



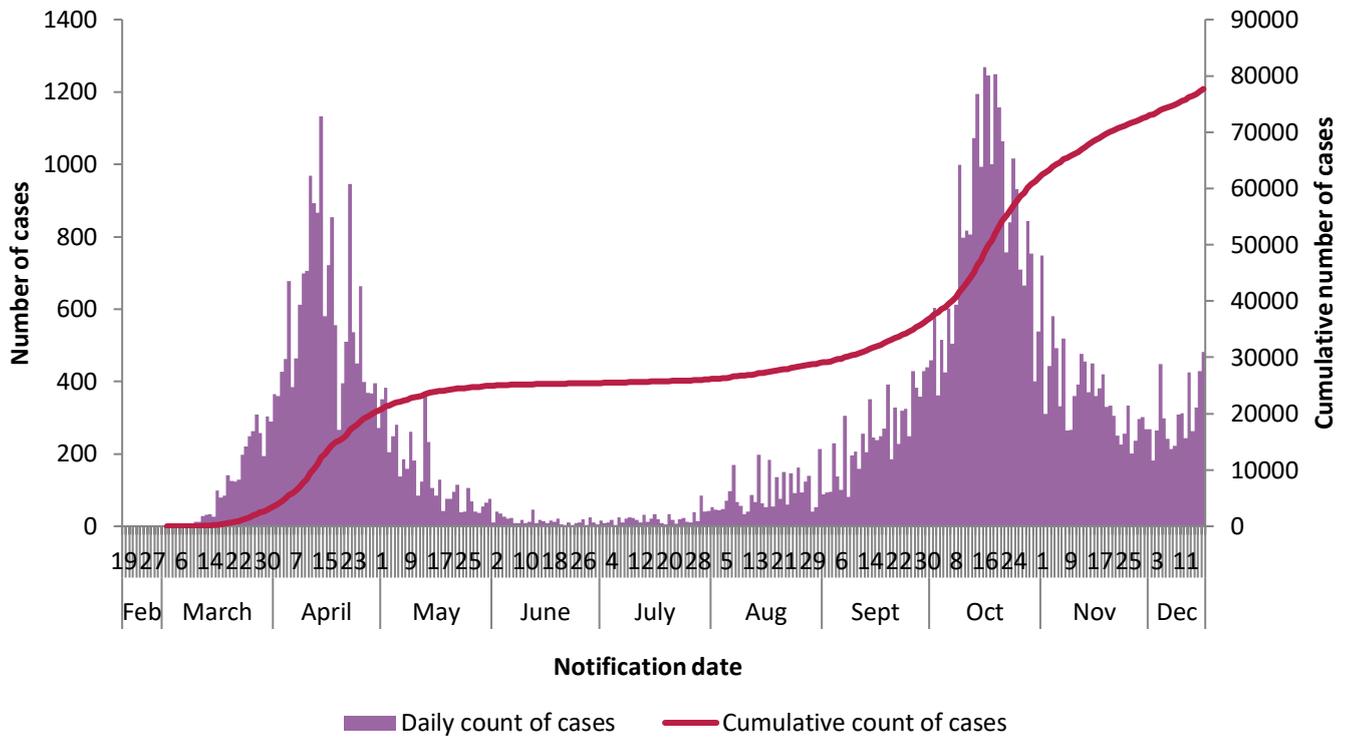
# Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 18/12/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 16/12/2020

