



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 10/09/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 08/09/2020

	Number	Percent
Total number of confirmed cases	30,164	
National cumulative incidence of confirmed cases per 100,000 population	633.45	
Total number of cases hospitalised	3,435	11.39
Total number of cases admitted to ICU	450	1.49
Total number of deaths among confirmed cases	1,523	5.05
Case fatality ratio (CFR, %)	5.05	
National cumulative incidence of confirmed deaths per 100,000 population	31.98	
Total number of outbreaks/clusters	2,933	
Total number of cases associated with clusters	16,415	54.42
Total number of imported cases	552	1.83
Number of cases in healthcare workers	8,815	29.22
Males	13,286	44.05
Females	16,848	55.85
M:F ratio	0.79	
Median age (years)	45	
Mean age (years)	48	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:15 on 10/09/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

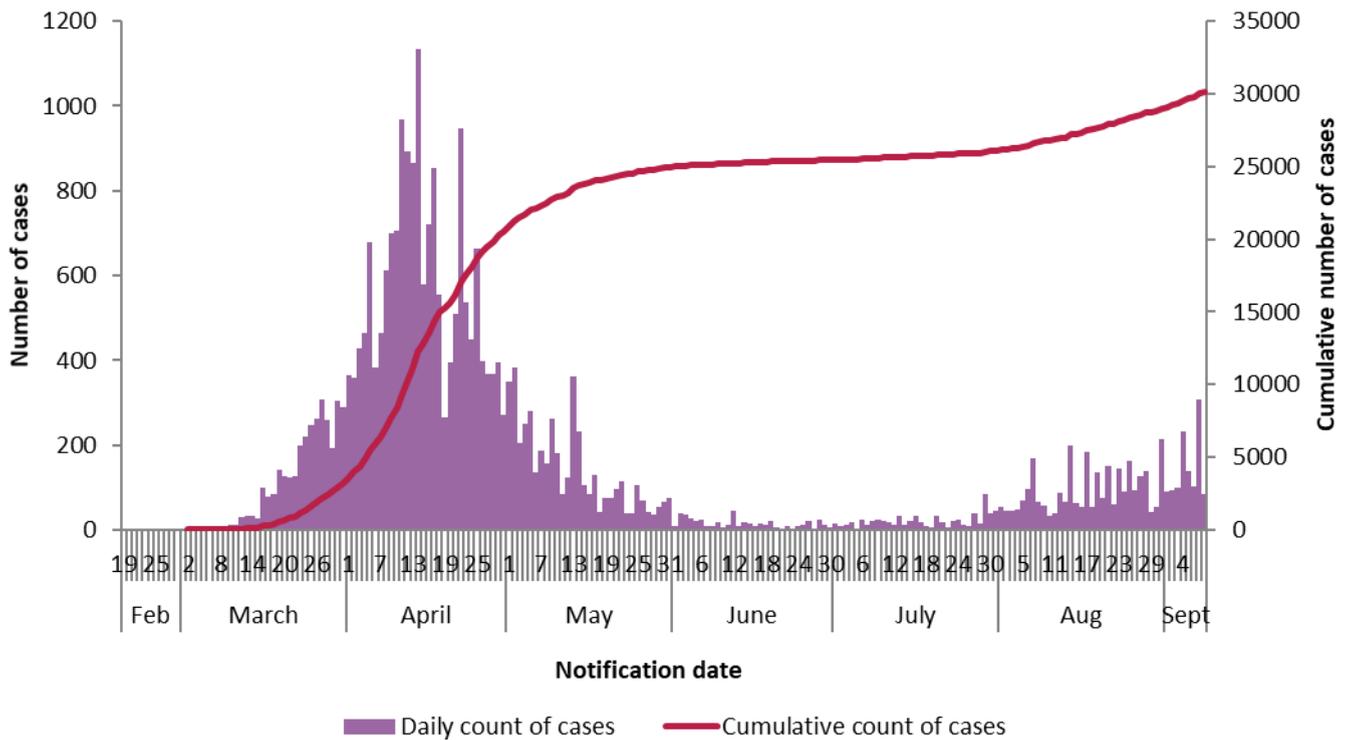


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 08/09/2020

*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

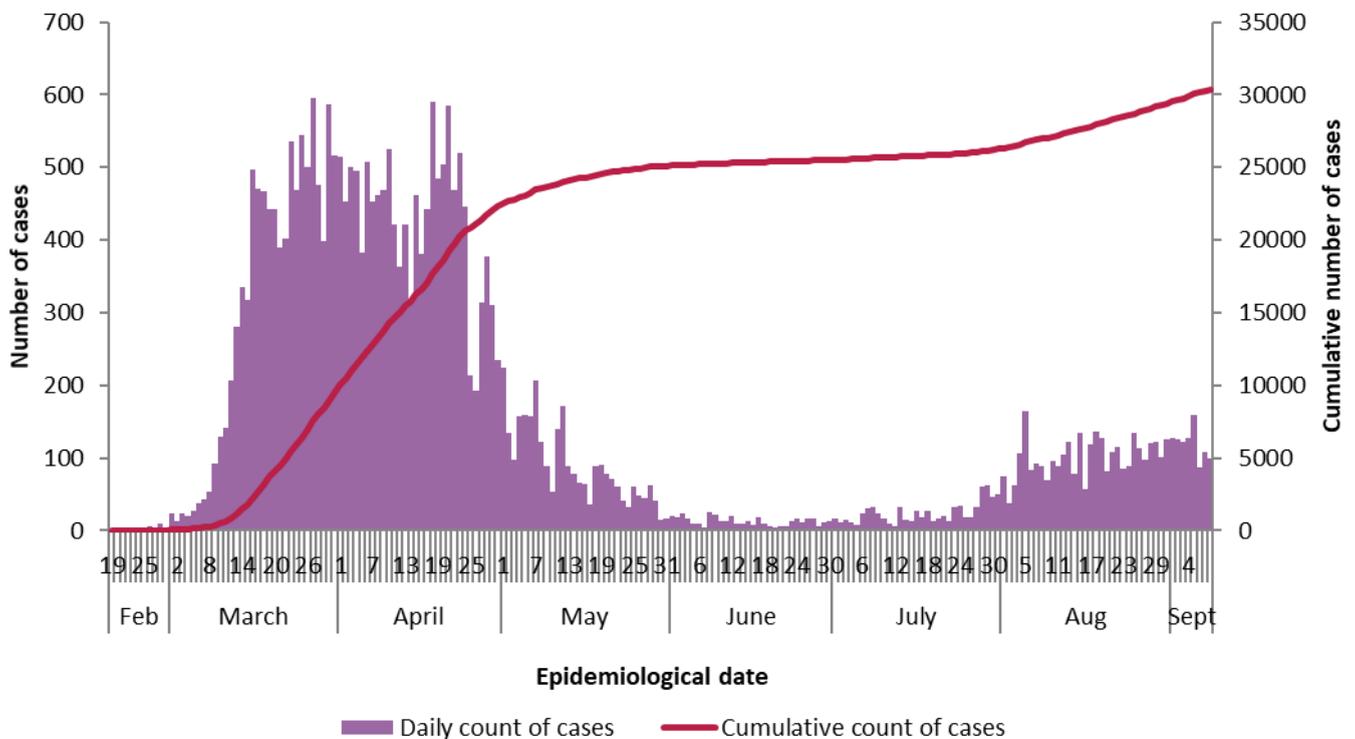


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 08/09/2020**

**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.

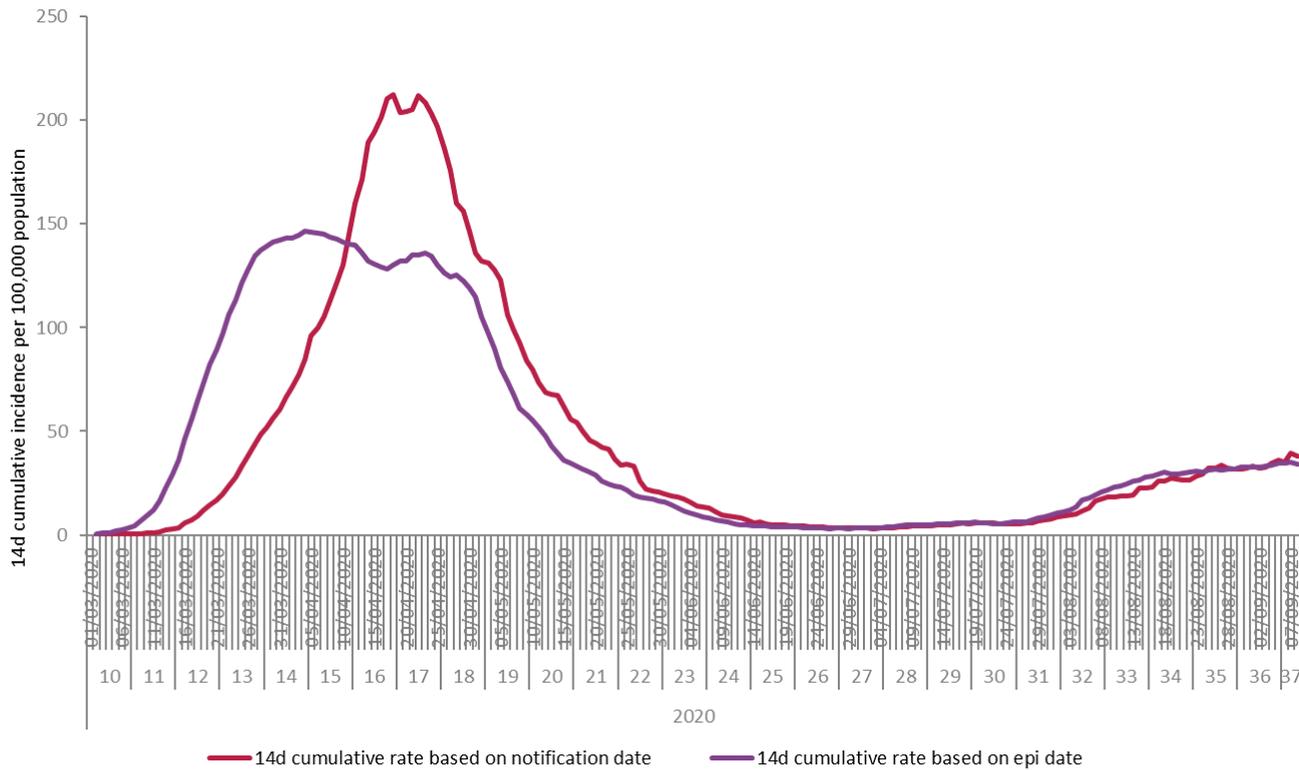


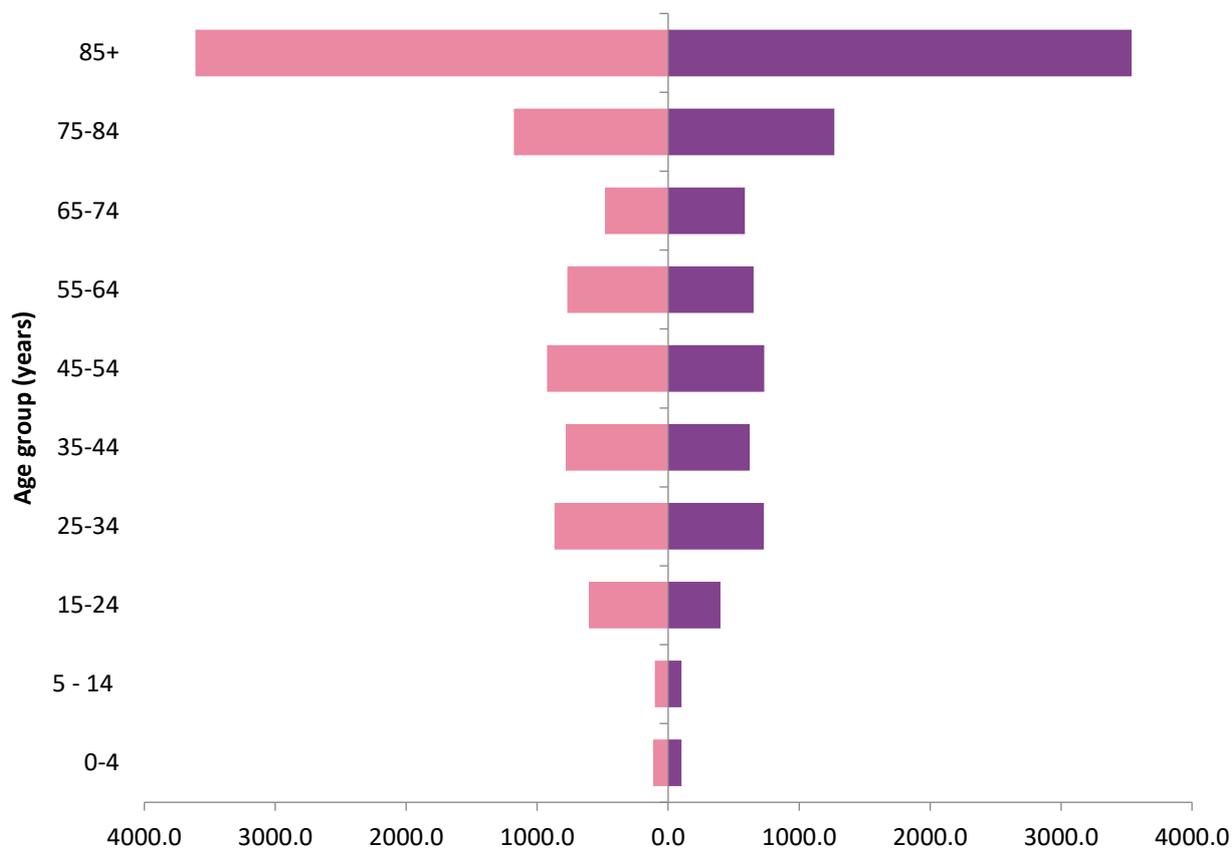
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 08/09/2020**

