



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 01/10/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 29/09/2020

	Number	Percent
Total number of confirmed cases	36,155	
National cumulative incidence of confirmed cases per 100,000 population	759.26	
Total number of cases hospitalised	3,617	10
Total number of cases admitted to ICU	473	1.31
Total number of deaths among confirmed cases	1,549	4.28
Case fatality ratio (CFR, %)	4.28	
National cumulative incidence of confirmed deaths per 100,000 population	32.53	
Total number of outbreaks/clusters	4,138	
Total number of cases associated with clusters	20,158	55.75
Total number of imported cases	602	1.67
Number of cases in healthcare workers	9,221	25.5
Males	16,249	44.94
Females	19,875	54.97
M:F ratio	0.82	
Median age (years)	44	
Mean age (years)	46	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:15 on 01/10/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

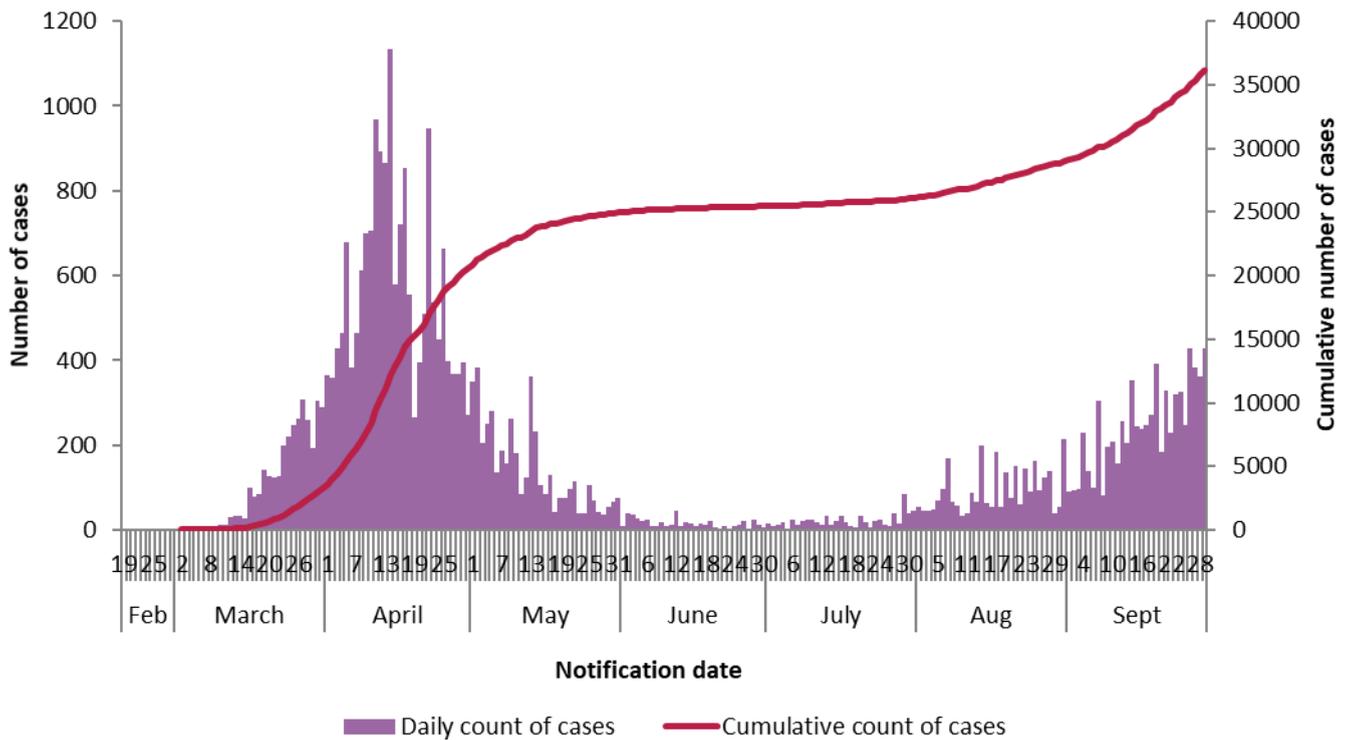


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 29/09/2020

*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

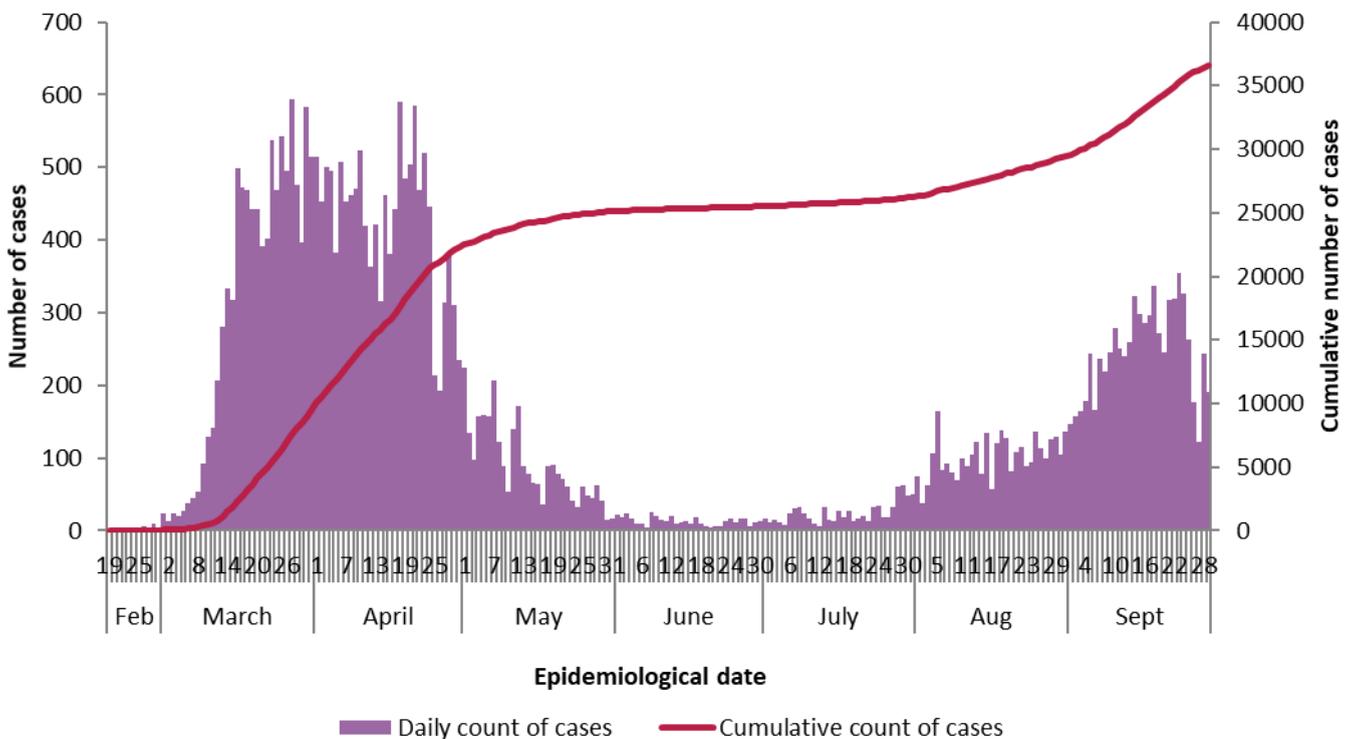


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 29/09/2020**

**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.

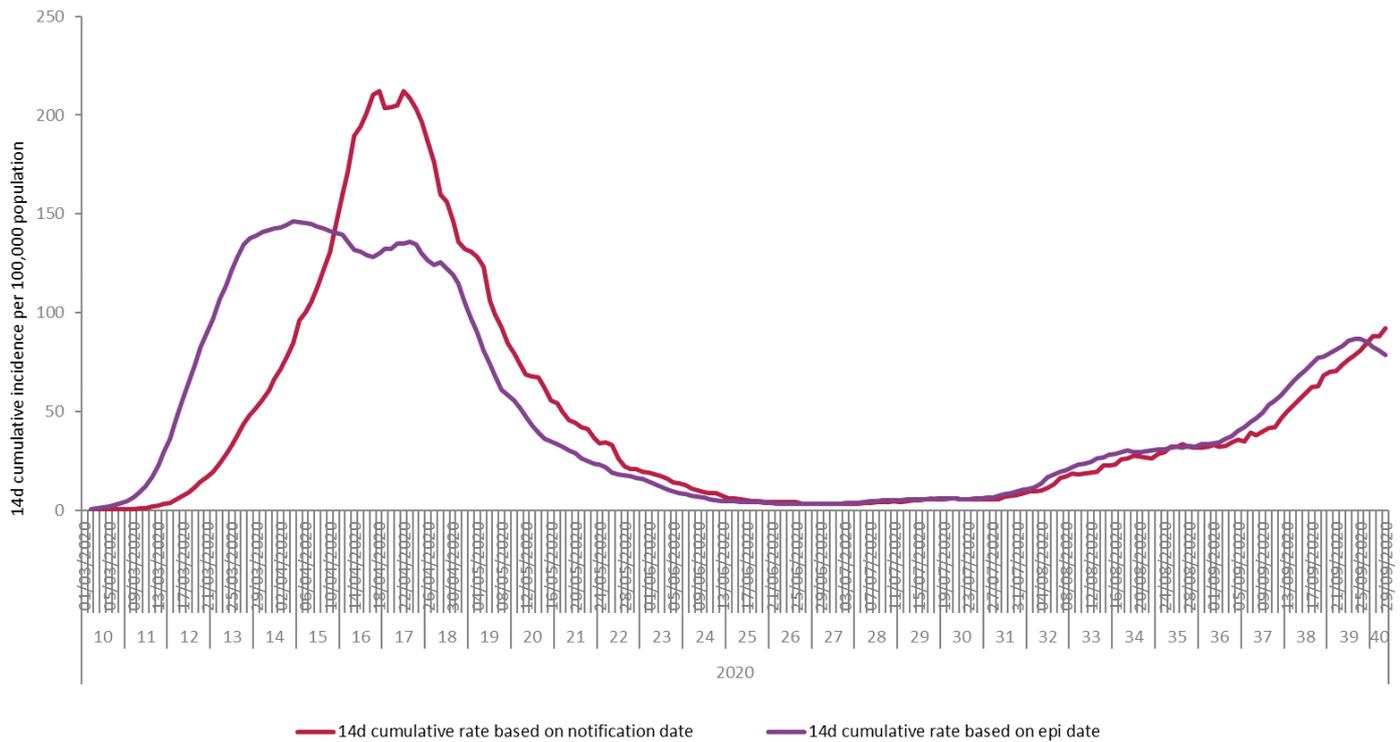


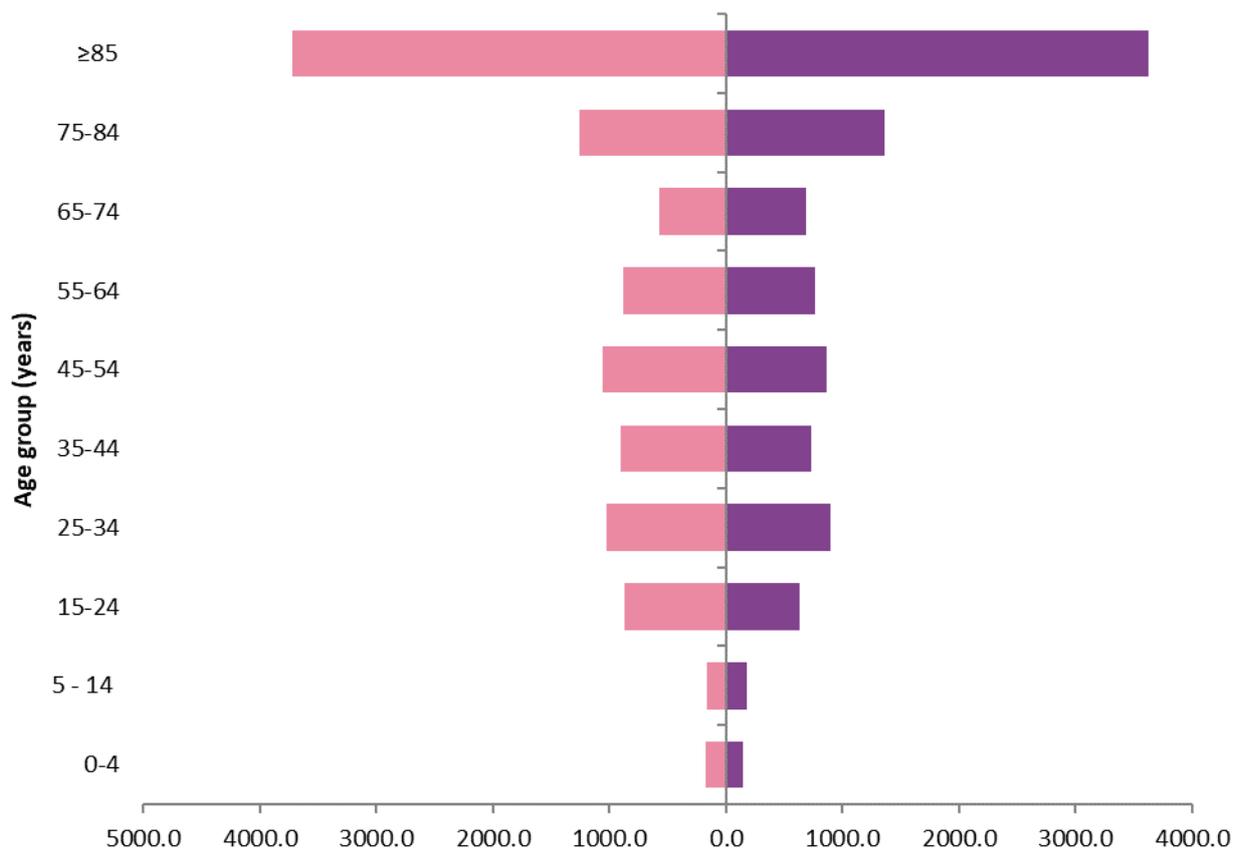
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 29/09/2020**

