



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 29/09/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 27/09/2020

	Number	Percent
Total number of confirmed cases	35,376	
National cumulative incidence of confirmed cases per 100,000 population	742.9	
Total number of cases hospitalised	3,593	10.16
Total number of cases admitted to ICU	468	1.32
Total number of deaths among confirmed cases	1,546	4.37
Case fatality ratio (CFR, %)	4.37	
National cumulative incidence of confirmed deaths per 100,000 population	32.47	
Total number of outbreaks/clusters	3,971	
Total number of cases associated with clusters	19,592	55.38
Total number of imported cases	594	1.68
Number of cases in healthcare workers	9,153	25.87
Males	15,881	44.89
Females	19,464	55.02
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 09:16 on 29/09/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

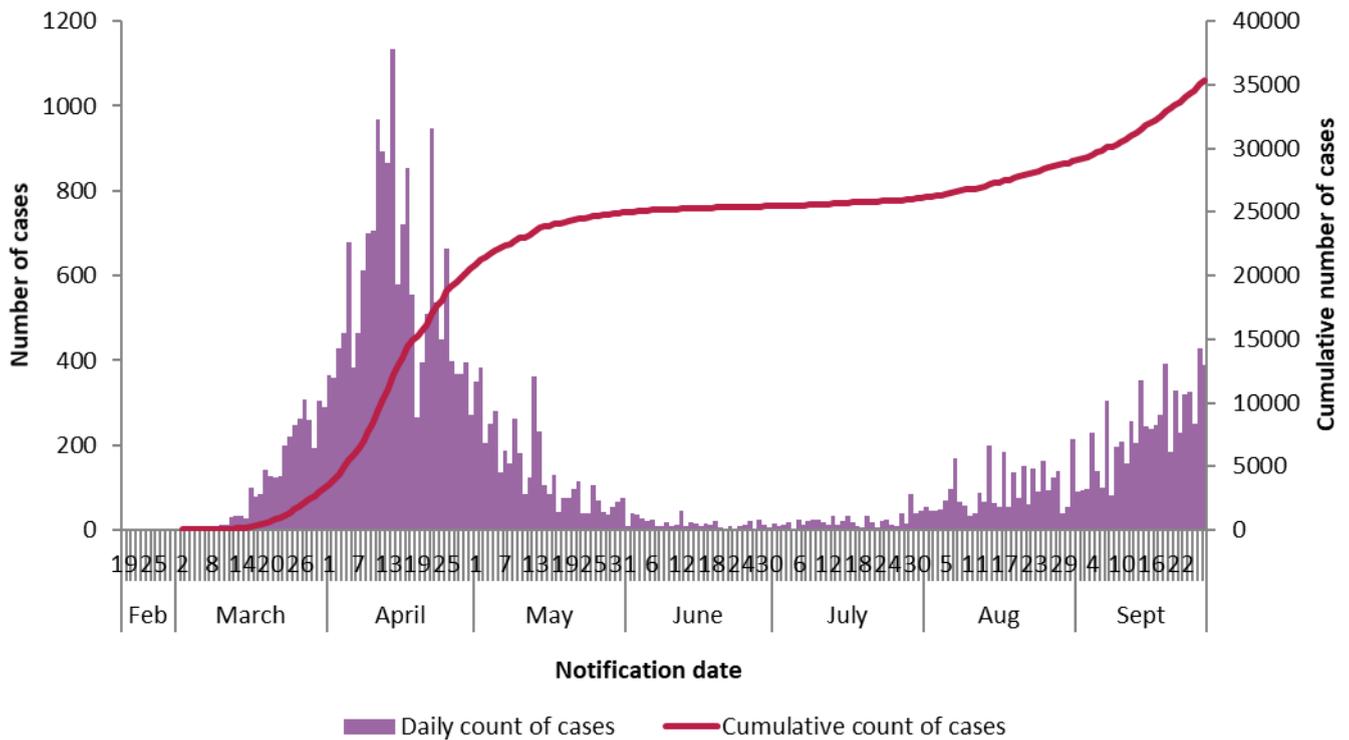


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 27/09/2020

*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

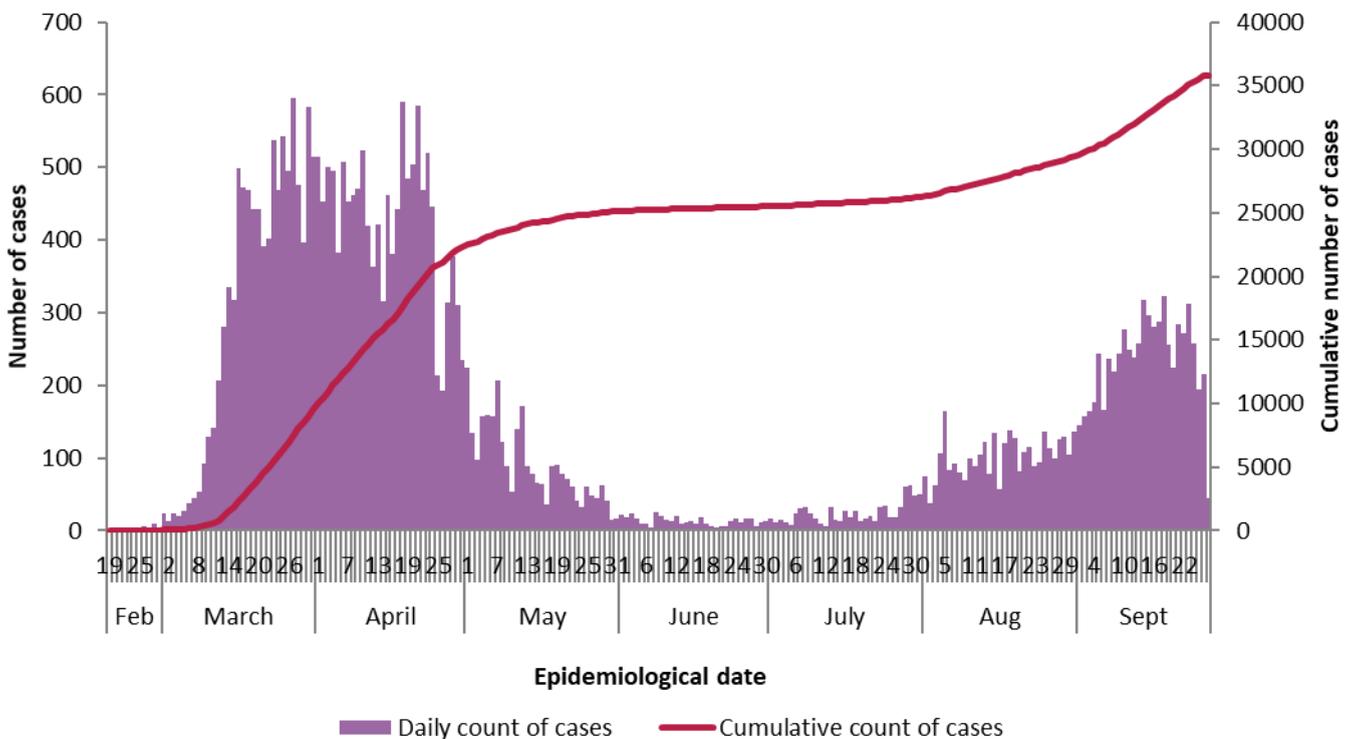


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 27/09/2020**

