



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 10/12/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 08/12/2020

	Number	Percent
Total number of confirmed cases	74,893	
National cumulative incidence of confirmed cases per 100,000 population	1,572.77	
Total number of cases hospitalised	5,380	7.18
Total number of cases admitted to ICU	638	0.85
Total number of deaths among confirmed cases	1,858	2.48
Case fatality ratio (CFR, %)	2.48	
National cumulative incidence of confirmed deaths per 100,000 population	39.02	
Total number of outbreaks/clusters	9,983	
Total number of cases associated with clusters	41,651	55.61
Total number of imported cases	674	0.9
Number of cases in healthcare workers	12,363	16.51
Males	35,285	47.11
Females	39,574	52.84
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 09:33 on 10/12/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

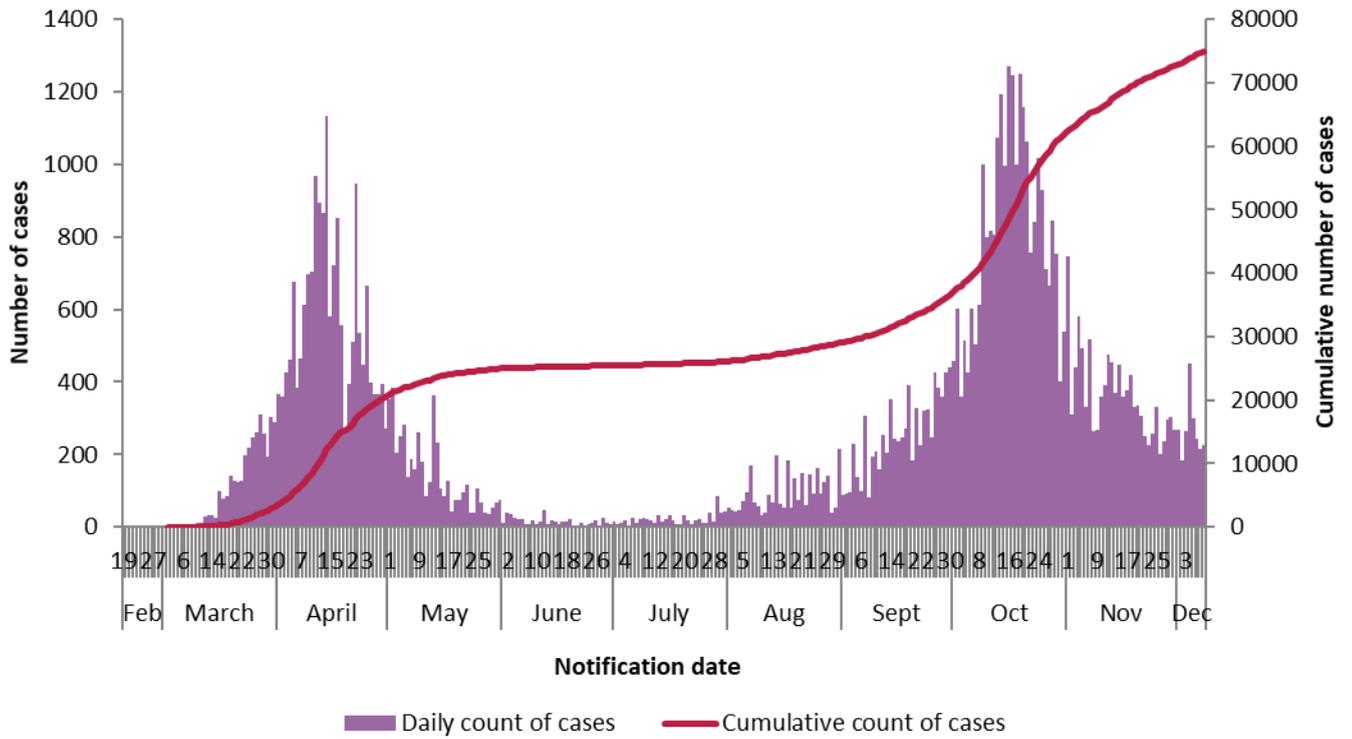


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 08/12/2020

*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

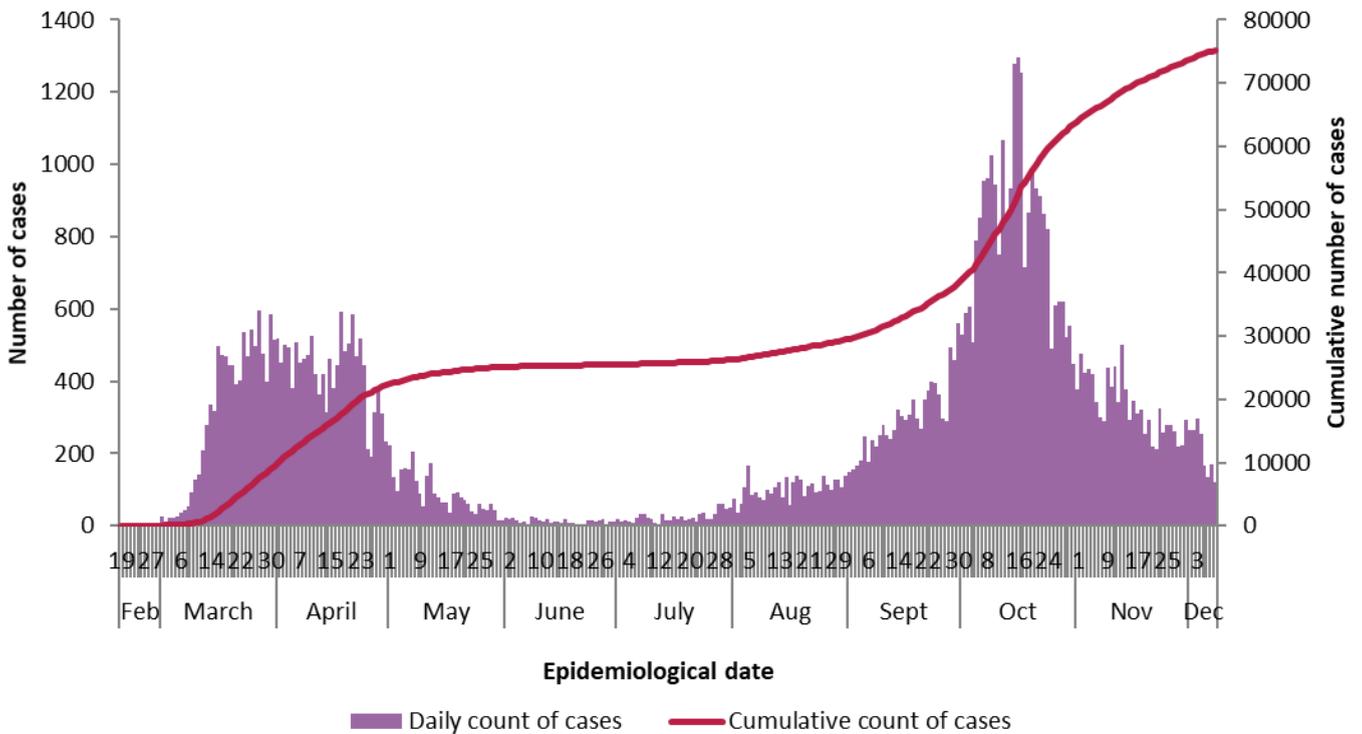


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 08/12/2020**

**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.

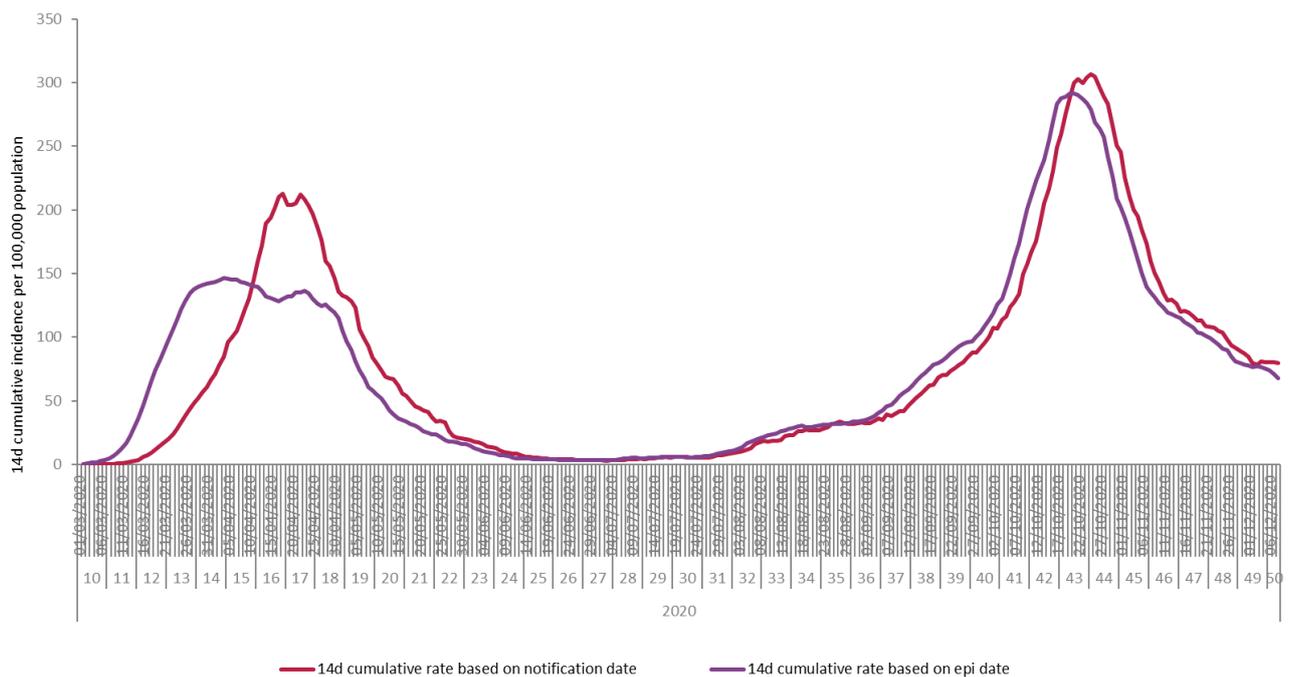


Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 08/12/2020**

* 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 08/12/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		74,893	100
Sex	Male:Female ratio	0.89	
	Male	35,285	47.11
	Female	39,574	52.84
	Unknown	34	0.05
Age	Median age (years)	39	
	Mean age (years)	41	
	Age range (years)	0 - 108	
	0-4 yrs	1,986	2.65
	5-14 yrs	4,896	6.54
	15-24 yrs	13,039	17.41
	25-34 yrs	12,567	16.78
	35-44 yrs	11,744	15.68
	45-54 yrs	11,294	15.08
	55-64 yrs	7,979	10.65
	65-74 yrs	4,307	5.75
	75-84 yrs	3,763	5.02
	85+ yrs	3,290	4.39
	Unknown	28	0.04

