



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 05/10/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 03/10/2020

	Number	Percent
Total number of confirmed cases	38,031	
National cumulative incidence of confirmed cases per 100,000 population	798.66	
Total number of cases hospitalised	3,678	9.67
Total number of cases admitted to ICU	475	1.25
Total number of deaths among confirmed cases	1,557	4.09
Case fatality ratio (CFR, %)	4.09	
National cumulative incidence of confirmed deaths per 100,000 population	32.7	
Total number of outbreaks/clusters	4,443	
Total number of cases associated with clusters	21,098	55.48
Total number of imported cases	606	1.59
Number of cases in healthcare workers	9,342	24.56
Males	17,204	45.24
Females	20,789	54.66
M:F ratio	0.83	
Median age (years)	43	
Mean age (years)	46	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:15 on 05/10/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

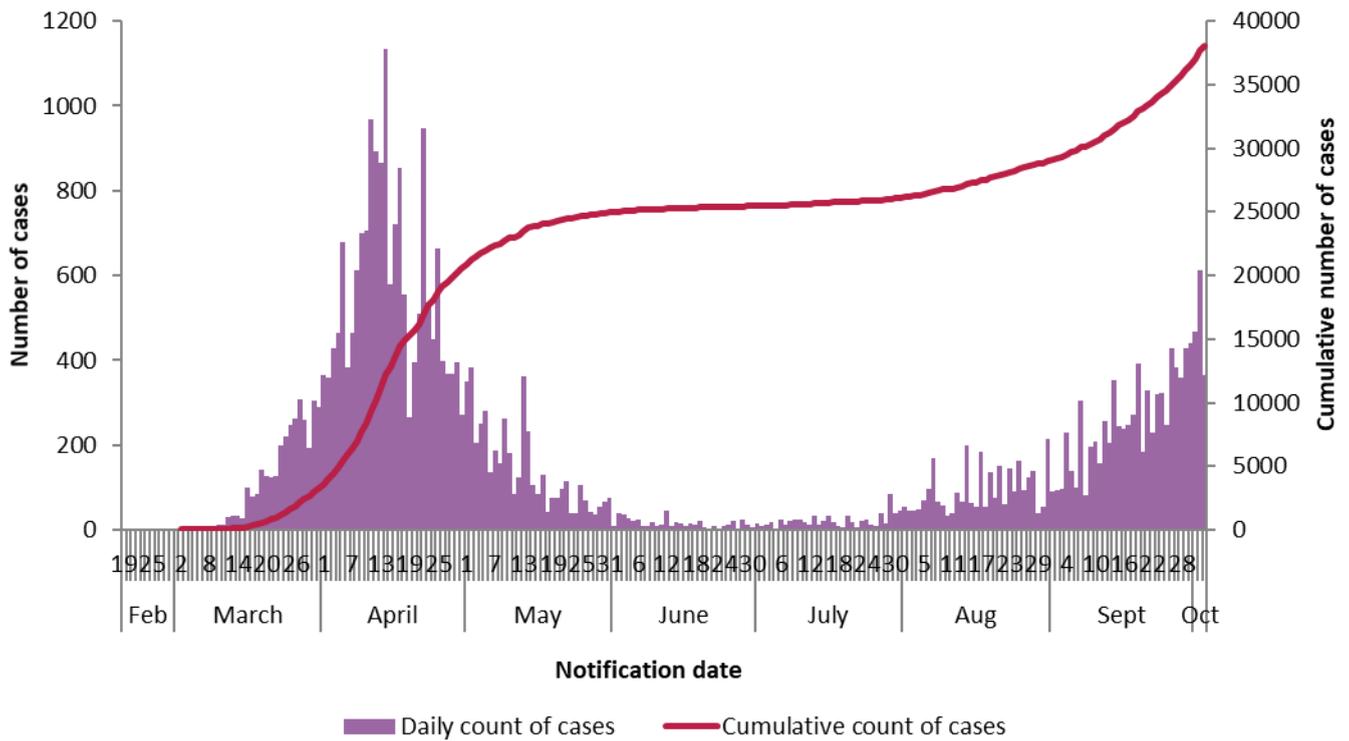


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 03/10/2020

*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

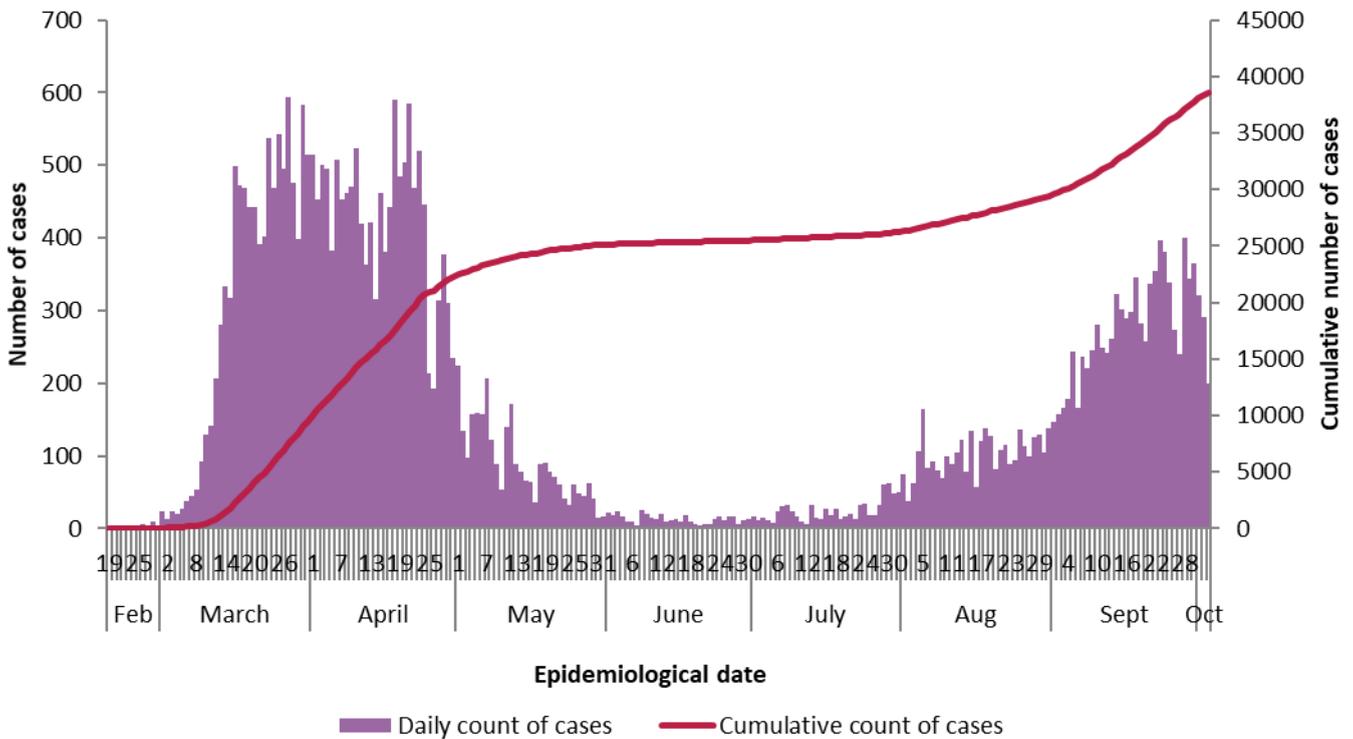


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 03/10/2020**

**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.

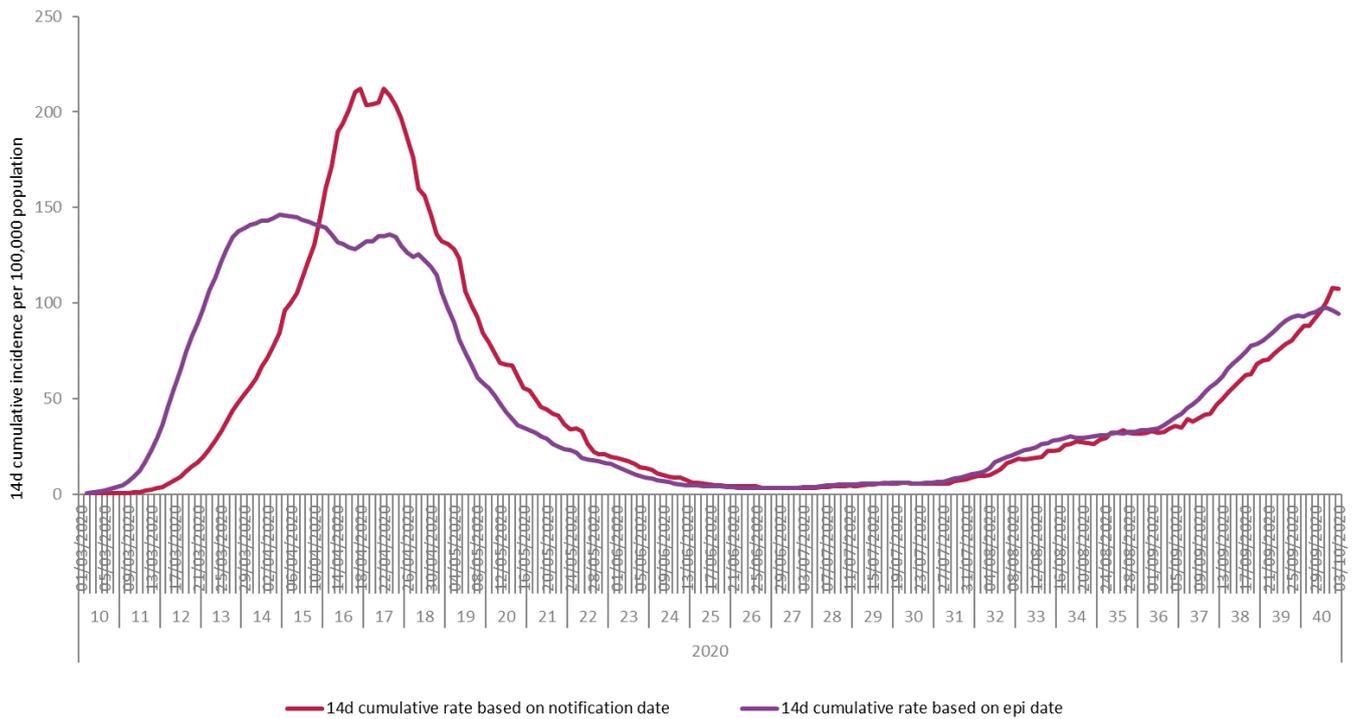


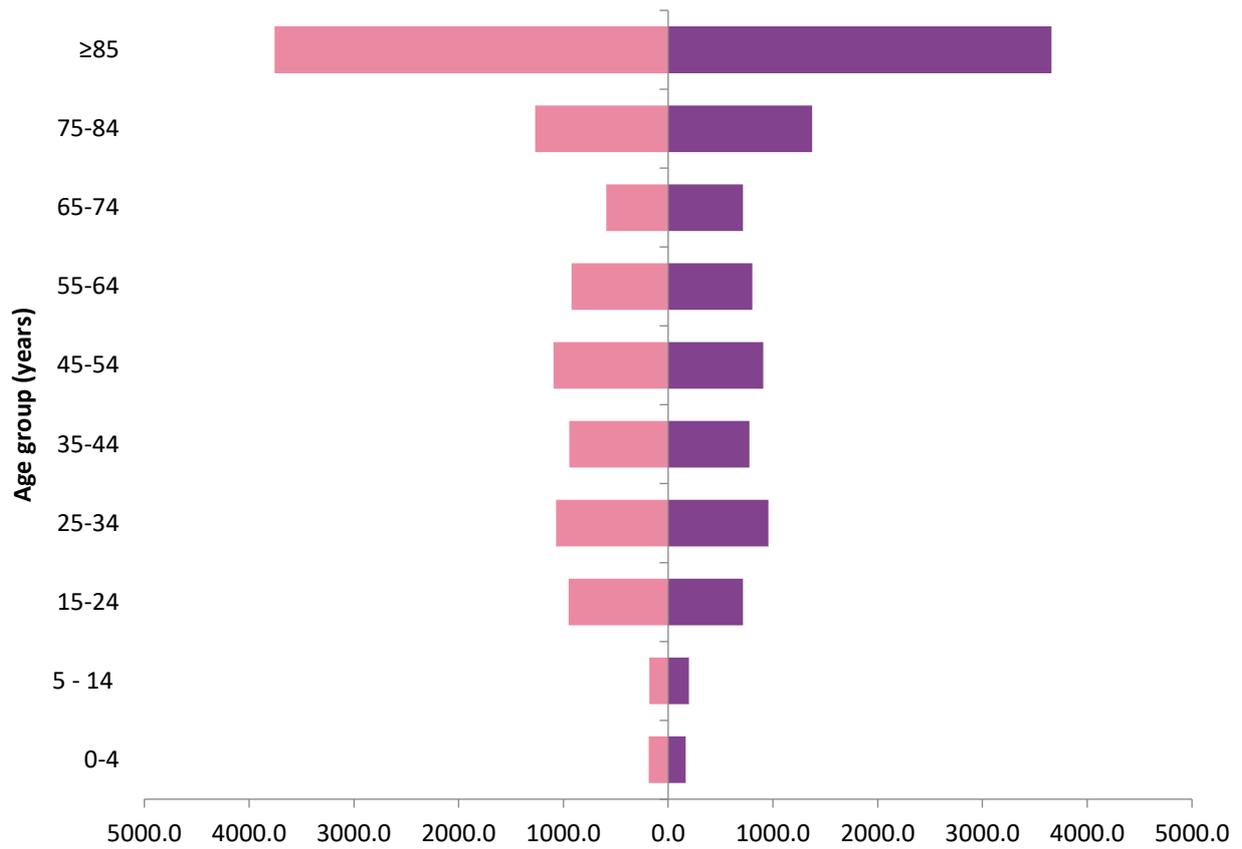
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 03/10/2020**

