[Report 1922] / Medical Officer of Health, Dundee City.

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CITY OF DUNDEE

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE

YEAR ENDING 31ST DECEMBER, 1922

DUNDEE:
PRINTED BY HARLEY & COX, 130 NETHERGATE.

INDEX.

DIAGRAMS.

Public Health Department,
West Bell Street,
Dundee, July, 1923.

To

The Lord Provost, Magistrates and Town Councillors
of the City of Dundee.

GENTLEMEN,

I have the honour to submit my Annual Report on the health of the City of Dundee for the year 1922.

The Report is prepared on the usual lines, and while it necessarily contains a great deal of statistical matter which may appear rather technical, I hope the information submitted in the text will be easily understood and prove of interest to anyone who may read it. In submitting my observations on the health of the City, and on the measures taken for its protection, I have attempted to do so in as fair a manner as possible, and while pointing out the sections of my Department which I consider efficient, I have at the same time directed attention to what, in my opinion, are its weak points, suggesting the action which should be taken to bring about the necessary improvements. By doing so, I hope the Report will serve a useful purpose.

The statistics for the year are fairly satisfactory. The infantile death-rate is the lowest yet recorded in the City, but the death-rate at all ages and from all causes is slightly higher than usual, due to an excessive number of deaths from influenza and pneumonia, which occurred in the early months of the year. These matters are dealt with in their proper places.

The various schemes established by the Local Authority have continued in active operation during the year, but the long-looked-for development in the Venereal Diseases Scheme has not yet taken place. This Scheme had to be carried on in the old unsatisfactory premises, and any extension of the work was thereby rendered impossible. The new principal Child Welfare Centre at the corner of Nelson Street and Victoria Road, so generously gifted by Mr F. B. Sharp, was opened in May, and the work of this section of the Public Health Department was therefore carried on under very much more adequate conditions.

The subject of housing is dealt with not only by me, but by the Chief Sanitary Inspector, and the most important point to be noted is that while the Local Authority were unable to take any action directed towards the closing of unfit houses, the outlook is now very much more hopeful, and there are signs that a definite number of such houses will in the near future be no longer available for human habitation.

The usual co-operation with other local authorities in the City concerned with health was continued during the year, and I have to thank particularly Dr A. E. Kidd, the Chief Medical Officer of the Education Authority, for his assistance on numerous occasions throughout the year, especially in connection with the control of infectious disease, and in dealing with verminous persons and houses.

The Reports of Mr Mitchell and of the various executive officers are included in this volume. They contain a great deal of useful information, and will be found of considerable interest.

The efficiency of the work of the Department is chiefly due to the continued support given me by the members of the staff, and I take this opportunity to acknowledge with gratitude their valued assistance.

I am, Gentlemen,

Your obedient Servant,

W. R. Burgess.

Medical Officer of Health.

STAFF OF THE HEALTH DEPARTMENT.

Medical Officer of Health - W. L. Burgess, M.D., D.P.H., D.T.M. & H.
Chief Sanitary Inspector - - - - - - - - Robert Mitchell.
Veterinary Inspector - - - - - - - Hugh Ferrier, M.R.C.V.S.
Chief Tuberculosis Medical Officer - - - J. H. Hunter, M.B., D.P.H.
Assistant Tuberculosis Medical Officer - Arthur Meek, M.B., D.P.H.
Child Welfare Medical Officer - - - Margaret Scott-Dickson, M.B.
Medical Officer, Ante-Natal Clinic (part time) - Margaret Fairlie, M.B.
Dental Surgeon—Special Child Welfare Dental Clinic (part time)—
H. Gordon Campbell, L.R.C.P., L.D.S.
Medical Officer, Venereal Disease Scheme — A. C. Profeit, M.D., D.P.H. (resigned).
Charles Averill, M.A., B.Sc., M.D., D.P.H. (appointed June, 1923)
Medical Officer Women's Section, Venereal Disease Scheme—
Andrewina Laird, M.B., D.P.H.
Matron, King's Cross Hospital - - - - - - Miss M. A. Clark.
Resident Medical Officer, King's Cross Hospital—
Walter Alexander, M.B., D.P.H. (resigned).
W. L. Kinnear, M.B. (appointed February, 1923).
Matron, Ashludie Sanatorium - - - - - - - Miss A. Henry.
Clerical Staff - - - - - - - - - - - - - 7 Clerks.
Sanitary Staff - - - - - - 1 Superintendent and 17 Inspectors.
Health Visitors—Child Welfare—Miss Hunter, Superintendent, and 9 others.
Tuberculosis - - - - - - - - - - - - 3 Nurses.
Venereal Diseases - - - - - 2 Male Nurses and 1 Female Nurse.
Day Nursery Staff - - - - - - - 4 Matrons, 8 Nurses, &c.
Disinfecting Officers, Ambulance Drivers, Hospital Staff, Staff of Nursing Mothers' Restaurants, etc., etc.

ANCILLARY INSTITUTIONS.

Bacteriological Laboratory, University College.
Director—Professor W. J. Tulloch.
Assistant—W. Cumming, M.B., Ch.B.
Infant Hospital, The Lodge, Broughty Ferry.
Matron—Miss Edwards.
Resident Medical Officer—Mabel Hodgson, M.B., D.P.H.
Seafield Hostel, Lochee Day Nursery, etc., etc.

Annual Report—1922

Population and Vital Statistics.

The following is a summary of the principal statistics for the years 1921 and 1922 :—

	1921.	1922.
Population	168,315	172,061
Number of Deaths (corrected)	2,566	2,793
Death-rate per 1,000 of population (corrected)	15.8	16.7
Deaths of Infants under One Year	509	460
Infantile Death-rate per 1,000 Births ...	114	109
Number of Births Registered (corrected) ...	4,450	4,227
Birth-rate per 1,000 of population	26.5	24.6
Number of Deaths from Pulmonary Tuberculosis	168	168
Death-rate per 1,000 from Pulmonary Tuberculosis	1.00	.98
Death-rate per 1,000 from all forms of Tuberculosis	1.35	1.37
Death-rate from the Principal Epidemic Diseases	1.09	.80
Deaths from Enteric Fever	1	0

The population given above for the year 1921 is the census population, and for 1922 the figure given (172,061) is the population estimated to the middle of the year by the Registrar-General, and is the figure used in preparing the vital statistics for the year. The estimated increase in the population from the middle of 1921 to the middle of 1922 is, therefore, 3,746. The age and sex distribution of the population is shown in the following table which is prepared on the assumption that the age and sex distribution found at the 1921 census has remained constant :—

Ages.	Both sexes.	Males.	Females.
All Ages ...	172,061	76,341	95,720
0	4,049	2,074	1,975
1	10,957	5,529	5,428
5	15,423	7,702	7,721
10	16,683	8,293	8,390
15	32,565	14,385	18,180
25	25,074	10,413	14,661
35	22,156	9,229	12,927
45	20,528	8,972	11,556
55	14,110	5,922	8,188
65	7,726	2,955	4,771
85 and over ...	284	60	224
Not stated ...	13	8	5
75	2,493	699	1,694

So far as one is permitted to judge from the mortality figures, the year 1922 was a fairly healthy one for the population of Dundee. Infant mortality is outstanding in that it is the lowest yet recorded. On the other hand, the death-rate at all ages and from all causes shows an increase from 15.8 in 1921 to 16.7 in 1922, both figures being well above the lowest recorded which was 14.7 (in 1917 and also in 1919). The table given below shows the general death-rate for the whole of Scotland, and for Dundee each year since 1913 :—

	913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922
Scotland	15·4	15·4	17·1	14·7	14·4	16·2	15·5	14·01	13·5	14 9
Dundee	17·5	16·8	21·1	16 06	14·7	17·4	14·7	15·8	15·8	16·7

The Dundee figure for last year approaches that for 1918, the first year of the great influenza pandemic. It would seem that the high rate for 1922 was also to some extent due to the prevalence of influenza, and to an unusual number of deaths from the respiratory diseases—pneumonia and bronchitis. An examination of the death-rates from the various groups of diseases reveals the fact that the respiratory death-rate shows an increase of over 30 per cent. compared with the previous year, while the infectious disease death-rate (including tuberculosis) shows a very slight increase, this being entirely due to an increased number of deaths certified as due to influenza. In 1921 33 deaths were thus certified, and in 1922, 103. Death-rates from diseases of the circulatory and genito-urinary system show a very slight increase, while the death-rates from congenital causes, malignant disease, and diseases of the digestive system show slight reductions.

The monthly death-rate at all ages and from all causes varied during the year from 32.2 in January to 10.7 in September. The following table gives the annual death-rate at all ages and from all causes for each month of the year 1922, and also the death-rate at all ages from the respiratory diseases and influenza :—

Monthly Death-Rates at All Ages (a) From All Causes, and (b) From Respiratory Diseases and Influenza—1922.

(a)	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
All Causes	32·2	19·1	15·8	20·0	17·8	12·8	13·5	11·3	10·7	11·9	15·7	17·8
(b) Respiratory Diseases and Influenza	14·2	4·6	3·06	5.02	3·6	1·5	·97	1·3	1·04	1·5	2·7	2·37

The high general death-rate in January was evidently due to an unusual prevalence of influenza and of respiratory diseases. Of the 103 deaths certified during the year as due to influenza, 73 occurred in January and 19 in February. The monthly death-rate from all causes and at all ages appears to have been influenced very markedly by the death-rate from respiratory diseases and influenza, the former rising and falling with the latter. This effect is more obvious in the month of January when the general death-rate was 32.2 per 1,000 population, and the death-rate from respiratory diseases and influenza 14.2. The average death-rate for January during the 10 years 1914-1923 was 21.3 per 1,000 population, so that the figure for January 1922 was well above the average. The fact that January of last year was an extremely wet and cold month no doubt predisposed a large number of people to respiratory diseases and influenza, the infecting agents of which are ever present.

The death-rates from all causes at the various age periods were as follows, the figures for 1922 being set along side those for 1921 :—

Age period.	1921.	1922.
Under 1 year	128.5	113.6
1- 5 years	14.08	17.5
5-10 „	2.1	2.5
10-15 „	1.8	2.03
15-25 „	2.9	3.5
25-35 „	5.2	4.8
35-45 „	7.98	8.3
45-55 „	11.3	13.9
55-65 „	27.08	27.0
65-75 „	57.2	70.5
75-85 „	137.7	144.8
85 and upwards ...	281.2	260.5

The death-rates at ages under one year and 85 and upwards show a reduction as also do the age periods 25-35 and 55-65, while the other age-periods show an increase. The fall in the death-rate at ages under one year is due to a reduction in the number of deaths from infantile diarrhœa, measles, and whooping-cough, and also to a fall in the death-rate from congenital causes. Infants under one year of age, however, shared in the increased death-rate from respiratory diseases. At the age period 1-5 years there was a

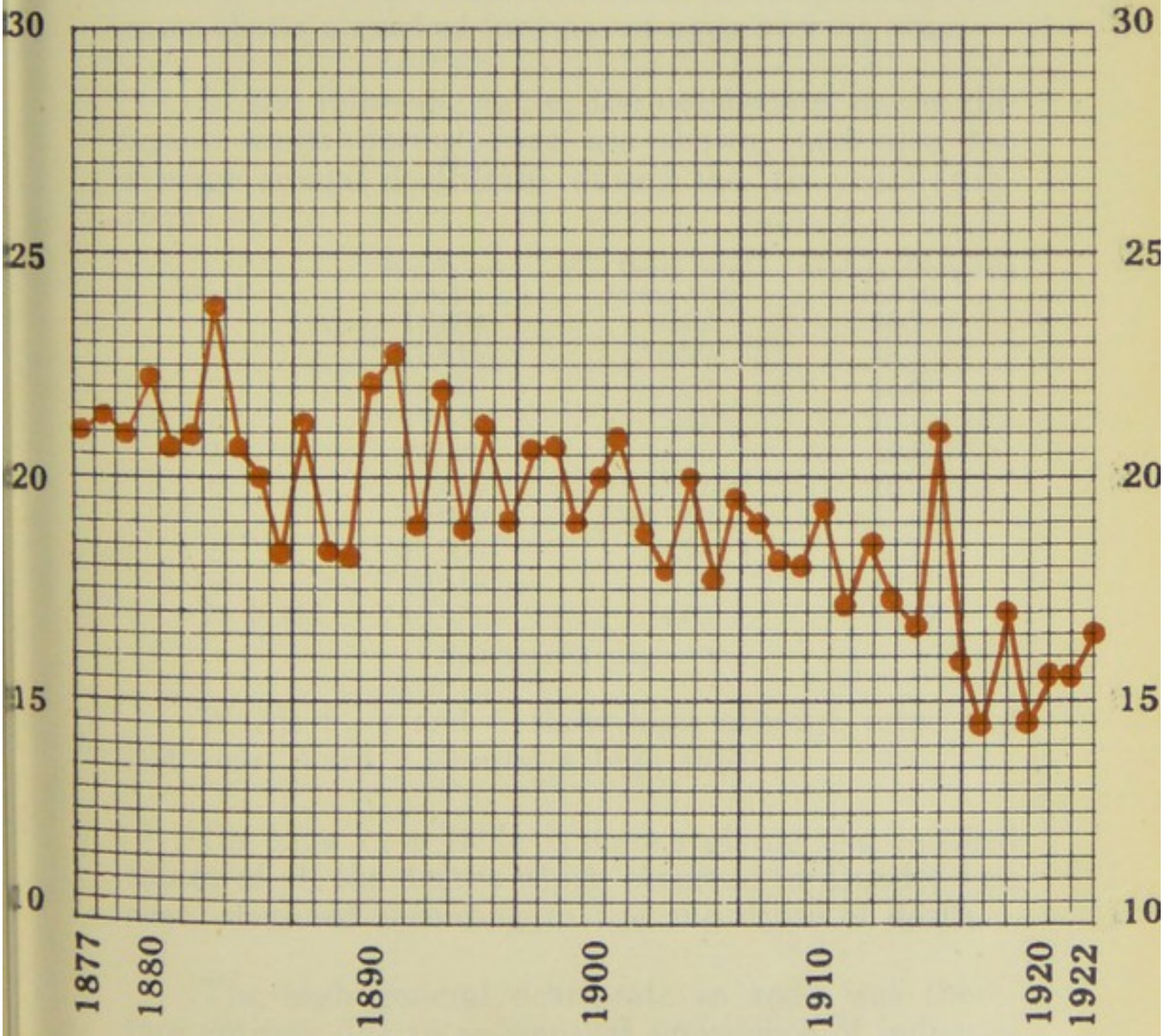
CITY OF DUNDEE

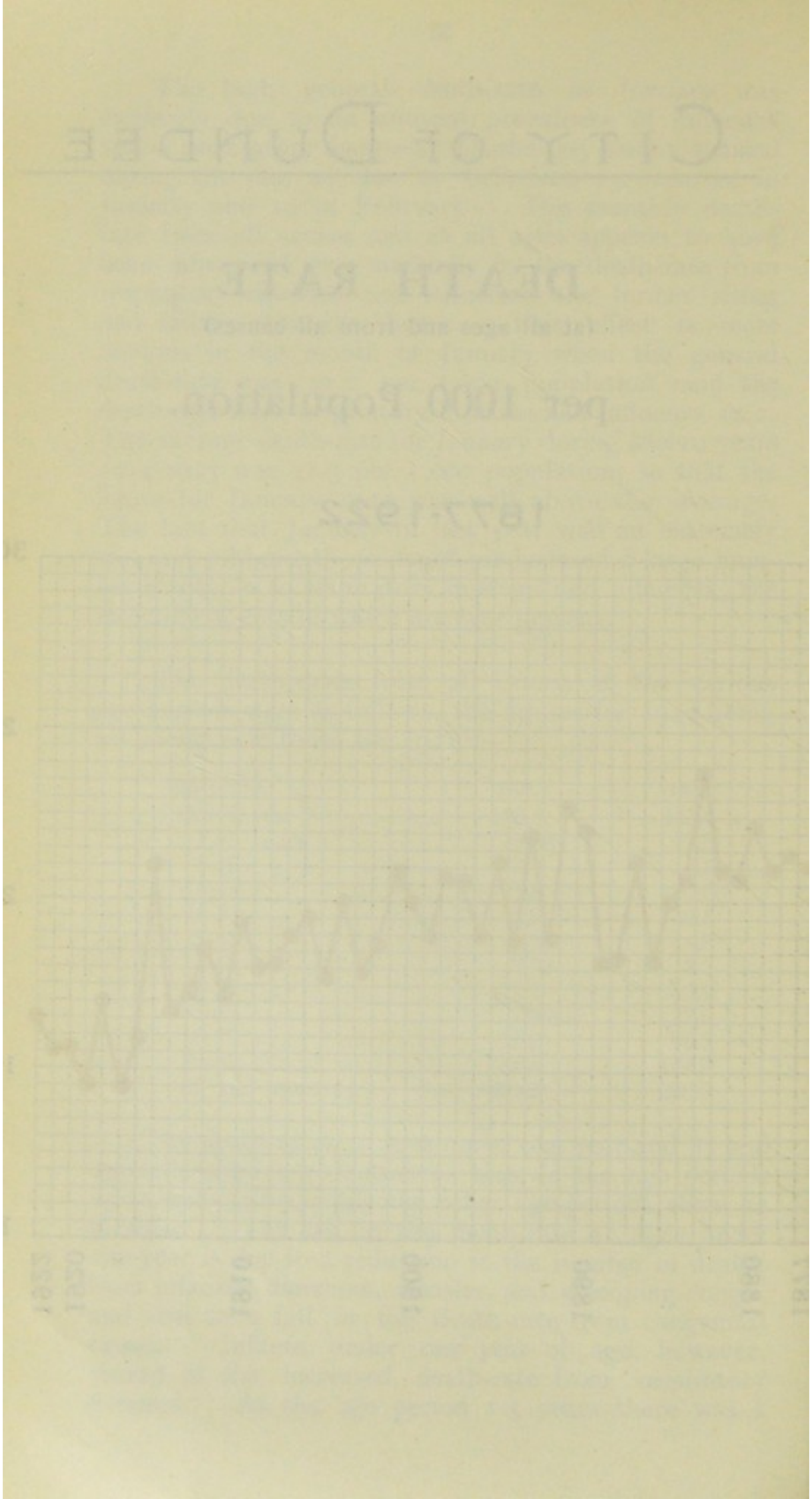
DEATH RATE

(at all ages and from all causes)

per 1000 Population.

1877-1922





reduction in the number of deaths from diarrhœa and enteritis, the death-rate from respiratory diseases shows a 50 per cent. rise, and the death-rate from the infectious diseases also shows a marked increase, measles, diphtheria, and tuberculous meningitis being mainly responsible, although there was a marked reduction in the number of deaths from whooping-cough. At the combined age periods, 5-45 years, there was only a very slight increase in the death-rate, due entirely to an increased number of deaths from the respiratory diseases, although the age period from 5-15 years shows some increase in the deaths from infectious disease, especially from pulmonary tuberculosis. At the later age periods there is nothing outstanding to note except that the death-rate from malignant diseases shows a reduction. The death-rate from the respiratory diseases shows a marked increase at ages over 65 years.

In the following table, the death-rates in the different wards during 1922 are shown, and also the average annual death-rate during the 10 years 1913-1922 :—

Ward.	Population (1922)	Death rate during 1922.	Average death-rate 1913-22.
1 ...	14,604	16.02	16.7
2 ...	12,415	16.99	18.1
3 ...	16,582	18.09	16.6
4 ...	19,449	15.47	15.1
5 ...	23,036	14.45	15.6
6 ...	17,666	18.11	18.5
7 ...	17,909	15.02	15.6
8 ...	18,906	18.14	17.7
9 ...	20,519	15.35	15.1
10 & 11 ...	10,975	14.03	*12.7

* Nine Years Average only.

Wards 8, 2 and 6 show high average rates and last year Ward 3 showed a high rate.

On page 17 a table is shown giving the certified causes of all the deaths which occurred in Dundee last year, classified according to age and cause of death.

The high general death-rate in 1922 was therefore entirely due to an unusual prevalence of influenza and the respiratory diseases during the early months of the year, and especially during January. Had the death-rate from those diseases remained the same as

for 1921, the general death-rate for 1922 would have been lower than for the preceding year. There is no question that the general death-rate is falling as a direct result of improved sanitation, but it is still subject to fluctuation due to accidental causes which must receive full consideration in using these figures to compare the health of a community one year with another. The prevalence of influenza and of the respiratory diseases may be due to many factors. Some of these are unknown, while the others are undoubtedly related to conditions of climate, housing, occupation, and general sanitation. These factors do not appear to operate more in Dundee than in other cities, at any rate in cities which are comparable in regard to industrial and other conditions. From the information I have at present, it would appear that bronchitis and pneumonia were unusually prevalent all over Scotland and England in the early part of last year, and no doubt this prevalence will be set forth in the annual reports of the medical officers of health of the various communties as being the principal cause of a high general death-rate. One would be entitled to assume that the unknown factors controlling the prevalence of the respiratory diseases apply in an equal degree to Dundee and all other communities. The conditions in regard to housing and occupation in Dundee would, however, lead one to conclude that the respiratory diseases would be more prevalent here than in certain other communities, and that is actually the case, but only to a limited extent. Naturally a comparison between Dundee and country districts puts the urban community in an unfavourable position as would be the case in a comparison between any town with any rural area in regard to almost any disease or any group of diseases. But a study of the death-rate at all ages from the respiratory diseases in the whole of Scotland, Dundee, and the various Public Health districts during the 10 years 1911-1920 shows that, while, as would be expected, the Dundee figures are much higher than those for Scotland as a whole, the smaller burghs and the country districts, they are only slightly higher than those for the group of larger burghs, including Dundee. Taking individual towns, the Dundee figure is lower than Glasgow, but higher than Edinburgh, Aberdeen, and Paisley. The place held by Dundee in this comparative statement is not what one would

like, but the nature of the industrial conditions in this City is very different from that in any other community in Scotland, and this fact must receive due consideration in comparing their death-rates. The staple industry in Dundee involves an environment both at home and at work, which must undoubtedly have an influence on the health of the workers, and as the workers in the jute trade form a very considerable proportion of the total population, naturally this influence is reflected in the vital statistics applicable to the whole population. The subject is complicated further by the fact that by far the greater number of the textile workers are females, many of whom are married. I do not suggest that the environment of the factory worker in Dundee compares unfavourably with that of the factory worker in other communities in Scotland, but emphasise the fact that the proportion of factory workers to the total population is very much higher in Dundee than elsewhere, and further, that the majority of the factory workers here are women, a large number of whom are married. So far as I know, the jute industry in itself has no direct effect on health, although those engaged in certain stages of the manufacturing process are exposed to the inhalation of a dust the breathing of which for prolonged periods must result in a certain predisposition to diseases of the respiratory system, especially if those engaged in this class of work are not selected from a particularly healthy section of the population, and further, are exposed to the risks associated with an unhealthy environment at home and at work, apart altogether from the special risk involved in the continual inhalation of dust no matter how slightly injurious the dust may be.

In the light of our present knowledge, a fall in the death-rate from respiratory diseases can only be brought about by the continued application of active measures directed towards the improvement of the environment of the individual, while the individual himself must do his part not only in regard to his immediate surroundings, but also in the matter of personal hygiene. In this way we may hope to improve the resistance to disease, and further, make it more than ever difficult for the infecting agent to be conveyed from one person to another by direct or indirect means. Early and adequate treatment is of course an important

factor, and in the treatment of such diseases as influenza, whooping cough and measles, the aim from the very commencement should be the prevention of complications, especially of those affecting the respiratory system.

During the early months of the present year (1923) there was no evidence of an excessive prevalence of influenza in the city, the general death-rate for the month of January being 22.6 per 1000, a figure slightly higher than the average for the ten years 1914-23, which was 21.3. The epidemic of measles, which commenced in September last, continued during the whole winter and ended about April, gave rise to a certain number of deaths from respiratory complications. This epidemic will, I am afraid, have a very definite influence on the infant mortality figure for the present year.

CAUSE OF DEATH.	ALL AGES			AGE												
	Total	Males	Females	—1	1—	5—	10—	15—	25—	35—	45—	55—	65—	75—	Over 85
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	..	...	...	...	...	...	...	...	..
Measles	45	22	23	11	30	4	...	...	...	...	...	...	...	...	...
Scarlet Fever	7	4	3	...	4	1	...	1	...	1	...	...	...	...	...
Whooping Cough	19	11	8	9	9	1	...	...	...	..	...	...	...	...	...
Diphtheria	23	14	9	1	19	2	1	...	...	...	...	...	...	...	...
Influenza	103	43	60	4	3	1	1	5	16	12	7	19	24	9	2
Encephalitis Lethargica	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	11	6	5	5	1	...	...	...	...	1	...	...	3	1	...
Tuberculosis of Respiratory System	168	75	93	...	...	3	7	36	29	35	32	21	3	2	...
Tuberculous Meningitis	28	13	15	4	13	4	3	1	2	...	1	...	...	...	...
Tuberculosis of Intestines and Peritoneum	18	10	8	4	3	1	1	4	1	...	2	1	1	...	..
Other Tuberculous Diseases	21	11	10	...	2	2	4	9	2	...	...	2	...	...	...
Malignant Tumours	272	104	168	...	...	..	...	1	2	19	49	74	92	33	2
Rheumatic Fever	5	1	4	...	...	2	1	1	...	...	...	1	...	...	...
Meningitis (not. Cer.-Spin. or T.B.)	12	6	6	5	3	1	...	...	1	1	1	...	...	...	...
Apoplexy	90	45	45	...	...	...	...	...	2	2	8	21	32	25	...
Heart Disease	277	114	163	...	...	1	4	4	13	12	40	54	91	51	7
Disease of Arteries	48	24	24	...	...	...	...	...	..	...	2	10	15	20	1
Bronchitis	249	108	141	41	13	...	1	2	5	4	16	30	71	53	13
Pneumonia (all forms)	262	131	131	71	54	3	5	14	13	13	13	18	35	20	3
Other Diseases of Respiratory System	41	20	21	1	1	2	...	1	...	5	3	5	11	9	3
Diarrhœa and Enteritis (under 2 years)	44	22	22	36	8	...	...	...	..	...	...	...	...	...	...
Appendicitis	13	5	8	...	...	1	2	2	...	1	4	2	1	...	...
All Liver Diseases (not Malignant)	25	11	14	...	...	...	...	1	...	1	9	5	8	1	...
Nephritis (Acute and Chronic)	74	44	30	...	...	2	...	5	4	6	15	16	17	9	...
Puerperal Sepsis	22	...	22	...	...	...	...	8	8	6	...	...	...	...	...
Other Diseases and Accidents of Pregnancy and Parturition	14	...	14	...	...	...	...	2	2	10	...	...	...	...	...
Disease of Early Infancy and Malformations	189	97	92	189	...	...	...	...	...	...	...	...	...	...	...
Suicide	17	10	7	...	..	...	...	...	1	4	7	...	5	...	...
Other Violent Deaths	98	59	39	15	10	4	2	6	3	21	15	8	8	6	...
Other Defined Diseases	543	215	328	63	16	4	2	10	17	30	54	77	112	116	42
Causes Ill-Defined or Unknown	54	34	20	1	2	...	...	1	...	1	9	17	16	6	1
All Causes	2793	1259	1534	460	192	39	34	114	121	185	287	381	545	361	74

INFECTIOUS DESEASES.

There was in 1922 a greater number of notifications of infectious disease than in the previous year. Notifications received under the Infectious Diseases (Notification) Act, 1889, and under Regulations made under Section 78 of the Public Health (Scotland) Act, 1897, numbered 2,150, as compared with 1,854 in 1921. This increase was due almost entirely to an increase in the number of notifications of acute primary pneumonia and acute influenzal pneumonia, the totals for these two diseases being 502 last year and 139 the preceding year. None of the notifiable diseases assumed epidemic form, although influenzal pneumonia was unusually prevalent early in the year, there being 127 notifications in January out of a total for the year of 154. The Department received information of 1,255 cases of measles and 363 of whooping cough, compared with 586 and 504 for 1921. Measles became epidemic about September last, and increased in prevalence during the remaining months of the year, and the early months of the present year, the largest number of cases occurring in December, when 723 intimations were received, chiefly from the Medical Department of the Education Authority. Whooping cough was distributed fairly equally over the year, with a tendency to increase during the second six months. The death-rate from the principal epidemic diseases (enteric fever, measles, scarlet fever, whooping cough, diarrhœa, and enteritis) was .80, the figure for 1921 being 1.09. The actual number of deaths in 1922 was 138, and in 1921, 183. While measles commenced about September, and was particularly widespread in December, the deaths from this disease were not numerous until the early months of the present year, and there is no doubt that the measles death-rate will be responsible for a rise in the death-rate from the principal epidemic diseases during 1923.

The following is a return of cases of infectious diseases notified, &c., during the year ending 31st December, 1922 :—

DISEASE.	Number of Cases coming to the Knowledge of the Medical Officer of Health.									
	At all ages.	At Age—Years.							Cases removed to Hospital.	Cases not removed to Hospital.
		Under 1.	1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards		
A.—Notified under the Infectious Disease (Notification) Act, 1889.										
Typhoid or Enteric Fever	14	...	...	9	...	4	1	...	14	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Scarlet Fever or Scarlatina	429	5	106	256	38	22	2	...	334	95
Diphtheria and Membranous Croup	267	8	109	93	32	21	4	...	249	18
Erysipelas	182	6	3	8	17	61	68	19	8	174
Puerperal Fever	29	...	...	...	10	19	...	...	23	
Cholera	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	..	..	...	...	...	...	...	...	...
B.—Notified in terms of Regulations made under Section 78 of the Public Health (Scotland) Act, 1897.										
Ophthalmia Neonatorum	147	147	...	...	...	...	...	...	3	144
Malaria	7	...	...	...	5	2	...	...	...	7
Dysentery	4	...	...	3	...	...	1	...	...	4
Trench Fever	...	...	...	...	...	...	...	...	...	...
Acute Primary Pneumonia	348	38	99	78	39	56	24	14	...	348
Acute Influenzal Pneumonia	154	6	21	17	33	44	22	11	90	64
Pulmonary Tuberculosis	401	...	15	66	109	130	73	8	162	239
Non-Pulmonary Tuberculosis	162	10	39	54	40	12	7	...	7	155
Total of A and B	2144	220	392	584	323	371	202	52	890	1254
C.—Diseases to which the Provisions of the Infectious Disease (Notification) Act have been extended by the Local Authority.										
Encephalitis Lethargica	2	...	1	...	1	...	...	...	2	...
Acute Anterior Poliomyelitis	4	2	2	...	...	..	...	...	4	...
D.—Notified under Local Provisions not under the Infectious Disease (Notification) Act, 1889.										
Measles	1255	30	486	733	4	2	...	...	90	1165
Whooping Cough	363	53	181	129	...	...	...	...	4	359
Chickenpox	362	25	95	239	3	...	...	...	2	360

Monthly Notifications of Notifiable Diseases During the Year 1922.

DISEASE.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Pulmonary Tuberculosis ...	33	38	43	37	32	31	27	32	31	25	26	46	401
Non-Pulmonary Tuberculosis	11	5	13	15	26	12	15	21	11	13	14	6	162
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	...	...	1	1	1	2	...	2	2	2	1	2	14
Puerperal Fever	2	2	5	1	3	...	1	1	1	2	7	4	29
Diphtheria	26	11	9	20	27	16	19	10	15	35	40	39	267
Scarlet Fever	32	15	22	26	17	7	14	21	83	76	55	61	429
Erysipelas	20	23	20	18	16	16	6	4	12	10	21	16	182
Cerebro-Spinal Fever	...	...	...	...	...	...	..	...	..	...	...	...	...
Ophthalmia Neonatorum ...	2	8	7	9	9	11	6	10	22	21	16	26	147
Pneumonia (Primary)	63	14	39	50	33	20	15	12	24	24	29	25	348
Pneumonia (Influenzal) ...	127	15	1	1	1	...	1	...	...	1	5	2	154
Trench Fever	...	...	...	...	...	...	...	..	...	...	...	...	..
Dysentery	...	...	4	...	...	...	...	...	...	...	...	...	4
Malaria	...	...	1	1	1	...	2	1	...	...	...	1	7
Total	316	131	165	179	166	115	106	114	201	209	214	228	2144
Non-Notifiable Diseases.													
Measles	...	5	3	1	4	3	...	3	21	137	355	723	1255
Whooping Cough	1	2	19	15	19	56	24	21	58	31	49	68	363
Chickenpox	8	11	35	30	90	77	19	13	13	19	24	23	362
Total	9	18	57	46	113	136	43	37	92	187	428	814	1980

Smallpox and Typhus Fever.

No cases of the above diseases occurred.

Chickenpox.

This disease is not notifiable, but 362 cases came under the notice of the Department, 3 patients being treated in Hospital.

Diphtheria.

There were 267 cases of diphtheria notified, compared with 274 in 1921. There was nothing of the nature of an epidemic, the largest number of cases occurring in the month of November, when 40 were notified. The case mortality was 8.5%, there being 23 deaths. The figures for the last 22 years are as follows :—

Year.	Cases.	Deaths.	Case Mortality.
1901	143	18	12.5
1902	143	20	14.0
1903	132	15	11.3
1904	100	22	22.0
1905	143	24	16.7
1906	183	38	20.7
1907	169	30	17.7
1908	200	39	19.5
1909	303	38	12.5
1910	498	67	13.4
1911	367	37	10.0
1912	409	43	10.5
1913	265	34	12.8
1914	319	30	9.4
1915	267	32	12.0
1916	261	32	12.2
1917	328	43	13.1
1918	362	39	11.8
1919	274	24	8.7
1920	315	30	9.5
1921	274	15	5.5
1922	267	23	8.6

Total cases for 22 years—5,722; total deaths—693; case mortality, 12.1%.

From the above table it is seen that the disease has been of a comparatively mild form during the last few years, the case mortality keeping below 10%. It must be noted, however, that facilities for the bacteriological diagnosis of suspected cases of diphtheria have only

been available to medical practitioners in this area during the last four or five years, and I am satisfied that a certain number of cases have been notified which would not previously have been considered as diphtheria. This has undoubtedly affected the case mortality figure, but nevertheless, it is satisfactory that such cases are being brought under our notice, as although they may be exceedingly mild and not likely to give rise to fatal results, yet they are capable of conveying the disease to others. Some of the cases admitted to Hospital were infants with persistent discharge from the nose and no other signs of diphtheria, a positive report from the bacteriologist leading to their admission. There may be some doubt as to whether these patients really suffer from diphtheria, and the question of more thorough investigation of such cases from the point of view of the virulence of the infecting organisms demands attention.

The following table shows the cases classified according to age periods. The numbers are small, but they illustrate the well-known fact that the disease is much more prevalent and much more fatal at ages under 5 years :—

	Cases.	Deaths.
Under 1 year ...	8	1
1- 5 years ...	109	19
5-15 „ ...	93	3
15-25 „ ...	32	0
25-45 „ ...	21	0
45-65 „ ...	4	0
65 and upwards	0	0

Of the total number notified, 249 were removed to King's Cross Hospital. In my opinion, it is very necessary to treat cases of diphtheria in hospital, and no case is permitted to remain at home unless conditions are satisfactory, not only from the point of view of prevention of spread of the disease, but also of the adequate treatment of the patient. We continue to have a certain number of cases sent in to us too late for successful treatment. This is mainly due to neglect on the part of the parents or guardian in sending for a doctor, the disease being very often painless, with nothing to suggest a serious infection of the throat.

Scarlet Fever.

There were 429 notifications of scarlet fever received during the year as compared with 380 in 1921

The disease was present at all seasons of the year, with the usual tendency to increase from September onwards, but never reached epidemic proportions. There were 7 deaths, giving a case mortality of 1.6%.

The corresponding figures for the last twelve years were as follows :—

	Notifications.	Deaths.
1911	674	13
1912	833	15
1913	442	14
1914	816	29
1915	1173	21
1916	452	11
1917	195	3
1918	87	1
1919	410	4
1920	424	6
1921	380	12
1922	429	7
Total for 12 years	6315	136

The case mortality for the 12 years was therefore 2.1%.

334 cases were removed to the Infectious Disease Hospital.

The following table shows the number of cases reported and the number of deaths at the various age periods :—

	Notifications.	Deaths.
Under 1 year	5	0
1 year and under 5 years	106	4
5 „ 15 „	256	1
15 „ 25 „	38	1
25 „ 45 „	22	1
45 „ 65 „	2	0
65 and upwards	0	0
	429	7

Enteric Fever.

As in 1921, last year was a very satisfactory one as regards enteric fever. 14 notifications were received, but of these only 6 were confirmed by serological and bacteriological investigation, the remaining cases proving to be suffering from other conditions which are detailed in the report of the Medical Officer

of King's Cross Hospital. The cases were not connected with each other in any way, occurring in different parts of the city, and at different times of the year.

There were no deaths.

The continued diminution in the prevalence of this disease is undoubtedly a matter for satisfaction, and indicates the effectiveness of the strenuous efforts towards improvement in the sanitation of the city. As long as we can continue to improve the sanitary conditions, we may hope to remain free of this disease, and in time it will become more a matter of historical interest. But although it has practically disappeared, the danger of its occurrence still exists in many areas of the town, and until these areas are dealt with, we cannot consider enteric fever as a disease of the past.

All the cases notified as enteric fever were treated in King's Cross Hospital.

The number of cases of the disease notified, the number of deaths, and the case mortality each year since 1901 are shown below :—

Year.	Cases.	Deaths.	Percentage. Case Mortality.
1901	76	10	13.1
1902	51	11	21.5
1903	180	32	17.7
1904	206	21	10.2
1905	62	10	16.1
1906	78	13	16.6
1907	48	6	12.5
1908	39	3	7.7
1909	34	4	11.7
1910	69	5	7.2
1911	30	2	6.6
1912	26	2	7.7
1913	42	7	16.7
1914	79	6	7.7
1915	131	14	10.7
1916	63	8	12.7
1917	26	1	3.8
1918	26	5	19.2
1919	103	7	6.8
1920	30	4	13.3
1921	7	1	14.3
1922	6	0	0

Total for 22 years 1,412 cases—172 deaths; case mortality, 12.18%.

Influenza.

As already stated influenza was prevalent during the first months of the year, and had an appreciable effect on the death-rate. The following table shows the number of deaths in which influenza was certified as the only cause or as a contributory cause during each month for the last five years :—

	1918	1919	1920	1921	1922
January ...	1	31	4	5	73
February ...	0	58	0	6	19
March ...	0	40	4	8	3
April ...	1	8	55	4	1
May	0	3	24	2	1
June	0	0	0	0	0
July	35	1	1	0	0
August ...	3	0	0	0	0
September ...	0	0	0	1	0
October ...	59	0	2	0	1
November ...	235	2	0	2	4
December ...	113	0	0	5	1
Totals ...	447	143	90	33	103

The total number for 1922 is higher than for either of the two preceding years, and the month of January of last year shows a very much larger number of deaths than any month during the whole period covered by the table with the exception of November and December of 1918, at which time occurred in Dundee the second wave of the influenza pandemic of 1918 and 1919.

As shown below influenza caused most damage to persons living at the higher age periods, the death-rate at ages over 65 being 3·33 per 1,000 population.

	No. of Deaths.	Death-rate per 1,000 Population.
0- 5 years ...	7	.46
5-15 „ ...	2	.06
15-25 „ ...	5	.15
25-45 „ ...	28	.59
45-65 „ ...	26	.75
65 and upwards	35	3.33
	103	.63

Of the 103 deaths, 10 were certified as being due to influenza alone, while in 93 cases, influenza was associated with :—

Pneumonia	46
Bronchitis	7
Heart Failure	21
Senile Decay	2
Meningitis	3
Gastro-Enteric Catarrh	2
Pulmonary Tuberculosis	4
Miscarriage	2
Pleurisy	1
Pneumonia and Appendicitis ...	1
Sclerosis of Spinal Cord	1
Complicated by Puerperium ...	1
Gangrene of Lower Extremities ...	1
Paroxysmal Tachycardia	1
Total ...	93

Pneumonia.