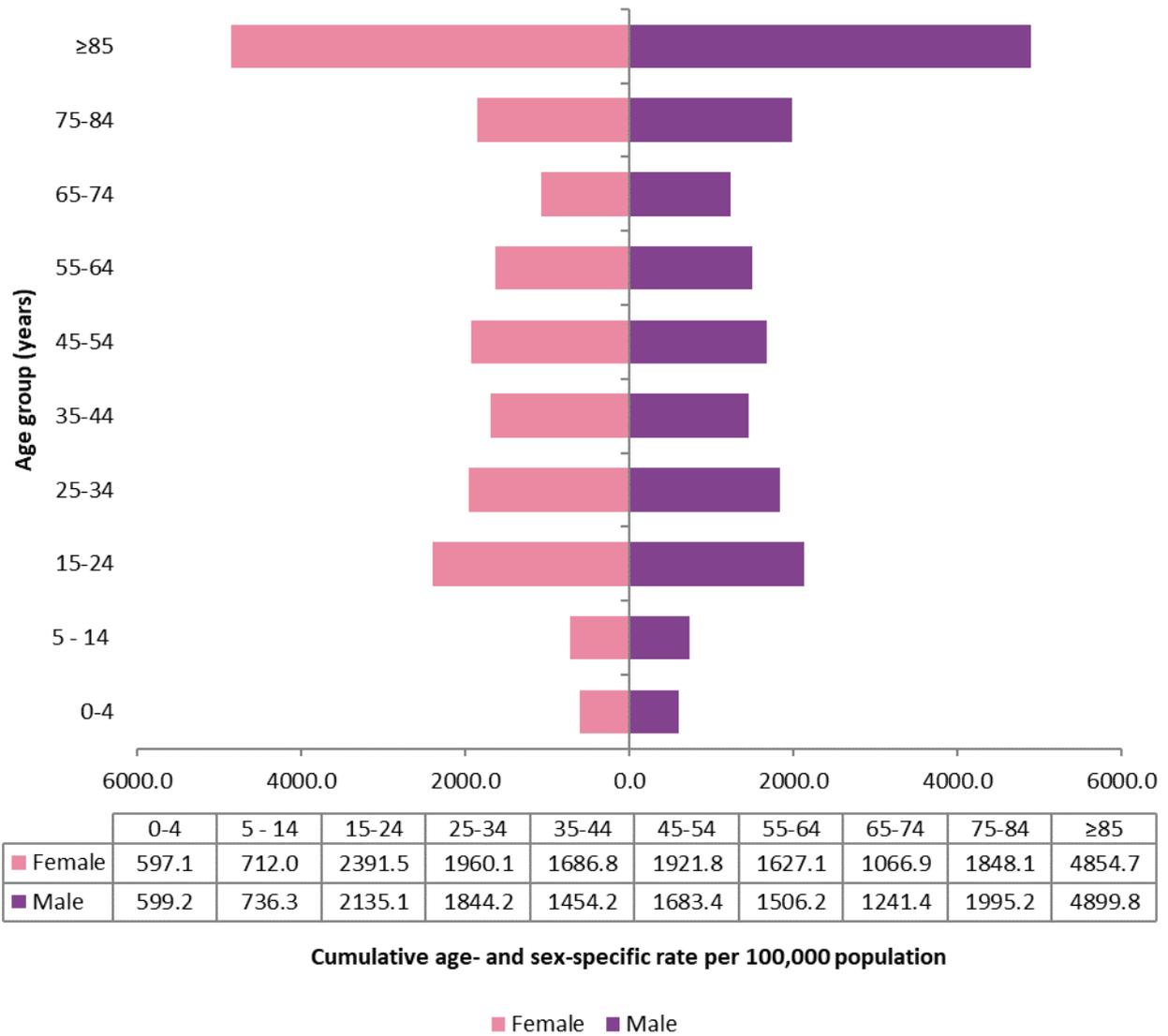


Figure 3: Cumulative age- and sex-specific incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 08/12/2020 (excluding 27 cases for whom age is unknown, 33 cases for whom sex is unknown and 1 case for whom both are unknown)

