



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 23/10/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 21/10/2020

	Number	Percent
Total number of confirmed cases	54,484	
National cumulative incidence of confirmed cases per 100,000 population	1,144.17	
Total number of cases hospitalised	4,163	7.64
Total number of cases admitted to ICU	528	0.97
Total number of deaths among confirmed cases	1,621	2.98
Case fatality ratio (CFR, %)	2.98	
National cumulative incidence of confirmed deaths per 100,000 population	34.04	
Total number of outbreaks/clusters	6,000	
Total number of cases associated with clusters	27,005	49.57
Total number of imported cases	617	1.13
Number of cases in healthcare workers	10,112	18.56
Males	25,382	46.59
Females	29,051	53.32
M:F ratio	0.87	
Median age (years)	40	
Mean age (years)	43	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:15 on 23/10/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

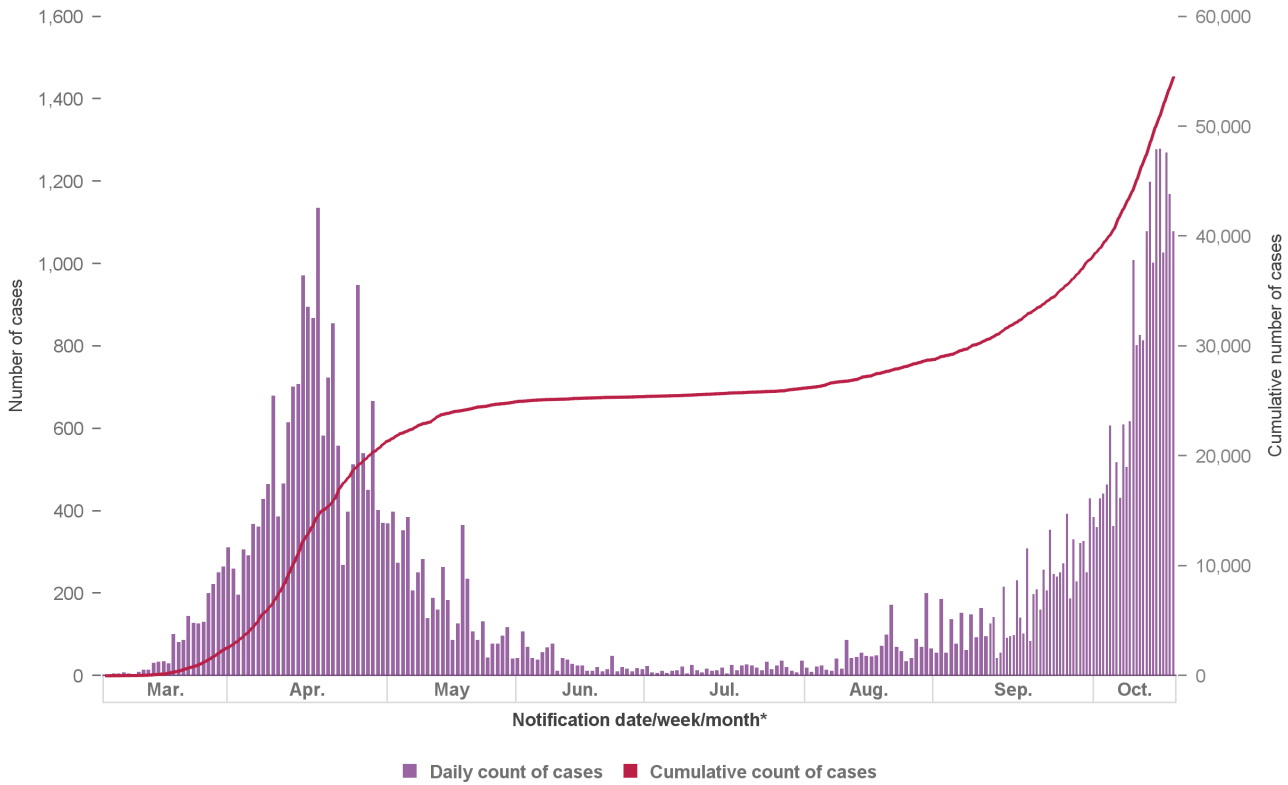


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 21/10/2020

*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

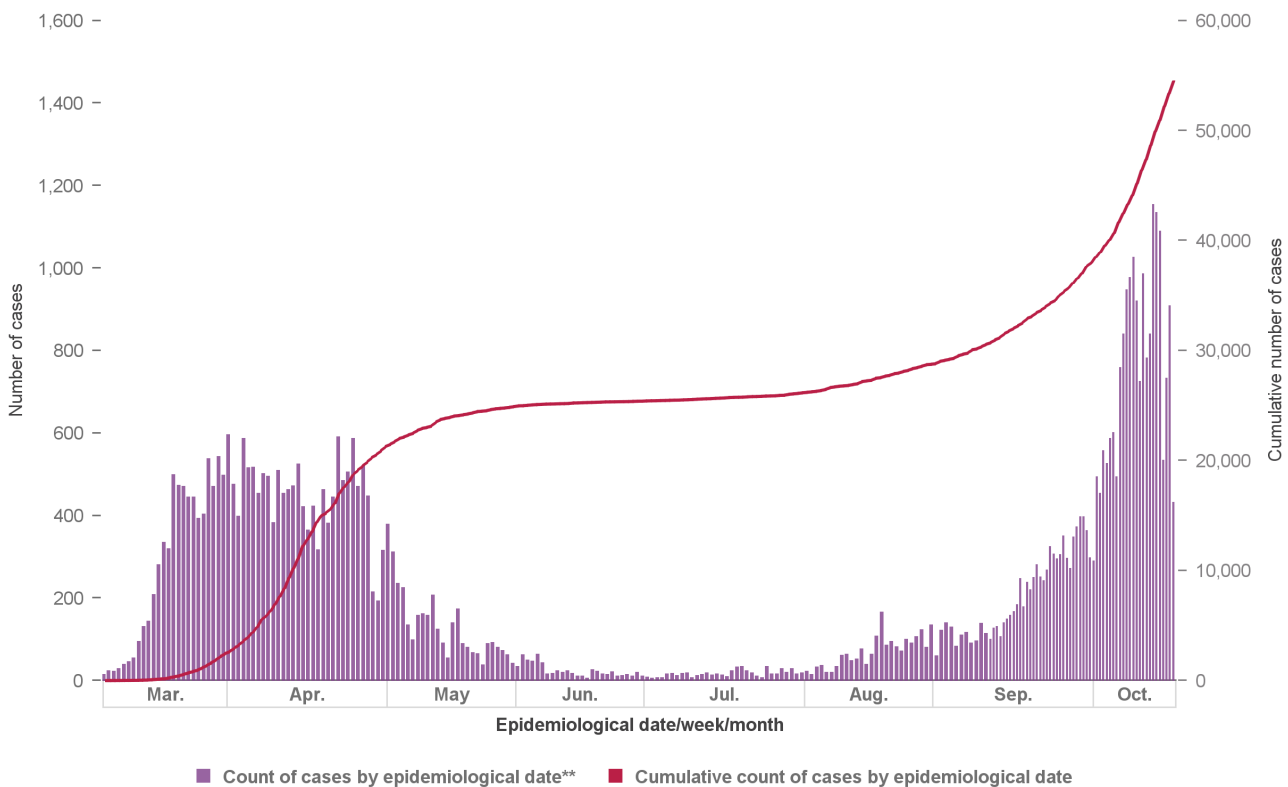


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 21/10/2020**

**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.

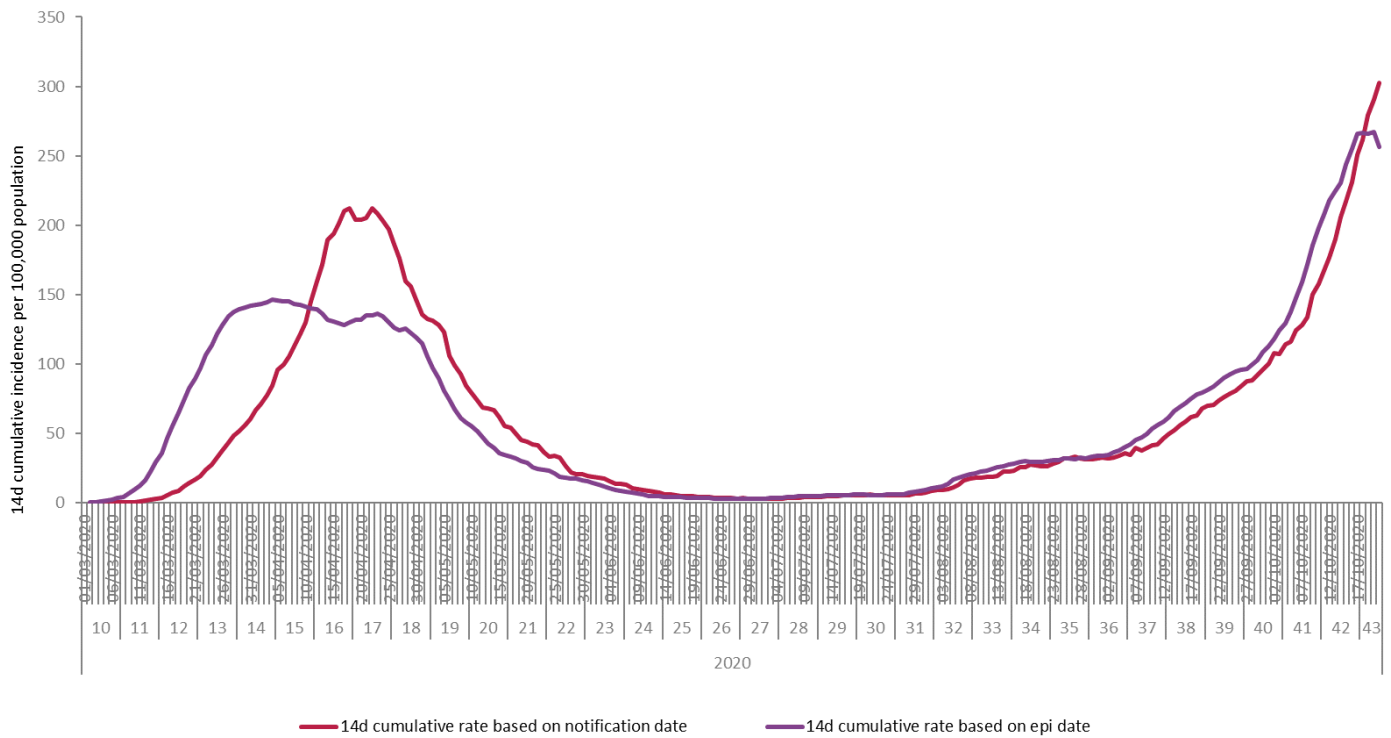


Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 21/10/2020**

* 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

**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.

Table 1: Characteristics of confirmed COVID-19 cases notified in Ireland up to midnight on 21/10/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		54,484	100
Sex	Male:Female ratio	0.87	
	Male	25,382	46.59
	Female	29,051	53.32
	Unknown	51	0.09
Age	Median age (years)	40	
	Mean age (years)	43	
	Age range (years)	0 - 106	
	0-4 yrs	1,111	2.04
	5-14 yrs	2,614	4.8
	15-24 yrs	9,174	16.84
	25-34 yrs	9,416	17.28
	35-44 yrs	8,665	15.9
	45-54 yrs	8,430	15.47
	55-64 yrs	6,052	11.11
	65-74 yrs	3,212	5.9
	75-84 yrs	2,998	5.5
	85+ yrs	2,783	5.11
	Unknown	29	0.05

