Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 21/08/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 19/08/2020

	Number	Percent
Total number of confirmed cases	27,675	
National cumulative incidence of confirmed cases per 100,000 population	581.18	
Total number of cases hospitalised	3,393	12.26
Total number of cases admitted to ICU	443	1.6
Total number of deaths among confirmed cases	1,518	5.49
Case fatality ratio (CFR, %)	5.49	
National cumulative incidence of confirmed deaths per 100,000 population	31.88	
Total number of outbreaks/clusters	2,577	
Total number of cases associated with clusters	15,134	54.68
Total number of imported cases	476	1.72
Number of cases in healthcare workers	8,536	30.84
Males	12,033	43.48
Females	15,614	56.42
M:F ratio	0.77	
Median age (years)	47	
Mean age (years)	49	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:23 on 21/08/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.
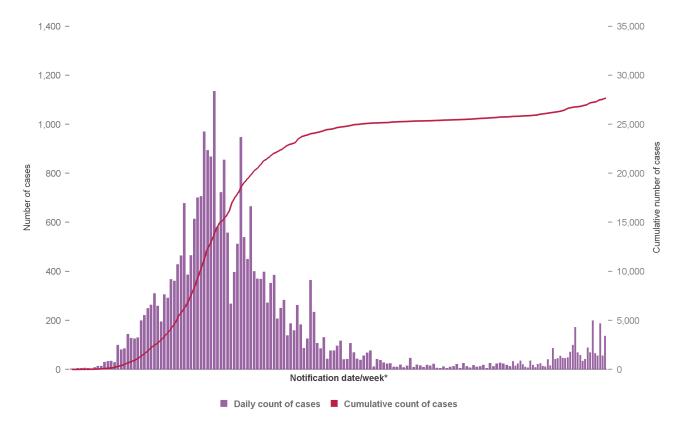
Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 19/08/2020

*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
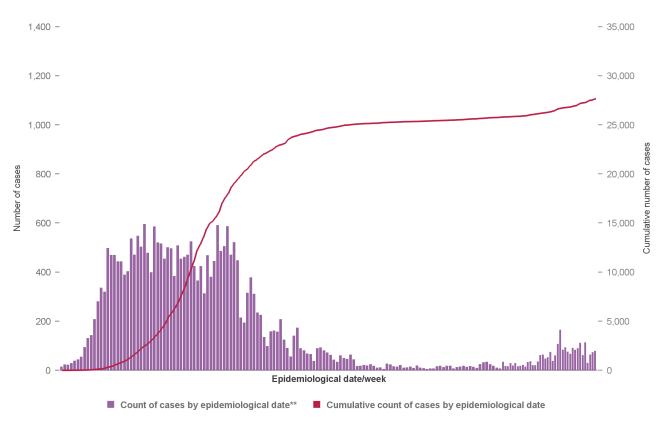

Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date** to midnight 19/08/2020

**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 19/08/2020

* 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

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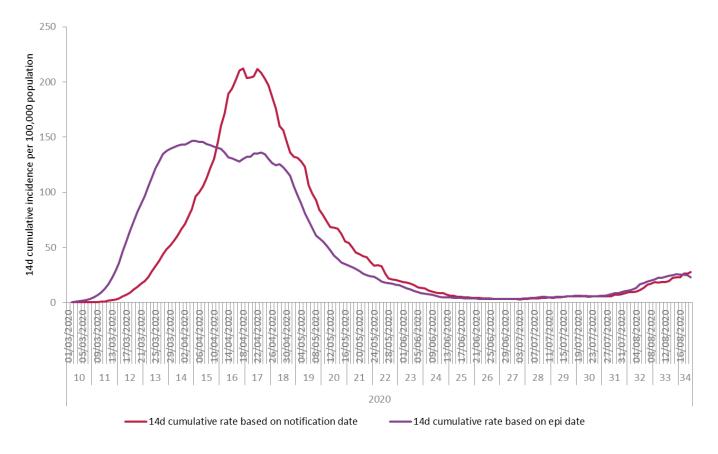
Table 1: Characteristics of confirmed COVID-19 cases notified in Ireland up to midnight on 19/08/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		**27,675**	**100**
Sex	Male:Female ratio	0.77	
	Male	12,033	43.48
	Female	15,614	56.42
	Unknown	28	0.1
Age	Median age (years)	47	
	Mean age (years)	49	
	Age range (years)	0 - 106	
	0-4 yrs	257	0.93
	5-14 yrs	480	1.73
	15-24 yrs	2,329	8.42
	25-34 yrs	4,812	17.39
	35-44 yrs	4,873	17.61
	45-54 yrs	4,883	17.64
	55-64 yrs	3,416	12.34
	65-74 yrs	1,894	6.84
	75-84 yrs	2,324	8.4
	85+ yrs	2,386	8.62
	Unknown	21	0.08

