



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 09/12/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 07/12/2020

	Number	Percent
Total number of confirmed cases	74,672	
National cumulative incidence of confirmed cases per 100,000 population	1,568.13	
Total number of cases hospitalised	5,360	7.18
Total number of cases admitted to ICU	633	0.85
Total number of deaths among confirmed cases	1,845	2.47
Case fatality ratio (CFR, %)	2.47	
National cumulative incidence of confirmed deaths per 100,000 population	38.75	
Total number of outbreaks/clusters	9,878	
Total number of cases associated with clusters	41,384	55.42
Total number of imported cases	673	0.9
Number of cases in healthcare workers	12,329	16.51
Males	35,189	47.12
Females	39,449	52.83
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 11:14 on 09/12/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

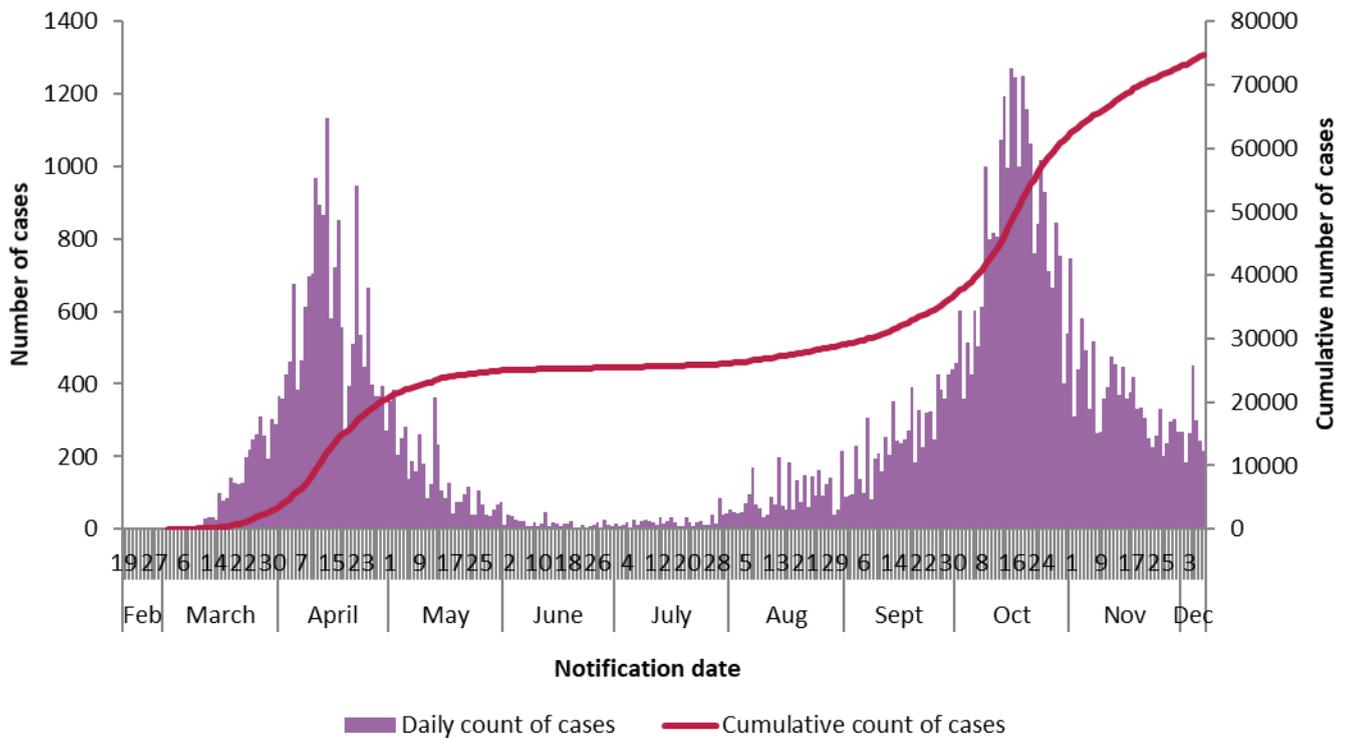


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 07/12/2020

*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

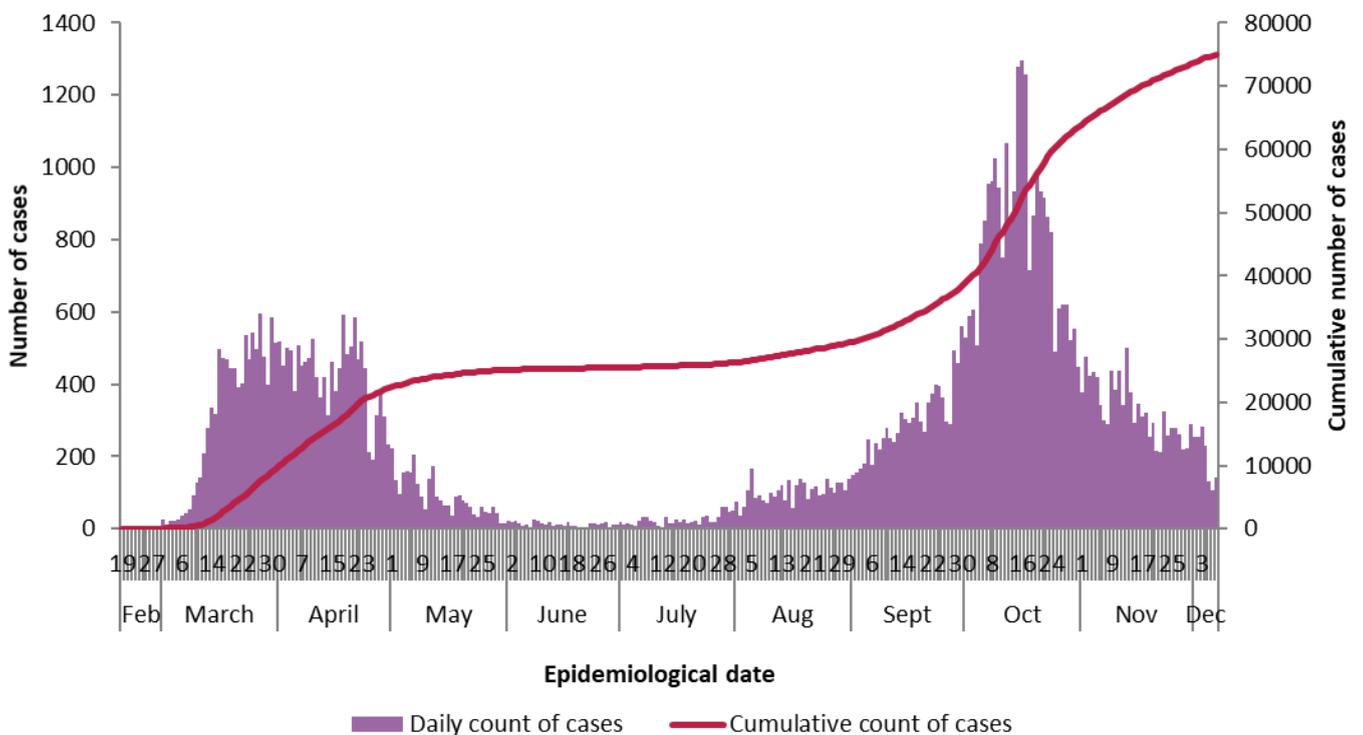


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 07/12/2020**

**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.

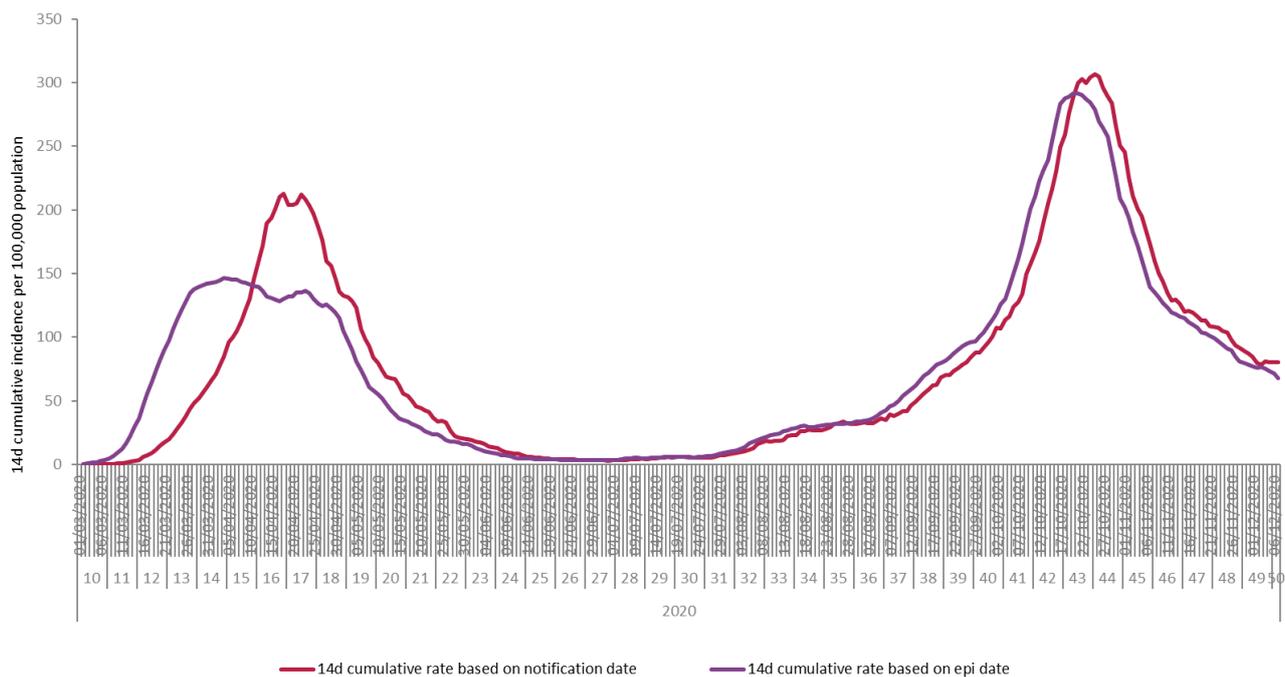


Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 07/12/2020**

* 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 07/12/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		74,672	100
Sex	Male:Female ratio	0.89	
	Male	35,189	47.12
	Female	39,449	52.83
	Unknown	34	0.05
Age	Median age (years)	39	
	Mean age (years)	41	
	Age range (years)	0 - 108	
	0-4 yrs	1,977	2.65
	5-14 yrs	4,871	6.52
	15-24 yrs	13,003	17.41
	25-34 yrs	12,535	16.79
	35-44 yrs	11,705	15.68
	45-54 yrs	11,261	15.08
	55-64 yrs	7,960	10.66
	65-74 yrs	4,292	5.75
	75-84 yrs	3,757	5.03
	85+ yrs	3,283	4.4
	Unknown	28	0.04