The following notifications of pneumonia were received during 1921 and 1922 :—

	1921	1922
Acute Primary Pneumonia ...	127	348
Acute Influenzal Pneumonia ...	12	154
	139	502

Of the 154 notifications of acute influenzal pneumonia, 127 were made in January and 15 in February, while in the case of acute primary pneumonia, the notifications were pretty well scattered over the year, the largest number occurring in January and April, while the second six months of the year showed a very much smaller number of notifications than the first six months. The cases occurred in the following age periods —

	Acute Primary Pneumonia.	Acute Influenzal Pneumonia.	Total.
0- 5 years ...	137	27	164
5-15 „ ...	78	17	95
15-25 „ ...	39	33	72
25-45 „ ...	56	44	100
45-65 „ ...	24	22	46
65 and upwards	14	11	25
Total ...	348	154	502

There occurred 262 deaths certified as due to pneumonia as compared with 200 in 1921.

The increased prevalence of pneumonia during last year is no doubt due to the agencies responsible for the increased prevalence of influenza during the early months, and cannot be said to be the result of more efficient notification. That this is so is evident from the fact that there was a very marked increase in the number of deaths from influenza and also from the pneumonias, especially during the early months of the year. While influenza did not result in a high death-rate among infants and children last year, the respiratory diseases were to a greater extent than usual responsible for the death-rate at these ages. One can do very little during an outbreak of influenza and pneumonia to prevent the spread, but every effort must be made to see that the affected persons receive adequate treatment. As pneumonia is so fatal at the early ages the question of providing treatment at the Infectious Diseases Hospital for a larger number of such cases is worthy of attention, especially during the years when the disease is unusually prevalent. Certainly, in my opinion, such cases should receive preference in regard to Hospital admission over cases of even scarlet fever.

As stated in last year's Report, medical practitioners have no difficulty in securing hospital treatment of their cases either at the Royal Infirmary or at King's Cross Hospital, but while, in some diseases, a smaller percentage of admissions to hospital may be aimed at, in this disease a larger percentage of admissions, especially among young patients should be the object.

Dysentry.

4 cases of dysentry were notified during the year.

They all occurred in March, and affected two households, 3 members (aged 11½, 7½, and 4½) being attack in one household, and 1 (aged 61) in the other. The infecting agent was one of the Flexner group of dysentry bacilli, and the first to show signs of the disease was a boy aged 7½, who died within 24 hours. The others were contacts, and were evidently infected from the first case. They all recovered.

The outbreak was very thoroughly investigated, but the source of the infection was not discovered.

Trench Fever and Malaria.

No cases of trench fever were notified during 1922, and only 7 cases of malaria. In all these cases the disease was contracted abroad. No special action was called for.

Measles.

Information was received by the Department of 1,255 cases of measles compared with 586 during 1921. These were reported chiefly by the Education Authority, but a certain number were discovered by the health visitors of the Child Welfare Department in the course of their work. By far the largest number of cases occurred during the last three months, 137, 355, and 723 cases being intimated in October, November, and December respectively, only 40 cases occurring during the other nine months. The epidemic continued during the early months of the present year and during January, February, and March, 514, 298, and 112 intimations were received, so that during the six months from October, 1922, to March, 1923, there were 2,139 cases which came under the notice of the Department. The figure is a very large one, but it cannot be said to represent the total number of cases which occurred in the community. The disease is not notifiable, and we have to depend on various sources for information. The most reliable source is the Medical Department of the Education Authority, who send us information regarding all school children who are absent from school suffering from measles, or whose homes are infected by reason of the disease.

The disease appeared first of all towards the end of September in the east centre of the town, and spread rapidly westwards and northwards during October, so that by November practically every area of the city was affected.

The table given below classifies the total intimations received during 1922 according to the ages of the patients, and also shows the number of deaths at the various age periods:—

	Cases.	Deaths.
Under 1 year	30	11
1 year and under 5 years	486	30
5 „ 15 „	733	4
15 „ 25 „	4	0
25 „ 45 „	2	0
Total ...	1,255	45

The majority of the cases are shown to have occurred at school ages, and next to that at the age period from 1-5 years, but it must be noted that we have much more accurate information regarding the former age period than the latter. With the figures given above, the attack-rate for the age period 5-15 is 27.7 per 1,000, and for the age-period 1-5, 44.3 per 1,000. In all probability the difference would be much greater had we exact information regarding all cases.

There were 45 deaths from the disease, 11 occurring at ages under 1 year, 30 at ages from 1-5 years, and 4 at ages from 5-10 years. These figures demonstrate the seriousness of measles among infants and children, especially under 5 years of age, and show that not only is the disease much more prevalent at these ages, but that the case mortality is also very much higher. The case mortality at all ages was 3.5 per cent.

During the year 90 cases were removed for treatment to the Infectious Diseases Hospital. Hospital treatment in this disease is exceedingly important, but it is usually impossible for us to set aside more than one pavilion for these cases. As, however, the period of infection is comparatively short, unless complications supervene, a fair number of patients pass through our hands.

The health visitors paid 1,292 visits to cases of measles, 1,011 being initial visits, and 281 repeat visits. They do all they can to secure proper isolation of the patients, who of necessity must be treated at home, and give instructions regarding the measures to be taken to prevent the onset of serious complications, but the amount of good done is limited, as during a severe epidemic only one visit can be paid to each house, except in very urgent cases.

Whooping Cough.

Information was received of 363 cases of whooping cough compared with 504 in 1921. The majority of the cases occurred during the last quarter of the year, but did not at any time assume epidemic form. All the cases occurred at ages under 15 years, but it must be noted that as, in the case of measles, the disease is not notifiable, and the figures given here represent intimations received from the Education Authority, health visitors, &c. There were 19 deaths during the year compared with 56 in 1921. Of these 9 occurred at ages under one year, 9 at ages from 1-5 years, and 1 between 5 and 10 years of age. Like measles, this infection, at any rate during epidemic years, is a very serious factor in the causation of infant and child mortality.

The health visitors paid 429 visits to cases of whooping cough, 300 were initial visits and 129 revisits.

Only 4 cases were removed to King's Cross Hospital.

Puerperal Fever and Ophthalmia Neonatorum.

For convenience the above diseases are considered in the chapter under the heading "Midwives (Scotland) Act, 1915 (see page 65).

Infantile Diarrhoea.

There were 44 deaths from diarrhœa and enteritis at ages under 2 years.

Of these 36 occurred in infants under 1 year, and 8 at ages over 1 and under 2 years.

The deaths from this disease each year since 1919 were:—

	Under 1 year.	1-2 years.	Total.
1919	35	5	40
1920	95	7	102
1921	63	12	75
1922	36	8	44

It is satisfactory to note that the number of deaths from this disease shows a reduction compared with the two preceding years, but the figure is still far too high, and the community cannot be considered as free from the risk of a serious epidemic of this infection in the summer months. The infecting agent is not known, but in all probability it enters the body of the infant with the milk, and any action taken is based on that theory. Broadly speaking, active measures directed towards the improvement in the purity of the milk supply and the education of mothers regarding the feeding of infants are likely to bring about the most satisfactory results.

Public Health (Infectious Disease Carriers) Regulations (Scotland), 1921.

No carriers were discovered during the year, and, therefore, no action was called for under the above Regulations.

No special examinations were made with a view to the discovery of carriers with the exception of diphtheria. In this disease, it is the routine to swab the throats of as many contacts as possible of all notified cases which are removed to hospital.

Tuberculosis.

No important developments in the Tuberculosis Scheme have to be dealt with in this report, the work having been continued on the usual lines. Towards the end of the year, Dr Hunter, the Chief Tuberculosis Medical Officer, lost the services of Dr G. S. Johnston, who obtained a more important post of a similar nature in Yorkshire. Early in the present year Dr Arthur Meek was appointed to fill the vacancy thus created, but the new Assistant Tuberculosis Officer no longer acts as Tuberculosis Officer to Arbroath, that Burgh having made other arrangements.

The eradication of tuberculosis is still one of the most pressing public health problems awaiting solution, and while, on the whole, the death-rates from this disease are gradually falling, they are still very high. It must still be considered as one of the most fatal diseases in Dundee as it is all over the country. Un-

doubtedly the prevalence of tuberculosis is closely related to social and economic conditions, especially slums, overcrowding, poverty and bad sanitation. As these conditions improve the prevalence of tuberculosis will diminish. Unfortunately the betterment of the social and economic environment is a slow process, and accordingly the disappearance of tuberculosis is exceedingly gradual. The fact that the disease is most prevalent and the death-rate highest at the middle age-periods, that is, the working periods of life, when the individual is most useful to the home, the community and the nation renders the damage done by disability and death very much more serious and serves as a powerful argument for specially active measures being adopted to counteract the scourge.

While we know the organism which is responsible for the disease, and are aware that it is associated directly with an unhealthy environment, whether in the home, in the workshop, or elsewhere, there still remains a great deal to be discovered regarding tuberculosis and its prevention. The disease is of more frequent occurrence among individuals living in unhealthy surroundings because the infecting agent is much more likely to be present in large numbers and in a virulent form, it is much more easily conveyed from a diseased person to a healthy person, and further, because the susceptibility of the individual is increased. A tremendous amount of research is being carried out daily in numerous laboratories in this and other countries in order to discover a means of conferring immunity on the uninfected person, and also in order to discover a remedy for the treatment of the infected individual, but up till now it cannot be said that the investigations have been successful, and at the moment there is no specific prophylactic or therapeutic agent which can be employed in an anti-tuberculosis campaign with any reasonable hope of success.

Our energies must therefore be directed towards a speeding up in the improvement of the social and economic conditions, including housing, occupation, &c., and pending a sufficient development in this direction, we must continue our efforts towards discovering the disease at the earliest possible moment, the proper isolation of known foci of infection, and the provision of a favourable environment for infected persons

in sanatoria, hospitals, &c. While there has been no special development in the Tuberculosis Scheme in Dundee during the year, there has been some advance in regard to housing and in the improvement of sanitation generally. Further, the passing of the Milk and Dairies (Amendment) Act, 1922, is a step in the right direction. This Act, besides imposing heavier penalties for the sale of milk from a cow suffering from tuberculosis of the udder, also introduces a system of grading of milk which, it is hoped, will in time result in a marked improvement in the purity of the milk supply. These measures, while not forming an integral part of our campaign against tuberculosis, are of supreme importance, and must be given due consideration in dealing with preventive measures.

Dr Hunter in his Report describes in detail the actual work carried out at the Dispensary and in other Institutions forming the Tuberculosis Scheme, and very little more requires to be said here on the subject. The attendances at the Dispensary show a very slight increase as compared with the previous year, namely, 18,475 for 1922 and 18,180 for 1921. It would appear that this increase was due to the attendance of a larger number of children suffering from malnutrition and suspected to be suffering from tuberculosis. One would naturally expect that as a result of the industrial depression malnutrition would be more widespread among the younger members of the population, the result of insufficient and unsuitable food, clothing, &c., and as Dr Hunter states, it is a matter for satisfaction that these cases are brought to the Dispensary for examination from time to time, as unfortunately they form excellent soil for the development of the tubercle bacillus. A total attendance of 18,475 for the year means an average attendance of about 90 at each consultation. This seems a very large number even for two medical officers to tackle, but the arrangements made at the Dispensary by Dr Hunter are in my opinion exceedingly efficient, and while it would be impossible for him to interview every patient at every visit, he sees all those requiring immediate attention, and has established a scheme of routine examinations, so that he keeps himself familiar with the physical condition of every person under his charge.

The number of contacts examined was 117 compared with 114 last year. Of these 18 (15 per cent.)

were found to be suffering from tuberculosis, 14 pulmonary and 4 non-pulmonary. Of the others, 70 were suspicious and are being kept under observation, while the remaining 29 were found to be negative. These figures are very striking. There appears to be great difficulty in persuading contacts to come to the Dispensary for examination, and it would seem that the only satisfactory method would be for the Tuberculosis Medical Officers to visit the homes of notified cases at suitable hours in order to examine the other members of the family. With the present staff that is quite impossible, and only in occasional cases can the Medical Officers examine contacts in their own homes.

Notifications.

The number of notifications for the year 1922 was 563, the corresponding number for 1921 being 474, an increase of 89. This increase cannot be considered as due to an increased prevalence in the disease, but is probably the result of more efficient notification, especially of non-pulmonary tuberculosis by medical officers of the Royal Infirmary. In 1921, 19 notifications came from the Royal Infirmary, and in 1922 the number was 120. As is usual a large number of cases was discovered at the Dispensary, and it is satisfactory to note that the number of cases discovered for the first time from the death returns has fallen to 39. Everything points to the fact that the notification of tuberculosis during 1922 was very efficiently carried out:—

Year.	Estimated Population.	Pulmonary Tuberculosis	Attack-rate per 1000 of Population.	Non-Puly. Tuberculosis	Attack-rate per 1000 of Population.	All Forms of Tuberculosis	Attack-rate per 1000 of Population.
1913	164,975	410	2·48	Non Pulmonary Tuberculosis notifiable in March, 1914.			
*1914	176,584	590	3·34				
1915	177,300	485	2·73	377	2·12	862	4·86
1916	181,437	522	2·87	213	1·17	735	4·05
1917	181,773	432	2·37	171	·94	603	3·36
1918	181,777	393	2·16	201	1·11	594	3·26
1919	185,388	442	2·38	137	·73	579	3·12
1920	184,084	423	2·29	132	·71	555	3·01
1921	168,217	375	2·23	99	·58	474	2·81
1922	172,061	401	2·33	162	·94	563	3·27

*Broughty Ferry included for the first time.

As far as one is permitted to judge from the attack rate, tuberculosis was more prevalent last year than has been the case for some time, especially non-pulmonary tuberculosis, but as already pointed out, the rise in the attack-rate is probably the result of more efficient notification, and in any case, one must be careful in estimating the prevalence of tuberculosis from the notification rate.

Attack-rate in age groups—1914 and 1917-22—pulmonary tuberculosis :—

Ages.	1914.	1917.	1918.	1019.	1920.	1921.	1922
0- 5 years -	·92	·81	1·27	·64	·67	1·43	·99
5-15 ,, -	2·31	1·52	1·55	1·92	2·05	1.81	2.05
15-45 ,, -	4·48	3·22	2·70	3·25	2.8	2.9	2 99
45-65 ,, -	3 21	2·58	2 52	2 02	2·4	1·62	2 10
65 and upwards	2·08	·71	·40	1·10	·84	·77	·76
	3·34	2·37	2·16	2·38	2·29	2·22	2·33

As usual the attack-rate for pulmonary tuberculosis was highest at age period 15-45.

The number of notifications of pulmonary tuberculosis was greater among females than among males. This has not been the case since 1913 as is shown below :—

Notification of pulmonary tuberculosis—males and females :—

	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
Males -	171	255	216	227	181	198	238	223	197	170
Females -	229	335	269	295	251	195	204	200	178	231
	400	590	485	522	432	393	442	423	375	401

Attack-rate in age groups—1914 and 1917-22—non-pulmonary tuberculosis :—

Ages.	1914.	1917.	1918.	1919.	1920.	1921.	1922.
0- 5 years ...	3.36	2.75	2.54	1.79	2.3	1.5	3.26
5-15 ,, ...	2.0	1.25	1.52	1.01	1.05	1.46	1.68
15-45 ,, ...	.78	.75	.90	.58	.49	.31	.65
45-65 ,, ...	.33	.19	.42	.32	.16	.14	.66
65 and upwards ...	.33	.10	.50	.30	0	.19	0
	1.10	.94	1.10	.74	.71	.58	.94

The attack-rate shows an increase at every age period except the last, and the figure for the age period under 5 years, the highest rate, is practically the same as for the year 1914, the first year of the notification of all forms of tuberculosis. The reason for these high figures has already been explained, and probably is the same as for the year 1914.

The following table shows the notifications of pulmonary and non-pulmonary tuberculosis in the various wards in the city, and also the corresponding and combined attack-rates. The numbers are small and the rates cannot, therefore, be considered as reliable, yet it is striking that the attack-rate from tuberculosis is highest in those wards which have for the last 10 years show the highest general death-rate (page 13) :—

Wards.	Pulmonary Tuberculosis.	Attack rate per 1000 of population.	Non-Pulmonary Tuberculosis.	Attack rate per 1000 of population.	Pulmonary and Non-Pulmonary Tuberculosis.	Pulmonary & Non-Pulmonary Tuberculosis. — Attack rate per 1000.
1	42	2·87	14	·96	56	3·83
2	42	3·38	9	·72	51	4·10
3	37	2·23	20	1·20	57	3·43
4	37	1·90	21	1·08	58	2·98
5	51	2·21	13	·56	64	2·77
6	57	3·22	21	1·19	78	4·41
7	34	1·9	16	·89	50	2·79
8	50	2·64	26	1·37	76	4·01
9	40	1·95	18	·87	58	2·82
10 & 11	11	1·00	4	36	15	1·36
Total	401	2·33	162	·94	563	3·27

Deaths from Tuberculosis.

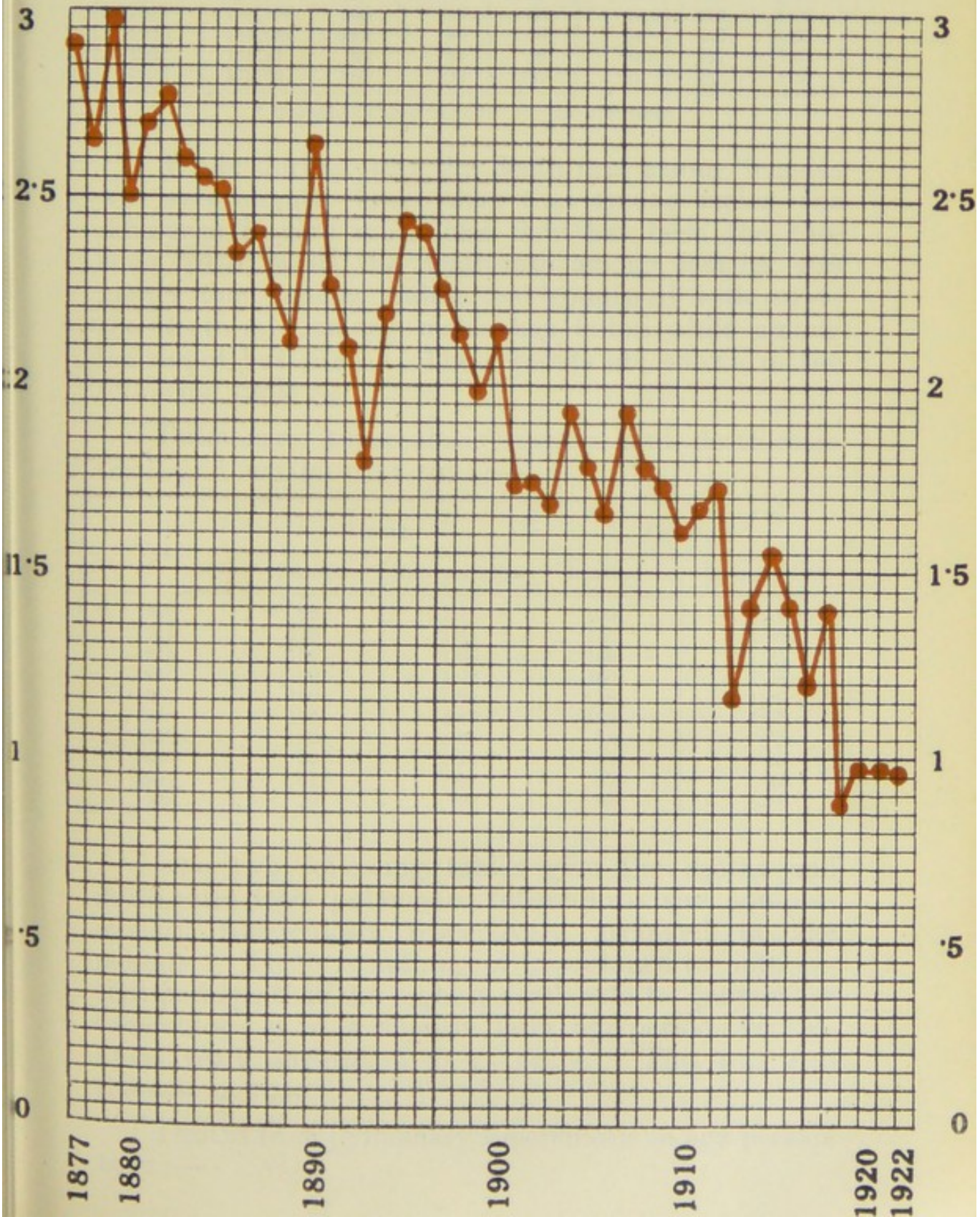
The figures for last year were very satisfactory, the rate for pulmonary tuberculosis showing a slight fall as compared with the previous year, while the figure for non-pulmonary tuberculosis shows a slight rise. The combined rate is 1.37 for 1922 as compared with 1.34 for 1921. The rates for the last 10 years are given below, and the chart on the opposite page shows the death-rate from pulmonary tuberculosis since 1877 :—

CITY OF DUNDEE

PULMONARY TUBERCULOSIS.

DEATH RATE per 1000 Population.

1877-1922



CITY OF DUNDEE

PULMONARY TUBERCULOSIS.

DEATH RATE per 1000 Population.

1877-1922

Year.	Estimated Population.	Pulmonary Tuberculosis.	Death-rate per 1000 of Population.	Non-Pulmonary Tuberculosis.	Death-rate per 1000 of Population.	Total Deaths from Tuberculosis.	Death-rates per 1000 of Population.
1913	164,975	191	1·16	128	·77	319	1·93
*1914	176,584	249	1·41	126	·71	375	2·12
1915	177,300	275	1·55	113	·64	388	2·19
1916	181,437	259	1·42	95	·52	354	1·95
1917	181,773	218	1·20	140	·77	358	1·97
1918	181,777	256	1·40	90	·49	346	1·90
1919	185,388	165	·89	83	·44	248	1·33
1920	184,084	183	·99	69	·38	252	1·37
1921	168,217	168	·99	59	·35	227	1.34
1922	172,061	168	·98	67	·39	235	1·37

* Broughty Ferry included for the first time.

While during 1922 the death-rate among females was very slightly lower than that among males, the difference is very much less than has been the case since 1916, when the death-rate among females was higher than among males, and compared with 1921, the death-rate among males has fallen while among females it has risen. These points are shown in the following table :—

Pulmonary tuberculosis—deaths and death-rates (male and female) 1913-1922 :—

Year.	Males.		Females.	
	Deaths.	Rate per 1000.	Deaths.	Rate per 1000.
1913	82	1·11	109	1·18
1914	113	1·44	136	1·39
1915	106	1·35	169	1·71
1916	99	1·23	160	1·58
1917	100	1·24	118	1·16
1918	117	1·45	139	1·37
1919	90	1·09	75	·72
1920	95	1·16	88	·85
1921	81	1·08	87	·92
1922	75	·98	93	.97

The two following tables give the deaths and death-rates from pulmonary tuberculosis and non-pulmonary tuberculosis respectively arranged in age periods. There is nothing of importance to note except perhaps that the highest death-rate for pulmonary tuberculosis is at a slightly later age-period, viz. :—45-65 years, instead of 25-45 years. This was also the case in 1920.

Deaths from pulmonary tuberculosis in age periods 1922 :—

Age Periods.	No. of Deaths.	Rate per 1,000.
0- 5	0	0
5-15	10	.31
15-25	36	1.10
25-45	64	1.35
45-65	53	1.53
65 and upwards ...	5	.47
Totals ...	168	.98

Deaths from non-pulmonary tuberculosis in age periods, 1922 :—

Age Periods.	No. of Deaths.	Rate per 1,000.
0- 5	26	1.73
5-15	15	.46
15-25	19	.58
25-45	0	0
45-65	6	.17
65 and upwards ...	1	.09
Totals	67	.39

Of the deaths from non-pulmonary tuberculosis these from :—

	M.	F.	Total.
Tuberculosis Meningitis numbered	13	15	28
Abdominal Tuberculosis „	10	8	18
Spinal Tuberculosis „	1	2	3
Joint Tuberculosis „	2	0	2
Other forms of Tuberculosis „	8	8	16
Total	34	33	67

The following table shows the death-rates from tuberculosis in the various wards in the city for last year. As in the case of the tuberculosis attack-rate and the death-rate from all causes, Wards 2, 6, and 8 show high figures, but Wards 4 and 5 also show high rates. The numbers dealt with are, however, very small, and no reliable conclusion can be drawn from them :

Ward.	Pulmonary Tuberculosis	Death-rate per 1000.	Non-Puly. Tuberculosis	Death-rate per 1000.	Total deaths from all forms of Tub.	Death-rate per 1000.
1	8	·54	4	·27	12	·82
2	14	1·12	4	·32	18	1·44
3	15	·95	6	·36	21	1·31
4	17	·87	11	·56	28	1·43
5	27	1·17	8	·34	35	1·51
6	21	1·18	11	·62	32	1·80
7	13	·72	5	·28	18	1·00
8	22	1·16	9	·47	31	1·63
9	19	·92	9	·43	28	1·36
10 and 11	7	·63	0	0	7	·63
No fixed abode.	5	0	0	0	5	0
Total	168	·98	67	·39	235	1·37

Of the 168 deaths from pulmonary tuberculosis, 85 (50.6 per cent.) occurred in institutions. The figures for the years 1913-1922 are as follows:—

	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
Total Deaths from Pulmon. T.B. -	191	249	275	259	218	256	165	183	168	168
No. of Deaths from Pulmon. T.B. in Institutions -	19	24	25	66	64	98	67	93	91	85
Percentage of Total Deaths from Pulmon. T.B. Dying in Institutions .	9.94	9.63	9.09	25.52	29.35	38.28	40.6	50.8	54.1	50·6

The Report of Dr Hunter, the Chief Tuberculosis Medical Officer, will be found on page 87.

Venereal Diseases.

The Public Health (Venereal Diseases) Regulations (Scotland) came into force in the year 1916, and yet in 1923 — seven years later — we have not in Dundee a venereal diseases scheme adequate for a city of its size and importance, and further, I am unable to say that a thoroughly efficient scheme will be in operation in the near future. The Scottish Board of Health adhere to the principle that the treatment of venereal disease should be carried out in a special department of a general hospital. Undoubtedly this principle is a sound one, and for many reasons should be followed when at all possible. The venereal infections are closely linked up with many medical and surgical diseases, and their treatment should, therefore, be carried out in one institution. The benefits result-

ing from this arrangement would not, by any means, be one-sided, but would tend to greater efficiency in every department. One must also note that patients suffering from venereal disease would be much more likely to attend regularly at an institution where all kinds of ailments are treated than at one whose activi ties are limited to the treatment of patients suffering from venereal disease. This is especially so in the case of women patients, and must influence the position in the case of men, but I am inclined to think that the latter will attend an ad hoc treatment centre quite well, provided it is situated in a convenient locality. On the whole, however, the venereal diseases scheme would on this account alone benefit considerably by being associated with a general hospital. Again, an efficient scheme must ultimately work to the advantage of a general hospital, for everyone familiar with the venereal diseases and their effects agrees that many beds in a general hospital are at the present moment occupied by patients suffering from diseases which are really the sequelæ of the venereal infections. An efficient scheme is bound in the long run to reduce the incidence of such sequelæ, and therefore, set free a certain number of beds for other purposes. This aspect of the question must be kept in mind.

The above remarks bear on the general question, and although already well known, they can stand repetition. From time to time, I have reported on possible arrangements for tackling the question in this area, each report being of course based on the circumstances prevailing at the time. Unfortunately these circumstances have frequently altered, making it necessary to modify proposals previously submitted, and at the moment it would appear to be again necessary to review the position.

At the outset, it must be accepted that complete co-operation with the Royal Infirmary is not possible, for the good and sufficient reason that the Directors of that Institution cannot provide us with the necessary accommodation nor can they provide us with ground suitable for the purpose of erecting a venereal diseases centre. The only site which they can even consider is a small area in the north-east corner of the Infirmary grounds. For many reasons concurred in

by everyone concerned, this site is quite unsuitable for the purpose, and the Local Authority would not be justified in incurring the necessary expenditure on the erection of a new building there. The Directors of the Royal Infirmary may, however, be able to assist us to the extent of permitting the female clinic to continue in the present premises. This, I consider, is a matter of great importance. To be a success, a treatment centre for females must be attached to a general hospital, not only for reasons of privacy, but also because of the undoubted advantage of being in close touch with a maternity hospital and gynecological department.

Failing the necessary accommodation for male patients in the Royal Infirmary, one naturally thinks of the Infectious Diseases Hospital, and we have plenty of spare ground at our own Institution for erecting new buildings, but the situation of the Hospital is quite unsuitable for the purpose of a treatment centre. It is too far away from the middle of the town, and a treatment centre established there would be doomed to failure.

In last year's Report I suggested that the new treatment centre for men should be erected on the Constitution Road site, and from the point of view of situation, I do not think we could do better, but in order to test the efficiency of an ad hoc treatment centre before incurring heavy capital expenditure, it is proposed to establish a treatment centre for men at the Reception House in Fleuchar Street. The accommodation in this building is satisfactory, but it is not sufficiently central to be convenient to everyone. The idea is, of course, that the Centre should be established there for a limited period only. A certain expenditure would be necessary for fittings and equipment, and while most of the fittings and equipment could be transferred to another building, the expenditure necessary can only be justified provided the clinic is to remain there for a reasonable period. One advantage of the Reception House is that we would be able to provide indoor accommodation for one or two men patients. The residential treatment of patients in a small institution is perhaps not advisable from the point of view of cost, but there is no other way out of

it. From the medical student's point of view, the Fleuchar Street Treatment Centre will not be very convenient, but on the other hand the improved accommodation will enable a larger number of students to have opportunities of obtaining clinical instruction. Instruction of students in the present centre is exceedingly difficult, as indeed is the proper and efficient treatment of patients, and the sooner we remove from it the better for everyone concerned.

The above recommendations give the general features of a scheme which should be fairly efficient. I cannot claim that it will be as successful as it would be if included among the activities of the Royal Infirmary, but, under present circumstances, it seems to me to be the best possible. The indoor treatment of patients has not been dealt with except in referring to the possibility of housing one or two male patients in the Reception House. This aspect of the question will require to have further careful consideration when the new Centre is established.

Early in the present year Dr A. C. Profeit, the Special Medical Officer, resigned, and the Town Council agreed to advertise for a successor at a salary of £600, the successful candidate to be permitted, during the pleasure of the Town Council to carry on consulting work in venereal disease in a private capacity. In June of the present year, Dr Charles Averill was appointed to the post. He has not yet taken up his duties. Dr Andrewina Laird continues in charge of the female section.

No special propaganda work was undertaken locally during the year, but Dundee representatives took an active part in the work of the Scottish Committee of the National Council for Combating Venereal Diseases.

Attendances at Treatment Centre.—Details regarding the attendances, &c., will be found on page 47, and the following table gives the totals for the years 1918, 1919, 1920, 1921, and 1922—

Number of new cases attending Treatment Centre :—

	1918	1919	1920	1921	1922
Suffering from Syphilis ...	455	637	1,085	877	374
„ Gonorrhœa	78	353	286	332	271
„ other V.D.	—	—	—	445	98
Found not to be suffering from Syphilis or Gonorrhœa	253	447	494	—	253
Total	786	1,437	1,865	1,654	996

Total Attendances of all persons :—

	1918	1919	1920	1921	1922
Suffering from Syphilis	2,181	4,121	14,343	23,437	15,799
„ Gonorrhœa	182	2,343	8,964	10,842	11,084
„ other V.D.	—	—	—	1,178	391
Found not to be suffering from Syphilis or Gonorrhœa ...	412	973	2,580	—	371
Total	2,775	7,437	25,887	35,457	27,645

	1918	1919	1920	1921	1922
Number of doses of salvarsan substitutes administered	810	1,958	6,362	6,222	5,135

The figures for the year 1922 given above are worthy of study. It will be noted that the total number of cases coming to the Treatment Centre for the first time is smaller than for any year except 1918, the year when the scheme came into operation. There was a marked fall in the number of new patients found to be suffering from syphilis, there being only 374 such cases in 1922 compared with 877 in 1921, and 1085 in 1920. The figure for gonorrhœa does not show such a marked reduction, the figure for 1922 being 271 and for 1921, 332. While there was a fall in the number of new cases coming to the Treatment Centre, the attendances during the year are fairly satisfactory, there being a total of 27,645 in 1922, compared with 35,457 in 1921, the reduction being most evident for patients suffering from syphilis. While a fall in the numbers attending venereal diseases centres is the general experience during the last year or two, I do not think the difference is so marked anywhere as it is in Dundee. To some extent it may be due to a very slight diminution in the prevalence of venereal disease, but it is probably due chiefly to the unsuitability of our premises and to changes in the personnel of the Centre.

Salvarsan Substitutes. — Altogether 5,613 doses of salvarsan substitutes were administered during 1922 :—

	Treatment Centre.	Other Institutions.	Medical Practitioners.	Total.
1919 ...	1,958	13	141	2,112
1920 ...	6,362	18	472	6,852
1921 ...	6,280	239	358	6,877
1922 ...	5,135	239	239	5,613

The number of doses applied for by medical practitioners shows a reduction, but the doses supplied to "Other Institutions" remains the same as for 1921.

Laboratory Work.—The pathological work in connection with the scheme was carried out in the usual efficient manner by Professor W. J. Tulloch, Director of the Bacteriological Laboratory, University College. The following examinations were performed by him during the year :—

	Treatment Centre.	Other Institutions.	Medical Practitioners.	Tl.
Wassermann Tests ...	1,564	1,517	492	3,573
Microscopical Examinations	470	69	71	610
Total ...	2,034	1,586	563	4,183

The totals for each of the four years, 1919, 1920, 1921, and 1922 were :—

	1919	1920	1921	1922
Wassermnan Tests	1,301	3,019	4,084	3,573
Microscopical Examinations ...	691	900	870	610
Total ...	1,992	3,919	4,954	4,183

These laboratory figures show a reduction on the year 1921 under all the headings with the exception of the Wassermann tests carried out on behalf of "Other Institutions," which show a slight increase. The fact that the number of specimens sent for examination is smaller from every source suggests that there is a certain limited diminution in the prevalence of venereal disease, but the very marked fall in the numbers applicable to the Treatment Centre cannot be thus explained. The smaller number of new cases attending the Treatment Centre and the smaller number of

total attendances are naturally reflected in the figures relating to the bacteriological examinations. For fuller information on this section of the Venereal Diseases Scheme, reference should be made to page 101, where Professor Tulloch, in his report, gives his views on the work done under his supervision in connection with the scheme.

Deaths from Venereal Disease.—There were 12 deaths certified as due to syphilis. Of these 5 were males and 7 females. Five occurred at ages under one year, and 7 at ages from 35-65 years

Besides these deaths which were certified as due to syphilis, I append a table on lines similar to that contained in my Report for last year, which shows the deaths which may be ascribed to syphilis. This table cannot be considered as too reliable, but I think it may safely be stated that the total number is an under-estimate rather than an over-estimate.

Deaths from diseases probably due to syphilitic virus (Dundee, 1922):—

	Total deaths.	Deaths probably due to syphilis.
Syphilis	12	12
General Paralysis of Insane ...	8	8
Locomotor Ataxy	3	3
Aneurysm	6	6
Premature Birth	85	42
Abortion, Miscarriage	1	0
Congenital Debility, Icterus, Sclerema	92	46
Other Diseases of Spinal Cord ...	20	10
Softening of Brain	—	—
Angina Pectoris	8	4
Cerebral Hæmorrhage	16	8
Apoplexy	3	1
Hemiplegia	5	2
	259	142

The total number of deaths from all causes was 2,793, so that the deaths probably due to syphilis equals 5 per cent. of the total.

As Dr Profeit left the city at the beginning of the present year, there is no report by the Executive Medical Officer, but the main points in regard to the work done at the Centre have been given.

Early in the present year, a special venereal disease clinic was established at the Child Welfare Centre for the treatment of expectant mothers, nursing mothers, and infants and children under five years of age, suffering from venereal disease. This Centre is in charge of the Special Medical Officer, Women's Section, Venereal Diseases Scheme, who holds a consultation on one afternoon each week. It is too early to estimate the value of this new institution, but my next annual report will include observations on the work done there during the year.

MONTH.	New Cases.								Total Attendances.								Injections of Salvarsan Given	
	Syphilis.		Other V.D.		Gonorrhoea.		Not Suffering from V.D.		Syphilis.		Other V.D.		Gonorrhoea.		Not Suffering from V.D.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January ...	16	8	0	0	18	1	10	5	755	411	19	16	942	44	10	5	270	100
February ...	24	14	5	0	19	1	24	22	809	527	57	29	952	24	24	22	311	105
March ...	22	17	5	0	21	4	18	28	967	668	28	0	1059	82	24	47	371	124
April ...	12	8	0	0	20	1	10	13	766	521	0	0	787	58	33	23	266	89
May	18	15	2	0	17	5	20	13	959	722	15	0	825	90	39	25	393	162
June ...	19	31	0	16	16	3	17	0	930	470	0	31	794	90	34	0	364	150
July ...	14	21	3	17	20	1	15	0	697	503	13	28	645	85	21	0	277	102
August ...	18	16	8	0	29	3	12	21	799	746	25	0	809	87	18	33	297	145
September ...	18	8	0	9	17	0	9	0	744	348	0	22	876	76	25	0	302	90
October ...	14	7	3	6	25	3	10	0	628	550	18	13	935	74	21	0	316	62
November ...	16	11	1	4	15	10	6	0	522	459	18	10	703	178	12	0	324	67
December ...	12	15	7	12	19	3	0	0	842	456	20	29	679	190	0	0	348	100
	203	171	34	64	236	35	151	102	9418	6381	213	178	10006	1078	261	155	3839	1296

TOTAL NEW CASES.

	M.	F.	
Syphilis	203	171	
Other V.D.	34	64	
Gonorrhoea	236	35	
Not Suffering from V.D.	151	102	
	624	372	= 996

TOTAL ATTENDANCES.

	M.	F.	
Syphilis	9,418	6,381	
Other V.D.	213	178	
Gonorrhoea	10,006	1,078	
Not Suffering from V.D.	216	155	
	19,853	7,792	= 27,645

Total Doses of Salvarsan—Males, 3,839; Females, 1,296 = 5,135.

The Public Health (Port Administration Infectious Diseases) Regulations (Scotland), 1921.

The work under the above Regulations was carried out on the lines laid down in a special report on the subject, which I submitted to the Council in 1921. As pointed out in my Annual Report for that year, the Council approved generally of the action which I suggested, but decided to postpone for a time the appointment of an additional inspector, and accordingly the duties have been performed by one of the existing staff of the Chief Sanitary Inspector. While the work has been carried out in a very thorough manner, the desirability of having an extra inspector must not be lost sight of, for although the work at the Port is of great importance, so also is the work carried out by the sanitary staff in the other parts of the city, and the withdrawal of one officer for the major portion of his time should not be considered as a permanent arrangement.

The duties relating to the sanitary condition of ships, the existence of infectious disease, verminous conditions, and the presence of rats on board ship were carried out by the Port Sanitary Officer, while the inspection of food landed at the Port was performed by the two Food Inspectors of the Sanitary Department. A complete record of the work carried out by these officials is shown under the appropriate headings in the Report of the Chief Sanitary Inspector which is included in this volume. A perusal of these sections will show that every precaution is being taken to prevent the introduction of infectious disease into Dundee, and that a determined effort is being made to improve the sanitary conditions of ships and thereby to protect the health of the crews. Few passengers are landed in Dundee, and last year none were landed from ships arriving from infected ports. The work in the Port of Dundee is therefore less onerous than would otherwise be the case, but vigilance is not relaxed on that account. The campaign against rats on board ship and in the quays is being carried on by Mr Mitchell in his usual vigorous fashion.

The amount of foodstuffs landed shows a great increase, being 50 per cent. more than for the year

1921, and 100 per cent. above the 1920 figures. All the food was inspected (in bulk), but only a small quantity of sugar and some 15 tons of carrots had to be destroyed. A necessary development in this connection is the breaking of bulk in a certain proportion of the foodstuffs landed. While we are very reluctant to take this step, it appears to me to be essential for efficient inspection.

Hospital Accommodation.

