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Epidemiology of COVID-19 in Ireland Report prepared by HPSC on 22/10/2020 for National Public Health Emergency Team

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Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 22/10/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 20/10/2020

	Number	Percent
Total number of confirmed cases	53,410	
National cumulative incidence of confirmed cases per 100,000 population	1,121.62	
Total number of cases hospitalised	4,118	7.71
Total number of cases admitted to ICU	524	0.98
Total number of deaths among confirmed cases	1,615	3.02
Case fatality ratio (CFR, %)	3.02	
National cumulative incidence of confirmed deaths per 100,000 population	33.92	
Total number of outbreaks/clusters	5,900	
Total number of cases associated with clusters	26,642	49.88
Total number of imported cases	617	1.16
Number of cases in healthcare workers	10,086	18.88
Males	24,844	46.52
Females	28,517	53.39
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 22/10/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

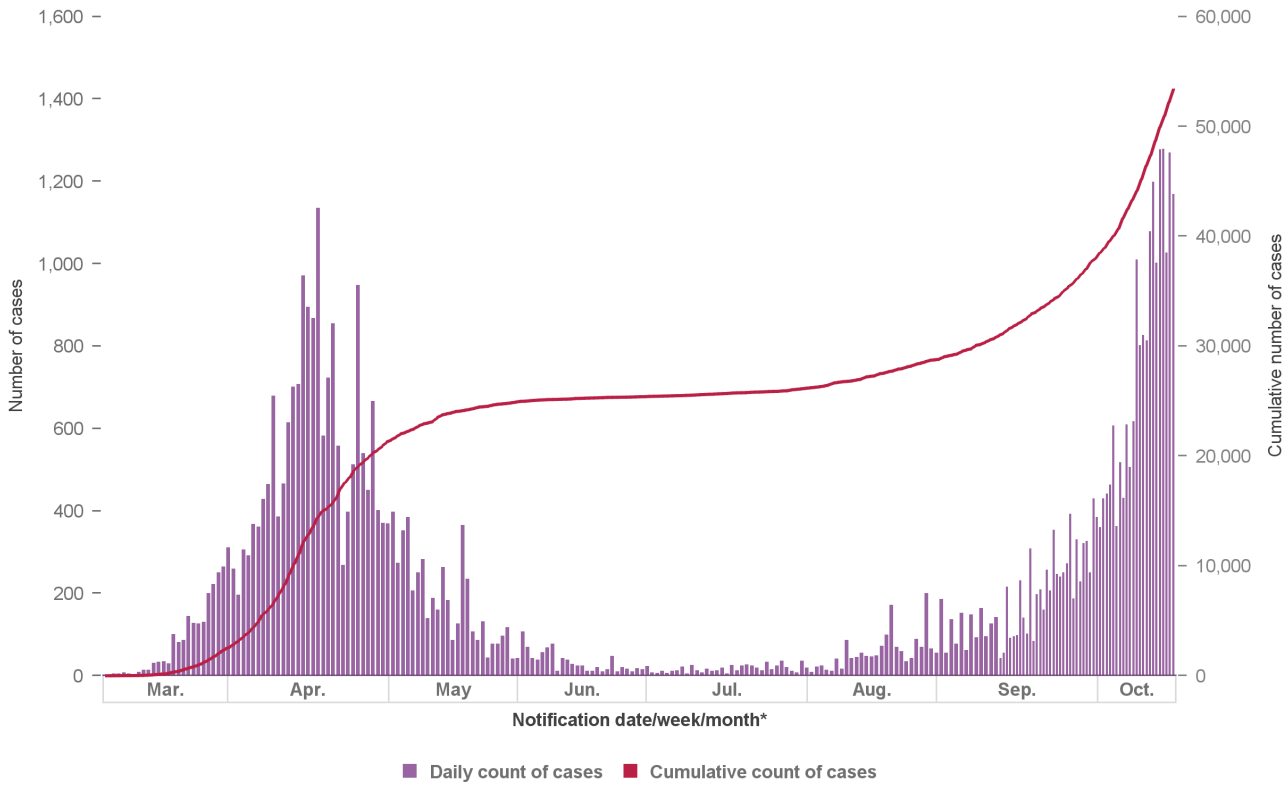


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 20/10/2020

*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

