



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 15/12/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 13/12/2020

	Number	Percent
Total number of confirmed cases	76,447	
National cumulative incidence of confirmed cases per 100,000 population	1,605.4	
Total number of cases hospitalised	5,451	7.13
Total number of cases admitted to ICU	647	0.85
Total number of deaths among confirmed cases	1,874	2.45
Case fatality ratio (CFR, %)	2.45	
National cumulative incidence of confirmed deaths per 100,000 population	39.35	
Total number of outbreaks/clusters	10,180	
Total number of cases associated with clusters	42,474	55.56
Total number of imported cases	685	0.9
Number of cases in healthcare workers	12,557	16.43
Males	36,044	47.15
Females	40,367	52.8
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 09:15 on 15/12/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

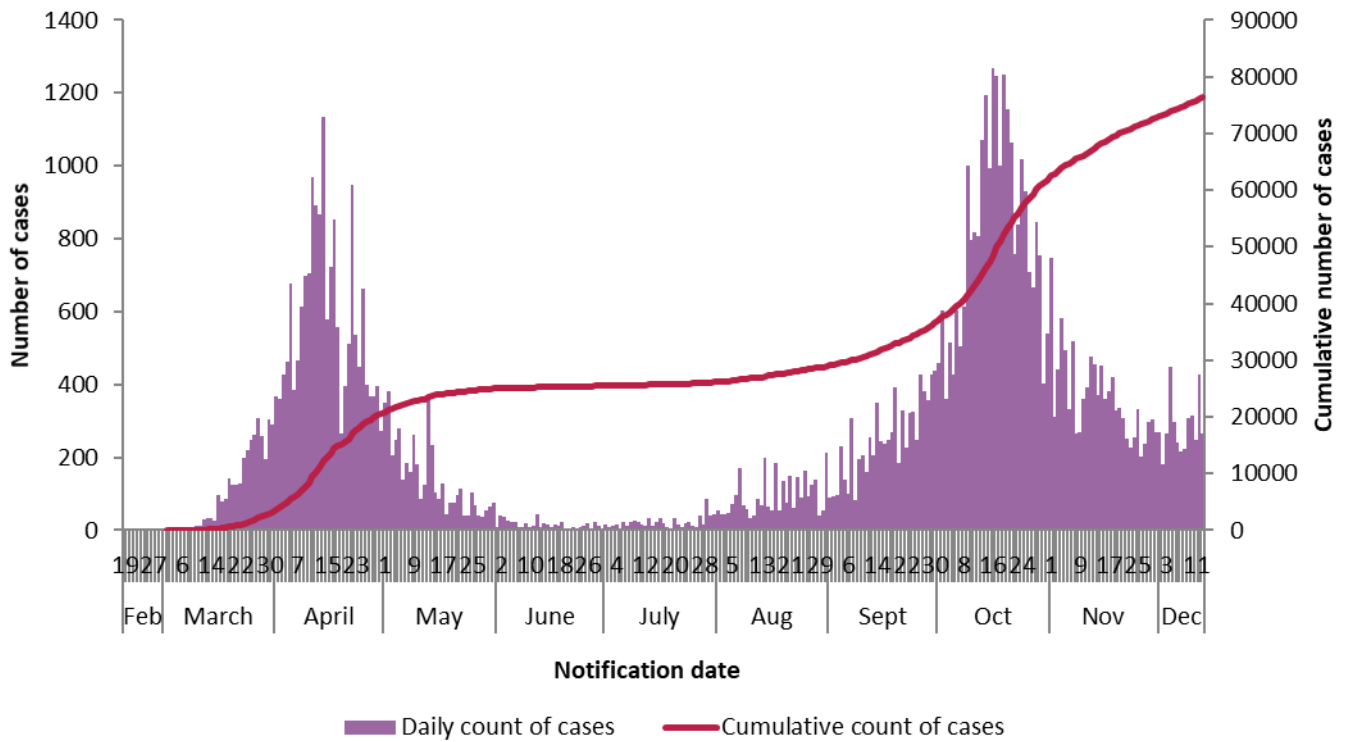


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 13/12/2020

*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

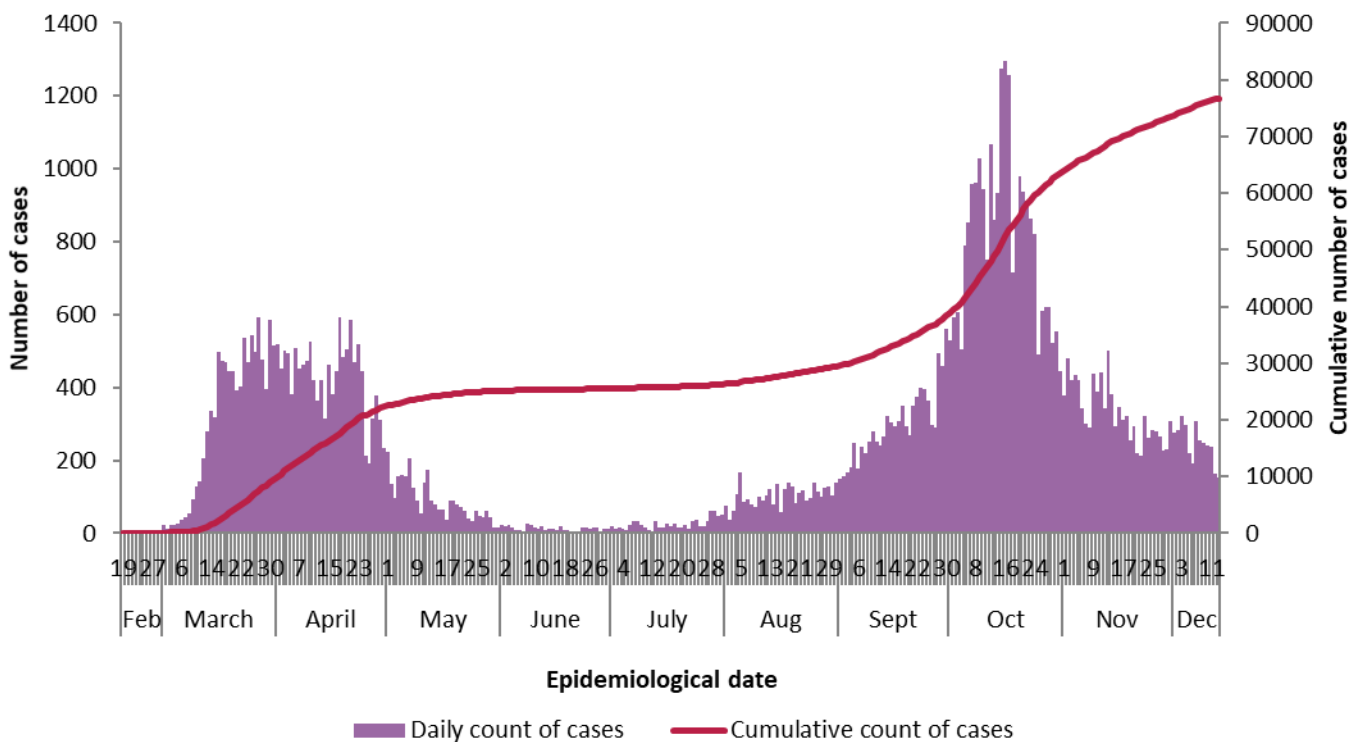


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 13/12/2020**

**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.

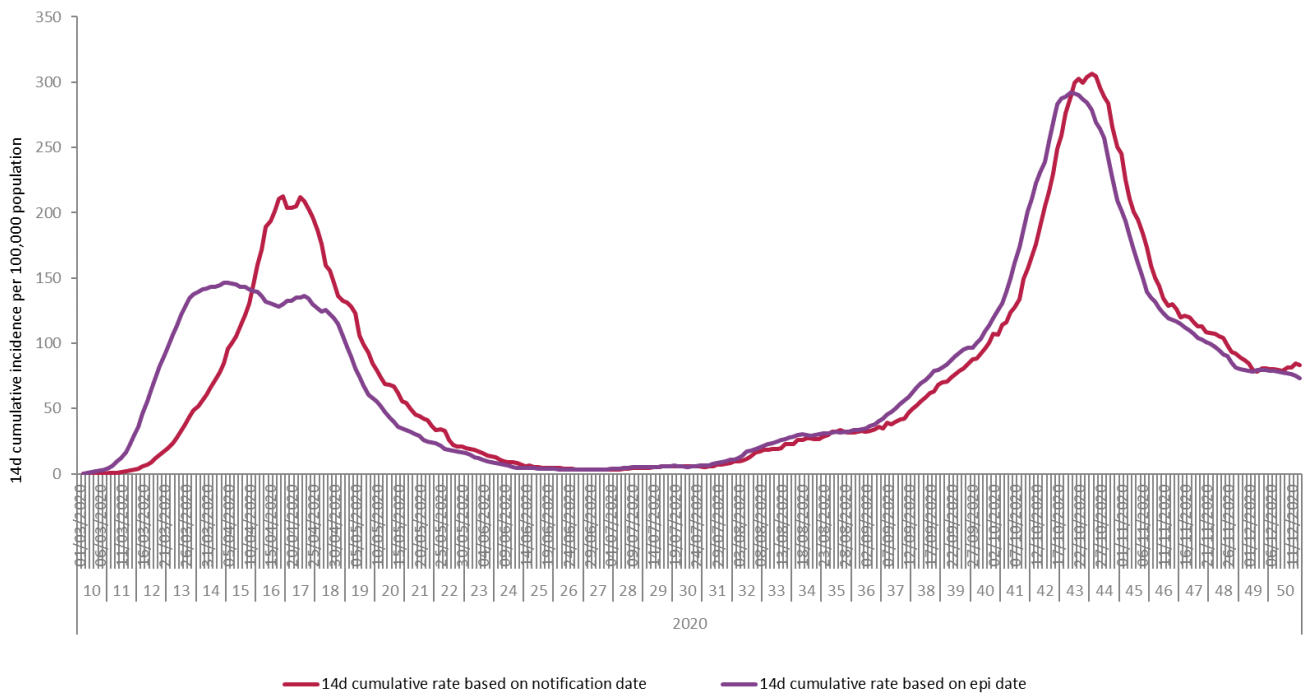


Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 13/12/2020**

* 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 13/12/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		76,447	100
Sex	Male:Female ratio	0.89	
	Male	36,044	47.15
	Female	40,367	52.8
	Unknown	36	0.05
Age	Median age (years)	39	
	Mean age (years)	41	
	Age range (years)	0 - 108	
	0-4 yrs	2,041	2.67
	5-14 yrs	5,098	6.67
	15-24 yrs	13,287	17.38
	25-34 yrs	12,833	16.79
	35-44 yrs	11,991	15.69
	45-54 yrs	11,531	15.08
	55-64 yrs	8,121	10.62
	65-74 yrs	4,369	5.72
	75-84 yrs	3,823	5
	85+ yrs	3,325	4.35
	Unknown	28	0.04