* 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 29/09/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		36,155	100
Sex	Male:Female ratio	0.82	
	Male	16,249	44.94
	Female	19,875	54.97
	Unknown	31	0.09
Age	Median age (years)	44	
	Mean age (years)	46	
	Age range (years)	0 - 106	
	0-4 yrs	533	1.47
	5-14 yrs	1,164	3.22
	15-24 yrs	4,330	11.98
	25-34 yrs	6,355	17.58
	35-44 yrs	6,116	16.92
	45-54 yrs	6,030	16.68
	55-64 yrs	4,204	11.63
	65-74 yrs	2,349	6.5
	75-84 yrs	2,555	7.07
	85+ yrs	2,495	6.9
	Unknown	24	0.07



	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	≥85
Female	170.6	164.5	869.8	1020.5	901.3	1057.7	886.1	570.8	1252.0	3724.2
Male	151.4	179.8	635.6	899.5	731.8	865.2	765.0	688.5	1358.1	3629.3

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 29/09/2020 (excluding 23 cases for whom age is unknown and 30 cases for whom sex is unknown and 1 case for whom both are unknown)

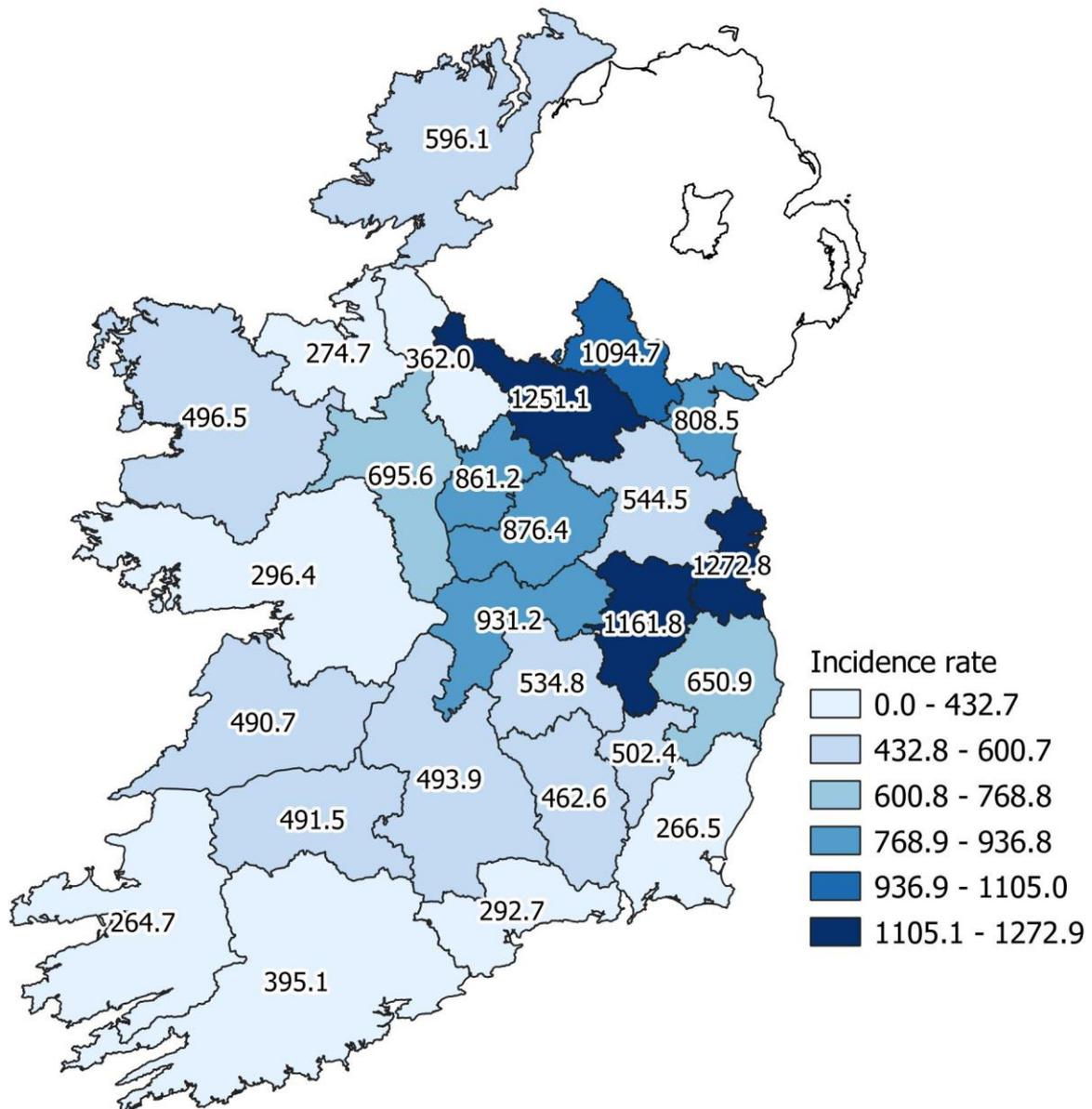


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 29/09/2020

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 29/09/2020

County Name	Number of cases	Percent
Carlow	286	0.79
Cavan	953	2.64
Clare	583	1.61
Cork	2,145	5.93
Donegal	949	2.62
Dublin	17,149	47.43
Galway	765	2.12
Kerry	391	1.08
Kildare	2,585	7.15
Kilkenny	459	1.27
Laois	453	1.25
Leitrim	116	0.32
Limerick	958	2.65
Longford	352	0.97
Louth	1,042	2.88
Mayo	648	1.79
Meath	1,062	2.94
Monaghan	672	1.86
Offaly	726	2.01
Roscommon	449	1.24
Sligo	180	0.5
Tipperary	788	2.18
Waterford	340	0.94
Westmeath	778	2.15
Wexford	399	1.1
Wicklow	927	2.56
Total	36,155	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 29/09/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	10,349	28.62%
Local transmission, incl. possible local transmission	24,533	67.86%
Travel abroad, incl. possible travel abroad	834	2.31%
Unknown	439	1.21%
Total	36,155	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 29/09/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	533	31	0.86	1	0.21
5-14 yrs	1164	23	0.64	2	0.42
15-24 yrs	4330	95	2.63	5	1.06
25-34 yrs	6355	218	6.03	18	3.81
35-44 yrs	6116	295	8.16	42	8.88
45-54 yrs	6030	489	13.52	97	20.51
55-64 yrs	4204	541	14.96	135	28.54
65-74 yrs	2349	645	17.83	118	24.95
75-84 yrs	2555	785	21.7	49	10.36
85+ yrs	2495	494	13.66	6	1.27
Unknown	24	1	0.03	0	0
Total	36,155	3,617	100	473	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 29/09/2020