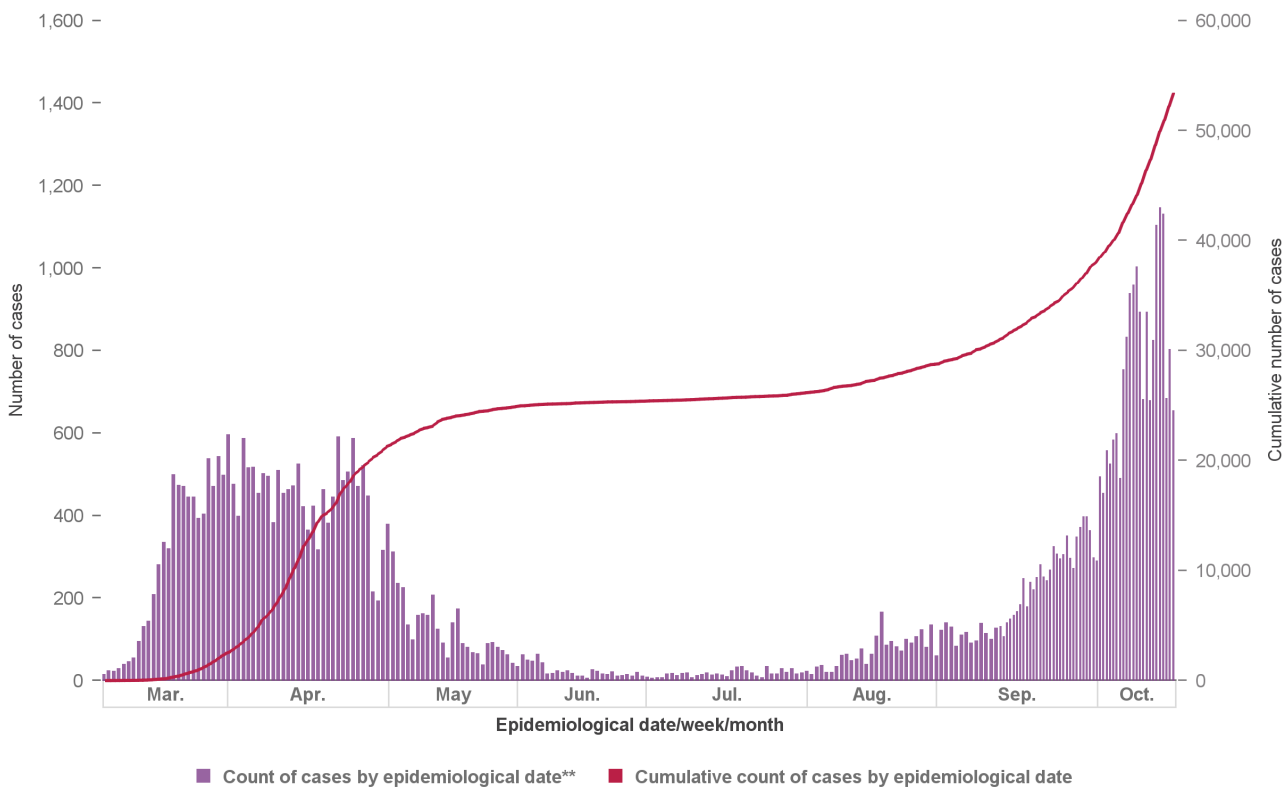


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 20/10/2020**

**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.

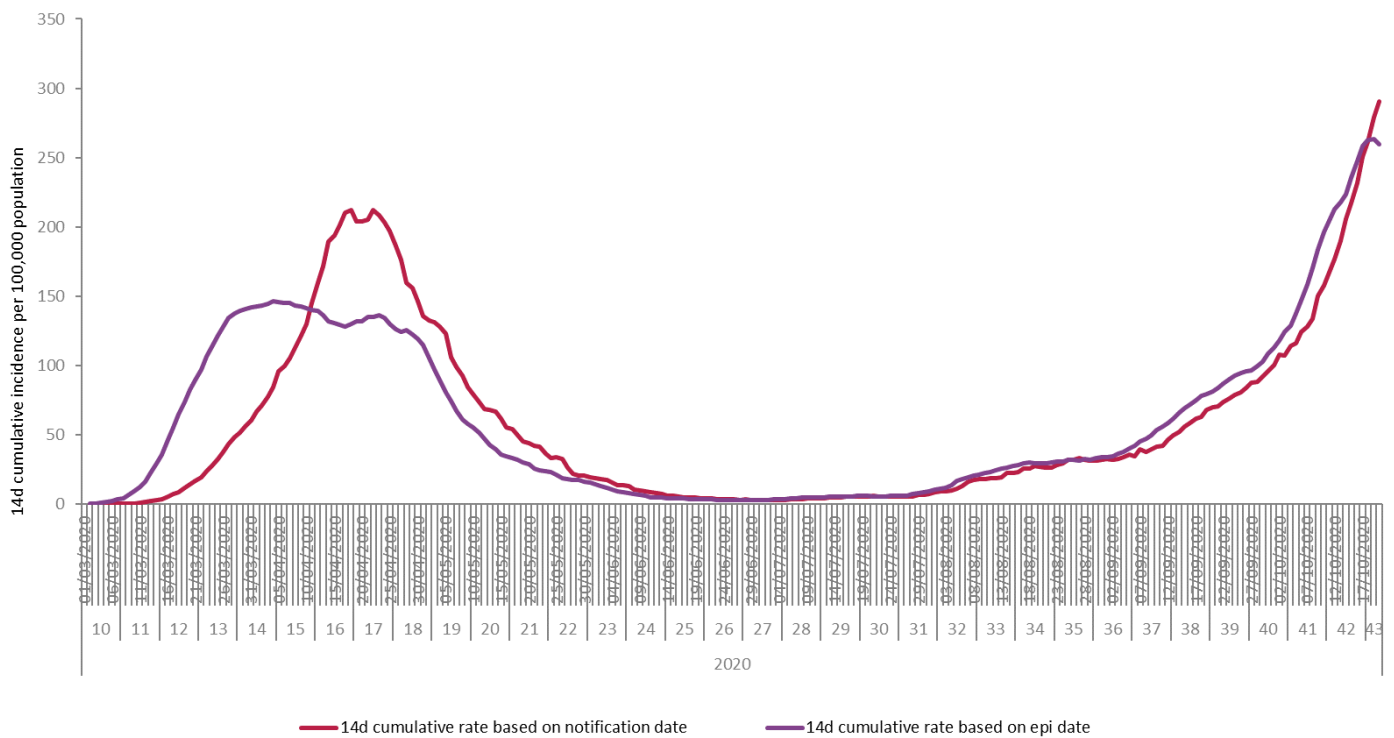


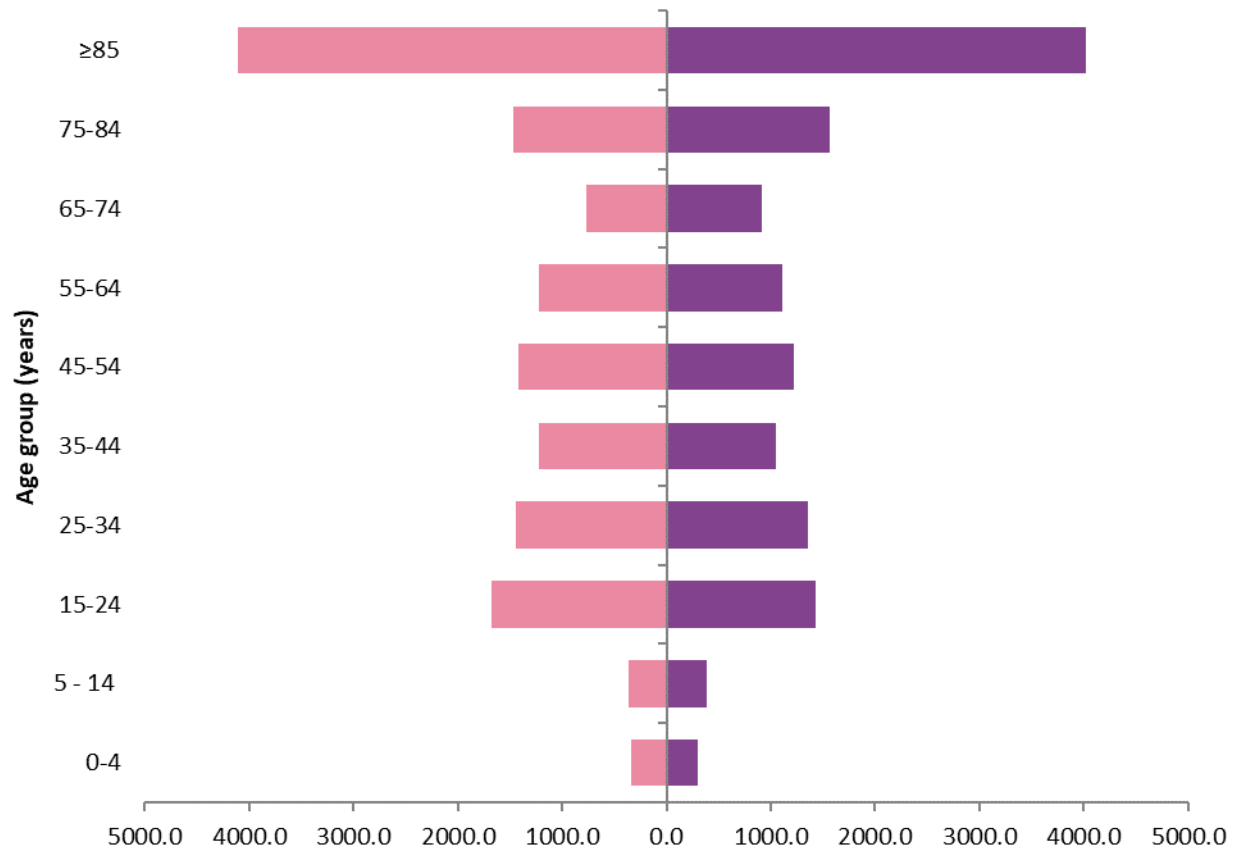
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 20/10/2020**

* 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 20/10/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		53,410	100
Sex	Male:Female ratio	0.87	
	Male	24,844	46.52
	Female	28,517	53.39
	Unknown	49	0.09
Age	Median age (years)	40	
	Mean age (years)	43	
	Age range (years)	0 - 106	
	0-4 yrs	1,056	1.98
	5-14 yrs	2,508	4.7
	15-24 yrs	8,946	16.75
	25-34 yrs	9,241	17.3
	35-44 yrs	8,514	15.94
	45-54 yrs	8,293	15.53
	55-64 yrs	5,956	11.15
	65-74 yrs	3,145	5.89
	75-84 yrs	2,967	5.56
	85+ yrs	2,755	5.16
	Unknown	29	0.05



	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	≥85
Female	331.9	358.6	1672.8	1440.1	1228.5	1422.2	1225.0	768.6	1462.8	4104.0
Male	303.4	383.1	1432.5	1355.5	1046.1	1223.3	1114.2	917.3	1566.4	4023.9

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 20/10/2020 (excluding 28 cases for whom age is unknown and 48 cases for whom sex is unknown and 1 case for whom both are unknown)

