Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 07/07/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 05/07/2020

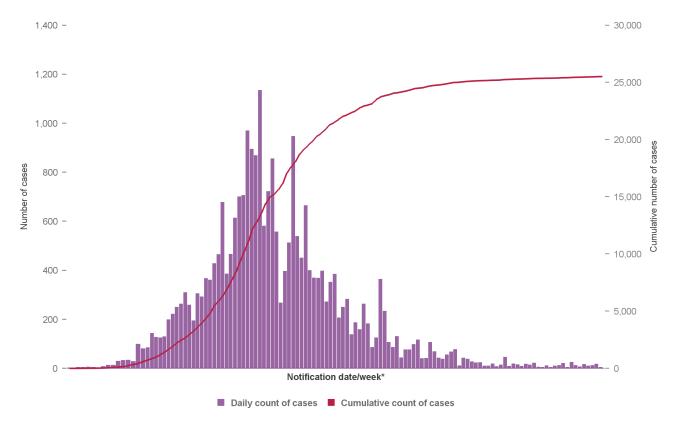|	Number	Percent
Total number of confirmed cases	25,514	
National cumulative incidence of confirmed cases per 100,000 population	535.8	
Total number of cases hospitalised	3,307	12.96
Total number of cases admitted to ICU	436	1.71
Total number of deaths among confirmed cases	1,482	5.81
Case fatality ratio (CFR, %)	5.81	
National cumulative incidence of confirmed deaths per 100,000 population	31.12	
Total number of outbreaks/clusters	1,827	
Total number of cases associated with clusters	12,848	50.36
Total number of imported cases	389	1.52
Number of cases in healthcare workers	8,237	32.28
Males	10,912	42.77
Females	14,572	57.11
M:F ratio	0.75	
Median age (years)	48	
Mean age (years)	51	
Age range (years)	0 - 106	

Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 05/07/2020

*Between 05/04/2020 – 19/04/2020, the daily number of COVID-19 events notified in Ireland is inflated due to batch reporting of cases with specimen dates between from 19/03/2020 – 01/04/2020 in addition to real-time reporting of cases with contemporaneous specimen dates
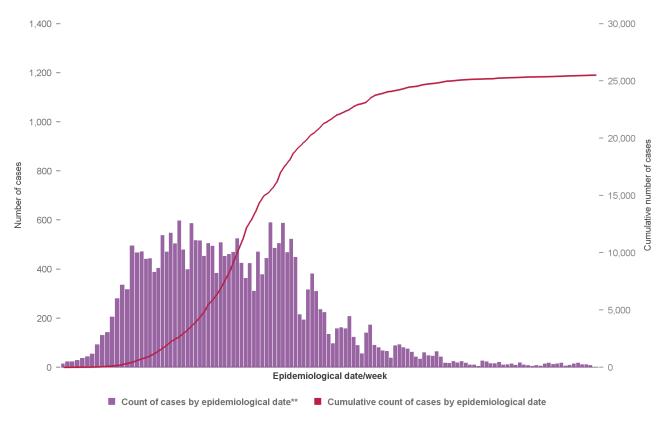

Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 05/07/2020**

**Epidemiological date is derived from epidemiological date, which is the earliest of onset date, date of diagnosis, laboratory specimen collection date, laboratory received date, laboratory reported date, event creation/notification date.
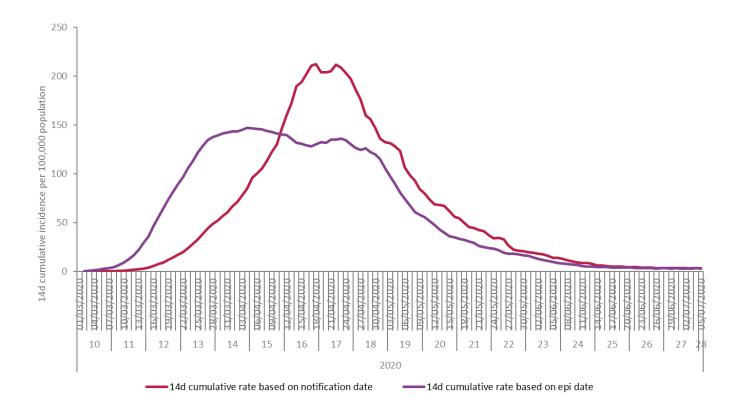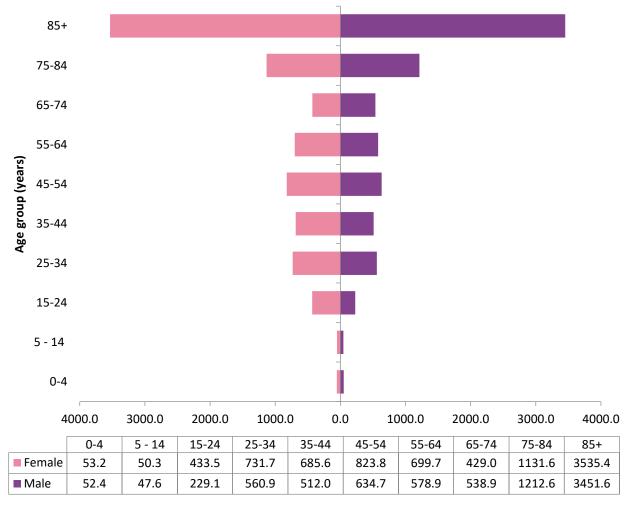
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date** to midnight 05/07/2020