	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)	533	1,164	4,330	6,355	6,116	6,030	4,204	2,349	2,555	2,495	24
Cases hospitalised (n)	31	23	95	218	295	489	541	645	785	494	1
Cases hospitalised (%)	5.82	1.98	2.19	3.43	4.82	8.11	12.87	27.46	30.72	19.8	4.17
Cases admitted to ICU (n)	1	2	5	18	42	97	135	118	49	6	0
Cases admitted to ICU (%)	0.19	0.17	0.12	0.28	0.69	1.61	3.21	5.02	1.92	0.24	0
Deaths (n)	0	0	1	6	12	28	72	232	530	668	0
Case fatality ratio (%)	0	0	0.02	0.09	0.2	0.46	1.71	9.88	20.74	26.77	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 29/09/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	2,001		52	144	227	100	187	171	60	2,942
Other*	82	2	34	96	20	33	64	24	32	387
Nursing home	145		11	19	44	5	15	17	36	292
Residential institution	126		11	11	26	6	22	10	4	216
Workplace	49		12	17	23	14	11	13	10	149
Hospital	71		5	4	14	2	11	5	6	118
Comm. Hosp/Long-stay unit	5		4	2		4	6	5	5	31
Unknown	2						1			3
Total	2,481	2	129	293	354	164	317	245	153	4,138