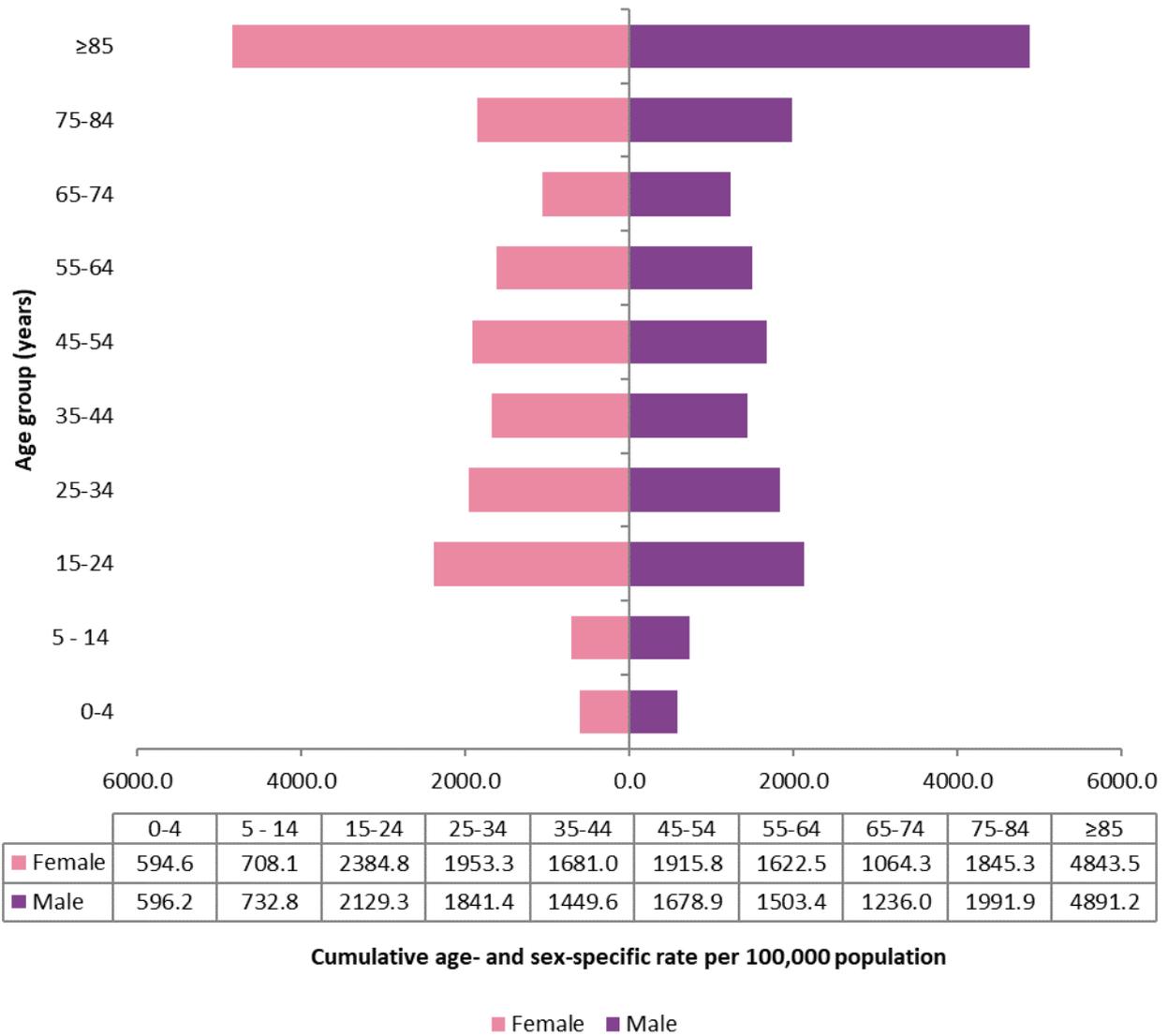


Figure 3: Cumulative age- and sex-specific incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 07/12/2020 (excluding 27 cases for whom age is unknown, 33 cases for whom sex is unknown and 1 case for whom both are unknown)

