



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 02/10/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 30/09/2020

	Number	Percent
Total number of confirmed cases	36,593	
National cumulative incidence of confirmed cases per 100,000 population	768.46	
Total number of cases hospitalised	3,631	9.92
Total number of cases admitted to ICU	475	1.3
Total number of deaths among confirmed cases	1,549	4.23
Case fatality ratio (CFR, %)	4.23	
National cumulative incidence of confirmed deaths per 100,000 population	32.53	
Total number of outbreaks/clusters	4,237	
Total number of cases associated with clusters	20,481	55.97
Total number of imported cases	604	1.65
Number of cases in healthcare workers	9,254	25.29
Males	16,471	45.01
Females	20,091	54.9
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 09:14 on 02/10/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

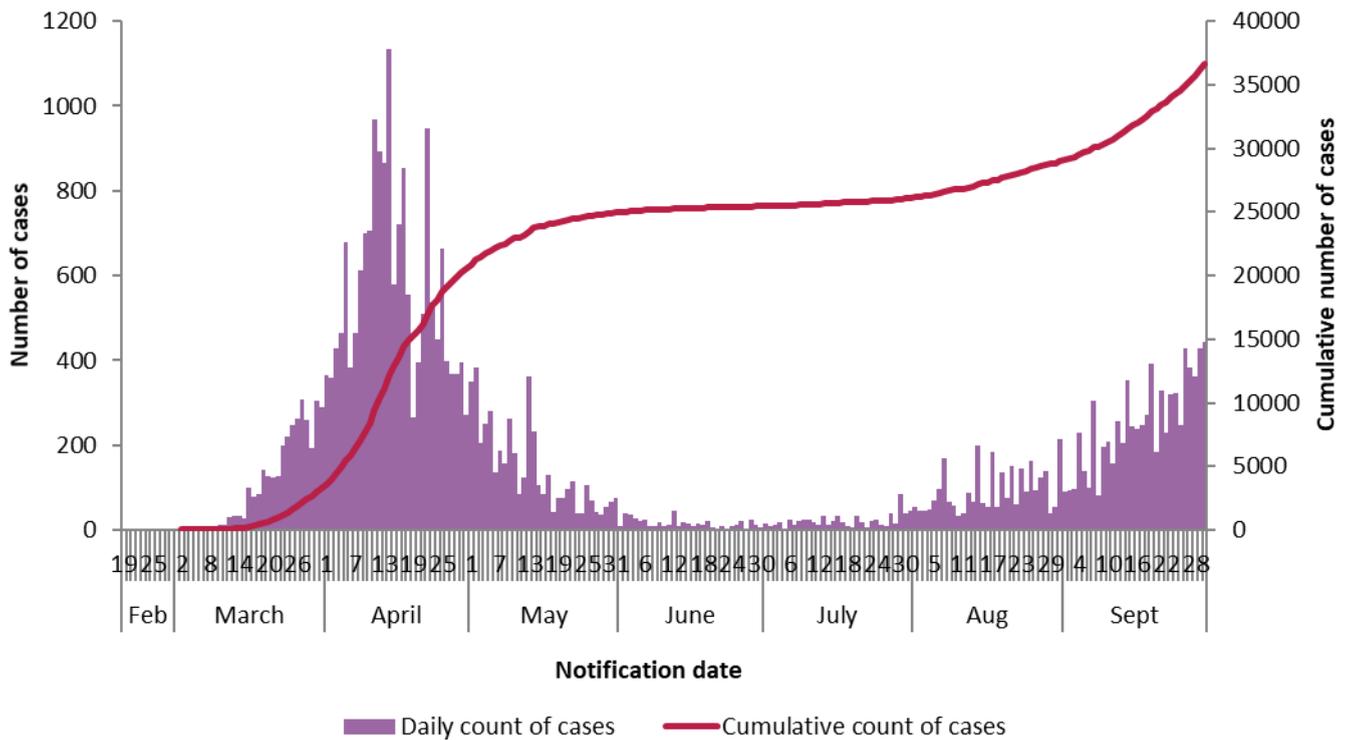