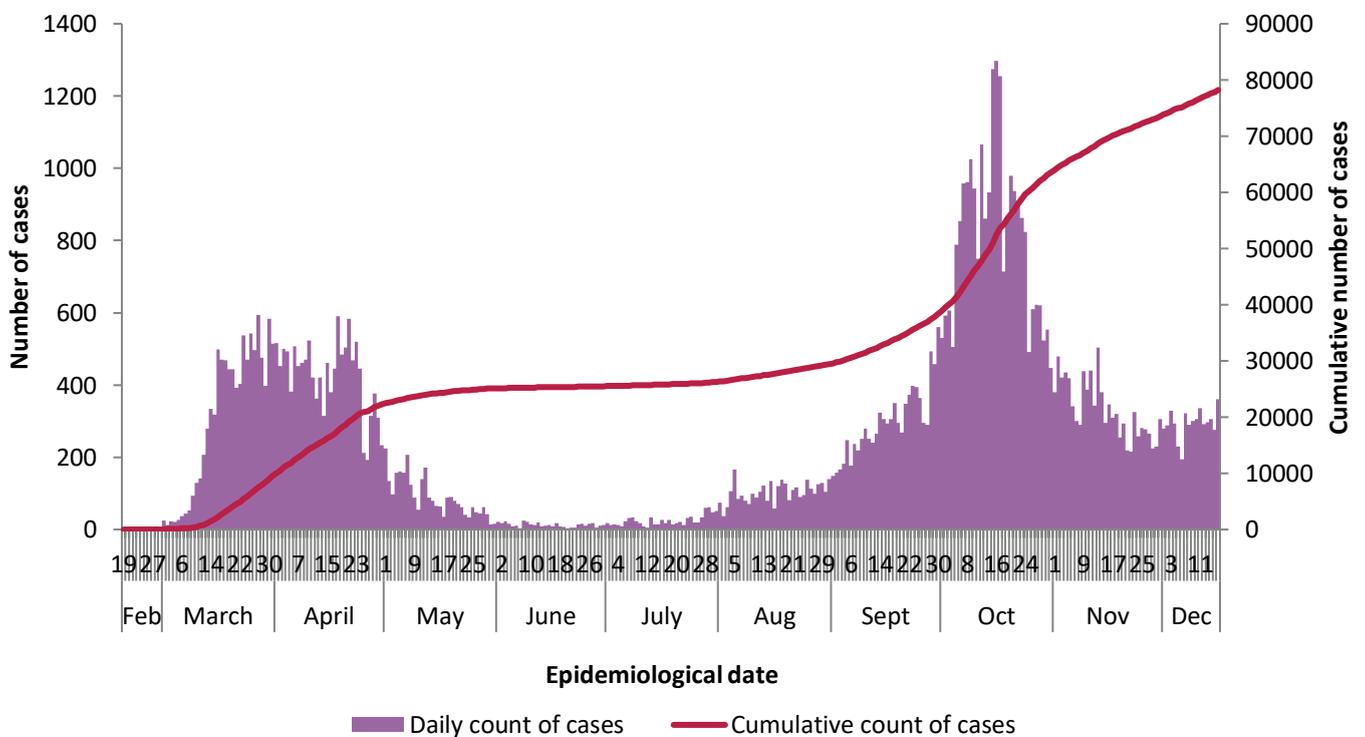
	Number	Percent
Total number of confirmed cases	77,672	
National cumulative incidence of confirmed cases per 100,000 population	1,631.13	
Total number of cases hospitalised	5,549	7.14
Total number of cases admitted to ICU	654	0.84
Total number of deaths among confirmed cases	1,889	2.43
Case fatality ratio (CFR, %)	2.43	
National cumulative incidence of confirmed deaths per 100,000 population	39.67	
Total number of outbreaks/clusters	10,288	
Total number of cases associated with clusters	43,076	55.46
Total number of imported cases	689	0.89
Number of cases in healthcare workers	12,702	16.35
Males	36,627	47.16
Females	41,006	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 09:23 on 18/12/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.



