



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 14/12/2020 for National Public Health Emergency Team

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

	Number	Percent
Total number of confirmed cases	76,185	
National cumulative incidence of confirmed cases per 100,000 population	1,599.9	
Total number of cases hospitalised	5,435	7.13
Total number of cases admitted to ICU	641	0.84
Total number of deaths among confirmed cases	1,866	2.45
Case fatality ratio (CFR, %)	2.45	
National cumulative incidence of confirmed deaths per 100,000 population	39.19	
Total number of outbreaks/clusters	10,150	
Total number of cases associated with clusters	42,295	55.52
Total number of imported cases	685	0.9
Number of cases in healthcare workers	12,513	16.42
Males	35,915	47.14
Females	40,234	52.81
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 09:41 on 14/12/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

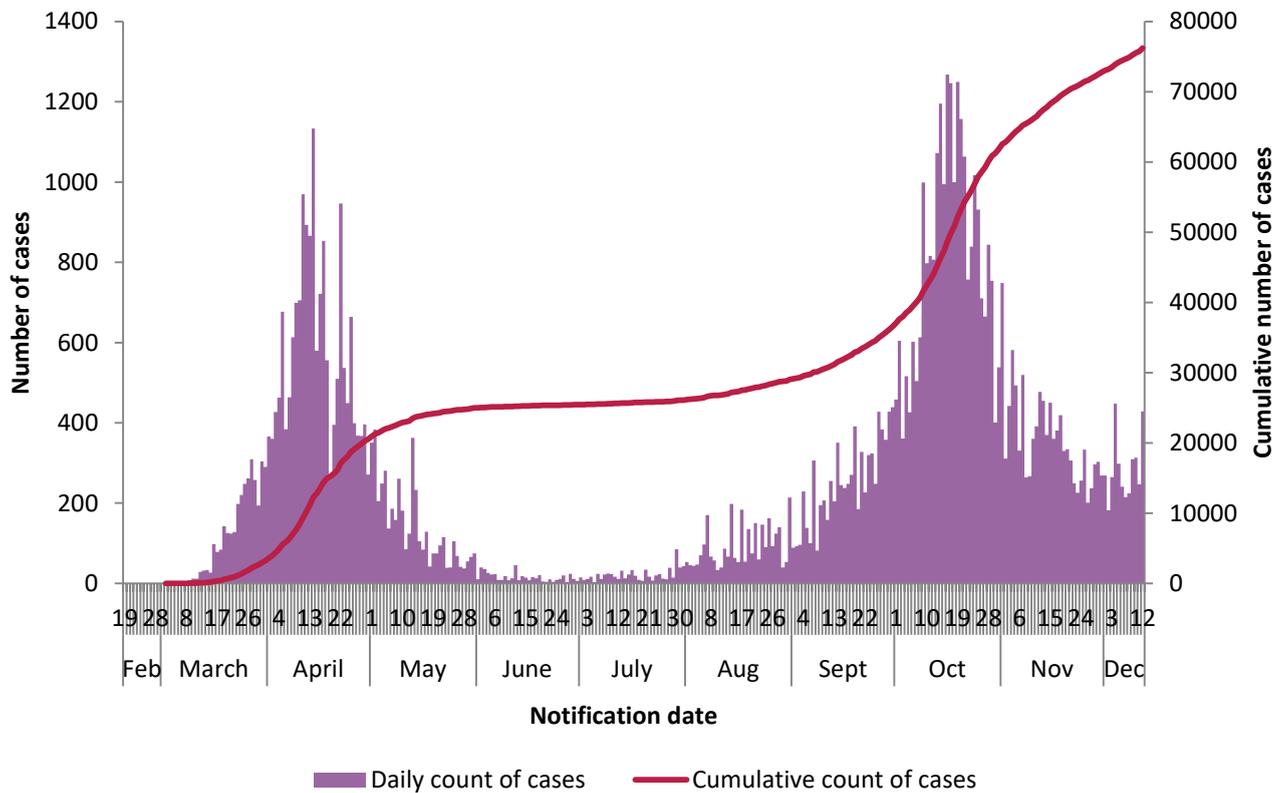


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 12/12/2020

*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

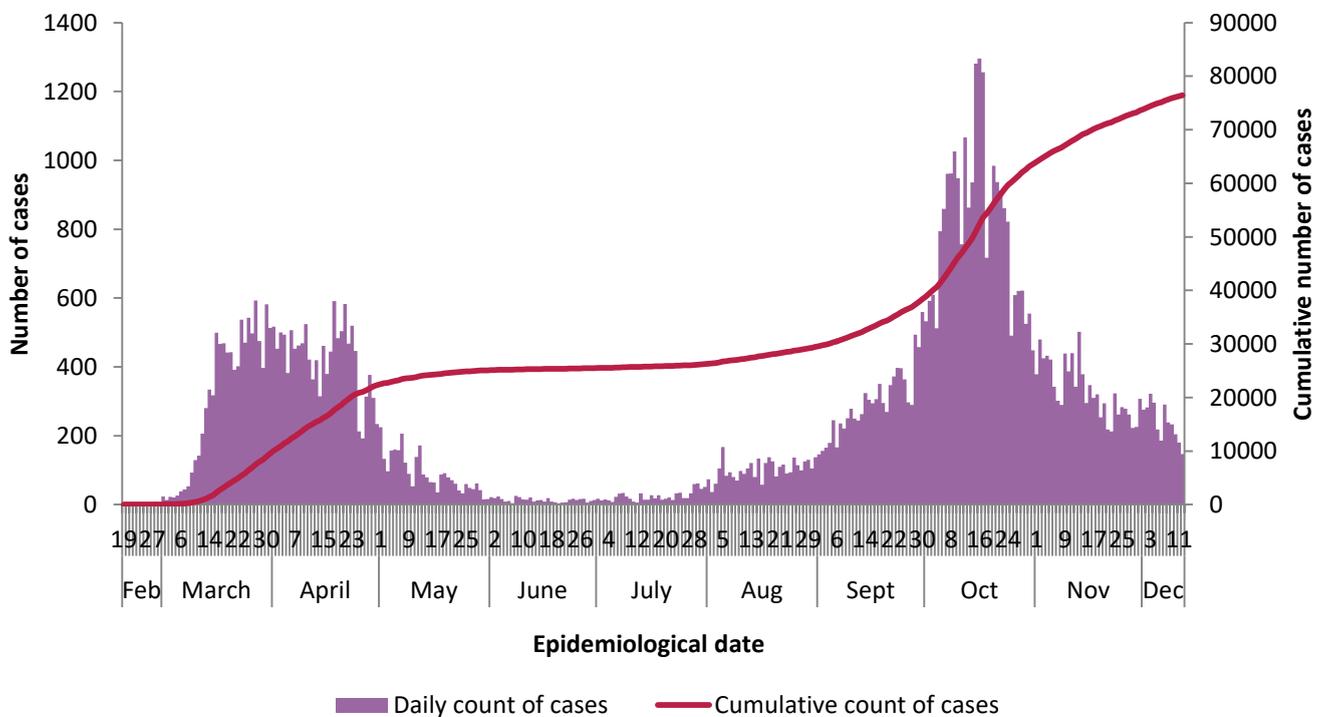


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 12/12/2020**

