



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 16/12/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 14/12/2020

	Number	Percent
Total number of confirmed cases	76,766	
National cumulative incidence of confirmed cases per 100,000 population	1,612.1	
Total number of cases hospitalised	5,489	7.15
Total number of cases admitted to ICU	649	0.85
Total number of deaths among confirmed cases	1,880	2.45
Case fatality ratio (CFR, %)	2.45	
National cumulative incidence of confirmed deaths per 100,000 population	39.48	
Total number of outbreaks/clusters	10,207	
Total number of cases associated with clusters	42,692	55.61
Total number of imported cases	686	0.89
Number of cases in healthcare workers	12,590	16.4
Males	36,202	47.16
Females	40,527	52.79
M:F ratio	0.89	
Median age (years)	39	
Mean age (years)	41	
Age range (years)	0 - 108	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:27 on 16/12/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

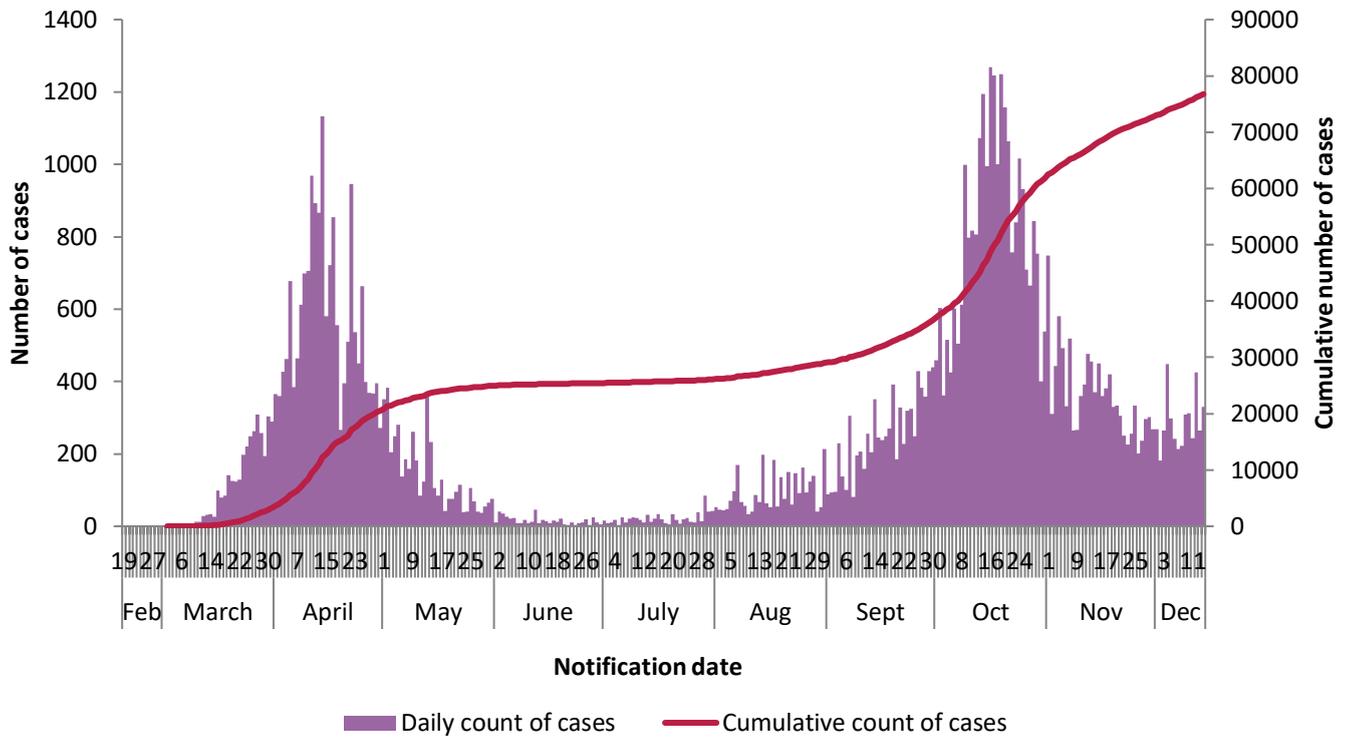


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 14/12/2020

*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

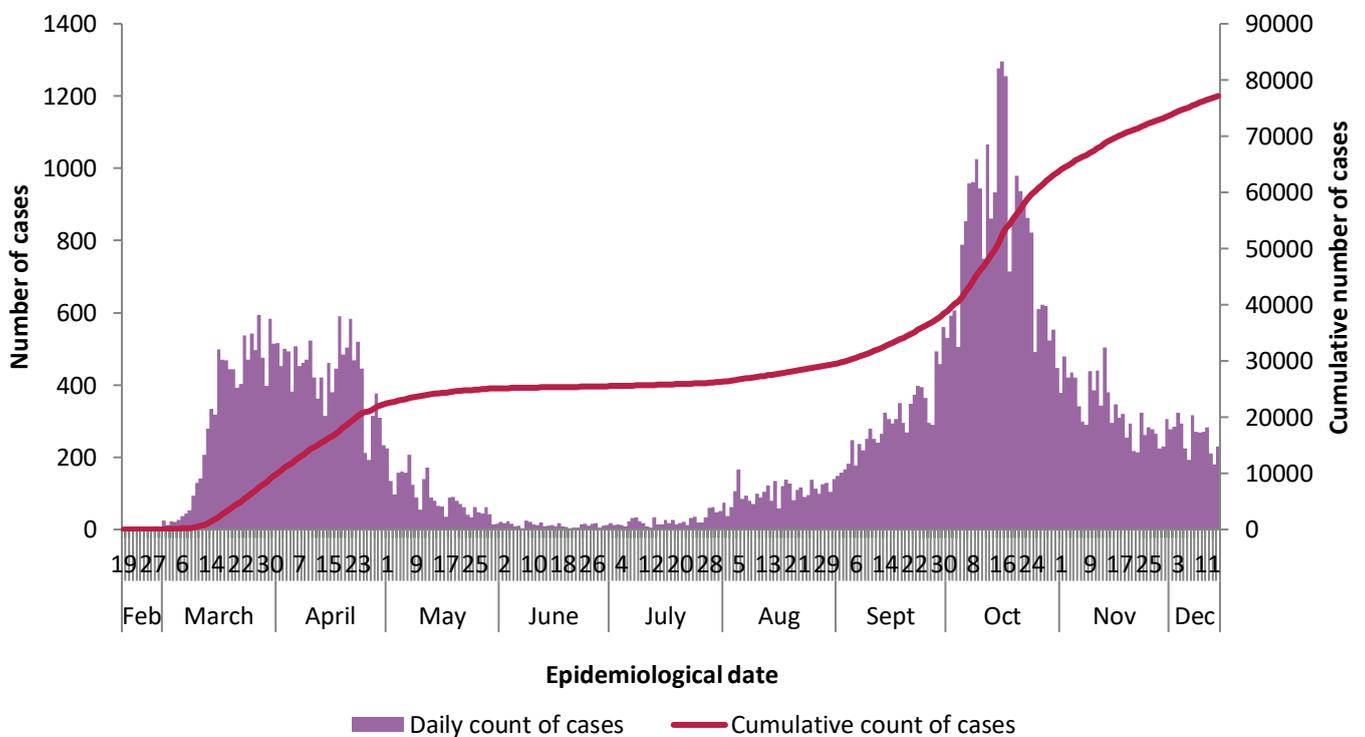


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 14/12/2020**

