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City and Port of Cardiff.

ANNUAL REPORT

FOR 1930

OF THE

Medical Officer of Health and School Medical Officer.

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PREFACE.

"The first consideration of a Minister should be the health of the people."

LORD BEACONSFIELD.

"Yes! There was one voice that had sounded in that proud Parliament, that, free from the slang of faction, had dared to express immortal truths: the voice of a noble . . . . who had declared that the social happiness of the millions should be the first object of a statesman, and that, if this were not achieved, thrones and dominions, the pomp and power of courts and empires, were alike worthless."

LORD BEACONSFIELD.

Involuntary experiments in the starvation of communities, such as those which the Teutonic peoples endured toward the end of the Great War, have demonstrated the close connection between nutrition and health, but the effects of minor degrees of deprivation are not so obvious. The absence of any gross sign of physical deterioration in this city as a result of trade depression was noted in the preface to the Annual Report for 1927, and it is possible to say that, in spite of a continuation of that depression for ten years, the health of the people of Cardiff does not appear to be materially affected. In some respects this statement ought, however, to be qualified. In recent years there has been a definite rise in the prevalence of diphtheria and scarlet fever; these zymotic diseases tend to come in waves and their increase cannot confidently be attributed to any social circumstance other than the gathering together within relatively small compass of a sufficient number of persons who have not acquired immunity to them. Fortunately, there is little, if any, increase in the virulence of the prevalent strains of infection. On the other hand, perhaps some significance ought to be attached to the greater proportion of children found at routine school medical inspections to be suffering from some physical disease or defect, and to the increase in disease and abnormality among expectant, parturient and nursing mothers as revealed by the records of the ante-natal clinics, the calling in of medical practitioners by midwives and the notifications of puerperal fever and pyrexia. Such seeming failures of the improvement which might have been expected from the increased services provided for women and children may be the result of mere chance fluctuations, but, on the other hand, they may be the first signs of the influence on health of these bad times. It is satisfactory to observe that tuberculosis—that sure measure of extreme hardship—shows no upward tendency.

This absence of gross deficiency can confidently be attributed to one main cause, namely, the provision made to maintain the standard of nourishment of the people generally, whether by means of unemployment benefit, public assistance or the provision of milk and meals for mothers and children. It is true that public medical services, and more especially public education in matters pertaining to health, have been more vigorously developed during the last ten years than ever before, but they could do little more than apply an ineffective brake to the downward progress of the health of the people if it once started along the road of poverty.

The world slump in trade and the financial position of the country will perhaps bring this period of unprecedented social assistance to an end. If so, there is not the shadow of a doubt that the demands upon the health services will be correspondingly increased.

THE TRANSFER OF POOR LAW FUNCTIONS.

On 1st April, 1930, the City Council became the Poor Law Authority in place of the Board of Guardians, whose area had covered more than that of the city. With the exception of certain children's homes across the boundary, the City Council acquired the poor law institutions, on the understanding that a proportion of the accommodation would be made available for cases from the County. The Council made no declarations in terms of section 5 of the Local Government Act, 1929, but recorded its determination to do so as soon as circumstances should permit. The

City Lodge and Ely Lodge institutions, which are largely medical in function, are not so constructed or arranged that it was readily practicable to sever their parts from each other and put them under separate administration, but the control of their medical services was unified and brought into line with the health service by appointing the Medical Officer of Health as Medical Officer for Public Assistance. So far, the administration of the existing institutions and the out-door medical services has been a continuation of that in vogue, with developments but no striking change.

On the other hand, Llandough Hospital, a general hospital of 340 beds for the acute sick which was in course of construction by the Guardians, was immediately appropriated in terms of section 95 of the Public Health Acts Amendment Act, 1907, to be administered along with the existing separate hospitals of the Local Authority under the Public Health Acts.

The vaccination and infant life protection services were taken over by the Health Committee, the only changes being a slight adjustment of one vaccination area which overlapped the boundary and the allocation of duties in connection with the protection of infant life to health visitors as well as to the existing visitor who was transferred from the Guardians.

General Health Service.

The Registrar-General's estimate of the population at 223,900 represents a further slight decline, and the Census of 1931 appears to bear out the reliability of this estimate.

A further decline in the birth-rate occurred, the rate being 16·9 per 1,000 of the estimated population, as compared with 17·5 last year, which was then the lowest on record. The birth-rate of Penylan Ward was again less than its death-rate (Appendix I, Table V, page 92).

The excess of live births over deaths was 1,241, being higher than last year (1,028). The failure of the population to increase is therefore to be attributed to migration and not to the declining birth-rate.

The crude death-rate, 11·4 per 1,000 of the population, was relatively low, the rate last year being 12·9. The difference was due to the absence of influenza and measles in epidemic form throughout the major part of the year. Attention has frequently been directed in these reports to the fact that the respiratory diseases, and more especially influenza, are the principal causes of the fluctuations of the death-rate from year to year. The discovery of means to prevent and cure influenza would lead to a great saving of human life.

Cancer accounted for 299 deaths, equivalent to a rate of 1·34 per 1,000, as compared with 1·27 last year. Cancer has now definitely surpassed tuberculosis as a cause of death, 258 deaths being due to the latter disease.

The rate of infant mortality was 72 per 1,000 births, much lower than the rate in 1929 (84 per 1,000 births) which, however, was affected by influenza and measles.

The continued incidence of diphtheria in epidemic form led to a special effort to immunise a large proportion of the child population, which is described on page 16.

Attention is directed to Dr. McSweeney's report on the working of the Lord Pontypridd Hospital (page 25). This is an example of an institution conducted in the preventive spirit, an idea which also actuates the use of the Isolation Hospital for measles and which ought to be in the forefront of our minds in relation to the greatly increased institutional functions of the Council since April, 1930. It should also be noted that, so far, the Lord Pontypridd Hospital has been run without cost to the rates.

The construction of Llandough Hospital made reasonable progress throughout the year. The Welsh National Memorial Association decided definitely to proceed with a hospital for tuberculosis at Hayes Farm, Sully, for 250 patients, thus affording much needed provision for this as well as other areas. Extensions were also made at Glan Ely Hospital by the Association, and the Health Committee had under consideration a scheme to improve the accommodation for nurses and patients at the Isolation Hospital.

An introductory statement to the quinquennial return required by section 25 of the Housing Act, 1930, given on page 61, shows how the estimates of houses to be closed and to be built during the next five years have been made. In the same part of the report will also be found a brief indication of the extent to which the existence of Corporation Housing Estates brings work to the department.

An interesting account by the Public Analyst of the presence of lead in cider appears on page 75.

The skin eruption affecting bathers in Roath Park Lake was kept under control (page 85). A study of the biological origins of this unique occurrence, written by Mr. E. L. Taylor and Dr. H. A. Baylis, appeared in the *Transactions of the Royal Society of Tropical Medicine and Hygiene* (Vol. XXIV, No. 2, August, 1930).

A summary of the sections of the Cardiff Corporation Act, 1930, in which the Public Health Department is concerned, is given on page 88, and reference to some of the powers conferred by the new Act is contained in the relative paragraphs of the parts dealing with food inspection and general sanitation.

Port Sanitary Service.

The year was distinguished mainly by a steady increase in the work of deratisation in terms of the International Sanitary Convention. Returns of the Ministry indicate that more work of this kind is done in Cardiff than in any other port in the United Kingdom, except London.

School Medical Service.

The increase in the proportion of children reported as suffering from diseases or defects during the year has already been referred to.

Attention is directed to Dr. Anderson's report on the work of Greenhill Open-Air School (page 116) and to the note by Drs. Gibbs and Anderson (page 118) on an investigation upon tests of physical efficiency carried out by them at Greenhill and elsewhere. It will be noted that they are becoming more and more impressed with the possibilities of mental retardation as a cause, not so much as a result, of physical unfitness.

Miss Rosser's very interesting report on the work done for stammerers is printed on page 121. Her resignation will be keenly felt by the officers of this department, with whom she worked in the closest possible co-operation.

A report on a series of visits to the school canteens and an inquiry into the amount and quantity of food provided, made by Dr. Dorothy James, is given on page 133. It will be noted that some of these meals suffer from the deficiency common in the diets of poorer people, namely, protein, fat and accessory food substances (vitamins).

Mental Deficiency Service.

The present position is fully set out in this part of the report, which also contains a statement by Mrs. Dascombe on the work of the Occupation and Training Centres. As in previous years, the department has been seriously embarrassed by the shortage of accommodation for those requiring institutional care and control.

RALPH M. F. PICKEN,

Medical Officer of Health and School Medical Officer.

Public Health Department,
City Hall, Cardiff,
August, 1931.

CITY OF CARDIFF.

PUBLIC HEALTH DEPARTMENT.

Expenditure, 1929-30.

Service	Gross Expenditure	Income (Excluding Government Grants)	Net Cost of Service	Government Grants.	Net Cost to the Rates	Approximate Cost in pence to the Rates
Health Services:—	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Sanitary Expenses	12,898 0 4	339 12 11	12,558 7 5	785 19 3	11,772 8 2	
Food and Drugs (Adulteration) Act	1,255 18 9	26 17 0	1,229 1 9	...	1 229 1 9	
Diseases of Animals Acts and Tuberculosis Order, 1925...	402 11 11	1 12 0	400 19 11	1 13 9	399 6 2	
Midwives Acts	24 3 5	...	24 3 5	...	24 3 5	
Shops Acts	540 6 10	12 5 6	528 1 4	...	528 1 4	
Poisons and Pharmacy Act ...	...	0 15 0	...	...	...	2·03
Blind Persons Act, 1920 ...	1,523 2 9	...	1,523 2 9	...	1,523 2 9	
Meteorological Station ...	51 4 10	0 15 0	50 9 10	...	50 9 10	
	16,695 8 10	381 17 5	16,314 6 5	787 13 0	15,526 13 5	
Less Poisons and Pharmacy Act—Excess Income over Expenditure	...	...	0 15 0	...	0 15 0	
			16,313 11 5	787 13 0	15,525 18 5	
Sanatorium (City Isolation Hospital)	17,182 0 7	1,562 18 9	15,619 1 10	...	15,619 1 10	2·27
Caerau Smallpox Hospital ...	2,305 12 3	530 2 0	1,775 10 3	...	1,775 10 3	
	36,183 1 8	2,474 18 2	33,708 3 6	787 13 0	32,920 10 6	4·30
Prevention and Treatment of Tuberculosis	11,607 13 5	435 11 3	11,172 2 2	...	11,172 2 2	1·46
Maternity and Child Welfare Service	13,520 5 8	3,592 5 11	9,927 19 9	4,906 6 1	5,021 13 8	0·66
Venereal Diseases	5,764 8 10	...	5,764 8 10	4,343 1 1	1,421 7 9	0·19
School Medical Service ...	12,267 3 3	867 10 7	11,399 12 8	5,699 16 4	5,699 16 4	0·75
Mental Deficiency Service ...	8,720 7 11	422 18 7	8,297 9 4	4,012 1 8	4,285 7 8	0·56
Port Sanitary Service	5,811 1 1	1,399 8 6	4,411 12 7	2,212 1 6	2,199 11 1	0·28
Totals	93,874 1 10	9,192 13 0	84,681 8 10	21,960 19 8	62,720 9 2	8·20

The total rate levied for the year 1929-30 was 10s. 3d.

GENERAL HEALTH SERVICE.

I.—GENERAL STATISTICS.

Area (acres) :—	
Including inland water, foreshore and Flatholm...	13,628
Excluding foreshore and Flatholm	11,984
Excluding inland water, foreshore and Flatholm	11,580
Population (Census, 1921)	219,580
Population (Registrar-General's estimate)	223,900
Number of persons per acre (exclusive of foreshore and Flatholm) ...	18·7
Number of inhabited houses (estimated)	43,400
Number of inhabited houses per acre (exclusive of foreshore and Flatholm)	3·62
Average number of persons per occupied house	5·1
Rateable value (October, 1930)	£1,802,892
Estimated product of a penny rate	£6,700

II.—VITAL STATISTICS.

Births.

The numbers of births and still-births registered during the year, arranged in wards and sub-divided according to sex and legitimacy, are shown in Table I, Appendix I. The live births registered according to the Registrar-General are summarised in the following brief statement :—

	Legitimate	Illegitimate	Totals
Males	1,861	82	1,943
Females	1,763	79	1,842
Totals	3,624	161	3,785
Rate per 1,000 population	16·2	0·7	16·9

The number of registered still-births belonging to Cardiff was 185, equivalent to a rate of 46·6 per 1,000 births.

The birth-rates for former years and for other places are given for comparison :—

	Cardiff			England and Wales	107 Great Towns
	1930	1929	1920-1929	1930	1930
Birth-rate per 1,000	16·9	17·5	20·8	16·3	16·6

The birth-rate in each ward is given in Table V, Appendix I.

Deaths.

The deaths in 1930, classified according to age and cause (Registrar-General's short list), are set out in Table III, Appendix I. The ward distribution of the deaths and death-rates is included in Table V, and the causes of infant deaths in Table IV, Appendix I.

The following is an abbreviated extract of the death statistics :—

	Males.	Females.	Total.	Death-rate per 1,000.
Deaths from all causes ...	1,366	1,178	2,544	11·4

Of the 2,544 deaths from all causes, 898, or 35·3 per cent., occurred in public institutions.

	Deaths.	Rate per 1,000 Births.
Women in childbirth :—		
Sepsis	10	2·64
Other causes	10	2·64
Total	20	5·28

	Deaths.	Rate per 1,000 Births.
Infants under one year of age :—		
Legitimate	248	68
Illegitimate	24	149
Totals	272	72

	Deaths.	Rate per 1,000 Population.
Measles	8	0·03
Whooping Cough	22	0·10

	Deaths.	Rate per 1,000 Births.
Diarrhœa (under 2 years)	30	7·9

Certain of these rates are tabulated for comparison with previous years and other places as follows :—

	Cardiff			England and Wales	107 Great Towns
	1930	1929	1920-1929	1930	1930
Death-rate per 1,000	11·4	12·9	12·2	11·4	11·5
Infant Mortality (Deaths under 1 year per 1,000 Births)	72	84	81	60	64
Deaths of women in Childbirth per 1,000 Births :—					
Sepsis	2·64	0·76	2·03	1·92	1·94
Other Causes	2·64	2·80	2·75	2·48	2·15
Totals	5·28	3·56	4·78	4·40	4·09

Cancer.

The number of deaths from cancer or malignant disease recorded in 1930 was 299, giving a death-rate per thousand of the population of 1·34 (males 1·27, females 1·41) as compared with 284 deaths and a death-rate of 1·27 per thousand (males 1·23, females 1·30) in 1929, and with a death-rate of 1·14 (males 1·08, females 1·19) during the ten years 1920-29. The deaths during 1930 are analysed according to age, sex and localisation of the disease in the following table :—

Cancer— Malignant Disease	15-25 years		25-45 years		45-65 years		65-75 years		75 years and upwards		All Ages		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Both Sexes
Buccal Cavity	...	...	...	...	4	3	4	...	3	...	11	3	14
Pharynx, Œsophagus, Stomach, Liver and Annexa	...	...	1	6	20	21	14	13	5	5	40	45	85
Peritoneum, Intestines and Rectum	...	...	1	2	19	15	14	8	8	7	42	32	74
Female Genital Organs...	...	...	...	4	...	19	...	10	...	1	...	34	34
Breast	...	...	...	5	...	19	...	3	...	2	...	29	29
Skin	...	...	...	...	1	...	4	1	2	4	7	5	12
Other or Unspecified Organs	1	...	3	1	18	7	12	3	2	4	36	15	51
Totals ...	1	...	5	18	62	84	48	38	20	23	136	163	299

Records of cases of cancer of the breast, uterus and rectum treated at the Cardiff Royal Infirmary, which were kept for several years on forms supplied by the Ministry of Health and which have been referred to in previous annual reports, were discontinued at the end of 1929. Arrangements have been made, however, for a detailed investigation into all cases of cancer treated at the Infirmary and belonging to Cardiff as from 1st January, 1931, on the lines suggested by the Ministry in Circular 1136.

Deaths from Road Accidents.

The number of deaths from violence (excluding suicide) and the number and proportion of these due to road accidents in each year since 1923 are shown in the following table :—

Year	Total Deaths from Violence (excluding Suicide)	Deaths from Road Accidents	
		Number	Percentage
1923	100	14	14·0
1924	97	21	21·6
1925	91	23	25·3
1926	107	17	15·9
1927	103	20	19·4
1928	103	26	25·2
1929	98	16	16·3
1930	98	29	29·6

The deaths from road accidents in 19 0 have been analysed in such a way as to show the type of vehicle and the class of individual involved. The results are presented in the following table :—

Vehicles	Fatal Accidents	Persons Killed					
		Drivers	Motor Cyclists	Passengers	Cyclists	Pedestrians	Totals
Electric tramcars	1	...	...	...	1	...	1
Heavy motor vehicles	12	1	1	...	2	8	12
Light motor cars	9	2	...	2	2	3	9
Motor cycles	5	...	2	1	...	2	5
Pedal cycles	2	...	...	...	2	...	2
Totals	29	3	3	3	7	13	29

III.—ACUTE COMMUNICABLE DISEASES.

Notifications, Admissions to Hospital, Deaths and Fatality Rates.

Disease (1)	Cases Notified (2)	Cases admitted to Hospital (3)	Deaths (4)	Percentage Fatality of Cases Notified (5)
Smallpox	8	7	...	0·00
Scarlet Fever	537	403	...	0·00
Diphtheria	731	714	29	3·97
Enteric Fever	11	8	...	0·00
Pneumonia*	177	4	126	...
Puerperal Fever	42	8	10	23·8
Puerperal Pyrexia	99	3	...	...
Cerebro-Spinal Fever	5	4	4	80·00
Acute Poliomyelitis	1	1	...	0·00
Encephalitis Lethargica	4	1	1	25·00
Dysentery	5	3	1	20·00
Ophthalmia Neonatorum	42	...	...	0·00
Erysipelas	106	18	10	9·43
Malaria	8	...	1	12·50
Chickenpox	1,294	15	...	0·00

Smallpox.

Eight cases of smallpox were notified during the year, the infection being introduced on three different occasions from infected districts near Cardiff. The source of infection was definitely established in two instances, but in the other there was some doubt as to the source. As the Cardiff Smallpox Hospital was being used for cases of diphtheria at the time when the first two cases occurred, they were removed by special arrangement to the Ogmore Smallpox Hospital. One case had practically recovered before detection and was therefore not removed to hospital. The other five were admitted to the Cardiff Smallpox Hospital. All the cases recovered.

* Only such cases of pneumonia as fall into the categories "acute primary" and "influenzal" are notifiable. Deaths from all forms of pneumonia are included in the fourth column.

The following table shows the vaccinal state of the cases :—

Age Period—Years	Number of Cases	Number Unvaccinated	Number Vaccinated in Infancy	Number Vaccinated and Re-vaccinated before Infection	Number Vaccinated or Re-vaccinated after Infection
Over 40 ...	...	...	...	...	...
20–40 ...	3	2	1	...	3
10–20 ...	2	2	...	...	1
Under 10 ...	3	3	...	...	3
Totals ...	8	7	1	...	7

Vaccinal State of the Population.—The following table gives the results of the labour of the vaccination officers in connection with 4,027 children during the year :—

Successfully Vaccinated	Insusceptible	Postponed	Certificates of Exemption	Died Unvaccinated	Unaccounted for (including cases removed to other districts)
2,009	22	35	1,487	301	173

Comparison with previous years is made in the following table :—

Year	Percentage of Infants not returned as Vaccinated	Percentage of Certificates of Exemption
1921	42·5	29·5
1922	47·7	37·2
1923	35·5	23·5
1924	44·2	30·5
1925	48·1	31·3
1926	54·2	34·0
1927	52·2	29·5
1928	47·8	33·2
1929	56·7	36·6
1930	50·1	36·9

Chickenpox.—In order that the discovery of aberrant cases of smallpox might be facilitated, chickenpox has been compulsorily notifiable since 17th March, 1927. During 1930 the number of cases of chickenpox notified was 1,294, and all doubtful cases, all cases over ten years of age—whether vaccinated in infancy or not—and all unvaccinated cases under ten years were visited by the medical staff.

Enteric Fever.

Eleven cases of enteric fever were notified, as compared with 18 in 1929. None of the cases died, 1930 being the first year since 1924 during which no deaths from this disease have been recorded.

Scarlet Fever.

The high prevalence of scarlet fever recorded in 1929 continued during the whole of 1930, 537 cases being notified as against 640 in the preceding year. A period of high prevalence of this disease commenced in 1929, and from past experience it

seems likely that it will continue for at least another year. Notwithstanding the relatively large number of cases notified no deaths were attributed to the disease during the year.

Diphtheria.

As anticipated and mentioned in the report for 1929, diphtheria continued to be prevalent during 1930, the number of notified cases being 731, as compared with 735 in 1929. The incidence of this disease is following, as usual, the same course as scarlet fever, and at present there are no signs that it will be much less prevalent for a year or two. Twenty-nine deaths from diphtheria were registered, being equivalent to a death-rate of 0·13 per 1,000. It is satisfactory to note that the case mortality (3·97 per cent.) was comparatively low.

Schick Testing and Active Immunisation.—Because of the increased prevalence of diphtheria in 1929 and the early months of 1930 it was decided to make a special effort to immunise as many children as possible during the summer months of the latter year. Partly because the incidence of the disease had been heavy among children of school ages, associated with a high mortality at these ages, and partly because experience has taught us that the most satisfactory way of organising such a campaign is through the schools, attention was concentrated upon children of the age-group 5-15 years. A medical officer, a nurse and two clerks were temporarily engaged for the purpose, a sum of £1,200 being provided to cover the whole cost of the campaign.

It was estimated that 10,000 children would be submitted to the Schick test and that 6,000 of these would require immunisation. In fact, less than 8,000 children were permitted by their parents to undergo the test, of whom rather more than 4,000 were found to require injections of toxoid anti-toxin. The unexpectedly high proportion of children found negative to the Schick test was partly due to the fact that over 1,100 children who had been previously tested, some 750 of whom had also been immunised, were submitted again by their parents for Schick-testing.

The following table summarises the work of the year, all but an insignificant number, mostly under five years of age, being actually done during the six months of special effort referred to above :—

Children	Schick Tested	Positive	Immunised	Failed to attend for Completion
0—5 years	11	8	321	7
5 years and upwards...	7,862	4,271	4,044	300
Totals	7,873	4,279	4,365	307

It may be of interest to record that the cost was less than anticipated, amounting in all to £791 9s. 3d. made up as follows :—

	£	s.	d.	£	s.	d.
(1) Staff—						
Medical Officer	250	15	9			
Nurse (3 months)	45	0	0			
Clerks	75	0	0			
				370	15	9
(2) Materials—						
Circulars, forms, etc.	30	6	9			
Toxin and Toxoid Anti-toxin	385	7	11			
Other materials	4	18	10			
				420	13	6
				£791	9	3

The difference between the estimated and actual costs is explained partly by the smaller number of acceptances than expected and partly by the fact that is was found possible to buy the prophylactic at less than the estimated rate. The complete cost per child Schick-tested amounted to 2s. 0·1d, or, if the total cost be placed against only those who were immunised, the cost may be expressed as 3s. 7·5d. per child immunised.

As in previous years, it has not been found possible to afford the time and staff to retest within six months those who have been immunised. It is, however, interesting to consider the result of the subsequent tests carried out during 1930 on children who had been tested, and in some instances immunised, during the previous four years. During the year, 1,168 such children presented themselves again for the purpose and the findings are set out in the following table :—

	Previously Schick-positive	Previously Schick-negative
Negative at retest	484	346
Positive at retest	294	44
Totals	778	390

Of the 778 previously Schick-positive cases, 756 had been fully immunised but not retested until the present occasion. Positive results were found in 1930 in 280 instances, or 37 per cent., while 476, or 63 per cent., were negative.

It has been thought desirable to summarise the results of the ascertainment and promotion of immunity to diphtheria since 1926, and for this purpose the following table, showing the state of immunity to diphtheria at 31st December, 1930, of children who have been tested and/or immunised by the department since that year, has been prepared :—

Age—Years	Condition of Immunity		Total child Population presumed to be Immune	Estimated Population at Certain Ages	Percentage presumed to be Immune
	Schick-negative	Received complete Course of Toxoid Anti-toxin			
1	...	141	141		
2	1	287	288		
3	5	323	328	16,913	6·1
4	56	222	278		
5	185	508	693	3,952	17·5
6	345	712	1,057	3,941	26·8
7	476	939	1,415	4,041	35·0
8	535	960	1,495	4,208	35·5
9	656	948	1,604	4,239	37·8
10	721	979	1,700	4,413	38·5
11	640	702	1,342	3,091	43·4
12	264	223	487	2,989	16·3
13	140	165	305	3,294	9·3
14	86	84	170		
15	39	32	71		
16	30	25	55		
17	19	22	41	Unknown	
18	18	13	31		
19	1	2	3		
Totals	4,217	7,287	11,504	...	...

In this table the numbers of children at each year of life as at 31st December, 1930, who have been found Schick-negative or who have received three injections of toxoid anti-toxin, with or without previous testing, are set out, and in the last column the percentages are given of the population in certain age-groups who are regarded provisionally as immune. These records may enable us to arrive at some measure of the influence of this effort upon the incidence of diphtheria in 1931 and subsequent years.

Ophthalmia Neonatorum.

Forty-two cases of ophthalmia neonatorum were notified during 1930, 19 of which were institutional cases. Of the remaining 23 cases, 19 were treated by private medical practitioners, three by medical officers of the department and one was admitted to the City Lodge Hospital. In 15 instances nurses of the Queen's Institute of District Nursing rendered assistance in the treatment. A complete cure was effected in 39 cases, the vision in each case being un-impaired. Two cases died from other causes and one left the district before the result of treatment was known.

During the year, 50 specimens of exudate from the eyes of individual infants notified or suspected to be suffering from ophthalmia neonatorum, including 18 of the notified cases, were submitted for microscopical examination for the presence of gonococci, with the following results :—

	Number.	Percentage.
Positive	10	20·0
Negative	40	80·0
Total	50	100

Non-Notifiable Acute Communicable Diseases.

The following statement shows the number of cases of non-notifiable communicable diseases which came to the knowledge of the department during 1930 :—

Measles	1,148
Rubella	38
Whooping Cough	557
Mumps	20

Measles.—Measles became epidemic towards the end of September and remained so until the end of the year. Eight deaths occurred, the death-rate being 0·03 per 1,000, as compared with a death-rate of 0·50 per 1,000 in 1929.

Whooping Cough.—Most of the known cases of whooping cough occurred during the first half of the year, the disease being especially prevalent during the first quarter. The deaths from this disease numbered 22, corresponding to a death-rate of 0·10 per 1,000, as compared with 0·11 per 1,000 in the preceding year.

Diarrhœa.—Thirty-nine deaths were registered as being due to diarrhœa, etc., 30 of which occurred amongst children under two years of age. These 30 deaths corresponded to a death-rate of 7·93 per 1,000 births, as against a rate of 11·2 in 1929.

Influenza.—The number of deaths certified as being caused by influenza was 23. This number is comparatively low and has been exceeded each year since 1921, when only 19 deaths were attributed to the disease. The following table is given to show the effect of recurring epidemics of influenza on the deaths from all causes and those definitely connected with the respiratory system :—

Year	(1) Deaths from All Causes	(2) Deaths from Influenza and Respiratory Diseases	(3) Percentage of (2) in (1)
1917	2,433	471	19·4
1918	3,188	1,073	33·6
1919	2,652	666	25·1
1920	2,411	424	17·6
1921	2,452	429	17·5
1922	2,704	758	28·0
1923	2,721	484	17·8
1924	2,740	597	21·8
1925	2,916	534	18·3
1926	2,441	357	14·6
1927	2,853	639	22·4
1928	2,660	431	16·2
1929	2,899	514	17·6
1930	2,544	315	12·4

Home Nursing of Pneumonia.—The arrangement made with the Queen's Institute of District Nursing for the home nursing of cases of pneumonia, referred to in the report for 1929, has been continued, and the following is a summary of the work done by nurses of the Institute in this connection during 1930 :—

Cases in hand at beginning of year	2
Cases referred for nursing during the year	66
Visits during the year	1,132
Cases in hand at end of year...	5

IV.—CARDIFF ISOLATION AND SMALLPOX HOSPITALS.

The number of patients admitted to the Isolation and Smallpox Hospitals, the average daily number of patients under treatment, the number of patient-days and the average duration of residence are shown in the following table :—

Disease according to diagnosis after admission	Patients admitted	Average daily number of patients	Patient-days	Average duration of residence in days
Smallpox	19	2	740	39
Scarlet Fever	322	25	9,709	30
Diphtheria	643	92	33,884	53
Other Diseases	415	39	14,557	35
All Diseases	1,399	158	58,890	42

The annual report of the Medical Superintendent is given below :—

Report for 1930 *of Dr. John McGarrity, Resident Medical Superintendent of the Cardiff Isolation Hospital.*

During the year there were admitted to the wards 1,399 patients, including cases of smallpox who were treated at the Smallpox Hospital, Caerau. The Smallpox Hospital was also used as an annexe of the Isolation Hospital for ordinary cases of infectious disease.

The health of the nursing and domestic staff was on the whole satisfactory. One nurse and two maids developed mild attacks of diphtheria. One nurse developed a severe attack of acute rheumatism and a few others mild attacks of rheumatism and influenza. As during 1929, quite a number of the nurses and maids developed attacks of tonsillitis or simple sore throat.

The work of testing the nurses and maids by means of the Schick and Dick tests continued, but the unsuitability of many of the probationer nurses for the nursing profession hindered the work, as so many left hospital at the end of their trial period. During the past six years (1925-1930 inclusive) 165 members of the nursing staff and 91 maids have been Schick tested ; 48 of the nurses and 30 of the maids were Schick-positive reactors, and, of these, 29 nurses and 8 maids have been successfully immunised against diphtheria. During the past five years (1926-1930 inclusive) 123 nurses and 56 maids have been Dick tested, and only 11 nurses and 3 maids were found to be susceptible to scarlet fever ; of these, 5 nurses have been given immunising injections. Only trivial local and constitutional reactions followed any of these immunising inoculations.

Dr. Douglas Norman was appointed Assistant Resident Medical Officer in the early part of the year. She was a great help to me—particularly in the wards and in the laboratory.

During the year the usual lectures and tutorials have been given in anatomy, physiology, hygiene and fevers by Dr Norman and myself. Miss Chubb and Sister Weir have, as usual, taken a full share in the training of the nurses for their examinations. Three nurses passed the Preliminary State Examination and three failed, while three passed the Final State Examination in Fevers and two failed.

Scarlet Fever.—Three hundred and ninety-nine patients were admitted to the wards, of whom 322 were true cases of scarlet fever ; of the remainder, 57 suffered from a variety of adventitious rashes. Twenty patients were admitted to the wards as likely cases of scarlet fever but were finally diagnosed as suffering from other infectious diseases, viz., 14 from rubella, three from measles, one from diphtheria and two from chickenpox. Two of the true cases of scarlet fever were admitted to the hospital as cases of diphtheria. One child, a case of scarlet fever, died from enteritis—an exacerbation of a previously chronic condition. Another child, admitted as a likely case of scarlet fever, in reality suffered from exfoliative dermatitis ; the patient died. Three hundred and seven patients suffered from simple scarlet fever, one being septic in type, while 14 were subseptic. Fifty-two patients received injections of scarlet fever anti-toxin. Two patients relapsed.

The principal complications are noted below :—

Complication.	Cases.	Percentage.
Arthritis	10 ...	3·1
Otorrhœa	29 ...	9·0
Rhinitis	19 ...	5·9
Late albuminuria	17 ...	5·3
Adenitis	28 ...	8·7
Tonsillitis	4 ...	1·2
Diphtheria	3 ...	0·9
Nephritis	1 ...	0·3

Table showing Age and Sex of Scarlet Fever Patients.

	0-5 years	5-10 years	10-15 years	15-25 years	25-45 years	Over 45 years	Totals
Recovered—							
Males	38	54	29	7	3	1	132
Females	34	78	40	14	14	9	189
Died—							
Males	...	...	...	...	...	...	...
Females	...	1	...	...	...	...	1
Totals ...	72	133	69	21	17	10	322

Hospital mortality—0·31 per cent.

Diphtheria.—Seven hundred and sixty-four patients were admitted to the wards, of whom 643 were true cases of diphtheria, while the remaining 121 suffered from a variety of complaints. Twenty-five suffered from tonsillitis, 10 from laryngitis, two from rhinitis, one from Vincent's angina, one from Vincent's angina with a concurrent quinsy, one from laryngitis and concurrent broncho-pneumonia, one from a septic throat following the removal of tonsils, one from a syphilitic ulceration of the throat, one from broncho-pneumonia following whooping cough, one from tonsillitis and acute rheumatism, and one from tonsillitis with an accompanying erythema of unknown origin. Fifty-eight were merely carriers of the diphtheria bacillus, though one suffered from concurrent chickenpox and one had concurrent adenitis. Ten patients admitted as possible cases of diphtheria were finally diagnosed as merely carriers with concurrent follicular tonsillitis ; they were found to be Schick-negative reactors and were not given diphtheria anti-toxin. Four patients, also admitted as likely cases of diphtheria, were found to be suffering from scarlet fever (two cases) and measles (two cases). Four of the true cases of diphtheria were admitted as being merely carriers, and one other true case of diphtheria was admitted as a possible case of scarlet fever.

Table showing Type of Diphtheria and Mortality.

Type	Number	Died	Mortality per cent.
Faucial only	465	8	1·72
Faucial and nasal	117	16	13·67
Faucial and laryngeal	17	2	11·76
Faucial, laryngeal and nasal	7	2	28·57
Laryngeal only	32	...	...
Nasal only	1	...	...
Laryngeal and nasal	1	...	...
Faucial and lip	1	...	...
Lip	1	...	...
Vaginal and nasal	1	...	...
Vaginal	1	...	...
Totals	643	28	4·35

The above table shows, among other things, that there were 28 deaths from diphtheria during the year, representing a hospital mortality of 4·35 per cent., as compared with 3·58 per cent. in 1929, 3·38 in 1928, 4·82 in 1927, 4·98 in 1926, and 5·36 in 1925.

Twenty-five patients suffered from laryngeal obstruction, and, of these, two died, representing a death-rate of 8·0 per cent. of laryngeal cases. Seventeen of the 25 patients were given steam inhalation only, of whom one died (death being due to broncho-pneumonia). Seven patients were subjected to intubation, of whom one died ; while one, subjected to tracheotomy before admission to hospital, made a satisfactory recovery. Ten other patients, admitted as possible cases of laryngeal diphtheria, were finally diagnosed as suffering merely from laryngitis ; these were treated with steam inhalation only.

Types of post-diphtheritic paralysis :—

Type.	Number.
Ptosis	1
Palatal paresis...	28
Strabismus	5
Ciliary paresis	3
Paralysis of the muscles of the neck	16
Paralysis of the muscles of the legs	16
Paralysis of the muscles of the back	1
Paralysis of the muscles of the foot	1
Facial paralysis	1
Pharyngeal paralysis	4
Total	76

Forty patients in all suffered from paralysis. The paralysis rate was therefore 6·2 per cent., as compared with 9·3 last year, 8·8 in 1928, 6·9 in 1927, 6·3 in 1926 and 8·3 in 1925.

Circulatory failure occurred in 89 patients. Fourteen of these showed only slight failure as evidenced by a soft pulse and rather weak heart sounds. Thirty-nine patients had, as well, definite irregularity of the pulse and heart, while the remaining 36 had quite serious circulatory failure accompanied by nausea, vomiting and abdominal pain. Of these 36 patients, 23 died, 19 of them dying of early heart failure and four of a later failure of the circulation.

Table showing the Diphtheria Death-rate according to the Day of Disease on which Serum was given.

Day of Disease on which Serum given	Number of Patients	Number of Deaths	Number of Deaths per cent.
1st	23	1	4·35
2nd	152	5	3·28
3rd	155	4	2·58
4th	122	7	5·74
5th	75	4	5·33
Later than 5th	116	7	6·03
Totals	643	28	4·35

An analysis of the causes of death of the six patients who succumbed on the first and second day of disease reveals the fact that four out of the six died from concurrent broncho-pneumonia rather than from diphtheria.

Rashes occurred in 79 instances following the injection of diphtheria anti-toxin. The type of erythema in 15 instances was scarlatiniform, in 30 morbilliform, and in 34 urticarial.

Table showing Age and Sex of Diphtheria Patients.

	0-5 years	5-10 years	10-15 years	15-25 years	25-45 years	Over 45 years	Totals
Recovered—							
Males	68	113	46	14	11	...	252
Females	65	150	63	53	23	9	363
Died—							
Males	6	8	...	...	1	...	15
Females	3	5	3	...	2	...	13
Totals ...	142	276	112	67	37	9	643

Hospital mortality—4·35 per cent.

Measles.—One hundred and eleven patients were admitted to the wards. Of these, 92 were true cases of measles, while four were really suffering from rubella and four had adventitious rashes of unknown origin. Three of the true cases of measles had been admitted to the hospital as likely to be suffering from scarlet fever and two from diphtheria. Five deaths occurred among the measles patients, representing a hospital mortality of 5·43 per cent. Of the children who died, one was marasmic, one suffered from concurrent pyelitis, one from concurrent diphtheria and enteritis, one from concurrent broncho-pneumonia and one from enteritis.

The principal complications were as follows :—

Complication.	Number.
Laryngitis	3
Broncho-pneumonia	5
Otorrhœa	14
Adenitis	1
Diarrhœa (with green stools)	10
Enteritis	1
Rhinitis	2
Diphtheria	1
Pyelitis	1

Table showing Age and Sex of Measles Patients.

	0-1 year	1-2 years	2-3 years	3-4 years	4-5 years	5-10 years	10-15 years	Totals
Recovered—								
Males	2	8	4	8	3	20	...	45
Females	1	5	1	9	5	21	...	42
Died—								
Males	2	...	1	...	...	1	...	4
Females	...	...	1	...	...	...	...	1
Totals	5	13	7	17	8	42	...	92

Hospital mortality—5·43 per cent.

Enteric Fever.—Fourteen patients were admitted to the wards, of whom twelve were true cases of enteric fever. The other two patients were finally diagnosed as suffering from lobar pneumonia (who died) and influenza respectively. Of the true cases of enteric fever, four were patients suffering from *Bacillus Typhosus* infection, seven from *Bacillus Paratyphosus B* infection, and one from *Bacillus Paratyphosus A* infection. There was one death* among the enteric fever patients. One patient relapsed.

Erysipelas.—Seventeen patients were admitted to the wards, all of whom were true cases of erysipelas. All suffered from facial erysipelas. Two patients died, one of whom suffered from concurrent pneumonia. One patient relapsed. Five of the patients received injections of polyvalent anti-streptococcal serum and the remaining ten received injections of scarlet fever anti-toxin.

Meningitis (Cerebro-spinal Fever).—Seven patients were admitted to the wards likely to be suffering from some form of meningitis. Of these, four were true cases of cerebro-spinal meningitis and three were finally diagnosed as cases of tuberculous meningitis. Two of the cases of cerebro-spinal meningitis died and two recovered. All the three cases of tuberculous meningitis died.

* An extra-mural case.

Whooping Cough.—Six patients were admitted to the wards, of whom one died from broncho-pneumonia. Three other children suffered from broncho-pneumonia as a complication.

Chickenpox.—Fifteen patients were admitted to the wards. Of these, two were admitted as possible cases of scarlet fever.

Rubella.—Nineteen patients were admitted to the wards during the year. Of these, 14 were admitted as likely cases of scarlet fever and four as likely cases of measles.

Smallpox.—Twenty-one patients (including 15 from Newport, Mon.) were admitted to the Smallpox Hospital, of whom 19 were true cases of smallpox. All recovered.

Puerperal Fever.—Twelve patients were admitted suffering either from puerperal pyrexia or fever. One of these 12 patients died, but all the others made a satisfactory recovery to health. All were treated with injections either of streptococcal or polyvalent serum or of scarlet fever anti-toxin.

Other Diseases.—In addition to all the above-mentioned diseases, there were admitted to the wards 42 other patients who were finally dignosed as follows :—

Disease.	Number	
Influenza	6	
Synovitis of knee	2	
Leprosy	1	
Rheumatism	3	
Goitre	1	
Quinsy	1	
Neurosis (admitted as observation encephalitis) ...	1	
Lobar pneumonia	4	(1 died)
Bacillary dysentery	3	
Anterio poliomyelitis	1	
Gastritis	2	
Tonsillitis	17	
Total	42	

Laboratory Work.—The following table contains a summary of the bacteriological examinations of various kinds conducted in the hospital laboratory during the year :—

Examinations	Positive	Negative	Totals
Specimens for diphtheria	1,429	2,300	3,729
Blood for the Widal reaction	10	4	14
Urines	...	...	71
Blood counts	...	...	9
Fæces	...	...	25
Cerebro-spinal fluid	...	...	14
Miscellaneous examinations...	...	...	14
Total	...	...	3,876

Schick and Dick Tests in the Wards.—Three hundred and twenty-five patients in the scarlet fever wards were Schick tested. Of these, 127 were positive reactors and 198 negative reactors, representing a Schick-positive rate of 39·08 per cent. Six hundred and six patients in the diphtheria wards were Dick tested. Of these, 328 were positive reactors and 278 were negative reactors, representing a Dick-positive rate of 54·12 per cent.

V.—LORD PONTYPRIDD HOSPITAL (DULWICH HOUSE).

Report for 1930 *by Dr. Chris. J. McSweeney.*

As mentioned in the report for 1929, this hospital is reserved for the treatment of early rheumatic conditions in children, more especially those in which early signs of involvement of the heart are present. While it is administered through the Public Health Department, it is financed out of funds derived from a legacy left to the Cardiff City Council in 1927 by the late Lord Pontypridd. Wherever possible, the parents make a contribution towards the cost of the maintenance of their children in hospital. During the year the accommodation was increased from 20 to 24 beds.

There were 18 children in hospital on 1st January, 1930, and during the year 115 cases were admitted and 111 discharged, 22 children remaining in hospital on 31st December, 1930. One child died in the institution—a girl of 11 years admitted with chorea major and an active carditis. This child was admitted on 19th April, 1930, on the recommendation of her medical attendant, after three months' treatment at home for chorea, which had started in December, 1929. On admission her heart showed definite mitral regurgitation. She developed two attacks of cerebral embolism, the last followed by a left-sided hemiplegia, and death supervened on 11th September, almost five months after admission. The temperature and pulse readings fluctuated around 100-102°F. and 100-120 respectively during the greater part of this period, but there was an entire absence of sweats and arthritis throughout. The colour of the child was distinctive, resembling more than anything that of cafe-au-lait. Clinically, the case occupies an intermediate position between malignant endocarditis on the one hand and acute rheumatic carditis on the other. A variety of sub-infective endocarditis of this type has been described by Horder and others under the title of "endocarditis lenta." It should be added that Professor A. M. Kennedy, of the Welsh National School of Medicine, kindly saw the case several times and gave advice as to its treatment.

Of the remaining 110 cases, 106 returned to their own homes, and 4 children were transferred to other Corporation hospitals, viz., 3 to the City Isolation Hospital (1 case of diphtheria, 1 diphtheria carrier and a case of chickenpox) and one to the City Lodge Hospital (a case of the post-encephalitic state with marked athetosis admitted in error as chorea). Six children were withdrawn from hospital for various reasons by their parents before treatment had been concluded.