* 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 03/10/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		38,031	100
Sex	Male:Female ratio	0.83	
	Male	17,204	45.24
	Female	20,789	54.66
	Unknown	38	0.1
Age	Median age (years)	43	
	Mean age (years)	46	
	Age range (years)	0 - 106	
	0-4 yrs	583	1.53
	5-14 yrs	1,281	3.37
	15-24 yrs	4,789	12.59
	25-34 yrs	6,709	17.64
	35-44 yrs	6,430	16.91
	45-54 yrs	6,279	16.51
	55-64 yrs	4,399	11.57
	65-74 yrs	2,432	6.39
	75-84 yrs	2,588	6.8
	85+ yrs	2,517	6.62
	Unknown	24	0.06



	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	≥85
Female	184.8	179.9	949.4	1070.9	942.8	1095.8	923.5	589.8	1268.8	3757.9
Male	166.1	198.9	714.2	956.3	774.2	906.6	804.2	714.0	1374.9	3659.7

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 03/10/2020 (excluding 23 cases for whom age is unknown and 37 cases for whom sex is unknown and 1 case for whom both are unknown)

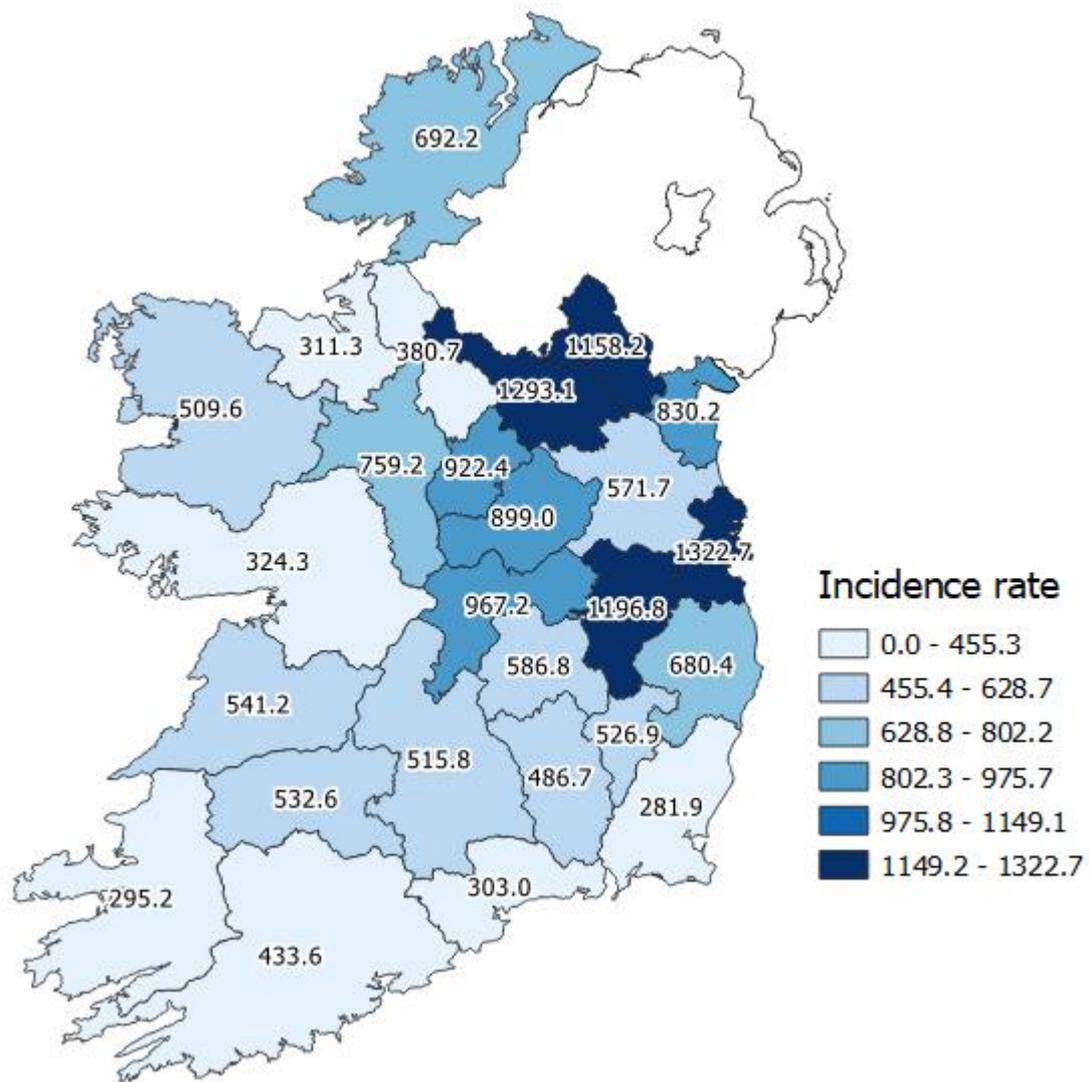


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 03/10/2020

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 03/10/2020

County Name	Number of cases	Percent
Carlow	300	0.79
Cavan	985	2.59
Clare	643	1.69
Cork	2,354	6.19
Donegal	1,102	2.9
