



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 01/09/20 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 30/08/2020

	Number	Percent
Total number of confirmed cases	28,808	
National cumulative incidence of confirmed cases per 100,000 population	604.97	
Total number of cases hospitalised	3,405	11.82
Total number of cases admitted to ICU	446	1.55
Total number of deaths among confirmed cases	1,519	5.27
Case fatality ratio (CFR, %)	5.27	
National cumulative incidence of confirmed deaths per 100,000 population	31.9	
Total number of outbreaks/clusters	2,733	
Total number of cases associated with clusters	15,764	54.72
Total number of imported cases	514	1.78
Number of cases in healthcare workers	8,637	29.98
Males	12,632	43.85
Females	16,148	56.05
M:F ratio	0.78	
Median age (years)	46	
Mean age (years)	49	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:31 on 01/09/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

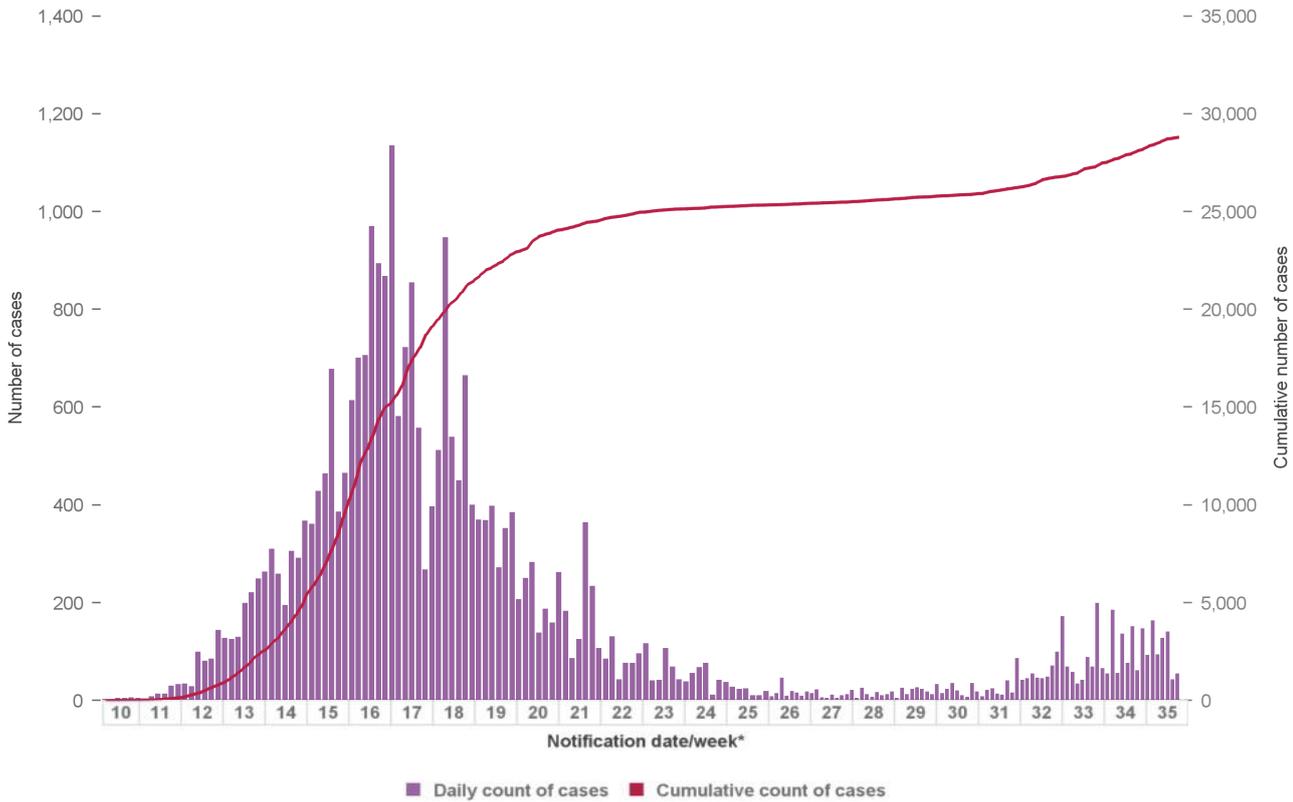


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 30/08/2020

*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

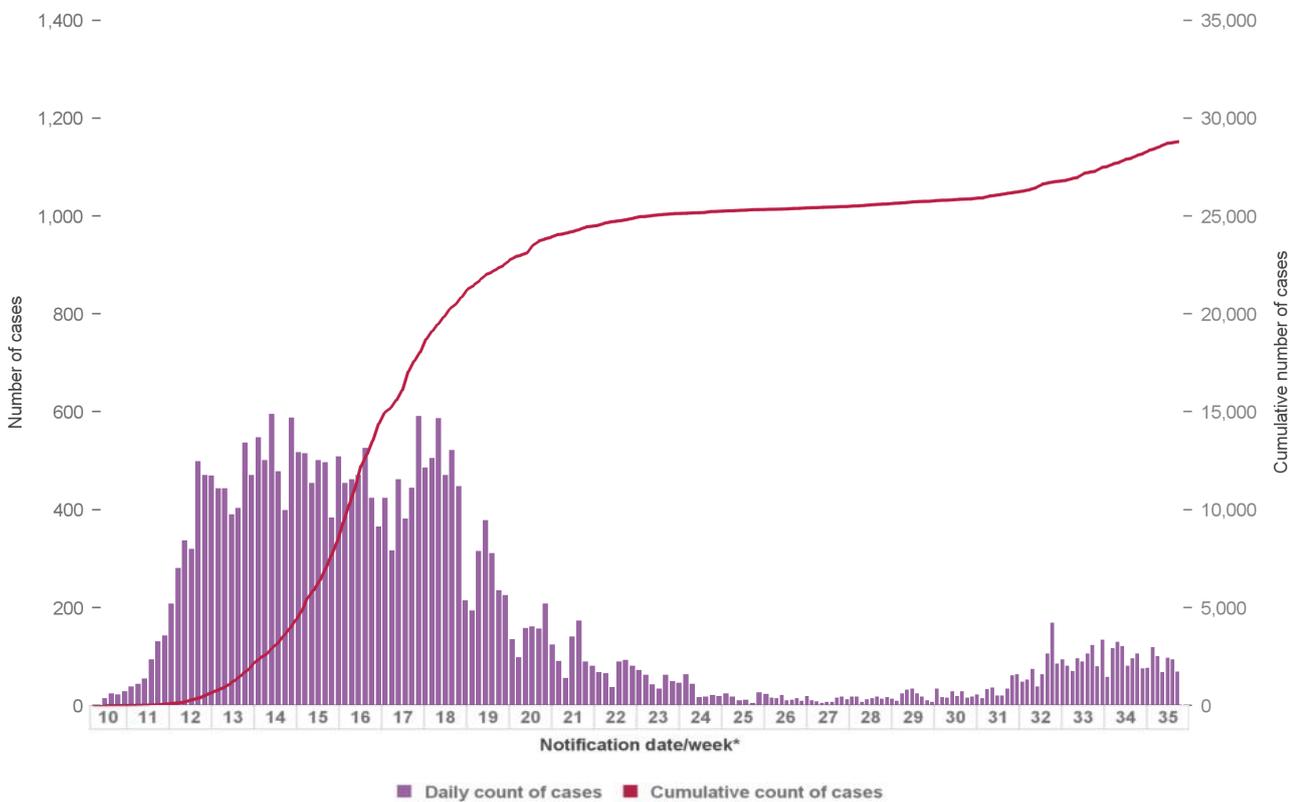


