



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 04/09/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 02/09/2020

	Number	Percent
Total number of confirmed cases	29,205	
National cumulative incidence of confirmed cases per 100,000 population	613.31	
Total number of cases hospitalised	3,412	11.68
Total number of cases admitted to ICU	447	1.53
Total number of deaths among confirmed cases	1,519	5.2
Case fatality ratio (CFR, %)	5.2	
National cumulative incidence of confirmed deaths per 100,000 population	31.9	
Total number of outbreaks/clusters	2,826	
Total number of cases associated with clusters	16,025	54.87
Total number of imported cases	526	1.8
Number of cases in healthcare workers	8,695	29.77
Males	12,827	43.92
Females	16,350	55.98
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 10:27 on 04/09/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

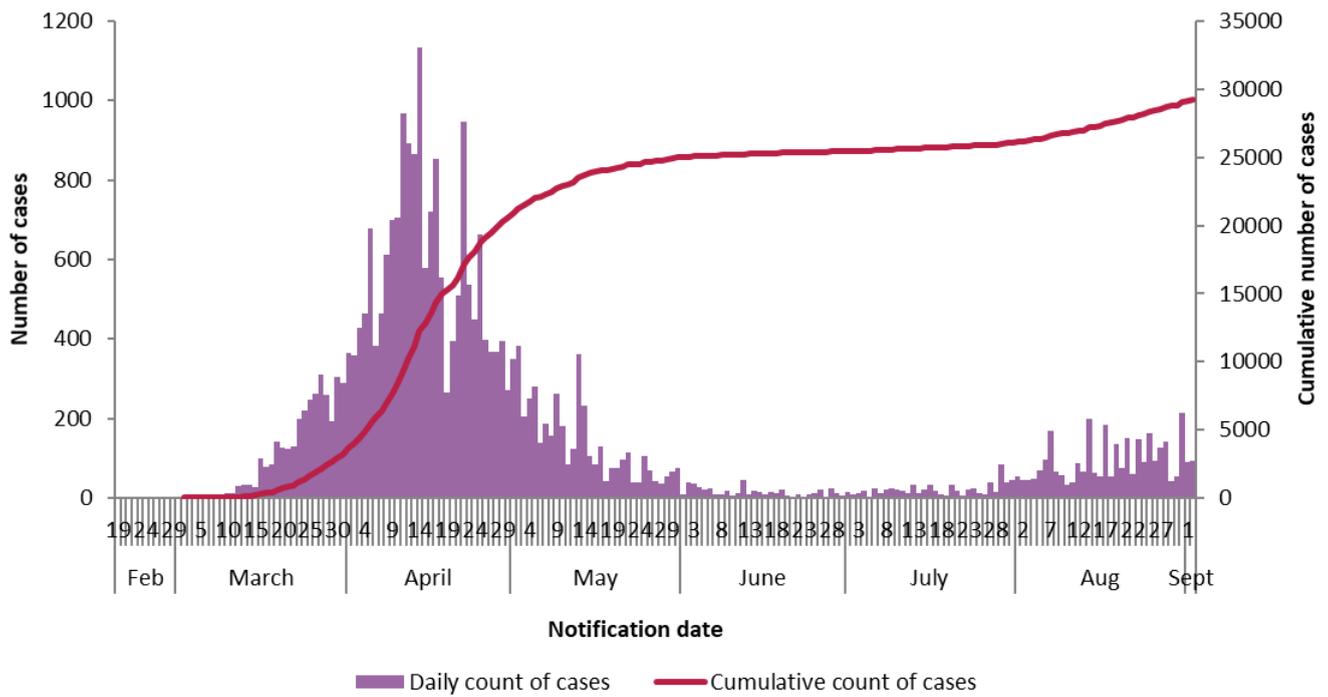


