

# SANITARY AND METEOROLOGICAL NOTES.

Compiled by the EDITOR.

## VITAL STATISTICS

*For four weeks ending Saturday, October 7, 1905.*

### IRELAND.

#### TWENTY-TWO TOWN DISTRICTS.

THE average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ending October 7, 1905, in the Dublin Registration Area and the twenty-one principal provincial Urban Districts of Ireland was 18.1 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,093,959. The deaths registered in each of the four weeks ended Saturday, October 7, and during the whole of that period in the several districts, alphabetically arranged, correspond to the following annual rates per 1,000. In some cases, owing to deaths not having been registered within the week in which they occurred, the rates do not fairly represent the weekly mortality.

TOWNS, &c.	Week ending				Aver- age Rate for 4 weeks	TOWNS, &c.	Week ending				Aver- age Rate for 4 weeks
	Sept. 16	Sept. 23	Sept. 30	Oct. 7			Sept. 16	Sept. 23	Sept. 30	Oct. 7	
22 Town Districts	17.2	15.8	19.1	18.1	17.6	Lisburn -	13.6	4.5	18.2	9.1	11.4
Armagh -	13.7	13.7	13.7	20.6	15.4	Londonderry	18.6	21.1	24.8	17.4	20.5
Ballymena	9.6	14.4	9.6	9.6	10.8	Lurgan -	17.7	25.6	17.7	26.6	22.1
Belfast -	16.6	13.7	15.8	16.9	15.8	Newry -	-	21.0	21.0	37.8	19.9
Clonmel -	15.4	5.1	20.5	15.4	14.1	Newtown- ards	28.6	17.2	17.2	11.4	18.6
Cork -	19.9	17.8	22.6	18.5	19.7	Portadown -	15.5	-	5.2	36.2	14.2
Drogheda -	8.2	12.3	8.2	20.4	12.3	Queenstown	19.8	13.2	26.4	6.6	16.5
Dublin - (Reg. Area)	16.2	17.9	22.3	19.8	19.0	Sligo -	24.0	24.0	14.4	14.4	19.2
Dundalk -	12.0	8.0	12.0	16.0	12.0	Tralee -	10.6	10.6	52.8	-	18.5
Galway -	35.0	7.8	23.3	11.7	19.4	Waterford -	21.4	23.4	19.5	29.2	23.4
Kilkenny -	34.3	24.6	14.7	9.8	20.8	Wexford -	18.7	23.3	9.3	14.0	16.3
Limerick -	23.2	8.2	12.3	10.9	13.7						

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases, registered in the 22 districts during the week ended Saturday, October 7, 1905, were equal to an annual rate of 0.8 per 1,000, the rates varying from 0.0 in fourteen of the districts to 5.2 in Portadown. Among the 116 deaths from all causes in Belfast are one from diphtheria and 5 from diarrhœal diseases; and the 27 deaths from all causes in Cork include one from diphtheria and one from pyrexia (origin uncertain).

#### DUBLIN REGISTRATION AREA.

The Dublin Registration Area consists of the City of Dublin as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock, and Kingstown. The population of this area is 378,994, that of the City being 293,385, Rathmines 33,203, Pembroke 26,025, Blackrock 8,759, and Kingstown 17,622.

In the Dublin Registration Area the births registered during the week ended October 7 amounted to 189—94 boys and 95 girls; and the deaths to 158—83 males and 75 females.

#### DEATHS.

The deaths registered represent an annual rate of mortality of 21.7 in every 1,000 of the population. Omitting the deaths (numbering 14) of persons admitted into public institutions from localities outside the area, the rate was 19.8 per 1,000. During the forty weeks ending with Saturday, October 7, the death-rate averaged 22.5, and was 3.3 below the mean rate for the corresponding portions of the ten years 1895—1904.

The registered deaths (158) include 2 from enteric fever and one death from *diarrhœa*. The weekly mean of the earth temperature at 4 feet was 53.9°. In the 3 weekly periods which preceded that under notice, deaths from diarrhœal diseases were 10, 10, and 9, and deaths from enteric fever were one, 2, and 2, respectively. The deaths of 3 infants under one year of age were attributed to *gastro-enteritis*. One death was due to influenza, and tetanus caused one death.