The medical reasons for admission of the 115 cases to hospital in 1930 were :—

Chorea alone	12
Chorea and early carditis	36
Rheumatic pains alone	5
Rheumatic pains and early carditis	30
Early carditis without definite symptoms	2
Rheumatic fever and early carditis	3
Rheumatic fever and valvular heart disease	4
Chorea and valvular heart disease	10
Rheumatic pains and valvular heart disease ...	13
Total ...	115

The ages of the children admitted varied from 5 years to 14 years. Fifty-seven were boys and 58 girls. Every case (with the exception of the post-encephalitic child

previously mentioned) was suffering from acute or subacute rheumatism and, as the foregoing table shows, in the great majority some abnormality of the heart was detectable. It will be noted that 27 cases were thought to be suffering from valvular disease of the heart on admission. Generally speaking, cases with established disease of the heart are not considered suitable for admission, but it is sometimes difficult to refuse a bed to a child with permanent heart disease who is suffering from one or other form of acute rheumatism urgently requiring treatment and rest in bed which he cannot obtain in his own home. On a few occasions the admission of children with established valvular disease has been attributable to the long periods during which they have had to wait for beds to become available. This is more especially prone to happen towards the end of the period of greatest rheumatic prevalence, viz., February and March. But the admission of children who appeared to have permanently damaged hearts has, in a few instances, unexpectedly justified itself, as with prolonged rest and treatment definite murmurs have disappeared and the heart has returned to normal functional capacity. Even with increasing experience it is not always possible to decide on clinical examination whether certain lesions of the heart of comparatively recent origin are likely to respond to treatment or not. In these cases the practice is to give the child the benefit of the doubt, and, accordingly, during the year five children classified on admission as having established valvular conditions completely lost all signs of heart disease after a prolonged period of hospitalisation, while four others were regarded on discharge as presenting only minor cardiac manifestations not amounting to valvular disease.

The following table shows the result of hospital treatment, so far as the heart was concerned, in 100 cases treated to a conclusion in 1930 : —

	On admission.	On discharge.
Minor cardiac manifestations* ...	59	23
Major cardiac manifestations† ...	26	17
Normal hearts	15	60
Total	100	100

The valvular lesions encountered during the year in all cases involved the mitral valve. On discharge, eight cases were considered to be suffering from established mitral regurgitation, eight from mitral stenosis and one from both mitral and aortic regurgitation. No child admitted with a normal heart developed valvular disease while in hospital. It will be seen that out of 100 cases treated the figure for normal hearts has been raised from 15 to 60 as a result of in-patient treatment. It is certain that this recovery rate would be higher if the accommodation at the hospital permitted the admission of every case of active carditis immediately on ascertainment. After two years of experience it is possible to hazard an estimate of the institutional provision necessary to achieve this ideal, and for a city like Cardiff it is probable that one bed for every 1,000 of school population would not be excessive for this purpose, *i.e.*, approximately 35 beds.

Selection of Cases for Hospital.—The ascertainment of rheumatic children is accomplished at school inspections and clinics and through the agency of private practitioners, head teachers, the public health nursing staff and school attendance officers. A weekly rheumatism clinic was held during 1930, and to this 170 new cases were referred and examined. There were 350 children under regular supervision at this clinic during the year, and 55 children ceased to attend in consequence of attaining the school leaving age. In all cases about to leave school advice is given

* Cases with alteration in character of first heart sound, *e.g.*, blurring or softening or having localised murmurs, usually with some increase in area of cardiac dulness. In most cases these signs express early rheumatic carditis.

† Cases with definite murmurs over valve areas conducted outside the heart and always with some increase in area of cardiac dulness. In most cases these signs connote valvular disease.

to the parents with reference to the choice of employment best suited to the child's physical condition. The percentage of appointments kept at the rheumatism clinic is extraordinarily high, and failure to attend when summoned is almost invariably found to be due to some unavoidable cause, *e.g.*, absence from home or confinement to bed. At each attendance the child receives a complete medical examination with special reference to the heart, and for this reason it is not possible to deal with more than 18 children at any one session of three hours duration. Cases referred by practitioners are frequently too ill to attend the clinic, and these are seen at home by arrangement with the medical attendant. Of the 115 admissions to hospital in 1930, 25 (21 per cent.) were referred by private practitioners, the corresponding figure in 1929 being just under 7 per cent. of the total admissions.

The ideal to strive after in preventive work of this kind is the ascertainment of cases at the earlier stages of heart involvement, with a view to their speedy removal to hospital. The domiciliary treatment of rheumatic carditis even in the homes of the well-to-do is rendered extremely difficult by the insidious nature of the disease and the excitable temperament of its victims.

Cardiac Complications.—One of the most striking of our experiences has been the comparative rareness of continued pyrexia in the acute and subacute cases of the disease treated at the hospital since its inauguration. It is, of course, common for the temperature to be elevated when a joint is swollen, but defervescence is generally very speedy—a matter of a day or two— and, apart from the fatal case already referred to, no child has had a continuous temperature due to rheumatism of more than a week's duration. No doubt the complete immobilisation of the patient which the hospital regime involves assists in producing this effect, but it is difficult to avoid the conclusion that juvenile rheumatism as seen to-day is a very much less acute disease than it was in former years. Unfortunately, there is no evidence that the prevalent, less dramatic forms of the disease are less likely to lead to cardiac disease. Indeed the converse may be true, for it is probable that the undoubted increase in the subacute types at the expense of the acute has led in many cases to neglect in securing medical advice at an early stage of the disease which might not have obtained had the rheumatic manifestations been more frank.

With prolonged rest in bed and a very gradual resumption of normal activities a heart which is the seat of early rheumatic infection tends, in the case of children, to return to normal. The area of cardiac dulness diminishes, the first sound loses its want of clearness, and even localised murmurs very often disappear entirely. It is probable that most of these signs express myocardial rather than endocardial mischief. Sometimes the process of recovery is accompanied by demonstrable hypertrophy, but in a majority of cases the heart, judged by clinical standards, appears to become absolutely normal.

The value of open-air treatment in the management of juvenile rheumatism has again been apparent during the past year. The children in the open-air ward (which is unfortunately not capable of being utilised except during the summer months) improved more rapidly than those sleeping indoors, and they seemed less liable to relapses after discharge. It was noticed that the pigmentation of the skin acquired by these children persisted for many months after they had left hospital.

Complications other than Cardiac.—These are so rare as hardly to merit comment. During the year, at different periods, nine cases developed a single attack of tonsillitis, but in each case this was very slight and quickly subsided. Since rheumatism supervisory work was begun in Cardiff four years ago no evidence has come to light indicating that there is any close connection between the size of the tonsils and the development or course of juvenile rheumatism. One curious feature, however, deserves mention. In a few cases under treatment in hospital a fleeting attack of tonsillitis or a complaint of sore throat antedated a definite relapse by periods varying from 7 to 28 days. The severity of the relapse seemed to bear no relation to the severity of the throat condition, which, indeed, in most cases, was quite transient and more often than not unaccompanied by exudation. The interval between the

inflammation of the throat and the relapse was generally uneventful and the onset of the relapse quite sudden. In other cases, presenting identical throat manifestations, no relapse occurred. Blotchy areas of brownish discolouration, simulating the later stages of a bruise, appeared on the skin of the limbs and trunk in four cases during the year. These cases were not choreic when the blotches were noticed and a traumatic origin was definitely excluded. In one case the areas continued to appear for several weeks. The children affected were all suffering from active rheumatism and had valvular lesions. Two children developed urticaria and one herpes zoster intercostalis (which, incidentally, was almost certainly responsible for a child in the next bed developing chickenpox fourteen days later).

Management of the Cases.—This has remained substantially the same except that a trial is being made of calcium therapy with cases of severe chorea. Usually the cases receiving calcium also take a preparation containing vitamins A and D, but up to the present there has been no striking evidence that these children part with their rheumatic manifestations more quickly than similar cases who have received neither calcium nor the vitamin preparation. Iron tonics are useful in combating the anæmia which is a common concomitant of the disease. Salicylates are used only for the relief of pain, but it is extraordinary how infrequently pains are complained of after the patient has been immobilised for a few days. The traditional connection between changes in climate and the occurrence of limb pains in rheumatism would appear to be borne out by the observation that children, even when resting in bed, frequently complain of the recurrence of aches after a long period of freedom whenever there is a somewhat sudden change to damp weather.

Incidence of Acute Rheumatism in Members of the same Family.—Reference was made in last year's report to the relatively large number (44 per cent.) of children admitted in whose cases one or other or both parents had suffered from rheumatic fever, chorea or rheumatic pains during early life. Of the 115 children admitted in 1930, it was possible to obtain reliable information concerning the family history in 98 instances. In 44 of these (approximately 46 per cent.) a history of juvenile rheumatism in the parents was unequivocal. It should be stated that these histories were ascertained by a medical officer, and in their compilation rheumatic pains and aches contracted in later life, as the result of war service or some other cause, were disregarded. Without a history during childhood or adolescence of rheumatic fever, chorea or pains sufficient to cause the patient to lie up for a long period, the parent was classified as not having suffered from juvenile rheumatism. It should be borne in mind that these histories relate only to children admitted to hospital, and in this respect the cases were selected and do not represent a random sample of all rheumatic children. Of these 98 children, 28 had one or more brothers or sisters afflicted with definite juvenile rheumatism, there being 131 rheumatic children distributed among the 98 separate families. It would seem then that, in Cardiff at least, family relationships play some part in the ætiology of juvenile rheumatism.

After Care.—Increasing experience shows the necessity for continuous medical supervision of children discharged from hospital. Owing to the pressure on the accommodation at the hospital, cases have to be sent home too soon after getting up and, although no child returns to school for at least a month after discharge from hospital, as many as 9 per cent. of the cases admitted in 1930 were readmissions. The speeding up of discharge from hospital consequent on the demand for beds is shown by the reduction in the average period of in-patient treatment per case in 1930, which was only 77 days, as compared with 84 days in 1929. In most of the cases readmitted the home conditions had been unfavourable and the parental management unsatisfactory. In dealing with a disease like juvenile rheumatism, recurrences must be expected, and this is one reason why regular medical supervision is desirable. Recently, leaflets couched in simple language, explaining the ravages of rheumatism and laying down rules for the care and management of rheumatic children, have been

printed and are given to parents when their children are leaving hospital; they are also distributed at the rheumatism clinic.

Generally speaking, the cases who have passed through the hospital have remained well, and in the majority the recurrences experienced have been slight and of brief duration. In attaining this, the educational value of the hospital regime cannot be over estimated. As to the permanency of any results obtained from the hospital treatment of these cases, it is, of course, far too early yet to express any definite opinion.

Co-operation with the school attendance department has now been developed to such an extent that rheumatic children not excluded from school are readily excused from attending on particularly wet days, especially if they would be obliged to walk a long distance in order to do so. Children who are threatened with chorea, or suffering from manifestations not severe enough to justify complete exclusion from school, are allowed to attend school for the afternoon sessions only, so that they may have an opportunity of resting in bed in the mornings. In the case of children who have had a long period of hospital treatment it is frequently necessary to resume schooling in this fashion. The willing co-operation of head teachers and school attendance officers in making these special arrangements is deserving of comment.

An experiment was started at Easter, 1930, of sending to Greenhill Open-Air School 12 convalescent rheumatic children, 10 of whom had passed through the hospital. The children selected were those who had escaped the graver cardiac complications but who were of subnormal physique and were likely to benefit from the open-air conditions and the regular and balanced diet available there. At the end of the year (eight months after admission) eight of these children were continuing to do very well, all having put on weight, the average gain per case being over 4 lb. The two children who had not had previous hospital treatment were allowed to return to elementary schools in November. Both of these had not gained in weight to any great extent. In one case the actual attendances had been less than half the possible, and the parents were not very keen on the child's attendance at the Open-Air School. The other case was found to be temperamentally rather unsuited for the open-air regime and has been quite fit since returning to an elementary school. The remaining two cases developed a recurrence of rheumatism with the arrival of the cold weather and were readmitted to hospital. Both had done quite well during their six months' attendance at the Open-Air School. It should be mentioned that special care is taken to ensure that rheumatic convalescents do not enter too strenuously into games or manual occupations at the Open-Air School, and pains are taken to prevent their undue exposure to the weather. Up to the present our experience has been that suitably selected convalescent rheumatic children, preferably those who are under weight at the time of their discharge from hospital, derive considerable benefit from attendance at an open-air school. The regular medical supervision which children obtain there has a special advantage in the case of rheumatic children, as by this means recurrence of the disease is detected at its earliest stage and appropriate treatment prescribed.

VI.—HOSPITAL ACCOMMODATION.

The tabular statement given below shows the amount of accommodation for the sick and others in need of special care, provided by the City Council and other bodies, classified according to the type of function each subserves. In addition, Llandough Hospital, a general municipal hospital which is at present in course of construction, will provide 340 beds for acute diseases, approximately 255 of which will be available for Cardiff patients.

Institution	Total available Beds		Approximate Number available for Cardiff.
Isolation Hospital (including old Smallpox Hospital)		151*	151*
Caerau Smallpox Hospital		31†	31†
Flatholm Hospital (for Cholera, Yellow Fever and Plague) ...		16	16
Lord Pontypridd Hospital (Dulwich House)		24	24
City Lodge Hospital‡:—			
Acute Diseases	187		
Maternity:—			
Mothers	23		
Infants	14		
Tuberculosis	53		
Mental Cases	12		
Chronic, Aged and Infirm	375		
	—	664	564
Ely Institution‡:—			
Mental Cases (including Mental Defectives)	380		
Chronic, Aged and Infirm	60		
	—	440	350
Mental Hospital		790	690
Total Rate-provided		2,116	1,826
Cardiff Royal Infirmary:—			
General	380		
Maternity:—			
Mothers	31		
Infants	25		
Convalescent Home	54		
	—	490	260
Prince of Wales' Hospital:—			
General	63		
Country Branch	72		
	—	135	12
Royal Hamadryad Seamen's Hospital		74	...
Total Voluntary		699	272
Grand Total		2,815	2,098
Sanatoria and Hospitals of the Welsh National Memorial Association		...	116

* Total adult accommodation on the basis of 144 sq. ft. per adult bed. This represents about 230 available beds and cots when allowance is made for children under 10 years.

† On the basis of 154 sq. ft. per bed, representing about 48 beds actual accommodation when allowance is made for children under 10 years.

‡ The accommodation for chronic, aged and infirm in the City Lodge and Ely Institution and for patients suffering from mental diseases, disorders or defects at Ely Institution fluctuate slightly with requirements. Many of the beds set apart for chronic cases at the City Lodge are really occupied by patients requiring continuous medical or surgical and nursing care. The figures for Ely Institution also include accommodation approved by the Board of Control for mental defectives (about 70) who are chargeable to the Mental Deficiency Committees of the Authorities responsible for their maintenance.

VII.—TUBERCULOSIS.

New Cases.—The following tables show the age distribution and localisation of the disease among new cases of tuberculosis* coming to the knowledge of the department during the year :—

Cases of Tuberculosis by Age and Sex.

Age Periods—Years	New Cases					
	Pulmonary			Non-Pulmonary		
	Males	Females	Totals	Males	Females	Totals
0— 1	1	...	1	1	2	3
1— 5	3	3	6	6	6	12
5—10	3	4	7	12	11	23
10—15	4	6	10	7	9	16
15—20	13	28	41	10	6	16
20—25	37	24	61	5	8	13
25—35	53	33	86	7	5	12
35—45	38	22	60	5	3	8
45—55	36	12	48	1	1	2
55—65	16	5	21	2	2	4
65 and upwards	2	4	6	1	2	3
Totals	206	141	347	57	55	112

Cases of Tuberculosis by Localisation of Disease and Sex.

Form of Tuberculosis	New Cases		
	Males	Females	Totals
Respiratory System	206	141	347
Nervous System	11	7	18
Intestines and Peritoneum	7	15	22
Vertebral Column	2	5	7
Joints	9	7	16
Other Organs	26	18	44
Disseminated Tuberculosis	2	3	5
Totals	263	196	459

Sources of Ascertainment.—The new cases of tuberculosis were ascertained as follows :—

Source	Pulmonary	Non-Pulmonary	Totals
General Medical Practitioners	131	24	155
Welsh National Memorial Association	115	36	151
Medical Officers of Institutions	63	31	94
Other Medical Officers	10	4	14
Otherwise ascertained	28	17	45
Totals	347	112	459

* Including cases notified after death, deaths of cases not notified and cases ascertained otherwise than by formal notification.

Home Conditions.—A detailed analysis is given below showing the actual living and sleeping conditions within their own tenements of 270 new cases of pulmonary tuberculosis coming to the knowledge of the department during 1930.

Living accommodation of 270 Patients in Private Houses.

Rooms in Tenement (*i.e.*, house or part of house occupied by one family)	Patients			Total Number of Persons in Household			
	Males	Females	Totals	Over 10 years	Under 10 years	Lodgers	Totals
1 room	5	3	8	12	4	...	16
2 rooms	14	14	28	61	22	...	83
3 rooms	7	9	16	61	11	...	72
4 rooms and over ...	117	101	218	1,019	171	1	1,191
Totals ...	143	127	270	1,153	208	1	1,362

In addition to the foregoing 270 cases, there were 22 cases (14 males and 8 females) in institutions and 16 males in lodging houses. Information as to the living accommodation of the remaining 39 cases (33 males and 6 females) could not be ascertained for various reasons.

Sleeping Accommodation of 270 Patients suffering from Pulmonary Tuberculosis and living in Private Houses.

Rooms in Tenement (*i.e.*, house or part of house occupied by one family)	Patients				Contacts		
	With Room to Self	With Bed but not Room to Self	With neither Bed nor Room to Self	Totals	Sleeping in same Bed as Patient	Sleeping in separate Bed but in same Room as Patient	Totals
1 room	4	...	4	8	5	2	7
2 rooms	8	3	15	26	20	15	35
3 rooms	5	2	11	18	12	5	17
4 rooms and over ...	113	25	80	218	90	69	159
Totals ...	130	30	110	270	127	91	218

It will be seen that only 130, or 48·1 per cent., of the new cases had sleeping rooms to themselves, and that the number of contacts exposed to infection in the same bedrooms was 218. The accommodation for new cases in 1930, both for living and sleeping, shows practically no improvement upon the conditions recorded in previous years.

Occupational Incidence.—Records of the numbers of cases of tuberculosis amongst persons engaged in various occupations have been tabulated as for previous years since 1924, but are not included in this report. Owing to the relatively high prevalence of tuberculosis in Cardiff, the classification of the occupational incidence is obviously of importance, but its exact significance will be more apparent when the Census returns of occupations are available.

Place of Birth of Patients and their Parents.—The inquiry into the place of birth of patients and their parents, the purpose of which was explained in the report for 1926, was continued during 1930, but the tabular information is not included in this report. The statistics for a number of years will, however, be given in a later report—perhaps in relation to the nativity statistics of the Census.

Known Cases of Tuberculosis.—In the following tables the number of cases of tuberculosis on the register at 31st December, 1930, is shown, and also the number of these who were under regular observation by the tuberculosis nurses :—

Pulmonary Tuberculosis : Cases on the Register at 31st December, 1930.

Municipal Wards, etc.	Males				Females				Grand Totals
	Under 5 years	5–15 years	Over 15 years	Totals	Under 5 years	5–15 years	Over 15 years	Totals	
Central	...	...	37	37	...	2	22	24	61
Lodging Houses, etc.	...	...	...	...	...	...	...	...	...
South	...	4	39	43	...	2	18	20	63
Lodging Houses, etc.	...	...	1	1	...	...	...	...	1
Cathays	...	...	42	42	...	...	20	20	62
Adamsdown	...	2	38	40	...	2	31	33	73
Lodging Houses, etc.	...	...	9	9	...	...	...	...	9
Riverside	...	1	47	48	...	1	32	33	81
Canton	...	1	34	35	...	...	30	30	65
Grangetown	...	2	32	34	...	...	20	20	54
Roath	...	1	27	28	...	1	23	24	52
Plasnewydd	...	...	23	23	...	...	30	30	53
Splott	...	3	47	50	1	1	42	44	94
Penylan	...	...	25	25	...	...	17	17	42
Llandaff	...	2	48	50	...	3	48	51	101
Gabalfa	...	2	36	38	...	...	31	31	69
Institutions*	...	3	29	32	...	2	20	22	54
Removed and not traced	...	...	12	12	...	...	7	7	19
Totals ...	...	21	526	547	1	14	391	406	953

Non-Pulmonary Tuberculosis : Cases on the Register at 31st December, 1930.

Municipal Wards, etc.	Males				Females				Grand Totals
	Under 5 years	5–15 years	Over 15 years	Totals	Under 5 years	5–15 years	Over 15 years	Totals	
Central	...	5	6	11	...	5	7	12	23
Lodging Houses, etc.	...	...	...	...	...	...	...	...	...
South	1	8	6	15	1	8	5	14	29
Lodging Houses, etc.	...	...	...	...	...	...	...	...	...
Cathays	...	5	8	13	...	2	4	6	19
Adamsdown	...	15	10	25	...	5	7	12	37
Lodging Houses, etc.	...	...	8	8	...	...	...	...	8
Riverside	...	3	4	7	...	2	8	10	17
Canton	...	9	7	16	2	1	6	9	25
Grangetown	...	5	9	14	...	3	8	11	25
Roath	...	6	7	13	...	4	10	14	27
Plasnewydd	...	5	7	12	...	2	4	6	18
Splott	...	8	13	21	1	3	13	17	38
Penylan	...	...	5	5	...	...	8	8	13
Llandaff	5	8	11	24	2	12	19	33	57
Gabalfa	...	3	5	8	...	2	5	7	15
Institutions*	...	...	4	4	1	3	5	9	13
Removed and not traced	...	...	6	6	...	2	5	7	13
Totals ...	6	80	116	202	7	54	114	175	377

* The cases shown as being in institutions are those who permanently reside in institutions and those temporarily residing in institutions whose home addresses are unknown.

Cases of Tuberculosis under Observation by Tuberculosis Nurses at 31st December, 1930.

Municipal Wards, etc.	Pulmonary			Non-Pulmonary			Grand Totals
	Males	Females	Totals	Males	Females	Totals	
Central	38	23	61	11	11	22	83
Lodging Houses, etc.	...	...	...	...	...	...	...
South	43	20	63	15	14	29	92
Lodging Houses, etc.	1	...	1	...	...	...	1
Cathays	42	20	62	13	6	19	81
Adamsdown	39	33	72	25	12	37	109
Lodging Houses, etc.	9	...	9	8	...	8	17
Riverside	46	31	77	7	10	17	94
Canton	34	30	64	16	9	25	89
Grangetown	34	20	54	14	11	25	79
Roath	27	22	49	13	14	27	76
Plasnewydd	23	28	51	12	6	18	69
Splott	50	44	94	21	17	38	132
Penylan	25	17	42	5	7	12	54
Llandaff	48	50	98	24	33	57	155
Gabalfa	37	31	68	8	7	15	83
Totals ...	496	369	865	192	157	349	1,214

Cases of Suspected Tuberculosis (unnotified) under Observation by Tuberculosis Nurses at 31st December, 1930.

Municipal Wards	Males	Females	Totals
Central	1	2	3
South	4	3	7
Cathays	1	...	1
Adamsdown	3	3	6
Riverside	5	6	11
Canton	9	7	16
Grangetown	5	3	8
Roath	3	9	12
Plasnewydd	1	2	3
Splott	3	3	6
Penylan	1	...	1
Llandaff	17	9	26
Gabalfa	2	5	7
Totals	55	52	107

The actual number of known cases of tuberculosis at the end of 1930 was 1,330, as compared with 1,276 the previous year. The last two tables reveal the very satisfactory extent to which cases and suspected cases are under the supervision of the department. The tuberculosis nurses made 440 first visits and 2,733 revisits during the year.

Inquiry regarding Cases Notified in 1928.—During the fourth quarter of 1930 Dr. J. C. Gilchrist, the Tuberculosis Physician, inquired into the then position of cases notified during the year 1928, and the following are his findings :—

"The entries in the register (Form A.) consist of primary and duplicate notifications. Each case has been considered with a view to ascertaining (*a*) whether and when the case had been seen by the Tuberculosis Physician, (*b*) the

year of death and (*c*) whether the case was known to be alive in the Autumn of 1930.

"It was found that a few notifications recorded as primary cases represented cases who had in fact been notified in a previous year by the Tuberculosis Physician, while others had been seen by the Tuberculosis Physician and were either considered negative or had been lost sight of before diagnosis could be completed.

"Laryngeal tuberculosis was counted as pulmonary tuberculosis. Notifications marked *cancelled* were not counted. Notifications duplicate to primary notifications of 1928 were not considered. Notifications duplicate to primary notifications in previous years were tabulated separately; this limited group of cases had survived until 1928 and been renotified by another practitioner in that year; forty-two out of 44 of these cases were seen by the Tuberculosis Physician. Cases who died of tuberculosis in 1928, who were either not notified or notified after death, were not considered.

"The following tables show the known state of the cases in September, 1930:—

PRIMARY NOTIFICATIONS.

A.—Pulmonary Tuberculosis.

	Died in 1928	Died in 1929	Died in 1930	Alive	Lost Sight of	Totals
(*a*) Not seen by Tuberculosis Physician ...	40	8	4	6	29	87
(*b*) Seen by Tuberculosis Physician—Negative or diagnosis incomplete	1	...	...	8	6	15
(*c*) Seen by Tuberculosis Physician and notified:—						
(*i*) before 1928	2	1	1	3	...	7
(*ii*) during 1928	34	45	13	75	17	184
(*iii*) after 1928	...	5	4	4	...	13
Totals	77	59	22	96	52	306

B.—Non-Pulmonary Tuberculosis.

	Died in 1928	Died in 1929	Died in 1930	Alive	Lost Sight of	Totals
(*a*) Not seen by Tuberculosis Physician ...	13	1	...	7	17	38
(*b*) Seen by Tuberculosis Physician—Negative or diagnosis incomplete	1	...	...	5	...	6
(*c*) Seen by Tuberculosis Physician and notified:—						
(*i*) before 1928	1	...	...	2	...	3
(*ii*) during 1928	3	3	...	29	5	40
(*iii*) after 1928	...	...	...	1	...	1
Totals	18	4	...	44	22	88

Duplicate Notifications.

A.—Pulmonary Tuberculosis.

	Died in 1928	Died in 1929	Died in 1930	Alive	Lost Sight of	Totals
(*a*) Not seen by Tuberculosis Physician ...	...	...	...	2	...	2
(*b*) Seen by Tuberculosis Physician and notified:—						
(*i*) before 1928	13	6	1	6	...	26
(*ii*) during 1928	3	3	1	9	...	16
Totals	16	9	2	17	...	44

B.—Non-Pulmonary Tuberculosis.

One case notified in 1928 had been seen and notified by the Tuberculosis Physician in 1921 and was still alive.

"The foregoing tables show (*a*) that 71·6 per cent. of the pulmonary cases and 56·8 per cent. of the non-pulmonary cases had been seen by the Tuberculosis Physician, (*b*) that 10 per cent. of each of these groups had been lost sight of before the Autumn of 1930, and (*c*) that 33·3 per cent. of the pulmonary cases and 44·7 per cent. of the non-pulmonary cases *not* seen by the Tuberculosis Physician had been lost sight of before the Autumn of 1930. Deducting the cases lost sight of, the percentage of deaths in each year was as follows:—

	Percentage of Deaths			
	1928	1929	1930	Totals
Pulmonary Tuberculosis—				
Cases not seen by Tuberculosis Physician ...	69	14	7	90
Cases seen by Tuberculosis Physician	19	27	9	55
Non-Pulmonary Tuberculosis—				
Cases not seen by Tuberculosis Physician ...	62	5	...	67
Cases seen by Tuberculosis Physician	11	7	...	18

"These figures point to two factors accounting for some cases not being seen by the Tuberculosis Physician: (1) the remarkably high percentage of cases not so seen which were lost sight of was made up largely of institutional cases (chiefly coloured sailors) whose home addresses were unknown; and (2) the high percentage of deaths amongst cases not seen by the Tuberculosis Physician was accounted for entirely by the number of deaths in 1928 (the year of notification) and suggests that many of these cases were so ill at the time of notification that the notifying practitioners for that reason did not think it worth while to call on the Tuberculosis Physician's services."

Deaths.—According to local records, 210 deaths from pulmonary tuberculosis and 47 from other forms of tuberculosis occurred during 1930. The death-rate per 1,000 from pulmonary tuberculosis was 0·94, compared with 1·14 in 1929 and with 1·23 during the ten years 1920-29; the death-rate from other forms of the disease was 0·21 per 1,000, as against 0·18 in 1929 and 0·25 during the ten years 1920-29.

The two following tables show the age distribution and localisation of the disease among the deaths from tuberculosis during the year.

Deaths from Tuberculosis by Age and Sex.

Age Periods—Years	Deaths					
	Pulmonary			Non-Pulmonary		
	Males	Females	Totals	Males	Females	Totals
0— 1	1	...	1	1	1	2
1— 5	1	2	3	3	2	5
5—10	...	2	2	6	1	7
10—15	2	...	2	1	2	3
15—20	7	9	16	7	1	8
20—25	11	12	23	3	3	6
25—35	25	28	53	4	3	7
35—45	31	19	50	3	1	4
45—55	15	16	31	...	1	1
55—65	17	6	23	1	1	2
65 and upwards	2	4	6	...	2	2
Totals ...	112	98	210	29	18	47

Deaths from Tuberculosis by Localisation of Disease and Sex.

Form of Tuberculosis	Deaths		
	Males	Females	Totals
Respiratory System	112	98	210
Nervous System	16	7	23
Intestines and Peritoneum	4	4	8
Vertebral Column	3	1	4
Joints	...	...	...
Other Organs	1	3	4
Disseminated Tuberculosis	5	3	8
Totals	141	116	257

Forty-six of the 257 deaths (17·9 per cent.) were of cases previously unknown to the Department, 31 of these being pulmonary cases (14·7 per cent.) and 15 non-pulmonary (31·9 per cent.).

Treatment.—The following tables give particulars of Cardiff cases examined and of cases treated under the scheme of the Welsh National Memorial Association during 1930.

1.—Work of the Dispensary.

Diagnosis	Pulmonary				Non-Pulmonary				Totals			
	Adults		Children		Adults		Children		Adults		Children	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A.—New cases examined during the year (excluding contacts):—												
(*a*) Definitely tuberculous	114	87	2	2	11	13	15	16	125	100	17	18
(*b*) Doubtfully tuberculous	...	...	...	...	...	...	...	...	19	30	14	4
(*c*) Non-tuberculous	...	...	...	...	...	...	...	...	102	89	58	49
B.—Contacts examined during the year:—												
(*a*) Definitely tuberculous	1	2	...	...	...	...	...	...	1	2	...	...
(*b*) Doubtfully tuberculous	...	...	...	...	...	...	...	...	2	3	...	3
(*c*) Non-tuberculous	...	...	...	...	...	...	...	...	9	31	38	50
C.—Cases written off the Dispensary Register as:—												
(*a*) Cured	7	4	...	...	3	6	5	5	10	10	5	5
(*b*) Diagnosis not confirmed or non-tuberculous (including cancellation of cases notified in error) ...	...	...	...	...	...	...	...	...	139	131	110	116
D.—Number of persons on Dispensary Register on 31st Dec., 1930:—												
(*a*) Diagnosis completed	390	231	18	15	59	63	66	61	449	294	84	76
(*b*) Diagnosis not completed	...	...	...	...	...	...	...	...	18	24	12	16

1.	Number of persons on Dispensary register on 1st January, 1930 ...	994
2.	Number of patients transferred from other areas and of "lost sight of" cases returned	25
3.	Number of patients transferred to other areas and cases "lost sight of"	165
4.	Died during the year	129
5.	Number of observation cases under A (*b*) and B (*b*) above in which period of observation exceeded 2 months	107
6.	Number of attendances at the Dispensary (including contacts) ...	5,569
7.	Number of attendances of non-pulmonary cases at orthopædic out-stations for treatment or supervision	165
8.	Number of attendances at Glan Ely Hospital for:—	
	(*a*) "Light" treatment	1,193
	(*b*) Other special forms of treatment	117
9.	Number of persons to whom dental treatment was given at or in connection with the Dispensary	—
10.	Number of consultations with medical practitioners:—	
	(*a*) At homes of applicants	158
	(*b*) Otherwise	61
11.	Number of other visits by Tuberculosis Officers to homes	100
12.	Number of visits by Nurses or Health Visitors to homes for Dispensary purposes	2,431
13.	Number of:—	
	(*a*) Specimens of sputum, etc., examined	575
	(*b*) X-ray examinations made in connection with Dispensary work	428

14. Number of insured persons on Dispensary register on 31st December 1930 506
15. Number of insured persons under domiciliary treatment on 31st December, 1930 48
16. Number of reports received during the year in respect of insured persons
    (*a*) Form G.P. 17 31
    (*b*) Form G.P. 36 26

2.—Residential Treatment.

			In Institutions on 1st Jan., 1930	Admitted during year	Discharged during year	Died in Institutions	In Institutions on 31st Dec., 1930
Number of Patients	Adults	M.	48	104	85	14	53
		F.	32	84	62	14	40
	Children	M.	17	9	15	...	11
		F.	9	9	8	...	10
Number of Observation Cases	Adults	M.	2	7	9	...	...
		F.	...	5	2	...	3
	Children	M.	1	3	3	...	1
		F.	...	2	2	...	...
Totals			109	223	186	28	118

3.—Immediate Results of Treatment of Patients and of Observation of Doubtful Cases discharged from Residential Institutions during 1930.

(*a*) Sanatorium (Pulmonary Cases).

(i) Tuberculous Cases :—

Condition at time of Discharge	Duration of Residential Treatment												Totals
	Under 3 months			3–6 months			6–12 months			More than 12 months			
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
Quiescent	1	...	...	2	5	...	...	3	3	...	...	...	14
Improved	3	...	...	24	7	...	7	5	2	4	...	...	52
No material improvement ...	7	1	...	1	3	1	3	1	...	...	...	...	17
Died in Institution	...	...	...	...	...	...	1	...	...	3	...	...	4

(ii) Observation Cases :—

Condition at time of Discharge from Observation	Duration of Residential Treatment.												Totals
	Under 1 week			1–2 weeks			2–4 weeks			More than 4 weeks			
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
Tuberculous	...	...	...	1	...	...	...	...	...	1	1	2	5
Non-tuberculous	...	...	...	...	...	...	...	...	...	...	...	1	1
Doubtful	...	...	...	...	...	...	...	...	...	...	...	1	1

(*b*) Hospital (Pulmonary Cases).

(i) Tuberculous Cases :—

Condition at time of Discharge	Duration of Residential Treatment												Totals
	Under 3 months			3–6 months			6–12 months			More than 12 months			
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
Quiescent	...	1	...	...	...	...	...	...	...	...	...	...	1
Improved	6	10	...	8	5	...	...	7	1	...	...	...	37
No material improvement ...	11	3	...	1	3	...	4	3	...	...	1	...	26
Died in Institution	5	8	...	2	4	...	1	2	...	1	...	...	23

(ii) Observation Cases :—

Condition at time of Discharge from Observation	Duration of Residential Treatment												Totals
	Under 1 week			1–2 weeks			2–4 weeks			More than 4 weeks			
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
Tuberculous	...	...	...	...	...	...	1	...	...	2	...	...	3
Non-tuberculous	...	...	...	...	...	...	...	...	...	1	1	...	2
Doubtful	...	...	...	...	...	...	...	...	...	...	...	...	...

(*c*) Hospital (Non-Pulmonary Cases).

(i) Tuberculous Cases :—

Condition at time of Discharge	Duration of Residential Treatment												Totals
	Under 3 months			3–6 months			6–12 months			More than 12 months			
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
Quiescent	1	1	1	...	2	...	...	...	4	...	...	7	16
Improved	...	...	1	...	1	1	...	...	...	...	...	...	3
No material improvement ...	...	...	2	1	...	...	1	...	...	...	...	...	4
Died in Institution	...	...	...	...	...	...	...	...	...	1	...	...	1

(ii) Observation Cases :—

Condition at time of Discharge from Observation	Duration of Residential Treatment												Totals
	Under 1 week			1–2 weeks			2–4 weeks			More than 4 weeks			
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
Tuberculous	...	...	...	...	...	1	...	...	...	1	...	...	2
Non-Tuberculous	...	...	...	...	...	...	...	...	...	2	...	...	2
Doubtful	...	...	...	...	...	...	...	...	...	...	...	...	...

VIII.—VENEREAL DISEASES.

The following is a summary of the returns from treatment centres established under the Public Health (Venereal Diseases) Regulations, 1916 :—

	Cardiff Royal Infirmary	Royal Hamadryad Seamen's Hospital*	Auxiliary Centre for Mothers and Children	Institutions outside Cardiff	Totals
A. Number of persons residing in Cardiff dealt with during the year for the first time and found to be suffering from :—					
Syphilis	187	235	44	2	468
Soft Chancre	6	112	...	1	119
Gonorrhœa	356	367	116	10	849
Conditions other than Venereal ...	167	17	125	2	311
Totals	716	731	285	15	1,747
B. Number of attendances of all patients residing in Cardiff	9,380	12,670	3,761	62	25,873
C. Aggregate number of "in-patient days" of all patients residing in Cardiff ...	91	1,639	...	222	1,952
D. Number of doses of arsenobenzene compounds given to patients residing in Cardiff	1,314	1,264	540	22	3,140

Examination of pathological material from patients residing in Cardiff :—

	For detection of			For Wassermann Reaction
	Spirochætes	Gonococci	Other Organisms	
Specimens examined at Treatment Centres :—				
Cardiff Royal Infirmary	3	451	...	658
Royal Hamadryad Seamen's Hospital* ...	85	137	...	...
Specimens examined at the Cardiff and County Public Health Laboratory from :—				
Treatment Centres—				
Royal Hamadryad Seamen's Hospital* ...	...	...	...	290
Auxiliary Centre for Mothers and Children ...	3	500	...	200
Public Health Department	1	18	...	1,026
Other sources	2	253	...	538
	— 6	— 771	— ...	—— 2,054
Totals	94	1,359	...	2,712

* The figures relate to seamen only, whether residents of Cardiff or not.

Results of Treatment.—The following summaries, relating to *all persons* treated during 1930, have been prepared from the annual returns of the clinical officers, and show the conditions under which patients ceased treatment at the treatment centres during the year :—

Cardiff Royal Infirmary.

	Syphilis		Soft Chancre		Gonorrhœa		Conditions other than Venereal		Totals			Percentage
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Both Sexes	
(1) Number of cases under treatment or observation at the beginning of the year (including cases marked off in a previous year and which returned during the year suffering from the same infection)	185	183	3	3	219	85	24	6	431	277	708	45·8
(2) Number of cases dealt with for the first time (*a*) Of less than one year's standing ...	106	46	6	...	357	39	162	36	677	162	839	54·2
(*b*) Of more than one year's standing ...	41	34	...	...	5	7						
Totals	332	263	9	3	581	131	186	42	1,108	439	1,547	100
(3) Number of cases that ceased to attend—												
(*a*) Before completing the first course of treatment ...	51	35	...	...	151	43	...	...	202	78	280	20·5
(*b*) After one or more courses but before completion of treatment	78	70	...	...	...	...	...	...	78	70	148	10·7
(*c*) After completion of treatment but before final tests as to cure	...	...	6	3	48	27	...	...	54	30	84	6·2
(4) Number of cases transferred to other treatment centres after treatment...	...	...	...	...	...	...	...	...	...	...	...	...
(5) Number of cases discharged after completion of treatment and observation	27	3	2	...	149	9	...	...	178	12	190	14·8
(6) Number of cases remaining under treatment or observation at the end of the year	176	155	1	...	233	52	21	8	431	215	646	47·8
Totals	332	263	9	3	581	131	21	8	943	405	1,348	100

Royal Hamadryad Seamen's Hospital (Seamen only).

	Syphilis	Soft Chancre	Gonorrhœa	Conditions other than Venereal	Totals	Per-centage
(1) Number of cases under treatment or observation at the beginning of the year (including cases marked off in a previous year and which returned during the year suffering from the same infection) ...	77	12	82	...	171	19·2
(2) Number of cases dealt with for the first time... (*a*) Of less than one year's standing	152	102	308	17	721	80·8
(*b*) Of more than one year's standing	83	...	59			
Totals	312	114	449	17	892	100
(3) Number of cases that ceased to attend :—						
(*a*) Before completing the first course of treatment	94	5	134	...	233	26·6
(*b*) After one or more courses but before completion of treatment	30	...	...	...	30	3·5
(*c*) After completion of treatment but before final tests as to cure	35	...	78	...	113	12·9
(4) Number of cases transferred to other treatment centres after treatment	41	12	121	...	174	19·9
(5) Number of cases discharged after completion of treatment and observation	59	82	51	...	192	21·9
(6) Number of cases remaining under treatment or observation at the end of the year ...	53	15	65	...	133	15·2
Totals	312	114	449	...	875	100

Auxiliary Centre for Mothers and Children.

	Syphilis		Soft Chancre		Gonorrhœa		Conditions other than Venereal		Totals			Percentage
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Both Sexes	
(1) Number of cases under treatment or observation at the beginning of the year (including cases marked off in a previous year and which returned during the year suffering from the same infection)	28	107	...	...	...	145	...	5	28	259	285	50·0
(2) Number of cases dealt with for the first time (*a*) Of less than one year's standing...	6	21	...	...	1	75	8	117	15	270	285	50·0
(*b*) Of more than one year's standing...	...	17	...	...	...	40						
Totals	34	145	...	...	1	260	8	122	43	527	570	100
(3) Number of cases that ceased to attend— (*a*) Before completing the first course of treatment	9	23	...	...	...	42	...	...	9	65	74	16·1
(*b*) After one or more courses but before completion of treatment	...	13	...	...	...	...	...	...	...	13	13	2·8
(*c*) After completion of treatment but before final tests as to cure	...	...	...	...	...	20	...	...	...	20	20	4·3
(4) Number of cases transferred to other treatment centres after treatment ...	...	...	...	...	...	7	...	...	...	7	7	1·5
(5) Number of cases discharged after completion of treatment and observation	9	13	...	...	1	83	...	...	10	96	106	23·0
(6) Number of cases remaining under treatment or observation at the end of the year	16	96	...	...	...	108	3	18	19	222	241	52·3
Totals	34	145	...	...	1	260	3	18	38	423	461	100

The number of doses of arsenobenzene compounds supplied to medical practitioners (other than at treatment centres) during the year was 530.

IX.—MATERNITY AND CHILD WELFARE.

Notification of Births and Still-births.—The following statement shows the numbers of births and still-births notified during the year :—

	Births.	Still-births.
By Medical Practitioners	35 ...	3
By Midwives	2,803 ...	126
By Queen's Nurses	652 ...	21
By Parents	22 ...	—
From Cardiff Royal Infirmary ...	486 ...	58
From City Lodge Hospital	130 ...	18
Totals	4,128 ...	226

Child Welfare Consultations.—The following is a record of the attendances at the several centres :—

Centre	Consultations	First Attendances	Total Attendances
Central	47	182	2,020
South	48	130	1,191
Glossop Terrace	96	438	4,930
Canton	92	381	3,993
Grangetown	92	314	3,514
Splott	93	365	4,081
Gabalfa	93	272	3,175
Llandaff North	46	48	997
Ely	87	265	3,094
Ely (Mount Pleasant)*...	9	31	344
Riverside†	3	7	83
Totals	706	2,433	27,422

* Opened on 6th November, 1930.