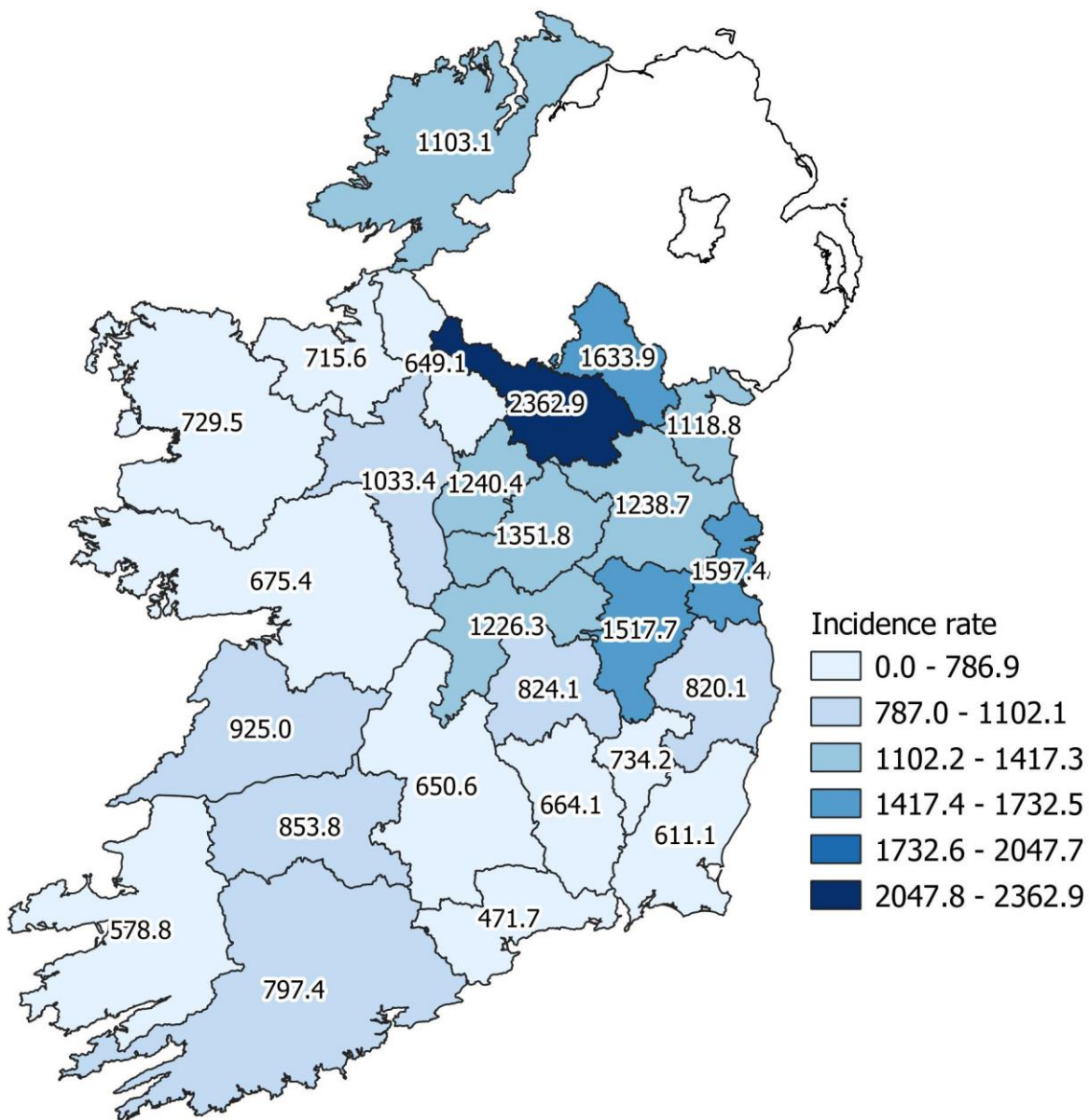


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 20/10/2020

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 20/10/2020

County Name	Number of cases	Percent
Carlow	418	0.78
Cavan	1,800	3.37
Clare	1,099	2.06
Cork	4,329	8.11
Donegal	1,756	3.29
Dublin	21,523	40.3
Galway	1,743	3.26
Kerry	855	1.6
Kildare	3,377	6.32
Kilkenny	659	1.23
Laois	698	1.31
Leitrim	208	0.39
Limerick	1,664	3.12
Longford	507	0.95
Louth	1,442	2.7
Mayo	952	1.78
Meath	2,416	4.52
Monaghan	1,003	1.88
Offaly	956	1.79
Roscommon	667	1.25
Sligo	469	0.88
Tipperary	1,038	1.94
Waterford	548	1.03
Westmeath	1,200	2.25
Wexford	915	1.71
Wicklow	1,168	2.19
Total	53,410	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 20/10/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	15,017	28.12%
Local transmission, incl. possible local transmission	33,222	62.20%
Travel abroad, incl. possible travel abroad	909	1.70%
Unknown	4,262	7.98%
Total	53,410	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 20/10/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	1056	42	1.02	1	0.19
5-14 yrs	2508	38	0.92	4	0.76
15-24 yrs	8946	124	3.01	6	1.15
25-34 yrs	9241	265	6.44	17	3.24
35-44 yrs	8514	330	8.01	46	8.78
45-54 yrs	8293	537	13.04	98	18.7
55-64 yrs	5956	620	15.06	145	27.67
65-74 yrs	3145	725	17.61	144	27.48
75-84 yrs	2967	884	21.47	56	10.69
85+ yrs	2755	551	13.38	7	1.34
Unknown	29	2	0.05	0	0
Total	53,410	4,118	100	524	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 20/10/2020