**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.

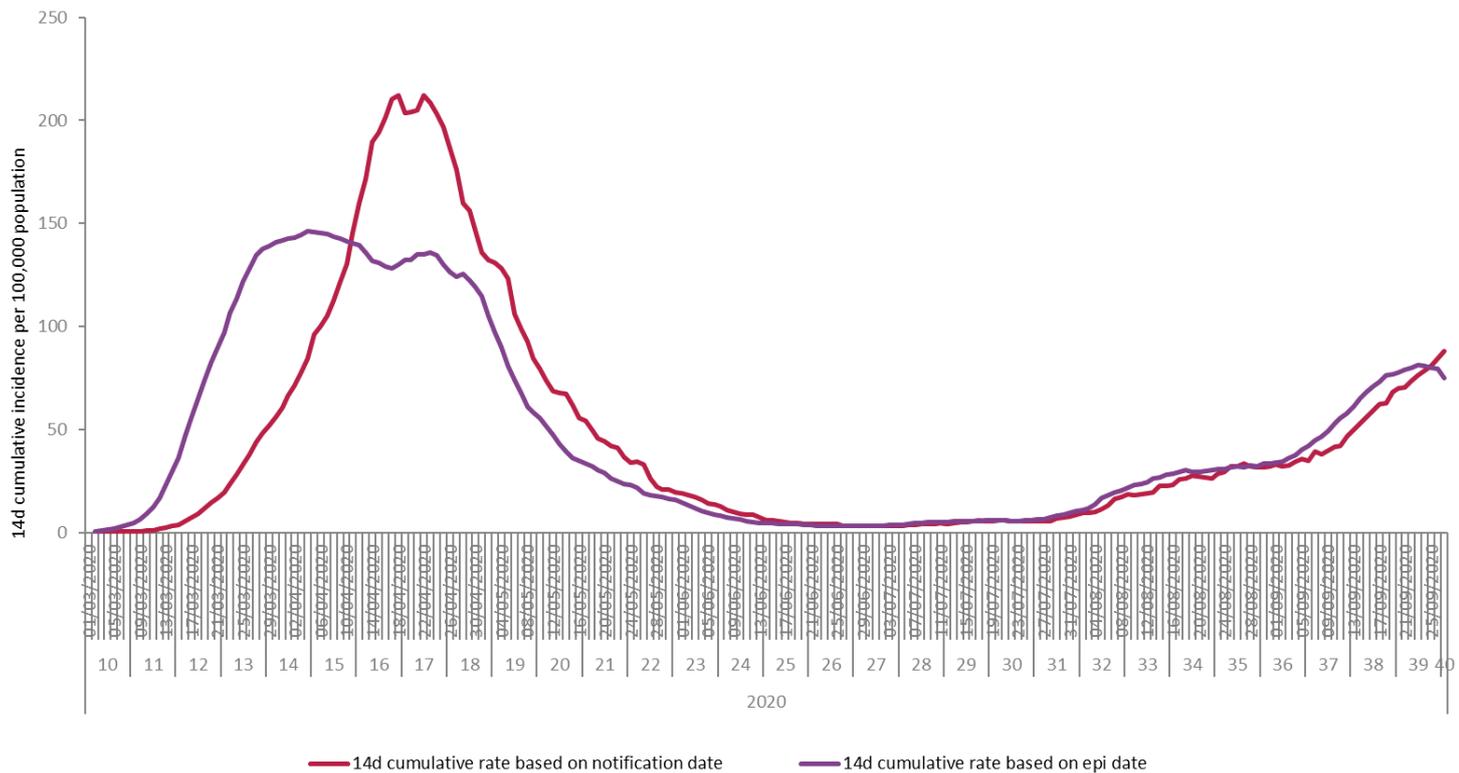


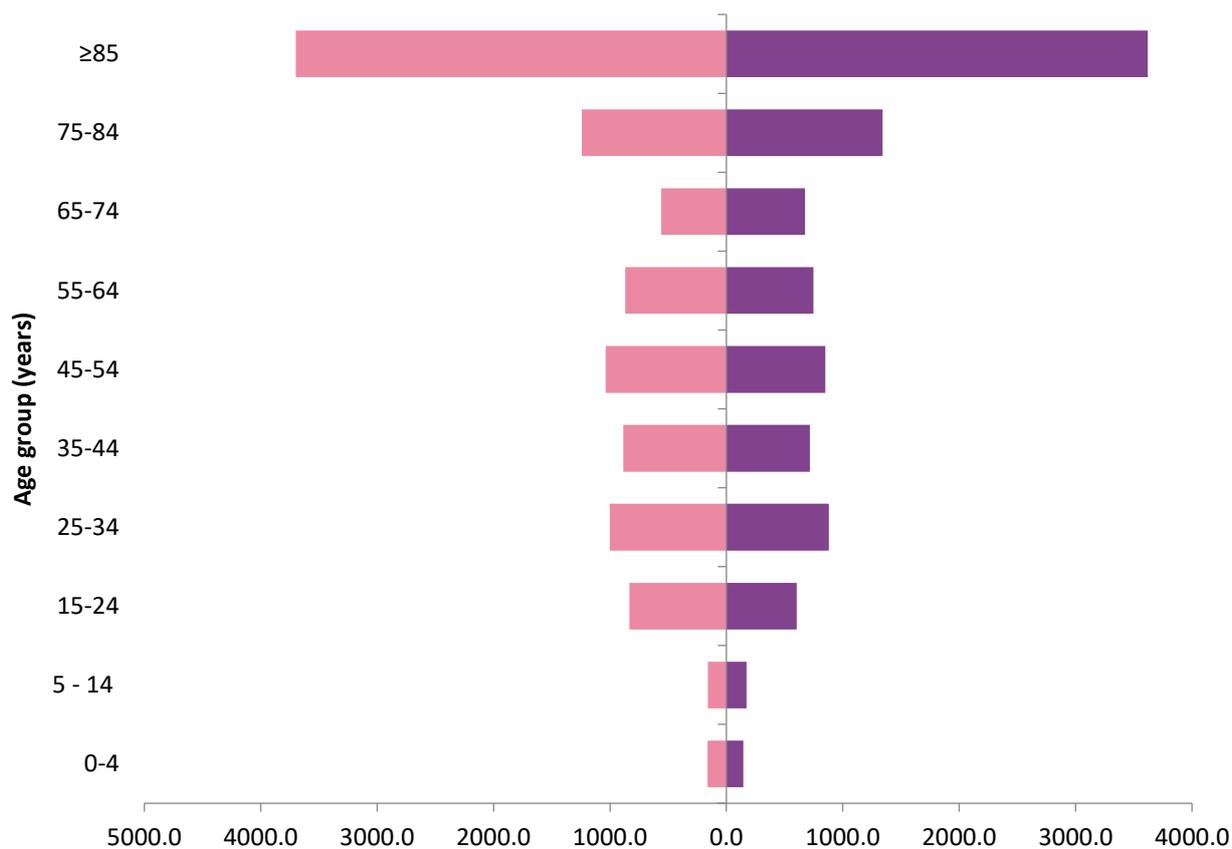
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 27/09/2020**

* 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 27/09/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		35,376	100
Sex	Male:Female ratio	0.82	
	Male	15,881	44.89
	Female	19,464	55.02
	Unknown	31	0.09
Age	Median age (years)	44	
	Mean age (years)	46	
	Age range (years)	0 - 106	
	0-4 yrs	507	1.43
	5-14 yrs	1,122	3.17
	15-24 yrs	4,128	11.67
	25-34 yrs	6,234	17.62
	35-44 yrs	6,008	16.98
	45-54 yrs	5,918	16.73
	55-64 yrs	4,116	11.64
	65-74 yrs	2,306	6.52
	75-84 yrs	2,530	7.15
	85+ yrs	2,482	7.02
	Unknown	25	0.07



	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	≥85
Female	161.9	158.4	832.2	1002.3	885.4	1038.1	867.8	560.7	1242.6	3699.5
Male	144.3	173.4	603.1	881.0	718.8	849.1	748.7	675.5	1341.4	3620.7

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 27/09/2020 (excluding 24 cases for whom age is unknown and 30 cases for whom sex is unknown and 1 case for whom both are unknown)