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 02/09/2020

*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

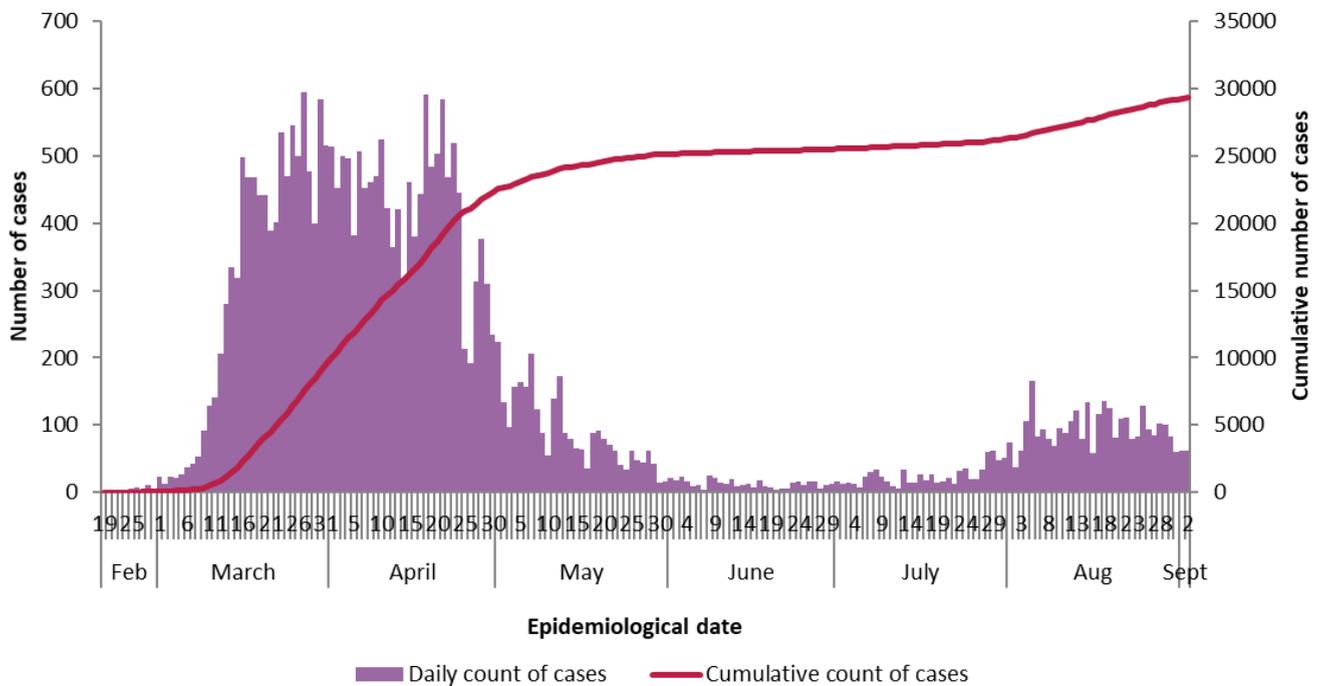


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 02/09/2020**

**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.

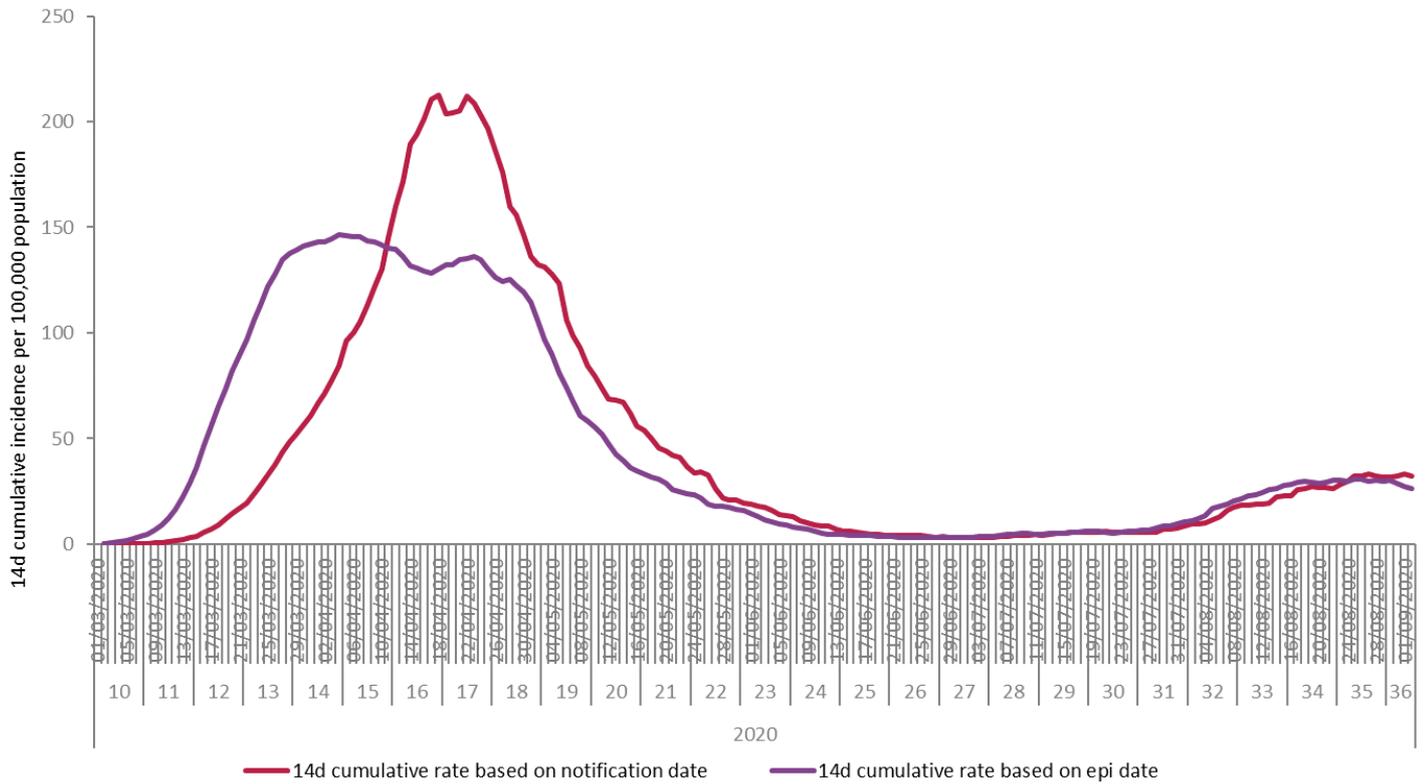


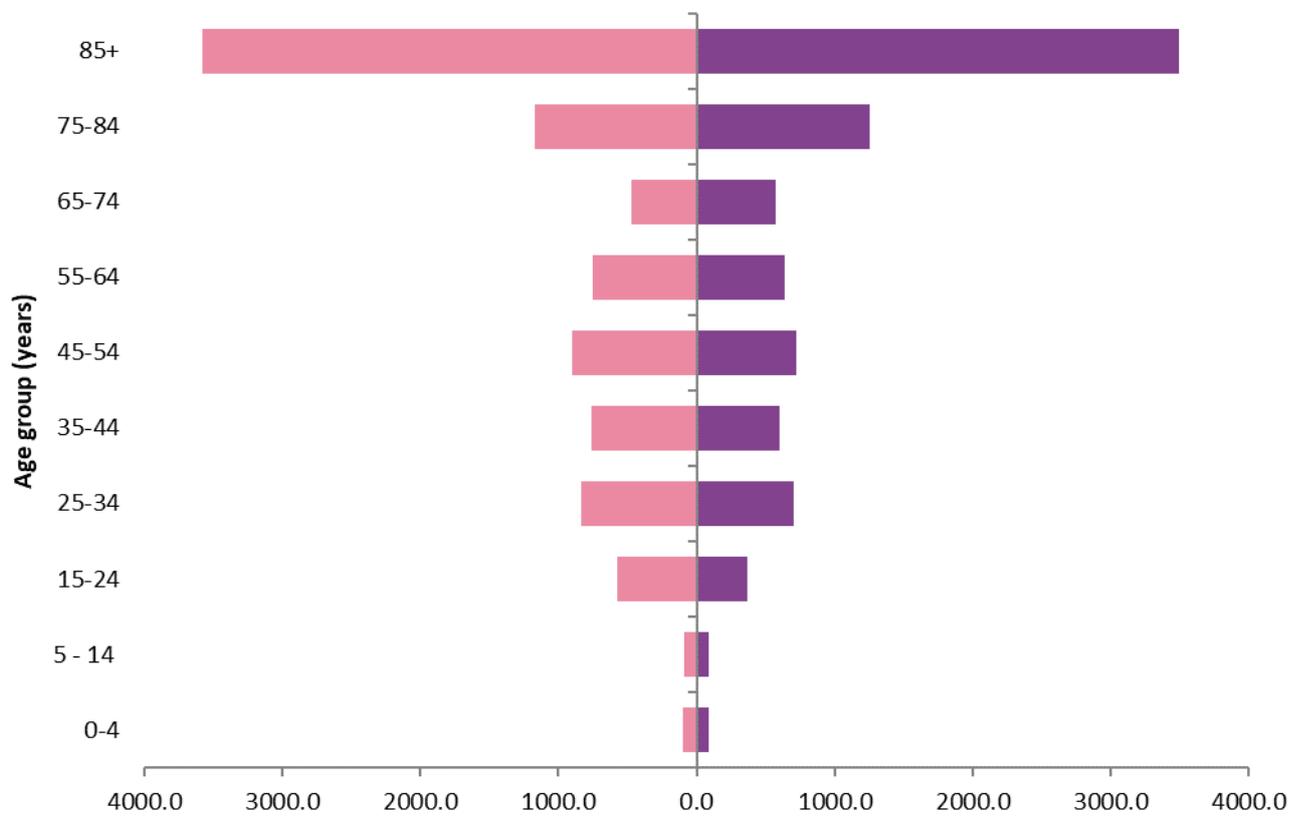
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 02/09/2020**