**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.

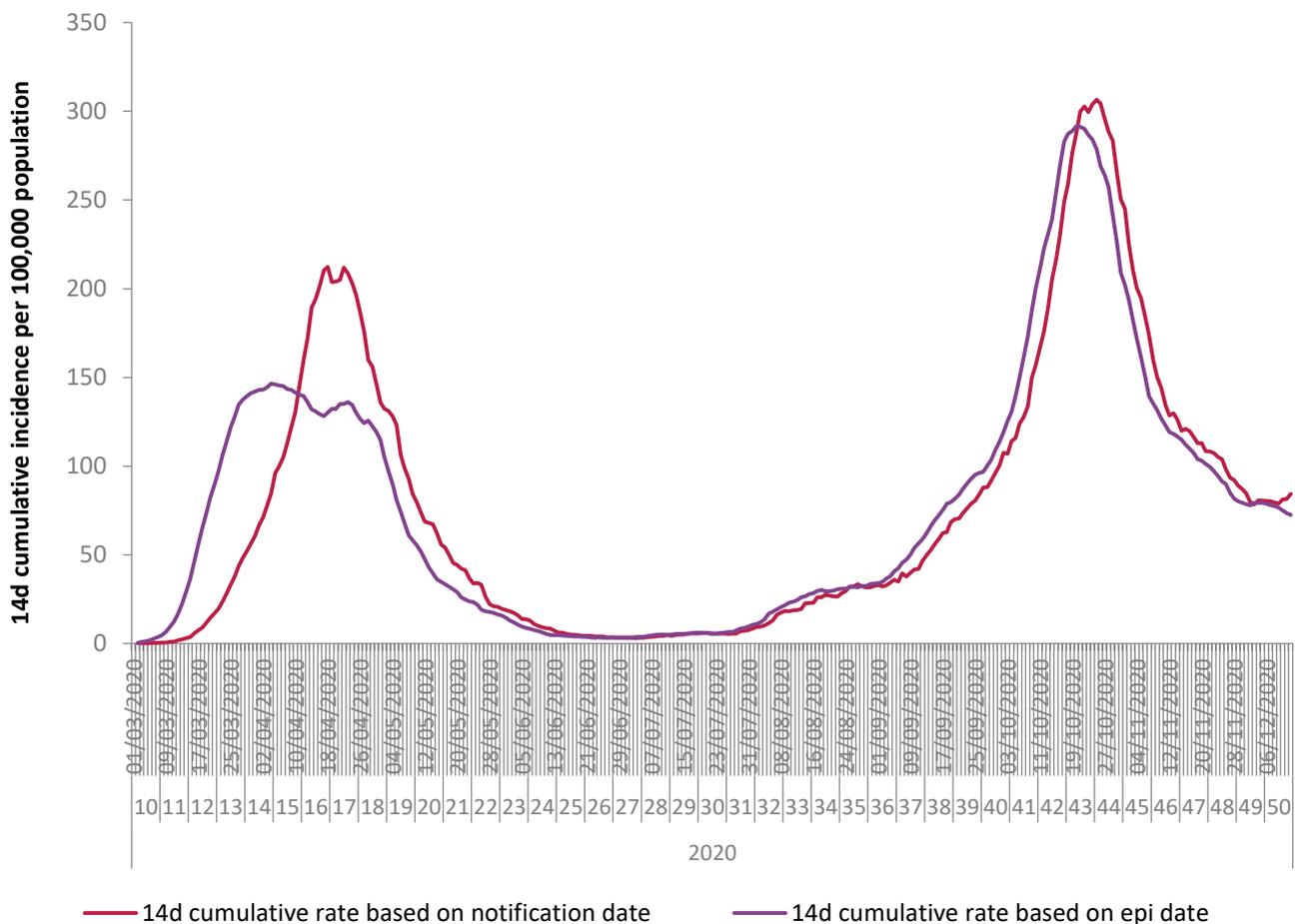


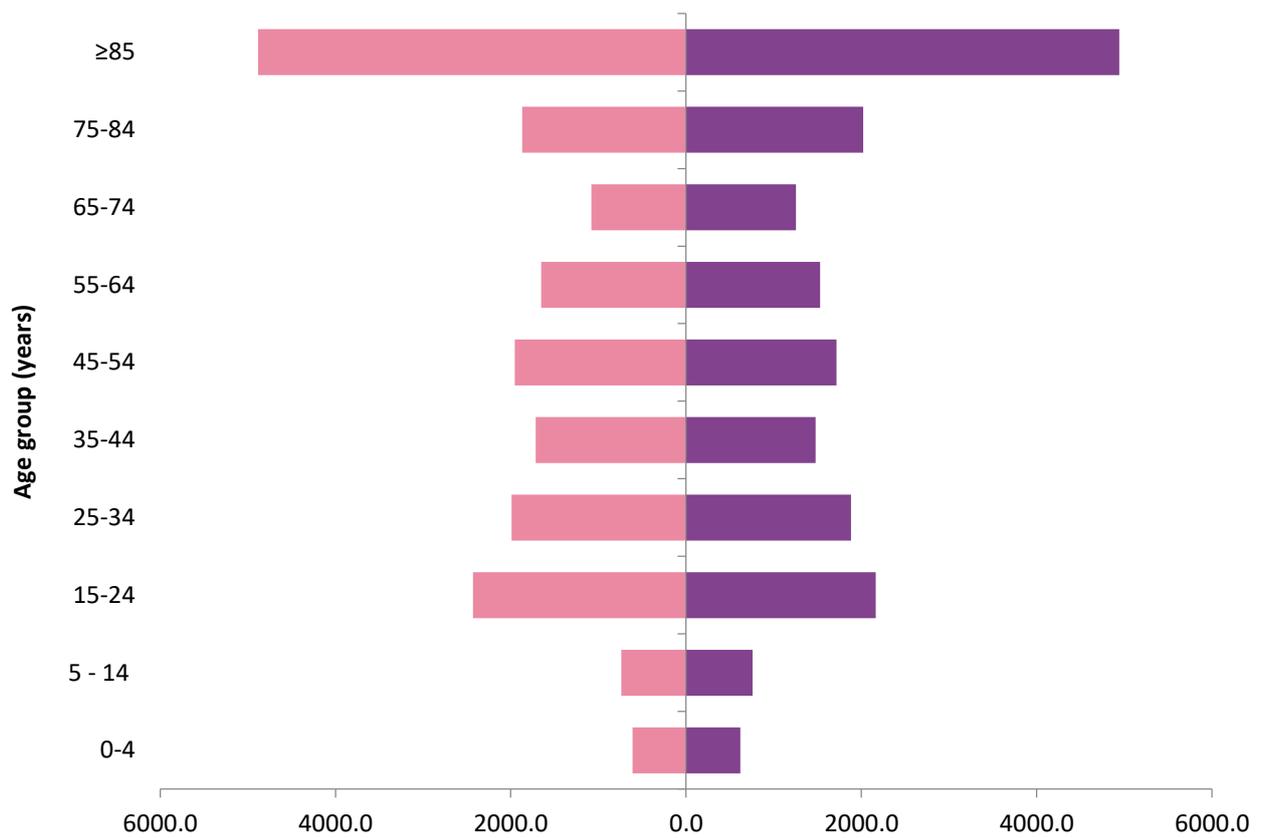
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 12/12/2020**

* 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

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Table 1: Characteristics of confirmed COVID-19 cases notified in Ireland up to midnight on 12/12/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		76,185	100
Sex	Male:Female ratio	0.89	
	Male	35,915	47.14
	Female	40,234	52.81
	Unknown	36	0.05
Age	Median age (years)	39	
	Mean age (years)	41	
	Age range (years)	0 - 108	
	0-4 yrs	2,039	2.68
	5-14 yrs	5,059	6.64
	15-24 yrs	13,242	17.38
	25-34 yrs	12,796	16.8
	35-44 yrs	11,943	15.68
	45-54 yrs	11,499	15.09
	55-64 yrs	8,100	10.63
	65-74 yrs	4,356	5.72
	75-84 yrs	3,810	5
	85+ yrs	3,313	4.35
	Unknown	28	0.04



	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	≥85
Female	610.1	736.9	2431.0	1992.0	1716.4	1954.9	1651.3	1079.1	1868.6	4883.9
Male	618.0	759.8	2166.2	1881.3	1477.8	1715.9	1529.6	1255.5	2023.2	4943.2

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 12/12/2020 (excluding 27 cases for whom age is unknown, 35 cases for whom sex is unknown and 1 case for whom both are unknown)

