Report of the Medical Officer of Health on the public health and sanitary circumstances of Johannesburg.

CITY OF JOHANNESBURG

REPORT

ON THE HEALTH OF

JOHANNESBURG

IN

1963

J. W. SCOTT MILLAR
B.A., M.B.Ch.B., D.P.H., D.T.M. and HY.
F.R.S.H.
MEDICAL OFFICER OF HEALTH

03-1114

With the Compliments

of the

Medical Officer of Health

CITY HEALTH DEPARTMENT.
18 HOEK STREET, C/R. DE VILLIERS STREET.
JOHANNESBURG.
P.O. BOX 1477.

P.H.F. 101

Met die komplimente

van die

Stadsgeneesheer

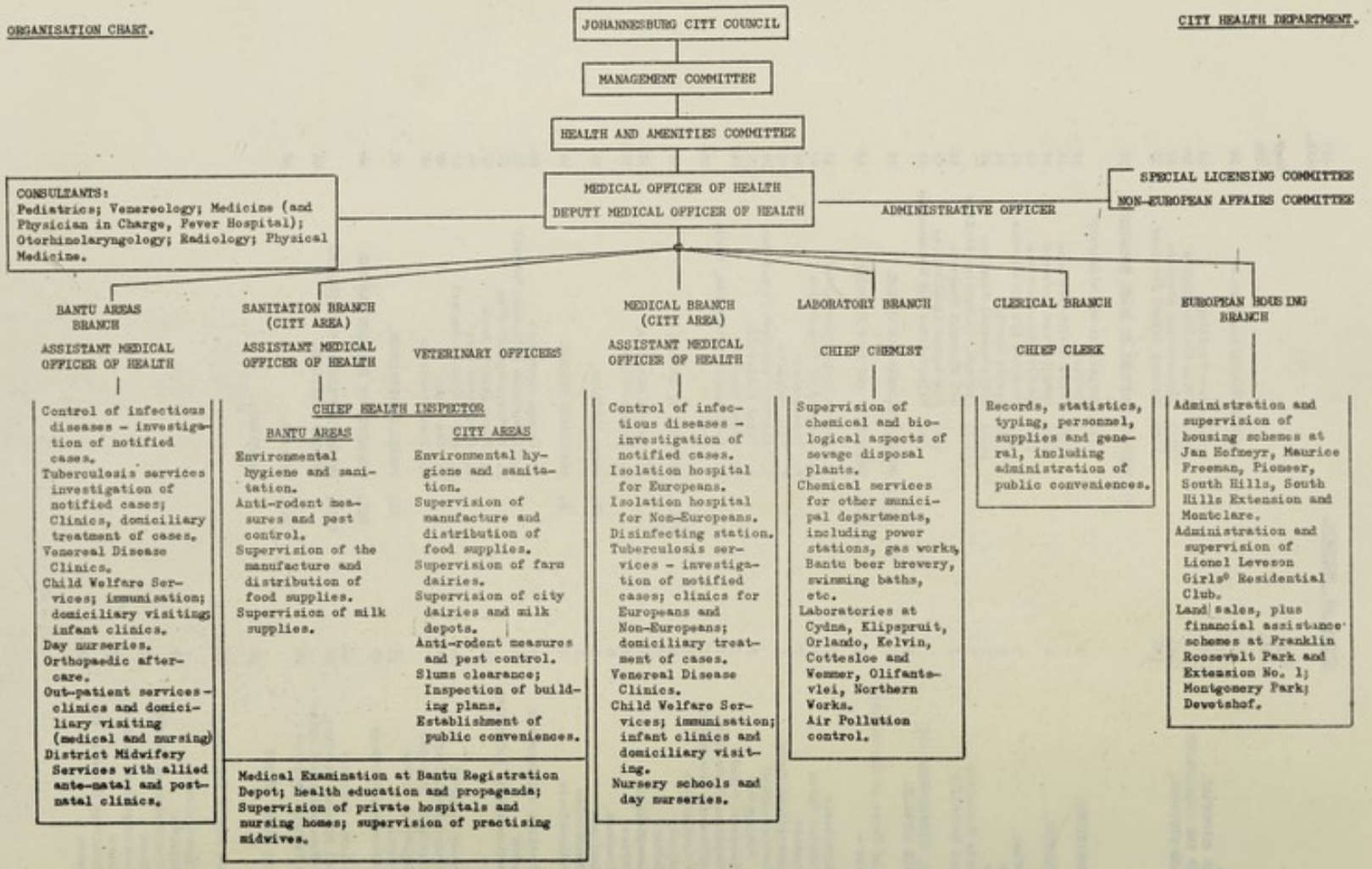
STADSGESONDHEIDSAFDELING,
HOEKSTRAAT 18, H/V DE VILLIERSSTRAAT,
JOHANNESBURG.
POSBUS 1477.

TABLE OF CONTENTS.

- - - oOo - - -

ORGANISATION CHART.

CITY HEALTH DEPARTMENT.



CITY OF JOHANNESBURG.

HEALTH AND AMENITIES COMMITTEE

To 15th March 1963.	From 15th March 1963.
COUNCILLORS: MR. A.B. WIDMAN, M.P.C. - CHAIRMAN	MR. A.B. WIDMAN, M.P.C. - CHAIRMAN
DR. A.D. BENSUSAN - DEPUTY CHAIRMAN	DR. V.V. BOY, M.P.C.
DR. V.V. BOY, M.P.C.	MR. A.P.J. DE KLERK
MR. A.P.J. DE KLERK	MR. I. MYERS
MR. H.P. DENNIS	DR. J.S. OTTO
MR. I. MYERS	MR. W.A. SAMMONS
DR. J.S. OTTO	MR. M. SKLAAR
MR. W.A.J. SAMMONS	MR. H.M. VAN RENSBURG
MR. H.M. VAN RENSBURG	MR. M.J. POWELL
MR. M. SKLAAR	MR. T.G. MORRIS

ADMINISTRATIVE HEADS AND CONSULTANTS:

MEDICAL OFFICER OF HEALTH	:	J.W. SCOTT MILLAR B.A., M.B., Ch.B., D.P.H., D.T.M. & Hy., F.R.S.H.
DEPUTY MEDICAL OFFICER OF HEALTH	:	B. MENDEL M.B., Ch.B., D.P.H., D.T.M. & Hy.
ASSISTANT MEDICAL OFFICER OF HEALTH	:	A.H. SMITH M.B., Ch.B., D.P.H., D.T.M. & Hy.
ASSISTANT MEDICAL OFFICER OF HEALTH	:	M.L. FREEDMAN O.B.E., M.B., Ch.B., D.P.H.
ASSISTANT MEDICAL OFFICER OF HEALTH	:	I.W.F. SPENCER M.B., Ch.B., D.P.H., D.T.M. & Hy.
ADMINISTRATIVE OFFICER	:	E.M. COETZEE A.M.I.P.H.E., R.S.H. Cert. for H.I.
CHIEF CLERK	:	C.J. MORSHEAD
CONSULTANTS:	:	
Pediatrics	:	B.G. VON B. MELLE M.B., Ch.B., F.R.C.S. Edin.
Venereology	:	B. SIEFF M.B., B.Ch.
*Medicine	:	A.L. JACKSON B.Chir., M.B., M.R.C.P.
Otorhinolaryngology	:	D.R. HAINES M.B., B.Ch., D.L.O., R.C.P. & S. Eng.
Radiology	:	H.I. OSLER M.B., Ch.B., D.M.R.E.
Radiology	:	M. HURWITZ M.B., Ch.B., D.M.R.D., R.C.P. & S. Eng., M.D.
Physical Medicine	:	C. ADLER M.B., B.Ch., D. Phys. Med.

* and Physician in Charge, Fever Hospital.

HEADS OF BRANCHES AND SECTIONS:

CHIEF TUBERCULOSIS MEDICAL OFFICER	:	M.H. GOLDBERG - M.B., Ch. B.
CHIEF CHILD WELFARE MEDICAL OFFICER	:	O.I.B. KREHER - M.B., Ch.B.
MEDICAL SUPERINTENDENT, WATERVAL HOSPITAL	:	G.B. MILLER - M.B., Ch.B.
MATRON, WATERVAL HOSPITAL	:	M. MILLER - Reg. Nurse and Midwife, School Nsg. and San. Cert.
SENIOR MEDICAL OFFICERS	:	E.N. ELLIS - M.B., Ch.B.
	:	L. EISENBERG - M.B., B.Ch.
	:	B. RICHARD - M.B., B.Ch., D.P.H.
	:	H. TAYLOR - L.R.C.P. and S., L.R.F.P.S.
	:	M. MER - M.B., B.Ch.
	:	M.S. BROWN - M.B., Ch.B.
SENIOR DENTAL OFFICER (ORLANDO)	:	J.H.C. LAING - L.D.S., D.P.D.
CHIEF PHARMACIST	:	S. GRINKER - Dip. Pharm.
CHIEF CHEMIST	:	E.G. WHITE - M. Sc. Ph.D. (Wits) F. Inst., S.P., F.R.I.C., M. (S.A.) Chem. I.
AIR POLLUTION CONTROL OFFICER	:	L. TUCKER - B.Sc. (Eng. Chem.), M. (S.A.) Chem. I., A.M.I.S.P.
HOUSING OFFICER	:	W.J. DUNCAN
HOUSING SUPERVISOR	:	J.M.E. BUTLER - Housing Manager's Cert., R.S.H. Cert. for H.I., Primary Teachers' Higher Cert.
CHIEF HEALTH INSPECTOR	:	A.H. SPARGO - A.M.I.P.H.E., M.R.S.H., R.S.H. Certs. for H.I. and M. & O.F.
DIVISIONAL HEALTH INSPECTORS	:	T. PATTERSON - R.S.H. Certs. for H.I. and M. & O.F.
	:	W.G. HOWARTH - R.S.H. Certs. for H.I. and M. & O.F. to 31.3.1963.
	:	A.H. MAXWELL - A.M.I.P.H.E., R.S.H. Certs. for H.I., M. & O.F. and Trop. Hy.
	:	A.C. WALLACE - R.S.H. Certs. for H.I. & M. & O.F.
	:	C.M. HAGLEY - R.S.H. Certs. for H.I. and M. & O.F. from 1.4.1963.
CHIEF HEALTH VISITOR	:	M. BERGH - R.S.H. Cert. for H.V., Reg. Nurse and Midwife.
SENIOR HEALTH VISITORS	:	R.C.C. SANGERHAUS - R.S.H. Cert. for H.V., Reg. Nurse and Midwife.
	:	C.E. HAINS - R.S.H. Cert. for H.V., Reg. Nurse and Midwife, Mothercraft Cert., Dipl. in Nsg. Admin. (Public Health) (London)
	:	M.H. RALPH - R.S.H. Cert. for H.V., Reg. Nurse and Midwife, Mothercraft Cert.
	:	J.M. MONNIK - R.S.H. Cert. for H.V., Reg. Nurse and Midwife, Dipl. in Nursing.
INSPECTRESS OF NURSERY SCHOOLS	:	E.K.P. BROSIUS - Dipl. in Pre-School Educ.
SENIOR SUPERVISOR, NURSERY SCHOOLS (ACTING)	:	A.M. VILJOEN - Nursery School Dipl.
SUPERINTENDENT, TRANSPORT AND DISINFECTING	:	J.H. CUTTING - Qualified Fitter

The full staff establishment is detailed in Annexure 1.

REPORT OF THE MEDICAL OFFICER OF HEALTH.

CALENDAR YEAR 1963.

The Mayor and
City Councillors of
JOHANNESBURG.

Mr. Mayor, Gentlemen,

I have the honour to present my report for the calendar year 1963 on the work of the City Health Department, the vital and morbidity statistics of the city and the main features in regard to the health and sanitary circumstances of the community. My report on overcrowding and bad or insufficient housing is issued separately.

The general health of the citizens of Johannesburg is maintained at a satisfactory level.

There have been slight fluctuations in the birth rates and death rates as compared with the previous year without any major change. There has, however, been an increase in the European death rate from 8.31 to 9.02 which is higher than it has been for some years; and there has been a drop in the Coloured death rate from 10.89 to 9.63 which restores the rate more or less to the level of 1960 and 1961. There has been no important change in the major causes of death as applicable to the different races.

The infantile mortality rate (i.e. the deaths of infants under 1 year of age per 1,000 live births registered) is substantially lower for Coloureds than in 1962 (68.03 compared with 48.07). This rate is lower than it has been previously except in 1961 when it was exceptionally low (38.44). The infantile mortality rate for Europeans is slightly lower and for Bantu slightly higher (66.00 compared with 61.20). The Asiatic rate is higher than in 1962.

The total incidence of notifiable diseases was much the same as for 1962 which was well below the incidence for previous years. Diphtheria cases were more numerous and poliomyelitis is again increasing among Bantu. There was an outbreak of a mild form of small-pox in the Bantu areas.

The total number of cases of pulmonary tuberculosis notified was the same as for 1962. The number of cases among Europeans, Coloureds and Asiatics dropped in contrast to an increase of Bantu cases. As pointed out in the body of my report the number of Bantu cases is likely to show a sharp rise in 1964 when the results of the B.C.G. campaign are fully known.

The Mofolo South Tuberculosis Clinic was in full operation and the tuberculosis staff was able to keep up their high standard of

service/.....

service to tuberculotics. Several surveys were conducted.

The maternal and child health services continue on a satisfactory basis with an increased number of home visits and clinic attendances and a good response to immunisation procedures. Routine medical services in the Bantu areas continued and two special immunisation campaigns of unusual importance were conducted. The measles vaccination campaign has created world-wide interest, besides contributing materially to the reduction of the incidence of this disease. The B.C.G. vaccination campaign, which was conducted with utmost efficiency, was the largest of its kind in Africa.

The control of smog is making good progress but results will not be apparent until more drastic steps can be taken under effective legislation. New legislation has been promised but has not materialised.

The control of sanitation and food supplies was maintained at the usual high level as were the other services of the Department.

The need for additional housing has become one of the Council's most urgent problems. At the end of 1962 and in early 1963 the number of vacancies in the housing schemes for Europeans under the control of the City Health Department was causing some concern and private owners had many vacant flats and houses on their hands. The need for urban renewal was recognised but otherwise the building of further houses could not be justified.

The position has entirely changed with the marked influx of families to Johannesburg from other parts of the country and of immigrants from northern territories and from overseas. New housing schemes have been initiated for implementation in the new year but may well have to be expanded to meet the constantly growing demand. The need for Coloured housing is also a high priority and is being met by schemes in Riverlea and elsewhere.

There is still no word of a decision in regard to the recommendations of the Borckenhagen Committee regarding health services or of the report of the Schumann Commission. Local authorities look to these reports for much-needed financial relief in the development of health and other services.

This is the last annual report I shall write as Medical Officer of Health owing to my forthcoming retirement on 16th July 1964. Perhaps I may be permitted to make some comments on the progress made in the health services of the City over a longer period than is usually covered by reports of this nature.

It is one of the frustrations of public health work that results, at best intangible, are still less obvious over short periods of time. Desired results can only be achieved through team work in a particular field and often only when advances in many different fields combine to contribute to the result. As an example, the treatment of tuberculosis patients will not in itself eradicate the disease unless the environment and various other factors are also controlled and improved.

I/.....

I have chosen 25 years as a period over which to show results achieved by the City Health Department, as this is a sufficiently long period for trends to show themselves. The growth of the City and the concomitant growth of the City Health Department is shown by the following data:

	1937/38.	1963.
Population (all races)	508,800	968,119
Valuation: Rateable Land	R100,633,318	R428,721,872
Improvements	R127,122,284	R660,445,782
Value of building plans passed	R16,785,376	R32,384,900
Water consumption (average daily - gallons)	13,652,000	59,813,508
Sewage treated (average daily - gallons)	10,210,916	49,000,000
Staff of City Health Department (all races)	253	1,458
Gross Expenditure of City Health Department	R248,714	R3,289,326
Expenditure per head of population - City Health Department	R0-49	R3-39
Total Expenditure of Council	R10,020,460	R55,403,443
Total Expenditure per head of population	R19-69	R57-23

It will be noted that the population has almost doubled itself in 25 years but that other developments are out of proportion to this increase.

In order to keep pace with modern developments all the services of the City Health Department have been expanded and certain new services have had to be instituted, including inter alia comprehensive integrated medical services in the Bantu townships, Waterval Hospital for Non-European tuberculosis and infectious disease cases, two Medical Examination Centres for Bantu work-seekers, and a number of tuberculosis clinics, including a master tuberculosis clinic at Mofolo South.

The following table contrasts the death rates (per 1,000 of the population):

	1937/38.	1963.
European	10.23	9.02
Coloured	21.98	9.63
Asiatic	21.04	5.74
Bantu	15.70	10.24
All races	13.13	9.61

These are crude death rates and consequently differences in the age and sex constitution of the population which are known to have occurred over the period invalidate precise comparisons. Nevertheless, the magnitude of the differences make the trend very clear.

The/.....

The following table contrasts the infantile mortality rates (deaths under 1 year per 1,000 registered live births):

	1937/38.	1963.
European	49.83	25.25
Coloured	223.48	48.07
Asiatic	135.10	55.47
Bantu	-	66.00
All races	-	51.73

The saving in infant life reflected in these figures is perhaps the biggest contribution made by the City Health Department, in common with Health Departments in South Africa and elsewhere. Rates for Bantu cannot be quoted for 1937/38 because the registration of births of Bantu was very much neglected at that time. The improvement here, however, is probably greater than for any of the other races.

The incidence and death rates for certain infectious diseases are reflected in the following table (per 100,000 of the population - all races):

	1937/38.	1963.
Typhoid incidence rate	460	3.4
" death rate	130	0.7
Diphtheria incidence rate	430	10
" death rate	20	0.3
Pulmonary Tuberculosis incidence rate	-	360
" " death rate	550	21

The reduction in both incidence and death rates is quite substantial but the continued incidence of these diseases is still a problem. Poliomyelitis, however, has been reduced very materially.

The improvement in the health of the population is clearly evident from the substantial reduction in the overall death rate and the infantile mortality rate and in the reduction in the incidence and deaths from infectious disease. Although there are many social, economic and other factors that have contributed towards these results the City Health Department can legitimately claim a share of the credit and the City Council may rest assured that it is getting good value for the money spent on health services.

I wish to thank all members of my staff for their loyalty, both personally and officially, throughout the years. It has been a great pleasure to work with them and to feel that I have enjoyed their support in our common task. I know that my successor, Dr. A.H. Smith, will enjoy the same support and I wish him and the Department every success in their future endeavours.

My thanks are also due to the Town Clerk and all Heads of Departments and members of their staffs, and to the Staff Board for willing co-operation at all times.

I/.....

I also desire to tender my thanks to his Worship the Mayor and to the Chairman and Members of the Health and Amenities Committee, and to their predecessors in office, all of whom have extended to me every courtesy and assistance.

J.W. SCOTT MILLAR

MEDICAL OFFICER OF HEALTH.

Consultant Medical Officer to the Rand Water Board.
Lecturer, Urban Health Administration, University of the Witwatersrand.

16th July 1964.

REPORT A.

1963.

C I T Y O F J O H A N N E S B U R G

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

1963

ON THE PUBLIC HEALTH AND SANITARY

CIRCUMSTANCES OF JOHANNESBURG.

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CITY OF JOHANNESBURG.

REPORT A. 1963.

REPORT ON THE PUBLIC HEALTH AND SANITARY CIRCUMSTANCES OF JOHANNESBURG FOR THE CALENDAR YEAR 1963, IN TERMS OF SECTIONS 6 AND 13 OF THE PUBLIC HEALTH ACT, 1919, AS AMENDED.

I. NATURAL CONDITIONS.

Physical Geography - Johannesburg is situated in latitude 26 degrees 11 minutes south and longitude 28 degrees 4 minutes east, at a mean altitude of 5,850 feet above sea level and approximately 300 miles from the sea coast on the Indian Ocean. It is placed almost at the northern limit of the highveld area of the Transvaal Province and almost in the centre of the Witwatersrand Goldfields which extend roughly eastwards and westwards over a total distance of approximately 88 miles.

The city is on the crest of the Witwatersrand ridge which is one of the main watersheds of the country, all streams in the northern suburbs being tributaries of the Limpopo River, while those in the south make their way to the Orange River. The highest four points, all of approximately the same altitude (5,940 feet) are Observatory Hill, Aasvogelskop, a hill south west of the City and a hill south of Linmeyer. The last named is the highest by a few feet. The City centre is about 5,700 feet above sea level.

From the southern municipal boundary proceeding northwards, the land slopes gently downwards at first and then rises slowly to the foot of the ridge where it becomes steeper. From the crest of the ridge it falls away rather suddenly and then, having reached the lower level, it divides up into several flat valleys dropping gradually northwards. In the Kensington-Bezuidenhout Valley area outliers of the main ridge form somewhat deep valleys running to the east. This area and the northern suburbs are to a certain extent protected from the cold southern winter winds.

The metereological and topographical features favour the dispersal of smog. Inversion is encountered but does not cause concern. On some days during the winter months smog tends to persist in the valleys but almost invariably disperses by 10 a.m.

The area of the City and its suburbs is 94.46 square miles which includes the Rand Airport. The extreme length of the City and Suburbs is $11\frac{1}{2}$ miles and extreme width $11\frac{1}{4}$ miles. The Bantu Townships on the southwestern boundary comprising Pimville and Soweto cover an area of 24.98 square miles, Pimville being included in the Municipal area and Soweto outside. A further 5.12 square miles owned and controlled by the Bantu Resettlement Board is part of the complex used for housing Bantu working in Johannesburg. The total area of the Bantu Townships is therefore 30.10 square miles.

Other land owned by the Council outside its own boundaries and controlled in terms of Section 7 of the Local Government Ordinance (Transvaal) includes the sewage purification farms to the south, and the Northern Sewage Purification Works, Zuurbekom, Kelvin Power Station,

Woodlands/.....

Woodlands, Lombardy, Gillooly's Farm, Rietvlei East, Rietvlei West and several other farms with a total area of 51.49 square miles.

The climate of Johannesburg is essentially temperate, although the city is within 3 degrees of the Tropic of Capricon. Generally the days are bright and warm and the nights cool. The humidity is low in winter and there is a marked diurnal variation in temperature. The average daily period of bright sunshine is 8.68 hours.

The rainfall has averaged 872.99 mms. (34.37 inches) per annum over a period of 50 years and occurs mainly in the summer months (October to March) often in the form of short thunderstorms. The total fall at Joubert Park in 1963 was 697.1 mms. (27.44 inches) and the rain fell on 74 days.

The hottest months are usually from December to March with an average maximum temperature over 15 years of 31°C and the highest recorded temperature of 34.2°C. The coldest months are usually in June and July with an average minimum temperature of 2.05°C and the lowest recorded temperature of -6.2°C on the 23rd July 1926.

Johannesburg is not a windy place; the only time when the wind calls for special comment is when cold winds blow from the south during August or September. The wind frequencies are shown diagrammatically in Annexure 2. The monthly averages of rainfall, etc., are reflected in Annexure 3.

II. VITAL STATISTICS.

The following table summarises the principal vital statistics for 1963:-

1963	Europeans	Coloureds	Asiatics	Bantu	All Persons
Population	374,800	49,004	26,327	517,979	968,110
Births (Number of)	9,150	2,018	667	17,335	29,170
Birth Rate	24.41	41.18	25.34	35.22	30.96
Illegitimate Birth Rate%	3.61	20.37	3.15	40.96	26.95
Deaths (Number of)	3,380	472	151	5,302	9,305
Death Rate	9.02	9.63	5.74	10.24	9.61
Infantile Deaths	231	97	37	1,144	1,509
Infantile Mortality Rate	25.25	48.07	55.47	66.00	51.73
Maternal Deaths	1	5	2	63	71
Maternal Death Rate	0.11	2.44	2.95	3.58	2.40

These figures are corrected for outward transfer only. The population recorded is based on estimates as at 30th June 1963 and the rates are calculated thereon.

The Bantu population included 25,800 mine Bantu among whom there were 110 deaths with a death rate of 4.26.

The statistical factors recorded above are referred to in more detail in the paragraphs which follow.

1. POPULATION.

	1959	1960	1961	1962	1963
Europeans	372,000	368,277	370,000	372,400	374,800
Coloureds	37,600	42,943	43,670	45,090	49,004
Asiatics	27,000	23,647	24,000	25,770	26,327
Bantu	502,423	522,953	532,677	515,804	517,979
	939,023	957,820	970,347	959,064	968,110

Details of the Bantu population by areas are given in Annexure 4.

2. BIRTHS.

As compared with the previous year, the figures reflect an increase in the European birth rate from 23.54 to 24.41; the rate for Coloureds has increased from 41.12 to 41.18. The rates for Asiatics and Bantu have decreased from 26.70 to 25.34 and from 39.98 to 35.22 respectively. The overall birth rate for all races shows a decrease of 2.15.

There has been a progressive increase in the percentage of illegitimate births of Europeans, Coloureds and Asiatics over a period of many years, although the rates for the current year are a little lower in each case. The complex marriage customs of Bantu make it difficult to arrive at a true assessment of illegitimacy and consequently no comment is made.

3. DEATHS.

The death rates over a period of five years are shown in the following table (rates are corrected for outward transfers):-

Year	Europeans	Coloureds	Asiatics	Bantu	All Persons
1959	8.38	11.33	5.63	11.07	9.86
1960	8.38	9.85	6.34	10.93	9.79
1961	8.39	9.30	6.08	10.05	9.29
1962	8.31	10.89	5.16	10.19	9.36
1963	9.02	9.63	5.74	10.24	9.61

The death rate for all races and for each race group separately shows a general downward trend but the overall death rate and the rate for each race separately (except Coloureds) is somewhat higher for 1963. The rate for Coloureds is quite substantially lessthan for the previous year.

The summary of causes of death classified according to race are listed in Annexure 5.

The causes of death classified in the main group causes, with comparative tables for 1961, 1962 and 1963 are listed in Annexure 6. The 5 most prominent causes of death are set out in graphical form overleaf.

An analysis/.....

An analysis of some of the main causes of death is recorded in the paragraphs which follow.

Diseases of the Circulatory System, cause the largest number of deaths, accounting for 22.33% of all deaths. It is also the major cause of death in Europeans (40.29%), Coloureds (23.09%) and Asiatics (28.47%) but not for Bantu in which case only 10.63% of deaths are due to this cause.

Arteriosclerotic heart disease (including coronary thrombosis) is responsible for over half the "heart" deaths in Europeans, one quarter in Coloureds and two thirds in Asiatics but causes only about 7% of the heart deaths in Bantu where the deaths due to heart lesions are spread over a number of classifications.

Alternative Classification of Accidents, Poisoning and Violence External Cause): This group causes 16.02% of all deaths. This is the most important "single" cause of death in Bantu (20.04%) and is high on the list for other races:- Coloureds (14.61%), Asiatics (10.59%) and Europeans (10.14%). In this group suicide accounts for most of the European deaths (95) followed by accidents (86) and motor traffic accidents (46). In Coloureds the major cause is homicide (20) followed by accident (17) and motor traffic accidents (17). Homicide caused Bantu 486 deaths, accidents 273 deaths and motor traffic accidents 137 deaths. Suicide is a relatively minor cause of violent death in Non-Europeans, being responsible for 40 deaths of which 36 were Bantu.

Symptoms, Senility and Ill Defined Conditions: 11.21% of all deaths are grouped together under this heading, being largely a reflection of the lack of clarity of death certificates. It is not surprising that the highest percentage in this group relate to Bantu and Coloureds.

Neoplasms account for 9.94% of all deaths. This is the second largest cause of death for Europeans (16.39%). It is also an important cause for Coloureds (6.99%) and Asiatics (7.28%) and also causes 6.16% of Bantu deaths.

Diseases of the Respiratory System cause 4.63% of all deaths. Coloureds (11.86%) and Bantu (10.82%) are the races most susceptible to death from this cause with Asiatics following closely at 5.96%.

Diseases of the Digestive System account for 8.01% of all deaths, ranging from 3.31% in Asiatics to 10.82% in Bantu. Over 75% of the deaths of Coloureds and Bantu from this cause are in children under 5 years old, while an even larger percentage of the European deaths are over that age.

Certain Diseases of Early Infancy, account for 5.58% of all deaths with percentages ranging from 4.40% for Europeans to 18.54% for Asiatics.

Infective and Parasitic Diseases cause 5.50% of all deaths - Europeans (2.54%) Bantu (7.46%), Coloureds (5.50%) and Asiatics (2.64%). These diseases have been a major cause of death in past years but are progressively being brought under control.

More details are available in respect of the foregoing and other causes of death and will be supplied to those who ask for them.

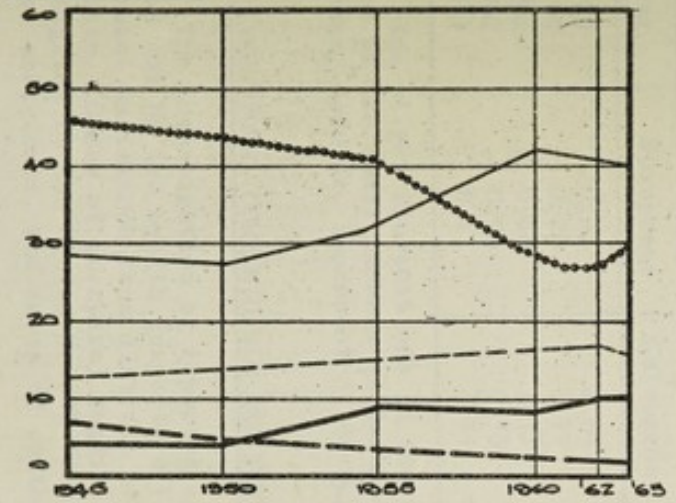
4. INFANTILE/.....

EUROPEANS.

CAUSES OF DEATH.

BANTU.

PERCENTAGES.



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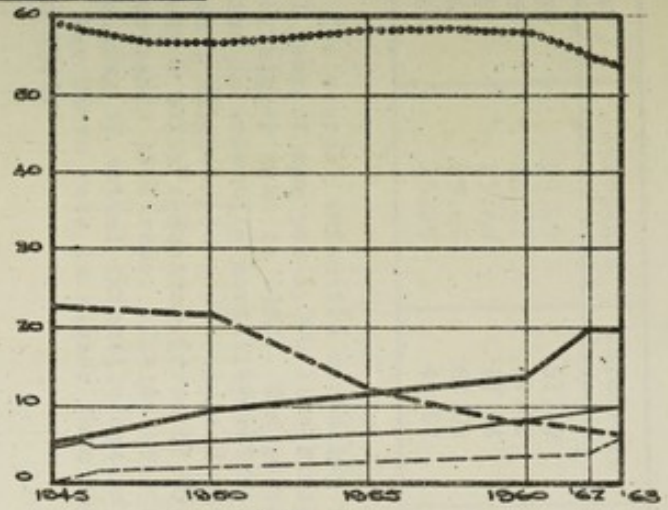
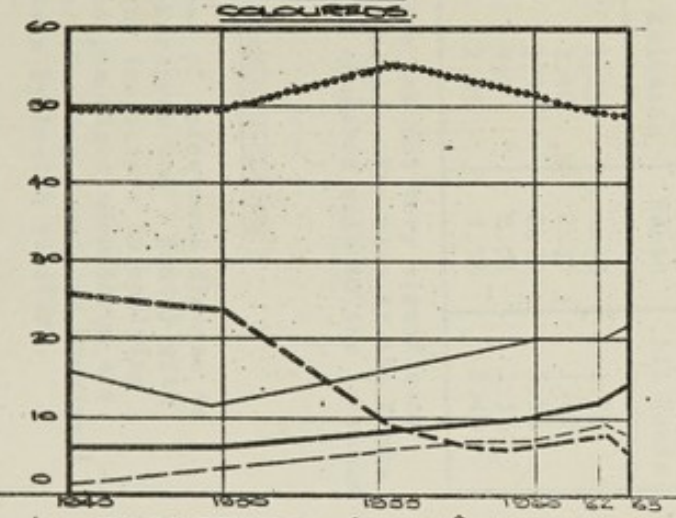
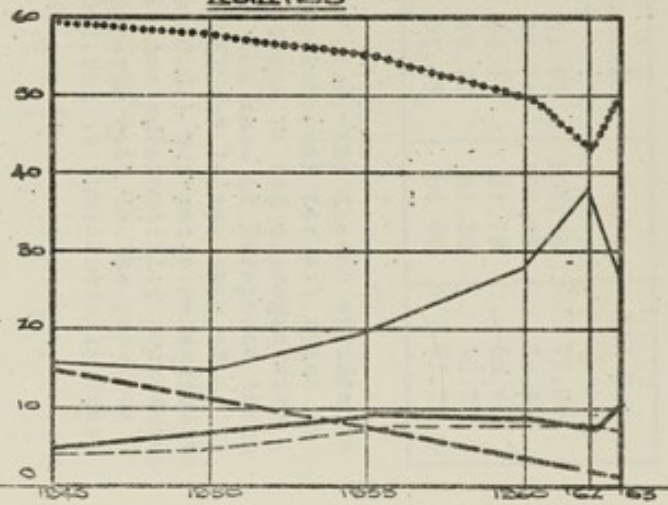


KLEURLINGE.
COLOUREDS.