* 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 02/09/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		29,205	100
Sex	Male:Female ratio	0.78	
	Male	12,827	43.92
	Female	16,350	55.98
	Unknown	28	0.1
Age	Median age (years)	46	
	Mean age (years)	49	
	Age range (years)	0 - 106	
	0-4 yrs	307	1.05
	5-14 yrs	612	2.1
	15-24 yrs	2,694	9.22
	25-34 yrs	5,109	17.49
	35-44 yrs	5,105	17.48
	45-54 yrs	5,087	17.42
	55-64 yrs	3,545	12.14
	65-74 yrs	1,947	6.67
	75-84 yrs	2,372	8.12
	85+ yrs	2,403	8.23
	Unknown	24	0.08



	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	95.8	92.7	571.9	836.9	761.5	903.1	754.3	470.8	1168.0	3584.8
Male	89.6	88.7	365.5	705.4	601.0	718.6	637.9	573.0	1254.0	3499.3

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 02/09/2020 (excluding 23 cases for whom age is unknown and 27 cases for whom sex is unknown and 1 case for whom both are unknown)

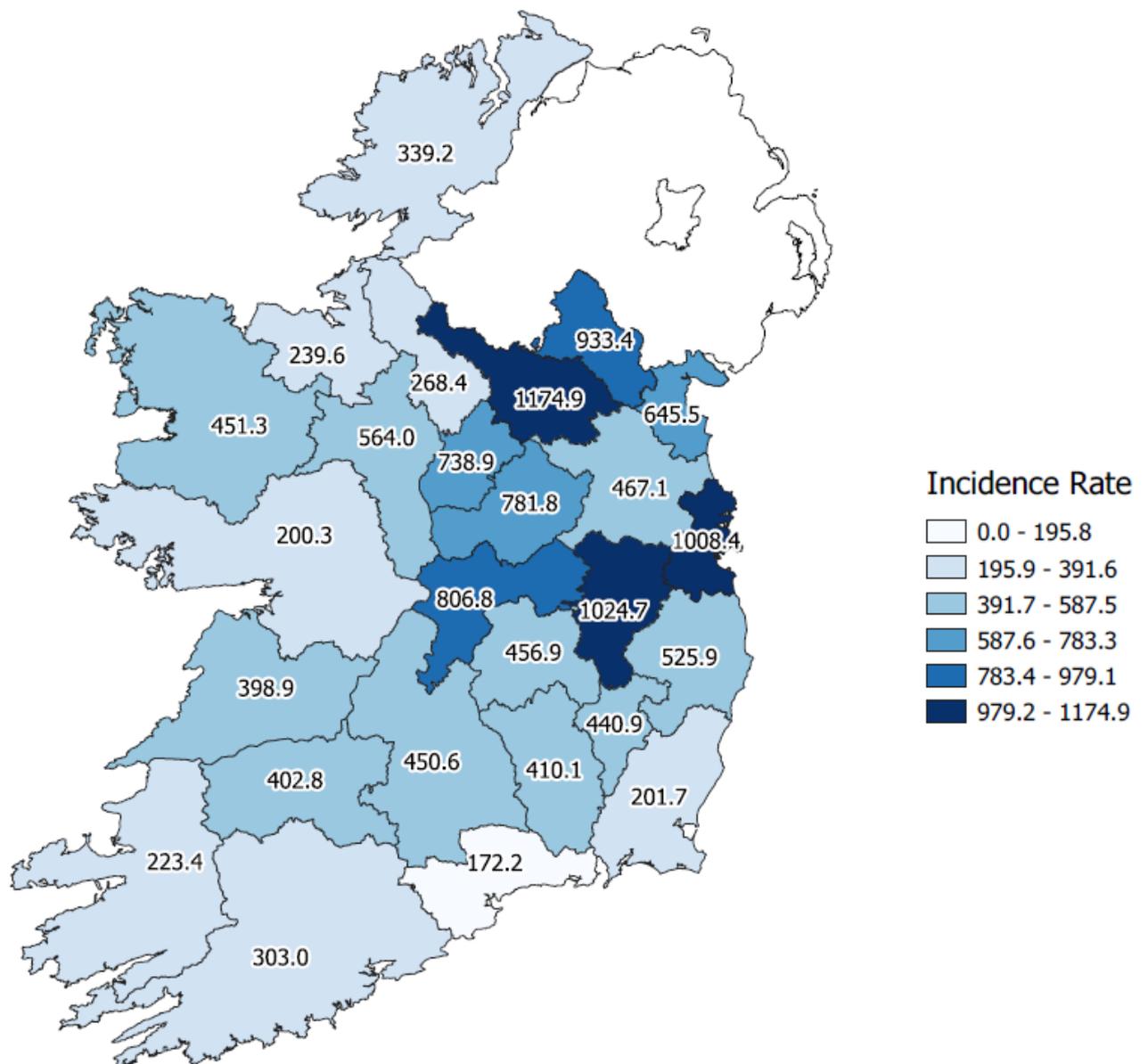


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 02/09/2020

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 02/09/2020

County Name	Number of cases	Percent
Carlow	251	0.86
Cavan	895	3.06
Clare	474	1.62
Cork	1,645	5.63
Donegal	540	1.85