One death was due to lobar pneumonia, 4 deaths were due to broncho-pneumonia, and there were 5 deaths from *pneumonia* (undefined).

Of 42 deaths caused by tuberculous disease there were 4 from tubercular phthisis, 21 from *phthisis*, 6 from tubercular

meningitis, one from tubercular peritonitis, and 10 deaths from other forms of the disease. The total deaths from tuberculous disease registered in the 3 weeks preceding were 27, 36, and 33, respectively.

Seven deaths were attributed to carcinoma, and 4 to cancer (undefined).

The deaths of 7 infants, prematurely born, were recorded.

The 12 deaths from diseases of the brain and nervous system include the deaths of 5 infants under one year of age from *convulsions*.

There were 18 deaths from diseases of the heart and blood vessels.

Ten deaths were caused by bronchitis.

Two deaths were due to accidental circumstances.

In 5 instances the cause of death was "uncertified," there having been no medical attendant during the last illness. These cases comprise the deaths of 3 children under one year of age and the deaths of 2 persons aged 60 years and upwards.

Forty-four of the persons whose deaths were registered during the week ended October 7 were under 5 years of age (33 being infants under one year, of whom 13 were under one month old) and 38 were aged 60 years and upwards, including 15 persons aged 70 and upwards, of whom 7 were octogenarians, and 2 (women) were stated to have been aged 93 and 106 years, respectively.

The Registrar-General points out that the names of the cause of death printed above in italics should be avoided whenever possible in Medical Certificates of the Cause of Death.

#### STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious disease notified under the "Infectious Diseases (Notification) Act, 1899," as set forth in the following table, have been furnished by Sir Charles A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin; Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban District; Mr. Manly, Executive Sanitary Officer for Pembroke Urban District; Mr. Heron, Executive Sanitary Officer for Blackrock Urban District; Dr. Byrne Power, Medical Superintendent Officer of Health for Kingstown Urban District; and Dr. Whitaker, Medical Superintendent Officer of Health for the City of Belfast.

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended October 7, 1905, and during each of the preceding three weeks. An asterisk (\*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Small-pox	Measles	Rubella, or Epi- demic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous (throat)	Continued Fever	Typhoid or Enteric Fever	Erysipelas	Puerperal Fever	Varicella	Whooping cough	Cerebro-spinal Fever	Total
City of Dublin	Sept. 16	-	-	-	10	-	-	5	-	12	25	17	-	-	-	-	69
	Sept. 23	-	-	-	14	-	-	1	-	1	16	19	-	-	-	-	51
	Sept. 30	-	-	-	13	-	-	3	-	2	21	7	-	-	-	-	52
	Oct. 7	-	-	-	5	-	-	4	-	2	14	6	-	-	-	-	31
Rathmines and Rathgar Urban District	Sept. 16	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	1
	Sept. 23	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
	Sept. 30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Oct. 7	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Pembroke Urban District	Sept. 16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
	Sept. 23	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
	Sept. 30	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	4
	Oct. 7	-	-	-	2	-	-	-	-	1	-	-	-	-	-	-	3
Blackrock Urban District	Sept. 16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sept. 23	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
	Sept. 30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Oct. 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kingstown Urban District	Sept. 16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sept. 23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sept. 30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Oct. 7	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	3
City of Belfast	Sept. 16	-	-	-	24	-	-	3	-	13	24	7	-	-	-	-	71
	Sept. 23	-	-	-	14	-	-	5	-	11	22	9	1	-	-	-	62
	Sept. 30	-	-	-	8	-	-	4	1	7	14	2	-	-	-	-	42
	Oct. 7	-	-	-	15	-	-	4	1	11	15	5	-	-	-	-	51

#### CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

During the week ended October 7, 1905, three cases of measles were admitted to hospital, 2 were discharged, and 4 patients remained under treatment at its close.