	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
■ Female	79.7	72.7	508.9	800.3	732.6	870.1	728.5	457.6	1146.6	3557.9
■ Male	75.4	69.6	301.9	652.0	567.1	686.4	612.9	557.8	1226.0	3477.6

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 19/08/2020 (excluding 20 cases for whom age is unknown and 27 cases for whom sex is unknown and 1 case for whom both are unknown)
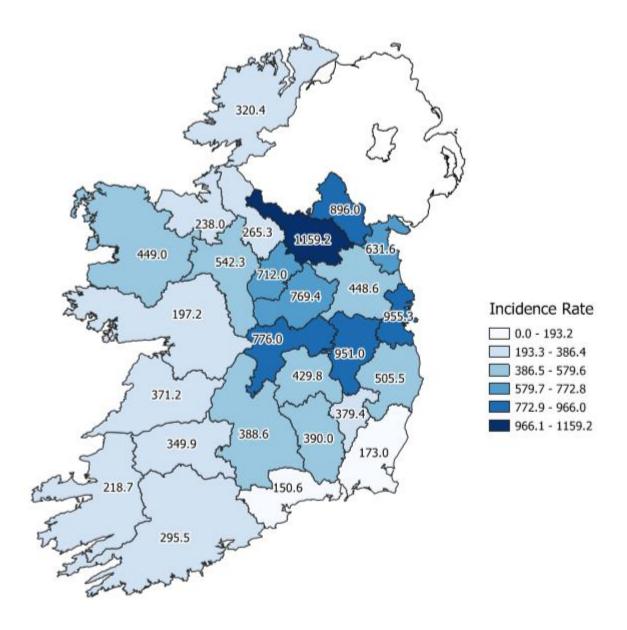
Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 19/08/2020

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 19/08/2020

County Name	Number of cases	Percent
Carlow	216	0.78
Cavan	883	3.19
Clare	441	1.59
Cork	1,604	5.8
Donegal	510	1.84
Dublin	12,871	46.51
Galway	509	1.84
Kerry	323	1.17
Kildare	2,116	7.65
Kilkenny	387	1.4
Laois	364	1.32
Leitrim	85	0.31
Limerick	682	2.46
Longford	291	1.05
Louth	814	2.94
Mayo	586	2.12
Meath	875	3.16
Monaghan	550	1.99
Offaly	605	2.19
Roscommon	350	1.26
Sligo	156	0.56
Tipperary	620	2.24
Waterford	175	0.63
Westmeath	683	2.47
Wexford	259	0.94
Wicklow	720	2.6
Total	**27,675**	**100**

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 19/08/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	8,425	30.44%
Local transmission, incl. possible local transmission	18,437	66.62%
Travel abroad, incl. possible travel abroad	670	2.42%
Unknown	143	0.52%
Total	**27,675**	**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 19/08/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	257	24	0.71	0	0
5-14 yrs	480	18	0.53	2	0.45
15-24 yrs	2329	80	2.36	5	1.13
25-34 yrs	4812	204	6.01	15	3.39
35-44 yrs	4873	279	8.22	37	8.35
45-54 yrs	4883	456	13.44	92	20.77
55-64 yrs	3416	503	14.82	128	28.89
65-74 yrs	1894	595	17.54	110	24.83
75-84 yrs	2324	753	22.19	48	10.84
85+ yrs	2386	480	14.15	6	1.35
Unknown	21	1	0.03	0	0
Total	**27,675**	**3,393**	**100**	**443**	**100**

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 19/08/2020

	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)	257	480	2,329	4,812	4,873	4,883	3,416	1,894	2,324	2,386	21
Cases hospitalised (n)	24	18	80	204	279	456	503	595	753	480	1
Cases hospitalised (%)	9.34	3.75	3.43	4.24	5.73	9.34	14.72	31.41	32.4	20.12	4.76
Cases admitted to ICU (n)	0	2	5	15	37	92	128	110	48	6	0
Cases admitted to ICU (%)	0	0.42	0.21	0.31	0.76	1.88	3.75	5.81	2.07	0.25	0
Deaths (n)	0	0	1	5	12	24	68	227	521	660	0
Case fatality ratio (%)	0	0	0.04	0.1	0.25	0.49	1.99	11.99	22.42	27.66	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 19/08/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	1,253		18	96	128	54	119	82	29	**1,779**
Nursing home	131		10	18	43	5	14	17	36	**274**
Residential institution	107		10	9	18	4	21	10	4	**183**
Other*	15	2	9	37	7	10	31	11	10	**132**
Hospital	64		3	4	14	2	10	5	6	**108**
Workplace	20		10	6	14	1	9	4	4	**68**
Comm. Hosp/Long-stay unit	4		4	2		4	6	5	5	**30**
Unknown	3									**3**
Total	**1,597**	**2**	**64**	**172**	**224**	**80**	**210**	**134**	**94**	**2,577**