ASIATE.
ASIATICS



TABEL
TABLE

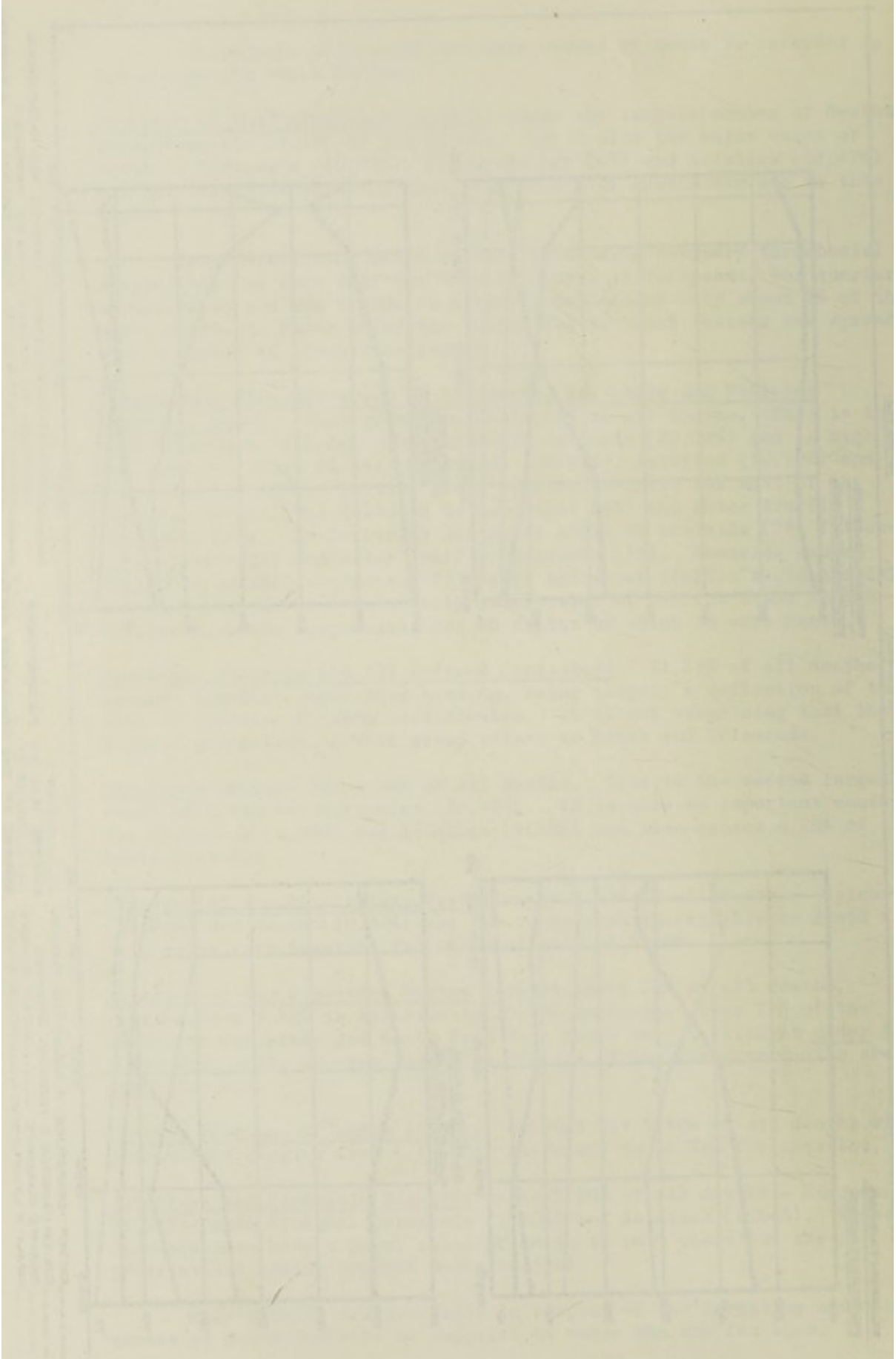
GROEP 1: BESMETLIKE & PARASITIESE SIEKTES
GROUP 1: INFECTIVE & PARASITIC DISEASES

GROEP 2: GEWASSE
GROUP 2: NEOPLASMS

GROEP 3: SIEKTES VAN DIE BLOEDSOMLOOP
GROUP 3: DISEASES OF THE CIRCULATORY SYSTEM

GROEP 4: ALTERNATIEWE INDELING VAN ONGELUKKE, VERGIFTIGING EN GEWELD (UITGESLUIT GOEDAAK.)
GROUP 4: ALTERNATIVE CLASSIFICATION OF ACCIDENTS, POISONINGS AND VIOLENCE.

GROEP 5: ALLE ANDER GROEPE
GROUP 5: ALL OTHER GROUPS



4. INFANTILE MORTALITY.

The rates for the years 1959 to 1963 inclusive, are shown on the following table:

Year	Europeans	Coloureds	Asiatics	Bantu	All Races
1959	25.29	61.79	51.61	104.98	75.80
1960	28.27	64.40	48.71	122.75	86.41
1961	25.66	38.44	40.33	91.78	66.40
1962	25.66	62.03	40.70	61.20	50.71
1963	25.25	48.07	55.47	66.00	51.73

The overall infantile mortality rate (i.e. the deaths of infants under 1 year of age per 1,000 live births registered) for all races is slightly higher than in 1962. The general trend is for a progressive reduction in infantile mortality rates. In the case of Europeans there has been a slight reduction compared with 1962 and in the case of Coloureds a major reduction (from 62.03 to 48.07) but not a reversion to the favourable 1961 rate. The Asiatic rate has substantially increased, representing 37 actual infantile deaths compared with 28 the previous year. The Bantu rate is higher than in 1962 but is substantially lower than in 1961.

5. MATERNAL MORTALITY.

Maternal mortality is measured by the number of maternal deaths per 1,000 births (including still births).

Details of the maternal mortality rates for the five years 1959 to 1963 inclusive are shown on the following table:-

Year	Europeans	Coloureds	Asiatics	Bantu	All Races
1959	0.22	2.64	1.25	1.70	1.26
1960	0.22	1.77	1.40	2.35	1.60
1961	0.56	1.13	1.37	2.13	1.56
1962	0.90	0.53	Nil	2.01	1.56
1963	0.11	2.44	2.95	3.58	2.40

The slight fluctuations in the rates are not very significant because of the small numbers of deaths involved. The rise in the Bantu rate does, however, represent 63 deaths as compared with 40 the previous year.

III. INFECTIOUS, COMMUNICABLE AND PREVENTABLE DISEASES.

The investigation of reported cases of infectious disease is carried out by two health inspectors (1 European and 1 Bantu) with occasional assistance from district health inspectors in outlying districts. Cases of puerperal sepsis and pemphigus neonatorum are investigated by the Senior Health Visitor (Nursing Homes and Midwives) and her assistants, and cases of ophthalmia by health visitors.

A special/.....

A special staff of health visitors assisted by Bantu nurses is responsible for the investigation and follow-up of tuberculosis cases other than Bantu employed on the mines.

The diseases which are notifiable in Johannesburg are those listed in Section 18(1) of the Public Health Act, 1919.

New regulations were promulgated under the Public Health Act on 16th November 1962, (Regulations Gazette No. 141) dealing with "Infectious Diseases - Exclusion of Patients and Contacts from Schools and Hostels". These replace old regulations which were very much out of date.

1. NOTIFIED CASES OF PREVENTABLE DISEASES.

Details of the number of cases of preventable diseases notified during the years are given in the following table:-

1963	Local Cases					Imported Cases				
	E	C	B	A	Total	E	C	B	A	Total
Diphtheria	22	2	68	1	93	4		4		8
Scarlet Fever	163	1	1		165	1				1
Typhoid	2	4	27		33	5	1	14	2	22
Paratyphoid	5				5					
Meningitis (C.S.)	10	4	46		60					
Erysipelas	2				2					
Puerperal Pyrexia	1		35		36		1			1
Pemphigus Neonatorum	6		3		9					
Ophthalmia Neonatorum	1	1	20		22					
Poliomyelitis	1	1	19		21		1			1
Malaria						7		18		25
Leprosy	1		1		2			8		8
Encephalitis	41				41					
Trachoma			3		3			5		5
Relapsing Fever								2		2
Trypanosomiasis								1		1
Smallpox			14		14			2		2
	255	13	237	1	506	17	3	54	2	76
Tuberculosis										
Pulmonary	125	199	3,137	25	3,486	21	13	2,247	6	2,287
Other Forms	10	6	143	6	165			2	19	21
Total Tuberculosis	135	205	3,280	31	3,651	21	13	2,249	25	2,308
Total All Diseases	390	218	3,517	32	4,157	38	16	2,303	27	2,384

The incidence/.....

The incidence of notifiable diseases is lower with the exception of diphtheria and poliomyelitis. The incidence of non-notifiable diseases could not be estimated. The principals of schools are required to report all cases of infectious disease in their schools but the majority failed to do so. Only 1,320 cases were reported, the majority of which were cases of mumps, measles, chicken pox, whooping cough, german measles, and scarlet fever in that order of frequency. Mumps in adults seemed to be more frequent than in past years which may have been a factor in the higher incidence of encephalitis. There were 25 deaths from measles and 14 from whooping cough during the year.

Diphtheria.

The number of locally infected cases of diphtheria has increased from 68 to 93 and the number of imported cases from 2 to 8.

Of the 22 local European cases 6 were over 17 years of age, 10 were of school going age and 6 of 5 years and under. There were 4 cases in one family and 3 in another all of them mild. No deaths occurred. Of the 71 local Non-European cases, 68 were Bantu. All were sporadic cases. 70% of the patients had some degree of protective inoculation and 3 had completed a full course. There were 2 deaths - one had not been immunised and the other had had one immunising injection.

Scarlet Fever.

There was a further drop in the local cases of scarlet fever from 176 to 165.

Typhoid Fever.

There were 2 local European cases. One was infected from a visiting Bantu child recuperating from typhoid. The source of infection of the other was not traced. Both recovered.

There were 31 local Non-European cases, all sporadic except a group of 4 children in a Coloured family, who became ill simultaneously. Four Non-European patients died who arrived ill from country districts.

Phage typing was carried out on cultures from 27 patients. There were 10 of phage type A, 2 each of types D1 and F1, one of types E1 and 28. The remainder were untypable (5) or degraded Vi antigen (6).

Paratyphoid Fever.

Five European cases of paratyphoid fever were reported, in two groups of 3 and 2 cases respectively. Several contacts were found to be excreting the organism but did not develop symptoms and cleared up rapidly.

Cerebro-spinal Meningitis.

There is a slight drop in the incidence among Coloureds (from 10 to 4 cases) and Bantu (from 68 to 46) as compared with the previous year.

There has been no notable change in the incidence of erysipelas puerperal sepsis, and ophthalmia neonatorum but there has been a drop of pemphigus neonatorum from 16 to 9 cases.

Poliomyelitis/.....

Poliomyelitis.

There were 21 local cases (19 of them Bantu) compared with 6 cases the previous year. This increase in incidence should be taken as a serious warning to redouble all efforts to maintain the immunisation of the population at a high level.

Malaria.

All the cases notified were imported. Two patients were infected in the Republic while on holiday in the Eastern Transvaal, the remainder being infected in neighbouring territories - principally Portuguese East Africa.

Leprosy.

Of the 10 cases reported, 2 were locally infected. One of these (a Bantu) was born and brought up in Johannesburg, the other (a European) had developed the disease after he had lived 20 years in the City. The remaining 8 patients (all Bantu) contracted the infection elsewhere.

Encephalitis.

The number of cases was substantially higher than in 1962. All were European.

Trachoma.

Only 8 Bantu cases (3 local) were notified. The condition is quite prevalent in Soweto in a mild form.

Smallpox.

Of the 16 cases of smallpox reported, 14 were infected locally. A thirty-year old Bantu woman arrived in Johannesburg from the Eastern Transvaal at the end of September. She was not discovered until the 11th October, when she was diagnosed. In spite of vaccination of all known contacts and mass house to house vaccination, cases occurred in members of her ethnic group until the end of the year - none of the cases was serious. One other imported case was reported but no secondary cases developed. Reports were also received of contacts in our area, of cases occurring in neighbouring areas. These contacts were vaccinated and kept under observation. The usual crop of "false alarms" was also received.

Kwashiorkor.

This is a notifiable disease but the criteria for diagnosis cause some difficulty and cases that are notified cannot always be traced to verify whether they are local residents or birds of passage. The true incidence cannot be ascertained but there were no notifications during the year 1963.

Rabies.

This disease is not prevalent in animals in Johannesburg but because it is enzootic elsewhere in the Republic, all reported dog-bites are followed up and suitable steps are taken - 148 were investigated during the year with negative results.

Tuberculosis/.....

ulosis.

The annual incidence and deaths per 100,000 population from all forms of tuberculosis are shown in the ring table:-

	Pulmonary				Non-Pulmonary				All Forms			
	Incidence		Deaths		Incidence		Deaths		Incidence		Deaths	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
ropeans	188	51	15	4	11	3	17	5	199	53	32	9
loureds	161	428	16	43	104	277	7	19	265	705	23	61
iatics	31	115	1	4	3	11	2	7	34	126	3	11
ning Bantu	217	758	9	31	11	38	5	17	228	796	14	49
n-Mining Bantu	2,988	631	240	51	468	99	87	18	3,456	729	327	69
l Bantu	3,205	636	249	50	479	95	92	18	3,684	733	341	68
l Persons	3,585	382	281	30	597	64	118	13	4,182	446	399	42
ropeans	136	37	17	5	18	5	8	2	154	42	25	7
loureds	142	331	10	23	32	75	8	19	174	405	18	42
iatics	24	101	2	8	1	4	1	4	25	106	3	13
ning Bantu	77	263	7	24	Nil	Nil	5	17	77	263	12	41
n-Mining Bantu	2,680	543	178	36	310	63	104	21	2,990	606	282	57
l Bantu	2,757	527	185	35	310	59	109	21	3,067	586	294	56
l Persons	3,059	319	214	22	361	38	126	13	3,420	357	340	35
ropeans	137	37	13	4	13	4	18	5	150	41	31	8
loureds	196	449	8	18	20	46	6	14	216	495	14	32
iatics	38	158	6	25	4	17	Nil	Nil	42	175	6	25
ning Bantu	237	878	2	7	2	7	2	7	239	885	4	15
n-Mining Bantu	2,499	494	181	36	213	42	115	23	2,712	536	296	59
l Bantu	2,736	514	183	34	215	40	117	22	2,951	554	300	56
l Persons	3,107	320	210	22	252	26	141	15	3,359	346	351	36
ropeans	142	38	15	4	15	4	28	8	157	42	43	12
loureds	236	523	20	44	18	40	5	11	254	563	25	55
iatics	60	233	1	4	1	4	1	4	61	237	2	8
ning Bantu	242	938	1	4	1	4	3	12	243	942	4	16
n-Mining Bantu	2,807	573	154	30	195	40	104	21	3,002	613	258	53
l Bantu	3,049	591	155	30	196	38	107	21	3,245	629	262	51
l Persons	3,487	364	191	20	230	24	141	15	3,717	388	332	35
ropeans	125	33	13	3	10	3	10	3	135	36	23	6
loureds	199	406	15	31	6	12	3	6	205	418	18	37
iatics	25	95	3	11	6	23	Nil	Nil	31	118	3	11
ning Bantu	180	698	2	8	Nil	Nil	7	27	180	698	9	35
n-Mining Bantu	2,957	601	169	34	143	29	67	14	3,100	630	236	48
l Bantu	3,137	606	171	33	143	28	74	14	3,280	633	245	47
l Persons	3,486	360	202	21	165	17	87	9	3,651	377	289	30

The/.....

The figures quoted do not include imported cases infected elsewhere who are attracted to Johannesburg for treatment, or in transit. In 1963 there were 2,266 imported cases of pulmonary tuberculosis of all races including 2,181 mining Bantu who spent a short period in mine hospitals pending transfer to their homes.

The following is an analysis of the notification rates and death rates (in brackets) per 100,000 population from pulmonary tuberculosis:-

	1959		1960		1961		1962		1963	
Europeans	51	(4)	37	(5)	37	(4)	38	(4)	33	(3)
Coloureds	428	(43)	331	(23)	449	(18)	523	(44)	406	(31)
Asiatics	115	(4)	101	(8)	158	(25)	233	(4)	95	(11)
Bantu	636	(50)	527	(35)	514	(34)	591	(30)	606	(33)
All Races	382	(30)	319	(22)	320	(22)	364	(20)	360	(21)

The incidence rate of pulmonary tuberculosis among Europeans has varied very little during the last four years but there is an appreciable improvement in the current year together with a drop in the death rate.

After a sharp rise in the incidence rate in 1962 the rate for Coloureds has dropped in 1963 to approximately the average for the three years 1959/61. The death rate is also lower.

The Asiatic incidence rate is the lowest for some years but the death rate is more than double the previous year. The incidence rate for Bantu is higher than for the previous year, but the death rate has decreased slightly.

Taking Non-Europeans as a whole the number of new cases was much the same in the current year as in 1962 but the number of deaths increased by 13.

The B.C.G. campaign completed in October will bring to light more cases when the positive reactors are followed up. Those below 5 years of age will be notified as cases on the sole criteria of a positive reaction without necessarily having clinical signs and without confirmation by X-ray examination which is considered unjustified at that age.

2. DISINFECTIONS AND REMOVALS.

The Disinfecting Station is situated at Vrededorp and is fully equipped for the effective disinfection and/or deverminisation of persons, and the disinfection and sterilisation of clothing, blankets, bedding and other infected articles. There is also a well equipped workshop for the maintenance and repair of vehicles and garages to accommodate them.

The activities at the Disinfecting Station include the following:-

1. The disinfection, where necessary, of premises in the city area where infectious cases have been accommodated and of their bedding, wearing apparel and belongings and also of ambulances and ambulance personnel after removal of an infectious case. Bedding and clothing from Waterval Hospital is transported direct to the

Fever Hospital/.....

Fever Hospital for disinfection.

2. The disinfection of bedding, clothing and other commodities for commercial firms, institutions and individuals is undertaken at a moderate charge.

3. The transport of dead bodies from Waterval and Fever Hospitals.

4. The treatment of scabies sufferers and delousing of verminous persons by a health visitor.

5. Arranging for the disinfecting of midwives by qualified health visitors, after the midwives have attended infectious cases. Sterilising dressing drums in an electric autoclave for midwives employed by the Council or by certain nursing homes and for private duty midwives.

6. The transport of staff to and from Waterval Hospital, including Bantu staff for the night shift for security reasons.

7. General supervision of drivers and vehicles for the transport of midwives, nurses and other staff in the Bantu townships. Bantu with drivers' licences are recruited as labourers and trained and the best are selected to fill vacancies as drivers.

8. The transport of stores and commodities to hospitals, clinics and nursery schools under the control of the Department.

9. The maintenance and repair of all vehicles under the control of the Department and supervision of the drivers.

10. The Disinfecting Station has many features of interest to student nurses, health inspectors and others concerned with infectious diseases and public health work. During the course of the year 340 students and others were conducted over the Station.

Structural improvements to various buildings at the Disinfecting Station were completed during the year. Full length verandahs were constructed for houses numbers 123 and 124. The building on the east boundary was re-designed and enlarged to provide parking space for the larger vehicles. A new ablution block was built on the north-east corner of the workshop to provide facilities for the mechanics. A dormitory was converted to a kitchen and messroom for the Bantu staff.

Eight new vehicles were acquired during 1963. Three of these vehicleswere for general transport and 1 each for the Air Pollution Control, Mobile Messenger, Midwifery Services (Soweto), conveyance of part-time medical officers and the Pest Control Section. Eight obsolete vehicles were sold during the year.

There were 50 vehicles under the control of the Department as at 31st December 1963 as follows:-

Ambulances:

Tuberculosis sitting-type Ambulance	2
Carried Forward	2

Station Wagons/.....

	Brought Forward	2
Station Wagons:		17
Soweto Midwifery services (14) and for the conveyance of part-time medical officers (1), Air Pollution Control (1), conveyance of Chemist, Technical Assistant and Radiographer (1)		
Vans and Trucks:		23
Pest Control	9	
General Transport Disinfections, etc.	6	
Stores Delivery	3	
Cydna Laboratory	1	
Housing Branch	1	
Nursery Schools	1	
Workshops Breakdown Van	1	
Waterval Duty Van	1	
Special Vehicles:		8
Tifa Fogging Machine	1	
Farm Dairy Demonstration Caravan	1	
Mobile Health Clinic	1	
Mobile X-ray	1	
Waterval Duty Omnibus	1	
3 Wheel Scooters	2	
Motor Car	1	
		50

The distance covered by the different vehicle groups over the four years are shown in the following table:-

	1960	1961	1962	1963
Ambulances	74,819	44,532	....	....
Tuberculosis Ambulances	39,153	32,367	31,086	33,898
Medical & Midwifery Services	701,061	413,258	411,848	450,711
Other Vehicles	167,731	231,097	201,294	195,209
	982,764	721,254	644,228	679,818

The activities of the Disinfecting Station regarding disinfections and disinfestation of persons, premises, vehicles, etc., are summarised as follows:-

In the City area, 225 premises were disinfected, 9 persons attended the Disinfecting Station for deverminising and Scabies treatment, 3,378 ambulance drivers and assistants from the Fire Department were dealt with and 1,689 Fire Department ambulances were disinfected. The method of disinfecting ambulances was changed from formalin applied with a stirrup pump to Anabac applied with a microjet fog applicator. 8,886 items consisting of miscellaneous bundles of clothing, coats of ambulance drivers and attendants, Fire Department ambulance blankets, bedding from nursing homes, etc., received formalin treatment and steam autoclaving. 14,852 dressing drums received steam autoclaving in the small capacity Butterworth Electric Autoclave. During the year 101 dental patients were conveyed from Waterval Hospital to Orlando Dental Clinic for treatment.

3. DISPENSARY/.....

3. DISPENSARY.

The dispensary is situated at Westdene. The decanting and manufacturing of dispensary products continues and the output has been substantially increased at the expense of manufactured products.

The following statistics reflect the activities:-

Decanting:

(1)	Liquids	537,056	bottles
(2)	Ointments	35,839	jars
(3)	Tablets	15,083,800	tablets

Manufacturing:

(1)	Liquids	6,494	gallons
(2)	Ointments	4,785	lbs.

Decanted Products Issued from Westdene Stores to the Department's various services:

Service	Liquids	Tablets	Ointments	Skimmed Milk Powder	Full-Cream Milk Powder
Curative	291,479	4,351,700	27,068		
Midwifery	21,320	595,700			
Tuberculosis	145,768	8,116,970	4,019	160,266	8,720
		*7,411,200			
Child Welfare	83,627	725,500	3,171	228,076	269,558
TOTAL:	542,194	21,201,070	34,258	388,342 lbs.	278,278 lbs

* P.A.S. tablets, in ready dispensed form.

Oral Poliomyelitis Vaccine: A total of 105,070 doses of oral poliomyelitis vaccine was issued as follows:-

European Clinic - 18 Hoek Street	36,750 doses
Bantu Clinics - Townships	57,000 doses
Asiatic and Coloured Clinics	3,640 doses
Private Practitioners	7,680 doses
TOTAL:	105,070 doses

4. HOSPITALISATION OF INFECTIOUS CASES.

European infectious cases are admitted where necessary to the Fever Hospital and Non-European infectious cases to Waterval Hospital. Occasionally for special reasons, infectious disease cases for which the Council is responsible are hospitalised elsewhere at the expense of the Council.

(i) Fever Hospital:

The hospital is administered on behalf of the Council by the Johannesburg Hospital Board which is reimbursed by the Council for the

expenditure/.....

expenditure incurred. The Physician-in-Charge and the Ear, Nose and Throat Surgeon are employed directly by the Council on a part-time basis. Admissions are arranged only through the City Health Department as part of its function in carrying out the Council's statutory obligations in regard to the control and prevention of the spread of infectious disease.

The full bed complement of the hospital, including the new ward block completed in March 1959, is 151 beds. Because of the low demand for beds, Wards 1, 2 and 3 were not opened during the year. The number of beds immediately available being 85. The daily average occupancy throughout the year was 37.35 beds (43.94%) and the total number of patient days was 13,633. The occupancy of beds has been steadily reduced during the last ten years owing to the progressive reduction in the incidence of infectious disease.

The number of patients admitted during the year was 932. There were 18 deaths and 27 operations (17 tracheotomies, 6 bronchoscopy, 2 biopsy of gland, 1 exchange transfusion, 1 foreign body removed from oesophagus).

The Transvaal Provincial Administration approached the Council to acquire the Fever Hospital for the extension of the Johannesburg College of Education but after prolonged negotiations the proposal fell away.

(ii) Waterval Hospital (Non-European):

The normal complement of this hospital is 310 beds (including 12 extra for children). Of this total 88 beds are allocated for infectious disease cases other than tuberculosis, 38 beds for medical and surgical cases occurring among Non-European employees of the Council and 184 beds for tuberculosis. In addition, 32 ambulant male tuberculosis patients are accommodated in the "resident outpatient" Section of the Hospital.

The hospital is entirely under the control of Bantu nursing staff at night. By day the wards are in the charge of Bantu sisters under the general supervision of the matron and two European sister-supervisors.

The hospital employs an occupational therapist who gives the adult patients instruction in leather work, basket work, shoe repairs, etc., which keeps them occupied and affords them an opportunity to earn a little money from the sale of made-up articles. A nursery school teacher is also employed to look after the children, including the older children who receive some elementary education.

The following table reflects the activities of the hospital for the years 1963 and 1962, the latter being in brackets:-

1963	Admissions	Discharges	Deaths	Patient Days	No. of Patients X-rayed
Tuberculosis	400 (382)	397 (381)	30 (26)	61436 (62996)	5076 (9471)
Infectious Fevers	982 (1163)	960 (1154)	73 (91)	23745 (19114)	
Council Employees	674 (877)	671 (869)	20 (31)	11143 (12301)	4489 (4849)
Other cases	5 (42)	7 (41)	- -	118 (1377)	
TOTALS:	2061 (2464)	2035 (2445)	123 (148)	96442 (95788)	9565 (14320)

The number/.....

The number of patients treated shows a substantial decrease over the previous year. The number of deaths from infectious fevers was also appreciably lower.

Diphtheria cases have shown a small drop in the number admitted and the number of deaths. This is undoubtedly due to the widespread immunisation of Bantu and other Non-Europeans.

Measles and whooping cough account for much severe illness among Bantu. The measles ward has remained "heavy" throughout the year with a relatively high mortality. Practically all the cases were under the age of two years.

Smallpox cases had to be admitted to the hospital during the latter part of the year for lack of other accommodation. There were 10 mild cases all confirmed by viral studies. The hospital is not suited to the treatment of smallpox but stringent precautions were taken.

(iii) Treatment of Bantu Employees of the Council.

In addition to their other duties, the staff of Waterval Hospital is responsible for the treatment of Bantu employees of the Council, including those injured on duty and entitled to compensation under the Workmen's Compensation Act. The employees may be admitted to one of the 38 beds available for this purpose or may be treated as outpatients. If the latter live at some distance they may be admitted as "resident outpatients" - i.e. they are accommodated in a portion of the hospital set aside for that purpose, and are fed from the hospital kitchen, but attend as outpatients without receiving nursing attention. Patients requiring major surgery or other special treatment are transferred to a provincial hospital.

In the course of the year the outpatient department treated 5,772 Non-Europeans employed by the Council for a total of 28,722 resident outpatient days and 8,341 casual outpatient attendances. These figures include 1,777 attendances by Council employees for tuberculosis and 2,475 resident tuberculosis patient days made by 128 patients.

674 of the employees were admitted to the Medical and Surgical ward, 671 being discharged. There were 20 deaths resulting from various diseases or other conditions affecting the following systems:- respiratory system (7), cardio vascular system (7), digestive system (4), and miscellaneous (2).

During the year 63 Municipal employees were admitted with the diagnosis of mental confusion. In 90% of these cases the mental confusion was due to malnutrition and avitaminosis. Other manifestations of malnutrition were seen in large numbers of employees.

The number of days lost through illness and the number of deaths must be related to the total number of unskilled Bantu employed by the Council. During the financial year ended 30th June 1963, 18,646 males and females absented themselves from duty through illness.

(iv) Laboratory Services.

The State Department of Health provides free laboratory services (in terms of Government Notice No. 1073 of 1956) for the diagnosis and

public/.....

public health control of specified infectious diseases, the diagnosis of neo-natal haemolytic disease and tests reasonably required for the diagnosis and treatment of patients at detached outpatient clinics. Other tests such as the bacteriological examination of domestic water supplies, dairy products and sewage effluents may be carried out at reduced charges by arrangement. The tests are performed by Government laboratories or are delegated to laboratories of the South African Institute for Medical Research in certain centres, including Johannesburg.

Full advantage is taken of the free tests by the Department, specimens being sent mainly from Fever Hospital, Waterval Hospital and the Bantu outpatient clinics, tuberculosis clinics and the Medical Examination Centre.

There are a number of tests not on the free list, including certain biological tests, water and milk samples, foods and dejecta in cases of suspected food poisoning, etc. The Council pays the South African Institute for Medical Research a composite fee of R20,000 per annum for the performance of these investigations.

The bacteriological examination of water and milk samples is shared between the South African Institute for Medical Research and the Department's own laboratory at Cydna; 1,756 samples of water were submitted to the Institute for bacteriological examination on behalf of the Rand Water Board plus samples from city taps and from borehole and other domestic and commercial sources. Details of tests of food, milk and water samples are indicated on Annexure 7.

5. TUBERCULOSIS SERVICES.

The staff establishment as at 31st December 1963 was 169 as detailed in Annexure 1. Of this figure 5 European and 13 Non-European posts were vacant pending the completion of the Riverlea and Western Township Non-European clinics.

Europeans.

European patients are supervised and treated in their homes, treated at the clinic or admitted to hospital where this is necessary and when beds are available. The domiciliary treatment is supervised by the medical staff and health visitors but injections are given by three full-time sisters forming part of the tuberculosis staff.

Clinic sessions are held twice weekly (on Mondays and Thursdays from 8 a.m. to 5 p.m.) at the Special Treatment Centre at the General Hospital. The attendances are reflected in the following table:-

1963	Cases	Contacts	Suspects	Total
First Visits	167	1,226	608	2,001
Re-Visits	3,218	3,361	1,207	7,786

During 1963, 164 patients were put on treatment as outpatients and 62 were taken off treatment. 613 patients were receiving treatment as at 31st December 1963.

Hospital beds/.....

Hospital beds are available at Rietfontein Hospital and Oaktree Chest Hospital and a few Johannesburg cases are treated in hospitals and sanatoria in other provinces.

Delays in admission to hospitals have been minimal. 116 patients were admitted to hospitals during the year and 127 were discharged. 34 were in hospital as at 31st December 1963. The number of cases treated in hospital is somewhat smaller than in 1962.

The sociological and X-ray services for Europeans and B.C.G. vaccination are dealt with later in this section of the report.

Non-Europeans.

Services for Non-Europeans follow the same pattern as for Europeans but the number requiring treatment is much greater, and co-operation by the patients cannot be relied on to the same extent.

Domiciliary treatment is given by Bantu nurses employed by the City Health Department and clinics are held twice weekly at each of the clinics in the Bantu townships. Treatment is also given at the head offices at 18 Hoek Street, mainly to patients who are working and who attend for injections before going to work, and also at the Medical Examination Centre attached to the Bantu Registration Depot. At the latter centre, cases found by clinical or X-ray examination are put on treatment or sent to hospital according to their needs.

The number of ambulatory patients receiving treatment at clinics or in their own homes is reflected in the following table:-

Township	Number of Patients			
	On Treatment as at 1.1.1963.	Put on Treatment During 1963	Taken off Treatment During 1963	On Treatment as at 31.12.1963.
18 Hoek Street				
Factory Workers	592	317	399	510
Domestics	766	495	446	815
Eastern Bantu Township	211	147	52	306
Moroka	1,508	1,013	836	1,685
Jabavu	1,671	1,185	1,204	1,652
Noordgesig	179	75	85	169
Orlando	845	413	419	839
Shantytown	459	225	291	393
Pimville	513	307	222	598
Western Township	221	208	111	318
Waterval Hospital	513	209	458	264
Medical Examination Centre	Nil	Nil	Nil	Nil
Mofolo South	3	108	26	85
GRAND TOTAL	7,481	4,702	4,549	7,634

Patients/.....

Patients requiring daily streptomycin are admitted to hospital. Patients with minimal or limited disease and a negative sputum are treated at work. Home visits are made three times a week and less frequent visits are necessary to patients with a negative sputum who are on tablet therapy.