* 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 08/09/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		30,164	100
Sex	Male:Female ratio	0.79	
	Male	13,286	44.05
	Female	16,848	55.85
	Unknown	30	0.1
Age	Median age (years)	45	
	Mean age (years)	48	
	Age range (years)	0 - 106	
	0-4 yrs	358	1.19
	5-14 yrs	690	2.29
	15-24 yrs	2,890	9.58
	25-34 yrs	5,298	17.56
	35-44 yrs	5,265	17.45
	45-54 yrs	5,203	17.25
	55-64 yrs	3,622	12.01
	65-74 yrs	1,996	6.62
	75-84 yrs	2,395	7.94
	85+ yrs	2,423	8.03
	Unknown	24	0.08



	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	115.0	103.0	605.4	867.4	783.1	924.4	769.9	483.5	1177.3	3609.6
Male	101.3	101.2	400.0	732.1	622.2	734.3	652.5	586.0	1268.6	3538.3

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 08/09/2020 (excluding 23 cases for whom age is unknown and 29 cases for whom sex is unknown and 1 case for whom both are unknown)

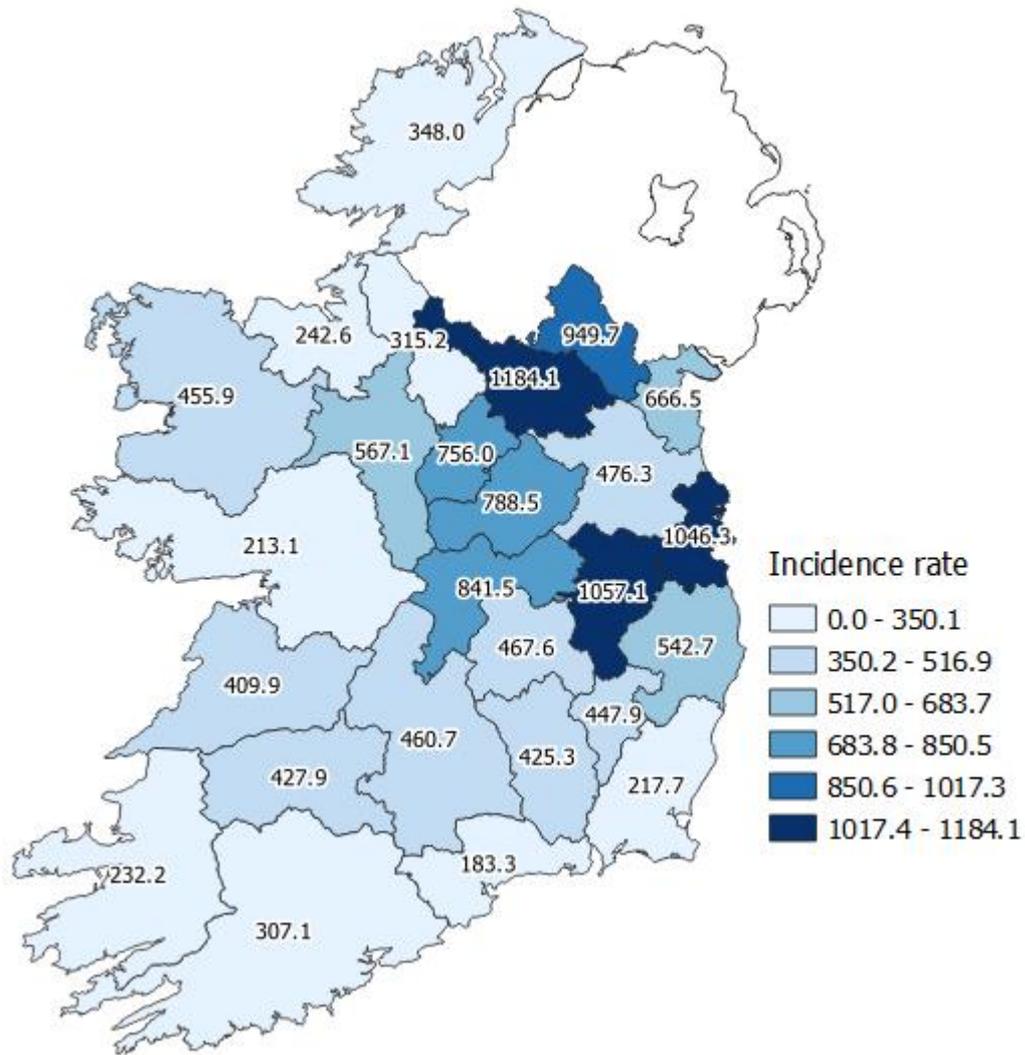


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 08/09/2020

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 08/09/2020

County Name	Number of cases	Percent
Carlow	255	0.85
Cavan	902	2.99
Clare	487	1.61
Cork	1,667	5.53
Donegal	554	1.84
Dublin	14,098	46.74
Galway	550	1.82
Kerry	343	1.14
Kildare	2,352	7.8
Kilkenny	422	1.4
Laois	396	1.31
Leitrim	101	0.33
Limerick	834	2.76
Longford	309	1.02
Louth	859	2.85
Mayo	595	1.97
Meath	929	3.08
Monaghan	583	1.93
Offaly	656	2.17
Roscommon	366	1.21
Sligo	159	0.53
Tipperary	735	2.44
Waterford	213	0.71
Westmeath	700	2.32
Wexford	326	1.08
Wicklow	773	2.56
Total	30,164	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 08/09/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	9,139	30.30%