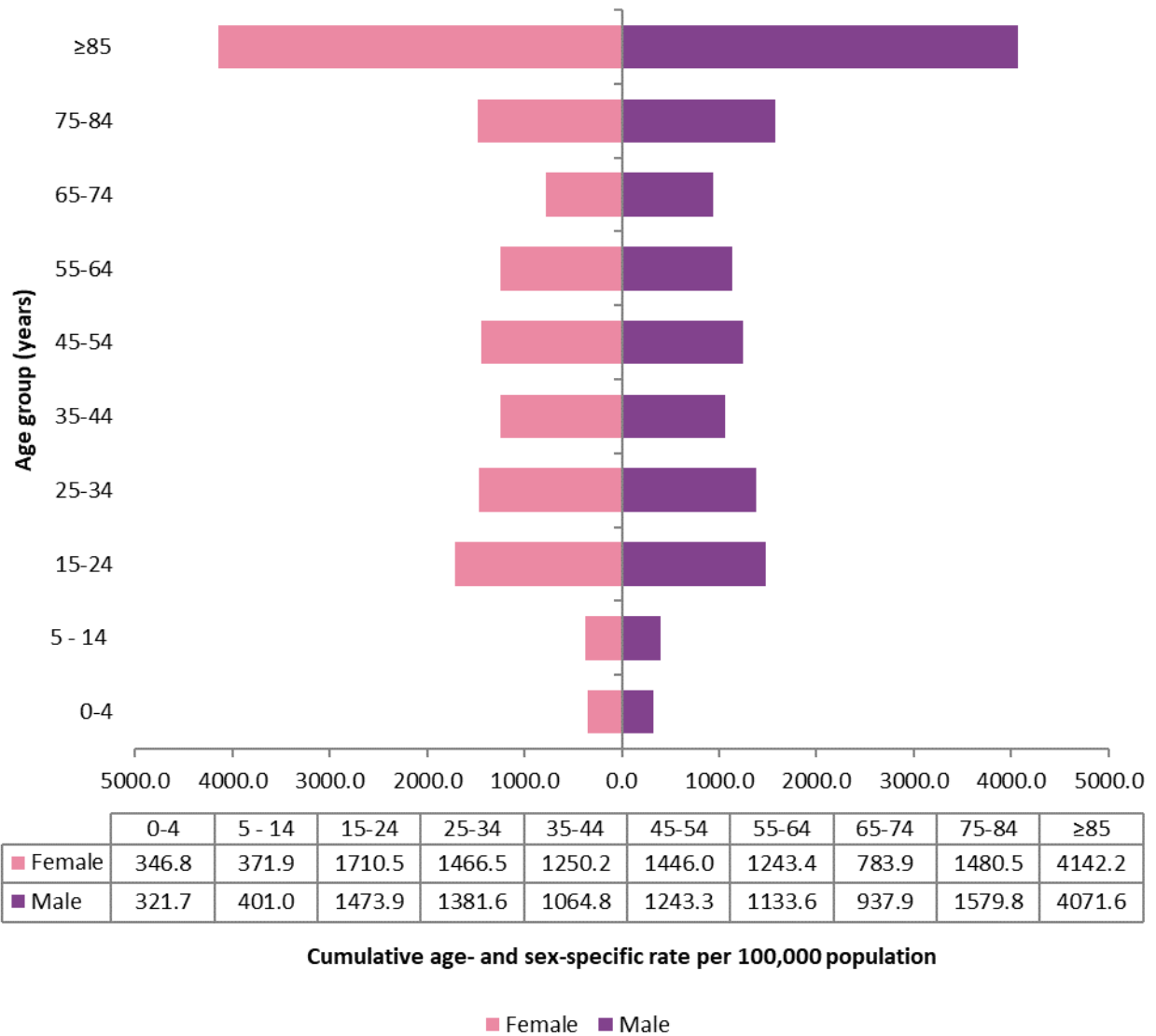


Figure 3: Cumulative age- and sex-specific incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 21/10/2020 (excluding 28 cases for whom age is unknown and 50 cases for whom sex is unknown and 1 case for whom both are unknown)