Clinic Attendances:

Clinic	Cases		Contacts		Suspects		Totals	
	1st Visit	Re-Visit	1st Visit	Re-Visit	1st Visit	Re-Visit	1st Visit	Re-Visit
18 Hoek Street								
Factory Workers	367	19,141	4	4	33	508	404	19,653
Domestics	501	23,276	597	256	133	75	1,231	23,607
Eastern Bantu Township	132	8,554	115	347	52	54	299	8,955
Moroka	759	42,835	2,713	4,612	35	14	3,507	47,461
Jabavu	789	43,423	1,606	11,727	1	137	2,396	55,287
Noordgesig	31	11,623	132	1,396	41	87	204	13,106
Orlando	277	22,030	267	1,209	77	80	621	23,319
Shantytown	114	12,587	37	1,725	68	116	219	14,428
Pimville	162	15,532	426	1,227	75	80	663	16,839
Western Township	188	19,321	516	382	7	6	711	19,709
Mofolo South	30	343	42	5	2	Nil	74	348
Waterval Hospital	211	8,168	172	291	646	173	1,029	8,632
Medical Examination Centre	630	741	Nil	Nil	943	Nil	1,573	741
TOTALS	4,191	227,574	6,627	23,181	2,113	1,330	12,931	252,085

Two jeeps are provided for the transport of patients and contacts to Waterval Hospital for X-ray examination and/or treatment and for the transport of tuberculosis cases to the Disinfecting Station for onward transport to other tuberculosis hospitals. The number of persons so transported during 1962 was 5,332 but this was increased to 5,873 in 1963. The mileage covered was 33,898 miles.

The jeeps are now also used to transport nurses checking defaulters and to supplement the clinic services. 934 such vists were made. The jeep are stationed three times a week at vantage points in the outlying township while a Bantu nurse gives streptomycin injections to patients on this treatment. This has had a good effect in reducing defaulters.

The/.....

The home visits by tuberculosis staff are reflected in the following table:-

Clinic	Health Visitors	Domiciliary Staff
18 Hoek Street		
Factory Workers	5	Nil
Domestics	1,820	619
Eastern Bantu Township	429	1,212
Moroka	2,678	11,787
Jabavu	1,634	6,555
Noordgesig	84	1,919
Orlando	670	5,844
Shantytown	578	4,955
Pimville	281	3,993
Western Township	236	3,865
Mofolo South	Nil	Nil
Waterval Hospital	21	98
Medical Examination Centre	15	Nil
TOTALS	8,451	40,847

The number of patients treated in hospital during the year is reflected in the following table:-

Hospital	Number of Patients			
	In Hospital as at 1.1.1963.	Admitted During 1963.	Discharged During 1963.	In Hospital as at 31.12.1963.
Knight's Chest	143	236	221	158
Rose Chest	208	490	487	211
East Rand Chest	3	7	9	1
East Rand S.A.N.T.A.	26	11	35	2
Rietfontein	121	196	250	67
King George V	2	5	5	2
Waterval	151	400	* 427	124
Waverley Chest	149	272	258	163
Randfontein South	51	195	130	116
Meintjies Centre	4	8	7	5
Charles Hurwitz Centre	345	441	486	300
Sundry Hospitals	9	16	11	14
TOTALS	1,212	2,277	2,326	1,163

* Includes 30 deaths

The number of patients treated in hospital has increased slightly as compared with the previous year. Suitable hospital accommodation for Bantu is reasonably adequate but this is not the case in regard to Coloureds and Asiatics.

Negotiations by the local branch of the Christmas Stamp Fund to build a "sunshine ward" at the Charles Hurwitz Santa Centre to accommodate the children of tuberculotics have not yet been concluded.

X-ray Services/ .....

X-ray Services.

The following X-ray plants are available:-

(a) At Waterval Hospital there is a machine for taking large plates and another for 70 mm. pictures which is also capable of taking large plates. The use of the mobile 100 mm. unit has greatly reduced the use of these plants.

9,504 patients were X-rayed on large plates of which 5,076 were tuberculosis patients and no miniatures were taken.

(b) At the Medical Examination Centre for males there are two 70 mm. units with an attachment for taking large plates and there is an additional 70 mm. plant at the centre for females. These installations are used mainly for the examination of Bantu seeking work.

Miniature X-rays totalled 84,674 males and 11,891 females and large plates 2,297 males and 83 females. Of the males 0.71% and of the females 0.18% were positive.

(c) The mobile 100 mm. unit serves the clinics in the Bantu townships, Charles Hurwitz Centre and 18 Hoek Street. It is used for the routine X-ray of older children and adults who are cases or contacts. The total number X-rayed was 26,065. The mileage covered was 4,675 miles.

(d) S.A.N.T.A. (Johannesburg) undertakes miniature radiography on behalf of the City Health Department by means of two mobile 70 mm. units. The Association collects contributions from those willing to pay and the Council pays for the balance at the rate of 15 cents per miniature. The units visit employers' premises by arrangement where the numbers warrant it and they are stationed periodically at strategic points in the streets. Non-European suspects are referred to 18 Hoek Street and X-rayed by the 100 mm. mobile unit and Europeans are referred to the Municipal Chest Clinic.

The statistics are as follows:-

	European	Non-European	Total
Miniatures taken	26,265	49,513	75,778
Referred for large plates	524	2,120	2,644
Active cases found	11	188	199
Inactive cases found	50	290	340

The percentage of active cases found among Non-Europeans in this group was 0.37%.

(e) At the Municipal Chest Clinic for Europeans, the X-ray Department of the General Hospital provides a satisfactory service at agreed rates. A fluoroscopic screen has been installed at the clinic.

(f) Special X-ray Surveys:-

(i) Surveys of garment workers in the Reef and Pretoria area have been organised annually for the last five years by the Transvaal Clothing Industry Medical Aid Society and conducted by S.A.N.T.A. The Society has a very generous aid scheme for tuberculosis cases that must be hospitalised. The City Health Department pays for the X-rays of workers resident in Johannesburg.

The X-rays/.....

The X-rays are included in the table in paragraph (d) above.

The following is a brief summary of the details of the survey as from 1957:-

Total Persons X-rayed by S.A.N.T.A.		Notified Cases of Pulmonary Tuberculosis	
1957	20,197	92	(0.45%)
1958	17,529	28	(0.15%)
1959/60	17,457	59	(0.33%)
1961	17,648	57	(0.32%)
1962	17,974	93	(0.51%)
1963	21,535	87	(0.40%)

The reasons for the increase in the number of cases discovered in 1962 were because the miniature films were read independently by a consultant radiologist and the Chief Tuberculosis Medical Officer, thereby reducing the margin of 'reading' error, and because stricter criteria were applied to borderline cases which could be classified either as active or inactive disease.

(ii) A survey was made of municipal employees exposed to special occupational risk of pneumoconiosis. A total of 601 Europeans and 2,484 Bantu were X-rayed on 100 mm. films and, in case of suspicious results, on large plates. Apart from other unrelated pathology, 7 Bantu ex-miners were identified as suffering from pneumoconiosis and were referred for compensation to the Mines previously employing them. Another Bantu caused some difficulty in diagnosis but was finally labelled as pulmonary tuberculosis.

(iii) The Bantu staff of the townships' administration was X-rayed at the request of the Manager of the Non-European Affairs Department. Of a staff complement of 1,085, 808 were X-rayed (74.5%) and 8 cases (0.99%) of active disease were discovered, all of whom were hospitalised.

(iv) Bree Street Indian High School. A percutaneous B.C.G. Vaccination Campaign and an X-ray survey (100 mm.) was carried out in December 1963 of all children attending the Bree Street Indian High School, which accommodates 859 children, aged 7 to 14 years. The procedure followed was similar to that adopted in the mass campaign in Soweto but was complicated by the fact that some children had previously been vaccinated. Four active cases of tuberculosis were discovered.

Sociological Aspects/.....

Sociological Aspects.

Welfare workers attached to the staff of the Department investigate all reported cases of tuberculosis and obtain for them any assistance they require within the limits of what is available. Every effort is made to persuade employers to keep jobs open for their employees and to find employment for patients with arrested disease. Employers are co-operating well and some pay wages or part wages during absence from work although not obliged to do so.

The Department spends R51,123 per annum on feeding tuberculosis patients who are being treated at home. This expenditure is subsidised by the State Health Department. European patients receive pasteurised milk and Non-European patients supplementary foodstuffs in the form of protone, kaffir corn meal, peanut butter and skimmed milk powder. An extended feeding scheme for tuberculosis patients is under consideration.

The local branch of S.A.N.T.A. assists the families of tuberculotics in hospital or on domiciliary treatment by distributing high protein foods and blankets and making cash grants for rent, fuel and other necessities, mainly to Non-Europeans whose need is greatest but also to Europeans. The Association also assists in the rehabilitation of patients by finding employment and in other ways. The Council makes a grant towards this work of R30,000 per annum.

The Council spends considerable sums in providing and subsidising European and Bantu housing and is actively building houses for Coloureds. Consideration is readily given by the Council to remission or part remission of rentals where the bread-winner of a family is unemployed for any reason, including tuberculosis. Bad housing still plays a considerable part in the spread of tuberculosis, particularly among Coloureds and Asiatics, through unavoidable delays in providing satisfactory housing.

B.C.G. Vaccination.

The use of B.C.G. vaccine should be determined on the basis of the need for it in given individuals, or particular population groups, and under circumstances in which exposure to tuberculous infection cannot be avoided, or the risk of the disease is high.

This would appear to apply to a very large extent in our Bantu townships but in respect of the European population B.C.G. inoculation does not appear to be as urgent a problem. All persons with known communicable tuberculosis are under treatment either in hospital or at home under supervision. These measures are usually adequate to protect the remaining members of the family from the disease. The contacts are X-rayed at regular intervals and initially tuberculin tested and ideally all negative reactors should receive B.C.G.

Bantu: During the year under review routine clinic B.C.G. vaccination was considerably curtailed owing to the mass B.C.G. campaign in Soweto which was completed by the Assistant Medical Officer of Health (Bantu Areas) and the Assistant Chief Tuberculosis Medical Officer and their respective teams

Prior to this campaign routine B.C.G. vaccination in the townships was confined to 4,159 negative tuberculin reactors who were tuberculosis contacts.

Europeans:/.....

Europeans: Seven hundred and thirty-seven (737) tuberculin negative contacts were vaccinated. The number could have been increased but not all patients agreed to have their children and themselves vaccinated and there was a shortage of vaccine due to the mass campaign. The following institutions were tuberculin tested and negative reactors vaccinated with intradermal B.C.G. Eight hundred and fifty-one (851) persons were tested and 450 out of 462 negative reactors were vaccinated. The following are the details:-

1. B.G. Alexander Nursing College:

Number Heafed	Negative Reactors	B.C.G.	Conversion
244	152 (62.29%)	150	149 (99.3%)

2. Abraham Kriel Nursery School:

All children under age of 6 years.

Number Heafed	Negative Reactors	B.C.G.	Conversion
23	21 (91.36%)	15	15 (100%)

3. St. George's Home for Boys:

Number Heafed	Negative Reactors	B.C.G.	Conversion
6 - 13 years.			
72	52 (72.22%)	52	52 (100%)
13 years and over.			
107	57 (53.27%)	57	55 (96.49%)
Total 179	109 (60.89%)	109	107 (98.16%)

4. St. Mary's Orphanage/....

4. St. Mary's Orphanage:

Number Heafed	Negative Reactors	B.C.G.	Conversion
Under 5 years.			
19	15 (78.94%)	12	12 (100%)
6 - 13 years.			
68	63 (92.64%)	63	63 (100%)
13 years and over.			
27	18 (66.66%)	18	18 (100%)
Total 114	96 (84.81%)	93	93 (100%)

5. Medical Students:

Number Heafed	Negative Reactors	B.C.G.	Conversion
241	64 (26.55%)	64	

6. Dental Students:

Number Heafed	Negative Reactors	B.C.G.	Conversion
50	20 (40%)	19	

Unfortunately the conversions were not read owing to the intervening vacation. Students were asked however to record their reactions and inform the clinic. No details were submitted.

6. VENEREAL DISEASE SERVICES.

The Department conducts venereal disease clinics at a number of centres and at different times to ensure that treatment is available to all who need it. All examinations, treatments and investigations are free of charge.

For Europeans, clinics are conducted at the "Special Treatment Centre" at the General Hospital with four sessions per week.

For Non-Europeans, cases of venereal disease are treated at each of the seven poly-clinics in the Bantu townships, at the Medical Examination Centre, (attached to the Employment Bureau of the Non-European Affairs Department); at the Non-European Hospital and at Coronation Hospital. The tendency is to avoid set times for clinics and to treat cases as they appear.

The following/.....

The following table indicates the number of cases dealt with at the various treatment centres during the years 1962 and 1963 inclusive:-

Treatment Centre	1962		1963	
	New Cases	Total Att.	New Cases	Total Att.
Bantu townships and North Eastern Townships	2,084	13,740	2,427	15,551
Medical Examination Centre	846	2,075	1,046	2,741
Non-European Hospital	1,496	6,321	1,639	4,466
Coronation Hospital	741	3,124	522	1,443
	5,167	25,260	5,634	24,201
General Hospital (for Europeans)	416	1,170	559	1,300
Grand Totals	5,583	26,430	6,193	25,501

The statistics reflect a substantial increase in the number of new cases at the European and Bantu clinics. Several of the medical officers at the Soweto clinics comment on this and attribute the increase to lues and gonorrhoea and one emphasises the incidence among teenagers.

The attendances at clinics is not a true reflection of the incidence of the disease. Many patients receive treatment at outpatient departments of hospitals but the numbers are not recorded. Many others are treated by their private doctors who are under no obligation to notify cases and in fact do not do so. Any estimate of the incidence of venereal disease or of variations in the incidence must be based on personal evaluations. There is, however, a consensus of opinion that venereal disease, specially gonorrhoea, is on the increase.

An increase of extra-marital sexuality, pre-marital sexuality and sexual promiscuity generally, as reflected in a progressive increase in the percentage of illegitimate births, may be a factor.

7. PLAGUE PREVENTION AND ANTI-RODENT CONTROL MEASURES.

These activities are controlled and developed as a section of the Sanitation Branch working in close liaison with other sections in all matters concerned with the control of rodents and other pests.

The routine anti-rodent functions are as follows:-

(a) The administration of the Government Rodent Regulations to ensure that rodents are 'built out' as far as possible.

(b) The destruction of rodents in the City and adjacent areas by means of trapping, poisoning and gassing of premises.

(c) Assistance and advice to owners of properties in regard to the trapping and destruction of rodents on their premises.

(d) Regular inspection/.....

(d) Regular inspection and trapping for rodents on all municipal property and any necessary anti-rodent measures.

(e) Testing various types of manufactured boarding used for building purposes to determine their rodent proof qualities. This work is done in collaboration with the South African Bureau of Standards.

(f) Maintaining a rodent-free belt approximately three miles outwards from the city boundary. In the area to the south-west of the city, these activities are intensified and the belt is extended to five miles. The Bantu townships in that locality are regularly inspected and rodents are destroyed. Periodic inspections of the surrounding veld are undertaken to ensure that there is no undue infestation or rodent mortality outside the rodent free belts.

(g) Regular submission of specimens of rodents and fleas caught in the city and on the veld to the Plague Research Laboratory of the South African Institute for Medical Research for routine examination for plague.

No cases of human or rodent plague occurred during the year, and as a routine control measure 351 rodents and 27 batches of fleas, taken from various places in the City, veld and environs, were sent to the Plague Research Laboratory for examination for plague with negative results.

Tests were also made on 161 rodents submitted for the determination of murine typhus and tick bite fever infection. In 6 instances possible signs of infection were found and precautionary steps were taken accordingly.

Other activities concerning rodent infestations throughout the year involved 2,534 inspections, re-inspections and interviews by health inspectors, and a combined total of 124,652 visits by pest control overseers operating in the city and contiguous country areas. Premises requiring trapping or other treatment for rodent infestation entailed 45,065 town and country visits. 26,976 separate premises received gassing treatment prior to demolition or in other appropriate circumstances. A total of 25,152 rodents, including 8,804 domestic rats, were known to have been destroyed.

Anti-coagulant poison bait is the main method of destruction as it reduces the visits from daily to once a week as compared with trapping but it results in fewer rodents being recovered.

The total number of rodents destroyed as a result of large scale gassing of rodent burrows on the veld and of the use of P3 (poison traps) elsewhere is far in excess of the figures quoted as so many dead rodents are not retrieved.

Stringent precautionary measures against rodents have been maintained throughout the Bantu townships and around the boundaries. Gerbille infestation occurred in some areas but as a result of the constant use of three carbon monoxide gassing machines most areas have been cleared. Heavy Gerbille infestation was found in Bosmont extending into Newlands and Newclare.

Periodic infestations/.....

Periodic infestations of this type acts as a warning that constant surveillance and destruction of gerbilles is necessary in enzootic plague areas. Batch specimens sent to the South African Institute for Medical Research comprised 529 rodents and 27 batches of fleas.

The activities of the Department in regard to other pests are recorded later in this report.

IV. MATERNAL AND CHILD HEALTH SERVICES.

1. MATERNAL HEALTH SERVICES.

The maternal services include the supervision of nursing homes (including those admitting medical and surgical cases), supervision of practising midwives, the investigation of maternal deaths and of certain communicable diseases. The supervision of nursing homes is reported under this section as the checking of nursing care, particularly the care of mothers and infants, is an important aspect of the service.

(i) Supervision of Midwives.

The Senior Health Visitor (Nursing Homes and Midwives) and her assistants supervise the activities of midwives practising in the municipal area, and in so doing ensure compliance with the provisions of the regulations under the Public Health Act, which require (inter alia) that all practising midwives must be listed with local authorities and that they submit their registers and equipment for regular inspection.

The midwives on the list during the preceding and current years were as follows:-

Race	1962		1963	
	Certificated	Uncertificated	Certificated	Uncertificated
Europeans	143	5	153	3
Coloureds	21	-	20	-
Bantu	330	1	291	-
Asiatics	8	-	8	-
Total	502	6	472	3

For various reasons such as deaths, discontinuing practice, inability to trace, etc., the names of 47 trained midwives were removed from the list of practising midwives and 27 were added. The names of 3 untrained midwives (2 European and 1 Bantu) were deleted at their own request.

The bags and registers of midwives are inspected quarterly and where necessary, midwives are visited in their homes. There were 240 bag inspections, 635 inspections of registers and 123 home visits during the year.

(ii) Supervision of Nursing Homes.

The Senior Health Visitor (Nursing Homes and Midwives) and her staff carry out regular inspections of all private hospitals, nursing

homes/.....

homes and maternity homes in the City area to ensure that they are conducted in a satisfactory manner and in connection with the licensing of these institutions under the Public Health By-laws and registering with the State Department of Health. There were 871 visits during the year and 38 interviews with owners and architects.

The number of licensed nursing homes at the end of the year remained at 30. There was much activity during the year to effect structural improvements and to provide additional accommodation and most of the nursing homes now comply with the Nursing Home By-laws promulgated on the 12th April 1961, or will do so when work planned or in progress is completed.

Numerous bacteriological investigations were carried out by members of this section assisted by a member of the health inspectorate staff, in both general nursing and maternity homes, in respect of the control of infection in nursing homes. In addition, a series of investigations was carried out in connection with theatre disinfection and the disinfection of bedding.

The lack of co-operation from directors and matrons of nursing and maternity homes nullified the Department's proposed scheme for the education of nursing staff at group level on the "Control of Cross Infection in Hospitals". However, a good deal of health education in this regard has been effected at individual level.

This education has been based on preventive techniques with stress on the sterilisation of syringes and equipment, the use of disposable equipment and the storage and transportation of sterile packs; the disposal and incineration of soiled dressings and ward refuse; and hand washing and the use of barrier creams by nurses doing dressings and midwives handling infants.

Institutions for the accommodation of the aged, other than those registered as nursing homes, were inspected by this section during the year. A general improvement in the standards of these institutions has been achieved, but there are four homes which cause the Department some concern and which require constant supervision.

Two reports in regard to deaths due to pregnancy and childbirth, one covering the period 1962 and one the period 1959 to 1962, together with a supporting report on prematurity rates were drawn up as a basis for discussion with the group of obstetricians investigating the possibility of introducing an obstetric flying squad service in the Municipal area. These reports on maternal deaths evidenced the increasing number of deaths due to abortion with or without sepsis. The conclusion was eventually reached that few of the deaths could have been prevented by such a service and that this had to be weighed against the difficulties in providing it.

(iii) Investigations Undertaken/.....

(iii) Investigations Undertaken.

(1) The following were notified to the Department during 1962 and 1963:-

	1962.	1963.
Maternal Deaths	32	40
Puerperal Sepsis	37	37
Pemphigus Neonatorum	16	9
Ophthalmia Neonatorum	28	22

All these reports were investigated by the Senior Health Visitor (Nursing Homes and Midwives).

(2) Of the 369 illegitimate births notified to the section 33 were imported. Of the local cases 10 died, 149 were kept by their mothers and 6 were still born. The remaining 201 babies were placed for adoption through registered adoption societies. 3 adoptions were arranged privately.

(iv) Midwifery Services for Bantu.

This section continued to supervise the midwifery service in the the Bantu townships in conjunction with the Senior Health Visitor (Soweto). In this connection 193 visits were paid plus 97 visits to Non-European Maternity Hospitals. An assessment of case loads for midwives in the various Bantu townships in relation to case loads and b.b.a.'s (births before arrival of midwife) is as follows:-

Township	No. of Midwives (Excluding ANC & Admin. Staff)	No. of Notified Births for Area	Case Load	% of B.B.A.'s
Pimville	12	1,095	91.25	28.76%
Moroka	29	3,524	121.51	43.89%
Jabavu	48	5,204	108.41	54.61%
Shanty	9	616	68.44	17.85%
Orlando	14	1,257	89.78	30.62%
Eastern	2	95	47.5	18.94%
Noordgesig	3	188	62.66	12.23%

2. CHILD HEALTH SERVICES.

(i) Home-Visiting.

This important aspect of community health work continued to provide the backbone of the service. Entry of the health visitor into the home was gained on notification of a birth. This entry provided the health visitor with the opportunity to supervise the health and progress of the infant as well as all other members of the family. Health education and advice on nutrition was given and a check on the immunisation state of the children made at regular intervals. Problems and abnormalities which fall outside the scope of the health visitor were referred to suitable sources for early correction and treatment.

Home visits/.....

Home visits paid:-

Race	Births Investigated	Home Visits
Europeans	9,669	52,777
Coloureds	1,684	11,765
Asiatics	496	3,995
Bantu (Central)	929	2,191
Total	12,778	70,728

The visiting of geriatric cases in their homes has not become an established service yet, but during the year health visitors looked in on old age pensioners whenever possible and at Christmas time assisted in delivering parcels of food from the Rand Daily Mail Fund to the aged in their areas.

Monthly reports were submitted to the Commissioner for Child Welfare on 105 protected infants.

For educational and statistical reasons health visitors investigate all infant deaths. 348 such investigations were conducted and although this forms the most unpopular part of the health visitors' work, it is felt that the importance of the results does not justify the discontinuing of these investigations at present.

Mental health forms an essential part of all community services. In the past, there has been some cloudiness as to where the health visitor fits into this picture. During July of 1963, a letter was received from the Secretary for Health in which it was said ".... Health Visitors shall in the future be able to work in respect of mental health as for example, to assist the psychiatrist under the general supervision of the psychiatrist, to visit patients at home, make investigations of families in connection with mental health, etc." This affords the opportunity of developing mental health work in the community and the utilisation of the health visitors' services in this field.

Kwashiorkor notifications in the central areas were referred to health visitors and were investigated wherever possible. Many cases were not traced owing to false addresses being given, patients having moved or returned to a "farm" or outside area from which they come to seek medical aid. Where the case was traced the health visitor offered advice and assistance in the form of skimmed milk and persuaded the mother to attend the nearest clinic for supervision.

Kwashiorkor cases notified for the central areas:

European	1
Coloured	16
Asiatic	2
Bantu	146
Total	165
Traced and advice given	61
Died in Hospital	4

On completion/.....

On completion of the sound-proofing of a room on the 6th floor at 18 Hoek Street, in May, deaf screening of infants and pre-school children was started. The importance of discovering defects as early as possible cannot be sufficiently stressed. Two health visitors attended a special course in deaf screening at Manchester University during a visit to the British Isles, and have been responsible for conducting the tests on children referred from areas in Johannesburg. So far only infants and toddlers falling into specially vulnerable groups such as prematurity, birth-injury, repeated otitis media, history of deafness in family and so forth have been tested. It is hoped gradually to devote more time to this service so that it will become a routine in the examination of all infants. Some difficulty is experienced in arranging appointments. On many occasions mothers failed to keep appointments so that sessions specially allocated for the purpose were not utilised to the full and new appointments had to be arranged.

Number of children tested	80
No response to hearing tests	2
Hearing defect in both ears	4
Hearing defect in one ear	1
Testing unsuccessful (to be repeated later)	3

The cases showing abnormality of hearing were referred to general practitioners or to the Children's Hospital for further investigation and treatment.

(ii) Child Health Clinics.

Child Health Clinics were distributed as follows:-

26 for Europeans providing 31 sessions.
4 for Coloureds providing 6 sessions.
1 for Asiatics providing 1 session.
1 for "central area" Bantu providing 3 sessions for the first half of the year.
1 for "central area" Bantu providing 1 session for the second half of the year.
1 Mobile Clinic providing 5 sessions for Coloureds, 1 for Asiatics and 1 for central Bantu.

This provides a total of 39 child health clinics conducted weekly and the mobile van providing 2 all-day and 6 half-day clinics for Non-Europeans.

With the development of the Coloured areas better facilities for child health have been sought. With the co-operation of the Division for Coloured and Asiatic Affairs a clinic was established in the Administrative Building in Riverlea until a permanent clinic can be erected in the area. This released the mobile van formerly functioning in Riverlea so that this session could be transferred to Bosmont where the services were urgently needed. During the year notification was received from the Department of Bantu Affairs that the premises at Jubilee Centre were required for administrative purposes so that they would not be available to us for the 3 child health sessions conducted weekly for Bantu residing in the central areas.

Although/.....

Although it is illegal for Bantu infants to reside in the central areas, it was felt that temporary services should be provided until such time as the problem no longer existed. A clinic was opened in Eastern Bantu Township, known as Avenue Clinic, to cater for Bantu babies residing in the Central areas. This clinic was accessible only to the south-easter areas and therefore it became necessary to provide a session in the mobile clinic stationed in the Bantu sports ground in Von Wielligh Street, for th people from the north-western areas.

Asiatic attendances have been decreasing as these people were moved out of the central areas and one session of the mobile clinic formerly for Asiatics was utilised for the Bantu clinic.

Attendances at clinics were:-

	1962.	1963.
European	81,158	87,333
Coloured	12,557	36,351
Asiatic	5,602	8,329
Bantu - central areas	11,716	7,347
Total	111,033	139,360

Of the total figure 19,281 consisted of Coloured, Asiatic and Bantu attendances at the mobile clinic.

Medical officers attended sessions at all the child health clinics, medically examining all new attendances and re-examining them whenever necessary. Only a small number of the total pre-school age group were examined, as facilities do not exist for all. Only children attending subsidised nursery schools were examined at their schools regularly.

Infant examinations were:-

European	8,718
Coloured	2,634
Asiatic	791
Bantu - central areas	831
Total	12,974

Pre-school examinations 5,631

These totals compared with 12,272 and 4,860 for 1962.

The child health medical officers supervised the issues at the clinics of subsidised skimmed milk powder to infants showing signs of malnutrition or failure to thrive. 10,197 lbs. of skimmed milk were distributed from clinics in the central areas.

(iii) Immunisation Services : City Area.

Immunisation of the public against preventable diseases continued steadily throughout the year. European clinics were conducted in the city clinic on three days every week and at two outlying points, namely South Hills and Newlands every sixth week. The Coloured community was catered for by two clinic sessions conducted six-weekly and by the mobile

van/.....

van where immunisation was incorporated with the child health clinics every week at Albertville, Riverlea and Western Coloured Township. Oral polio immunisation was given weekly at the Indian clinic in Fordsburg and for the central Bantu at the Avenue Clinic and mobile van session at the Von Wielligh Street point.

Immunisation was offered against poliomyelitis, diphtheria, whooping cough, tetanus and smallpox.

Members of the staff of the South African Institute for Medical Research were assisted in a trial of measles vaccine at two children's homes in Johannesburg but the vaccine was not made available for the general use of the European population.

The immunisation campaign in schools against diphtheria entered its fourth year and all provincial and private schools, where the service was wanted have now been visited. 44 schools were immunised during the year, bringing the total number of schools visited to 157.

Immunisation figures for the year:-

Type	European	Coloured	Asiatic	Bantu	Total
D.W.T.	5,520	1,612	101	312	7,545
Diph./Tet.	1,214	396	-	14	1,624
Diph. P.T.A.P.	776	338	230	-	1,344
Boosters	10,458	289	148	1	10,896
Tetanus & others	354	2	-	5	361
No. of injections	35,765	7,638	752	1,366	45,521
Vaccinations	5,462	1,811	-	386	7,659
Oral Polio Feeds					
No. 1	11,433	2,313	577	586	14,909
No. 2	11,164	2,170	318	400	14,052
No. 3	11,732	1,889	340	319	14,280
Total	34,329	6,372	1,235	1,305	43,241

The immunisation of new-born infants and immigrants with oral poliomyelitis vaccine has been very well maintained. Regulations making poliomyelitis immunisation compulsory for children up to 16 years and immigrants up to 40 years were gazetted on 27th December 1963. It is anticipated that this will increase the number of attendances at immunisation clinics soon.

(iv) Nursery School Service.

This service comprises three components which are dealt with in the following paragraphs.

The future of the European nursery schools conducted by the Council is still very uncertain. The Director of Local Government has instructed the Council to find voluntary welfare organisations to take them over. Letters were sent to eligible organisations and some have asked for further information. Negotiations are proceeding in respect of the La Rochelle Nursery School.

(a) Nursery School Medical Services/.....

(a) Nursery School Medical Services.

During the year there were three medical officers available for medical supervision of nursery school children. The service is provided at the 7 municipal nursery schools (5 European and 2 Bantu) and at 41 non-profit-making nursery schools (39 European and 2 Coloured). The examinations totalled 5,631 (4,664 European and 286 Bantu) of which 1,900 were first examinations.

The physical, mental, emotional and social problems were assessed and referred where necessary. The parents were required to fill in a form giving basic medical data on admission of the child. The parents were also interviewed where possible to impart basic health education.

Stress was laid on the prevention of diseases in the children and a check made to ensure that every child was immunised against smallpox, diphtheria, whooping cough, tetanus and poliomyelitis. A form was sent to every child leaving nursery school reminding parents of the necessity for receiving booster injections for diphtheria and tetanus.

Each child was fully examined at least twice a year and the findings recorded on a medical card kept at the nursery school. Height and weight were measured at least 4 times a year and charted.

Visual screening was done by the supervisors with simple apparatus after being trained in the methods used. Doubtful cases are referred to the medical officers who referred them to ophthalmologists where necessary.

Any child suspected of being hard of hearing was referred to the special screening clinic at 18 Hoek Street for screening.

Every child was tuberculin tested, the Heaf test replacing the patch test. Children with positive results were referred to their own doctors or to the Municipal Chest Clinic.

Routine stool testing was done at the municipal nursery schools and simple treatment given where necessary or children were referred for treatment.

Dental services are provided for pre-school children by the Johannesburg Coronation Dental Infirmary. The children are examined twice a year. This institution is supported by the Johannesburg City Council, the Transvaal Provincial Administration and the State Health Department and is conducted by a board comprising representatives of these bodies and the Dental Association of South Africa. Services are also provided for indigent and semi-indigent school children and for mothers in the ante-natal and post-natal period.

The records of pre-school children who have been medically supervised during their attendance at nursery schools are handed over to the school authorities when they enter primary schools, as school medical services are provided by the Hospital Services Branch of the Transvaal Provincial Administration and not by the City Health Department. The Medical Officer of Health does, however, supervise infectious diseases among school children and their exclusion from school where necessary, in terms of regulations promulgated under Section 138 of the Public Health Act.

(b) Supervision of Nursery Schools/.....

(b) Supervision of Nursery Schools.

This includes all pre-school institutions conducted privately.

Control is exercised under the Town Planning Scheme and the Public Health and Building By-laws and by means of a certificate which is required by the Social Welfare Department from Council's officials in terms of Section 4(2) of the Regulations under the Children's Act, 1960 (Proclamation No. 524 of 30th March, 1961). The certificate applies only to pre-school institutions registrable by the Social Welfare Department in terms of Section 42 of the Children's Act and this does not include nursery schools.

Control is usually triggered off by an application for permission for change of use under the Town Planning Scheme but once the new use is established transfer may take place without the Department being notified.

Standards for the building and for facilities for the preparation of food can be controlled under existing by-laws but other important matters can only be dealt with by persuasive methods. These include the control of indoor and outdoor space per child, furniture and equipment required, the conduct of the nursery school, keeping of records and registers, safety measures, staffing standards and medical supervision. Special by-laws are required to control these aspects but cannot be promulgated until the necessary powers are written into the Local Government Ordinance. Application has been made for such powers but without success.

There are 57 nursery schools that receive a token grant from the Council which qualifies them for a subsidy from the Transvaal Education Department. They cater for approximately 3,000 children. Of these 44 take advantage of the Department's Medical Service.

There are 46 private pre-school institutions registered under the Children's Act, catering for 1,500 children and conducted for profit.

