



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 23/07/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 21/07/2020

	Number	Percent
Total number of confirmed cases	25,819	
National cumulative incidence of confirmed cases per 100,000 population	542.2	
Total number of cases hospitalised	3,341	12.94
Total number of cases admitted to ICU	438	1.7
Total number of deaths among confirmed cases	1,505	5.83
Case fatality ratio (CFR, %)	5.83	
National cumulative incidence of confirmed deaths per 100,000 population	31.63	
Total number of outbreaks/clusters	2,226	
Total number of cases associated with clusters	13,772	53.34
Total number of imported cases	434	1.68
Number of cases in healthcare workers	8,367	32.41
Males	11,056	42.82
Females	14,735	57.07
M:F ratio	0.75	
Median age (years)	48	
Mean age (years)	50	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:17 on 23/07/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

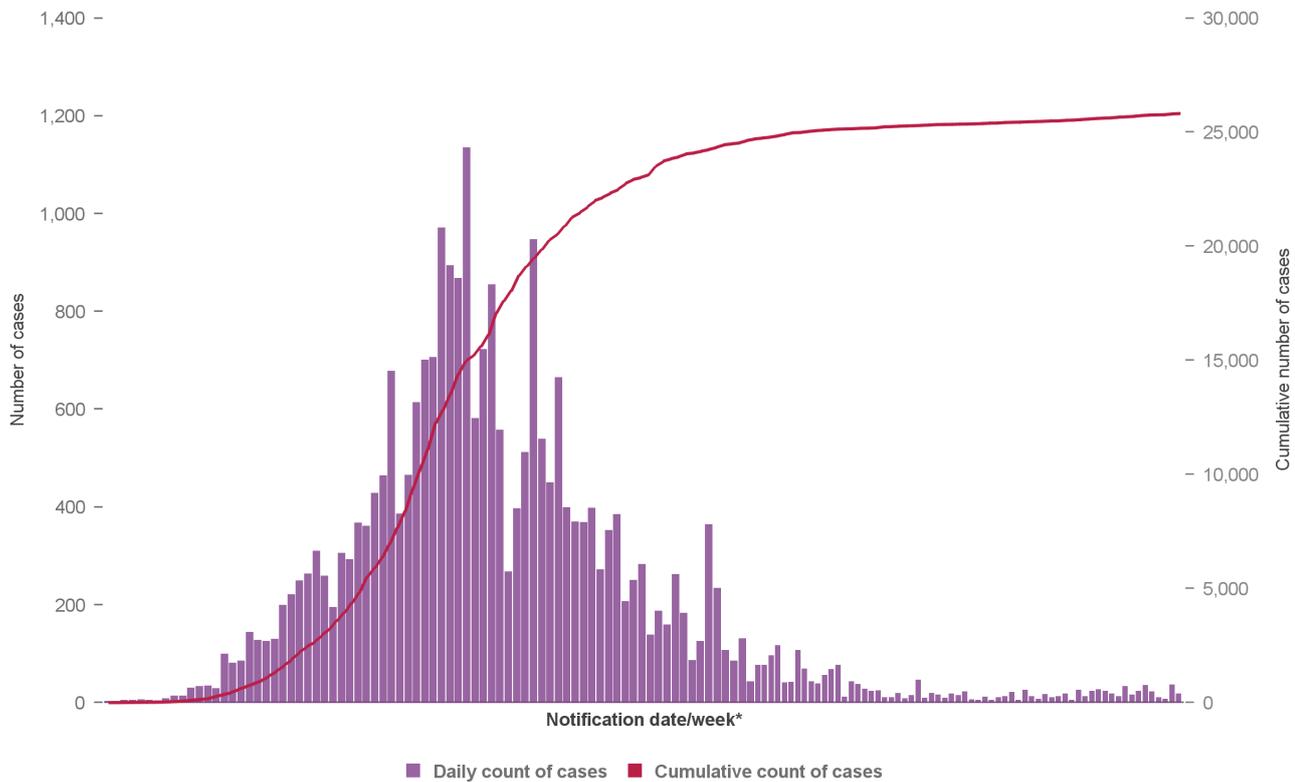


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 21/07/2020