Dublin	13,587	46.52
Galway	517	1.77
Kerry	330	1.13
Kildare	2,280	7.81
Kilkenny	407	1.39
Laois	387	1.33
Leitrim	86	0.29
Limerick	785	2.69
Longford	302	1.03
Louth	832	2.85
Mayo	589	2.02
Meath	911	3.12
Monaghan	573	1.96
Offaly	629	2.15
Roscommon	364	1.25
Sligo	157	0.54
Tipperary	719	2.46
Waterford	200	0.68
Westmeath	694	2.38
Wexford	302	1.03
Wicklow	749	2.56
Total	29,205	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 02/09/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	8,782	30.07%
Local transmission, incl. possible local transmission	19,475	66.68%
Travel abroad, incl. possible travel abroad	722	2.47%
Unknown	226	0.77%
Total	29,205	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 02/09/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	307	25	0.73	0	0
5-14 yrs	612	19	0.56	2	0.45
15-24 yrs	2694	80	2.34	5	1.12
25-34 yrs	5109	210	6.15	16	3.58
35-44 yrs	5105	278	8.15	38	8.5
45-54 yrs	5087	458	13.42	93	20.81
55-64 yrs	3545	503	14.74	129	28.86
65-74 yrs	1947	598	17.53	110	24.61
75-84 yrs	2372	759	22.25	48	10.74
85+ yrs	2403	481	14.1	6	1.34
Unknown	24	1	0.03	0	0
Total	29,205	3,412	100	447	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 02/09/2020