	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)	1,056	2,508	8,946	9,241	8,514	8,293	5,956	3,145	2,967	2,755	29
Cases hospitalised (n)	42	38	124	265	330	537	620	725	884	551	2
Cases hospitalised (%)	3.98	1.52	1.39	2.87	3.88	6.48	10.41	23.05	29.79	20.00	6.9
Cases admitted to ICU (n)	1	4	6	17	46	98	145	144	56	7	0
Cases admitted to ICU (%)	0.09	0.16	0.07	0.18	0.54	1.18	2.43	4.58	1.89	0.25	0
Deaths (n)	0	0	1	7	12	29	76	242	557	691	0
Case fatality ratio (%)	0	0	0.01	0.08	0.14	0.35	1.28	7.69	18.77	25.08	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 20/10/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC	Total
Private house	2,632	66	154	337	204	345	219	260		4,217
Other*	150	89	128	42	70	143	37	81	2	742
Nursing home	157	15	20	48	8	16	18	41		323
Residential institution	129	13	13	31	6	28	11	6		237
Workplace	72	14	19	32	23	18	15	16		209
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
Total	3,221	209	341	508	320	573	310	416	2	5,900

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

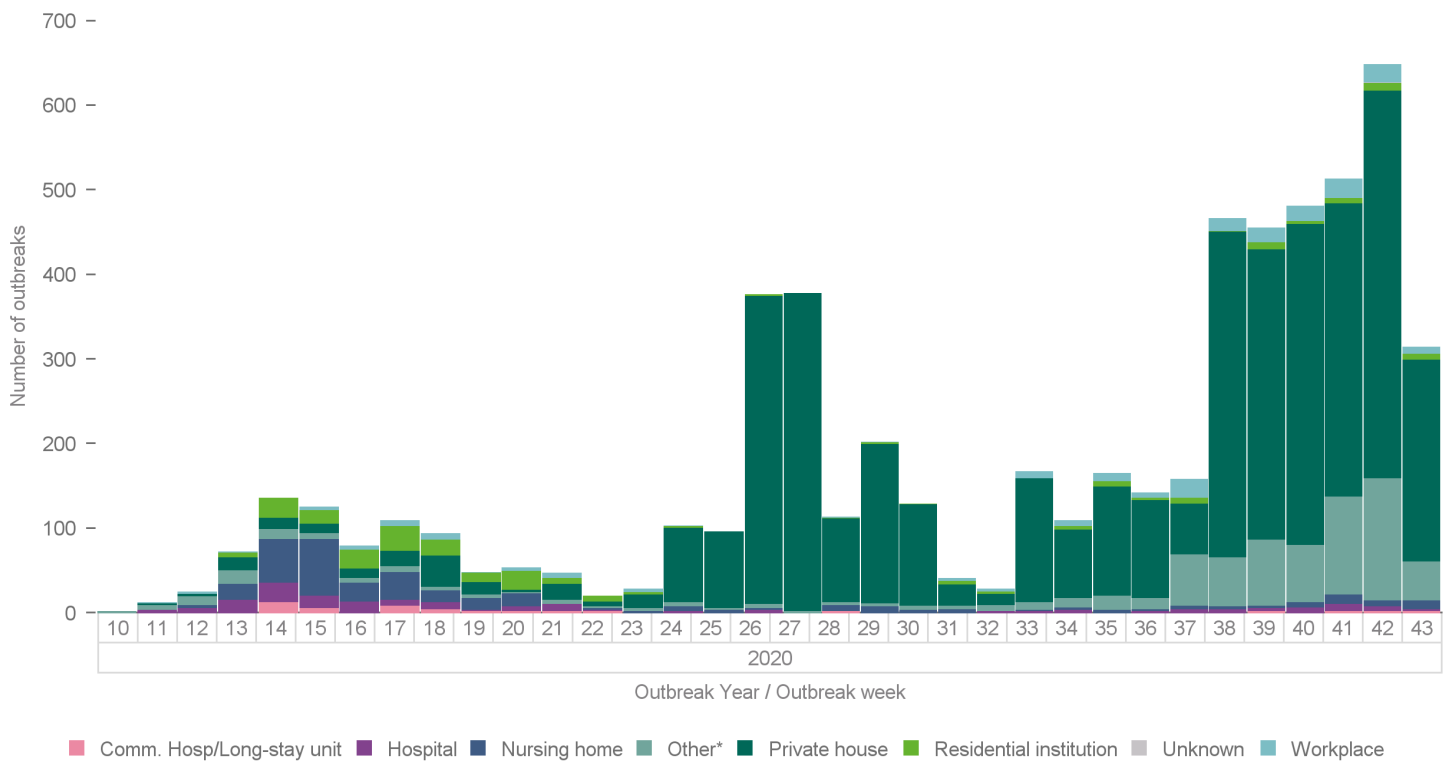


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 20/10/2020

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

Note: 5,064 COVID-19 outbreaks were reported on CIDR between week 24 and week 43 2020 to date (9th June to 20th October). Of these, 4,039 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, 1,463 in September and 586 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 20/10/2020

	Number	Percent
Total number of deaths	1,871	
Confirmed	1,615	86.32
Probable	95	5.08
Possible	161	8.61
Total number of cases hospitalised	808	43.19
Cases admitted to ICU	104	5.56
Cases not admitted to ICU	704	37.63
Total number of imported cases	6	0.32
Number of cases in healthcare workers	8	0.43
Number with underlying clinical conditions	1,759	94.01
Total number of male cases	934	49.92
M:F ratio	1	
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 20/10/2020

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	1.66
55-64 yrs	27	55	82	4.38
65-74 yrs	99	169	268	14.32
75-84 yrs	292	346	638	34.1
85+ yrs	497	332	829	44.31
Unknown	<5	<5	2	0.11
Total	937	934	1,871	100
Percent	50.08	49.92		