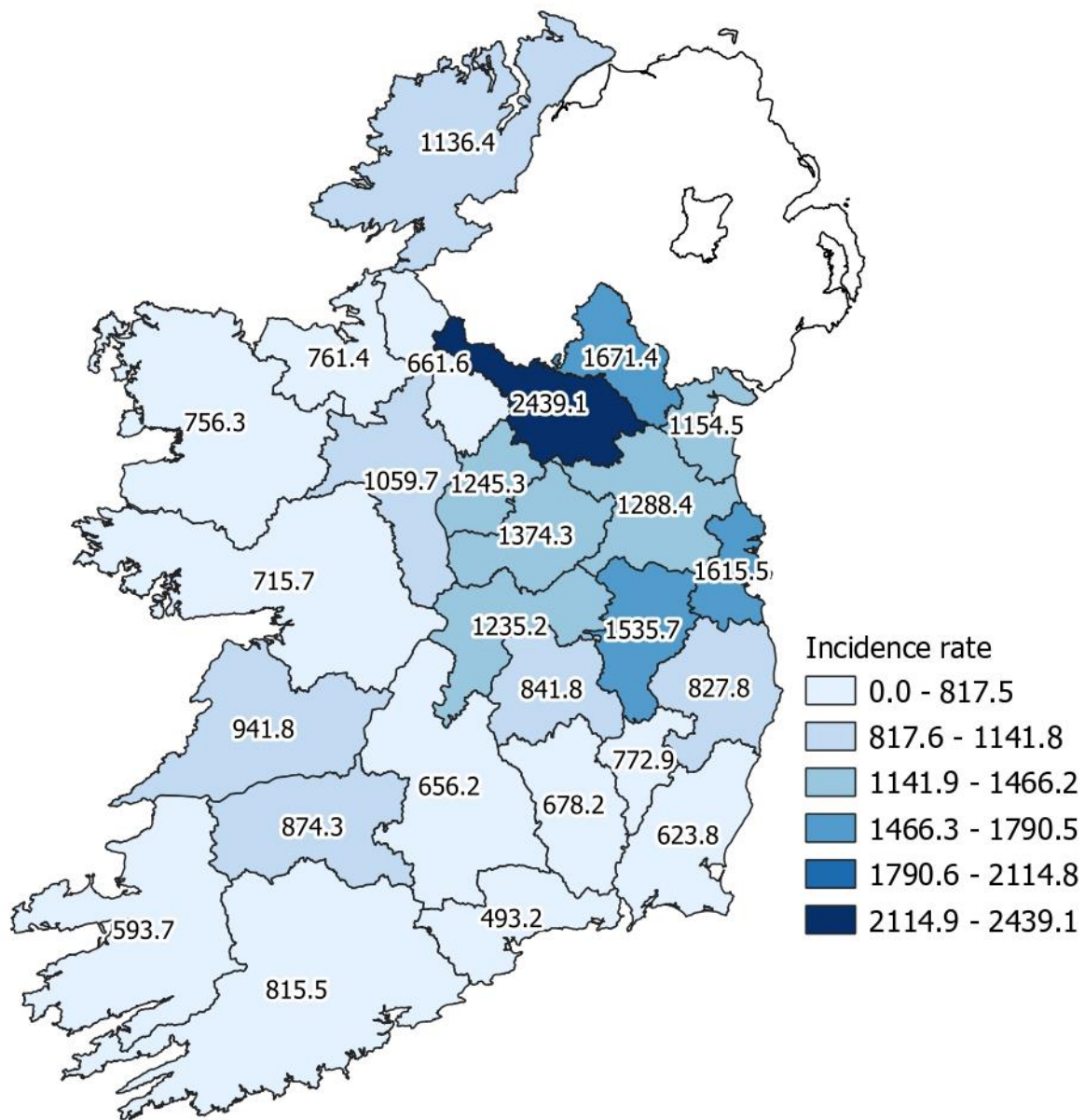


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 21/10/2020

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 21/10/2020

County Name	Number of cases	Percent
Carlow	440	0.81
Cavan	1,858	3.41
Clare	1,119	2.05
Cork	4,427	8.13
Donegal	1,809	3.32
Dublin	21,766	39.95
Galway	1,847	3.39
Kerry	877	1.61
Kildare	3,417	6.27
Kilkenny	673	1.24
Laois	713	1.31
Leitrim	212	0.39
Limerick	1,704	3.13
Longford	509	0.93
Louth	1,488	2.73
Mayo	987	1.81
Meath	2,513	4.61
Monaghan	1,026	1.88
Offaly	963	1.77
Roscommon	684	1.26
Sligo	499	0.92
Tipperary	1,047	1.92
Waterford	573	1.05
Westmeath	1,220	2.24
Wexford	934	1.71
Wicklow	1,179	2.16
Total	54,484	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 21/10/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	15,194	27.89%
Local transmission, incl. possible local transmission	34,019	62.44%
Travel abroad, incl. possible travel abroad	912	1.67%
Unknown	4,359	8.00%
Total	54,484	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 21/10/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	1111	42	1.01	1	0.19
5-14 yrs	2614	38	0.91	4	0.76
15-24 yrs	9174	128	3.07	6	1.14
25-34 yrs	9416	268	6.44	17	3.22
35-44 yrs	8665	334	8.02	46	8.71
45-54 yrs	8430	546	13.12	100	18.94
55-64 yrs	6052	626	15.04	146	27.65
65-74 yrs	3212	730	17.54	144	27.27
75-84 yrs	2998	892	21.43	57	10.8
85+ yrs	2783	557	13.38	7	1.33
Unknown	29	2	0.05	0	0
Total	54,484	4,163	100	528	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 21/10/2020