	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)	307	612	2,694	5,109	5,105	5,087	3,545	1,947	2,372	2,403	24
Cases hospitalised (n)	25	19	80	210	278	458	503	598	759	481	1
Cases hospitalised (%)	8.14	3.1	2.97	4.11	5.45	9	14.19	30.71	32	20.02	4.17
Cases admitted to ICU (n)	0	2	5	16	38	93	129	110	48	6	0
Cases admitted to ICU (%)	0	0.33	0.19	0.31	0.74	1.83	3.64	5.65	2.02	0.25	0
Deaths (n)	0	0	1	5	12	25	68	228	521	659	0
Case fatality ratio (%)	0	0	0.04	0.1	0.24	0.49	1.92	11.71	21.96	27.42	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 02/09/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	1,409		27	103	139	55	123	93	30	1,979
Nursing home	134		10	18	44	5	14	17	36	278
Residential institution	114		10	10	20	4	21	10	4	193
Other*	19	2	10	45	8	11	38	13	11	157
Hospital	63		4	4	14	2	10	5	6	108
Workplace	27		10	7	16	1	9	7	4	81
Comm. Hosp/Long-stay unit	4		4	2		4	6	5	5	30
Total	1,770	2	75	189	241	82	221	150	96	2,826

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

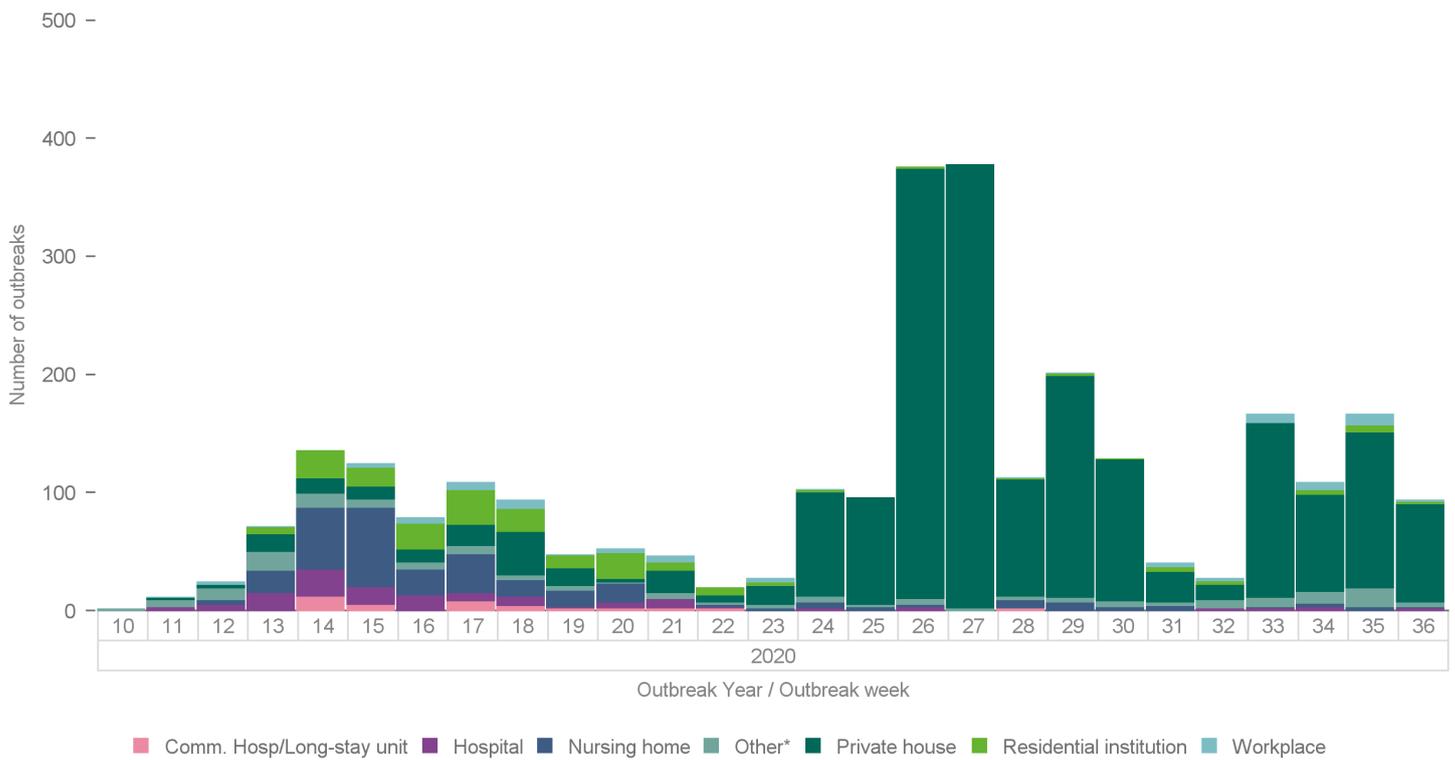


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 02/09/2020

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

Note: 1,988 COVID-19 outbreaks were reported on CIDR between week 24 and week 36 2020 to date (9th June to 2nd September). Of these, 1,838 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 36 as a result of data validation: 1 occurred in February, 634 in March, 472 in April, 94 in May, 127 in June, 125 in July, 374 in August and 11 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 02/09/2020

	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	758	42.66
Cases admitted to ICU	94	5.29
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	874	49.18
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 02/09/2020

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	25	48	73	4.11
65-74 yrs	94	159	253	14.24
75-84 yrs	279	326	605	34.05
85+ yrs	484	314	798	44.91
Unknown	<5	<5	2	0.11
Total	903	874	1,777	100
Percent	50.82	49.18		