† Opened on 3rd December, 1930.

The following tabular statement shows the conditions found by medical officers in 2,010 infants under one year and 314 children between one and five years who were examined for the first time during 1930, and also the diseases or defects discovered subsequent to the first examination of children attending the consultations for the first time during 1930 or previously :—

	Examined for first time		Diseases or Defects found in Children not attending for the first time	
	Under 1 year	1 year and over	Under 1 year	1 year and over
Number examined :—				
Normal	1,334	68	...	...
Individual cases found with Diseases or Defects ...	676	246	...	...
Diseases or Defects found :—				
Injury at Birth	16	...	...	...
Congenital Malformation or Defect	38	...	12	2
Prematurity	39	1	...	...
Congenital Debility	24	...	5	...
Malnutrition (cause not specified) or Debility (not congenital)	64	19	33	39
Anæmia (cause not specified)	4	9	14	19
Diseases or defects of :—				
Skin (Non-syphilitic) :				
Systemic	63	11	201	103
Contagious	15	28	70	130
Irritative	41	7	156	73
Eye : Ophthalmia Neonatorum	16	...	2	...
Squint	4	9	12	34
Other	26	3	50	40
Ear : Otorrhœa	14	9	68	55
Other	1	1	23	14
Nose and Throat :				
Enlarged Tonsils and/or Adenoids ...	4	29	31	132
Other	10	6	52	45
Heart and Circulation : Congenital	6	...	2	6
Rheumatic	...	...	...	2
Other	1	1	2	2
Respiratory System (non-tuberculous)	55	15	381	168
Digestive System : Hernia—Umbilical	79	3	52	10
Other	29	3	47	19
Other Diseases	111	21	503	219
Nervous System : Chorea	...	...	...	4
Other	2	3	9	24
Genito-urinary System : Phimosis	44	1	31	11
Other	4	1	20	37
Tuberculosis : Pulmonary—				
Definite	...	...	...	...
Suspected	...	...	...	...
Non-Pulmonary	...	2	4	8
Defective Teeth	...	73	7	192
Rickets	18	19	48	51
Other Deformities	13	7	16	30
Rheumatism (not Cardiac or Nervous)	1	...	...	1
Syphilis	2	...	...	2
Other Diseases or Defects	59	19	69	105

Thirty-three infants under one year who had attended the consultations died during 1930. The following table shows the causes of and ages at death in these cases :—

	4 weeks—3 months	3–6 months	6–9 months	9–12 months	Totals
Measles...	1	...	...	...	1
Whooping Cough	1	...	...	...	1
Diphtheria	...	...	1	...	1
Tuberculosis of Nervous System	...	1	...	...	1
Syphilis	1	...	...	...	1
Meningitis	...	...	1	...	1
Pneumonia	2	5	1	3	11
Inflammation of the Stomach	...	1	...	...	1
Diarrhœa and Enteritis	3	2	...	1	6
Congenital Malformations...	1	1	...	1	3
Congenital Debility	1	...	...	...	1
Premature Birth...	1	1	...	...	2
Other Causes	...	1	1	1	3
Totals	11	12	4	6	33

These 33 deaths correspond to a rate of 13 per 1,000 first attendances at the consultations, compared with a total rate of 36 deaths at similar ages (*i.e.*, 4 weeks to 12 months) per 1,000 births for the city generally.

Ante-natal Consultations.—The record of attendances at the ante-natal clinics is given in the following statement :—

Clinic	Consultations	First Attendances	Total Attendances
Canton	72	384	1,497
Gabalfa	46	137	711
Glossop Terrace	97	849	3,458
Totals	215	1,370*	5,666

Of the women who attended the consultations for the first time during the year, 82 were found not pregnant, and in 17 instances miscarriages occurred (2 primiparæ and 15 multiparæ).

An analysis of new cases (definitely pregnant) attending the clinics and who were confined during 1930 is given below.

Type of case :—	
Primiparæ	329
Multiparæ	740
Total	1,069

* Including 95 post-natal cases.

Of these 1,069 cases, 616 were found to be suffering from 861 diseases, abnormalities or defects, as follows :—

Abscess of breast	1
Albuminuria	69
Anæmia	5
Conditions requiring cæsarean section... ...	7
,, ,, induction	6
,, ,, version	56
Contracted pelvis	40
Dental defects requiring treatment	288
Epilepsy	3
Fœtal abnormality	1
Fibroids	1
Goitre	8
Hæmorrhage	34
Hæmorrhoids	3
Heart conditions	9
Hydrometra	13
Jaundice	1
Œdema	52
Oxyuris	1
Prolapse of uterus	1
Pyelitis	4
Respiratory diseases	11
Rheumatism	3
Skin diseases	15
Syphilis	4
Vaginal discharge	144
Varicose veins	63
Vomiting	18
Total	861

Place of confinement :—

Private dwelling-houses	597
Maternity Hospital (Cardiff Royal Infirmary) ...	356
City Lodge Hospital	37
Private Maternity Homes	9
Outside Cardiff	31
Not traced	39
Total	1,069

Since June, 1925, pregnant women attending the ante-natal clinics have been subjected to a blood examination for syphilis, viz., the Wassermann reaction. During 1930 such routine tests were made in 987 cases, of whom 20, or 2·0 per cent., were found to be positive.

The mortality among women who had attended the ante-natal clinics and whose pregnancy terminated during each of successive years has been studied during 1930. For this purpose, the clinic records of the years 1926 to 1930, inclusive, have

been analysed and compared with the mortality among pregnant women in the city generally. The result is shown in the following table :—

Year	Clinic Cases			All Cases		
	Cases whose Pregnancy terminated	Maternal Deaths	Rate per 1,000	Births	Maternal Deaths	Rate per 1,000
1926	771	1	1·30	4,356	22	4·85
1927	717	...	0·00	4,086	16	3·91
1928	864	3	3·47	4,091	24	5·86
1929	923	2	2·17	3,927	14	3·56
1930	1,086	7	6·44	3,785	20	5·28

It is notable that, with the growth of the use of the ante-natal clinics, the balance of mortality among women attending them, as compared with the rate for the whole city, has changed from favourable to adverse. The figures are small and the high rate for 1930 may be accidental. But it is clear from the statement of abnormalities and diseases on page 48 that these clinics are attracting, on the recommendation of medical practitioners and midwives, a larger proportion of women who anticipate abnormal pregnancy or labour. While this tendency will unfavourably load the statistical results of attendance, it is one of the best purposes which such clinics can serve, and is therefore to be welcomed.

The causes of death in the seven cases so terminating in 1930 were as follows :—

1. Acute nephritis ; difficult labour ; cardiac failure.
2. Post-partum hæmorrhage.
3. Puerperal septicæmia ; cæsarean section ; obstructed labour.
4. Post-partum shock ; obstructed labour ; albuminuria.
5. Puerperal septicæmia ; post-partum hæmorrhage ; ante-partum hæmorrhage.
6. Post-partum eclampsia.
7. Ectopia vesicæ ; sapræmia.

Maternity Hospital.—The number of expectant mothers in necessitous circumstances, or suffering from abnormalities of pregnancy, and emergency cases admitted to the Maternity Hospital (Cardiff Royal Infirmary) were as follows :—

Complicated cases sent by General Practitioners ..	72
Cases admitted through Ante-natal Clinics ...	352
Other Cardiff cases	2
Total	426

Maternity and Nursing Homes.—At 31st December, 1930, there were 21 registered nursing homes, 10 providing for maternity cases only, 6 providing for surgical and/or medical cases only and 5 providing for both maternity and other cases. The total number of beds in the registered nursing homes was 163, of which 64 were available for maternity cases. All the homes for which application for registration was made were duly registered after careful inspection and remedy of defects.

Extra-Domiciliary Confinement.—The number and proportion of births belonging to Cardiff and registered as having occurred away from private dwelling-houses during 1930 are given below :—

Place of Birth	Number	Number per 1,000 Births
Cardiff Royal Infirmary	367	97
City Lodge Hospital	113	30
Private Nursing and or Maternity Homes	140	37
Totals	620	164

Dental Clinic.—The following is a record of the year's work :—

	Mothers	Children	Totals
Inspected	257	233	490
Treated	572	224	796
Attendances :—			
For inspection	257	233	490
For treatment	1,079	228	1,307
Teeth extracted	2,913	756	3,669
Teeth filled	14	14	28
Dressings	44	1	45
Scalings	48	...	48
Anæsthetics administered :—			
General	408	220	628
Local	66	...	66
Supplied with dentures	133	...	133

Dentures supplied :—

Full upper	115
Partial upper	11
Full lower	93
Partial lower	16
Cost of dentures	...£216 11s. 6d.
Amount reclaimed from patients	... £20 19s. 0d.
Amount recovered from patients	... £18 13s. 0d.

Domiciliary Visits by Health Visitors.—The following is a summary of the visits by the health visitors in connection with maternity and child welfare:—

Births—First visits		3,496
Subsequent visits	Infants under one year	8,037
	Children over one year	11,793
Births and infant deaths—Combined visits		90
Infant deaths investigated		143
Still-births investigated		178
Expectant mothers	First visits	282
	Re-visits	121
Infectious Diseases:—		
Ophthalmia Neonatorum	First visits	36
	Re-visits	91
Puerperal Fever	First visits	9
	Re-visits	—
Measles	First visits	727
	Re-visits	161
Whooping Cough	First visits	521
	Re-visits	30
Mumps	First visits	30
	Re-visits	1
Financial inquiry—Visits		658
Other visits		4,651
Total		31,055

Supply of Free Milk.—Milk was supplied free of charge in necessitous cases and on medical certificates to the following extent:—

	Fresh Milk—Grade A (T.T.)		Dried Milk	
	Individual Cases	Pints Granted	Individual Cases	Pounds Granted
Children	1,127	34,268	348	2,075
Expectant Mothers	328	9,965	...	...
Nursing Mothers	499	15,128	...	...
Totals	1,954	59,361	348	2,075

Training of Midwives.—The arrangements made by the City Council whereby not more than eight free studentships in theoretical training at the Welsh National School of Medicine are awarded annually and for providing one or two of the students with free practical training at the Cardiff Royal Infirmary or the Maternity Branch of the Queen's Institute of District Nursing have been continued, but the number of candidates seeking the training is small. Only one free studentship in theoretical training was awarded during the year and no candidate proved to be suitable for free practical training.

Midwives Practising in Cardiff.—The number of midwives practising in Cardiff at the end of the year was 125. They may be classified as follows :—

According to qualifications :—

Bona fide	9
Certificate of Central Midwives Board	116
Total	125

According to type of practice :—

Attached to public institutions	23
Conducting private nursing or maternity homes	13
Dealing with less than five cases per annum	12
Monthly nurses	11
Others	66
Total	125

Officers of the department made 203 visits of inspection of midwives, and midwives' appliances, etc., were disinfected in 14 instances.

The following is a record of the practice of midwives in Cardiff during the year in relation to the births which were the subject of visits by the health visitors :—

Attendances at births by midwives* as ascertained by health visitors :—

(*a*)	Alone	1,848
(*b*)	With a medical practitioner :—	
	(i) Medical practitioner engaged	766
	(ii) Medical practitioner called in emergency ...	574

Attendances at still-births by midwives* :—

(*a*)	Alone	49
(*b*)	With a medical practitioner :—	
	(i) Medical practitioner engaged	41
	(ii) Medical practitioner called in emergency ...	52

Medical Practitioners called in by Midwives in Emergency.—During the year the number of instances in which medical practitioners were called in by midwives in emergency was 909, and claims for emergency fees were made by practitioners in 544 cases. The fees claimed totalled £843 10s. 6d. and in 116 instances fees amounting to £144 19s. 0d. were reclaimed from patients. The sum actually recovered during the year was £94 7s. 0d. (including sums reclaimed in 1929). The proportion recovered of the amount paid to practitioners was 11·2 per cent.

* Other than those engaged in midwifery at the Cardiff Royal Infirmary and the City Lodge Hospital.

The following statement gives the reasons for medical help being summoned by midwives :—

(1) MOTHER.—

(*a*) *Pregnancy*—

Miscarriage (including abortion)	40	
Hæmorrhage	52	
Albuminuria and œdema and other toxic causes	31	
Other causes	11	
	—	134

(*b*) *Labour*—

Abnormal presentation	48	
Premature labour	14	
Obstructed and delayed labour	287	
Placenta prævia, ante-partum hæmorrhage and eclampsia, and other toxic causes ...	53	
Post-partum hæmorrhage and retained and adherent placenta	40	
Ruptured perineum	96	
Other causes	30	
	—	568

(*c*) *Lying-in*—

Pyrexia, secondary post-partum hæmorrhage and phlegmasia and other septic causes ...	40	
Other causes	27	
	—	67

(2) INFANT.—

Debility	49	
Inflammation of or discharge from eyes	50	
Other causes	41	
	—	140
Total		909

Puerperal Fever and Puerperal Pyrexia.—Statistics as to the number of cases of puerperal fever and puerperal pyrexia notified during the year under the Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations, 1926, are given in the section dealing with communicable diseases and in the statistical tables (Appendix I), but as the work involved comes within the province of maternity and child welfare it is referred to here. Forty-two cases of puerperal fever and 99 cases of puerperal pyrexia were notified, 8 of the former and 3 of the latter being removed to the Isolation Hospital for treatment. General practitioners sought the assistance of the department in several cases, but a specialist consultation was not required in any instance.

Home Nursing.—The following is a record of the work done by the Queen's Institute of District Nursing for the maternity and child welfare section of the department :—

Disease or Defect	Cases Carried over from 1929		Cases Referred for Treatment during 1930		Totals	
	Cases	Visits	Cases	Visits	Cases	Visits
Skin :—Impetigo	3	4	39	816	42	820
Other Skin Diseases ...	2	7	10	182	12	189
Eye:—Ophthalmia Neonatorum	2	75	14	445	16	520
Other Eye Defects ...	2	23	19	325	21	348
Minor Ear Defects	...	...	21	352	21	352
Miscellaneous	3	273	72	1,126	75	1,399
Totals	12	382	175	3,246	187	3,628

Home Helps.—Home Helps were provided by the department in 105 cases in which mothers confined at home were without adequate domestic help and without means of obtaining it.

Crippling Defects and Orthopædics.—A report by Dr. Betenson on the work done under the orthopædic scheme is included in the report on the school medical service (page 129) and only such records regarding children under school age not included there are dealt with in this part of the report. The clinic and the facilities for treatment and the provision of appliances exist both for school children and for children under school age.

The following is a summary of the work carried out at the orthopædic clinic during 1930 :—

	Children under School Age.
Consultation Clinic :—	
Examined for first time	101
Recommended for treatment for first time	71
Previously treated, recommended for additional treatment	33
Recommendations for :—	
Treatment in Hospital	10
Treatment at Clinic (Special and Routine)	51
Appliances	14
Alterations to appliances	—
Special boots	—
Alterations to boots	25
Other forms of treatment	7
Treated at Clinic for first time	11
Attendances at Clinic	321
Routine Treatment (massage, electricity, exercises, etc.) :—	
Treated at Clinic for first time	54
Attendances for routine treatment	1,268

The following statement relates to treatment at and provision of appliances, etc., through the Prince of Wales' Hospital, Cardiff, during 1930 :—

	Children under School Age.
Hospital Treatment :—	
Admitted to Prince of Wales' Hospital—	
(*a*) Day cases	7
(*b*) Other cases	8
Under treatment at Prince of Wales' Hospital at end of 1930	1
On Prince of Wales' Hospital waiting list at end of 1930—	
(*a*) Day cases	1
(*b*) Other cases	4
Other treatment or provision (including appliances, etc., provided following hospital treatment) :—	
Appliances provided	22
Appliances altered	3
Special boots provided	2
Alterations to boots	34
Other forms of treatment provided	14

Nose and Throat Defects.—The facilities provided at the school clinics for the operative treatment of enlarged tonsils and/or adenoids were extended as from 1st October, 1930, to include children under school age. The following is a summary of the work done in this connection to the end of the year :—

(1) Examined for first time	43
(*a*) Recommended for operative treatment ...	26
(*b*) Recommended for other forms of treatment	11
(*c*) Found to be normal	1
(*d*) Recommended for re-examination ...	5
(2) Received operative treatment	14
(3) Total attendances	56

Visual Defects.—Arrangements for the examination of visual defects in children under school age and for the provision of spectacles were commenced on 1st October, 1930, and the following statement summarises the work done from that date to the end of the year :—

(1) Attended for first time	19
(2) Requiring examination for errors of refraction ...	18
(*a*) Examination for errors of refraction completed	9
(*b*) For whom spectacles were prescribed ...	8
(3) For whom spectacles were provided :—	
(*a*) By parents	5
(*b*) By Council free of charge	3
(4) Requiring examination for other eye defects ...	1
(*a*) For whom treatment was prescribed ...	1
(*b*) For whom treatment was provided	—
(5) Found to be normal	—
(6) Total attendances	28

Measles.—The hospital treatment of cases of measles under five years of age is undertaken as part of the maternity and child welfare scheme of the Council. Particulars as to the cases admitted to hospital during 1930 are contained in the report on the Isolation and Smallpox Hospitals (page 23).

Venereal Diseases.—Tabular statements relating to the work of the auxiliary treatment centre for mothers and children are included in the section dealing with venereal diseases (page 41). A brief report by Dr. Webster on the work of this special treatment centre is given below.

Report by Dr. Helena J. Webster on the Special Treatment Centre for Mothers and Children.

"The figures given in the return for 1930 show that the attendances of patients have been well maintained and are increasing. The majority of patients attending this treatment centre are expectant mothers drawn from the various ante-natal clinics and, considering the fact that many of them have to come a considerable distance and have young families to care for, the attendances must be regarded as very satisfactory.

"The greatest difficulty which has to be combated with regard to these patients is the tendency to discontinue treatment once the confinement is over. Particularly in the case of those under treatment for syphilis it is necessary to urge the importance of their return to the centre after confinement and the need for the closest observation of the babies to be carried out for a period of at least three years. The Wassermann reaction of these babies should be done at regular intervals during this period.

"In this connection the patients remaining under treatment or observation at the end of the year include 32 such infants and young children under three years of age whose mothers were under treatment for syphilis during pregnancy. Wassermann tests at various intervals in these cases have so far repeatedly proved

negative and there has been no evidence whatever in any instance of any of the manifestations of congenital syphilis. At three years of age, if progress has been consistently satisfactory, such children are discharged from the centre, and an arrangement has been made whereby they are followed up further in their homes or at school in connection with the maternity and child welfare service or the school medical service.

"Amongst the new cases admitted during the year there were 21 expectant mothers or women who suspected that they were pregnant. Their attendance has been extremely satisfactory, and so far there is only one case to report as having ceased to attend; this was a woman who had put in only one attendance. Of the others, eight have had their babies; these include two sets of twins. They have all attended the centre, are progressing very satisfactorily, and the Wassermann reactions have all been negative. Seven women are still expectant and are attending regularly for treatment; one has returned since confinement but as yet has not brought the baby for examination; two were found not to be pregnant but are continuing treatment; one had a still-born child (spina bifida and hydrocephalus); and one, on further investigation, was found not to be suffering from specific infection.

"The fact that so many of these infants of infected mothers are born healthy, progress satisfactorily and show no signs of inherited disease, proves the great value of the work carried out at such special treatment centres.

"The mothers on the whole co-operate well, many of them who cease attendance on their own account returning voluntarily with a request for further treatment during a subsequent pregnancy.

"With regard to patients under treatment for gonorrhœal infection, a striking feature of the year's work has been the number of children of school age suffering from gonococcal vulvovaginitis. There were 21 such cases, 13 of whom have been discharged after repeated tests as to cure. Four ceased attendance and four are still under treatment."

Radiography.—The X-ray apparatus is used for radiography for both maternity and child welfare and school medical service cases, and a note by Dr. Anderson on the work done during 1930 is contained in the report on the school medical service (page 127), from which it will be seen that 133 individual cases chargeable to maternity and child welfare were dealt with, as compared with 80 in 1929.

Artificial Light Treatment.—Artificial light treatment of delicate children under five years of age has been undertaken at the Central Clinic since February, 1928. A report by Dr. Gibbs on the work of the clinic during 1930 is given below.

Report by Dr. Nancy K. Gibbs on the Artificial Light Treatment Clinic.

"The number of children treated for the first time during 1930 and their ailments are shown in the following table:—

Diseases	Children
Anæmia	1
Anæmia and impetigo	1
Bronchial catarrh	1
Cervical adenitis	1
Cœliac disease	1
Debility	15
Malnutrition	1
Marasmus	2
Nervous instability	3
Rickets (Prophylaxis)	2
Rickets	35
Rickets and bronchitis	1
Sinus from operation	1
Total	65

"The total number of attendances for treatment was 1,030.

"The same routine as previously was carried out in regard to general organisation, training of additional health visitors, dosage, etc.

"Keenness for treatment, and hence relatively large numbers on the waiting list, have necessitated confirmation of *activity* in all cases of rickets before recommending them for light treatment. Rickets is the disease which continues to give the most successful results. On the whole the improvement is slower than stated by most authorities. This is probably due to the fact that too many cases of a severe type are still seen—in spite of the knowledge of prevention now possessed. Three examples are quoted :—

"(1) T. M., 2½ years. Had been fed on tinned milk for the greater part of the first year of life. Light and massage were given concurrently during the active stage of the disease, but the degree of deformity made walking calipers subsequently necessary.

"(2) I. D., 2 years. Had been breast fed for almost two years. He is still having treatment. The bones are only calcifying very slowly as shown radiographically, and the deformity of the legs, in spite of massage, is so great that he now has plaster splints.

"(3) T. R., 4¾ years. History of prematurity and of being able only to take little but brandy and water for the first six months of life. He shows the classical head, thorax and leg deformities ; the chest is most affected (severe pigeon-breast and marked diminution of capacity) and made worse by almost complete nasal obstruction. The boy is being operated upon for enlarged tonsils and adenoids shortly and is then to be given breathing exercises and abdominal massage in the orthopædic clinic to try to improve the chest condition.

"The cases of choice in rickets are those showing the first signs of activity. Treating these is nearer the ideal of prevention, and the time required is about one to two months in contrast to from four to six months for such cases as those quoted, and with very different end results.

"Change in mentality is still one of the earliest obvious signs of improvement. Two cases of what may be called hyper-irritability of the nervous system have been treated with good results. Each was a strong-willed only child with probably ineffectual parental control. The mother of one of them came to ask for treatment, as the child had had a course of irradiation two years before for rickets, and she had noticed the temperamental improvement at that time.

"In this connection it should be noted that a certain number of children recommended on account of physical backwardness and not showing any definite physical signs appear to have been cases of retardation due to backward mental development. Three such cases were noted during the year.

"Catarrhs, either nasal, bronchial or intestinal, improve quickly when they form part of the rachitic diatheses, provided the stage has not been reached in the first two of enlarged tonsils and adenoids for any length of time.

"Malnutrition is a term applied to a condition which has such a variety of causes, *e.g.*, wrong feeding, mismanagement, etc., that it is difficult to give a definite opinion in regard to the benefit derived from irradiation.

"The 'old' cases which have been followed up give the impression that they are in a better physical condition than one would have expected ; they compare more than favourably with the 'normal' child."

Infant Life Protection.—The functions relating to infant life protection under Part I of the Children Act, 1908, were, in accordance with Section 2 of the Local Government Act, 1929, taken over as part of the maternity and child welfare scheme on 1st April, 1930, the Infant Protection Visitor (Miss L. Sherwood) being transferred

to the staff of the department. The following statement gives particulars of the work during the nine months ended December, 1930 :—

Persons registered as keeping children for reward as at 31st December, 1930	64
Children registered as being kept for reward as at 31st December, 1930	68
Applications for registration	16
Registered	11
Registration refused	3
Postponed	2
First visits	19
Routine visits	575
Special visits	219

Legal proceedings were taken in one case for failure to give notice of the reception of an infant, the defendant being fined 30/- and costs (3/6).

Adoption of Children Act, 1926.—Since 1st April, 1930, the Council have acted as guardian *ad litem* in certain cases under the Adoption of Children Act. The Infant Protection Visitor (Miss L. Sherwood), who undertakes the necessary investigations, dealt with 13 cases to the end of 1930.

X.—LABORATORY WORK.

Cardiff and County Public Health Laboratory.—The following statement shows the work carried out for Cardiff (City and Port) during 1930 :—

Bacteriological Examinations :—	
Water Supplies	378
Milks for Tubercle Bacilli	214
Milks for other Organisms	539
Ice Cream for Organisms	56
Butter for Tubercle Bacilli	27
Sputa for Tubercle Bacilli	958
Urines for Tubercle Bacilli	27
Rodents for Plague	481
Specimens for :—	
Diphtheria	3,874
Enteric Fever	62
Malaria	2
Gonorrhœa	771
Syphilis (Wassermann Reaction)	2,252
Syphilis (Spirochæta Pallida)	5
Ringworm	9
Fæces for Organisms	64
Cerebro-spinal Fluids	24
Other Examinations	127
Chemical Examinations :—	
Water Supplies	206
Milk and Milk Products	401
Ice Cream	56
Air of Cinemas	9
In connection with Atmospheric Pollution	12
In connection with Ultra-violet Radiation	365
Other Examinations	17
Total	10,936

The number of specimens examined for suspected disease in patients resident in Cardiff, together with results of such examinations, are shown below :—

Suspected Disease	Positive Results	Negative Results	Totals	Percentage of Positive Results
Diphtheria	514	3,360	3,874	13·2
Enteric Fever	21	42	63	33·3
Tuberculosis	218	740	958	22·8
Gonorrhœa	87	684	771	11·3
Syphilis—				
Wassermann Reaction ...	341	1,911	2,252	15·1
Spirochæta Pallida ...	4	1	5	80·0

The above figures relate to specimens and samples actually examined during 1930.

XI.—HOUSING.

The following is a statement in the form required by the Ministry in relation to housing :—

Number of New Houses erected during the Year :—

(*a*) Total (including numbers given separately under (*b*)).

(i) By the Local Authority	200
(ii) By other Local Authorities	—
(iii) By other bodies and persons	274
Total	474

(*b*) With State assistance under the Housing Acts :—

(i) By the Local Authority—	
(*a*) For the purpose of Part II of the Act of 1925 ...	—
(*b*) For the purpose of Part III of the Act of 1925 ...	200
(*c*) For other purposes	—
(ii) By other bodies or persons	—

1. *Inspection of Dwelling-houses during the Year :—*

(1) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts) and the number of inspections made	7,114
(2) Number of dwelling-houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925, and the number of inspections made ...	904
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation ...	5
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	1,539

2. *Remedy of Defects during the Year without Service of formal Notices :—*

Number of defective dwelling-houses rendered fit in consequcnce of informal action by the Local Authority or their officers ...	1,642

3. *Action under Statutory Powers during the Year :—*

A.—Proceedings under section 3 of the Housing Act, 1925, and section 17 of the Housing Act, 1930.

(1) Number of dwelling-houses in respect of which notices were served requiring repairs	23
(2) Number of dwelling-houses which were rendered fit after service of formal notices :—	
(*a*) By owners	22
(*b*) By Local Authority in default of owners	3
(3) Number of dwelling-houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close	—

B.—Proceedings under Public Health Acts :—

(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	54
(2) Number of dwelling-houses in which defects were remedied after service of formal notices :—	
(*a*) By owners	70
(*b*) By Local Authority in default of owners	—

C.—Proceedings under sections 11, 14 and 15 of the Housing Act, 1925.

(1) Number of representations made with a view to the making of Closing Orders	1
(2) Number of dwelling-houses in respect of which Closing Orders were made	1
(3) Number of dwelling-houses in respect of which Closing Orders were determined, the dwelling-houses having been rendered fit	—
(4) Number of dwelling-houses in respect of which Demolition Orders were made	—
(5) Number of dwelling-houses demolished in pursuance of Demolition Orders	—

4. *Number of houses owned by the Local Authority :—*

Held under—

(1) Part III of the Housing Act, 1925	3,970
(2) ,, II ,, ,, ,, ...	—
(3) Other powers	174
Total ...	4,144*

House Inspection.—The results of all recorded house inspections during the year have been summarised in the following table, with the object of showing the various conditions found to exist in working-class property.

The figures relating to overcrowding, dampness, ash-bins, flushing cisterns and food storage serve to indicate the lines along which future action should be directed.

Structurally separate dwellings inspected and recorded...	904
Number overcrowded, as measured by :—	
Air-space standard†	39
Undesirable intermingling of sexes‡	36
Registrar-General's standard‖	67

* As at March, 1931, and including 498 houses built during 1929 and 1930 under Part III of the Housing Act, 1925.

† At least 300 c. ft. per adult and 150 c. ft. per child under 10 years of age in bedrooms.

‡ Where two or more persons of the opposite sex, each over 13 years of age, excluding married couples, occupy the same room for sleeping purposes.

‖ More than two persons per room. Both living and sleeping rooms are included in the total number of rooms, and all children are counted as adults.

Number with :—	
One family	570
Two families	289
Three families	43
More than three families	2
Without through ventilation	10
Without satisfactory washing accommodation ...	101
Without satisfactory cooking arrangements	11
Without proper food pantries	584
Without troughs	217
Dampness from :—	
Defective roofs, shutes or downpipes	330
Defective outside plastering or joints	126
Lack of, or defective, damp-proof course ...	9
Without Corporation water	1
With earth or pail closets	1
Drained to cesspools	—
Without flushing cisterns	549
With flushing cisterns out of repair	36
Without covered galvanised iron ash-bins	818
Found to be not reasonably fit for human habitation ...	332
Found to be unfit for human habitation	5

Multiple Tenancy.—For comparison with the inquiries made in previous years, the following summary is given of the living conditions of families coming under the observation of the department in relation to multiple tenancy :—

Source of Information.	Number of Houses.	Percentage occupied by more than One Family.
Birth Records	3,485	53·0
Tuberculosis Records	383	35·0
Housing Records	904	36·9

Housing Act, 1930, *Section* 25 (2) : *Quinquennial Statement.*—The return required by Section 25 of the Act, in the form prescribed by the Ministry's Circular 1153, which is given below, was prefaced by the following explanatory statement :—

"*Houses to be Provided under Act of* 1924.—On the basis of past experience of the demand for dwelling-houses and the degree of overcrowding in existing houses, it is estimated that the Council will erect during the five years' period 1,740 houses to be allocated to the purposes of the Act of 1924.

"*Houses to be Provided under Act of* 1930.—There is no area in Cardiff which can be most satisfactorily dealt with as a clearance area in terms of Section 1 of the Act.

" There is one area in the centre of the city (11·75 acres) which is considered suitable to be dealt with as an improvement area in terms of Section 7 of the Act. In this area there are 286 occupied dwelling-houses, 8 vacant houses, 34 dwelling-houses converted into warehouses or shops and 17 warehouses built on sites which were formerly occupied by dwellings. Three of the dwelling-houses above-mentioned are used as common lodging houses, 21 are partly used as shops and 4 are partly used as licensed premises. Single lodgers being disregarded and the personnel of lodging houses being regarded as one family for each lodging house, there are 465 families in the area, with a total population of 1,759 persons (41 living in lodging houses). When the area is taken as a whole, the number of persons per acre is 150, but when the sites of business premises and the adjacent

portions of streets are deducted from the total, the area occupied by dwelling-houses is reduced by 4·54 acres to 7·21, and the number of persons per acre covered by dwelling-houses is 244. Overcrowding of individual dwelling-houses on the basis of a minimum of 300 cubic feet per adult person is found in 97 instances, and if the standard suggested in the model byelaws issued by the Ministry in terms of Section 8 of the Act were adopted, the number of houses overcrowded would be somewhat greater. In this area there are 88 houses which are recorded as unfit for human habitation and therefore subject to be dealt with by closure and demolition. These houses contain 121 families with a total of 465 persons (including 15 lodgers in one lodging house). In order to re-house the population displaced from this area by closure and demolition, 121 houses will be provided and, in addition, 69 houses will be provided to accommodate families at present overcrowded in houses which are not subject to closure and demolition.

"Scattered about singly or in small groups throughout the rest of the city there are 68 houses which will be closed and demolished. These houses accommodate 70 families consisting of 273 persons. In order to re-house the population displaced therefrom 70 houses will be erected.

" As the result, therefore, of these combined operations it is estimated that 260 houses will be erected for the purposes of the Housing Act, 1930.

" The total number of houses, therefore, to be erected for all purposes during the five years' period will be 2,000.

"*Repair of Houses under Act of* 1930.—As regards the repair of houses, it is impossible to arrive at any accurate estimate of the number of houses which will be repaired during the period in virtue of the powers conferred on the Authority by Part 2 of the Housing Act, 1930, but it is estimated that 2,000 houses per annum will be inspected and that 300 of these requiring repair will be dealt with under this Act. It is therefore estimated that 1,500 houses will be so repaired during the five years' period."

Housing Act, 1930 (Section 25 (2)).

Form of Quinquennial Statement.

Name of Local Authority	Cardiff City Council.
Population (estimated figure for middle of 1929)	224,200 (R.G.)
Number of inhabited houses (according to rate books)—Dwelling-houses ...	40,476
Houses and Shops	3,185
Total	43,661
A. Estimated production of houses by the local authority during the next five years	2,000
B. Estimated production of new houses of working-class type by private enterprise during the next five years—	
(i) With subsidy under the Act of 1924	Nil
(ii) Under arrangements made under Section 29 of the Act of 1930	Nil
(iii) Otherwise	Nil

C. Estimated number of new houses to be allocated by the local authority during the next five years to the purposes of the Housing Act, 1930 (*i.e.*, the purposes mentioned in E and F)—		
(i) For re-housing population displaced by closure and demolition in improvement area	121	
(ii) For re-housing population displaced by closure and demolition elsewhere	70	
(iii) For re-housing population displaced to abate overcrowding in improvement area	69	
Total		260
D. Estimated number of new houses to be allocated by the local authority during the next five years to the purposes of the Act of 1924 (*i.e.*, new housing)		1,740
Grand Total		2,000
E. Estimated number of houses to be demolished during the next five years :—		
(i) In clearance areas		—
(ii) In improvement areas—		
(*a*) for opening the area		—
(*b*) as unfit houses		88
(iii) Individual houses outside clearance and improvement areas		68
Total		156
F. Estimated number of persons to be displaced during the next five years :—		
(i) By any of the processes mentioned in E		723*
(ii) To abate overcrowding in improvement areas		368
Total		1,091
G. Estimated number of houses to be repaired under Part II of the Housing Act, 1930, during the next five years		1,500

Corporation Housing Estates.—The sanitary supervision of these estates has continued to develop, and although this has thrown a considerable amount of additional work upon the department the results have been more than justified. Briefly, the control exercised by this department has been concerned with the following matters :—

1. Reports on the home conditions of applicants.
2. The investigation of cases requiring to be re-housed for hygienic reasons.
3. The inspection of all Council houses before re-letting.
4. The inspection of all houses where transfers are contemplated.
5. The investigation of alleged verminous conditions, overcrowding, trading on premises, etc.
6. The disinfestation of all verminous houses.

During the year, 321 vacant houses were inspected before being re-let, and of these, 98 were found to be infested with bugs. In addition, 95 cases of bug infestation were reported by the City Treasurer and Controller. Further investigations to the

* This figure does not include a floating population of 15 in a common lodging house which it is proposed to close.

number of 344 were made into the home conditions of applicants, and 53 miscellaneous problems reported by the City Treasurer and Controller were dealt with.

The methods of disinfestation, namely, the use of a blow-lamp and, in bad cases, stripping of picture rails and skirtings, have been continued. Various insecticidal sprays have also been experimented with, but these have not been particularly successful in cases of bad infestation, owing to the impossibility of the spray reaching behind the woodwork and into damaged portions of the plaster. It has also been found that, even if the spray kills the adult insects, the eggs are left, and these subsequently hatch and the house quickly becomes re-infested. It has not been found practicable to use such fumigants as hydrogen cyanide for the eradication of insect parasites.

Houses Let in Lodgings.—In September, 1930, new byelaws for the control of houses let in lodgings were approved by the Ministry of Health. These byelaws, which repealed those previously in force, follow the terms of the Ministry's model. The Ministry originally inserted a clause which made some of the most important byelaws inapplicable until the repeal of the Rent and Mortgage Interest (Restrictions) Acts, but after representation by the City Council this was modified, and the byelaws were confirmed with a proviso that certain portions should not apply to houses which were controlled by these Acts.

XII.—FOOD INSPECTION.

Meat Inspection at Municipal Abattoirs.—The following tables set out in detail the work done in connection with meat inspection during the year.

Animals slaughtered and whole carcases found diseased which were surrendered and destroyed or otherwise dealt with by arrangement with the owners :—

	Roath Abattoir		Canton Abattoir		Totals	
	Slaughtered	Diseased or unsound and destroyed	Slaughtered	Diseased or unsound and destroyed	Slaughtered	Diseased or unsound and destroyed
Bulls	109	2	56	2	165	4
Cows	1,057	34	233	10	1,290	44
Heifers	2,665	7	401	1	3,066	8
Steers	2,140	6	381	1	2,521	7
Calves	8,472	30	660	4	9,132	34
Sheep and Lambs	34,483	28	10,012	22	44,495	50
Pigs	25,465	75	4,395	18	29,860	93
Totals	74,391	182	16,138	58	90,529	240

Instances in which tuberculosis was found :—

	Roath Abattoir		Canton Abattoir		Totals	
	Number	Percentage	Number	Percentage	Number	Percentage
Cattle :—						
Bulls	19	17·4	1	1·8	20	12·1
Cows	269	25·4	22	9·4	291	22·6
Heifers	126	4·7	6	1·5	132	4·3
Steers	59	2·8	2	0·5	61	2·4
Calves	30	0·4	1	0·2	31	0·3
All Cattle	503	3·5	32	1·8	535	3·3
Pigs	165	0·6	29	0·7	194	0·6

Causes of destruction of carcases :—

Cause	Beef	Veal	Mutton and Lamb	Pork	Totals
Tuberculosis	58	17	...	66	141
Dropsy	...	...	11	...	11
Emaciation	2	1	5	5	13
Dropsy and Emaciation	...	...	16	1	17
Johne's Disease	1	...	...	...	1
Moribund	...	3	...	1	4
Found dead	...	...	...	...	...
Decomposition	...	...	1	...	1
Other Causes	2	13	17	20	52
Totals	63	34	50	93	240

Approximate weight of diseased or unsound meat surrendered and destroyed or otherwise dealt with by arrangement with the owners :—

	Tons	cwt.	lb.
Carcases of—			
Beef	15	1	47
Veal	1	6	63
Mutton and Lamb	—	16	43
Pork	4	3	27
Part carcases of—			
Beef	1	7	44
Veal	—	—	44
Mutton and Lamb	—	1	35
Pork	—	13	62
Offal of—			
Beasts	20	8	107
Calves	—	8	50
Sheep and Lambs	2	8	26
Pigs	2	7	1
Total	49	2	101

Meat Inspection at Private Slaughter-houses.—The numbers of animals slaughtered were as follows :—

Sheep and Lambs	228
Pigs	1,160
Total	1,388

Nine unsound carcases of pork were destroyed, the cause in each case being tuberculosis. Tuberculosis was found in carcases of pork in 33 instances, the proportion being 2·9 per cent.

The total weight of unsound meat surrendered at private slaughter-houses and destroyed by arrangement with the owners was 1 ton 1 cwt. 70 lb.

Caseous Lymphadenitis.—The prevalence of caseous lymphadenitis in consignments of mutton from South America has continued to throw a considerable amount of additional work on the department. In addition to carcases arriving at the port, consignments from other towns are examined, and in some instances the presence of the disease has made it necessary for the majority, if not all, of the carcases to be inspected.

Recently there has been a decrease in the proportion of diseased carcases found, and as a result of a conference of Port Medical Officers of Health held in London last December it was decided that in future Australian and New Zealand mutton and lamb (excluding lambs under 42 lb. in weight) should be subjected to a minimum examination of 5 per cent., and if more than 2 per cent. of this proportion were found diseased a further examination should be made. In the case of consignments from other countries it was agreed to maintain the 10 per cent. examination, followed by the examination of all carcases if more than 2 per cent. of the 10 per cent. were found diseased.

The following is a summary of the inspection for caseous lymphadenitis of imported carcases of mutton and lamb at cold stores in the city during 1929 and 1930 :—

	Number of Carcases		Number Condemned		Percentage Condemned	
	1929	1930	1929	1930	1929	1930
Mutton	15,149	21,880	149	77	0·98	0·35
Lamb	6,917	355	1	...	0·01	...
Totals ...	22,066	22,235	150	77	0·61	0·35

Handling, Storage and Preparation of Food.—This aspect of public health work has received considerable attention during the year, and additional powers have been obtained through the Cardiff Corporation Act, 1930. It is now necessary for all meat hawkers to hold annual certificates from the Corporation approving of their storage accommodation before they are allowed to carry on business. Byelaws, with provisions similar to the Meat Regulations, 1924, for the control of all articles of food during transport have been confirmed. Section 72 of the Public Health Act, 1925, has been extended by the new local Act to exclude the limitation applying to food premises classified as factories or workshops, and additional powers have been obtained making it compulsory for the provision of water supply and toilet arrangements in all places where food is prepared. The new local Act also makes it obligatory for all premises used for the manufacture or sale of ice cream and the preparation of made-up articles of food to be registered.

Unsound Food exposed or intended for Sale.—The following is a record of the work done by the sanitary inspectors in connection with inspection of food exposed or intended for sale during the year :—

	Number of Inspections.
Butchers' shops	2,703
Provision shops	312
Markets	353
Wholesale stores	1,496
Fish and fruit shops	910
Butter factories	109
Margarine stores (wholesale)	57
Ice cream premises and barrows ...	402
Fried fish shops	592
Food vehicles	97
Railway stations	51
Other premises	259
Total ...	7,341

Approximate weight of diseased or unsound food found in shops and stores and destroyed or disposed of by the owners otherwise than as food for human consumption:

	Tons	cwt.	lb.
Beef	—	1	73
Veal	—	—	80
Mutton and lamb	1	7	—
Pork	—	1	70
Rabbits	—	—	10
Fish	1	10	88
Poultry	—	—	13
Ham and bacon	—	7	81
Eggs	—	—	54
Rice	1	—	—
Other provisions	10	5	99
Fruit	7	3	105
Offal	—	6	43
Vegetables	5	6	57
Total	27	12	101

Milk Inspection.—The following is a statement showing the distribution of the milk business in Cardiff and the amount of milk sold per day in December, 1930 :—

Character of Business	Number of Vendors	
	Totals	Selling 6 Gallons or less per day
(1) From retail premises other than shops, with or without rounds	52	11
(2) By rounds direct from farms within the city boundary ...	11	...
(3) By rounds direct from farms or premises beyond the city boundary	65	5
(4) From shops (not entirely bottled milk) with or without rounds	113	82
(5) From shops (bottled milk only)	296	248
(6) By rounds only	117	11
(7) Under the Milk (Special Designations) Order, 1923 :—		
Grade A	9	5
Grade A (T.T.)	48	13
Certified	2	...
Totals	713	375

The approximate number of gallons sold per day by all vendors was 10,247 (including 141 gallons of Grade A, 432 gallons of Grade A (T.T.) and 64½ gallons of Certified milk).

