



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 18/09/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 16/09/2020

	Number	Percent
Total number of confirmed cases	32,018	
National cumulative incidence of confirmed cases per 100,000 population	672.38	
Total number of cases hospitalised	3,490	10.9
Total number of cases admitted to ICU	455	1.42
Total number of deaths among confirmed cases	1,535	4.79
Case fatality ratio (CFR, %)	4.79	
National cumulative incidence of confirmed deaths per 100,000 population	32.24	
Total number of outbreaks/clusters	3,252	
Total number of cases associated with clusters	17,471	54.57
Total number of imported cases	571	1.78
Number of cases in healthcare workers	8,959	27.98
Males	14,200	44.35
Females	17,785	55.55
M:F ratio	0.8	
Median age (years)	45	
Mean age (years)	47	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:15 on 18/09/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

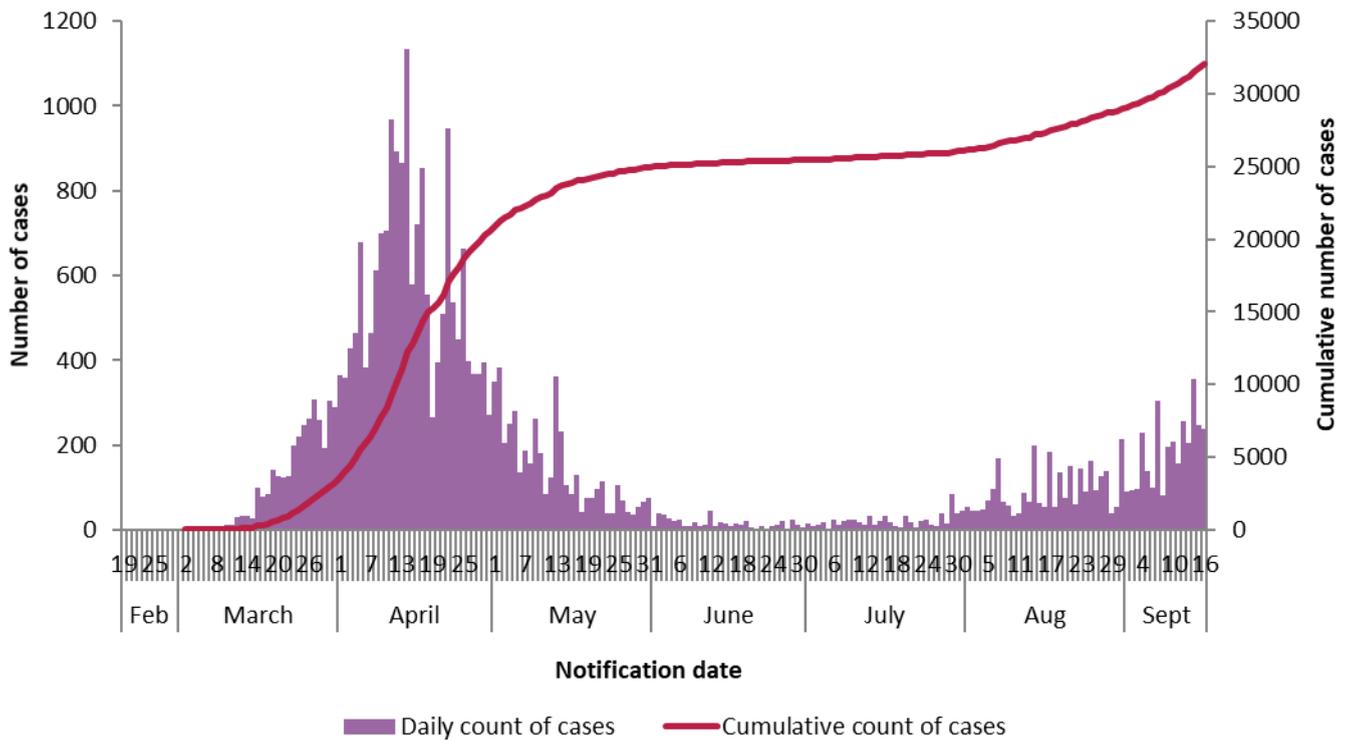


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 16/09/2020

*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

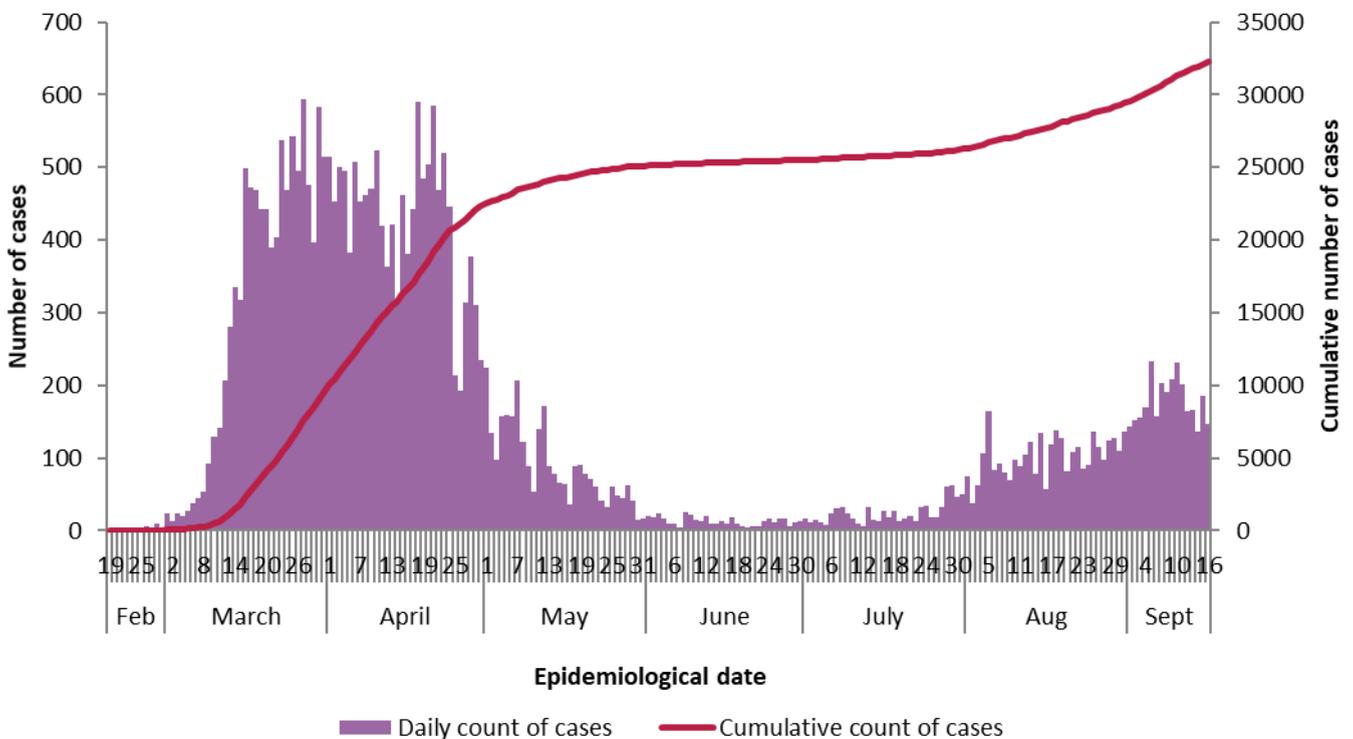


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 16/09/2020**

**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.

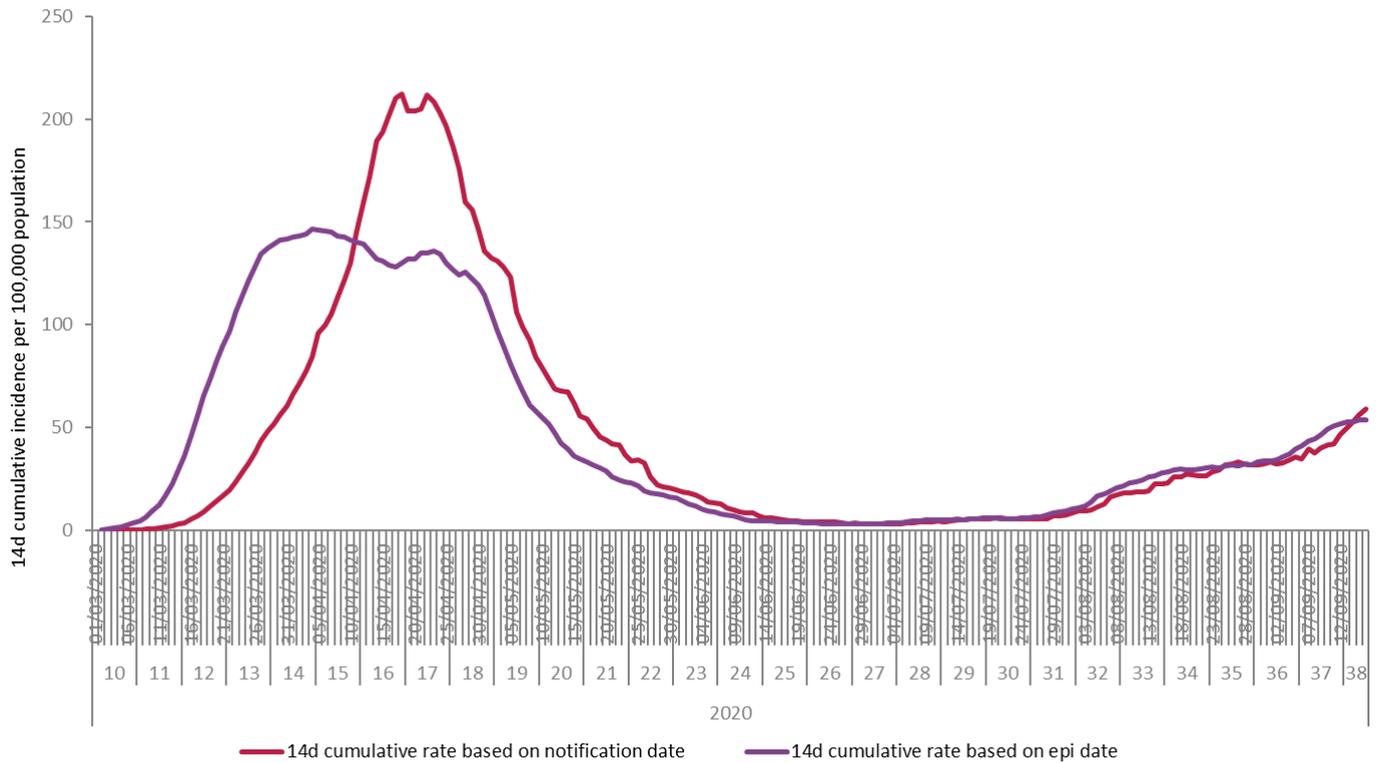


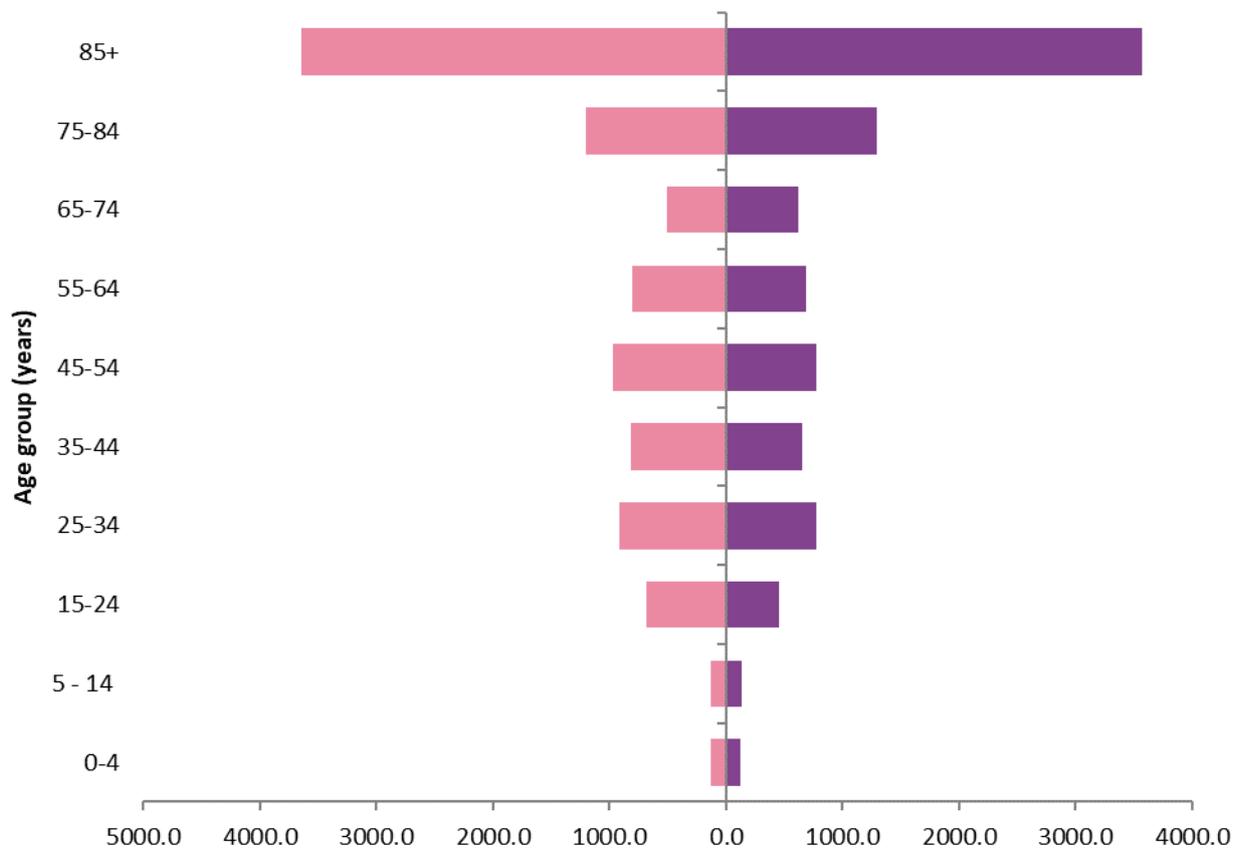
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 16/09/2020**