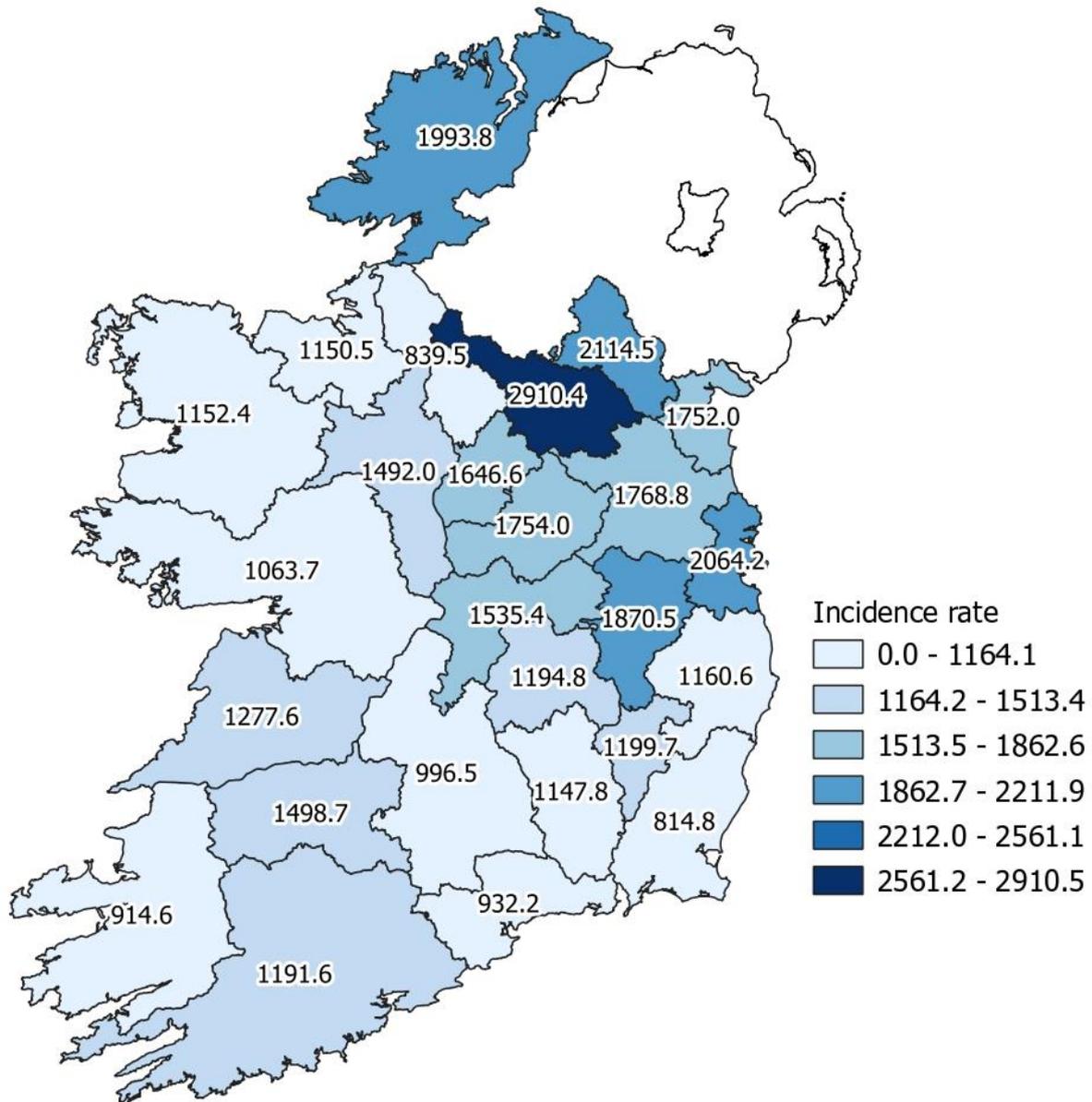


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 07/12/2020

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 07/12/2020

County Name	Number of cases	Percent
Carlow	683	0.91
Cavan	2,217	2.97
Clare	1,518	2.03
Cork	6,469	8.66
Donegal	3,174	4.25
Dublin	27,812	37.25
Galway	2,745	3.68
Kerry	1,351	1.81
Kildare	4,162	5.57
Kilkenny	1,139	1.53
Laois	1,012	1.36
Leitrim	269	0.36
Limerick	2,921	3.91
Longford	673	0.9
Louth	2,258	3.02
Mayo	1,504	2.01
Meath	3,450	4.62
Monaghan	1,298	1.74
Offaly	1,197	1.6
Roscommon	963	1.29
Sligo	754	1.01
Tipperary	1,590	2.13
Waterford	1,083	1.45
Westmeath	1,557	2.09
Wexford	1,220	1.63
Wicklow	1,653	2.21
Total	74,672	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 07/12/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	22,369	29.96%
Local transmission, incl. possible local transmission	50,511	67.64%
Travel abroad, incl. possible travel abroad	1,019	1.36%
Unknown	773	1.04%
Total	74,672	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, hospitalisation and ICU admission as of midnight 07/12/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	1977	58	1.08	2	0.32
5-14 yrs	4871	51	0.95	4	0.63
15-24 yrs	13003	172	3.21	8	1.26
25-34 yrs	12535	334	6.23	18	2.84
35-44 yrs	11705	424	7.91	55	8.69
45-54 yrs	11261	668	12.46	112	17.69
55-64 yrs	7960	766	14.29	165	26.07
65-74 yrs	4292	968	18.06	181	28.59
75-84 yrs	3757	1,188	22.16	80	12.64
85+ yrs	3283	729	13.6	8	1.26
Unknown	28	2	0.04	0	0
Total	74,672	5,360	100	633	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation, ICU admission and vital status 07/12/2020