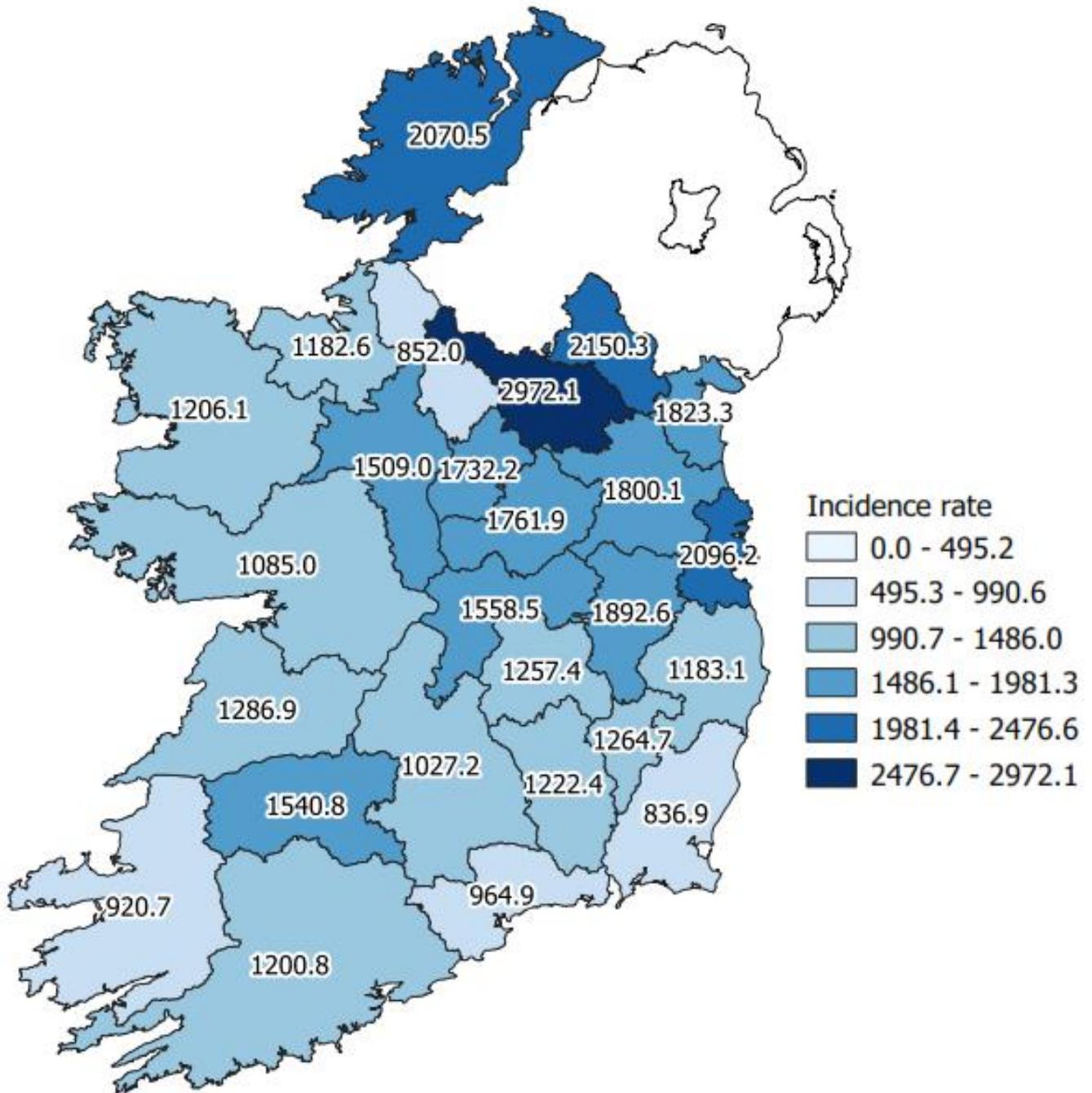


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 12/12/2020

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 12/12/2020

County Name	Number of cases	Percent
Carlow	720	0.95
Cavan	2,264	2.97
Clare	1,529	2.01
Cork	6,519	8.56
Donegal	3,296	4.33
Dublin	28,243	37.07
Galway	2,800	3.68
Kerry	1,360	1.79
Kildare	4,211	5.53
Kilkenny	1,213	1.59
Laois	1,065	1.4
Leitrim	273	0.36
Limerick	3,003	3.94
Longford	708	0.93
Louth	2,350	3.08
Mayo	1,574	2.07
Meath	3,511	4.61
Monaghan	1,320	1.73
Offaly	1,215	1.59
Roscommon	974	1.28
Sligo	775	1.02
Tipperary	1,639	2.15
Waterford	1,121	1.47
Westmeath	1,564	2.05
Wexford	1,253	1.64
Wicklow	1,685	2.21
Total	76,185	100