Six cases of scarlet fever were admitted to hospital, 7 were discharged, and 44 cases remained under treatment at the close of the week. This number is exclusive of 20 convalescents who remained under treatment in Beneavin, Glasnevin, the Convalescent Home of Cork Street Fever Hospital.

One case of typhus remained under treatment at the close of the week.

Six cases of diphtheria were admitted to hospital, 6 were discharged, and 28 patients remained under treatment at the close of the week.

Ten cases of enteric fever were admitted to hospital, 7 were discharged, and 85 cases remained under treatment in hospital at the end of the week.

In addition to the above-named diseases, 10 cases of pneumonia were admitted to hospital, 2 were discharged, and 23 cases remained under treatment at the close of the week.

#### ENGLAND AND SCOTLAND.

The mortality in the week ended October 7, in 76 large English towns, including London (in which the rate was 13.2), was equal to an average annual death-rate of 13.5 per 1,000 persons living. The average rate for 8 principal towns of Scotland was 14.9 per 1,000, the rate for Glasgow being 15.1, and for Edinburgh 15.2.

#### METEOROLOGY.

*Abstract of Observations made in the City of Dublin, Lat. 53° 20' N., Long. 6° 15' W., for the Month of September, 1905.*

Mean Height of Barometer, - - -	29.974 inches.
Maximal Height of Barometer (17th, at 9 a.m.),	30.394 „
Minimal Height of Barometer (7th, at 9 a.m.),	29.219 „
Mean Dry-bulb Temperature, - - -	53.7°
Mean Wet-bulb Temperature, - - -	51.2°.
Mean Dew-point Temperature, - - -	48.7°.
Mean Elastic Force (Tension) of Aqueous Vapour,	.346 inch.
Mean Humidity, - - -	83.6 per cent.
Highest Temperature in Shade (on 4th),	68.1°.
Lowest Temperature in Shade (on 26th),	38.5°.
Lowest Temperature on Grass (Radiation) (15th)	34.1°.
Mean Amount of Cloud, - - -	56.0 per cent.
Rainfall (on 14 days), - - -	1.225 inches.
Greatest Daily Rainfall (on 27th), - - -	.359 inch.
General Directions of Wind, - - -	W., S.W., N.E.

#### *Remarks.*

A favourable, but cool, month. There was a warm period at the beginning, lasting to the 7th, and S.W. winds were also in evidence at that time. But the remainder of the month was cool, the nights being often especially sharp, and winds from polar quarters were constant. Some heavy local showers on

the 24th and 27th and 28th disturbed the distribution of rainfall in the Dublin district. The duration of bright sunshine was estimated at 134.5 hours, equal to a daily mean of 4.5 hours compared with a twenty years' mean of 143.4 hours recorded at the Ordnance Survey Office, Phoenix Park, or 38 per cent. of the possible duration. The prevalent winds were W., S.W., and N.E.

In Dublin the arithmetical mean temperature ( $54.9^{\circ}$ ) was  $1.0^{\circ}$  below the average ( $55.9^{\circ}$ ); the mean dry-bulb readings at 9 a.m. and 9 p.m. were  $53.7^{\circ}$ . In the forty years ending with 1904, September was coldest in 1886 and 1892 (M. T. =  $53.0^{\circ}$ ), and warmest in 1865 (M. T. =  $61.4^{\circ}$ ) and 1898 (M. T. =  $60.2^{\circ}$ ). In 1904 the M. T. was  $56.8^{\circ}$ .

The mean height of the barometer was 29.974 inches, or 0.064 inch above the corrected average value for September—namely, 29.910 inches. The mercury rose to 30.394 inches at 9 a.m. of the 17th, and fell to 29.219 inches at 9 a.m. of the 7th. The observed range of atmospheric pressure was, therefore, 1.175 inches.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was  $53.7^{\circ}$ , or  $3.7^{\circ}$  below the value for August, 1905. Using the formula, *Mean Temp.* = *Min.*  $\times$  (*Max.* — *Min.*  $\times$  .476), the mean temperature was  $54.6^{\circ}$ , or  $1.0^{\circ}$  below the average mean temperature for September, calculated in the same way, in the thirty years, 1871–1900, inclusive ( $55.6^{\circ}$ ). The arithmetical mean of the maximal and minimal readings was  $54.9^{\circ}$ , compared with a thirty years' average of  $55.9^{\circ}$ . On the 4th the thermometer in the screen rose to  $68.1^{\circ}$ —wind, S.W.; on the 26th the temperature fell to  $38.5^{\circ}$ —wind, W. The minimum on the grass was  $34.1^{\circ}$  on the 15th.