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 30/08/2020**

**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.

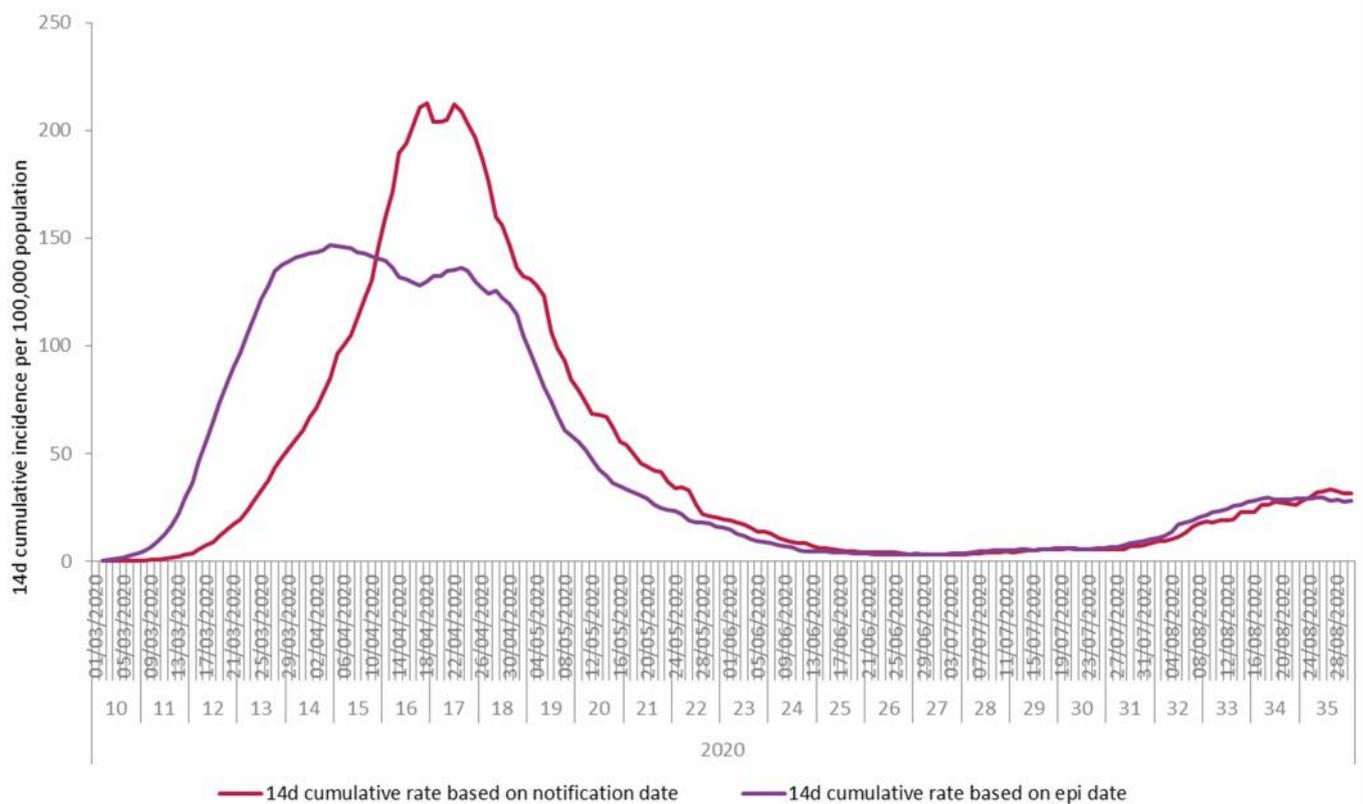


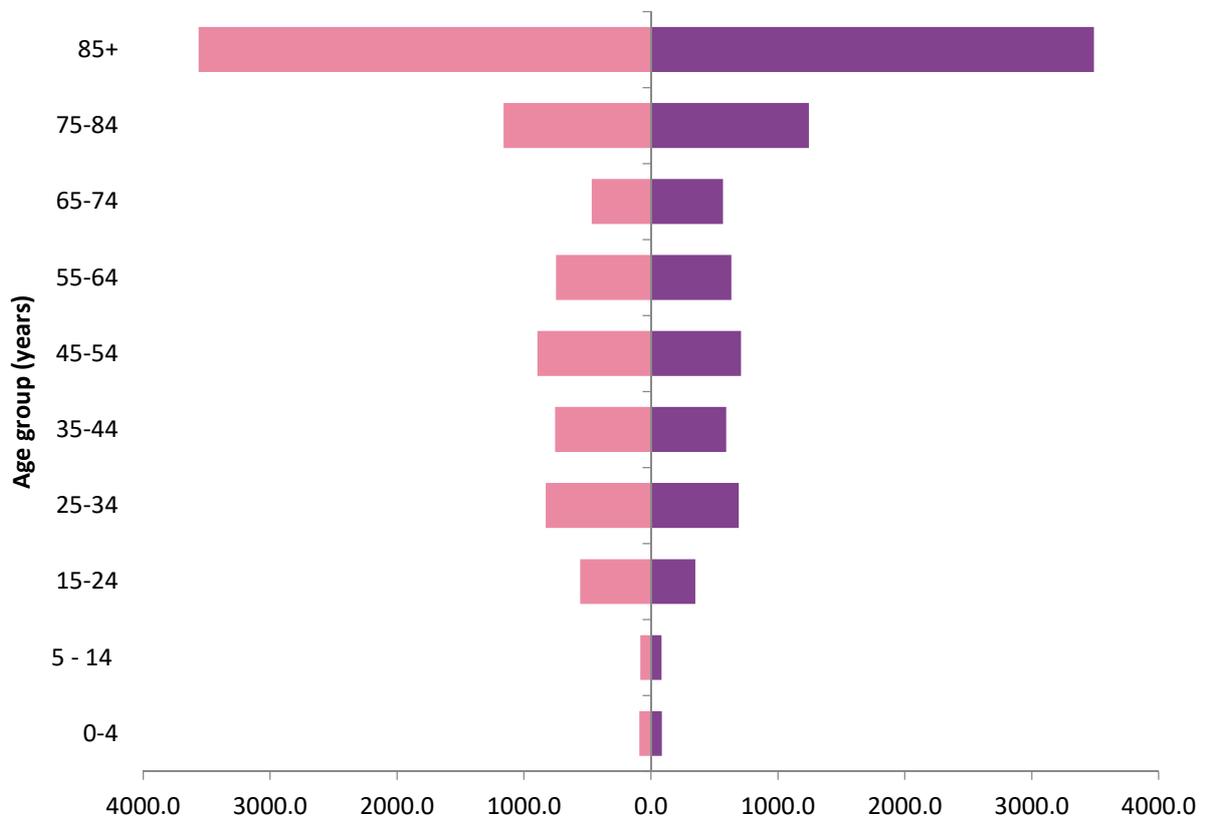
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 30/08/2020**

* 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 30/08/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		28,808	100
Sex	Male:Female ratio	0.78	
	Male	12,632	43.85
	Female	16,148	56.05
	Unknown	28	0.1
Age	Median age (years)	46	
	Mean age (years)	49	
	Age range (years)	0 - 106	
	0-4 yrs	294	1.02
	5-14 yrs	567	1.97
	15-24 yrs	2,602	9.03
	25-34 yrs	5,041	17.5
	35-44 yrs	5,052	17.54
	45-54 yrs	5,038	17.49
	55-64 yrs	3,514	12.2
	65-74 yrs	1,930	6.7
	75-84 yrs	2,356	8.18
	85+ yrs	2,391	8.3
	Unknown	23	0.08



	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	91.5	83.9	556.4	829.3	754.6	895.2	747.3	466.0	1160.5	3562.4
Male	86.0	83.8	349.1	692.5	593.7	710.9	632.7	568.7	1245.1	3490.6

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 30/08/2020 (excluding 22 cases for whom age is unknown and 27 cases for whom sex is unknown and 1 case for whom both are unknown)