	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)	1,111	2,614	9,174	9416	8,665	8,430	6,052	3,212	2,998	2,783	29
Cases hospitalised (n)	42	38	128	268	334	546	626	730	892	557	2
Cases hospitalised (%)	3.78	1.45	1.40	2.85	3.85	6.48	10.34	22.73	29.75	20.01	6.90
Cases admitted to ICU (n)	1	4	6	17	46	100	146	144	57	7	0
Cases admitted to ICU (%)	0.09	0.15	0.07	0.18	0.53	1.19	2.41	4.48	1.90	0.25	0
Deaths (n)	0	0	1	7	12	29	76	242	559	695	0
Case fatality ratio (%)	0	0	0.01	0.07	0.14	0.34	1.26	7.53	18.65	24.97	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 21/10/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC	Total
Private house	2,667	66	154	337	204	345	243	279		4,295
Other*	156	91	128	42	71	144	38	86	2	758
Nursing home	157	15	20	48	8	16	18	41		323
Residential institution	129	13	13	31	6	28	13	6		239
Workplace	73	15	19	32	23	18	16	16		212
Hospital	75	7	5	18	4	16	5	7		137
Comm. Hosp/Long-stay unit	6	5	2		4	7	5	5		34
Unknown	1				1					2
Total	3,264	212	341	508	321	574	338	440	2	6,000

