



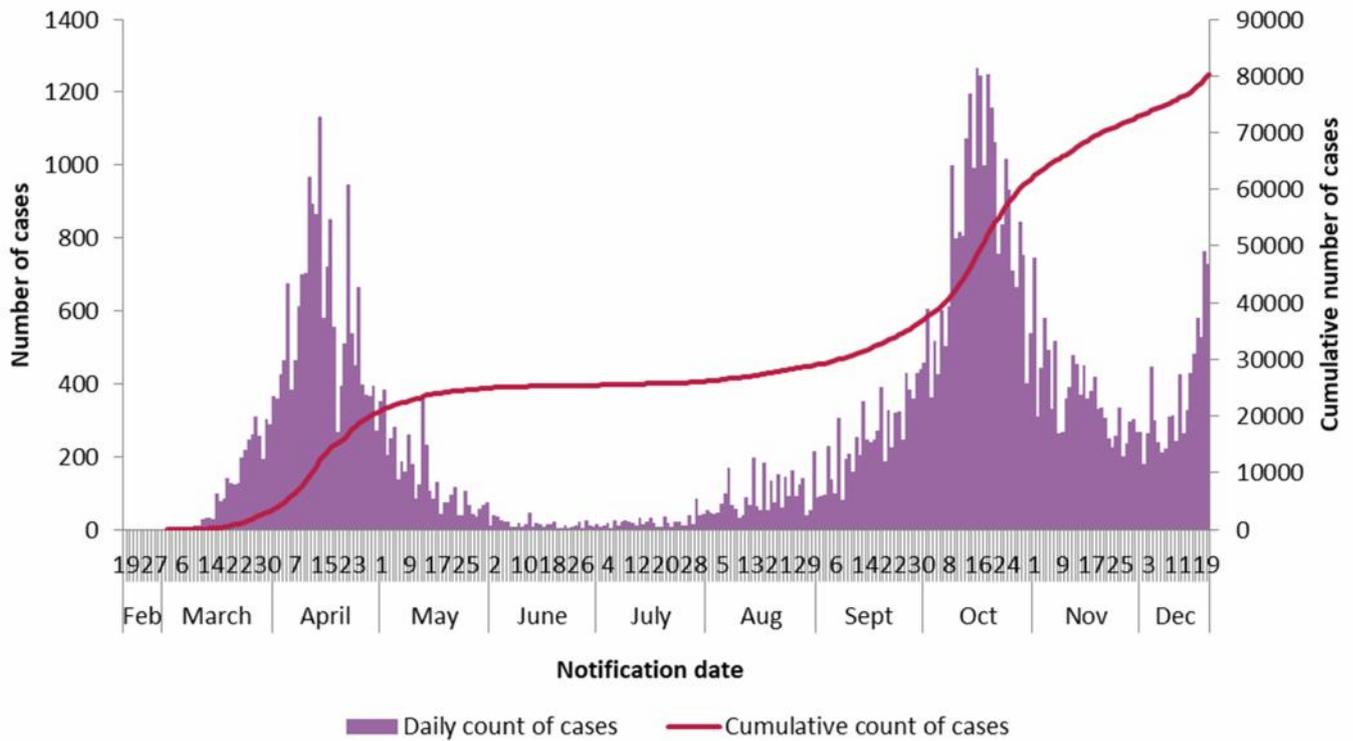
# Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 22/12/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 20/12/2020