Dublin	17,821	46.86
Galway	837	2.2
Kerry	436	1.15
Kildare	2,663	7
Kilkenny	483	1.27
Laois	497	1.31
Leitrim	122	0.32
Limerick	1,038	2.73
Longford	377	0.99
Louth	1,070	2.81
Mayo	665	1.75
Meath	1,115	2.93
Monaghan	711	1.87
Offaly	754	1.98
Roscommon	490	1.29
Sligo	204	0.54
Tipperary	823	2.16
Waterford	352	0.93
Westmeath	798	2.1
Wexford	422	1.11
Wicklow	969	2.55
Total	38,031	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 03/10/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	10,816	28.44%
Local transmission, incl. possible local transmission	25,651	67.45%
Travel abroad, incl. possible travel abroad	850	2.24%
Unknown	714	1.88%
Total	38,031	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 03/10/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	583	34	0.92	1	0.21
5-14 yrs	1281	27	0.73	2	0.42
15-24 yrs	4789	103	2.8	5	1.05
25-34 yrs	6709	230	6.25	18	3.79
35-44 yrs	6430	300	8.16	42	8.84
45-54 yrs	6279	492	13.38	97	20.42
55-64 yrs	4399	548	14.9	135	28.42
65-74 yrs	2432	655	17.81	120	25.26
75-84 yrs	2588	793	21.56	49	10.32
85+ yrs	2517	495	13.46	6	1.26
Unknown	24	1	0.03	0	0
Total	38,031	3,678	100	475	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 03/10/2020