Local transmission, incl. possible local transmission	20,022	66.38%
Travel abroad, incl. possible travel abroad	747	2.48%
Unknown	256	0.85%
Total	30,164	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 08/09/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	358	26	0.76	1	0.22
5-14 yrs	690	19	0.55	2	0.44
15-24 yrs	2890	84	2.45	5	1.11
25-34 yrs	5298	209	6.08	17	3.78
35-44 yrs	5265	278	8.09	38	8.44
45-54 yrs	5203	461	13.42	93	20.67
55-64 yrs	3622	505	14.7	130	28.89
65-74 yrs	1996	605	17.61	110	24.44
75-84 yrs	2395	762	22.18	48	10.67
85+ yrs	2423	485	14.12	6	1.33
Unknown	24	1	0.03	0	0
Total	30,164	3,435	100	450	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 08/09/2020

	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)	358	690	2,890	5,298	5,265	5,203	3,622	1,996	2,395	2,423	24
Cases hospitalised (n)	26	19	84	209	278	461	505	605	762	485	1
Cases hospitalised (%)	7.26	2.75	2.91	3.94	5.28	8.86	13.94	30.31	31.82	20.02	4.17
Cases admitted to ICU (n)	1	2	5	17	38	93	130	110	48	6	0
Cases admitted to ICU (%)	0.28	0.29	0.17	0.32	0.72	1.79	3.59	5.51	2	0.25	0
Deaths (n)	0	0	1	5	12	25	69	228	522	661	0
Case fatality ratio (%)	0	0	0.03	0.09	0.23	0.48	1.91	11.42	21.8	27.28	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 08/09/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	1,427		31	114	150	58	125	110	33	2,048
Nursing home	135		10	19	44	5	14	17	36	280
Residential institution	114		10	11	21	4	21	10	4	195
Other*	22	2	12	57	9	12	41	16	12	183
Hospital	65		4	4	14	2	10	5	6	110
Workplace	28		10	10	16	2	9	7	5	87
Comm. Hosp/Long-stay unit	4		4	2		4	6	5	5	30
Total	1,795	2	81	217	254	87	226	170	101	2,933