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

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	22,874	30.02%
Local transmission, incl. possible local transmission	51,471	67.56%
Travel abroad, incl. possible travel abroad	1,042	1.37%
Unknown	798	1.05%
Total	76,185	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 12/12/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	2039	59	1.09	2	0.31
5-14 yrs	5059	52	0.96	4	0.62
15-24 yrs	13242	179	3.29	8	1.25
25-34 yrs	12796	343	6.31	18	2.81
35-44 yrs	11943	424	7.8	57	8.89
45-54 yrs	11499	677	12.46	114	17.78
55-64 yrs	8100	777	14.3	165	25.74
65-74 yrs	4356	986	18.14	183	28.55
75-84 yrs	3810	1,200	22.08	82	12.79
85+ yrs	3313	736	13.54	8	1.25
Unknown	28	2	0.04	0	0
Total	76,185	5,435	100	641	100

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

	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)	2,039	5,059	13,242	12,796	11,943	11,499	8,100	4,356	3,810	3,313	28
Cases hospitalised (n)	59	52	179	343	424	677	777	986	1,200	736	2
Cases hospitalised (%)	2.89	1.03	1.35	2.68	3.55	5.89	9.59	22.64	31.5	22.22	7.14
Cases admitted to ICU (n)	2	4	8	18	57	114	165	183	82	8	0
Cases admitted to ICU (%)	0.1	0.08	0.06	0.14	0.48	0.99	2.04	4.2	2.15	0.24	0
Deaths (n)	0	0	2	6	12	32	83	286	643	802	0
Case fatality ratio (%)	0	0	0.02	0.05	0.1	0.28	1.02	6.57	16.88	24.21	0

Outbreaks of COVID-19

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

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC**	Total
Private house	4,567	173	193	515	433	627	634	590		7,732
Other*	262	75	161	86	137	255	65	150	2	1,193
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	5,390	314	428	761	650	986	785	834	2	10,150

*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.