	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)	583	1,281	4,789	6,709	6,430	6,279	4,399	2,432	2,588	2,517	24
Cases hospitalised (n)	34	27	103	230	300	492	548	655	793	495	1
Cases hospitalised (%)	5.83	2.11	2.15	3.43	4.67	7.84	12.46	26.93	30.64	19.67	4.17
Cases admitted to ICU (n)	1	2	5	18	42	97	135	120	49	6	0
Cases admitted to ICU (%)	0.17	0.16	0.1	0.27	0.65	1.54	3.07	4.93	1.89	0.24	0
Deaths (n)	0	0	1	6	12	29	74	234	530	671	0
Case fatality ratio (%)	0	0	0.02	0.09	0.19	0.46	1.68	9.62	20.48	26.66	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 03/10/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	2,148		55	146	245	119	213	179	94	3,199
Other*	89	2	37	100	24	37	69	26	34	418
Nursing home	146		12	19	44	7	15	17	36	296
Residential institution	126		12	11	26	5	22	10	5	217
Workplace	49		13	17	23	17	12	13	13	157
Hospital	73		5	4	14	3	12	5	6	122
Comm. Hosp/Long-stay unit	5		4	2		4	6	5	5	31
Unknown	2						1			3
Total	2,638	2	138	299	376	192	350	255	193	4,443

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

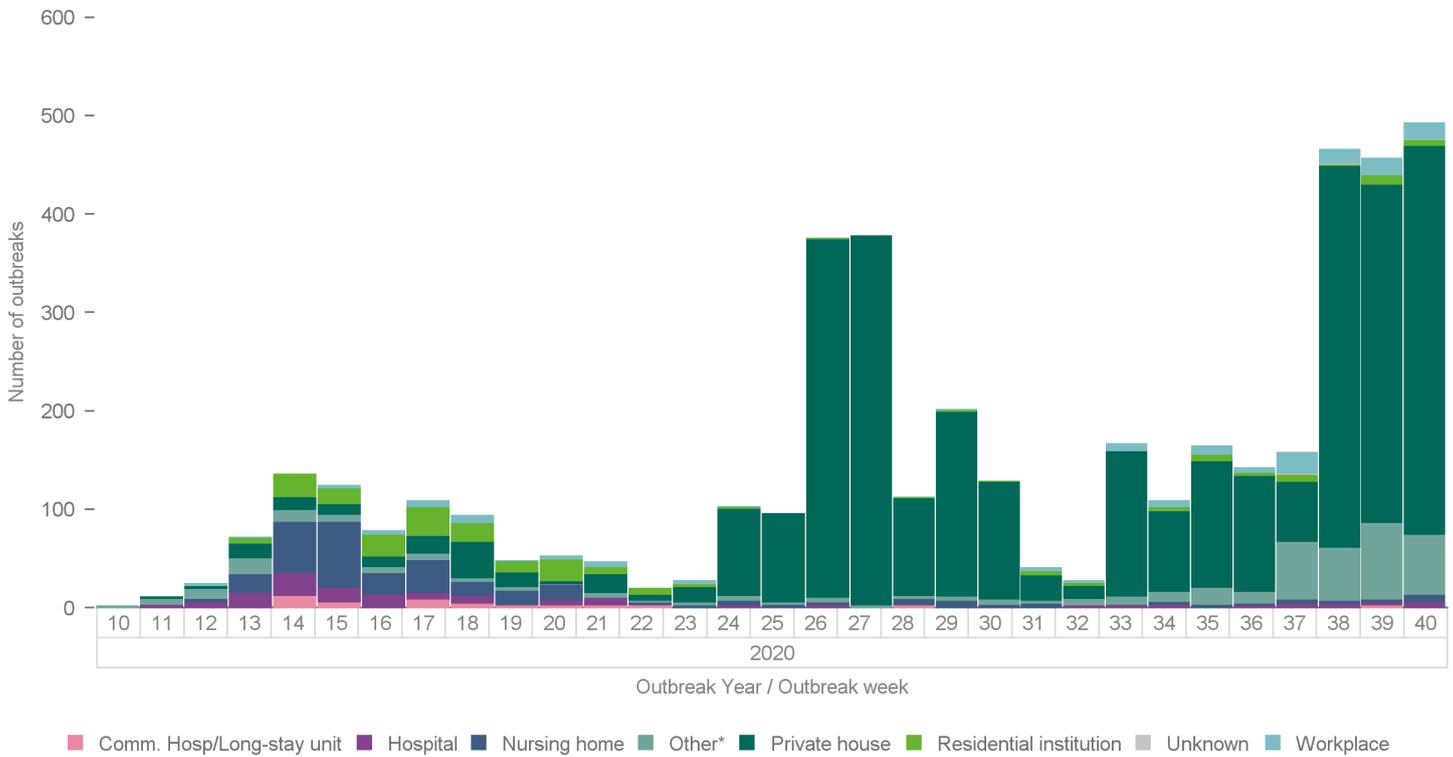


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 03/10/2020

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

Note: 3,605 COVID-19 outbreaks were reported on CIDR between week 24 and week 40 2020 to date (9th June to 3rd October). Of these, 3,074 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, 1,074 in September and 13 in October to date.