The rainfall was 1.225 inches on 14 days. The average rainfall for September in the thirty-five years, 1866–1900, inclusive, was 2.220 inches, and the average number of rainy days was 15. In 1871 the rainfall was very large—4.048 inches on, however, only 13 days; in 1896 no less than 5.073 inches fell on 23 days, establishing a record rainfall for September. On the other hand, in 1865, only .056 inch was measured on but 3 days. In 1904, 2.339 inches fell on 17 days.

High winds were noted on 13 days, but attained the force of a gale on the 7th and 8th alone. The atmosphere was foggy on the 20th, 21st, and 26th. Solar halos were observed on the 5th, 22nd, 24th, and 26th.

The rainfall in Dublin during the nine months ending September 30th amounted to 19.266 inches on 145 days, compared with 19.147 inches on 152 days in 1904, 25.269 inches on 174 days in 1903, 21.425 inches on 149 days in 1902, 18.070 inches on 124 days in 1901, 24.394 inches on 156 days in 1900, 20.948 inches on 138 days in 1899, only 10.968 inches on 112 days in 1887, and a thirty-five years' average of 19.880 inches on 145 days.

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At the Normal Climatological Station in Trinity College, Dublin, the mean height of the barometer was 29.976 inches, the range of atmospheric pressure being from 29.221 inches at 9 a.m. of the 7th to 30.393 inches at 9 a.m. of the 17th. The mean value of the readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 54.9°. The arithmetical mean of the daily maximal and minimal temperature was 54.8°. The screened thermometers rose to 69.4° on the 4th, and fell to 38.8° on the 26th. On the 27th the grass minimum was 29.8°. On the 6th the black bulb *in vacuo* rose to 126.3°. Rain fell on 13 days to the amount of 1.148 inches, the greatest fall in 24 hours being .258 inch on the 24th. The duration of bright sunshine, according to the Campbell-Stokes recorder, was 120.4 hours, of which 9.1 hours occurred on the 7th. The mean earth temperatures were—at 1 ft., 55.7°; at 4 ft., 56.1°. The one-foot thermometer ranged from 59.9° on the 5th to 52.4° on the 27th. The four-foot thermometer ranged from 57.5° on the 7th to 54.2° on the 29th and 30th.

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At 21 Leeson Park, Dublin, Dr. Christopher Joynt, F.R.C.P.I., registered 1.185 inches of rain on 13 days, the greatest fall in 24 hours being .330 inch on the 27th.

Mr. R. Cathcart Dobbs, J.P., reports that at Knockdolian, Greystones, Co. Wicklow, the rainfall was 1.055 inches on 10 days, compared with 2.880 inches on 12 days in 1904, 3.950 inches on 20 days in 1903, 3.995 inches on 12 days in 1902, 5.420 inches on 19 days in 1901, and only .695 inch on but 4 days in 1900. The heaviest fall in 24 hours was .300 inch on the 8th. At Knockdolian the rainfall since January 1st, 1905, has been 22.113 inches on 120 days, compared with 21.457 inches on 141 days in 1904, 27.050 inches on 154 days in 1903, 27.156 inches on 123 days in 1902, 25.105 inches on 119 days in 1901, 30.021 inches on 140 days in 1900, 28.440 inches on 139 days in 1899, and 19.688 inches on 124 days in 1898.

Dr. Arthur S. Goff returns the rainfall at Lynton, Dundrum, Co. Dublin, at 1.07 inches on 15 days, compared with 5.03 inches on 18 days in 1901, 4.09 inches on 19 days in 1902, 4.33 inches on 21 days in 1903, and 2.94 inches on 19 days in 1904. The greatest daily fall was .25 inch on the 8th. The mean temperature in the shade was 54.9°, compared with 55.3° in September, 1903, and 56.2° in 1904. The screened thermometers rose to 75° on the 4th and 5th, and fell to 41.0° on the 11th.