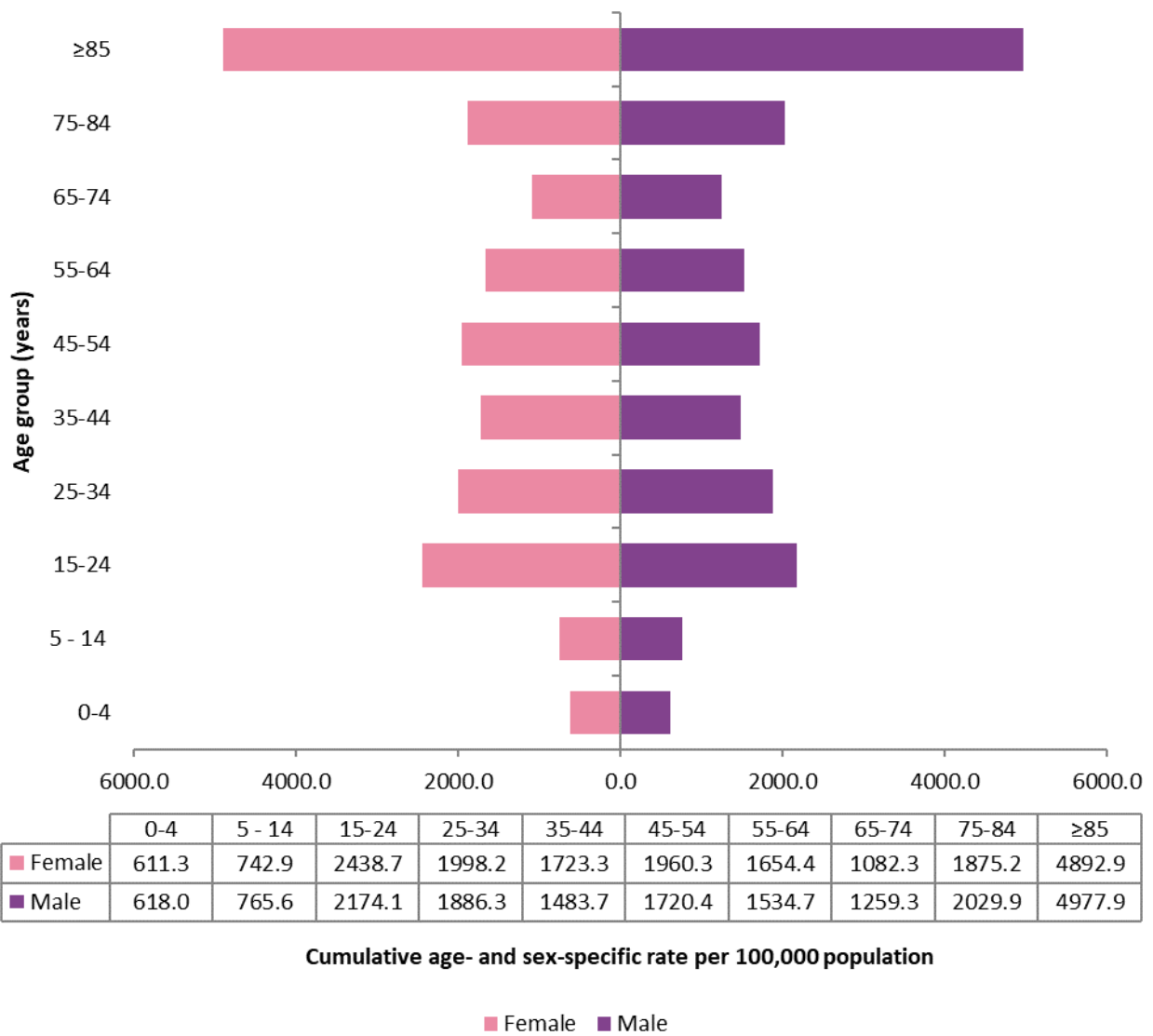


Figure 3: Cumulative age- and sex-specific incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 13/12/2020 (excluding 27 cases for whom age is unknown, 35 cases for whom sex is unknown and 1 case for whom both are unknown)