Deaths among COVID-19 cases

Table 7: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 03/10/2020

	Number	Percent
Total number of deaths	1,810	
Confirmed	1,557	86.02
Probable	95	5.25
Possible	158	8.73
Total number of cases hospitalised	773	42.71
Cases admitted to ICU	98	5.41
Cases not admitted to ICU	675	37.29
Total number of imported cases	6	0.33
Number of cases in healthcare workers	8	0.44
Number with underlying clinical conditions	1,712	94.59
Total number of male cases	895	49.45
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 03/10/2020

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	20	31	1.71
55-64 yrs	27	52	79	4.36
65-74 yrs	98	162	260	14.36
75-84 yrs	279	332	611	33.76
85+ yrs	489	318	807	44.59
Unknown	<5	<5	2	0.11
Total	915	895	1,810	100
Percent	50.55	49.45		

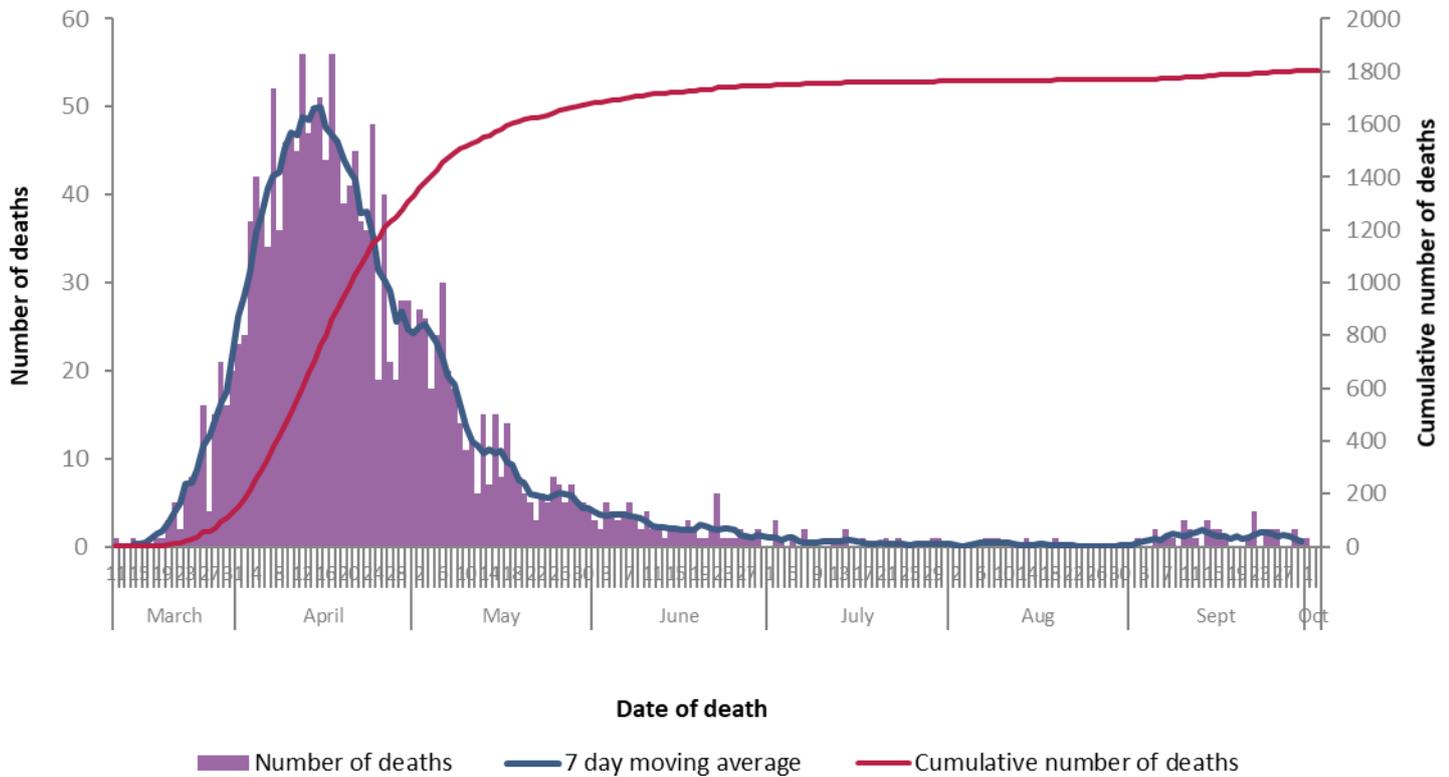


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 03/10/2020

* Date of death is not yet available for seven cases

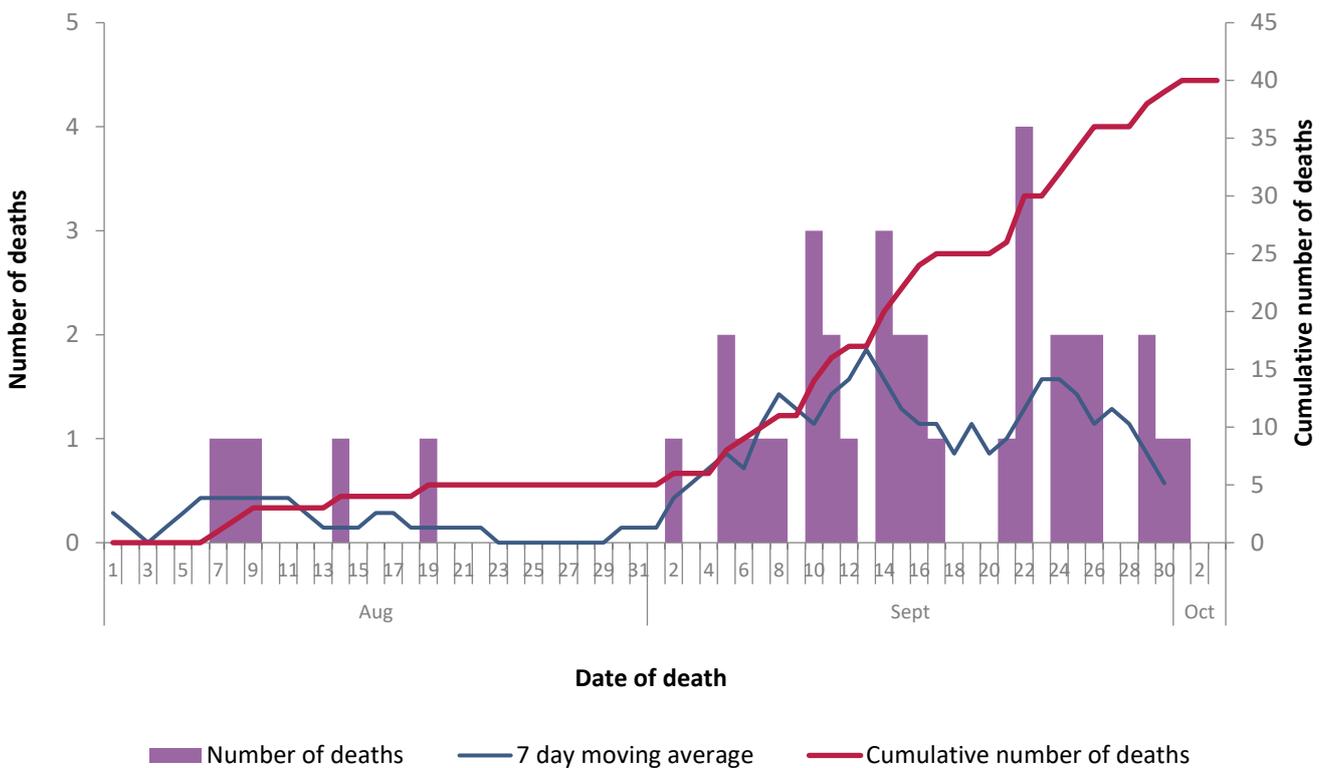


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/08/2020 to midnight 03/10/2020

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 05/10/2020. 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.

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.