* 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

**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.

Table 1: Characteristics of confirmed COVID-19 cases notified in Ireland up to midnight on 16/09/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		32,018	100
Sex	Male:Female ratio	0.8	
	Male	14,200	44.35
	Female	17,785	55.55
	Unknown	33	0.1
Age	Median age (years)	45	
	Mean age (years)	47	
	Age range (years)	0 - 106	
	0-4 yrs	428	1.34
	5-14 yrs	864	2.7
	15-24 yrs	3,286	10.26
	25-34 yrs	5,610	17.52
	35-44 yrs	5,510	17.21
	45-54 yrs	5,466	17.07
	55-64 yrs	3,825	11.95
	65-74 yrs	2,120	6.62
	75-84 yrs	2,440	7.62
	85+ yrs	2,445	7.64
	Unknown	24	0.07



	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	134.1	124.8	683.2	912.3	817.2	969.8	809.3	510.5	1197.9	3641.0
Male	124.3	130.8	459.8	781.4	653.7	772.6	692.9	625.6	1294.3	3573.0

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 16/09/2020 (excluding 23 cases for whom age is unknown and 32 cases for whom sex is unknown and 1 case for whom both are unknown)

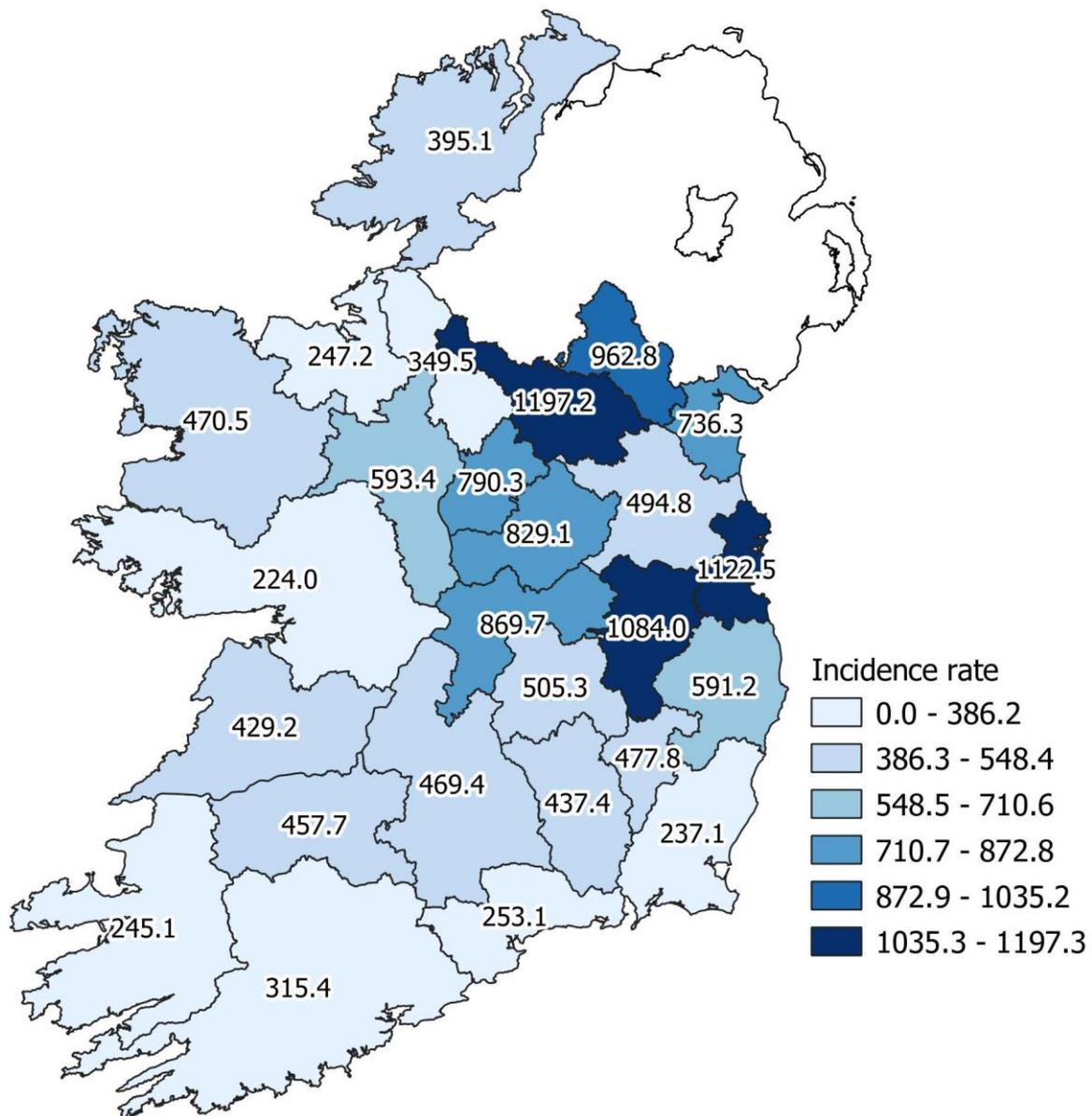


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 16/09/2020

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 16/09/2020

County Name	Number of cases	Percent
Carlow	272	0.85
Cavan	912	2.85
Clare	510	1.59
Cork	1,712	5.35
Donegal	629	1.96
Dublin	15,124	47.24
Galway	578	1.81
Kerry	362	1.13
Kildare	2,412	7.53
Kilkenny	434	1.36
Laois	428	1.34
Leitrim	112	0.35
Limerick	892	2.79
Longford	323	1.01
Louth	949	2.96
Mayo	614	1.92
Meath	965	3.01
Monaghan	591	1.85
Offaly	678	2.12
Roscommon	383	1.2
Sligo	162	0.51
Tipperary	749	2.34
Waterford	294	0.92
Westmeath	736	2.3
Wexford	355	1.11
Wicklow	842	2.63
Total	32,018	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 16/09/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	9,414	29.40%
Local transmission, incl. possible local transmission	21,572	67.37%
Travel abroad, incl. possible travel abroad	774	2.42%
Unknown	258	0.81%
Total	32,018	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 16/09/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	428	29	0.83	1	0.22
5-14 yrs	864	19	0.54	2	0.44
15-24 yrs	3286	88	2.52	5	1.1
25-34 yrs	5610	212	6.07	17	3.74
35-44 yrs	5510	280	8.02	38	8.35
45-54 yrs	5466	470	13.47	93	20.44
55-64 yrs	3825	513	14.7	132	29.01
65-74 yrs	2120	619	17.74	113	24.84
75-84 yrs	2440	770	22.06	48	10.55
85+ yrs	2445	489	14.01	6	1.32
Unknown	24	1	0.03	0	0
Total	32,018	3,490	100	455	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 16/09/2020