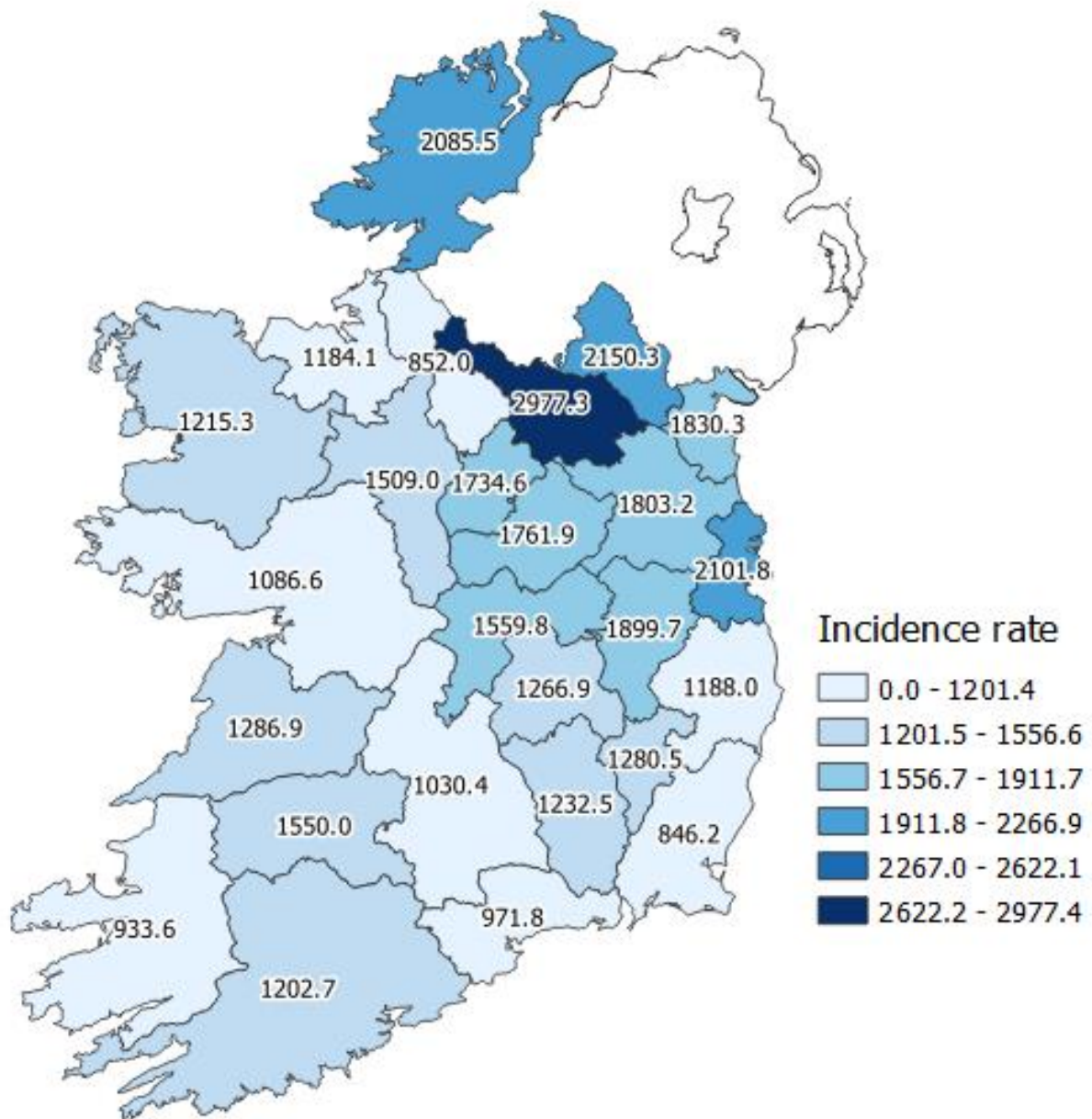


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 13/12/2020

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 13/12/2020

County Name	Number of cases	Percent
Carlow	729	0.95
Cavan	2,268	2.97
Clare	1,529	2
Cork	6,529	8.54
Donegal	3,320	4.34
Dublin	28,319	37.04
Galway	2,804	3.67
Kerry	1,379	1.8
Kildare	4,227	5.53
Kilkenny	1,223	1.6
Laois	1,073	1.4
Leitrim	273	0.36
Limerick	3,021	3.95
Longford	709	0.93
Louth	2,359	3.09
Mayo	1,586	2.07
Meath	3,517	4.6
Monaghan	1,320	1.73
Offaly	1,216	1.59
Roscommon	974	1.27
Sligo	776	1.02
Tipperary	1,644	2.15
Waterford	1,129	1.48
Westmeath	1,564	2.05
Wexford	1,267	1.66
Wicklow	1,692	2.21
Total	76,447	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 13/12/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	22,899	29.95%
Local transmission, incl. possible local transmission	51,727	67.66%
Travel abroad, incl. possible travel abroad	1,047	1.37%
Unknown	774	1.01%
Total	76,447	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 13/12/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	2041	58	1.06	2	0.31
5-14 yrs	5098	52	0.95	4	0.62
15-24 yrs	13287	182	3.34	8	1.24
25-34 yrs	12833	342	6.27	18	2.78
35-44 yrs	11991	427	7.83	57	8.81
45-54 yrs	11531	681	12.49	116	17.93
55-64 yrs	8121	780	14.31	167	25.81
65-74 yrs	4369	989	18.14	184	28.44
75-84 yrs	3823	1,202	22.05	82	12.67
85+ yrs	3325	736	13.5	9	1.39
Unknown	28	2	0.04	0	0
Total	76,447	5,451	100	647	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation, ICU admission and vital status 13/12/2020