	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)	1977	4871	13003	12535	11705	11261	7960	4292	3757	3283	28
Cases hospitalised (n)	58	51	172	334	424	668	766	968	1188	729	2
Cases hospitalised (%)	2.93	1.05	1.32	2.66	3.62	5.93	9.62	22.55	31.62	22.21	7.14
Cases admitted to ICU (n)	2	4	8	18	55	112	165	181	80	8	0
Cases admitted to ICU (%)	0.10	0.08	0.06	0.14	0.47	0.99	2.07	4.22	2.13	0.24	0
Deaths (n)	0	0	1	6	11	32	83	285	638	789	0
Case fatality ratio (%)	0	0	0.01	0.05	0.09	0.28	1.04	6.64	16.98	24.03	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 07/12/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC**	Total
Private house	4428	173	190	482	407	619	634	579		7512
Other*	258	72	160	80	129	250	60	145	2	1156
Nursing home	170	18	20	50	12	23	23	45		361
Workplace	109	19	22	52	37	27	31	27		324
Residential institution	155	16	17	35	9	30	17	10		289
Hospital	112	7	10	22	14	17	9	7		198
Comm. Hosp/Long-stay unit	6	4	3		5	7	5	5		35
Unknown				1	2					3
Total	5238	309	422	722	615	973	779	818	2	9878

*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.

