



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 14/09/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 12/09/2020

	Number	Percent
Total number of confirmed cases	30,984	
National cumulative incidence of confirmed cases per 100,000 population	650.67	
Total number of cases hospitalised	3,457	11.16
Total number of cases admitted to ICU	450	1.45
Total number of deaths among confirmed cases	1,527	4.93
Case fatality ratio (CFR, %)	4.93	
National cumulative incidence of confirmed deaths per 100,000 population	32.07	
Total number of outbreaks/clusters	3,035	
Total number of cases associated with clusters	16,728	53.99
Total number of imported cases	564	1.82
Number of cases in healthcare workers	8,889	28.69
Males	13,689	44.18
Females	17,262	55.71
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 09:16 on 14/09/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

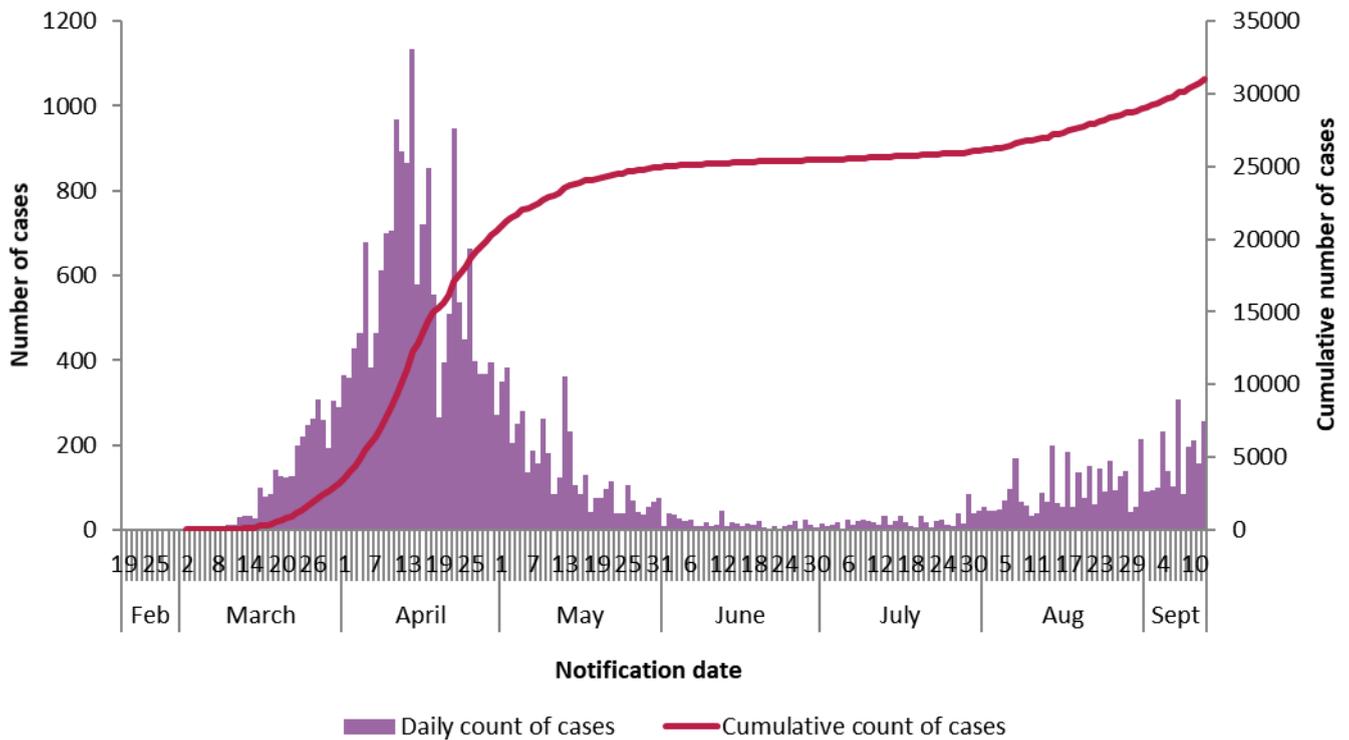


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 12/09/2020

*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

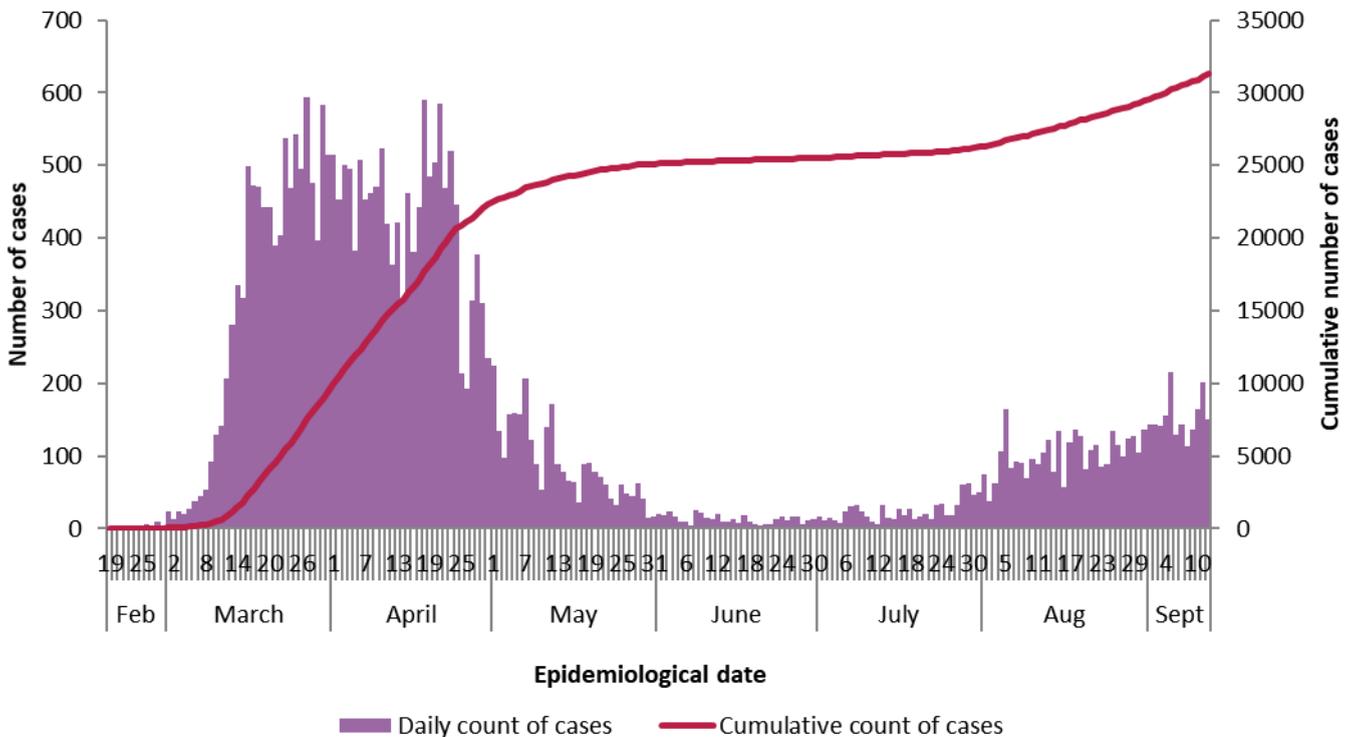


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 12/09/2020**

**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.

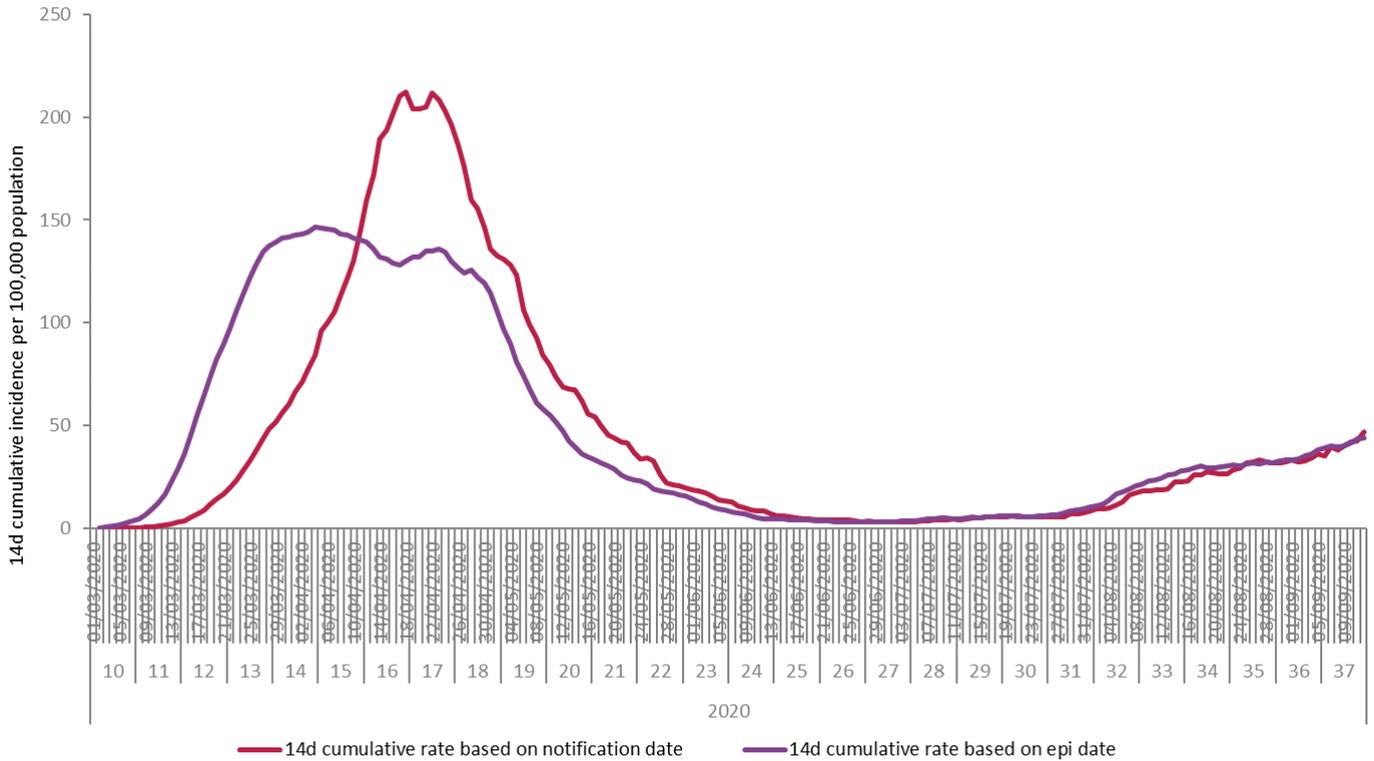


Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 12/09/2020**

* 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 12/09/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		30,984	100
Sex	Male:Female ratio	0.79	
	Male	13,689	44.18
	Female	17,262	55.71
	Unknown	33	0.11
Age	Median age (years)	45	
	Mean age (years)	48	
	Age range (years)	0 - 106	
	0-4 yrs	388	1.25
	5-14 yrs	772	2.49
	15-24 yrs	3,046	9.83
	25-34 yrs	5,458	17.62
	35-44 yrs	5,386	17.38
	45-54 yrs	5,306	17.12
	55-64 yrs	3,705	11.96
	65-74 yrs	2,050	6.62
	75-84 yrs	2,411	7.78
	85+ yrs	2,438	7.87
	Unknown	24	0.08



	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	123.0	115.7	635.3	891.2	797.9	941.9	786.3	494.1	1187.6	3629.8
Male	111.4	112.8	424.3	756.3	639.8	749.4	668.8	604.5	1274.2	3564.3

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 12/09/2020 (excluding 23 cases for whom age is unknown and 32 cases for whom sex is unknown and 1 case for whom both are unknown)