	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)	428	864	3,286	5,610	5,510	5,466	3,825	2,120	2,440	2,445	24
Cases hospitalised (n)	29	19	88	212	280	470	513	619	770	489	1
Cases hospitalised (%)	6.78	2.2	2.68	3.78	5.08	8.6	13.41	29.2	31.56	20	4.17
Cases admitted to ICU (n)	1	2	5	17	38	93	132	113	48	6	0
Cases admitted to ICU (%)	0.23	0.23	0.15	0.3	0.69	1.7	3.45	5.33	1.97	0.25	0
Deaths (n)	0	0	1	5	12	26	71	228	527	665	0
Case fatality ratio (%)	0	0	0.03	0.09	0.22	0.48	1.86	10.75	21.6	27.2	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 16/09/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	1,533		43	130	168	67	129	125	44	2,239
Nursing home	139		11	19	44	5	14	17	36	285
Other*	48	2	24	76	11	18	45	19	17	260
Residential institution	120		10	11	22	4	21	10	4	202
Workplace	38		11	14	19	10	12	9	7	120
Hospital	67		4	4	14	2	11	5	6	113
Comm. Hosp/Long-stay unit	4		4	2		4	6	5	5	30
Unknown	3									3
Total	1,952	2	107	256	278	110	238	190	119	3,252