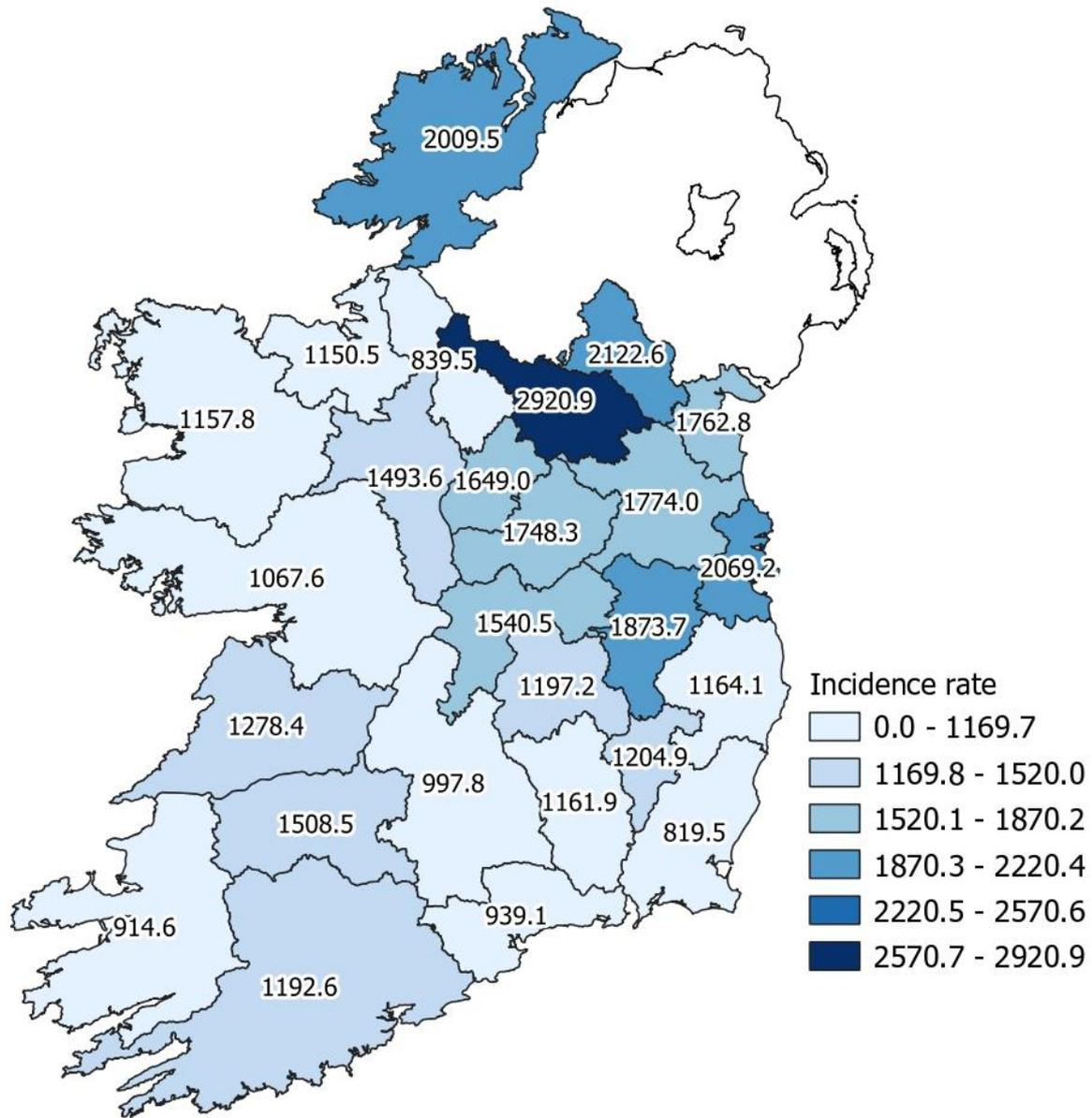


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 08/12/2020

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 08/12/2020

County Name	Number of cases	Percent
Carlow	686	0.92
Cavan	2,225	2.97
Clare	1,519	2.03
Cork	6,474	8.64
Donegal	3,199	4.27
Dublin	27,880	37.23
Galway	2,755	3.68
Kerry	1,351	1.8
Kildare	4,169	5.57
Kilkenny	1,153	1.54
Laois	1,014	1.35
Leitrim	269	0.36
Limerick	2,940	3.93
Longford	674	0.9
Louth	2,272	3.03
Mayo	1,511	2.02
Meath	3,460	4.62
Monaghan	1,303	1.74
Offaly	1,201	1.6
Roscommon	964	1.29
Sligo	754	1.01
Tipperary	1,592	2.13
Waterford	1,091	1.46
Westmeath	1,552	2.07
Wexford	1,227	1.64
Wicklow	1,658	2.21
Total	74,893	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 08/12/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	22,394	29.90%
Local transmission, incl. possible local transmission	50,703	67.70%
Travel abroad, incl. possible travel abroad	1,020	1.36%
Unknown	776	1.04%
Total	74,893	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 08/12/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	1986	58	1.08	2	0.31
5-14 yrs	4896	52	0.97	4	0.63
15-24 yrs	13039	173	3.22	8	1.25
25-34 yrs	12567	335	6.23	18	2.82
35-44 yrs	11744	425	7.9	57	8.93
45-54 yrs	11294	670	12.45	113	17.71
55-64 yrs	7979	769	14.29	165	25.86
65-74 yrs	4307	976	18.14	182	28.53
75-84 yrs	3763	1,190	22.12	81	12.7
85+ yrs	3290	730	13.57	8	1.25
Unknown	28	2	0.04	0	0
Total	74,893	5,380	100	638	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation, ICU admission and vital status 08/12/2020