	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)	2,041	5,098	13,287	12,833	11,991	11,531	8,121	4,369	3,823	3,325	28
Cases hospitalised (n)	58	52	182	342	427	681	780	989	1,202	736	2
Cases hospitalised (%)	2.84	1.02	1.37	2.67	3.56	5.91	9.6	22.64	31.44	22.14	7.14
Cases admitted to ICU (n)	2	4	8	18	57	116	167	184	82	9	0
Cases admitted to ICU (%)	0.1	0.08	0.06	0.14	0.48	1.01	2.06	4.21	2.14	0.27	0
Deaths (n)	0	0	2	6	12	33	83	287	645	806	0
Case fatality ratio (%)	0	0	0.02	0.05	0.1	0.29	1.02	6.57	16.87	24.24	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 13/12/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC**	Total
Private house	4581	173	196	516	441	627	634	590		7758
Other*	262	75	162	85	141	255	65	150	2	1197
Nursing home	172	18	20	50	12	23	24	45		364
Workplace	113	20	23	52	37	27	31	27		330
Residential institution	154	16	18	36	9	30	17	10		290
Hospital	116	8	10	22	15	17	8	7		203
Comm. Hosp/Long-stay unit	6	4	3		5	7	6	5		36
Unknown					2					2
Total	5404	314	432	761	662	986	785	834	2	10180

*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.