*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

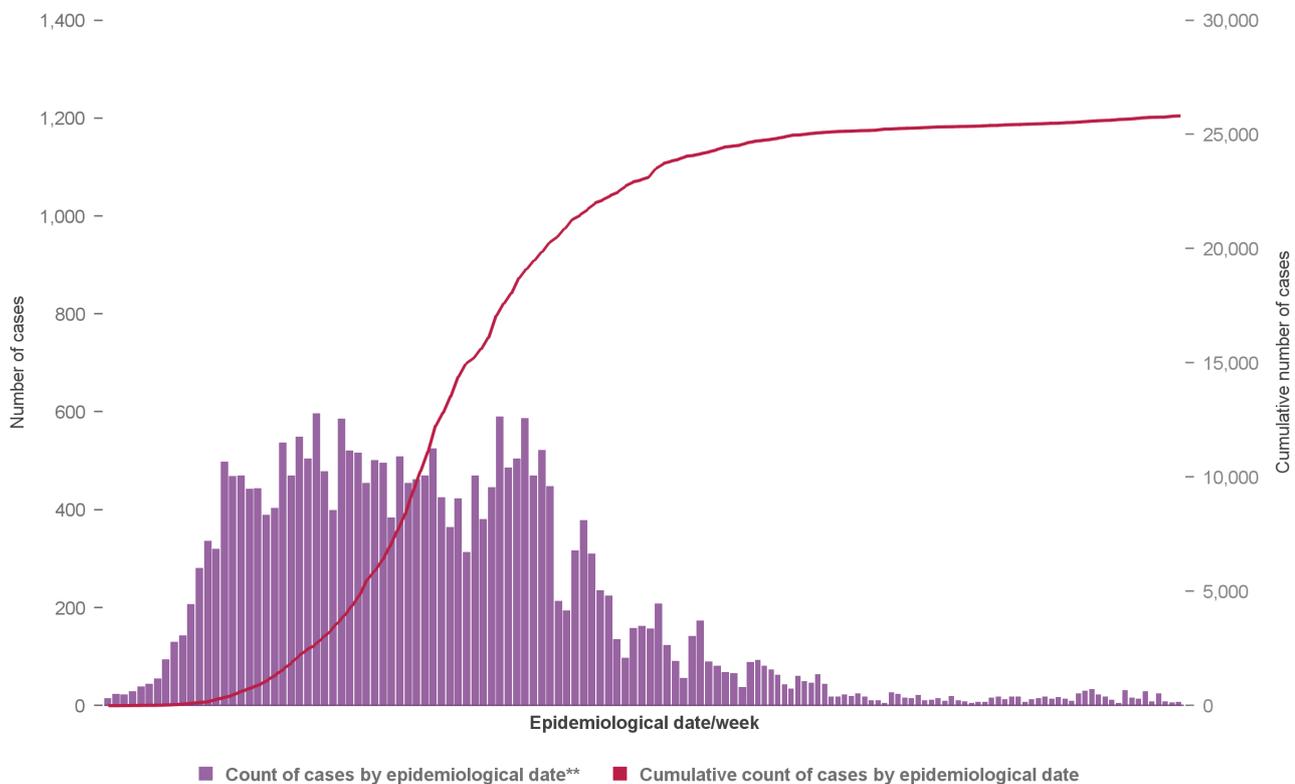


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 21/07/2020**

**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.

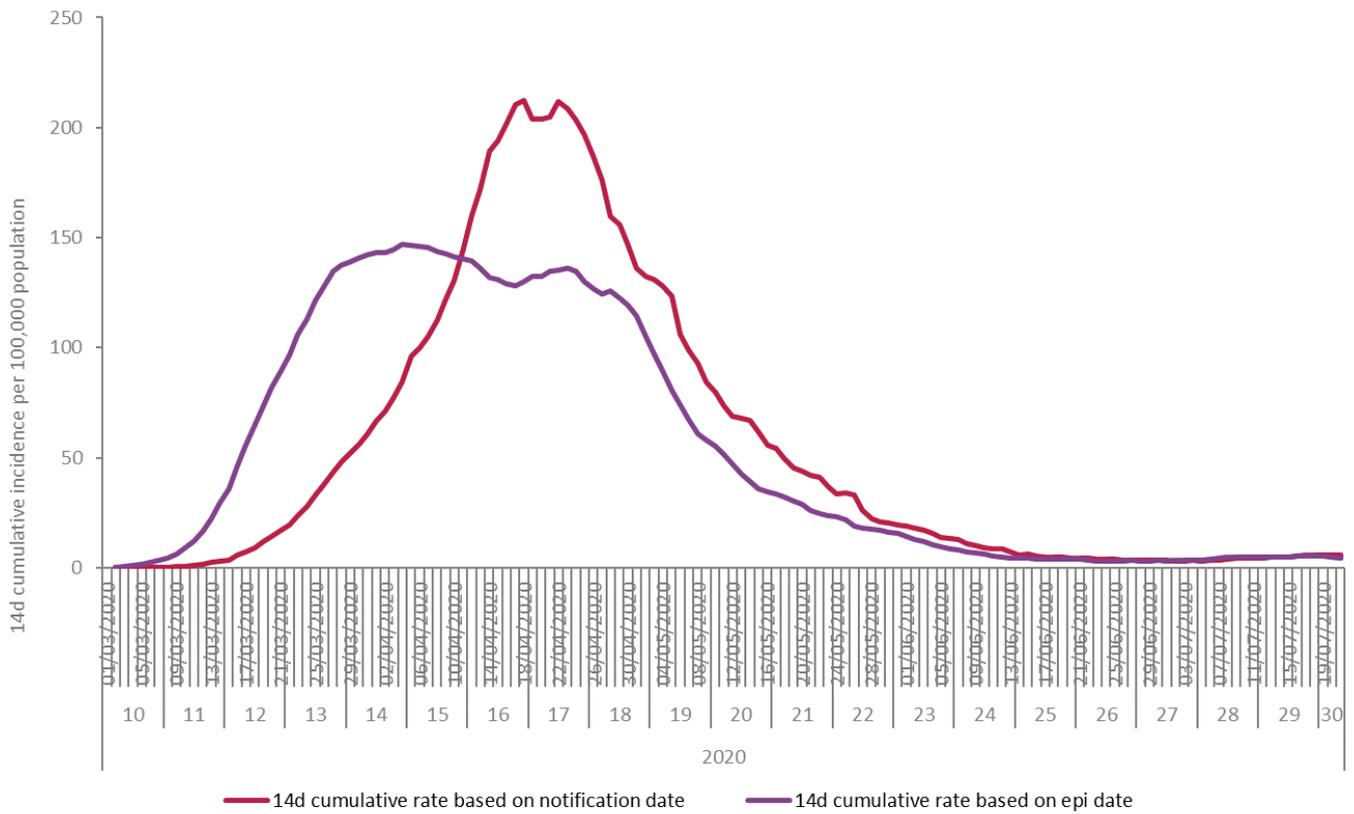


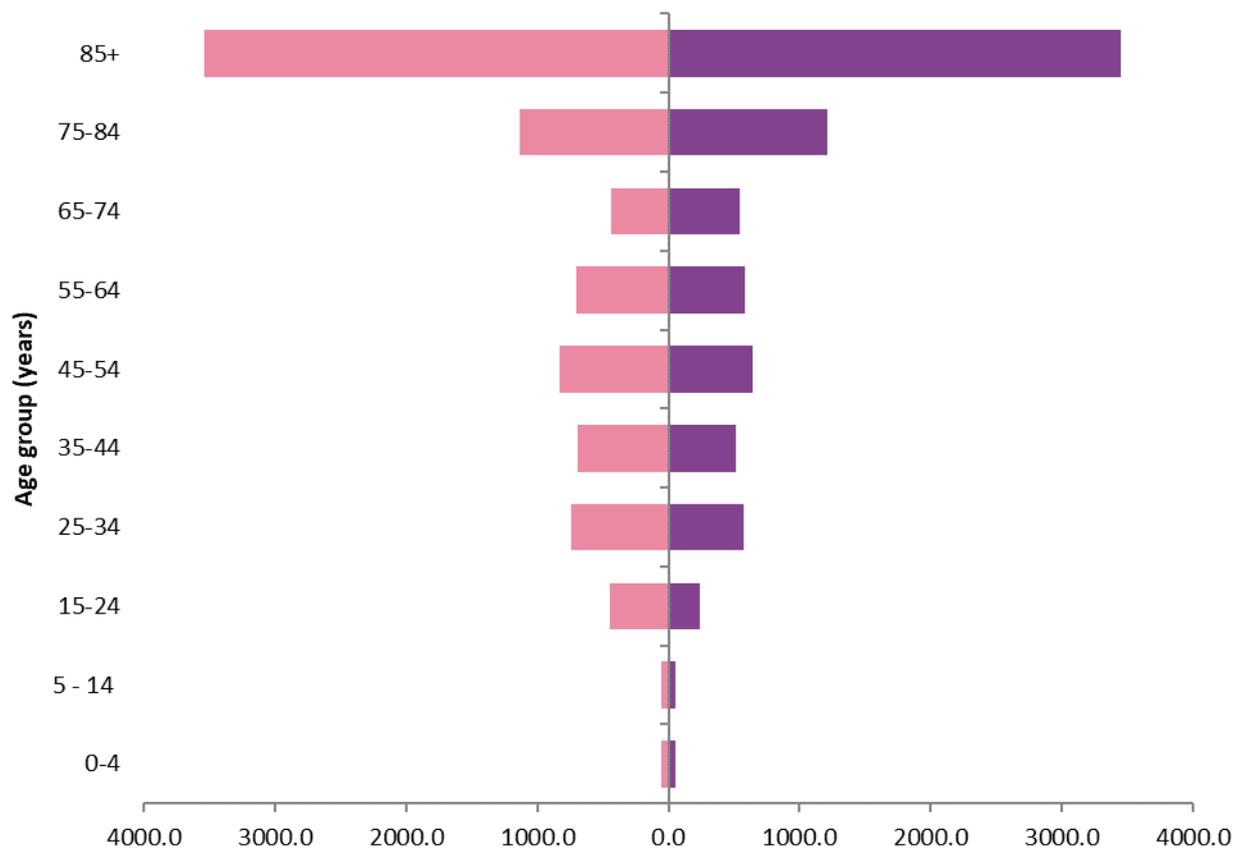
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 21/07/2020**

* 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

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Table 1: Characteristics of confirmed COVID-19 cases notified in Ireland up to midnight on 21/07/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		25,819	100
Sex	Male:Female ratio	0.75	
	Male	11,056	42.82
	Female	14,735	57.07
	Unknown	28	0.11
Age	Median age (years)	48	
	Mean age (years)	50	
	Age range (years)	0 - 106	
	0-4 yrs	184	0.71
	5-14 yrs	340	1.32
	15-24 yrs	1,966	7.61
	25-34 yrs	4,363	16.9
	35-44 yrs	4,539	17.58
	45-54 yrs	4,621	17.9
	55-64 yrs	3,280	12.7
	65-74 yrs	1,827	7.08
	75-84 yrs	2,304	8.92
	85+ yrs	2,374	9.19
	Unknown	21	0.08