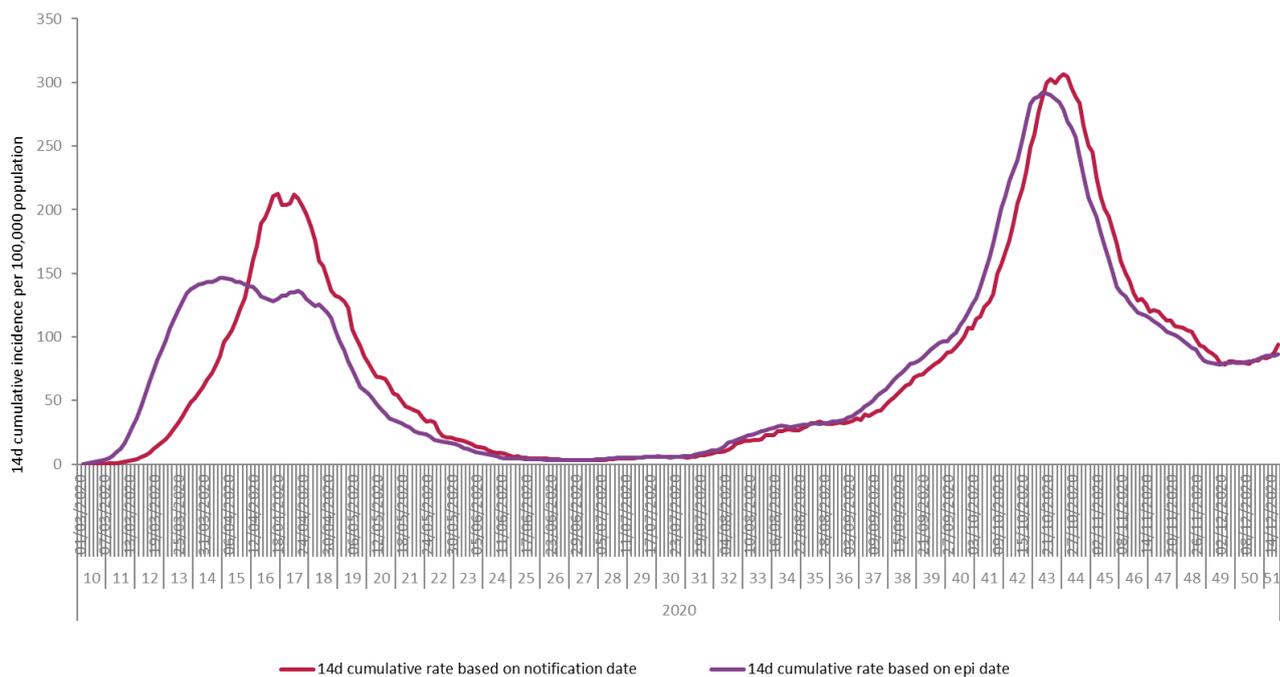
**Figure 1a: Number\* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date\* to midnight 16/12/2020**

\*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 16/12/2020**