Miss Muriel E. O'Sullivan reports that at Whitecross, Stillorgan, Co. Dublin, only .853 inch of rain fell on 13 days, of which small amount nearly one-half (.421 inch) was measured on the 27th.

Dr. B. H. Steede reports that at the Royal National Hospital, Newcastle, Co. Wicklow, the rainfall amounted to 1.133 inches on 13 days, .216 inch falling on the 4th. The maximal temperature in the shade was 69.0° on the 4th, the minimum was 38.2° on the 15th. Since January 1, rain has fallen on 128 days to the amount of 23.432 inches.

Mr. T. Bateman reports that the rainfall at the Green, Malahide, Co. Dublin, was 1.038 inches on 11 days, the greatest fall in 24 hours being .205 inch on the 27th. The mean shade temperature was 53.8°, the extremes being—highest, 69° on the 5th; lowest, 37° on the 26th.

The Rev. Arthur Wilson, M.A., returns the rainfall at the Rectory, Dunmanway, Co. Cork, at 3.465 inches on 16 days, the heaviest fall in 24 hours being .715 inch on the 8th.

Mr. Wm. Miller states that in the City of Cork the rainfall was 1.35 inches on 11 days, or 1.35 inches below the average for September. The rainfall was greatest on the 8th, when 0.32 inch was measured. In the 9 months ended September 30, the rainfall was 28.13 inches, or 1.74 inches above the average, but 1.62 inches less than in the corresponding period of 1904. The rainy days in 1905 have so far been 142, or 4 above the average.

The rainfall recorded at the Ordnance Survey Office, Phoenix Park, was 1.165 inches on 13 days, the greatest measurement in 24 hours being .270 inch on the 27th. The total amount of sunshine at this station was 122.6 hours, the most registered on any one day being 9.8 hours on the 9th.

Dr. J. Byrne Power, F.R. Met. Soc., Medical Superintendent Officer of Health, Kingstown, reports that the mean temperature at that health resort was 56.0°, being 0.9° below the average for September during 18 previous years (1873-80 and 1898-1904),



the extremes being—highest, 70.7° on the 4th; lowest, 40.5° on the 15th. At Bournemouth the mean was 56.7°, the extremes being—highest, 75° on the 4th; lowest, 40° on the 27th. The mean daily range of temperature was 10.3°; at Bournemouth it was 15.3°. The mean temperature of the sea at Sandycove bathing place was 56°, being 1.2° below the average for the month during the previous 7 years. The relative humidity was 76 per cent., being 1 per cent. below the average for the month during the previous 4 years. The rainfall was 0.85 inch on 10 days, being 1.61 inches below the average for the month during 15 previous years (1873–83 and 1901–04), the greatest fall for any 24 hours being 0.36 inch on the 28th. The rainfall at Kingstown for the past 9 months amounted to 18.98 inches, being 1.32 inch below the average for the corresponding 9 months during 15 previous years. The rainfall at Bournemouth was 2.08 inches on 14 days. The duration of bright sunshine was 131.5 hours compared with 122.6 hours at the Ordnance Survey Office, Phoenix Park, 94.6 hours at Valentia, 113.9 hours at Birr Castle, 113.3 hours at Southport, and 118.8 hours at Hastings.

Mr. Robert O'B. Furlong, C.B., reports that the rainfall at Cloneevin, Killiney, Co. Dublin, was only .79 inch on 10 days, compared with an average for September of 2.148 inches on 13.5 days in the twenty years 1885–1904. The greatest fall in 24 hours was .25 inch on the 27th. There was absolute drought from the 13th to the 26th, both days included. The rainfall in September at this station had been lower in 1903 (.46 inch on 11 days), 1888 (.58 inch on 7 days), 1894 (.70 inch on 5 days), 1900 (.70 inch on 8 days), and 1889 (.77 inch on 11 days). In 1905 the total rainfall to September 30 amounts to 21.09 inches on 132 days.