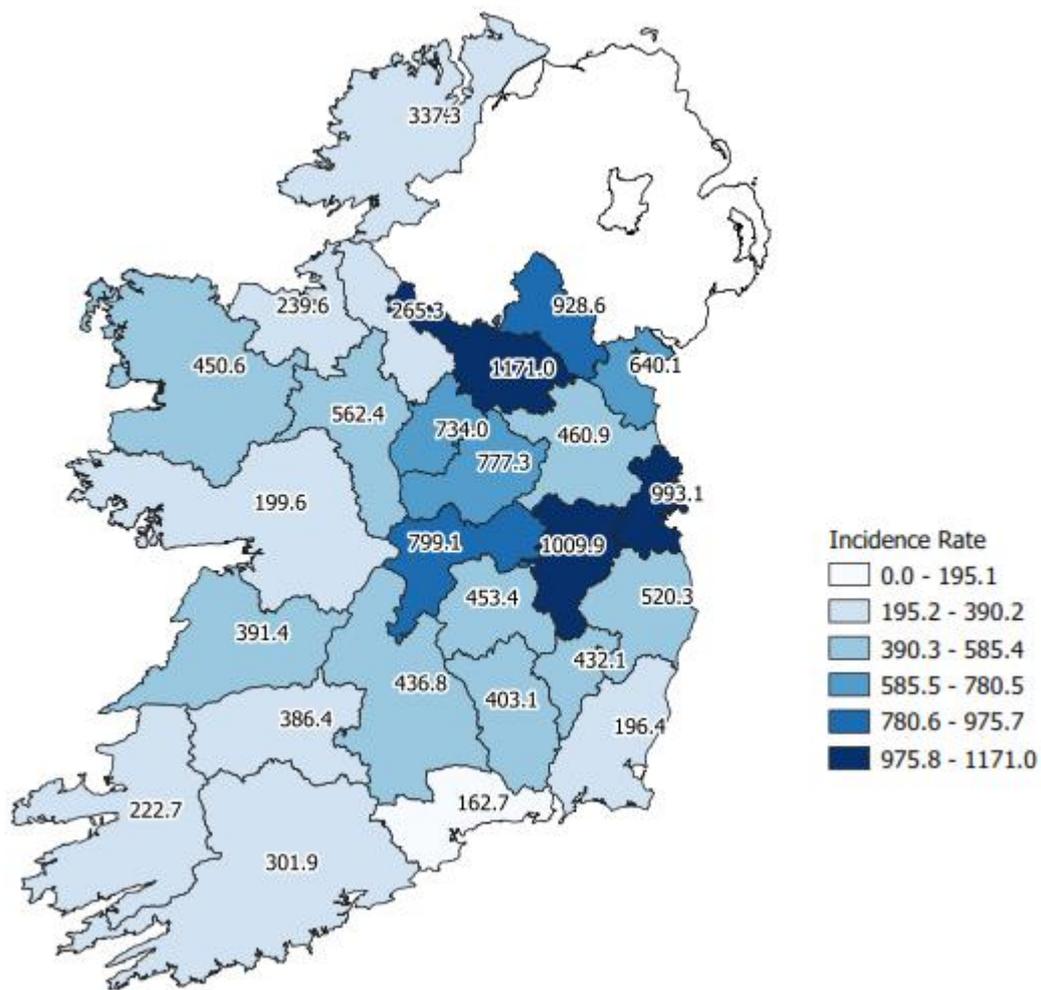


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 30/08/2020

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 30/08/2020

County Name	Number of cases	Percent
Carlow	246	0.85
Cavan	892	3.1
Clare	465	1.61
Cork	1,639	5.69
Donegal	537	1.86
Dublin	13,380	46.45
Galway	515	1.79
Kerry	329	1.14
Kildare	2,247	7.8
Kilkenny	400	1.39
Laois	384	1.33
Leitrim	85	0.3
Limerick	753	2.61
Longford	300	1.04
Louth	825	2.86
Mayo	588	2.04
Meath	899	3.12
Monaghan	570	1.98
Offaly	623	2.16
Roscommon	363	1.26
Sligo	157	0.54
Tipperary	697	2.42
Waterford	189	0.66
Westmeath	690	2.4
Wexford	294	1.02
Wicklow	741	2.57
Total	28,808	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 30/08/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	8,678	30.12%
Local transmission, incl. possible local transmission	19,199	66.64%
Travel abroad, incl. possible travel abroad	712	2.47%
Unknown	219	0.76%
Total	28,808	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 30/08/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	294	26	0.76	0	0
5-14 yrs	567	19	0.56	2	0.45
15-24 yrs	2602	81	2.38	5	1.12
25-34 yrs	5041	209	6.14	16	3.59
35-44 yrs	5052	282	8.28	38	8.52
45-54 yrs	5038	457	13.42	93	20.85
55-64 yrs	3514	505	14.83	129	28.92
65-74 yrs	1930	595	17.47	110	24.66
75-84 yrs	2356	754	22.14	47	10.54
85+ yrs	2391	476	13.98	6	1.35
Unknown	23	1	0.03	0	0
Total	28,808	3,405	100	446	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 30/08/2020