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

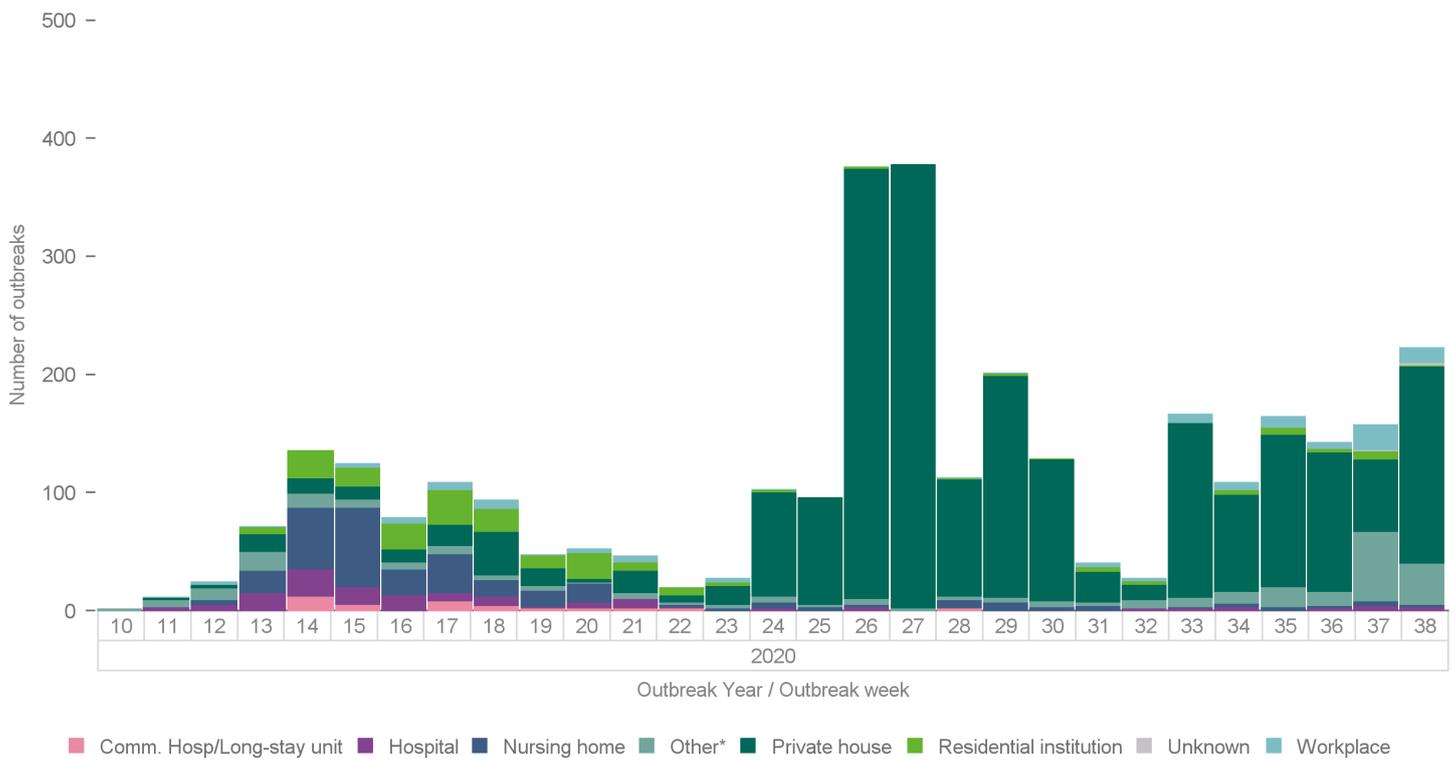


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 16/09/2020

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

Note: 2,416 COVID-19 outbreaks were reported on CIDR between week 24 and week 38 2020 to date (9th June to 16th September). Of these, 2,112 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 38 as a result of data validation: 1 occurred in February, 636 in March, 472 in April, 94 in May, 127 in June, 126 in July, 476 in August and 180 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 16/09/2020

	Number	Percent
Total number of deaths	1,792	
Confirmed	1,535	85.66
Probable	99	5.52
Possible	158	8.82
Total number of cases hospitalised	765	42.69
Cases admitted to ICU	97	5.41
Cases not admitted to ICU	668	37.28
Total number of imported cases	6	0.33
Number of cases in healthcare workers	8	0.45
Number with underlying clinical conditions	1,692	94.42
Total number of male cases	887	49.5
M:F ratio	0.98	
Median age (years)	83	
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 16/09/2020

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	18	28	1.56
55-64 yrs	26	50	76	4.24
65-74 yrs	94	159	253	14.12
75-84 yrs	279	332	611	34.1
85+ yrs	485	318	803	44.81
Unknown	<5	<5	2	0.11
Total	905	887	1,792	100
Percent	50.5	49.5		