It would appear that the decreased spending power of the public, owing to trade depression, is reflected in the daily consumption of milk, which has decreased by 900 gallons in comparison with the corresponding figures for 1929.

Pasteurised Milk.—No milk is retailed within the city under the designation "Pasteurised," but from an inquiry made it appears that practically one-third of the total city milk supply is treated by either the flash process or the retarding process of pasteurisation. The largest wholesaler in the city reconstructed his dairy during the year and installed a positive holder plant.

Veterinary Inspection of Cows.—The following are particulars of the inspection of cows carried out by Mr. P. J. Mullane, Veterinary Inspector :—

	Cowsheds in City.		Cowsheds beyond City Boundary.
Dairymen whose premises were visited	28	...	6
Visits to such premises	298	...	6
Cows in milk examined	336	...	211
Examinations of cows ...	3,399	...	211
Cows found diseased ...	2	...	30
Cows excluded from dairy herds at time of inspection ...	2	...	–
Cows not in milk examined ...	51	...	6
Examinations of cows ...	438	...	6
Cows found diseased ...	3	...	–

Condition of cows examined :—

	Cowsheds in City		Cowsheds beyond City Boundary	
	Cows in Milk	Cows not in Milk	Cows in Milk	Cows not in Milk
Suffering from—				
Tuberculosis of Udder	...	...	...	...
Other Forms of Tuberculosis	...	...	...	...
Acute Inflammation of Udder	...	...	2	...
Other Chronic Diseases of Udder	2	3	20	...
Other Diseases	...	...	8	...
Healthy	334	48	181	6
Totals	336	51	211	6

Tubercle Bacilli in Milk.—The number of routine samples of milk examined for tubercle bacilli was 130, five of which were found to be positive. The record of sampling from the commencement is shown in the following table :—

Year.	Number of Samples.	Number containing Tubercle Bacilli.
1911	9 ...	—
1912	45 ...	5
1913	42 ...	1
1914	39 ...	—
1915	45 ...	—
1916	41 ...	1
1917	32 ...	—
1918	19 ...	1
1919	13 ...	—
1920	14 ...	1
1921	27 ...	2
1922	43 ...	2
1923	51 ...	2
1924	53 ...	1
1925	55 ...	2
1926	55 ...	1
1927	62 ...	6
1928	84 ...	4
1929	113 ...	5
1930	130 ...	5

The milk was produced outside Cardiff in all instances in which tubercle bacilli were found during 1930, and the prescribed action under Section 4 of the Milk and Dairies (Consolidation) Act, 1915, was taken in each case.

Routine Bacteriological Examination of Milk.—The following is a record of the bacteriological examination of ordinary commercial milk carried out during 1930, the results being shown in such a way as to reveal the proportion which attained the standard prescribed by the Milk (Special Designations) Order, 1923, for Grade A milk :—

Month	Number of Samples examined	Number containing not more than 200,000 bacteria in 1 c.c.	Number with *B. Coli* absent in 1/100 c.c.	Number attaining Grade A standard by both tests	Percentage attaining Grade A standard
January	12	11	12	11	
February	12	11	9	8	
March	13	11	10	9	77
April	8	7	8	7	
May	15	11	14	11	
June	12	7	9	6	
July	17	6	10	6	41
August	17	10	9	7	
September	13	7	8	5	
October	20	19	18	17	
November	19	19	15	15	73
December	23	23	18	18	
Totals	181	142	140	120	66

Graded Milks.—The following is a statement of the number of licences for the various grades of milk and the number of individual dealers under the Milk (Special Designations) Order, 1923, each year since 1923 :—

Description	Number on 31st December							
	1923	1924	1925	1926	1927	1928	1929	1930
(1) Producers' licences to use the designation "Grade A"	...	1	1	1	1	1	1	1
(2) Dealers' licences to use the designation "Certified"	...	...	...	2	...	2	2	4
(3) Dealers' licences to use the designation "Grade A (Tuberculin Tested)"—								
(*a*) Bottling establishments	...	...	...	3	5	17	21	24
(*b*) Shops	...	...	...	...	...	17	25	26
(*c*) Supplementary	...	...	...	...	1	1	1	1
(4) Dealers' licences to use the designation "Grade A"—								
(*a*) Bottling establishments	3	3	6	6	9	2	2	...
(*b*) Shops	...	...	...	2	8	2	...	...
(*c*) Supplementary	...	2	2	2	1	1	3	3
(5) Dealers' licences to use the designation "Pasteurised"—								
(*a*) Pasteurising establishments	1	1	1	...	...	...	...	...
(*b*) Shops	...	...	...	...	...	...	...	...
(6) Individual dealers—								
(*a*) Licenced to use the designation "Certified"	...	...	...	2	...	2	2	4
(*b*) Licenced to use the designation "Grade A (Tuberculin Tested)"	...	...	...	3	5	34	45	50
(*c*) Licensed to use the designation "Grade A"	3	5	8	9	18	5	5	3

The following tables show the proportion of samples of Grade A and Grade A (Tuberculin Tested) milk which conformed with the standard laid down by the Order. In every instance of a sample being below standard steps were taken to ascertain the cause and to remedy the defect.

(*a*) Samples from Producers' Supplies (before bottling).

Month	Number of Samples examined	Number containing not more than 200,000 bacteria in 1 c.c.	Number with *B. Coli* absent in 1/100 c.c.	Number attaining Grade A standard by both tests	Percentage attaining Grade A standard
January	4	4	4	4	
February	5	5	5	5	
March	4	4	4	4	100
April	1	1	1	1	
May	1	1	1	1	
June	...	...	...	...	
July	...	...	...	...	100
August	1	1	1	1	
September	2	2	2	2	
October	3	3	3	3	
November	2	2	2	2	100
December	4	4	4	4	
Totals	27	27	27	27	100

(*b*) Samples from Dealers' Supplies (after bottling).

Month	Number of Samples examined	Number containing not more than 200,000 bacteria in 1 c.c.	Number with *B. Coli* absent in 1/100 c.c.	Number attaining Grade A standard by both tests	Percentage attaining Grade A standard
January	27	25	27	25	
February	28	27	28	27	
March	26	26	25	25	96
April	29	29	28	28	
May	28	28	28	28	
June	27	24	24	23	
July	27	21	23	20	79
August	26	21	21	20	
September	27	26	23	22	
October	26	25	26	25	
November	29	28	29	28	93
December	30	30	29	29	
Totals	330	310	311	300	91

Examination of Ice Cream.—During the summer months samples of ice cream were submitted for examination. Fifty-six samples were examined and they showed considerable variation. The best sample contained 7,000 bacteria per c.c., with *Bacillus Coli* present in 1 c.c. and *Bacillus Welchii* absent in 20 c.c. The worst sample

contained 99,000,000 bacteria per c.c., with *Bacillus Coli* present in 1/10,000 c.c. and *Bacillus Welchii* present in 10 c.c. A summary of the results is given below :—

Number of Bacteria per c.c. :—

	Number of Samples
Under 100,000	22
100,000—200,000	2
200,000—500,000	13
500,000—1,000,000	7
Over 1,000,000	12
Total	56

Presence of *Bacillus Coli* :—

	Number of Samples
Absent in 1 c.c.	2
Present in 1 c.c.	16
,, ,, 1/10 c.c.	18
,, ,, 1/100 c.c.	8
,, ,, 1/1,000 c.c.	9
,, ,, 1/10,000 c.c.	3
Total	56

Presence of *Bacillus Welchii* :—

	Number of Samples
Absent in 20 c.c.	6
,, ,, 10 c.c.	26
Present in 10 c.c.	18
,, ,, 1 c.c.	2
,, ,, 1/10 c.c.	4
Total	56

None of the samples contained boric acid. Starch was present in 51 samples, and gelatine in eight.

Examination of Butter for Tubercle Bacilli.—Twenty-nine samples of butter were submitted for examination for the presence of tubercle bacilli, with a negative result in each case. The sources of these samples were as follows :—

English	3
Welsh	18
Australian	3
New Zealand	5

These examinations are being continued, attention now being concentrated on farm-house butter, as butter from distant places is likely to be made from pasteurised milk.

Legal Proceedings.—The following is a summary of the legal proceedings taken during the year in connection with food inspection :—

Acts, etc., under which Proceedings were taken	Number	Fined	Cautioned	To pay costs only	Dismissed	Withdrawn	Amount of Fines and Costs
							£ s. d.
Food and Drugs (Adulteration) Act, 1928	19	5	1	9	4	...	13 10 6
Milk and Dairies Order, 1926 ...	63	51	3	4	...	5	21 12 6
Merchandise Marks Act, 1926 ...	2	2	...	...	...	...	15 0
Totals ...	84	58	4	13	4	5	£35 18 0

Report for 1930 *of Mr. Stanley Dixon, M.Sc., F.I.C., Public Analyst and Agricultural Analyst.*

Food and Drugs (Adulteration) Act, 1928.—One thousand and four samples of food and drugs were submitted to me for analysis under the Food and Drugs (Adulteration) Act, 1928, by the sampling officers of the Urban Sanitary Authority during 1930.

The following table shows the number and nature of the various articles and the number of samples of each variety found upon examination to be adulterated or of inferior quality :—

Description of Sample	Number Submitted	Number Adulterated	Number of Inferior Quality
Almonds, Ground	4	...	...
Apples, Dried	3	...	...
Apricots, Dried	9	...	...
Arrowroot	2	...	...
Beer	1	...	...
Butter	79	1	...
Camphorated oil	10	...	...
Candied peel	9	1	...
Cheese	8	...	...
Cherries, Glacé	2	...	...
Cider	8	4	...
Cinnamon, Ground	2	...	...
Cocoa	6	...	...
Coffee	10	...	...
Cream	44	1	...
Cream of tartar	3	...	...
Currants	2	...	...
Dripping	2	...	...
Epsom salts	4	...	...
Fish paste	1	...	...
Flour	5	...	...
Flour, Self-raising	7	...	...
Fruit cordials	7	...	...
Ginger, Ground	11	1	...
Ginger wine	3	...	...
Ice cream	2	...	...
Jam	8	...	1
Lard	2	...	...
Margarine	38	...	...
Meat paste	1	...	...
Milk	519	15	6
Milk, Condensed	11	...	...
Milk, Dried...	1	...	...

Description of Sample	Number Submitted	Number Adulterated	Number of Inferior Quality
Milk powder, Humanised	1	...	...
Milk, Skimmed	12	...	...
Mineral water	4	...	...
Oatmeal	2	...	...
Pears, Dried	7	...	...
Peas, Dried	2	...	...
Pepper	9	...	...
Pepper, Cayenne	6	...	...
Prunes	2	...	...
Quinine, Ammoniated tincture of	3	...	...
Raisins	4	1	...
Rice	11	...	...
Rice, Ground	8	...	...
Sal Volatile, Spirit of	3	...	...
Sauce	2	...	...
Sausages	10	1	...
Spice, Mixed	1	...	...
Spirits	18	1	...
Sugar	9	...	...
Sulphur	2	...	...
Sultanas	19	...	...
Sweets, Boiled	5	...	...
Tea	18	...	...
Vegetables, Canned	2	...	...
Vinegar	20	7	...
Totals	1,004	33	7

The number of samples examined during 1930 represents 4·57 samples per 1,000 of the population of the city, the corresponding figure for the whole of England and Wales during 1929 being 3·53; the return for 1930 is not yet available.

One hundred and twenty-seven of the samples were taken informally, whilst the remainder were formal samples taken in accordance with Section 18 of the Act.

The number of adulterated samples was 33 (3·3 per cent.), and details of these articles are given below :—

Article	Formal or Informal	Nature of Adulteration or Irregularity	Observations
Butter ...	Informal	Contained 17·5 per cent. of water	Subsequent formal sample genuine.
Candied Peel	Formal ...	Contained 140 parts per million of sulphur dioxide	
Cider ...	Informal	Contained 1/14 grain per gallon of lead.	
Cider ...	,, ...	,, 1/14 ,, ,, ,,	
Cider ...	,, ...	,, 0·84 ,, ,, ,,	
Cider ...	,, ...	,, 4·2 grains ,, ,,	
Cream ...	,, ...	Contained 7·7 grains per lb. of boric acid	Subsequent formal sample genuine.
Ginger, Ground ...	Formal ...	Contained 125 parts per million of sulphur dioxide	
Milk ...	,, ...	Deficient of 1·5 per cent. of milk-fat	Contained approximately 28 per cent. of separated milk.
Milk ...	,, ...	,, 2 ,, ,,	
Milk ...	,, ...	,, 3 ,, ,,	
Milk ...	,, ...	,, 5 ,, ,,	
Milk ...	,, ...	,, 5 ,, ,,	
Milk ...	,, ...	,, 5 ,, ,,	
Milk ...	,, ...	,, 9 ,, ,,	} From same vendor.
Milk ...	,, ...	,, 9 ,, ,,	
Milk ...	,, ...	,, 9 ,, ,,	
Milk ...	,, ...	,, 30 ,, ,,	
Milk ...	,, ...	Deficient of 3 per cent. of non-fatty solids.	
Milk ...	,, ...	,, 5 ,, ,, ,,	
Milk ...	,, ...	,, 6 ,, ,, ,,	
Milk ...	,, ...	,, 9 ,, ,, ,,	
Milk ...	,, ...	Deficient of 4 per cent. of milk-fat and 2 per cent. of non-fatty solids.	
Raisins ...	,, ...	Contained 850 parts per million of sulphur dioxide	
Sausages ...	,, ...	Contained 100 parts per million of sulphur dioxide	Presence of preservative not declared.
Vinegar ...	,, ...	Deficient of 14·5 per cent. of acetic acid.	
Vinegar ...	,, ...	,, 15·2 ,, ,,	
Vinegar ...	,, ...	,, 15·2 ,, ,,	
Vinegar ...	,, ...	,, 28·0 ,, ,,	
Vinegar ...	,, ...	,, 29·5 ,, ,,	
Vinegar ...	,, ...	,, 37·0 ,, ,,	
Vinegar ...	,, ...	,, 43·0 ,, ,,	
Whiskey ...	,, ...	Being 36·1 degrees under proof.	

Milk.—Of the total number of samples received, 519, or 51·7 per cent., consisted of milk, whereas 51·0 per cent. of the various articles collected under the Act throughout England and Wales in 1929 were milk. Fifteen samples were returned as adulterated, ten being deficient in fat only, four were deficient in non-fatty solids only, whilst one was deficient in both fat and non-fatty solids. In one instance the milk was deficient of no less than 30 per cent. of fat, and in another case, though the deficiency was only 1·5 per cent. calculated on the presumed minimum standard of 3·0 per cent. in genuine milk, laid down by the Sale of Milk Regulations, 1901, the sample contained approximately 28 per cent. of machine-skimmed milk. Fifty-one samples of milk were taken on Sundays, and of these only one was adulterated, this being deficient in non-fatty solids to the extent of 5 per cent. In addition to those classified as adulterated, six samples of milk were returned as of inferior quality.

The following table shows the average composition of all the milk samples analysed each month and for the whole year :—

	Number of samples	Fat per cent.	Non-fatty solids per cent.	Total solids per cent.
January	41	3·65	8·87	12·52
February	45	3·85	8·91	12·76
March	40	3·53	8·86	12·39
April	45	3·46	8·92	12·38
May	43	3·52	8·89	12·41
June	41	3·51	8·89	12·40
July	48	3·51	8·85	12·36
August	30	3·79	8·95	12·74
September	47	3·58	8·90	12·48
October	61	4·06	8·91	12·97
November	37	4·10	8·89	12·99
December	41	3·71	8·89	12·60
Whole year, 1930	519	3·69	8·90	12·59
Whole year, 1929	487	3·71	8·87	12·58
Legal standard	...	3·00	8·50	11·50

These figures are very similar to those obtained during 1929, and the average composition of all the samples is practically identical for the two years. As is usually the case, the average for the percentage of non-fatty solids is almost constant throughout the year, whilst the fat content shows the normal seasonal variation, being somewhat lower during the summer months than in the winter. It is evident, therefore, that most of the herds supplying milk to the city produce milk of good quality.

Condensed and Dried Milk.—Eleven samples of condensed milk were submitted for examination. Four of these were described as full-cream unsweetened milk, three as full-cream sweetened milk and four as machine-skimmed sweetened milk. They were all of satisfactory quality and complied with the Condensed Milk Regulations as regards chemical composition, labelling and equivalent contents.

The sample of dried milk complied with the requirements of the Dried Milk Regulations, and the sample of humanised milk powder was of satisfactory composition, containing approximately 50 per cent. of full cream dried milk modified by the addition of various milk constituents, so that the product upon suitable dilution resembled normal human milk.

Butter.—Of the 79 samples of butter examined, 74 were purchased from shops and five were taken from registered butter factories. An informal sample bought at a shop contained 1·5 per cent. of water in excess of the limit of 16 per cent., but a subsequent formal sample obtained from the same vendor was genuine. There was no evidence of the presence of fat foreign to butter in any of the samples.

Cheese.—The eight samples of cheese were all prepared from full cream milk, the amount of fat calculated on the dry matter of the cheese varying from 45·7 to 54·3 per cent. There was no evidence of the presence of foreign fat.

Cider.—During the year the attention of the Medical Officer of Health was drawn to a case of lead poisoning which had come to the notice of the Welsh Board of Health. This occurred in the area of another local authority and was attributed to drinking cider drawn from a cask through a lead pipe. Other cases of lead poisoning through drinking contaminated cider are not unknown. Inquiries were therefore made in the city by the Chief Sanitary Inspector as to the method of drawing cider in public houses where there is a considerable demand for this article, and in two instances it

was found to be drawn from a barrel through considerable lengths of lead piping by means of a suction pump.

The longest time that cider would remain in the pipes is about 38 hours, *i.e.*, from closing time on Saturday night until the following Monday morning, public houses in Wales being closed on Sundays, and in order to ascertain the maximum amount of contamination that is likely to occur, the first quantity drawn off on a Monday morning at each place was submitted for analysis.

The cider from one of these sources was found to contain 0·84 grain of lead per gallon. Whilst it is obviously difficult to draw a line in the case of a cumulative substance such as lead between what may be considered as a passable amount and what quantity may have a deleterious effect upon health, a guide may be taken from the generally recognised limit of 1/20 (0·05) grain per gallon of lead for a water supply. In view of the great individual difference in tolerance to lead, this limit might well be considered suitable in the case of cider, which in some districts, on account of its lower price, is consumed in as great a quantity as beer. Although the sample was taken under severe conditions, the amount of lead present must be considered as undesirably excessive. A portion of the pipe was replaced by a tin-lined one, the remainder being already tin-lined. Another sample taken under similar conditions showed lead still to be present though in reduced amount, and upon further investigation it was found that considerable corrosion of the old tin-lined pipe had occurred. When this was replaced, a subsequent sample was found to be free from lead.

At the second house, the first sample taken contained 1/14 grain per gallon of lead, but a subsequent sample, stated to have been drawn through a tin-lined lead pipe installed as a precaution, was seriously contaminated, containing 4·2 grains of lead per gallon. In this case, investigation showed that a number of pipes ran parallel to each other, and a section of the tin-lined pipe had been connected by mistake to a length of unlined lead piping normally used for beer instead of with the corresponding tin-lined pipe. When this was remedied a further sample was submitted, and it was found to contain 1/48 grain per gallon of lead. An acid liquid such as cider will always exert a solvent action on metal pipes, and having regard to the somewhat severe conditions under which the sample was taken, this amount of lead may be considered as fairly safe. Samples taken directly from the barrel were free from both lead and tin.

In all the samples drawn through tin-lined pipes, tin has been found in amounts varying from 1/3 to 1 grain per gallon. Tin is much more readily excreted from the body than lead, and as a result of an extensive investigation carried out by Dr. Buchanan and Dr. Schryver for the Local Government Board in 1908, it is generally held that canned foods (which may be eaten in considerable quantity) containing tin not exceeding 2 grains per lb. may be regarded as reasonably safe for consumption, and therefore the amounts of tin found in these samples of cider may be considered as of no serious consequence.

Nevertheless, there can be no doubt that, where circumstances permit, cider should be drawn directly from the barrel through a wooden tap, for the logical method of attacking this problem is to prevent the possibility of contamination rather than to consider what amount of metal may be permitted with safety in the article. If, however, the demand is such that resort must be made to the use of pipes, these should be well lined with tin and of as short a length as possible. The pipe should not be bent, since the tin is liable to crack and galvanic action may be set up at the exposed tin-lead junction. In addition, a sufficient quantity of cider should be run to waste each morning to replace that which has remained in the pipe over night. Even with these precautions, continuous solvent action by the acid liquid is likely to occur, and in the course of time replacement of the pipe may become necessary.

Further samples from these two sources will be examined from time to time.

Spirits.—The eighteen samples of spirits consisted of one brandy, four each of gin and rum, and nine of whiskey. With the exception of a whiskey which was 36·1 degrees under proof, these were found to be above the minimum spirit strength of 35 degrees under proof.

Vinegar.—Seven of the 20 vinegars examined showed deficiencies in acetic acid varying from 14·5 to 43 per cent. of the minimum amount of 4 per cent. which should be present in genuine vinegar. These weak samples all consisted of artificial vinegar, and the adulteration is due to excessive dilution of more concentrated solutions of acetic acid.

Preservatives.—The whole of the samples of milk, skimmed milk, condensed and dried milk, humanised milk powder, butter, margarine, cheese and lard were examined for preservatives, but in no case was any found. Preservatives have been looked for in all other articles likely to contain them. The following table shows the articles which have been found to contain preservatives and the respective amounts present :—

Article	Number examined	Number containing Preservative	Preservative found	Parts per million unless otherwise stated	
				Amount present	Maximum permitted
Apples, Dried ...	3	1	Sulphur Dioxide	115	2,000
Apricots, Dried ...	9	9	,,	305, 645, 800, 1120, 1120, 1250, 1265, 1560	2,000
Candied peel ...	9	1	,,	140	100
Cider	5	4	,,	5, 10, 40, 45	200
Cream	44	1	Boric Acid	7·7 grains per lb.	None.
Fruit cordials ...	7	5	Sulphur Dioxide	145, 175	350
			Benzoic Acid	110, 230, 325	600
Ginger, Ground...	11	1	Sulphur Dioxide	125	None.
Jam	8	4	,,	25, 30, 35, 40	40
Mineral water ...	4	1	,,	15	70
Pears, Dried ...	7	7	,,	250, 610, 610, 690, 740, 925, 1,745	2,000
Raisins	4	3	,,	390, 470, 850	750
Sausages	8	1	,,	100	450
Sultanas	19	5	,,	125, 330, 355, 415, 635	750
Sweets, Boiled ...	5	2	,,	145, 145	169
		1	,,	30	70
Wine, Alcoholic....	3	2	,,	55, 105	450

The Public Health (Preservatives, etc., in Food) Regulations were contravened in five instances.

Candied Peel.—The maximum amount of sulphur dioxide allowed in candied peel is 100 parts per million. Only one of the nine samples examined contained this preservative, and in this the amount present was 40 parts per million in excess of the maximum permitted.

Cream.—An informal sample of raw cream contained 7·7 grains per lb. of boric acid. No preservatives are permitted in cream, and a formal sample was therefore taken the same morning from this vendor. This proved to be free from boric acid, as also was a second formal sample taken later.

Ground Ginger.—Eleven samples were examined, and one of these was found to contain sulphur dioxide, which is contrary to the Regulations. The amount present was 125 parts per million.

Raisins.—One sample of raisins contained an excessive amount of sulphur dioxide, 850 parts per million being present, whereas the maximum amount permitted is 750 parts per million.

Sausages.—The Regulations provide that when sausages contain sulphur dioxide notice of the presence of preservative must be given to the purchaser in the form of a notice exhibited in a conspicuous place in the shop or by means of a label attached to the article. In the case of the only sample found to contain sulphur dioxide, though the amount was under the maximum allowed, no declaration of its presence was made.

Jam.—Manufacturers of black-currant jam prepared from preserved black-currant pulp, which may contain 1,500 parts per million of sulphur dioxide, have stated that occasionally there is difficulty in reducing the amount of sulphur dioxide in the finished article to the maximum limit of 40 parts per million required by the Preservative Regulations. Informal samples of six different brands of this jam have been examined and in no case was this figure exceeded. In two cases it was intimated on the label that the preserve was made from fresh fruit, and in these no sulphur dioxide was present. The other four samples contained 25, 30, 35 and 40 parts per million respectively. One of the samples containing sulphur dioxide was of very inferior quality. The label on the jar bore the words " Choice Selected Fruit—Refined Sugar." This jam had the character of a preserve made from fruit pulp and the sugar used in its manufacture was infested with the sugar mite, *Acarus Sacchari*, an immense number of the dead organisms being present in the jam. Sugar mites are commonly associated with the insoluble matter of crude sugar and are not present in the refined article. It would appear that the above words on the label are a misdescription of the nature of the ingredients used. It has not been possible to obtain a formal sample from this source.

Fertilisers and Feeding Stuffs Act, 1926.—Twenty samples, consisting of two fertilisers and 18 feeding stufis, were submitted by Inspectors under this Act. Of these, the compound meal and the meat and bone feeding meal were official samples, the remainder being obtained informally. The table below gives details of the 12 different varieties of material, together with the results of their analysis :—

Article	Number Submitted	Number Sutisfactory	Number Unsatisfactory	Observations
Barley Meal	4	4	...	
Bean Meal	2	2	...	
Blood & Bone Fertiliser..	1	1	...	
Bone Meal	1	...	1	Nitrogen guaranteed 4·0 per cent., present 6·47 per cent. Phosphoric Acid ,, 22·3 per cent., present 16·5 per cent.
Bran	1	1	...	
Compound Feeding Meal	1	1	...	
Cotton Cake	1	1	...	Oil guaranteed 4·5 per cent., present 5·2 per cent. Albuminoids guaranteed 22·0 per cent., present 25·4 per cent.
Undecorticated Indian Meal	1	1	...	
Meat and Bone Feeding Meal ...	1	...	1	Oil guaranteed 13·57 per cent., present 11·25 per cent.
Middlings	1	1	...	
Oats, Sussex Ground ...	1	1	...	
Sharps	5	5	...	
Totals ...	20	18	2	

Rag Flock Acts, 1911 *and* 1928.—Three samples of rag flock examined contained 6·2, 11·7 and 16·7 parts per 100,000 respectively of water-soluble chlorine, the maximum amount permitted by the Rag Flock Regulations, 1912, being 30 parts per 100,000.

Imported Food.—In addition to the food and drugs analysed for the Urban Sanitary Authority, 69 samples of imported foodstuffs were examined for the Port Sanitary Authority.

Sixty-six articles were submitted under the Public Health (Preservatives, etc., in Food) Regulations, consisting of the following :—

Bacon 1	Edible fat ... 4	Pearl barley ... 1
Butter 1	Fruit pulp ... 3	Peas, Dried ... 1
Candied peel ... 1	Fruits, Dried ... 17	Sausage casings 1
Cherries, Glacé ... 1	Jam 2	Sausage filling ... 1
Cod roe 1	Lard 1	Sausage, Lunch ... 1
Coffee & chicory essence 1	Liver paste ... 1	Sugar 3
Corn syrup ... 1	Margarine ... 2	Tomato sauce ... 1
Cream, Canned ... 2	Milk, Condensed 10	Vegetables, Canned 4
Curry powder ... 1	Milk, Dried ... 2	
	Olives 1	

Total 66

All were found to conform to the Regulations and to be satisfactory in other respects.

Three samples were submitted under the Public Health (Imported Food) Regulations, 1925, viz., cayenne pepper, jam and rice, the last two being returned as adulterated. The rice was brown in colour, being contaminated with ochre. It contained 0·4 per cent. of extraneous mineral matter, including 0·25 per cent. of oxide of iron, and also 1/12 grain per lb. of arsenic expressed as arsenious oxide. The black-currant jam contained 60 parts per million of sulphur dioxide, which is 20 parts per million in excess of the maximum permitted by the Preservative Regulations.

Miscellaneous Samples.—Seventeen articles, comprising 5 sweets, 3 pharmaceutical preparations, 3 dried milks, 3 medicines, and one each of dried grains, cleanser and Epsom salts, have been specially examined for the Medical Officer of Health. The sweets were free from arsenic and the dried milks were of normal composition and free from metallic contamination and rancidity. The Epsom salts, which were stated to have caused violent vomiting and severe pains in three people who had taken them, were found to contain 18·8 per cent. of crystallised zinc sulphate—a powerful emetic.

A sample of scale and a cleaning preparation were analysed for the Public Works Department, and 14 articles were examined at considerable length for the City Coroner.

The total number of samples examined during the year therefore was as follows :

Under Food and Drugs (Adulteration) Act ...	1,004
Under Fertilisers and Feeding Stuffs Act ...	20
Under Rag Flock Acts	3
Imported Foods for Port Sanitary Authority ...	69
For Health Committee	17
For Public Works Department	2
For City Coroner	14
Total	1,129

XIII.—GENERAL SANITATION.

Statements as to the nature and extent of the work done during 1930 in connection with the general sanitary inspection of the district are given below. A summary of legal proceedings and particulars with regard to disinfection, baths at the Cleansing Station and bodies removed to the Public Mortuary are also included.

General Sanitary Inspection.

Complaints of nuisances received ... ... 1,833.

	Inspections or Visits	Intimation Notices		Statutory Notices	
		Served	Complied	Served	Complied
House Inspections for Nuisances	2,260	1,234	1,371	54	70
,, ,, in connection with infectious diseases	2,730	40	55	...	...
,, ,, for vermin	561	225	188	...	...
,, ,, ,, other conditions ..	659	40	28	...	...
Houses inspected and "recorded"	904	...	...	...	...
Re-inspections of houses	9,165	...	...	...	...
Owners and contractors interviewed	1,430	...	...	...	...
Knackers' yards	54	12	11	...	...
Slaughter-houses	435	4	4	...	...
Milkshops, etc.	2,217	76	61	...	...
Cowsheds	189	20	11	...	...
Offensive trades	114	18	19	...	...
Workshops—					
Bakehouses	566	98	93	...	...
Bootmakers	178	9	9	...	...
Dressmakers and milliners...	87	2	5	...	...
Laundries	88	8	2	...	...
Tailors	207	20	22	...	...
Miscellaneous	675	53	67	...	...
Factories—					
Bakehouses	342	93	74	...	...
Bootmakers	47	3	2	...	...
Laundries	39	8	7	...	...
Tailors	17	8	6	...	...
Dressmakers and Milliners	2	2	...	...	...
Miscellaneous	809	100	80	...	...
Workplaces	513	41	31	...	...
Tailors' outworkers	48	1	1	...	...
Seamen's lodging houses (day)	1,290	72	80	...	...
,, ,, ,, (night)	199	...	...	...	...
Common lodging houses (day)	155	13	10	...	...
,, ,, ,, (night)	4	...	...	...	...
Houses let in lodgings	27	4	6	...	...
Tents, vans, sheds and similar structures ...	162	78	74	...	...
Amusement places	208	16	15	...	...
Public houses	319	14	13	...	...
Schools	94	2	2	...	...
Swimming baths	216	1	1	...	...
Water supplies	36	2	1	...	...
Water courses	246	13	12	...	...
Refuse tips	92	8	6	...	...
Accumulations	557	43	48	...	...
Sewers	50	14	11	...	...
Drains	1,233	127	111	...	...
Public urinals	298	5	4	...	...
Cesspools	84	8	8	...	...
Back lanes	349	29	24	...	...
Rat infestation	656	49	45	...	...
Premises where swine or other animals are kept	170	26	26	...	...
Marine store hawkers	40	1	1	...	...
Smoke and grit observations	101	5	5	...	...
Visits not classified	4,328	7	4	...	...

Nuisances Abated, Repairs Executed, etc.

Houses :—	
Walls repaired	191
Outside plastering repaired	243
Inside plastering repaired	400
Damp-proof courses inserted	5
Floors renewed or repaired	337
Floors ventilated	27
Roofs renewed or repaired	725
Shutes, downpipes or gutters renewed or repaired	536
Chimneys repaired	104
Ceilings repaired	194
Doors and frames repaired	131
Lighting and ventilation of rooms improved ...	7
Window sashes or frames renewed or repaired ...	290
Window cords renewed	285
Staircases repaired	24
Grates or ovens repaired or renewed	163
Boilers provided or repaired	74
Food stores provided or improved	3
Washhouses provided or improved	35
Outbuildings repaired	5
Obstructive out-buildings demolished	2
Walls or ceilings cleansed and redecorated ...	184
Bedding cleansed or destroyed	39
Rooms treated for vermin	751
Overcrowding abated	9
Yard paving relaid or repaired...	283
Nuisances from animals abated	4
Accumulations removed	70
Ash-bins provided	30
Water supply provided	4
Water taps or pipes repaired	17
Water samples taken for analysis	51
Miscellaneous repairs and nuisances abated ...	99
Drainage :—	
Drains tested (smoke)	278
,, ,, (chemical)	1,023
New drains constructed	21
Drains reconstructed	35
Drains repaired	214
Drains under houses abolished	2
Drains cleansed	240
Inspection or intercepting chambers provided or repaired	58
Intercepting traps fixed	11
Soilpipes or ventilating shafts fixed or repaired ...	25
Rain-water pipes disconnected...	2
Gullies fixed	46
Troughs provided	17
Troughs trapped or waste pipes repaired ...	46
Bath waste pipes trapped or repaired	4
Lavatory basins trapped or waste pipes repaired	4
Additional w.c's provided	18
Drain inlets inside houses abolished	1
W.c's reconstructed	26
Lighting and ventilation of w.c's improved ...	10

NUISANCES ABATED, REPAIRS EXECUTED, ETC.—(contd).

New pans and traps fixed	167
W.c. pans cleansed	51
Flushing apparatus provided	36
Flushing apparatus repaired	58
Miscellaneous repairs	112
Cesspools :—	
Abolished and house connected to sewer ...	7
Cleansed	4
Other repairs	4
Seamen's Lodging Houses :—	
Limewashing or cleansing carried out	149
Bedding renewed	2
Verminous rooms treated	43
Bedsteads cleansed or repaired	87
Overcrowding abated	2
Accumulations removed	8
W.c's repaired	3
Washing accommodation provided	24
Other repairs	8
Common Lodging Houses :—	
Limewashing or cleansing carried out	18
Bedding renewed	30
Verminous rooms treated	24
Bedsteads cleansed or repaired	369
W.c's repaired	1
Accumulations removed	1
Other repairs	1
Urinals :—	
Additional urinals provided	2
Urinals reconstructed...	1
Walls repaired or made impervious	2
Flushing apparatus fixed or repaired	4
Floors repaired	1
Other repairs	2
Earth or Pail Closets :—	
Provided	3
Abolished	2
Tents, Vans or Sheds :—	
Removed	85
Sanitary improvements effected	1
Amusement Places :—	
Additional w.c. accommodation provided ...	2
W.c's repaired	3
Cleanliness improved	8
Ventilation improved	1
Other repairs	4
Dairies, Cowsheds and Milkshops :—	
New dairies constructed	6
Existing dairies improved	3
Existing cowsheds improved	2

NUISANCES ABATED, REPAIRS EXECUTED, ETC.—(contd).

Drainage improved	2
Paving repaired	10
Lighting or ventilation improved	3
Limewashing or cleansing carried out	65
Water supply provided	3
Sterilisers fixed	4
Accumulations of manure removed	4
Other repairs	6
Ice Cream Premises :—	
Limewashing or cleansing carried out	28
Accumulations removed	1
Other repairs	2
Food Shops, Kitchens, etc. :—	
Communicating sleeping places abolished ...	1
Communicating w.c's abolished	2
Accumulations removed	13
Cleanliness improved	27
Storage arrangements improved	8
Lighting or ventilation improved	3
Ash-bins provided	6
Other sources of contamination removed ...	7
Washing-up arrangements improved	7
Food Vehicles :—	
Warnings regarding general cleanliness of vehicle, person or covering	3
Fried Fish Shops :—	
New ranges fitted	5
Ash-bins provided	10
Cleansing carried out	31
Storage accommodation provided or improved ...	3
Drainage improved	3
Lighting or ventilation improved	3
Accumulations removed	5
Other repairs	7
Houses Let in Lodgings :—	
Limewashing or cleansing carried out	20
Other repairs	5
Offensive Trades :—	
Accumulations removed	11
Cleanliness improved	10
Floors or walls repaired	2
Knackers' Yards :—	
Accumulations removed	9
Cleanliness improved	4
Other repairs	1

NUISANCES ABATED, REPAIRS EXECUTED, ETC.—(contd.)

Stables :—	
Manure receptacles provided or repaired ...	5
Accumulations of manure removed	34
Paving repaired or renewed	5
Limewashing carried out	11
Back Lanes :—	
Accumulations removed	20
Surfaces repaired	1
Miscellaneous repairs or nuisances abated	5

Rat Destruction.—The following statement shows the numbers of purchases of rat poison from the department and of baits laid and eaten in public sewers and elsewhere:—

Purchases of rat poisons from Public Health Department ...	69
Amount of poisons sold	95 tins and 1lb.
Number of baits laid in public sewers	9,836
Number of baits eaten	4,487
Number of baits laid elsewhere	32,342
Number of baits eaten	24,606
Total number of baits laid	42,178
Total number of baits eaten	29,093

At the request of Mr. C. Matheson, Keeper of Zoology, National Museum of Wales, a regular supply of live rats from premises in the city for identification and for examination of their parasitic fleas, for comparison with those submitted from ships and docks, was maintained throughout the year, 2,079 being submitted.

Conservancy System Closets.—During 1930 five privies were converted to the water-carriage system and two were demolished. The numbers remaining on the conservancy system at the end of the year were as follows :—

Earth closets	6
Privies	123
Total	129

Cesspools.—New powers relating to the conversion of existing closet accommodation into water closets were obtained by the Cardiff Corporation Act, 1930, and preliminary steps have been taken to secure the abolition of many cesspools which could not be dealt with under the Public Health Acts. At the present time there are 58 cesspools in the city receiving drainage from dwelling-houses and four cesspools in connection with factories.

Mosquito Control.—All likely breeding places for mosquitoes were kept under observation during the summer months. The dangers of mosquito-breeding grounds at Splott are now minimised, as the Great Western Railway Company have raised the level of practically the whole of their low-lying land, and this applies in a smaller measure to the Corporation land, owing to the extension of the tipping area. Arrangements were made with the Great Western Railway Company and the Public Works Department of the Corporation for those pools and ditches which remained to be sprayed periodically with disinfectant or paraffin.

Ventilation of Cinemas.—Observations in connection with the ventilation of these places were continued, and where the conditions were found to be unsatisfactory the proprietors were asked to give the matter attention. Owing to the elaborate

nature of the tests it is not possible to carry them out with sufficient frequency, and it is therefore proposed to ask cinema proprietors to instal hygrometers in different parts of the halls. This will enable officers of the department to visit the cinemas at any time and check the readings.

Swimming Baths.—The efforts of the department, in collaboration with the Parks Department, to maintain the water of open-air swimming baths in a condition satisfactory for bathing have been continued.

A continuous filtration plant was installed at the Corporation Swimming Baths, Guildford Crescent, during the year. The plant has been working successfully since its installation and, as a result, the condition of the water has shown great improvement.

Roath Park Lake: Skin Eruption on Bathers.—To prevent a recurrence of the urticarial eruption affecting bathers in Roath Park Lake, referred to in the report for 1929, the water was treated with a solution of 1 in 500,000 copper sulphate early in March, when the lake was only about one-third full. It was hoped that this would eradicate the cercariæ causing the eruption. Samples of water snails, in which the cercariæ are found, were submitted to Mr Matheson, Keeper of Zoology, National Museum of Wales, during the summer months, and it was found towards the end of June that the cercariæ were becoming numerous. Almost at the same time, isolated complaints of skin eruption were received. The lake was again treated with a similar solution of copper sulphate, and bathing proceeded until the end of the season without further complaints.

Rag Flock Acts, 1911 and 1928.—There is one rag flock factory in the city, the buildings and plant being modern. Samples of the flock are periodically submitted for examination by the Public Analyst to ensure that the required standard is maintained.

Factories, Workshops and Workplaces.—Details of the sanitary inspection of factories, workshops and workplaces under the Factory and Workshop Act, 1901, are given in the following tables:—

1.—Inspection of Factories, Workshops and Workplaces.

Premises.	Number of		
	Inspections	Written Notices	Prosecutions
Factories (including Factory Laundries)	1,256	214	...
Workshops (including Workshop Laundries)	1,801	190	...
Workplaces (other than Outworkers' premises included in Part 3 of this Report)	513	41	...
Totals	3,570	445	...

2.—Defects Found in Factories, Workshops and Workplaces.

Particulars	Number of Defects	
	Found	Remedied
Nuisances under the Public Health Acts :—		
Want of Cleanliness	370	324
Want of Ventilation	7	4
Overcrowding	2	2
Other Nuisances	80	73
Sanitary accommodation { insufficient	6	3
Sanitary accommodation { unsuitable or defective...	69	68
Sanitary accommodation { not separate for sexes	2	2
Breach of special sanitary requirements for bakehouses (Sec. 97 to 100)	...	...
Totals	536	476

3.—Home Work.

Nature of Work	Outworkers' Lists, Section 107.							Outwork in Unwholesome Premises, Section 108		Outwork in Infected Premises, Sections 109, 110	
	Lists received from Employers.						Notices served on Occupiers as to keeping or sending lists				
	Sending twice in the year.			Sending once in the year							
		Outworkers			Outworkers						
	Lists	Contractors	Workmen	Lists	Contractors	Workmen		Instances	Notices served	Instances	Orders made (S. 110)
Wearing Apparel—											
(1) Making, etc. ...	30	...	131	2	...	13	22	1	1	...	...
(2) Cleaning & washing	...	...	...	...	...	...	...	...	...	...	...

4.—Registered Workshops.

Workshops on the Register (S. 131) at the end of the Year	Number
Bakers	125
Bootmakers	141
Dressmakers and Milliners	76
Laundries	20
Tailors	173
Miscellaneous...	412
Total Number of Workshops on Register	947

5.—Other Matters.

Class	Number
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (Sec. 133)	...
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts but not under the Factory Act :—	
Notified by H.M. Inspector	36
Reports (of action taken) sent to H.M. Inspector	37
Other (Notices of Occupation of Workshops received from H.M. Inspector)	56
Underground Bakehouses in use at the end of the year	...

Shops.—The following is a summary of the work done under the Shops Acts and in connection with the sanitary inspection of shops during 1930 :—

Closing Orders in operation	15
Observations of shops under Closing Orders	814
Observations of shops as to weekly half-holiday ...	3,326
Inspections of shops	1,548
Infringements of Shops Acts	174
Notices requiring sanitary defects to be remedied :—	
Served	86
Complied	79

Legal Proceedings.—The following is a summary of legal proceedings taken during the year in connection with general sanitary administration :—

Acts, etc., under which Proceedings were taken	Number	Fined	Cautioned	To pay costs only	Dismissed	Withdrawn	Amount of Fines and Costs
							£ s. d.
Shops Acts	84	45	27	10	...	2	13 10 0
Public Health Act, 1925 (Sec. 72 and 73)	4	2	...	...	2	...	15 0
Merchant Shipping Act, 1894 (Sec. 214, Sub-Sec. 5) ...	48	43	...	2	3	...	155 2 0
Totals ...	136	90	27	12	5	2	£169 7 0

Disinfection.—Disinfection was carried out at 1,636 houses during the year, and 6,890 articles of bedding, clothing, etc., were removed to and disinfected at the Disinfection Station ; 164 infected articles were destroyed by arrangement with or at the request of the owners.