**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.

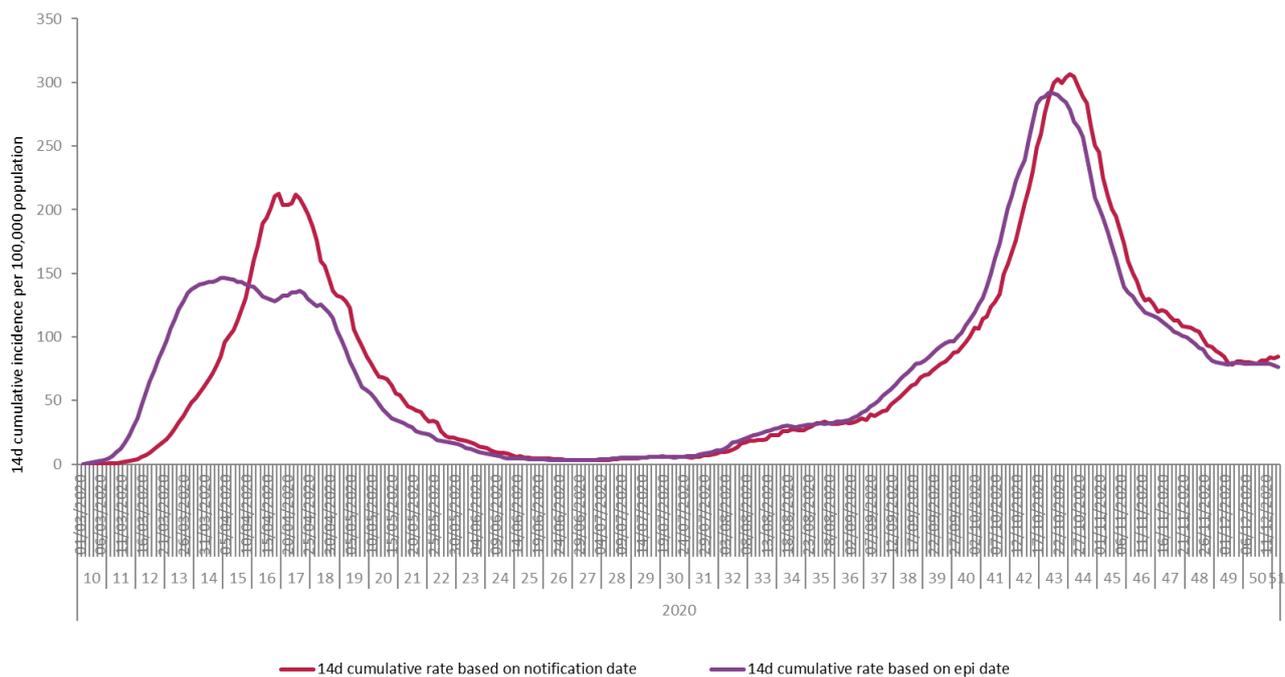


Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 14/12/2020**

* 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 14/12/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		76,766	100
Sex	Male:Female ratio	0.89	
	Male	36,202	47.16
	Female	40,527	52.79
	Unknown	37	0.05
Age	Median age (years)	39	
	Mean age (years)	41	
	Age range (years)	0 - 108	
	0-4 yrs	2,046	2.67
	5-14 yrs	5,138	6.69
	15-24 yrs	13,347	17.39
	25-34 yrs	12,878	16.78
	35-44 yrs	12,048	15.69
	45-54 yrs	11,566	15.07
	55-64 yrs	8,159	10.63
	65-74 yrs	4,381	5.71
	75-84 yrs	3,840	5
	85+ yrs	3,335	4.34
	Unknown	28	0.04