* Between 05/04/2020 – 19/04/2020, the daily number of COVID-19 events notified in Ireland is inflated due to batch reporting of cases with specimen dates between from 19/03/2020 – 01/04/2020 in addition to real-time reporting of cases with contemporaneous specimen dates

**Epidemiological date is derived from epidemiological date, which is the earliest of onset date, date of diagnosis, laboratory specimen collection date, laboratory received date, laboratory reported date, event creation/notification date.

Table 1: Characteristics of confirmed COVID-19 cases notified in Ireland up to midnight on 05/07/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		**25,514**	**100**
Sex	Male:Female ratio	0.75	
	Male	10,912	42.77
	Female	14,572	57.11
	Unknown	30	0.12
Age	Median age (years)	48	
	Mean age (years)	51	
	Age range (years)	0 - 106	
	0-4 yrs	175	0.69
	5-14 yrs	330	1.29
	15-24 yrs	1,903	7.46
	25-34 yrs	4,289	16.81
	35-44 yrs	4,491	17.6
	45-54 yrs	4,577	17.94
	55-64 yrs	3,256	12.76
	65-74 yrs	1,805	7.07
	75-84 yrs	2,296	9
	85+ yrs	2,370	9.29
	Unknown	22	0.09

	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	53.2	50.3	433.5	731.7	685.6	823.8	699.7	429.0	1131.6	3535.4
Male	52.4	47.6	229.1	560.9	512.0	634.7	578.9	538.9	1212.6	3451.6

Cumulative age- and sex-specific rate per 100,000 population

■ Female ■ Male

Figure 3: Cumulative age- and sex-specific incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 05/07/2020 (excluding 22 cases for whom age is unknown and 30 cases for whom sex is unknown and 1 case for whom both is unknown)
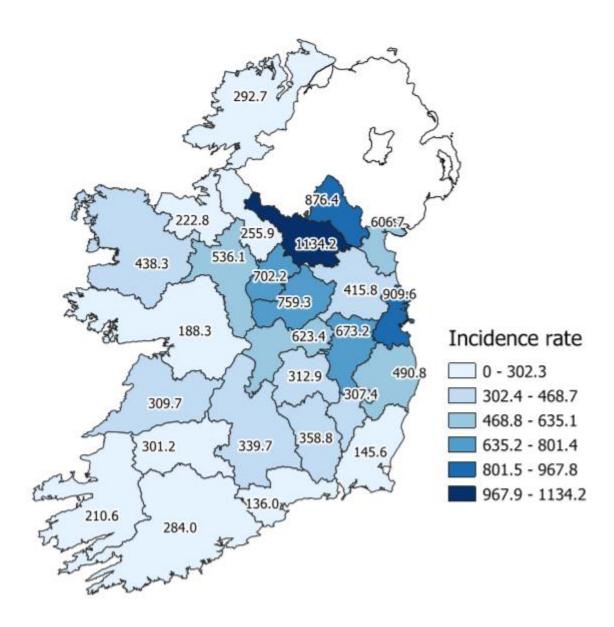
Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 05/07/2020

Please do not directly compare county shades to previous maps. The numbers of cases by county are increasing and as such the categories listed will broaden which may result in changes to the map shading.

Table 2: Number of confirmed COVID-19 cases by county notified to midnight 05/07/2020

County Name	Number of cases	Percent
Carlow	175	0.69
Cavan	864	3.39
Clare	368	1.44
Cork	1,542	6.04
Donegal	466	1.83
Dublin	12,255	48.03
Galway	486	1.9
Kerry	311	1.22
Kildare	1,498	5.87
Kilkenny	356	1.4
Laois	265	1.04
Leitrim	82	0.32
Limerick	587	2.3
Longford	287	1.12
Louth	782	3.06
Mayo	572	2.24
Meath	811	3.18
Monaghan	538	2.11
Offaly	486	1.9
Roscommon	346	1.36
Sligo	146	0.57
Tipperary	542	2.12
Waterford	158	0.62
Westmeath	674	2.64
Wexford	218	0.85
Wicklow	699	2.74
Total	**25,514**	**100**

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 05/07/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	8,425	33.02%
Local transmission, incl. possible local transmission	16,487	64.62%
Travel abroad, incl. possible travel abroad	596	2.34%
Unknown	6	0.02%
Total	**25,514**	**100.00%**

*See technical note 3 for definition of WHO transmission classification

Cases which were notified more than 2 weeks ago and have not yet been reported as imported or linked to an outbreak are classified as possible community transmission.