Cleansing Station.—The total number of baths for scabies, pediculosis, etc., undertaken at the Cleansing Station was 454.

Public Mortuary.—Seventy-two bodies (60 males, 12 females) were admitted to the Public Mortuary and 33 post-mortem examinations were performed.

XIV.—CARDIFF CORPORATION ACT, 1930.

One of the outstanding events of the year was the passing of the Cardiff Corporation Act, which received the Royal Assent on 1st August. The department was fortunate in obtaining many powers which, it is hoped, will effectually close some of the gaps left by the general law governing public health administration.

The sections of the Act dealing with the repair of drains, prohibition of tents, vans, sheds and houseboats, provision of dust-bins and flushing cisterns, and the sections dealing with food are especially valuable.

The following is an epitome of the sections in which the Public Health Department is particularly interested :—

Section 88.—Provision of food storage accommodation to new and existing dwelling-houses.

Section 90.—Drains not to be repaired without previous notice to the Corporation.

Section 93.—Prohibition of tents, vans, sheds, boats or similar structures used or intended to be used for human habitation being placed or kept on any land or foreshore or water adjoining the land or foreshore within the city without the previous approval of the Corporation.

Section 94.—Extension of the definition "seamen's lodging house."

Section 95.—Power to order discontinuance of an offensive trade.

Section 96.—Power to deal with smoke nuisances from chimneys of wash-houses and other out-buildings forming part of or in proximity to dwelling-houses.

Section 97.—Power to require the provision of regulation dust-bins, which may be supplied by the Corporation at an annual charge.

Section 98.—Power to deal with choked and defective drains, etc., after 24 hours' notice.

Section 99.—Extension of Section 72 of the Public Health Act, 1925, including power to require the provision of a water supply and washing-up sinks in connection with food places.

Section 100.—Power to require the conversion of existing closet accommodation into fresh-water closets communicating with a sewer.

Section 101.—Power to require the provision of flushing apparatus to all water closets.

Section 102.—Power to remove the occupier and cleanse and disinfect a dwelling-house in certain cases.

Section 103.—Power to secure the removal of diseased, aged or physically incapacitated persons residing under insanitary conditions.

Section 104.—Power to prevent the sorting over of refuse receptacles which are placed in any street for collection.

Section 106.—Notification of food-poisoning cases.

Section 107.—Parents to notify infectious disease to school teachers.

Section 108.—Meat hawkers not to carry on their trade unless they hold an annual certificate from the Corporation approving of their storage accommodation.

Section 109.—Power to inspect articles of food in transit.

Section 110.—Provides for a penalty on the original vendor of unsound food.

Section 111.—Power to make byelaws governing the transport or exposure for sale in the open air of any article of food.

Section 112.—Registration of premises used for the preparation or manufacture of made-up foods.

Section 113.—Registration of ice cream manufacturers and vendors.

Section 114.—Prohibition of infected persons engaging in the cooking or preparation of food for sale.

APPENDIX I.

STATISTICAL TABLES OF BIRTHS, DEATHS, COMMUNICABLE DISEASES, Etc.

Table I.

Births and Still-births Registered in and Belonging to Cardiff, 1930.

Municipal Wards	Legitimate				Illegitimate				Totals	
	Live		Dead		Live		Dead			
	M.	F.	M.	F.	M.	F.	M.	F.	Live	Dead
Central	95	101	1	6	10	8	...	...	214	7
South	149	127	4	4	12	8	...	2	296	10
Cathays	128	123	10	3	3	9	...	...	263	13
Adamsdown	140	149	6	7	6	8	...	...	303	13
Riverside	115	112	6	6	5	5	...	1	237	13
Canton	137	124	5	11	5	5	...	...	271	16
Grangetown	143	135	7	8	6	5	...	...	289	15
Roath	99	95	...	1	3	2	...	...	199	1
Plasnewydd	90	82	9	4	3	3	...	...	178	13
Splott	226	201	11	8	3	3	...	2	433	21
Penylan	68	81	5	5	...	2	...	...	151	10
Llandaff	287	254	15	13	6	3	...	1	550	29
Gabalfa	165	165	15	5	7	7	...	...	344	20
Institutions, etc.	..	...	...	...	2	2	...	...	4	...
	1,842	1,749	94	81	71	70	...	6	3,732	181
Totals	3,591		175		141		6		...	...

Table II.

Summary of Registered Births (Live) Belonging to Cardiff.*

	Legitimate		Illegitimate		Totals
	Male	Female	Male	Female	
Registered in Cardiff	1,842	1,749	71	70	3,732
Transferred to Cardiff	21	15	5	3	44
Totals	1,863	1,764	76	73	3,776

* Compiled from detailed weekly returns supplied by the local Registrars of Births and Deaths, duly corrected for inward and outward transfers. The figures differ slightly from those supplied by the Registrar-General, viz., Males, 1,943 ; Females, 1,842 ; Total, 3,785.

Table III.

Causes of Death at Various Ages, 1930.*

Causes of Death	All Ages			Age Periods								
	M.	F.	Totals	Under 1 yr.	1–2 yrs.	2–5 yrs.	5-15 yrs.	15–25 yrs.	25–45 yrs.	45–65 yrs.	65–75 yrs.	75 yrs. and upwards
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...
Measles	4	4	8	3	3	2	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	12	10	22	9	3	9	1	...	...	...	...	...
Diphtheria	16	13	29	2	2	6	18	...	1	...	...	...
Influenza	16	7	23	1	...	...	...	1	5	9	4	3
Encephalitis Lethargica	1	...	1	...	...	...	...	...	...	...	1	...
Meningococcal Meningitis	2	2	4	3	1	...	...	...	...	...	...	...
Tuberculosis of Respiratory System	115	98	213	1	2	1	3	39	104	57	5	1
Other Tuberculous Diseases	27	18	45	2	4	1	10	13	10	3	2	...
Cancer, Malignant Disease	136	163	299	...	...	...	...	1	23	147	85	43
Rheumatic Fever	6	2	8	...	...	2	4	1	...	...	1	...
Diabetes	14	12	26	...	...	...	...	...	2	9	10	5
Cerebral Hæmorrhage, etc.	38	41	79	...	...	...	...	...	2	24	23	30
Heart Disease	228	252	480	...	...	1	7	9	22	165	147	129
Arterio sclerosis	62	50	112	...	...	...	...	...	...	33	41	38
Bronchitis	88	49	137	23	4	1	...	...	4	28	38	39
Pneumonia (all forms)	80	46	126	32	8	10	3	6	14	24	11	18
Other Respiratory Diseases	18	11	29	1	...	2	1	1	6	9	5	4
Ulcer of Stomach or Duodenum	14	7	21	...	...	...	...	...	5	13	1	2
Diarrhœa, etc.	18	21	39	28	2	3	...	...	1	3	1	1
Appendicitis and Typhlitis	9	7	16	...	...	...	4	2	3	6	...	1
Cirrhosis of Liver	7	1	8	...	...	...	...	...	1	6	1	...
Acute and Chronic Nephritis	56	62	118	...	...	1	3	2	18	50	25	19
Puerperal Sepsis	...	10	10	...	...	...	...	1	9	...	...	...
Other Accidents & Diseases of Pregnancy and Parturition	...	10	10	...	...	...	...	1	8	1	...	...
Congenital Debility and Malformation, Premature Birth	68	59	127	125	...	1	...	1	...	...	...	...
Suicide	19	11	30	...	...	...	...	2	10	12	6	...
Other Deaths from Violence	69	29	98	4	2	2	8	15	19	30	9	9
Other Defined Diseases	243	182	425	38	6	5	15	20	42	110	76	113
Causes ill-defined or unknown	...	1	1	...	...	...	...	...	...	...	1	...
Totals	1,366	1,178	2,544	272	37	47	77	115	309	739	493	455
Included above :—												
Tuberculosis of Nervous System	15	7	22	1	3	1	8	7	1	1	...	...
Acute Poliomyelitis	...	...	...	...	...	...	...	...	...	...	...	...

* Compiled from figures supplied by the Registrar-General.

Table IV.

Deaths from Various Causes under One Year of Age, 1930.*

Causes of Death	Under 1 week	1—2 weeks	2—3 weeks	3—4 weeks	Total under 4 weeks	4 weeks —3 months	3—6 months	6—9 months	9—12 months	Totals
Measles	...	...	...	...	...	...	...	...	3	3
Whooping Cough	...	...	...	...	...	2	3	1	3	9
Diphtheria	...	...	...	...	...	...	1	1	...	2
Influenza	...	...	...	...	...	...	...	...	1	1
Tuberculosis of Nervous System	...	...	...	...	...	...	1	...	...	1
Tuberculosis of Intestines and Peritoneum	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases ...	...	...	...	...	...	...	1	...	1	2
Syphilis	...	...	1	...	1	...	1	...	...	2
Meningitis	...	...	...	...	...	...	1	...	1	2
Convulsions	...	3	2	2	7	2	1	...	...	10
Bronchitis	...	...	3	...	3	8	6	5	3	25
Pneumonia	1	...	2	2	5	5	11	5	8	34
Other Respiratory Diseases ...	...	...	1	...	1	...	...	...	...	1
Inflammation of the Stomach ..	1	...	...	...	1	...	1	...	...	2
Diarrhœa and Enteritis ..	3	2	2	1	8	15	6	4	2	35
Hernia, Intestinal Obstruction	...	...	...	...	...	1	...	...	...	1
Congenital Malformations ..	9	2	1	1	13	4	1	1	1	20
Congenital Debility & Sclerema	8	1	5	1	15	3	...	...	...	18
Icterus	1	1	1	...	3	...	...	...	...	3
Premature Birth	46	6	5	4	61	9	1	...	...	71
Injury at Birth	4	1	...	...	5	...	...	...	...	5
Disease of Umbilicus	...	...	1	...	1	...	...	...	...	1
Atelectasis	3	...	...	...	3	...	...	...	...	3
Suffocation in Bed, and not stated	1	...	...	...	1	...	1	...	...	2
Other Causes	6	1	2	...	9	4	2	2	2	19
Totals	83	17	26	11	137	53	38	19	25	272
Percentage of Total Deaths under one year	30·5	6·2	9·6	4·0	50·4	19·5	13·9	7·0	9·2	100

Deaths of :—

Legitimate Infants 248

Illegitimate Infants ... 24

* Compiled from weekly returns supplied by the local Registrars of Births and Deaths, duly corrected for inward and outward transfers.

Table V.

Analysis of Area, Population, Births, Deaths, Deaths under One Year and Deaths from certain Causes, together with Birth- and Death-rates per 1,000 in the whole City and in Municipal Wards, 1930.*

Municipal Wards, etc.	Area: Acres	Estimated Population	Live Births		Deaths: All Causes		Deaths under One Year		Deaths from Zymotic Diseases, Tuberculosis, Influenza and Respiratory Diseases.																	
									Enteric Fever		Measles		Scarlet Fever		Whooping Cough		Diphtheria		Diarrhœa, etc. (under 2 years)		Tuberculosis: Respiratory		Tuberculosis: Other Forms		Influenza		Respiratory Diseases
			Number	Birth-rate	Number	Death-rate	Number	Number per 1,000 births	Number	Death-rate	Number	Death-rate	Number	Death-rate	Number	Death-rate	Number	Death-rate	Number	Number per 1,000 births	Number	Death-rate	Number	Death-rate	Number	Death-rate	Number	Death-rate
Central ... Lodging Houses, etc. ...	535	12,532	214 ...	17·1 ...	179 27	16·5	16 ...	75 ...	... ...	...	1 ...	0·08	... ...	...	1 ...	0·08	3 ...	0·24	2 ...	9·3 ...	17 2	1·52	2 ...	0·16	... ...	...	13 8	1·68
South ... Lodging Houses, etc. ...	1,073	13,149	296 ...	22·6 ...	173 9	13·9	30 ...	101 ...	... ...	...	1 ...	0·08	... ...	...	4 ...	0·30	... ...	...	3 ...	10·1 ...	15 ...	1·14	... ...	...	1 ...	0·08	23 1	1·83
Cathays	338	17,683	263	14·9	190	10·8	20	76	...	...	...	...	...	...	...	...	4	0·23	1	3·8	14	0·79	3	0·17	1	0·06	23	1·31
Adamsdown Lodging Houses, etc. ...	1,320	13,249	303 ...	23·0 ...	205 22	17·0	25 ...	82 ...	... ...	...	... ...	...	... ...	...	1 ...	0·07	4 ...	0·30	3 ...	9·9 ...	14 12	1·97	5 3	0·61	... ...	...	34 3	2·80
Riverside	320	15,798	237	15·1	211	13·4	17	72	...	...	...	...	...	...	1	0·06	6	0·38	3	12·6	10	0·63	3	0·19	...	...	21	1·34
Canton	247	17,835	271	15·3	189	10·6	13	48	...	...	...	...	...	...	2	0·11	1	0·06	1	3·7	17	0·96	2	0·11	4	0·22	28	1·58
Grangetown ...	949	15,045	289	19·3	188	12·5	23	79	...	...	...	...	...	...	1	0·07	...	...	4	13·8	17	1·13	6	0·40	4	0·27	28	1·87
Roath	754	16,712	199	11·9	176	10·6	13	65	...	...	1	0·06	...	...	1	0·06	1	0·06	4	20·1	15	0·90	5	0·30	...	...	18	1·08
Plasnewydd ...	233	15,482	178	11·5	159	10·3	14	79	...	...	1	0·06	...	...	...	...	2	0·13	2	11·2	10	0·65	3	0·19	1	0·06	21	1·36
Splott	1,912	20,757	433	20·9	222	10·7	35	81	...	...	2	0·10	...	...	6	0·29	3	0·14	4	9·2	17	0·82	2	0·10	4	0·19	33	1·59
Penylan	1,765	15,291	151	9·9	168	11·0	6	40	...	...	...	...	...	...	1	0·06	1	0·06	...	...	13	0·85	4	0·26	2	0·13	16	1·05
Llandaff	2,719	25,647	550	21·5	221	8·6	35	64	...	...	1	0·04	...	...	2	0·08	5	0·19	6	10·9	19	0·74	4	0·16	2	0·08	34	1·33
Gabalfa	1,463	18,720	344	18·4	165	8·8	23	67	...	...	...	...	...	...	1	0·05	...	...	3	8·7	15	0·80	3	0·16	3	0·16	18	0·96
Institutions, etc. ...	...	6,000	48	...	43	...	2	...	...	...	...	...	...	...	...	...	...	...	1	...	3	...	2	...	...	...	4	...
Cardiff	13,628	223,900	3,776	16·9	2,545	11·4	272	72	...	...	7	0·03	...	...	21	0·09	30	0·13	37	9·8	210	0·94	47	0·21	22	0·10	326	1·46

* The statistics of births and deaths are compiled from weekly returns supplied by the local Registrars of Births and Deaths, duly corrected for inward and outward transfers.

Table VI.

Notified Cases of Acute Communicable Diseases by Age and Sex, 1930.

Diseases	Under 1 year		1—2 years		2—3 years		3—4 years		4—5 years		5—10 years		10—15 years		15—20 years		20—25 years		25—35 years		35—45 years		45—65 years		65 years and over		All Ages		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Totals
Smallpox	...	1	...	...	...	...	...	...	...	...	2	...	...	1	1	...	2	...	1	...	...	...	...	...	...	...	6	2	8
Scarlet Fever	1	1	4	7	7	11	18	16	25	24	111	158	44	59	11	10	1	9	4	11	...	3	1	1	...	...	227	310	537
Diphtheria	6	5	6	11	23	13	15	29	31	27	142	164	57	74	9	30	8	23	9	22	3	14	1	8	...	1	310	421	731
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	2	...	...	1	1	1	2	...	1	...	...	3	8	11
Pneumonia	7	4	8	4	4	10	1	3	7	3	13	5	2	5	8	3	4	8	13	9	18	5	13	6	8	6	106	71	177
Puerperal Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	9	...	21	...	8	...	...	...	...	...	42	42
Puerperal Pyrexia ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	...	31	...	45	...	15	...	...	...	...	...	99	99
Cerebro-Spinal Fever ...	1	1	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	4	1	5
Acute Poliomyelitis ...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Acute Polioencephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Encephalitis Lethargica	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	1	...	...	1	...	1	3	4
Dysentery	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	1	1	...	...	...	1	...	...	...	3	2	5
Ophthalmia Neonatorum	17	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17	25	42
Erysipelas	1	2	...	...	...	1	...	...	1	...	2	...	1	1	3	4	1	4	1	4	7	13	16	17	22	5	55	51	106
Malaria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	5	...	2	...	...	...	...	...	8	...	8
Chickenpox	33	24	27	42	34	26	44	39	76	78	429	352	33	40	8	5	...	1	1	2	...	...	...	...	...	...	685	609	1,294

Table VII.

Notified Cases of Acute Communicable Diseases in Municipal Wards and Cases Removed to Hospital, 1930.

Municipal Wards, etc.	Smallpox	Scarlet Fever	Diphtheria	Enteric Fever	Pneumonia	Puerperal Fever	Puerperal Pyrexia	Cerebro-Spinal Fever	Acute Poliomyelitis	Acute Polioencephalitis	Encephalitis Lethargica	Dysentery	Ophthalmia Neonatorum	Erysipelas	Malaria	Chickenpox
Central	...	21	51	2	8	5	2	...	...	...	...	...	6	7	...	69
South	...	15	17	2	13	2	4	1	...	...	...	1	1	7	1	87
Cathays	...	53	79	...	24	3	6	...	...	...	...	...	2	13	...	92
Adamsdown ...	1	22	50	...	12	2	6	2	...	...	...	...	4	11	3	36
Riverside ...	...	34	30	...	8	1	7	...	...	...	1	2	5	5	...	85
Canton	...	49	67	1	13	...	9	...	...	...	...	...	3	4	...	89
Grangetown ...	...	16	23	1	8	1	11	...	1	...	...	...	4	7	...	180
Roath	...	30	56	...	9	3	2	...	...	...	...	...	...	6	1	92
Plasnewydd ...	4	34	61	1	12	3	6	...	...	...	1	...	4	14	...	109
Splott	3	60	83	...	8	8	9	...	...	...	...	...	3	14	...	75
Penylan	...	34	36	1	7	3	3	...	...	...	2	...	...	4	...	63
Llandaff	...	104	84	...	12	4	6	1	...	...	...	...	3	3	...	191
Gabalfa	...	55	78	1	10	2	7	...	...	...	...	1	4	3	...	104
Institutions ...	...	10	16	2	33	5	21	1	...	...	...	1	3	8	3	22
Totals ...	8	537	731	11	177	42	99	5	1	...	4	5	42	106	8	1,294
Cases removed to Hospital ...	7	403	714	8	4	8	3	4	1	...	1	3	...	18	...	15

APPENDIX II.

METEOROLOGICAL OBSERVATIONS TAKEN AT PENYLAN, CARDIFF, DURING 1930.

TABLE I.

BAROMETRIC PRESSURE AND RELATIVE HUMIDITY

Month	Attached Thermometer (Mean)	Mean Barometric Pressure*		Hygrometer*		
		Uncorrected	Reduced to Mean Sea Level and Temp. 32° F.	Dry Bulb (Mean)	Wet Bulb (Mean)	Mean Relative Humidity
	°F.	Inches	Inches	°F.	°F.	%
January	48	29·359	29·560	42·9	41·5	90
February	45	29·900	30·207	36·9	35·0	84
March	48	29·640	29·845	40·7	39·8	94
April	53	29·621	29·812	46·6	44·2	82
May	58	29·800	29·976	51·2	48·5	82
June	67	29·866	30·011	59·5	55·7	76
July	65	29·736	29·914	59·1	55·5	78
August	65	29·762	29·912	59·5	57·0	85
September	64	29·794	30·147	56·7	54·3	89
October	57	29·677	30·017	51·5	49·5	86
November	51	29·680	29·877	44·3	42·7	87
December	47	29·627	29·833	40·8	39·9	92
	56	29·705	29·925	49·1	46·9	85

* From observations at 9 a.m. and 9 p.m. (G.M.T.)

TABLE II.

TEMPERATURE.

Month	Absolute Maximum	Absolute Minimum	Mean of Maximum	Mean of Minimum	Mean Temperature	Difference from Average (41 years)
	°F.	°F.	°F.	°F.	°F.	°F.
January	53	31	47·6	38·3	42·9	+ 3·0
February	49	27	40·7	33·6	37·2	— 3·1
March	56	24	48·1	37·3	42·7	+ 0·3
April	62	36	53·0	42·1	47·6	+ 1·3
May	66	39	57·9	46·0	51·9	— 0·9
June	78	42	67·9	52·1	60·0	+ 2·8
July	74	48	66·3	53·8	60·0	— 0·8
August	85	48	66·6	53·8	60·3	+ 0·2
September	72	44	62·7	51·6	57·2	+ 9·8
October	64	38	56·6	47·2	51·9	+ 1·6
November	58	28	50·0	39·4	44·7	+ 0·6
December	52	28	45·5	37·4	41·5	+ 0·5
	85	24	55·2	44·4	49·8	+ 0·5

Table III.

Terrestrial Radiation, Underground Temperature, Solar Radiation and Sunshine.

Month	Temperature				Bright Sunshine	
	Grass Minimum (Mean)	Underground (Mean)		Solar Maximum (Mean)	Total Duration	Difference from Average (22 years)
		1ft.	4ft.			
	°F.	°F.	°F.	°F.	Hours	Hours
January	34·9	42·2	45·3	65·2	46·3	— 4·8
February	29·9	37·9	43·1	72·5	78·2	+ 4·5
March	32·2	41·6	43·0	91·4	109·4	— 5·6
April	37·9	47·7	46·1	104·0	135·6	— 38·5
May	41·9	53·3	49·9	112·0	131·8	— 80·1
June	48·8	61·6	55·4	123·6	262·8	+ 42·2
July	49·9	61·7	58·2	124·6	203·2	— 6·4
August	50·8	61·6	58·4	121·2	190·9	+ 7·0
September	48·6	60·0	59·4	110·8	137·6	— 10·9
October	43·8	52·5	55·5	98·4	109·9	+ 3·6
November	36·7	46·5	51·1	77·8	72·4	+ 4·6
December	34·9	42·2	46·8	63·6	39·4	— 10·9
	40·8	50·7	51·0	97·1	1,517·5*	— 95·3

*=34% of possible duration and a daily average of 4·16 hours.

Table IV.

Rainfall.

Month	Total	Difference from Average (41 years)	Greatest Fall in 24 hours.*		Number of Rain-days (0·01 inch or more)	Duration
			Amount	Day		
	Inches	Inches	Inches			Hours
January	6·68	+ 2·73	0·96	22nd	23	117·37
February	0·71	— 2·37	0·55	3rd	5	18·50
March	2·73	— 0·35	0·53	6th	16	54·25
April	3·22	+ 0·65	0·60	1st	18	80·50
May	1·67	— 0·85	0·35	10th	18	49·75
June	0·64	— 2·00	0·18	1st	9	14·25
July	3·24	+ 0·37	1·28	20th	17	34·25
August	5·28	+ 1·05	1·00	20th	19	76·85
September ...	5·08	+ 2·03	0·98	19th	20	70·75
October	5·15	+ 0·21	0·55	2nd	26	96·60
November ...	5·51	+ 1·73	0·82	19th	19	76·00
December ...	4·59	— 0·10	1·07	10th	20	88·75
	44·50	+ 3·10	1·28	20th July.	210	777·82

* 24 hours ended 9 a.m. (G.M.T.) next day.

APPENDIX III.

ATMOSPHERIC POLLUTION.

Observations made in Cardiff during 1930.

Month	Rain-fall (mm.)	Grammes per Square Dekametre (Metric Tons per Hundred Square Kilometres).								
		Insoluble Matter			Soluble Matter		Total Solids	Included in Soluble Matter		
		Tar	Carbon-aceous other than Tar	Ash	Loss on Ignition	Ash		Sulphates (SO_3)	Chlorine (Cl)	Ammonia (NH_3)
January ..	151	7	218	222	152	908	1,507	197	364	1
February ..	19	7	114	185	36	85	427	32	17	1
March ..	65	7	170	249	92	182	700	76	25	1
April	78	8	198	242	76	189	713	78	30	1
May	47	5	114	169	75	157	520	55	23	1
June	12	5	81	142	36	80	344	27	9	0
July	74	7	90	133	130	240	600	98	32	1
August ...	117	5	73	139	122	209	548	73	49	1
September ...	111	10	218	218	176	342	964	105	100	13
October ...	111	8	120	165	86	295	674	84	89	1
November ...	127	5	94	200	93	390	782	100	125	1
December ...	105	6	136	165	78	189	574	69	50	1
Total ...	1,017	80	1,626	2,229	1,152	3,266	8,353	994	913	23
Mean ...	85	7	135	186	96	272	696	83	76	2

ULTRA-VIOLET RADIATION.

Observations made in Cardiff during 1930.

Month	Mean Daily Radiation Units*	
	Penylan	City Hall
January	0·53	0·49
February	0·89	0·88
March	1·18	1·13
April	1·33	1·30
May	1·61	1·58
June	2·83	2·88
July	2·58	2·53
August	2·30	2·35
September	1·70	1·58
October	1·18	1·10
November	0·80	0·73
December	0·42	0·39

*Acetone-methylene blue standard.

PORT SANITARY SERVICE.

I.—SHIPPING ENTERING THE PORT.

The following table (compiled from information kindly supplied by H.M. Collector of Customs) shows the annual number of arrivals of vessels and tonnage since 1921 :—

Years	Number of Arrivals			Tonnage		
	Foreign	Coastwise*	Totals	Foreign	Coastwise	Totals
1921	1,656	5,042	6,698	2,066,973	1,689,474	3,756,447
1922	2,818	5,356	8,174	3,437,294	2,342,461	5,779,755
1923	3,282	5,026	8,308	3,961,631	2,343,827	6,305,458
1924	3,424	5,145	8,569	3,689,057	2,352,124	6,041,181
1925	3,405	4,686	8,091	3,399,249	1,920,546	5,319,795
1926	2,204	3,517	5,721	2,208,168	1,218,551	3,426,719
1927	3,451	5,847	9,298	3,593,633	3,013,405	6,607,038
1928	3,205	4,530	7,735	3,389,525	1,695,890	5,085,415
1929	3,531	4,601	8,132	3,652,185	1,891,215	5,543,400
1930	3,210	4,368	7,578	3,182,124	1,820,183	5,002,307

The number and tonnage of vessels entering the port (including Penarth) which were inspected by officers of the Port Sanitary Authority during 1930 are set out below :—

Ministry of Health Table A.

		Number	Tonnage	Number Inspected by		Number reported defective	Number of Vessels on which defects were remedied	Number of Vessels reported as having or having had during the voyage infectious disease on board
				Medical Officer	Sanitary Inspector			
Foreign	Steamers ...	2,505	3,069,803	84	2,505	526	477	40
	Motor	127	47,140	3	127	1	—	—
	Sailing	228	21,282	4	228	4	3	3
	Fishing	350	43,899	2	350	—	—	—
	Total Foreign...	3,210	3,182,124	93	3,210	531	480	43
Coastwise	Steamers ...	2,233	1,682,189	18	2,233	203	191	3
	Motor	237	36,670	—	237	—	—	—
	Sailing	116	6,776	—	116	1	1	—
	Fishing	93	10,416	—	93	—	—	—
	Total Coastwise	2,679	1,736,051	18	2,679	204	192	3
Total Foreign and Coastwise		5,889	4,918,175	111	5,889	735	672	46

* Including tugboats, sand barges, pleasure steamers, etc.

The following table shows the number of vessels entering the Port (including Penarth) which were dealt with by the department each month during 1930 :—

Month	Foreign	Coastwise	Totals
January	335	254	589
February	278	206	484
March	305	250	555
April	229	208	437
May	270	243	513
June	300	208	508
July	295	227	522
August	249	210	459
September	266	189	455
October	258	228	486
November	219	219	438
December	206	237	443
Totals	3,210	2,679	5,889

The nationalities of the several types of vessels dealt with during 1930 are shown in the following table :—

Nationality	Steam	Motor	Sailing	Totals
American	17	—	—	17
Belgian	50	—	—	50
Brazilian	2	—	—	2
British	3,547	278	128	3,953
Danish	173	8	—	181
Dantzig	1	—	—	1
Dutch	81	6	—	87
Esthonian	24	2	—	26
Finnish	11	1	—	12
French	324	56	216	596
German	106	3	—	109
Greek	166	—	—	166
Hungarian	3	—	—	3
Italian	56	2	—	58
Japanese	4	—	—	4
Latvian	14	—	—	14
Norwegian	262	4	—	266
Panamanian ...	5	—	—	5
Polish	2	—	—	2
Portuguese	8	—	—	8
Roumanian	5	—	—	5
Russian	4	—	—	4
Spanish	179	—	—	179
Swedish	114	4	—	118
Yugo-Slavonian ...	23	—	—	23
Totals	5,181	364	344	5,889

II.—CHARACTER OF TRADE.

Passenger Traffic.—The passenger traffic at the port is casual and small in volume and cannot be classified in the form prescribed by the Ministry of Health (*Table B*). The number of inward passengers during 1930 was 500, most of whom came on cargo vessels. The number of outward passengers totalled 276.

Cargo Traffic.—The principal imports are iron ore, pitwood, fruit, potatoes, onions, grain, flour, sugar and other provisions. The principal exports are coal, coke, patent fuel and flour. Amongst the countries and places with which the port principally trades may be mentioned Spain, France, Portugal, Italy, Norway, the Baltic Ports, United States of America, Canada and North Africa.

The following figures as to imports and exports annually since 1921 have been kindly supplied by the Chief Docks Manager :—

Years.	Imports (tons)	Exports (tons)
1921	1,043,000	5,912,485
1922	1,561,622	10,659,227
1923	2,183,601	12,610,305
1924	2,141,486	11,367,604
1925	1,940,836	9,798,810
1926	2,003,654	4,358,411
1927	2,073,680	10,188,499
1928	1,730,940	8,970,143
1929	1,981,165	10,144,026
1930	1,711,970	8,963,328

III.—WATER SUPPLY.

The water supply for the port and shipping is derived entirely from the Cardiff Corporation supply by means of hydrants installed at convenient points.

During the year, 242 samples of drinking water from ships were submitted to the Cardiff and County Public Health Laboratory for bacteriological examination, the results being as follows :—

Satisfactory	...	...	...	191
Moderate purity	...	...	...	26
Doubtful purity	...	...	...	17
Contaminated	...	...	...	8
		Total	...	242

Twenty-five notices were served on the masters of vessels having contaminated water or water of doubtful purity on board, and in each instance the tanks were emptied, cleansed and refilled at this port.

IV.—INFECTIOUS DISEASE, ETC.

Detection of Infectious Disease.—Cases of infectious disease are reported to inspectors who board every vessel on arrival at the port. Warning messages are sometimes received from Lloyd's signal stations at Barry Island and Penarth, but there is no arrangement for receiving wireless intimation of approaching cases of infectious disease. The nearest receiving station for wireless messages is at Milford Haven —over one hundred miles from Cardiff.

The usual inquiries were made during the year as to the number of vessels carrying wireless installations (excluding vessels under 500 tons N.R.T.), the results of which are as follows :—

	Vessels arriving		Totals
	Foreign	Coastwise	
With Wireless ...	1,217	509	1,726
Without Wireless ...	525	198	723
Totals ...	1,742	707	2,449

Method of Dealing with Infectious Disease.—Cases of infectious disease, other than cholera, yellow fever, plague or smallpox, arriving at the port are conveyed in the port sanitary motor ambulance to the City Isolation Hospital. The Flatholm Hospital, which is situated on an island in the middle of the Bristol Channel, where accommodation is provided for sixteen patients suffering from cholera, yellow fever or plague, has not been in use during the year. It has, however, been kept in good order and readiness for use in any emergency. Cases of smallpox are removed to the Cardiff Smallpox Hospital, and contacts are at once vaccinated or revaccinated and kept under observation for the necessary period. Usually cases of malaria are treated at the Royal Hamadryad Seamen's Hospital. Routine throat swabbing of the crew is practised when a case of diphtheria is discovered on arrival, and members of the crew giving positive swabs are usually removed to the City Isolation Hospital. When members of a ship's crew suspected to have been in contact with infectious disease are paid off at Cardiff they are supervised at their lodgings ashore, and information is sent to the responsible local authorities should any of them leave Cardiff.

Disinfection.—Infected quarters on board vessels are fumigated by officers of the Port Sanitary Authority. Bedding, clothing and effects are removed to the Corporation Disinfecting Station and are disinfected by steam. Articles of clothing to the number of 44 were disinfected during the year, and 2,904 verminous or infected beds were destroyed.

Scabies.—During the year, 76 cases of scabies amongst seamen were treated at the Corporation Cleansing and Disinfecting Station.

Bugs.—Constant attention is still being given to the eradication of bugs, which are a source of irritation and discomfort in the crews' quarters. Ninety vessels were reported as being verminous, and, upon inspection being made, notices were served on the masters requiring them to take steps to eradicate the bugs. In most cases berths, etc., were sprayed with a vermicide, and in others in which there was not time for action supplies of vermicide were taken to sea.

Venereal Disease.—The treatment of *bona fide* seamen suffering from venereal disease is undertaken at a treatment centre at the Royal Hamadryad Seamen's Hospital. Although the centre is mentioned here, it forms part of the general scheme of the Cardiff City Council for the diagnosis and treatment of venereal diseases and is not an integral part of port sanitary administration. The following tabular statement shows the number of cases dealt with, the number of attendances and the aggregate number of in-patient days each year since the treatment centre was opened in April, 1917 :—

Years	Number of Persons Attending for the First Time	Total Attendances	Aggregate Number of In-patient Days
16th April, 1917	572	7,191	2,692
1918	790	4,361	5,297
1919	972	17,040	6,281
1920	1,234	12,872	4,679
1921	868	12,242	3,352
1922	786	12,856	3,775
1923	821	13,704	3,722
1924	615	16,212	2,697
1925	616	16,008	3,104
1926	565	12,702	2,536
1927	640	13,995	2,426
1928	646	15,437	3,195
1929	704	15,027	2,093
1930	731	12,670	1,639

Forty cases of venereal disease were reported to inspectors and recommended for specialist treatment at the centre. Leaflets in various languages relating to the facilities for treatment at the port are distributed by the inspectors on arrival of vessels.

Bacteriological Examinations.—Examinations of rats for the detection of plague, of swabs for diphtheria and of other specimens (blood, sputum, etc.) for the diagnosis of disease are carried out at the Cardiff and County Public Health Laboratory.

Cases of Infectious Disease landed from Vessels.—The following table shows that 33 cases of notifiable infectious disease were landed from vessels during the year :—

Ministry of Health Table C.

Disease	Number of Cases during 1930		Average Number of Cases for previous 5 years	Number of Vessels concerned
	Passengers	Crew		
Chickenpox	—	1	0·2	1
Malaria	—	10	12·6	10
Pneumonia	—	6	5·8	6
Tuberculosis	—	12	9·2	10
Enteric Fever	—	4	3·2	4

The following tabular statement shows how the cases referred to in the preceding table were dealt with :—

	Admitted to City Isolation Hospital	Admitted to Royal Hamadryad Seamen's Hospital	Allowed to return Home	Treated aboard Ship	Totals
Chickenpox	1	—	—	—	1
Malaria	—	6	4	—	10
Pneumonia	—	6	—	—	6
Tuberculosis...	—	11*	1	—	12
Enteric Fever	4	—	—	—	4
Totals ...	5	23	5	—	33

In addition to the above-mentioned cases, one case of measles was landed from a vessel and treated at the City Isolation Hospital.

Other Cases of Infectious Disease.—Thirty-three other cases of infectious disease were dealt with by the port sanitary staff which were ascertained to fall properly within the province of urban administration, and were referred to the districts to which they belonged, as follows :—

Disease	Cardiff	Barry
Dysentery	2	—
Malaria	4	2
Pneumonia	2	3
Tuberculosis	13	7
Totals	21	12

* Three of these were subsequently transferred to the City Lodge Hospital and three others were allowed to return home after a short period in hospital.

Cases of Infectious Disease occurring on Vessels during the Voyage but disposed of prior to Arrival.—Twenty cases of infectious disease were reported to have occurred on 14 vessels during the voyage and were disposed of prior to arrival, as follows :—

Ministry of Health Table D.

Disease	Number of Cases during 1930		Average Number of Cases for previous 5 years	Number of Vessels concerned
	Passengers	Crew		
Dysentery	—	1	5·0	1
Malaria	—	17	16·4	11
Tuberculosis	—	1	5·8	1
Typhoid Fever	—	1	4·0	1

V.—MEASURES AGAINST RODENTS.

During 1930, 236 deratisation certificates and 420 exemption certificates were granted in accordance with the provisions of Article 28 of the International Sanitary Convention, 1926, the method of deratisation employed being fumigation by sulphur dioxide in 211 instances and by hydrocyanic acid gas in 25 instances, as compared with 181 deratisation certificates and 110 exemption certificates issued during 1929. In eleven instances deratisation was carried out by trapping but no certificates in respect of these were issued. Generally speaking, so far as shipping is concerned, the scope of the Rats and Mice (Destruction) Act is now restricted to vessels in the coasting service, and three notices were served under this Act during the year.

Advice as to rat-proofing of vessels is given whenever opportunity offers (*e.g.* during the carrying out of repairs). To prevent transit of rats between ships and the shore, the use of rat-guards on mooring ropes and the tarring of ropes and gangways are insisted upon, and gangways are raised at night-time where possible.

Systematic visits are paid by port sanitary inspectors to quays, wharves and warehouses in the vicinity of the docks, and, when necessary, responsible owners and occupiers are advised as to the best practical means of eradicating rodents. The laying of baits around the docks and in adjacent premises is supervised by the inspectors. In most instances warehouses are reasonably rat-proof, possessing concrete floors and iron doors. Rat poison (barium carbonate) is sold by the department at cost price, the amount sold during the year being 25½ lb. In all, 38,810 baits were laid in and around dock premises during the year, and 6,566 rats and 2,071 mice were found dead as a result of these measures.

Rats caught in ships and on quays and wharves, in warehouses, etc., and rats found dead after fumigation of vessels are submitted to the Cardiff and County Public Health Laboratory for examination for the detection of plague. During the year, 504 rats were so submitted, *i.e.*, 23 caught in ships, 123 caught in warehouses, etc., and 358 from ships after fumigation. One hundred and seventy-seven rats (included in the number examined for the detection of plague) were submitted to the Department of Zoology of the National Museum of Wales for identification and classification.

During 1930, 11,316 rats were destroyed ; of these, 47 were caught in ships, 7,028 in warehouses, etc., and 4,241 were found dead on ships after fumigation.

Rats Destroyed during 1930.

Ministry of Health Table E.

(*a*) Vessels.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total in Year.
Number of Rats—													
Black	718	288	422	411	146	125	205	474	803	286	59	351	4,288
Brown	—	—	—	—	—	—	—	—	—	—	—	—	—
Species not recorded ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Examined	62	45	47	33	21	24	7	28	49	35	—	30	381
Infected with Plague ...	—	—	—	—	—	—	—	—	—	—	—	—	—

Ministry of Health Table F.

(*b*) Docks, Quays, Wharves and Warehouses.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total in Year.
Number of Rats—													
Black	56	24	54	57	39	54	34	21	34	9	36	36	454
Brown	4	1	—	3	—	—	—	—	—	—	—	—	8
Species not recorded ...	656	398	374	670	491	401	603	663	363	557	733	657	6,566
Examined	24	8	16	18	15	19	3	2	8	—	3	7	123
Infected with Plague ...	—	—	—	—	—	—	—	—	—	—	—	—	—

Ministry of Health Table G.

Particulars relating to Plague "Infected" or "Suspected" Vessels arriving in the Port during 1930.

Name of Vessel 1.	Date of Arrival 2.	Whether "infected" or "suspected" 3.	Methods of Rat Destruction employed 4.	Number of Dead Rats recovered 5.	Whether a Certificate of Deratisation was issued 6.	Remarks 7.
—	—	—	—	—	—	—

Ministry of Health Table H.

Measures of Rat Destruction on Vessels from Plague infected Ports (other than those included in Table G) arriving in the Port during 1930 and number of Certificates issued in respect of such Vessels.

Total Number of Vessels arriving from plague infected Ports 1.	Number of such Vessels fumigated by SO_2 2.	Number of Rats killed 3.	Number of such Vessels fumigated by HCN. 4.	Number of Rats killed 5.	Number of such Vessels on which trapping, poisoning, etc., were employed 6.	Number of dead Rats recovered 7.	Number of such Vessels on which measures of Rat destruction *were not carried out* 8.	Number of Fumigation Certificates issued on Form "Port 11"*		Number of other Certificates issued 11.
								Deratisation 9.	Exemption 10.	
6	2	—	1	—	1	—	2	3	—	—

Ministry of Health Table I.

Measures of Rat Destruction on Vessels (other than those included in Tables G and H) and Number of Certificates issued in respect of such Vessels during 1930.

Number of Vessels fumigated by SO_2 1.	Number of dead Rats recovered 2.	Number of Vessels fumigated by HCN. 3.	Number of dead Rats recovered 4.	Number of Vessels on which trapping, poisoning etc., were employed 5.	Number of dead Rats recovered 6.	Number of Certificates issued on Form "Port 11"*		Number of other Certificates issued 9.
						Deratisation 7.	Exemption 8.	
211	4,123	24	118	10	47	233	420	—

* Form Port 11 is issued only by the Port Medical Officers of Health of Ports approved by the Minister of Health for the issue of Deratisation and Deratisation Exemption Certificates in accordance with the provisions of Article 28 of the International Sanitary Convention of 1926.

VI.—HYGIENE OF CREWS' SPACES, ETC.

During the year, 5,889 vessels, with a tonnage of 4,918,175, were inspected on arrival. The number of persons in the crews carried by these vessels was 97,707. In addition, 5,193 re-inspections of ships in dock were made. Ten informal notices were served and 757 verbal orders were given to masters and others in connection with nuisances and sanitary defects.

Ministry of Health Table J.

CLASSIFICATION OF NUISANCES.

Nationality of Vessel	Number inspected during 1930	Defects of original construction		Structural defects through wear and tear		Dirt, vermin and other conditions prejudicial to health	
		Found	Remedied	Found	Remedied	Found	Remedied
British	3,953	—	—	148	130	575	570
Other Nations	1,936	1	—	204	178	461	449

VII.—FOOD INSPECTION, ETC.