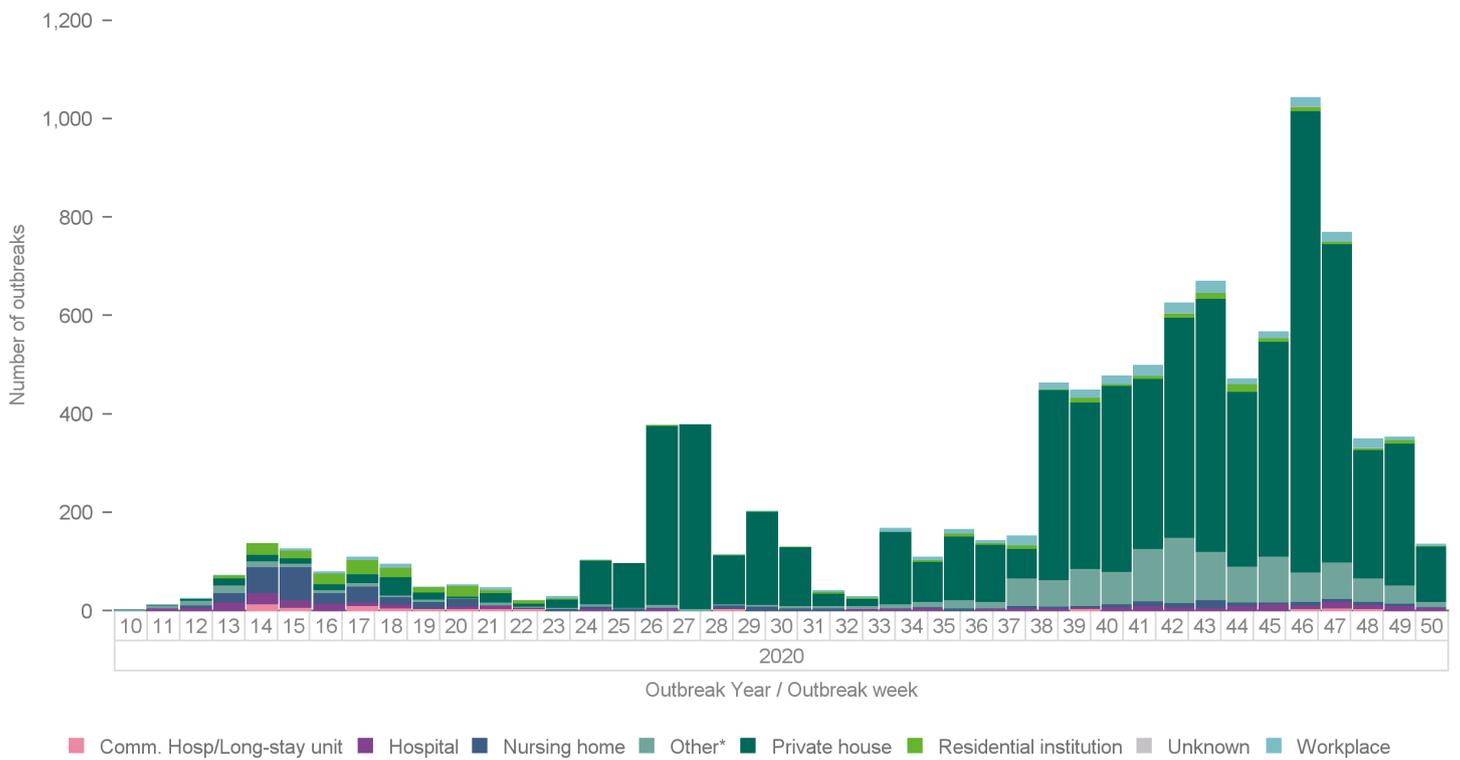


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 07/12/2020

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

Note: 9,042 COVID-19 outbreaks were reported on CIDR between week 24 and week 50 2020 (9th June to 7th December). Of these, 7,225 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, 1,513 in September, 2,624 in October, 1,038 in November and 57 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 07/12/2020

	Number	Percent
Total number of deaths	2,104	
Confirmed	1,845	87.69
Probable	95	4.52
Possible	164	7.79
Total number of cases hospitalised	962	45.72
Cases admitted to ICU	144	6.84
Cases not admitted to ICU	818	38.88
Total number of imported cases	5	0.24
Number of cases in healthcare workers	8	0.38
Number with underlying clinical conditions	1,957	93.01
Total number of male cases	1,070	50.86
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 07/12/2020

Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.05
25-34 yrs	<5	<5	6	0.29
35-44 yrs	5	7	12	0.57
45-54 yrs	14	20	34	1.62
55-64 yrs	30	59	89	4.23
65-74 yrs	110	203	313	14.88
75-84 yrs	327	393	720	34.22
85+ yrs	543	384	927	44.06
Unknown	<5	<5	2	0.1
Total	1,034	1,070	2,104	100
Percent	49.14	50.86		