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 30/09/2020

*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

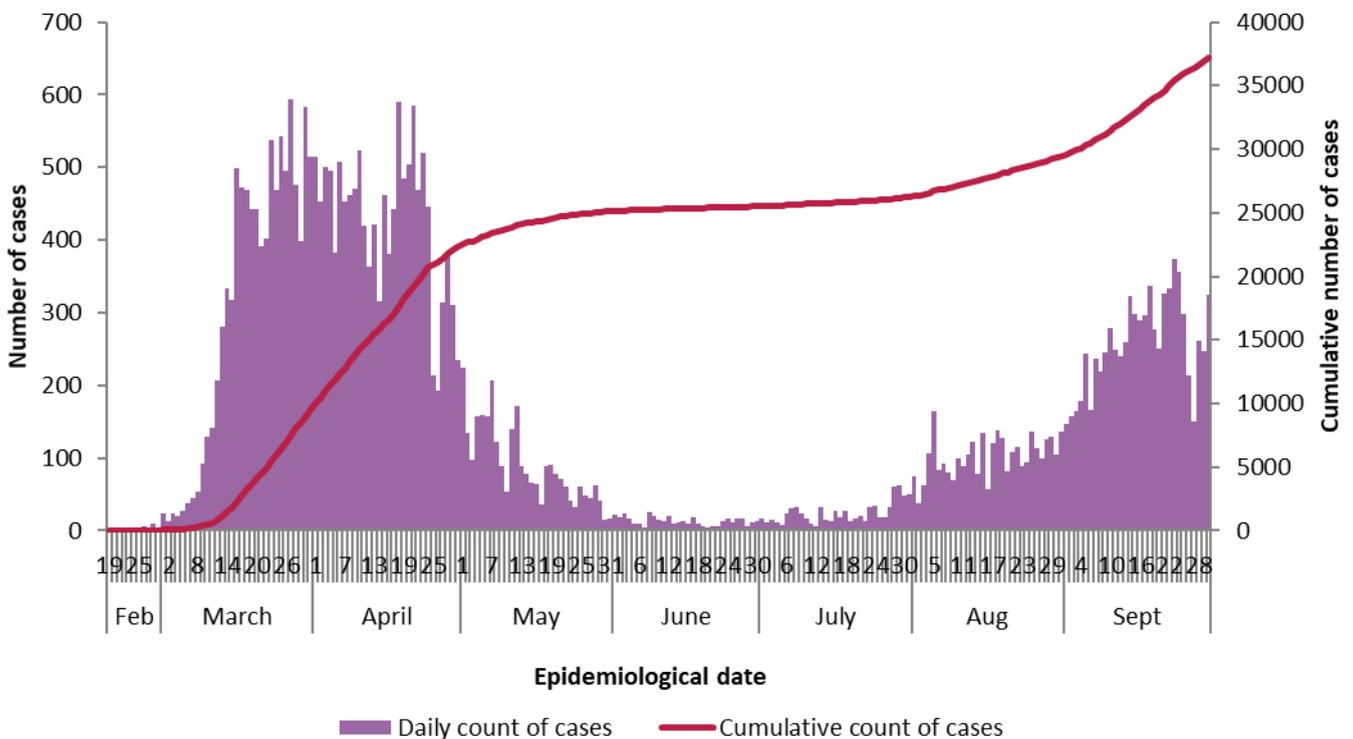


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 30/09/2020**

**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.

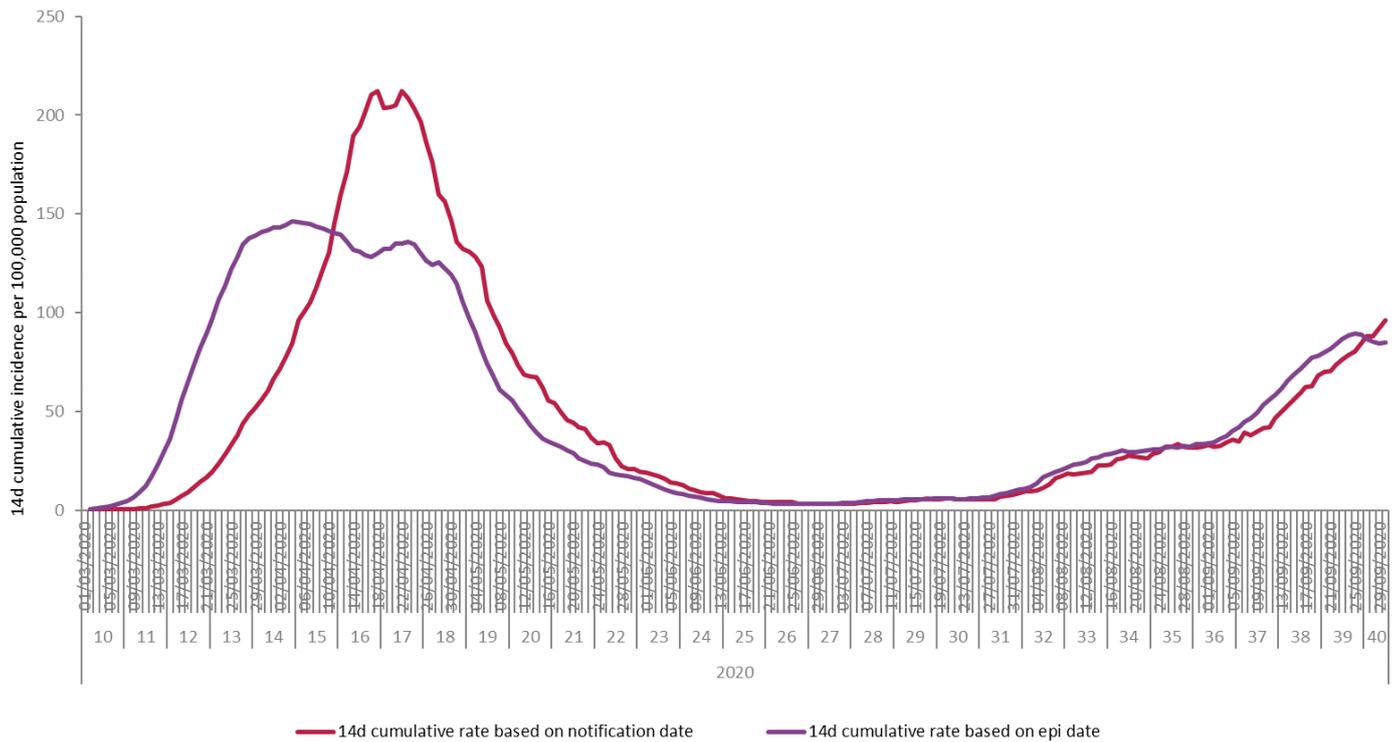


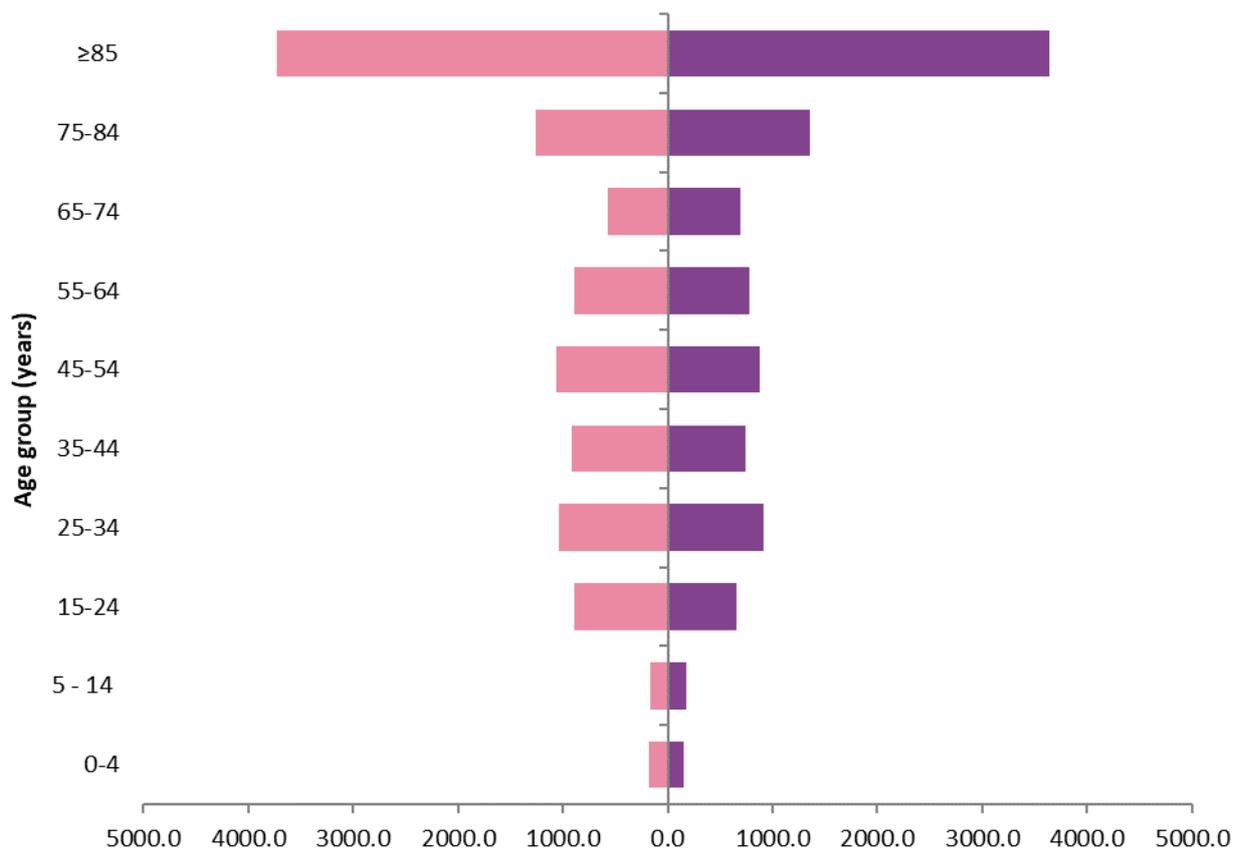
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 30/09/2020**