	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	58.1	51.5	444.4	741.6	693.0	830.1	705.1	438.5	1135.4	3542.1
Male	53.0	49.3	240.3	573.8	517.5	642.4	582.8	541.0	1217.1	3455.9

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 21/07/2020 (excluding 21 cases for whom age is unknown and 28 cases for whom sex is unknown and 1 case for whom both are unknown)

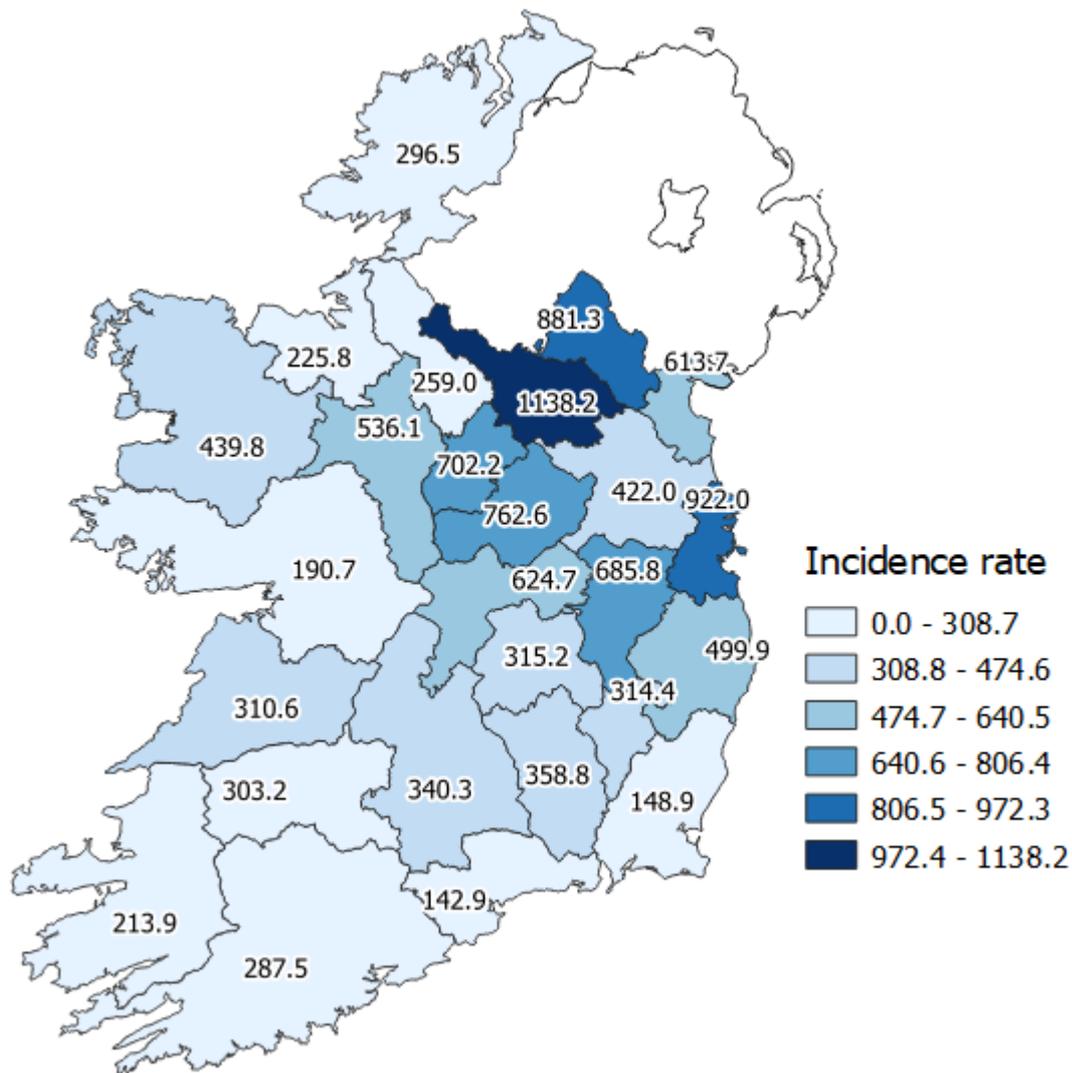


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 21/07/2020

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 21/07/2020

County Name	Number of cases	Percent
Carlow	179	0.69
Cavan	867	3.36
Clare	369	1.43
Cork	1,561	6.05
Donegal	472	1.83
Dublin	12,422	48.11
Galway	492	1.91
Kerry	316	1.22
Kildare	1,526	5.91
Kilkenny	356	1.38
Laois	267	1.03
Leitrim	83	0.32
Limerick	591	2.29
Longford	287	1.11
Louth	791	3.06
Mayo	574	2.22
Meath	823	3.19
Monaghan	541	2.1
Offaly	487	1.89
Roscommon	346	1.34
Sligo	148	0.57
Tipperary	543	2.1
Waterford	166	0.64
Westmeath	677	2.62
Wexford	223	0.86
Wicklow	712	2.76
Total	25,819	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 21/07/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	8,151	31.57%
Local transmission, incl. possible local transmission	17,010	65.88%
Travel abroad, incl. possible travel abroad	629	2.44%
Unknown	29	0.11%
Total	25,819	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 21/07/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	184	22	0.66	0	0