There are approximately 35 nursery schools for Bantu, the majority ($\pm$ 30) of which are conducted by the African Self-Help Association.

The Inspectress of Nursery Schools keeps all these institutions (profit-making and non-profit-making) under observation and handles applications for the establishment of proposed new pre-school institutions. This entails discussions of plans with applicants and their architects, visiting proposed sites, advising regarding standards and by-laws applicable to the buildings, etc.

(c) Municipal Nursery Schools and Day Nurseries.

The City Health Department conducts five nursery schools for Europeans and two day nurseries for Bantu.

In maintaining the nursery schools and day nurseries particular attention is given to the physical, mental and moral health of the children, to the promotion of normal habits and the correction of physical, psychological and moral defects. All the children have the benefit of regular medical examination, treatment of minor ailments, regular dental inspection and prophylactic treatment, treatment of psychological defects, behaviour difficulties and abnormalities

(by/.....

(by the Johannesburg Child Guidance Clinic - for Europeans only), other specialist services and regular home visiting by the staff. The diet of the children is supplemented by means of a prepared midday meal, additional milk and other protective foodstuffs.

The average enrolment at the European schools was as follows:-

La Rochelle Nursery School	59
Judith's Paarl Nursery School	56
Vrededorp Nursery School	30
Fordsburg Nursery School	44
Newlands Nursery School	29

The La Rochelle buildings were specially erected as a nursery school and the Judith's Paarl buildings are also owned by the Council. These schools are well supported and have long waiting lists.

The Vrededorp Nursery School buildings were purchased by the Transvaal Education Department and have been demolished. The nursery school was moved to the old Trap der Jeugd Primary School buildings on the 7th May. Accommodation is available for 45 children but applications for enrolment fell short of this total.

The Transvaal Provincial Administration approved of the erection of a new building for the Newlands Nursery School and plans have been drawn for a new building to be erected in 1964. There is a long waiting list for this nursery school.

The Fordsburg Nursery School is conducted in rented premises at the Octavia Hill Flats. Of the 45 children enrolled only 5 live in the Flats. The balance come from Mayfair.

The two Bantu nursery schools are conducted at Chiawelo and Jabavu and have an enrolment of 114 and 134 respectively. A building has been adapted and altered to provide new premises for the Jabavu Nursery School but will only accommodate 80 children.

V. MEDICAL SERVICES IN BANTU TOWNSHIPS.

Comprehensive medical services, comprising curative and preventive aspects, have been maintained in the Council's Bantu Townships and are centred on 6 polyclinics plus a clinic for tuberculosis patients.

(i) Outpatient and Midwifery Services.

These are grouped together as they are carried out by the Council on behalf of the Transvaal Provincial Administration which has subsidised them since 1st April 1958, pending the taking over of executive responsibility at some future date.

A five year plan for the progressive transfer of these services has been approved by the Provincial Administration and by the City Council. The existing and proposed distribution of clinics is shown in Annexure 9 (A and B). The clinic at Moroka will be replaced by a new clinic at Senaoane, a new clinic building will be provided at Pimville on a more central site, and the clinics at Shantytown and Noordgesig will eventually be closed. New buildings will be provided adjacent to the clinics for

preventive/.....

preventive and promotive services. The implementation of the transfer has been the subject of correspondence and interviews and will be further pressed in the forthcoming year.

Charges were collected for these services in terms of the Hospitals Ordinance. Approximately 22% of those attending clinics were not charged for treatment, 35% paid 25 cents at the time of attendance and most of the remainder were required to pay later. The composite fee for ante-natal care and confinement is R1-50 (15/-), or twice that amount if the confinement takes place in hospital. The imposition of charges has reduced attendances for trivial ailments without depriving those who need treatment of the benefits of the service.

The curative and midwifery services were maintained at an efficient level during the year and no special problems were encountered. The immunisation campaigns in May and October meant the withdrawal of substantial numbers of staff from routine work at the clinics for a total of 30 days but the staff remaining made a commendable effort to ensure that the patients did not in any way suffer.

Detailed statistics for the medical services are included in Annexure 8.

The redistribution of the nursing staff between general nursing and midwifery duties introduced in 1962 has had the effect of reducing the case load to 100 births per midwife. There has been a resulting improvement in the Midwifery Service with a reduction in the b.b.a. rate (birth before arrival of midwife) to 43.7%. Moreover, radio communication makes it possible to arrange for rapid removal of abnormal cases to hospital.

All the clinics are linked with each other and with Baragwanath Hospital by radio communication. The ambulances also carry two-way sets. The walkie-talkie sets issued to midwives on night duty are of great assistance in view of the almost complete absence of telephones, but in some areas their operation is somewhat unreliable for technical reasons.

An ambulance service is conducted by the Fire Department which removed 74,958 patients during the year. This is supplemented by a bus ambulance for non-stretcher cases operated by the Province. A bus does a circular tour between all clinics and Baragwanath Hospital twice daily. A further 5,873 patients (mainly tuberculotics) were transported by the City Health Department which also provided a transport service for nurses and midwives to assist them with their district work.

There is a close association between the clinic services and Baragwanath Hospital and the staff of the clinics and that of the hospital co-operate very satisfactorily.

(ii) Child Health Services.

The domiciliary health visiting service started as a pilot service in Jabavu and Moroka in June and July 1962 and has now been extended to the whole area except Pimville, Dube and Orlando, which will be included in the service early in 1964.

The basis/.....

The basis of the reorganised service is domiciliary health visiting, serving the family as a unit and with records kept in a family folder. The health visitors now deal with all preventive health matters affecting the family, including child welfare, immunisation procedures, follow up of malnutrition cases discharged from hospital, mental health and social problems and any other factors bearing on the health of the family. Problems outside the scope of the service are referred to the appropriate agency. The link between the home visiting and the clinics is maintained by organising sessions by areas so that the health visitor for the area will attend her own mothers.

This service has promoted close contact and cordial relations betwee health visitors and the families for whom they are responsible. Each Bant health visitor is allocated 3,200 families - a somewhat high case load which will be eased when circumstances permit. The heavy immunisation programme was a further drain on their resources. Wasted visits are a constant problem but no immediate solution can be found.

In spite of the difficulties so far encountered good results have been achieved and these may be expected to build up as the staff gain experience and the case load is eased through completion of the initial immunisation programmes and in other ways.

(iii) Immunisation Services.

Routine immunisation by the clinics and the health visitor service was continued against diphtheria, whooping cough and tetanus (d.w.t.) and against poliomyelitis and smallpox. This was supplemented by a mass campaign for d.w.t. booster doses combined with vaccination with live measles vaccine from 6 - 24th May and by a B.C.G. vaccination campaign against tuberculosis from 7 - 31st October. There were also localised campaigns against smallpox in November and December 1963.

Routine d.w.t. immunisation was suspended one month before, during, and one month after the May campaign and smallpox vaccination was discontinued from 10 days before until 10 days after the campaign. In these services d.w.t., smallpox vaccination and, if necessary, oral poliomyelitis vaccination, are administered concurrently, but smallpox vaccination was discontinued because of lack of experience of the combined administration by injection of two viruses - a smallpox vaccine and live measles-virus vaccine. Again during the mass percutaneous B.C.G. immunisation and diagnostic campaign carried out in October, routine d.w.t. immunisation and smallpox vaccination was discontinued from 1 September to 30 November 1963 because of the possibility of precipitating complications or of weakening the antigenic response of the B.C.G. vaccine by competition with more potent antigens. Routine smallpox vaccination was therefore unavoidably discontinued for 4 months of the year because of the unusual circumstances of 2 mass and complex immunisation drives having to be conducted in the same year. Since re-establishment of routine immunisation, demand by the public has been so great as to be met with difficulty.

Oral poliomyelitis vaccine was given by health visitors of the pilot health visitor service during clinic sessions and on domiciliary visits when tracing the new-born and immigrant children. The vaccine is administered by general clinic staff to mothers attending ante-natal clinics. Poliomyelitis immunisation was not interrupted at any time during the year. The work of the remaining oral poliomyelitis

immunisation team/.....

immunisation team of 2 Health Visitors who cover the new-born and immigrant children in Pimville, Orlando and Dube (the areas not yet incorporated in the Health Visitor Service) was interfered with during 6 - 24 May when both health visitors were seconded to teams of the measles, diphtheria, whooping cough and tetanus immunisation campaign. However the work was kept up to date by additional effort on resumption of the service. Difficulties continued to be experienced in tracing the new-born in the home for oral poliomyelitis and other immunisations as exemplified in the figures of the immunisation team for the first quarter of 1963:-

Feeds given	527
Moved	299
Out	241
Unknown	149
Died	68
Refusals	2
Visits	1,286

It is believed that this problem will be greatly lessened when the expanded health visitor service commences routine percutaneous B.C.G. inoculation of the new-born, which takes place as soon as possible after notification of the birth without the enforced delay of 3 months as in the case of poliomyelitis immunisation. The following table of returns for the quarter ended 31 August 1963 to the State Department of Health illustrates the significant decrease in the number of second and third feeds of vaccine administered amongst the Bantu:-

Doses Administered	Europeans	Coloureds	Asiatics	Bantu
First	2,212	607	96	7,802
Second	2,242	506	77	3,747
Third	3,375	469	82	2,229
Total	7,829	1,582	255	13,778

The late attendance of many mothers at ante-natal clinics prevents them from receiving the full course of oral vaccine.

The regulations introduced at the end of the year making immunisation against poliomyelitis compulsory amongst children and immigrants in the various racial groups apply to children aged 3 months to 9 years in urban Bantu areas and require the issue of certificates of completed poliomyelitis immunisation. The certificates issued by the City Health Department are stamped on the back with tables for recording of inoculation with diphtheria, whooping cough, tetanus, smallpox, measles and B.C.G. vaccines, and for recording of allergies, drug sensitivities, corticosteroid therapy or affliction with epilepsy or diabetes.

Combined Measles, Diphtheria, Whooping Cough and Tetanus Immunisation:

The fourth booster phase of mass diphtheria, whooping cough and tetanus immunisation was scheduled for May 1963. As epidemics of measles in these areas were frequently severe and the number of annual deaths from measles exceeded those from diphtheria, supplies of Ender's

attenuated/.....

attenuated live measles-virus vaccine (Edmonston Strain) made available through the courtesy of the World Health Organisation were gratefully accepted and, after various preliminary investigations, measles vaccinati of children in the age group 3 months to 2 years was combined with the booster phase of diphtheria, whooping cough and tetanus immunisation.

The campaign was completed in 14 working days between 6th - 24th May 1963. The results are shown in the following table:-

	Antigens			Measles Vaccination	Total Inoculations
	D.W.T.	D.T.	Total		
	3 months to 2 years	3 years to 9 years		3 months to 2 years	
Inoculations	21,947	61,400	83,347	22,289	105,636
Percentage of Estimated Target	73.2%	87.7%	83%	74.3%	

D.W.T. = diphtheria, whooping cough and tetanus immunisation;
D.T. = diphtheria and tetanus immunisation.

An additional 342 children received measles vaccine alone as they had inadvertently been given a booster injection of triple antigen at a clinic shortly before commencement of the phase.

In this study the concurrent administration of live attenuated measles-virus vaccine with triple antigen proved safe. Clinical reactions to the measles vaccine tended to be rather severe for a routine immunisation procedure. The concomitant use of gamma-globulin was impracticable but the use of the vaccine by itself was justified because measles is such a critical problem in the Bantu population. In communities at intermediate risk an inoculation of inactivated vaccine could be given 2 months before an injection of live attenuated measles-virus vaccine. Reactions would be minimal and this procedure would permit combined administration with diphtheria, whooping cough and tetanus antigens. Where measles is a lesser health problem there would appear to be no indication for mass immunisation and live attenuated measles-virus vaccination should be administered with gamma-globulin and possibly reserved, at this stage, for cases at high medical risk should they contract natural measles infection.

Following the measles vaccination campaign there has been a marked drop in morbidity and mortality from this disease amongst true residents of the Bantu areas. Medical officers of hospitals, municipal clinics and Tladi clinic were requested to complete a return form when making a diagnosis of measles. During the period 11th July to 31st December 1963 a total of 260 cases of measles in non-vaccinated children was reported and 68 cases amongst vaccinated children. The cases amongst vaccinated children included only a few where persistence of maternal antibody could have interfered with antibody production. The results are interpreted as evidence of the complete efficacy of Ender's vaccine and this is supporte by reports in the world literature and by the authorities at the

Poliomyelitis Research Foundation who consider that there is no proven evidence of post vaccinational infection in persons without circulating maternal antibody. The notification of 68 cases of measles in the vaccinated therefore heightens the contention that returns of this nature are extraordinarily unreliable as was also shown when kwashiorkor was made a notifiable disease. There may be various undetected reasons in respect of the measles return but the following is of interest. One vaccinated child developed a biphasic pyrexial illness in December 1963 with morbilliform rash indistinguishable from measles but of coxsackial origin. Another vaccinated child developed a similar condition. The mother contracted the illness a few days afterwards and she had had measles as a child. Confirmation of accuracy of notification of measles would require viral studies which become impossible under field conditions.

B.C.G. Immunisation.

In close consultation with the State Department of Health a large-scale B.C.G. immunisation campaign was undertaken in these areas as an immunising and preliminary diagnostic procedure. A study was undertaken to establish field criteria of local hypersensitivity reaction to percutaneous B.C.G. inoculation with Heaf's pattern multiple puncture apparatus, and this was followed by a field study to test the proposed organisation. The mass campaign was completed in 18 working days in October 1963 and the diagnostic reaction to inoculation was read 24 hours later in persons who could be traced in the age group 0 - 20 years.

A total of 160,298 inoculations was given to all age groups in the mass campaign. In addition 2,100 persons were inoculated in a pilot field study. A total of 124,997 persons was inoculated in the priority age group 0 - 20 years, being 71.4% of the calculated target of 175,000 people in the age group living in these areas. Of those in this age group, in whom the reaction to percutaneous B.C.G. inoculation was to be assessed 24 hours later, 91,966 persons were traced and the reactions recorded by the reading teams. Reading teams therefore traced 73.6% of their possible target. A total of 12,759 positive reactions was recorded. This total obviously included conversion to positivity from previous B.C.G. vaccination, which had been relatively limited in these areas, instances of exposure to infection without clinical disease, and previously diagnosed cases who happened to present for inoculation. A follow-up programme of further investigation and therapy is scheduled for the first half of 1964. As new cases are identified, they will be put on treatment according to their needs but until all positive reactors have been investigated, it is not possible to say how many new cases have been brought to light. Routine percutaneous B.C.G. inoculation of the newborn will commence at the beginning of 1964.

Smallpox Vaccination was continued as a routine except for periods of interruption noted earlier in this section of the report. Localised vaccination campaigns were carried out in Chiawelo and Pimville in November and December 1963, following the discovery of 11 cases of smallpox in these townships. It was estimated that an average of 25% of the population were unvaccinated but the resumption of full routine vaccination is rapidly improving the position.

The following table/.....

The following table summarises the immunisation of all types in the Bantu areas for the year ended 31st December 1963:-

Immunisation System	Polio	D.W.T.	D.T.	Small-pox	Measles	B.C.G.	Other
Routine Immunisation at Clinics	36,468	16,802	-	9,050	-	-	3,558
Pilot Health Visitor Services Immunisations at Clinics	9,497	7,143	-	2,973	-	-	-
Pilot Health Visitor Services Immunisations at Home	10,873	12	9	2,093	-	-	-
Pilot Health Visitor Services Immunisations, Creche or School	672	-	-	197	-	-	-
Campaigns.							
D.W.T. and Measles 6. 5.63 - 24. 5.63	-	21,947	61,400	-	22,289	-	-
B.C.G. Pilot Field Study 9.9.63 - 10. 9.63	-	-	-	-	-	2,100	-
B.C.G. Immunisation 7.10.63 - 31.10.63	-	-	-	-	-	160,298	-
Smallpox 18.11.63 - 22.11.63	-	-	-	10,122	-	-	-
Smallpox 22.11.63 - 3.12.63	-	-	-	13,458	-	-	-
Oral Poliomyelitis Maintenance Immunisation Team	12,392	-	-	-	-	-	-
	69,902	45,904	61,409	37,893	22,289	162,398	3,558

(iv) Tuberculosis Services.

During 1963 the tuberculosis services in the Bantu Areas have been brought under the sectional control of the Assistant Medical Officer of Health (Bantu Areas) with the Chief Tuberculosis Officer co-ordinating the services for all races. The personnel of these services in the Bantu areas participated in the study group system conducted by the Assistant Medical Officer of Health (Bantu Areas). A recent critical analysis indicated progress in inter-personal relationship and thought and planning. The activities are included in the section dealing with tuberculosis services to avoid duplication.

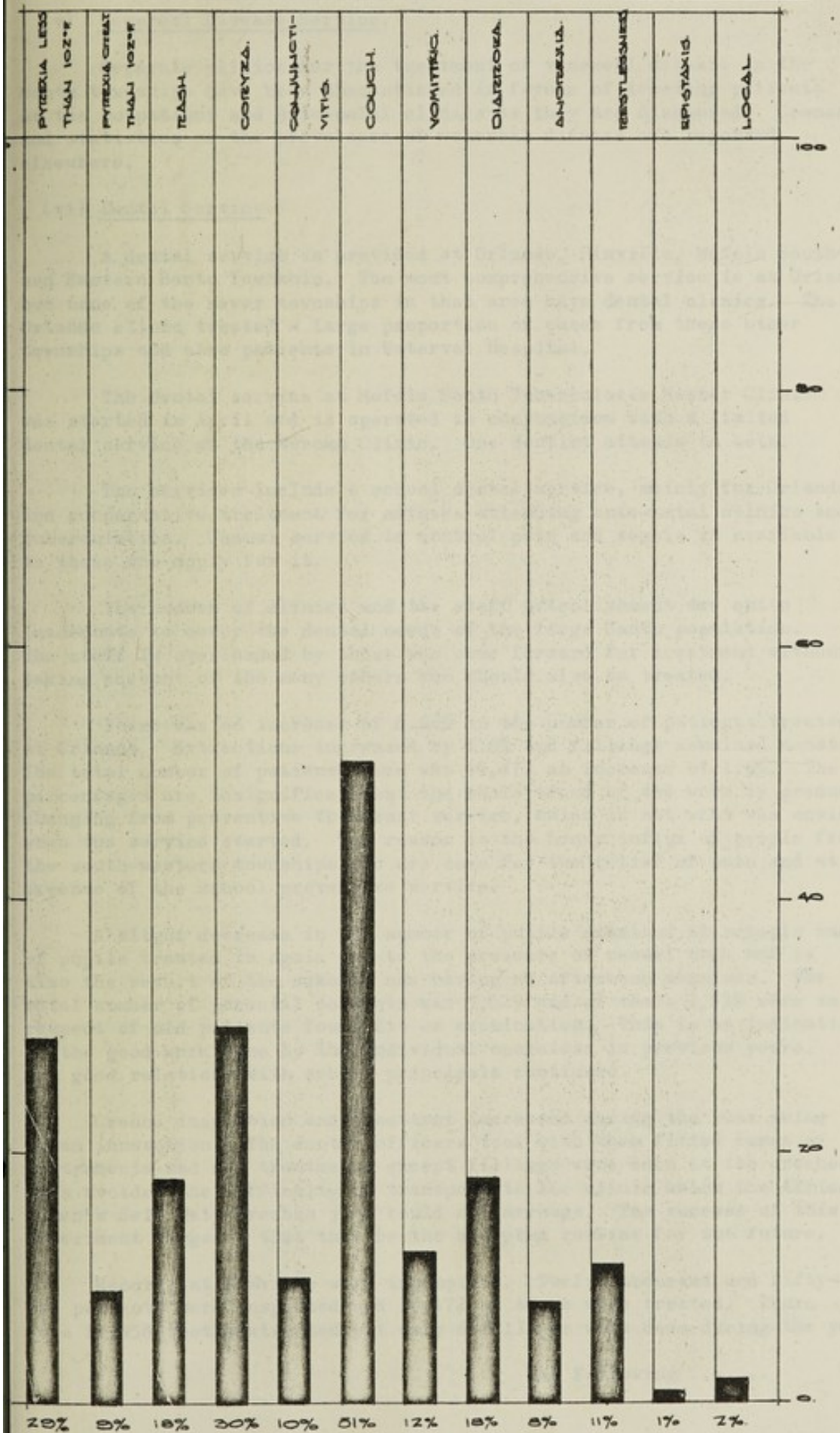
(v) Venereal Disease Service/.....

ANNEXURE A.

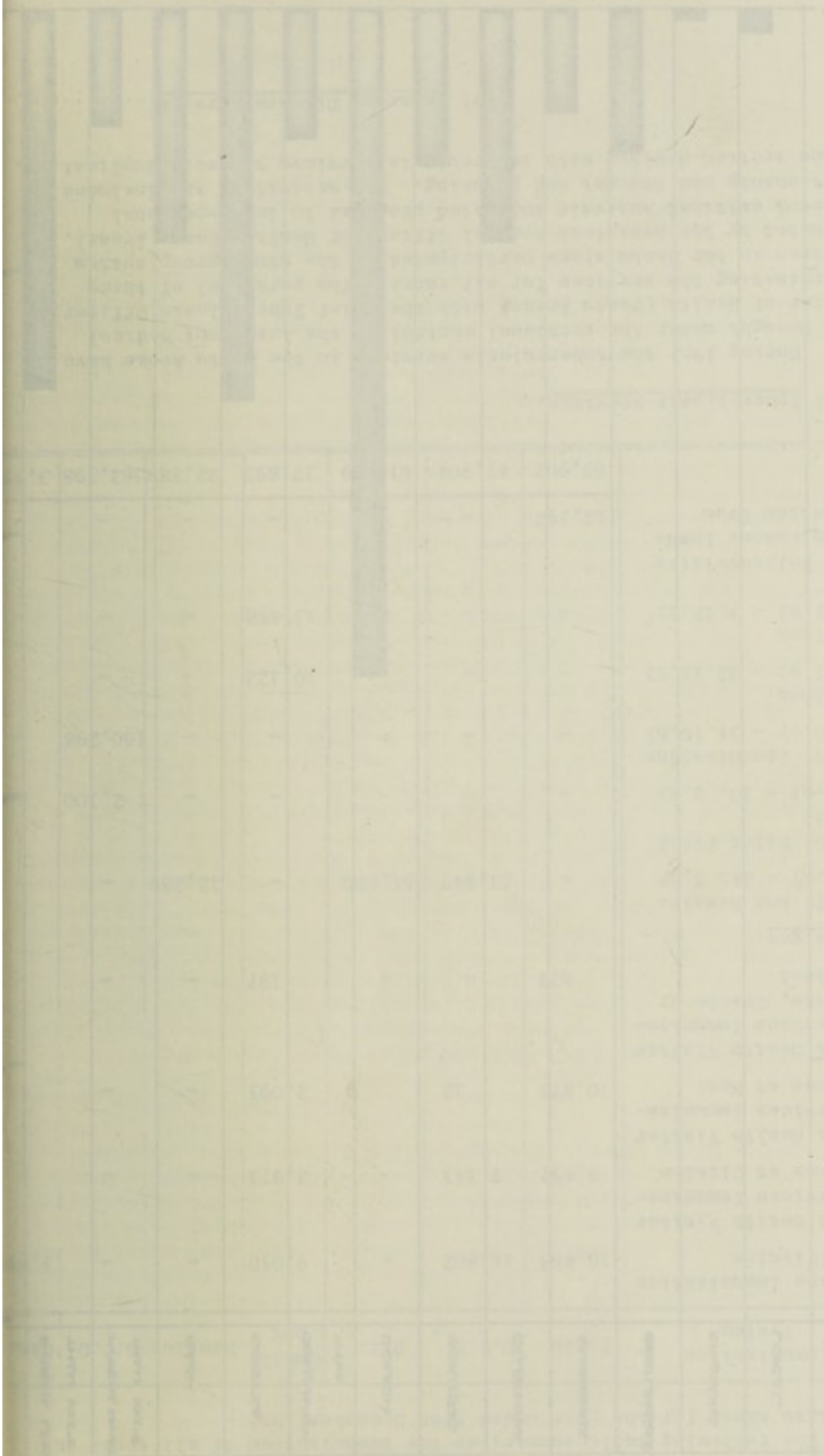
CITY OF JOHANNESBURG – CITY HEALTH DEPARTMENT.

PILOT SURVEY.

ANALYSIS OF REACTIONS TO COMBINED IMMUNISATION.



36% SHOWED NO REACTION.



(v) Venereal Disease Service.

Separate clinics for the treatment of venereal disease in the Bantu townships have been discontinued in favour of treating patients at the outpatient and ante-natal clinics as they are diagnosed. Comments and statistics on the prevalence of venereal disease are reported elsewhere.

(vi) Dental Service.

A dental service is provided at Orlando, Pimville, Mofolo South and Eastern Bantu Township. The most comprehensive service is at Orlando but none of the newer townships in that area have dental clinics. The Orlando clinic treated a large proportion of cases from these other townships and also patients in Waterval Hospital.

The dental service at Mofolo South Tuberculosis Master Clinic was started in April and is operated in conjunction with a limited dental service at the Moroka Clinic. One dentist attends to both.

The services include a school dental service, mainly for Orlando and conservative treatment for mothers attending ante-natal clinics and tuberculotics. Casual service to control pain and sepsis is available to those who apply for it.

The number of clinics and the staff establishment are quite inadequate to cover the dental needs of the large Bantu population. The staff is overloaded by those who come forward for treatment without taking account of the many others who should also be treated.

There was an increase of 8.66% in the number of patients treated at Orlando. Extractions increased by 4.6% and fillings remained constant. The total number of patients seen was 35,473 an increase of 1.6%. The percentages are insignificant but the whole trend of the work is gradually changing from preventive to casual service, which is not what was envisaged when the service started. The reason is the heavy influx of people from the south-western townships who are seen for the relief of pain and at the expense of the school preventive service.

A slight decrease in the number of pupils examined at schools and of pupils treated is again due to the pressure of casual work but is also the result of the schools now having no afternoon sessions. The total number of parental consents was 5,029 and of these 2,338 were in respect of old patients found fit on examination. This is an indication of the good work done by the individual operators in previous years. The good relations with school principals continued.

Creche inspection and treatment increased during the year owing to an innovation. The dental officers took with them fitted cases of instruments and all treatments except fillings were done at the creches. This avoided the difficulty of transport to the clinic which the African Women's Self Help creches just could not arrange. The success of this experiment suggests that this be the accepted routine for the future.

Records at Pimville were incomplete. Twelve thousand and fifty-two patients were inspected and 10,472 of these were treated. There were 11,958 teeth extracted but only 6 fillings were done during the year.

The following/.....

The following table reflects the work done during the years 1960 - 1963:-

Type of Treatment	1960	1961	1962	1963
Anaesthetics	6	Nil	4	Nil
Fillings	3,479	4,062	2,944	2,750
Scalings	238	180	285	148
Extractions	31,962	43,610	42,850	40,488
No. of Patients	27,255	35,782	34,894	33,860

(vii) Environmental Services.

The routine environmental services, including the maintenance of a rodent-free belt round the City, are reported on elsewhere in this report.

(viii) Surveys, Controlled Studies and Research Projects.

(1) Trachoma. In 1962, 58,310 persons were examined and 3,000 suspects detected and treated, being 5% of the total examined since the start of the campaign. It was intended that in 1963 new entrants in schools would be examined and previously suspect cases would be followed up but this could only be done from the time the schools opened in 1963 until 27th March 1963. Thereafter preparation for the measles and D.W.T. immunisation campaign assumed priority and later the B.C.G. campaign. No further burden can be placed on the schools until the latter half of 1964 when the trachoma follow-up programme will recommence.

(2) Technical assistance was given to the South African Institute for Medical Research in various serological studies connected with the use of live attenuated measles virus vaccine.

(3) A field study of Ender's attenuated live measles-virus vaccine administered concurrently with diphtheria, whooping cough and tetanus antigens was undertaken and submitted for publication.

(4) A survey of invalidism in an urban Bantu community was completed and approved for publication by the Head of the Department.

(5) A further investigation was undertaken of the issue of foodstuffs to cases attending child welfare clinics. Commodities were found to be issued within stipulated limits and infants attended clinics an average of 4.6 times in 3 months.

(6) The changing pattern of venereal disease in Urban Bantu areas is under investigation.

(7) Diabetic Survey: A survey in conjunction with the South African Institute for Medical Research covering 7,000 school children and 20,000 ante-natal subjects was commenced but discontinued by the Institute after 3,000 examinations had shown no evidence of glycosuria.

(8) Decompression during pregnancy: Following on a series of cases at the then Western Native Township investigated under the direction of Professor O. Heyns, a further series is proceeding at Moroka Clinic.

(9) The proposed survey/.....

(9) The proposed survey of 500 pre-school Bantu children for the occurrence of Hymenolopsis nana and other parasites in the stools was commenced in conjunction with the parasitology department of the Medical School. After testing all the children in the 2 Council-operated nursery schools this project remains incomplete.

(10) Johannesburg Kaffir Beer Research Project: This extensive undertaking was completed on 24th May 1963 but the final edited report from the Council for Scientific and Industrial Research is still awaited.

(11) An investigation into oral poliomyelitis immunisation in the Bantu Areas was completed.

(ix) Pre-school Institutions.

The Jabavu Day Nursery, operated by the Council, was moved to new premises towards the end of the year.

The medical inspection service was extended to crèches operated by private organisations. The children were examined and treated for minor ailments or referred to an appropriate organisation for treatment. The general state of nutrition of the children is reported as satisfactory. The standard of crèches remains variable but pressure is gradually being brought to bear to improve conditions.

(x) Malnutrition and Kwashiorkor.

The standard of nutrition of children attending child welfare clinics from an early age is good but in general the number of malnourished children especially those showing signs of protein deficiency is considerable. The majority show mild or early signs but there is a general undercurrent of malnutrition among pre-school children and especially in infants who are wholly artificially fed. The health visitors have done a great deal to better the nutritional habits and standards of many families.

Kwashiorkor was made notifiable from September 1962. At first there was a flood of notifications but they have decreased progressively: last quarter 1962 - 1,008; first quarter 1963 - 669; second quarter 1963 - 347. The last of these figures is probably the most accurate as early notifications probably included early cases of malnutrition rather than kwashiorkor. A detailed survey of the first 2,000 notifications has been made by the staff. Of these 54.71% were definitely local residents, the balance being immigrants or unknown, i.e. untraceable; 85.32 were notified from Baragwanath Hospital; 2.65% from clinics and the balance by private practitioners or Coronation Hospital.

Supplementary foodstuffs in the form of skim milk powder, full-cream milk powder, peanut butter and kaffircorn meal were issued at the clinics. The cost to the Council for the fiscal year 1962/3 was R98,377. The issue of these foodstuffs undoubtedly helps to lower the incidence of malnutrition and kwashiorkor but the position is far from satisfactory. The State Department of Health has agreed to subsidise skimmed milk powder at the rate of 5 cents per lb. (full costs 15 cents) as from the forthcoming year.

VI. MEDICAL EXAMINATION CENTRE/ ...

VI. MEDICAL EXAMINATION CENTRE.

This Centre was established to conduct all medical examinations associated with the Bantu Labour Employment Bureau (for males and females conducted by the Non-European Affairs Department at 80 Albert Street. A bureau for females was opened at 1 Polly Street and separate medical facilities were provided by the City Health Department as from 1st April 1961.

A Senior Medical Officer is in charge of both centres, the female unit being staffed by Non-European females, including the doctor.

It is proposed to build more modern and adequate premises on the vacant land opposite 80 Albert Street to house both male and female sections under the same roof. Preliminary plans are being drawn up.

The functions of the Centre, including the subsidiary centre for women, are as follows:-

(i) Workseekers are submitted to a clinical examination and an X-ray of the chest. Blood tests are performed if indicated. All are vaccinated if not previously vaccinated or not within three years. Women are submitted to the additional tests for foodhandlers.

(ii) Foodhandlers are submitted to additional examination (such as for sores on hands or elsewhere, discharges or sore throats) and the blood is tested for syphilis and the typhoid carrier state. If the Vi test is positive stools and urine are cultured.

The bulk of those sent for examination were dairy and ice cream factory workers, nursing home staff, domestic servants, teamakers, etc. Employers were encouraged to make special appointments for dairy and nursing home employees. The total number of foodhandlers examined was 461, an increase of 122 over the 1962 figure.

(iii) Bantu in employment are examined at their own request or at the request of employers. Special appointments may be made by telephone. Employers are encouraged to send foodhandlers and nurse-maids for examination.

(iv) Municipal employees or prospective employees are examined for the pension fund and applicants for the municipal police force are submitted to a comparable examination.

Prospective daily paid employees are subjected to a thorough physical examination to determine whether they are fit for heavy or light manual labour and to reduce subsequent absenteeism. This includes a blood pressure reading, testing of vision and hearing and urine-analysis. A full medical history is taken.

The numbers average 21 per day but there may be as many as 75. This duty occupies much of the time of the medical staff. The number examined increased by 893 over 1962 to a total of 5,048.

(v) Treatment is provided for certain cases only. Pediculosis - disinfestation is carried out where necessary. Venereal disease is treated at the Centre at any time during working hours to suit the patients.