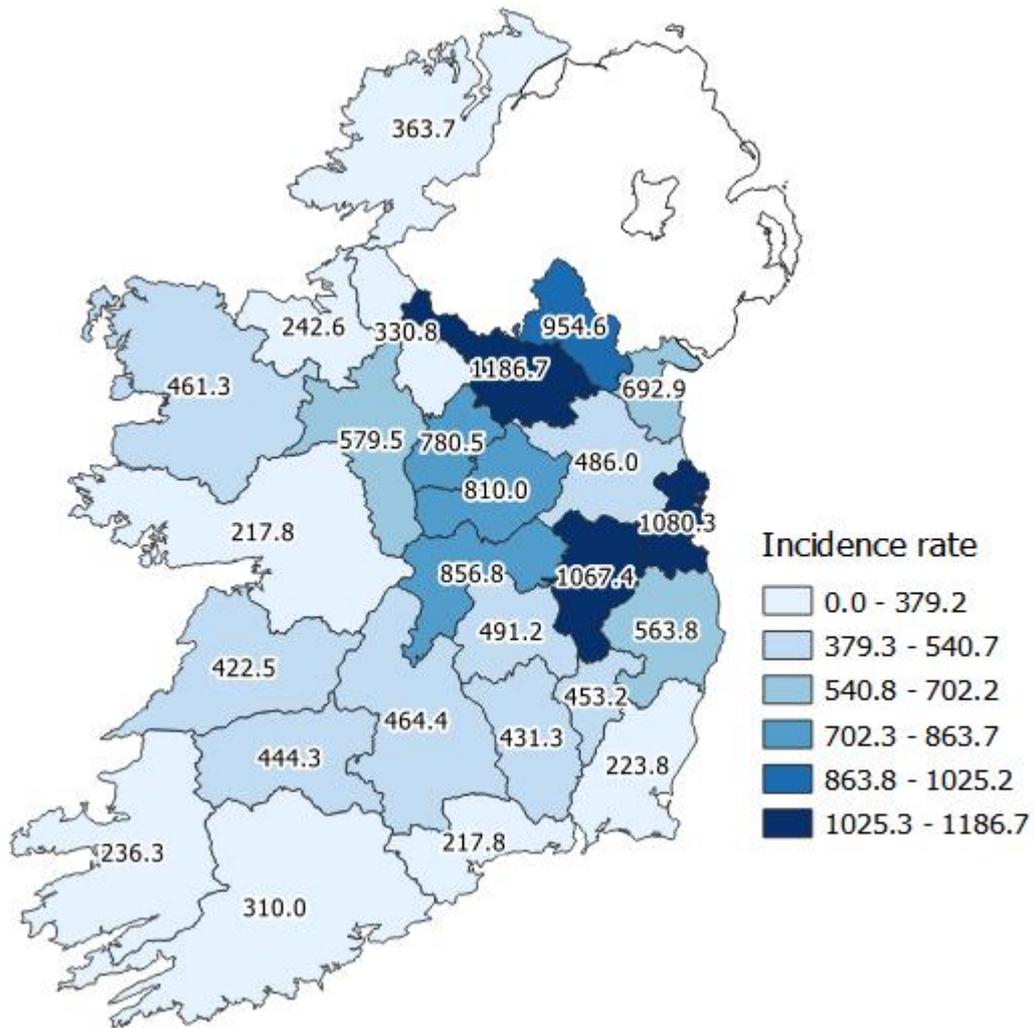


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 12/09/2020

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 12/09/2020

County Name	Number of cases	Percent
Carlow	258	0.83
Cavan	904	2.92
Clare	502	1.62
Cork	1,683	5.43
Donegal	579	1.87
Dublin	14,556	46.98
Galway	562	1.81
Kerry	349	1.13
Kildare	2,375	7.67
Kilkenny	428	1.38
Laois	416	1.34
Leitrim	106	0.34
Limerick	866	2.79
Longford	319	1.03
Louth	893	2.88
Mayo	602	1.94
Meath	948	3.06
Monaghan	586	1.89
Offaly	668	2.16
Roscommon	374	1.21
Sligo	159	0.51
Tipperary	741	2.39
Waterford	253	0.82
Westmeath	719	2.32
Wexford	335	1.08
Wicklow	803	2.59
Total	30,984	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 12/09/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	9,423	30.41%
Local transmission, incl. possible local transmission	20,422	65.91%
Travel abroad, incl. possible travel abroad	764	2.47%
Unknown	375	1.21%
Total	30,984	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 12/09/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	388	29	0.84	1	0.22
5-14 yrs	772	19	0.55	2	0.44
15-24 yrs	3046	85	2.46	5	1.11
25-34 yrs	5458	212	6.13	17	3.78
35-44 yrs	5386	278	8.04	38	8.44
45-54 yrs	5306	465	13.45	93	20.67
55-64 yrs	3705	510	14.75	130	28.89
65-74 yrs	2050	610	17.65	110	24.44
75-84 yrs	2411	762	22.04	48	10.67
85+ yrs	2438	486	14.06	6	1.33
Unknown	24	1	0.03	0	0
Total	30,984	3,457	100	450	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 12/09/2020