\*\*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.



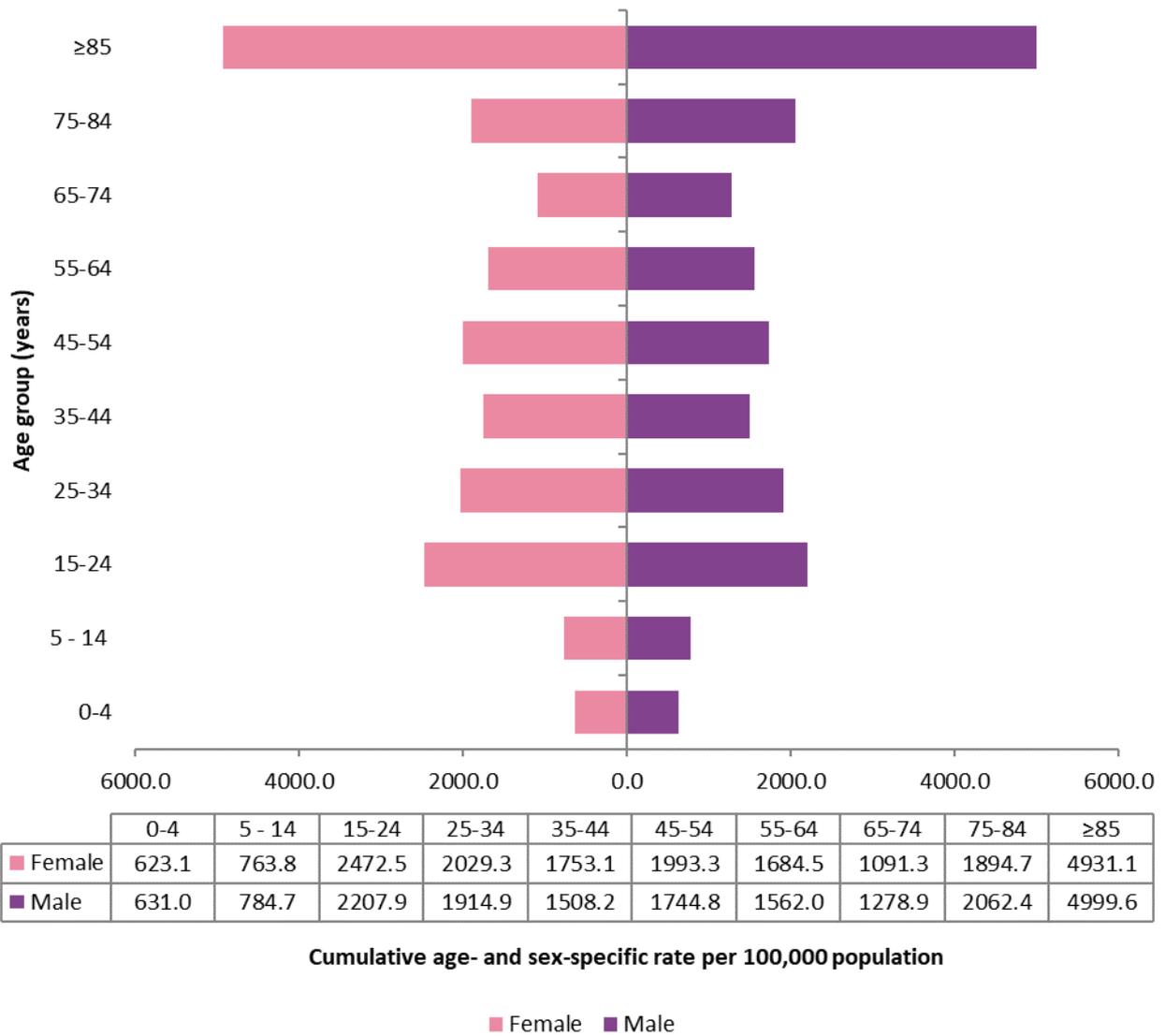
**Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification\* and epidemiological date\*\* to midnight 16/12/2020**