Tuberculosis cases/.....

Tuberculosis cases found are treated at the Centre at daily clinics conducted by the Senior Medical Officer with the assistance of a tuberculosis health visitor and two Bantu nurses from 18 Hoek Street or they are sent to a hospital, if this is necessary.

Bantu who are suffering from any other conditions requiring treatment are persuaded to accept treatment if this is necessary in the interest of their health and are referred to the appropriate agency.

The following table records the work of the Centre during the year:-

Sex	Work Seekers Examined	Food Handlers Examined	Municipal Pension Fund and Police	Employees Other	Medically Unfit		Vaccinations
					Temp.	Perm.	
Males	118,049	461	125	5,048	999	824	84,388
Females	13,693	10	34	6	19	39	11,963
Total	131,742	471	159	5,054	1,018	863	96,351

To obtain the full number of foodhandlers examined, all females examined (13,693) must be added.

The number of male workseekers examined shows a small increase (4.29%) over the previous year but the total increase (including females) is 2.46%. Females are subjected to a full medical examination in the privacy of a cubicle.

Exemptions from employment on medical grounds were granted to 1,881 Bantu - 1,018 temporary exemptions and 863 permanent exemptions.

The temporary exemptions comprise Bantu requiring further investigations or treatment, including those suffering from tuberculosis, mental disorders, fractures, cardiac disease, nutritional conditions, epilipsy, hernias, etc. The necessary arrangements are made for these Bantu with appropriate agencies or at a general hospital.

The permanent exemptions comprise Bantu with gross physical or mental disabilities, including those suffering from blindness, gross cardiac disease, cirrhosis of liver with ascites, respiratory cripples, orthopaedic cripples, epileptics whose fits cannot be controlled, etc.

Every endeavour is made by the Employment Officer of the Labour Bureau to find employment suitable to their disability for handicapped persons but lack of educational standards for occupations other than manual labour is a limiting factor. More success is achieved with selected tuberculosis cases who are clinically well and non-infectious.

Workseekers who are medically unfit for any employment are given permanent exemption certificates. The number was greater than the previous year. The welfare section of the Bureau arranges temporary assistance or invalidity or old age pensions for such cases according to their needs.

Pediculosis/.....

Pediculosis is becoming less prevalent. No cases were found among females and only 5 in males, compared with 12 in 1962.

Venereal Disease Attendances:

	1962.		1963.	
	Males	Females	Males	Females
Gonorrhoea	248	1	216	-
Syphilis (all cases)	1,074	636	819	1,657
Venereal Disease Warts	114	2	49	-

Pulmonary Tuberculosis:

Sex	Miniature X-rays	Large X-rays	Cases Discovered	%
Males	84,674	2,297	619	0.73
Females	11,891	83	21	0.18
Total	96,565	2,380	640	-

The cases discovered were new cases; and the numbers noted in the table do not include the many cases detected which were subsequently found to be old notified cases, either on treatment at a clinic or absconders or defaulters from treatment.

The occupational distribution of male notifications was approximately as follows:-

Flat cleaners in employment	16
Flat cleaners returning from Home Leave (usually one month or more)	26
Domestic servants and foodhandlers in general (excluding Dairies)	48
Dairy employees	12
Pensioners (old age, disability, etc.)	9
Self employed individuals	3
Clerk	1
Labourers in employment	478
Labourers returning from Home Leave	26
Total	619

The age group distribution of notified Pulmonary T.B. were as follows:-

Age in Years.	No. of Cases.	Percentage (to one decimal place)
16 years - 20 years	30	4.8
21 years - 25 years	68	11.0
26 years - 30 years	68	11.0
31 years - 35 years	74	12.0
36 years - 40 years	100	16.2
41 years - 45 years	97	15.8
46 years - 50 years	100	16.2
51 years - 55 years	28	4.6
56 years - 60 years	21	3.4

61 years/.....

Age in Years.	No. of Cases.	Percentage (to one decimal place).
61 years - 65 years	18	2.6
66 years - 70 years	10	1.6
71 years - 75 years	3	0.5
76 years - 80 years	2	0.3
81 years and over	Nil	0.0
Total	619	100.0

From the above figures the age groups 21-50 appear to be the most vulnerable to tuberculosis.

VII. SANITATION AND FOOD SUPPLIES.

1. HEALTH INSPECTORATE STAFF.

The reorganisation of the Sanitation Staff approved in 1962 was implemented by the appointment in April 1963 of the senior health inspector for the supervision of health education related to food supplies, and by the filling of one Non-European post of Coloured health inspector and two senior posts of Bantu supervisory inspectors.

The recruitment of meat inspectors remains difficult but by employment of pensioners, it was not necessary to second health inspectors to the Abattoir in terms of the "pool" arrangement.

Members of the Sanitation Staff assisted on two occasions with mass immunisation campaigns in the Bantu townships.

2. RECORDS OF INSPECTIONS.

The following table shows the number of routine inspections by health inspectors during the past two years, including inspections for the supervision of general sanitation and hygiene, investigations arising from complaints, inspections concerned with licensing, taking of samples, etc., but does not include inspections related to the demolition of premises or the control of rodents and other pests which accounted for many additional inspections.

Health Inspectors : Inspections and Visits	
1962	1963
270,393	319,792

A table reflecting the various types of inspections made is contained in Annexure 13. (See also Annexure 10).

3. PROSECUTIONS.

Prosecutions during the year for various contraventions of the Public Health Act, the Food, Drugs and Disinfectants Act, the Council's Public Health By-laws and other public health legislation involved a

total of/.....

total of 734 persons. The number of charges preferred was 905 and fines (or "admission of guilt") of R6,470 were imposed. An analysis of the prosecutions is set out in Annexure 14.

4. MILK SUPPLIES.

The City's main milk supply is derived from producing dairies in the southern Transvaal and northern Free State farming districts. The quantity produced in the City area is a very small percentage of the total demand. The introduction of milk and cream from outside sources is controlled by the issue of permits which are granted only if the producer complies with the Council's dairy by-laws. During the year 896 permits were approved (a 10.4% increase on the previous year) of which 9 were to producer/distributors delivering milk from their farm dairies direct to consumers.

Milk introduced into the City from outside sources (excluding industrial milk) averaged 57,831 gallons daily, of which 600 to 700 gallons were supplied direct to consumers by producer/distributors. Twenty dairies in the Kliptown and Nancefield areas ceased supplying some 4,000 gallons of milk to Johannesburg when these townships were proclaimed as Coloured areas. This was more than made up by new suppliers from other areas. The average daily consumption in Johannesburg ranged from 56,210 to 60,773 gallons throughout the year.

Control of Milk Supplies in the City.

The control and supervision of milk supplies within the City covers deliveries from outside producers to local distributors and thence to the consumer; inspections of premises and vehicles and observations on handling methods and equipment. Samples are taken and field tests are performed at all stages of transport and handling to determine quality, purity and effective pasteurisation.

Samples taken are submitted to bacteriological, chemical or biological examination at one or other of the laboratories at the dispos of the Department. The field tests include phosphatase and sedimentatio tests by means of which a close watch is kept on the effectiveness of pasteurisation and the standard of cleanliness of the milk. Of the test performed at the abattoir laboratory 636 were positive for the presence of mastitis; 0.49% for tuberculosis by the biological tests; 1,913 for brucellosis by the ring test and 0.05% by the agglutination test. The presence of penicillin was revealed in 0.01% of the samples tested. The number of tests performed is recorded in Annexure 7.

The pasteurisation of milk within the City, although not compulsor has been maintained at a reasonably good level, 89.39% of the daily supp being pasteurised during the year as against 86.75% in 1962. There are now 18 pasteurising depots established within the City area and one situated outside the City boundary.

In general, the hygienic standard of premises concerned with the handling and distribution of milk in the City has been maintained at a satisfactory level.

Control of Milk Supplies/.....

Control of Milk Supplies Outside of the City Area.

The supervision and control of milk supplies from sources outside of the City limits is the responsibility of the Farm Dairy Section. One inspector is permanently resident in Standerton to save time and mileage covered in supervising a number of farm dairies in the Standerton/Volksrust districts. Periodic visits are paid to ensure that hygienic conditions are maintained. It was necessary to stop the milk from one supplier during the year because of the unhygienic conditions obtaining on the farm.

A dairy demonstration van operated by a qualified and experienced dairy inspector and a Bantu Assistant, is designed and equipped to tour farm dairies and to attend agricultural shows in the country districts to give on-the-spot demonstrations of hygienic milk production and handling, to take samples and make tests on the various aspects of milk production and to guide and advise farmers on matters relating to their dairy premises.

The farm dairy inspectors are available to farmers to advise on improvements to dairy premises and on proper housing, latrine and ablution facilities for their employees. Standard types of plans are made available for the construction or modification of their premises.

The hygienic and economic advantages of the mechanical refrigeration of milk at the point of production are continually being stressed. Up to the end of the year 69% of the supplying dairies had installed refrigeration plants, an increase of 1.9% over the figure for the preceding year. This is an important hygienic measure but provision in the Council's by-laws making this compulsory was deleted by the Provincial Administration.

The routine of regular inspections, interviews and tests has been maintained throughout the year with a total of 5,461 visits, 1,017 sediment tests and 4 special water samples taken for bacteriological examination. The staff of the dairy demonstration van made 246 practical demonstrations and performed 10,434 tests of various kinds in connection with milk production. These included strip-cup tests for mastitis, acidity tests, butterfat tests and sedimentation tests. 116 farms were visited.

The Council's veterinarians working in collaboration with the dairy inspectors carried out regular examinations of bulk supplies. Positive results for bovine tuberculosis were obtained in supplies from 7 farm dairies and these were dealt with in terms of the Department's tuberculosis policy.

Investigations on two reported outbreaks of diphtheria on farms were carried out. Precautionary measures were taken to prevent any infection being conveyed into the City via the milk supplies.

Examination of Dairy Herds.

Two veterinarians on the staff of the Abattoir and Livestock Market Department are seconded to the City Health Department. These officials work in close collaboration with the farm dairy inspectors, their main function being the supervision of dairy herds.

During/.....

During the year 791 herds (totalling 70,888 cattle) were inspected of which 35 herds were reported not inoculated against anthrax, and 179 herds not inoculated against brucellosis. Notifications were sent to 709 producers regarding contamination of their milk supplies with mastitis and brucellosis.

Details of the number of tests made for mastitis, brucellosis and tuberculosis are given in Annexure 7. Fuller details of inspections on dairy herds are recorded in the Annual Report of the Director, Abattoir and Livestock Market Department.

Laboratory Examinations.

The Council's chemists undertake the examination of samples of milk and certain milk products throughout the year. (See Annexure 7). In general, the examinations revealed a satisfactory standard in the pasteurised and sterilised milks with some seasonal fluctuations in the quality of the raw milks. The regular 'field' phosphatase tests undertaken by inspectors and pasteurisation depot operators play an important part in maintaining an acceptable standard of milk pasteurisation.

Samples are also taken for submission to the Government Analyst for tests for milk fat and solids - non-fats in terms of standards for milk specified by the Food and Drugs Act.

As a routine check on sales and deliveries in the City 711 such samples were tested and 50 were found to be sub-standard or adulterated milk. These resulted in 36 prosecutions with R420 being paid in fines, 13 cases pending and one case no service of summons. A further 30 samples were taken, from bulk supplies arriving at Railway stations and pasteurisation depots in the Municipal area, on behalf of the Secretary for Health. One of these samples was sub-standard or adulterated.

5. ABATTOIR AND MEAT INSPECTION.

The Abattoir is controlled by the Director of Abattoir and Livestock Market Department which functions as a separate Department. The distribution and sale of meat in the City is controlled by the City Health Department.

Slaughtering and meat inspection activities during the year were as follows:-

Number of Animals Slaughtered.

Cattle	338,109
Sheep	1,049,160
Calves	58,769
Equines	12,159
Pigs	177,010

Inspection of Imported Meat.

Beef	27,900,395	lbs.
Mutton	205,680	
Veal	7,000	
Pork	35,550	
	28,148,625	

The number/.....

The number of carcasses condemned and processed in the by-product plant included 6,006 cattle (1.78%) and 6,053 pigs (3.41%). Cysticercosis was the main cause of condemnation in each case.

The principal diseases and conditions causing condemnation of meat, were:-

Cattle:	Cysticercosis	0.63%
	Pleurisy and Peritonitis	0.30%
	Gangrene	0.26%
	Extensive Bruising	0.08%
	Fever	0.07%
Sheep:	Fever	0.08%
	Pneumonia	0.04%
	Emaciation	0.02%
	Icterus	0.007%
	Caseous Lymphadenitis	0.005%
Pigs:	Cysticercosis	2.17%
	Gangrene	0.26%
	Tuberculosis	0.26%
	Scrotal Sepsis	0.17%
	Pneumonia	0.05%

6. OTHER FOODSTUFFS.

(a) Control of Food Premises and Distribution of Food.

The normal routine inspections of food premises continued during the year as a major activity of the Department. Increased attention was paid to those aspects of the new foodhandling by-laws promulgated in December 1962 which were more specific than those stipulated in the earlier by-laws. After a period of latitude to enable traders to become acquainted with the new by-laws, enforcement by means of verbal instructions, statutory notices and, where necessary, by prosecutions, was resorted to.

A major obstacle in attaining the desired standard of hygiene in many foodhandling premises is the large number of persons of foreign origin, who are acquiring such businesses without the necessary knowledge of English or Afrikaans, thus making it extremely difficult for the Health Inspectorate staff to convey their requirements to these traders who comprise mainly Fresh Produce Dealers (fruit and vegetables) and Fish Friers. An interpreter has been engaged to assist the health inspectors when required.

The inspection routine covering wholesale and retail stores handling foodstuffs in the City resulted in 57,819 lbs. of various types of food being condemned during the year. Of this quantity 54.7% comprised canned foodstuffs, the remainder consisting of fresh and frozen fish, fresh and dried fruit, vegetables, mealie meal, apples and cabbages.

(b) Early Morning Inspections - Foodstuff Deliveries, etc.

Special early morning inspections were continued throughout the year to assess the hygienic condition of vehicles and personnel engaged in wholesale and retail trades distributing bread, fish, meat and other

fresh/ .....

(c) Food Sampling.

Samples of food are taken mainly for the purpose of checking on possible adulteration in terms of the Food, Drugs and Disinfectants Act. The samples are submitted to the Government Analyst in Pretoria on behalf of the City Health Department and the Secretary for Health.

Government Notice No. 911 of 16th May 1930, as amended, vests the Johannesburg City Council with authority to take food samples in its area of jurisdiction. The annual quota of samples for free examination is 1,848.

The samples taken are recorded in Annexure 7. There were 36 successful prosecutions for adulteration of milk, 59 for adulteration of meat and 1 for adulteration of honey.

(d) Display of Foodstuffs on Pavements and in Shop Entrances.

During the past few months the application of the by-law preventing shopkeepers from displaying their foods beyond the precincts of their premises has been rigidly enforced with almost 100% success. However, th shop owners are now drawing attention to the increasing volume of illegal trading taking place on sidewalks, from motor lorries, vans and unauthori stalls. These illegal traders have been particularly active in the Hillb shopping area and the parking areas of the Rosebank shopping centre. Although the full co-operation of the Traffic Department in an effort to curb this type of trading has been given, it still persists and, like the tea and coffee carts, remains a major problem.

(e) Food Hygiene Section.

Two teams each comprising 1 European and 1 Non-European health inspector under the supervision of a senior health inspector continue to give practical instruction and advice to the management and kitchen staff of food premises and nursing homes. One team worked in the eastern half of the City and the other the western half.

The teams visited food premises and gave instruction to staff and management in personal hygiene and the hygienic maintenance of premises and equipment to ensure the production of clean food. These visits were invariably followed by an organised lecture and film show, either at the premises of the licensee or at this Department's lecture theatre. During 1963 the following visits were made:-

Hotels and boarding houses 1,033; restaurants and tea rooms 1,185; fish friers 149; food factories 140; Non-European restaurants 43; nursing and old aged homes 106; sports clubs 10.

The number of organised film shows and lectures totalled 34 with an attendance of 525 persons.

Contact was made with all firms within the municipal area who manufacture kitchen equipment and advice was offered in connection with modifications to equipment to facilitate easy cleansing.

The Health Education Theatre was used on 76 occasions for the projection of films.

In/.....

In the course of these inspections bacteriological sampling was undertaken and subsequent to the promulgation of the new Food Handling By-laws on 12th December 1962, eating utensils in food establishments were swabbed. A total of 423 swabs and specimens taken from eating utensils was submitted to the South African Institute for Medical Research for analysis. Eighty-three of these had excess bacteriological counts. In these instances the licensees of the premises were notified and advice was given in improving their cleansing technique.

At first, the method of sampling stipulated in the by-laws was adopted, but negative results were obtained. On the recommendation of the South African Institute for Medical Research, the method was modified by using 10 ml. of Ringers solution and larger wooden sticked swabs, instead of 2 ml. of normal saline and ordinary wire swabs. This resulted in more realistic counts being obtained. An amendment to the By-laws to include this modified method is to be recommended.

The teams co-operated with the Senior Health Visitor (Nursing Homes and Midwives) in the control of nursing homes and homes for the aged. Assistance and advice was given in planning new premises especially in regard to kitchens, laundries and air conditioning and in conducting bacteriological surveys in nursing homes - 982 swabs were taken and 341 plates exposed.

Advice and assistance was given to industrialists in establishing canteens in their factories. Liaison was established with "Kupugane" which is also encouraging this development. The elimination of tea and coffee carts depends largely on the establishment of satisfactory alternative feeding arrangements.

(f) Municipal Market.

Early morning inspections of foodstuffs exposed for sale at the Municipal Market were maintained on all days that the market opened. All unsound foodstuffs were seized and destroyed. The district inspector also makes inspections during the day in the course of his normal duties. The Market Master and the City Engineer's cleansing branch afforded the fullest co-operation in ensuring a good standard of cleanliness in the market generally and in the numerous stalls handling and selling foodstuffs.

Dressed poultry is examined prior to being offered for sale by auction. 27,534 birds were inspected of which 217 (0.78%) were condemned and destroyed as being unfit for human consumption.

The dressed birds consisted of 26,645 fowls, 684 ducks, 122 geese and 83 turkeys.

In addition 259,773 live birds were offered for auction. This figure comprised 235,091 fowls, 8,199 turkeys, 1,869 geese, 4,406 ducks and 5,885 pigeons.

Game animals/.....

Game animals and birds consigned to the market were also subjected to pre-sale inspections with the following results:-

Type of Game.	No. Examined.	No. Condemned.
Blesbok	548	1
Impala	94	1
Kudu	16	-
Rabbits	239	-
Springbok	312	-
Total	1,209	2

Game Birds.	No. Examined.	No. Condemned.
Guinea Fowl	302	12
Pea Fowls	10	-
	312	12

(h) Food Poisoning.

There were 9 notifications of suspected food poisoning outbreaks during the year, involving 38 people. All were investigated and in 5 outbreaks staphylococcus aureus was established as the probable cause In two, the causes were not traced and in the remaining two outbreaks other causes were found to explain the symptoms. The investigations were of a routine nature and did not reveal any items of special interest.

7. OTHER MATTERS.

(a) Witwatersrand Agricultural Society's Annual Show.

The overall attendance was 579,245 persons, the highest attendance on any one day being 115,314 persons.

Many improvements to restaurants and food stalls were made in consultation with the Department and hygienic conditions were observed in the handling of food which was kept under surveillance by health inspectors seconded for the purpose.

Prior to the show the local representative of the Milk Board was approached and he made the necessary arrangements for all milk to be removed from the grounds as industrial milk. He also instructed two of his inspectors to be on duty at the show and to supervise the collection of all milk. All exhibitors were warned that it was illegal to sell fresh milk produced at the showgrounds within the Municipal area. With one exception exhibitors co-operated and sent their milk to a large co-operative society for disposal as industrial milk.

The removal of refuse and manure and rodent and fly control and the maintenance of latrines were satisfactory. The Non-European latrines were, however, inadequate and difficulties were experienced with blockage

(b) Functions/.....

(b) Functions in Parks.

A major horse show was held at the Zoo Lake grounds from 26th to 28th December, 1963. It was anticipated that 50,000 people would attend this function. Fortunately the figures released by the General Manager of the Parks and Recreation Department indicated that the number did not exceed 7,000 as in spite of strenuous efforts in every direction by the health inspectors concerned, conditions left much to be desired regarding the food preparation, handling, storage and sale. This was due to complete lack of co-operation, in the early stages, by the organisers and the caterers, and the lack of knowledge of the caterers supplying food and drink in providing facilities for a large number of persons.

(c) Dumping on Vacant Sites.

The illegal dumping of builders' rubble, garden refuse and miscellaneous debris on vacant sites, necessitated the serving of numerous notices. This remains one of the major problems confronting district health inspectors. State, Provincial and Council owned sites are cleaned after notification, although here, too, there have been instances of considerable delay in giving effect to the Department's requests.

(d) Controlled Tipping of Refuse.

All refuse tips on which controlled tipping is carried out by the City Engineer's Department were inspected at frequent intervals during the year. With few exceptions, these tips were well maintained. Where there were public health deficiencies, these were rectified after the attention of the City Engineer's Cleansing Branch had been drawn thereto.

(e) Amendments to Public Health By-laws.

No new chapters were promulgated during the year but correction notices and amendments were promulgated in respect of the food handling chapters (8, 9, 10 and 11) and also an amendment to section 328 of Chapter 20 relating to the tariff of payments for after hour fumigation.

(f) Pest Control.

The staff which is responsible for anti-rodent measures (referred to in the section dealing with plague control) is also responsible for the control of other pests.

Regular insecticidal work is carried out at Municipal compounds, stables, sewage disposal works and in sewers, etc., to prevent breeding and to destroy flies, cockroaches, bugs and mosquitoes by the use of a special insecticidal fog applicator machine. Mosquito surveys and regular routine spraying of all water courses and dams in the Municipal area are also carried out.

All streams and dams and marshes likely to favour mosquito breeding were treated with suitable insecticides and larvicidal oils during the rainy season. Specific complaints of the prevalence of mosquitoes are investigated and dealt with where necessary. The summer of 1962/63 was a bad season for mosquitoes, particularly in the north-western suburbs. A house to house survey was undertaken in Craighall

and/.....

and Craighall Park. Heavy mosquito breeding was found in 102 of the 1,015 properties inspected. In the summer months at the end of 1963 few complaints were received.

By means of a mobile 'TIFA' fogging machine 130 properties, including compounds, were treated for bugs, and sewers were "fogged" to control cockroach infestation on 7 occasions at the request of the City Engineer's Department. Fogging of sewers is confined to Sundays to ensure that members of the public are not exposed to any inconvenience or possible danger.

The staff constantly experiments with different products to overcome resistance problems and to find cheaper and longer-lasting insecticides. Some success has attended these efforts. Tests are made by the South African Bureau of Standards with various products on specific batches of insects supplied by the Department.

The routine collection of snails was discontinued at the request of the South African Institute of Medical Research in favour of collecti at specific sites indicated. The Institute is continuing its research into bilharzia. Although rivers to the north of Johannesburg are known to be infested with snail vectors, these have not beenfound in waters in the municipal area. This fact does not indicate that this will always be so, and should not be interpreted that bathing or paddling in open stretches of water or streams is encouraged or countenanced.

(g) Provision of Closet Facilities on Building Sites.

As water-borne sewerage is now available to practically the whole Johannesburg area the City Engineer notified builders that pail removal service would not be available at building sites except where it was proved that a sewer connection could not be provided and that builders must apply for a sewer connection before commencing building. Some difficulty was experienced in enforcing this directive and prosecutions have had to be instituted where no accommodation has been provided or for insanitary pit latrines.

(h) Gipsy Sites.

During the year, several Gipsies established themselves on vacant stands in Bertrams, Troyeville and throughout the Southern Suburbs. The refuse disposal and latrine accommodation at these sites left much to be desired. However, after culprits had been warned about these conditions they invariably cleaned the site and moved on.

(i) Smoke Abatement.

All smoke complaints are dealt with by the Air Pollution Control Section and close liaison exists between it and the Sanitation Branch, especially in regard to joint inspections and endorsements on licence certificates in respect of premises where smoke nuisances exist or are likely to exist.

(j) Water Sampling.

Weekly water sampling was carried out at the municipal reservoirs and at points on distribution mains. 943 water samples from these points were submitted to the Department's Cydna Laboratory for bacteriological

analysis./.....

analysis. 143 water samples were submitted to the same Laboratory for chemical analysis on behalf of the Rand Water Board. 75 applications were received for the testing of private borehole water. A fee of R10-50 was charged for each full analysis, which included both bacteriological and chemical tests. A total amount of R787-50 was received for this service. Water from 40 of these boreholes was found to be suitable for potable purposes at the first test. Water from the remaining 35 boreholes was found to be unsuitable initially. These boreholes were rechecked and with the exception of 4 were, after remedial measures had been taken, found to be satisfactory. In the case of the 4 borehole supplies which remained unsatisfactory, the owners were warned to cease using this water for human consumption.

8. ENVIRONMENTAL SERVICES, BANTU AREAS.

The staff dealing with the environmental services of the Bantu areas is attached to the Sanitation Division but comes under the general direction of the Assistant Medical Officer of Health (Bantu Areas).

The anti-plague and pest control measures reported in other sections of this report are the responsibility of the staff of this section. Other activities include:-

(i) Routine inspections were made of each dwelling three or four times during the year by the health inspectors and infringements of the legislation were dealt with when found.

(ii) Numerous statutory notices were served on householders for junk and debris found in their premises affording cover and harbour for rodents.

(iii) The elimination of unauthorised structures was pursued and a constant watch kept for illegal erections.

(iv) Constant surveillance was also maintained for trading and the keeping of draught animals and bovines on dwelling sites.

(v) Pressure was maintained on owners of dwellings, private schools and churches to connect these premises with drainage to the municipal sewer, with excellent results.

(vi) The numerous milk hawkers were eliminated by confining the sale of milk in the townships to sale in sealed bottles or cartons.

(vii) Routine inspections were made of the municipal fruit and vegetable stalls and all trading premises.

(viii) Action was taken against unlicensed business premises and a continuous struggle waged against the numerous illegal hawkers of foodstuffs.

(ix) Raids were periodically carried out on butcheries for the sale of unstamped butchers' meat.

(x) Routine/.....

(x) Routine inspections were carried out on stables for the maintenance of cleanliness and prevention of fly breeding.

(xi) Some 419 building plans for new buildings or for additions and alterations to buildings were examined and approved.

(xii) Everything possible was done to prevent the conditions in Pimville from deteriorating still further pending the removal and rebuilding of the Township. Court action was taken to prevent the keeping of cattle and the number of cattle was thereby reduced.

(xiii) The inspections made by health inspectors are recorded in Annexures 10 and 11.

VIII. DISPOSAL OF WASTES.

The services referred to in this section of the report are provided by the City Engineer's Department. The City Engineer has appointed a Joint Technical Staff Committee which is a standing committe comprising members of his own staff and of the City Health Department. Matters affecting the disposal of wastes and other matters of mutual interest to both departments are discussed and investigated.

1. Refuse Disposal.

In terms of the Council's By-laws, owners of premises are required to provide approved types of covered refuse receptacles for the storage of refuse pending its removal. Refuse collection is carried out mainly on a tri-weekly basis for domestic premises and on a daily basis (6 days) for business premises. Mechanisation of the collection service was completed in 1962 and all mules, horses and animal drawn vehicles were disposed of by auction. Vrededorp Compound was closed.

The bulk of refuse is disposed of by controlled tipping (1,465 tons per day) and a small proportion by incineration (2 tons per day). The regular inspection of tipping sites by health inspectors is a routine procedure to ensure effective control of rodent harbourage, fly breeding and other nuisances.

The tipping system is invaluable to provide disposal facilities and at the same time to convert large areas of eroded or waste lands for playing fields and parks, etc., with a limited amount of building being allowed thereon under prescribed health and structural conditions.

2. Sewage Wastes.

The City area and the Bantu townships (except Pimville) are almost completely sewered. The average number of pails is 2,100. Service is nightly or triweekly depending on circumstances.

Conservancy tank service is restricted by the number of vacuum tanks available - 211 tanks are being serviced.

Pit privies are not permitted in the Municipal area. Septic tank installations are permitted but only where a sewer cannot be provided and

if/.....

if the tank can be situated at a suitable distance from the dwelling and the boundary of the property concerned.

The layout of the Council's sewerage system provides for disposal plants so situated as to ensure a maximum of gravity drainage to avoid pumping. The additional disposal works of Olifantsvlei serves the Bantu townships and relieves congestion at the older Klipspruit plant serving some of these townships and the southern sections of the City.

The Northern Sewage Disposal Works serves the northern section of the City plus adjoining sewered areas administered by the Peri-Urban Areas Health Board. It replaces the works at Bruma, Cydna and Sandringham and Delta which were closed down during 1961 and 1963.

The average flow of sewage received at the purification works was as follows:-

Klipspruit	25,000,000 gallons per day
Olifantsvlei	9,500,000 gallons per day
Northern Sewage Works	14,500,000 gallons per day
	49,000,000

The part played by the City Health Department in assisting the City Engineer to comply with the standards laid down in the Water Act (No. 54 of 1956) and the regulations framed thereunder and with the requirements of the Public Health Act, is detailed in the section dealing with the Laboratory Branch.

IX. WATER SUPPLIES.

The City's water supply is maintained by the Rand Water Board, the main source being the Vaal River. After treatment the water is delivered in bulk at an agreed rate to the Council's reservoirs and thence through the reticulation system also owned and controlled by the Council. The Council has 14 service reservoirs and nine water towers, including two of each type in the Bantu occupied areas. All are decked over.

The sale of the water to consumers in the European areas is based on a metering system with charges for domestic supplies at the rate of 29 cents (2/11d.) per 1,000 gallons up to 100,000 in any one month and 17½ cents (1/9d) per 1,000 thereafter. Lower rates are charged for charitable institutions and sporting bodies. During 1963 the amount of water purchased by the Council was 21,393,399,000 gallons with an average daily consumption of 59,813,508, a substantial increase on the previous year.

Throughout the year weekly water samples were taken by health inspectors at various points where the water passes into supply. A number of private boreholes are in use in the Municipal area some of which are used for supplying large buildings such as blocks of flats, and periodic samples are taken to assess purity and potability. Suitable action is taken where tests of City supplies indicate any unusual condition. Borehole supplies are restricted to non-potable usage where tests reveal sub-standard conditions. The number of tests is recorded in Annexure 7.

The/.....

The Medical Officer of Health is Honorary Medical Officer to the Rand Water Board.

X. LABORATORY BRANCH.

The main laboratory of the Branch is at Cydna with subsidiary laboratories at the various sewage purification works (Northern, Klipspruit and Olifantsvlei) and at the Bantu Beer Brewery, the power stations (Orlando and Kelvin) and the Gas Works.

Most of the general analytical and bacteriological work is done at the Cydna Laboratory but some is delegated to the other laboratories apart from their more specialised work.

Miss S.M. Walker, a Principal Chemist, spent 7 weeks in the United States and 1 week in Britain on study leave investigating modern research work on problems arising from water pollution by synthetic detergents.

The functions of the Branch are outlined in the following paragraphs.

1. Sewage Treatment.

The primary function of the Chief Chemist and his staff is to advise the Medical Officer of Health and the City Engineer in carrying out their statutory obligations in regard to the quality of the effluent discharged from the Council's sewage works. Other duties have been added from time to time.

The first appointment of a biochemist was made in 1931 as a result of complaints of smell from the Bruma Works, recently closed down, and one of his first tasks was to investigate improved methods of purification. Various types of experimental activated sludge plants were installed and as a result the works were re-designed.

The biochemical staff keeps a constant check on the operation of the sewage works by means of routine chemical analysis to maintain efficient operation and to ensure that the bacteriological and chemical requirements laid down by the Water Act are met so that the final effluents will not endanger health in any way.

In addition research work is undertaken to improve operation and to ensure that extensions to existing works and construction of new works will give optimum results for the expenditure incurred. This research is carried out by a committee of chemists and engineers appointed for the purpose. Officials of the City Health and City Engineer's Departments meet monthly to discuss problems of sewage purification, water supply and other matters of mutual interest.

A possible new purification works at Liefde en Vrede is under discussion, and much of the sewerage reticulation has been completed or designed. Alternative plans are being considered to send this sewage up the Klip River Valley for treatment at Olifantsvlei, or possibly to construct a large regional works further down the valley below Liefde en Vrede.

The standard of effluents has been satisfactory. A table

showing/.....

showing the average annual analysis for all the works is given in Annexure 15. A full report on the operation of the works is issued by the City Engineer.

The Delta Works, opened in 1935, closed down on the 1st June 1963.

The Klipspruit Purification Works:

These works supply 5 million gallons per day of sand filtered effluent as cooling water for the Orlando Power Station. About 3 m.g.d. are irrigated on land after primary settlement only and the balance is irrigated after biological filtration. Over 8 hundred thousand cubic feet of sludge digester gas per day were sold to the cyanide factory.