* 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 30/09/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		36,593	100
Sex	Male:Female ratio	0.82	
	Male	16,471	45.01
	Female	20,091	54.9
	Unknown	31	0.08
Age	Median age (years)	44	
	Mean age (years)	46	
	Age range (years)	0 - 106	
	0-4 yrs	541	1.48
	5-14 yrs	1,187	3.24
	15-24 yrs	4,426	12.1
	25-34 yrs	6,443	17.61
	35-44 yrs	6,196	16.93
	45-54 yrs	6,085	16.63
	55-64 yrs	4,256	11.63
	65-74 yrs	2,370	6.48
	75-84 yrs	2,567	7.02
	85+ yrs	2,498	6.83
	Unknown	24	0.07



	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	≥85
Female	172.5	167.8	885.3	1034.0	913.2	1065.4	896.2	574.5	1260.4	3726.4
Male	154.4	183.3	653.4	912.7	741.3	875.1	775.3	696.1	1361.5	3638.0

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

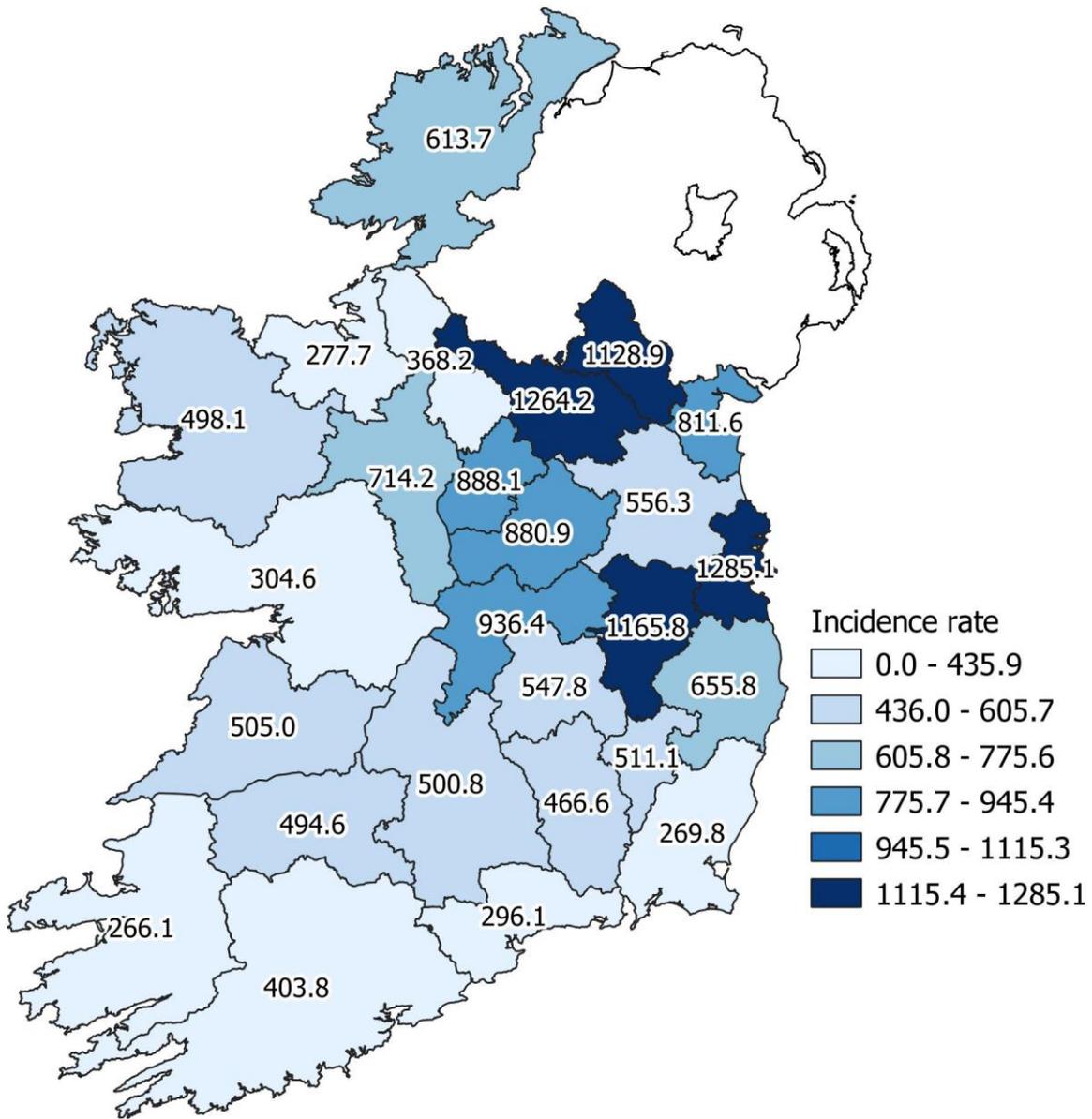


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 30/09/2020

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 30/09/2020

County Name	Number of cases	Percent
Carlow	291	0.8
Cavan	963	2.63
Clare	600	1.64
Cork	2,192	5.99
Donegal	977	2.67
Dublin	17,315	47.32
Galway	786	2.15
Kerry	393	1.07
Kildare	2,594	7.09