The number of beds in the various Institutions included in or affiliated to the Public Health Department was not altered during 1922, and except, as stated below, proved to be sufficient for our requirements. Reference must, however, be made here to the fact that we have no accommodation for the residential treatment of persons suffering from venereal disease. During the year, the Superintendent of the Royal Infirmary was able to find beds for four patients in urgent need of residential treatment, but as he requires every bed at present at his disposal, arrangements must be made to secure accommodation outwith the Royal Infirmary. As already pointed out, the indoor treatment of one or two male patients may be provided for at the Reception House, if a treatment centre is ultimately established in that building. The whole question will require to be dealt with immediately we have adequate provision for the outdoor treatment of infected persons.

The work done at King's Cross Hospital is described by Dr Alexander, the resident medical officer page 137). Of the 920 patients admitted during the year, 334 were cases of scarlet fever. This figure represents nearly 80 per cent. of the notified cases. Of diphtheria 249 or over 90 per cent. of the cases notified were admitted, while of the 1,255 intimated cases of measles 90 or just over 7 per cent. were treated in hospital. The figure for diphtheria is, in my opinion, satisfactory, but I would like to see a fall in the proportion of scarlet fever cases treated in hospital, and a rise in the percentage admissions of children suffering from measles, especially when that disease has assumed epidemic form. While hospital treatment may do little to prevent the spread of measles, it can do a great deal to prevent the onset of fatal or disabling

complications, especially in debilitated children. The same remarks may be applied to whooping cough. I do not suggest that the hospital treatment of scarlet fever should cease, but that a larger number of cases of this disease might be treated at home when an epidemic of either measles or whooping cough exists. The Scottish Board of Health have now ceased to permit the cost of maintenance of measles and whooping cough in children under 5 years of age to rank for grant under the Child Welfare Scheme. In my opinion local authorities should be encouraged by the Board to provide additional accommodation even to the extent of making their approval of child welfare schemes depend on sufficient provision being made.

The Local Authority have still the use of 15 beds at the Dundee Infant Hospital for cases of malnutrition. This Institution has over 30 beds always occupied by Dundee infants, and the usefulness of this unit of the Child Welfare Scheme cannot be overestimated. We have no provision in our Scheme for the hospital treatment of expectant mothers, but this work is very efficiently carried out at the Maternity Hospital, although no beds are set aside there for our use.

The Smallpox Hospital and the Reception House were not in use during the year.

The two motor ambulances are still giving every satisfaction.

Bacteriological Laboratory.

The bacteriological work of the Department was carried on as usual by Professor W. J. Tulloch in his laboratory at the University College. The figures given below show a reduction of some 700 in the total examinations compared with the previous year, and this reduction is entirely due to a fall in the number of specimens submitted under the Venereal Diseases Scheme, the probable reason having already been given. Medical practitioners continue to take full advantage of the laboratory, and the city is fortunate in having at its disposal the services of such a skilled bacteriologist as Professor Tulloch.

Bacteriological examinations carried out each year since 1919 :—

	1919.	1920.	1921.	1922.
Wassermann	1,301	3,019	4,084	3,573
Microscopical Examinations under V.D. Scheme for—				
Syphilis	47	163	208	125
Gonorrhœa	644	827	662	485
Swabs for Diphtheria	125	429	470	569
Widal Tests for Enteric Fever	185	55	52	65
Sputum Examinations	48	127	280	303
Examination of Fæces for—				
Enteric Fever	163	118	47	24
Dysentry	0	21	4	3
Infantile Diarrhœa ...	0	38	5	5
Special Examinations	0	23	50	14
	2,513	4,820	5,862	5,166

As usual the laboratory has proved extremely useful to this Department in directions other than the diagnosis of disease, and during the present year, this side of the work is being further developed. It is hoped to submit a much larger number of milk samples for bacteriological examination in order to carry out efficiently the provision of the Milk and Dairies (Scotland) Act, 1922.

Professor Tulloch submits his observations on the work performed on behalf of this Department on page 99.

Disinfection.

The disinfection of infected articles and houses was carried out on the lines referred to in my last Annual Report, and during the year the following articles were removed from houses in which infectious diseases occurred, and were disinfected :—

Month.	Beds.	Mattresses.	Rugs.	Blankets.	Sheets.	Wearing Apparel.	Miscellaneous Articles.	Total No. of Articles.	No. of Houses from which clothes were removed.
January ...	4	30	171	240	159	579	388	1,571	109
February ...	4	18	115	192	112	291	321	1,053	69
March ...	6	34	154	266	121	312	328	1,221	80
April ...	4	7	160	148	138	339	360	1,156	72
May ...	1	57	158	434	132	323	374	1,479	80
June ...	1	11	101	109	73	100	154	549	45
July ...	3	15	104	97	95	238	286	838	53
August ...	2	10	139	103	107	292	577	1,230	60
September	240	11	206	509	198	539	544	2,247	76
October ...	7	17	256	287	231	552	806	2,156	127
November	6	25	252	378	178	64	535	2,014	120
December	7	22	305	259	233	589	551	1,966	134
	285	257	2,121	3,022	1,779	4,794	5,224	17,480	1,025

In spite of the fact that there was a decided increase in the total number of cases of infectious disease in 1922, the number of articles disinfected was less by over 1,000 than in the year 1921. This is the result of modification in our scheme of disinfection whereby we no longer perform routine disinfection in such diseases as measles, whooping cough, and certain other infections, but rather encourage cleanliness of house and contents on the part of the householders themselves.

The following figures relating to the articles disinfected and the houses concerned each year since 1917 show the reduction in the volume of the work done :—

	1917.	1918.	1919.	1920.	1921.	1922.
Articles ...	30,691	33,542	26,591	20,917	18,078	17,480
Houses concerned	1,025	891	1,181	1,204	1,103	1,025

In regard to verminous persons and houses, complete co-operation now exists between the Medical Department of the Education Authority and this Department, the Chief Medical Officer forwarding information regarding all children who are repeatedly found to be in a verminous condition. The homes of these children are investigated, and kept under observation, while the parents or guardians of the children are encouraged to keep their houses, bedding, &c., free from vermin. While we are prepared to cleanse a house and contents, and to provide a cleansing bath for the adults, this offer is usually rejected. We do not usually press the matter further, as we think it inadvisable to relieve the people of their responsibility, but prefer to encourage them to carry out the necessary measures themselves.

Malignant Diseases.

The number of deaths from cancer during the year was 272 — 104 males and 168 females. The majority of these deaths were persons over 45 years of age, only 22 occurring at earlier ages.

The deaths from cancer during the last five years were as follows :—

Year.	Males.	Females.	Total.
1918	70	141	211
1919	73	138	211
1920	89	127	216
1921	113	176	289
1922	104	168	272

The death-rate per 10,000 persons above the age of 20, arranged in quinquennia, since the year 1877 were :—

Year.	Males.	Females.	Total.
1877-1881	4.98	9.25	7.27
1882-1886	5.45	11.46	8.77
1887-1891	9.83	13.87	12.24
1892-1896	11.27	15.27	13.65
1897-1901	14.02	18.90	16.92
1902-1906	14.99	19.91	17.84
1907-1911	15.16	16.71	17.24
1912-1916	16.71	23.48	20.57
1917-1921	19.44	24.31	21.67
1922	23.25	26.57	25.19

The accompanying table shows the sex and ages of the fatal cases, as well as parts of the body affected :—

Ages.		Stomach and Oesophagus.	Liver.	Bowel.	Rectum.	Generative Organ.	Breast.	Jaw.	Throat.	Tongue.	Bladder.	Other parts.	Not specified.	Totals.	
Under 20	M.	...	...	..	...	...	...	...	...	...	...	...	...	...	
	F.	...	...	...	...	...	...	...	...	...	...	..	...	...	
20—25	M.	...	1	...	...	...	...	...	...	...	...	...	...	1	1
	F.	...	...	...	...	...	...	...	...	...	..	...	...	...	
25—35	M.	...	1	1	...	...	...	...	...	...	...	...	...	2	3
	F.	...	...	...	...	...	...	...	...	...	...	1	...	1	
35—45	M.	3	...	2	2	...	...	...	...	...	1	...	...	8	19
	F.	2	...	...	2	4	1	...	...	...	...	2	...	11	
45—55	M.	2	1	4	...	...	...	2	2	1	...	1	1	14	54
	F.	9	2	2	1	8	10	..	1	...	...	7	...	40	
55—65	M.	9	2	6	3	...	...	1	1	2	2	4	...	30	73
	F.	8	2	8	2	7	5	1	1	1	1	7	...	43	
65—75	M.	15	2	8	2	...	...	4	1	2	1	5	...	40	89
	F.	16	3	10	4	6	5	...	...	...	3	2	...	49	
75 and up'ds.	M.	3	1	1	...	...	...	...	...	1	..	1	2	9	33
	F.	5	3	6	1	2	4	1	...	...	1	1	...	24	
Total ...		72	18	48	17	27	25	9	6	7	9	31	3		272

Maternal and Child Welfare.

BIRTHS.—There were 4,288 births registered in Dundee during the year. Corrected for transfers the number of births was 4,227 (2,162 males and 2,065 females), which represents a birth-rate of 24.6 per

1,000 of the population. The excess of births over deaths (natural increase of the population) was 1,434. The corresponding figure for 1921 was 1,884.

The following table shows the birth-rate per 1,000 population, the illegitimate-rate per 100 births, and the marriage-rate per 1,000 population each year since 1913 :—

Year.	Birth-rate.	Illegitimate-rate.	Marriage-rate.
1913	24.6	9.8	7.7
1914	25.2	9.1	8.3
1915	22.1	8.0	9.5
1916	20.5	8.0	7.1
1917	15.6	11.2	7.0
1918	16.0	10.6	7.5
1919	18.7	11.1	10.6
1920	27.4	8.5	11.4
1921	26.5	7.7	10.0
1922	24.6	7.0	8.8

The number of illegitimate infants born during the year was 296, equal to 7.0 per cent. of the total births.

Under the Notification of Births Act, 4,102 births were notified. Of these 171 were stillbirths, so that of the 4,288 registered live births, 3,931, or 91.6 per cent., were notified under the above Act. In 1921 92.6 per cent. of the registered births were notified.

Of the 4,102 notifications :—

647	were received from	doctors.
1,928	„	midwives.
1,068	„	Maternity Wards, Royal Infirmary.
7	„	Eastern Poorhouse Hospital.
305	„	parents.
2	„	handywomen.
145	„	other sources.
4,102		

The number of stillbirths notified was 171 equal to 38.3 per 1,000 births (4,288 registered births plus 171 notified stillbirths).

Vaccination.—Of the 4,374 children born between 1st July, 1921, and 30th June, 1922, for whom

certificates of successful vaccination should have been lodged in 1922, 383 died before reaching the age of 6 months, certificates of conscieutious objections to the operation were lodged in 2,651 cases, and in 224 cases no returns of successful vaccination were made to the Registrar.

This means that only 25.5 per cent. of the infants who reached the age of 6 months were successfully vaccinated.

MARRIAGES.—There were 1,506 marriages celebrated in Dundee during 1922, representing a marriage-rate of 8.8 per 1,000 population. The corresponding rates for the last 10 years are shown in the table on the previous page.

DEATHS OF WOMEN FROM DISEASES AND ACCIDENTS CONNECTED WITH PREGNANCY AND CHILD-BIRTH.—There were 36 deaths of women under this heading, representing a rate of 8.07 per 1,000 births (4,288 registered births plus 171 notified stillbirths). The figures for the years 1914-1922 are:—

1914	1915	1916	1917	1918	1919	1920	1921	1922
5·78	6·36	6·71	3·87	6·20	5·40	6·71	5·27	8·07

The high rate for the year 1922 was entirely due to an unusual number of deaths from puerperal sepsis, there being 22 deaths from this cause compared with 9 for each of the years 1920 and 1921.

INFANT DEATHS.—460 infants died during the first year of life, and calculated on the number of births during the year, the infantile death-rate was 109 per 1,000 births. The infantile mortality rate among illegitimate children was 152, there being 296 illegitimate births with 45 deaths. The death-rate among legitimate infants was 104.

The following table gives the certified cause of death at various ages under 1 year :—

RETURN OF INFANT MORTALITY FOR YEAR ENDING 31ST DECEMBER, 1922 :—

CAUSE OF DEATH.	Under one week.	1 and under 2 weeks.	2 and under 3 weeks.	3 and under 4 weeks.	Total under 4 weeks.	4 weeks and under 3 mths	3and unde 6 months.	6 and under 9 months.	9 and under 12 months.	Total deaths under 1 year.
Smallpox	...	...	...	...	...	...	...	...	...	...
Chickenpox	...	...	...	...	...	...	...	1	...	1
Measles	...	...	...	...	...	...	1	2	8	11
Scarlet Fever	...	...	...	...	...	...	...	...	...	...
Whooping-Cough	...	1	...	1	2	1	1	1	4	9
Diphtheria and Croup	...	...	...	...	...	...	...	1	...	1
Erysipelas	...	...	1	...	1	1	...	...	...	2
Tuberculous Meningitis	...	...	...	...	...	...	3	...	1	4
Abdominal Tuberculosis	...	1	...	...	1	...	1	1	1	4
Other Tuber. Diseases	...	...	...	...	...	...	...	...	...	...
Meningitis (not T.B.)	...	...	...	..	...	1	1	3	3	8
Convulsions	3	1	2		6	2	1	1	1	11
Pneumonia (all forms)	1	1	1	2	5	11	18	15	21	70
Bronchitis	...	2	3	3	8	15	5	6	10	44
Laryngitis	...	...	...	...	...	...	...	...	...	...
Diarrhoea and Entritis	1	1	..	...	2	10	10	8	5	35
Other Digestive Diseases	...	...	...	...	...	...	5	4	1	10
Congenital Malforimations	6	3	1	1	11	2	...	...	...	13
Premature Births	54	12	8	3	77	4	...	...	...	81
Athrophy, Debility, and Marasmus	34	13	8	7	62	25	14	3	1	105
Atelectasis	...	1	...	...	1	...	...	...	...	1
Injury at Birth	5	...	...	...	5	...	...	1	...	6
Suffocation, overlying	5	...	3	1	9	4	3	...	...	16
Syphliis	...	..	...	...	...	1	...	1	...	2
Rickets	...	...	...	...	...	...	...	...	...	...
All other causes	1	2	...	1	4	6	6	5	4	25
Total	110	38	27	19	194	83	69	53	60	459

The above table is prepared from the weekly returns of deaths received from the registrars and shows slight difference from the annual return of the Registrar-General. The latter show 460 deaths under 1 year.

Of the total deaths of infants 110 or 24 per cent. occurred among infants under 1 week, and 194 or 42.04 per cent. among infants under four weeks. The deaths at the four three-monthly age periods were as follows :—

	Under 3 mths.	3-6 mths.	6-9 mths.	9-12 mths
No. of deaths	277	69	53	60
Percentage of total under 1 year	60.35	15.03	11.55	13.07

As is always the case, more than half of the deaths during the first year of life occurred at ages under three months

The following table shows the infantile death-rate each year since 1890 :—

1890	208	1901	180	1912	159
1891	181	1902	143	1913	162
1892	146	1903	142	1914	136
1893	217	1904	174	1915	209
1894	163	1905	133	1916	126
1895	176	1906	170	1917	137
1896	159	1907	148	1918	126
1897	194	1908	149	1919	126
1898	181	1909	144	1920	131
1899	169	1910	168	1921	114
1900	177	1911	154	1922	109

The figure for 1922 is the lowest on record, the next lowest figure, viz. :—114 occurring in 1921.

The principal causes of death were congenital conditions (atrophy, debility, marasmus, premature birth, congenital malformations, syphilis, injury at birth) 212; digestive diseases (including infantile diarrhœa) 49; respiratory diseases, 113, and infectious diseases (including tuberculosis) 40. Of the 110 deaths which occurred during the first week of life, 99 were due to congenital causes.

The infantile death-rates from the various groups of diseases each year from 1913-1922 were as follows :—

Diseases.	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
Congenital -	62	58	64	63	57	53	60	53	58	50
Digestive -	40	33	38	20	24	16	13	21	16	11
Respiratory -	28	15	38	15	24	24	30	36	19	27
Infec. Diseases	12	17	51	13	13	20	8	10	13	10
All other causes	20	13	18	15	19	13	15	11	8	11
Total -	162	136	209	126	137	126	126	131	114	109

It is satisfactory to note that the infantile death-rate for last year was the lowest recorded. The fall is due chiefly to a reduction in the number of deaths from infantile diarrhœa, measles, and whooping cough, and also to a fall in the death-rate under the congenital group of diseases. The death-rate from respiratory causes shows an increase from 19 per 1,000 to 27 per 1,000, infants at this age period having shared in the outbreak of pneumonia and bronchitis which occurred in the early part of the year.

Birth-rate per 1,000 population, and infantile mortality rate per 1,000 births in the various wards in the city :—

Ward.	Population.	Number of Births.	Birth-rate per 1000.	Deaths under 1 year.	Infantile Mortality per 1000 Births
1	14,604	397	27.2	32	81
2	12,415	306	24.6	31	101
3	16,582	409	24.6	56	136
4	19,449	438	22.5	53	121
5	23,036	486	21.1	53	109
6	17,666	487	27.5	56	115
7	17,909	441	24.6	44	99
8	18,906	536	28.3	67	125
9	20,519	516	25.1	51	98
10 & 11	10,975	211	19.2	16	76
	172,061	4,227	24.6	459	109

Child Deaths.—At ages over 1 year and under 5 years, there were 192 deaths compared with 151 in 1921. Of these 85 were due to infectious diseases (measles, 30; scarlet fever, 4; whooping cough, 9; diphtheria, 19; tuberculosis, 18; 68 to the respiratory diseases and 12 to digestive diseases.

Maternity and Child Welfare Scheme.—Dr Margaret Scott Dickson deals very fully in her Report (page 107) with the work done in her Department last year. The circumstances existing in an industrial city like Dundee make it necessary to have a very complete and very efficient Child Welfare Scheme in charge of an enthusiastic staff, and we have nothing to complain of in this direction. The Dundee scheme is very complete in the way of institutions, and Dr Dickson and her staff of medical officers, health visitors, and nurses, are keenly alive to the peculiar needs of the city, and carry out their work with an enthusiasm which is bound to have good results, notwithstanding the many difficulties which have to be overcome.

Broadly speaking, the object of the Child Welfare Scheme is to reduce disability and death among expectant and nursing mothers, and also among infants and children under school age. This object cannot be achieved by means of a child welfare scheme alone, and indeed the success of such a scheme depends not only on the efficiency of its own organisation, but on the completeness and efficiency of the measures adopted

to deal with the infectious diseases including tuberculosis and the venereal infections, and also on the efficiency of the measures directed towards the improvement of the environment of the people, especially the improvement in that multitude of conditions included under the comprehensive term, housing. All these factors bear on the problem of child welfare, they are all intimately related to infant mortality, and that the infant death-rate in Dundee is steadily declining is due to the fact that all these factors are dealt with in a thoroughly vigorous fashion in order to preserve the health of everyone while the Child Welfare Scheme takes special action along the lines of routine inspection, early treatment and education to protect the health of that section of the population with which it is specially concerned.

The fall in the infantile mortality in Dundee cannot therefore be said to be entirely due to the activities of its organised child welfare movement, yet the evidence available suggests that it has played a very considerable part. A reference to the table on page 57 giving the infantile death-rates in Dundee since the year 1890 shows that the rate has been much more stable since 1916, the year in which a child welfare scheme was established by the Local Authority. The decline in this death-rate has been more marked since that year than for any corresponding period, and one is therefore entitled to assume that there is a certain relationship between this decline and the special measures adopted for the preservation of the health of infants.

One cannot view with the same satisfaction the figures relating to the death-rate among women from diseases and accidents connected with pregnancy and child-birth Last year this rate was very high, and a study of the figures for the last few years reveals no tendency towards improvement. Last year the high rate was due to an unusual number of deaths from puerperal sepsis. These deaths are considered more fully in another part of this report, but the matter is sufficiently serious to demand special attention.

While the infantile death-rate is showing a steady fall, we must still be prepared for fluctuation from

time to time due to an unusual prevalence of epidemic diseases such as measles, whooping cough, and summer diarrhœa. The last-mentioned disease can be controlled by vigorous measures in the direction of a purer milk supply and improved methods of infant feeding and in time, as these measures become effective the disease should disappear. The same cannot yet be said of measles and whooping cough, which both take a heavy toll of infant lives during epidemic times, and once begun, we can do very little to limit an outbreak. A higher proportion of cases of these diseases should be given hospital treatment in order to prevent the onset of serious complications.

The most important development in the actual organisation of the Child Welfare Department was the opening in May last of the new central child welfare centre at the corner of Nelson Street and Victoria Road. This centre, so generously gifted by Mr F. B. Sharp, takes the place of the old premises at 23 Victoria Road, which were quite inadequate for the work. While the whole building is not yet at our disposal, the accommodation available meantime is fairly satisfactory, and the staff are able to carry on their work much more smoothly under the improved conditions. Of the five branch centres, I need only refer to the one situated in Blackness Road. This centre is not suitable for the purpose, and other accommodation must be secured at an early date. The premises are too small, they are badly lighted and badly ventilated, and in every way make unsatisfactory surroundings for susceptible individuals in search of health and strength. New premises are being looked for, and I hope to be able to submit definite proposals on this matter to the Council at an early date.

The ordinary attendances at the various clinics during the year numbered 16,086, while the attendances made for the purpose of obtaining free food and milk were 16,420, a total of 32,514. The corresponding figures for 1921 were 17,629 and 8,300, a total of 25,929. Last year therefore over 50% of the visits were paid for the purpose of obtaining free food and milk. These figures are analysed by Dr Dickson on page 111. In my Report for 1921, I referred to the overlapping which must have occurred as the result of

too many authorities being concerned with the distribution of relief. Following on a conference of local authorities held in Glasgow, a small committee was recently formed in Dundee consisting of three representatives, one from each of the three authorities chiefly concerned, namely, the Town Council, the Parish Council, and the Education Authority, to consider co-operation when necessary. The value of the two Nursing Mothers' Restaurants attached to this Department is doubtful. It would probably cost less to make arrangements with private restaurants, and in many cases this would be much more convenient for the nursing mother. The matter is being investigated, and proposals may be submitted to the Public Health Committee at an early date.

The Infant Hospital carried on its invaluable work on the usual lines. During the severe outbreak of measles which prevailed during the past winter, one would not have been surprised had the disease invaded this Institution. That the Hospital succeeded in remaining free from infection testifies to the efficiency of the preventive measures adopted by the officials concerned. The following is the report of the Resident Medical Officer :—

In Hospital, 1st January, 1922 ...		31
Admitted		152
		183
Discharged :—		
Relieved	105	
Unrelieved	3	
Taken home by parents ...	14	
Sent to Royal Infirmary ...	1	
Sent to King's Cross Hospital	1	
	—	124
		59
Died—		
Marasmus	11	
Broncho-Pneumonia	4	
Bronchitis	2	
Enteritis	2	
Acute Acidosis	2	
Hydrocephalus	1	
Laryngismus Stridulous ...	1	
Syphilitic Meningitis	1	
Congenital Syphilis	1	
	—	25
In Hospital, 31st December, 1922		34

The cases treated were :—

Marasmus	74	Congenital Heart ...	1
Congenital Syphilis ...	12	Simple Primary Anæmia	1
Syphilitic Meningitis	1	Laryngismus Stridulous	1
Bronchitis	12	Congenital Laryngeal Stridor	1
Broncho-Pneumonia	8	Seborrhæic Dermatitis	1
Lobar Pneumonia ...	1	Impetigo	1
Enteritis	8	Blepharitis	1
Gastro-Enteritis ...	4	Unstilical Suppuration	1
Constipation	1	Tuberculous Abscess...	1
Acidosis	3	Prematurity	1
Rickets	7	Cleft Palate	2
Debility	3		149
Neglect	1		
Hydrocephalus ...	1		
Microcephaly ...	1		

Highest daily number	... ...	35
Lowest daily number	... ...	28
Average daily number	... ...	32.72

MIDWIVES (SCOTLAND) ACT, 1915.—The following is a list of midwives who, during January, 1923, intimated their intention to practice midwifery in the City of Dundee :—

Reg No.	NAME AND ADDRESS.
1182	Miss Jean Arnott, 36 Dundonald Street.
2863	Mrs Isabella Anderson, 4 Ferguson Street.
3057	Mrs Clementina Angus, 96 King Street, Broughty Ferry.
4950	Mrs Jessie Bowman, 58 Victoria Road.
3373	Mrs Ann Cartmill, 61 Hill Street.
2611	Mrs Mary Cascy, 78 Peddie Street.
400	Miss Alexandrina Clark, 287 Hilltown.
537	Mrs Margaret Cunningham, 249 Hilltown.
4423	Mrs Rachel H. Dobson, 84 Logie Street.
395	Mrs Annie Forbes, 175 Hawkhill.
3561	Mrs Jessie Howe, 143 Victoria Road.
755	Mrs Ellen King, 4 Miller's Wynd.
410	Mrs Helen M'Donald, 31 Brook Street.
3122	Mrs Jane Masson, 3 Tayview Buildings, Broughty Ferry.
5186	Mrs Helen M'Pherson, 2 Elizabeth Street.
733	Mrs Ann C. Ramsay, 4 Ogilvie's Road.
1850	Mrs Isabella Scott, 2 Church Street, Broughty Ferry.
4688	Miss Flora Thomas, Salvation Army Hostel, 93 Magdalen Green.
2279	Mrs Elizabeth Wallace, 1 Macaulay Street.
411	Mrs Elizabeth Webster, 48 Blackscroft.

During 1922, 24 midwives notified the Local Supervising Authority of their intention to practise midwifery in Dundee. Twenty-two of these sent intimations in January, and the other 2 started practice in the city later on in the year, one in the Lochee district, and the other in the north-central district.

I pointed out in my report for last year that the Lochee district of the town was without a resident midwife, although it was well served by the Maternity Department of the Dundee Royal Infirmary. It is, however, satisfactory to know that a well-qualified midwife has again commenced practice in this area.

During January of the present year 20 midwives notified their intention to practice in the city. One of these is attached to an institution in Dundee, and does no district work, so that the number of effective midwives is 19. Four names have disappeared from the list, 2 from the east end of the town, and 2 from the west. Of these four, 1 died, 1 left the city, 1 gave up practice, and in 1 case the name was removed from the Midwives' Roll by the Central Midwives' Board.

While the number of midwives is smaller than usual, the distribution in the city is satisfactory, there being 6 in the central and north side of the city, 5 in the east side, 6—of whom 5 are effective—in the west, while Broughty Ferry has 3, being therefore, in proportion to population, the best served district in the city.

Section 1, sub-section 2, of the Midwives (Scotland) Act, 1915, came into operation on 1st January of the year under review, and although the sub-section as worded is of doubtful value, it is satisfactory to record that while during 1921 15 women in child-birth were attended by handywomen, in 1922, 7 were so attended. Four of these were emergencies, but the Inspector had to reprimand the others. I had taken steps at the beginning of the year to draw the attention of all known handywomen to the sub-section, and it is hoped that this notice was effective. It appears to me, however, that it would be very difficult to obtain a conviction under the sub-section as it stands, unless one could prove repeated offences.

In carrying out her duties under the Act, the Inspector found it necessary to reprimand 7 midwives (the details are given in the Inspector's report); the figure for 1921 was 17, and for 1920 32. If these figures can be used as an indication of the improvement in the standard of midwifery in this city; then undoubtedly there is marked progress, and I am indeed quite satisfied that there is some improvement. One of the midwives reprimanded was ultimately reported to the Central Midwives Board, who, after enquiry, removed her name from the Roll. This midwife had been proved to neglect her duty to her patients, and also to the Local Supervising Authority, and her removal from practice may be considered as a matter for satisfaction.

The Local Branch of the Scottish Midwives' Association is still very active in its endeavour to promote the standard of midwifery among midwives in this area, and lectures on subjects connected with the work were delivered from time to time during the year. The President of the Dundee Branch is the Medical Officer in charge of the Ante-natal Clinic, and in her recent lectures to the midwives she has dealt particularly with ante-natal hygiene.

During the year 1922 information was obtained of 4,438 births (including still-borns) occurring in Dundee, and these were attended as follows:—Doctors, 1,396; midwives, 1,941; Maternity Hospital, 1,086; handywomen, 7; Eastern Poorhouse, 8; so that midwives attended 43.7 per cent. of the total births.

The panel of doctors for the purposes of Section 22 of the Act now consists of 27 names compared with 28 at the end of last year. While the number remains about the same, there have been one or two changes in the personnel. It may be assumed that midwives have no difficulty in obtaining the services of a doctor as no complaints on this account have reached me during the year. The Local Supervising Authority paid £120 14s 6d in fees to 15 doctors, involving 138 cases. Of this amount £15 9s 6d was recovered from the patients or relatives. The amount paid to medical practitioners under this heading is almost double that for the year

1921. The increase may be the result of unemployment, and it may also be due to the possibility that medical practitioners find it easier to recover the money from the Local Authority without attempting to obtain the fees from the patients. Towards the end of the year I drew the attention of medical practitioners on the list to the advisability of their obtaining fees from the patients directly, when they are able to pay.

Puerperal Sepsis.—Unfortunately I have to report a marked increase in the number of cases of puerperal sepsis. During 1921 the Department dealt with 16 cases, but during 1922, 33 came under our notice. The following are the yearly figures since 1919 :—

	Cases.	Deaths.
1919	6	6
1920	14	9
1921	16	9
1922	33	22

These figures are exceedingly unsatisfactory, and demand very close examination. Of the 33 women who suffered from this disease last year, 4 were confined in areas outwith Dundee, and were removed to the Royal Infirmary here for treatment. All four cases died. In Dundee there actually occurred 29 cases with 18 deaths. The ages of the 29 cases were :—

Age.	No. of Cases.
15-20 years	3
20-25 „	9
25-30 „	7
30-35 „	3
35-40 „	6
40-45 „	1
	29

The confinements in 27 cases were conducted in private houses, and in 2 cases in the Maternity Wards of the Royal Infirmary.

11 cases were primipara, and 18 were multipara.

The confinements in these cases were attended as follows:—

Doctors - - -	5	in 1396	confinements	or 1 in 279	—2 deaths
Midwives - - -	20	in 1941	,,	or 1 in 97	—12 ,,
Maternity Hospital—					
In-patient - -	2	in 1086	,,	or 1 in 362	—3 ,,
Out-patient - -	1				
Handywomen - -	1	in 7	,,		1 ,,
	29				18 deaths

In the year 1921 there was one case of puerperal sepsis in 284 confinements in the practice of doctors; 1 in 266 in the practice of midwives, and 1 in 402 in the practice of the Maternity Hospital, so that comparing the two years, the proportion of cases of puerperal fever occurring in the practice of doctors and also in the practice of the Maternity Hospital is substantially the same; on the other hand there was a very marked increase in the proportion of cases occurring in the practice of midwives last year compared to the previous year, the figures being 1 in 97 confinements for 1922, and 1 in 266 for 1921.

The 20 cases were distributed among 9 midwives as follows:—

A.	4 in 217	confinements	or 1 in 54	
B.	2 in 53	,,	or 1 in 25	(off list in June),
C.	3 in 153	,,	or 1 in 51	
D.	1 in 22	,,		(off list in March)
F.	3 in 160	,,	or 1 in 53	
E	1 in 148	,,		
G.	1 in 102	,,		(off list in October)
H	1 in 140	,,		
K	4 in 240	,,	or 1 in 60	

In two of the cases (one death) doctors were called in by midwives because of delayed labour, and in each case, instruments had to be employed to deliver the child. These cannot properly be included among midwives' cases, so that the proportion becomes 1 in 108 confinements instead of 1 in 97.

On two occasions the child was born before the arrival of the midwife, but in one of these, the midwife delivered the placenta.

The four cases occurring in the practice of midwife K. developed within 9 days. The intervals between the confinements were as follows:—1 day between the first and second, 5 days between the second and the other two which occurred on the same day, while the intervals between the times of onset of the puerperal sepsis were very short, being one day between the first and second, 5 days between the second and third, and 2 days between the third and last case. The symptoms of infection appeared on the day of confinement in 3 cases, and 2 days later in the other case. From the inquiry which took place, it seems clear that the midwife was suffering from a mild unrecognised attack of erysipelas.

In regard to the remaining 12 cases, various factors may have operated. In 2 cases there is a definite history of ruptured perineum; 1 patient had a history of old septic uterine trouble, and 1 a septic focus in the leg, while another is reported to have suffered from heart trouble. In 2 cases subsequent enquiry elicited the infomation that the doctors in attendance were of opinion that the patients were really suffering from influenza. In 1 case the confinement appears to have been conducted at the patient's home where there was no satisfactory provision for nursing. The remaining 4 were evidently cases of normal confinement, and there is no information regarding possible sources of infection.

The time elapsing between the occurrence of the signs of puerperal sepsis and the calling in of a doctor was usually very short—in the majority of cases the doctor being sent for on the same day, and in others the following day. In a few cases, however, there was some delay extending up to three days in one case and four days in other two.

There appears to have been no difficulty in providing hospital treatment for the cases of puerperal sepsis which occurred during the year, and of the 31 patients who were confined in their own homes, 24 were subsequently removed to the Maternity Hospital.

Ophthalmia Neonatorum.—The staff of the Child Welfare Department visited 144 cases of ophthalmia neonatorum during the year. These cases were brought to the attention of the Department by doctors, &c., as set forth by Dr Dickson in her Report. The figure for 1921 was 193, and for 1920, 265.

Of the 144 cases, 12 were reported to be severe, and probably gonorrhœal in origin. Of these 7 were midwives' cases, 2 doctors' cases, and in the remaining 3 the confinements were attended from the Maternity Hospital. In one case permanent damage was done to both eyes. The child has since died of malnutrition.

Three cases were treated in King's Cross Hospital, and 1 in the Eastern Poorhouse Hospital.

The health visitors of the Child Welfare Department paid 1,104 visits to cases of ophthalmia neonatorum in order to treat the infection, or to see that appropriate treatment was being carried out.

Deaths of Women in connection with Child Birth and Pregnancy.—The following table gives the certified causes of deaths of women from diseases and accidents connected with child-birth for the three years 1920, 1921, and 1922. (From the Long List of the Registrar-General):—

	1920.	1921.	1922.
Abortion, Miscarriage	4	0	1
Uncontrolled vomiting	0	0	0
Ectopic gestation	1	0	0
Other diseases and accidents of pregnancy	1	1	2
Puerperal hæmorrhage	0	3	5
Other accidents to parturition	5	2	0
Puerperal sepsis	9	9	22
Phlegmasia albadolins, Embolism ...	1	1	1
Albuminuria of pregnancy, Eclampsia ...	11	6	3
Other diseases of puerperium	4	3	1
Puerperal dieases of breast	0	0	1
	36	25	36

Therefore, 36 deaths occurred in 4,438 confinements (4,267 live births as intimated by registrars and 171 notified still-births) or 8.1 per 1,000.

Total No. of Births during 1922.	Total No. of Deaths of New-Born Children (within 10 days) during 1922.	Actual No. of Births Attended by Midwives during 1922.	Actual No. of Deaths of New-Born Children (within 10 days) occurring in the Practices of Midwives during 1922.	Actual No. of Cases not Attended by a Doctor or Midwife during 1922.	
				Births.	Deaths.
4227 (corrected for transfers)	125	1941	40	7	0

Cases of Ophthalmia Neonatorum.

Total No. of Cases during 1922.	Actual No. of Cases occurring in the Practice of Midwives during 1922.	Actual No. of Cases occurring where Confinement not attended by a Doctor or midwife during 1922.
144	19	0

Cases of Puerperal Sepsis.

Total No. of Cases during 1922.	Total No. of Deaths during 1922.	Actual No. of Cases occurring in the Practice of Midwives during 1922.	Actual No. of Deaths occurring in the Practice of Midwives during 1922.	Actual No. of Cases occurring where Confinement not attended by a Doctor or Midwife during 1922.	
				Cases.	Deaths.
33	22	20	12	1	1

Cases of Still-Birth (Dead-Born).

Total No. of Cases during 1922.	Actual No. of Cases occurring in the Practice of Midwives during 1922.
171	55

ANNUAL REPORT ON MIDWIVES (SCOTLAND) ACT, 1915, by Dr Dickson, Inspector of Midwives, for the year, 1922.

In January, 1922, 22 midwives gave notice of their intention to practice midwifery in Dundee, but during that period—

1 midwife left the town.
1 midwife died.
1 midwife's name was removed from the Central Midwives' Board Roll.
1 midwife took up practice in the north end of the town during August, 1922.
1 midwife who formerly pursued the practice of midwifery in the Lochee district notified her intention to resume midwifery work in the same district in September, 1922.

which leaves on the local roll of midwives at the end of December, 1922, 21 midwives in practice.

These midwives attended a total of 1,941 births, which equals 43.73 per cent. of the total births (including stillbirths, occurring in the city during the year.

The extent of the practice of the individual midwife varies, 1 midwife having attended 240 cases, while another only attended 4 cases during the year. The average to each midwife in practice is 81 cases.

93 visits were paid by the inspector of midwives and her assistant to midwives' homes, and 17 visits were paid to cases attended by midwives.

3 handywomen were visited and reprimanded for taking cases without a doctor.

3 lectures were given to midwives on special subjects connected with their work.

426 Notifications have been received from midwives, as follows:—

(a)	Application for medical assistance (mother 251; infant, 82)	333
(b)	Notification of death (infant)	16
(c)	Stillbirths	55
(d)	Laying out a dead body	1
(e)	Liability to be a source of infection	18
(f)	Notification of Artificial Feeding	3

Details of complications necessitating medical assistance :—

ANTE-NATAL (42 cases).		Excessive after pain	1
Persistent pain ...	1	Pain in side	2
Abortion	18	„ leg	1
Threatened abortion ...	4	„ abdomen ...	4
False Pain	3	Phlebitis	2
Hæmorrhage ...	2	Swelling on leg ...	1
Excessive vomiting ...	1	Mastitis	3
Breathlessness ...	1	Rash	1
Swelling of feet, legs, genitals ...	1	Pleurisy	1
Pain in left side ...	2	Fainting attacks ...	1
„ breast ...	1	Diarrhœa	1
„ abdomen ...	1	Cough—breathlessness	1
Unclassified ...	7	Catarrhal cold ...	1
LABOUR (163 cases).		INFANT (82 cases).	
Ruptured perineum ...	52	Feeble and premature infant	28
Prolonged labour ...	46	Discharging eyes ...	22
Abnormal presentation	19	Icterus neonatorum ...	8
Contracted pelvis ...	10	Imperforate anus ...	4
Stillbirth	10	Cyanosis	4
Adherent membrane of placenta ...	6	Inabiilty to suckle ...	2
Ante-partum hæmorrhage	6	Sudden death ...	2
Eclampsia	3	Hæmorrhage from penis	2
Prolapse of cord ...	2	Intestinal pain ...	1
Uterine inertia ...	5	Abscess — right breast	1
Persistent occipite posterior	1	Discharging umbilicus	1
Excessive sickness ...	1	Rash	1
Collapse	2	Spina bifida	1
POST-NATAL (46 cases).		Congenital malformations (arm) ...	1
High temperature ...	26	Swelling on head ...	1
		Unclassified	3

7 midwives were reprimanded during 1922 for the following offences against the C.M.B. rules :—

1 midwife continued to treat a septic case and attend her other cases at the same time.

1 midwife failed to send for medical aid in a case of stillbirth.

1 midwife failed to send for medical aid for discharging eyes.

1 midwife failed to send for medical aid in two cases of high temperature, and in one of these cases, neglected to visit on request another midwife to visit on the 3rd and 4th day of puerperium.

1 midwife failed to report herself to the Local Supervising Authority as a source of infection, so that adequate means could be taken for disinfection. Midwife reported to C.M.B., and suspended for 24 hours.

1 midwife (a) failed to send for medical aid in a case of abortion; (b) repeatedly sent in her medical aid forms without stating the reason for requiring assistance, and omitting to state the hour of sending.

1 midwife (a) failed to send for medical aid on the second day when patient complained of abdominal pain and had a high temperature; (b) omitted to notify discharging eyes; (c) bag and contents found in a very soiled condition (scissors covered with blood-stains) at visit of Assistant Inspector of Midwives; (d) failed to send for medical aid in case of stillbirth; (e) failed to report herself to the Local Supervising Authority that she was attending a case of puerperal sepsis (Doctor called in for high temperature notified case), and continued to attend her cases and confined one woman.