	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)	1986	4896	13039	12567	11744	11294	7979	4307	3763	3290	28
Cases hospitalised (n)	58	52	173	335	425	670	769	976	1190	730	2
Cases hospitalised (%)	2.92	1.06	1.33	2.67	3.62	5.93	9.64	22.66	31.62	22.19	7.14
Cases admitted to ICU (n)	2	4	8	18	57	113	165	182	81	8	0
Cases admitted to ICU (%)	0.10	0.08	0.06	0.14	0.49	1.00	2.07	4.23	2.15	0.24	0
Deaths (n)	0	0	1	6	11	32	83	286	641	798	0
Case fatality ratio (%)	0	0	0.01	0.05	0.09	0.28	1.04	6.64	17.03	24.26	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 08/12/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC**	Total
Private house	4486	173	193	491	418	625	634	581		7601
Other*	258	72	162	81	129	251	62	147	2	1164
Nursing home	171	18	20	50	12	23	23	45		362
Workplace	110	20	23	52	37	27	31	27		327
Residential institution	155	16	17	35	9	30	17	10		289
Hospital	113	7	10	22	14	17	9	7		199
Comm. Hosp/Long-stay unit	6	4	3		5	7	5	5		35
Unknown				3	2		1			6
Total	5299	310	428	734	626	980	782	822	2	9983

*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.