Imported Foodstuffs.—The following table shows the amount of foodstuffs imported during the year :—

Description	Tons	cwt.	Bags	Bales	Barrels	Boxes	Skips
Almonds	—	—	170	—	—	417	—
Apples...	—	—	—	—	79,095	10	—
Apple Juice	—	—	—	—	1	710	—
Bacon and Hams ...	—	—	—	8,752	—	2,163	—
Baking Powder ...	—	—	—	—	—	80	—
Barley, Pearl	—	—	569	—	—	—	—
Biscuits	—	—	—	—	—	943	146
Bread	—	—	—	—	—	10	—
Butter	—	—	—	—	—	374	—
Catsup...	3	12	—	—	—	1,350	—
Cheese	—	—	—	—	—	29,620	—
Coffee	—	—	—	—	—	48	—
Condiment, Mixed ...	—	—	—	—	—	30	—
Confectionery... ...	—	—	—	—	415	606	—
Cream	—	—	—	—	—	9,736	—
Cream of Tartar ...	—	—	—	—	20	—	—
Eggs	—	—	—	—	—	391	—
Fat, Edible	—	—	—	—	308	6,580	—
Fish, Canned	10	18	—	—	—	715	—
Fish, Fresh	7,209	4	—	—	—	—	—
Fish, Salted	—	—	—	—	106	22	—
Flour	360	0	71,360	—	—	—	—
Fruit, Canned ...	257	1	—	—	—	329	—
Fruit, Dried	35	17	—	—	—	16,361	—
Fruit, Fresh	—	—	—	—	33,577	310,386	—
Fruit Pulp	—	—	—	—	244	35	—
Glucose	—	—	—	—	360	—	—
Herbs, Dried	—	—	—	18	—	—	—
Lard	—	—	—	—	—	130,784	—
Macaroni	—	—	—	—	—	2,779	—
Malt	—	—	637	—	—	—	—
Margarine	—	—	—	—	—	13,874	—
Meat, Canned... ...	—	—	—	—	—	9,979	—
Meat, Preserved ...	—	—	—	—	—	2,197	—

Description	Tons	cwt.	Bags	Bales	Barrels	Boxes	Skips
Meat, Salted	2	4	—	—	717	—	—
Milk, Condensed ...	2	3	—	—	—	175,288	—
Milk Powder	—	—	—	—	—	179	—
Nuts	—	—	128	—	—	—	—
Oats, Rolled	—	—	1,936	—	—	33,707	—
Olive Oil	—	2	—	—	12	146	—
Onions...	1,522	0	77,009	—	—	60,639	—
Peas and Beans ...	—	—	1,257	—	—	—	—
Potatoes	19,444	0	168,828	—	—	7,147	—
Provisions, Canned ...	—	—	—	—	—	3,204	—
Rice	—	—	9,006	—	—	—	—
Sago	—	—	11	—	—	—	—
Salt	562	10	—	—	—	—	—
Semolina	—	—	40	—	—	—	—
Sugar	13,094	0	23,747	—	—	660	—
Syrup	—	—	—	—	40	—	—
Tomatoes, Canned ...	—	—	—	—	—	56,250	—
Tomatoes, Fresh ...	—	—	—	—	—	43,484	—
Vegetables, Canned ...	—	—	—	—	—	4,540	—
Vegetables, Fresh ...	86	0	20,337	—	—	2,907	—
Vegetables, Salted ...	—	—	—	—	263	—	—
Wheat	118,549	0	—	—	—	—	—
Wheat Products ...	—	—	—	—	—	11,025	—
Yeast	—	—	—	—	—	69	—

Imported Meat.—In addition to the foodstuffs previously referred to, seven cargoes of frozen meat were imported, particulars of which are as follows :—

Loading Port	Fore-quarters of Beef	Hind-quarters of Beef	Carcases of Lamb	Carcases of Mutton	Carcases of Pork	Crates of Rabbits
Adelaide	—	—	7,277	1,202	—	—
Sydney	—	—	12,500	500	—	—
New Zealand	454	456	16,485	2,739	—	—
Wellington	—	—	13,722	1,466	—	—
New Plymouth	1,312	1,313	9,086	1,250	200	—
Fremantle	906	605	3,381	2,000	—	300
Melbourne	836	752	4,503	1,735	—	100
Totals	3,508	3,126	66,954	10,892	200	400

Public Health (Imported Food) Regulations, 1925.—The following table shows the kinds and quantities of food withheld from human consumption during the year :—

	Tons	cwt.	lb.
Apples	8	6	70
Apricots, Canned	—	—	68
Apricot Pulp	—	1	23
Beef, Canned	—	2	46
Biscuits	—	7	16
Brawn, Canned	—	11	77
Cabbage	1	10	0
Cabbage, Red	2	12	0
Carrots	5	5	0
Cheese	—	—	20
Grapes	1	6	103
Carried forward ...	20	3	87

	Tons	cwt.	lb.
Brought forward ...	20	3	87
Lard	—	3	52
Lemons	1	0	55
Loganberries, Canned	—	4	97
Melons	—	12	0
Milk, Condensed	—	4	50
Mutton, Frozen	—	—	74
Onions	25	1	56
Oranges	29	19	83
Parsnips	7	7	0
Peaches, Canned	—	1	91
Pears, Canned	—	—	110
Plums, Canned	—	7	96
Potatoes	7	19	0
Raisins	—	—	14
Rice	13	5	0
Sugar	—	4	84
Sultanas	—	—	84
Tomatoes, Canned	5	12	62
Wheat	46	5	42
Total	158	16	17

Three samples of food were submitted to the Public Analyst for analysis under the Public Health (Imported Food) Regulations, comprising cayenne pepper, jam and rice. The cayenne pepper was reported to be genuine and the jam and rice to be adulterated. The sample of jam contained 60 parts per million of sulphur dioxide, being 20 parts per million in excess of the amount permitted. The sample of rice was found to be contaminated with ochre ; it contained 0·4 per cent. of extraneous mineral matter, 0·25 per cent. of oxide of iron and one-twelfth of a grain per pound of arsenic expressed as arsenious oxide.

Public Health (Imported Milk) Regulations, 1926.—No fresh milk was imported by sea during the year.

Public Health (Preservatives, etc., in Food) Regulations, 1925-27.—Sixty-six samples of food were submitted to the Public Analyst for analysis as to the presence of preservatives. The samples, all of which were reported to be free from preservatives or to contain preservatives within the prescribed limits, were as follows :—

Bacon	1
Butter	1
Candied Peel	1
Cherries, Glace	1
Cod Roe	1
Coffee and Chicory Essence	1
Corn Syrup	1
Cream, Canned	2
Curry Powder	1
Edible Fat	4
Fruit Pulp	3
Fruit, Dried	17
Jam	2
Lard	1
Liver Paste	1
Margarine	2
Milk, Condensed	10
Milk, Dried	2

Olives	1
Pearl Barley	1
Peas, Dried	1
Sausage Casings	1
Sausage Filling	1
Sausage, Lunch	1
Sugar	3
Tomato Sauce	1
Vegetables, Canned	4

Public Health (Shell-fish) Regulations, 1915.—There are no shell-fish beds or layings within the area under the jurisdiction of the Port Sanitary Authority.

Samples submitted for Bacteriological Examination.—A sample of hide thongs from orange boxes was examined for *B. Anthracis*, the result being negative. A sample of canned tomatoes was examined and found to give no evidence of active bacterial decomposition. Two samples of evaporated milk were also examined, one being reported as free from bacteria and the other to be unsound, with gas formation due to the presence of bacterial growth.

VIII.—MEDICAL INSPECTION OF ALIENS.

	Total	Number inspected by the Medical Inspector	Number subjected to detailed examination by the Medical Inspector	Certificates Issued					Transmigrants	
				Lunatic, Idiot or M.D.	Undesirable for Medical Reasons	Physically Incapacitated	Suffering from acute Infectious Disease	Landing necessary for adequate Medical Examination	Verminous	Trachoma, Favus, etc.
				(a)	(b)	(c)	(d)	(e)		
1. (*a*) Total number of Aliens (excluding Alien Seamen) landing at the Port	500									
(*b*) Aliens refused permission to land by Immigration Officer	22	130	130	—	—	—	—	—	—	—
(*c*) Transmigrants	11									
2. Total Aliens arriving at the Port	533	130	130	—	—	—	—	—	—	—

3. (*a*) Total number of vessels carrying Alien Passengers 123

(*b*) Number of such vessels dealt with by the Medical Inspector ... 9

Analysis of Aliens landing (*see* 1 (*a*))—

	Number.
Residents returning	15
In transit	46
Visitors	117
Business	146
Diplomatic	—
Seamen	—
Contract Seamen	163
Ministry of Labour Permit (M.L.):	
(*a*) Males	3
(*b*) Females	1
(*c*) Children	—
Aliens coming to settle not holding M.L. Permits:	
(*a*) Males	8
(*b*) Females	1
(*c*) Children	—
Total ...	500

Classification of Aliens referred to the Medical Inspector by the Immigration Officer for detailed examination—

	Examined.	Number of certificates issued.
(i) holding Ministry of Labour permits	—	—
(ii) intending to take up employment and remain in the country over 3 months	126	—
(iii) intending to make their home in this country	3	—
(iv) students coming for educational purposes	1	—
(v) in regard to whom there is any mention of health as a reason for their visit	—	—
(vi) who appear to the I.O. (*a*) not to be in robust health, (*b*) to be mentally or physically abnormal or sub-normal, (*c*) to be dirty in their person or (*d*) are selected for special reasons	—	—
(vii) seamen travelling as passengers	—	—

IX.—DISEASES OF ANIMALS ACTS, ETC.

The various Orders under the Diseases of Animals Acts with reference to the importation of canine and other animals have been strictly enforced during the year. One fox, 549 dogs and 1,045 cats were brought to the port on vessels, and four vessels arrived from scheduled countries directly or indirectly with 13 sheep on board. All the vessels were visited regularly during their stay in port to ensure that the requirements of the Orders were observed, and when the vessels having sheep on board left for other British ports the port sanitary authorities concerned were notified.

The Animals (Importation) Order, 1930, came into force on 15th November, 1930. On the 20th November the s.s. "Salacia" arrived from Montreal with 157 head of cattle which were landed at the Imported Animals Wharf. Cleansing and disinfection of the vessel were carried out satisfactorily.

The Parrots (Prohibition of Import) Regulations, 1930, came into force on 30th May, 1930. Thirty parrots were dealt with, seven of which were destroyed.

X.—CANAL BOATS.

Mr. S. J. Holbourn, the Chief Port Sanitary Inspector, who is also Inspector of Canal Boats, has reported that he made 45 inspections of canal boats during the year and found infringements of the Acts in 16 instances (marking one and painting 15). Verbal orders were given, and the defects were remedied in each case. The number of boats on the register was 14 (not propelled by motor), each with accommodation for two males. Generally the sanitary condition of the canal boats was satisfactory.

SCHOOL MEDICAL SERVICE.

I.—STAFF.

The medical staff consists of the School Medical Officer, a deputy medical officer and eight assistant medical officers, all of whom, being engaged in other sections of the Public Health Department, devote part time only to the work. Apart from the School Medical Officer, who is also Medical Officer of Health, the medical staff-time devoted to the school medical service is equivalent to three and seven-elevenths. There are also four part-time specialist medical officers (an ophthalmic surgeon, an aural surgeon, an anæsthetist and an orthopædic surgeon) who undertake treatment at the school clinics, four dentists, a supervisor of nurses, twelve nurses, a chief clerk, eight clerks (six of whom are females) and four female dental clerk-attendants. The supervisor of nurses, two nurses (orthopædic) and the chief clerk are also employed in other sections of the department.

An additional dental unit was established in February, 1930, the dentist and dental clerk-attendant appointed being Mr. Howard B. Wilson, L.D.S., and Miss Doris I. Howell respectively. Mr T. Mills, the clerk in charge of the school medical service clerical section, was transferred to the general health section of the department in September, 1930, his place being taken by Mr. D. C. Smart—a new appointment. In addition to the changes mentioned, there were a few other changes in the personnel of the nursing and clerical staffs.

II.—CO-ORDINATION.

Effective co-ordination exists between the school medical service and other services administered by the Public Health Department, matters affecting both the Education Committee and the Health and Port Sanitary Committee being dealt with by a sub-committee designated the Joint Education and Health (Medical Services) Sub-Committee. As previously stated, the School Medical Officer is also the Medical Officer of Health and his deputy and the chief clerk are concerned with all sections of the department, thus linking up the various services. The supervision of the work of the school nurses is carried out by a supervisor, who also controls the work of the health visitors and other public health nurses.

Records of children from the maternity and child welfare section are passed on for use in connection with the medical inspection of school children. School clinics are held in four buildings, each of which is also used for maternity and child welfare purposes. The facilities provided for operative treatment of ear, nose and throat defects, refraction work and orthopædic treatment are available for children under school age as well as for school children, whilst the school dental clinics are also used for the treatment of children under school age and expectant mothers. At the central clinic one of the public vaccinators has the use of a room as a vaccination centre. Cases of tuberculosis and suspected tuberculosis are referred to the Welsh National Memorial Association—the body responsible for the treatment of tuberculosis. The section of the department concerned with the control of communicable diseases co-operates in the closest possible way with the school medical service, and pathological specimens taken in the course of routine and special inspections are submitted for examination to the Cardiff and County Public Health Laboratory. Cases of scabies in school children are dealt with by school nurses at the Council's cleansing station, and the disinfection station adjoining is used for the disinfection of the children's clothing. The mental deficiency service is an integral part of the work of the department, which therefore deals with mental defectives of all ages, several of the medical officers being recognised as certifying officers under the Education Act, 1921, and the Mental Deficiency Acts. It may also be mentioned that a motor ambulance belonging to the port sanitary section is used for conveying children to their homes after operative treatment at the school clinics, and that the laundrywork in connection with all the

clinics is carried out at one of the city hospitals. Financially, each of the main sections of the department is self-contained, and the cost of services performed by one section for another is defrayed by means of cross-payments at the end of the year.

Mention should be made here of the close co-operation existing between the officers connected with the school medical service and the education administrative staff, school teachers and school attendance officers, all of whom render every possible assistance in the work. Among voluntary bodies that co-operate may be mentioned the National Society for the Prevention of Cruelty to Children, who deal promptly with cases of neglect amounting to cruelty which officers of the department refer to them, and Pearson's Fresh Air Fund and the Cardiff Rotary Club, who utilise the services of the department for the selection of delicate children for whom they provide holidays at seaside homes. The Queen's Institute of District Nursing undertakes the home treatment of certain cases of minor ailments requiring frequent attention, in respect of which the Education Committee make an annual contribution of £50. Particulars of the work done during 1930 by the nurses of the Institute will be found on pages 125 and 126.

III.—SCHOOL BUILDINGS.

Medical officers pay attention to the sanitary condition of school premises in the course of their duties in connection with routine medical inspections, and district sanitary inspectors also inspect school premises periodically. Defects discovered in this way are reported by the School Medical Officer to the Director of Education, who refers them to the appropriate authorities to be remedied. Constant attention is also paid to the sanitary condition and structural suitability of the schools by an officer of the City Engineer's Department.

Glass permeable to Ultra-Violet Rays in Relation to the Health of School Children.—During 1929 and 1930 an inquiry was made into the influence of special glass upon the health of young children in school. For this purpose one half of the rooms in a new infants' school was glazed with such glass, each of these rooms being selected so that it was orientated exactly in the same way as another room having ordinary glass. The children in both types of room were specially examined at the time of entrance to the school and on subsequent occasions. This inquiry was very carefully carried out by Dr. C. W. Anderson, and his very full report has been published recently.* His conclusion is that there is no evidence of special benefit from the use of glass permitting the passage of ultra-violet rays among the class of children investigated.

IV.—MEDICAL INSPECTION.

The numbers of children medically inspected at routine and special inspections and the numbers of re-inspections are set out in Table I. of the Appendix.

Altogether, 13,982 school children were inspected at routine inspections, as compared with 12,437 in 1929. The number of children specially inspected was 5,653, compared with 5,122 in the previous year. The children dealt with at special inspections were those suspected to be suffering from diseases or defects and referred by medical officers, head teachers, school attendance officers, parents and others; 761 of them were inspected at school and 4,892 at the clinics. In addition, 5,370 individual children were re-inspected during the year, the actual number of re-inspections being 8,637, as against 3,787 and 6,339 respectively in 1929.

V.—FINDINGS OF MEDICAL INSPECTION.

The diseases and defects found at routine and special inspections to require treatment or to be kept under observation are shown in detail in Table II A of the Appendix. Of 12,502 elementary school children inspected at routine inspections, 2,474, or 19·8 per cent., and of 1,480 secondary and high school children, 208, or 14·1 per cent., were found to be suffering from one or more defects (excluding dental disease and uncleanliness) requiring treatment. Of the 5,612 elementary school children specially inspected, 3,307, or 58·9 per cent., and of 41 secondary and high school children dealt with in this way, 31, or 75·6 per cent., were found to require treatment for diseases or defects other than dental disease and uncleanliness.

* *The Medical Officer*, 16th May, 1931.

The following table shows the number and proportion of cases in which diseases or defects of various kinds were discovered :—

	Defects found at Routine Inspections		Defects found at Special Inspections	
	Number	Percentage	Number	Percentage
Malnutrition	107	0·76	74	1·31
Uncleanliness	98	0·70	34	0·60
Skin Diseases	148	1·06	1,427	25·24
Defective Vision and Squint	1,291	9·23	238	4·21
External and Other Eye Diseases	63	0·45	112	1·98
Otitis Media	106	0·76	161	2·85
Other Ear Diseases	147	1·05	115	2·03
Enlarged Tonsils only	1,140	8·15	359	6·35
Adenoids only	97	0·69	64	1·13
Enlarged Tonsils and Adenoids	198	1·42	150	2·65
Other Nose and Throat Defects	97	0·69	106	1·87
Enlarged Cervical Glands	33	0·24	61	1·08
Defective Speech	31	0·22	13	0·23
Dental Diseases (found by Medical Officers) ...	2,408	17·22	197	3·48
Heart Diseases	204	1·46	50	0·88
Anæmia	62	0·44	57	1·01
Lung Diseases—Non-Tuberculous	338	2·42	141	2·49
Tuberculosis (All forms, including suspects) ...	13	0·09	16	0·28
Nervous Diseases	23	0·16	97	1·72
Deformities	196	1·40	52	0·92
Other Defects and Diseases	563	4·03	819	14·49

Variation in the Incidence of Defects from Year to Year.—The percentage of children found to be suffering from defects requiring treatment is not constant. This figure, for elementary school children, has varied since 1923 as shown in the following statement :—

Year.	Percentage.	Year.	Percentage.
1923 ...	17·2 ...	1927 ...	14·2
1924 ...	16·8 ...	1928 ...	13·8
1925 ...	15·0 ...	1929 ...	15·0
1926 ...	13·1 ...	1930 ...	19·8

During the first four years of this period there was a steady improvement, but since 1927 it has been arrested, and latterly there has been an increase, culminating in 1930 in the highest percentage yet recorded. While there may be fallacies arising from differences in outlook of the medical staff from time to time, the general movement suggests that there is some genuine underlying cause. It may be that the heavy incidence of acute communicable disease in recent years has caused an increase in the incidence of post-catarrhal conditions, such as otorrhœa, rhinitis, chronic enlargement of tonsils and adenoids, but nearly every type of ailment shows an upward tendency in 1930, and in this connection it seems reasonable to think of its association with the present financial distress of the community.

Entrants.—The above table and the more detailed returns in the Appendix, Table II A, refer to children in all groups. Table II B of the Appendix shows the proportion of children entering school who required treatment, and a special table (II C) is again included showing those who required treatment or to be kept under observation for defects of various kinds. The proportion of entrants found at routine inspections who suffered from such defects as required immediate treatment (exclusive of uncleanliness, pediculosis and dental diseases) amounted to 16·1 per cent., as compared with 11·4 last year, while the percentage is increased to 42·7 if all defects requiring either treatment or observation are taken into consideration. This latter figure compares with 32·4 per cent. last year. Of the defects recorded, 29·6 per cent. were affections of the nose and throat, of which the majority were enlarged tonsils and adenoids.

The following table, compiled from information supplied by parents or guardians, shows the medical history of 3,902 school children (2,017 boys and 1,885 girls) prior to medical inspection as entrants :—

Diseases	Boys		Girls		Both Sexes	
	Number	Percentage	Number	Percentage	Number	Percentage
Measles	1,106	54·8	1,040	55·2	2,146	54·9
Whooping Cough	851	42·1	816	43·3	1,667	42·7
Chickenpox	503	24·9	496	26·3	999	25·6
Scarlet Fever	54	2·7	66	3·5	120	3·1
Diphtheria	61	3·0	52	2·8	113	2·9
Rheumatism	13	0·6	18	1·0	31	0·8
Chorea	4	0·2	5	0·3	9	0·2
Tuberculosis...	5	0·2	3	0·2	8	0·2
Bronchitis	103	5·1	88	4·7	191	4·9
Pneumonia	111	5·5	90	4·7	201	5·2
Other Diseases	438	21·7	327	17·3	765	19·6

Enlargement of the Thyroid Gland.—Records have again been kept of children approaching puberty who were found to have enlargement of the thyroid gland (simple goitre). Among 3,513 children (1,854 boys and 1,659 girls) who had attained the age of 12 years at the beginning of 1930 and who were examined during the year, 58 (4 boys and 54 girls) were found to have enlargement of the gland. The percentage of this condition recorded among children over 12 years of age since 1924 has been as follows :—

Year.	Boys.	Girls.	Both Sexes.
1924 ...	1·27 ...	5·99 ...	3·65
1925 ...	1·46 ...	5·55 ...	2·78
1926 ...	0·95 ...	6·14 ...	3·48
1927 ...	0·42 ...	6·75 ...	3·64
1928 ...	0·39 ...	7·07 ...	3·67
1929 ...	0·12 ...	3·59 ...	1·87
1930 ...	0·22 ...	3·25 ...	1·65

VI.—RE-INSPECTION OF CHILDREN FOUND DEFECTIVE.

The usual survey was made by the medical staff of cases in certain categories referred for treatment or observation during the previous year. The total number of children overtaken in this survey was 2,429, showing 2,462 defects (see Appendix, Table VI). Such defects as malnutrition, uncleanliness and infectious skin diseases, which are continuously under supervision because of exclusion from school, and dental diseases, regarding which fairly full knowledge is obtained through the clinic organisation, were omitted from this inquiry. Many of the children previously found defective had left school or were absent at the time of re-inspection.

Of the 2,462 defects in children re-inspected, 1,145 had not been treated, this number including some cases of such a serious nature as heart disease, anæmia, lung diseases and deformities. The condition of the defects on re-inspection, classified according to whether or not they had received treatment, may be shown as follows :—

	Percentage			
	Cured or improved	Not improved	Worse	Totals
Treated at School Clinics	84·8	15·0	0·2	100
Treated elsewhere	74·6	25·4	...	100
Not treated	37·4	58·0	4·6	100
All cases	62·4	35·3	2·3	100

VII.—EXCEPTIONAL CHILDREN.

Physically Defective Children.—The numbers of children found to be physically defective are recorded in detail in the Appendix (Table III).

Greenhill Open-Air School.—At the end of the year the number of physically defective children on the register of the Open-Air School was 137, the average attendance during the year being 110. The arrangements for extending the accommodation for children from 120 to 180, referred to in the report for 1929, have unfortunately been delayed, owing mainly to prolonged negotiations in connection with the purchase of additional land. The purchase of this land (about 1½ acres) has now been decided upon, and the construction of three additional open-air class rooms is likely to be commenced during 1931. The children at this school are closely supervised by medical officers of the department, and a report for the year by Dr. Anderson is given below.

Report by Dr. C. W. Anderson on Greenhill Open-Air School from the Medical Aspect.

"During 1930, 133 children (60 girls and 73 boys) were admitted to the Open-Air School to take the places of those discharged. Owing to such causes as unsuitable temperament and/or removal of the family from the district, 21 children were withdrawn from the school during the year after very short periods, and therefore no opinion as to any material change in their physical condition can be given.

"The remaining 112 children attended the school for periods varying from 3 to 36 months. The reasons for the admission of this group were as follows :—

Condition.	Number.
Anæmia	21
Malnutrition	26
Anæmia and Malnutrition	52
Organic Lung Disease (not tuberculous)	3
Pre-tuberculous	3
Cervical Adenitis	1
Healed Tuberculous Peritonitis	1
Quiescent Tuberculosis	2
Post-rachitic Debility	1
Post-rheumatic Debility	2
Total	112

"In the above classification only the principal defects have been considered. It must be borne in mind that many of the cases were found to be suffering from a combination of several of the diseases mentioned.

"At some period of their lives 24 of the children had shown clinical signs which were sufficiently suggestive to warrant an examination by the tuberculosis officer. A history of tuberculosis in the parents or brothers and/or sisters was obtained in 51 cases.

"Three children lost weight during their attendance at the school, and a note on each of these may be of interest :—

Case I.—R. A., aged 14. A debilitated and nervous boy. Record of school attendances :—Possible 202—actual 97. Withdrawn from the school by parents when he became 14 years old. Lost 1 pound.

Case II.—G. S., aged 11. Slightly malnourished boy. Family history of tuberculosis. Record of school attendances :—Possible 304—actual 180. Lost 3½ pounds. Referred to tuberculosis officer, but no active disease found. Withdrawn from the school by parents against medical advice.

Case III.—D. M., aged 12. Very malnourished and anæmic girl. Had been delicate since infancy. Gained 2¼ pounds during first seven months she attended the school, but lost 6 pounds during the following two months. The child was referred to the family practitioner, and later she was excluded from school indefinitely on account of severe anæmia.

" One child developed rheumatic symptoms for which he was admitted to the Lord Pontypridd Hospital. This boy gained 5 pounds during his six months' attendance at the school.

" The following table shows the average increases in weight and height of the 112 children during the period throughout which they attended the school :—

Average Period in School (Months)	Number of Children in Group	Average Age (Years)	Average gain in Weight (Pounds)	Average gain in Height (Inches)
3	8	10·90	2·00	0·62
6	15	11·50	4·65	1·08
9	3	9·92	1·08	1·00
12	19	10·36	6·77	1·69
15	26	10·20	8·03	2·53
18	13	10·32	7·36	3·09
20	10	9·28	8·50	3·02
24	7	10·79	12·25	3·82
28	7	11·30	14·21	5·14
30	2	10·92	15·25	4·25
32	1	10·33	12·00	1·25
36	1	11·60	12·00	5·25

" Seventy-eight children were assessed scholastically and intellectually on admission and again immediately prior to their return to ordinary elementary schools, the results being given in the following table :—

Average Period in School (Months)	Number of Children in Group	Average Age (Years)	Average Progress (Months)			
			Reading	Spelling	Arithmetic	Intellectual (Binet-Simon)
3	2	11·57	+ 4·50	+ 10·50	+ 3·00	+ 4·50
6	4	12·51	+ 4·50	− 1·50	+ 7·20	− 0·50
12	12	11·05	+ 6·35	+ 3·30	+ 8·70	+ 8·41
15	24	10·30	+ 8·92	+ 3·70	+ 6·94	+ 9·33
18	11	10·57	+ 11·27	+ 7·53	+ 12·76	+ 12·17
20	9	9·18	+ 13·47	+ 11·22	+ 15·07	+ 17·00
24	5	10·15	+ 14·92	+ 17·16	+ 18·24	+ 14·88
28	7	11·44	+ 14·65	+ 10·45	+ 13·88	+ 16·57
30	2	10·92	+ 2·40	+ 3·60	+ 1·20	− 5·00
32	1	10·33	+ 6·00	± 0·00	+ 30·00	+ 36·00
36	1	9·40	+ 6·00	+ 6·00	− 6·00	+ 6·00

" As in preceding years, the average progress generally was subnormal. In arriving at a decision as to the necessity for open-air school treatment, a parent's statement regarding the previous health of a child is often of importance. A history frequently obtained is that the child is tired in the mornings, is nervous, cries readily and will not eat his breakfast. A physical examination of such a child frequently reveals simply a slight degree of malnutrition or anæmia. Mentally, however, such children are frequently dull and backward. It is possible that the knowledge of this inability to compete on equal terms with their class-mates produces a state of anxiety which, if prolonged, may cause a deterioration in physical well-being.

" In the early stages, complaints such as those mentioned above may be merely inventions on the part of the child to avoid school attendance amid unhappy surroundings. Later they may be the symptoms of actual physical unfitness. It is reasonable to expect that such children should benefit by a transfer to the less intensive and more varied open-air school routine.

" Two children were found to be feebleminded on admission to the school. When their physical condition had become satisfactory they were certified as ineducable in an ordinary elementary school and recommended for admission to the special day school for mental defectives.

" Eight children were found to be definitely dull and backward. All had improved physically and mentally at the time of discharge from the school. Arrangements have been made with the head teachers of the schools concerned to report the progress of these children.

" Of the ' leavers ' for the year 1930 who have been re-examined or about whom inquiries have been made, all are apparently continuing well. Several have entered secondary schools, and most of those who have left school are now in employment.

" Certain tests of physiological fitness have been applied to children at the Open-Air School during the year, the results obtained being dealt with in a report given below."

Report by Dr. Nancy K. Gibbs and Dr. C. W. Anderson on Physical Efficiency Tests.

" *Aim.*—To find a more accurate method of selecting children for the Open-Air School—if possible a single figure for each child, to enable one to pick out those most likely to benefit from the large group of children who show no definite physical signs of disease although recommended by school nurses, teachers, parents and others.

" The number of children of the above type put forward for special examination with a view to admission to the Open-Air School is steadily increasing, so that careful selection of those most likely to benefit is essential.

" Many of these children, judged on anatomical standards are subnormal, but up to the present there is no definite evidence as to how far a child may be below average nutrition and retain average physical health. For this reason, admission or refusal depends frequently on the parent's history of frequent absence from school, loss of appetite, sleeplessness or lassitude.

" In the past the usual methods have been employed, viz., all children recommended for admission to the Open-Air School are examined by the medical officer through whose hands all children admitted and discharged pass. In addition, all the children in the school are constantly under his supervision. Each case is given a thorough physical examination and a detailed history is obtained from the parent, and in some cases from a school nurse or school teacher in addition.

" *Experiments.*—Although not ideal to begin work on children who had already been picked out as subnormal in physical condition, experiments were begun on the Open-Air School children because of several practical advantages, viz., the convenience of being able to use the same group of children on several occasions without serious interruption of school work and the suitability of the accommodation provided at the school.

" Throughout the investigation the work was done in frequent consultation with members of the staff of the Physiological Department of the Welsh National School of Medicine, by kind consent of Professor Graham Brown, F.R.S.

" The first set of experiments was :—

(1) *Estimation of Vital Capacity.*—The apparatus used was a simple form of spirometer—an inverted hollow bell suspended in a water jacket. Each child was allowed three trials, and the highest reading was taken as being the most accurate, as improvement occurred with practice.

(2) *Persistence Test.*—For this a simple form of mercury manometer was used. After various trials, a point was chosen to which all children could raise the mercury. The number of seconds during which each child after full inspiration could retain the column of mercury at this mark was found. Again three observations were made on each child.

(3) *Effect of a Standard Exercise on Pulse Rate.*—This exercise consisted in stepping on and off a block 12 inches high 12 times in 24 seconds. The pulse rate was taken before and after, and the time taken for the pulse rate to return to normal ; for this purpose the rate was estimated every 5 seconds.

" Next a control group was examined. This group consisted of 25 boys and 25 girls from an elementary school, all of whom were chosen as being physically fit and taking part in games. The result was that no significant difference was found between the two groups. As the time which the pulse rate takes to return to

normal after exercise is usually accepted as an index of cardio-vascular fitness, the third test mentioned was made more vigorous, hoping to show more difference between the 'fit' and the 'unfit' and a graph plotted for each child.

"Difficulties were encountered, as follows:—

(1) In determining the child's resting pulse, the mere fact of coming into the medical officers' room appeared to cause a rise in many cases, judging from the rates to which the pulse fell and remained after exercise.

(2) Because of the first difficulty, there was uncertainty when to stop counting. In most cases the pulse rate fell in a staircase manner, and gradually it came to be realised that the re-appearance of sinus arrhythmia meant that the rate had fallen to normal.

"In the control group and in the Open-Air School group, with few exceptions, the pulse had returned to normal within two minutes and frequently after 40 to 70 seconds. The exceptions in both groups were children showing evidence of past tuberculous infection, viz., scars of tuberculous adenitis, dactylitis or lupus vulgaris. In all cases these lesions were healed and apparently quiescent for a number of years. Again these results did not help to solve the problem. After further consultation with the physiologists, it was decided to work out the formula

$$\frac{\sqrt{\text{Pr}} \times \text{Per} \times \text{Br}}{1{,}000 \times (\text{Age in years})^{1{\cdot}807}}$$

$$\frac{}{4}$$

Pr —The expiratory pressure test.
Per—The persistence test.
Br —The breath-holding test.

"This formula was first worked out by Flack[1] and modified by Woolham.[2,3] Dr. Woolham, in Manchester, and Dr. Simpson,[4] in Torquay, have tested large numbers of children. A control group from a high school for boys was tested, as the formula is thought to be correct only for boys between the ages of 9 and 19.

"Points of interest in this connection were—

(1) All children improved with practice.

(2) Nasal catarrh, slight sore throat, fatigue or recent infectious illness, although mild, gave a low figure in a child who had given a persistently high result.

(3) The psychological element was considerable. Two boys, judged by clinical methods to be particularly unfit, competed against one another and gave higher readings than many of the control group.

(4) Children showing evidence of past tuberculous infection (skin, glands or bone) always gave a low figure.

(5) In the Open-Air School group 21 per cent. gave a figure of 0·4 or over.

(6) In the group from a high school 80 per cent. gave a figure of 0·4 or over.

(7) In both these groups the figure for each child was an average of from four to six readings spread over four to six months. The first estimations were made in consecutive weeks and the final reading after an interval of several months.

"*Summary*:—

(1) Many of the children admitted to the Open-Air School show an amount of activity which suggests physiological fitness. Is their supposed ill-health due to some other factor than physical illness? Are some of these children, who show no definite clinical signs, examples of over-anxiety states due to maladjustment at school (or at home) or possibly dullness causing difficulty in keeping up with the average?

(2) The formula

$$\frac{\sqrt{Pr} \times Per \times Br}{1{,}000 \times (\text{Age in years})^{1\cdot807}}$$

$$\frac{}{4}$$

confirms on the whole the results obtained by other workers, but it is obvious from the improvement with practice and the effect of any infection present or recent—even so mild as to escape notice except on inquiry—that one observation is useless to pick out the subnormal child; hence it is not of practical value for the purpose of the present investigation."

REFERENCES.

[1]Flack, Martin. *The Medical Problems of Flying*, Medical Research Council, Special Report Series, No. 53.

[2]Woolham, J. G. *The Mathematical Assessment of Physical Fitness* and *The Fitness of Schoolboys*. Annual Reports of School Medical Officer, Manchester, 1923-27.

[3]Woolham, J. G. and Honeyburne, W. R. *The Fitness of Schoolboys*. Annual Report of School Medical Officer, Manchester, 1928.

[4]Simpson, J. V. A. *Schoolboys and Rowing, The Assessment of Physical Fitness* and *The Measurement of Physiological Efficiency*. Annual Reports of School Medical Officer, Torquay, 1925, 1927 and 1929 respectively.

Mentally Defective Children.—The number of known mentally defective children of special school age (7-16 years) at 31st December, 1930, who were not transferable to the Mental Deficiency Authority, was 133, of whom 123 were in attendance at the special day school.

During the year, 106 children were specially examined or re-examined for suspected mental deficiency. Of these, 4 were regarded as normal, 47 were found to be dull and backward, 35 were certified as feebleminded and suitable for education in a special school, 6 were found to be neurotic and unstable, 2 to be physically defective, and 12 (2 feebleminded, 8 imbeciles and 2 idiots) were transferred to the care of the Mental Deficiency Authority. In addition to the 12 cases mentioned, 17 feebleminded children formerly attending the special day school were notified to the Mental Deficiency Authority on or before attaining the age of 16 years.

The following is a classification, in a form prescribed by the Board of Education, of the 29 cases notified during 1930 to the Mental Deficiency Authority :—

Diagnosis	Boys	Girls	Totals
1. (i) Children incapable of receiving benefit or further benefit from instruction in a Special School :—			
(*a*) Idiots	...	2	2
(*b*) Imbeciles	2	6	8
(*c*) Others	2	...	2
(ii) Children unable to be instructed in a Special School without detriment to the interests of other children :—			
(*a*) Moral defectives	...	...	...
(*b*) Others	...	...	...
2. Feebleminded children notified on leaving a Special School on or before attaining the age of 16	10	7	17
3. Feebleminded children notified under Article 3 of the 1928 Regulations, *i.e.*, " special circumstances " cases	...	...	...
4. Children who in addition to being mentally defective were blind or deaf	...	...	...
Totals	14	15	29

The numbers of children of special school age known to be mentally defective at 31st December, 1930, whether under the Education Authority or the Mental Deficiency Authority, were as follows :—

Diagnosis	Education Authority Cases			Mental Deficiency Authority Cases		Totals
	Attending Special Day School	In Special Residential Schools	Not attending Special School	In Institutions or under Guardianship	Under Supervision at Home	
Feebleminded	123	2	8*	2	27	162
Imbeciles	...	...	...	12	48	60
Idiots	...	...	...	2	15	17
Unclassified	...	...	...	...	3	3
Totals	123	2	8*	16	93	242

* Two attending private schools and 6 absent from the Special School pending arrangements for their admission or because of illness or physical defect.

Of the cases under supervision at home, referred to in the above table, 13 (1 feebleminded, 10 imbeciles and 2 idiots) were attending the Occupation Centre.

Blind Children.—The number of blind children of special school age (including partially blind children suitable for training in a school for the totally blind) at the end of the year was 19, all except one of whom were in attendance at the School for Children with Defective Sight.

Partially Blind Children.—The number of school children of special school age suitable for training in a school or class for the partially blind at the end of 1930 was 59. Forty-two of these were attending the School for Children with Defective Sight, where special provision has been made for the education of partially blind children. Of the 42 children attending the special classes, 21 suffer from myopia, the remaining 21 having other forms of defective vision. Of the 17 partially blind children not attending the special classes, 11 suffer from myopia and 6 from other defects of vision.

Deaf Children.—The number of deaf children of special school age at the end of the year was 22, 20 of them being in attendance at the Oral School for Deaf Children.

Partially Deaf Children.—Fourteen children attending ordinary elementary schools who might be suitable for training in a school or class for the partially deaf were known to the department at the end of the year.

Stammerers.—The number of school children known to the department as stammerers at 31st December, 1930, was 332 (258 boys and 74 girls). The special classes for the cure of stammering, which were inaugurated in September, 1927, have been continued with success during the year. The scholars attending are divided into five classes, each meeting for one hour a day on two days weekly. To the end of the year 161 children (143 boys and 18 girls) had attended the classes for varying periods. The title of the special classes has been changed from "Classes for Stammerers" to "Classes for Speech Training," the latter being regarded as of less suggestive significance than the former. A report on the classes by the instructress is given below.

Report by Miss Hester Rosser, Instructress of the Classes for Speech Training.

"In January, 1930, the classes opened with 41 children (32 boys and 9 girls) in attendance. During the year, 34 new cases (26 boys and 8 girls) were admitted

and 4 boys were readmitted for further instruction, making a total of 79 on the register during the year. Thirty-four children were discharged, and these may be classified as follows :—

	Duration of Attendance in Terms							Totals
	7	6	5	4	3	2	1 or less	
Provisionally cured	...	1	5	...	6	2	1	15
Very much improved	...	4	6	1	2	...	1	14*
Slightly improved	...	...	...	...	...	1	1	2†
Unsuitable for further treatment ...	1	...	...	...	...	...	...	1
Withdrawn by parents	...	...	...	...	...	...	2	2‡
Totals	1	5	11	1	8	3	5	34

* Five of these would have continued to attend had they not left school.
† These would have continued to attend had they not left school.
‡ One of these had improved so much that further attendance was unnecessary.

" It is gratifying to note that only one child in need of treatment was withdrawn owing to parental opposition or lack of co-operation.

" The total number of children discharged is slightly lower than in each of the two previous years. This is partly due to the fact that more children about the ages of 9 and 10 are now in attendance and are therefore able to remain longer in the classes. From observation of the progress made after leaving the classes, it is considered wiser to keep children longer in order to establish the improvement made, provided they stay willingly. If, however, a child has lost interest it is better to discharge him and, if necessary, readmit him later. This course has proved successful in dealing with a boy from a secondary school who is now making surer and more intelligent progress.

" As one gains experience in the treatment of stammerers, the psychological aspect of the problem grows in importance, and an increasing need is felt for specialised psychological help in the more severe cases which do not yield readily to methods of suggestion.

" The half-yearly reports made by head teachers on scholars who have left the classes but still attend school show almost the same results as in 1929, as will be seen from the following table :—

Cured	8
Almost cured	4
Much improved	17
Improved	13
Not improved	9*
Slightly relapsed	1
Considerably relapsed	—†
Total	52

" In almost all cases it is felt that the teachers will now supplement the work of the classes with more enthusiasm and understanding, but the marked progress of the children in the classes as compared with their progress in the ordinary schools suggests that there is still need of greater co-operation.

" In certain cases it has been considered necessary for a visit to be paid to a child's home, with satisfactory results.

" In view of the prevalent theory that stammering is associated with suppressed left-handedness, 43 children were tested in order to ascertain which hand they used for throwing in relation to the foot used for kicking and the leg on which they hopped.

* Four in 1929. † Four in 1929.

" The results of this investigation are shown in the following tabular statement :—

(1) Children who hopped on left foot			21*
(*a*) Threw with	Right hand		18
	Left hand		3
(*b*) Kicked with	Right foot		17
	Left foot		3
	Either foot		1
(2) Children who hopped on right foot			22
(*a*) Threw with	Right hand		20†
	Left hand		1
	Either hand		1
(*b*) Kicked with	Right foot		15
	Left foot		3
	Either foot		4

" It is doubtful whether the results are of much significance.

" Another experiment was made with a view to discovering how many of the children using their right hand for writing would take easily to the use of the left hand. Each child has done one exercise, using whichever hand is not generally employed. The three habitually left-handed children used their right hand more readily than the right-handed used their left. It is not yet possible to say whether, with practice, those of the latter, who showed fair capability with their left hand, would become equally good with the left as they now are with the right, and whether, if they did revert to the use of the left hand entirely, their speech would benefit, which is a theory sometimes put forward. A great deal more testing would be necessary before coming to a decision on this point, but opportunities for practising writing with the left hand will be given in the classes and the specimens kept for comparison.

" It has been possible to make after-care visits to the homes of ten boys who have left school. It may be said that two of these boys show promise of being completely cured, one having been discharged from the classes as ' provisionally cured ' and one as ' very much improved.' The conclusions with regard to the remaining eight boys may be summarised thus :—Of three who were discharged as ' provisionally cured,' two had slightly relapsed (although still very much improved) and one had completely relapsed. One who was discharged as ' very much improved ' had maintained a good standard and should improve further in time. One who was discharged as ' slightly improved ' had improved and may continue to improve as his life becomes more settled. Two boys who were withdrawn from the classes by their parents had not improved at all, and were hindered by this defect from obtaining suitable employment. One who was discharged as being ' unsuitable for further treatment ' had been cured by living in congenial surroundings, and had realised his ambition of joining the army. At the time of the investigation these ten boys were employed as follows :—

Motor mechanic	1
Apprentice house decorator	1
Errand boy	1
In a bakehouse	1
In a saleroom (odd jobs)	1
Drummer boy	1
In a packing room	2
Page boy at a cinema	1
In a commercial school	1
Total	10

* Including 4 out of 8 girls.