This midwife was reported to the Central Midwives' Board, and, after enquiry, her name was removed from the Roll. Cert. No. 418. Mrs Jane Egan, 26 Isles Lane.

During the last three months of 1922, an enquiry was made int othe circumstances of all deaths of women occurring within one month of childbirth. 20 cases were notified. Of these:—

8 were midwives' cases.
11 were doctors' cases.
1 was Maternity Hospital case.

The classification of the cases was as follows:—

(a) Cause of death not connected with parturition—3 cases.

1. Multiple neuritis.
2. Septicæmia from cellulitis of arm.
3. Peritonitis (unknown origin) not from pelvic organs.

(b) Cause of death indirectly connected with parturition—2 cases.

1. Cerebral embolism.
2. Mammary abscess and septic meningitis.

(c) Deaths due to emergencies of parturition—4 cases.

1. Placenta praevia (2 cases).
2. Accidental hæmorrhage and secondary collapse.
3. Puerperal hæmorrhage (possibly accidental) woman moribund.

(d) Deaths from Puerperal Sepsis—11 cases.

1 was a midwife's case.
1 was a Maternity Hospital in-patient (case complicated by adherent placenta).
1 was a case of macerated premature foetus born before arrival of the midwife.

1 was delivered by a handywoman, the doctor engaged not being summoned in time.

1 case was a breech presentation delivered by a doctor.

2 cases were delivered by the same doctor within 7 days.

4 cases were delivered by the same midwife within one week.

The suspected source of infection in these four cases was traced to a possible focus of erysipelas of the midwife's own face following dental extraction which had been so slight as not to be considered by her any definite lesion. Swabs from mouth and throat revealed suggestively large numbers of streptococci. The midwife was suspended for ten days and placed under suitable treatment, and no further trouble occurred. The circumstances were reported to the Central Midwives' Board.

PUERPERAL SEPSIS.—33 cases of puerperal sepsis occurred in 1922, of which :—

22 died.

11 recovered.

20 of these cases were attended by midwives, of which :—

12 died.

8 recovered.

3 cases were attended by the Maternity Hospital :—

3 died (2 in-patients; 1 out-patient).

4 cases were attended by doctors :—

2 died.

2 recovered.

1 case was attended by a handywoman :—

1 died.

4 cases were admitted to Dundee Royal Infirmary from rural districts and notified to the Public Health Department as puerperal sepsis. All cases were attended by doctors.

4 died.

1 case attended by doctor and midwife :—

1 recovered.

STILLBIRTHS.—171 stillbirths were notified during 1922.

55 of these occurred in the practice of midwives.

Of the 55 stillbirths notified by midwives:—

29 were full-time pregnancies.
26 were premature.

Of the 29 full-time stillbirths:—

9 were macerated foetuses.
13 complications at labour.
7 unclassified.

Of the 26 premature stillbirths:—

17 were macerated.
3 complications at labour.
6 not classified.

OPHTHALMIA NEONATORUM.—144 notifications of ophthalmia neonatorum were received during the year, as under:—

12 from doctors (2 midwives' cases; 2 Maternity Hospital in-patient; 1 Maternity Hospital out-patient).
19 from midwives.
100 from Maternity Wards, Royal Infirmary.
4 from doctor and midwife (all midwives' cases).
8 from Child Welfare Department (3 midwives' cases; 2 Maternity Hospital out-patient; 3 Maternity Hospital in-patient).
1 Medical Officer of Health of another town.

Of the 144 notifications received:—

8 were attended at birth by doctors, out of a total of 1,396 confinements.
28 were attended at birth by midwives, out of a total of 1,941 confinements.
107 were attended at birth at Maternity, out of a total of 1,086 confinements.
1 transfer.

12 cases were of a severe type. Of these:—

7 were midwives' cases.
3 were Maternity Hospital cases.
2 were doctors' cases.

1 midwife's case was of an exceptionally severe and rapid type. It was notified by the midwife on the 9th day, a doctor being already in attendance. The child was removed to King's Cross Hospital on the 11th day, and discharged on the 20th day with the left eye partly damaged. A secondary infection occurred in the right eye on the 68th day, after the child returned home, which resulted in the total destruction of the right eye.

3 cases were admitted to King's Cross Hospital for treatment.

1 case was admitted to the Eastern Poorhouse Hospital for treatment.

Sanitary Department.

The Report of Mr Mitchell is to be found on page 147. It contains a detailed description of the work carried out under his supervision during the year under review, and it is a record of splendid work done by an enthusiastic official assisted by an energetic and loyal staff. In administering the combined Departments, Mr Mitchell and I are daily in close touch with one another, and this co-operation adds strength to the efforts which are being made to improve the health of the city. I submit some observations on certain matters which have received attention from both of us during the year.

Factories and Workshops Act, 1901. — The work of inspection was carried out as usual by the staff of the Sanitary Department, 1,835 visits being made compared with 1,162 in 1921, and the inspectors have expressed satisfaction at the conditions found, no statutory action being considered necessary. The influence on health of unsatisfactory surroundings in factory and workshop is sufficiently serious to call for special effort on the part of employers. Apart from the fact that the better the environment the greater is the output of the workers, the employer who has a real interest in his employees will not be content with the minimum conditions laid down by statute, but will go beyond the statutory requirements in regard to cleanliness, sanitation, lighting, ventilation, &c., and satisfy himself that no injury to health has resulted from any neglect on his part. It is satisfactory to note that no statutory action was necessary during the year, but that any defects discovered by the inspecting officers were remedied immediately these were pointed out. I have always

held the opinion that better and more lasting results are likely to follow advice tendered in a discreet manner, accompanied by an intelligent explanation regarding the necessity for the desired improvement. While legal action may be necessary on rare occasions, and while such action may be successful, I cannot consider such a success as a victory for the Department. It may be argued that legal pressure must be employed now and again because it has a good effect on others, but that is not the kind of good effect likely to produce lasting results. These can only be achieved by stimulating the interest of the employer in the health of his workers so that any action he may take will arise from this interest and not from the fear of publicity. These remarks apply to practically all public health activities, and the discovery of any influence likely to affect health adversely should form the starting point of combined action between the person responsible and the public health officials with a view to the suppression of the influence and the prevention of its recurrence. This method must be thoroughly explored before adopting measures which are bound to smash co-operation and lead to fruitless opposition.

A detailed list of workshops, &c., on the register is given on page 181, along with details regarding matters referred by H.M. Inspector as remediable under the Public Health Act.

As has been the practice in recent years, I paid particular attention to the condition of bakehouses in the city, and along with the Chief Sanitary Inspector visited the majority of them, including 55 factory bakehouses, for which the Local Authority became responsible under the Scottish Board of Health (Factory and Workshops Transfer of Powers) Order, 1921. This new Order places the supervision of all bakehouses in the city under the Local Authority, a much better arrangement than existed previously when factory bakehouses were supervised by H.M. Inspector of Factories, the Local Authority being responsible for all the others. There are still a certain number of bakehouses which are not maintained at a satisfactory standard of cleanliness, and in a few cases little effort is apparently being made by the occupiers to improve matters. Some bakehouses are very unsatisfactory owing to structural

defects, and nothing short of reconstruction will ever make them suitable. After passing through a baker's shop, spotlessly clean with, possibly, tiled walls, glass shelving, smooth ceiling and floors, it is very depressing to enter a room where the food exposed for sale is prepared, to find the walls and floors rough and dirty, the windows dirty, lighting and ventilation bad, untidiness everywhere, especially under the baking tables, the surfaces of which, I must say, are kept clean. It is obvious that the public who consume the food are not intended to see the places where it is prepared. It must be clearly understood that these remarks do not apply generally to the bakehouses in Dundee. Far from it. Broadly speaking, the bakehouses in this area are being kept in good condition, and each year one can observe improvement, but they do apply to one or two bakehouses which I have in mind at the moment, and which I have visited more than once during the year. It is only fair to state, however, that as the result of prolonged negotiation there is some slight evidence of progress, and I hope to be able to report more favourably next year. It is gratifying to notice in the course of my inspections that it is becoming a more general practice to keep covered the receptacles containing the various ingredients used in baking. This is extremely important, as otherwise contamination by dust, flies, &c., cannot possibly be avoided. It would be a step in the right direction if all bread, &c., in course of delivery to the consumer by van or otherwise was protected in a similar fashion.

Food Poisoning.—Only one outbreak of food poisoning came under the notice of the Department during the year. The causative agent, in all probability, a bacterium, was not discovered, but it was apparently present in a consignment of raw milk, the consumption of which gave rise to more or less severe symptoms of gastro-enteritis. Altogether 32 persons belonging to 13 households residing in two adjoining streets in the west centre of the city were affected. The outbreak was not serious in that there were no deaths nor any cases of severe illness, but the occurrence is one that must be noted as it demonstrates the potential dangers of milk as a vehicle of infection and serves to emphasise the importance of complete protection for this article of food from the point of production until it reaches the

consumer, and further, until it is actually consumed. The outbreak was very carefully investigated, and the available evidence points to the probability that the milk was contaminated either in the open streets while being transferred from one vessel to another, or while exposed in a shop in which many other commodities besides milk are dealt with. The infection of the milk may be described as an accident, but it was also an accident, and a fortunate one, that the infecting agent was not a more virulent one.

Meat Inspection.—The usual system of meat inspection was continued during the year by Mr Anderson, the Superintendent of the Slaughterhouses. In my annual reports for 1920 and 1921 I pointed out that Mr Anderson required some assistance in carrying out his duties as meat inspector. The matter was considered by the Markets and Baths Committee early this year, and the various officials concerned with meat inspection were asked to submit more precise recommendations to a future meeting of the Committee. Further, new Regulations on the subject of a uniform system and standard of meat inspection have since been issued by the Scottish Board of Health, and the question of their administration in Dundee ensures that the whole subject will be carefully examined in the immediate future.

Details regarding the animals slaughtered, diseased meat seized, &c., are given on page 194.

Milk Supply.—The quality of the milk supplied to the citizens of Dundee during the year continued to receive the careful attention of the Department, but nothing of unusual interest falls to be reported on. The inspectors during their numerous visits to dairy premises did all in their power to stimulate the interest of producer and purveyor in the quality of their milk supply, especially in regard to its purity, and no doubt some slight improvement has resulted. But a great advance must be made before I can express satisfaction on this point. Possibilities of contamination of the milk are still far too frequent, much more frequent than is really necessary, for, although, in many cases, the premises are not too suitable for the production or distribution of milk, the exercise of ordinary care would

considerably lessen the risk of contamination. Such measures as cleanliness in byres and dairies, clean cows, clean milkers, clean milking, and clean vessels are surely elementary, and the public have a right to expect these precautions to be taken by everyone who is engaged in the business of handling milk, apart altogether from other desirable precautions such as the testing of cows with tuberculin, the cooling and bottling of milk at the farm, &c., which may not be expected to be practicable measures in every case at the moment. The Milk and Dairies (Amendment) Act, 1922, introduced a system of grading, each grade requiring to fulfil certain standards in regard to quality, including purity. It is now illegal for anyone to sell milk under any of the prescribed designations except in accordance with a license granted by the Scottish Board of Health or with their authority. This enactment goes a certain length and may in time result in improvement in the quality of the milk supply, but it would have been better if a minimum standard in regard to the quality of milk had been established, so that it would be illegal for anyone to sell milk for human consumption which was below the standard laid down. The administration in Dundee of the principal sections of the above Act was dealt with by me in reports submitted to the Public Health Committee early in the present year.

In my report for last year I quoted regulations which the Local Authority proposed to add to their existing Regulations under the Dairies, Cowsheds and Milkshops Orders. The Town Council have approved of these proposed additions, which are now in the hands of the Scottish Board of Health.

During the year 12 samples of milk were submitted for bacteriological examination. The following are the details :—

No.	Source of Milk.	No. of bacteria. per c.c.	Tubercle bacilli.
1b.	Taken in shop selling milk and dairy produce only	over 10,000,000	Absent.
2b.	Taken in shop selling milk only	over 10,000,000	Absent.
3b.	Taken from van on street ...	57,000	Absent.
4b.	Taken in shop selling milk, provisions, and vegetables ...	452,000	Absent.

5b.	Taken at King's Cross Hospital	185,000	Absent.
6b.	Taken from milkhouse of cowkeeper's premises	6,120,000	Absent.
7b.	Taken from milkhouse of cowkeeper's premises	81,500	Present.
8b.	Taken from milkhouse of cowkeeper's premises	175,000	Absent.
9b.	Taken from van on street ...	72,500	Absent.
10b.	Taken from van on street ...	106,500	Absent.
11b.	Taken in shop selling milk, dairy produce, and confectionery	149,000	Absent.
12b.	Taken from shop selling milk and confectionery	9,000	Absent.

Contagious Diseases (Animals) Acts. — Mr Ferrier's report will be found on page 129.

Housing.

On page 163 the Chief Sanitary Inspector submits his observations on the subject of housing and details the work done in this connection during the year. The figures included in his report are of interest, and deal not only with the work performed by this Department, but also relate to the work of the Director of Housing. In substance the report shows that there has been marked activity in the provision of new houses, altogether some 277 being erected throughout the year, 252 being the work of the Local Authority, only 25 being built privately, 20 of these being houses of 4 or more rooms. On the other hand, a study of the report must impress anyone who is at all familiar with the housing conditions of the city that nothing was done during the year to close houses at present in use, but which are really unfit for human occupation. Needless to say, no action was possible in this direction, because of the absence of alternative accommodation for the dishoused. In my report for 1921 I emphasised that a new housing scheme should coincide with a campaign against overcrowding, and insanitary houses, the new houses providing for the overflow in the one case, and supplying alternative accommodation in the other. At that time of writing we believed, or rather we had been notified, that only one more allocation consisting of 200 houses would be allowed to rank for assistance from the State. Since that time, however, the lack of houses everywhere has made a continuation of the sub-

sidy in some form or other an absolute necessity. The new houses erected under such a subsidised scheme will go towards the relief of overcrowding and provide for increase in population. That is an important development, but what is equally important is that the Local Authority have now an excellent opportunity of getting rid of a certain number of slum houses by means of an assisted slum clearance scheme. I understand that under this scheme grant can only be secured for the new houses provided a corresponding number of slum houses is closed. This is the opportunity we want for Dundee. The new houses already provided in various parts of the city have done literally nothing, directly or indirectly, towards the elimination of slums. They have undoubtedly relieved overcrowding to some extent, but they have done so in houses of a kind which could stand a little of it, and which could at any rate wait until the more urgent problem of the slum was dealt with. The housing problem is a health problem, and the solution of the latter must be tackled in the slums. We all thought that there would be a moving up process for all classes of the population, so that the slum dweller would ultimately benefit. That has not come about, and is not likely to happen unless a tremendous number of houses are produced within a very short tme. This indirect method of dealing with slum dwellings must not be thought of for one moment —it is too indefinite, too doubtful and too slow. This recent development in the housing policy is, in my opinion, on the right lines, and is of supreme importance to Dundee. No doubt many obstacles will have to be overcome, but I am convinced that substantial benefit will follow. The provision of new houses must coincide with the closing of slum dwellings, and the occupants thus dislodged must be offered one of the new houses, which should, of course, be available at rents which people in their circumstances can afford to pay. The new houses under this special scheme are intended for the present slum dweller, and the aim should therefore be a direct transfer of the occupants from the condemned houses to the new ones. One cannot hope for this transference to be carried out smoothly and completely. There will be sure to be a certain number, a small number, I hope, who will refuse for various reasons to go to the new houses. Nevertheless, these people must remove from the houses closed by order

and care must be taken that they are not permitted to overcrowd other dwellings. This care wll be the responsibility of the Public Health Department, who will do all in their power to find acceptable accommodation. A certain number of the new houses will therefore not be occupied by dispossessed families, and the question will arise as to who will be permitted to occupy the rejected dwellings. It must be noted that houses closed by order will not represent all the slums in Dundee, but only those which in the opinion of the Local Authority demand their immediate attention. There will be many families occupying houses in other so-called slum areas of the town anxious to secure better accommodation, and in selecting the tenants preference should be given to such families, and the dwellings vacated by them may be secured by the tenants of the condemned houses, who refused the offer of new houses. That is an outline of the policy which, in my view, should be adopted, and while it is only worked out in theory, it seems to me to be quite a practicable scheme, and even although it does not develop entirely as suggested, it will result in the abolition of an appreciable number of houses which should not be used for human habitation, without causing hardship to the families concerned, but rather conferring benefits on them. The new houses which are to be erected under the slum clearance scheme must not be modified in any way because they are intended for families from the slums. Each dwelling must be a complete unit, a self-contained house with all the requisite facilities for keeping the house itself clean, for keeping the utensils, clothing, bedding and persons of the occupants clean. The erection of houses incomplete in any of these respects would be a great mistake. Such facilities are necessary in every house, but they are especially necessary for obvious reasons in these small houses, and for the families which we hope will occupy them.

Mr Mitchell in his report states that the amount of overcrowding in the city, taken as a whole, has been reduced during the year. That that is so, should be a matter for satisfaction to everyone. At the same time, the reduction cannot be a very considerable one. and, indeed, I am inclined to think it is very slight. The fact that the inspectors are not meeting so many cases must be interpreted as meaning that the nuisance

is not so prevalent. We have no accurate knowledge of the actual population of Dundee at the middle of last year, but there was an estimated increase of 3,746 on the 1921 census figure. Nor have we reliable information regarding the balance between emigration, immigration, and the natural increase of the population, but we know that there was a net addition of 256 houses available for human habitation during 1922, and even allowing for 5 persons per house, I very much doubt if these would suffice for the actual increase in population and also relieve overcrowding to any extent. A better distribution of the occupants of overcrowded houses may have occurred, and possibly a certain number of these occupants have left the city.

Although no advance has been made in the direction of closing slum dwellings, active measures have been continued duirng the year to keep these houses and indeed all houses in the city in as habitable a condition as possible, and all nuisances were dealt with immediately on their discovery. Details of the action taken are to be found elsewhere in this volume.

I have dealt with the subject of housing at the end of the section of the Report for which I am responsible, but if the various subjects were dealt with in order of importance, housing would be discussed in the first pages, for there is no question that it is the problem which must occupy the attention of every health authority before all others, although not to the exclusion of all the others. If the preceding pages of this Report are studied, it will be noted that the environment in the home is quoted again and again under various headings as an important factor in the prevention of disease. It is quoted in reference to the general death-rate, and the death-rate from the respiratory diseases. It is emphasised again here and there in certain of the paragraphs dealing with the ordinary infectious disease. Reporting on tuberculosis also called for reference, and I might even have dealt with housing as an important factor in connection with venereal disease. The chapter on child welfare required further mention of the subject, and indeed there is no public health activity which does not depend for its success on sufficient and adequate housing. It directly concerns every member of the population, old and young,

male and female. Occupational environment is of a similar importance, but not to the same degree, as it does not directly affect the whole population as is the case with housing. In many of our health activities we must of necessity strike at a point where true prevention cannot be said to be possible, but in the case of housing we have a straightforward case of cause and effect. Provide adequate and sufficient housing and you are striking at the cause of disease, neglect this provision and the effects must be treated.

The Local Authority of Dundee are contemplating the provision of a certain number of houses under the schemes of subsidy and slum clearance. This number must be considered as only another instalment of a bigger programme which must take a prolonged period of time to complete, but the actual number of new houses erected each year should be limited only by the volume of labour available. It should always be kept in mind that housing forms the major part of what is called environment, and that the whole public health machine is striving towards the betterment of environment and of education. The expenditure involved may appear heavy, but an adequate return may be confidently expected in future years in a certain reduction in the cost of treating disease, and in the improved health, happiness, and prosperity of the citizens.

Tuberculosis.

Dr. Hunter's Report.

During the year 1922 there has been no alteration in the conduct of the scheme for the campaign against tuberculosis in the city, the work being carried out on the proved and established lines with the most satisfactory results.

The co-operation between this Department and other Authorities and Institutions in the city interested in this campaign, such as the Education Authority, the Parish Council, the Royal Infirmary, and the Ministry of Pensions has been close and the relationship most cordial.

In December, 1922, Dr G. S. Johnston, having received an important appointment in England, resigned his post of Resident Medical Officer to the Sanatorium at Ashludie, Monifieth, and Assistant Tuberculosis Officer to the city after two years much appreciated service. According to the terms of the agreement between Dundee and Arbroath Town Councils, the Resident Medical Officer at Ashludie acted as Tuberculosis Officer to Arbroath. On Dr Johnston's resignation, negotiations were entered upon with Arbroath Town Council as to their future action, and their decision to appoint a Tuberculosis Officer independently terminated the agreement. This was to our advantage, as it released this officer for further work in the city. New proposals as to remuneration, terms of service, &c., of the new officer necessarily had to be considered, and to tide over the delay caused, temporary arrangements were made.

I again tender my appreciation to those in charge of the various institutions in my Department, and the staffs for their loyal and helpful services, which have aided greatly the furtherance of our scheme.

In the year 1922 :—

563 cases of tuberculosis were notified, 401 pulmonary and 162 non-pulmonary. Of these :—
182 were discovered at the Dispensary.
188 were notified by private practitioners.
3 were notified by school medical officers.
10 were notified from the Eastern Hospital.
120 notifications came from the Royal Infirmary.
12 notifications came from the Convalescent Home.
9 notifications came from medical officers outside the city.
39 cases came under the notice of the department through the registrar after death had taken place.

The ages and sex of these were as follows :—

	Males.	Females.	Total.
Under 1 year ...	—	—	—
1 to 5 years ...	7	8	15
5 to 15 years ...	25	41	66
15 to 25 years ...	43	66	109
25 to 45 years ...	61	69	130
45 to 65 years ...	33	40	73
65 and upwards ...	1	7	8
	170	231	401

The following are the particulars as regards housing :—

No. of rooms.	No. of cases.	Total No. of Inmates.	No. of Inmates per room.
1	53	152	2.86
2	223	1,151	2.57
3	68	414	2.02
4 and upwards	24	158	1.62

11 cases lived in public institutions.
4 cases lived in lodging-houses.
6 cases were notified from the Poorhouse with no other address.
9 could not be found at the address given.
3 cases were visited and home conditions found satisfactory.

213 houses have been disinfected on removal of patients, and at time of death, as compared with 267 in 1921.

The number of notified cases has risen considerably, and on analysis of the figures, this increase is found to be mainly of non-pulmonary tuberculosis. The notifications sent in from the Royal Infirmary have increased remarkably, from 19 in 1921 to 120 in 1922, which points to a greater care in notification on the part of the medical officers of this Institution than was formerly the case, and, to my mind, accounts almost wholly for the increase. Minor non-pulmonary cases who have slight operative treatment performed at and who attend the out-patient department are lost sight of and failure to notify results. The greater numbers reported from the Infirmary show a more careful scrutiny of the cases and stricter attention to regulations, probably due to the appointment of a resident casualty medical officer, who is also in charge of the out-patient department, but withal a considerable number of cases are almost sure to escape notice, and even yet, the figures may fall short of the actual numbers.

It is gratifying to note the decrease in the number of cases knowledge of which is obtained from the registrars' returns after death of the patient.

Tuberculosis Dispensary.

During the year 744 new cases were enrolled, as compared with 616 in 1921. Of these 220 were found to be suffering from distinct phthisis (98 males and 122 females); 93 were found not to have the disease. In 291 cases the signs were somewhat indefinite, but these cases were regarded as in the pre-tubercular stage; 12 cases were found to be suffering from other forms of tuberculosis.

There were 117 contacts examined, 14 of whom were found to be suffering from pulmonary tuberculosis and 4 were found to be suffering from non-pulmonary tuberculosis, 70 were suspicious and are being kept under observation; the remaining 29 were found to be negative.

Of the 220 cases of definite phthisis 94 were previously notified, and 126 were notified from the Dispensary for the first time.

The ages and sex of these cases were as follows :—

	Males.	Females.	Total.
1 to 5 years ...	5	4	9
5 to 15 years ...	12	30	42
15 to 25 years ...	30	42	72
25 to 45 years ...	36	30	66
45 to 65 years ...	15	16	31
65 and upwards ...	—	—	—
	98	122	220

The attendances at the Dispensary were as follows :—

	Insured.	Non-Insured.	Total.
January ...	1,177	340	1,517
February ...	1,165	482	1,647
March ...	1,408	559	1,967
April ...	1,123	521	1,644
May ...	1,213	577	1,790
June ...	1,157	472	1,629
July ...	714	333	1,047
August ...	842	501	1,343
September ...	850	460	1,310
October ...	944	538	1,482
November ...	940	714	1,654
December ...	874	571	1,445
Total ...	12,407	6,068	18,475

as compared with 21,514 in 1920 and 18,180 in 1921.

The occupations of those notified as suffering from pulmonary tuberculosis were as follows :—

Architect	1	Jute Preparers	41
Bakers	3	Labourers	27
Ball Tier	1	Laundry Workers	3
Batchers	4	Linoleum Worker	1
Boilermaker	1	Machineman	1
Butchers	2	Machinists	4
Cabinetmaker	1	Mason	1
Calender Workers	7	Medical Superintendent	1
Carters	4	Mechanic	1
Cartwright	1	Merchant	1
Charwomen	3	Messenger	1
Chemist	1	Mill Overseer	1
Children under 5 yrs.	17	Miners	2
Chauffeur	1	Nursemaid	1
Cinema Managers	2	Packingcase Maker	1
Clerks	2	Plater	1
Clerkess	1	Ploughmen	2
Cop Winder	1	Reelers	3
Compositor	1	Rover	1
Coal Carters	2	Saddler	1
Cleaner	1	Sawmillers	2
Dealer	1	Saleswomen	3
Dock Labourer	1	Scavengers	2
Domestic Servants	13	School-boys	22
Dressmaker	1	School-girls	38
Dyers	2	Shipwright	1
Engineers	3	Sister of Mercy	1
Engine Attendant	1	Seaman	1
Factory Worker	1	Soldiers	3
Farm Servants	2	Spinners	28
Field Drainer	1	Shifters	10
Fireman	1	Stableman	1
Fitter	1	Sweet Packer	1
Gardener	1	Tailors	2
Grocers	2	Tailoress	1
Hammermen	2	Telegraph Linesman	1
Hawkers	3	Telegraphist	1
Housekeepers	3	Traveller	1
Housewives	50	Typists	3
Hosemaker	1	Waitress	1
Hotel Boots	1	Watchmen	2
Insurance Agent	1	Watchmaker	1
Iron Driller	1	Weavers	9
Iron Turners	2	Winders	4
Joiner	1	Yarn Bundler	1
Jute Cutter	1		

In 12 cases there was no occupation. 53 of the above were discharged soldiers.

The occupations of those notified as suffering from non-pulmonary tuberculosis were as follows :—

Batcher	1	Hairdresser	1
Boxmaker	1	Housewives	2
Cabinetmaker ...	1	Jute Preparers ...	9
Calender Workers ...	2	Labourers	2
Clerk	1	Plater	1
Clerkess	1	Riveters	2
Chauffeur	1	Sawyer	1
Children under 5 yrs.	48	School-boys	27
Chococate Dipper ...	1	School-girls	31
Craneman	1	Shop Assistant ...	1
Domestic Servants ...	4	Shifter	1
Draper	1	Soldier	1
Electrician	1	Spirit Dealer	1
Engineer	1	Seaman	1
Fitters	2	Steel Erector	1
General Dealer ...	1	Weavers	4
Grocer	1	Winder	1
Hackle Fitter ...	1		

In 5 cases there was no occupation. 3 of the above were discharged soldiers.

The attendances at the Tuberculosis Dispensary have increased compared with the figures of 1921, but still a substantial decrease on the figures of 1920. Analysing these figures, it is seen that there is a small decrease in the number of insured cases and a great increase in the number of non-insured cases. The majority of these non-insured cases was children. It is the custom of many mothers to give their delicate children some form of cod liver oil during the winter months, but consequent to bad trade and the unemployment of the breadwinner of the family, mothers could not afford to buy the usual winter supply of the cod liver oil. Therefore, they brought their children to the Dispensary. Though this is not the object of the Dispensary, it was advantageous in that it brought to our notice many children at a susceptible age, and gave us the opportunity to advise, help and catch cases at a time when they could be more easily and successfully treated.

The number of contacts examined still remains very low. The figures reported show the importance of this part of our work, and do what we may, we fail to make the other and apparently healthy members of the family realise its need. The high percent-

age of actual cases and suspects shows that it is only the slightly ailing members who come forward for examination, or it is only when a second case appears in the family that these fears are aroused, and they realise the danger of infection, and submit to examination.

Laboratory Work.

During the year 469 specimens of sputum were examined with the following results :—

	Positive.	Negative.
92 for General Practitioners ...	31	61
377 for Dispensary Patients ...	62	315

King's Cross Hospital.

During the year there were 141 cases admitted to the Institution. Of these, 61 were males and 80 females. 66 patients died (30 males and 36 females) and 71 were discharged, many of these greatly improved. On 1st January, 1923, there were 55 cases remaining in hospital.

The ages of the fatal cases were :—

Age.	Males.	Females.
Under 1 year ...	—	1
1 to 5 years ...	—	2
5 to 15 years ...	2	—
15 to 25 years ...	7	13
25 to 45 years ...	10	11
45 to 65 years ...	10	8
65 and upwards ...	1	1

The accommodation at King's Cross Hospital is being taxed to its limit. The tuberculosis wards were established for the reception of advanced cases of pulmonary tuberculosis, and are sufficient to meet that demand. Now there is an ever-increasing demand for accommodation for the non-pulmonary case, especially the advanced case. From the preventive point of view, the isolation of this type of case is not so important as of the advanced pulmonary type, but the treatment necessary is so prolonged, skilled nursing often required, and in many cases, expensive dressings, that the ordinary householder is totally unable to meet the demands. Again, other institutions, recognising that the Local Authority is responsible for the care of all forms of tuberculosis, and that their accommoda-

tion cannot meet the requirements, refuse to admit them, and refer them to the Local Authority. The need is now urgent, and is increasingly so.

The lack of isolation wards in the Hospital for the dying and seriously ill is a great drawback. At present these cases are treated in the open wards, where it is impossible to give the peace and quiet so urgently required, nor can friends have the privacy so desirous at such a time, and the mental effect on the other less seriously ill inmates of the wards is to their detriment.

I cannot too strongly urge the crying necessity of this extra accommodation, or estimate the boon it would be to patients, friends, and staff.

Ashludie Sanatorium.

During the year there were 101 cases admitted to this Institution. Of these 50 were males and 51 females. 107 patients were discharged (56 males and 51 females). Average stay in the Sanatorium—200 days.

The following shows the result of treatment of those cases :—

	Very much Improved.	Improved.	Slight Improvement.	No Change.
Males ...	10	28	5	11
Females ...	13	19	4	10

1 male and 5 females were sent out for surgical treatment, and 1 male died before discharge.

Of these 90 are still alive and 17 have died since discharge.

The work carried on at Ashludie Sanatorium during the past year has been eminently satisfactory and successful. The number of cases admitted during the year shows a fairly big reduction, due, in my opinion, to the longer stay of the cases in the Institution. This means a greater content amongst the patients and an earnest desire to take full advantage of the treatment afforded. The complete arrest of this disease is largely a question of time, and the longer the residence in a sanatorium the better prospects of cure.

Sidlaw Sanatorium.

During the year there were altogether 31 cases from the city under treatment in this institution. Of these, 13 were males and 18 were females. There were 16 patients discharged (7 males and 9 females). Average stay in the Sanatorium—143 days..

The following table shows the result of treatment in these cases :—

Improved.	Slight Improvement.	Arrested.	No Improvement.
4	1	8	3

The 15 beds at the disposal of the Local Authority in Sidlaw Sanatorium have proved of the greatest value, and full advantage has been taken of them. These beds help materially to meet the problem of tuberculosis in children of school age, and appreciably relieve the congestion. At present only half of the available beds in this Institution are utilised, and any proposals for its further opening up should be be given serious consideration.

The scheme adopted has now had a fair trial, and is running smoothly and without hitch, while the co-operation between this department and the Sanatorium authorities has been of the closest.

I visited the Sanatorium on several occasions and assured myself that every provision was made for efficient care and treatment. On every occasion I found the children happy and content with their surroundings.

I would here record my highest appreciation of the courtesy and helpful services of the visiting and residential staff of this Institution.

During the year 162 cases of non-pulmonary tuberculosis were notified. The age and sex were as follows :—

	Males.	Females.	Total.
Under 1 year ...	5	5	10
1 to 5 years ...	15	24	39
5 to 15 years ...	25	29	54
15 to 25 years ...	25	15	40
25 to 45 years ...	5	7	12
45 to 65 years ...	5	2	7
65 and upwards...	—	—	—
	80	82	162

The seats of the disease were as follows:—

Under 1 year	Meningitis, 4; Abdomen, 5; Glands, 1 Total	10
1 to 5 years	Meningitis, 14; Abdomen, 7; Glands, 7; Joints, 9; Spine, 1; other forms, 1. Total	39
5 to 15 years	Meningitis, 7; Abdomen, 13; Glands, 15; Joints, 10; Spine, 2; other forms, 8. Total	55
15 to 25 years	Meningitis, 1; Abdomen, 10; Glands, 9; Joints, 6; Spine, 4; other forms, 9. Total	39
25 to 45 years	Meningitis, 1; Abdomen, 3; Glands, 2; Spine, 3; other forms, 3. Total	12
45 to 65 years	Meningitis, 1; Abdomen, 1; Glands, 1; other forms, 4. Total	7
	Total	162

J. H. HUNTER, M.B., Ch.B., D.P.H.,
Chief Tuberculosis Officer.

Bacteriological Laboratory.

REPORT

OF

Professor William J. Tulloch.

REPORT OF WORK CARRIED OUT IN THE DEPARTMENT OF BACTERIOLOGY, UNIVERSITY OF ST ANDREWS, ON BEHALF OF THE DUNDEE PUBLIC HEALTH AUTHORITY.

From the 1st January, 1922, to the 31st December, 1922.

The Report is divided into the following sections and sub-sections :—

1. Control of Venereal Diseases.
   - (a) Control of Syphilis.
   - (b) Control of Gonorrhœa.
2. Control of other communicable diseases.
   - (a) Diphtheria.
   - (b) Enteric Fever.
   - (c) Tuberculosis.
3. Special investigations.
   - (a) Investigation of fæces for dysentery.
   - (b) Investigation of outbreak of gastro-enteritis.
   - (c) Examination of milk.
   - (d) Investigation of cases of infantile diarrhœa at Dundee Infant Hospital.
   - (e) Supply of Sclavo's serum.
   - (f) Minor investigations.

1. Control of Venereal Diseases.

(a) Control of Syphilis.

During 1922, 125 microscopical examinations were made for the presence of T. Pallidum in suspected syphilitic sores; of these 108 were sent from the V.D. clinic and 13 from private practitioners, the remainder being cases of syphilis insontium.

During the year under consideration, then, the direct examinations for the causal organism of syphilis has decreased from 208 to 125. On the other hand, the ratio of examinations from private practitioners has increased. Nevertheless, it is still notable that very few cases are sent by private practitioners, and although this point has been stressed before, it appears not improbable that a number of cases in private practice remain undiagnosed for a period longer than

is really necessary. Of course, the majority of the cases sent from the clinic to the laboratory are first seen by their private practitioner, on whose advice they attend the clinic. Nevertheless, the ratio of examinations on behalf of private practitioners remains too low.

During 1922 blood tests numbering 3,573 were carried out on behalf of the City of Dundee. This shows a slight reduction on the previous year, but the distribution of these tests is interesting. From the clinic 1,564 tests were made, while for institutions other than the treatment centre 1,517 were carried out. This shows a steady increase since 1920, while the tests carried out on behalf of private practitioners again show an increase on the figure for 1920, but a decrease of about 80 on that for 1921; the actual figure for 1922 being 492 tests.

I would call attention to the ratio of direct microscopical examinations to indirect blood examinations so far as the clinic cases are concerned. In 1919, the ratio was 1 to 12, 1920 1 to 11, 1921 1 to 10, and in the year under consideration the ratio is 1 to 14. This ratio is too low, and it indicates a retrogression from the previous years.

One cannot call attention sufficiently to the importance of early diagnosis of the disease and the demonstration of T. Pallidum in a primary sore is the only certain method of making this diagnosis. The serological test, while extremely valuable, is not of the same unequivocal character as is direct demonstration of the causal micro-organism. It is worthy of note that the four cases of syphilis insontium examined microscopically were all cases of labial infection.

During the period under consideration the vast majority of the serum tests in cases from the clinic were done in duplicate. A further series of 500 examined in triplicate and mentioned in the previous report, was completed during this period. This investigation showed that of three methods employed, two being methods of conducting the ordinary Wassermann test, and the third what is known as Dreyer's "Sigma" reaction, all gave the same results in 98 per cent. of cases. A still further series of 500 tests

was made using four different methods of carrying out the Wassermann reaction. Here again exactly comparable results were obtained in 98 per cent of the tests.

(b) Control of Gonorrhœa.

During 1922, 485 specimens were examined for the diagnosis of gonorrhœa; of these 358 were from the clinic, 58 from private practitioners, and 69 from institutions other than the clinic.

During this period a considerable amount of work was done in this laboratory on the subject of the classification of gonococci, and this work was published in February, 1922. As a result of this investigation which showed that about 70 per cent. of cases of gonorrhœa were due to one "type" of the micro-organism, it was decided to make a sensitised vaccine of this type and employ it for routine treatment of cases of the disease. I am informed by the officers responsible for the treatment of cases that this vaccine has given gratifying results and has greatly assisted in the work of the department. In order precisely to state the value of this vaccine, it will be necessary to use it over a much longer period than has so far been done, but the results already obtained are very hopeful indeed.

As foreshadowed in the previous Report, an attempt has been made to elaborate a method for diagnosing gonorrhœa, especially chronic gonorrhœa in the female. This work is at present going on, and while the precise value of the method cannot be assessed, only 200 specimens having been examined so far, the results tend to show that here a distinct advance has been made, and it only remains to determine the precise degree of that advance.

2. Examinations for the Control of Other Communicable Diseases.

(a) Control of Diphtheria.

Although during 1922 there has been no serious or widespread outbreak of diphtheria in Dundee, the number of throat swabs examined shows a slight in-

crease over those examined during 1921, 569 investi gations having been made during the period under consideration. The ratio of positive to negative results remains much the same as in previous years.

(b) Control of Enteric Fever.

A number of cases of enteric fever occurred in Dundee in 1922, but the number was small. 65 specimens of blood were submitted for examination by the Widal method, and many of these proved negative. During the year 24 specimens of faeces were submitted for examination, this being much the same as in the previous year. In this connection it is worthy of note that some of the positive results obtained in the investigation of faeces again showed that b. paratyphosus B. remains responsible for the causation of a few isolated cases of enteric fever in this district.

(c) Control of Tuberculosis.

303 specimens of sputum were examined from cases in Dundee during 1922, which also shows a slight increase on the previous year.

During this year, Dr Alexander at King's Cross Hospital continued to treat the secondary infections in pulmonary tuberculosis, and met with considerable success, and in this connection a few vaccines have also been prepared on behalf of patients in Ashludie Sanatorium.

3. Special Investigations.

(a) Investigations of Fæces for Dysentery.

Three specimens of fæces were examined for dysentery during the year 1922. One of these was from a case of amœbic dysentery and cysts of entamœba histolytica were found; one of the others was of interest having been derived from a case of severe diarrhœa in a child, the causal micro-organism being a member of the group of Flexner bacilli.

(b) In September, 1922, an outbreak of gastro-enteritis, apparently due to the consumption of milk, occurred in the city, and an extensive examination was made of vomit from the cases affected, and also the milk which was incriminated as the causal agent. In

addition thereto, an equally extensive examination was made of the affected patients to determine whether they harboured any organisms responsible for food poisoning, or had developed antibodies thereto. The result of these investigations was negative, so that one could not regard the outbreak as being any of the recognised forms of bacillary food poisoning.

(c) 14 specimens of milk were submitted during the course of 1922 in order to determine the degree of contamination and the presence of tubercle bacilli. These specimens were very fully investigated, and showed a great range of quality, varying from unsatisfactory specimens to specimens that would qualify as good grade milk. In one instance a milk was found to be infected with tubercle bacilli, but the number of specimens examined was small, and it would be well to have a fairly large series thus investigated to determine the incidence of tubercle infected milk in this district.