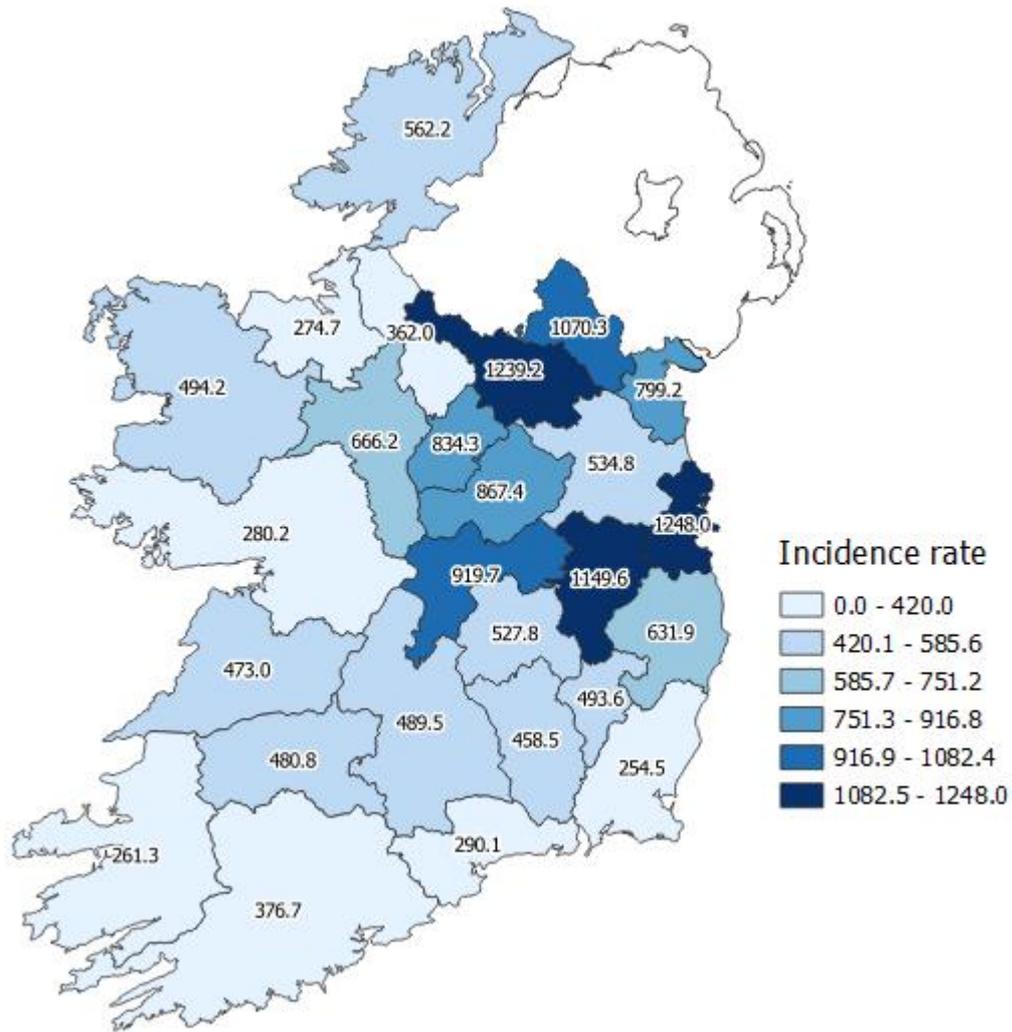


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 27/09/2020

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 27/09/2020

County Name	Number of cases	Percent
Carlow	281	0.79
Cavan	944	2.67
Clare	562	1.59
Cork	2,045	5.78
Donegal	895	2.53
Dublin	16,815	47.53
Galway	723	2.04
Kerry	386	1.09
Kildare	2,558	7.23
Kilkenny	455	1.29
Laois	447	1.26
Leitrim	116	0.33
Limerick	937	2.65
Longford	341	0.96
Louth	1,030	2.91
Mayo	645	1.82
Meath	1,043	2.95
Monaghan	657	1.86
Offaly	717	2.03
Roscommon	430	1.22
Sligo	180	0.51
Tipperary	781	2.21
Waterford	337	0.95
Westmeath	770	2.18
Wexford	381	1.08
Wicklow	900	2.54
Total	35,376	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 27/09/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	10,203	28.84%
Local transmission, incl. possible local transmission	23,897	67.55%
Travel abroad, incl. possible travel abroad	818	2.31%
Unknown	458	1.29%
Total	35,376	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 27/09/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	507	29	0.81	1	0.21
5-14 yrs	1122	20	0.56	2	0.43
15-24 yrs	4128	92	2.56	5	1.07
25-34 yrs	6234	217	6.04	17	3.63
35-44 yrs	6008	291	8.1	42	8.97
45-54 yrs	5918	485	13.5	97	20.73
55-64 yrs	4116	539	15	135	28.85
65-74 yrs	2306	641	17.84	115	24.57
75-84 yrs	2530	784	21.82	48	10.26
85+ yrs	2482	494	13.75	6	1.28
Unknown	25	1	0.03	0	0
Total	35,376	3,593	100	468	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 27/09/2020