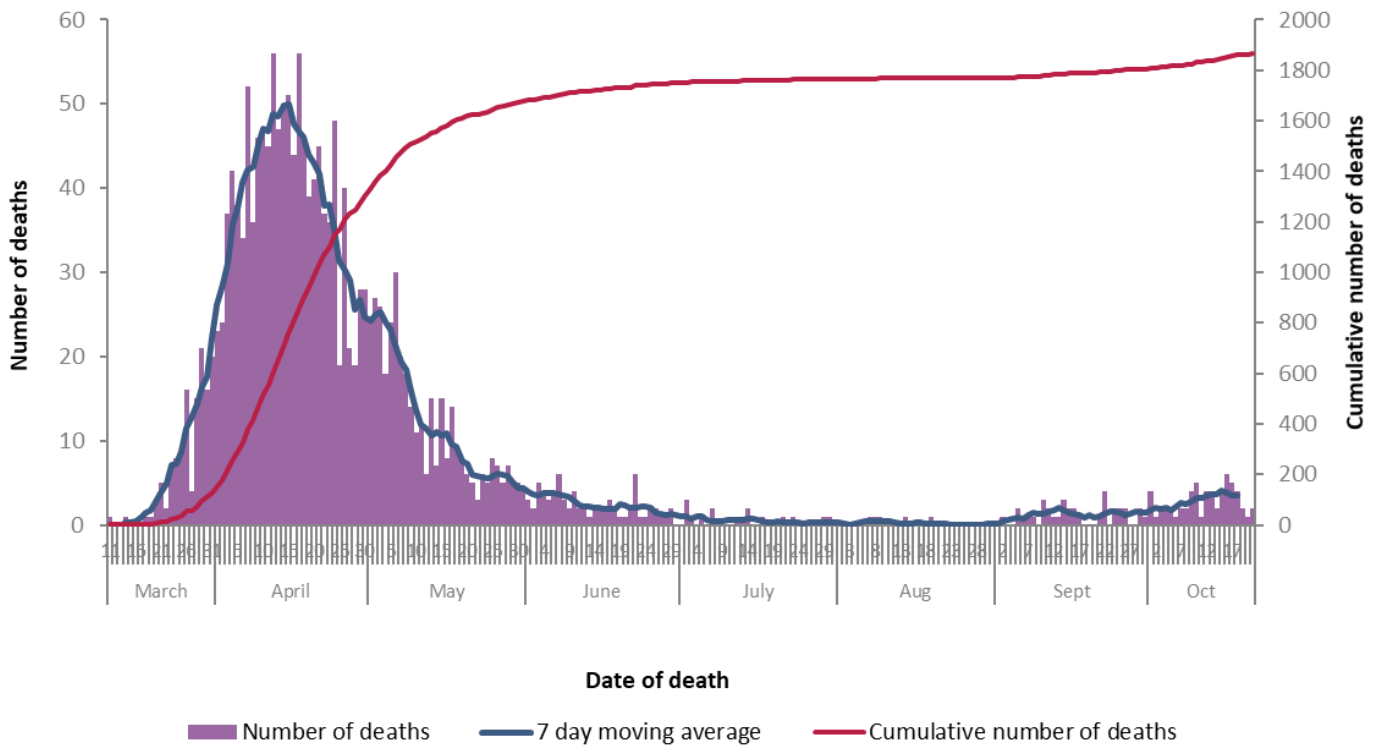


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 20/10/2020

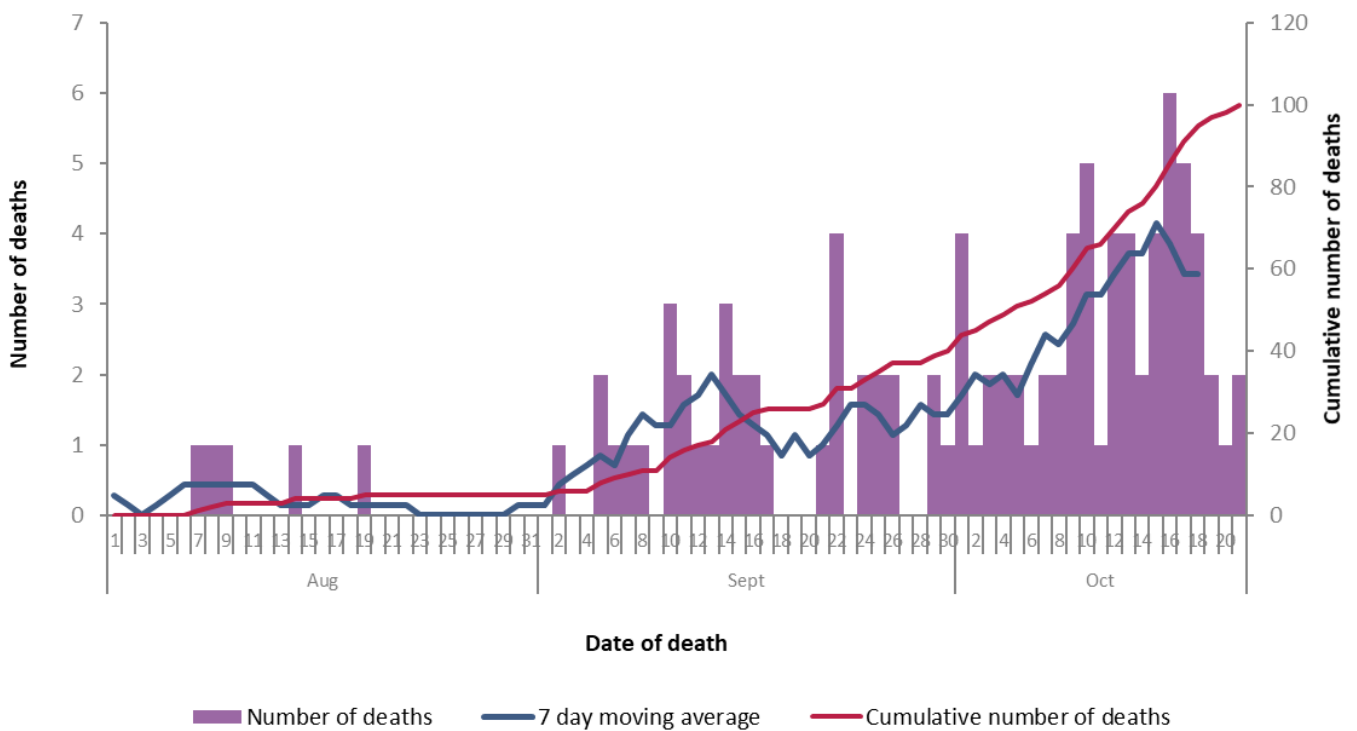


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/08/2020 to midnight 20/10/2020

* 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 22/10/2020. 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.