5-14 yrs	340	18	0.54	2	0.46
15-24 yrs	1966	76	2.27	5	1.14
25-34 yrs	4363	198	5.93	15	3.42
35-44 yrs	4539	274	8.2	36	8.22
45-54 yrs	4621	447	13.38	91	20.78
55-64 yrs	3280	497	14.88	127	29
65-74 yrs	1827	587	17.57	110	25.11
75-84 yrs	2304	745	22.3	46	10.5
85+ yrs	2374	476	14.25	6	1.37
Unknown	21	1	0.03	0	0
Total	25,819	3,341	100	438	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 21/07/2020

	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)	184	340	1,966	4,363	4,539	4,621	3,280	1,827	2,304	2,374	21
Cases hospitalised (n)	22	18	76	198	274	447	497	587	745	476	1
Cases hospitalised (%)	11.96	5.29	3.87	4.54	6.04	9.67	15.15	32.13	32.34	20.05	4.76
Cases admitted to ICU (n)	0	2	5	15	36	91	127	110	46	6	0
Cases admitted to ICU (%)	0	0.59	0.25	0.34	0.79	1.97	3.87	6.02	2	0.25	0
Deaths (n)	0	0	2	5	12	24	67	225	514	657	0
Case fatality ratio (%)	0	0	0.1	0.11	0.26	0.52	2.04	12.32	22.31	27.67	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 21/07/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	1,050		6	76	118	52	112	54	27	1,495
Nursing home	128		10	16	41	5	13	17	37	267
Residential institution	102		9	7	17	4	21	10	4	174
Other*	14	1	8	28	6	7	23	8	9	104
Hospital	61		3	3	14	2	10	4	6	103
Workplace	8		5	5	14	1	9	3	4	49
Comm. Hosp/Long-stay unit	4		4	2		4	6	5	5	30
Unknown	2					1	1			4
Total	1,369	1	45	137	210	76	195	101	92	2,226