	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)	507	1,122	4,128	6,234	6,008	5,918	4,116	2,306	2,530	2,482	25
Cases hospitalised (n)	29	20	92	217	291	485	539	641	784	494	1
Cases hospitalised (%)	5.72	1.78	2.23	3.48	4.84	8.2	13.1	27.8	30.99	19.9	4
Cases admitted to ICU (n)	1	2	5	17	42	97	135	115	48	6	0
Cases admitted to ICU (%)	0.2	0.18	0.12	0.27	0.7	1.64	3.28	4.99	1.9	0.24	0
Deaths (n)	0	0	1	6	12	28	72	231	529	667	0
Case fatality ratio (%)	0	0	0.02	0.1	0.2	0.47	1.75	10.02	20.91	26.87	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 27/09/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	1,945		48	143	206	92	160	166	59	2,819
Other*	68	2	32	94	18	31	59	24	29	357
Nursing home	143		11	19	44	5	15	17	37	291
Residential institution	125		11	11	25	5	22	10	4	213
Workplace	46		12	17	22	13	10	11	10	141
Hospital	70		5	4	14	2	11	5	6	117
Comm. Hosp/Long-stay unit	5		4	2		4	6	5	5	31
Unknown	2									2
Total	2,404	2	123	290	329	152	283	238	150	3,971