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

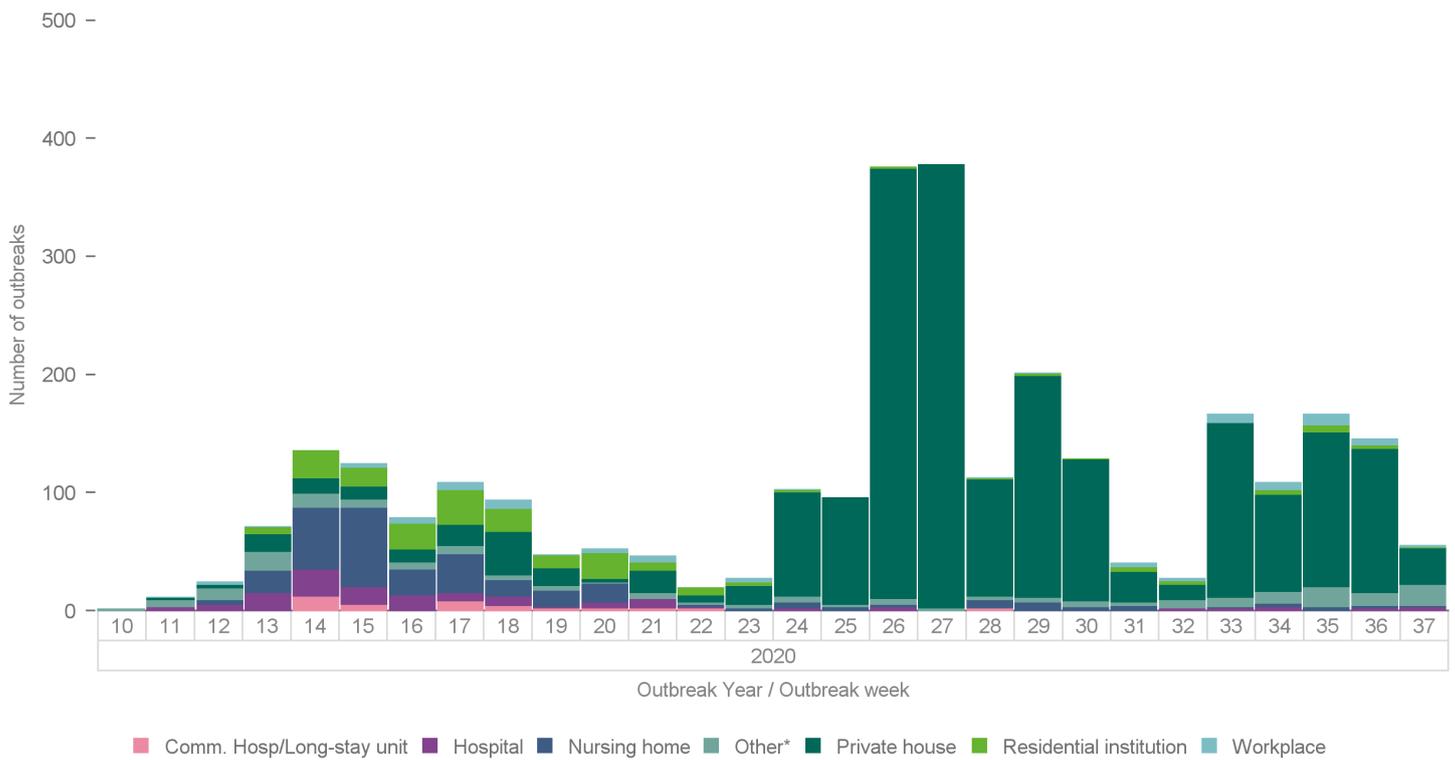


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 08/09/2020

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

Note: 2,095 COVID-19 outbreaks were reported on CIDR between week 24 and week 37 2020 to date (9th June to 8th September). Of these, 1,909 were family outbreaks. Based on the earliest date associated with each outbreak, a large proportion of these family outbreaks occurred earlier and were reported between weeks 24 and 37 as a result of data validation: 1 occurred in February, 635 in March, 472 in April, 94 in May, 127 in June, 126 in July, 427 in August and 27 in September to date.