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

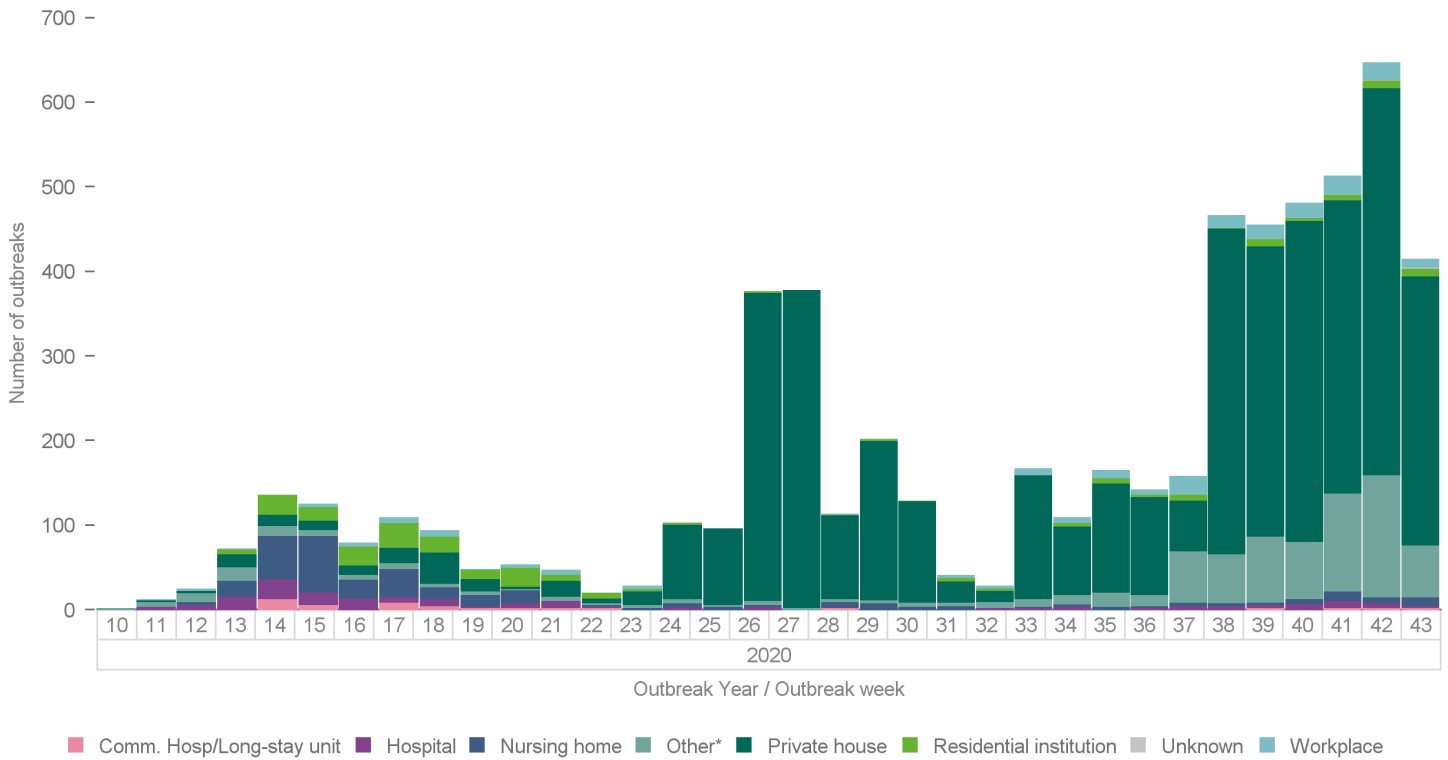


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 21/10/2020

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

Note: 5,164 COVID-19 outbreaks were reported on CIDR between week 24 and week 43 2020 to date (9th June to 21st October). Of these, 4,111 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 43 as a result of data validation: 1 occurred in February, 636 in March, 474 in April, 94 in May, 126 in June, 127 in July, 532 in August, 1,471 in September and 650 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 21/10/2020

	Number	Percent
Total number of deaths	1,877	
Confirmed	1,621	86.36
Probable	95	5.06
Possible	161	8.58
Total number of cases hospitalised	809	43.1
Cases admitted to ICU	104	5.54
Cases not admitted to ICU	705	37.56
Total number of imported cases	6	0.32
Number of cases in healthcare workers	8	0.43
Number with underlying clinical conditions	1,761	93.82
Total number of male cases	936	49.87
M:F ratio	0.99	
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 21/10/2020

Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.05
25-34 yrs	<5	5	7	0.37
35-44 yrs	6	7	13	0.69
45-54 yrs	11	20	31	1.65
55-64 yrs	27	55	82	4.37
65-74 yrs	99	169	268	14.28
75-84 yrs	293	347	640	34.1
85+ yrs	500	333	833	44.38
Unknown	<5	<5	2	0.11
Total	941	936	1,877	100
Percent	50.13	49.87		