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

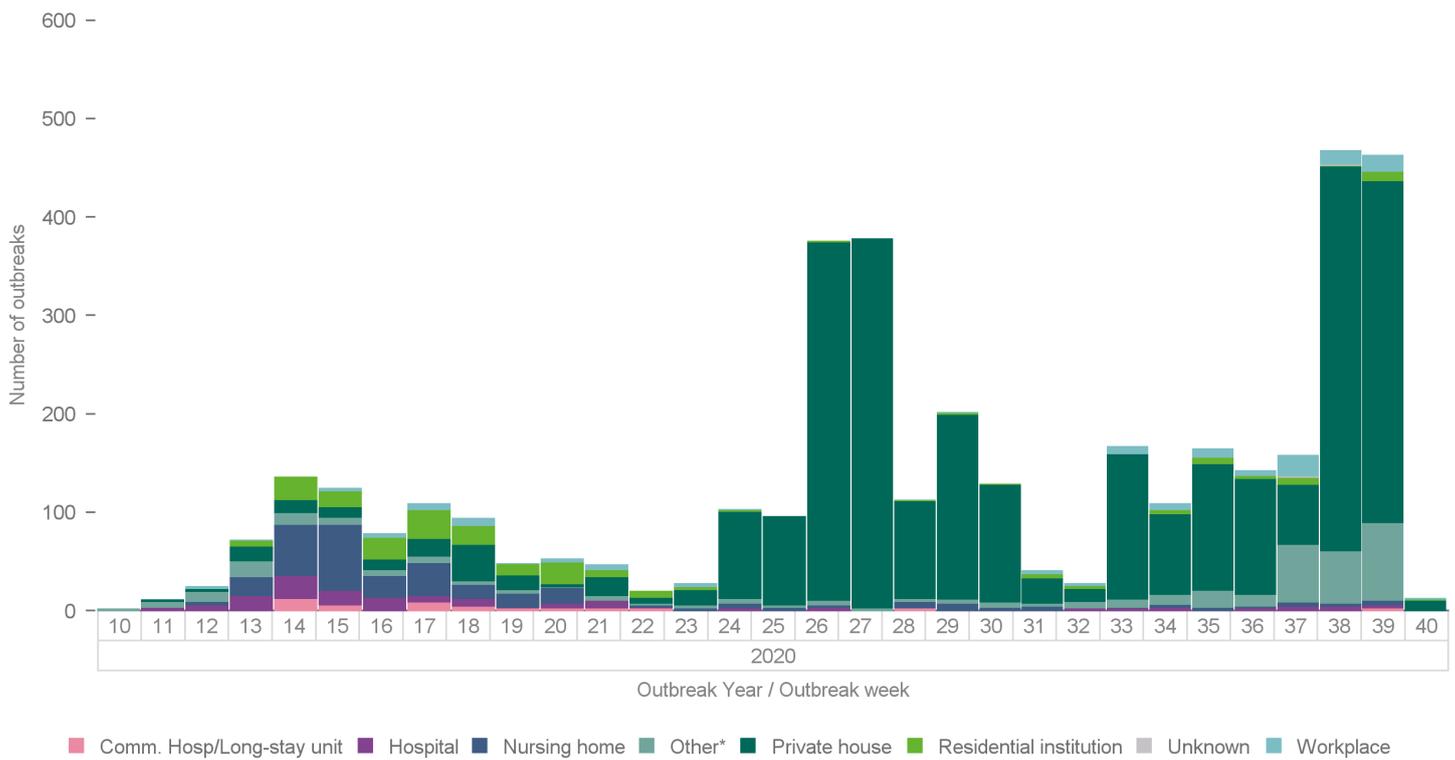


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 27/09/2020

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

Note: 3,133 COVID-19 outbreaks were reported on CIDR between week 24 and week 40 2020 to date (9th June to 27th September). Of these, 2,702 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 717 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 27/09/2020

	Number	Percent
Total number of deaths	1,803	
Confirmed	1,546	85.75
Probable	99	5.49
Possible	158	8.76
Total number of cases hospitalised	769	42.65
Cases admitted to ICU	98	5.44
Cases not admitted to ICU	671	37.22
Total number of imported cases	6	0.33
Number of cases in healthcare workers	8	0.44
Number with underlying clinical conditions	1,707	94.68
Total number of male cases	892	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 27/09/2020

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	4.27
65-74 yrs	97	159	256	14.2
75-84 yrs	280	333	613	34
85+ yrs	486	319	805	44.65
Unknown	<5	<5	2	0.11
Total	911	892	1,803	100
Percent	50.53	49.47		