(d) Investigation of Cases of Infantile Diarrhœa at the Dundee Infant Hospital.

During this year there has been no serious outbreak of infantile diarrhœa at the Dundee Infant Hospital, and only five specimens of fæces were submitted for examination. None of these showed a heavy infection either with b. Welchii or b. proteus, which were so frequently found and in such large numbers in cases which occurred in this institution in 1920.

(e) Supply of Sclavo's Serum.

Should, unfortunately, cases of exposure to infection with anthrax occur in the city, the laboratory has always available a supply of Sclavo's serum for immediate needs. This has proved useful, and during 1922 the prophylactic use of this serum was employed with success.

(f) A number of minor examinations have been carried out in order to assist the work of the public health department in a variety of directions, but these are of such a nature that they do not permit of being categorised for purposes of report.

Child Welfare Scheme.

Dr. Margaret Scott Dickson's Report:

also Reports by

Dr. Margaret Fairlie and

Dr. H. Gordon Campbell.

MATERNAL AND CHILD WELFARE SCHEME.

The work of the Department has been carried out on the same lines as in former years, no new developments having taken place. The lease of the central office and clinic at 23 Victoria Road expired on 28th May, and, as the premises were too small for present needs, it was not renewed. Other premises were obtained through the generosity of Mr Fred. B. Sharp, who purchased a house at the corner of Nelson Street and Victoria Road, and presented it to the Department for use as a Child Welfare Centre. The property consists of a self-contained house of two storeys and a basement standing in a large garden. At present only the ground floor and basement are available for use, the upper flat, which has a separate entrance, being occupied by a tenant who has so far been unable to find another suitable house.

For this reason, in addition to the installation of electric light and central heating, only such structural alterations have been undertaken as were absolutely necessary to make the building conform to modern requirements as to drainage, &c. At present, the accommodation comprises Health Visitors' Office, Superintendent's Office, Clerks' Office, Medical Officer's Room, Waiting Room, Consulting Room, with another room which is available as an extra waiting room when required, and the usual domestic offices. The rooms are not large, but the site is ideal, being sufficiently near the centre of the town for convenience, while the position of the house on a height above Victoria Road ensures quiet and privacy. When the upper storey is vacant, further improvements will be carried out, and it will be possible to construct a most up-to-date and well equipped Child Welfare Centre, and there is sufficient ground around the house for any extension that might be required. Even as arranged at present the number of rooms makes it possible for each section of the work to be carried out in a separate room, a method possessing enormous ad-

vantages when compared to the only arrangements possible in ordinary business premises, such as the former centre at 23 Victoria Road. While the alterations were in progress, the Victoria Road Clinic was held in Caldrum Street and Princes Street Centres alternately. This arrangement only worked fairly well, as many of the mothers found either of these centres too far away to attend regularly. This was probably one factor in the diminution of the total attendances at the clinics during the year, but that was mainly due to the unavoidable exclusion of large numbers of children during the serious outbreak of measles which occurred in November and December.

The Child Welfare Relief Scheme has continued in operation on the same lines as in 1921, and the attendances numbered almost twice as many as in the previous year.

The great increase of work entailed made it necessary to obtain extra help, and in May an extra Health Visitor was appointed to help in the investigation of these cases. The staff are more than even convinced that this purely economic extension of the Scheme is an encouragement to a certain class of mother to discontinue attending a clinic, and is thus a hindrance to the education of the mothers which ought to be the true objective of all child welfare work.

As in former years, in addition to the home visiting of newly-born babies, and of cases of measles, whooping cough, &c., all the notified cases of ophthalmia neonatorum have been visited by the health visitors, and all necessary treatment carried out.

One health visitor resigned during the year to take up similar work in Manchester.

The staff now consists of:—1 Superintendent Health Visitor (who acts as Assistant Inspector of Midwives), 9 ordinary health visitors, and 1 special health visitor for the Relief Scheme, 1 almoner, and 1 clerkess.

REPORT OF CASES ADMITTED TO THE CLINICS.

ATTENDANCES.

Clinic.	Babies.		Children 1 to 5 Years.			Mothers.				
						V.1.		V.2		
	V.1.	V.2.	V.1.	V.2.	V.3.*	A.N.	P.N.	A.N.	P.N.	Total.
Victoria Road -	269	2238	35	65	1032	3	15	3	9	3669
Lochee - -	159	1501	33	123	1228	1	6	6	9	3066
Caldrum Street -	134	1195	16	124	404	...	11	...	11	1895
Princes Street -	163	1408	23	96	508	...	14	...	27	2239
Blackness Road	281	2463	47	150	1347	...	11	1	10	4310
Broughty Ferry Weighing Cen.	26	262	3	34	122	...	...	...	...	447
Dental Clinic -	...	...	26	19	...	2	24	1	72	144
Special Clinic for Mothers - -	...	...	...	...	...	113	52	101	50	316
	1032	9067	183	611	4641	119	133	11	188	16086
Relief Cases—1st Visits 1,050 ; Revisits, 7,314 ; Revisits for 1921, 8,064										16428
Total - -										32514

V3* Visits of children between 1 and 5 years of age who were admitted as babies and are still attending.

CASES ADMITTED TO HOSPITAL FROM THE CLINIC.

Hospital.	Babies.	Children 1-5 Years.	Mothers.
Infant Hospital - - - -	40	26	...
Dundee Royal Infirmary - -	3	3	...
King's Cross Hospital - - -	...	1	...
Comerton Home - - - -	...	1	...
St. Andrews Convalescent Home	...	1	...
	43	32	...

	Babies.	Children 1-5 Years.	Total
Died -	57	37	94
Left Town	9	11	20

Statistics of weight of babies on admission to the 5 principal centres with reference to feeding :—

	Av. (1)	– (2)	+ (3)	Not Weighed.	Total.
Entirely Breast-fed	19 2·9%	145 22·3%	480 73·8%	6 ·9%	650
Partly breast-fed -	6 7%	39 45·8%	38 44·7%	2 2·3%	85
Breast-fed for 1st 3 months - -	0 ...	12 48%	12 48%	1 4%	25
Fresh Cow's milk -	2 1·6%	75 60·9%	44 35·8%	2 1·6%	123
Dried milk or artificial milk - -	2 1·6%	73 59·3%	47 38·2%	1 ·8%	123
	29 2·8%	344 34.1%	621 61·7%	12 1·1%	1006

(1) Av. = Average weight for age. (2) – = Under average weight for age
(3) + = Over average weight for age.

Statistics as to weight of babies on admission with reference to sex :—

A. Sex. B. Age, Sex and Employment of Mothers in Industrial Occupations

(A). SEX.

	Average weight.	Un. average weight	Over average weight	Not weighed	Total.
Male - - -	13 2·4%	168 31·8%	338 64%	9 1·7%	528
Female - - -	16 3·3%	176 36·8%	283 59·2%	3 ·6%	478
	29 2·8%	344 34·1%	621 61·7%	12 1·1%	1006

Statistics of weight of babies on admission with reference to employment of mothers in industrial occupations, arranged with reference to sex and age on admission :—

(a) MALES.

Age.	Average Weight.	Un. average weight	Over average weight	Not weighed.	Total.	
Un. 1 mth.* (w)	0	11	38	1	50	131
	—	22%	76%	2%		
† (o)	3	18	58	2	81	
	3.7%	22·2%	71·6%	2·4%		
1-3 months (w)	4	30	60	1	95	239
	4·2%	31·5%	63·2%	1%		
(o)	5	40	98	1	144	
	3·4%	27·7%	66%	·6%		
3-6 months (w)	1	14	29	0	44	100
	2·2%	31·8%	65·9%	—		
(o)	0	23	32	1	56	
	—	41%	57·1%	1·7%		
6-9 months (w)	0	7	4	0	11	44
	—	63·6%	33·3%	—		
(o)	0	17	15	1	33	
	—	51·5%	45·4%	3%		
9-12 months (w)	0	3	2	0	5	14
	—	60%	40%	—		
(o)	0	5	2	2	9	
	—	55·5%	22·2%	22.2%		
All ages (w)	5	65	133	2	205	528
	2·4%	31·7%	64·8%	·9%		
(o)	8	103	205	7	323	
	2·4%	31·8%	63·5%	2·2%		
Total.	13	168	338	9	528	
	2·4%	31·8%	64%	1·7%		

(b) FEMALES.

Age.	Average Weight.	Un. average weight	Over average weight	Not weighed	Total.	
Un. 1 mth. (w)	4	7	30	0	41	109
	9·7%	17%	73·1%	—		
(o)	1	21	44	2	68	
	1·4%	30·8%	64·7%	2·9%		
1-3 months (w)	3	33	44	0	80	219
	13·7%	41·2%	55%	—		
(o)	3	45	91	0	139	
	2·1%	32·3%	65·4%	—		
3-6 Months (w)	0	11	13	0	24	86
	—	45·8%	54·1%	—		
(o)	2	19	41	0	62	
	3·2%	30·6%	66·1%	—		
6-9 months (w)	1	11	9	1	22	44
	4·5%	50%	40·9%	4·5%		
(o)	0	14	8	0	22	
	—	63·6%	36·3%	—		
6-12 months (w)	0	6	0	0	6	20
	—	100%	—	—		
(o)	2	9	3	0	14	
	14·2%	64·2%	21·4%	—		
All ages (w)	8	68	96	1	173	478
	4·6%	39·3%	55·4%	·5%		
(o)	8	108	187	2	305	
	2·6%	35·4%	61·3%	·65%		
Total.	16	176	283	3	478	
	3·3%	36·8%	59·2%	·63%		

* (w) = Working, i.e., habitually engaged in industrial work continued for at least part of the period of pregnancy.

† (o) = Not working, i.e., not habitually engaged in industrial work, and not working during pregnancy.

Comparing these tables with those of 1920 and 1921, we do not find the definite relationship between the fact of the mother working during pregnancy and the nutrition of the infant which was so striking in the two previous years. The possible explanation is that, owing to the unsettled labour conditions, the periods during which the mothers were in regular work were too short either to affect the infants adversely as appeared to be the case in 1920, or, on the other hand, to benefit the children by making it possible to provide better nourishment for the mothers, when they were able to add their wages to the total family income, and thus to improve the general economic conditions of the home, which was undoubtedly the case in 1921.

Health of Babies on Admission :—

Not examined	3			— 0.3%
No disease or defect ...	66			— 6.6%
One disease or defect ...	207	(207	diseases)	— 20.5%
Two diseases or defects ...	280	(560	„)	— 27.8%
Three diseases or defects ...	254	(762	„)	— 25.2%
Four diseases or defects ...	122	(488	„)	— 12.1%
Six diseases or defects ...	48	(240	„)	— 4.7%
Five diseases or defects ...	20	(120	„)	— 1.9%
Seven diseases or defects ...	6	(42	„)	— 0.5%
	1,006	(2,419	„)	

Statistics showing relation of feeding to special diseases of nutrition :—

	Not Exam.	No Disease.	Rick-ets.	Mar-asmus.	Anæmia.	Digestive Diseases.	Other Diseases	Total.
Wholly breast-fed	1 ·1%	55 8·4%	2 ·3%	2 ·3%	0 ...	370 56·9%	220 33·8%	650
Partly breast-fed	0 ...	2 2·3%	1 1·1%	1 1·1%	0 ...	63 74·1%	18 21·1%	85
Breast-fed for 3 mths.	1 4%	1 4%	0 ...	1 4%	0 ...	13 52%	9 36%	25
Fresh Cow's Milk	1 ·8%	3 2·4%	0 ...	3 2·4%	1 ·8%	85 69·1%	30 24·3%	123
Dried Milk or Artificial Food	0 ...	5 4%	1 ·8%	4 3 2%	0 ...	80 65%	33 26·8%	123
Totals	3 ·3%	66 6·6%	4 ·4%	11 1%	1 ·1%	611 60·7%	310 30·8%	1006

Classification of diseases observed on admission :—

Diseases of the Digestive System		1,000
Diseases of the Respiratory System		337
Diseases of Nutrition—		
Rickets	4	
Marasmus	11	16
Anæmia	1	
Diseases of the Skin		346
Diseases of the Eye		57
Diseases of the Ear, Nose, and Throat ...		19
Diseases of the Nervous System		1
Surgical Diseases		36
Infectious Diseases		2
Congenital Defects		549
Congenital Syphilis		28
Various		28
		2,419

CHILDREN 1-5 YEARS.

154 children between the ages of 1 and 5 years were admitted to the 5 principal centres, of which 68 were males and 86 were females.

MALES.

Of the 68 males admitted :—

12	(17·6%)	were suffering from	one disease or defect	(12 diseases)
28	(41·1%)	,, ,,	two diseases or defects	(56 ,,)
14	(20·5%)	,, ,,	three ,,	(42 ,,)
9	(13·2%)	,, ,,	four ,,	(36 ,,)
4	(5·8%)	,, ,,	five ,,	(20 ,,)
1	(1·4%)	was suffering from	six ,,	(6 ,,)
68	(100%)			(172 ,,)

FEMALES.

Of the 86 females admitted :—

1	(1·1%)	was suffering from	no disease or defect	
29	(33·7%)	were	one ,,	(29 diseases)
33	(38·3%)	,, ,,	two diseases or defects	(66 ,,)
17	(19·7%)	,, ,,	three ,,	(51 ,,)
6	(7%)	,, ,,	four ,,	(24 ,,)
86				170

CHILDREN 1-5 YEARS.

Classification of diseases observed on admission :—

	Males (172).		Females (170).		Total (324).	
Diseases of Digestive System ...	11		13		24	
Diseases of Respiratory System ...	30		34		64	
Diseases of Nutrition—						
Rickets	18		18		36	
Marasmus	5	34	4	39	9	73
Anæmia	1		2		3	
Debility	10		15		25	
Diseases of Nervous System ...	1		3		4	
Diseases of Skin	23		33		56	
Diseases of Eye	4		10		14	
Diseases of Ear, Nose, and Throat—						
Adenoids	14		10		24	
Enlarged Tonsils	8	24	3	17	11	41
General	2		4		6	
Infectious Diseases—						
Chickenpox	1		0		1	
Whooping-Cough	0		1	3	1	4
Influenza	0		1		1	
T.B. Peritonitis	0		1		1	
Surgical Diseases	9		11		20	
Congenital Defects	29		1		30	
Intestinal Parasites	1		2		3	
Various	5		4		9	
Total	172		170		342	

CONSULTATIONS FOR MOTHERS.

61 mothers attended the 5 principal centres, of which 4 were ante-natal cases, and 57 were post-natal cases.

ANTE-NATAL CASES.

Of the 4 ante-natal cases—

1 (25%)	was suffering from no disease (attended for advice only	
1 (25%)	,, ,, ,, one disease	(1 disease)
1 (25%)	,, ,, ,, three diseases	(3 diseases)
1 (25%)	,, ,, ,, five ,,	(5 ,,)
4		(9 diseases)

POST-NATAL CASES.

Of the 57 post-natal cases—

27 (47·3%)	were suffering from one disease	(27 diseases)
22 (38·6%)	,, ,, ,, two diseases	(44 ,,)
7 (12·2%)	,, ,, ,, three ,,	(21 ,,)
1 (1·7%)	was ,, ,, four ,,	(4 ,,)
57		(96 diseases)

CLASSIFICATION OF DISEASES OBSERVED ON ADMISSION.

Ante-Natal Cases.		
Diseases of Pregnancy		1
Gynecological Diseases		1
Venereal Diseases—		
Gonorrhœa	0	
Syphilis I.	0	
„ II.	1	
	—	1
Diseases of Genito-Urinary System		0
„ Digestive System		2
„ Respiratory System		1
Various		3
		9
Post-Natal Cases.		
Gynecological Diseases		6
Venereal Diseases—		
Gonorrhœa	2	
Syphilis I.	0	
„ II.	0	
	—	2
Diseases of Genito-Urinary System		2
„ Digestive System		22
„ Respiratory System		3
„ Nervous System		2
„ Skin		2
Surgical Diseases		12
Debility		19
Anæmia		6
Various		20
		96

ATTENDANCES AT DAY NURSERIES.

Day Nursery.	New Cases Admitted.			Total Attendance.			Average Daily Attendance.			No. of Days Open.
	Babies Under 2.	Toddlers 2-5 years.	Total.	Babies Under 2.	Toddlers 2-5 years.	Total.	Babies Under 2.	Toddlers 2-5 years.	Total.	
St George's -	36	33	69	2375	3424	5799	8	12	20	289
Hillbank - -	19	34	53	1800	3235	5035	6	11	17	290
Isles' Lane -	32	18	50	2350	1175	3525	8	4	12	290
Lilybank -	29	20	49	2429	1271	3700	8	4	12	289
	116	105	221	8954	9105	18059	30	31	61	Average 289·5 Days

PROVISION OF FREE FOOD FOR NECESSITOUS CASES.

Food Supplied.	Sold at Cost Price.	Given Free.			
		Clinic.		Relief Committee.	
		No. of Cases.	Amount Given.	No. of Cases.	Amount Given.
Glaxo	2463 lbs.	30	547½ lbs.	19	291 lbs.
Benger's Food	...	1	1 lb.	1	5 ,,
Horlick's Malted Milk	2 lbs.	1	17 lbs.	...	...
Chymol	27 tins	16	153 tins	...	...
Virol	440 ,,	18	150 ,,	...	...
Dairy Milk	...	128	38,343½ pts.	1,190	289,766½ pts.
Do. (assisted)	Part of cost paid by Dept.	7	1,306 ,,	5	458 ,,

DINNERS.

	Paid.	Free.			No. of Cases receiving Free Dinners.			Av. Daily Attend.	No. of days open.
		Clinic	R.C.	Total.	Clinic	R.C.	Total.		
Blackscroft	4119	217	3062	7398	2	53	55	25	291
Lochee	2000	420	3006	5426	6	51	57	19	291
Private Rests	...	1312	19809	21121	17	307	324	70	302
	6119	1949	25877	33945	25	411	436	115	Av. = 295

SCHOOL FOR MOTHERS.

As in former years various sewing classes for mothers have been conducted by members of the Dundee Voluntary Health Workers' Association. Poor financial circumstances interfered to some extent with the work done, as many of the mothers could not afford to buy new material.

Miss Batting again kindly lent a room in Grey Lodge for the Princes Street Class, and also for the Victoria Road and Caldrum Street Classes, which were held together during the period when alterations were in progress at the Victoria Road Centre.

SEWING CLASSES.

SESSION: JANUARY-MARCH, 1922.

Clinic.	Number of Classes held.	Duration of each Class.	Total Number on Roll.	Average Attendance.	Approximate Number of garments made.	Special Teaching of Mothers and General Remarks.
Victoria Road -	12	1½ hrs.	23	12	23	Sewing, cutting out, knitting, re-making
Lochee - -	8	1½ hrs.	14	12	35	Do.
Caldrum Street -	12	1½ hrs.	5	4	16	Do., (mostly re-making done)
Princes Street -	17	2 hrs.	70	39	200	Sewing, machining, cutting out, knitting, hat-making, Class continued during summer
TOTAL, -	49	...	112	...	274	

SESSION: OCTOBER-DECEMBER, 1922.

Victoria Road -	11	1½ hrs.	24	20	41	Sewing, cutting out, knitting, re-making
Lochee - -	7	1½ hrs.	13	8	re-making	Owing to trade depression all the work done consisted of re-making old garments
Caldrum Street -	...	...	...	...	...	Included in Report of Victoria Road Clinic
Princes Street -	13	2 hrs.	76	40	150	Sewing, machining, cutting out, knitting, hat-making
TOTAL, -	31	...	113	...	191	

SOCIAL WORK.

This opportunity must again be taken to express the sincere thanks of all the officials of the Department to the members of the Dundee Voluntary Health Workers' Association who have once more assisted so loyally and willingly at the clinics, and in making garments for the children, and visiting the day nurseries.

During the year 926 garments were made for the clinics and 144 for the day nurseries.

278 garments were sold to the mothers at cost price.

26 garments were sold to the mothers at half cost.

294 garments were sold to the mothers at one quarter price.

454 garments were given free to necessitous cases.

The usual prizes were awarded for regularity in attendance at the clinics, but this year they had to be given to the mothers privately, as, although all the arrangements had been made for the usual Christmas Tea and Entertainment, it was considered necessary to cancel it on account of the epidemic of measles which was at its height in December.

Each Day Nursery had a Christmas Tree for the children attending, with presents of garments and toys.

NOTIFICATION OF BIRTHS ACT.

Under the Notification of Births Act, 4,102 births were notified during 1922, of which :—

3,931 were live births.
171 „ stillbirths.

Of these 3,931 live births, 107 were not registered until 1923, and 12 were not registered in Dundee.

In addition 156 were registered during 1922, but had already been notified in 1921.

336 births were registered but unnotified, making a total of 4,304 live births received by the Department from the Registrars during 1922.

Thus, of the 4,304 registered births, 3,968 or 92.1% were notified previous to or during 1922.

NOTIFICATIONS.

By whom Notified.	Notified.	Un-notified.	Total.	Total Cases Attended.
Doctors	647	290	937	1,400 (31.4%)
Midwives ...	1,928	13	1,941	1,941 (43.7%)
Maternity Hospital	1,068	15	1,083	1,086 (24.4%)
Handywomen ...	2	1	3	3 (.06%)
Parents	305	—	305	—
East Poorhouse ...	7	1	8	8 (.18%)
Other Sources ...	145	16	161	—
	4,102	336	4,438	4,438

OPHTHALMIA NEONATORUM.

144 cases of ophthalmia neonatorum were notified during 1922.

	Doctors.	Mid-wives.	Maternity Hospital.		Handy Women.	Dr. and Midwife.	C.W. Dept.	Eye Inst.	Transfers.	E. Poor-house.	Total.
			In-Pat.	Out-Pat.							
By whom notified	12	19	13	87	0	4	8	0	1	0	144
By whom attended	8	28	17	90	0	0	0	0	1	0	144
Total No of Births attended in 1922	1400	1941	1086		3	...	...	...	...	8	4438

TREATMENT AND RESULT OF TREATMENT.

Admitted to Hospital.		Type of Case.		Complete Recovery	Injury to Eyes.	Died during Treatment.	Initial Visits.	Re-visits.
King's Cross Hospital.	Eastern Hospital.	Mild.	Severe					
3	1	132	12	143	1	0	144	960

One case left town during treatment.

One case was transferred to Dundee from another town.

The 12 cases of the severe type were attended at birth as follows :—

Midwives	7
Maternity Ward	3
Doctors	2

In one case the eye was damaged and the other completely destroyed. This child has since died (2nd March, 1923).

DEATHS OF WOMEN FROM DISEASES AND ACCIDENTS CONNECTED WITH PREGNANCY AND CHILDBIRTH.

There were 39 deaths of women under this heading.

Puerperal Sepsis	22
Septic Peritonitis	1
Septic Phlebitis	1
Mammary abscess and septic meningitis ...	1
Peritonitis	1
Erysipelas	1
Eclampsia	1
Ante-Partum Hæmorrhage	3
Placenta Prævia	2
Cardiac Failure	1
Pulumonary Congestion and Heart Failure...	1
Influenza	1
Diphtheria	1
Multiple Neuritis and Paralysis of Heart ...	1
Cerebral Irritation and Paralysis	1

33 cases of Puerperal Sepsis came under the notice of the Maternity and Child Welfare Department, of which :—

22 died.

11 recovered.

PUERPERAL CASES.

Attendant at Birth.	Total No. of births attended in 1922.	Total No. of cases of puerperal sepsis.	Notified.	Un-notified.	Multipara.	Primipara.	Admitted to Hospital.	Died.	Recovered.
Maternity Hospital—									
In-patient (*a*)	1086	2	2	...	1	1	...	2	0
Out-patient (*b*)		1	1	...	1	...	1	1	0
Doctors (*c*)	1399	4	3	1	2	2	...	2	2
Midwives (*d*)	1941	2	17	3	14	6	17	12	8
Doctor and Midwife (*e*)	1	1	1	...	...	1	...	...	1
Handy-women	3	1	1	...	...	1	1	1	...
East Poorhouse Hospital	8	0	0	...	...	...	...	...	...
Rural cases	...	4	3	1	1	3	4	4	...
Total	4438	33	28	5	19	14	23	22	11

(*a*) 6 cases of instrumental delivery. (*b*) 2 cases of ruptured perineum. (*c*) 1 case of complicated septic abscess (leg). (*d*) 1 case of pyaemia due to old uterine trouble. (*e*) 1 case of peritonitis. (*f*) 1 case complicated by heart condition. (*g*) 1 case of incomplete abortion (macerated).

HOME CONDITIONS IN DEATHS FROM PUERPERAL SEPSIS.

Of the 22 cases—

2 were delivered in the Maternity Wards of the Royal Infirmary. Home conditions good.

17 were delivered at home and admitted later to the Maternity Wards. Home conditions in 8 cases bad; 5 cases good; 4 cases not known (admitted from rural districts).

3 were delivered at home and nursed there. Home conditions good.

HOME CONDITIONS OF THOSE WHO RECOVERED FROM PUERPERAL SEPSIS.

11 cases were delivered at home, 9 of which were admitted to Hospital. Home conditions in 6 cases good, in 3 cases bad.

2 cases were nursed at home. Home conditions good.

INFANT DEATH STATISTICS, 1922.

190 deaths occurred in children over one year and under five years.

459 deaths occurred in children under one year, distributed as follows :---

1st week.	2nd week.	3rd week.	4th week.	1-3 mths.	3-6 mths.	6-9 mths.	9-12 mths.	Total.
106	32	41	18	78	71	54	59	459

Of these 206 were breast fed.

37 were mixed fed (partly breast).

119 were artificially fed.

In 56 cases infants feeding was not commenced due to prematurity.

39 cases were not visited.

In 2 cases no particulars were available.

Regarding feeding, the ages at which these infants died were as follows :—

	1st Month	2nd Month	3rd Month	4th Month	5th Month	6th Month	7th Month	8th Month	9-12 Months	Total	Prem.	N.V.	N.P.
Breast ...	88	25	15	14	8	6	7	10	33	206	56	39	2
Mixed	4	5	4	4	5	1	1	0	13	37	...	...	...
Artificial ...	28	20	15	3	15	7	4	9	18	119	...	...	...
Total ...	120	50	34	21	28	14	12	19	64	362	56	39	2

HOUSING.

In the case of 418 of the deaths in which particulars were obtained—

147 occurred in houses of one room in which there were 453 occupants.

233 occurred in houses of two rooms in which there were 1,198 occupants.

30 occurred in houses of three rooms in which there were 167 occupants.

3 occurred in houses of four rooms in which there were 15 occupants.

5 occurred in lodging-houses.

FAMILY HISTORY.

The family history showed that in these families 752 children were still alive, that 683 had died, and of these no fewer than 580 had died in the first year of life.

In the 418 cases in which particulars were obtained, 126 mothers were engaged in work outside their own homes, and 292 were not thus employed.

In 23 cases the mother left work 1 week before confinement.
In 0 case the mother left work 2 weeks before confinement.
In 9 cases the mother left work 3 weeks before confinement.
In 1 case the mother left work 4 weeks before confinement.

45 children who died were illegitimate.

50 children who died were twin births.
108 deaths were due to prematurity.

A SPECIAL INQUIRY INTO DEATHS FROM DIARRHOEA.

35 deaths occurred from diarrhœa during 1922. Of which—

11 were breast fed.
4 were mixed fed (partly breast).
19 were artificially fed.
1 was not visited.

	1st Month	2nd Month	3rd Month	4th Month	5th Month	6th Month	7th Month	8th Month	9-12 Months	Total	N.V.	N.P.	Total.
Breast ...	2	2	3	0	0	1	1	0	3	12	1	...	35
Mixed ...	0	2	1	0	0	0	0	1	1	5	0	...	...
Artificial ...	0	5	1	1	2	3	2	1	2	17	0	...	...
Total	2	9	5	1	2	4	3	2	6	34	1	...	35

The family history showed that in these families 103 children were still alive, 68 had died, and of these no fewer than 59 had died in the first year of life.

10 mothers had worked during pregnancy, and 24 were not engaged in outside employment.

1 mother left work during the last week of pregnancy.

HOUSING.

Of the 35 deaths from diarrhœa in which particulars were obtained—

6 occurred in houses of 1 room in which there were 15 occupants.

25 occurred in houses of 2 rooms in which there were 169 occupants.
2 occurred in houses of 3 rooms in which there were 8 occupants.
1 occurred in a lodging-house.
1 case was not visited.

35

HEALTH VISITORS' WORK.

	Initial Visits.	Re-Visits.	Total.
Newly Born Infants ...	3,809	19,640	23,449
Measles	1,011	281	1,292
Whooping-Cough	300	129	429
Chickenpox	47	21	68
Ophthalmia Neonatorum ...	144	960	1,104
Broncho-Pneumonia ...	3	4	7
Puerperal Sepsis	29	0	29
Erysipelas	1	0	1
Acute Anterior Poliomyelitis	3	0	3
	5,347	21,035	26,382

Of the 3,809 homes of the newly born, visited for the first time, the home conditions were as follows:—

409 were very good.
1,694 were good.
1,464 were medium.
242 were bad.

Report on the Ante-Natal Clinic by Dr Margaret Fairlie.

The Ante-Natal Clinic has now completed its third year. Compared with the previous years there is a decrease in the number attending, due to the fact that the clinic had to be changed to the Princes Street Welfare Centre, also the number of post-natal cases was intentionally restricted.

The total number of visits is therefore less; but the number of ante-natal cases shows an increase on the previous year. When the clinic is established at 94a Victoria Road the surroundings will be much more attractive, and the personal comfort of the patients will be considerably increased.

The midwives are taking more advantage of the clinic, and the aim is to get them specially to send all primiparous patients where a doctor is not in attendance. Written instructions are sent back with the patient, and the midwives see that those are carried out.

It is encouraging to note that a large number of the patients do not stop at one visit, but return regularly, and a fair proportion also return to report after they have been delivered.

Total number of visits—		
New Cases	165	
Revisits	151	
	—	316
New Cases—		
Ante-Natal	113	
Post-Natal	52	
	—	165
Revisits—		
Ante-Natal	101	
Post-Natal	50	
	—	151

ANALYSIS OF CASES—

ANTE-NATAL.

Advice (no disease)	15
Conditions due to Pregnancy—	
Ante-Partum Hæmorrhage ...	7
Excessive Vomiting	13
Albuminuria	4
Conditions aggravated by Pregnancy—	
Varix	12
Hæmorrhoids	1
Conditions complicating Pregnancy—	
Breech Presentation ...	4
Contracted Pelvis	3
Constipation	17
Excessive Discharge	4
Prolapse	3
Dysuria	2
Dental Caries	5
Debility	4
Pruritus	1
Respiratory	4
Various	6
Myalgia	3
Venereal Diseases—	
Syphilis	4
Gonorrhœa	1
Total ...	113

POST-NATAL.

Advice	11
Constipation	10
Retroversion	4
Prolapse	2
Menorrhagia	5
Vaginitis	1
Cystitis	3
Debility	6
Dental Caries	2
Headaches	1
Cancer of Cervix	1
Abortion	1
Repeated Stillbirths (Wassermann Negatives	1
Venereal Diseases—	
Syphilis	2
For Examination (not pregnant) ...	2
Total ...	52

MARGARET FAIRLIE, M.B., Ch.B.

Dental Clinic.

I beg to submit my Annual Report for 1922. I regret to state that the attendances are not by any means so numerous as they might be, and I am more than ever of the opinion that this is due to the fact that the patients are not assisted to obtain the necessary dentures after extractions, which unfortunately in many cases, is the only possible method of treatment.

I would like to thank Dr Scott Dickson and Dr Margaret Fairlie for their great interest in the clinic, and Nurse Jameson for her assistance, and for her kindness to the patients.

The followng is a statement of the work done in the Clinic :—

Patients	45
Visits	144

Permanent Extractions.	Temporary Extractions.	Fillings.	Scaling.	Dressings.	Advice.	Dentures.	General Anaesthetic.	Refused Treatment.
140	11	36	5	45	33	10	3	2

H. GORDON CAMPBELL, L.R.C.P. and S.E., L.D.S.

REPORT

OF

Mr Ferrier, Veterinary Inspector

DAIRIES.

While veterinary inspection has done much to improve the conditions under which our milk supply is produced, still it leaves much to be desired. The greater part of the milk consumed in Dundee is produced from cows outwith the Burgh, and over these we have no control. The dairyman who takes the necessary precautions to supply pure milk increases his expenses, and has to compete with the dairyman who knows or cares little or nothing about preventing contamination of the milk. The public are the chief sufferers, and also the chief offenders, owing to their indifference and their desire for cheapness.

During the year 1913 the Board of Agriculture and Fisheries issued a new Order called the Tuberculosis Order of 1913, which gave the Local Authority power to cause any cow suffering from tuberculosis, accompanied by emaciation, to be valued and afterwards slaughtered. Compensation was paid to the owner by the Local Authority for any cow so dealt with. Half of the compensation paid by the Local Authority was refunded by the Treasury. This Order has a good effect on the health of the dairy cows. A cow must first show signs of emaciation, although it might be in such a condition as to be capable of infecting other cattle coming in contact or living in the same byre. I maintain that such a cow is a source of danger to the human subject as well as to other cattle, and therefore ought to have been included in the Order and slaughtered. This would undoubtedly increase the amount of compensation payable, for at least a year or two at the first, but ultimately there would be a saving, as such cows capable of spreading the disease would not then exist. I even doubt that the amount of compensation would be much increased, because the salvage of such an animal slaughtered when in such condition, and before reaching an advanced stage of the disease, would be much greater, and taking that into consideration, the actual loss to the Local Authority would be small, and the benefit the public would derive would be good value for the money expended.

Shortly after the outbreak of the war this Order was suspended while the war lasted, and it is unfor-

tunate that the Ministry have again delayed the reintroduction of the Tuberculosis Order of 1913, as it would have given the Local Authority complete control over the disposal of a dangerous tuberculous cow, which the owner of such can dispose of almost in any way that may occur to him. The reintroduction of this Order would have entailed some expenditure, but when that is placed against the protection it would afford to the life of children against infection with bovine tuberculosis and might well have been productive of an equivalent saving, by reducing the number of cases of bovine disease in children and lessening expenditure on the treatment of its effects.

During the year I examined 4,616 cows, which necessitated 259 visits to dairies, and on the whole found the health of the cows to be very satisfactory.

CATTLE MARKET.

The Cattle Market is visited by me every market day (Tuesday), and all the cattle, sheep, and pigs exposed for sale are inspected for the purpose of preventing animals showing symptoms of disease, and which are ultimately intended for human food being sold. The Superintendent of the Market and I seize all suspicious animals exposed for sale in the fat stock market, under powers conferred by Section 43 of the Public Health (Scotland) Act, 1897, which renders the owners of animals so seized liable to prosecution. The owners of such animals are given the option of sending them to the slaughter-house to be killed. There the carcases undergo a minute inspection, and are dealt with on their merits. In the event of the owner of such failing to comply with our request, the animal can be seized and the owner prosecuted under the Act above mentioned.

There has been only one case during the past fifteen years in which the owner of a diseased animal exposed in the market has attempted to defy or question the authority of the Inspectors, for which he was prosecuted and fined £20, and expenses of the prosecution.

SLAUGHTER-HOUSES AND MEAT MARKET.

The following table shows the number of animals slaughtered at the Public Slaughter-Houses, and

found to be unsound, and the weight of each class seized and condemned as being unfit for human food.

Diseased or Unsound Carcases.			Weight (in lbs.) Condemned.		
Cattle	... ...	540	Beef	... ...	108,753
Calves	... ...	15	Veal	... ...	519
Sheep	... ...	47	Mutton	... ...	1,378
Pigs	... ...	64	Pork	... ...	3,025

The following table shows the number of carcases, dressed or undressed, brought in during the year and found to be diseased or unsound, and the weight of each class seized and condemned as being unfit for human food :—

Diseased or Unsound Carcases.			Weight (in lbs.) Condemned.		
Cattle	... ...	339	Beef	... ...	80,218
Calves	... ...	23	Veal	... ...	1,243
Sheep	... ...	303	Mutton	... ...	12,159
Pigs	... ...	56	Pork	... ...	3,949

In addition, the following organs were seized and condemned at the Public Slaughter-Houses :—

Cattle Organs.		Sheep Organs.		Pigs Organs.	
Cows Udders	62	Livers	4	Udders	27
Livers	563	Plucks	155	Plucks	41
Lungs	148	Kidneys	21	Kidneys	8
Hearts	21	Lungs	42	Heads	37
Kidneys	36			Livers	6
Heads	95	AND			
Tongues	136	Frozen Meat,	239 lbs.		
Skirts	59	Frozen Ox Hearts,	36 lbs.		
		Tinned Meat,	273 lbs.		
		Frozen Liver,	84 lbs.		

ANTHRAX.

During the year there were 5 cases of anthrax. One occurred at a farm within the burgh, other 2 were detected and diagnosed at the Slaughter-house, in the carcases of a bullock and a heifer which were sent into the Slaughter-house after being bled, for the purpose of being dressed and sold for food. Another bullock was found unwell at the Slaughter-house and was killed, when it was found to be suffering from anthrax. The fifth one was sent into the Dead-Meat Market dressed for the purpose of being sold for food, when in the process of inspection was detected and found to be infected with anthrax.

SWINE FEVER.

During the year 9 visits were made to pigs reported to have died suddenly, 3 of which were reported to the Board of Agriculture as being suspected of being infected with swine fever, and dealt with by them.

PARASITIC MANGE.

4 visits were made to horses affected by parasitic mange.

In each case of parasitic mange a weekly report has to be sent to the Ministry of Agriculture and Fisheries and also to the Local Authority, which necessitated sending 4 reports to each during the year. In each case a Restriction Schedule is served on the owner to prohibit him from working an animal on the street while it is infected, which necessitated one schedule being served on owner of infected horses, and in each case a copy of same has to be sent to the Local Authority and also to the police in connection with each case.

FOOT AND MOUTH DISEASE.

During the last week of January there was a serious outbreak of foot-and-mouth disease, in Perth and Stirling, &c. Two cows that had come from Lancashire to Perth, and were in Perth market on the Friday, were sold in Dundee market on the following Tuesday. One of them was sold to a dairyman just outside the burgh boundary, along with another. Two days later they were reported as being suspected, then next day I had all the cows traced that were sold in the market, and found the second Lancashire cow along with another that was in the same consignment in the market, and both were suspicious.

Next morning I saw them again, I then called at the dealer's premises in the city who brought them from Perth, and found three cows in his byre showing symptoms. I immediately wired the Ministry of Agriculture and Fisheries, whose Inspectors arrived here in the evening, and I took them to both premises. when both cases were confirmed. On the Monday night previous to our market being held the Ministry sent

a telegram advising the Local Authority that foot-and-mouth disease had broken out, and requesting that no market should be held, but it was too late to get in touch with the consigners of stock to advise them that there would be no market. Therefore, the market was allowed to go on. Had the market been closed, every consigners cattle would have been meeting and mixing on the roads and streets, and it would have been impossible to know what cattle had been in contact, or where they had returned to, but by holding the market every animal that was in it was able to be traced, and followed up and inspected immediately afterwards.

In all, there were six outbreaks in the city. There were two cases in Dundee to start with. On one of the premises there were 57 animals, 3 of which were infected. On the second premises there were 27 cows, 2 of which were infected, but by the time the Ministry had them slaughtered nearly all of them were infected. Other two cases followed soon afterwards, which involved the slaughter of 40 animals. After an interval of a month other two cases occurred in dairies in the city. By this time the Ministry had changed their policy, and had the cattle isolated, and all movement to and from the infected premises stopped, instead of slaughtering them and paying the owners compensation. Owing to the outbreak the Cattle Market was closed for two weeks, during which time it was all thoroughly cleansed and disinfected. While the disease lasted, the movement of animals within and into the city was controlled by license, and over 2,000 licenses authorising movement were issued.

IRISH ANIMALS ORDER.

The Irish cattle trade has been subject to restrictions throughout the whole year, and during the early months no Irish animals were permitted to be landed in Great Britain.