The flow to the works has increased and now exceeds 23 m.g.d. Six new primary biological filters were placed in operation in September, and six further secondary filters are being constructed. During 1964 all of these new units should be operating and matured and, together with new auxiliary plant such as pump stations, supernatant liquor conditioning tanks, etc., should ensure a uniform high standard of purified effluents.

In addition to normal sewage routine control analyses, investigations were carried out at newly designed sedimentation tanks, on periodicity of dosing of biological filters (mechanical methods of driving the feed-arms at various controllable speeds have been installed), on solids balance in and operation of digesters. These investigations are proceeding.

The laboratory carries out a considerable amount of paint testing (310 samples during the year) and putty testing for the Buyer, and control analyses on Abattoir by-products. Some industrial effluent samples were analysed for the Randfontein municipality. Lime slurry and effluent samples from the cyanide factory were analysed to keep a check on the cyanide content.

Olifantsvlei Purification Works:

The Laboratory at these works is now in use.

The flow to the works is over 9 million gallons a day, close to the designed loading of 10 m.g.d. The sewage is almost entirely from Non-European areas, and is weaker than was anticipated - in other words water use per capita is higher than was expected. The final effluent is either irrigated on land, or passed through maturation ponds.

To cope with increasing flows, plans are in hand to make greater use of existing aerobic treatment plant (biological filters). The anaerobic digesters have ample capacity at present. Preliminary plans are also being discussed to double the capacity of the works.

Northern Purification Works:

The second unit of these works was placed in commission on 5th June 1963, and as a result it was possible to close the Delta Works and accept the extra sewage. The flow is increasing rapidly because of increased reticulation in Peri-Urban areas. At the end of the year the flow totalled about 16 million gallons a day, of which about 9 million were treated in the first unit, and the remainder in the second almost identical unit.

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A further two maturation ponds for the sewage works effluent were commissioned, making the total area of ponds about 96 acres, with an estimated volume of 252 million gallons.

Oxidation of alkaline ammonia and its compounds during sewage purification causes conversion of the nitrogen to nitric acid, thus lowering the alkalinity of the sewage during the purification processes. At the Northern works this fall in alkalinity is so much that a corrosive effluent is sometimes produced, and this attacks the concrete in the biological filters and in the effluent channels. As some of this effluent is pumped through a 19-mile pipeline to the Kelvin Power Station as cooling water, concern is being felt about concrete corrosion there. This has led to research work into eliminating the nitrogen either as ammonia or as the free gas, without full conversion to nitric acid.

Ammonia has been eliminated experimentally by passing partly purified sewage into maturation ponds. Unfortunately this has not been very successful in the winter months, and it is difficult to return pond effluents to the works site to be pumped to Kelvin. Secondly, effluent from primary biological filters and containing nitrates has been mixed with settled sewage before passing on to the secondary filters. The sewage appears to use the nitrate oxygen, releasing the nitrogen to the atmosphere. Application of this principle (akin to recirculation) necessitates constructional alterations to the works. These experiments are continuing, with some urgency.

Valuable information, of national interest, is being obtained on reduction of E. coli counts by tertiary treatment of good sewage works effluents in maturation ponds.

Monitoring of synthetic detergent concentrations in the sewage and in the effluents from various works units is continuing. Preliminary steps have been taken to carry out early in 1964 a large scale experiment with a new type of detergent to confirm whether or not it will be broken down during normal sewage purification processes, as has appeared likely in laboratory experiments. If successful, it is expected that this detergent will be marketed on a large scale by the manufacturers. This would be of great national interest in reducing foaming of sewage works effluents and receiving streams.

The laboratory at the Northern works is fully occupied. Unexpecte increases in bacteriological and chemical work has necessitated a request for increased laboratory accommodation, now being dealt with by the City Engineer.

2. Industrial Effluents Control.

Supervision of industrial plants is maintained to ensure that effluents discharged into the sewer will not be a danger to the health of sewer maintenance personnel or operators at the sewage works, that they are amenable to treatment and that they will not have any deleteriou effects on stormwater drains, sewers or disposal works. Plants and processes are studied and the volume and strength of effluents are assessed, plans for new factories and alterations are scrutinised and owners are required to make modifications where necessary. Charges are adjusted according to the nature and strength of the effluents accepted.

The number/.....

The number of samples collected and analysed during the year totalled 3,549. The present number of factories assessed is 334. This is an increase of 26 new factories, while 9 have closed or left during the year. The factory investigations, sampling and advisory service cover the areas of Johannesburg, Bedfordview, Peri-Urban Areas, Edenvale and Roodepoort.

Considerable difficulty has been experienced with industrialists discharging effluent into stormwater drains. This discharge is usually made during the night or over weekends. With assistance from the sewer maintenance branch considerable success has been achieved in eliminating these contraventions. The staff is carrying out its duties as provided for in the Drainage and Plumbing by-laws, and at the same time assisting manufacturers with their effluent problems.

3. Bacteriological Work.

This is centred on the Cydna Laboratory where a bacteriologist organises and carries out bacteriological tests on various products and commodities. These include milk and milk products, drinking waters, swimming bath water, sewage, materials bought on contract by Municipal Departments such as antiseptics and disinfectants, Bantu beer, etc. Details of samples examined are included in Annexure 7.

Milk: Samples of raw, pasteurised and sterilised milk are collected by health inspectors and submitted for bacteriological tests and for the phosphatase test where appropriate samples of dried milk and ice cream are also examined occasionally. The total number of milk samples examined was 3,427.

Water: Samples of domestic water supplies derived from various sources were examined, including samples from reservoirs, distribution points and boreholes. The samples of reticulated water were on some occasions unsatisfactory in regard to total counts and the presence of presumptive coli organisms. The causes are under investigation. Water samples were also analysed chemically.

In addition to routine samples, duplicate examinations were carried out on 611 water and sewage samples to compare the Membrane Filtration Method with the Most Probable Number Estimation. The result has been most favourable to the Membrane Filtration Method and it is hoped it will be adopted as a standard method.

Swimming Bath Water: Regular examinations of the water in the Council's Municipal Swimming Baths, including those at Hillbrow and at Kelvin and Orlando Power Stations, reflected a consistently high quality. Tests of the water in children's paddling or swimming pools attached to some of the larger baths also gave satisfactory results. The number of baths has been increased to 15 and 5 small children's baths have been put into use.

4. Bantu Beer Control.

A chemist is responsible for routine day to day control of the beer to ensure reliable standards. Research is undertaken into brewing materials, brewery plant and methods of brewing, improvement in the keeping qualities and other matters.

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A start has been made with research on the protein content of the beer. The idea is to see whether more protein is formed as bacterial activity in the beer increases. In this connection the amino acids in both the beer and the malt will have to be separated out. The total number of free amino acids in the beer seems to be much less than the total amount in the malt. Apparently they are used in the process of enzyme synthesis. This opens up an interesting field of fundamental research.

5. Analytical Work.

This is centred on the Cydna Laboratory but is also undertaken at other laboratories in addition to their specialised activities, where this is convenient. The Buying Branch relies on the results of analysis in the purchase of some two million rand worth of materials and equipment per annum.

Routine analyses and investigations include analysis of oil, coal, paints, constructional stone and sand, cleaning materials, kaffir corn meal and malts, pharmaceuticals, foodstuffs, etc., analysis of municipal and non-municipal waters, testing and treating of municipal swimming pool waters, analysis and checking of blood meal and carcase meal sold at the Abattoirs. Analysis of foodstuffs for pesticides, poisoned waters, preservatives in food and milk, the use of molybdenum disulphide in lubricating greases (the cause of sludging in bus engines) cumulative arsenicals in human hair and urine and many others.

The routine work is combined with practical research such as the determination and attempted breakdown of troublesome synthetic detergents the follow up of paint work in various departments, improvements in filtration procedures at swimming baths, etc.

6. Air Pollution Control.

The measurement of smoke and sulphur dioxide is continuing but the chemist previously performing these duties has been replaced by a chemical assistant. The results are as usual forwarded to the C.S.I.R. for their national survey.

The survey of all fuel burning appliances other than those in domestic premises is being continued and to date 1,475 installations are on record. Of these 366 are industrial and 1,109 pertain to buildings such as flats, hotels, etc. During the year 372 complaints were received of which 268 were brought to satisfactory conclusions.

Two Bantu stoker demonstrators have been appointed. They are at present being trained by the inspectors in all aspects of boiler operation on a variety of different boilers. Even at this early stage it is already evident that where the demonstrators are operating considerable improvements in the control of smoke emission can be effected.

The report of the Commission of Enquiry into the Air Pollution Prevention Bill, including the revised draft bill, has been made available. The inclusion of a section on dust and other detailed modifications is considered to be a vast improvement over the original draft. At present, control where possible by means of licence endorsemen

is being/ .....

is being continued and is proving to be most effective.

A Clean Air Consultative Committee has been established to act as a liaison group between the City Council and various bodies either interested in or affecting air pollution in one way or another. At the first meeting of this committee in March 1963 an Action Committee was appointed and a programme for their investigation was put forward. The Committee has met twice since then and has considered draft regulations which will be ready for promulgation immediately the national legislation is available. In addition it has considered reports from three of its sub-committees on solid smokeless fuels, vehicle smoke and publicity.

As a result of stimulus from this Department the Electricity Department has obtained a revision of their tariffs enabling the use of "off-peak" electricity for all forms of bulk water heating. This cheap power is expected to play a major role in smoke elimination when the legislation is available.

The Gas Department has initiated a research programme into the manufacture of a solid smokeless fuel suitable for use in open fires. The Council has agreed in principle to the installation of additional plant at the Gas Works for the production of such a fuel. Large quantities of free burning solid smokeless fuel are required before a programme for the control of smoke from domestic dwellings can be embarked upon.

The sub-committee of the Clean Air Action Committee in its report on smoke from diesel engines recommended inter alia, that a continuous Reef-wide campaign be instituted by the Traffic authorities throughout the Reef. This recommendation is shortly to be implemented when it is hoped that by means of continuous pressure the operators of heavy transport vehicles will be made aware of the necessity as well as the desirability of efficient maintenance. Although diesel smoke is not a serious contributor to the overall level of air pollution its severe local effects make it the most discussed topic among the general public whenever air pollution is mentioned.

The Section is collaborating with the mechanical engineer from the O. and M. Division in an interesting experiment concerning the use of liquid petroleum gas as a supplement to diesel fuel. Initial indications from experiments carried out on an engine test bed show that a slight increase in power can be gained with clear exhaust conditions where this was not possible with diesel fuel alone.

Where fuels other than smokeless fuels are to be used methods must be adopted for burning them smokelessly. This can be accomplished by the correct use of the correct equipment. A scheme has been put forward for the introduction of training courses for both whites and non-whites in boiler house practice and boiler operation. It is hoped that a course on boiler house practice for European boiler house supervisors and engineers may be introduced by the Witwatersrand Technical College under the auspices of the Transvaal Chamber of Industries. Practical courses for Non-Europeans are expected to be held by the City Council with the co-operation of industry in making boiler plant available.

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One most satisfying result of the publicity which the Clean Air Campaign has received is the greater public realisation of the problem of air pollution in Johannesburg and the interest shown in the campaign. The Public Relations Officer is arranging with one of the local newspapers to hold a competition for a suitable emblem or poster to publicise the campaign.

7. Gas Works.

Routine sampling and analysis assist in satisfactory process control in the manufacture of gas and by-products to required specifications. Special investigations are made from time to time. The by-products produced include coke, ammonia and tar. Control is also aimed at regulating the effluents discharged into the sewers and the prevention of air pollution. Experiments are proceeding in the production of solid smokeless fuel.

8. Power Stations.

The Branch continued with routine and research work at the power stations which involves such matters as the examination and testing of boiler waters, make up and cooling waters; analysis of oils and other lubricants; prevention of corrosion or scaling throughout the plant; rebuilding by electroplating of worn shafts; prevention of corrosion of concrete cooling towers, etc.

At Orlando Power Station an investigation into the chemical and biological changes taking place in the Orlando Dam was carried out. The corrosion of concrete by sewage effluent is still a major problem.

The City Generating station remains closed. Monthly visits are paid to sample boiler and economiser waters from the boilers wet-stored with hydrazine.

XI. PUBLIC CONVENIENCES.

The Department maintains and controls 42 public conveniences for both sexes in the City and suburbs. Additional conveniences are available in public parks and in premises controlled by other municipal departments

During the year, this Department at the request of the Manager, Non-European Affairs Department, assumed responsibility for the administration of the conveniences for use by Bantu males and females in Polly Street, City and Suburban.

Public conveniences for the use of male and female Europeans were incorporated in the building plans for new Kazerne Car Park in Harrison Street. These were constructed by the Traffic Department and staffed by this Department. Similar arrangements are being provided at the Union Ground Parking Garage (Jack Mincer Parking Garage) and at the Residency Parking Garage.

Public conveniences are urgently required at stands 274/5, Parktown North/ Houghton - near King Edward VII Preparatory School; and Hillbrow - near the Bantu bus stop. The first of these should be available in 1964 but it has not been possible to acquire sites for the other two.

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At its meeting on the 20th August 1963, the Management Committee requested that it be furnished with a schedule showing those posts in the Council's service in which physically handicapped persons are employed in pursuance of the Council resolution dated 19th October 1948. Insofar as the public conveniences were concerned the position is that of the 31 White males employed on that date, 14 suffered from physical handicaps of various kinds. The largest group consisted of persons with disabled legs.

XII. CREMATION OF DECEASED PERSONS.

Cremations in the Braamfontein Crematorium numbered 1,647 during the year, an increase of 143 over the previous year. The By-laws relating to burials and cremations promulgated during 1957, do not make any provision for special medical certificates for cremation other than those normally required for the burial of a body. There is the possibility that this procedure may be open to abuse but this is a medico-legal as opposed to a public health consideration. Improved control of cremations is under consideration by the Transvaal Provincial Administration, but no special regulations have yet been promulgated.

XIII. HEALTH EDUCATION, TRAINING AND PUBLIC RELATIONS.

The Senior Health Visitor (Health Education) gave a number of lectures to the staff of the Department, mothers, student health visitors and other groups, arranged for other talks and demonstrations and assisted in the preparation of material for broadcasting to Bantu audiences.

The lecture room on the ground floor at 18 Hoek Street and the facilities for screening colour slides and cinematograph films were available to all members of the staff and full use was made of them. Good progress was made with the building up of public health models and exhibits in the adjoining basement but the work was not completed.

All members of the staff played an active part in the education of the public in health matters in the course of their routine duties and otherwise. Formal talks were given to special groups and at conferences. These are listed in Annexure 17. The food hygiene health education teams continued with their practical demonstrations, lectures and training of food handlers.

Visits were arranged by request for parties of students and others to visit the laboratories at sewage purification works, the Disinfecting Station and other points of interest, and visitors to the City were shown over the polyclinics in the Bantu townships when occasion offered. Nurses and other persons visited the Klipspruit Works for instructional purposes. Short explanatory talks were given on the sewage purification processes. Many of these visitors were university students or scholars, the latter also being conducted over the laboratory as part of their "careers guidance" training.

The Medical Officer of Health and members of his staff have taken an active part in their own professional organisations and in welfare and other bodies actively associated with public health work. These activities are encouraged as a means of keeping their knowledge and enthusiasm up-to-date and in maintaining good public relations while, at the same time, assisting organisations which directly and indirectly contribute a great deal to the health and welfare of the community. By resolution of the

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General Purposes Committee (12th January 1960) Heads of Departments are authorised to approve of officials in their departments serving on such committees during working hours and lists of officials so serving are reported to Standing Committees at the beginning of each year for information. The list is quite a formidable one as there are so many organisations doing worth while work in the public health field. Members of the staff devote much of their spare time to serving on these committee which meet mostly outside office hours and take up a minimum of official time.

The Medical Officer of Health has maintained good relations with the Press which has been very helpful and ready to assist in many directions, an attitude which is much appreciated. Thanks are also recorded to the Public Relations Officer of the Town Clerk's Department who has assisted in maintaining good relations with the public and in publicising matters of special topical interest.

The Witwatersrand and Pretoria Public Health Consultative Committee continues to function. It is sponsored by local authorities in the area and further afield which are represented by the Medical Officers of Health, Veterinarians and Chief Health Inspectors. The Committee acts as a forum to discuss health matters of local interest, to draw up public health by-laws and to prepare and distribute material for health propagand

The Research Co-ordinating Sub-Committee of the Joint Technical Staff Committee comprises members of the staff of the City Health and City Engineer's Departments and co-ordinates experimental and research work, mainly on sewage purification and related problems.

The Council was represented officially at a number of conferences and annual general meetings of national bodies. The names of the delegates are included in the following list:-

The Institute of Sewage Purification (S.A. Branch) at a conference held in Salisbury from 6th to 10th May 1963. Dr. B.S. Mundel and Mr. D.W. Osborn.

44th S.A. Medical Congress held in Johannesburg from 22nd to 27th July 1963. Dr. J.W. Scott Millar and 10 medical officers.

17th Annual Chemical Convention held in Port Elizabeth from 15th to 19th July 1963. Mr. D.W. Osborn and Mr. W.A. Potgieter.

Nursery School Association of S.A.; Annual General Meeting held in Pretoria from 1st to 3rd July 1963. Dr. O.I.B. Kreher.

Institute of Sewage Purification (S.A. Branch) and the National Institute of Water Research at a conference held in Pretoria from 21st to 24th October 1963. Dr. J.W. Scott Millar, Dr. E.G. White and Mr. D.W. Osborn.

National Council for Child Welfare; annual meeting held in Bloemfontein from the 9th to 13th September 1963. Dr. S. Johnson and Miss M. Bergh.

S.A. National Council for Mental Health; First National Conference Cape Town from 15th to 19th October 1963. Dr. J.W. Scott Millar and Miss C. Hains.

Institute of Public Health/....

Institute of Public Health, 21st Annual Congress held in Durban from 28th October to 1st November 1963. Dr. J.W. Scott Millar and Mr. A.H. Spargo. Dr. A.H. Smith and Mr. W.M. McConaghy attended in their private capacities.

National Standards Conference held in Pretoria from the 23rd to 26th September 1963. Dr. B. Mundel and Dr. E.G. White.

Air Pollution Research Fund; conference of contributors held in Johannesburg on the 27th November 1963. Dr. J.W. Scott Millar, Mr. L.E. Tucker and Dr. E.G. White.

Meetings of the National Executive and the National Council of S.A.N.T.A. from the 30th September to 1st October 1963, held in Bloemfontein.

Formal Education: The Medical Officer of Health is Lecturer in Urban Health Administration at the University of the Witwatersrand and, with other members of the staff, assists with the teaching of undergraduate and postgraduate medical students. The Senior Dental Officer (Orlando) is Honorary Lecturer in Public Health and Preventive Dentistry and gave demonstrations at the Orlando Dental Clinic to final year dental students and pupil health visitors.

Members of the staff assist the Witwatersrand Technical College with the theoretical and practical training of health visitors and health inspectors and also conduct oral examinations on behalf of the examining body. Practical demonstrations are given to pupil nursery school teachers and students for diploma in paediatric nursing.

Several health visitors attended a course of lectures at the Tara Hospital on the Problems of Adolescence. The lectures covered all aspects of the problem.

The Health Visitors Discussion Group organised a study day at Pretoria University. The lectures included the subjects:- "The Young Unmarried Mother a Sociological Problem", "Feeding Patterns of the Child and Adolescent"; and a seminar "The Human Approach in the Art of Interviewing - Health Visitor, Social Worker and School Nurse".

Miss A.M. Walker of the Laboratory Division made a study tour of the U.S.A. and England from 10th May 1963 to 31st January 1964 studying "Synthetic Detergents in Sewerage".

XIV. FINANCE.

A schedule of the cost of the services rendered by the City Health Department for the Financial year ended 30th June 1963, is shown on Annexure 19.

Expenditure:

The expenditure figures for the various services operated by the Department are made up of Salaries, Wages and Allowances, Miscellaneous Expenses, Repairs and Maintenance, Loan Charges and Revenue Contributions to Capital Outlay. The cost of services provided for Non-Europeans which amounted to R1,986,642, was passed to the Non-European Affairs Department to be charged to the Bantu Revenue Account.

Income/.....

Income:

Income detailed in the financial summary includes refunds of expenditure totalling R984,712 from the State Department of Health in terms of the Public Health Acts. A subsidy of R433,489 was received from the Transvaal Provincial Administration for Curative and Midwifery Services in the Bantu Townships. The subsidy being received by the Council now represents only approximately 79% of the cost of the services because of the non-acceptance by the Administration of certain items of expenditure. Further representations have been made for the payment of the full 100% subsidy, and it is understood that these are at present receiving consideration.

The net cost of the services administered by the City Health Department increased by R148,879 as compared with the previous financial year. During the financial year 1962/63, two substantial salary increases had to be met. Firstly, in October 1962, consolidation of the Cost of Living Allowance into Bantu salaries took place. This, together with the resultant adjustment in salary scales was back-dated to November 1961. As a result, the increased expenditure on Bantu salaries amounted to approximately R45,000. (R20,500 for back-pay, and R24,500 for increased scales of pay.)

Secondly, as a result of the Conciliation Agreement concluded in May 1963, the European staff was regraded with effect from 1st September 1962. The cost of this regrading in the City Health Department amounted to R32,500.

The Council's share of other salary and wage increases amounted to R26,600, these being for filling of vacancies on the establishment and normal increments.

The balance of the net increased expenditure for the financial year, approximately R44,700, can mainly be attributed to the following:-

Increase in commuted payment to the South African Institute for Medical Research, for the analysis of Bacteriological specimens (R14,000); increase in Subsidy from the Province for curative and midwifery services (R6,000); increase in charges made by the Stores Branch of the City Treasurer's Department (R7,000); Council's share of the increased cost of hospitalisation of tuberculosis patients (R3,500); increased locomotion allowances (R10,000).

ANNEXURE 1.

STAFF ESTABLISHMENT AS AT 31ST DECEMBER 1963.

HEAD OFFICE ADMINISTRATION:

1 Medical Officer of Health
1 Deputy Medical Officer of Health
3 Assistant Medical Officers of Health
1 Administrative Officer
1 Chief Clerk
15 Clerks
11 Woman Assistants
10 Shorthand Typists
2 Telephonists
11 Unskilled Labourers (Bantu)

INFECTIOUS, COMMUNICABLE AND PREVENTABLE DISEASES:

1 Senior Infectious Disease Inspector
1 Woman Assistant
1 Health Inspector (Bantu)

DISINFECTIONS AND REMOVALS:

1 Transport and Disinfecting Superintendent
1 Assistant Transport and Disinfecting Superintendent
4 Disinfecting Officers
1 Recorder
1 Chargehand Mechanic
3 Mechanics
1 Mobile Messenger (Bantu)
15 Unskilled Labourers (Bantu)

FEVER HOSPITAL:

1 Physician-in-Charge (Part-time)
1 Ear, Nose and Throat Surgeon (Part-time)

MATERNAL HOSPITAL:

1 Medical Superintendent
3 Medical Officers
1 Radiologist (Part-time)
1 Matron
2 Nursing Sisters
1 Food Supervisor
2 Radiographers
1 Specialist in Physical Medicine (Part-time)
1 Orthopaedic Surgeon (Part-time)
1 Physiotherapist (Part-time)
1 Occupational Therapist
1 Clerk-in-Charge
1 Woman Assistant
1 Hygiene Officer/Handyman
1 Night Superintendent (Female) (Bantu)
9 Sisters (Bantu)
24 Nurses (Bantu)
58 Nursing Assistants (Uncertificated) (Bantu)
4 Orderlies (Bantu)
4 Clerks (Bantu)
1 Darkroom Assistant (Female) (Bantu)
1 Male Instructor (Bantu)
1 Female Instructor (Bantu)
61 Unskilled Labourers (Bantu)

TUBERCULOSIS SERVICES:

1 Chief Tuberculosis Medical Officer
1 Assistant Chief Tuberculosis Medical Officer
4 Medical Officers
1 Radiologist (Part-time)
1 Senior Health Visitor
18 Health Visitors (A)
8 Welfare Officers (A) and (B)
4 Nursing Sisters
2 Radiographers
2 Technical Assistants (A)
1 Clerk
3 Woman Assistants

TUBERCULOSIS SERVICES: (Contd.)

57 Nurses (Bantu) (A)
17 Clerks (Bantu) (A)
14 Clinic Assistants (Female) (Bantu) (A)
3 Transport Drivers (Bantu)
1 Radiographer (Bantu)
3 Darkroom Assistants (Bantu) (A)
9 Welfare Assistants (Bantu) (B)
19 Labourers (Bantu) (A)

VENEREAL DISEASES SERVICES:

1 Consultant Venereologist (Part-time)
2 Medical Officers (Part-time)
2 Clinic Orderlies (Part-time)
1 Technical Assistant (Part-time)
1 Orderly (Clinic) (Bantu)

MATERNAL AND CHILD HEALTH SERVICES:

1 Paediatric Officer (Part-time)
1 Chief Child Welfare Medical Officer
1 Assistant Chief Child Welfare Medical Officer
11 Child Welfare Medical Officers
1 Chief Health Visitor
1 Senior Health Visitor (Health Education)
41 Health Visitors (A)
3 Nursing Sisters
5 Clinic Attendants
1 Mobile Clinic Attendant
4 Woman Assistants
27 Health Visitors (Bantu)
6 Clerks (Bantu)
2 Clinic Assistants (Bantu) (A)
3 Labourers (Bantu)

SUPERVISION OF NURSING HOMES AND MIDWIVES:

1 Senior Health Visitor
3 Health Visitors
1 Woman Assistant

DISPENSARY:

1 Chief Pharmacist
2 Pharmacists
11 Unskilled Labourers (Bantu)

PUBLIC CONVENIENCES:

2 Supervisors
49 Attendants
105 Unskilled Labourers (Bantu)

NURSERY SCHOOLS AND DAY NURSERIES:

1 Medical Officer
1 Inspectress of Nursery Schools
1 Senior Supervisor
6 Supervisors
15 Assistant Supervisors
6 Nursery Assistants
1 Driver/Handyman
1 Woman Assistant
2 Senior Assistant Supervisors (Bantu)
11 Assistant Supervisors (Bantu)
7 Cooks (Bantu)
13 Unskilled Labourers (Bantu)

MEDICAL SERVICES IN BANTU LOCATIONS:

5 Senior Medical Officers
18 Medical Officers
1 Medical Officer (Part-time)
1 Senior Dental Officer
5 Dental Officers

2/.....

ANNEXURE 1.

MEDICAL SERVICES IN BANTU LOCATIONS: (Contd.)

1 Senior Health Visitor
9 Health Visitors
1 Orthopaedic After-Care Sister
1 Clerk
1 Woman Assistant
1 Health Visitor (Bantu)
4 Senior Nurses (Bantu)
2 Senior Midwives (Bantu)
79 Nurses (Bantu)
132 Midwives (Bantu)
29 Clerks (Bantu)
31 Clinic Assistants (Female) (Bantu)
8 Dentists' Assistants (Bantu)
4 Clinic Assistants (Part-time) (Bantu)
31 Jeep Drivers (Bantu)
47 Unskilled Labourers

SANITATION DIVISION:

1 Chief Health Inspector
4 Divisional Health Inspectors
12 Senior Health Inspectors
61 District Health Inspectors
3 Learner Health Inspectors
2 Veterinarians (C)
3 Clerks
2 Pest Control Inspectors
21 Pest Control Overseers
2 Supervising Health Inspectors (Bantu)
1 Health Inspector (Coloured)
15 Health Inspectors (Bantu)
59 Unskilled Labourers (Bantu)

LABORATORY DIVISION:

1 Chief Chemist
1 Assistant Chief Chemist
5 Principal Chemists
1 Air Pollution Officer
10 Chemists
6 Inspectors (Air Pollution Control)
1 Industrial Effluents Inspector

LABORATORY DIVISION: (Contd.)

1 Industrial Effluents Sampler
1 Bacteriologist
1 Laboratory Technician
10 Chemical Assistants
1 Clerk
1 Typist
3 Chemical Engineering Students
13 Unskilled Labourers (Bantu)

MEDICAL EXAMINATION CENTRE : BANTU REGISTRATION DEPOT:

1 Senior Medical Officer
3 Medical Officers (2 European or Non-European)
1 Radiologist (Part-time)
1 Technical Assistant (X-ray)
1 Medical Orderly
1 Radiographer (Bantu)
4 Orderlies (Medical) (Bantu)
2 Clinic Orderlies (Bantu)
4 Orderlies (X-ray) (Bantu)
2 Nurses (Bantu)
2 Clinic Assistants (Bantu)
1 Dark Room Assistant (Bantu)
1 Messenger (Bantu)

EUROPEAN HOUSING:

1 Housing Officer
1 Assistant Housing Officer
1 Maintenance Supervisor
1 Housing Supervisor
1 Senior Assistant Housing Supervisor
2 Housing Assistants
7 Assistant Housing Supervisors
2 Woman Assistants
7 Caretaker/Handymen
1 Matron, Girls' Club
1 Assistant Matron, Girls' Club
47 Unskilled Labourers (Bantu)

(A) Appointments to the following 22 posts which were created for preventive Health Services for the Coloured Community, will only be made when the Riverlea Clinic is completed:

EUROPEANS: 4 Health Visitors
2 Welfare Officers
1 Technical Assistant

NON-EUROPEANS: 6 Nurses
2 Clerks
4 Clinic Assistants
1 Dark Room Assistant
2 Labourers.

(B) Five Welfare Officers and nine Bantu Welfare Assistants seconded to City Health Department from Non-European Affairs Department for full-time duties in Bantu Areas.

(C) Seconded full-time from Abattoir and Livestock Market Department.

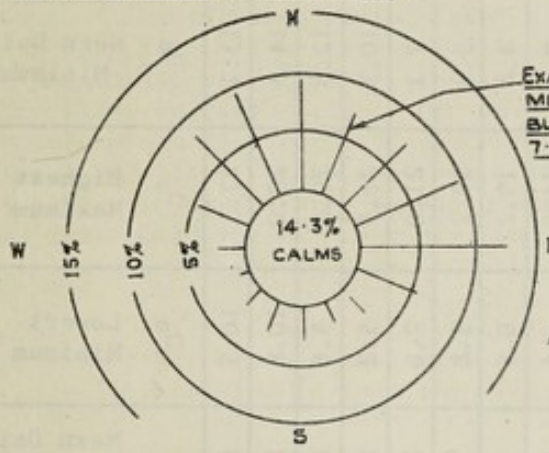
SUMMARY OF STAFF ACTUALLY EMPLOYED AS AT 31ST DECEMBER 1963.

EUROPEANS:		NON-EUROPEANS.	
Salaried Staff	406	Salaried Staff	559
Daily Paid	54	Daily Paid	439
	460		998

ANNEXURE 2

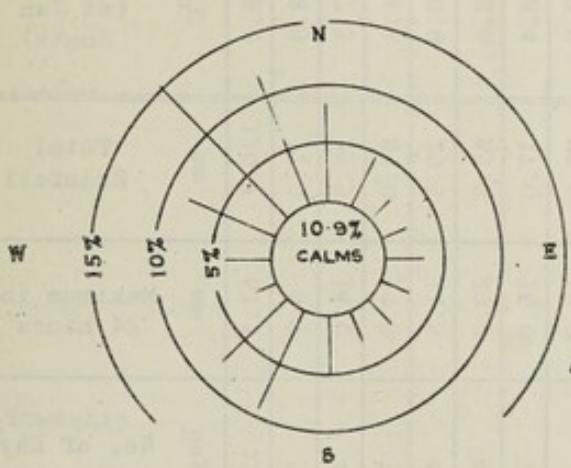
WIND FREQUENCIES FOR CENTRAL WITWATERSRAND.

INDICATING DIRECTIONS FROM WHICH THE WINDS BLOW,
CALCULATED AS PERCENTAGES OF THE PERIOD GIVEN.
PERCENTAGE CALMS ARE GIVEN WITHIN THE CIRCLE
(ARCS REPRESENT 5% INTERVALS)

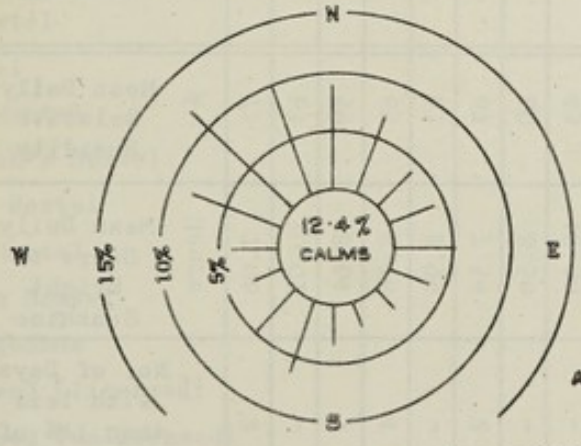


EXAMPLE: THIS LINE MEANS THAT WINDS BLOW FROM N.N.E. 7·23% OF MONTH.

AVERAGE FOR JANUARY (MID SUMMER).



AVERAGE FOR JULY. (MID WINTER)



AVERAGE FOR YEAR.

DATA RECORDED AT JAN SMUTS AIRPORT, LAT. 26° 08'S, LONG. 28° 14'E, AND TAKEN FROM "CLIMATE OF SOUTH AFRICA: PART 6: SURFACE WINDS", PUBLISHED BY THE WEATHER BUREAU, PRETORIA, 1960.