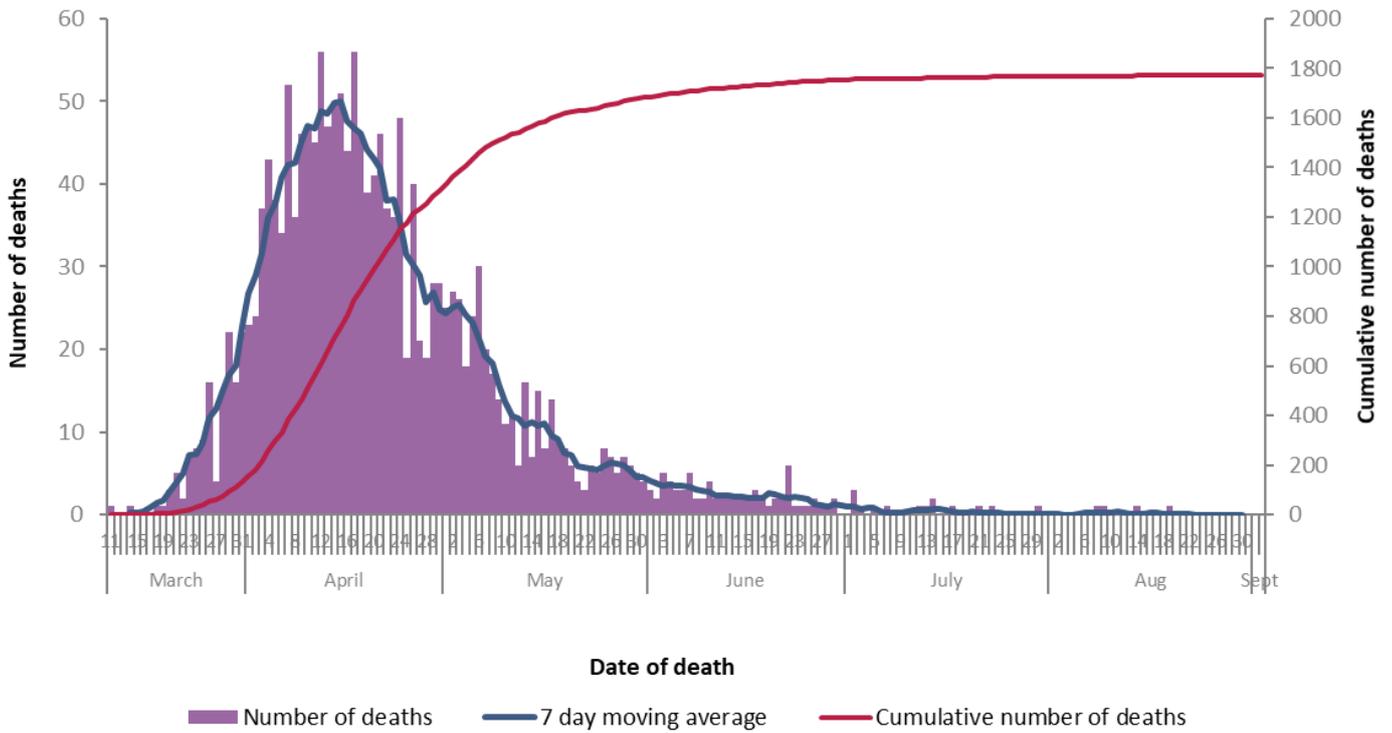


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 02/09/2020

* Date of death is not yet available for six cases

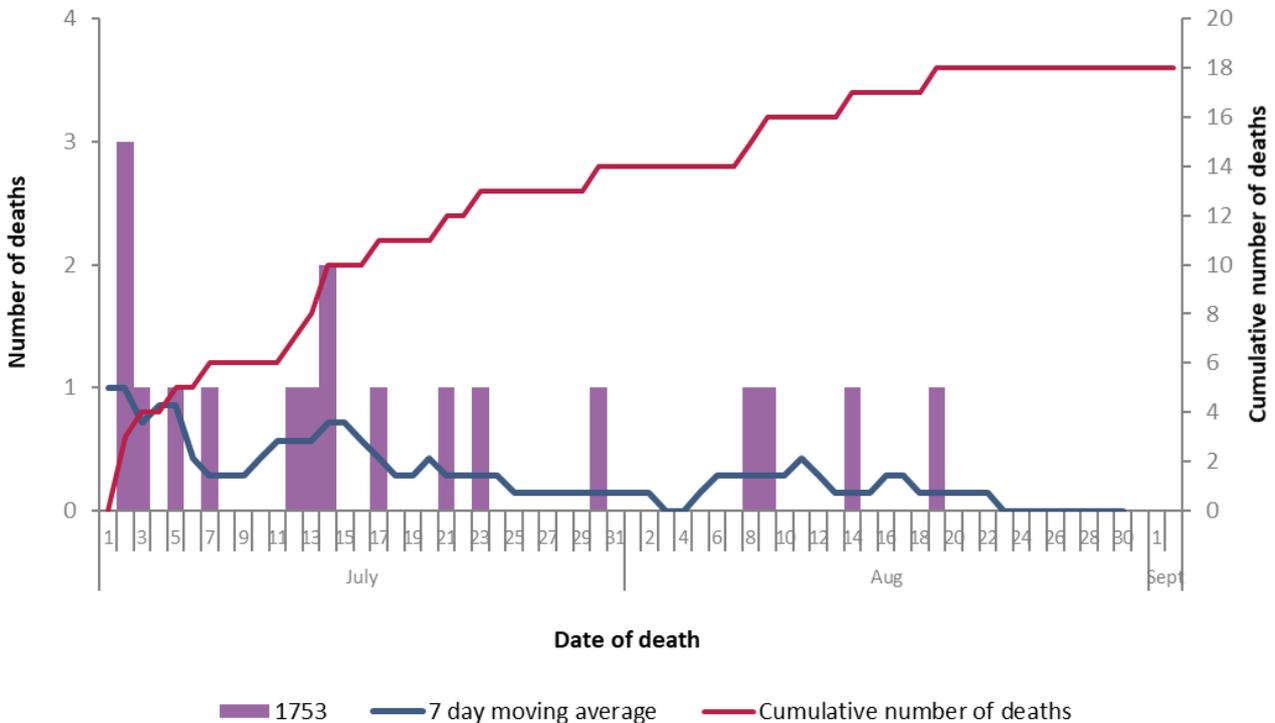


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/07/2020 to midnight 02/09/2020

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 10:27 on 9/4/20. 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.