On 23rd March the Ministry issued an Order permitting the admission of Irish cattle for slaughter or for movement to farms, where they were required to undergo 28 days' detention, subject to constant supervision. This Order has been modified, and the period

of detention reduced to six days. The Purpose of the Irish Animals Order presently in force is to prevent Irish cattle rushing from market to market, which will assist materially in preventing the spread of infectious disease with which cattle may come in contact with in a market. The movement of Irish cattle has now been placed on a permanent basis, and after landing cattle may only be moved under accompanying license to farm premises either direct from the landing place or after passing through a specially authorised market, and they must be detained for six days after arrival at their destination. 2,020 Irish animals were admitted into the City under licence, the inspection of which necessitated 150 visits.

The Irish Animals Order also require that Irish cattle exposed for sale in a specially authorised market must be isolated from all other animals in the market.

The passing of the Importation of Animals Act in December providing for the importation of Canadian store cattle marks a very important change of policy followed by the Government for almost thirty years. The Act comes into force on 1st April, 1923, and thereafter Canadian store cattle will arrive in this country.

VETERINARY ATTENDANCE ON HORSES BELONGING TO THE CORPORATION.

Nine horses were examined for soundness before being purchased by the Horse and Provender Committee. One for the Parks and Cemeteries, two for the Works, and six for the Cleansing Departments. The attendance during the illness of horses belonging to the different Departments necessitated 175 visits during the year. The whole stud are in a very satisfactory state of health and in excellent condition.

King's Cross Hospital.

REPORT

BY

Dr. Walter Alexander,
Resident Medical Officer.

During the year 1922 there were admitted to King's Cross Hospital 776 cases of ordinary infectious diseases, and 144 of tuberculosis.

The daily average number of such patients was 56.60 in the case of common infectious diseases, and 60.23 in the case of tuberculosis.

The highest number in Hospital on any day was 185 in December, and the lowest 79 in July. The case mortality of the common infectious diseases. exclusive of tuberculosis, was 6.7 per cent.

RETURN OF PATIENTS FOR THE YEAR 1922.

Disease.	In Hospital 1st Jan., 1922.	Admitted during the year.	Discharged during the year.	Died during the year.	Remaining in Hospital on 31st Dec., 1922.
Scarlet Fever	51	334	337	6	42
Diphtheria	13	249	203	24	35
Typhoid Fever	2	15	15	1	1
Influenza	0	56	52	4	0
Erysipelas	0	9	8	0	1
Measles	0	90	54	13	23
Whooping Cough	0	4	2	2	0
Diph.-Scarlet	0	8	8	0	0
Chickenpox	0	2	2	0	0
Phthisis	59	144	76	65	62
Ophthalmia Neonatorum ...	0	3	3	0	0
Scarlet-Measles	0	2	2	0	0
Typhus Fever	0	1	0	1	0
Pediculosis	0	1	1	0	0
Encephalitis Lethargica ...	0	2	1	1	0
	125	920	764	117	164

SCARLET FEVER.

There were 334 cases of scarlet fever admitted to Hospital during the year, an increase of 40 as compared with 1921. 6 cases proved fatal giving a case mortality of 1.79 per cent.

The sex and ages of the cases were as follows:

Ages.			Cases.	Deaths.
Under 1 year ...	M	...	2	0
	F	...	3	0
1-2 years ...	M	...	10	1
	F	...	9	0
2-5 years ...	M	...	33	1
	F	...	35	1
5-15 years ...	M	...	82	0
	F	...	105	1
15-25 years ...	M	...	16	1
	F	...	20	0
25-45 years ...	M	...	4	0
	F	...	14	1
45 years & upwards	M	...	0	0
	F	...	1	0
	Total	...	334	6

The majority of deaths in the scarlet fever cases resulted where some other condition was present as a complication.

1 child, aged 9 years, died from meningitis.

1 child, aged 2 years, died from the effects of the co-existing conditions—scarlet fever and diphtheria.

1 case, aged 3 years and 10 months, died from septic broncho-pneumonia.

1 case, aged 37 years, developed scarlet fever after a mastoid operation (before admission), and died from pyæmia.

1 case, transferred from the Royal Infirmary with scarlet fever, died of acute lobar-pneumonia, following an operation for appendicitis.

8 cases admitted during the year were found to be suffering from diphtheria as well as scarlet fever. 1 case sent in as scarlet fever proved to be one of measles.

The chief complications of scarlet fever were :—

Meningitis	1
Otitis Media	18
Simple Adenitis	19
Suppurative Adenitis ...	4
Bronchitis	3
Endocarditis	7
Nephritis	2
Joint Pains	10
Rhinitis	6
Pleuritis	1
Mastoid Abscess	1
Septic Broncho - Pneumonia	1
Lobar Pneumonia	1
	74

DIPHTHERIA.

During the year 249 cases were admitted with 24 deaths. Of the 249 cases, the diagnosis was not confirmed in 14. The cases were as follows :—

Rhinitis	3
Tonsillitis	3
Sloughs after Excision of Tonsils	1
Stomatitis	1
Acute Peritonsillar Abscess ...	1
Retrotracheal Abscess	1
Secondary Syphilis	1

Tracheotomy had to be performed in 11 cases suffering from laryngeal diphtheria and of these 7 died.

1 case died 5 weeks after the operation from cardiac failure.

1 case died 3 days after admission to hospital, tracheotomy having been performed by a surgeon prior to admission.

The following table shows the sex and ages of the cases treated, and of those which were fatal :—

Ages.		Cases.	Deaths.	
Under 1 year ...	M ...	6	1	
	F ...	4	1	
1-2 years ...	M ...	31	8	one plus Measles
	F ...	21	4	
2-5 years ...	M ...	36	6	
	F ...	25	2	
5-15 years ...	M ...	39	1	
	F ...	45	1	
15-25 years ...	M ...	8	0	
	F ...	18	0	
25-45 years ...	M ...	3	0	
	F ...	10	0	
45 years & upwards	M ...	0	0	
	F ...	3	0	
	Total ...	249	24	

The death-rate, therefore, from diphtheria was 8.9 per cent. The chief complications of diphtheria were :—

Paralysis	12
Otorrhœa	3
Adenitis	3
Broncho-Pneumonia ...	3
Meningitis	1
Nephritis	2
Rheumatism	1
Total ...	25

5 cases convalescent from diphtheria developed measles.

TYPHOID FEVER.

During 1922 15 cases were admitted with the provisional diagnosis of enteric fever, but only in 6 instances was this confirmed by serological and bacteriological investigations. The remaining 9 cases proved to be :—

Tubercular Peritonitis	1
Malnutrition	1
Gastro-Enteritis	3
Sigmoid Sinus Thrombosis ...	1
Sulphrenic Abscess	1
Intestinal Stasis	1
Contusion of Abdominal Viscera (result of an accident) ...	1

The case of sinus thrombosis died two days after operation from infective endocarditis.

The sex and ages were as follows:—

Ages.		Cases	Deaths.
Under 1 year ...	M ...	0	0
	F ...	0	0
2-5 years ...	M ...	1	0
	F ...	1	0
5-15 years ...	M ...	5	0
	F ...	3	0
15-25 years ...	M ...	2	0
	F ...	0	0
25-45 years ...	M ...	1	1
	F ...	1	0
45 years & upwards	M ...	1	0
	F ...	0	0
	Total ...	15	1

The death-rate therefore from typhoid fever was 6.6 per cent.

MEASLES.

During the year 90 cases of measles were admitted. 54 were discharged cured and 13 died. The majority of the cases were affected with pulmonary complications, broncho-pneumonia being the cause of death in all the fatal cases.

1 child, aged 2 years, developed diphtheria and died after tracheotomy.

2 cases admitted as measles were found not to be suffering from the disease but had rashes probably of septic origin.

1 child on admission was suffering from extensive ulceration of the cornea.

The death-rate from this disease was 14.4 per cent.

INFLUENZA.

During the influenza epidemic of January and February, 1922, 56 cases were admitted to hospital; 50 were discharged cured, 4 proved fatal and 2 were transferred to the Royal Infirmary.

The complications of influenza were as follows :—

Broncho-Pneumonia	...	11
Empyæma	... ...	2

The death-rate from this disease was 7.1 per cent.

ERYSIPELAS.

9 cases were admitted during the year and all recovered. 1 case developed an abscess of the face. Another case was complicated with acute nephritis.

OPHTHALMIA NEONATORUM.

3 cases were admitted to hospital and were discharged relieved.

WHOOPING COUGH.

4 cases of whooping cough were admitted. 2 were discharged cured and 2 died, the cause of death in both cases being broncho-pneumonia.

CHICKENPOX.

2 cases were admitted, and both were discharged cured.

TYPHUS FEVER.

1 case was admitted to hospital as typhus fever, but the diagnosis proved to be wrong. The case was one of acute generalised tuberculosis and proved fatal.

ENCEPHALITIS LETHARGICA.

2 cases were admitted as such, but in neither case was the diagnosis confirmed. 1 proved fatal, the cause of death being tuberculous meningitis.

SCARLET FEVER-MEASLES.

Two cases were admitted with this diagnosis, but both proved to be ordinary uncomplicated cases of measles.

TUBERCULOSIS.

During the year 144 cases were admitted to hospital. Of these 63 were males and 81 females.

76 cases were discharged and 65 died.

The percentage death-rate was :—

Males	...	44.6 per cent.
Females	...	55.4 „

The ages among the fatal cases were as follows :—

Ages.			Deaths.
Under 1 year ...	M	...	0
	F	...	1
1- 5 years ...	M	...	0
	F	...	2
5-15 years ...	M	...	3
	F	...	1
15-25 years ...	M	...	8
	F	...	12
25-45 years ...	M	...	8
	F	...	12
45-65 years ...	M	...	9
	F	...	7
65 years & upwards	M	...	1
	F	...	1
	Total	...	65

BACTERIOLOGICAL LABORATORY.

During the year the following investigations were carried out in the laboratory of the hospital :—

Cultural Investigation of Throat Swabs ...		1,625
(a) In-Patients	1,248	
(b) Contacts	377	
Direct Examination of Throat Swabs ...		20
Microscopical Examination of Sputa		121
Autogenous Vaccines		26
Widal Reactions		15
Blood Cultures		5

WALTER ALEXANDER, M.B., Ch.B., D.P.H.

REPORT

OF

Mr Mitchell, Chief Sanitary Inspector.

SANITARY DEPARTMENT,
WEST BELL STREET,
DUNDEE, 8th June, 1923.

To the Scottish Board of Health and
the Lord Provost, Magistrates, and Councillors—
the Local Authority of the City of Dundee.

GENTLEMEN,

I have the honour to submit the Annual Report showing the work of the Sanitary Department during the year 1922. The Report has been prepared in accordance with the requirements of the Board as contained in their circular dated 28th December, 1922, namely :—

"The Board also call upon every Sanitary Inspector of a Burgh to prepare annually a Report for the year ending 31st December. The Report shall contain—

(a) A general account of the sanitary state of the Burgh as regards Water Supply, Drainage, Scavenging, Nuisances, &c., together with any suggestions for its improvement. In populous and closely-built centres where closets on the conservancy system remain, the Report should show the number converted to the Water carriage system during recent years, as well as the number of privies, earth closets, and privy middens remaining at the end of the year.

(b) An account of his General Inspections, and of any special inspections or enquiries, including the supervision of Slaughter-houses and other offensive trades, and the sanitary condition of schools and of factories and workshops.

(c) An account of the condition of the common lodging-houses.

(d) An account of the condition of the dairies, cowsheds, and milkshops.

(e) An account of the condition of the Burial Grounds.

(f) An account of his proceedings under the Burgh Police Act.

(g) A Report on the work done by the Local Authority under the Sale of Food and Drugs Acts, and under the Sale of Food Order, 1921, and the Milk (Scotland) Order, 1921, with observations on any special questions which have received or require attention.

(h) An account of any proceedings under the Rag Flock Act, 1911.

(i) A Statement in such form, as the Scottish Board of Health may from time to time direct, of his proceedings during the year."

Death-Rate: Density of Population and Acreage.

The death-rate per 1,000 as calculated and corrected by the Medical Officer of Health for 1922 was 16.7 as against 15.8 last year.

The population, as estimated to the middle of 1922 by the Registrar-General, is 172,061.

The acreage of the city, excluding foreshores, is 6,548. This works out at 26.27 persons to an acre.

Staff.

The number and composition of the Staff is the same as mentioned in my Report of last year, viz. :—

1	Chief Sanitary Inspector.
1	Superintendent.
1	Plumber Inspector.
1	Housing Inspector.
2	Food Inspectors.
4	District Inspectors.
6	District Officers.
2	Junior District Officers.
1	Mason Inspector.
1	Clerk.
Total 20	

Public Sewerage of the City.

The sewerage of the city is discharged direct into the River Tay by fireclay and iron pipes, brick-built egg-shaped sewers, and stone-built rectangular sewers, the total length of which is 128½ miles

The work of superintending these and keeping them in good repair is under the charge of the City Engineer and his staff. On their maintenance and repair the sum of £2,375 was expended, whilst new sewers and gullies were provided at a cost of £1,359.

The Committee sitting on the Rivers Pollution Enquiry sent out a list of questions to be answered so far as Dundee was concerned. Thirty-five outfall sewers were thus reported upon.

No complaints of a serious nature have reached me under this head, and the sewerage system of the City may be regarded as satisfactory.

The Amphibious Ancients Bathing Association, it appears, have been in the habit of bathing at the North British Pier, Broughty Ferry, for the period of some thirty years, but owing to this pier being demolished these bathers had to remove to other bathing grounds at the Harbour Pier. The Secretary of the Association sent me the following complaint:—"We have discovered that there is a sewer pipe from the beach which at low tide sends filth right up on to the place where we are bathing. The pipe is not far enough out to catch the ebbing tide, and instead of going out to sea the filth is caught by the back eddy, and flows round and round." I immediately visited the locus and inspected the foreshore with a three-quarters ebb tide, but could then find little cause for complaint. Later, along with the Convener and the Medical Officer of Health, I made another visit with the tide three-quarters to full ebb, and again found there was nothing to call for interference. However, the matter is not being lost sight of, and should any nuisance of the nature complained of be found to occur or recur, whatever action is necessary or desirable will be taken.

A complaint was received from the occupiers of the Tay Oilcake Works, Stannergate, regarding the sewage from a farm discharging into the cooling pond in connection with their works. Samples of the water and sludge from this pond were taken and submitted to the Public Analyst, who reports, inter alia:—"There may be a small proportion of the mud derived from farm drainage, but the major part is due to a natural accumulation from decaying vegetable matter, and probably

dust and detritus from the oil mill and surface drainage. The odour on incubation did not suggest sewage, but was more of a vegetable nature. The sample did not give the re-action for cow-manure."

This report was brought to the notice of the occupiers of the Oilcake Works, who had the pond thoroughly cleaned out during the Dundee holiday week.

Water Supply.

Mr George Baxter, jun., the Water Works Manager and Engineer, reports:—

"The total average daily consumpt over the whole water area is at present 10,060,000 gallons. Of this quantity 9,747,000 gallons is brought from Lintrathen for the supply of the city and district, and 313,000 gallons from Crombie for the supply of Carnoustie. The population of the water area is approximately 210,000, so that the above total represents a daily consumpt per head of 47.90 gallons. Of this rate per head, 17.5 gallons represents the meter supply for trade and general public health purposes, including street and sewer flushing, leaving a balance of approximately 30 gallons per head for general domestic purposes. Compared with some cities in the British Isles, this figure is relatively high, although in comparison with Continental and American cities it is low. The consumpt per head in any city is really pre-determined by local circumstances, and depends largely on the habits of the people.

The Department has now an efficient and permanent waste inspection staff continuously employed in the detection and prevention of waste, with waste detection meters in operation in certain districts. Waste inspection is an important function in all waterworks undertakings, but is especially so in Dundee in view of the fact that the Lintrathen mains, owing to their corroded state, are barely able to meet the "peak load" demands of the city unless one of them is periodically scraped. For this reason also the city must before many more years have passed make the fullest use of the filtered water from Monikie."

Under Section 75 of the Dundee Corporation Order Confirmation Act of 1907, 47 notices, after authorisation by the Town Council, were served upon the owners or agents of private property to have the water supplies to dwelling-houses augmented through the introduction of new service piping or piping of a larger diameter. These notices have been complied with or are now in course of receiving attention.

At 37 different properties the water supplies have been thus increased. No complaints as to the quality of the water have reached me, and it was therefore deemed inexpedient or unnecessary to take any samples for analysis.

Scavenging and General Nuisances.

The scavenging proper of the whole town is under the charge of the Cleansing Superintendent, and all the work appertaining to same has been carried through in a thoroughly satisfactory manner and the usual good standard maintained. Such work as street sweeping; flushing; shop and household refuse removal; sweeping and flushing of private areas and courts laid with an impervious material; removal of manure from dairies, stables, &c., where requested to do so, &c., &c., having been duly attended, very few complaints reached this Department thereanent. General nuisances may briefly be summed up as the choking of various fittings relating to drains and drainage, accumulations of garbage and rubbish, paving of areas, courts, and footways, &c.; choked or defective rhones; filthy houses, closes, and staircases, and the washing or sweeping of stairs and closes, &c., and for the detection of these nuisances a continual system of property inspection has to be maintained by the Inspectors of this Department. Altogether 67,716 inspections were made under this heading, and during the course of which 14,198 nuisances were discovered. The usual means of intimating these, either verbally, by writing, or telephone had the desired effect, and in no case was it necessary for any of the facts to be brought before the notice of the Local Authority, except as otherwise stated throughout this Report.

About 75% of the nuisances dealt with by the Department consist of choked drain traps, particularly

those in connection with the base of sink waste pipes. The experience is not altogether a local one, but one that is prominent in the majority of cities of large dimensions.

This type of nuisance has on many occasions brought before sanitary authorities the question of the advantages and disadvantages of these fittings. Their utility and benefit is doubted. In tenemental properties little or no attention is paid by the proprietors or agents unless a choke occurs, and the percentage of these is in accordance with (1) the grade of property and class of tenants, and (2) the type of trap used. Even then it generally works out that when a choke occurs it is left to the officers of this Department to take the matter in hand and cause the owner or agent to have the nuisance removed. This state of matters could be easily remedied, and the following remarks are directed particularly to owners, factors, and agents, or those responsible for the upkeep of property. Were all traps, that is, sink waste traps at the foot of the main stalk, traps at the foot of rain water conductors (generally known in the district as Doulton's) plunged bi-weekly, and all main drains cleaned by means of rods and brush half-yearly, there would be at least a reduction of 50% of the chokages as occurring at the present. This could easily be done by the appointment of a sub-factor residing on the property. The abolition of such traps at the foot of sink waste pipes would, I feel sure, be beneficial, but before this could be done all waste pipes would require to be thoroughly air-tight jointed, and for the purpose of ventilation the pipe would require to be carried over the eaves—in fact treated in a manner similar to soil pipes at the present time. The traps in the internal fittings would also require to be thoroughly sealed, with the same remarks applying to the joints. The waste pipe under these conditions could, with perfect safety, join the drain direct, and, moreover, it would assist in its ventilation. It would mean, however, provision of separate rain pipes discharging into separate traps, seeing such pipes terminate under the eaves.

With those conditions in vogue fewer complaints would be made by tenants regarding smells emanating from sinks and other fittings, generally arising from

solid matter decomposing in the traps, and those living on the ground floor houses would not be compelled to keep windows closed, but use them for their true purpose—ventilation.

Whitewashing and Painting of Common Stairs and Passages.

Prior to the usual statutory notices being served on houseowners and factors in August, I, in June, drew their attention by letter to the terms of Clause 354 of "The General Police and Improvement (Scotland) Act, 1862," which is incorporated with and forms part of "The Dundee Police and Improvement Consolidation Act, 1862," and which provides that all Common Stairs and Common Passages must be cleaned by whitewash or paint as often as required. I requested them to cause the necessary painting or whitewashing to be put into the hands of tradesmen forthwith, and so enable the occupiers of the properties to enjoy the benefits throughout the summer accruing from the cleansing. This produced very satisfactory results, as much of the work was completed by the beginning of August. In 340 cases, however, it was considered that there had been unnecessary delay in giving effect to the terms of my letter, and on August 28th I caused notices to be served on these delinquents. The effect was quite satisfactory, and on the whole the work was carried out as required.

Stables.

There are 445 stables within the city, and to these 1,316 visits were made. They were found, generally, in quite as good a state of cleanliness as could be expected. Whatever instructions were given for whitewashing of premises were readily carried out

Special attention is given to the periodical removal of manure, especially during the summer months, so that the fly plague may be reduced to a minimum.

Piggeries.

The 169 piggeries, wherein are kept as at the end of the year, 1265 pigs, received 785 visits. In most cases the instructions given for cleansing, limewashing, removal of manure, &c., were given effect to, but as

there are many nuisances, of what may be termed a recurring nature, in connection with the pig-keeping industry and the conduct thereof, it has been felt for some time the possession of more stringent and definite regulations would be of great service in the supervision of these places and their environment. During the war years considerable latitude was given to encourage the business of pig-breeding and feeding. These days are past; the latitude must cease, and piggeries should be kept in a manner and placed in such positions with surroundings as will produce no nuisance, or justifiable complaint, or be dangerous to health.

Up to the present time we have no bye-laws dealing with piggeries and the keeping thereof, but to aid us these have been drafted, which will shortly be submitted for the approval of the Local Authority, after which they will go through the usual legal routine procedure to become law. Through their instrumentality many of the conditions which are meantime tolerated will be dealt with and removed.

Complaints.

Complaints received at the office, either personally, by telephone, or by letter, numbered 2,414, being a decrease of 13 as compared with last year. These were all carefully enquired into, and further action was taken in regard to 2,267, whilst in 147 of the complaints it was found on enquiry these were based on some trivial matters or the outcome of a neighbours' quarrel. Of the latter it was in many cases a difficult matter to find out the author, as the complaints were received in an anonymous manner. The Departments of the Chief Constable and the Superintendent of Cleansing co-operate in the matter of reporting to this Department all nuisances or irregularities found in the course of their officials' duties, which greatly assists in nuisance removal, as by immediate notification it allows my Inspectors to get to the seat of the trouble at the speediest moment. The complaints as generally dealt with were found to be affecting choked drains, W.C.'s, defective sanitary fittings, sink woodwork, bad smells, defective rhones and rain-water conductors, dilapidated ashbins, badly constructed or

broken-down ashpits, and non-weekly washing or sweeping of stairs or passages used in common at tenement properties, &c., &c.

Statutory Intimations or Notices.

Under the Public Health (Scotland) Act of 1897; Local Acts; the Burgh Police (Scotland) Acts, and the Factory and Workshops Acts, there were 19,019 notices or intimations, written or verbal, served upon the proprietors or agents of property or authors of nuisances, and under Section 20 of the first-named Act four notices were issued at the instigation of the Local Authority, after the particulars had been laid before the Public Health Committee. With one exception these have received attention or the requisitions thereof are now in course of being complied with. The exception mentioned was a House Agent upon whom a statutory notice to provide sufficient water-closet accommodation for the use of his tenants had been served failed to comply with the terms thereof. After all persuasive means had failed the particulars were, with much reluctance, placed in the hands of the Procurator-Fiscal. The accused appeared before the Magistrate in the Police Court, when the case was continued on the understanding that the terms of the notice would be complied with. Later additional water closet accommodation was provided, and the accused was dismissed with an admonition.

Letters and Special Reports.

1,627 letters and special reports regarding the insanitary condition of properties, &c., nuisances of other description, and general correspondence, have been sent from and received at the office.

Infectious Diseases and Disinfection.

Visits of enquiry numbered 2,624, whilst 703 patients were removed to King's Cross Hospital. It was not necessary for any contacts in connection with the cases of infectious disease to be removed to the Reception House in Fleuchar Street. Notices served under Sections 50 and 53 of the Public Health (Scotland Act, numbered 2,847, these directing the attention of the householders to the prevention of the spread of infectious disease. 4,138 intimations were sent to the

Education Authorities, school teachers, &c., preventing the attendance of school children. The houses or premises disinfected numbered 1,212, and sets of bedding, clothing, &c., 16,198. When special authority was given by the owner the bedding, &c., was destroyed. Included in the premises disinfected were 25 for cancer, 17 houses for vermin, 9 rooms in public or semi-public buildings, 1 military building, &c., and in connection with foot-and-mouth disease 1 hay loft.

The Municipal Dispensary was disinfected on one occasion each month.

Raw jute and jute cloth for export to the Argentine, &c., which required to be disinfected before certificates to allow of exportation were granted, totalled 5,577 bales.

Under this head fuller details, particulars, and statistics are given in the Report of the Medical Officer of Health.

Drainage and Structural Improvements.

At 127 properties improvements have been carried out, in connection with which the following sanitary appliances have been used :—

138 Water-closets.
53 Sinks.
12 Baths.
25 Lavatory basins.
30 Washtubs.

together with the required soil, waste, and vent pipes, traps, and necessary fittings.

Water Closets.

Of the 138 water-closets provided, 50 were new conveniences, 13 of which were introduced into dwelling-houses, and 37 placed on staircases, plats, &c.; 33 are water-closets renewed in dwelling-houses and 31 renewed on staircases, &c.

5 were provided in workshops, 3 in factories, 8 in offices, 6 in saleshops, 1 in a hall, and 1 in a dairy. 14 of the 138 represent privies abolished.

Cast-Iron Drainage.

At 8 properties cast-iron pipes, traps, and access fittings were substituted for fireclay material.

770 feet of piping and 15 traps were used in these reconstructions.

One outstanding fact in connection with cast-iron drainage systems is that after their introduction they give little or no further trouble.

At the beginning of the year tests were applied to a cast-iron drainage sytsem laid down under the supervision of this Department in 1899, when it was found thoroughly air-tight. This may occur with drainage systems of fireclay material, but it is an exception and seldom looked for.

Drainage Tests.

The drainage systems and sanitary fittings of 19 properties have been subjected to smoke, air, or water tests.

In 10 instances defects were discovered, and in some cases so serious as to render necessary entire reconstruction. 9 of the tests proved satisfactory.

Complaint is sometimes made that the water test is too severe for fireclay drains, but it has to be borne in mind that drains in use are subjected to such a test when stoppage occurs in any part.

Given a water-tight drain such as is required by Local and other Acts, when stoppage takes place the liquid will rise to the surface and be seen and the matter rectified, otherwise it soaks into the subsoil and may not be detected until the subsoil is so saturated as to discharge foul odours into the building, and these may lead to septic throats and other troubles.

Structural work and improvements of the above description were carried out under the sight of the Plumber and Mason Inspectors, who made 2,841 visits whilst the work was in course.

Back Courts, Areas, Footways, &c.

7,641 square feet of pavement flags, concrete, or other impervious material were laid anew or re-laid for the upkeep of the above connected with private properties, &c. The covering of areas with concrete, &c., is much to be desired, particularly at the buildings in more congested parts of the city, where the practise of filth-throwing is most met with. When these areas, &c., are so laid it is then possible for the Cleansing Department to give beneficial attention to the proper cleansing by sweeping, and, where provided with proper stand pipes and drainage, regular flushing with water. In the laying of back courts, areas, passages, &c., with an impervious material it is advised that gas, water, and drain pipes be inspected so that if any defect exists it can be remedied before the material is laid down. When this is not done it often occurs that the paving has to be broken for the purpose of repairs being effected, and the court is liable to develop a dilapidated and uneven surface.

Privies, Earth Closets, or Privy Middens.

In giving effect to the recommenadtion contained in the circular from the Scottish Board of Health dated 31st December, 1920, I, in my Report for that year, gave a detailed list showing the number of privies, privy middens, or earth closets, and their location. At that time there were 96 separate properties served with such conveniences, embracing 166 households occupied by 352 males and 368 females. I have revised this list and brought it up to the end of 1922. It is given in detail here, and from which it will be seen the list has been reduced to 84 separate properties of 137 households, housing 282 males and 314 females.

A scrutiny of the list shows these privies, etc., to be situated on the outskirts of the city —practically in the country — and from the use of which little or no nuisance arises. However, whenever opportunity occurs and a sewerage service available, the chance is taken to have these obsolete conveniences removed and modern water closets provided in their stead.

I think I am safe in saying without any exaggeration that no town approaching the acreage or popula-

tion of Dundee is so well equipped with a system of modern sanitary conveniences. On the other hand, we possess a valuable natural asset in the River Tay, which in its course sweeps the city's sewage right out to the sea, thus enabling us, without the expense of sewage disposal works or treatment schemes, to maintain the best water carriage sanitary convenience system in Scotland at least.

District One.

Ward.	Situation.	Number of		To Serve		
		Privies or Earth Closets.	Privy Middens.	No. of Households.	Persons. M.	Persons. F.
5	Easter Clepington	2	...	2	5	3
5	Dighty Toll (East)	2	...	2	5	3
5	Dighty Toll House	1	...	1	3	5
5	Old Manse, Mains	1	...	1	4	6
5	Castle Mains, North House	1	...	1	1	3
5	Castle Mains, South House (empty)	...	1	...	...	...
5	Castle Mains, (Cotton)	...	2	2	4	2
5	Claverhouse Dairy	...	1	1	2	6
5	Claverhouse (Cottage)	1	...	1	1	2
5	Balgray, Farm House	1	...	1	...	1
5	Balgray Farm, South Cotton	2	...	2	6	4
5	Balgray Farm, North Cotton	2	...	2	7	6
5	The Manse (Lodge)	1	...	1	...	2
5	East Kirkton (Hamlet)	3	...	5	8	8
5	Kirkgate Mains	1	...	1	1	1
5	Trottick Hamlet, N.W. Cotts.	2	...	6	10	9
5	,, N. Cottages	2	...	6	8	9
5	,, N.E. ,,	2	...	5	12	14
5	,, N.E. ,,	1	...	1	3	2
5	,, S. ,,	2	...	6	7	11
5	Balmuir Cottage	1	...	1	3	3
7	Balmuir Smithy	1	...	1	3	...
7	Balmuir North House	1	...	1	5	3
7	Magdalene's Kirkton, Bothy	1	...	1	5	...
7	Magdalene's Kirkton, Cotton	1	...	1	4	2
7	West March Farm	...	1	1	2	4
7	Balmuir Cotton	1	...	1	2	5
7	Harestane (Cottage)	1	...	1	...	3
7	Harestane (Works)	...	1	1	1	3
7	South Baldovan Farm	1	...	1	2	2
7	East Pitempton	1	...	1	1	1
7	Pitempton	2	...	2	2	2
7	Pitempton (Cottages)	2	...	2	2	2
7	517 Strathmartine Road	1	...	1	1	5
7	St. Mary's Cottar House	1	..	1	4	2
7	458 Strathmartine Road	1	...	1	...	3
7	97/99 Americanmuir Road	...	1	1	1	2
7	101 Do. Do.	1	...	1	...	2
7	103/5 Do. Do.	1	...	2	1	1
7	107 Do. Do.	1	...	1	...	3
7	109/111 Do. Do.	1	...	1	4	1
7	113/115 Do. Do.	1	...	4	3	5
7	90 Do. Do.	1	...	1	...	2
7	48 Do. Do.	1	...	1	2	2
7	West Kirkton Cottages, Kirkton Rd.	2	...	5	9	14

District Two.

Ward.	Situation.	Number of Privies or Earth Closets.	Number of Privy Middens.	To Serve. No. of Households.	To Serve. Persons. M.	To Serve. Persons. F
3	Dryburgh Cottar Houses	1	...	1	2	2
3	King's Cross Cottar Houses	2	...	2	3	6
3	Ballfield Farm House, Loons Road	...	1	1	7	3
3	Ballfield Cottar Houses	2	...	2	8	8
3	Backhill of Balgay, Cottar Houses	...	2	3	10	7
3	7 Stewart's Lane, Lochee	1	...	1	2	2
3	9/11 Stewart's Lane, Lochee	1	...	2	6	13
3	75 Kirk Street	1	...	1	2	1
3	168 South Road	1	...	1	3	2
3	56 Buttar's Loan	1	...	1	1	1
3	11 Perrie Street	1	...	1	1	1
3	North Lawton	...	1	1	3	4
7	Lawton Cottar Houses	3	...	3	11	10
7	Lawton Reservoir Lodge	1	...	1	2	1
7	Stirling Park	1	...	1	4	3
	District Three.					
8	Hillside Cottages, Ancrum Road	2	...	2	3	5
9	Blackness Nursery	2	...	2	9	6
	District Four.					
1	Ellengowan Lodge, Arbroath Road	1	...	1	3	1
1	219 Arbroath Road	1	...	1	1	3
1	251 Do.	1	...	1	2	2
1	North Lodge, Craigie	...	1	1	2	3
1	Strips of Craigie, Chaffeur's House	1	...	1	1	2
1	125 Ferry Road	2	...	1	2	2
1	135 Do.	1	...	1	4	4
1	250 Do.	1	...	1	2	2
4	166 Arbroath Road	1	...	1	2	2
4	168 Do.	1	...	1	2	5
4	Mid Craigie Cottar Houses	...	1	3	5	6
10	208/210 Arbroath Road	2	...	2	9	4
10	Claypots Cottages, Claypots Road	2	...	3	5	6
10	Claypots Cottar House Do.	...	1	1	2	3
10	Do. Do. Arbroath Road	1	...	1	3	5
10	Forthill Feus, Balgillo Road	1	...	1	2	1
11	Do. (Orrock's Houses)	3	...	3	4	6
11	Progress Place, Balgillo Road	1	...	1	2	1
11	East Balgillo Cottar Houses (New)	1	...	1	2	3
11	Do. Do. (Old)	1	...	1	2	4
11	Forthill Feus Dairy (Geekie)	...	1	1	2	2
11	281 Queen Street, Broughty Ferry	1	...	1	2	3

Ashbins and Ashpits.

Section 23 of the Burgh Police (Scotland) Act of 1903 (which was adopted by the Town Council) has been kept in operation, and together with Section 77 of the Dundee Corporation Order Confirmation Act,

1907, opportunity is taken when dilapidated and broken-down ashpits are discovered to have them removed and galvanised iron ashbins provided in their stead.

During the year 335 bins were laid down in place of 11 ashpits which had been removed or in place of bins which had become dilapidated. Complaints are occasionally received anent the abuse of these conveniences, and at times are particularly directed against the Corporation servants, who are blamed for damaging the bins during the process of emptying. On enquiry into these complaints little or no blame is found to attach to the servants of the Corporation, but rather to the tenants or their children. Far too often is liquid and excremental matter thrown into those receptacles which in itself soon causes the bin to become a total wreck. Again, certain owners or factors do not pay sufficient attention to the position on which the bins are laid. It will be readily understood that if a bin is laid on an earthy surface it does not tend to prolong its life. Bins should be laid down on an impervious surface and, if possible, on a slope where any surface water may run off into a drain. The Inspectors give every assistance possible and make all endeavours to assist the property owners, but they cannot be perpetually on the watch for the offenders and prevent damage being done.

Housing.

In the beginning of 1923 I, as a Designated Officer under the Housing Acts, prepared and laid before the Housing and Town Planning Committee the Annual Report on Housing for the year 1922, and which contained all the data available at the moment. It is embodied in full in this Report.

In my annual report as Sanitary Inspector of last year I mentioned that

OVERCROWDING

of other days was as greatly in evidence as at the present time—if not more so. Just to emphasise this statement, I went over the books of the Department relative thereto, of thirty years or so ago, and culled therefrom at random several instances that came under the notice of the officials then. The particulars of a few I here give in curtailed form.

No. 1. 4 West Port—Occupied by husband, wife, and four of a family (2 juveniles) and five lodgers (two juveniles). In all 11 persons. A two-roomed house of 1,440 cubic feet capacity. One bed and 7 of the inmates sleeping on the floor. Overcrowded to the extent of 4½ persons. Brought before the Court and fined 10s 6d.

No. 2. 11 Wilson Street, Lochee—Occupied by husband, wife and one child aged 16 weeks, along with 7 adult lodgers. In all 10 persons. Two-roomed house of 2,520 cubic feet. Overcrowded to the extent of 3 persons. Three beds. Three male and three female lodgers were sleeping in one room. Occupier fined £2.

No. 3. 189½ Scouringburn—Occupier and two of a family—adults, male and female—along with 6 lodgers, 5 adults and one juvenile, males and females. A total of 9 persons. One room of 1,171 cubic feet. One bed, shake downs on floor. Overcrowded to the extent of 5½ persons. Fined 2s 6d.

No. 4. 7 Lyon's Close—Occupier and five of a family—4 daughters and one son—along with 7 lodgers, all adults, except one child of 2 years, males and females. In all 13 persons; two rooms of 1,657 cubic feet. Two beds, shake downs on floor. Overcrowded to the extent of 8 persons. Fined 7s 6d.

No. 5. 7 Small's Lane—Occupier, wife, and 3 of a family—2 juveniles—along with three female lodgers, adults; one room of 971 cubic feet. In all 8 persons sleeping on shake downs on floor. Overcrowded to the extent of 4½ persons. Occupier fined 10s 6d.

No. 6. 44 King Street—Occupier and five of a family—juveniles—and 7 adult lodgers. 13 persons; two rooms of 1,680 cubic feet. Overcrowded to the extent of 6½ persons. Fined 2s 6d.

These are only a few of the discovered cases of overcrowding met with then, and barely a week passed without one or more offenders appearing before the magistrates for offences of this nature.

In those days it must be remembered there was ample housing accommodation and to spare—in fact, many houses of the good working-class type would stand for a year on end empty. These facts will, however, bear out the statement that it is not the scarcity of houses which create or foster overcrowding, The real cause of legal overcrowding is summed

up in the desire of a certain class of our population to congregate together. Air space receives no consideration in the slightest degree — the floor space counts. If beds are not available, shake downs on the floor answer the purpose, whilst then, as to-day, no efforts being attempted in the shape of separation of the sexes. The examples which I gave in detail in my report of last year showed that overcrowding of a like nature and to an equal extent is with us to-day in manner as of thirty years ago.

It takes no great stretch of imagination to understand the conditions under which the rising generations are reared and they in turn continue the crowding together existence—it was the life of their forefathers, and thus it continues on from one generation to another. Police prosecutions did not strike at the root of the evil—produced little or no beneficial results.

The improvement that may accrue will come from house-to-house visitation, personal instruction, and education of these people on the laws of hygiene. This is a policy of perseverance which has been going on in Dundee for a considerable time, but it means years of hard toil ere forward results are perceptible.

Since my last report, and somewhat to the regret of the householders in the Overgate, the Slum Sisters —Commandant Fryatt and Ensign Smith—who did so much useful work in a quiet and effectual way, have been transferred to the Bedminster area to work in the mission field there.

They were succeeded by Captain Grace and Adjutant Waterston, who are applying themselves to the work so well begun by their predecessors, and Blair's Lands in the Overgate are all the brighter because of their labours.

ANNUAL REPORT

ON

HOUSING OF THE WORKING CLASSES—

INSANITARY BUILDINGS, &c.

For the Year ending 31st December, 1922.

Whilst one may say that the amount of overcrowding in the City, accruing from house shortage

taken as a whole, has been considerably reduced during the year, it cannot be doubted that in certain districts overcrowding still exists to an extent which is inimical to health. The overcrowded houses generally speaking are to be found in the working-class districts, or in areas in the centre of the City, and in certain localities in Lochee, where the birds of passage find it most convenient to congregate, and instances, some of them of a very distressing kind, are constantly being brought to my notice.

In an industrial City, having a staple trade such as ours, there always has been, and I expect will continue to be, what one would call a residential connection between our permanent population and the itinerant workers who flit to and from the larger cities. This is very apparent on the open road between Glasgow and Dundee. These people reach our City mayhap late at night, seek out their old haunts, and obtain for the night or longer, accommodation in what is probably an already overcrowded house. This is one phase of overcrowding that no house sufficiency can ever cope with or eradicate.

It is the house shortage which renders it a necessity for two or more separate families to be resident under one roof that has to be solved.

Unfortunately the new housing schemes afford little or no material assistance in this problem because the high rents of the new houses are beyond the means of the majority now living under these conditions.

Relief, therefore, can only come as houses now occupied by persons able to pay the higher rents of the new houses are vacated and become available for those on a lower stratum. Here again we find the occupiers of property built prior to the war, are, under our present trade conditions and living cost, very chary in undertaking heavier rental and taxation liabilities.

Thus the solution certainly lies in the provision of more houses, but at economic rents compatible with the means of the population they are legitimately erected and intended for, and who at the moment are suffering for the lack thereof at rentals with which they can cope.

Towards the end of the year your Committee had placed before them a report on a scheme of slum clearance.