† Two of these threw with the right hand and kicked with the left foot.

" Information was also obtained of a girl who was discharged as ' very much improved.' She seemed to have maintained that standard, but it is even less possible than usual to predict any definite result in this case."

VIII.—COMMUNICABLE DISEASES.

The numbers of school children notified during the year as suffering from various communicable diseases were as follows :—

Smallpox	3
Scarlet fever	406
Diphtheria	480
Enteric fever	1
Pneumonia	24
Erysipelas	3
Tuberculosis—Respiratory	19
,, —Other forms	34
Chickenpox	961

The following cases of non-notifiable communicable diseases were intimated by head teachers or school attendance officers, or were otherwise ascertained :—

Measles	833
Rubella...	38
Whooping cough	422
Mumps	20

Vaccinal State of School Population.—The following table shows the vaccinal state of 13,982 children and young persons (elementary, secondary and high schools) inspected during 1930. The proportion vaccinated was 57·4 per cent., compared with 56·4 in 1929. During recent years the highest proportion of all children inspected at routine inspections found to be vaccinated was 66·5 per cent. in 1924.

Age—Years	Vaccinated	Unvaccinated	Totals	Percentage Vaccinated
3	181	141	322	56·2
4	679	552	1,231	55·2
5	786	743	1,529	51·4
6	316	276	592	53·4
7	118	104	222	53·2
8	454	363	817	55·6
9	2,839	2,208	5,047	56·3
10	286	199	485	59·0
11	146	78	224	65·2
12	1,169	724	1,893	61·8
13	537	314	851	63·1
14	99	49	148	66·2
15	168	98	266	63·2
16	173	72	245	70·6
17	61	27	88	69·3
18	16	3	19	84·2
19	1	2	3	33·3
Totals ...	8,029	5,953	13,982	57·4

IX.—"FOLLOWING UP" AND THE WORK OF SCHOOL NURSES.

Following Up.—The number of new cases visited by the school nurses was 6,949, and the total number of visits made was 9,530, which were distributed as follows :—

	First Visits	Revisits	Totals
Defects of Vision	1,313	479	1,792
„ „ Teeth	1,657	528	2,185
„ „ Ear, Nose and Throat	1,462	663	2,125
Other Defects	2,517	911	3,428
Totals	6,949	2,581	9,530

Cleanliness Surveys.— The nurses paid 358 special visits to schools, making 45,713 examinations of children for uncleanliness. The number of children found to be harbouring vermin was 235, and 2,691 were found to have nits only. The number of children previously found unclean who were re-examined was 1,666 ; of these, 82 were found to be free from vermin and 543 to be free from vermin and nits. The proportion found to be verminous was 0·5 per cent., as compared with 0·3 per cent. in 1929. The improvement in the cleanliness of children's heads during recent years is highly satisfactory. Since 1924 the proportion found in a verminous condition has dropped from 3·8 to 0·3 per cent. in 1929 and 0·5 per cent. in 1930.

Other Work of School Nurses.—The school nurses have, as usual, rendered useful service in assisting medical officers at routine and special inspections and in carrying out their school clinic duties, which comprise the treatment of minor ailments, assisting medical officers at the special clinics for the treatment of ear, nose and throat diseases, defective vision, and in the X-ray treatment of ringworm. Nursing assistance has also been rendered to the school dentists during the treatment of children under anæsthetics. In certain instances the nurses have themselves cleansed verminous children and children suffering from scabies at the cleansing station, and during 1930 the number of individual children dealt with in this way was 78, the number of baths given being 131.

X.—MEDICAL TREATMENT, ETC.

Arrangements have been made for medical and other treatment of school children at school clinics as follows :—

(i) Treatment of minor ailments.
(ii) X-ray treatment of ringworm of the scalp.
(iii) Zinc ionisation for otorrhœa.
(iv) Operative treatment of nose and throat defects.
(v) Correction of errors of refraction.
(vi) Orthopædic treatment.
(vii) Dental treatment.

Minor Ailments.—Table IV, Group I, in the Appendix gives details of the treatment of minor ailments (skin diseases, minor eye and ear defects, etc.), from which it will be seen that altogether 1,605 such defects were treated at the school clinics, as compared with 1,408 in 1929.

The nurses of the Queen's Institute of District Nursing have, as usual, rendered useful assistance in the treatment of minor ailments. One hundred and seventy-four

cases were referred to them for treatment, and they paid 3,416 visits to the homes of children to administer treatment. Details of this work are given below :—

Disease or Defect	Cases Carried over from 1929		Cases Referred for Treatment during 1930		Totals	
	Cases	Visits	Cases	Visits	Cases	Visits
Skin :—						
Impetigo	4	42	63	1,215	67	1,257
Other Skin Diseases	1	28	9	214	10	242
Minor Eye Defects	...	...	10	575	10	575
Minor Ear Defects	...	...	7	154	7	154
Miscellaneous	1	2	85	1,186	86	1,188
Totals	6	72	174	3,344	180	3,416

First-Aid Outfits.— To enable teachers to render first aid in the many minor accidents which occur at schools, first-aid outfits, in metal boxes, are provided. New supplies of dressings, etc., required to replenish the outfits are supplied by the department on the application of teachers.

Ringworm.—One hundred and sixty-four cases of ringworm were treated by or under the supervision of the medical staff of the department. Of this number, 64 were cases of ringworm of the scalp, 21 of whom were treated by X-rays. A brief report by the medical officer who undertakes the treatment of ringworm of the scalp by X-rays is given below.

Report by Dr. C. W. Anderson on X-ray Treatment of Ringworm of the Scalp.

" During 1930, 21 cases of ringworm of the scalp received treatment by X-rays, and a complete cure was obtained in 20 cases. The following is a note on the case in which the result was less satisfactory :—

D.B., aged 6 years. One infected area on left parietal region. Partial irradiation of scalp carried out. No attempt made by parents to assist epilation. Spread of infection to surrounding areas occurred.

" The average period of exclusion from school after X-ray treatment of the 20 cases in which a cure was obtained was found to be 29 days. Details of the exclusion periods in the series of cases are given in the following table :—

Number of days of exclusion from school after X-ray treatment	Number of Cases	Percentage
15 — 20	2	10
21 — 25	2	10
26 — 30	8	40
31 — 35	6	30
36 — 40	2	10
Total ...	20	100

" Partial treatment was carried out in 10 of the cases. The ages of the patients treated varied from 5 to 11 years.

" X-ray treatment was contra-indicated in a number of cases of ringworm of the scalp who attended the clinic during the year, owing to the presence of acute inflammation and, in some cases, superimposed impetigo. This accounts for the reduction in the number of cases treated by X-rays during the year. It has been found that the cases showing a considerable amount of inflammatory reaction often result in cure of the ringworm in a comparatively short time."

Radiography.—In addition to the treatment of ringworm of the scalp, the X-ray apparatus is used for radiography, which is of great assistance to the medical officers and dentists in connection with the work of the clinics. The X-ray apparatus is used both for school children and for cases referred from the maternity and child welfare centres, the cost being apportioned between the two services. A note on the radiographical work done during the year is given below :—

Note by Dr. C. W. Anderson on General and Dental Radiography.

"The number of cases referred for radiography showed a marked increase over that for the previous year. One hundred and thirty-three cases were referred from the maternity and child welfare centres, as compared with 80 for the year 1929. The number of cases referred from the school clinics was 97, thus making a total of 230 individual cases.

"The number of actual radiograms taken was 353.

"The following table shows the sources from which the cases were referred and the parts requiring X-ray examination :—

	School Medical Service Cases	Maternity and Child Welfare Cases	Totals
Teeth	4	...	4
Chest	3	2	5
Spine	27	...	27
Shoulder	2	...	2
Arm	2	6	8
Elbow	11	1	12
Wrist	1	121	122
Hand	7	6	13
Hip ...	11	12	23
Thigh	2	1	3
Knee	8	5	13
Leg ...	7	2	9
Foot	14	9	23
Skull	4	2	6
Heart	1	...	1
Totals	104	167	271

"One session a week is devoted to radiography, and an average of five patients attend per session."

Visual Defects.—The record of treatment of visual defects is shown in Table IV, Group II (*a*) and (*b*), in the Appendix. Altogether, 2,056 children were dealt with at the clinics, of whom 1,776 required examination for errors of refraction. The examination of 1,485 was completed during the year, spectacles being prescribed in 1,336 instances, and by the end of the year 1,211 children were known to have obtained them. The number of children examined for defects other than errors of refraction was 178, and appropriate treatment was given in each case. In addition, 34 children examined for errors of refraction were also treated for other eye defects. Thirty-seven children for whom spectacles were prescribed in 1929 obtained them in 1930.

The following table, prepared by Dr. Sheasby, showing the visual diseases and defects found in children treated at the special clinic, amplifies the information given in the tables contained in the Appendix :—

Diseases or Defects	Boys	Girls	Totals
Squint	105	100	205
Errors of refraction—			
Hypermetropia	244	321	565
Myopia	61	65	126
Astigmatism—			
Hypermetropic	226	294	520
Myopic	60	73	133
Mixed	60	81	141
Conjunctivitis	40	47	87
Phlyctenular conjunctivitis	4	12	16
Blepharitis	41	47	88
Cataract—Congenital	3	4	7
Optic neuritis and choroiditis	...	1	1
Keratitis	9	11	20
Nebulæ	17	21	38
Leucoma adhærens	1	1	2
Corneal ulcer	2	5	7
Nystagmus	5	8	13
Injury to eye	1	...	1
Meibomian cyst	2	...	2
Cellulitis of eyelid	2	3	5
Iritis	...	1	1
Ptosis	2	1	3
Persistent pupillary membrane	2	...	2
Foreign body	1	...	1
Sebaceous cyst	1	2	3
Dacryocystitis	1	...	1
Epicanthus	1	...	1
Lenticular opacities	...	1	1
Optic atrophy	...	1	1
Ectropia	...	1	1
Dermoid cyst	1	...	1
Aniridia	...	1	1
Totals	892	1,102	1,994

Ear, Nose and Throat Defects.—Particulars of operative and other forms of treatment of ear, nose and throat defects carried out at the clinics are given in the Appendix, Table IV, Group III (*a*) and (*b*), from which it will be seen that 1,709 nose and throat cases were examined, and that 826 received operative treatment, 73 operative and other forms of treatment, and 433 other forms of treatment only. The number of cases of serious ear defects dealt with was 300, of whom 268 received appropriate treatment.

Crippling Defects and Orthopædics.—The number of non-tuberculous crippled children of school age known to the department at the end of the year was 298. Of these, 279 were attending elementary schools, 4 were at residential schools, while 15 were at no school or institution.

The following is a summary of the work carried out at the orthopædic clinic during 1930 :—

	Children of School Age.
Consultation Clinic :—	
Examined for the first time	319
Recommended for treatment for first time	209
Previously treated, recommended for additional treatment	127

	Children of School Age.
Recommendations for :—	
Treatment in Hospital	50
Treatment at Clinic (Special and Routine)	146
Appliances	31
Alterations to appliances	5
Special boots	5
Alterations to boots	74
Other forms of treatment	58
Treated at Clinic for first time	13
Attendances at Clinic	973
Routine treatment (massage, electricity, exercises, etc.) :—	
Treated at Clinic for first time	109
Attendances for routine treatment ...	3,328

The following statement relates to treatment at and provision of appliances, etc., through the Prince of Wales' Hospital, Cardiff, during 1930 :—

	Children of School Age.
Hospital treatment :—	
Admitted to Prince of Wales' Hospital—	
(*a*) Day cases	3
(*b*) Other cases	42
Under treatment at Prince of Wales' Hospital at end of 1930	3
On Prince of Wales' Hospital waiting list at end of 1930—	
(*a*) Day cases	—
(*b*) Other cases	28
Other treatment or provision (including appliances, etc., provided following hospital treatment)—	
Appliances provided	59
Appliances altered	17
Special boots provided	16
Alterations to boots	102
Other forms of treatment provided ...	22

The following report by Dr. Betenson deals with the work of the orthopædic scheme during 1930 as regards children under and of school age. The clinic exists both for school children and for those under school age, the Education Authority, of course, being responsible only for the cost of the former.

Report by Dr. W. F. W. Betenson on the Orthopædic Scheme.

" The number of ascertained cripples (including children suffering from minor crippling defects) under or of school age on the clinic register at the end of 1930 was as follows :—

Remaining on register at 1st January, 1930	1,015
Ascertained during the year	416
	1,431
Discharged during the year	329
Remaining on register at 31st December, 1930 ...	1,102

" The new cases seen during the year have been classified as shown in the two following tables :—

A.—Children under School Age.

	Slight	Moderate	Severe	Totals
Poliomyelitis	...	1	...	1
Spastic paralysis	...	1	...	1
Birth palsy	1	1	...	2
Rickets	14	6	1	21
Trauma	2	...	...	2
Tibial curves	17	3	...	20
Congenital malformations	12	2	2	16
Scoliosis	1	...	...	1
Postural defects	1	...	...	1
Flat foot	5	4	1	10
Other defects	21	3	...	24
Totals	74	21	4	99

" It is anticipated that these will be fit for education in elementary schools, with the exception of one case of birth palsy (classified as suitable for a special day school) and one spastic case, one of congenital malformation and one classified under other defects, who are expected to be unfit for education in any school.

B.—Children of School Age.

	Slight	Moderate	Severe	Total
Poliomyelitis	6	5	2	13
Spastic paralysis	...	1	...	1
Rickets	5	...	1	6
Tuberculosis—Non-active	...	2	...	2
Trauma	10	3	...	13
Congenital malformations	7	4	1	12
Scoliosis	18	2	3	23
Postural defects	120	29	8	157
Flat foot	21	5	3	29
Other defects	46	10	5	61
Totals	233	61	23	317

" These cases are fit for education in ordinary elementary schools, with the exception of 11 who have been classified for special school education. These 11 consist of one case of poliomyelitis, one of non-active tuberculosis, two of scoliosis and five classified under other defects ; also two cases of poliomyelitis (one of whom has left the district) who are fit only for a residential school. The remaining case, who is suitable for a residential school, has an interesting history, which may be worthy of mention. He is a boy of 10 years who has never been to school and is badly affected in both lower limbs and back. When first seen he could only limp very short distances with support. It appears that, having been originally classed as unfit for school at the age of five, he had been left alone by the authorities. Several visits paid to the house over a course of years were always met by the reply from his mother that ' he was away in London.' Finally he was brought to the clinic, seen by the specialist, fitted with irons and a back support and given treatment ; he now walks about unaided and is a different child. The boy has never been to London and there is no doubt that he had been deliberately concealed at every visit paid to the house and neglected. The mother now brings him to the clinic with the utmost regularity for treatment and is very grateful.

"An attempt has been made to reduce the large number of cases on the active list of the clinic, and many old cases have been discharged for various reasons. The reasons for discharge are set out in the following table :—

	Children under School Age	Children of School Age	Totals
Cured	16	31	47
Improved	3	40	43
Unlikely to benefit further	...	9	9
Left the district	3	9	12
Died	1	2	3
Over school age...	...	34	34
Other reasons	33	148	181
Totals	56	273	329

"Under the category of 'other reasons' are included cases who failed to attend or did so very irregularly, or did not require treatment, or were unsuitable for treatment, or could not benefit further, or were discharged to other clinics, or were admitted to the open-air school or to other special schools. Except for any of the above reasons, cases are now seen up to 16 years of age, and those who have left school but are not over 16 years can come to the clinic for advice respecting their orthopædic complaint.

"The following table shows the attendances at the specialist clinics :—

Month	Children under School Age	Children of School Age	Totals	Number Summoned to Attend
January	6	18	24	26
February	3	25	28	28
March	3	19	22	26
April	6	20	26	27
May	4	18	22	23
June	6	15	21	27
September	12	14	26	29
October	10	14	24	26
November	9	13	22	28
December	9	13	22	28
Totals	68	169	237	268

"The attendances for routine treatment were as follows :—

Attendances of children under school age ...	1,268
Attendances of children of school age	3,328
Total	4,596

"These attendances were made by 266 individual children, namely, 74 children under school age and 192 school children, of whom 54 children under school age and 109 school children (163 altogether) were treated for the first time during the year.

"The full complement of possible attendances for routine treatment and the percentage attendances for treatment work out as follows :—

	Attendances		
	Possible	Actual	Percentage
Children under school age	1,722	1,268	73·6
Children of school age	4,623	3,328	72·0
Totals	6,345	4,596	72·4

" The results of routine treatment are analysed in the following tables :—

A.—Children under School Age.

	Cured	Much Improved	Slightly Improved	Not Improved	Totals
Poliomyelitis	2	1	1	1	5
Spastic paralysis	...	...	3	1	4
Rickets	5	2	2	2	11
Talipes	3	2	3	1	9
Tibial curves	6	2	3	4	15
Other defects	2	6	3	19	30
Totals	18	13	15	28	74

B.—Children of School Age.

	Cured	Much Improved	Slightly Improved	Not Improved	Totals
Poliomyelitis	...	6	6	4	16
Spastic paralysis	...	5	6	1	12
Scoliosis	3	3	6	1	13
Postural defects	37	22	20	34	113
Other defects	4	9	12	13	38
Totals	44	45	50	53	192

" Excluding the 18 children under school age and the 44 school children cured, the remaining cases may be analysed as follows :—

	Children under School Age	Children of School Age	Totals
Refused to attend more than a few times	8	19	27
Irregular attendance for treatment (not due to illness) ...	10	29	39
Unable though willing to attend	5	7	12
No further benefit to be obtained	11	34	45
Admitted to Prince of Wales' Hospital for treatment ...	8	2	10
Left district	2	1	3
Left school	...	12	12
Unfit or unsuitable for treatment	...	4	4
Still continuing treatment	12	40	52
Totals	56	148	204

" The fact that 66 children failed to attend with sufficient frequency to benefit from treatment illustrates the extent to which the welfare of children may still be hampered by lack of appreciation of their needs on the part of parents."

Dental Inspection and Treatment.—Details of dental inspection and treatment are given in the Appendix (Table IV, Group IV). The total number of children inspected by the dentists was 24,625, of whom 19,244 were found to require treatment. The number of new cases treated was 5,409, and 4,583 were retreated as the result of periodical examination.

XI.—PROVISION OF MEALS.

The following statement of the meals given during each of the years 1921-30 has been supplied by the Superintendent School Attendance Officer :—

	Number of Canteens	Number of Meals Supplied	Average Weekly Number of Meals	Average Weekly Number of Children fed
1921	13	594,411	11,655	1,148
1922	12	182,094	3,501	434
1923	8	35,700	686	144
1924	7	27,378	526	110
1925	7	52,960	1,018	169
1926	8	119,572	2,299	292
1927	8	143,633	2,762	316
1928	11	225,415	4,335	479
1929	12	362,392	6,969	755
1930	12	359,732	6,918	744

In the annual report for 1927 Dr. Helena J. Webster reported on the food value of meals provided at the canteens for school children. During 1930 Dr. Dorothy M. James made a further special investigation into the arrangements for the feeding of school children and the food value of the meals given, the results of this investigation being contained in the following report :—

Report by Dr. Dorothy M. James on the School Canteens.

" There are twelve centres in Cardiff where free meals are provided for school children. Of these, six were visited twice, one three times and the remainder once each.

" In the majority of cases small restaurants or the kitchens of such restaurants are used as canteens. At one centre, viz., Elford Road, Ely, the rooms of an ordinary house are used and at two centres, viz., North Road and Cowbridge Road, Ely, large buildings at the end of the gardens are used for the purpose. The rooms are well heated, but in most cases are too small for the full number of children attending to be seated at the same time. Consequently, some children are kept waiting while others have their meals. The majority of children take about ten minutes over a meal, and as one child leaves another is allowed in, except at the canteen in North Road, where about half the number of children attending are admitted and served, and the other half are allowed in when the whole of the first half have finished, at about 12.40 p.m. On a wet day, however, an effort is made to cram all the children in together.

" At the larger canteens the children are seated at long trestle tables, sometimes covered with a cloth, and small tables are used at the smaller canteens.

" When the canteens were visited the children were orderly and there was no rushing about during the meal, except in one instance. At the centre in Penarth Road some of the children were not sitting down but were allowed to walk about with pieces of bread in their hands. In a few cases children were seen eating pieces of bread and jam or bread and margarine in the street outside the canteen.

" With regard to the meals provided, it is difficult to judge how much food each child is given. At most of the canteens second helpings are given if asked for, and at those where second helpings are not given the allowance is liberal ; in fact, in some cases more than the children can eat is given, and consequently some food is wasted.

" The meals are served hot, and consist largely of soup and vegetables, and are therefore on the whole very ' sloppy ' and the majority of children ' bolt ' their food.

" On the whole, having regard to the cost, the meals provided are quite good, but some are excessive in carbohydrate and deficient in protein and fat. I do

not think that at the present cost, except perhaps at the larger canteens, it would be possible to provide more meat. Even if a larger quantity of fresh meat were given, it would probably be wasted by a number of children, for I observed that several children left the meat unless it happened to be corned beef, and others asked for potatoes only. I was also told at two or three canteens that it was difficult to get some of the children to eat a cooked meal, and that they prefer to have corned beef and tinned salmon sandwiches.

" On the whole, the larger the canteen the better are the meals provided.

" The following tables show the meals provided on the days the canteens were visited. The quantities stated are based, where possible, on the total quantity of each article of food bought for the day. The food values of such articles as soup and rice pudding are taken from Dr. Webster's report on the subject (1927).

CANTEEN A (50 children).

	Calories	Protein (gm)	Carbohydrates (gm)	Fat (gm)
Beef, 2–4 oz.	125	15·58	...	5·0
Potatoes, 4 oz.	108	2	18·2	...
Peas, 3 oz.	108	7·6	18	0·5
Bread, 3 oz.	198	6	41·1	0·2
Total	539	31·18	77·3	5·7
Percentage ...	...	27·3	67·7	5·0

CANTEEN B (25 children).

	Calories	Protein (gm)	Carbohydrates (gm)	Fat (gm)
Corned Beef, ¼ oz., and broth ...	12·5	1·7	...	0·5
Potatoes, 6 oz.	162	3	27·3	...
Bread, 3 oz.	198	6	41·1	0·25
Margarine, ¼ oz.	56	0·02	...	6·25
Total	428·5	10·72	68·4	7·00
Percentage ...	...	12·1	79·5	8·4

CANTEEN C (100 children).

	Calories	Protein (gm)	Carbohydrates (gm)	Fat (gm)
Meat, 1 oz.	51	6	...	3
Onions, 2 oz.	20	1	4	...
Potatoes, 6 oz.	162	3	27·3	...
Bread, 3 oz.	198	6	41·1	0·2
Butter, 1 oz.	225	...	...	25·0
Bun, 2 oz.	138	4	28·6	0·4
Total	794	20·0	101·0	28·6
Percentage ...	...	13·7	69·1	17·2

CANTEEN D (50 children).

	Calories	Protein (gm)	Carbohydrates (gm)	Fat (gm)
Potatoes, 4 oz.	108	2	18·2	...
Soup, 10 oz.	476	12·6	30·4	8·6
Bread, 3 oz.	198	6	41·1	0·2
Total	782	20·6	89·7	8·8
Percentage ...	...	17·3	75·3	7·4

CANTEEN E (25 children).

	Calories	Protein (gm)	Carbohydrates (gm)	Fat (gm)
(1) Peas, 3 oz.	108	7·6	18·0	0·5
Potatoes, 4 oz.	108	2·0	18·2	...
Beef, 2 oz.	102	12·0	...	6·0
Total	318	21·6	36·2	6·5
Percentage ...	...	33·1	58·1	8·8
(2) Tinned salmon, 2 oz.	100	8·4	...	6·4
Bread, 3 oz.	198	6·0	41·1	0·2
Margarine, ¼ oz.	56	0·02	...	6·0
Cocoa	81	1·46	11·5	0·31
Apple-tart crust, 1½ oz. ...	230	3·0	22·6	12·7
Apple, 1 oz.	25	2	4·0	0·1
Total	690	20·88	79·2	25·71
Percentage ...	...	16·3	62·0	21·7

CANTEEN F (104 children).

	Calories	Protein (gm)	Carbohydrates (gm)	Fat (gm)
(1) Rice pudding	36·8	0·8	8·02	0·08
Potatoes, 4 oz.	108	2·0	18·2	...
Stew :—				
Carrots, 1 oz.	10	0·5	2.0	...
Onions, 1 oz.	10	0·5	2·0	...
Mutton, 2 oz.	166	11·4	...	4·6
Total	330·8	15·2	30·22	4·68
Percentage ...	...	33·1	63·4	3·5

(2) Second visit.—Potatoes, rissoles (meat negligible) and macaroni pudding (about 3 oz.).

Canteen G (60 children).

	Calories	Protein (gm)	Carbohydrates (gm)	Fat (gm)
(1) Peas, 2 oz.	50	4·0	8·0	0·2
Potatoes, 4 oz.	108	2·0	18·2	...
Onions, 1 oz.	10	0·5	2·0	...
Corned beef, ½ oz.	25	3·4	...	1·0
Bread, 3 oz.	198	6·0	41·1	0·2
Butter, ⅛ oz.	28	...	...	3·1
Total	419	15·9	69·3	4·5
Percentage ...	...	17·9	78·1	4·0
(2) Soup, 10 oz.	476	12·6	30·4	8·6
Bread, 3 oz.	198	6·0	41·1	0·2
Butter, ⅛ oz.	28	...	...	3·1
Corned beef, 2 oz.	100	13·6	...	4·0
Total	802	32·2	71·5	15·9
Percentage ...	...	26·9	59·8	13·3

Canteen H (55 children).

	Calories	Protein (gm)	Carbohydrates (gm)	Fat (gm)
(1) Pasties :—				
Meat, 3 oz.	249	17·1	...	6·9
Crust, 2 oz.	308	4·0	30·2	17·0
Potatoes, 4 oz.	108	2	18·2	...
Bread, 3 oz.	198	6	41·1	0·2
Total	863	29·1	89·5	24·1
Percentage ...	...	13·4	62·8	23·8
(2) Soup, 10 oz.	476	12·6	30·4	8·6
Rice, 12 oz.	221	4·8	48·1	0·5
Bread 3 oz.	198	6·0	41·1	0·2
Total	895	23·4	119·6	9·3
Percentage ...	...	15·3	78·5	6·2
(3) Rice, 12 oz.	221	4·8	48·1	0·5
Potatoes, 6 oz.	168	6·0	36·0	...
Bread, 3 oz.	198	6	41·1	0·2
Butter, ¼ oz.	56·25	...	...	6·25
Total	643·25	16·8	125·2	6·95
Percentage ...	...	11·3	84·0	4·7

CANTEEN J (120 children).

	Calories	Protein (gm)	Carbohydrates (gm)	Fat (gm)
(1) Fried Egg	78	6	...	6
Bread, 3 oz.	198	6	41·1	0·2
Margarine, ½ oz.	112	0·04	...	12
Cup of tea	...	...	...	...
Total	388	12·04	41·1	18·2
Percentage ...	...	16·9	57·7	25·4
(2) Peas, 2 oz.	50	4	8	0·2
Potatoes, 6 oz.	168	6	36	...
Bread, 3 oz.	198	6	41·1	0·2
Total	416	16	85·1	0·4
Percentage ...	...	15·8	83·8	0·4
(3) Tinned Salmon, 2 oz.	100	8·4	...	6·4
Bread, 3 oz.	198	6	41·1	0·2
Margarine, ¼ oz.	56	0·02	...	6
Cheese, 1 oz.	122	8	0·1	10
Cocoa, 12 oz.	101	1·75	13·8	2·77
Total	577	24·17	55·0	25·37
Percentage ...	...	23·1	52·9	24·0

CANTEEN K (63 children).

Hash (corned beef, 1 oz., with mutton broth), bread, potatoes and a slice of Madeira cake.

CANTEEN L (25 children).

Faggots (¼ oz.), peas (2 oz.), potatoes (about 4 oz.), bread (4 oz.) and margarine (½ oz.).

"According to Robert Hutchinson (*Food and the Principles of Dietetics*), a man doing moderate muscular work requires about 3,000 calories per day, that is, 450 grams of carbohydrate (72 per cent.), 100 grams of protein (16 per cent.) and 75 grams of fat (12 per cent.). The nutritive ratio is 1 to 5·3 (*i.e.*, proportion in weight of protein to carbohydrate and fat). A child from 6 to 10 years requires 0·6 of the above, *i.e.*, 1,800 calories per day, but the nutritive ratio should be 1 to 4·3. Therefore a child of this age requires 255 grams of carbohydrate (68 per cent.), 75 grams of protein (20 per cent.) and 45 grams of fat (12 per cent.). A child from 10 to 14 years requires 0·83 of that required by an adult, *i.e.*, 2,500 calories per day. Judged by the above standard, ten of the meals given were deficient in protein, seven excessive in carbohydrate and six deficient in fat.

The breakfast supplied at CANTEEN J was as follows :—

	Calories	Protein (gm)	Carbohydrate (gm)	Fat (gm)
Bread, 3½ oz.	214	7·5	51·1	0·25
Butter, $\frac{5}{10}$ oz.	67·5	...	...	7·5
Rolled Oats, 1 oz.	108	4·6	18	0·4
Cocoa, 12 oz.	101	1·75	13·8	2·77
Total	490·5	13·85	82·9	10·92
Percentage ...	...	13·0	76·8	10·2

" If this standard were adopted for breakfast in all canteens, the total meals (breakfast and dinner) would have a deficiency as above, but the actual proportion of fat would be slightly increased. The combined diet given which was poorest in fat contained only 4·4 per cent. fat. 78·9 carbohydrates and 16·7 proteins. If 1 oz. of cheese were substituted for 2 oz. of potatoes and ½ pint of milk added, then the proportion would be 23·4 per cent. proteins, 64·5 per cent. carbohydrates, 12·1 per cent. fat, which is satisfactory. The maximum amount of milk given per day is now about 1½ oz. (except at Bridge Street, where about 8 oz. are used and 2 oz. of butter with porridge) and of butter or margarine about 1¾ oz. In cases where proteins and fat are deficient, the addition of milk and cheese, or cheese, butter, dripping or margarine, and skimmed milk to the diet would make up the deficiency. I think that the introduction of plain suet pudding, served with jam or treacle, instead of rice (unless more milk is used for the rice pudding) on days when potatoes and bread form the chief part of the meal would increase the proportion of protein and fat. Bacon might sometimes be used instead of corned beef, for if 3 oz. of streaky bacon were substituted for 3 oz. of corned beef, the protein would be only slightly less, while the fat would be increased by 39 grams and calorie value would be much greater, *i.e.*, 465 as against 150.

" The known vitamins are A, B, C, D, E, F and G. Vitamin G is the latest discovered and is growth producing. Doubt has been recently cast on the existence of vitamin F. On the whole, the vitamin content of the meals provided is rather low. Of the different foods comprising the meals, vitamins A and D are contained in butter and milk, but the amount of these provided is very small. Vitamins A, B and C are present in dried peas, vitamin B in bread, vitamins B and C in potatoes and vitamins B and D in oatmeal. By the addition of a larger quantity of milk, vitamins A, B, C, D and G are included. A further addition of butter or some special brand of margarine and cheese also ensure a good supply of vitamins A and D. Vitamins B and C are chiefly contained in fruit and vegetables. The amount of vitamin C depends largely on the duration and method of cooking. Oranges, tinned tomatoes, cabbage, spinach and young carrots could be substituted for a portion of the potatoes or rice. The use of these vegetables would also ensure a supply of mineral salts as well as providing a little variation in the diet. I do not think these substitutions should greatly alter the cost.

" Cathcart and Murray, in their inquiry into the diets of 154 families of St. Andrews*, show that there is a marked difference between the protein and fat contents and those given in the standard diets of Voit and Rubner. The following is the table showing the comparison between the two standard diets and those of the inquiry mentioned.

	Protein		Fat		Carbohydrate	
	Gm.	Per cent. Total Calories	Gm.	Per cent. Total Calories	Gm.	Per cent. Total Calories
Voit (Moderate Work)	118	16	56	17	500	67
Rubner (Moderate Work)	127	17	52	16	509	67
Cathcart and Murray	89	11	119	35	411	54

* *Medical Research Council, Special Report Series*, No. 151, 1931.

"The point about the last diet is the comparative lowness in protein content and richness in fat.

"Cathcart and Murray give the actual diet taken by a girl of 8 of a labourer's family, protein 43·4 grams (per cent. total calories 11·37), fat 45·3 (per cent. total calories 26·91) and carbohydrate 235·6 grams (per cent. total calories 61·72).

"The following is the distribution of energy equivalent to the meals supplied at the school canteens in per cent. of total calories :—

Canteen	Meal	Protein	Carbohydrate	Fat
A.	...	25·2	64·6	10·2
B.	...	11·3	72·0	16·7
C.	...	11·9	53·2	34·9
D.	1	15·7	68·3	16·0
	2	15·7	68·3	16·0
E.	1	28·8	50·7	20·5
	2	15·6	47·1	37·3
F.	1	27·2	54·1	18·7
G.	1	16·6	72·3	11·1
	2	23·3	50·9	25·8
H.	1	16·9	31·4	51·7
	2	14·2	72·9	12·9
	3	10·6	79·3	10·1
J.	1	12·7	43·8	43·5
	2	15·7	83·4	0·9
	3	19·2	39·9	40·9
J.	Breakfast	10·9	65·7	23·4

"It will be seen from the above figures that 12 diets contain considerably less fat than those of the St. Andrews diets, and that while 14 contain a higher proportion of protein, in 6 of these the carbohydrate is also much higher.

"As previously suggested, the addition of milk and cheese to the diet containing the lowest proportion of fat would bring the percentage of total calories of fat up to 24.

"The diets are low in fat when compared with the average given by Professor Cathcart for Cardiff in 1928*. These values were :—

	Fat— Per cent. Total Calories.
Cardiff	33·3
Cardiff I. (under 9/- per man)	25·8
Cardiff II. (,, 12/- ,,)	31·4

"The average diet in Cardiff was therefore slightly lower in fat than that in St. Andrews."

XII.—PHYSICAL EDUCATION.

The organisation of physical education among girls attending the elementary schools is undertaken by Miss Maud M. Brown, Chief Organiser of Physical Education, but there is not an organiser of physical training of boys in the elementary schools, which is left to head teachers, who may arrange for properly organised games during school hours for the older scholars. A report on the work amongst girls attending elementary schools follows :—

Report of Miss Maud M. Brown, Chief Organiser of Physical Education.

"During 1930, 278 visits have been paid to girls, mixed, infants' and special schools, to swimming baths, playing fields and parks. Thirty teachers' classes have been held and 114 sessions have been given to the work of organisation.

* Annual Report for 1929 (page 105).

"*Teachers' Classes.*—Fourteen lessons for infants' and girls' teachers were held during the Spring term in preparation for the Cardiff Schools Musical Festival. A course of twelve lessons was held during the Autumn term on physical education in junior schools which was attended by 49 teachers.

"*Cardiff Schools Musical Festival.*—Good work was done in preparation for the second annual Cardiff Schools Musical Festival. The girls' schools that sent children to take part in the national dances were Adamsdown C., Allensbank C., Ely C., Lansdowne Road C., Ninian Park C., Viriamu Jones C., South Church Street C., St. Mary's R.C., St. Cuthbert's R.C. and St. Patrick's R.C. The infants' schools that took part in the nursery rhymes and dances were Marlborough Road C., South Church Street C., Llandaff N., St. Mary's Mission N., St. Alban's R.C., St. Cuthbert's R.C., St. David's R.C., St. Joseph's R.C. and St. Mary's R.C. The items given by both girls and infants were well received by crowded audiences at the four concerts.

"*Girls' Schools Organised Games Competitions.*—These competitions were held between Easter and August at Sophia Gardens Field. Girls from 23 schools took part, as follows:—Adamsdown C., Allensbank C., Ely C., Hawthorn C., Herbert Thompson C., Kitchener Road C., Lansdowne Road C., Llandaff C., Maindy C., Marlborough Road C., Radnor Road C., Severn Road C., South Church Street C., Splotlands C., Wood Street C., Canton N., Llandaff N., Metal Street N., St. John's N., Tredegarville N., St. Cuthbert's R.C., St. Francis' R.C. and St. Patrick's R.C.

Result of Net-ball Competition:—

School	Won	Lost	Drawn	Points
1st—Herbert Thompson C....	12	0	0	24
2nd—Adamsdown C.	10	2	0	20
3rd—Lansdowne Road C.	9	2	1	19
4th—St. Patrick's R.C	9	3	0	18
5th—Radnor Road C	6	4	2	14
6th—Splotlands C.	4	5	5	13
7th—Llandaff C.	4	4	4	12
8th—Severn Road C.	4	6	2	10
9th—Hawthorn C. (A.)	3	6	3	9
10th—St. Francis' R.C.	3	8	1	7
11th—Hawthorn C. (B.)	2	10	0	4
—South Church Street C.	2	10	0	4
13th—Wood Street C.	1	11	0	2

Final Match: Herbert Thompson C.—37 Goals (Holders of Net-ball Picture).
Adamsdown C.—6 Goals.

Result of Rounders Competition:—

School	Won	Lost	Drawn	Points
1st—Allensbank C.	10	0	0	20
2nd—Maindy C. (A.)	9	1	0	18
3rd—Herbert Thompson C....	8	2	0	16
4th—Canton N.	7	3	0	14
5th—St. Francis' R.C.	6	4	0	12
6th—Maindy C. (B.)	4	6	0	8
7th—St. John's N.	3	7	0	6
—Tredegarville N.	3	7	0	6
9th—Ely C.	2	8	0	4
—Radnor Road C.	2	8	0	4
11th—Hawthorn C.	1	9	0	2

Final Match: Allensbank C.—135 points (Holders of Frederick Evans Challenge Cup).
Maindy C. (A.)—76 points (Holders of Rounders Picture).

Result of Team Events (nine teams entered):—

1st —Tredegarville N. (Holders of Team Events Picture presented by Miss T. Warman.)	... Won 5 Finals	... 1st in 7 heats
2nd—Allensbank C. ...	... ,, 3 ,,	... ,, 7 ,,
3rd —Marlborough Road C. (2)	,, 2 ,,	... ,, 4 ,,
Kitchener Road C.	... ...	... ,, 1 heat
Llandaff N.	... ...	... ,, 1 ,,
Marlborough Road C. (1)	... ...	... ,, 1 ,,

" *Swimming*.—The fourth annual swimming gala was held at Splotlands Open-Air Baths on 15th July and 22nd July. The entry was larger than ever, being 1,036, 462 of whom were girls who had learnt to swim during the year. The points gained by each school were :—

School.	Points.
Allensbank C.	13
Eleanor Street C.	32
Grangetown C.	2
Hawthorn C.	31
Herbert Thompson C.	44
Kitchener Road C.	14
Radnor Road C.	24
Severn Road C.	7
Splotlands C.	29
Llandaff N.	18
St. John's N.	53
Tredegarville N.	33
St. David's R.C.	317

1st —St. David's R.C.—317 points—are the holders of the Swimming Picture.
2nd—St. John's N.—53 points.
3rd —Herbert Thompson—44 points.

" Mrs. Davies, Miss Valerie Davies and Miss Britton kindly acted as judges, and Miss Valerie Davies gave a splendid swimming and diving demonstration.

Particulars of Swimming Events :—

Event	School	Competitor
I.	1st —St. David's R.C.	E. Cooksley
	2nd—Radnor Road R.C.	N. Knight
	3rd —St. David's R.C.	A. Ryan
II.	1st —St. David's R.C.	R. Morros
	2nd—St. David's R.C.	I. Barry
	3rd —St. David's R.C.	E. Cooksley
V.	1st —St. John's N.	F. Gould
	2nd—St. David's R.C.	M. Kelleher
	3rd —St. David's R.C.	P. Healan
VI.	1st —St. John's N.	F. Gould
	2nd—St. John's N.	L. Jones
VIII.	1st —St. John's N.	F. Gould P. Gould
IX. (Best Dive)	St. John's N.	F. Gould

Event	School	Competitor
X.	1st —St. David's R.C. (1).	—
XI.	1st —Kitchener Road C.	G. Martin
	2nd—St. John's N.	F. Gould
	3rd—St. David's R.C.	J. Brice
XII.	1st —St. John's N.	F. Gould

"Swimming tests were taken in September, when one girl swam 2 miles, 14 girls swam 1 mile, 4 girls swam ½ mile, 6 girls swam ¼ mile, 20 girls swam 200 yards and 55 girls swam 100 yards.

" *Re-organisation.*—Under the re-organisation of elementary schools a report on provision for physical education was prepared, which included—

1. Accommodation at each school, *i.e.*, each new senior school should be provided with a gymnasium equipped with suitable apparatus.
2. Provision of playing fields (including secondary school provision). For senior schools three fields of approximately fifteen acres each, to serve the needs of 7,500 girls and 7,500 boys. For secondary schools two fields of ten acres each (one for girls and one for boys) giving two sessions each week for the eight secondary and high school departments.
3. School swimming baths.
4. Organisation and provision for play centres.
5. Marking of school playgrounds.
6. Additional administrative staff—
   (*a*) Male organiser.
   (*b*) Female assistant organiser.

" *Visit of H.R.H. The Prince of Wales.*—In connection with a display organised by the Cardiff Juvenile Welfare Council at Cardiff Arms Park on 21st May, on the occasion of the visit of H.R.H. The Prince of Wales, a very successful and pleasing demonstration of national and country dances was given by 1,280 children drawn from the following schools :—Adamsdown C., Allensbank C., Court Road C., Ely C., Grangetown C., Hawthorn C., Herbert Thompson C., Kitchener Road C., Lansdowne Road C., Llandaff C., Maindy C., Ninian Park C., Severn Road C., South Church Street C., Viriamu Jones C., Windsor Clive C., Wood Street C., St. Mary's N. (Bute Terrace), St. Albans' R.C., St. Cuthbert's R.C., St. David's R.C., St. Francis' R.C., St. Patrick's R.C., and St. Peter's R.C.

" *General.*—There is a growing interest in physical education for girls in the city schools. The head teachers have done much to help on the improvement, by giving more facilities to the children and by recognising the value of the work and the improvement shown in the happy response and good discipline of the girls who have had the advantage of more physical exercise. Much time and thought have been given to the preparation for the lessons by teachers who are specially interested in this subject on the curriculum. In most cases these teachers have very successfully prepared the girls for entry for one or more of the games competitions, swimming galas, and dancing for the Musical Festival and for the display at Cardiff Arms Park. These teachers realise the importance of education of the whole human being where mind and body receive due attention, they believe in a wide curriculum and that girls working for scholarships do better work because they have the advantage of a healthy body, good circulation, and a keen and proportioned interest in all sides of life as a result of the wise consideration given to all subjects. It will be a happy day for the Cardiff school girls when a daily lesson in physical education be arranged on the time table. 'Little and often' brings the best result, as it does in all other subjects."

XIII.—EMPLOYMENT OF CHILDREN AND YOUNG PERSONS.

During the year, 21 children (18 boys and 3 girls) who had left school were examined by medical officers of the department at the request of the Juvenile Employment (Education) Officer and reports were sent for his guidance.