\* 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 16/12/2020**

Characteristic		Number of cases	Percent
<b>Total number of confirmed cases</b>		<b>77,672</b>	<b>100</b>
<b>Sex</b>	Male:Female ratio	0.89	
	Male	36,627	47.16
	Female	41,006	52.79
	Unknown	39	0.05
<b>Age</b>	Median age (years)	39	
	Mean age (years)	41	
	Age range (years)	0 - 108	
	0-4 yrs	2,082	2.68
	5-14 yrs	5,233	6.74
	15-24 yrs	13,482	17.36
	25-34 yrs	13,031	16.78
	35-44 yrs	12,194	15.7
	45-54 yrs	11,711	15.08
	55-64 yrs	8,269	10.65
	65-74 yrs	4,422	5.69
	75-84 yrs	3,873	4.99
	85+ yrs	3,347	4.31
	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 16/12/2020 (excluding 27 cases for whom age is unknown, 38 cases for whom sex is unknown and 1 case for whom both are unknown)**

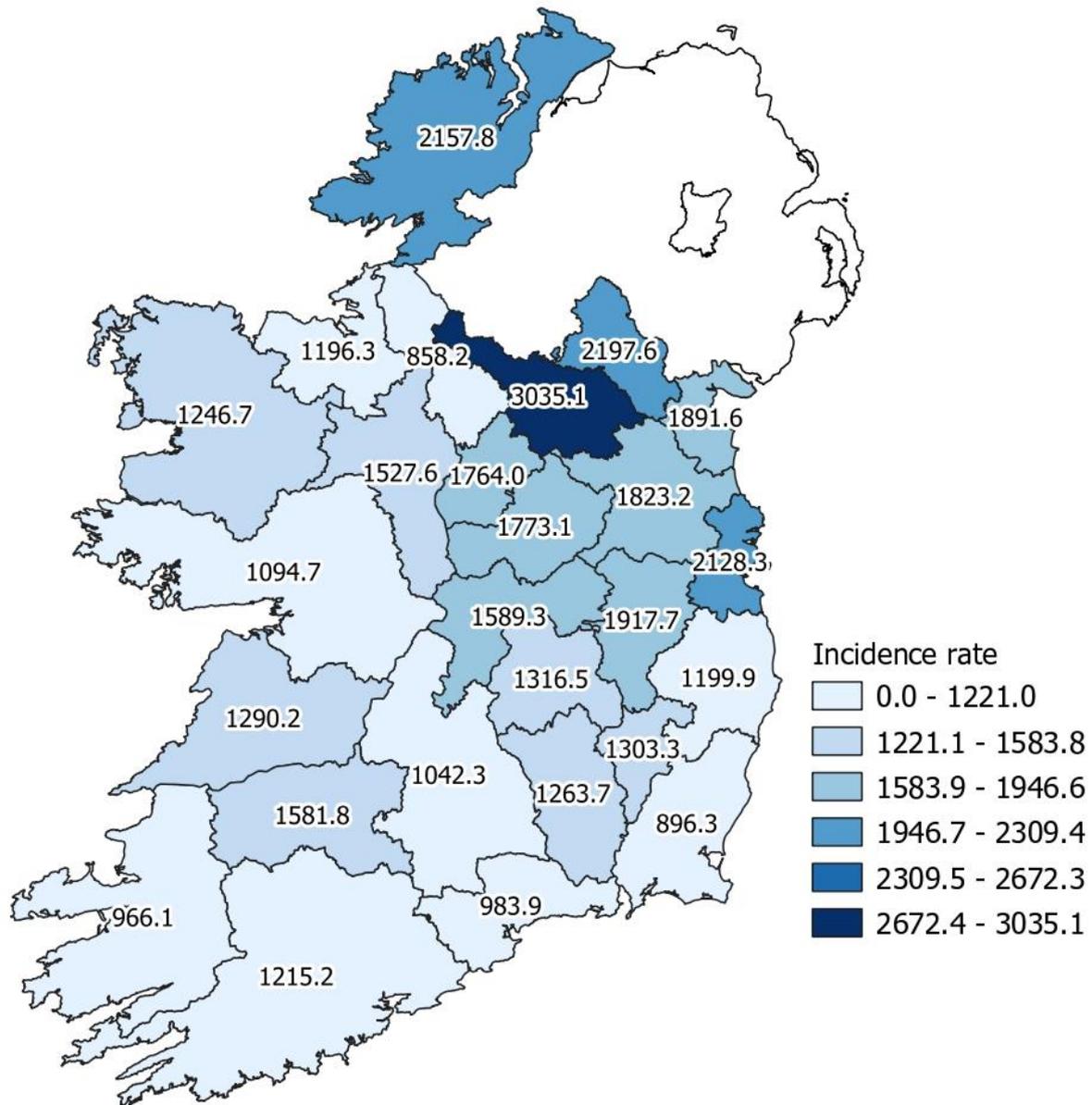


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 16/12/2020

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 16/12/2020**

County Name	Number of cases	Percent
Carlow	742	0.96
Cavan	2,312	2.98
Clare	1,533	1.97
Cork	6,597	8.49
Donegal	3,435	4.42
Dublin	28,676	36.92
Galway	2,825	3.64
Kerry	1,427	1.84
Kildare	4,267	5.49
Kilkenny	1,254	1.61
Laois	1,115	1.44
Leitrim	275	0.35
Limerick	3,083	3.97