Kilkenny	463	1.27
Laois	464	1.27
Leitrim	118	0.32
Limerick	964	2.63
Longford	363	0.99
Louth	1,046	2.86
Mayo	650	1.78
Meath	1,085	2.97
Monaghan	693	1.89
Offaly	730	1.99
Roscommon	461	1.26
Sligo	182	0.5
Tipperary	799	2.18
Waterford	344	0.94
Westmeath	782	2.14
Wexford	404	1.1
Wicklow	934	2.55
Total	36,593	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 30/09/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	10,383	28.37%
Local transmission, incl. possible local transmission	24,919	68.10%
Travel abroad, incl. possible travel abroad	841	2.30%
Unknown	450	1.23%
Total	36,593	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 30/09/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	541	31	0.85	1	0.21
5-14 yrs	1187	24	0.66	2	0.42
15-24 yrs	4426	96	2.64	5	1.05
25-34 yrs	6443	219	6.03	18	3.79
35-44 yrs	6196	295	8.12	42	8.84
45-54 yrs	6085	490	13.49	97	20.42
55-64 yrs	4256	541	14.9	135	28.42
65-74 yrs	2370	650	17.9	120	25.26
75-84 yrs	2567	790	21.76	49	10.32
85+ yrs	2498	494	13.61	6	1.26
Unknown	24	1	0.03	0	0
Total	36,593	3,631	100	475	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 30/09/2020