Some twenty areas, which the Sanitary Department suggested should be cleared, improved, or reconstructed, were so reported on, and on 28th December the City Engineer submitted his answers to the queries regarding the town's proposals for the improvement of insanitary areas.

The following are the particulars above referred to :—

PROPOSALS FOR THE IMPROVEMENT OF INSANITARY AREAS.

1.	(a) Locality and description of areas proposed to be improved. (The Local Authority may, if they so desire, submit a tracing from the 25 inch Ordnance Map, showing the locus.	Areas situated as shewn on Ordnance Maps and List sent to Scottish Board of Health.
	(b) Number of existing houses in areas	3,580
	(c) Do. occupied houses do.	3,258
	(d) Do. houses to be closed and demolished	1,925
	(e) Do. new houses to be erected	210
	(f) Do. existing houses to be acquired and reconstructed ...	1,655
2.	Number of houses proposed to be closed and demolished :—	
	(a) 1 apartment houses	847
	(b) 2 do.	867
	(c) 3 do.	126
	(d) 4 do. and upwards ...	85
	(e) Total houses to be closed and demolished	1,925
	(f) Number at present vacant ...	237
	(g) Number of new houses proposed to be erected in substitution for houses to be closed and demolished	210
3.	Number of new houses proposed to be erected :—	
	(a) 2 apartment houses	210
	(b) 3 do.	None.
	(c) 4 do.	None.
	(d) Total	210

4.	Number of existing houses to be acquired for purposes of reconstruction :—	
	(a) 1 apartment houses	704
	(b) 2 do.	803
	(c) 3 do.	126
	(d) 4 do. and upwards ...	22
	(e) Total houses to be acquired ...	1,655
	(f) Number at present vacant ...	85
5.	Number of reconstructed houses to be provided :—	
	(a) 1 apartment houses	704
	(b) 2 do.	803
	(c) 3 do.	126
	(d) 4 do. and upwards ...	22
	(e) Total	1,655
6.	Cost of :—	
	(a) Acquisition of land for new houses	£171,448
	(b) Erection of new houses ...	65,100
	(c) Acquisition of existing properties	282,268
	(d) Reconstruction of existing houses	248,250
	(e) Other improvements	25,000
	(f) Total cost	792,066
7.	(a) Estimated amount of annual loan charges (including sinking fund)	47,524
	(b) Period proposed for repayment of loan	Sixty years.
8.	Estimated revenue from schemes, i.e.	
	(a) Rents of houses	15,760
	(b) Other sources	None.
9.	(a) Estimated annual loss on schemes	37,416
	(b) Estimated rate per £ to meet loss	6.8 pence per £.

All the houses in these areas are either unfit for human habitation, or the narrowness, closeness, bad arrangement, and want of light, air, ventilation, and proper sanitary conveniences, are such as to render them dangerous or injurious to the health of the inhabitants. The most satisfactory method, though probably not the only method, of dealing with such areas is an improvement scheme, and at this point we must pause and wait the result of the deliberations of the Local Authority now in course.

Outwith the areas mentioned, there is a number of houses throughout the City which are either unfit

or not in all respects reasonably fit for human habitation. Full details can not yet be given but a rough computation of 500 such individual dwellings may be given. The number could readily be greatly increased if we pressed for other than the repairs (merely maintenance repairs) required to make life comfortable in the houses.

There are many old houses in the City, which, owing to neglect during the past seven or eight years, have become dilapidated and almost unfit for human habitation.

To those living in such houses the garden city is an impossibility. Their means are limited, and they cannot afford higher rents.

Again, I must put forward the plea for the erection of suitable houses for the poorer section of the community.

Pessimists declare that given better housing and environment this class of tenant would soon make other slums. A like theory was advanced when the water-closet system was inaugurated in the City, that all sorts of abuse, misuse, and nuisance would arise in the using of such sanitary conveniences, and urged that the dirty, foul-smelling privy midden was good enough or equally suitable for them.

For over twenty years, in an official capacity, I have been going out and in amongst these people, and know well their habits.

Some are terrors to both health officials and owners. They are what we would call undesirables in every respect, but they are only, after all, a fraction of the whole, and no housing conditions will ever alter their methods or nature.

There is a vast majority of cleanly, honest, and respectable people, whose means are very limited, and who have to exist under the most unhealthy surroundings.

Further, houses must be made available before the Health Department can fulfil its statutory duties

of securing the abatement of overcrowding on even the moderate standard of 400 cubic feet of air space for each occupant; to remedy the growing evil of sex intermingling, both in the adolescent and adult stage of life; and sub-letting, particularly of the smaller sized houses.

Better housing would certainly solve many of our health problems. New houses are wanted, but the need for betterment of our present decadent houses is more urgent.

Leaving out of consideration three unoccupied mansions, there is not at the present time a vacant habitable house to be got within the City.

The Town Clerk, in a very concise Report, has set forth the legal procedure in connection with slum clearances (Ref. Housing and Town Planning Committee's Minute of Meeting of 3rd October, 1922), and I would just like to emphasise that part of it dealing with the powers of the Local Authority to call upon owners to put their properties into a proper state of repair.

Section 25 of the Housing, &c., Act of 1919 enacts that—"If the owner of any house suitable for occupation by persons of the working classes fails to keep such house in all respects reasonably fit for human habitation, then without prejudice to any other powers the Local Authority may serve a notice in writing upon the owner of such house requiring him within a reasonable time, not being less than twenty-one days, to execute such works as may be necessary to make the house in all respects reasonably fit for human habitation."

Failing the owner fulfilling the demand made upon him, the Local Authority may carry out the necessary repairs themselves, ar[1] charge the owner with the cost, unless the house is in such a state as to be incapable, without reconstruction, of being rendered fit for human habitation, in which case the owner may close the house. Any dispute as to whether or not a house is capable of being made fit for habitation falls to be determined by the Sheriff.

In connection with the repair of houses, reference may be made here to the recent decision in the Dunfermline Sheriff Court, in which it was held that where it was proved that the work required by the Local Authority did not constitute re-construction, an owner had not the right to intimate that he would close the dwellings instead of carrying out the necessary repairs.

The Housing, Town Planning, &c. (Scotland) Act, 1919, Section 44, lays down a standard of housing, namely, a minimum of three apartments, but probably because the occupants of insanitary property are not, as a general rule, able to afford the rents requisite for houses of such size, the Board of Health are prepared to authorise under new proposals the erection of houses of two apartments with separate bath and water-closet, scullery, larder, press, and cellar accommodation.

The need for housing, and still more housing, is well amplified in the census figures and data relating to our City, and which I trust will be of some interest.

Population.

In taking the population figures as a basis of statistic calculations, we find considerable variations from the Census returns of 1921. In that year the population was returned by the Registrar-General as 168,315.

The figures given as estimated at 1st January, 1922, were 167,600, whilst as estimated at the 1st January, 1923, they were 175,900, an increase in one year of 8,300. This huge increase during one year is certainly abnormal. We must therefore assume that the figure for 1922 was far below the reality, and that the 1923 estimate gives us a truer gauge of our population strength. More so is this the case when we observe that the 1922 estimate is even below the Census returns of the former year, and naturally we look for these returns providing us with reliable population data.

Therefore the statistics to be as near accurate as possible must be based on the higher figures.

Housing Conditions in Dundee based on the Census Returns for the various Decennial Years.

Census Year.	Total Inhabited Houses.	Total Population.	Average number of Inmates per house.
1891 ...	31,839	153,330	4.81
1901 ...	36,829	161,173	4.37
1911 ...	38,637	165,004	4.27
1921 ...	42,256	168,315	3.98

Return of Occupied Houses in Dundee.

One-roomed houses = 15.7 per cent. of total in 1921.

Census Year.	Number of.	Number of Inmates.	Average number of Inmates per house.
1891 ...	8,499	22,206	2.61
1901 ...	7,371	18,252	2.47
1911 ...	6,553	15,854	2.42
1921 ...	6,650	15,056	2.26

Two-roomed houses = 51.7 per cent. of total in 1921.

Census Year.	Number of.	Number of Inmates.	Average number of Inmates per house.
1891 ...	17,834	81,488	4.56
1901 ...	19,503	83,363	4.27
1911 ...	20,503	85,324	4.16
1921 ...	21,843	85,541	3.92

Three-roomed houses = 17.8 per cent. of total in 1921.

Census Year.	Number of.	Number of Inmates.	Average number of Inmates per house.
1891 ...	4,812	26,120	5.42
1901 ...	6,177	32,463	5.25
1911 ...	6,177	34,678	5.19
1921 ...	7,538	35,255	4.68

In Dundee at 19th June, 1921, according to the Census figures :—

	As compared to in 1911.
8.9 per cent. of the population were living in one-roomed houses.	9.88
50.8 per cent. of the population were living in houses of 2 rooms	53.16
20.9 per cent. of the population were living in houses of 3 rooms.	21.61
19.4 per cent. of the population were living in houses of 4 rooms and over.	15.35

On a standard of not more than three persons to a room, 11.3 per cent. of the population are living in an overcrowded condition, as compared with about 13.9 per cent. in 1911.

HOUSES IN WHICH 3 OR MORE PERSONS PER ROOM WERE ENUMERATED :—

	1 Room.	2 Rooms.	3 Rooms.	4 and over Rooms	Total.
1911 -	1,322	2,798	344	9	4,473
1921 -	1,076	2,420	222	7	3,725

Further examination of the Census figures, however, reveals that the average number of persons to each 100 rooms is now 152 instead of 169 in 1911.

If the average number of persons per house had continued to be 4.27 as in 1911, then, seeing there are 42,256 occupied houses, the population of Dundee would have been 180,433 in 1921 instead of 168,315 as is the case when the average number of persons per house has fallen to 3.98.

The number of separate occupiers as against the number of occupied houses serves to indicate the dearth of houses, as no fewer than 969 families are shown to be occupying only part of a dwelling-house, and this incidence is shown particularly in the 2nd, 1st, 9th, and 4th Wards in the order named.

These figures are amplified in the table dealing with Sub-Letting of Houses. No fewer than 837 houses, including 299 two-roomed houses and 246 houses of three rooms, are sub-let.

There is, in addition, an unnumbered section of the people who are compelled to remain in furnished lodgings, as apart from sub-let houses, owing to their inability to secure suitable houses.

NEW HOUSES.

The total number of new houses completed and occupied during the year was 277, which were provided by, and may be classed for, as follows :—

Provided by the Town Council under the Housing Schemes, each house 3 rooms and kitchenette—

Hospital Park Scheme ...	4	suitable for the working classes.
Stirling Park Scheme ...	80	
Taybank Housing Scheme...	168	
Provided by private enterprise— 3 rooms each, Timber Houses	4	
	256	
Provided by private enterprise—	21	houses of four rooms and upwards.
Total ...	277	

The Dundee Garden City Association, Ltd. recently acquired 9½ acres or thereby of ground on the north side of Kingsway for the erection of semi-detached houses—two flats of 5 rooms and kitchenette each. Plans have already been passed for the erection of 82 houses, and 10 now nearing completion will, I understand, be occupied early in 1923.

The current housing policy was agreed upon in January, 1916,, and at the end of 1921, 169 houses, which amongst others were left to the Sanitary Inspector to deal with under Class 1, were still unsatisfactory.

During the present year 102 houses at 41 properties have been improved.

Under Section 17 of the Housing, Town Planning, &c., Act, 1909, 3,225 visits were made to insanitary buildings, or to properties where alterations and improvements were in progress following upon action taken by this Department.

The following is a synopsis of how the various Housing Schemes under the charge of the Housing and Town Planning Committee stand as at 31st December, 1922:—

		OCCUPIED HOUSES. ROOMS.		IN COURSE OF ERECTION. ROOMS.
SCHEME.	Area in Acres.	Two.	Three.	Three.
Logie	20.243	88	162	—
Hospital Park ...	10.33	52	100	—
Stirling Park ...	9.67	—	100	—
Taybank ...	15.82	—	168	12

N.B.—All the above houses are of the flatted type and have kitchenettes in addition.

At Craigiebank 4 four-roomed framed houses of the cottage type have been erected and occupied.

In July, 1921, the Government called a halt in housing, but as a result of persistent representation made by the Dundee Housing Committee the Board have agreed to sanction the erection of an additional 200 houses. Of this number plans have been prepared for the erection of 40, i.e., 16 at Stirling Park, 12 at

Forthill Road, Broughty Ferry, all on the flatted system, with three living rooms and a kitchenette in each; and tenements at Logie, comprising 8 houses of two rooms, and 4 three-roomed houses, all with sculleries and bathrooms. The balance of the houses is to be erected at Dudhope and Craigiebank sites.

INCREASE OF RENT AND MORTGAGE INTEREST (RESTRICTIONS) ACT, 1920.

When the above Act came into force the onus of seeing its provisions carried through was placed upon the Medical Officer of Health and the Chief Sanitary Inspector, and during its existence 104 householders have made application to the Sanitary Authority for a Certificate under Section 2, paying the stipulated fee of one shilling as required by Sub-Section 4 of the Act, and of this number details of 102 were given in last year's Report.

Of the applications for 1922 one was from the occupier of a cottage (certificate refused), and the other referred to a working man's house. After the certificate was granted in the latter case the dwelling-house was in all respects made reasonably fit for human habitation.

As the direct result of pressure from the Department this year the owners of 22 separate dwelling-houses agreed to withdraw the increase of rent permitted under the above Act without having recourse to legal proceedings.

Summary in Regard to Housing Conditions and Alterations during 1922.

I. Particulars of Houses (102) Improved :—

	1 Room.	2 Rooms.	3 Rooms.	4 and over Rooms.
(a) At properties "represented"	—	—	—	—
(b) At instance of Sanitary Inspector after "representation" had been made ...	3	19	1	—
(c) At properties that had been voluntarily closed for a period	2	1	2	—
(d) At instance of Sanitary Inspector, but not "represented" to Committee ...	12	43	4	4
(e) After Plans had been submitted to and approved of by the Works Committee	—	1	—	10

II. Shops and other Premises converted into dwelling-houses (19) during 1922 :—

	1 Room.	2 Rooms.	3 Rooms.	4 and over Rooms.
(a) 13 Shops	—	10	2	1
(b) 2 Stores	1	1	—	—
(c) 1 Workshop ...	—	—	1	—
(d) 1 Part of Common Lodging-house ...	—	1	—	—
(e) 1 Private School ...	—	—	—	2

III. New Houses built and occupied during the year 1922 :—

(a) By Private Enterprise.

	3 Rooms.	4 and over Rooms.
Ward 3	—	1
„ 5	—	3
„ 7	4	9
„ 8	—	3
„ 9	—	1
„ 10	1†	1
„ 11	—	2

Total, 25 houses.

(b) Under the Housing Schemes.

	3 Rooms.
Ward 1	168†
„ 7	84†

Total, 252 houses.

Giving a grand total of 277 new houses erected throughout the year.

†With Kitchenettes.

IV. Particulars of Dwelling-Houses Closed (48) for human habitation during the year 1922, in whole or in part :—

	1 Room.	2 Rooms.	3 Rooms.	4 and over Rooms.
(a) Voluntarily — houses generally in very bad repair, very damp, and not reasonably fit for human habitation	8	9	1	1
(b) Converted into business premises, offices, or workshops	4	9	3	5
(c) Reconverted into shops ...	5	3	—	—
Total	17	21	4	6

V. Dwelling-Houses Demolished (30) during the year 1922 (no demolition order):—

	1 Room.	2 Rooms.	4 Rooms.
(a) Dwelling-houses that had been closed by order ...	7	—	—
(b) Dwelling-houses that had been closed voluntarily	14	8	1
Total ...	21	8	1

NOTE.—In addition to the above 5 obstructive buildings were removed.

VI. Net Results for 1922:—

The net result for the year is that there are 254 more houses available for human habitation than at 31st December, 1921, i.e., houses of:—

1 Room.	2 Rooms.	3 Rooms.	4 and over Rooms.
14 fewer.	8 fewer.	258 more.	18 more.

N.B.—At present there are no houses of less than 3 rooms in course of erection.

VII. Inhabited and uninhabited houses.

The following figures for 1922 as supplied by the City Assessor show the position under this head:—

WARD.	Occupied Houses.	Unoccupied Houses (with the exception of 3 unfit for human habitation).
1	3,588	12
2	3,338	13
3	4,159	8
4	4,989	7
5	5,728	2
6	4,429	6
7	4,892	12
8	5,241	9
9	5,082	11
10	1,159	9
11	1,590	1
Total ...	44,195	90

VIII. The Official Return submitted to the Scottish Board of Health for the year ended 31st December, 1922, is as follows:—

(a) HOUSING, TOWN PLANNING, &c., ACT, 1909.

1. Number of dwelling-houses inspected under and for the purpose of Section 17 73
2. Number of dwelling-houses which on inspection were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation 73

3. Number of representations made to the Local Authority with a view to the making of Closing Orders 30

4. Number of Closing Orders made ... ... Nil.

5. Number of dwelling-houses the defects in which were remedied without the making of Closing Orders (see below for proceedings taken under Section 25 of the Housing, Town Planning, &c. (Scotland) Act, 1919 12

6. Number of dwelling-houses which after the making of Closing Orders were put into a fit state for human habitation ... ... Nil.

(b) Housing, Town Planning, &c. (Scotland) Act, 1919.

1. Number of dwelling-houses in respect of which notices were served under Section 25 (1) ... ... Nil.

2. Number of dwelling-houses rendered fit for human habitation under Section 25 (1) ... ... Nil.

3. Number of dwelling-houses in respect of which Closing Orders became operative under Section 25 (1) Nil.

4. Number of dwelling-houses rendered fit for human habitation by the Local Authority under Section 25 (2) ... ... Nil.

5.* Number of cases where notices were served under Section 40 (1) to provide dwelling-houses with water supply:—

(a) Cases where requirement complied with by owners.

(b) Cases where works carried out by Local Authority after failure of owners to do so.

(c) Cases still pending.

6.* Number of cases where intimations were given under Section 41 (2) as to insufficient water-closet accommodation:—

(a) Cases where requirement complied with by owners.

(b) Cases where works carried out by Local Authority after failure of owners to do so.

(c) Cases still pending.

*These provisions do not apply to Burghs.

7. Number of houses of (a) one apartment and (a) Nil.
(b) two apartments for the erection of which the consent of the Local Authority has been given in terms of Section 44 (1) (b) Nil.

General character of the deficits found to exist:—

Inadequate lighting and ventilation; low ceilings; houses not provided with sinks and inside water supply; insufficient water-closet accommodation; steep, worn, or dangerous stairs; damp walls and floors; insufficient ashpit or ashbin accommodation; and open spaces around the buildings restricted.

N.B.—The foregoing dwelling-houses have been dealt with in terms of Section 138 of "The Dundee Police and Improvement Consolidation Act, 1882," and not under the provisions of "The Housing (Scotland) Acts, 1890 to 1919."

IX. The Total number of dwelling-houses in course of erection (55)—all stages—at 31st December 1922, is as follows:—

Ward.	*3 Rooms.	4 and over Rooms.
1	12	—
5	—	6
7	—	15
8	—	10
9	—	3
10	1	—
11	1	7
	—	—
	14	41

*With Kitchenettes, &c.

Tents and Vans.

Every year—perhaps more so during the winter months—members of the itinerant fraternity, whose life is in the open, make the city a temporary abiding place. The usual localities favoured by these caravan and tent dwellers are in Wilkie's Lane and Lowden's Alley; Gussie Park, in the Clepington district; the grounds of the Wester Clepington Estate; or Reid's Lane, Lochee.

These communities comprise a very mixed crowd, and include show people, horse dealers, hawkers, &c., with a fair sprinkling of gipsies—male and female. Throughout the flower show season, and particularly during the Dundee Flower Show week, large numbers of caravans with their occupants were to be found in Lochee Park, Magdalen Green, and North End Park

Later in the year two large carnivals were held in the Gussie Park—the second one lasting about 6 weeks—and in spite of the very inclement weather experienced, and the large number of vans and occupants there segregated together, no real cause for complaint could be found at any time with respect to the sanitary conditions of the show ground, the encampment or environment. By arrangements with the Cleansing Department the refuse was removed daily, whilst the sanitary conveniences situated at the north of the ground proved a great boon, and assisted in keeping the place free of nuisances. Again, the lessee was of great assistance to the officials of this Department in carrying out all recommendations and requirements promptly.

Unfortunately the conditions prevailing at Wilkie's Lane and Lowden's Alley were not so propitious. At the height of the season here there is a big gathering of as many as 34 caravans housing over 120 persons. Some little time ago, after strong representations had been made from the Department, the factors of this vacant ground were prevailed upon to lay on a supply of water for culinary and domestic purposes along with sufficient ashbin accommodation, but no sanitary conveniences were provided. With a population such as I have indicated, the condition into which the ground and surroundings of the encampment would soon become can be readily imagined, and complaints from the permanent population living in the adjoining tenements were frequent. I therefore, accompanied by the Medical Officer of Health, made a special visit to the locus, the result of which was that the subject of providing a sufficient number of water closets here for the use of these persons was taken up afresh, and is presently under negotiation.

Under this head there were 206 visits paid, special attention being given to the cleanliness of the vans, accommodation, separation of sexes, &c., and taking them as a whole—with the exception of what I have above mentioned—there was little to cavil at. Many of the occupiers of the caravans take pride and maintain a high standard in the keeping of the interior of their travelling homes.

Housing of Seasonal Outworkers.

Intimations were sent to all the farmers within the City area bringing to their notice the provisions of the Bye-Laws relative to Seasonal Outworkers, and calling their special attention to the conditions pertaining to separate the sexes, clean bedding, culinary and cooking arrangements, the provision of proper sanitary convenience, &c.

The terms of these Bye-Laws have been carried out by the employers, and, on the whole, this class of work can now be considered as being carried on in a proper and satisfactory manner, and under the best hygienic conditions obtainable.

The Schools.

The Schools call for little comment by me so far as their structural condition is concerned or in regard to their cleanliness. The officials of the Education Authority see that the buildings and sanitary appliances are kept in a good working order.

During the year no complaints were received anent these places, and on no occasion was it necessary to have any of the schools disinfected.

Factories and Workshops

have been kept under a steady system of inspection to see that the provisions of the various Factory and Workshop Acts or Orders were being given effect to, and taking these premises all over they may be considered as satisfactory and the workers performing their duties under the healthiest conditions possible. It was not necessary to serve statutory notices for any nuisances or want of cleansing—verbal suasion in all instances being sufficient to effect the necessary improvements.

To factories and workshops (other than workshop or factory bakehouses) 1,835 visits were made.

The following intimations were received from H.M. Inspector of Factories and Workshops regarding nuisances or defects found by him in the course of his inspections :—

Insufficient fire escape Sec. 14	Dirty workshops Sec. 5	Floor of workshop broken and dirty Sec. 5
11	12	1

Insufficient means of escape in case of fire.—Six of these intimations were dealt with by this Department, and after negotiations with the occupier sufficient means of escape as could be deemed reasonable in the circumstances of the case was provided.

It has now been decided by the Town Council that work of this nature should be under the charge of the Firemaster, and that official has now assumed the responsibility. The remaining five intimations were receiving my consideration when this new arrangement took place, and these have been handed over to Capt. Weir for his attention.

The 12 dirty workshops were all cleansed and the broken floor repaired and cleansed.

Three intimations were received under Section 9 and The Sanitary Accommodation Order regarding insufficient means of ventilation or want of intervening space in water closets. In each case here the necessary alterations were carried out in compliance with the above-mentioned Order.

The following Workshops, &c., are upon the Register at 31st December, 1922:—

Trade or Business.	Workshops	Domestic Workshops	Homework	Workplaces
Basket Makers, Feather Dressers, and Bedding Manufacturers	2	0	0	0
Blacksmiths, Cartwrights, and Carriage Builders	21	0	0	0
Blacking and Chemical Manufacturers ...	3	0	0	0
Boot Repairers	102	7	0	0
Brush Makers	2	0	0	0
Cabinetmakers, Joiners, & French Polishers	70	0	0	0
Cycle and Motor Mechanics, Enamellers and Vulcanisators	31	0	0	0
Dental Mechanics	29	5	0	0
Dress, Mantle, and Corset Makers ...	66	44	0	0
Engineers	4	0	0	0
Electro-Platers, Wire Workers, Blind Makers, and Bellhangers	3	0	0	0
Florists	0	0	0	9
Furriers	4	1	0	0
Glaziers	4	0	0	0
Granite and Marble Cutters and Masons	0	0	0	30
Hairdressers and Wigmakers	0	0	0	90

Hosiers and Knitters	5	3	0	0
Hotels and Restaurateurs	0	0	0	43
Laundries	3	4	0	0
Milliners	43	1	0	0
Painters	0	0	0	51
Photographers	21	1	0	0
Piano and Gramophone Repairers ...	7	0	0	0
Picture Framers, Carvers, and Gilders ...	6	0	0	0
Plasterers	0	0	0	19
Plumbers and Tinsmiths	59	0	0	0
Saddlers and Leather Cutters	15	0	0	0
Sewing Machine and Wringer Repairers...	2	0	0	0
Slaters	0	0	0	23
Shirt and Pyjama Makers	1	0	0	0
Stamp Cutters, Engravers, and Ticket Writers	1	0	0	0
Sugar Boilers	15	0	0	0
Tailors	79	7	1	0
Umbrella Makers and Repairers	5	0	0	0
Underclothing, Baby Linen, and Blouse Makers	49	0	1	0
Upholsterers and Carpet Sewers ...	12	0	0	0
Waste, Rag, and Metal Merchants ...	0	0	0	15
Watch and Jewellery Repairers and Opticians	42	5	0	0
Weighing Machine and Scale Makers ...	4	0	0	0
Miscellaneous, i.e., Gut Manufacturer, Mica Makers, Clay Pipe Makers, Paper Bag Makers, Bottlers, Potted Meat Manufacturers, Oil Refiners, Manufacturing Chemists, &c. ...	38	0	0	14
Totals ...	748	78	2	294

Bakehouses.

The terms of the Scottish Board of Health (Factories and Workshops Transfer of Powers) Order of 1921 added very considerably to the duties falling under this head, when no fewer than 55 factory bakehouses had to be included in the work of inspection, in conjunction with the Medical Officer of Health, an early opportunity was taken to visit the different bakeries concerned in this transference. The majority were found in good order; the standard of cleanliness fairly high, and it is pleasing to report that since the initial visit a higher standard is being aimed at and, in most cases, maintained.

Still, there are a few places in which that staple article of diet—bread—is baked under not the most satisfactory conditions, and many verbal and written

warnings have been found necessary. For one thing, the internal walls and fittings, in quite a few cases, do not quite lend themselves to the state of cleanliness which is not only desired but imperative.

Like houses, there is a great scarcity of premises suited for work of this nature, otherwise much more rigid conditions would be required.

During the year six workshop bakehouses were converted into factories through the introduction of electric motive power.

Two new bakeries were opened during the like period, one being on very up-to-date lines, whilst a third was almost entirely re-constructed. With little or no regret, I report that one factory and five workshop bakehouses were closed for use as such, and five remain empty—all as at 31st December, 1922.

The factory bakehouse here referred to was situated entirely underground, and this reduces our list of :

Underground bakehouses by one, and leaves on this particular Register at the end of the year

12 factories and 7 workshops

certified as suitable in terms of Section 101 of the Factory and Workshop Act of 1901, all being occupied and used in conformity with the Statute. The total number of bakehouses, including those just referred to, in occupation at the close of 1922 was :—

63 factories and 30 workshops,

and to these 485 visits were made.

Common Lodging-House.

According to the present definition, there is only one common lodging-house proper, which is situated at 18 Peter Street, with accommodation for 21½ male lodgers. It was fully taken advantage of throughout the year, and has been kept in a clean and satisfactory state and well managed. To it 2 visits have been made by night and 60 by day.

The question of raising the price chargeable per lodger per night from the present rate of sixpence to one shilling has engaged the attention of the Public Health Committee, with the result it has been decided to include powers in this direction in the next Provisional Order which will bring back houses now outwith the price scope (as mentioned in my Report of last year, and presently placed on the register for Houses let in Lodgings) on to the common lodging-house register. We will thus have more strict supervision in the shape of sex separation than we, at the moment, possess.

Houses Let in Lodgings.

At the end of the year there were 147 such houses upon the register, as against 144 at the beginning of the year. This does not by any means embrace all the houses that are let in lodgings or occupied by members of more than one family within the city. These are houses that are, from their locality, deemed expedient for or requiring inspection supervision to insist upon sex separation, the prevention of overcrowding, and the regular cleansing of premises. For these purposes 298 visits were made by night and 622 by day. Overcrowding is written of under the head of Housing.

These privately-owned lodging-houses are, generally speaking, very well conducted. In many cases the doors are closed for admission at 10.30 p.m., and, by arrangement with the keeper, at 11 p.m. if attending cinema shows, &c., but it looks to me like putting a premium on late hours or wrong doing when females who claim admission after 11.30 p.m. have an additional twopence to pay for the use of a bed for the night, although the keeper will only admit it is to meet the extra cost of supervision in providing a night warder.

By the Public Health (Scotland) Act of 1897 the Sanitary Inspector is held to be ex-officio the Inspector of Common Lodging-Houses, &c., and hardened official though he may be, his heart must be seared not to be anxious for the many young girls who are found to be frequenting such houses.

Anyone familiar with the personal daily life of the frequenters of the common lodging-house knows well they sit for hours on end doing nothing, and the im-

moral element is strongly in evidence—a powerful force in the life of young girls.

The presence of these girls—many of them yet in their teens—frequenting such houses, night and day, presents a very serious problem. Many fine-looking girls, well-set-up at first, are there all too often because of a petty quarrel in a small, narrow home, and the inevitable result is, unless timeously rescued, they commence a career of crime, get engulfed in a life of shame, from which seldom, if ever, can they raise their head.

Seamen's Boarding-House

has not been taken advantage of by the persons for whom it was originally intended to the extent as in former years, whilst all over the year there has been a decrease of lodgers. This was accounted for not so much by a reduced number of vessels frequenting the port as from the class of vessels. The home has been patronised more by civilians than by the sailor fraternity.

It has been kept in a very satisfactory condition.

Salvation Army Home and Metropole for Women.

During the year this excellent institution has been fully taken advantage of. Since the opening and development of Seafield Lodge slight internal re-arrangements have been made. The Nursery has been transformed into a meeting room; the Department reserved for mothers and infants closed down and an additional bathroom provided. The available sleeping accommodation, both for rescue work and for girl and women boarders — some 145 beds — is even sometimes overtaxed. Brigadier Alvey and her staff are to be congratulated on the very excellent way the whole establishment is conducted. And this brings me to speak of

The Seafield Hostel

out near the west end of the Magdalen Green, a fine, old self-contained house, Seafield Lodge, now the property of the Salvation Army authorities. Here 23 beds in 9 bedrooms are set apart for unmarried mothers. That such an institution is essential is a pity, but its necessity is borne strongly upon us from the fact that there is always a waiting list of applicants for admission.

On a recent surprise visit I found everything spotlessly clean and neat; the mothers under tuition and the bairns in snug, little cots. The rule appears to be for the prospective mother to become an inmate about two months prior to child birth and from 4 to 6 months thereafter. The mothers almost invariably do well after their sojourn in this excellent home, and the vivacious Adjutant—Flora Thomas, who is in possession of the certificate granted by the Central Midwives Board—is looked upon as their Guardian Angel. Long after they return to the world of work these mothers keep in touch with her.

A splended opportunity is here for persons of a philanthropic mind providing the wherewithal for an extension of this home—sorely needed to cope with the many demands made upon it.

Dairies, Cowsheds, and Milkshops.

The persons licensed to purvey milk within the burgh on the Register are as under:—

On Register on 1st January	344
Registered during the year	81
Removed from Register during the year ..	70

Thus showing 355 persons presently on Register, made up as follows:—

Dairymen and Cowkeepers	59
Purveyors of Milk—Shops	236
Purveyors of Milk—Vans	42
Persons resident outwith the City, but Registered to purvey milk within it	18

Byres. Premises of this description where cows for dairying purposes are kept number 59, and to them 941 visits were made. Whitewashed twice during the year, viz., in April and October, they may, so far as cleanliness is concerned, be looked upon as in a satisfactory state.

At the end of the year there were 1,003 cows in the byres as against 1,041 at the same period last year. There is a decrease in the occupied byres, several of the cow-keepers or dairymen having given up keeping cows and retired from the trade, whilst others are purveyors of milk solely, buying in their milk supply. Owing to having his herd slaughtered during the out-

break of foot-and-mouth disease in the early part of the year, the occupier of a dairy in the west end has never replenished his stock. One dairy in the north end was reconstructed and enlarged to accommodate 39 cows. This was done at the request of the Department and to put an end to overcrowding.

In one of the leading dairies there were recently introduced 60 appliances for automatically supplying the cows stalled therein with drinking water. These appliances consist of a bowl or basin having in its interior a level which on being pressed downwards by the cow opens a valve, admitting the water to the bowl—closing again on pressure being removed.

This appliance does away with a large amount of manual labour, and as there is one in each stall the animals can get fresh, clean water, free from contamination whenever desired.

The method is certainly a decided improvement on the general practice of conveying water in pails to the animals at fixed periods.

For many years this Department has impressed upon the dairymen and cowkeepers the desirability of handlers of the milk wearing overalls in the course of their duties, as well as the washing of hands and the cows' udders before milking operations are commenced. All the advice thus tendered has hitherto, I regret to say, produced no great results. If these people would only think that clean and attractive workers in clean and attractive byres and dairy premises will attract customers, the initial outlay would be nothing compared to the gain in reputation and finance.

If they cannot rise to the occasion then they need not be surprised to discover that firms of dairykeepers outside the city, who presently carry on their businesses on the most hygienic principles, will show that the citizens of Dundee when they get the opportunity can, and will, appreciate a clean-handled milk supply. To put the subject in a nutshell, those engaged in the milk trade must get away from the methods of their forefathers and the forerunners of the business, or be left hopelessly in the background of the public's patronage. If they act up to the instructions of this Department they will defy any such outside competition—and in their own interests they ought to get a forward move in the clean handling of milk.

Milk Shops.—There are 236 shops where milk is sold, and to them 1,487 visits of inspection have been made. They are usually found in a satisfactory state. Owing to the fact that generally vegetables, &c., are also sold, there is a liability of the milk in cans becoming contaminated through dust in the course of handling the other commodities. In every instance the shopkeeper is impressed with the necessity of keeping all milk vessels covered up.

Food Inspection.

FOODSTUFFS ARRIVING AT THE PORT OF DUNDEE, EITHER DIRECTLY FROM ABROAD OR BY COASTWISE TRAFFIC.

The following two tables show the kind and quantity of foods arriving by waterway at the Port during the year.

The total of 31,291 tons 10 cwts., as against 21,058 tons 15 cwts. and 3 qrs. of last year and 13,687 tons 10 cwts. during 1920.

TABLE No. I.

Shows the foodstuffs arriving coastwise at the Port by steamers plying between Dundee and the Ports of London, Hull, Liverpool, Aberdeen, Newcastle, Belfast, Southampton, Leith, &c., during 1922:—

	Tons.	Cwts.	Qrs.
Bacon and Ham	77	3	0
Beef (frozen)	0	19	3
Beef (fresh)	1	19	1
Butter	223	8	1
Biscuits	34	13	3
Cereals	568	0	0
Cheese	271	18	3
Cinnamon	0	16	1
Chemical Food	8	9	1
Cocoa and Cocoa Beans ...	218	12	1
Cocoa Butter	34	14	0
Cocoanuts	64	3	2
Coffee	23	7	0
Confectionery	210	9	1
Corn Flour	8	14	1
Cream of Tartar	6	9	1
Eggs	5	7	3
Eggs (dried and liquid) ...	5	6	2
Fish (dried)	7	4	3
Fish (tinned)	108	1	3
Flour	2,948	1	2

	Tons.	Cwts.	Qrs.
Fruit	937	17	3
Fruit (dried)	360	16	0
Fruit (pulp)	107	12	3
Fruit (tinned)	102	3	2
Ginger	14	2	0
Glucose	305	2	3
Honey	0	9	3
Jams and Jellies	0	16	1
Lard	223	0	2
Macaroni	2	18	3
Margarine	537	1	2
Meat (tinned)	577	13	3
Milk (dried)	12	9	2
Milk (tinned)	31	5	2
Nuts	56	6	3
Oatmeal	40	12	0
Pepper	9	6	1
Pickles and Spices	62	18	3
Preserves	244	19	0
Rice	157	19	3
Sago	31	16	1
Salt	23	2	1
Semolina	0	4	2
Sugar	1,044	11	2
Syrup	330	15	2
Tapioca	45	4	3
Treacle	273	16	0
Vegetables	581	12	3
Vegetables (tinned)	36	6	0
Vinegar	63	19	0
	11,045	1	1

TABLE No. II.

Shows the amount and kinds of food arriving direct from abroad, with shipping port, for the year ending 31st December, 1922 :—

	Tons.	Cwts.	Qrs.
Hamburg—			
Cereals	84	18	0
Cheese	5	9	0
Condensed Milk	2	10	0
Sugar	1,184	0	0
Rotterdam—			
Cereals	20	15	0
Cheese	48	4	2
Cocoa	3	7	0
Cocoa Butter	4	0	0
Condensed Milk	86	0	2
Flour	60	17	2
Fruit	235	18	2
Fruit (pulp)	0	2	2
Sugar	719	10	0
Syrup	42	10	0
Vegetables	175	9	2

	Tons.	Cwts.	Qrs.
Antwerp—			
Cheese	0	9	0
Seville—			
Fruit	200	0	0
Boston—			
Cereals	86	11	0
Flour	12	10	0
New York			
Cereals	23	1	0
Corn Flour	55	0	0
Flour	13,743	1	2
Glucose	650	0	0
Lard	164	0	2
Meat (tinned)	5	15	0
Milk (tinned)	6	5	0
Sugar	2,250	0	3
Treacle	153	0	0
Syrup	90	0	0
Mobile, U.S.A.—			
Flour	30	0	0
Rouen—			
Flour	3	3	0
Danzig—			
Sugar	100	0	0
	20,246	8	3
Total from Home Ports (Table I.)	11,045	1	1
Total	31,291	10	0

Included in table 1 is 168 tons 11 cwts. and 1 qr. of damaged flour, consigned for starch-making, and allowed out for that purpose.

Five cwts. and one qr. of sugar landed from New York was found to be damaged by sea water and unfit for human food. It was destroyed by emptying over the wharf side in presence of two Customs officers.

Fifteen tons twelve cwts. of carrots arrived from Dunkirk via Rotterdam in a decomposed state, quite unfit for human food. They were removed by the Cleansing Department and used as manure.

No other section of the cargoes was detained.

Public Slaughter-Houses and Meat Inspection.

The following tables were compiled from records kept by the Superintendent of the Public Slaughter-Houses and Dead Meat Market (belonging to the Corporation of Dundee), and give a very graphic and

reliable detail of the important work of meat inspection carried on there. These figures eminently bear out the great necessity for such a protective, rigid and continual system of examination. In former Reports I have written of the valuable asset Dundee possesses in the shape of a Clearing House at the Dead Meat Mart. Many Authorities admit the excellence of this innovation possessed by few cities—if any other—in Scotland at least. Through this method it is practically impossible for diseased butcher meat to find its way into retail shops for sale to the public, owing to the fact that all dead meat consigned to the city must first of all be taken to this Clearing House and there undergo an examination at the hands of the Inspector, who is a qualified and certificated Meat Inspector. The figures given in the tables may, to the uninitiated, seem alarming, but to those of experience they are only what may be expected. The beneficial results are obtained in the fact that seldom, if ever, is unsound or diseased butcher meat discovered by the Food Inspectors of the Sanitary Department in shops exposed for sale to the public, and any meat of this nature that is so found had become tainted through length of keeping. The carcases of animals killed at the Slaughter-Houses undergo the same rigid inspection. Otherwise, such as meat allowed to be consigned from the country districts direct to the shops, the citizens of Dundee would not stand in the same immune position as they occupy to-day; their food table would not have the same guarantee. We see in the public prints from time to time of large seizures in other towns of butcher meat offered for sale to the public from retail shops. This is the sequel to the want of such a Clearing House system. Our diseased meat is seized at the Dead Meat Market and never reaches the shop, neither is it offered to the public.