Longford	721	0.93
Louth	2,438	3.14
Mayo	1,627	2.09
Meath	3,556	4.58
Monaghan	1,349	1.74
Offaly	1,239	1.6
Roscommon	986	1.27
Sligo	784	1.01
Tipperary	1,663	2.14
Waterford	1,143	1.47
Westmeath	1,574	2.03
Wexford	1,342	1.73
Wicklow	1,709	2.2
<b>Total</b>	<b>77,672</b>	<b>100</b>

**Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 16/12/2020**

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	23,295	29.99%
Local transmission, incl. possible local transmission	52,556	67.66%
Travel abroad, incl. possible travel abroad	1,059	1.36%
Unknown	762	0.98%
<b>Total</b>	<b>77,672</b>	<b>100.00%</b>

\*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 hospitalisation and ICU admission as of midnight 16/12/2020**

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	2082	58	1.05	2	0.31
5-14 yrs	5233	53	0.96	4	0.61
15-24 yrs	13482	184	3.32	8	1.22
25-34 yrs	13031	345	6.22	18	2.75
35-44 yrs	12194	434	7.82	57	8.72
45-54 yrs	11711	692	12.47	117	17.89
55-64 yrs	8269	797	14.36	169	25.84
65-74 yrs	4422	1,002	18.06	188	28.75
75-84 yrs	3873	1,233	22.22	82	12.54
85+ yrs	3347	749	13.5	9	1.38
Unknown	28	2	0.04	0	0
<b>Total</b>	<b>77,672</b>	<b>5,549</b>	<b>100</b>	<b>654</b>	<b>100</b>

**Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation, ICU admission and vital status 16/12/2020**

	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)	2082	5233	13482	13031	12194	11711	8269	4422	3873	3347	28
Cases hospitalised (n)	58	53	184	345	434	692	797	1002	1233	749	2
Cases hospitalised (%)	2.79	1.01	1.36	2.65	3.56	5.91	9.64	22.66	31.84	22.38	7.14
Cases admitted to ICU (n)	2	4	8	18	57	117	169	188	82	9	0
Cases admitted to ICU (%)	0.10	0.08	0.06	0.14	0.47	1.00	2.04	4.25	2.12	0.27	0
Deaths (n)	0	0	2	6	12	35	83	288	650	813	0
Case fatality ratio (%)	0	0	0.01	0.05	0.10	0.30	1.00	6.51	16.78	24.29	0

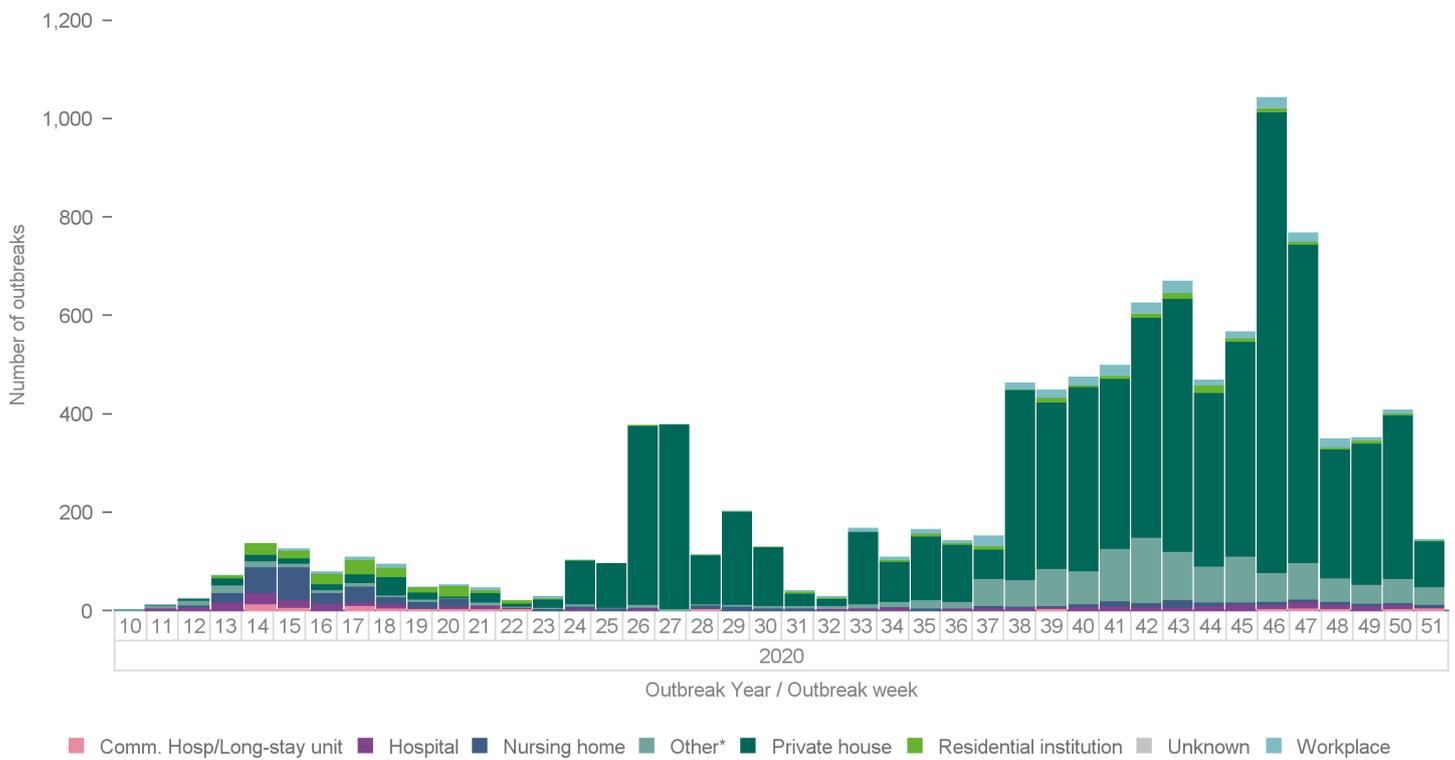
## Outbreaks of COVID-19

**Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 16/12/2020**

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC**	Total
Private house	4584	175	200	521	449	634	647	610		<b>7820</b>
Other*	267	78	162	89	146	260	69	156	2	<b>1229</b>
Nursing home	173	18	20	50	12	24	26	46		<b>369</b>
Workplace	113	20	23	55	38	27	31	27		<b>334</b>
Residential institution	154	16	18	37	9	30	17	10		<b>291</b>
Hospital	117	8	10	23	15	17	8	7		<b>205</b>
Comm. Hosp/Long-stay unit	8	4	3		5	7	6	5		<b>38</b>
Unknown					2					<b>2</b>
<b>Total</b>	<b>5416</b>	<b>319</b>	<b>436</b>	<b>775</b>	<b>676</b>	<b>999</b>	<b>804</b>	<b>861</b>	<b>2</b>	<b>10288</b>

\*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 16/12/2020**

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

Note: 9,452 COVID-19 outbreaks were reported on CIDR between week 24 and week 51 2020 (9th June to 16th December). Of these, 7,542 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, 1,198 in November and 209 to date in December.