	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)	541	1,187	4,426	6,443	6,196	6,085	4,256	2,370	2,567	2,498	24
Cases hospitalised (n)	31	24	96	219	295	490	541	650	790	494	1
Cases hospitalised (%)	5.73	2.02	2.17	3.4	4.76	8.05	12.71	27.43	30.78	19.78	4.17
Cases admitted to ICU (n)	1	2	5	18	42	97	135	120	49	6	0
Cases admitted to ICU (%)	0.18	0.17	0.11	0.28	0.68	1.59	3.17	5.06	1.91	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	0.19	0.46	1.69	9.79	20.65	26.74	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 30/09/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	2,054		52	144	228	113	192	171	70	3,024
Other*	85	2	35	98	21	34	66	24	33	398
Nursing home	145		12	19	44	5	15	17	36	293
Residential institution	126		11	11	26	7	22	10	5	218
Workplace	49		12	17	23	16	11	13	10	151
Hospital	72		5	4	14	2	11	5	6	119
Comm. Hosp/Long-stay unit	5		4	2		4	6	5	5	31
Unknown	2						1			3
Total	2,538	2	131	295	356	181	324	245	165	4,237

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

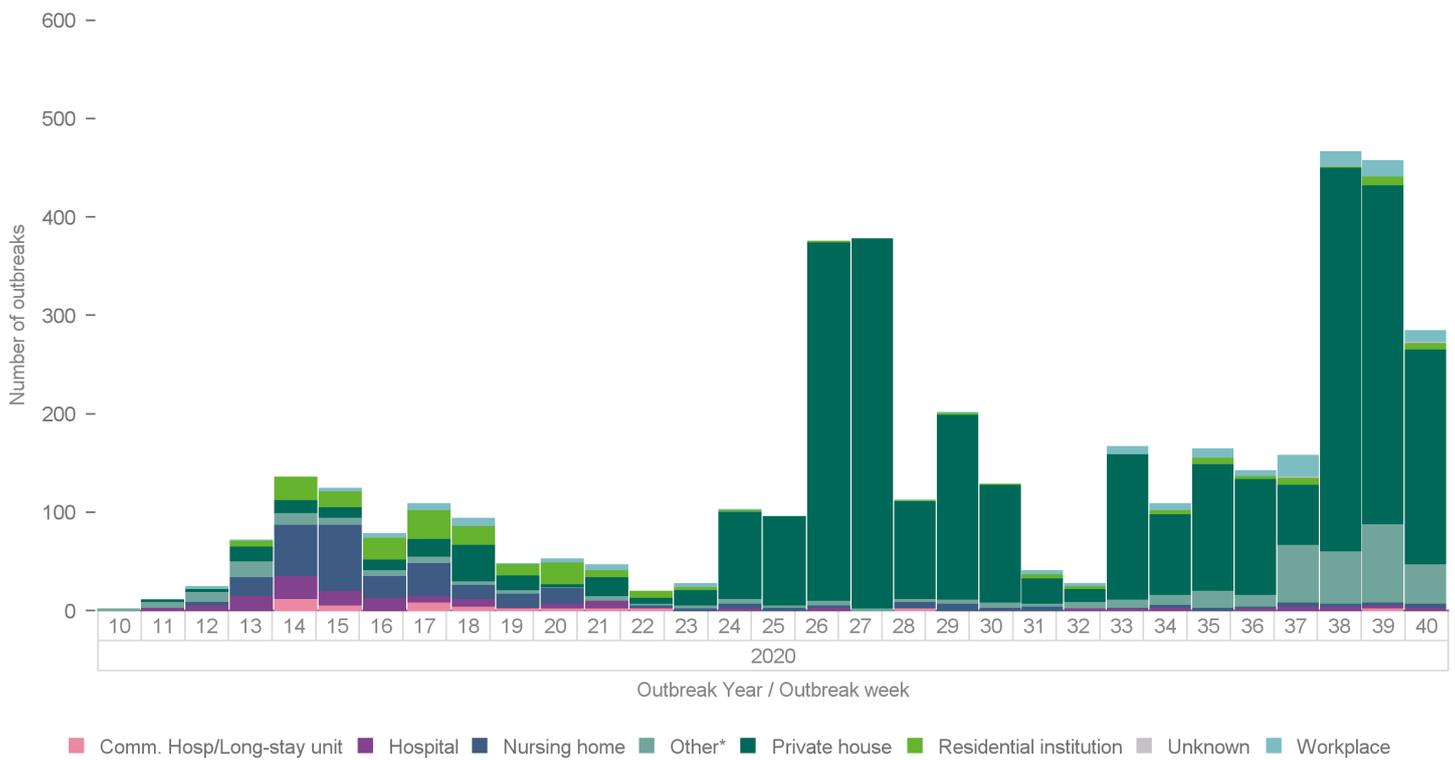


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 30/09/2020

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

Note: 3,401 COVID-19 outbreaks were reported on CIDR between week 24 and week 40 2020 to date (9th June to 30th September). Of these, 2,911 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, 530 in August and 924 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 30/09/2020

	Number	Percent
Total number of deaths	1,801	
Confirmed	1,549	86.01
Probable	95	5.27
Possible	157	8.72
Total number of cases hospitalised	769	42.7
Cases admitted to ICU	98	5.44
Cases not admitted to ICU	671	37.26
Total number of imported cases	6	0.33
Number of cases in healthcare workers	8	0.44
Number with underlying clinical conditions	1,707	94.78
Total number of male cases	891	49.47
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 30/09/2020

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	1.67
55-64 yrs	26	51	77	4.28
65-74 yrs	97	160	257	14.27
75-84 yrs	279	332	611	33.93
85+ yrs	486	318	804	44.64
Unknown	<5	<5	2	0.11
Total	910	891	1,801	100
Percent	50.53	49.47		