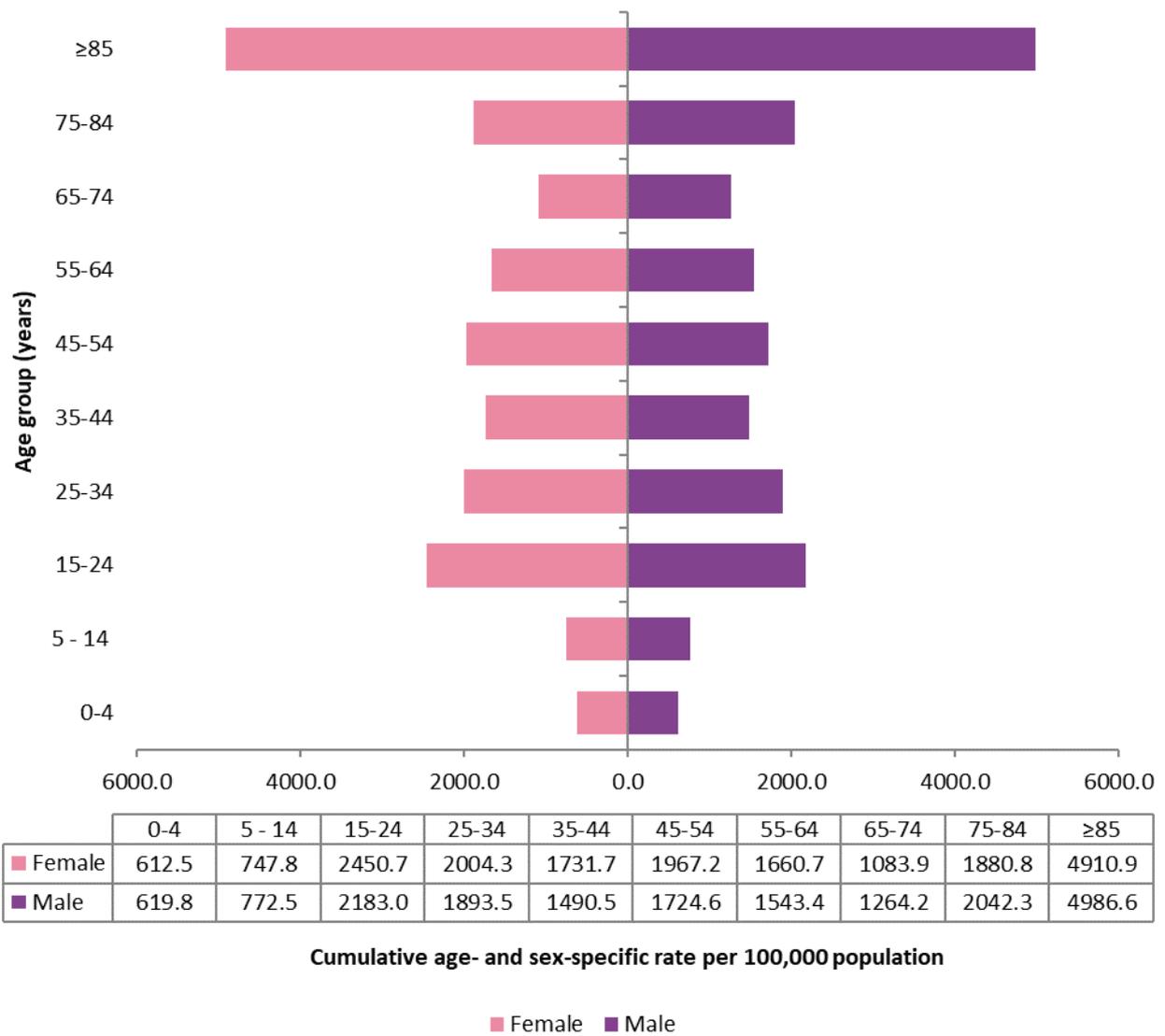


Figure 3: Cumulative age- and sex-specific incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 14/12/2020 (excluding 27 cases for whom age is unknown, 36 cases for whom sex is unknown and 1 case for whom both are unknown)