	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)	388	772	3,046	5,458	5,386	5,306	3,705	2,050	2,411	2,438	24
Cases hospitalised (n)	29	19	85	212	278	465	510	610	762	486	1
Cases hospitalised (%)	7.47	2.46	2.79	3.88	5.16	8.76	13.77	29.76	31.61	19.93	4.17
Cases admitted to ICU (n)	1	2	5	17	38	93	130	110	48	6	0
Cases admitted to ICU (%)	0.26	0.26	0.16	0.31	0.71	1.75	3.51	5.37	1.99	0.25	0
Deaths (n)	0	0	1	5	12	25	69	229	523	663	0
Case fatality ratio (%)	0	0	0.03	0.09	0.22	0.47	1.86	11.17	21.69	27.19	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 12/09/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	1,426		38	125	153	60	126	114	34	2,076
Nursing home	138		10	19	44	5	14	17	36	283
Other*	39	2	19	71	10	12	42	17	14	226
Residential institution	119		10	11	22	4	21	10	4	201
Hospital	66		4	4	14	2	10	5	6	111
Workplace	35		11	14	18	4	10	9	6	107
Comm. Hosp/Long-stay unit	4		4	2		4	6	5	5	30
Unknown	1									1
Total	1,828	2	96	246	261	91	229	177	105	3,035