ANNEXURE 3.

The following table reflects the averages of records of climatic conditions each month during 1963:

	Joubert Park								Jan Smuts Airport			
	Temperature					Rainfall			Relative Humidity	Bright Sunshine		
	Mean Daily Maximum °C	Mean Daily Minimum °C	Highest Maximum °C	Lowest Minimum °C	Mean Daily (at Jan Smuts) °C	Total Rainfall mm.	Maximum in 24 hours mm.	No. of Days with rain Days	Mean Daily Relative Humidity %	Mean Daily Hours of Bright Sunshine Hours	No. of Days with less than 11% of possible	No. of Days with more than 89% of possible
January	23.6	13.1	27.3	10.5	18.0	120.7	61.5	13	73	7.06	2	3
February	25.3	14.3	28.0	10.8	18.9	17.5	5.7	5	63	10.01	-	9
March	23.5	12.8	29.0	5.6	17.3	35.5	14.0	4	59	8.64	1	9
April	19.9	10.3	24.5	5.2	14.4	89.0	39.0	7	65	8.16	4	12
May	17.0	7.1	21.0	2.6	10.9	29.5	11.5	4	61	8.99	-	18
June	14.5	5.1	19.2	1.8	8.6	65.5	29.0	4	67	7.59	2	11
July	14.2	4.4	19.2	0.5	8.4	17.0	16.0	2	60	8.56	-	16
August	18.8	7.1	24.0	0.4	12.0	00.0	0.0	-	43	10.00	-	21
September	23.9	12.1	27.5	6.4	17.2	7.8	5.0	2	41	10.13	-	11
October	24.2	13.3	28.8	9.2	17.9	55.0	16.0	7	56	8.76	-	4
November	23.1	13.6	26.0	8.6	17.4	154.6	46.0	13	74	7.19	1	-
December	26.2	15.0	29.8	10.3	19.7	105.0	37.0	13	63	9.02	2	3
Year	21.2	10.7	29.8	0.4	15.1	697.1	61.5	74	60	8.68	12	117

BANTU POPULATION. ANNEXURE 4.

The following estimates were arrived at in consultation with the Manager, Non-European Affairs Department of the Council:

Place	1963
Central Western Jabavu	8,657
Jabavu	23,191
Chiawelo	12,868
Dhlamini	9,070
Dube	12,527
Emdeni	11,165
Jabulani	11,485
Mapetla	8,823
Mofolo	28,425
Molapo	8,386
Moletsane	10,481
Moroka	15,611
Naledi	19,398
Orlando	60,774
Orlando Extension	5,826
Phiri	11,089
Pimville	32,210
Senaoane	8,353
Tladi	9,988
Zola	30,052
Zondi	9,018
Eastern Bantu Township	3,932
Dube Hostel	5,020
Nancefield Hostel	4,762
Jabulani Hostel	4,018
Denver Men's Hostel	3,332
George Goch Men's Hostel	2,830
Mai-Mai Men's Hostel	Nil
Wemmer Men's Hostel	2,807
Wolhuter Men's Hostel	3,123
Municipal Compounds	9,093
Privately-housed (licensed)	33,483
Privately-housed (unlicensed)	72,249
Wolhuter Women's Hostel	133
Mine Bantu	25,800
TOTAL ESTIMATED BANTU POPULATION	517,979

ABBREVIATED LIST OF 50 CAUSES OF DEATH.

International Code No.	Cause of Death	Europeans	Bantu	Mine Bantu	Coloureds	Asiatics	All Races
001 - 008	Tuberculosis Respiratory System	21	179	3	17	3	223
010 - 019	Tuberculosis, Other Forms	2	57	6	1	-	66
020 - 029	Syphilis	17	24	1	1	-	43
040	Typhoid Fever	-	6	-	1	-	7
045 - 048	Dysentery	1	27	-	1	-	29
055	Diphtheria	-	2	-	1	-	3
056	Whooping Cough	1	12	-	1	-	14
057	Meningococcal Infections	5	5	-	1	-	11
080	Acute Poliomyelitis	-	2	-	-	-	2
085 - 086	Measles	1	22	-	2	-	25
	Other Diseases Classified as Infective and Parasitic	38	46	4	-	1	89
140 - 205	Malignant Neoplasms	542	311	10	33	10	906
210 - 239	Benign Neoplasms	12	6	-	-	1	19
260	Diabetes Mellitus	45	28	-	11	8	92
290 - 293	Anaemias	9	10	1	1	1	22
330 - 334	Vascular Lesions Affecting Central Nervous System	140	144	3	27	9	323
340	Non-Meningococcal Infections	8	40	2	1	-	51
400 - 402	Rheumatic Fever	6	2	-	-	-	8
410 - 416	Chronic Rheumatic Heart Disease	53	76	-	9	4	142
420 - 422	Arteriosclerotic and Degenerative Heart Disease	813	65	2	32	23	935
430 - 434	Other Disease of the Heart	159	183	1	26	4	373
440 - 443	Hypertension with Heart Disease	14	27	-	3	-	44
444 - 447	Hypertension without Mention of Heart	102	144	-	20	11	277
450 - 456	Diseases of Arteries	188	36	1	14	1	240
480 - 483	Influenza	1	20	-	2	-	23
490 - 493, 763	Pneumonia	139	474	5	34	8	660
500 - 502	Bronchitis	34	116	1	17	2	170
540 - 541	Ulcer of Stomach and Duodenum	27	4	-	2	1	34
550 - 553	Appendicitis	3	1	-	-	-	4
560, 561, 570	Intestinal Obstruction and Hernia	27	17	2	1	-	47
571, 764	Gastro-Enteritis	14	467	1	28	2	512
581	Cirrhosis of Liver	23	59	3	6	2	93
590 - 594	Nephritis and Nephrosis	43	47	1	1	4	96
610	Hyperplasia of Prostate	12	3	-	-	-	15
640 - 652		1	52	-	4	-	57
670 - 689	Complications of Pregnancy and Childbirth	-	10	-	-	2	12
750 - 759	Congenital Malformations	45	41	-	6	2	94
760 - 762	Birth Injuries and Post-Natal Asphyxia	52	97	-	19	12	180
765 - 776	Other Infant Diseases and Immaturity	82	140	-	25	13	260
780 - 795	Senility and Ill-Defined Conditions	137	876	6	24	1	1,044
810 - 835	Motor Vehicle Accidents	37	146	3	10	8	204
800 - 802		2	33	-	-	-	35
840 - 965	All Other Accidents	159	341	33	30	6	569
970 - 979	Suicide	95	29	-	3	-	127
980 - 999	Homicide	52	495	16	26	2	591
	Other Causes	218	270	5	31	10	534
	TOTALS	3,380	5,192	110	472	151	9,305

CORRECTED FOR OUTWARD TRANSFER.

SUMMARY OF DETAILED LIST OF DISEASES, INFIRMITIES AND CAUSES OF DEATH 1961 - 1963.

ANNEXURE 6.

Cause of Death	1961			1962			1963		
	Deaths	Rate	% of Total	Deaths	Rate	% of Total	Deaths	Rate	% of Total
I. Infective and Parasitic Diseases									
Europeans	86	0.23	2.77	100	0.27	3.23	86	0.22	2.54
Bantu	499	0.94	9.32	465	0.90	8.85	396	0.76	7.46
Coloureds	25	0.37	6.16	42	0.93	8.55	26	0.53	5.50
Asiatics	11	0.46	7.53	3	0.13	2.26	4	0.15	2.64
All Persons	621	0.64	6.89	610	0.64	6.80	512	0.52	5.50
II. Neoplasms									
Europeans	561	1.52	18.07	546	1.47	17.64	554	1.47	16.39
Bantu	265	0.50	4.95	299	0.59	5.69	327	0.63	6.16
Coloureds	42	0.96	10.34	40	0.89	8.15	33	0.67	6.99
Asiatics	12	0.50	8.22	10	0.39	7.32	11	0.41	7.28
All Persons	880	0.91	9.77	895	0.93	9.97	925	0.95	9.94
III. Allergic, Endocrine System, Metabolic and Nutritional Diseases									
Europeans	56	0.15	1.80	63	0.17	2.03	77	0.20	2.27
Bantu	150	0.28	2.80	162	0.31	3.08	147	0.28	2.77
Coloureds	11	0.25	2.71	16	0.35	3.26	18	0.36	3.81
Asiatics	7	0.29	4.79	8	0.31	6.02	11	0.41	7.28
All Persons	224	0.23	2.49	249	0.26	2.77	253	0.26	2.71
IV. Diseases of the Blood and Blood-Forming Organs									
Europeans	13	0.04	0.42	20	0.05	0.65	14	0.03	0.41
Bantu	19	0.04	0.35	21	0.04	0.40	17	0.03	0.32
Coloureds	5	0.11	1.23	5	0.11	1.02	1	0.02	0.21
Asiatics	2	0.02	1.37	Nil	Nil	Nil	1	0.03	0.66
All Persons	39	0.04	0.43	46	0.05	0.51	33	0.03	0.35
V. Mental, Psychoneurotic and Personality Disorders									
Europeans	5	0.01	0.16	6	0.02	0.19	8	0.02	0.23
Bantu	6	0.01	0.11	7	0.01	0.13	2	0.003	0.03
Coloureds	2	0.05	0.49	1	0.02	0.20	Nil	Nil	Nil
Asiatics	-	-	-	Nil	Nil	Nil	Nil	Nil	Nil
All Persons	13	0.01	0.14	14	0.01	0.16	10	0.01	0.10
VI. Diseases of the Nervous System and Sense Organs									
Europeans	154	0.42	5.00	166	0.45	5.36	185	0.49	5.47
Bantu	228	0.43	4.26	225	0.44	4.28	261	0.50	4.92
Coloureds	20	0.46	4.93	19	0.42	3.87	32	0.65	6.77
Asiatics	2	0.02	1.37	5	0.19	3.76	11	0.41	7.28
All Persons	404	0.42	4.48	415	0.43	4.62	489	0.50	5.25
VII. Diseases of the Circulatory System									
Europeans	1,269	3.43	40.88	1,213	3.26	39.18	1,362	3.63	40.29
Bantu	482	0.90	9.00	510	0.99	9.71	364	1.08	10.63
Coloureds	91	2.08	22.41	101	2.24	20.57	109	2.22	23.09
Asiatics	49	2.04	33.56	53	2.06	39.85	43	1.63	28.47
All Persons	1,891	1.95	20.99	1,877	1.96	20.91	2,078	2.14	22.33
VIII. Diseases of the Respiratory System									
Europeans	135	0.36	4.35	163	0.44	5.26	192	0.51	5.68
Bantu	579	0.09	10.81	611	1.18	11.63	574	1.10	10.82
Coloureds	35	0.80	8.62	49	1.09	9.98	56	1.14	11.86
Asiatics	15	0.63	10.27	13	0.50	9.77	9	0.34	5.96
All Persons	764	0.79	8.48	836	0.87	9.31	431	0.44	4.63

IX. Diseases/.....

Cause of Death	1961			1962			1963		
	Deaths	Rate	% of Total	Deaths	Rate	% of Total	Deaths	Rate	% of Total
IX. Diseases of the Digestive System									
Europeans	141	0.38	4.54	142	0.38	4.59	131	0.34	3.87
Bantu	643	1.21	12.01	617	1.20	11.74	574	1.10	10.82
Coloureds	24	0.55	5.91	43	0.95	8.76	36	0.73	7.42
Asiatics	5	0.21	3.42	5	0.19	3.76	5	0.18	3.31
All Persons	813	0.84	9.02	807	0.84	8.99	746	0.77	8.01
X. Diseases of the Genito-Urinary System									
Europeans	83	0.22	2.67	57	0.15	1.84	84	0.22	2.48
Bantu	91	0.17	1.70	100	0.19	1.90	88	0.16	1.65
Coloureds	8	0.18	1.97	7	0.16	1.43	2	0.04	0.42
Asiatics	4	0.17	2.74	2	0.08	1.50	7	0.26	4.63
All Persons	186	0.19	2.06	166	0.17	1.85	181	0.18	1.94
XI. Diseases and Complications of Pregnancy, Childbirth and the Puerperium									
Europeans	5	0.01	0.16	8	0.02	0.26	1	0.002	0.02
Bantu	37	0.07	0.70	40	0.08	0.76	63	0.12	1.18
Coloureds	2	0.05	0.49	1	0.02	0.20	5	0.10	1.05
Asiatics	1	0.04	0.68	Nil	Nil	Nil	2	0.26	1.32
All Persons	45	0.05	0.50	49	0.05	0.55	71	0.07	0.76
XII. Diseases of the Skin and Cellular Tissue									
Europeans	4	0.01	0.13	Nil	Nil	Nil	4	0.01	0.11
Bantu	5	0.009	0.09	5	0.009	0.10	4	0.007	0.07
Coloureds	-	-	-	Nil	Nil	Nil	2	0.04	0.42
Asiatics	-	-	-	Nil	Nil	Nil	Nil	Nil	Nil
All Persons	9	0.009	0.09	5	0.005	0.06	10	0.01	0.10
XIII. Diseases of the Bones and Organs of Movement									
Europeans	9	0.02	0.29	12	0.03	0.39	8	0.02	0.23
Bantu	2	0.003	0.04	4	0.007	0.08	7	0.01	0.13
Coloureds	2	0.05	0.49	Nil	Nil	Nil	2	0.04	0.42
Asiatics	1	0.04	0.68	Nil	Nil	Nil	Nil	Nil	Nil
All Persons	14	0.01	0.16	16	0.02	0.18	17	0.01	0.18
XIV. Congenital Malformations									
Europeans	47	0.13	1.51	37	0.10	1.20	45	0.12	1.33
Bantu	38	0.07	0.52	37	0.07	0.70	41	0.07	0.77
Coloureds	5	0.11	1.23	5	0.11	1.02	6	0.12	1.27
Asiatics	4	0.17	2.74	3	0.12	2.26	2	0.07	1.32
All Persons	94	0.10	1.04	82	0.09	0.91	94	0.09	1.01
XV. Certain Diseases of Early Infancy									
Europeans	152	0.41	4.90	147	0.39	4.75	149	0.39	4.40
Bantu	516	0.97	9.64	216	0.42	4.11	292	0.56	5.50
Coloureds	26	0.60	6.40	57	1.26	11.61	51	1.04	10.80
Asiatics	17	0.71	11.64	16	0.62	12.03	28	1.06	18.54
All Persons	711	0.73	7.89	436	0.45	4.86	520	0.53	5.58
XVI. Symptoms, Senility and Ill-Defined Conditions									
Europeans	88	0.24	2.84	102	0.27	3.29	137	0.36	4.05
Bantu	925	1.74	17.27	916	1.78	17.43	882	1.70	16.63
Coloureds	42	0.96	10.34	42	0.93	8.55	24	0.48	5.08
Asiatics	4	0.17	2.74	4	0.16	3.01	1	0.03	0.66
All Persons	1,059	1.09	11.75	1,064	1.11	11.86	1,044	1.07	11.21
XVII. Alternative Classifications of Accidents Poisonings and Violence (External Causes)									
Europeans	296	0.80	9.54	314	0.84	10.14	343	0.91	10.14
Bantu	870	1.63	16.25	1,020	1.98	19.41	1,063	2.05	20.04
Coloureds	66	1.51	16.26	63	1.40	12.83	69	1.40	14.61
Asiatics	12	0.50	8.22	11	0.43	8.27	16	0.60	10.59
All Persons	1,248	1.28	13.81	1,408	1.47	15.69	1,491	1.54	16.02

CORRECTED FOR OUTWARD TRANSFER.

RECORD OF SAMPLES SUBMITTED.

FOOD, MILK AND WATER SUPPLIES.

ANNEXURE 7.

Details of Tests			S.A.I.M.R.	Abattoirs Laboratory	Council Laboratories	Government Chemical Laboratories	Staff of C.H.D. (Field Tests)
Milk	Pasteurised	Bacteriological			1,562		
	Raw Milk	"			1,825		
	Sterilised Milk	"			40		
	Special Butter Fats	"			8		
		For Secretary for Health				30	
		Milk Fat and Solid not Fat Standards				711	
City Milk Supplies		Bacteriological and Biological Tests	8,704				
		Mastitis		3,930			
		Biological tests for Tuberculosis		1,913			
		Brucellosis Tests		1,913			
		Antibiotics		1,412			
Farm Dairy Demonstration Van		Mastitis Test by means of strip cup					7,883
		Microscopic Examination of Milk					240
		Acidity Tests					239
		Butter Fats					241
		Sediment Tests					1,831
All Producing Dairies		Sediment Tests					1,017
		Special Water Samples					4
Milk Samples		Field Phosphatase Tests					428
		Sediment Tests					4,408
Food Samples	Miscellaneous						
	Ice Cream	Bacteriological	954			5	
	Water Suckers		205			1	
	Meat					887	
	Honey					21	
	Bread					3	
Water Supplies	Municipal Reservoirs	Bacteriological	157				
	Boreholes	Bacteriological and Chemical			943		
	"	" "			75		
	"	Bacteriological			38		
	Kaffir Corn Malts	Chemical			89		
	Kaffir Beer	Chemical			253		
		Chemical			821		

ANNEXURE 8.

MEDICAL SERVICES IN BANTU TOWNSHIPS

CLINIC ATTENDANCES, ETC.

JANUARY - DECEMBER 1963.

	Pimville	Western Township	Eastern Bantu Township	Orlando	Noordgesig	Shantytown	Jabavu	Moroka	Total
Dispensary and Out-patient Clinics	47,224	Nil	8,486	62,836	18,036	44,589	140,971	142,095	464,237
Ante-Natal Clinics	5,755	Nil	1,344	8,596	1,666	5,548	25,172	16,023	64,104
Child Welfare Clinics	20,750	Nil	5,382	25,813	12,014	15,027	45,257	41,471	165,714
Tuberculosis Clinics	17,502	20,420	9,254	23,940	13,310	14,647	57,683	50,968	207,724
Venereal Disease Clinics	2,374	Nil	332	1,603	191	713	7,544	2,794	15,551
TOTAL ATTENDANCES	93,605	20,420	24,798	122,788	45,217	80,524	276,627	253,351	917,330
Home Visits by Medical Officers	1,169	Nil	125	85	1,025	129	688	533	3,754
Home Visits by Health Visitors	1,164	236	699	745	503	846	21,323	6,484	32,000
Home Visits by Bantu Nurses and Midwives	22,233	3,865	4,424	38,625	5,697	21,828	88,736	83,455	268,863
TOTAL VISITS	24,566	4,101	5,248	39,455	7,225	22,803	110,747	90,472	304,617
No. of Confinements and B.B.A.'s Attended by District Midwives	1,162	Nil	97	1,201	173	595	5,331	3,613	12,172

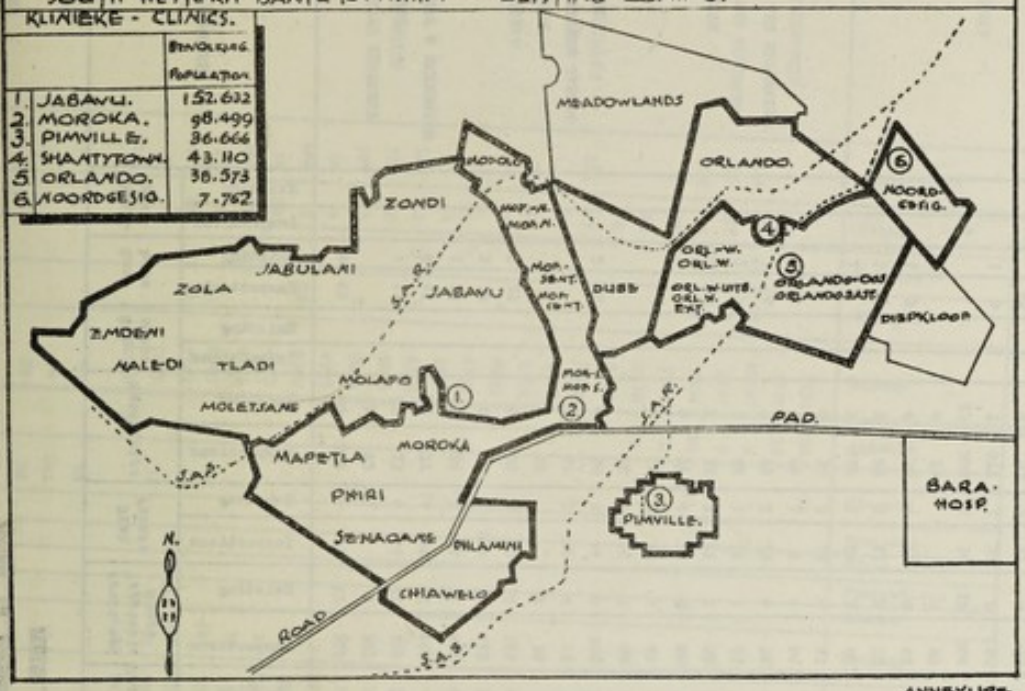
PROPOSED AND EXISTING ZONING OF CLINICS IN SOWETO.
BEOOGDE EN BESTAANDE INDELING VAN KLINIEKE IN SOWETO.

AANHANGSEL. ANNEXURE. A.

SUIDWESTELIKE BANTOEDORPE · BESTAANDE INDELING.
SOUTH WESTERN BANTU TOWNSHIPS · EXISTING ZONING.

KLINIEKE - CLINICS.

		BEVOLKING POPULATION
1.	JABAVU.	152.632
2.	MOROKA.	98.499
3.	PIMVILLE.	36.666
4.	SHANTYTOWN.	43.110
5.	ORLANDO.	38.573
6.	NOORDGESIG.	7.762

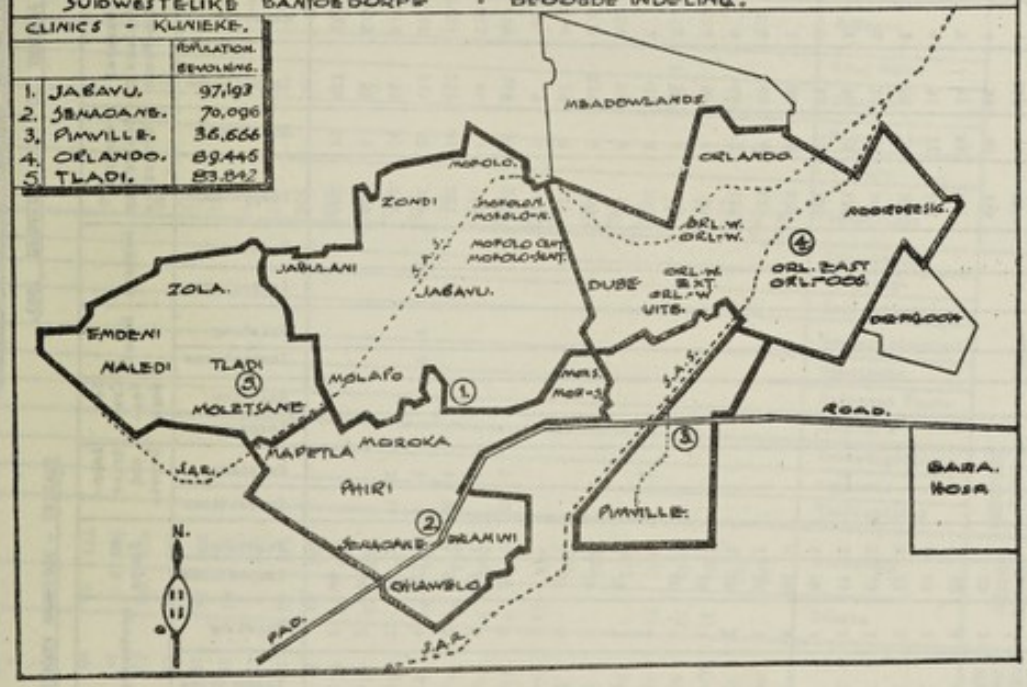


ANNEXURE. AANHANGSEL. B.

SOUTH WESTERN BANTU TOWNSHIPS · PROPOSED ZONING.
SUIDWESTELIKE BANTOEDORPE · BEOOGDE INDELING.

CLINICS - KLINIEKE.

		POPULATION. BEVOLKING.
1.	JABAVU.	97.193
2.	SENAOANE.	70.096
3.	PIMVILLE.	36.666
4.	ORLANDO.	89.445
5.	TLADI.	83.842



REPORT ON ENVIRONMENTAL HEALTH SERVICES IN BANTU TOWNSHIPS.

ANNEXURE 10.

PERIOD 1ST JANUARY TO 31ST DECEMBER 1963.

TRADING - BUSINESS PREMISES AND INSPECTIONS.

TOWNSHIP	Bakeries		Barbers		Bioscope		Butcheries		Fish Friers		Fruit and Vegetable Shops		Garages		General Dealers in Non-Foods		General Dealers in Groceries		Hawkers		Hotels		Ice Cream Vendors		Laundries and Depots		Milk Shops		Restaurants		REMARKS
	Existing	Inspections	Existing	Inspections	Existing	Inspections	Existing	Inspections	Existing	Inspections	Existing	Inspections	Existing	Inspections	Existing	Inspections	Existing	Inspections	Existing	Inspections	Existing	Inspections	Existing	Inspections	Existing	Inspections	Existing	Inspections	Existing	Inspections	TRADING CONDITIONS
PIMVILLE			6	43			20	108	6	72	12	105			19	116	24	290									3	68	3	51	Unsatisfactory
EASTERN BANTU TOWNSHIP							3	72	1		1	107			3	51	3	104									1	36	2	45	Fairly Satisfactory
ORLANDO EAST			1	11			20	113	6	54	21	108	2	18	8	35	37	294							2	14	5	39	11	88	Unsatisfactory
ORLANDO WEST & EXTENSION			6	41			32	327	16	105	34	269	-		48	315	52	389			1	8			1	4	10	128	14	135	Fairly Satisfactory
JABAVU			1	22			18	124	3	31	11	120	-		14	219	25	221		18					1	10	4	91	5	65	Fairly Satisfactory
DUBE			3	10			8	68	2	104	5	115	1		3	46	11	132							2		3	80	5	61	Fairly Satisfactory
MOPOLO CENTRAL			2	15			6	105	3	60	10	165	-		5	185	16	210							2	12	2	30	5	73	Fairly Satisfactory
MORORA NORTH							2	18			2	18				5	3	25											1	14	Fairly Satisfactory
CENTRAL WESTERN JABAVU							5	61	2	22	4	57			4	19	8	117									2	17	6	51	Fairly Satisfactory
MOPOLO NORTH			2	20			6	96	2	44	6	106	1	3	7	237	9	159									1	23	5	52	Fairly Satisfactory
MOLAPO							6	48	4	38	7	64			7	27	9	98									4	29	5	33	Fairly Satisfactory
MOLETSANE							6	62	2	10	5	65	1	8	1	17	8	103							1				3	23	Fairly Satisfactory
TLADI							6	57	4	18	5	44	1	9	4	13	9	73								4	2	20	4	29	Fairly Satisfactory
MOPOLO SOUTH			2	32			2	32	2	31	2	32	2	12	2	99	4	20									1	16	1	16	Unsatisfactory
DHLAMINI			1	3			2	48	1	15	4	63			3	66	7	135									1	18	2	31	Fairly Satisfactory
CHIAVELO AND EXTENSION			1	6			7	79	2	25	4	54		6	6	68	8	113									1	14	1	14	Fairly Satisfactory
ZONDI			1	4			7	64	1	7	4	64			1	20	9	130									4	56	4	32	Fairly Satisfactory
PHIRI							8	32	2	12	6	71			7	13	11	138									1	10	1	8	Satisfactory
SESHEGANE			1				7	117	1	24	3	60			7	70	8	139							1		1	13	3	30	Satisfactory
MAPETLA			1	8			7	29	2	11	9	79			6	15	13	142									3	13	3	18	Fairly Satisfactory
JABULANI			1	9			4	38	4	31	6	62	1		1	30	9	105									7	23	5	31	Fairly Satisfactory
MALEDI							4	71			9	95			4	31	17	181									2	22	3	35	Fairly Satisfactory
ZOLA		*					25	208	1	14	12	204			2	47	33	357									1	12	8	42	Satisfactory
EMDENI			1	6			7	877	1	24	8	85			4	35	10	114									1	10	3	44	Fairly Satisfactory
MORORA				25			4	61	3	17	6	59			4	130	14	159											1	41	Fairly Satisfactory
NAMKEFIELD HOSTEL			1	32			1	24	1	28	1	32			3	48	1	34							1	4			5	87	Fairly Satisfactory
JABULANI HOSTEL			1	6			1	10	1	14	1	12			1	22	1	12							1	4			1	8	Fairly Satisfactory
DUBE HOSTEL			1	15			1	16	2	16	1	51			1	43	1	75							2	6			3	27	Fairly Satisfactory
GEORGE GOCH HOSTEL			1	36											1	103	7	41							1				1	117	Fairly Satisfactory
TOTALS			34	344			226	2175	75	827	200	2366	9	56	178	2125	367	4110		18	1	8			15	58	55	768	114	1301	

PEST CONTROL PERSONNEL.

Inspector 1
Overseers 6
Labourers 34

REPORT ON ENVIRONMENTAL HEALTH SERVICES IN BANTU TOWNSHIPS.

PERIOD 1ST JANUARY 1963 TO 31ST DECEMBER 1963.

ANNEXURE 11.

INSPECTIONS NUISANCES, NOTICES SERVED. PEST CONTROL INSPECTIONS, ETC.

TOWNSHIP	BUILDINGS					GENERAL											FOOD							INFECTIOUS DISEASES			NOTICES SERVED		PROSECUTIONS (COURT HOURS)	PEST CONTROL INSPECTIONS	
																														PREMISES
	Inspections	Plans	Repairs	Illegal	Survey	Animals	Closets	Drainage	Flies	Fumigations	Manure	Poultry	Refuse	Rodents	Slop Water	Stables	Storm Water	Vermin	Interviews	Inspections	Sampling	Poisoning	Bacteriological	Specimens	Sediment Tests	Handlers	Investigations	Contacts	Vaccinations	Statutory	Others		Inspected	Deretised
PIMVILLE					3151	298	258												121															
EASTERN BANTU TOWNSHIP		1			1910	36						25		195					470										128		100	2262	417
ORLANDO EAST	114	25	49	20	10157	3	3	6			2	34	64	6		11			1337										470		29	632	524
ORLANDO WEST AND EXTENSION	322	27		10	9487	7	6	4			2	92	169	227		13			1013										1501	11	116	5238	3723
JABAVU	508	9		10	7504	130	231	75			92	144	839	1117	3	119			2717										1075	22	93	4093	3102
DUBE		103			7025	2													286										1805	71	61	5035	1679
MOPOLO CENTRAL		22			2318	2						25	32	120					752										1471		21	1568	919
MOROKA NORTH		6			1677							13	102	11					201										752		5	2471	1360
CENTRAL WESTERN JABAVU	353	27			3599		2					1	57	103		4			409										215		1	88	49
MOPOLO NORTH		10			2123	5						19	8	114					547										414	11	20	2	1
MOLAPO	24	15			3103							13	144	46		8			245										547	6	11	1586	921
MOLETSANE	35	12		4	4923		1					45	248	387					410										266	8	9	1504	599
TLADI	75				4772		7					41	100	246		11			267										1461	45	24	2065	875
MOPOLO SOUTH		4			1634							8	5	11					112										234	34	19	1929	799
DHLAMINI	167	11	3	3	4160							35	157	165					768										112		3	702	397
CHIAWELO AND EXTENSION	175	10			5095							32	135	90		2			718										758	12	22	1461	712
ZONDI	195	19		6	2621		2					15	105	182		7			112										796	30	16	1749	684
PHIRI	14	9			4995							4	266	293		19			538										182	81	17	1478	844
SENAOANE	186	5		22	4300							61	227	106		6			757										436	40	16	2349	815
MAPETLA	16	22			4479							14	247	164		16			177										840		27	1590	719
JABULANI	168	14			4011		2					38	92	251		9			281										340	48	17	1416	686
NALEDI	19	6			8395		83					143	535	196					753										209	21	35	2100	825
ZOLA	410	15		4	17347	4	8					103	255	532		11			582										986	23	33	4210	1268
EMDENI	1	2			7625	1	33					58	778	128					856										478	186	73	5225	1883
MOROKA	326	45			6572	30						131	543	30					500										904	58	14	2405	887
DUBE HOSTEL					40		58																						571	40	40	4	4
NANCEFIELD HOSTEL					26		241																								1	211	141
JABULANI HOSTEL					26		58																								4	41	38
GEORGE GOCH HOSTEL							124																										
TOTALS	3108	410	52	78																													

ANNEXURE 12.

PLACING OF PHYSICALLY HANDICAPPED PERSONS IN EMPLOYMENT.

The Medical Section does not contact employers or potential employers directly, as a rule, in trying to find employment for the Physically Handicapped. This is done in co-operation with the Employment Officer and the Welfare Officer. Recommendations are made by the Medical Officer on the Non-European Affairs Department record card as to the physical and mental capabilities of the individual and the Employment Officer and/or Welfare Officer makes approaches to firms where they feel such an individual could be reasonably employed.