Table 4: Cumulative number of confirmed cases of COVID-19 notified in Ireland by age group and hospital, ICU and vital status as of midnight 05/07/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	175	22	0.67	0	0
5-14 yrs	330	17	0.51	2	0.46
15-24 yrs	1903	73	2.21	5	1.15
25-34 yrs	4289	197	5.96	15	3.44
35-44 yrs	4491	267	8.07	36	8.26
45-54 yrs	4577	446	13.49	91	20.87
55-64 yrs	3256	491	14.85	126	28.9
65-74 yrs	1805	579	17.51	109	25
75-84 yrs	2296	741	22.41	46	10.55
85+ yrs	2370	472	14.27	6	1.38
Unknown	22	2	0.06	0	0
Total	**25,514**	**3,307**	**100**	**436**	**100**

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 05/07/2020

	0-4 yrs	5-14 yrs	15-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75-84 yrs	85+ yrs	Unknown
Number of cases (n)	175	330	1,903	4,289	4,491	4,577	3,256	1,805	2,296	2,370	22
Cases hospitalised (n)	22	17	73	197	267	446	491	579	741	472	2
Cases hospitalised (%)	12.57	5.15	3.84	4.59	5.95	9.74	15.08	32.08	32.27	19.92	9.09
Cases admitted to ICU (n)	0	2	5	15	36	91	126	109	46	6	0
Cases admitted to ICU (%)	0	0.61	0.26	0.35	0.8	1.99	3.87	6.04	2	0.25	0
Deaths (n)	0	0	1	5	12	23	64	221	506	650	0
Case fatality ratio (%)	0	0	0.05	0.12	0.27	0.5	1.97	12.24	22.04	27.43	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 05/07/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	Total
Private house	755	6	52	118	28	108	28	26	1,121
Nursing home	124	10	16	38	5	11	17	37	258
Residential institution	99	9	7	17	4	21	10	4	171
Hospital	61	3	3	14	2	10	4	6	103
Other*	12	8	26	6	7	21	6	9	95
Workplace	7	5	5	14	1	8	3	4	47
Comm. Hosp/Long-stay unit	4	3	2		4	6	5	5	29
Unknown	2					1			3
Total	1,064	44	111	207	51	186	73	91	1,827

*Other outbreak location includes community, extended family, hotel, public house, retail outlet, travel related and all other locations.
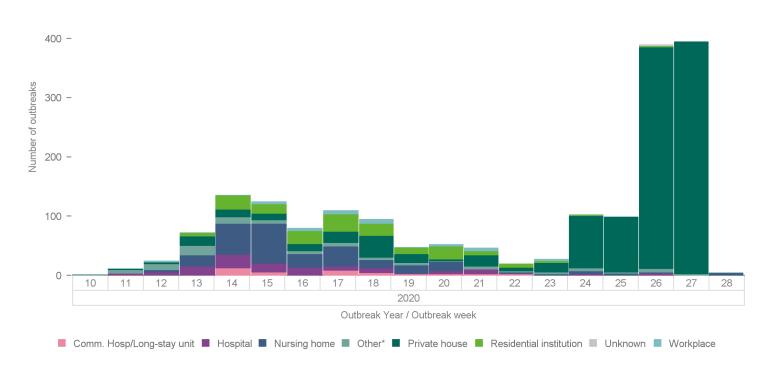
Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 05/07/2020

*Other outbreak location includes community, extended family, hotel, public house, retail outlet, travel related and all other locations.

Note: In week 24 and 25, 200 new COVID-19 outbreaks were reported on CIDR, of which 187 were family outbreaks. Of these, 79 family outbreaks occurred in March, 66 family outbreaks occurred in April and 16 family outbreaks occurred in May 2020.

In week 26, 389 new COVID-19 outbreaks were reported on CIDR, of which 376 were family outbreaks. Of these, 172 family outbreaks occurred in March, 129 family outbreaks occurred in April and 22 family outbreaks occurred in May 2020.

In week 27 (28/06/2020- 04/07/2020), 394 new COVID-19 outbreaks were reported on CIDR, of which all 394 were family outbreaks. Of these, 196 family outbreaks occurred in March, 98 family outbreaks occurred in April, 44 family outbreaks occurred in May and 5 family outbreaks occurred in June 2020.