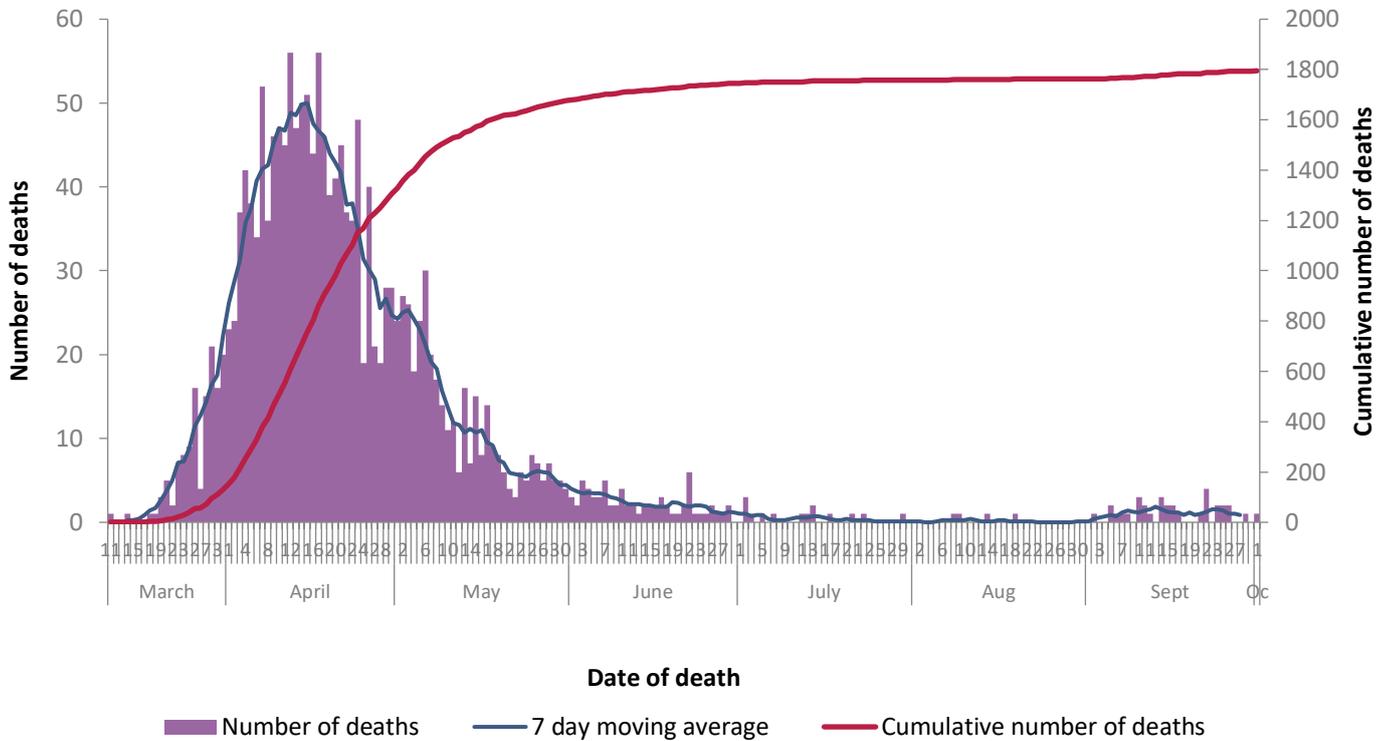


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 30/09/2020

* Date of death is not yet available for six cases

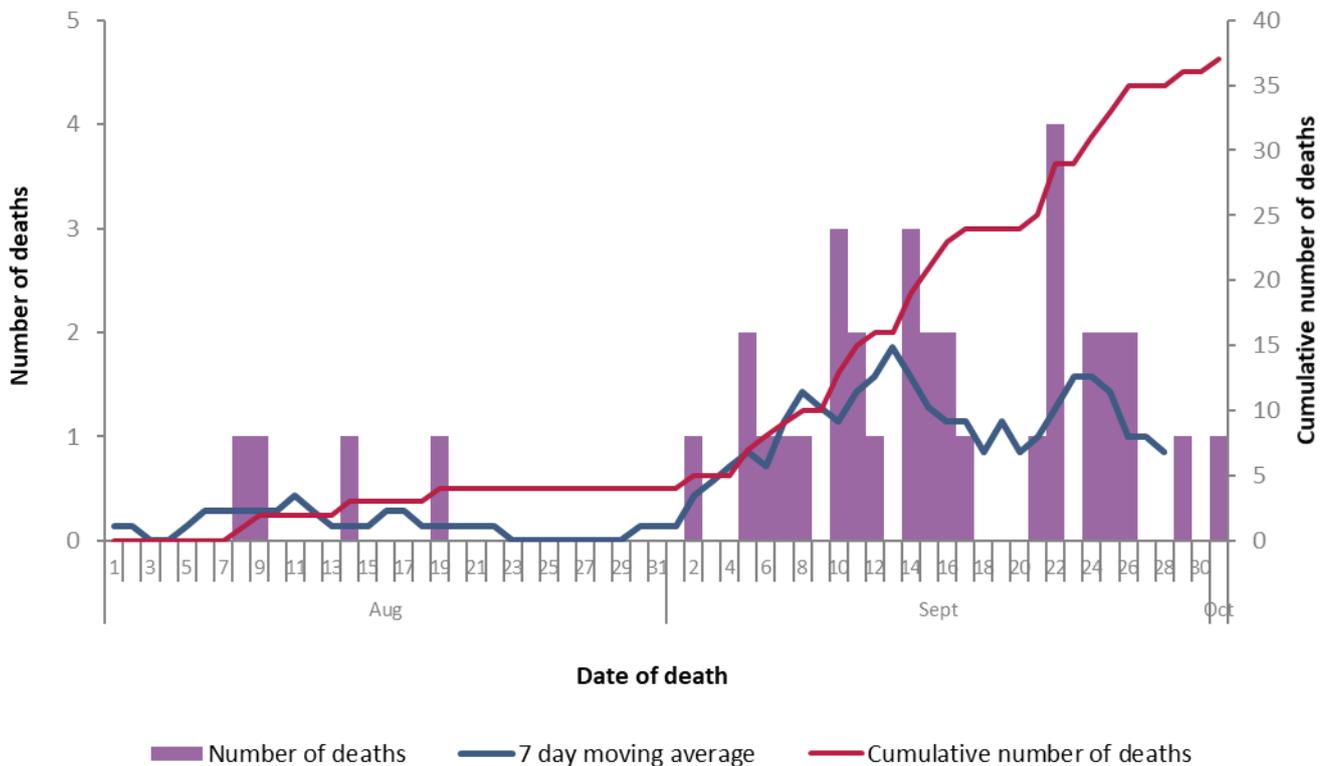


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/08/2020 to midnight 30/09/2020

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 09:14 on 02/10/2020. 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.