The following report relating to the employment of children of school age and young persons has kindly been supplied by the Juvenile Employment (Education) Officer, Mr. Ben Williams :—

"A child under the age of 12 years cannot now be legally employed. The approximate number of child employees under the old conditions was 2,000. They were from 10 years of age and upwards, and worked anything up to 36 hours a week, before, between and after school hours.

"The hawking of newspapers is illegal except for boys over the age of 15 years. Boys between 15 and 16 years need a licence for this work.

"Fifteen hours per week is the maximum number of hours which a child may be employed under the provisions of the bye-laws made under the Employment of Children Act, 1903, as amended by the Education Act, 1918, except in the delivery of milk and newspapers, where two hours' employment is allowed on Sunday mornings, which makes a maximum of 17 hours per week for these two employments.

Ages of School Children Employed out of School Hours.

	12 years	13 years	14 years	Totals
Boys	55	118	99	272
Girls	...	...	...	...
Totals	55	118	99	272

Nature of Employment of School Children Employed out of School Hours.

Nature of Employment	Boys	Girls	Totals
Assisting in shops	2	...	2
Delivery of bread	17	...	17
Delivery of milk	21	...	21
Errands	133	...	133
Miscellaneous	99	...	99
Totals	272	...	272

Number of Hours of Employment per Week (including Saturday and Sunday) of School Children Employed out of School Hours.

Number of Hours per Week	Boys	Girls	Totals
1	...	...	...
2	5	...	5
3	...	...	...
4	...	...	...
5	37	...	37
6	...	...	...
7	16	...	16
8	2	...	2
9	1	...	1
10	5	...	5
11	...	...	...
12	43	...	43
13	27	...	27
14	23	...	23
15	81	...	81
16	7	...	7
17	25	...	25
Totals	272	...	272

"*Entertainment Section.*—The number of children licensed by the Education Committee and examined by medical officers of the School Medical Officer's department during 1930 was 32, and 40 children visited Cardiff on licence from other areas."

XIV.—MEDICAL EXAMINATION OF TEACHERS.

All teachers newly appointed under the Education Committee and other teachers sent for special reasons are examined by the medical staff, and appropriate reports are forwarded to the Director of Education. During the year, 40 teachers (12 males and 28 females) were examined.

APPENDIX.

YEAR ENDED 31ST DECEMBER, 1930.

TABLE I.

RETURN OF MEDICAL INSPECTIONS.

A.—ROUTINE MEDICAL INSPECTIONS.

	Elementary Schools			Secondary and High Schools		
	Boys	Girls	Totals	Boys	Girls	Totals
Entrants	2,017	1,885	3,902	...	...	...
Intermediates	3,050	3,196	6,246	...	...	...
Leavers	1,177	1,177	2,354	...	...	...
Other Routine Inspections ...	...	...	...	854	626	1,480
Totals	6,244	6,258	12,502	854	626	1,480

B.—SPECIAL INSPECTIONS.

		Elementary Schools			Secondary and High Schools		
		Boys	Girls	Totals	Boys	Girls	Totals
Special Inspections	At School ...	311	435	746	1	14	15
	At School Clinic	2,371	2,495	4,866	14	12	26
	Totals	2,682	2,930	5,612	15	26	41
Re-inspections	At School ...	1,181	1,248	2,429	...	...	...
	At School Clinic	2,856	3,304	6,160	25	23	48
	Totals	4,037	4,552	8,589	25	23	48

TABLE II.

A.—RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION.

Disease or Defect	Children Inspected at Routine Inspections				Children Inspected at Special Inspections			
	Elementary Schools		Secondary and High Schools		Elementary Schools		Secondary and High Schools	
	Requiring Treatment	To be kept under Observation	Requiring Treatment	To be kept under Observation	Requiring Treatment	To be kept under Observation	Requiring Treatment	To be kept under Observation
Malnutrition	42	63	...	2	64	10	...	...
Uncleanliness	96	1	1	...	34	...	...	...
Skin :—								
Ringworm :—								
Scalp	12	...	...	...	64	...	...	...
Body	12	...	...	1	99	...	...	...
Scabies	28	...	...	...	124	...	...	...
Impetigo	46	1	1	...	817	...	5	...
Other Diseases (Non-Tuberculous) ...	44	1	2	...	307	4	7	...

TABLE II. A—continued.

Disease or Defect	Children Inspected at Routine Inspections				Children Inspected at Special Inspections			
	Elementary Schools		Secondary and High Schools		Elementary Schools		Secondary and High Schools	
	Requiring Treatment	To be kept under Observation	Requiring Treatment	To be kept under Observation	Requiring Treatment	To be kept under Observation	Requiring Treatment	To be kept under Observation
Eye :—								
Blepharitis	32	3	1	...	47	...	...	...
Conjunctivitis	7	...	1	...	24	1	...	...
Keratitis	...	...	...	...	5	...	...	...
Corneal Opacities ...	1	...	...	...	6	...	...	...
Defective Vision (excluding Squint) ...	849	217	139	11	197	3	5	...
Squint	68	4	3	...	33	...	...	...
Other Conditions ...	16	...	1	1	24	4	1	...
Ear :—								
Defective Hearing ...	88	13	3	1	67	1	...	...
Otitis Media	95	9	2	...	160	1	...	...
Other Ear Diseases ...	36	1	5	...	47	...	...	...
Nose and Throat :—								
Enlarged Tonsils only	595	507	12	26	334	25	...	...
Adenoids only	72	22	3	...	64	...	...	...
Enlarged Tonsils and Adenoids	174	23	1	...	148	2	...	...
Other Conditions ...	75	15	7	...	95	11	...	...
Enlarged Cervical Glands (Non-Tuberculous) ...	9	20	2	2	57	3	1	...
Defective Speech	22	9	...	...	12	1	...	...
Teeth :—								
Dental Diseases ...	2,176	5	224	3	197	...	...	...
Heart and Circulation :—								
Heart Disease :—								
Organic	25	24	1	2	17	6	...	...
Functional	22	121	1	8	20	7	...	...
Anæmia	30	27	4	1	50	7	...	...
Lungs :—								
Bronchitis	50	36	...	...	38	9	1	...
Other Non-Tuberculous Diseases	28	212	1	11	59	33	...	1
Tuberculosis :—								
Pulmonary :—								
Definite	...	...	...	...	...	...	...	...
Suspected	3	4	...	...	6	...	...	...
Non-Pulmonary :—								
Glands	2	1	...	...	6	1	...	...
Spine	...	...	...	...	...	...	...	...
Hip	...	...	...	...	...	...	...	...
Other Bones and Joints	...	...	...	...	1	...	...	...
Skin	1	...	...	...	1	...	...	...
Other Forms ...	...	2	...	...	1	...	...	...
Nervous System :—								
Epilepsy	3	3	...	1	5	5	...	...
Chorea	7	3	...	...	46	7	...	...
Other Conditions ...	2	4	...	...	29	4	1	...
Deformities :—								
Rickets	1	1	...	...	1	...	...	...
Spinal Curvature ...	41	7	5	...	9	...	...	...
Other Forms ...	95	28	14	4	40	...	2	..
Other Defects and Diseases	310	208	24	21	586	218	11	4

TABLE II.

B.—NUMBER OF INDIVIDUAL CHILDREN FOUND AT ROUTINE AND SPECIAL INSPECTIONS TO REQUIRE TREATMENT (EXCLUDING UNCLEANLINESS AND DENTAL DISEASES).

	Elementary Schools			Secondary and High Schools		
	Number of Children		Percentage of Children found to require treatment	Number of Children		Percentage o Children found to require treatment
	Inspected	Found to require treatment		Inspected	Found to require treatment	
Entrants	3,902	627	16·1	...	...	...
Intermediates ...	6,246	1,320	21·1	...	...	...
Leavers	2,354	527	22·4	...	...	...
Others	...	...	...	1,480	208	14·1
Totals	12,502	2,474	19·8	1,480	208	14·1
Specials... ...	5,612	3,307	58·9	41	31	75·6
Grand totals ..	18,114	5,781	31·9	1,521	239	15·7

TABLE II.

C.—ENTRANTS: DISEASES AND DEFECTS FOUND TO REQUIRE TREATMENT OR TO BE KEPT UNDER OBSERVATION.

Diseases or Defects referred for Treatment or Observation. (1)	Diseases or Defects referred for Treatment or Observation.											
	Tuberculosis—Pulmonary (2)	Tuberculosis—Non-Pulmonary (3)	Heart Disease (4)	Anæmia (5)	Respiratory Diseases—Not Tuberculosis (6)	Defective Vision (7)	Ear Defects (8)	Nose and Throat Defects (9)	External Eye Diseases (10)	Skin Diseases (11)	Defective Teeth (12)	Other Diseases and Defects (13)
(1) Tuberculosis—Pulmonary	...	...	...	...	...	...	...	...	...	...	...	...
(2) Tuberculosis—Non-Pulmonary	...	3	...	...	...	...	...	...	...	...	...	...
(3) Heart Disease	...	...	58	...	2	1	...	7	3	1	8	8
(4) Anæmia	...	...	...	17	1	1	1	2	...	...	3	4
(5) Respiratory Diseases (Not Tuberculosis) ...	...	...	...	...	148	1	1	33	1	2	28	4
(6) Defective Vision	...	...	...	...	...	18	1	...	...	...	4	2
(7) Ear Defects	...	...	...	...	...	...	47	9	...	3	12	...
(8) Nose and Throat Defects	...	...	...	...	...	...	...	560	11	5	142	42
(9) External Eye Diseases	...	...	...	...	...	...	...	...	53	...	6	4
(10) Skin Diseases	...	...	...	...	...	...	...	...	...	53	3	3
(11) Defective Teeth	...	...	...	...	...	...	...	...	...	...	562	38
(12) Other Diseases and Defects	...	...	...	...	...	...	...	...	...	...	...	146
TOTALS	...	3	58	17	151	21	50	611	68	64	768	251

Number examined: 3,902. Number found normal: 2,237. Number found defective: 1,665 (the sum of the first figures in the lines of the above table). Number of diseases or defects: 2,062 (the sum of the figures at the foot of the columns in the above table).

The following statement is given in explanation of this table:—Fifty-eight children (shown in line 3, column 4) suffered from heart disease, and of that number 2 suffered from respiratory diseases, 1 from defective vision, 7 from nose and throat defects, 3 from external eye diseases, 1 from skin disease, 8 from defective teeth and 8 from other diseases or defects. Each line should be read in the same way.

TABLE III.

RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA.

			Boys	Girls	Totals
Blind (including partially blind).	(*i*) Suitable for training in a school or class for the totally blind.	Attending Certified Schools or Classes for the Blind	12	6	18
		Attending Public Elementary Schools ...	–	–	–
		At other Institutions	–	–	–
		At no School or Institution	–	1	1
	(*ii*) Suitable for training in a school or class for the partially blind.	Attending Certified Schools or Classes for the Blind	22	20	42*
		Attending Public Elementary Schools ...	4	11	15
		At other Institutions	–	–	–
		At no School or Institution	–	2	2
Deaf (including deaf and dumb and partially deaf).	(*i*) Suitable for training in a school or class for the totally deaf or deaf and dumb.	Attending Certified Schools or Classes for the Deaf	8	12	20†
		Attending Public Elementary Schools ...	–	–	–
		At other Institutions	–	1	1
		At no School or Institution	1	–	1
	(*ii*) Suitable for training in a school or class for the partially deaf.	Attending Certified Schools or Classes for the Deaf	–	–	–
		Attending Public Elementary Schools ...	10	4	14
		At other Institutions	–	–	–
		At no School or Institution	–	–	–
Mentally Defective.	Feebleminded (cases not notifiable to the Local Control Authority).	Attending Certified Schools for Mentally Defective Children	69	54	123‡
		Attending Public Elementary Schools ...	–	–	–
		At other Institutions	2	–	2
		At no School or Institution	4	4	8§
	Notified to the Local Control Authority during the year.	Feebleminded	12	7	19
		Imbeciles	2	6	8
		Idiots	–	2	2
Epileptics.	Suffering from severe epilepsy.	Attending Certified Special Schools for Epileptics	2	2	4
		In Institutions other than Certified Special Schools	–	–	–
		Attending Public Elementary Schools ...	–	–	–
		At no School or Institution	3	3	6
	Suffering from epilepsy which is not severe.	Attending Public Elementary Schools ...	6	4	10
		At no School or Institution	–	–	–

* In addition 1 boy not residing in the area in attendance.

† In addition 4 boys and 3 girls not residing in the area in attendance.

‡ In addition 1 boy not residing in the area in attendance.

§ Including 2 girls attending private schools.

TABLE III.—continued.

			Boys	Girls	Totals
Physically Defective.	Infectious pulmonary and glandular tuberculosis.	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board	8	2	10
		At other Institutions	–	–	–
		At no School or Institution	2	1	3
	Non-infectious but active pulmonary and glandular tuberculosis.	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board	–	–	–
		At Certified Residential Open-Air Schools	–	–	–
		At Certified Day Open-Air Schools ...	–	–	–
		At Public Elementary Schools	21	9	30
		At other Institutions	–	–	–
		At no School or Institution	2	5	7
	Delicate children (*e.g.*, pre- or latent tuberculosis, malnutrition, debility anæmia, etc.).	At Certified Residential Open-Air Schools	–	–	–
		At Certified Day Open-Air Schools ...	78	58	136
		At Public Elementary Schools	73	83	156
		At other Institutions	–	–	–
		At no School or Institution	12	11	23
	Active non-pulmonary tuberculosis.	At Sanatoria or Hospital Schools approved by the Ministry of Health or the Board	4	3	7
		At Public Elementary Schools	14	12	26
		At other Institutions	–	–	–
		At no School or Institution	9	5	14
	Crippled children (other than those with active tuberculous disease) *e.g.*, children suffering from paralysis, etc., and including those with severe heart disease.	At Certified Hospital Schools	–	–	–
		At Certified Residential Cripple Schools ...	–	4	4
		At Certified Day Cripple Schools ...	–	–	–
		At Public Elementary Schools	198	196	394*
		At other Institutions	11	18	29
		At no School or Institution	18	23	41†

* Comprising :—	Boys	Girls	Totals
Cripples	151	128	279
Severe Heart Disease	47	68	115
† Comprising :—			
Cripples	7	8	15
Severe Heart Disease	6	11	17
Chorea	5	4	9

TABLE IV.

RETURN OF DEFECTS TREATED.

TREATMENT TABLE.

GROUP I.—Minor Ailments (excluding Uncleanliness, for which see Group V.)

Disease or Defect	Number of Defects Treated or under Treatment during the Year					
	Elementary Schools			Secondary and High Schools		
	Under the Authority's Scheme	Otherwise	Totals	Under the Authority's Scheme	Otherwise	Totals
SKIN :—						
Ringworm—Scalp ...	64	...	64	...	...	...
,, Body ...	100	2	102	...	...	...
Scabies	140	3	143	1	...	1
Impetigo	794	14	808	2	...	2
Other Skin Diseases ...	299	4	303	4	1	5
MINOR EYE DEFECTS (External and other but excluding cases falling in Group II.)	22	...	22	...	...	...
MINOR EAR DEFECTS ...	17	...	17	...	...	...
MISCELLANEOUS (*e.g.*, minor injuries, bruises, sores, chilblains, etc.)	161	10	171	1	...	1
Totals	1,597	33	1,630	8	1	9

GROUP II. (a)—Defective Vision and Squint (excluding Minor Eye Defects treated as Minor Ailments—Group I.).

	Number of Defects dealt with							
	Elementary Schools				Secondary and High Schools.			
	Under the Authority's Scheme	Submitted to Refraction by Private Practitioners or at Hospital	Otherwise	Totals	Under the Authority's Scheme	Submitted to Refraction by Private Practitioners or at Hospital	Otherwise	Totals
Errors of Refraction ...	1,398	2	2	1,402	87	7	...	94
Other Defect or Disease of the Eyes (excluding those recorded in Group I.)...	211	...	...	211	1	...	...	1
Totals ...	1,609	2	2	1,613	88	7	...	95

GROUP II. (a)—continued.

	Elementary Schools	Secondary and High Schools
Children for whom Spectacles were prescribed :—		
(*a*) Under the Authority's Scheme	1,254	82
(*b*) Otherwise	4	7
Children who obtained or received Spectacles :—		
(*a*) Under the Authority's Scheme	1,031*	63†
(*b*) Otherwise	110	18

GROUP II. (b)—Additional Particulars with reference to the Treatment of Visual Defects.

	Elementary Schools	Secondary and High Schools
Children examined at School Clinics	1,958	98
(*a*) Examined for Errors of Refraction	1,686	90
(1) Examination completed	1,398	87
(2) For whom glasses were prescribed	1,254	82
(3) For whom glasses were provided :—		
(*a*) By parents	826	72
(*b*) With assistance of Local Authority	...	...
(*c*) Free of charge	311	2
(4) For whom glasses were not prescribed	136	5
(5) Examination not completed	31	...
(6) Failed to attend for completion of examination ...	257	3
(7) Other treatment required :—		
(*a*) Glasses also prescribed—included in (2) ...	11	...
(*b*) Not requiring glasses—included in (4) ...	23	...
(8) Received other treatment	34	...
(9) Old cases (1929) for whom glasses were provided in 1930 :—		
(*a*) By parents	33	4
(*b*) With assistance of Local Authority	...	...
(*c*) Free of charge	...	...
(*b*) Examined for Defects other than Errors of Refraction ...	177	1
(1) For whom treatment was recommended	177	1
(2) Received treatment	177	1
(3) For whom no treatment was considered necessary ...	...	...
(*c*) Found to be normal	95	7
(*d*) Number of attendances of Vision Cases at the School Clinics...	4,322	212

* Including 311 free of charge.

† Including 2 free of charge.

GROUP III. (a)—Treatment of Defects of Nose and Throat.

	Elementary Schools	Secondary and High Schools
Children dealt with at School Clinics :—		
Examined	1,675	34
Received operative treatment...	819	7
Received operative and other forms of treatment ...	73	...
Received other forms of treatment only	421	12
Attendances	4,160	57
Children dealt with by Private Practitioners or at Hospital :—		
Received operative treatment...	1	...
Received operative and other forms of treatment ...	...	...
Received other forms of treatment only	...	...

GROUP III. (b)—Treatment of Serious Ear Defects.

	Elementary Schools	Secondary and High Schools
Children dealt with at School Clinics :—		
Examined	287	13
Received operative treatment...	...	...
Received operative and other forms of treatment ...	...	...
Received other forms of treatment only	257	11
Attendances	634	28
Children dealt with by Private Practitioners or at Hospital :—		
Received operative treatment...	...	...
Received operative and other forms of treatment ...	...	...
Received other forms of treatment only	...	...

GROUP IV.—Dental Defects.

		Elementary Schools	Secondary and High Schools
(1) Number of Children who were :—			
(*a*) Inspected by the Dentists :			
Routine Age Groups ... Aged :	3	31	...
	4	570	...
	5	2,259	...
	6	2,399	...
	7	2,598	...
	8	2,683	...
	9	2,834	...
	10	3,068	...
	11	2,216	...
	12	1,674	...
	13	1,584	...
	14	900	...
	15	8	...
Totals		22,824	
Specials		1,253	548
Grand Totals		24,077	548
(*b*) Found to require treatment		18,704	540
(*c*) Actually treated		5,159	250
(*d*) Re-treated during the year		4,298	285
(2) Half-days devoted to :—			
Inspection		118	...
Treatment		1,617	...
Totals		1,735	...*
(3) Attendances made by children for :—			
Inspection		6,515	223
Treatment		15,927	1,222
Totals		12,442	1,445
(4) Fillings :—			
Permanent teeth		4,999	799
Temporary teeth		741	29
Totals		5,740	828
(5) Extractions :—			
Permanent teeth		3,439	411
Temporary teeth		18,259	194
Totals		21,698	605
(6) Administrations of general anæsthetics for extractions by :—			
Dentists		4,210	197
Medical Officers		2,552	72
Totals		6,762	269
(7) Other Operations :—			
Permanent teeth		1,629	372
Temporary teeth		177	1
Totals		1,806	373

Known treatment of dental defects by private dentists :—

	Elementary Schools	Secondary and High Schools
Children treated	76	31

* Not differentiated from half-days devoted to inspection and treatment of elementary school children.

GROUP V.—Uncleanliness and Verminous Conditions.

Elementary Schools.

(i)	Average number of visits per school made during the year by the school nurses		2·9
(ii)	Total number of examinations of children in the schools by school nurses		45,713
(iii)	Number of individual children found unclean :—		
	With vermin	235	
	With nits only	2,691	
		——	2,926
(iv)	Number of children cleansed under arrangements made by the Local Education Authority :—		
	Previously verminous	26	
	Previously with nits only	517	
	Previously verminous found to be free from vermin but not free from nits...	82	
		——	625*

TABLE V.

A.—AVERAGE HEIGHTS AND WEIGHTS OF CHILDREN INSPECTED

(Elementary Schools).

Age–Years	Boys			Girls		
	Number	Average Height	Average Weight	Number	Average Height	Average Weight
		in.	lb.		in.	lb.
3 ...	172	37·4	34·6	135	37·0	33·5
4 ...	583	39·6	37·4	556	39·3	36·3
5 ...	742	41·9	40·7	725	41·2	38·8
6 ...	277	43·9	44·4	270	43·4	43·6
7 ...	97	45·3	47·6	107	45·4	46·5
8 ...	426	49·1	56·4	388	48·6	54·8
9 ...	2,239	50·2	58·8	2,510	49·8	57·6
10 ...	145	50·4	61·3	200	51·1	61·0
12 ...	731	55·1	76·8	744	56·2	77·0
13 ...	268	56·7	81·5	330	57·5	83·0

* Including cases actually cleansed by the school nurses and cases cleansed by parents on advice given by the nurses.

TABLE VI.

RESULTS OF MEDICAL RE-INSPECTION DURING 1930 OF 2,429 CHILDREN FOUND DURING 1929 TO REQUIRE TREATMENT OR TO BE KEPT UNDER OBSERVATION.

	Treated at School Clinics			Treated Elsewhere			Not Treated			Totals			Total Number of Defects
	Cured or Improved	No Improvement	Worse	Cured or Improved	No Improvement	Worse	Cured or Improved	No Improvement	Worse	Cured or Improved	No Improvement	Worse	
Eye Diseases	364	53	2	...	1	...	86	164	31	450	218	33	701
Ear Diseases	72	14	...	1	2	...	12	28	...	85	44	...	129
Diseases of Nose and Throat	299	45	1	11	4	...	177	305	19	487	354	20	861
Enlarged Cervical Glands	3	1	...	1	1	...	5	2	...	9	4	...	13
Defective Speech	7	3	...	1	...	...	5	4	...	13	7	...	20
Heart Diseases	4	17	...	...	...	...	18	33	...	22	50	...	72
Anæmia	10	5	...	2	...	...	4	7	...	16	12	...	28
Lung Diseases (Non-Tuberculous) ...	65	3	...	11	2	...	41	21	...	117	26	...	143
Tuberculosis — Pulmonary ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis — Non-Pulmonary ...	2	...	...	...	2	...	...	...	...	2	2	...	4
Nervous Diseases	6	1	...	1	...	...	2	...	...	9	1	...	10
Deformities	69	21	...	3	...	...	9	33	2	81	54	2	137
Other Defects and Diseases	155	24	...	22	6	...	69	67	1	246	97	1	344
Totals	1,056	187	3	53	18	...	428	664	53	1,537	869	56	2,462

MENTAL DEFICIENCY SERVICE.

The usual statistical tables giving information as to the age, sex, classification and condition of mental defectives under the care of the Mental Deficiency Committee are submitted. On reference to Table III it will be noted that the total number of ascertained defectives for the care of whom the Committee were responsible at the end of 1930 was 407, as compared with 391 at the end of 1929. Of the 407 cases, 158 were in institutions or under statutory guardianship, the various institutions in which they were accommodated being shown in Table VII. The ascertained cases remaining at home numbered 249, of whom 169 were under statutory supervision and 76 under voluntary supervision, 4 remaining to be dealt with appropriately.

During the year the urgent need for the provision of further institutional accommodation has received the careful consideration of the Committee, partly as a result of a letter from the Board of Control in which they expressed the hope that the Local Authority would without further delay give serious consideration to the formulation of a scheme for the provision of suitable and sufficient accommodation for all mental defectives within the area who are in need of institutional care. The estimated number of beds needed for Cardiff, according to a schedule prepared by the Board on the basis of the Wood Committee's conclusions, and which corresponds fairly closely to an estimate made from the records of the department, is as follows:—

	Males.	Females.
Children—		
Trainable	40	32
Untrainable (including cot and chair cases)	16	9
Totals for children	56	41
Younger Adults—		
Employable	79	86
Unemployable (including cot and chair cases)	25	22
Totals for younger adults	104	108
Adults over 30 years— (Mostly suitable for Poor Law Institutions and roughly divisible into two equal groups, *i.e.*, employable and unemployable).		
Totals for adults over 30	90	88
Grand Totals	250	237

This estimate of the number of beds required includes mental defectives in need of institutional care who have hitherto been maintained by the Guardians of the Poor and persons detained in mental hospitals who would be more appropriately dealt with in an institution for mental defectives.

When the Glamorgan County Council provide accommodation for 660 defectives at Hensol Castle, it is hoped that a sufficient number of beds will be available at that institution for trainable and employable defectives belonging to Cardiff. The estimate of our requirements for such cases is 130 beds immediately and at least 200 ultimately.

The Public Assistance Committee now have under consideration certain alterations and re-arrangements at Ely Lodge with a view to providing beds for more untrainable and unemployable defectives, which, if carried out, will provide accommodation for some 250 cases altogether. If this is found possible, and if 200 beds become available at Hensol Castle, the Committee will be able to deal satisfactorily for many years with all the defectives for whom they are responsible.

MENTAL DEFICIENCY—STATISTICAL TABLES.

TABLE I.

SUMMARY OF THE YEAR'S WORK.

	Males.	Females.	Totals.
(1) Cases examined for the first time :—			
Idiots	9	5	14
Imbeciles	23	18	41
Moral defectives	—	—	—
Feebleminded	33	34	67
Post-encephalitic deterioration	—	1	1
Unclassified	4	6	10
Not mentally defective	95	115	210
Totals	164	179	343
(2) Cases re-examined	42	72	114
(3) Failed to keep appointment for examination	1	—	1
(4) Visits paid by Visiting Officer	—	—	2,075
(5) Removed from list of ascertained cases under supervision at home—			
(i) Placed in Institutions at instance of Local Authority—			
(*a*) Obligatory	4	6	10
(*b*) Permissive	—	—	—
(ii) Deceased	—	1	1
(iii) Left Cardiff	—	2	2
(iv) Removed to Institutions at instance of Public Assistance Committee	—	7	7
(v) Removed to Mental Hospitals	2	2	4
(vi) Removed to "places of safety"	—	1	1
(vii) Re-classified as not mentally defective	—	1	1
Totals	6	20	26
(6) Removed to Institutions (not previously under supervision at home)	4	3	7
(7) Total number removed to Institutions or placed under Guardianship during the year at the instance of the Local Authority	8	10	18
(8) Cases in Institutions that ceased to be chargeable during 1930 :—			
(i) Deceased	1	—	1
(ii) Escaped and still at liberty	1	—	1
(iii) On licence	4	—	4
Totals	6	—	6
(9) Transferred from one Institution to another	12	5	17
(10) Died in Mental Hospitals	—	3	3

Table II.

Source of Ascertainment of New Cases.

Source of Ascertainment	Idiots	Imbeciles	Moral Defectives	Feeble-minded	Post-encephalitic Deterioration	Unclassified	Not Mentally Defective	Totals
Local Education Authority	2	5	—	17	—	—	—	24
Public Assistance Committee*	11	34	—	43	1	10	202	301
Juvenile Employment Bureau	—	—	—	1	—	—	—	1
Psychiatric Clinic, Cardiff Royal Infirmary ...	—	—	—	1	—	—	—	1
Parents, Guardians or Relatives	1	1	—	—	—	—	4	6
Police	—	—	—	1	—	—	1	2
Mental Hospital ...	—	1	—	3	—	—	3	7
Brighton Mental Deficiency Authority...	—	—	—	1	—	—	—	1
Totals	14	41	—	67	1	10	210	343

Table III.

Position at 31st December, 1930.

	Males.		Females.		Totals.
(1) Obligatory cases :—					
(*a*) In Institutions	75	...	65	...	140†
(*b*) Under Guardianship	—	...	2	...	2
(*c*) On licence from Institutions ...	4	...	1	...	5
(*d*) Absconded from Institution (not yet found)	1	...	—	...	1
(2) In " places of safety "	—	...	1	...	1
(3) Cases in regard to whom the Local Authority contribute under permissive powers :—					
(*a*) In Institutions	4	...	3	...	7
(*b*) Under Guardianship	—	...	—	...	—
(4) Cases removed by parents or guardians in regard to whom the Local Authority does not contribute :—					
(*a*) In Institutions	2	...	—	...	2
(*b*) Under Guardianship	—	...	—	...	—
Totals ...	86	...	72	...	158
(5) Cases in Ely Lodge, Cardiff, under Lunacy Orders—ascertained to be mentally defective	46	...	50	...	96
(6) Cases at home — ascertained to be defective :—					
(*a*) Under Statutory Supervision ...	93	...	76	...	169
(*b*) Under Voluntary Supervision ...	31	...	45	...	76
Totals ...	124		121		245

* Survey of cases in Poor Law Institutions.

† Including 14 cases (8 males and 6 females) maintained by the Board of Control.

	Males.	Females.	Totals.
(7) Cases in Mental Hospitals—ascertained to be defective	4	5	9
(8) Attending Occupation Centre—included in (6) :—			
(*a*) Under Statutory Supervision ...	12	5	17
(*b*) Under Voluntary Supervision ...	—	—	—
Totals ...	12	5	17
(9) Attending Training Centre :—			
(*a*) Under Statutory Supervision—included in (6)	13	10	23
(*b*) Under Voluntary Supervision—included in (6)	3	2	5
(*c*) On licence from Institution—included in (1)	—	1	1
Totals ...	16	13	29
(10) "Subject to be dealt with" but action not yet taken :—			
(*a*) Notified by Education Authority	2	2	4
(*b*) Otherwise ascertained	—	—	—
Totals ...	2	2	4
(11) Under consideration but not ascertained to be defective	7	1	8

Table IV.

Classification of Known Cases.

	In Institutions or under Guardianship			Under Supervision at Home		
	Males	Females	Totals	Males	Females	Totals
Idiots	5	6	11	13	10	23
Imbeciles	36	19	55	46	52	98
Moral Defectives	1	1	2	—	1	1
Feebleminded	43	45	88	65	55	120
Post-encephalitic Deterioration ...	—	—	—	1	2	3
Unclassified or not examined ...	1	1	2	8	4	12
Totals	86	72	158	133	124	257

Table V.

Ages of Cases in Institutions or under Guardianship.

Ages—Years	Idiots		Imbeciles		Moral Defectives		Feeble-minded		Post-Encephalitic Deterioration		Unclassified		Totals
	M	F	M	F	M	F	M	F	M	F	M	F	
8	—	—	—	2	—	—	—	—	—	—	—	—	2
11	—	—	2	—	—	—	—	—	—	—	—	—	2
12	—	—	2	—	—	—	—	—	—	—	—	—	2
13	—	—	1	1	—	—	1	—	—	—	—	—	3
14	1	1	1	1	—	—	—	—	—	—	—	—	4
15	—	—	2	—	—	—	1	—	—	—	—	—	3
16	1	—	3	1	—	—	1	2	—	—	—	—	8
17	—	—	5	—	—	—	2	3	—	—	—	—	10
18	—	1	2	2	—	—	2	2	—	—	—	—	9
19	—	1	—	—	—	—	4	1	—	—	—	—	6
20—25	3	2	9	7	1	1	19	11	—	—	1	—	54
25—30	—	—	2	2	—	—	10	18	—	—	—	1	33
30—40	—	1	6	1	—	—	3	6	—	—	—	—	17
Over 40	—	—	1	2	—	—	—	2	—	—	—	—	5
Totals	5	6	36	19	1	1	43	45	—	—	1	1	158

Table VI.

Ages of Cases under Supervision at Home.

Ages—Years	Idiots		Imbeciles		Moral Defectives		Feeble-minded		Post-Encephalitic Deterioration		Unclassified		Totals
	M	F	M	F	M	F	M	F	M	F	M	F	
5	—	1	—	—	—	—	—	—	—	1	—	—	2
6	1	—	1	1	—	—	—	—	—	—	1	—	4
7	—	—	—	2	—	—	—	—	—	—	1	—	3
8	1	1	2	3	—	—	—	1	—	—	1	1	10
9	—	—	1	3	—	—	—	—	—	—	—	—	4
10	2	—	3	2	—	—	—	—	—	—	—	—	7
11	1	—	4	3	—	—	2	—	—	—	—	—	10
12	—	3	2	2	—	—	—	—	—	—	—	—	7
13	1	2	5	—	—	—	1	—	—	—	—	—	9
14	—	1	3	2	—	—	—	—	—	—	—	—	6
15	3	—	1	2	—	—	3	4	—	—	—	—	13
16	—	—	5	3	—	—	12	4	—	—	—	—	24
17	—	—	6	2	—	—	9	6	—	—	—	—	23
18	1	1	2	9	—	—	6	5	—	—	1	1	26
19	1	—	1	1	—	—	5	3	—	—	—	—	11
20—25	1	—	6	7	—	1	16	13	1	—	3	—	48
25—30	—	1	4	4	—	—	6	11	—	—	1	—	27
30—40	—	—	—	5	—	—	5	4	—	1	—	2	17
Over 40	1	—	—	1	—	—	—	4	—	—	—	—	6
Totals	13	10	46	52	—	1	65	55	1	2	8	4	257

Table VII.

Cases in Institutions or Under Guardianship at 31st December, 1930.

(*a*) Obligatory Cases.

NAME OF INSTITUTION, Etc.	Idiots	Imbeciles	Moral Defectives	Feeble-minded	Post-encephalitic Deterioration	Unclassified	Totals
Allerton Priory R.C. Special School, Nr. Liverpool	—	—	—	—	—	1	1
Besford Court Catholic Mental Welfare Home, Worcester	—	—	—	3	—	—	3
Calderstones Institution, Whalley, Lancashire	1	—	—	—	—	—	1
Cardiff Poor Law Institution, Ely, Cardiff	7	9	1	30	—	—	47
Carnarvon Poor Law Institution, Bodvan	—	2	—	—	—	—	2
Caterham Mental Hospital, Caterham, Surrey	—	1	—	—	—	—	1
Central Association for Mental Welfare, London	—	1	—	1	—	—	2
Cuckfield Poor Law Institution, West-Hylands, Cuckfield	—	—	—	1	—	—	1
Darenth Training Colony, Dartford, Kent	—	1	—	—	—	—	1
Drymma Hall, Skewen, Nr. Neath ...	—	—	—	1	—	—	1
Etloe House, Leyton, Essex	—	—	—	2	—	—	2
Falmouth Poor Law Institution, Falmouth	—	2	—	—	—	—	2
Girls' Village Homes, Barkingside, Essex	—	—	—	1	—	—	1
Hensol Castle Certified Institution, Nr. Pontyclun, Glam.	—	6	—	4	—	—	10
Hillside Institution, Buntingford ...	—	1	—	3	—	—	4
House of Help, Bath	—	—	—	2	—	—	2
Leavesden Mental Hospital, Abbots Langley, Herts	—	1	—	—	—	—	1
Monkton Hall Home, Jarrow-on-Tyne	—	—	—	2	—	—	2
Mount Tabor Certified Institution, Basingstoke, Hants	—	—	—	1	—	—	1
Newtown and Llanidloes Poor Law Institution, Caersws	1	2	—	—	—	—	3
Pield Heath House, Hillingdon, Uxbridge	—	2	—	—	—	—	2
Princess Christian's Farm Colony, Hildenborough	—	—	—	1	—	—	1
Rampton State Institution, Retford	—	3	1	9	—	1	14
Rock Hall House, Combe Down, Bath	—	1	—	—	—	—	1
Ross Poor Law Institution, Ross ...	—	4	—	1	—	—	5
Royal Earlswood Institution, Redhill	—	—	—	1	—	—	1
Ruthin Poor Law Institution, Denbigh	—	1	—	2	—	—	3
St. Elizabeth's Home for Epileptics, Much Hadham, Herts	—	—	—	3	—	—	3
St. Joseph's Home, The Croft, Sudbury	—	—	—	1	—	—	1
St. Mary's Home, Painswick, Stroud, Glos.	—	—	—	1	—	—	1
St. Teresa's Home, Lewisham ...	—	—	—	2	—	—	2
Seafield House, Seaforth, Nr. Liverpool	—	1	—	3	—	—	4
Shotley Bridge Colony, Durham ...	—	—	—	9	—	—	9
Stoke Park Colony, Stapleton, Bristol	—	12	—	2	—	—	14
Totals	9	50	2	86	—	2	149

(*b*) Permissive Cases.

NAME OF INSTITUTION, ETC.	Idiots	Imbeciles	Feeble-minded	Totals
Brentry Certified Institution, Westbury-on-Trym... ...	—	1	—	1
Cardiff Poor Law Institution, Ely, Cardiff	1	1	—	2
Falmouth Poor Law Institution, Falmouth	—	1	—	1
Newtown and Llanidloes Poor Law Institution, Caersws	1	—	—	1
Ross Poor Law Institution, Ross	—	—	1	1
Royal Earlswood Institution, Redhill	—	2	—	2
Shotley Bridge Colony, Durham	—	—	1	1
Totals	2	5	2	9

REPORT FOR 1930 (ABRIDGED) ON THE OCCUPATION AND TRAINING CENTRES BY MRS. A. DASCOMBE, SUPERVISOR.

Since the issue of the report for 1929 it has been necessary to make certain changes in organisation, curricula and arrangement of time-tables, the chief factors being an increase in numbers and the progressive needs of the boys and girls. In reviewing the year's work I think we can claim that we have realised our aims as set forth in previous reports, and that we now have the improved material for further progressive training.

The year has been experimental in the combination and correlation of the schemes of work for both Centres, and the venture has been justified, not only in an improved standard of work amongst the low-grade cases, but in an awakened sense of responsibility amongst the higher-grade feebleminded cases towards those of weaker mentality.

At Christmastide we attempted the performance of a Christmas play with quite creditable results in memorising and a very fair sense of dramatic expression.

TRAINING CENTRE—MALES.

At the end of 1930 there were 12 feebleminded boys attending.

Regularity and punctuality have been very satisfactory, the only reasons for absence being sickness or temporary work. Three feebleminded boys and one imbecile from the Occupation Centre have been transferred for 1½ hours out of 3 as part-time trainees, and the possibility of promotion to the Training Centre is an incentive for increased effort and closer application.

The Instructor's enthusiasm and pupils' application during woodwork lessons are unabating, and the standard of work is highly satisfactory, comparing very favourably with, and in some cases excelling, the work of normal boys. We want the lads, through skill of hand and eye, to develop that attitude of mind which awakens voluntary powers of observation, and woodwork is only one of many suitable media ; hence the introduction of metalwork (which is an excellent combination with woodwork), leatherwork and elementary educational subjects. A very ingenious first stage in metalwork has been the beating out of old tins to make match-box holders, etc. From this stage the Instructor will proceed to teach the making of curbs, fire-irons, etc. But the enthusiasm and self-confidence gained in acquiring manipulative skill and the joy of creative effort have tended to over-application and have led to bad posture and fatigue. To remedy this a break has been made by the assembly of the children from both Centres for roll call, prayers, hymn singing and topical talks. The topical talks have become very popular and should

with continuity result in keener powers of observation and self-expression. Following these talks, Swedish drill, breathing exercises and handkerchief drill are taken, and already signs of improved posture are noticeable during these exercises.

Again, with reference to educational subjects, the criticism is often made that such boys and girls who can benefit from instruction in these subjects should not be at these Centres. It is true that they are not mentally equipped to keep pace with the normal child, but it must be remembered that even in Special Schools the pace is set by the sharpest, and it is found that instruction along individual lines and according to individual needs does give tangible results.

Training Centre—Females.

The number of females on the register at the end of the year was 12.

The girls have worked well, and there is a decided improvement in their personal appearance through the quiet but effective influence of the Instructress and her personal interest in their welfare.

Improvement is shown in all subjects, but the greatest is in housework and laundrywork. The girls set about the housework with more confidence and three girls have shown marked improvement. With one exception, there is better manipulative skill in cooking. The majority cannot read or write, which hinders the memorising of recipes, but this should be overcome by continued application and experience. The greatest difficulty to be overcome is lack of confidence through want of experience and the attitude of "mothers who can do things more quickly themselves."

Interest in needlework is well maintained, and there has been a speeding up in the making of garments. A desire was expressed for more fancy work, and in this section two girls have done particularly good drawn-thread work.

As in the case of boys, enthusiasm for a subject led to over application, and when the lesson was sedentary led to retarded functioning of excretory organs. The girls also tend to sit too much at home; hence the introduction of folk dancing for at least 20 minutes every day. At first great difficulty was experienced in overcoming shyness, but, with one exception, there is now spontaneous enjoyment, with a resulting measure of acquired alertness and in some cases gracefulness. We hope in future gradually to introduce the more strenuous Swedish drill.

We have three girls who could very shortly become useful mothers' helps under the right supervision. One other girl is very good at her work, but her uncertain moods and temper would make her a difficult proposition for any housewife. The others are improving and should with continued training prove useful helps.

Occupation Centre.

The numbers on the register at the end of the year were 17 boys and 6 girls.

These numbers do not include the Training Centre boys who stay for the afternoon session of the Occupation Centre. Three started in May and two in September, and they still attend.

With the exception of two boys and one girl, regularity and punctuality have been very satisfactory. There are several children who are constitutionally delicate but they make a very good effort during bad weather.

Instruction in various forms of handwork form the chief occupations, and since the last report six imbeciles have succeeded in making rugs and seven are able to make cane and raffia baskets. The boys and girls have made some very good canvas and wool pouchettes which compare very favourably for evenness and neatness with similar but more advanced work of the Training Centre girls.

Three low-grade boys have been transferred to the leatherwork class and are working well, with keen interest. Six boys who have given evidence of some creative ability have been allowed to gather together odd scraps of wood from the Training Centre for free construction of toys, and several have shown ingenuity and skill which augur well for future trainees.

There is amongst these boys and girls, as in the Training Centre, a request for educational subjects, and a definite measure of attainment has been realised in their limited capacity.

The memorising of hymns, songs, etc., has resulted in improved articulation and enunciation in the majority, and four boys and two girls are acquiring facility in sentence formation during expression of nature, Bible and fairy stories. The free expression of these stories during drawing lesson has revealed surprising powers of observation amongst the low-grade children.

The spontaneous physical exercises, folk dancing, and rhythmic work have so improved control and balance that six boys are able to take Swedish drill with the trainees. Our problem is how to prevent faulty posture at home. In the case of one Mongolian type the work of months was undone by two weeks' unavoidable absence.

The Occupation Centre children set the example for good behaviour, in that there are evidences of a reaching forward towards self-discipline and an understanding in a real sense of " being trusted " and " put on one's honour," and in this respect the training of the defective cannot be commenced too early.

With one exception, the destructive instinct has been replaced by controlled effort and even " the exception " is manifesting evidences of control in certain instances.

Finally, there is a decided improvement in the general tone of the Centre, an elimination of uncontrolled language and expressions of annoyance, and a definite advance in individual responsiveness.