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

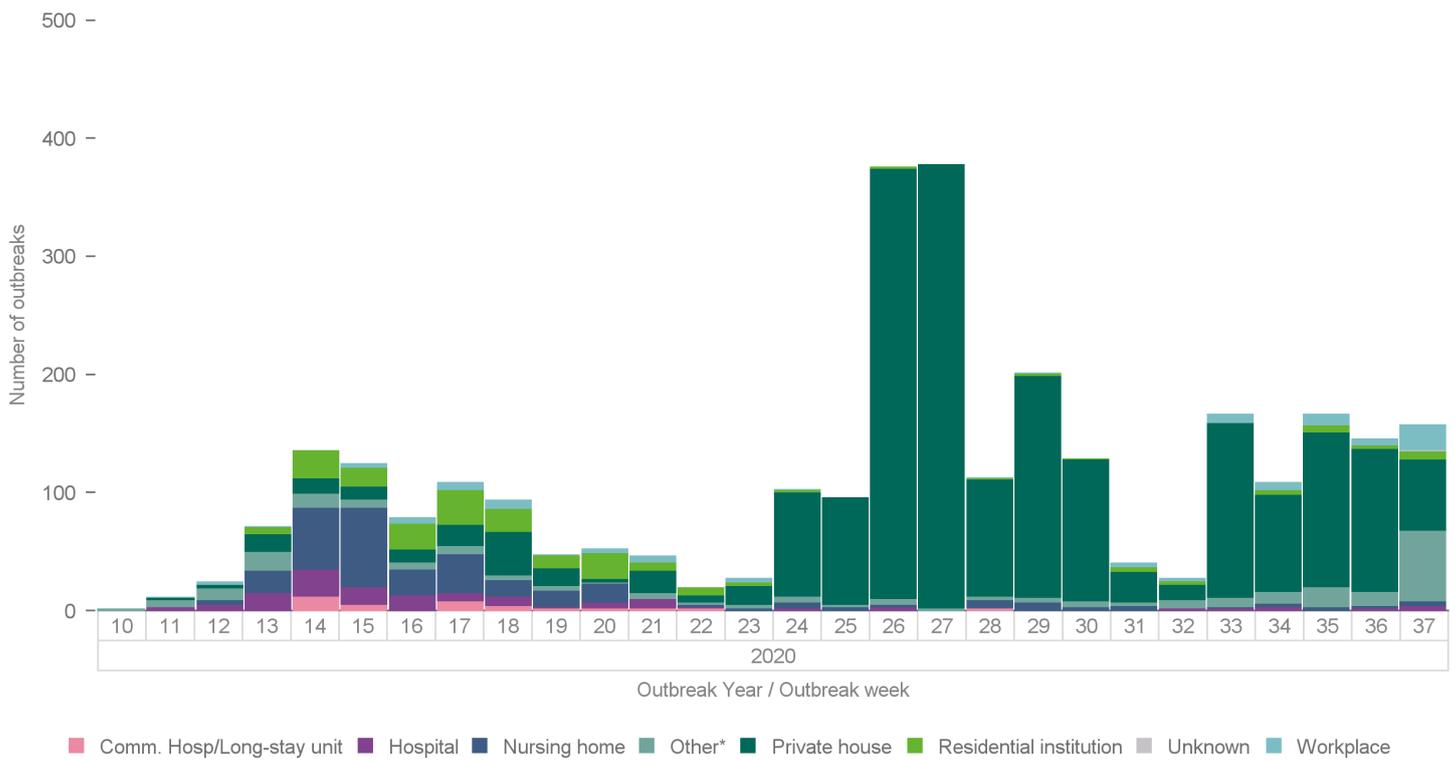


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 12/09/2020

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

Note: 2,199 COVID-19 outbreaks were reported on CIDR between week 24 and week 37 2020 to date (9th June to 12th September). Of these, 1,944 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, 444 in August and 45 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 12/09/2020

	Number	Percent
Total number of deaths	1,784	
Confirmed	1,527	85.59
Probable	99	5.55
Possible	158	8.86
Total number of cases hospitalised	761	42.66
Cases admitted to ICU	95	5.33
Cases not admitted to ICU	666	37.33
Total number of imported cases	6	0.34
Number of cases in healthcare workers	8	0.45
Number with underlying clinical conditions	1,688	94.62
Total number of male cases	879	49.27
M:F ratio	0.97	
Median age (years)	83.5	
Mean age (years)	81	
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 12/09/2020

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	1.51
55-64 yrs	26	48	74	4.15
65-74 yrs	95	159	254	14.24
75-84 yrs	279	328	607	34.02
85+ yrs	484	317	801	44.9
Unknown	<5	<5	2	0.11
Total	905	879	1,784	100
Percent	50.73	49.27		