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

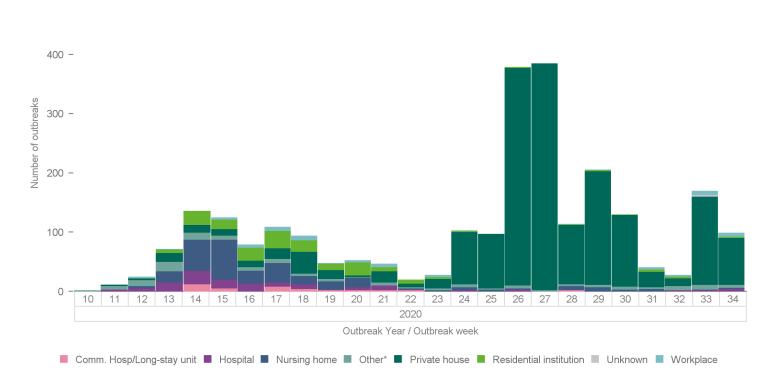**Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 19/08/2020**

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

Note: 1,673 COVID-19 outbreaks were reported on CIDR between week 24 and week 34 2020 (June 9th to 19th August). Of these, 1,574 were family outbreaks. Most of these family outbreaks occurred earlier and were reported between weeks 24 and 34 as a result of data validation: 1 occurred in February, 603 in March, 458 in April, 97 in May, 12 in June, 46 in July and 62 in August to date.

Deaths among COVID-19 cases

Table 7: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 19/08/2020

		Number	Percent
Total number of deaths		1,776	
	Confirmed	1,518	85.47
	Probable	99	5.57
	Possible	159	8.95
Total number of cases hospitalised		755	42.51
	Cases admitted to ICU	93	5.24
	Cases not admitted to ICU	662	37.27
Total number of imported cases		6	0.34
Number of cases in healthcare workers		8	0.45
Number with underlying clinical conditions		1,676	94.37
Total number of male cases		874	49.21
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 19/08/2020

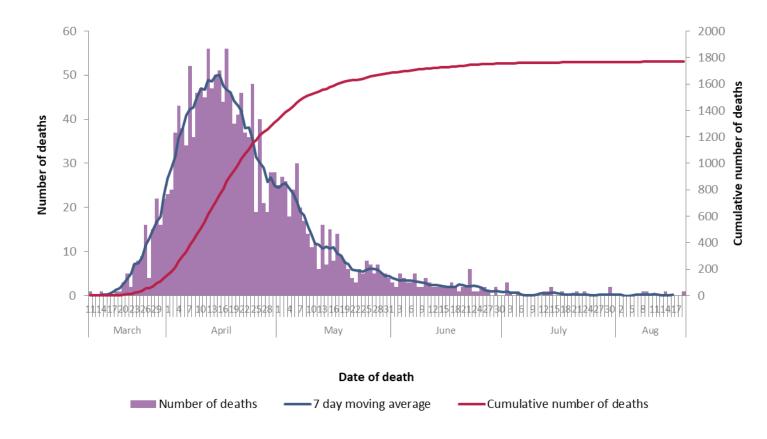| Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.06
25-34 yrs	<5	<5	5	0.28
35-44 yrs	6	7	13	0.73
45-54 yrs	10	16	26	1.46
55-64 yrs	25	48	73	4.11
65-74 yrs	93	159	252	14.19
75-84 yrs	279	326	605	34.07
85+ yrs	484	315	799	44.99
Unknown	<5	<5	2	0.11
Total	**902**	**874**	**1,776**	**100**
Percent	**50.79**	**49.21**		

Figure 6a: 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 19/08/2020 (n=1776)
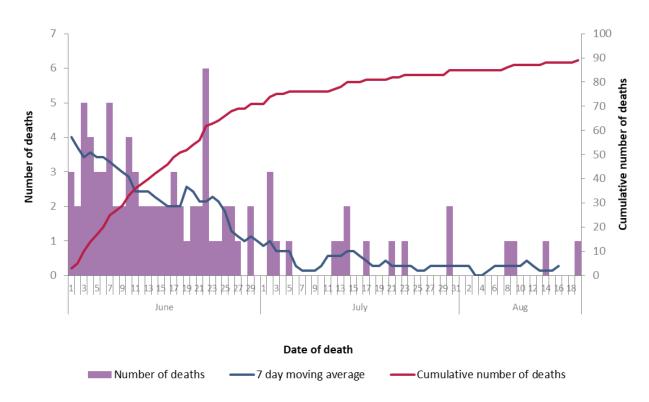

Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/06/2020 to midnight 19/08/2020 (n=89)

* Date of death is not yet available for five 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 these reports. This includes the HSE COVID-19 Contact Management Programme (CMP), 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

1. Data Source

Data are based on statutory notifications and were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:23 on 8/21/20. 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.

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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.