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

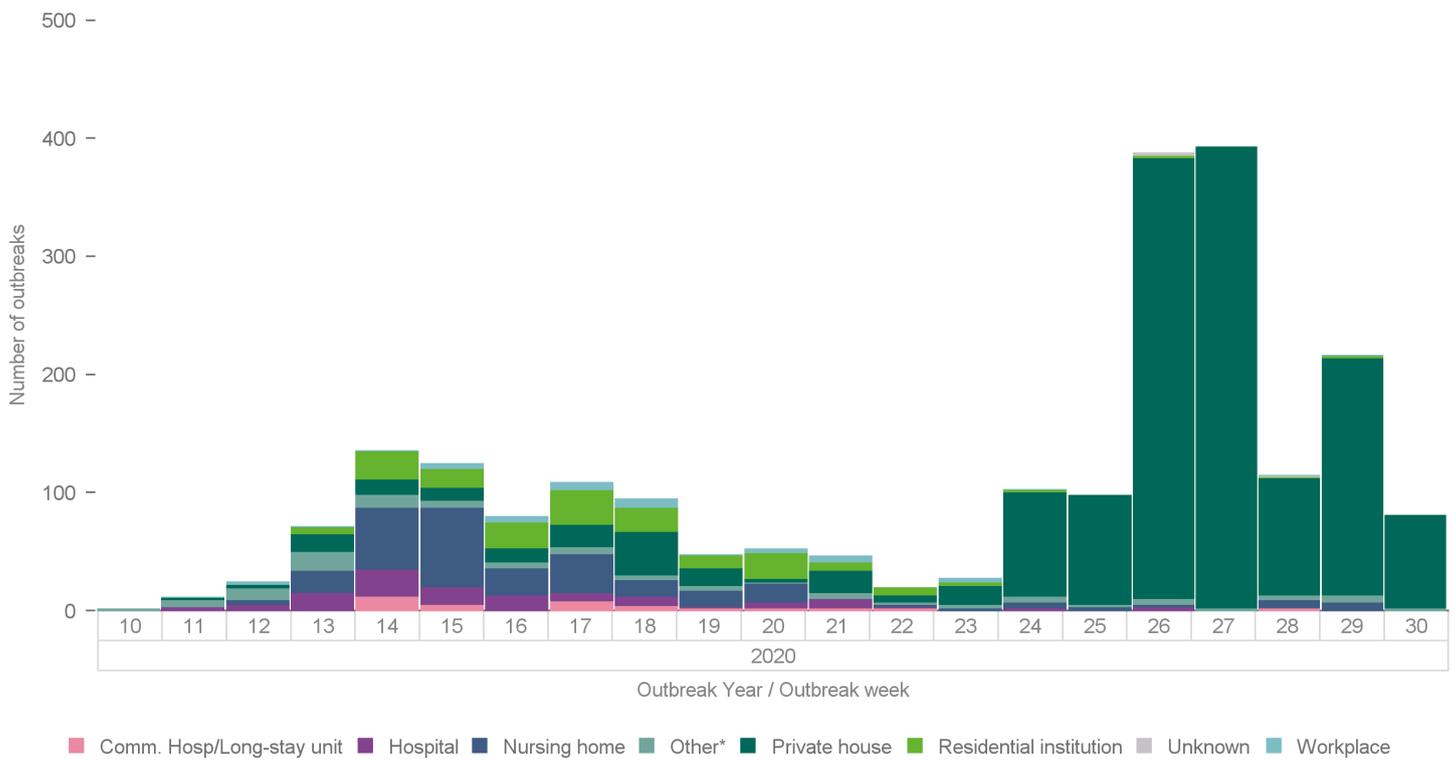


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 21/07/2020

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

Note: 1426 COVID-19 outbreaks were reported on CIDR between week 24 and week 30 2020 (June 7th to July 21th). Of these, 1,376 were family outbreaks. Most of these family outbreaks occurred earlier and were reported between weeks 24 and 30 as a result of data validation: 1 occurred in February, 604 in March, 440 in April, 94 in May, 13 in June and 4 in July.