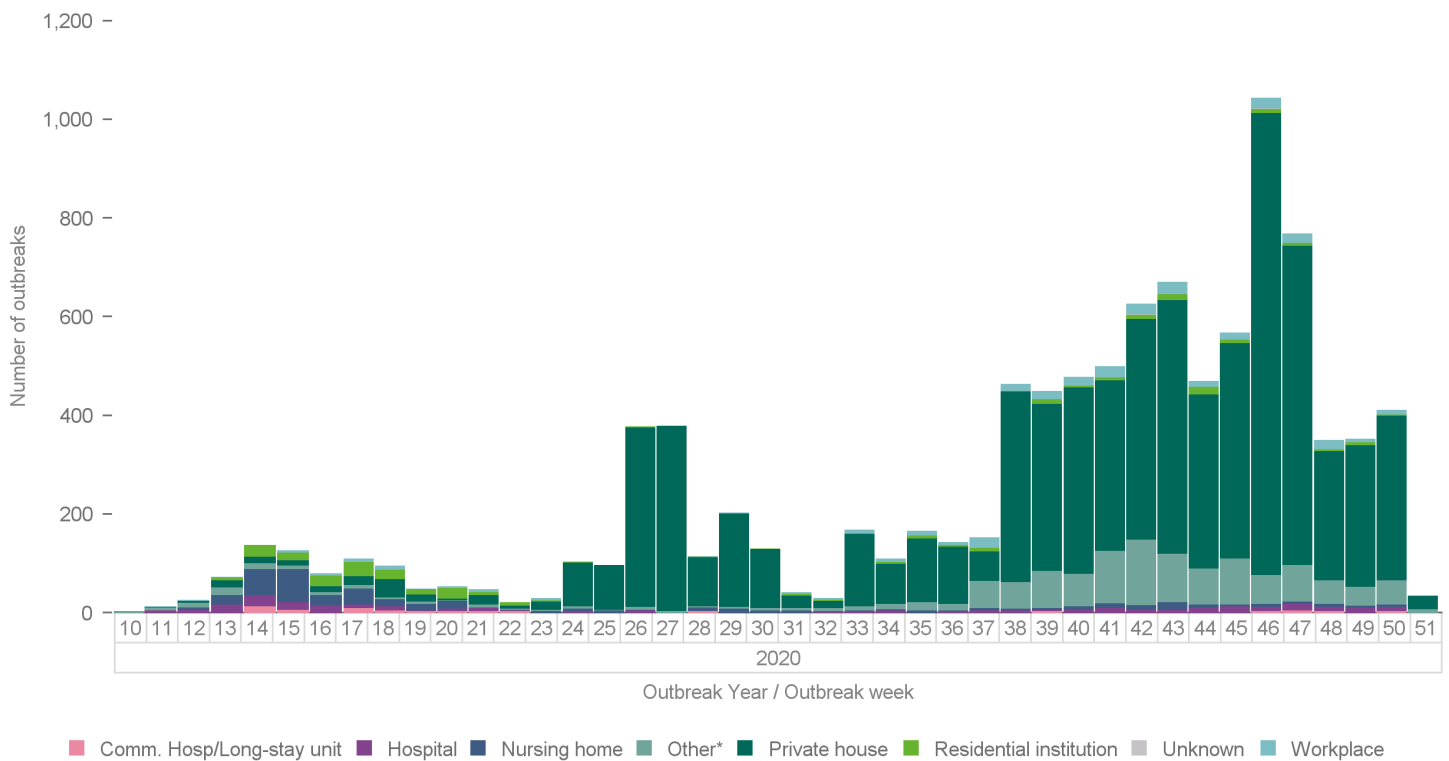


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 13/12/2020

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

Note: 9,342 COVID-19 outbreaks were reported on CIDR between week 24 and week 50 2020 (9th June to 13th December). Of these, 7,483 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, 2,630 in October, 1,185 in November and 162 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 13/12/2020

	Number	Percent
Total number of deaths	2,134	
Confirmed	1,874	87.82
Probable	95	4.45
Possible	165	7.73
Total number of cases hospitalised	976	45.74
Cases admitted to ICU	149	6.98
Cases not admitted to ICU	827	38.75
Total number of imported cases	5	0.23
Number of cases in healthcare workers	8	0.37
Number with underlying clinical conditions	1,982	92.88
Total number of male cases	1,086	50.89
M:F ratio	1.04	
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 13/12/2020

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	14	21	35	1.64
55-64 yrs	30	59	89	4.17
65-74 yrs	110	205	315	14.76
75-84 yrs	328	399	727	34.07
85+ yrs	554	391	945	44.28
Unknown	<5	<5	2	0.09
Total	1,048	1,086	2,134	100
Percent	49.11	50.89		