	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)	294	567	2,602	5,041	5,052	5,038	3,514	1,930	2,356	2,391	23
Cases hospitalised (n)	26	19	81	209	282	457	505	595	754	476	1
Cases hospitalised (%)	8.84	3.35	3.11	4.15	5.58	9.07	14.37	30.83	32	19.91	4.35
Cases admitted to ICU (n)	0	2	5	16	38	93	129	110	47	6	0
Cases admitted to ICU (%)	0	0.35	0.19	0.32	0.75	1.85	3.67	5.7	1.99	0.25	0
Deaths (n)	0	0	1	5	12	25	68	227	521	660	0
Case fatality ratio (%)	0	0	0.04	0.1	0.24	0.5	1.94	11.76	22.11	27.6	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 30/08/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	1,341		25	101	135	55	120	89	30	1,896
Nursing home	134		10	18	43	5	14	17	36	277
Residential institution	112		10	10	20	4	21	10	4	191
Other*	19	2	10	45	7	11	36	12	11	153
Hospital	63		3	4	14	2	10	5	6	107
Workplace	27		10	7	15	1	9	6	4	79
Comm. Hosp/Long-stay unit	4		4	2		4	6	5	5	30
Total	1,700	2	72	187	234	82	216	144	96	2,733

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

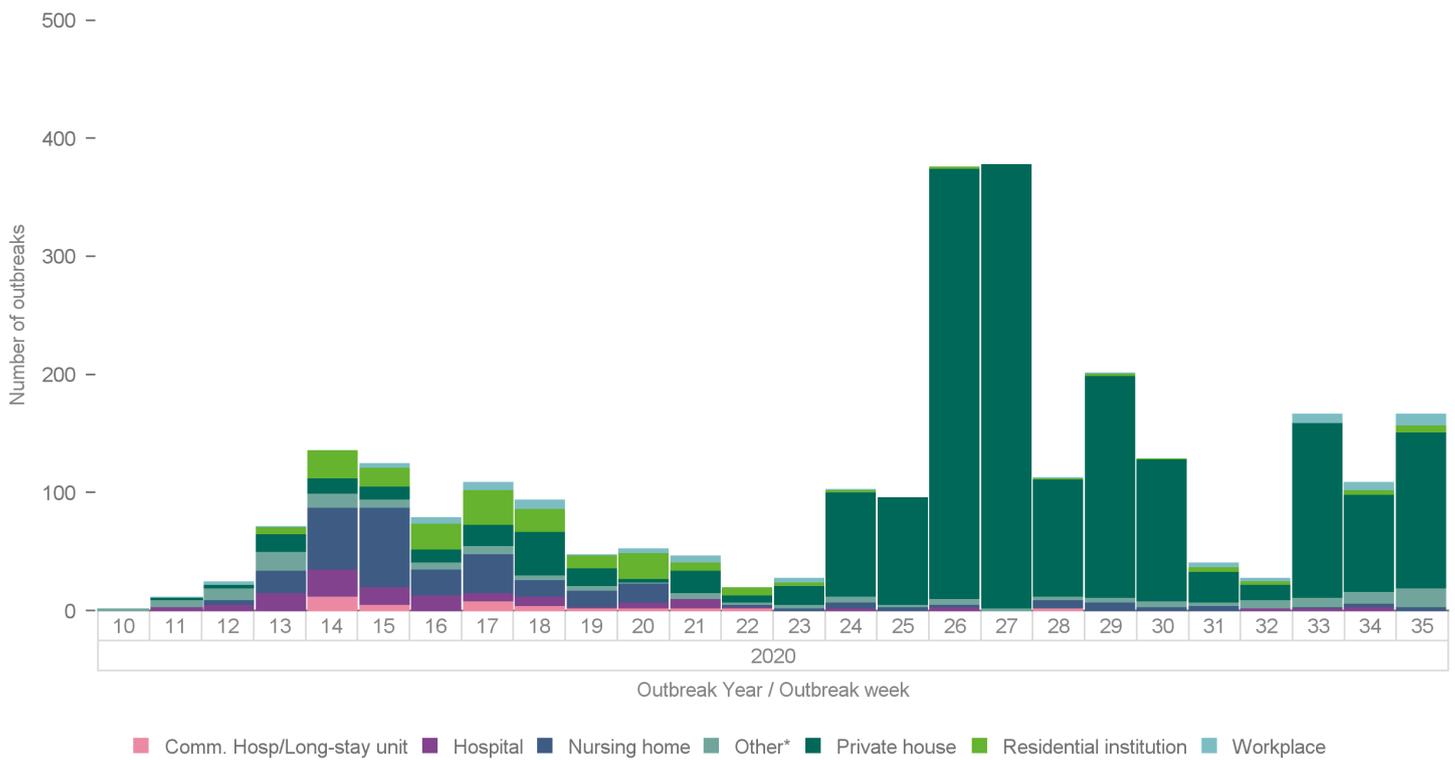


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 30/08/2020

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

Note: 1,894 COVID-19 outbreaks were reported on CIDR between week 24 and week 35 2020 (June 9th to 30th August). Of these, 1,751 were family outbreaks. Most of these family outbreaks occurred earlier and were reported between weeks 24 and 35 as a result of data validation: 1 occurred in February, 632 in March, 472 in April, 94 in May, 126 in June, 125 in July and 301 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 30/08/2020

	Number	Percent
Total number of deaths	1,777	
Confirmed	1,519	85.48
Probable	99	5.57
Possible	159	8.95
Total number of cases hospitalised	757	42.6
Cases admitted to ICU	93	5.23
Cases not admitted to ICU	664	37.37
Total number of imported cases	6	0.34
Number of cases in healthcare workers	8	0.45
Number with underlying clinical conditions	1,677	94.37
Total number of male cases	875	49.24
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 30/08/2020

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	17	27	1.52
55-64 yrs	25	48	73	4.11
65-74 yrs	93	159	252	14.18
75-84 yrs	279	326	605	34.05
85+ yrs	484	315	799	44.96
Unknown	<5	<5	2	0.11
Total	902	875	1,777	100
Percent	50.76	49.24		