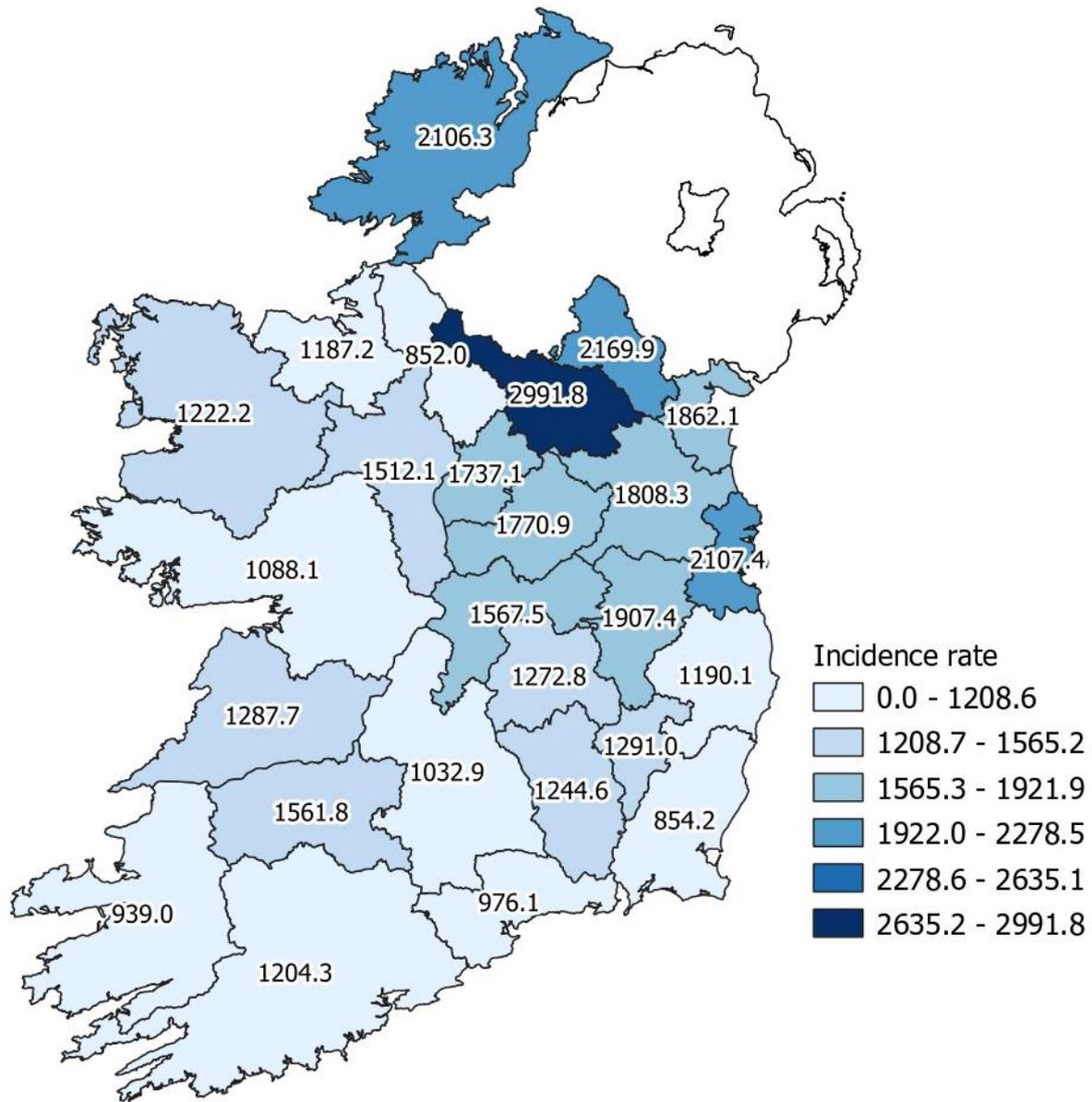


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 14/12/2020

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 14/12/2020

County Name	Number of cases	Percent
Carlow	735	0.96
Cavan	2,279	2.97
Clare	1,530	1.99
Cork	6,538	8.52
Donegal	3,353	4.37
Dublin	28,394	36.99
Galway	2,808	3.66
Kerry	1,387	1.81
Kildare	4,244	5.53
Kilkenny	1,235	1.61
Laois	1,078	1.4
Leitrim	273	0.36
Limerick	3,044	3.97
Longford	710	0.92
Louth	2,400	3.13
Mayo	1,595	2.08
Meath	3,527	4.59
Monaghan	1,332	1.74
Offaly	1,222	1.59
Roscommon	976	1.27
Sligo	778	1.01
Tipperary	1,648	2.15
Waterford	1,134	1.48
Westmeath	1,572	2.05
Wexford	1,279	1.67
Wicklow	1,695	2.21
Total	76,766	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 14/12/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	22,981	29.94%
Local transmission, incl. possible local transmission	51,978	67.71%
Travel abroad, incl. possible travel abroad	1,050	1.37%
Unknown	757	0.99%
Total	76,766	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 14/12/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	2046	58	1.06	2	0.31
5-14 yrs	5138	52	0.95	4	0.62
15-24 yrs	13347	182	3.32	8	1.23
25-34 yrs	12878	343	6.25	18	2.77
35-44 yrs	12048	430	7.83	57	8.78
45-54 yrs	11566	685	12.48	116	17.87
55-64 yrs	8159	788	14.36	167	25.73
65-74 yrs	4381	996	18.15	186	28.66
75-84 yrs	3840	1,213	22.1	82	12.63
85+ yrs	3335	740	13.48	9	1.39
Unknown	28	2	0.04	0	0
Total	76,766	5,489	100	649	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation, ICU admission and vital status 14/12/2020