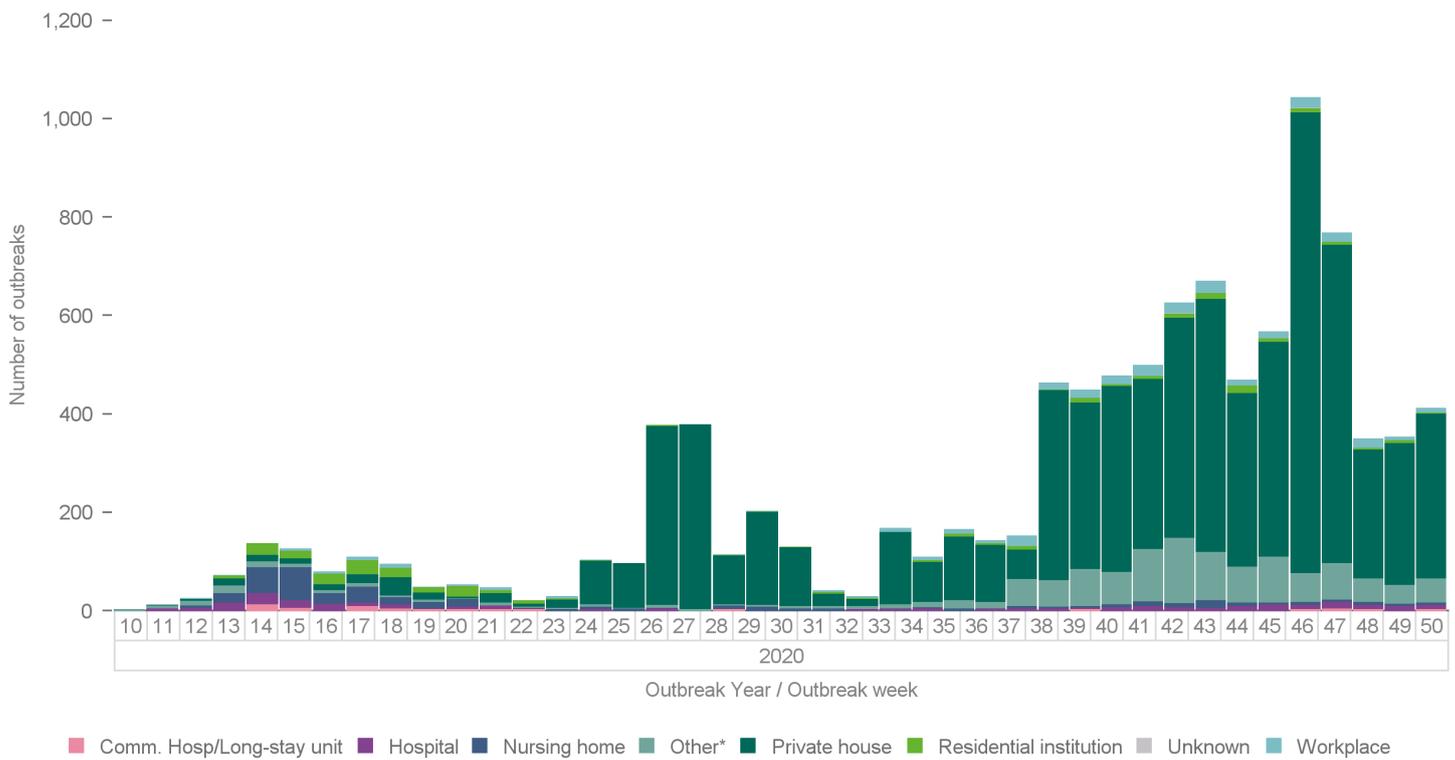


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 12/12/2020

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

Note: 9,314 COVID-19 outbreaks were reported on CIDR between week 24 and week 50 2020 (9th June to 12th December). Of these, 7,456 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, 2,627 in October, 1,172 in November and 151 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 12/12/2020

	Number	Percent
Total number of deaths	2,126	
Confirmed	1,866	87.77
Probable	95	4.47
Possible	165	7.76
Total number of cases hospitalised	971	45.67
Cases admitted to ICU	147	6.91
Cases not admitted to ICU	824	38.76
Total number of imported cases	5	0.24
Number of cases in healthcare workers	8	0.38
Number with underlying clinical conditions	1,978	93.04
Total number of male cases	1,082	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 12/12/2020

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	20	34	1.6
55-64 yrs	30	59	89	4.19
65-74 yrs	110	204	314	14.77
75-84 yrs	328	397	725	34.1
85+ yrs	550	391	941	44.26
Unknown	<5	<5	2	0.09
Total	1,044	1,082	2,126	100
Percent	49.11	50.89		