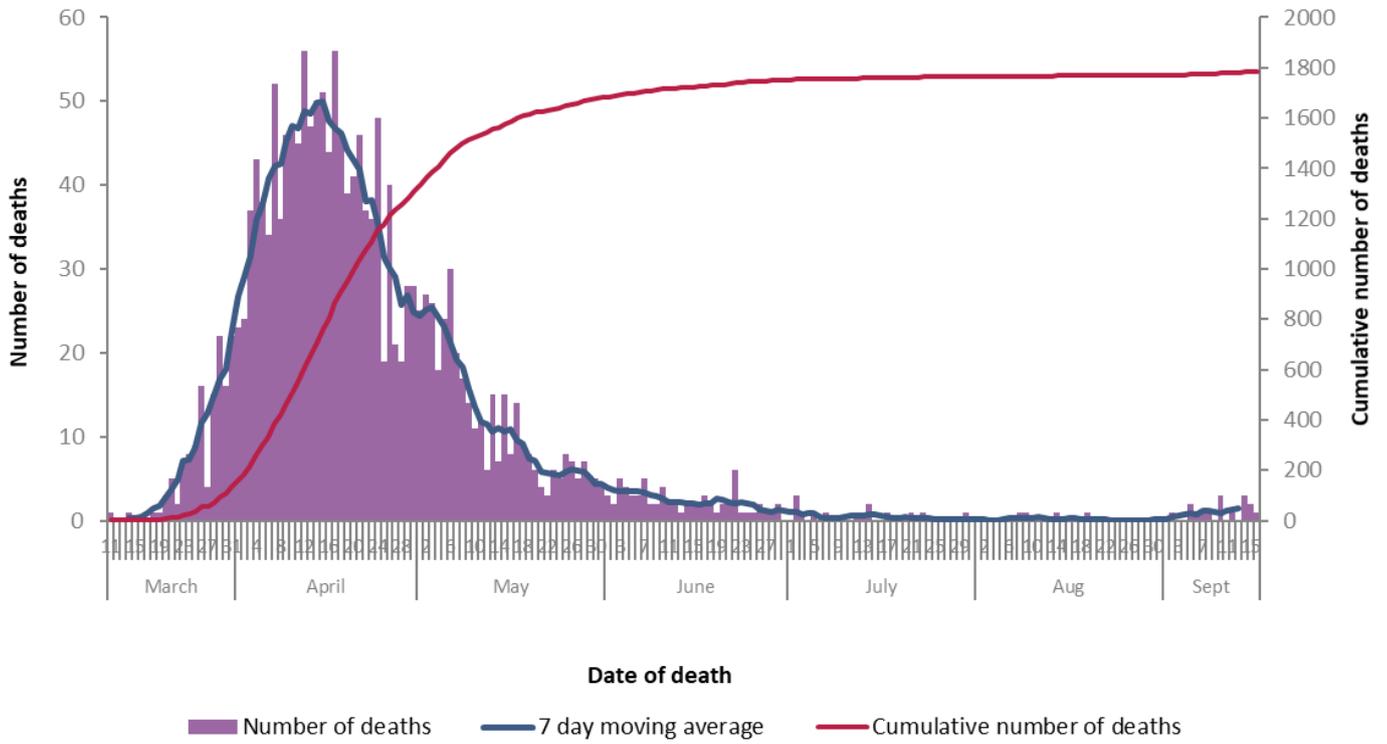


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 16/09/2020

* Date of death is not yet available for six cases

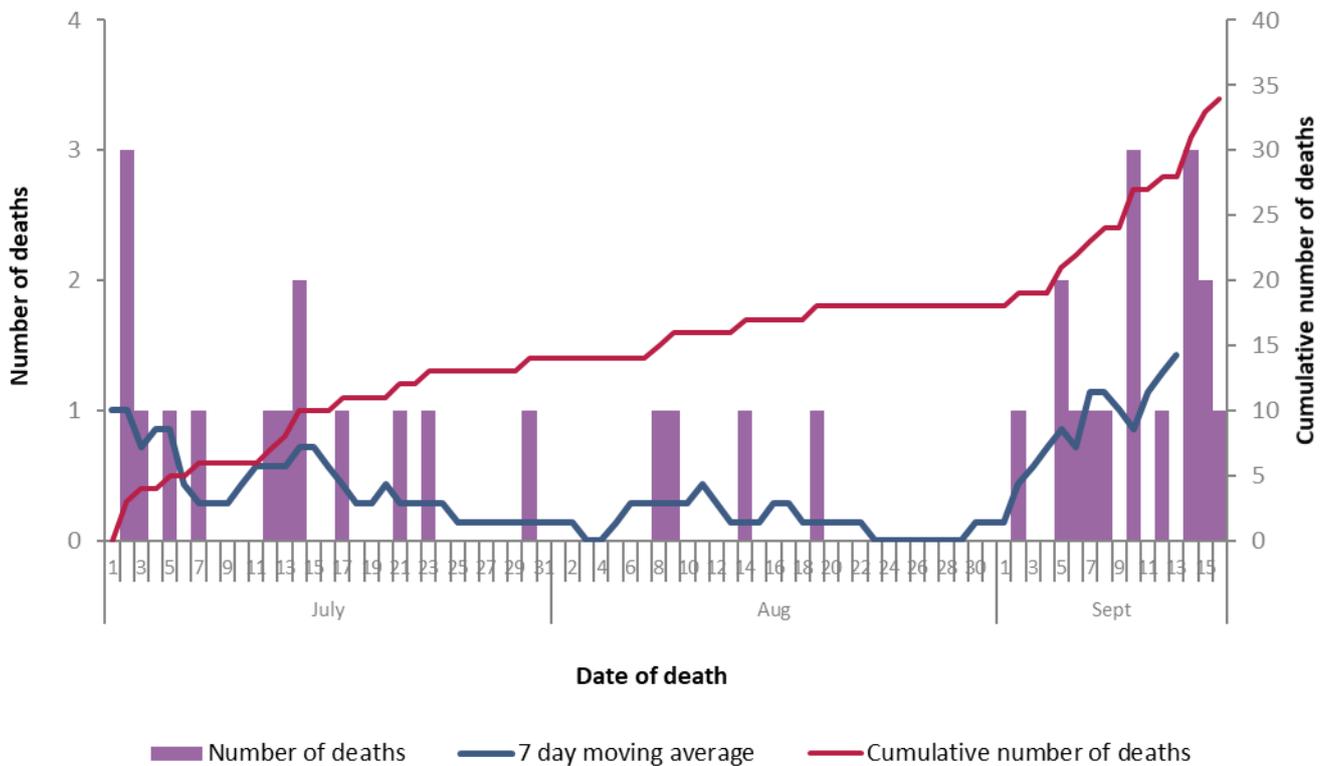


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/07/2020 to midnight 16/09/2020

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 18/09/2020. 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.
- 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.