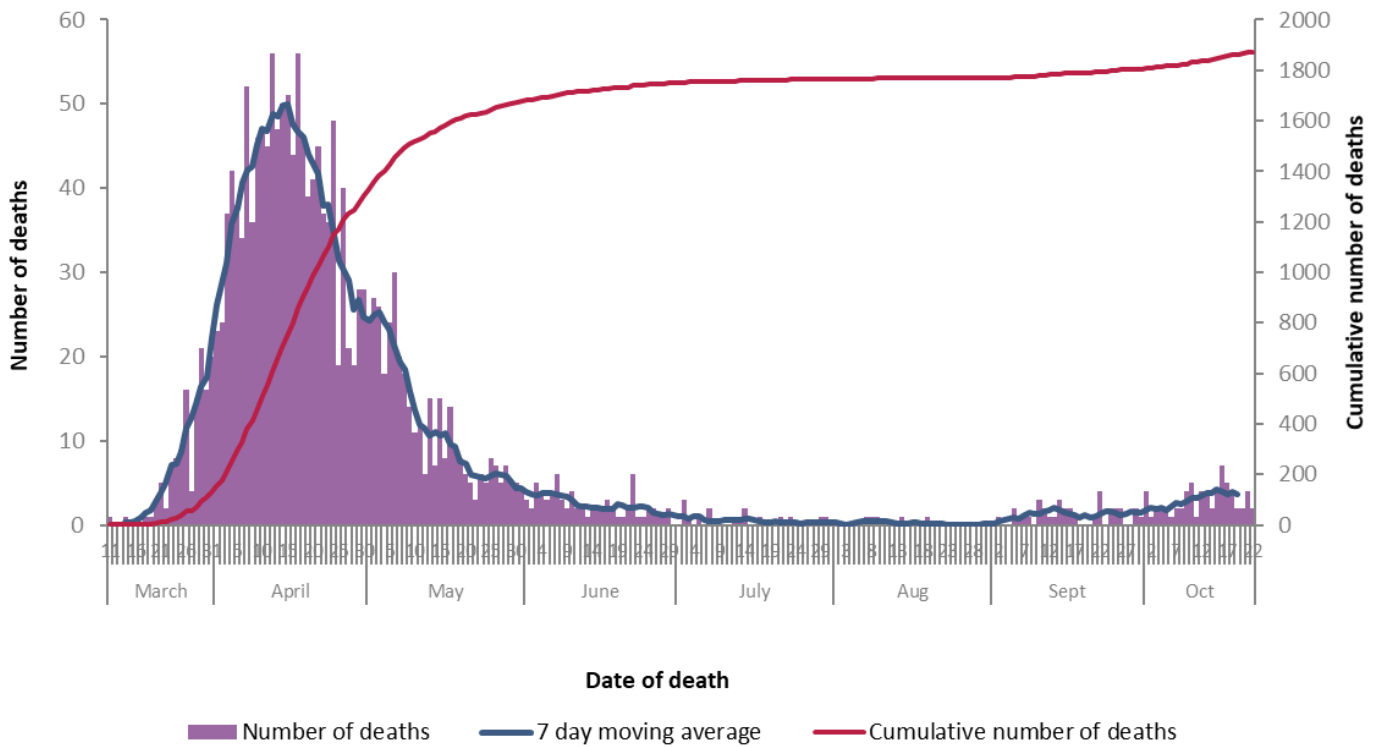


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 21/10/2020

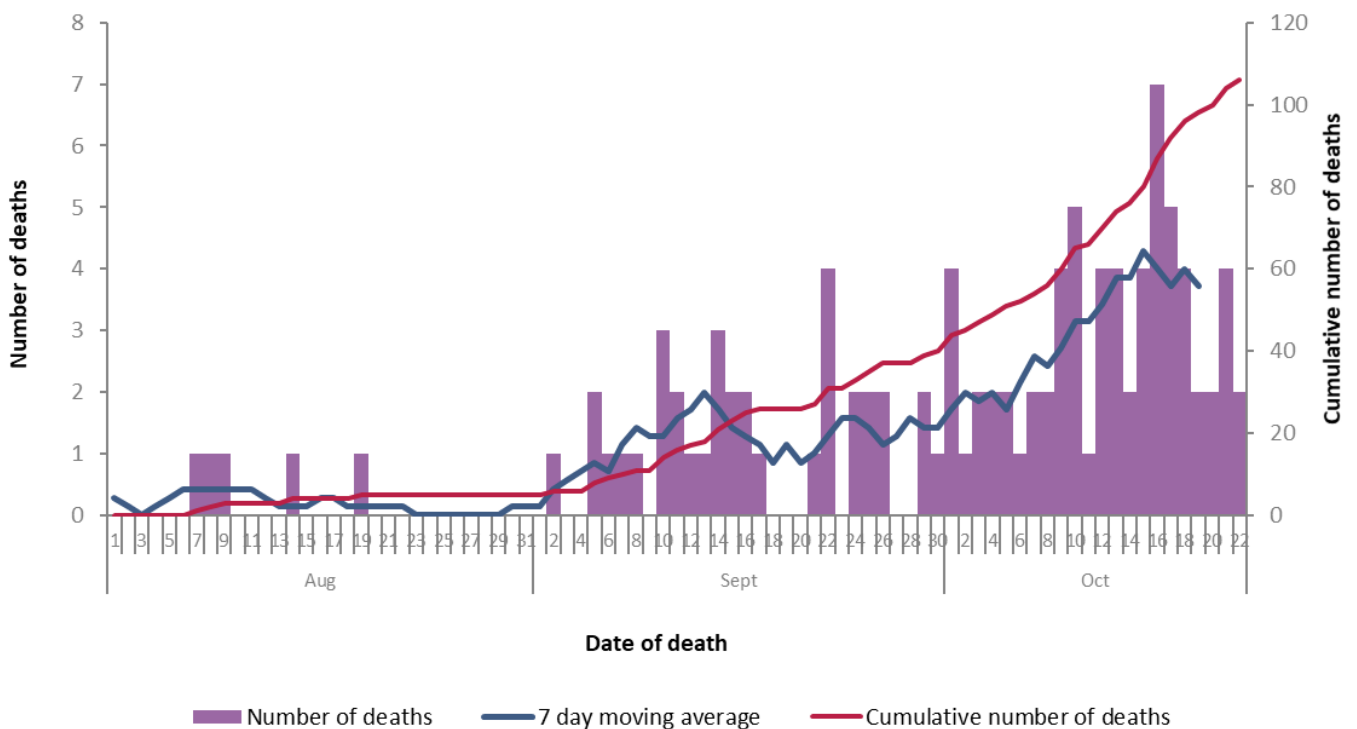


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/08/2020 to midnight 21/10/2020

* Date of death is not yet available for six cases

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 23/10/2020. 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 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.