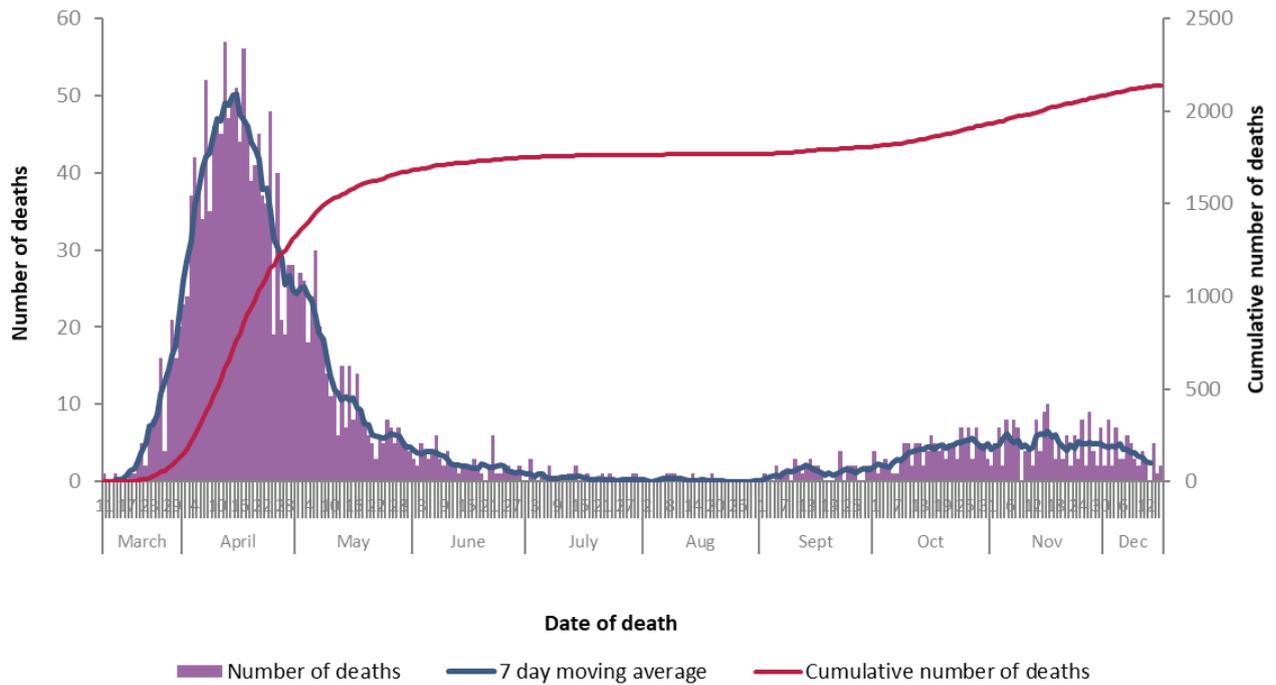
## Deaths among COVID-19 cases

Table 7: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 16/12/2020

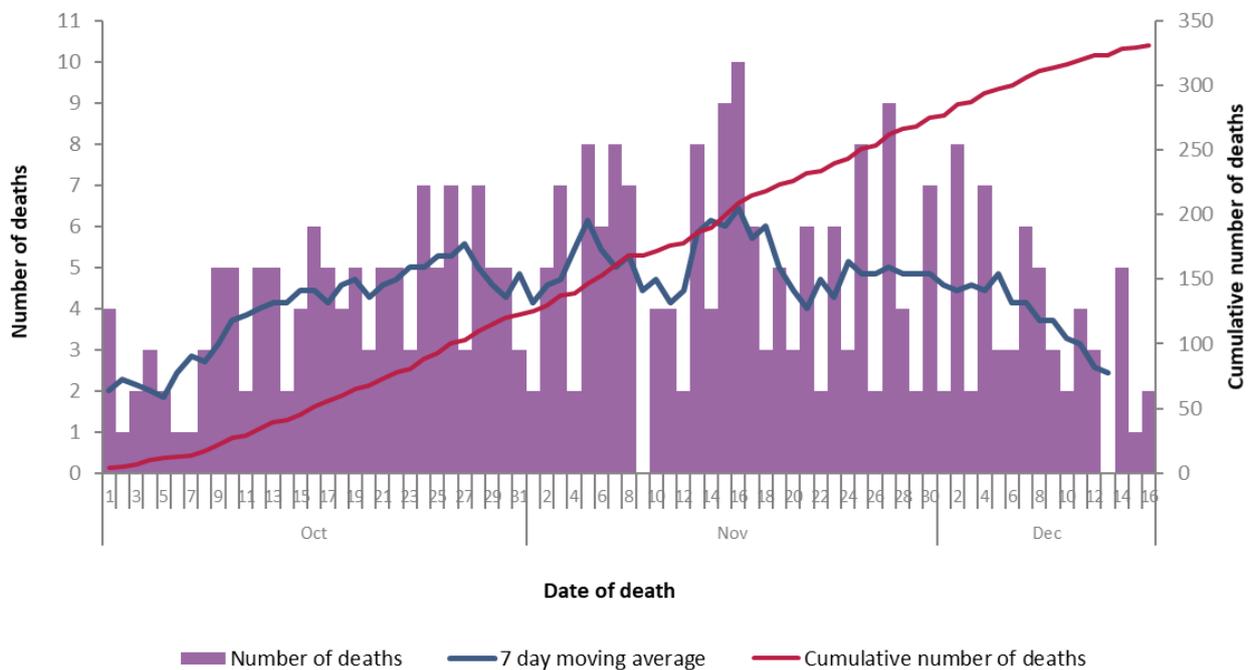
	Number	Percent
Total number of deaths	2,149	
Confirmed	1,889	87.9
Probable	95	4.42
Possible	165	7.68
Total number of cases hospitalised	986	45.88
Cases admitted to ICU	152	7.07
Cases not admitted to ICU	834	38.81
Total number of imported cases	5	0.23
Number of cases in healthcare workers	8	0.37
Number with underlying clinical conditions	1,999	93.02
Total number of male cases	1,091	50.77
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 16/12/2020

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	0.6
45-54 yrs	15	22	37	1.72
55-64 yrs	30	59	89	4.14
65-74 yrs	111	205	316	14.7
75-84 yrs	331	401	732	34.06
85+ yrs	559	393	952	44.3
Unknown	<5	<5	2	0.09
<b>Total</b>	<b>1,058</b>	<b>1,091</b>	<b>2,149</b>	<b>100</b>
<b>Percent</b>	<b>49.23</b>	<b>50.77</b>		



**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 16/12/2020**



**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 16/12/2020**

\* 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 09:23 on 18/12/2020. 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  $\geq 85$  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.