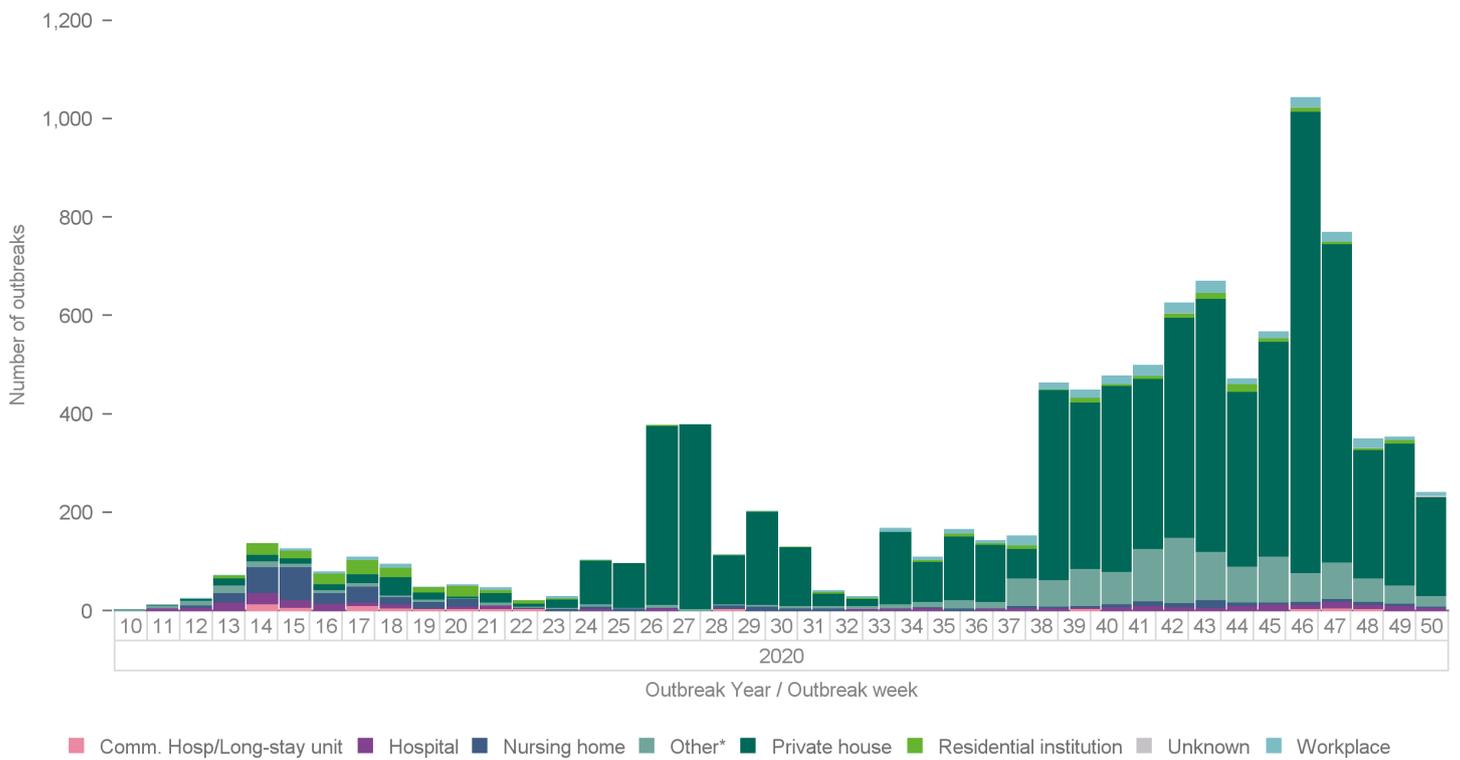


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 08/12/2020

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

Note: 9,147 COVID-19 outbreaks were reported on CIDR between week 24 and week 50 2020 (9th June to 8th December). Of these, 7,318 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, 2,629 in October, 1,088 in November and 95 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 08/12/2020

	Number	Percent
Total number of deaths	2,117	
Confirmed	1,858	87.77
Probable	95	4.49
Possible	164	7.75
Total number of cases hospitalised	967	45.68
Cases admitted to ICU	144	6.8
Cases not admitted to ICU	823	38.88
Total number of imported cases	5	0.24
Number of cases in healthcare workers	8	0.38
Number with underlying clinical conditions	1,969	93.01
Total number of male cases	1,077	50.87
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 08/12/2020

Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.05
25-34 yrs	<5	<5	6	0.28
35-44 yrs	5	7	12	0.57
45-54 yrs	14	20	34	1.61
55-64 yrs	30	59	89	4.2
65-74 yrs	110	204	314	14.83
75-84 yrs	328	395	723	34.15
85+ yrs	548	388	936	44.21
Unknown	<5	<5	2	0.09
Total	1,040	1,077	2,117	100
Percent	49.13	50.87		