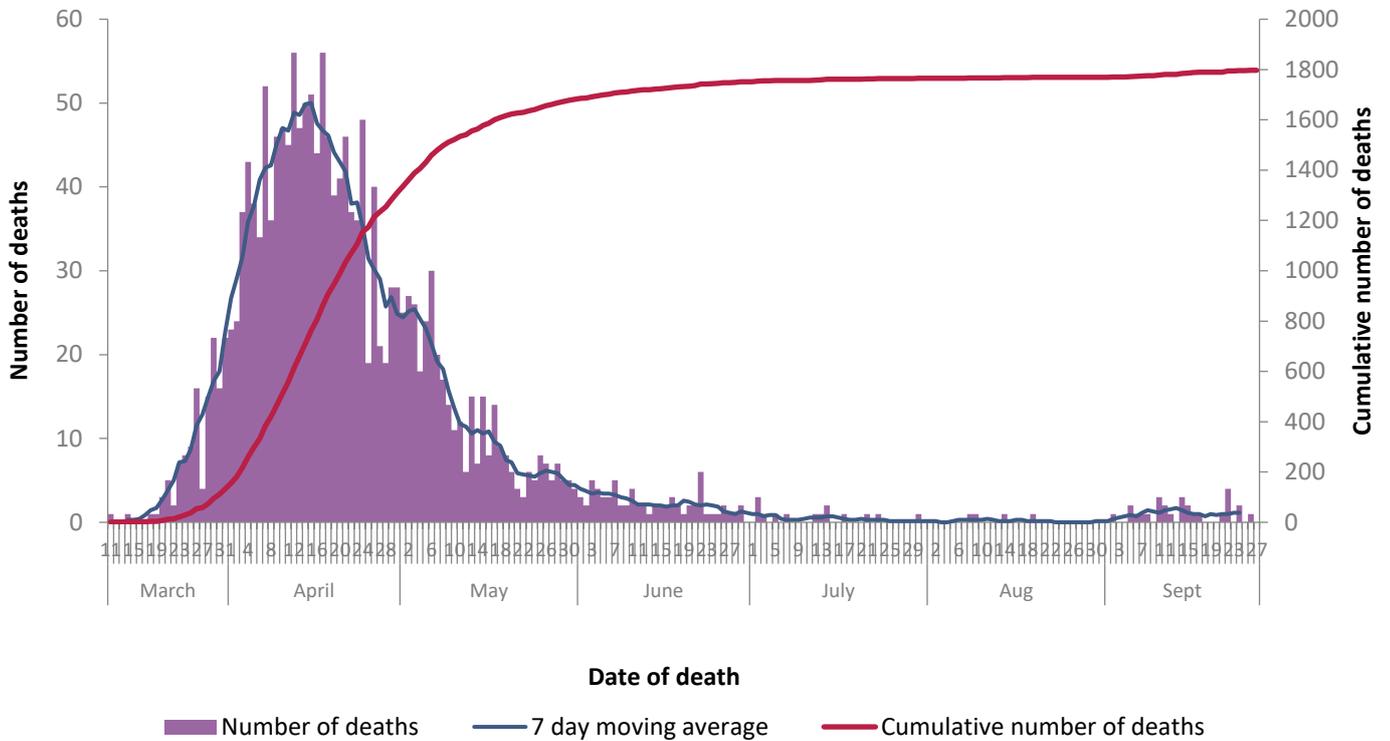


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 27/09/2020

* Date of death is not yet available for six cases

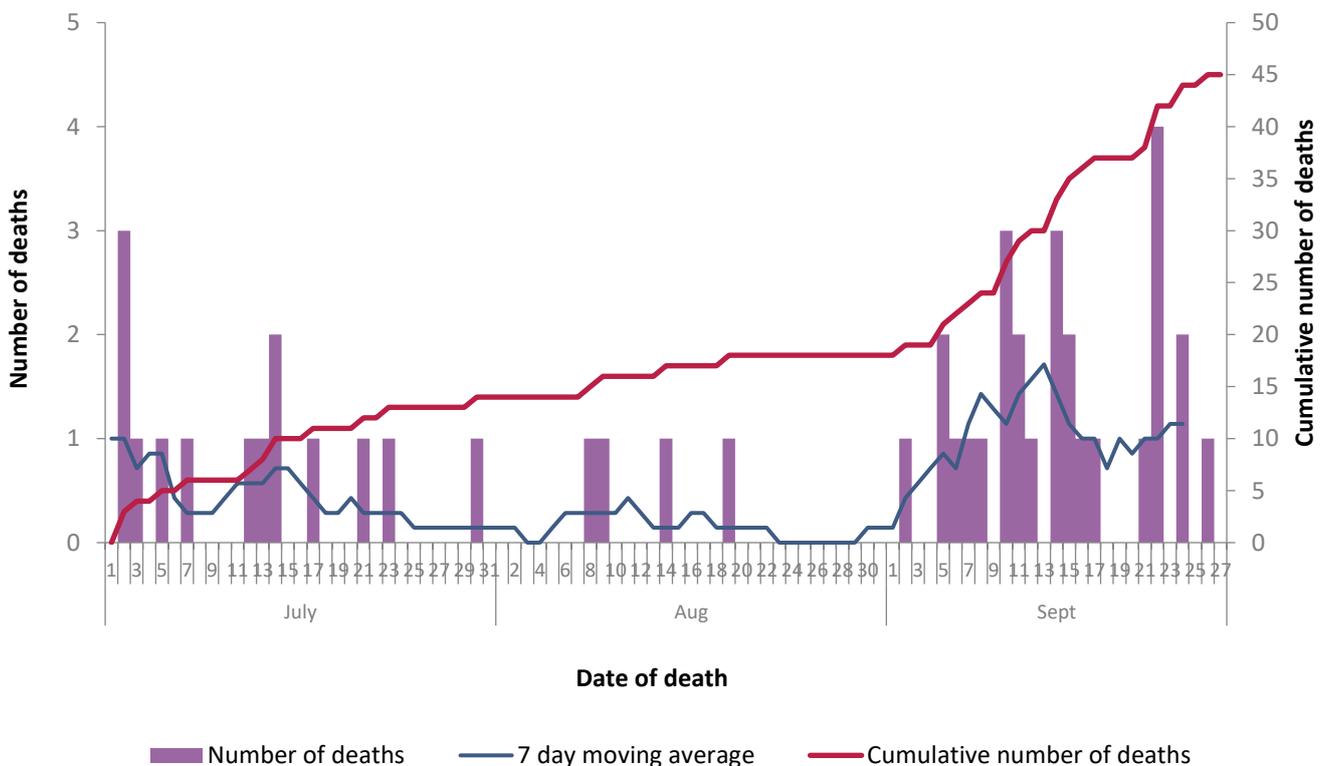


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/07/2020 to midnight 27/09/2020

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 29/09/2020. 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.

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.