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

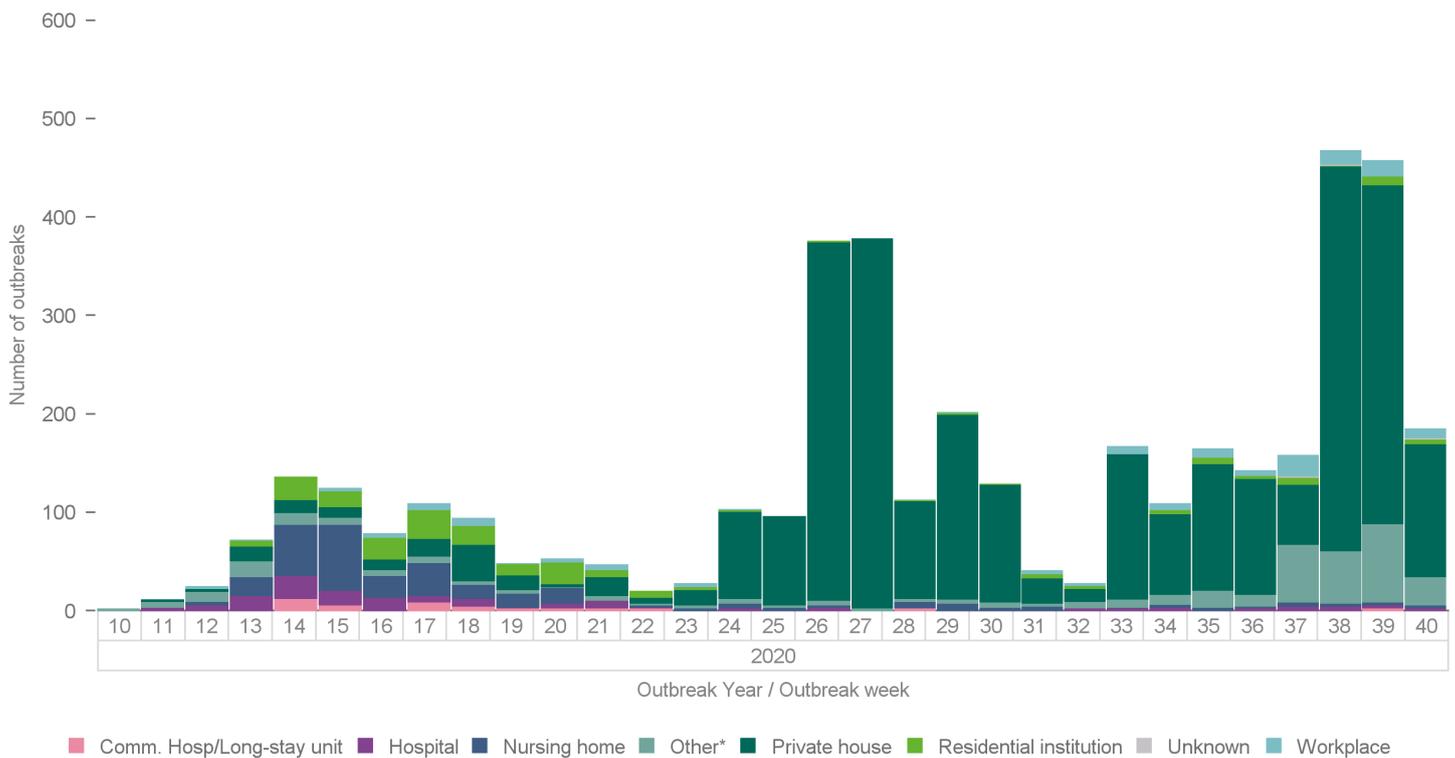


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 29/09/2020

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

Note: 3,302 COVID-19 outbreaks were reported on CIDR between week 24 and week 40 2020 to date (9th June to 29th September). Of these, 2,827 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 40 as a result of data validation: 1 occurred in February, 636 in March, 473 in April, 94 in May, 126 in June, 127 in July, 528 in August and 842 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 29/09/2020

	Number	Percent
Total number of deaths	1,806	
Confirmed	1,549	85.77
Probable	99	5.48
Possible	158	8.75
Total number of cases hospitalised	769	42.58
Cases admitted to ICU	98	5.43
Cases not admitted to ICU	671	37.15
Total number of imported cases	6	0.33
Number of cases in healthcare workers	8	0.44
Number with underlying clinical conditions	1,711	94.74
Total number of male cases	894	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 29/09/2020

Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.06
25-34 yrs	<5	<5	6	0.33
35-44 yrs	6	7	13	0.72
45-54 yrs	11	19	30	1.66
55-64 yrs	26	51	77	4.26
65-74 yrs	97	160	257	14.23
75-84 yrs	280	334	614	34
85+ yrs	487	319	806	44.63
Unknown	<5	<5	2	0.11
Total	912	894	1,806	100
Percent	50.5	49.5		