	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)	2046	5138	13347	12878	12048	11566	8159	4381	3840	3335	28
Cases hospitalised (n)	58	52	182	343	430	685	788	996	1213	740	2
Cases hospitalised (%)	2.83	1.01	1.36	2.66	3.57	5.92	9.66	22.73	31.59	22.19	7.14
Cases admitted to ICU (n)	2	4	8	18	57	116	167	186	82	9	0
Cases admitted to ICU (%)	0.10	0.08	0.06	0.14	0.47	1.00	2.05	4.25	2.14	0.27	0
Deaths (n)	0	0	2	6	12	34	83	288	645	810	0
Case fatality ratio (%)	0	0	0.01	0.05	0.10	0.29	1.02	6.57	16.80	24.29	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 14/12/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC**	Total
Private house	4581	173	196	519	442	629	634	597		7771
Other*	264	75	162	88	142	257	65	152	2	1207
Nursing home	173	18	20	50	12	23	24	46		366
Workplace	113	20	23	53	37	27	31	27		331
Residential institution	154	16	18	36	9	30	17	10		290
Hospital	116	8	10	23	15	17	8	7		204
Comm. Hosp/Long-stay unit	6	4	3		5	7	6	5		36
Unknown					2					2
Total	5407	314	432	769	664	990	785	844	2	10207

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

**Outbreaks/clusters notified with a location of 'HPSC' are those with cases in three or more HSE areas. These are considered national outbreaks.