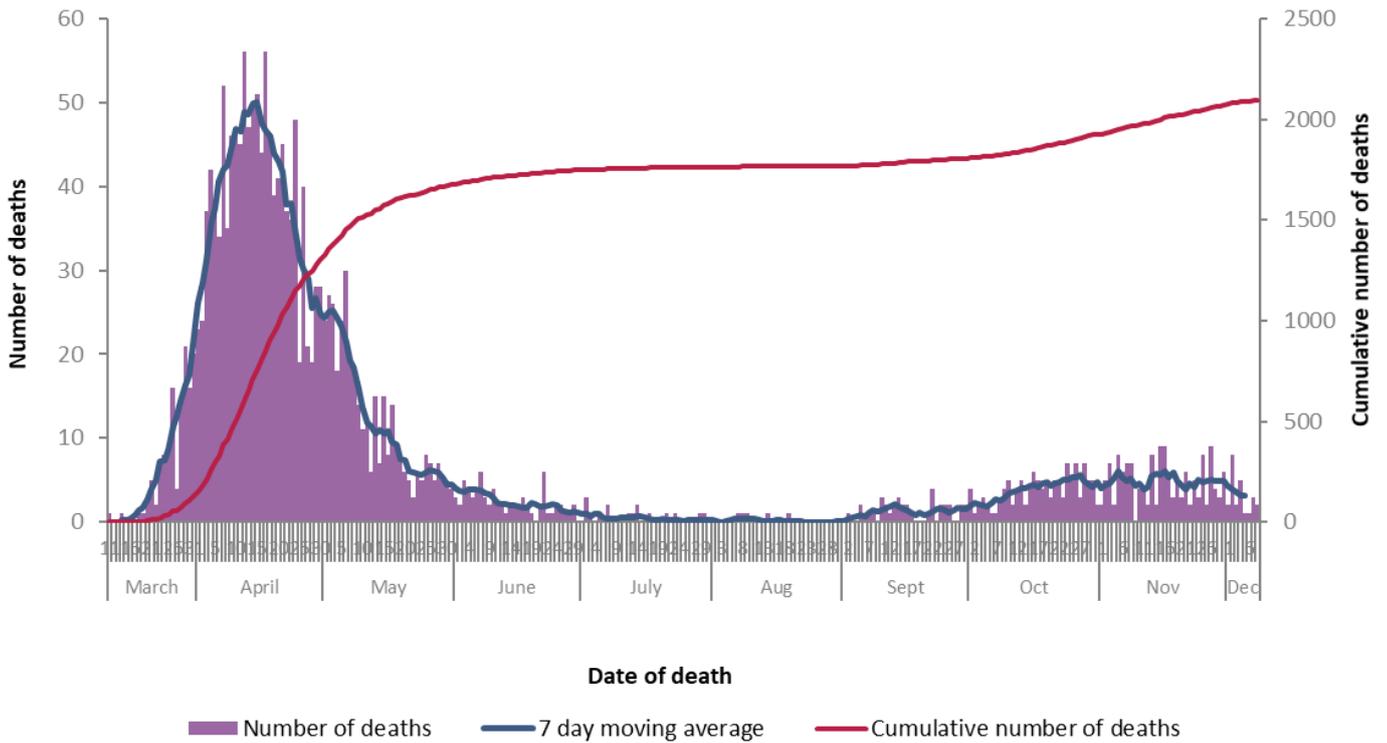


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 07/12/2020

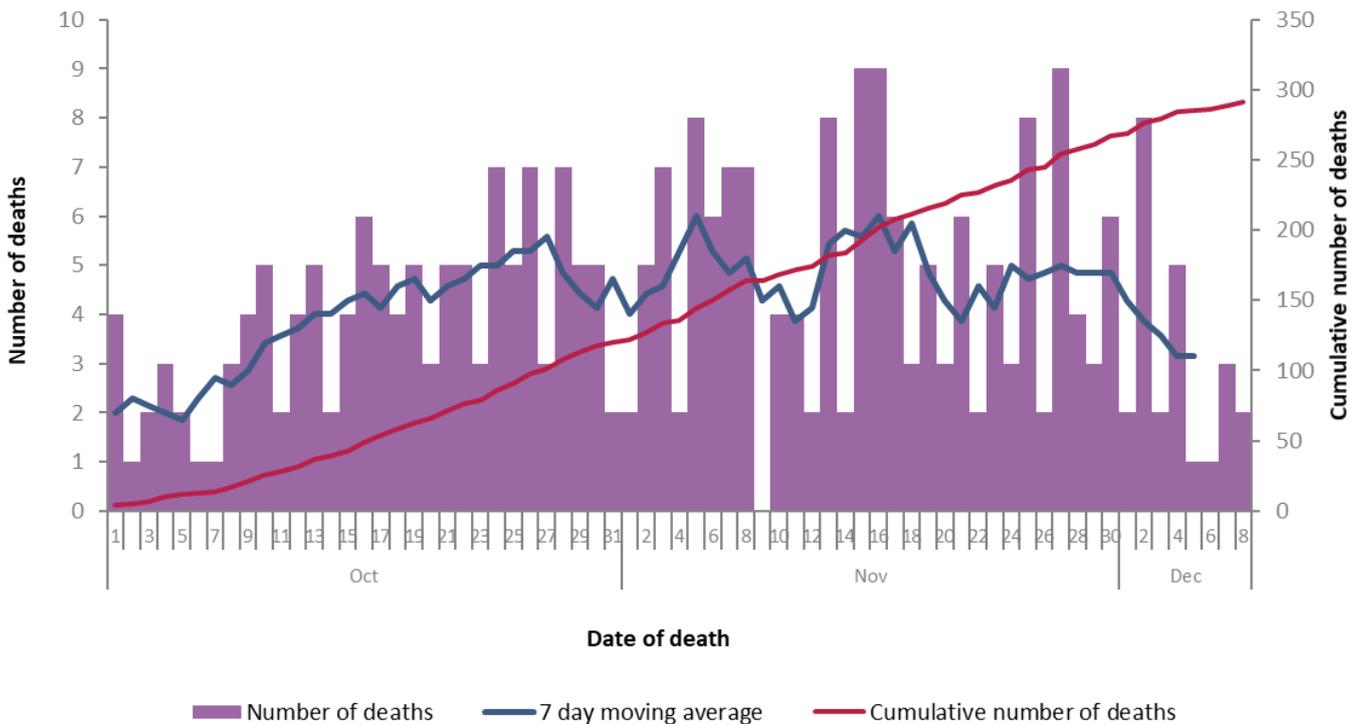


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total from 01/10/2020 to midnight 07/12/2020

* Date of death is not yet available for eight 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 11:14 on 09/12/2020. 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.