This is a system of meat inspection which could with great advantage be made universal—in large cities at least.

The meat taken possession of this year, the huge total of 211,244 lbs., is the largest ever touched in the record history of the city, and is 50,183 lbs. over that of last year.

Seizures from tuberculosis (whole or partial carcases) head the list of specific diseases with 105,539 lbs. out of the whole total. The weights from this disease for the former three years were :—

1919	...	...	67,629 lbs.
1920	...	...	88,959 „
1921	...	...	69,033 „

These figures alone show the necessity for such inspection as is in vogue here. The table at the end of this Report will give in detail the weights of the seizures from the different diseases, and to those interested in such information it is worthy of scrutiny .-

There is, however, one point in connection with the butcher meat supply of the city which may be written of, viz., the method of transport from the Dead Meat Mart to the various retail shops in the city. It is the usual custom for the meat to be conveyed by means of open lorries—sometimes and sometimes not—covered with cloth which, to say the least, is occasionally not too clean. The meat in transit under such conditions is liable to be contaminated or covered by grit or other dust. It would be far more hygienic, and incidentally provide a cleaner butcher meat supply, if it were conveyed in closed or covered vans

Another improvement that could be effected even after the meat is into the shop is the discontinuance of the custom on the part of the shopkeeper of hanging carcases of meat on the verge of the outside door of the shop, where they are, as can daily be seen, liable to contamination from dogs or cats.

These are points which may be thought of little importance, but if given effect would always tend to a more appetising food supply. Yet I think the present conditions of local transport of our butcher meat will on the whole compare favourably with that of any large city.

Mr John D. Anderson, Superintendent and Inspector of Meat at these establishments, was in December last appointed a Sanitary Inspector under the Public Health Acts and amendments thereof so far as the inspection of meat there is concerned.

Table 2 shows the number of animals slaughtered at the slaughter-houses each month during the year; also the number of their carcases found to be diseased or unsound, and the weights of each variety of meat seized and condemned. Table 3 deals in a similar manner with country and foreign carcases sent in.

The number of cases for which the carcases were wholly or partially condemned for Tuberculosis during the years 1902 to 1922 (exclusive of 1915 to 1918):—

	Bulls	Bullocks	Heifers	Cows	Calves	Sheep	Pigs	Total
1902 ...	6	53	14	110	2	—	18	203
1903 ...	7	60	11	121	3	—	35	237
1904 ...	12	64	10	133	8	—	21	248
1905 ...	6	62	18	138	5	—	12	241
1906 ...	8	69	12	144	2	—	18	253
1907 ...	6	76	22	185	2	—	28	319
1908 ...	12	66	17	204	2	—	34	335
1909 ...	12	70	15	207	5	—	23	332
1910 ...	11	65	28	205	4	—	29	342
1911 ...	14	62	23	204	7	—	88	398
1912 ...	6	64	33	185	1	—	108	397
1913 ...	7	66	23	173	3	—	62	334
1914 ...	5	68	22	160	3	—	71	329
1919 ...	8	61	21	149	—	—	83	322
1920 ...	18	81	25	178	1	—	41	344
1921 ...	7	83	17	200	1	—	31	339
1922 ...	16	93	22	260	5	1	65	462

TABLE 2.—Shews the numbers of the different kinds of Animals Slaughtered at the Public Slaughter-houses each month during 1922, also the numbers of their carcases found to be Diseased or Unsound, and the weights of each class seized and destroyed.

Month.	Animals Slaughtered.				Numbers of their Carcases Diseased or Unsound.				Weights (in lbs.) condemned from Carcases of Animals Slaughtered on the Premises.				
1922.	Cattle.	Calves.	Sheep.	Pigs.	Cattle.	Calves.	Sheep.	Pigs.	Beef.	Veal.	Mutton.	Pork.	Total.
January -	1,294	5	2,150	303	27	...	5	2	6,535	...	176	68	6,779
February -	1,082	8	1,971	268	34	1	10	2	5,894	20	310	34	6,258
March -	1,378	2	2,276	343	41	...	2	6	11,429	...	57	496	11,982
April -	1,326	4	2,581	381	41	1	2	5	7,134	10	21	124	7,289
May -	1,479	12	2,710	414	52	...	5	5	10,109	...	152	102	10,363
June -	1,190	4	1,495	207	45	1	3	10	6,335	14	72	286	6,707
July -	1,076	4	1,416	124	40	2	2	7	8,052	65	16	230	8,363
August -	1,296	16	1,874	182	41	3	3	4	7,443	87	111	270	7,911
September	1,385	27	2,514	204	62	2	3	4	12,794	102	84	233	13,213
October -	1,343	26	2,162	269	49	2	3	3	9,452	83	117	210	9,862
November	1,304	18	2,181	377	45	...	1	8	11,669	...	44	153	11,866
December	1,381	15	1,779	383	63	3	8	8	11,907	138	218	819	13,082
Totals -	15,534	141	25,109	3,455	540	15	47	64	108,753	519	1,378	3,025	113,675

TABLE 3.—Shews the numbers of the different kinds of Carcases, dressed and undressed, brought to the Slaughter-houses each month during 1922, with the numbers found to be diseased or unsound, and the weight of each class seized and destroyed on that account.

Month.	Carcases brought in.				Numbers of them diseased or unsound.				Weight (in lbs.) Seized and Condemned from Carcases sent in.				
1922.	Cattle.	Calves.	Sheep.	Pigs.	Cattle.	Calves.	Sheep.	Pigs.	Beef.	Veal.	Mutton.	Pork.	Total.
January -	186	6	437	40	24	2	20	2	5,993	95	815	104	7,007
February -	322	9	376	176	18	1	20	18	3,430	14	755	1,092	5,291
March -	418	8	956	66	36	...	30	3	8,115	...	1,281	121	9,517
April -	155	4	323	62	24	1	35	6	6,318	42	1,455	224	8,039
May -	213	7	399	36	46	1	19	1	8,775	24	746	20	9,565
June -	279	8	468	18	30	3	27	5	8,687	219	1,007	52	9,965
July -	276	4	505	29	24	1	6	1	4,931	82	249	98	5,360
August -	281	3	368	33	16	1	11	3	2,108	74	683	460	3,325
September	253	7	362	39	16	5	11	3	3,267	153	590	200	4,210
October -	264	7	753	59	26	5	29	3	7,084	332	1,107	308	8,831
November	288	2	417	79	44	3	62	8	10,377	208	2,220	630	13,435
December -	356	1	666	107	35	...	33	3	11,133	...	1,251	640	13,024
Total -	3,291	66	6,030	744	339	23	303	56	80,218	1,243	12,159	3,949	97,569
Add Table 2.	15,534	141	25,109	3,455	540	15	47	64	108,753	519	1,378	3,025	113,675
Total for Two Tables	18,825	207	31,139	4,199	879	38	350	120	188,971	1,762	13,537	6,974	211,244

TABLE 4.—The totals for the years 1904 to 1921, (excluding 1915 to 1918) were :—

Year.	Carcases Examined.				Numbers Diseased or Unsound.				Weight (in lbs.) of Meat Seized and Condemned.				
	Cattle.	Calves.	Sheep.	Pigs.	Cattle.	Calves.	Sheep.	Pigs.	Beef.	Veal.	Mutton.	Pork.	Total.
1904	17,451	801	32,358	6,004	608	67	214	59	175,381	3,295	7,915	5,758	192,349
1905	18,033	801	31,891	5,484	603	49	259	47	176,778	2,471	9,227	5,164	193,640
1906	19,127	891	34,676	4,690	603	51	230	46	177,705	2,318	8,664	5,931	194,618
1907	19,439	904	34,763	5,157	562	56	253	52	145,114	2,554	9,686	3,989	161,343
1908	19,137	684	33,759	5,052	588	45	264	61	159,519	1,936	9,487	6,193	177,135
1909	19,714	780	47,363	3,420	597	53	218	57	158,354	2,579	7,511	6,019	174,463
1910	19,957	664	41,782	3,255	602	38	167	53	160,085	1,942	6,184	5,084	173,295
1911	19,015	561	40,611	4,132	582	33	179	55	154,380	1,851	7,322	6,657	170,210
1912	18,836	574	38,896	4,339	573	39	173	71	150,502	2,194	7,160	7,106	166,962
1913	19,206	515	34,929	2,744	633	45	131	24	155,996	2,115	5,807	2,086	166,004
1914	18,664	427	34,672	3,401	549	38	156	52	134,341	1,811	6,595	3,624	146,371
1919	19,743	268	38,156	4,381	463	45	228	95	135,692	2,328	8,281	1,494	147,795
1920	20,933	250	29,795	2,386	627	51	170	58	174,715	2,955	6,707	5,931	190,308
1921	17,914	182	26,357	2,717	633	32	214	52	144,858	2,278	9,353	4,572	161,061

Anthrax, Actinomycosis, and Foot-and-Mouth Diseases.

Four cattle beasts were found to be affected with anthrax, and the carcases were taken possession of and destroyed in terms of the Order. Forty-three cases of actinomycosis were discovered. One carcase was wholly condemned, the remainder being partial seizures. An outbreak of foot-and-mouth disease occurred in the early part of the year, which resulted in 17 affected carcases being discovered—all being partial seizures.

Fish Inspection at the Fish Market, Carolina Port.

During the year 57 visits were made in the mornings to the Fish Market and the fish landed from the trawlers examined on these occasions. 9,410,744 lbs. of various kinds of fish were brought into the port for sale by the auctioneers there during 1922. No seizure under this head falls to be recorded.

Retail Shops, Stalls, Barrows on Streets, &c.

The safeguarding of the public food supply and maintaining its standard of purity and state of preservation is one of vital importance, and a day-to-day system of inspection has to be kept up by the Food Inspectors of the Department for the prevention of the sale of any foods which are in an unsound condition or which are likely to be detrimental to health.

Of late years tinned foodstuffs have formed a large item of the seizures owing to the great liability to become unsound through (1) damage, (2) air reaching the contents of the tin owing to bad workmanship, (3) air having been left in the tin when the blow hole was sealed, and (4) metallic impurities. When any of the first three affect the food the gases formed, as time goes on, cause the ends of the tin to change from the concave to the convex. In metallic impurities it is more difficult to trace and one which only chemical examination can show to what percentage it may be present. However, on this point examination of tins used by particular firms will soon denote if they are of an inferior grade—a blue tinge on the inside after the contents of the tin have been removed will show the material used to be of an inferior quality.

Strict supervision has to be kept over the foodstuffs offered for sale in the open market-place at the Greenmarket on Tuesdays, Fridays, and Saturdays. In this respect an improvement will be effected on an early date, when the open market-place will be abolished and its place taken by the market in the premises of the Caird Hall, which will be a decided improvement owing to its being covered in, and thus prevent dust, &c., so readily reaching the articles offered for sale.

Inspections under this head, numbering 6,398, took place; details of the seizures will be found in the Appendix to this Report.

Butter and Margarine Acts.

No change falls to be recorded under this head, there still being 33 persons registered as wholesale dealers in margarine or margarine cheese under Section 7 (4) of the Food and Drugs Act, 1899. The premises are in a satisfactory state and suitable for the purposes of the trade. Three premises are registered for the re-working of butter, and two samples of such butter were taken and submitted to the Public Analyst, who reports them to be genuine.

Food and Drugs Acts.

Undernoted I gave a statement of the number of samples purchased under these Acts during the last nineteen years :—

	Purchased.	Certified to be Genuine.	Certified to be Adulterated.
1903 -	144	130	14
1904 -	200	170	30
1905 -	199	170	29
1906 -	201	169	32
1907 -	215	184	31
1908 -	257	234	23
1909 -	304	274	30
1910 -	455	414	41
1911 -	445	415	30
1912 -	435	411	24
1913 -	484	449	35
1914 -	607	566	41
1915 -	615	588	27
1916 -	619	590	29
1917 -	610	578	32
1918 -	629	598	31
1919 -	607	582	25
1920 -	602	578	24
1921 -	663	629	34

The following is a synopsis of the samples purchased this year :—

I.—Samples taken in the ordinary course, with a view of following up by prosecution, if necessary, should adulteration be discovered.

	Purchased.	Certified to be Genuine.	Adulterated.
Sweet Milk	302	283	19
Salted Butter ...	1	1	0
Margarine	23	23	0
Coffee	14	14	0
Ground Rice ...	6	6	0
Rice	13	13	0
White Pepper ...	17	17	0
Black Pepper ...	1	1	0
Lard	7	7	0
Cream of Tartar ...	14	14	0
Tapioca	8	8	0
Ground Ginger ...	13	13	0
Baking Soda ...	9	9	0
Cinnamon	9	8	1
Pot Barley	6	6	0
Sago	2	2	0
Fat	1	1	0
Ginger Ale	1	1	0
Total ...	447	427	20

II.—The following samples were taken in terms of Section 2 of the Butter and Margarine Act, 1907 :—

	Taken	Genuine	Adulterated
Sweet or Fresh Butter	2	2	0

III.—The undernoted "test" samples were purchased by deputy :—

	Purchased	Certified to be Genuine.	Adulterated.
Sweet Milk	28	27	1
Condensed Milk ...	1	1	0
Lard	5	5	0
Margarine	18	18	0
Salted Butter ...	8	8	0
Fresh Butter ...	3	3	0
Sago	12	12	0
Oatmeal	8	8	0
Pot Barley	12	12	0
Flour	11	11	0
Ground Ginger ...	10	10	0
White Pepper ...	12	12	0
Rice (ground) ...	11	11	0
Rice	13	13	0
Cream of Tartar ...	14	14	0
Coffee	11	11	0
Tapioca	8	8	0
Baking Soda ...	11	11	0

Cinnamon	8	8	0
Vinegar	1	1	0
Linseed Meal ...	1	1	0
Camphorated Oil ...	4	4	0
Olive Oil	4	4	0
Linseed Oil	3	3	0
Epsom Salts ...	3	3	0
Ginger Ale ...	2	2	0
Total ...	222	221	1
Add Table I. ...	447	427	20
Add Table II. ...	2	2	0
Total ...	671	650	21

According to the population of 172,061 this works out to 3.32 samples for every 1,000 persons, as against 3.94 in 1921.

Twenty samples of sweet milk were certified by the Public Analyst to be adulterated with either added water or skimmed milk, and one sample of cinnamon was returned as adulterated by sand or silicious matter to the extent of 3.46 per cent.

For the selling of adulterated sweet milk eight prosecutions—involving ten samples—were instituted in the Sheriff Court, and the following were the decisions :—

3 were fined £1 10s each.

3 were fined £3 each, and

2 were found not proven.

The average cost of each prosecution was £1 6s 8d.

The remainder of the sellers of adulterated samples were warned.

9 samples of tapioca were sold instead of sago.

1 sample of sago was sold instead of tapioca.

1 sample of baking soda was sold instead of cream of tartar.

1 sample of ground ginger was sold instead of cinnamon.

The sellers in these cases were warned to be more careful.

330 samples of sweet milk were purchased or taken —302 official and 28 tests—as against 316 last year.

The lowest milk fat recorded this year was 1.88% (as against 2.07 last year) and the highest 7.32% (as against 8.00 last year), whilst the average milk fat was 3.64% (as against 3.52% last year). The number of samples with milk fat below 3% was 15 and the number with milk fat above 4% 55.

Interments.

Under Section 69 of the Public Health (Scotland) Act, 1897.

For the interment of bodies of destitute persons, and whose friends, if any, were alleged to be unable to defray burial expenses, 69 applications were made; 68 of these were granted, and in the remaining case arrangements were otherwise made. Of those granted the cost of three were later paid direct to the undertaker by the applicants.

The total cost to the Local Authority was £153 3s 6d, but refunds were made by relatives or through the medium of insurance companies of £32 4s 4½d, which sum has been handed over to the Police Treasurer to be credited towards the estimate under this head.

Of the interments carried through, 21 were adults and 47 juveniles.

Burial Grounds.

No material change has taken place on these as when referred to in my Report of last year. They have been well and satisfactorily kept.

The following interments were made in each :—

Eastern Necropolis	1,640
Western Necropolis	999
Western Cemetery (Perth Road)	211
Barnhill Cemetery	180
Parish Church Burying-Ground (Broughty Ferry)	12
Constitution Road Burying-Ground ...	3
Total ...	3,045

Smoke Nuisance.

Not the least perplexing part of a Sanitary Inspector's duties is that dealing with abatement of the smoke nuisance, as occupiers of mills, factories, &c., do not take kindly to the warnings given that the air is being polluted by the unconsumed carbon belching from their chimneys. Experience provides ample evidence that nuisances of this nature can be reduced to a minimum or totally avoided. Many of our chimneys rarely show black smoke at their heads because the owners have studied their own furnaces, boilers, &c., and devise such means or methods as will prevent the emission of black smoke. Others, so long as they are obtaining sufficient boiler power for the purposes required, do not consider the question of black smoke or atmospheric pollution. It is surprising, however, when we consider the fact that, during recent years, economy has been one of the main outcries, there are still a number of our manufacturers, &c., who do not seem to be alive to the great waste or leakage that is occurring through the emission of dense black smoke. In the olden days it was considered where there was smoke there was money, but nowadays we know that the reason of the smoke is due to ignorance and scepticism as to adopting remedies now at hand. The initial cost of the preventive measure may be slightly expensive, but very soon the reduction in the fuel bill counterbalances the outlay. To put the whole thing in a nutshell, a smokeless chimney means greater boiler power with less cost.

Since April, 1922, there have been 8 installations of smoke consuming apparatus provided at works, institutions, &c., where for some time the smoke and grit nuisance has been very apparent and a source of bitter complaint to the Department. These consumers have given most satisfactory results in the abatement of the smoke nuisance, and, I am informed, considerably reduced the coal consumpt bill with no loss of energy; added efficiency, prolonged life to the boiler, and the involving of less manual labour.

During the year 54 observations were made of one hour's duration each, and in 31 cases warning letters were sent to the authors of the nuisances.

SHOPS ACTS.

Shops Acts, 1912 and 1913.

7,138 visits were made by the Inspectors to 3,516 shops to see that the provisions required under the various sections of these Acts were being complied with. Under this head the meal hours of assistants, the employment of young persons (that is, persons under 18 years of age), half-holidays, and the exhibition of the notices, seats for female shop assistants, &c., as required under the Statutes, came under observation. Altogether 217 contraventions were discovered, these being principally the want of notices required to be exhibited stating the particular half-holiday taken, and showing the names, &c., of the assistants employed.

Closing Orders.

No petition was lodged in favour of the earlier closing of any particular trade during the year.

Shops (Early Closing) Act, 1920, and Amendment Act, 1921, and Various Closing Orders.

The work incidental to carrying through the provisions of the above Act and Orders entailed a considerable amount of work by the inspectors, all after the regular working hours. Duties of this nature for the detection of contraventions entailed 907 hours of street patrol, and during the course of which 114 irregularities were discovered. Many of these being a first offence or of a trivial nature, verbal warnings were deemed sufficient. However, it was necessary to institute proceedings in 22 cases, and all either pled or were found guilty. Last year I referred to the the fines imposed not covering the expenses entailed in the prosecution. Again I wish to draw attention to this fact. The average expense per case was £1 3s 9d, whilst the figure arrived at from the fines imposed only amounts to 15s 8d, this being a deficit of 8s 1d per case, which has to be met by a charge against the rates. This charge is an avoidable one, and can easily be remedied in two separate ways. The first is to avoid reporting cases for prosecution (which would render these Acts and Orders abortive), and the second is one that could more readily solve the problem, viz. :— inflict a sufficient fine upon the guilty party and in addition charge him up with the total costs of the prosecution.

Theatres and Cinemas.

In the carrying out of the duties applicable to the above, 95 inspections were made, items such as ventilation, suitable sanitary accommodation, the cleanliness of the buildings in general, &c., and the all-round well-being of the patrons and performers so far as sanitary matters were concerned being seen to. The places were generally found in a cleanly and satisfactory condition, and any little improvements found necessary were attended to after the notice of the owner or manager had been drawn thereto.

Rag Flock Act.

During the year six samples of rag flock were taken in the premises of bedding factories, &c., and submitted to the Public Analyst, who reported all the samples to be within the standard of 30 parts of chlorine per 100,000 parts of flock.

The figures as prepared by the Analyst on the samples submitted are as follows :—

One sample yielded	.....	10.00 parts
One sample yielded	.....	7.00 parts
One sample yielded	.....	6.60 parts
Three samples yielded	.....	5.00 parts

Rats and Mice (Destruction) Act, 1919.

In the carrying out of the recommendations of the Board of Agriculture, the Local Authority, in like manner to other Local Authorities throughout Scotland, organised two "Rat Weeks," viz. :—from 27th March till 1st April, and from 20th till the 25th November.

During these two very intensive campaigns considerable headway was made in the destruction of these vermin and clearing premises of them. 4,500 notices or handbills were served at all likely places such as shops, bakehouses, restaurants, dairies, stables, piggeries, mills and factories, &c., whilst additional and special instructions were sent to farmers within the city area, and to masters of ships at the port.

700 posters were displayed within the city, whilst the press gave much help in the shape of publicity articles. Altogether 263 special complaints were

dealt with by the staff, who made 3,490 visits of inquiry to premises known or suspected of being rat infested. The majority of these premises are reported now to be clear.

About 60 per cent. of the poison baits laid in the public sewers were taken, which would indicate disastrous results to the rodents, and the workmen employed in the sewers report that the vermin have not been so numerous. It is impossible to actually estimate the number of casualties, but so far as ascertainable there were close upon 4,000 rats accounted for during these two campaigns, including 34 in five ships, and the general progress may be looked upon as highly satisfactory—the results well worth the expense of the campaigns.

Several black rats were taken alive during the former "Week," and keeping in mind the danger from this species—disease spreading, &c.—it is of value to know they were accounted for, as two were found to be with young, and their presence along with their offspring in our community might have had far-reaching results.

However, the operations of the Department did not begin or terminate with these special "Weeks." The staff have been continually following up infested premises and advising on methods of extermination. Advice is also given on the use of the various poisons and traps on the market and the provision of rat proofing. Householders are advised against the practice of putting down foodstuffs which would attract the vermin. Unless a vigorous campaign is kept up between these "Rat Weeks" all the efforts would be of no avail as the breeding proclivities of the vermin is so great they would in a very short time return to their numerical strength.

The rat menace is a danger to every section of the community—every individual is concerned—and it is pleasing to record the great co-operation the Department has received in the efforts to reduce the populations of these undesirables to a minimum. If they are perpetually harassed, kept on the move, their breeding operations must be much curtailed and less successful.

The different rat catchers who have experience in rat extermination have been kept busy throughout the year, and always keep in touch with this Department.

Towards the end of the year a complaint was received regarding a property in the east end of the city being infested with mice which were diseased. A specimen mouse was obtained, which was sent to Professor Tulloch for the purpose of examination. He reported the disease to be that of ordinary favus, and one not of serious consequence. The property in question, however, is now reported to be clear of the vermin.

Offensive Trades.

Little alterations falls to be recorded under this head, the Register being the same as mentioned in last year's Report.

The tallow melter's business at 62 East Dock Street was enlarged with the sanction of the Local Authority.

The various businesses and premises have been conducted and maintained in as satisfactory a manner as can be expected. The places have received ten visits throughout the year.

The premises so registered are situated as follows :

62 East Dock Street—Tallow melter.
Marine Parade—Tanner.
1 Park Street—Tanner.
At Public Slaughter-Houses, East Dock Street — Gut Cleaner.
At Public Slaughter-Houses, East Dock Street — Hide Factors (2).
At Public Slaughter-Houses, East Dock Stret—Slaughterer of Cattle (Corporation).
At Public Slaughter-Houses, East Dock Street — Tripe Cleaner.

Port Inspection.

All the ships inspected were those arriving from foreign ports direct or otherwise. The ships coming direct numbered 90, and those which had various ports of call en route numbered 110.

The cargoes consisted principally of timber, flax and hemp from Baltic ports; tea, jute, linseed, cotton seed, esparto grass, dried fruit, &c., from Eastern ports; general foodstuffs, phosphates, machinery, toys, &c., from France, Belgium, and Germany.

Every facility was given by chief officers for the inspection of the vessels.

NUISANCES.—The nuisances noted are those which action could have been taken if necessary with a view to compelling abatement. Numerous other conditions not exactly comprising nuisances were dealt with, such as ventilator outlets being adapted for stove chimney exits; obstructed ventilators; the removal of food from sleeping quarters to more suitable and hygienic positions. Little difficulty was experienced in having nuisances abated, as with very few exceptions a subsequent visit found the conditions remedied.

CREW'S QUARTERS.—The situation varies much, although the chief position is forward in the forecastle. When situated aft and below deck, the companion ways are usually dirty, dark or damp, the general situation proving conducive to dirt.

OVERCROWDING was not met with, although the Lascar accommodation in one case appeared confined, but on measuring same, the requisite 72 cubic feet was found to fully prevail. The Europeans being allowed 120 cubic feet, such allowance was always found to exist, although in conformity with the Merchant Shipping Act, 1906, messrooms and washplaces are to be taken into consideration in the measurements, which curtails matters.

Bunks in excess of those allowed by regulations were observed, but those being unoccupied, overcrowding could not be inferred.

Walls and ceilings were washed down in six or eight cases; the surfaces of the steel compartments are cork painted in the majority of cases, to obviate condensation, and these required at least scrubbing in the above cases.

Lack of ventilation and lighting was not met with, although that already provided was not fully utilised sometimes, the outlets being obstructed to eliminate draught, and the port windows being obscured with clothing, &c.

FLOORS, especially of firemen's quarters, were invariably found dirty, due no doubt to the nature of the occupation followed by these members of the crew, necessitating, therefore, more rigid inspection.

No complaints were received as to dirty bedding, although in three cases such was changed previous to action being taken.

VERMINOUS conditions were not reported, although cockroaches were found prevalent in ONE case. The vicinity of the galleys forming the chief source of interest for those insects.

GALLEYS were cleaned; floors and walls washed down in five cases.

MESSROOMS are provided on a few ships, especially Swedish and Norwegian, and in ONE case the tables and forms were scrubbed when such was requested.

WOOD BUNKS are numerous, the wood arrangements no doubt facilitates the harbouring of bugs, but no case of such conditions prevailing was reported. Steel frame bunks with wire mesh or wood slat bottoms appear rightly to be gaining favour in the more recently built ships, as does also the provision of messrooms and washplaces.

Nothing requires to be mentioned regarding the officers' quarters, which are usually situated amidships or aft. Each officer invariably has a single cubicle with ample space, light and ventilation; such places always being found clean and tidy.

Fresh Water SUPPLY TANKS were cleaned in numerous cases, although in ONE case only was intimation given to have this done by the use of paraffin or cement wash. Most ships renew their water supply here, although certain officers appear to prefer that at other ports, as being a better keeping quality of water.

W.C.'s and LATRINES formed the principal source of nuisance, the main cause being the lack of water in the storage tanks on arrival, with the W.C.'s being used and left unflushed, also dirty accommodation, with the port windows closed and ventilators obstructed, creating, therefore, pollution of the atmosphere therein, and the gun-metal non-return valves being stopped with paper, &c., at the soil outlets.

Choked W.C.'s numbered 90 and Latrines 7. Soil discharges polluting the quay sides were dealt with in two cases. Either of two alternatives were adopted here; the W.C. accommodation next the quay being temporarily closed during the stay of the ship here, and the off side accommodation being used, or, screen splash boards were lowered over the ship's side, covering the outlet in order to facilitate the soil discharge in a downward direction.

W.C. compartments are usually situated outside the forecastle, although a few were in proximity to the sleeping quarters, requiring, therefore, rigid cleanliness in lieu of change of position.

Probably it may be a commendable procedure to at some future time have all W.C.'s on board ships berthed in the Camperdown Dock and Victoria Dock closed, as ample accommodation exists on the quays. The same might apply to the Earl Grey and King William Docks, although such would entail the opening of lavatory accommodation on these quays which at present is in dis-use.

BILGES were cleaned in 3 cases.

BALLAST TANKS also in 3 cases.

A leaking Ballast Tank was met with, but the Board of Trade official gave the matter attention.

The inspection of Bilge Wells and Water Ballast Tanks proves difficult until the cargo is unloaded, although the chief officers give the date that such were last cleaned out.

NO LIVE STOCK was landed or encountered as forming part of the various cargoes, although horses were often found to have been landed at London, the

holds previously occupied by those animals having been cleaned out before the arrival of the ships here.

Rat Preventive Measures.—Decided difficulty was experienced for a time during the past year in persuading chief officers to have rat stoppers fixed to all mooring cables, especially where no rats were reported to exist on board. Improvised means in the form of tarring hemp ropes and greasing wire cables had to be adopted in many cases, but as proper galvanised rat stoppers are now available at short notice, all ships from foreign ports without guards are being provisioned with same. Since January of this year 50 rat stoppers have been issued by the local firms which undertook to make these.

With the Special Rat Instructions issued to shipmasters, notification is also tendered as to where stoppers can be procured. The tarring of mooring cables did not prove a suitable preventive measure for rats escaping from ships, the omission to renew the tar daily being prevalent; stoppers are therefore being insisted upon. There is obviously a growing desire on the part of the shipping agents and shipmasters to keep vessels clear of rats and mice, and the various methods adopted are :—

Fumigation at recognised periods;
Special rat catchers at ports of call,
Permanent rat catchers on board;
Periodical setting of poison baits and traps.

and the keeping of cats or mongoose on board. The German authorities at Hamburg apparently board all vessels calling thereat and set poison baits, but no dead rats as a result were reported on arrival here or during the stay of ships at this port.

Few passengers arrived during the year from foreign ports, none being reported as coming from infected ports, and where members of the crews left the ships permanently, the longest incubation period of probable infectious disease had elapsed previous to the arrival of the ships or the actual paying off of the members concerned.

Cases of illness or infectious disease numbered five. One case of chickenpox was reported, but disinfection had taken place previous to the arrival of the ship here.

The medical officer of health visited the five ships involved.

Visits of inspection on first arrival of ships	200
Re-visits to above for nuisance abatement, &c. ...	151
Nuisances detected	191
Nuisances abated previous to departure of ships... ...	188
Nuisances unabated owing to ships proceeding to dry dock	3
Ships found without proper rat guards	70
Ships the quarters of which were measured	47
Verbal intimations	100
Special Rat Instructions served	102
Number of complaints received from members of crews and attended to	2

Section 164 of the Burgh Police (Scotland) Act, 1892.

Provision and Renewal of Rain Water Spouts and Downpipes.

Under the above Section the following work was executed, viz. :—

Number of Properties where the rain water spouts and conductors have been overhauled, renewed, or otherwise repaired.	Lineal feet of new rain water conducting channel rhones or gutter pipes used in the renewing or repairing of the same.	Lineal feet of new rain water conducting or downfall pipes used in the same way at the different properties.
760	22,047	8,412

General Prosecutions.

The prosecutions for the year were as under :—

Contravention of Public Health Act. Failure to erect Water Closet, &c.	Contravention of Food and Drugs Acts.	Contravention of Shops Acts.
1	8	23

	Total.	
	32	

Detailed particulars of each are given under the various heads.

I am, Gentlemen,

Your obedient Servant,

ROBERT MITCHELL,

Chief Sanitary Inspector.

APPENDIX.

Statement by Sanitary Inspector of Proceedings under the Public Health and other Acts during 1922.

Subordinate Sanitary Inspectors employed	19

I. *Nuisances.*

Complaints received	2,414
Intimations served under Sec. 19	19,019
Notices served under Sec. 20	4
Cases in which legal proceedings were taken ...	1
Cases in which legal proceedings were successful ...	1

II. *Workshops.*

Inspections	2,320
Notices served under Sec. 2 (3) of Factory and Workshop Act, 1901	0
Cases in which legal proceedings were taken	0
Cases in which legal proceedings were successful ...	0

III. *Tents and Vans.*

Inspections	206

IV. *Underground Dwellings.*

Reported to Local Authority	0
Notices to Owners (Sec. 74)	0
Cases in which legal proceedings were taken	0
Cases in which legal proceedings were successful ...	0

V. *Common Lodging-Houses.*

On Register at 1st January, 1922	1
Registered during year (not to include renewals) ...	0
Renewals of Registration	1
Removed from Register	0
On Register at 31st December, 1922	1
Common Lodging-Houses belonging to the Local Authority	0
Inspections between 8 a.m. and 10 p.m.	60
Inspections between 10 p.m. and 8 a.m.	2
Intimation of Irregularities sent to Keepers	0
Cases of Infectious Disease reported to Medical Officer (Sec. 97)	0
Unregistered Premises dealt with	0
Cases in which legal proceedings were taken (breaches of bye-laws, &c.)	0
Cases in which legal proceedings were successful ...	0

VI. *Houses Let in Lodgings.*

On Register at 1st January, 1922	144
Registered during year	7
Removed from Register	4
On Register at 31st December, 1922	147
Inspections	920
Cases in which legal proceedings were taken	0
Cases in which legal proceedings were successful ...	0

VII. *Infectious Diseases.*

Visits of Inquiry, &c.	2,624
*Patients removed to Hospital	703
Persons removed to House of Reception	0
Notices served under Sec. 53 (2) / Notices served under Sec. 50 (2)	2,847
Intimations to School Boards, Teachers, &c.	4,138
Houses or Premises disinfected	1,212
Sets of Clothing, Bedding, &c., disinfected or destroyed	16,198
Cases in which legal proceedings were taken	0
Cases in which legal proceedings were successful ...	0

VIII. *Burials.*

Burials undertaken in terms of Sec. 69...	68

IX. *Dairies, Cowsheds, and Milkshops.*

On Register at 1st January, 1922	344
Registered during year	81
Removed from Register	70
On Register at 31st December, 1922	355
Inspections	2,428
Contraventions of Orders or Regulations dealt with	2
Cases in which legal proceedings were taken	0
Cases in which legal proceedings were successful ...	0

X. *Slaughter-Houses and Offensive Trades.*

Applications under Sec. 32 for sanction to establish	0
Applications granted	0
Applications under Sec. 33 for Licence or Renewal of Licence	0
Applications granted	0
Public Slaughter-Houses (if any) belonging to Local Authority	1
Private Slaughter-Houses	0
Unlicensed Slaughter-Houses dealt with	0
Inspections of Slaughter-Houses	40
Inspections of other Offensive Businesses	10
‡Number of such other Offensive Businesses at 31st December, 1922	7
Cases in which legal proceedings were taken (breaches of bye-laws, &c.)	0
Cases in which legal proceedings were successful ...	0

XI. *Unsound Food.** *(See table appended.)*

Inspections under Sec. 43	6,455
Seizures of Unsound Food	49
Animals or carcases or articles of food destroyed with owner's consent by or at the instance of the Sanitary Inspector	49
Cases in which owners of Unsound Food were prosecuted	0
Convictions in connection with above cases	0

XII. *Sale of Food and Drugs Acts.*†

Samples procured for Analysis	671
Certified to be genuine	650
Certified to be adulterated	21
Cases in which legal proceedings were taken	8
Cases in which legal proceedings were successful ...	6

XIII. *Rag Flock Act*, 1911.†

Samples procured for analysis	6
Certified to conform to Board's standard	6
Certified not to conform to Board's standard	0
Cases in which legal proceedings were taken	0
Cases in which legal proceedings were successful ...	0

XIV. *Bye-Laws.*

Inspections in carrying out bye-laws relating to—	
(a) Pigstyes	785
(b) Public Conveyances—Under charge of Police	—
(c) Buildings	3,225
(d) Cleansing in Special Scavenging Districts ...	—
(e) Other Sanitary matters	72,373

‡ State on the fourth page hereof nature of such offensive businesses and number of each.

* Only those inspections and seizures in which the Sanitary Inspector has personally taken part should be inserted. The Sanitary Inspector is requested to give on the fly-leaf a statement of the nature and quantities (or weights) of the food seized—distinguishing butcher meat, fish, fruit, &c.

† Only those samples which have been procured by the Sanitary Inspector personally, or by his deputies, should be inserted here, and the Sanitary Inspector is requested to give on the fourth page hereof a statement of the articles analysed:—Milk, butter, pepper, &c.

*Unsound Food. All Seized at the Public Slaughter-Houses.

Carcases Entirely or Partially Destroyed.

FOR YEAR ENDING 31st DECEMBER, 1922.

DISEASE	CATTLE		SHEEP		SWINE		TOTAL		
	Entire.	Partial.	Entire.	Partial.	Entire.	Partial.	Entire.	Partial.	Weight Lbs.
Tuberculosis	133	263	—	1	13	52	146	316	105,539
Pneumonia and other Chest Troubles ...	7	9	4	6	1	1	12	16	4,894
Fevered Conditions	48	27	73	24	3	—	124	51	25,156
Septic Conditions	13	29	2	11	3	—	18	40	8,757
Rheumatism	2	22	—	1	—	3	2	26	2,177
Fractures and Bruises	5	117	1	27	1	13	7	157	12,309
Dropsical Conditions	41	26	71	18	11	9	123	53	15,629
Inflammation of Abdominal Organs	50	15	74	4	1	1	125	20	24,374
Immaturity	1	—	—	—	—	—	1	—	32
Asphyxiation	4	—	3	—	—	—	7	—	2,559
Decomposition	4	7	24	5	4	—	32	12	4,071
Actinomycosis	1	42	—	—	—	—	1	42	1,438
Anthrax	4	—	—	—	—	—	4	—	2,400
Foot and Mouth Disease	—	17	—	—	—	—	—	17	518
Abscesses, Tumours, and Cysts	—	22	—	1	—	2	—	25	534
Wasted Conditions	2	6	—	—	2	—	4	6	857
Totals	315	602	252	98	39	81	606	781	211,244

The following is a synopsis of the Organs seized and condemned at the Slaughter-Houses :—

CATTLE ORGANS.		SHEEP ORGANS		PIG'S ORGANS.	
Cows' Udders ...	62	Livers	4	Udders	27
Livers	563	Plucks	155	Plucks	41
Lungs	148	Kidneys	21	Kidneys	8
Hearts	21	Lungs	42	Heads	37
Kidneys ...	36			Livers	6
Heads	95				
Tongues ...	136				
Skirts... ...	59				

In addition, the following was seized there for decomposition :—

Tinned Meat ...	273 lbs.	Frozen Liver ...	84 lbs.
Frozen Meat ...	239 lbs.	Frozen Ox Heart ...	36 lbs.

OTHER ARTICLES OF FOOD DESTROYED.

Articles.	Where Seized.	Quantities or Weights.					Reasons for Seizure.
		Tons.	Cwts.	Qrs.	Lbs.	Ozs.	
Fruit	In Shops, Stalls, Barrows on Streets, Markets, Railway Stations, or at the Port of Dundee.	0	16	1	16	0	Decomposition
Tinned Beef ...		0	8	1	6	8	
Salted Beef ...		0	1	3	4	0	
Venison		0	2	3	7	0	
Liquid Eggs ...		0	0	2	0	0	
Tinned Tongue ...		0	0	1	8	20	
Tinned Fruit ...		0	0	2	1	0	
Tinned Beans ...		0	0	0	2	7	
Tinned Rabbit ...		0	0	0	2	0	
Tinned Fish ...		0	0	0	13	8	
Pickles (jars) ...		0	0	0	3	0	
Tinned Milk ...		0	0	0	4	14	
Tinned Mutton ..		0	1	2	0	4	
Potatoes		1	2	0	0	0	
Sugar		0	5	1	0	0	
Carrots		15	12	0	0	0	
		18	11	2	13	13	

‡Number of Other Offensive Businesses.

Tallow Melters	1
Tanners	2
Gut Cleaners	1
Tripe Cleaners	1
Hide Factors	2
Total ...	7

†Sale of Food and Drugs Acts.

ARTICLES ANALYSED.

Sweet Milk	330
Condensed Milk	1
Margarine	41
Salted Butter	9
Fresh Butter	5
Sago	14
Oatmeal	8
Pot Barley	18
Flour	11
Ground Ginger	23
White Pepper	29
Black Pepper	1
Ground Rice	17
Rice	26
Cream of Tartar	28
Coffee	25
Tapioca	16
Baking Soda	20
Cinnamon	17
Lard	12
Fat	1
Vinegar	1
Linseed Meal	1
Camphorated Oil	4
Olive Oil	4
Linseed Oil	3
Epsom Salts	3
Ginger Ale	3
Total ...	671

City of Dundee

Vital Statistics of the Various Wards 1922.