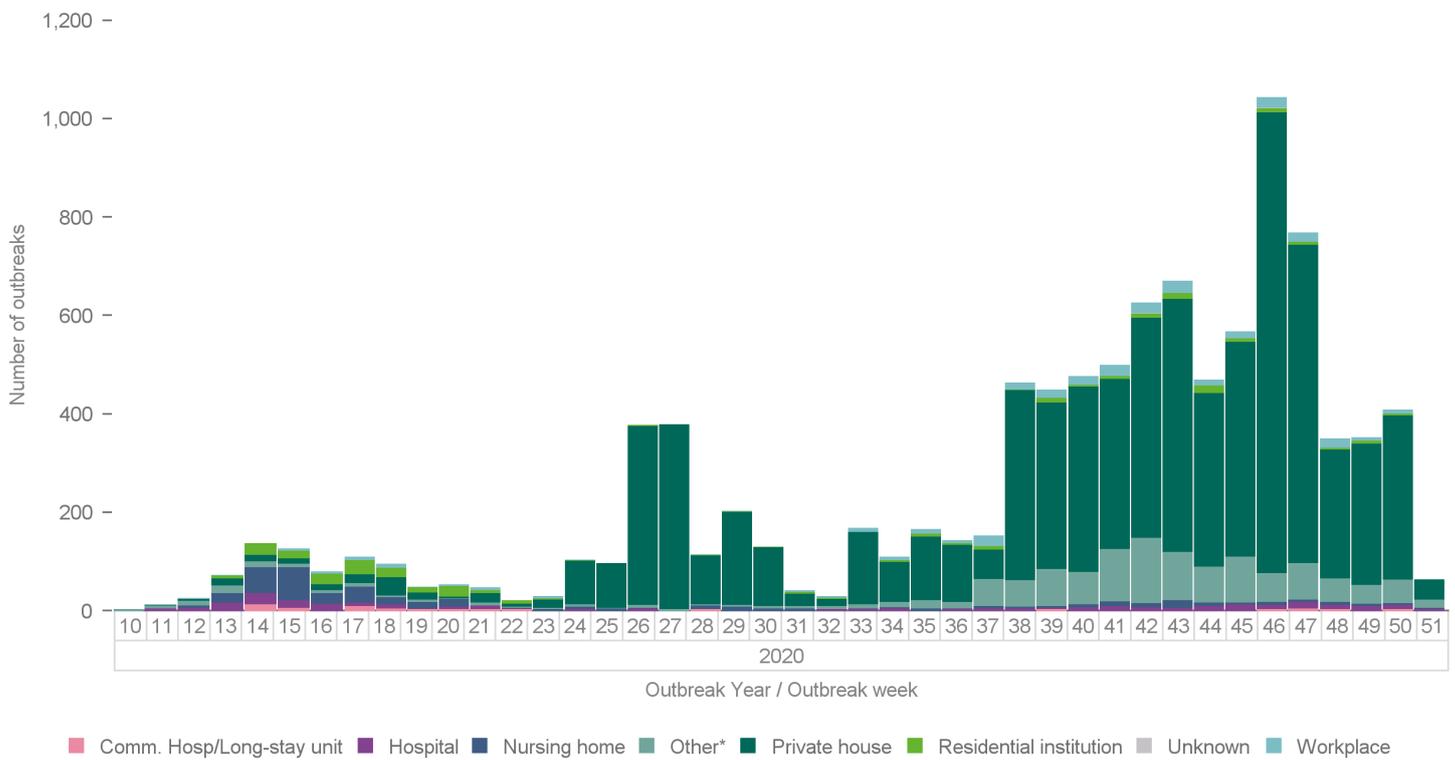


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 14/12/2020

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

Note: 9,371 COVID-19 outbreaks were reported on CIDR between week 24 and week 51 2020 (9th June to 14th December). Of these, 7,498 were family outbreaks. Based on the earliest date associated with each outbreak, some of these family outbreaks occurred earlier and were reported in subsequent weeks as a result of data validation: 1 occurred in February, 636 in March, 475 in April, 94 in May, 126 in June, 128 in July, 533 in August, 1,512 in September, 2,630 in October, 1,188 in November and 175 to date in December.

Deaths among COVID-19 cases

Table 7: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 14/12/2020

	Number	Percent
Total number of deaths	2,140	
Confirmed	1,880	87.85
Probable	95	4.44
Possible	165	7.71
Total number of cases hospitalised	983	45.93
Cases admitted to ICU	151	7.06
Cases not admitted to ICU	832	38.88
Total number of imported cases	5	0.23
Number of cases in healthcare workers	8	0.37
Number with underlying clinical conditions	1,989	92.94
Total number of male cases	1,086	50.75
M:F ratio	1.03	
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 14/12/2020

Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	2	0.09
25-34 yrs	<5	<5	6	0.28
35-44 yrs	6	7	13	0.61
45-54 yrs	15	21	36	1.68
55-64 yrs	30	59	89	4.16
65-74 yrs	111	205	316	14.77
75-84 yrs	328	399	727	33.97
85+ yrs	558	391	949	44.35
Unknown	<5	<5	2	0.09
Total	1,054	1,086	2,140	100
Percent	49.25	50.75		