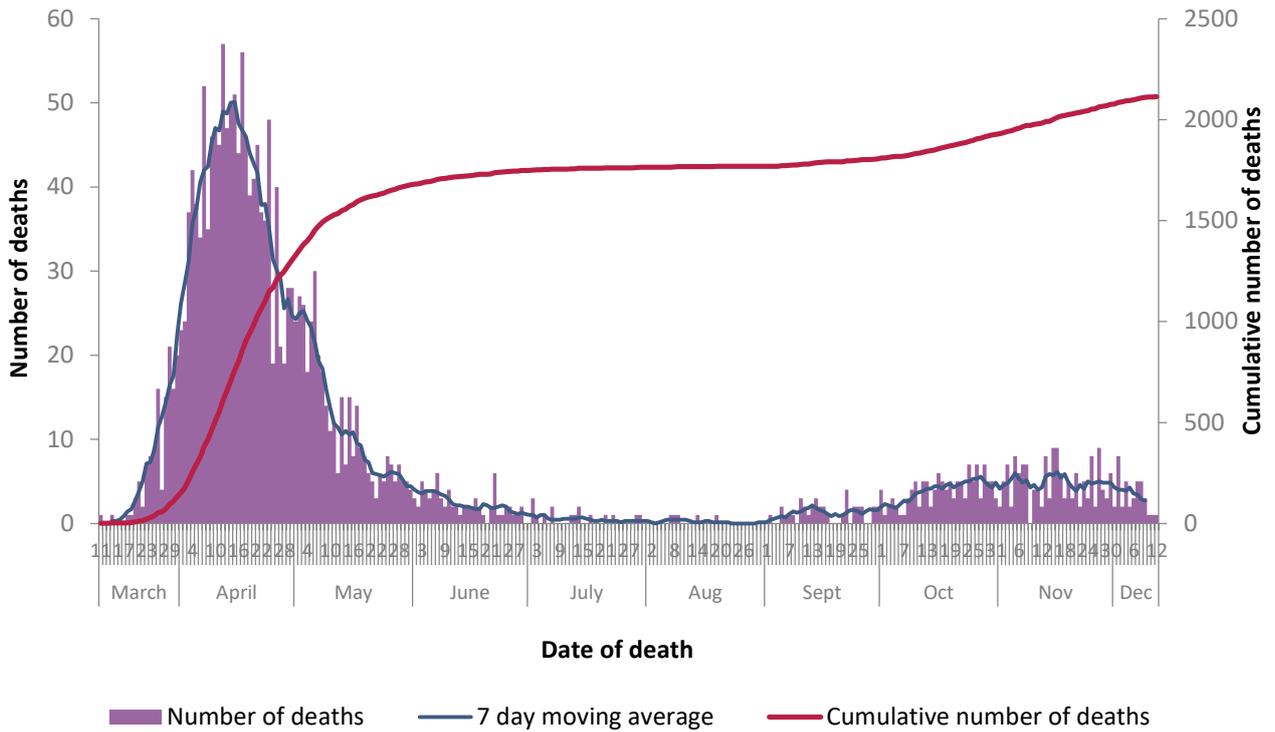


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 12/12/2020

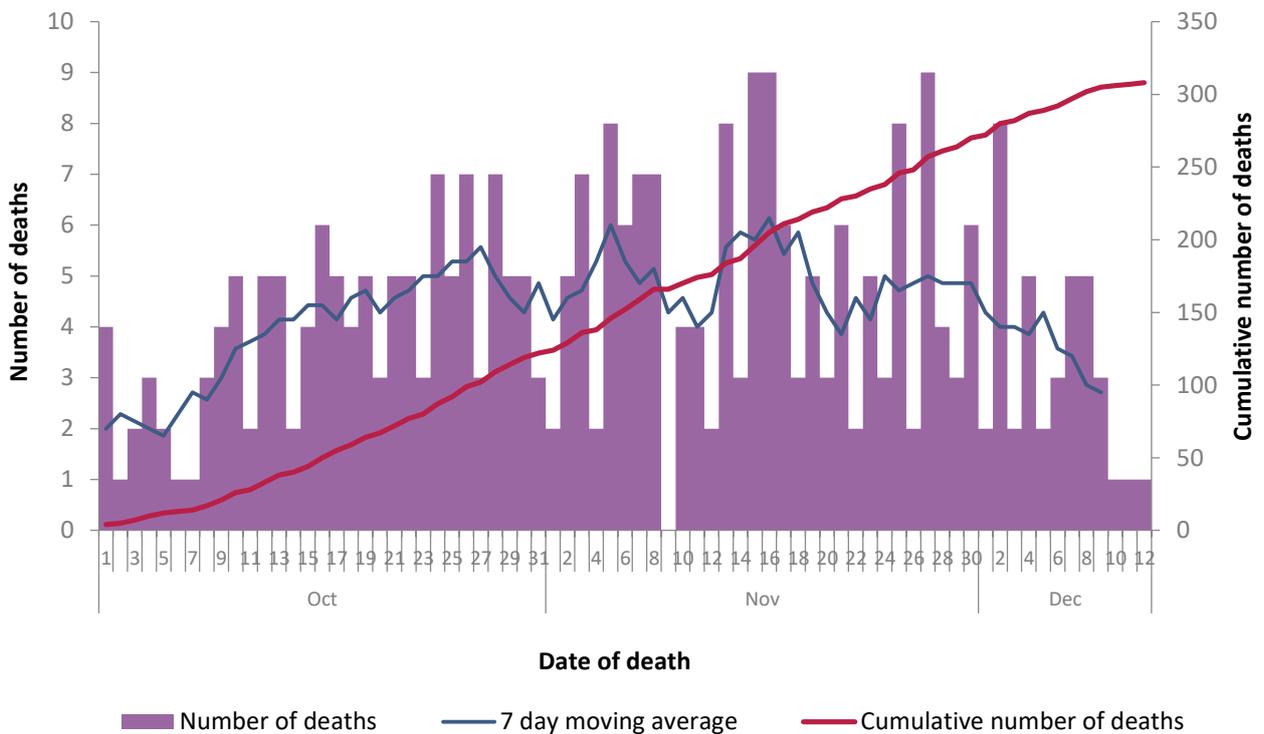


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total from 01/10/2020 to midnight 12/12/2020

* 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 09:41 on 14/12/2020. 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.