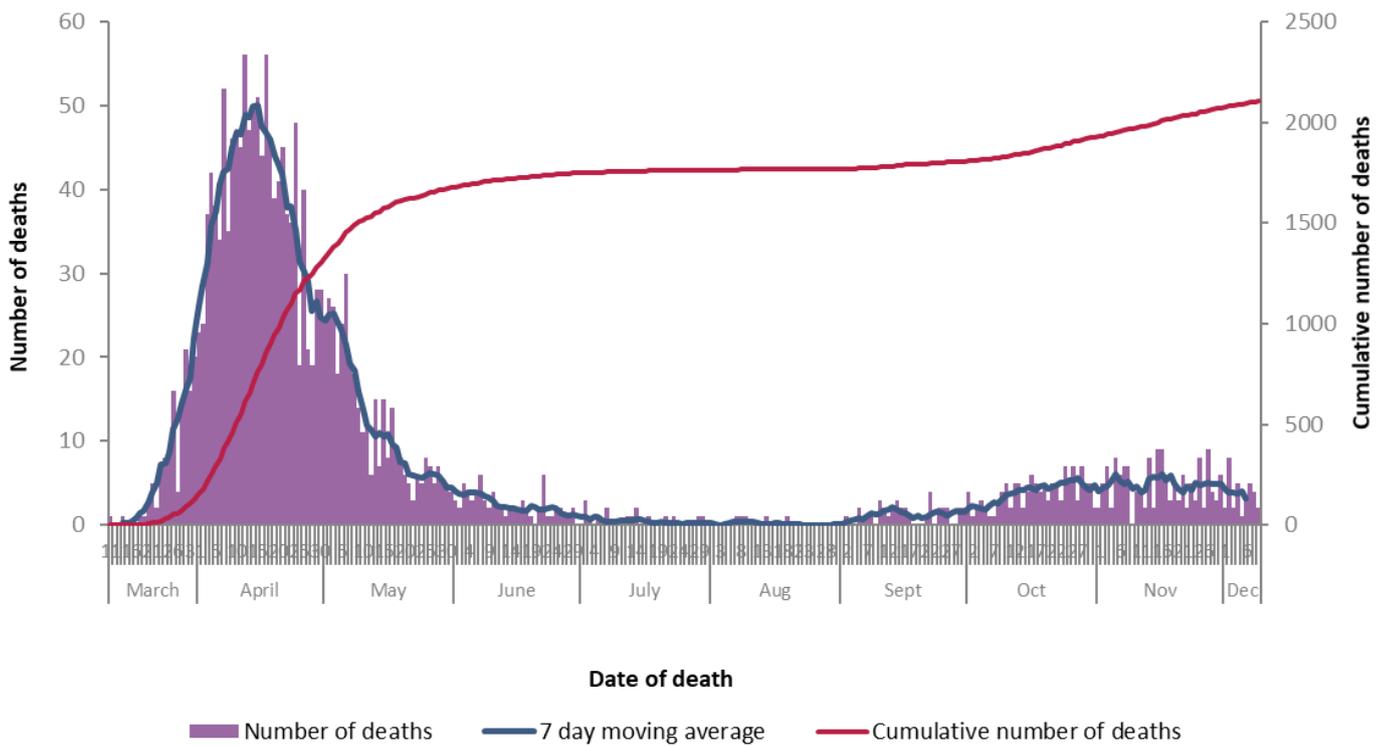


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 08/12/2020

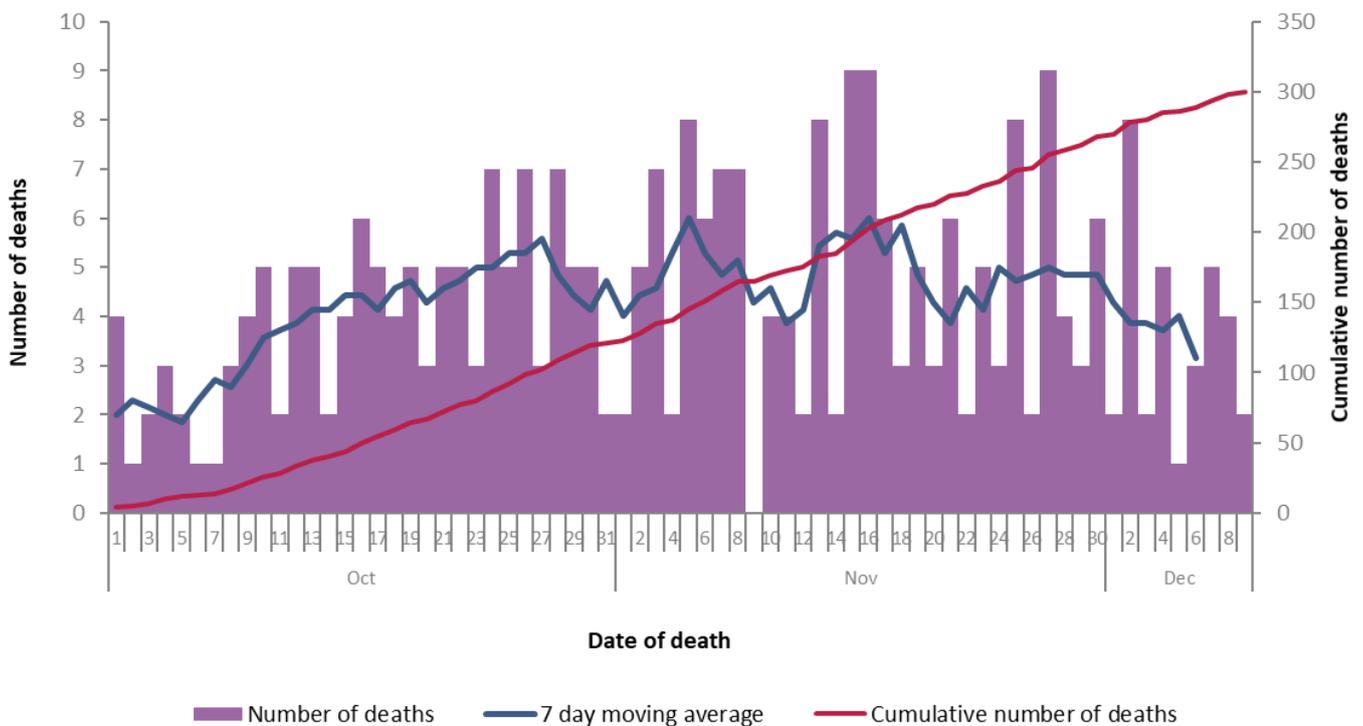


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total from 01/10/2020 to midnight 08/12/2020

* 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 09:33 on 10/12/2020. 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.