The disabilities can be divided into two broad groups - Tuberculosis and "Other". The "Other" group includes medical disabilities which are controlled by suitable therapy, such as congestive cardiac failures, epileptics, whose seizures are under control, emphysemas who can manage light work, ex mental cases, such as schizophrenia, who have been suitably treated, diabetics under control, mentally defective individuals, limb cripples - some without an arm or leg, defective eyesight, ex lepers, hernias, hydrocoeles who refuse treatment, hemiplegias and a host of other conditions which appear from time to time.

The Medical Section keeps no record of those recommended for suitable employment, although an endorsement is made on the Non-European Affairs Department record card. Unfortunately, the Employment Officer also finds it almost impossible to keep statistics of those placed in employment, although notes are made by him on the same Non-European Affairs Department record card, which is filed along with the rest of the cards in circulation. No special filing system can be kept, as all the record cards are filed in numerical order, according to the Identity Number. It may take months to place one disabled individual in employment. He may appear at the Non-European Affairs Department offices on numerous occasions and be sent to potential employers for consideration, but it may take months before he is finally accepted by an employer.

The Welfare Section is in a similar position, and has also no accurate records available of the "Other" group. A reasonable estimate given me by the Welfare Officer is that 15 persons out of 100 were successfully placed in employment in 1961. The reason submitted for this apparently low figure is that in most cases the individuals lack education, and also that they lack the physical ability for heavy manual labour, which is the commonest form of labour available.

As regards the Tuberculosis cases, more accurate records are available from the Welfare Officer. A special Section of Welfare is devoted solely to tuberculosis cases. In the year 1961, 309 out of 834 cases were successfully placed in employment. These were tuberculosis cases who had had fairly extensive treatment and were clinically well, radiologically improved and non-infectious. Many had been patients in chest hospitals. In most cases they were being reinstated and engaged in work similar to that which they were doing before their Tuberculosis was discovered.

All cases of disability are tided over socio-economically by the Welfare Section until employment is found.

In general, where an individual is assessed as being completely and totally medically unfit for work, and where his condition will notimprove under any further treatment, a permanent exemption is recommended and the Welfare Section will then be asked to take over the case and apply for an invalidity pension.

ANNEXURE 13.

RECORD OF INSPECTIONS BY HEALTH INSPECTORS.

(THIS SCHEDULE INDICATES THE MASS ACTIVITIES OF THE HEALTH INSPECTORATE OF THE DEPARTMENT EXCLUDING THE PLAGUE PREVENTION AND PEST CONTROL SECTION).

1.	1963	1962
BUILDINGS.		
Repairs	423	421
Illegal	136	1,725
CLOSETS AND URINALS.		
Inspected	9,878	11,336
Additional Provided	44	95
VARIOUS PREMISES.		
Factories	4,763	7,165
Business Buildings	1,600	1,623
Dwellings - Routine Visits	6,001	34,579
Dwellings Survey	133,778	11,849
Interviews	23,947	30,779
Bantu Housing	524	530
NUISANCES.		
Service Complaints	550	545
Stormwater	46	118
Fumigations	1,843	2,053
Wells	31	38
French Drains	51	111
Animals	693	549
Manure	243	485
Drainage	4,337	3,489
Refuse	16,113	17,343
Wastewater	443	460
Stables	466	649
Fly	120	164
Rats	7,699	15,351
Poultry	2,333	4,267
Unspecified	4,559	4,283
Vermin	717	556
Smoke	64	80
Mosquitoes	436	191
INFECTIOUS DISEASES.		
Investigated	44	22
Isolation of Contacts	287	22

2.	1963	1962
LICENSED PREMISES.		
Aerated Water & Ice Factories	359	352
Dairies	6,788	2,776
Ice Cream Factories	707	497
Bakeries	1,414	1,484
Boarding Houses	1,509	1,174
Barber Shops	1,745	2,047
Bioscopes	383	323
Butcheries	5,642	8,973
Garages	1,506	1,495
Hotel Dining Rooms	2,455	2,808
Bantu Eating Houses	1,746	1,901
Laundries	1,079	1,194
Milk Shops	5,146	7,077
Noxious Trades	5,722	5,999
Pedlars and Hawkers	694	1,946
Private Cows	60	167
Restaurants	6,572	7,832
Tea Rooms	3,917	4,008
General Dealers	31,170	42,738
Nursing Homes	108	298
Lodging Houses	54	72
Cowsheds	119	3,120
GENERAL.		
Inspections - Food Handling	895	1,654
Sediment Tests Taken	5,425	5,095
Bacteriological Samples Taken	9,370	11,183
Inspections - Milk Purveyors	55	130
Food Poisoning Investigations	38	3
Food Samples Taken	1,841	1,824
Water Samples Taken	1,104	1,345
TOTALS	319,792	270,393
NOTICES, ETC.		
COURT HOURS	1,873	2,667
STATUTORY NOTICES	24,185	22,951
OTHER NOTICES	3,215	3,890
REPORTS	1,469	1,233
MARKET HOURS	350	365
LICENSING COURT - HOURS	34	30

ANNEXURE 14.

DETAILS OF PROSECUTIONS INSTITUTED : YEAR 1963.

CODE NO.	DETAILS OF OFFENCE	NO. OF CHARGES		GUILTY		NOT GUILTY		COURT ORDER GRANTED		WITHDRAWN OR STRUCK OFF		FINES IMPOSED	
		1962	1963	1962	1963	1962	1963	1962	1963	1962	1963	1962	1963
												R	R
	SANITATION AND NUISANCES:												
1	Dirty Premises, Closets, etc.	176	105	135	73	3	2	-	-	38	30	872	1,071
2	Verminous Premises	7	18	6	11	-	2	-	-	1	5	49	63
3	Refuse and Refuse Bins	8	5	6	5	-	-	-	-	2	-	28	32
5	Insufficient Sanitary Accommodation	18	17	11	12	1	-	-	-	6	5	145	93
6	Water Supply	1	1	1	1	-	-	-	-	-	-	10	8
7	Fumigations	-	3	-	3	-	-	-	-	-	-	-	30
8	Rodents or Harbourage	255	126	104	73	4	10	-	-	147	43	214	326
9	Waste Water	7	1	1	-	-	-	-	-	1	1	74	-
10	Unsatisfactory Storage	1	1	1	1	-	-	-	-	-	-	-	5
29	Court Orders - Structural Repairs	9	12	3	-	-	-	-	2	6	10	2	-
30	Poultry Nuisances	39	15	14	10	-	3	-	-	25	2	15	58
42	Keeping of Animals	15	3	14	1	-	-	-	-	1	2	40	1
12	Other Prosecutions	127	96	69	59	3	4	-	-	55	33	316	331
31	Sheds and Garages	-	6	-	3	-	2	-	-	-	1	-	20
4	Fly Breeding in Manure	14	-	10	-	-	-	-	-	4	-	42	-
	MILK AND ICE CREAM.												
13	Below Standard or Adulterated	194	54	148	43	5	-	-	-	41	11	1,081	415
14	Visible Dirt	171	93	166	91	-	2	-	-	5	-	1,840	1,404
15	Dirty Clothing or No Overalls	37	18	29	13	1	-	-	-	7	5	63	90
33	Dirty Premises or Equipment	3	5	3	4	-	-	-	-	-	1	21	31
44	Milk Purveyor Selling in Bottles	8	2	5	2	-	-	-	-	3	-	24	16
38	Trading without a Licence	89	44	65	31	-	4	-	-	24	9	297	181
32	No Card of Authority	24	10	16	7	-	1	-	-	8	2	35	21
16	Other Prosecutions	64	26	46	20	-	3	-	-	18	3	221	105
36	Marks and Merchandise Act	-	2	-	2	-	-	-	-	-	-	-	6
	MEAT.												
17	Dirty Premises or Equipment	9	6	8	6	-	-	-	-	1	-	78	72
18	Unsound or Unstamped	41	40	40	38	-	1	-	-	1	1	504	666
19	Dirty Clothing or Handling	3	3	3	-	-	-	-	-	-	3	11	-
20	Exposed to Contamination	8	3	5	2	-	1	-	-	3	-	28	12
34	Other Prosecutions	9	17	9	17	-	-	-	-	-	-	73	171
	BREAD.												
23	Exposed to Contamination	12	1	8	-	-	-	-	-	4	1	68	-
22	Dirty Clothing or Handling	-	1	-	1	-	-	-	-	-	-	-	10
21	Dirty Vehicles	1	2	1	1	-	-	-	-	-	1	10	8
24	Other Prosecutions	2	-	2	-	-	-	-	-	-	-	20	-
	OTHER FOODSTUFFS.												
25	Below Standard or Adulterated	24	4	20	3	-	-	-	-	4	1	242	21
26	Exposed to Contamination	72	19	54	18	2	-	-	-	16	1	296	124
27	Dirty Premises or Equipment	205	87	169	82	-	-	-	-	36	5	1,694	857
28	Dirty Clothing or Handling	82	26	50	24	-	-	-	-	32	2	278	119
35	Other Prosecutions	57	27	42	26	1	-	-	-	13	1	201	123
41	Unsound Foodstuffs	7	6	7	4	-	1	-	-	-	1	77	20
	TOTALS	1,799	905	1,276	687	21	36	-	2	502	180	8,949	6,470

SUMMARY: TOTAL NUMBER OF PERSONS PROSECUTED 734
TOTAL NUMBER OF CHARGES 905
TOTAL FINES IMPOSED R6,470

ANNEXURE 15

AVERAGE ANALYSES OF WORKS SAMPLES FOR YEAR 1ST JANUARY TO 31ST DECEMBER 1963.

Samples	Average flow m.g.d.	Settleable solids ccs per litre	Suspended solids	Total dissolved solids	Permanganate Value (Oxygen Absorbed)			5-day Biochemical Oxygen demand	Chemical Oxygen demand	Nitrogen as				Sodium as Na	Chlorion (Cl^*)	Phosphates as PO_4	Anionic detergent as Manoxal	Alkalinity as $CaCO_3$	pH	Faecal coli M.P.N. per 100 ml.
					In 3 minutes	In 4 hours (British)	In 4 hours (S.A.B.S.)			Free and Saline Ammonia	Albuminoid Ammonia	Nitrites	Nitrates							
			Parts per million																	
NORTHERN SEWAGE PURIFICATION WORKS.																				
Unit 1:																				
Settlement Tank Influent (ii)		15			23.0	75.1				34.0	12.4				73		17.1	243	7.0	
Effluent		0.4			12.8	31.7		178		32.0	8.1				75		14.9	246	7.1	
Primary Biological Filter Effluent		1.7																	7.3	
Humus Tank Effluent		0.2			5.8	16.7		25.0		23.9	3.4	0.8	6		74	23	12.0	204	7.3	
Secondary Biological Filter Effluent		1.0																	6.8	
Humus Tank Effluent		Tr.	19.0			12.5		9.3		5.0	2.2		30		75		10.3	35	6.8	
Sand Filter Effluent		Tr.	8.8	552	3.7	11.1	9.6	6.7	74	6.3	1.7		29	77	75	22	9.1	45	6.8	102,000
Unit 2:																				
Settlement Tank Influent (ii)		10.4				55.6				32.6	8.5				66		14.5	224	7.1	
Effluent		0.8				31.1		133		31.9	3.8				66		11.3	223	7.3	
Primary Biological Filter Effluent		2.0																	7.3	
Humus Tank Effluent		Tr.				21.0		21.7		25.4	2.3	4.3	2		65	16	10.5	180	7.5	
Secondary Biological Filter Effluent		1.0																	7.0	
Humus Tank Effluent		Tr.				15.2		15.5		10.8	2.3	3.3	16		63	16	8.8	78	7.3	
Maturation Ponds:																				
Top of furrow (iii)						30.2				21.0	3.6		7		74		12.4	183	7.4	3,665,000
End of furrow (iv)						14.8		20.7		19.1	2.8		2		75	22	8.2	197	7.6	398,000
Final dam outlet to river				478		9.6	8.8	7.6	68	11.4	1.7		1	81	78	22	5.8	177	7.9	2,300
Jukskei River:																				
Above works				858			6.7		35	12.7	0.9		32	80	100	3	0.8	59	7.2	950
Below works				480			7.8		53	7.1	1.3		12	73	80	13	3.8	114	7.3	2,200
KLIPSPRUIT SEWAGE PURIFICATION WORKS.																				
Screened Sewage	23	10.4			39.4	84.1				39.2	10.3				86		8.5	258	7.4	
Settled Sewage		0.8			35.0	68.7		280		37.5	7.6				89		8.0	252	7.4	
Unit 1:																				
Primary Biological Filter Effluent		3.3																		
Humus Tank Effluent		0.3			11.9	28.0		32		24.3	4.0	0.5	5		89		6.6	209	7.4	
Secondary Biological Filter Effluent		0.6																		
Humus Tank Effluent		Tr.	19.0		8.4	21.3		16.8		10.9	2.1	0.2	24		89		5.6	92	7.5	
Sand Filter Effluent		Nil	1.6	602	7.2	18.6	14.8	8.9	87	10.6	1.8	0.1	20		93	14.8	5.6	109	7.5	562,000

Samples/...

Samples	Average flow m.g.d.	Settleable solids ccs per litre	Suspended solids	Total dissolved solids	Permanganate Value (Oxygen Absorbed)			5-day Biochemical Oxygen demand	Chemical Oxygen demand	Nitrogen as				Sodium as Na	Chlorion (Cl^1)	Phosphates as PO_4	Anionic detergent as Manoxal	Alkalinity as $CaCO_3$	pH	Faecal coli M.P.N. per 100 ml.
					In 3 minutes	In 4 hours (British)	In 4 hours (S.A.B.S.)			Free and Saline Ammonia	Albuminoid Ammonia	Nitrites	Nitrates							
			Parts per million																	
KLIPSPRUIT SEWAGE PURIFICATION WORKS.																				
Unit 2:																				
Final Filter Effluent (v)		1.9																		
Final Filter Effluent after Settlement					13.1	30.8						0.3	0.7		85			220	7.7	
Klipspruit Lands Irrigation:																				
Homestead Farm run-off		0.1			6.9	18.6		8.1		8.1	1.4	0.2	1.3		155	4.7		228	7.6	
Harringtonspruit		Tr.			8.2	22.4		14.2		12.3	2.1	Tr.	0.1		156	8.2		327	7.7	
Mixed Effluents to Olifantsvlei Farm for Irrigation:																				
Via 18 inch pipeline		7.5			21.0	53.1				30.0	6.0				89			183	7.6	
Via 36 inch pipeline		3.9			18.7	45.0				35.3	5.8				92			250	8.2	
OLIFANTSVLEI SEWAGE PURIFICATION WORKS.																				
Screened Sewage	9.1	6.3			18.6	44.8				35.0	7.4				57		8.0	246	7.5	
Sedimentation Tank Influent (vi)		9.5			21.6	54.0									58			258	7.4	
Effluent		0.2			13.2	30.8		174		36.9	6.3				59		7.9	255	7.5	
Primary Biological Filter Effluent		1.1																		
Humus Tank Effluent		0.1			5.2	13.8		20.5		19.1	2.4	0.4	10.4		57		7.4	172	7.6	
Secondary Biological Filter Effluent		0.4																		
Humus Tank Effluent		Tr.	14.6	525	3.5	10.1	8.5	7.6	73	7.7	1.4	0.1	30		58	19	6.2	47	7.4	463,000
Maturation Pond Effluent		Nil			2.5	7.3	6.1			5.0	0.7	0.2	29		60	19	4.8	40	7.7	1,350

NOTES:

(i) Full flow to works only from mid-year, so average is low. December flow 16 m.g.d., 9 to Unit 1, 7 to Unit 2.

(ii) Settlement tank influent is incoming sewage plus internal works returns (humus, supernatant liquor, etc.). The difference between the Unit 1 and Unit 2, 4-hour P.V. probably due to comminutor overflow going to Unit 2.

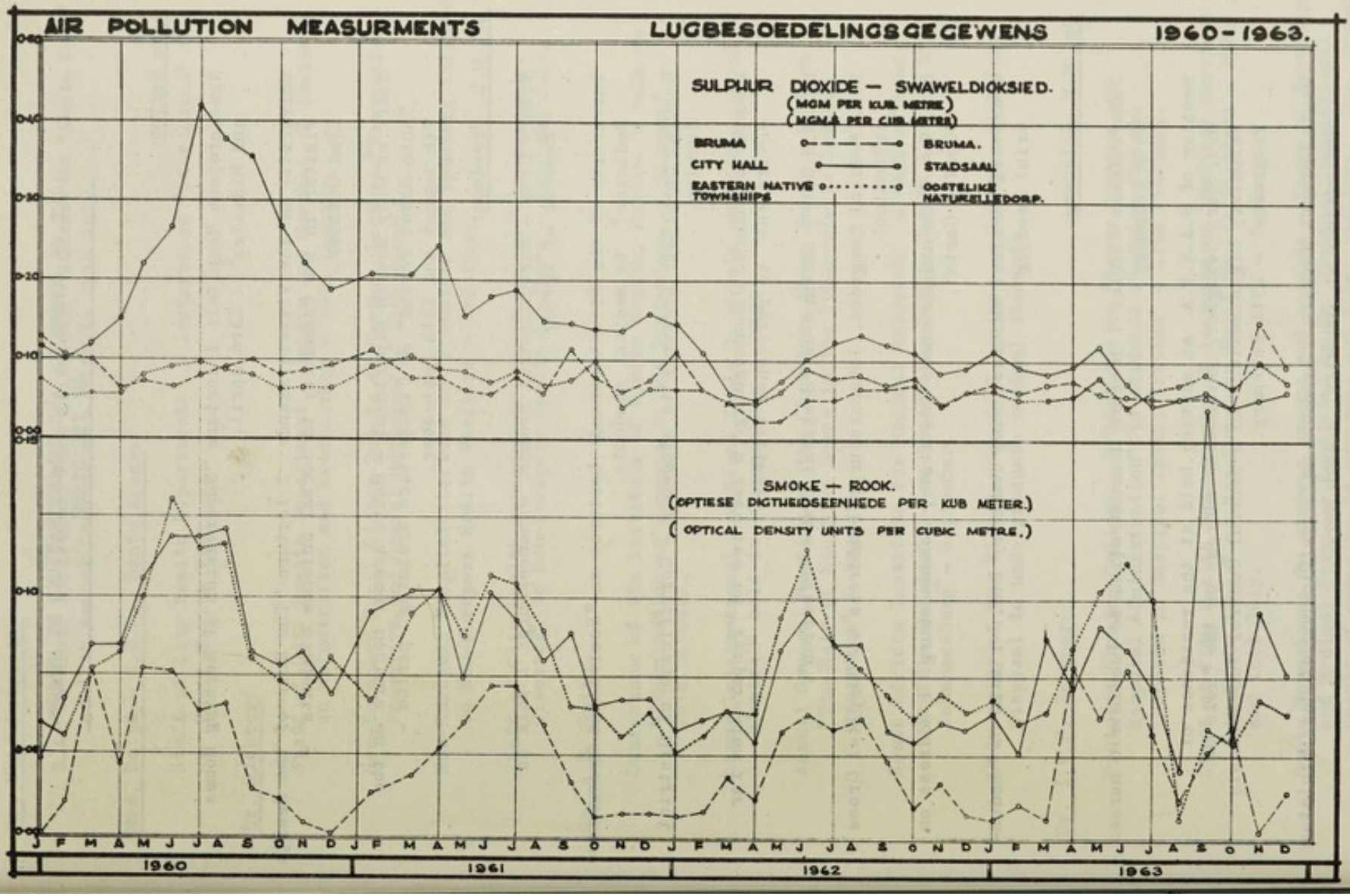
(iii) This sample contained digester supernatant liquor for some months.

(iv) The furrow is about 7 miles long, with small dams en route.

(v) Averages from September 1963 when new biological filters were commissioned.

(vi) Incoming sewage plus internal works returns of humus and digester supernatant liquor.

ANNEXURE 16
AANHANGSEL



LIST OF ADDRESSES AND DEMONSTRATIONS BY MEMBERS OF THE STAFF.

Miss Burton:

Non-European Hospital: 1 lecture "Supervision of Nursing Homes and Midwives" - 23rd April.

University of the Witwatersrand: 1 lecture "The Role of the Health Visitor in the Community to Social Science Students" - 22nd October.

Staff of City Health Department - Bantu Areas: Lecture on the "Ante-Natal Period" at "in-service training" period - 7th August and 11th September.

Dr. M.L. Freedman:

Rotary Club - North Central Branch, Johannesburg: 1 talk on "Aspects of Ageing".

University of the Witwatersrand: Lectures on "Social and Preventive Medicine" to medical students.

General Hospital: Lectures to students - Certificate of District Nursing.

Chamber of Mines, Johannesburg: 6 lectures on "Preparation for Retirement" to personnel officers.

S.A.I.M.R.: 1 lecture on "Hospital Cross Infection".

S.A. Medical Congress, Johannesburg: 1 address on"Hospital Cross Infection".

S.A. Tea Room and Caterers Institute, Johannesburg: 1 address on "Coffee Carts".

Transvaal Chemical Manufacturing Industry Ltd.: 1 talk on "Industrial Feeding".

Dr. M.H. Goldberg:

Tuberculosis Clinic: 1 lecture/demonstration to Paediatric nurses - 25th February.

Meeting of S.A.N.T.A. at meeting held at the residence of Mrs. Mary Swingler, Bryanston: address on the "Role of Voluntary Organisations in a General Control Tuberculosis Programme" - 25th February.

Bantu Garment Workers: Lecture on "Significance of Mass Miniature Radiography in Industry" - 26th March.

Coloured Garment Workers:/.....

ANNEXURE 17 (CONTD.)

Mr. W.A. Potgieter:

S.A. Chemical Institute, Port Elizabeth: Address on "Bantu Beer" to 17th Annual Convention - 15th to 19th July.

Mrs. Ralph - S.H.V., Bantu Areas:

Staff of City Health Department: 3 lectures on "Statistics" to Pupil Health Visitors.

Dr. Richter:

Staff of City Health Department - Jabavu and Moroka: 2 lectures on Malnutrition and Kwashiorkor - 16th January.

Non-European Pupil Sister Tutors at Moroka: Lecture "Preventive, Promotive and Social Medicine" - 12th March.

Non-European Hospital: Lecture on "Premature and Immature Infants" to Non-European Health Visitors - 3rd June.

Staff of City Health Department: 3 lectures on "Communicable Diseases" to Non-European Health Visitors - June and July.

Dr. A.H. Smith:

Conference of the Institute of Public Health, Durban: a talk on "Immunisation as a means to the Prevention of Disease" - 28th October.

Lions International and Round Table 3: a talk on "Tuberculosis Control" held in Johannesburg - June.

Annual General Meeting of the Christmas Stamp Fund: a talk on "The Role of Sunshine Homes in the Tuberculosis Control Programme" - August.

South African Institute for Medical Research: A talk on"Road Traffic Accidents - an Increasing Public Health Problem in Johannesburg"- September.

University of the Witwatersrand: 1 lecture on Sewage and Refuse Disposal to undergraduate medical students.

Dr. I.W.F. Spencer:

Pretoria Nursing College: 2 lectures on "Bantu Customs and Hospital Administration" to students studying for the "Diploma in Hospital Administration" - 27th February.

Staff of City Health Department: 2 lectures on "Medical Services in Bantu Areas" to Non-European Pupil Health Visitors - 15th and 16th July.

Bantu Townships: To various groups and persons - Tours of Townships and Medical Services (assisted by Dr. Richter), operational points of campaign to overseas and other visitors. Drs. Spencer, Coster, Richter and MacPhail.

Dr. E.G. White/.....

ANNEXURE 17 (CONTD.)

Dr. M.H. Goldberg: (Contd.)

Coloured Garment Workers: 3 lectures on "Significance of Mass Miniature Radiography in Industry" - 2nd, 9th and 30th April.

B.G. Alexander Nursing Institute: 1 lecture to a study course for school nurses, "Tuberculosis in the School-Going Child" - 11th April.

University of the Witwatersrand: 1 lecture on "Public Health Aspects of Pulmonary Tuberculosis" to 4th year medical students.

Lions International: talk on the "Work of S.A.N.T.A. in the Field of Tuberculosis" - 19th April.

Johannesburg Rotary Club: 1 address on "The Need for Funds to Combat Tuberculosis" - 28th May.

University of the Witwatersrand: 1 lecture on the "Social and Economic Aspects of Pulmonary Tuberculosis" to first year students - 9th September.

General Hospital - Department of Radiology: 1 talk on "Chemo-therapy of Tuberculosis" - 16th September.

Toc-H, Florida: 1 talk on "The Work of S.A.N.T.A. and its Role in a T.B. Control Programme" - 26th September.

Miss C.K. Hains:

Witwatersrand Technical College: 1 lecture on "Supervision of Nursing Homes and Midwives" to European Health Visitor Students - June.

Baragwanath Hospital: "A Commemorative Address" - the One-hundred and Fiftieth Anniversary of Midwifery in S.A. to the Non-European Midwives' Discussion Group - 7th December.

Dr. Mer:

Lecture/demonstrations were again given to nurses and pupil health visitors during the year.

Mr. D.W. Osborn:

Conference of the Institute of Sewage Purification in Salisbury: Address on "Nitrified Sewage Effluents: Their corrosiveness and suitability for use as Power Station cooling water" - 10th May.

South African Chemical Institute: Address on "Synthetic Detergents and their Significance to Local Authorities" at the 17th Annual Convention in Port Elizabeth - 15th to 19th July.

National Institute for Water Research and the Institute of Sewage Purification (S.A. Branch) Pretoria: Lecture on "Municipal Trade Waste Policies with respect to Final Effluent" - 21st to 25th October.

Mr. W.A. Potgieter/.....

ANNEXURE 17 (CONTD.)

Dr. J.W. Scott Millar:

44th South African Medical Congress, Johannesburg: A paper on "Botulism in South Africa" (published in South African Medical Journal, Vol. 38, 9th May, 1964).

South African Council for Mental Health: First National Conference, Cape Town: A paper on "Mental Health and Public Health" (published in Medical Proceedings, Vol. 9, No. 21, 19th October, 1963).

Dr. E.G. White:

S.A. Chemical Institute, Port Elizabeth: Paper on "Gas Supplies" to the 17th Annual Convention (paper read by Councillor M.L. Neppe) - 15th to 19th July.

Miss V.A.M. Wolff:

Staff of the City Health Department: 2 lectures "The Puerperium" - 14th August and 25th September. "Equipment and Correct use of Delivery and Nursing Bags" - 21st August at the 'in-service training' sessions.

NON-EUROPEAN STAFF:

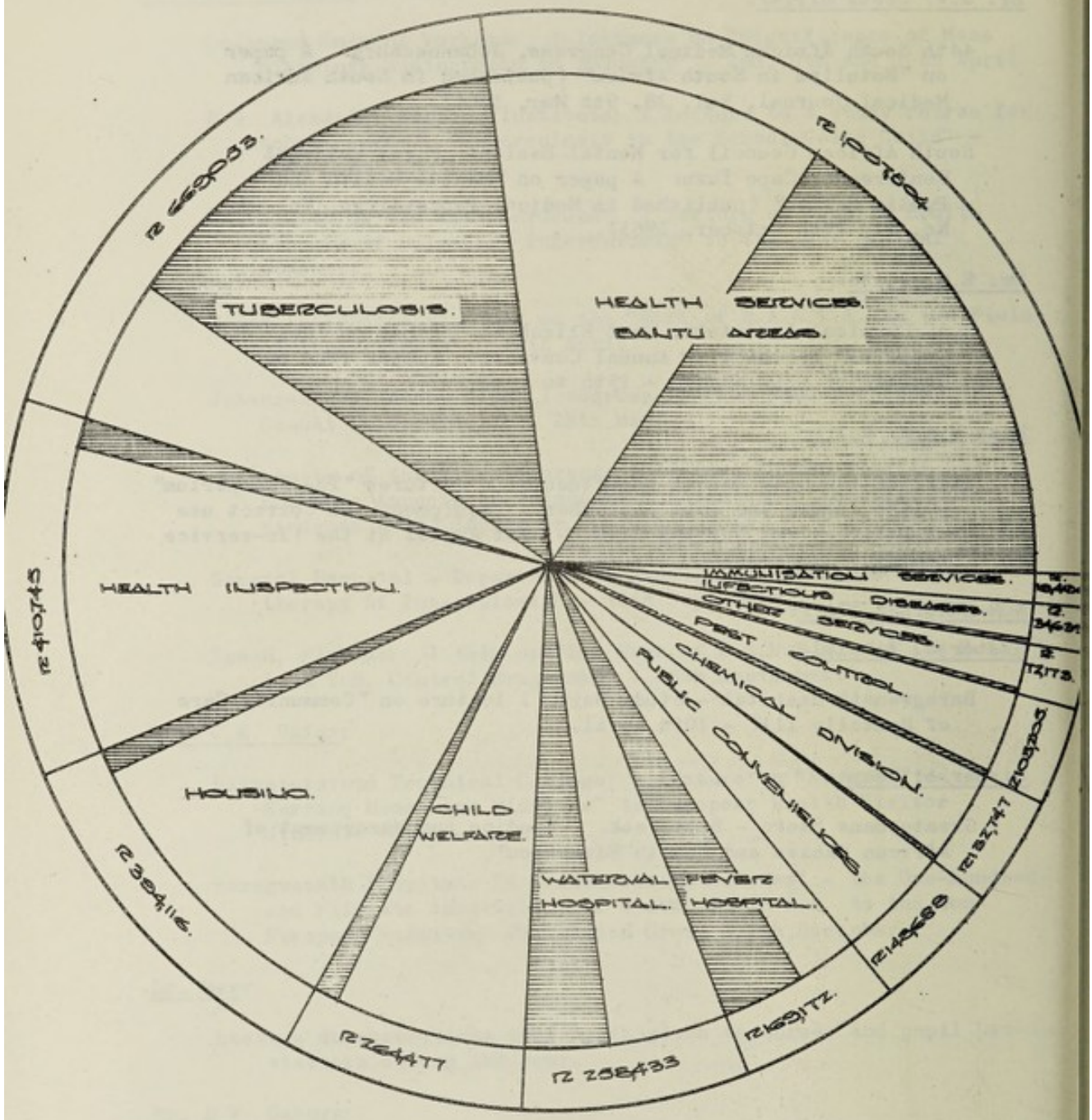
Sister G. Zikalala:

Baragwanath Hospital - Study Day: 1 lecture on "Community Care of Mentally Ill" - 10th April.

Sister A. Maepa:

Greatermans Store - Baby Week: "Feeding and Management of African Babies and Health Education".

ANNEXURE. 18



GROSS EXPENDITURE ON VARIOUS HEALTH SERVICES

SHADED AREAS REPRESENT SUBSIDIES AND PART REFUNDS RECEIVED FROM PROVINCIAL AND CENTRAL GOVERNMENTS

FINANCIAL YEAR 1962/63.

ANNEXURE 19.

FINANCIAL SUMMARY : CITY HEALTH DEPARTMENT : 1962 - 1963.

Details	1962 - 1963 Expenditure	Income	Net Cost	Cost of Medical Services in Townships 1962 - 1963	
	R	R	R		R
Chemical Division	132,747	638	132,109	Immunisation	15,561
Child Welfare	168,924	28,985	139,939	Outpatient Services - Clinic	294,443
Supervision of Nursing Homes and Midwives	15,381	4,968	10,413	Outpatient Services - Domiciliary	23,048
Nursery Schools	80,172	13,947	66,225	District Midwifery Services	158,407
Health Inspection	410,745	58,035	352,710	Ante-Natal and Post-Natal Clinics	32,021
Disinfecting Station	20,701	49	20,652	Dental Services	37,291
Immunisation Services	18,490	-	18,490	Child Welfare Clinics	154,052
Fever Hospital	169,172	137,493	31,679	Child Welfare - Domiciliary	9,833
Maternal Hospital	258,433	182,334	76,099	Tuberculosis Clinics	100,728
Tuberculosis	669,053	508,447	160,606	Tuberculosis Domiciliary	119,217
Venereal Disease	15,856	947	14,909	Ambulance Services	470
Infectious Diseases	34,639	8,985	25,654	Midwifery Transport	62,433
Pest Control	103,205	3,915	99,290		
Public Conveniences	148,688	8,717	139,971		
Medical Examination Centre (Registration Depot)	34,483	-	34,483		
Medical Services in Bantu Townships	1,007,504	607,730	399,774		
Sub-Total	*3,288,193	≠1,565,190	1,723,003	TOTAL EXPENDITURE	1,007,504
Head Office Building	640	33,398	CR.32,758		
Dispensary	493	-	493	INCOME	
				Recoveries under the Public Health Act	174,241
				Subsidy from Transvaal Provincial Administration	433,489
				Other Income	-
	3,289,326	1,598,588	1,690,738	TOTAL INCOME	607,730

* Of this expenditure 2,021,157 was charged to Other Departments.

≠ Of this income 1,238,526 was paid over to Non-European Affairs Department.

EUROPEAN HOUSING 1962 - 1963.

	Expenditure	Income	Net Cost
	R	R	R
	394,116	324,418	69,698