Deaths among COVID-19 cases

Table 7: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 05/07/2020

		Number	Percent
Total number of deaths		1,742	
	Confirmed	1,482	85.07
	Probable	101	5.8
	Possible	159	9.13
Total number of cases hospitalised		732	42.02
	Cases admitted to ICU	90	5.17
	Cases not admitted to ICU	642	36.85
Total number of imported cases		5	0.29
Number of cases in healthcare workers		7	0.4
Number with underlying clinical conditions		1,628	93.46
Total number of male cases		857	49.2
M:F ratio		0.97	
Median age (years)		84	
Mean age (years)		82	
Age range (years)		17 - 105	

Table 8: Number of deaths in all COVID-19 cases by sex and age group notified in Ireland up to midnight 05/07/2020

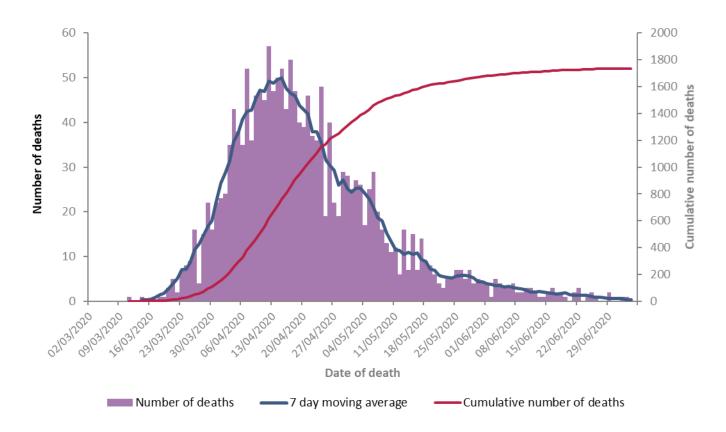| Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.06
25-34 yrs	<5	<5	5	0.29
35-44 yrs	6	7	13	0.75
45-54 yrs	10	15	25	1.44
55-64 yrs	24	45	69	3.96
65-74 yrs	91	156	247	14.18
75-84 yrs	270	322	592	33.98
85+ yrs	479	309	788	45.24
Unknown	<5	<5	2	0.11
Total	**885**	**857**	**1,742**	**100**
Percent	**50.8**	**49.2**		

Figure 6: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 05/07/2020

* Date of death is not yet available for six cases

Please note: a lag in time between reporting of deaths and data extraction is expected and as such most recent dates will not yet reflect all deaths on that date

Acknowledgements

Sincere thanks are extended to all those who are participating in the collection of data and reporting of data used in this report. This includes staff in ICU units, notifying clinicians, laboratory staff, public health doctors, nurses, surveillance scientists, microbiologists and administrative staff.

Report prepared by COVID-19 Epidemiology Team, HPSC

Technical Notes

1. Data Source

Data are based on statutory notifications and were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:16 on 07/07/2020. Data are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

2. Epidemiological date

Epidemiological date is derived from epidemiological date, which is the earliest of onset date, date of diagnosis, laboratory specimen collection date, laboratory received date, laboratory reported date, event creation/notification date.

3. Population data

Population data were taken from Census 2016. Data were aggregated into the following age groups for the analysis: 0-4 years, 5-14 years, 15-24 years, 25-34 years, 35-44 years, 45-54 years, 55-64 years, 65-74 years, 75-84 years and ≥ 85 years.

3. Transmission classification

Transmission classification is based on country of infection as well as enhanced exposure data (international travel; close contact of a case) recorded in CIDR. Transmission is classified as 'unknown' due to incomplete data on CIDR.

WHO definition of transmission classification is specified below:
- Community transmission is evidenced by the inability to relate confirmed cases through chains of transmission for a large number of cases, or by increasing positive tests through routine screening of sentinel samples.

- Local transmission indicates locations where the source of infection is within the reporting location.

- Imported cases only indicates locations where all cases have been acquired outside the location of reporting.

4. HSE areas

The counties covered by each HSE area are as follows:
  HSE East (E): Dublin, Kildare & Wicklow;
  HSE Midlands (M): Laois, Longford, Offaly & Westmeath;
  HSE Midwest (MW): Clare, Limerick & N. Tipperary;
  HSE Northeast (NE): Cavan, Louth, Meath & Monaghan;
  HSE Northwest (NW): Donegal, Leitrim & Sligo;
  HSE South (S): Kerry & Cork;
  HSE Southeast (SE): Carlow, Kilkenny, S. Tipperary, Waterford & Wexford;
  HSE West (W): Galway, Mayo & Roscommon.

5. Outbreak location

Where an outbreak location is reported as a residential facility (RF) this includes nursing homes, community hospitals, long-stay units and residential institutions including mental health facilities, prisons and direct provision centres.

Other outbreak location includes community, extended family, hotel, public house, retail outlet, travel related and all other locations.