Deaths among COVID-19 cases

Table 7: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 21/07/2020

	Number	Percent
Total number of deaths	1,763	
Confirmed	1,505	85.37
Probable	100	5.67
Possible	158	8.96
Total number of cases hospitalised	747	42.37
Cases admitted to ICU	92	5.22
Cases not admitted to ICU	655	37.15
Total number of imported cases	6	0.34
Number of cases in healthcare workers	8	0.45
Number with underlying clinical conditions	1,662	94.22
Total number of male cases	869	49.26
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 21/07/2020

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	0.74
45-54 yrs	10	16	26	1.47
55-64 yrs	25	47	72	4.08
65-74 yrs	92	158	250	14.17
75-84 yrs	275	324	599	33.96
85+ yrs	481	314	795	45.07
Unknown	<5	<5	2	0.11
Total	894	869	1,763	100
Percent	50.71	49.29		

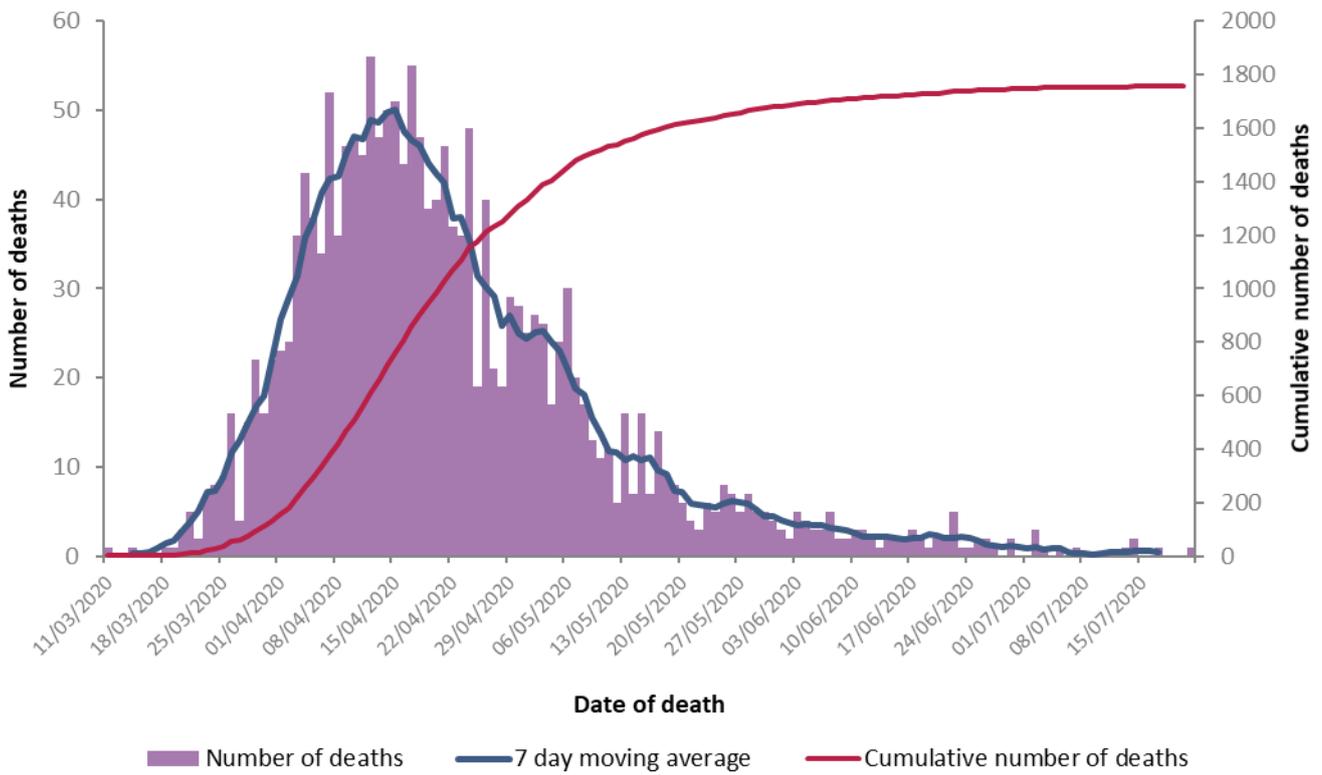


Figure 6: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 21/07/2020

* 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

Technical Notes

1. Data Source

Data are based on statutory notifications and were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:17 on 23/07/2020. 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.