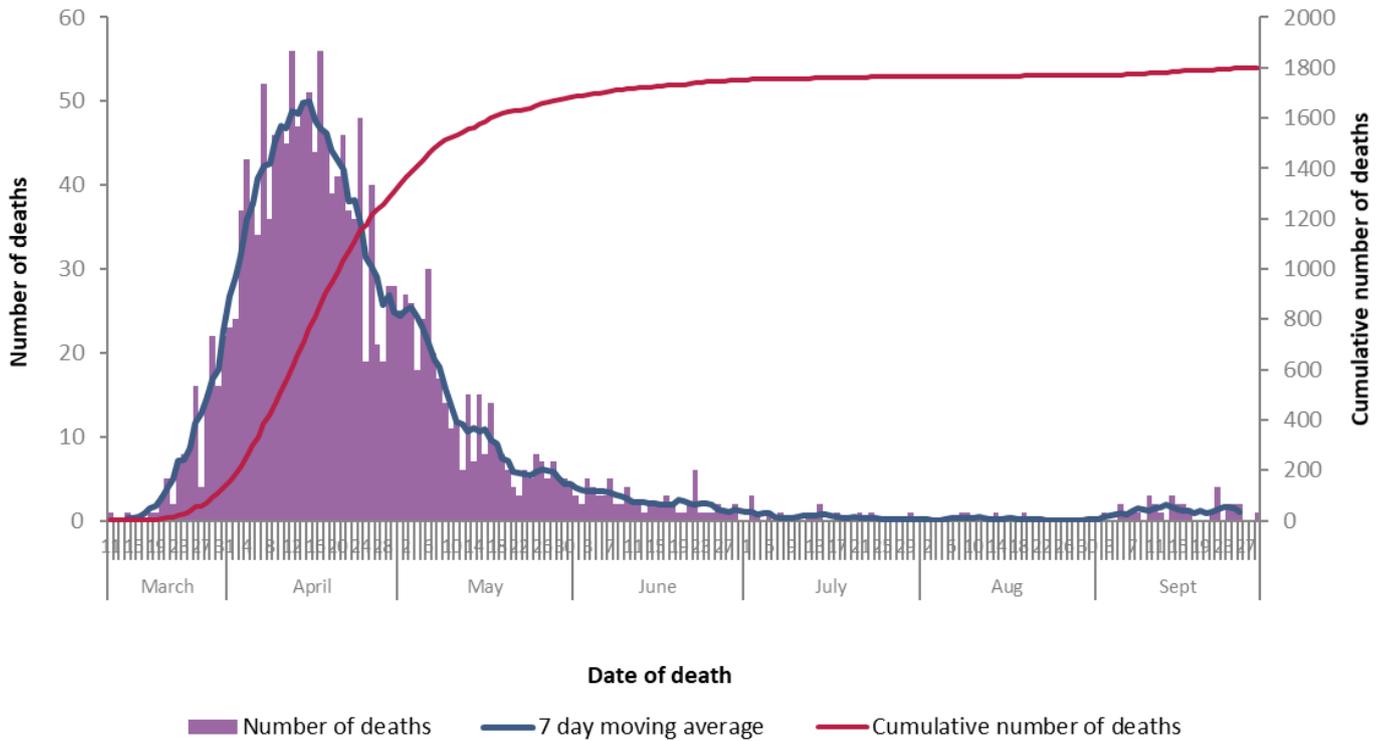


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 29/09/2020

* Date of death is not yet available for six cases

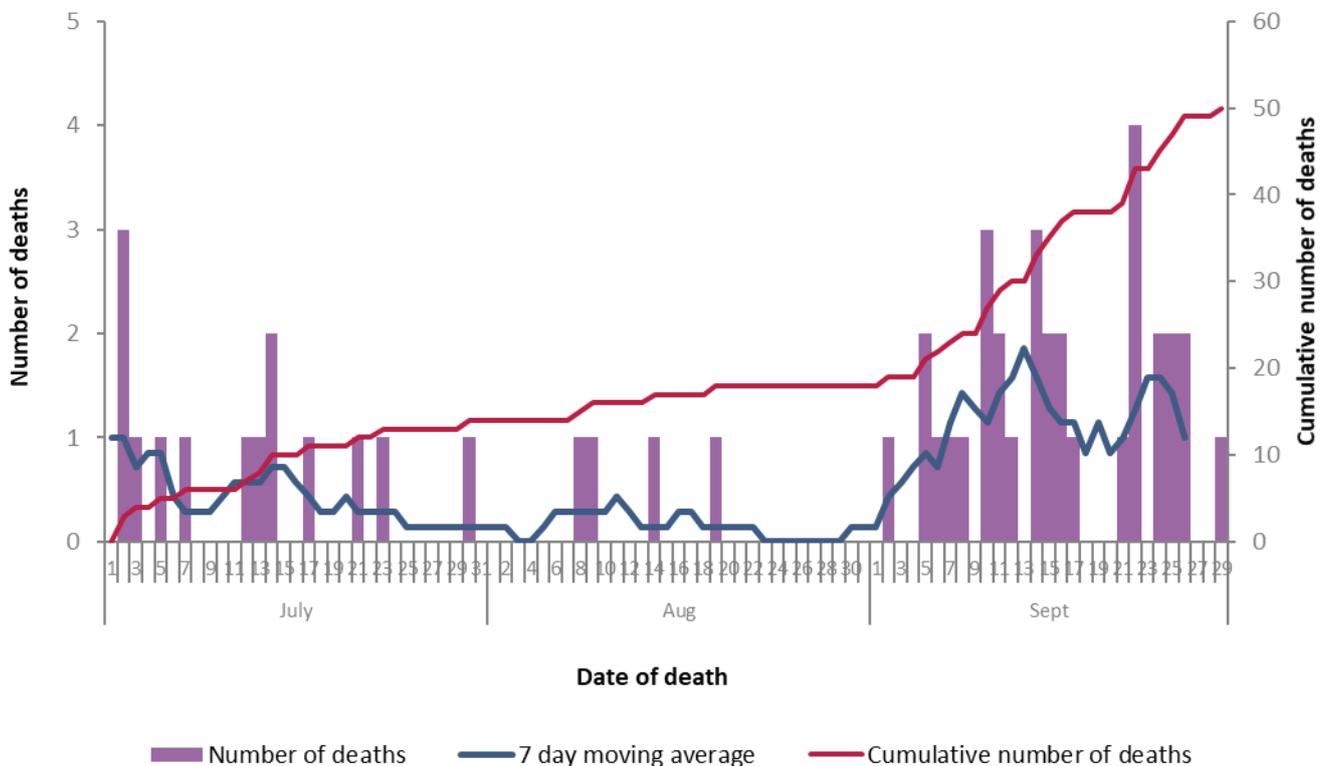


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/07/2020 to midnight 29/09/2020

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 01/10/2020. 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.