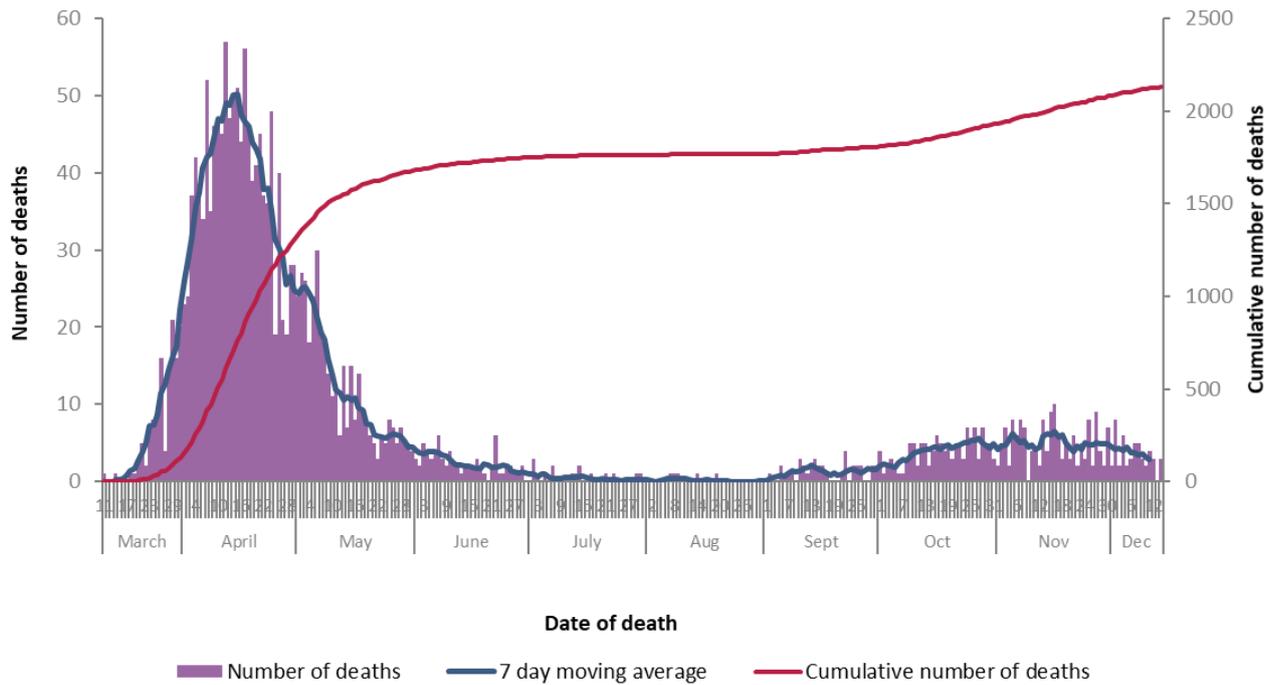


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 14/12/2020

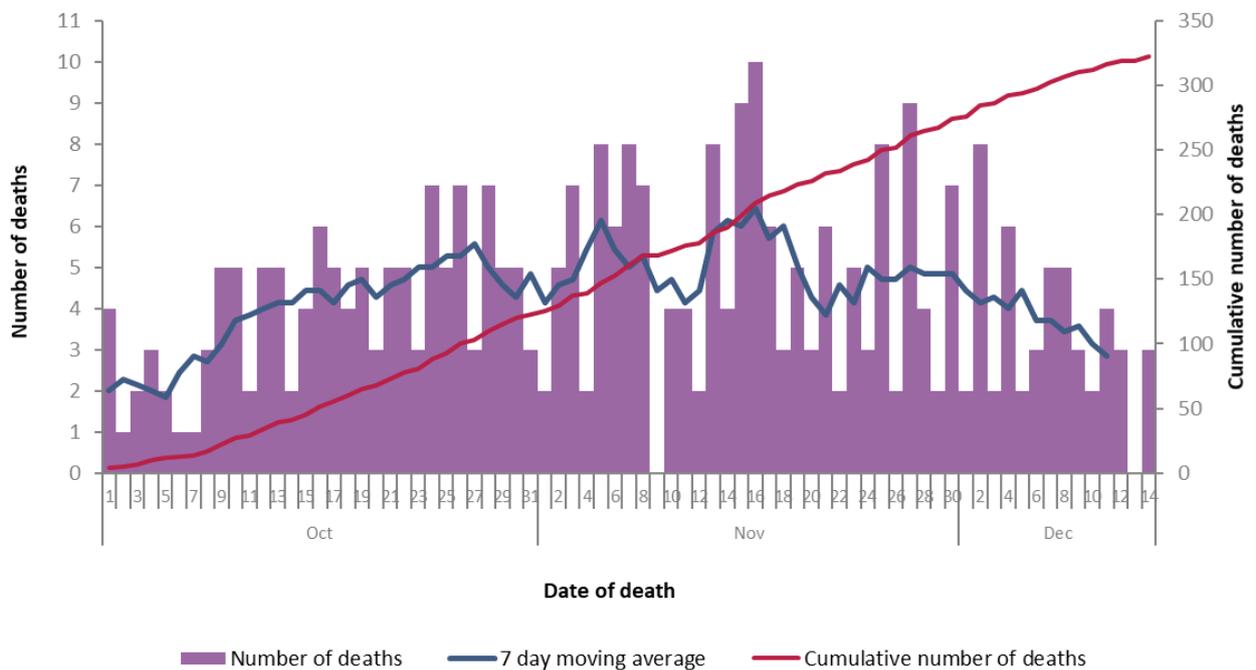


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total from 01/10/2020 to midnight 14/12/2020

* Date of death is not yet available for twelve cases

Please note: a lag in time between reporting of deaths and data extraction is expected and as such the 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 09:27 on 16/12/2020. 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.