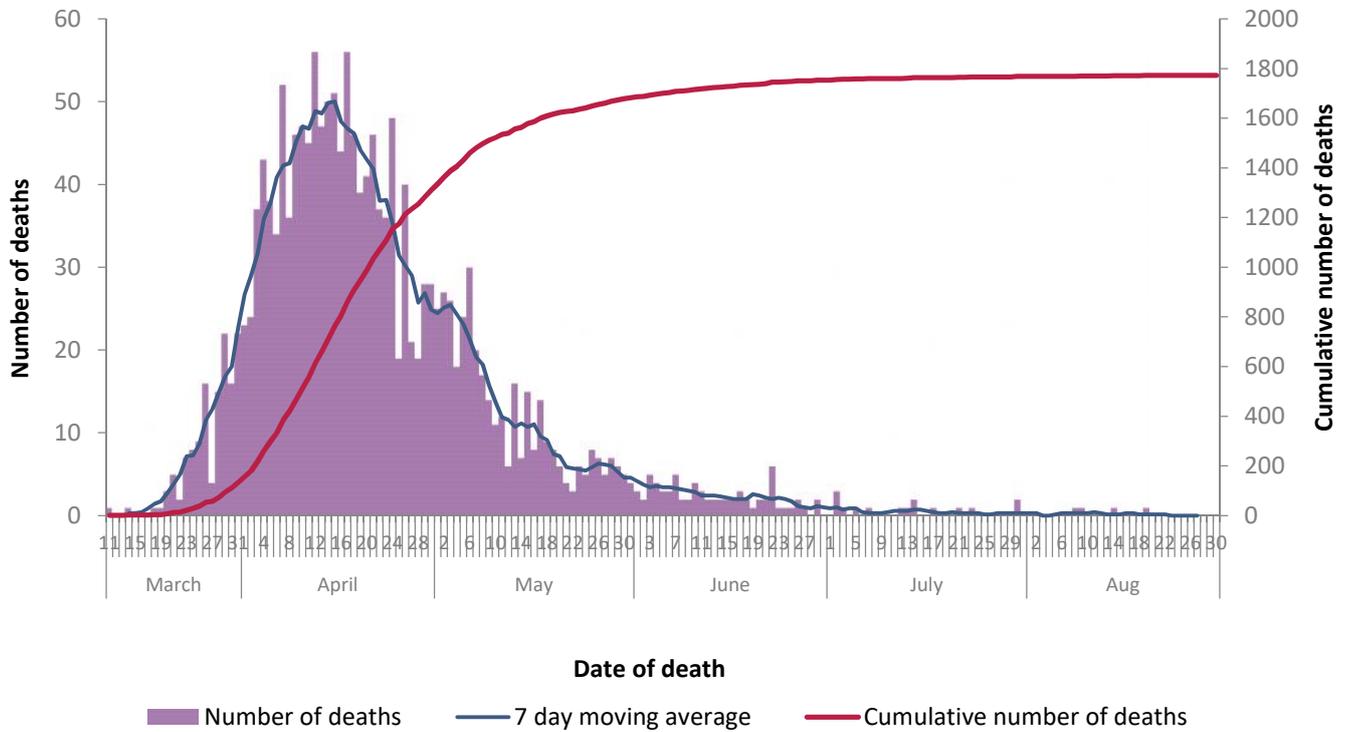


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 30/08/2020

* Date of death is not yet available for five cases

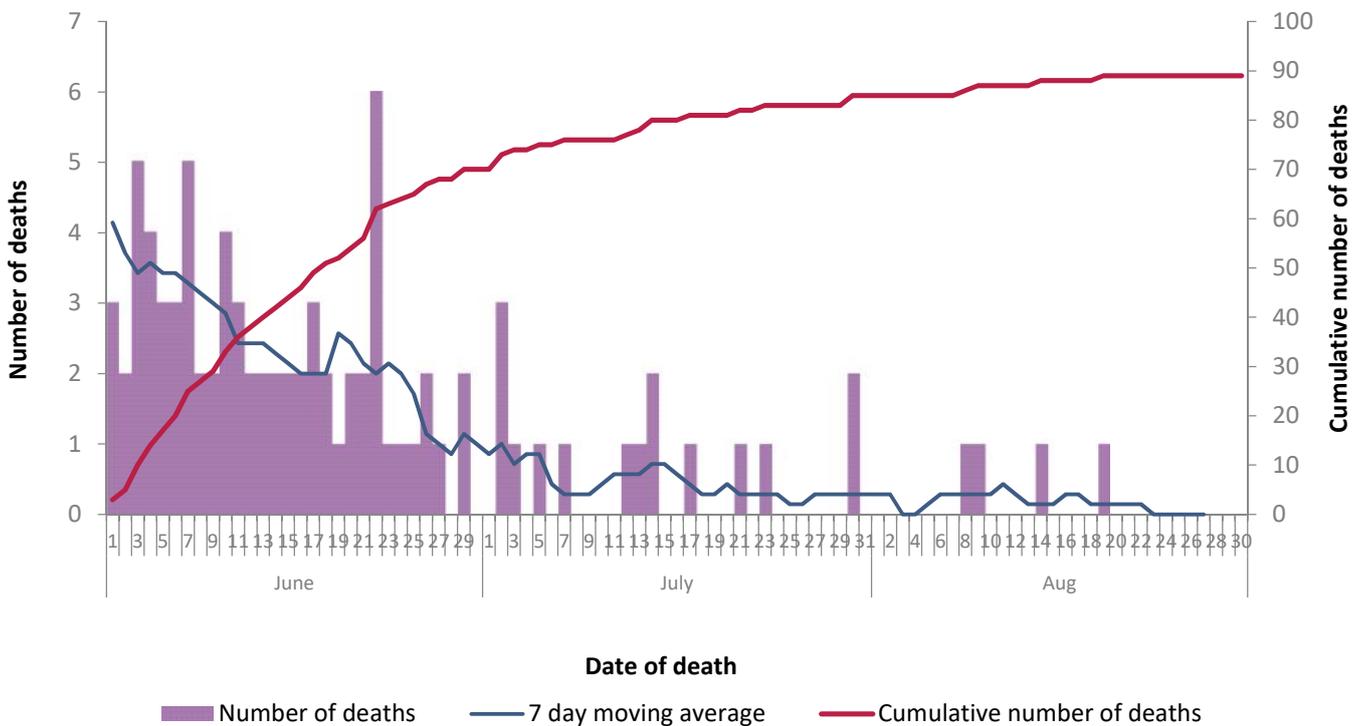


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/06/2020 to midnight 30/08/2020 (n=89)

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 09:31 on 9/1/20. 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.