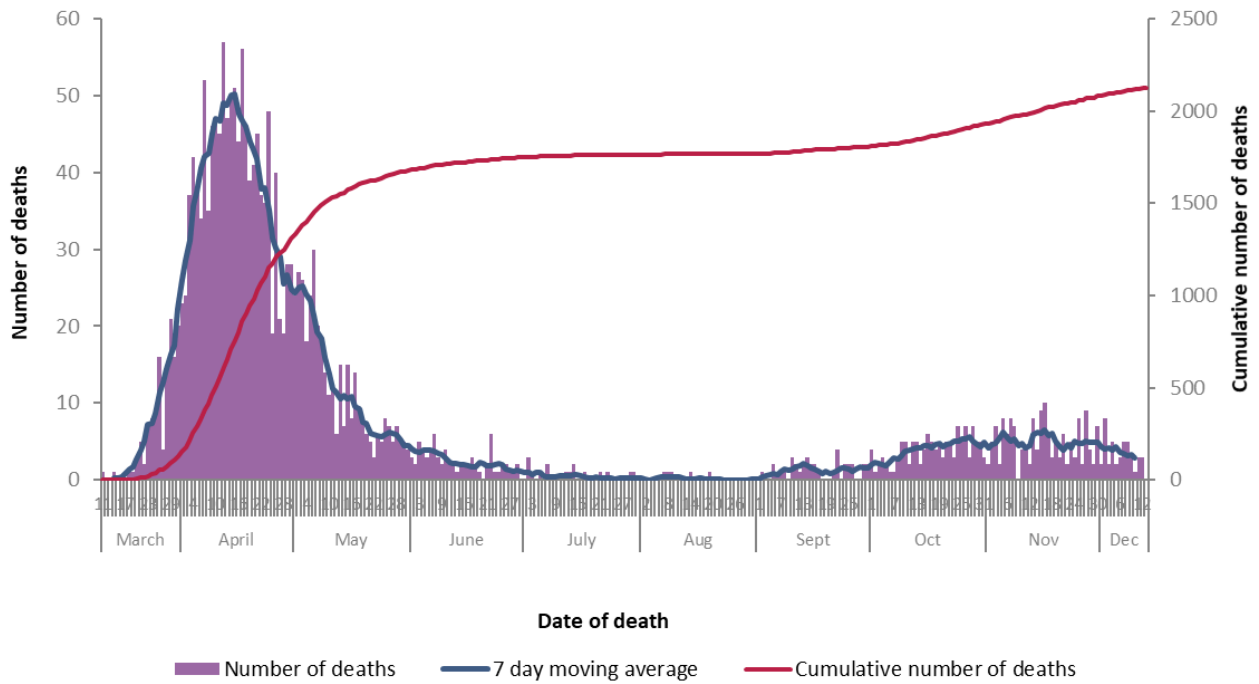


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 13/12/2020

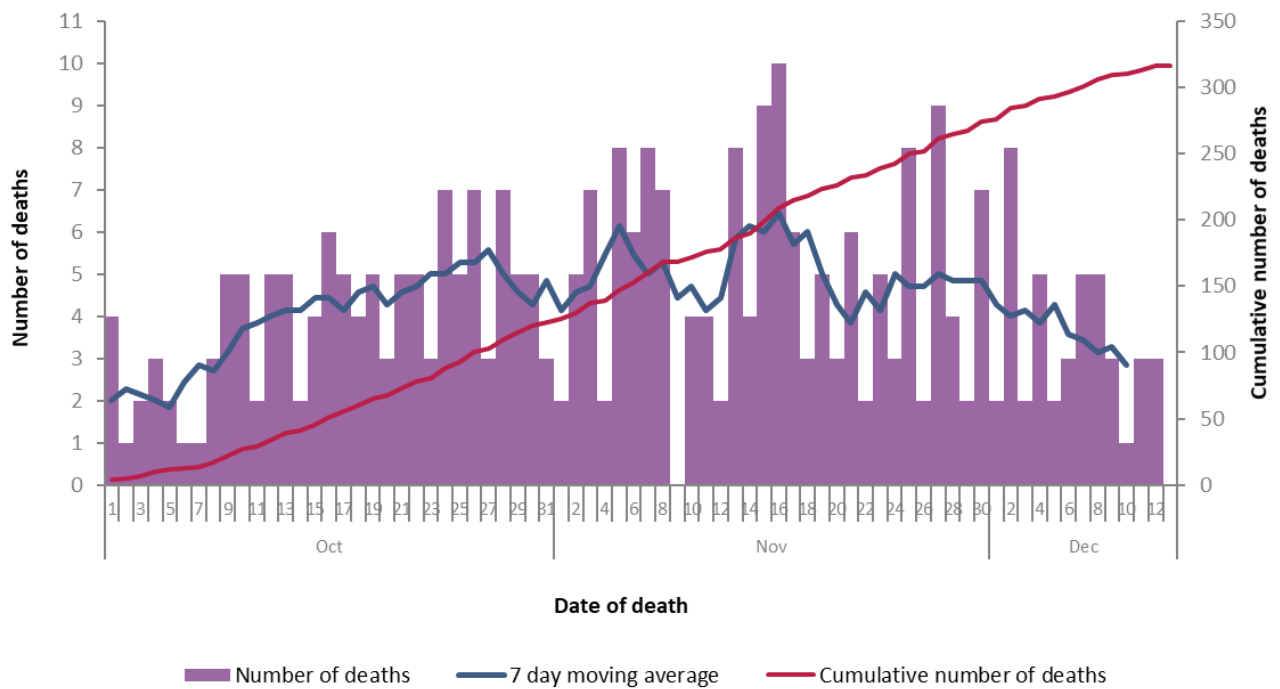


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total from 01/10/2020 to midnight 13/12/2020

* 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 09:15 on 15/12/2020. 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.