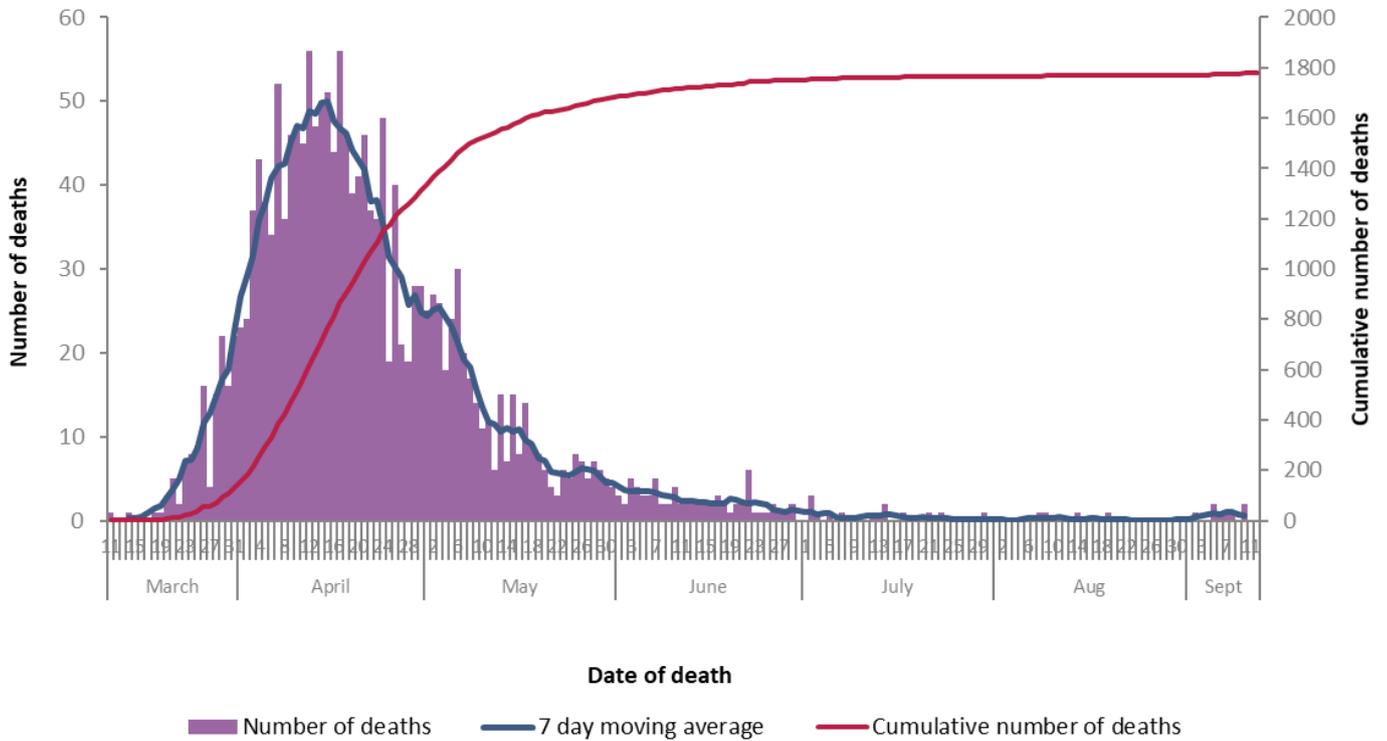


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 12/09/2020

* Date of death is not yet available for six case

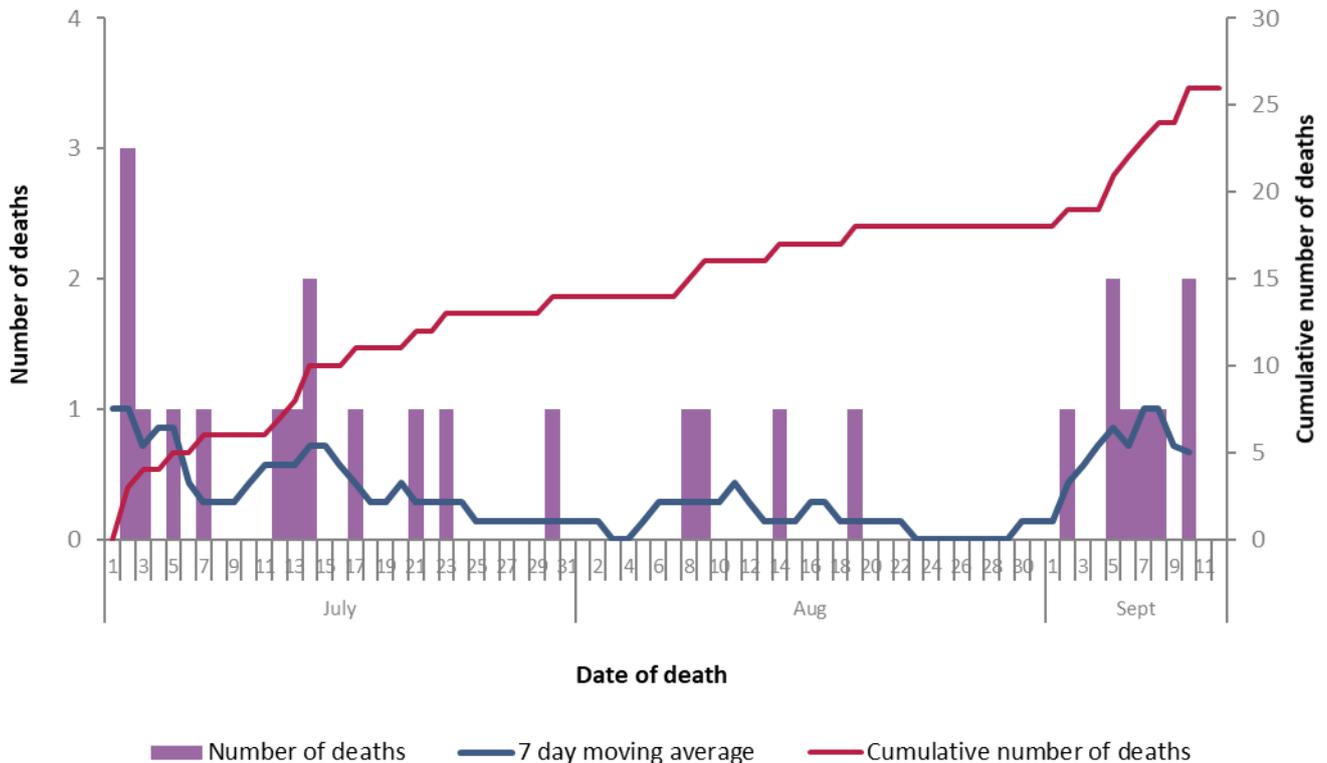


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/07/2020 to midnight 12/09/2020

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 09:16 on 14/09/2020. 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.