Deaths among COVID-19 cases

Table 7: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 08/09/2020

	Number	Percent
Total number of deaths	1,781	
Confirmed	1,523	85.51
Probable	99	5.56
Possible	159	8.93
Total number of cases hospitalised	761	42.73
Cases admitted to ICU	95	5.33
Cases not admitted to ICU	666	37.39
Total number of imported cases	6	0.34
Number of cases in healthcare workers	8	0.45
Number with underlying clinical conditions	1,682	94.44
Total number of male cases	877	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 08/09/2020

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	26	48	74	4.15
65-74 yrs	94	159	253	14.21
75-84 yrs	279	327	606	34.03
85+ yrs	484	316	800	44.92
Unknown	<5	<5	2	0.11
Total	904	877	1,781	100
Percent	50.76	49.24		

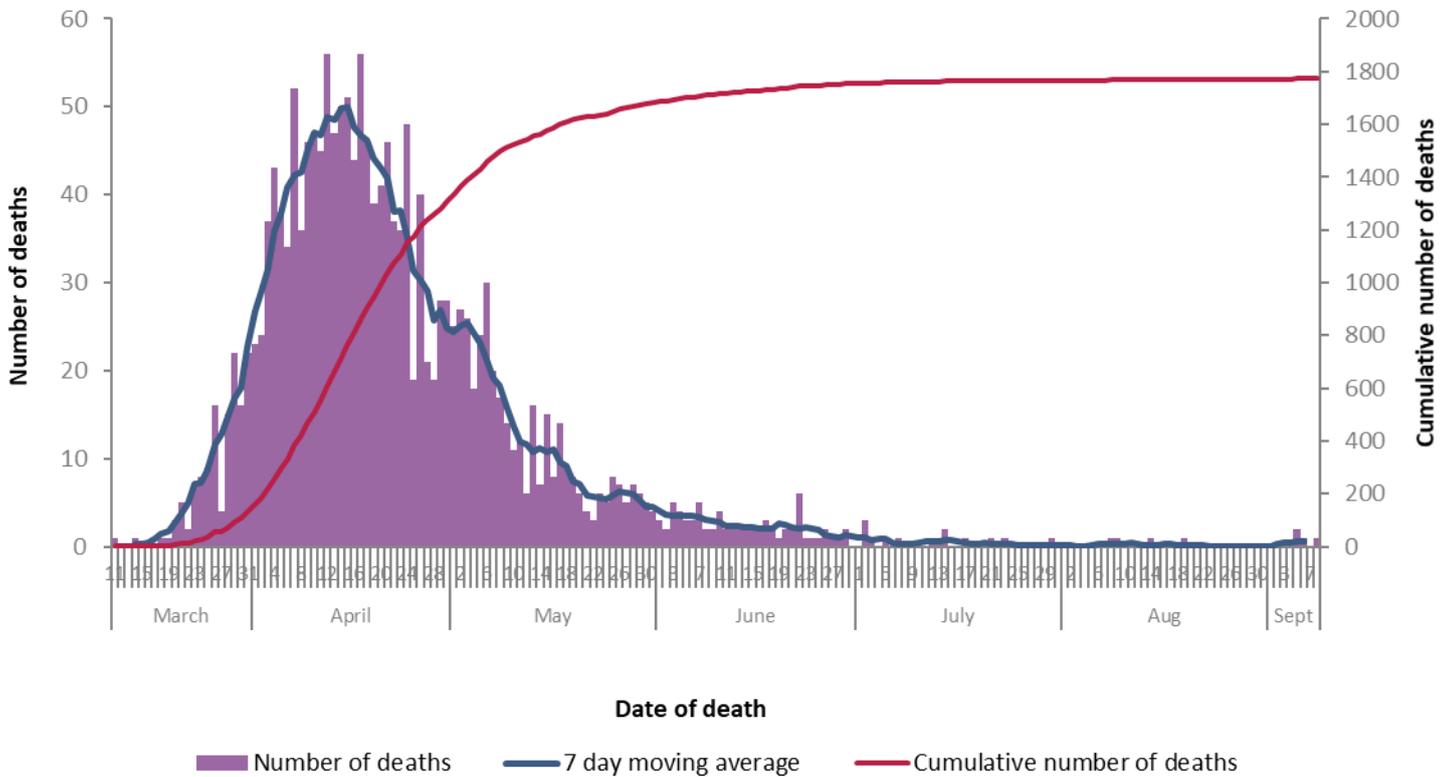


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 08/09/2020

* Date of death is not yet available for six case

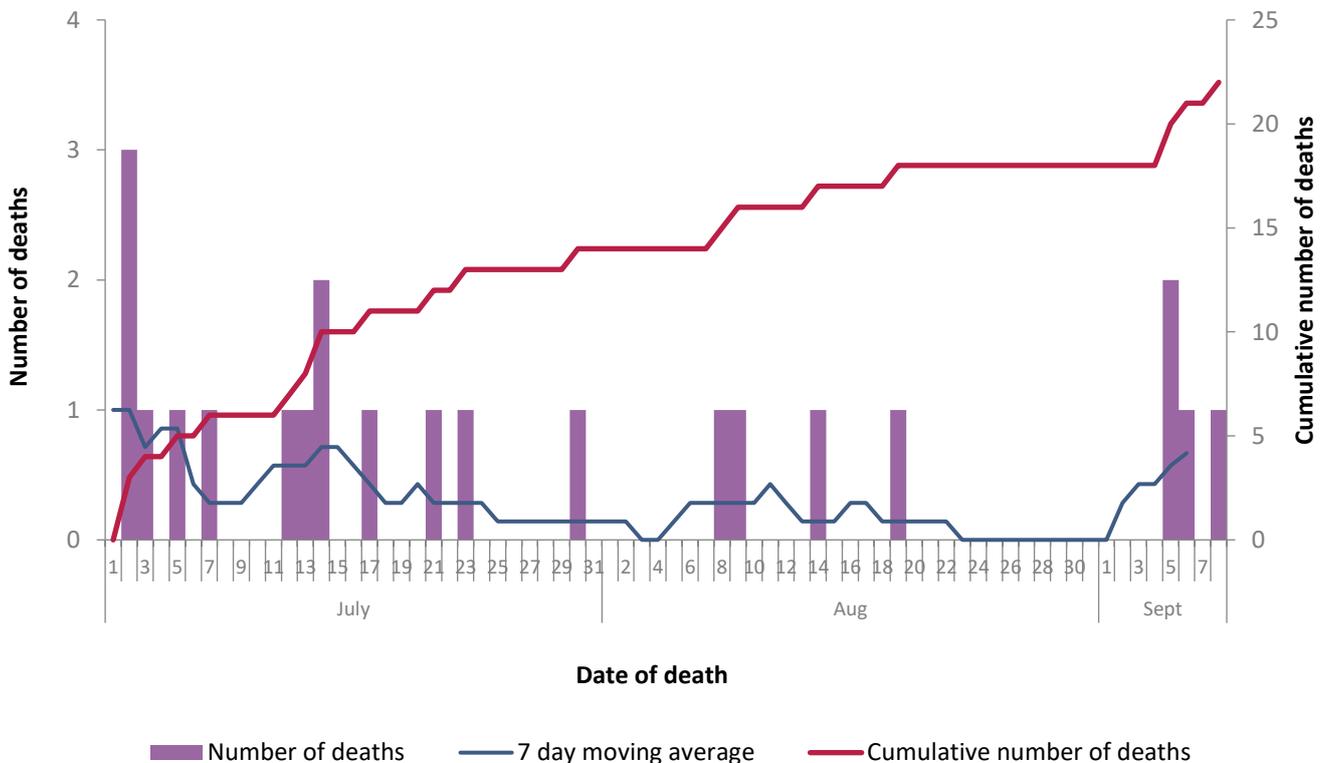


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/07/2020 to midnight 08/09/2020

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 09:15 on 10/09/2020. 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.
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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.