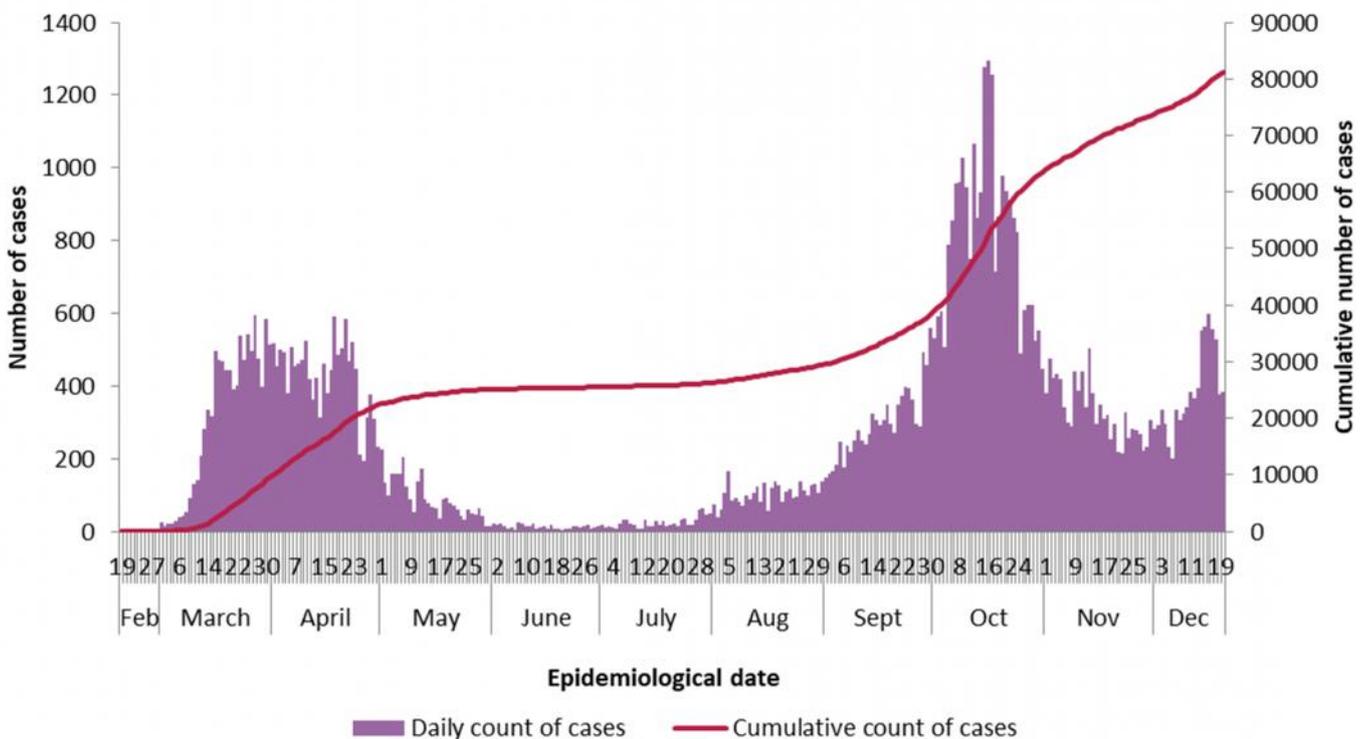
	Number	Percent
Total number of confirmed cases	80,258	
National cumulative incidence of confirmed cases per 100,000 population	1,685.43	
Total number of cases hospitalised	5,653	7.04
Total number of cases admitted to ICU	659	0.82
Total number of deaths among confirmed cases	1,911	2.38
Case fatality ratio (CFR, %)	2.38	
National cumulative incidence of confirmed deaths per 100,000 population	40.13	
Total number of outbreaks/clusters	10,412	
Total number of cases associated with clusters	43,742	54.5
Total number of imported cases	695	0.87
Number of cases in healthcare workers	12,949	16.13
Males	37,959	47.3
Females	42,252	52.65
M:F ratio	0.9	
Median age (years)	38	
Mean age (years)	41	
Age range (years)	0 - 108	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:21 on 22/12/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.



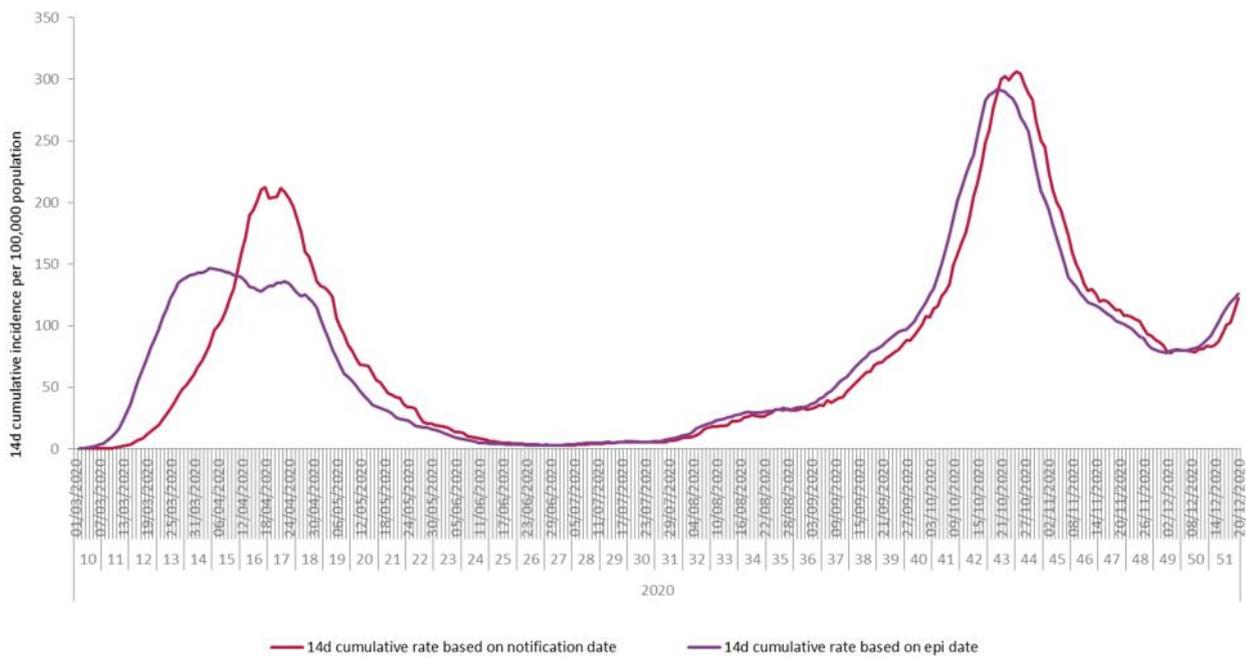
**Figure 1a: Number\* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date\* to midnight 20/12/2020**

\*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 20/12/2020**

\*\*Epidemiological date is derived from notification 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.



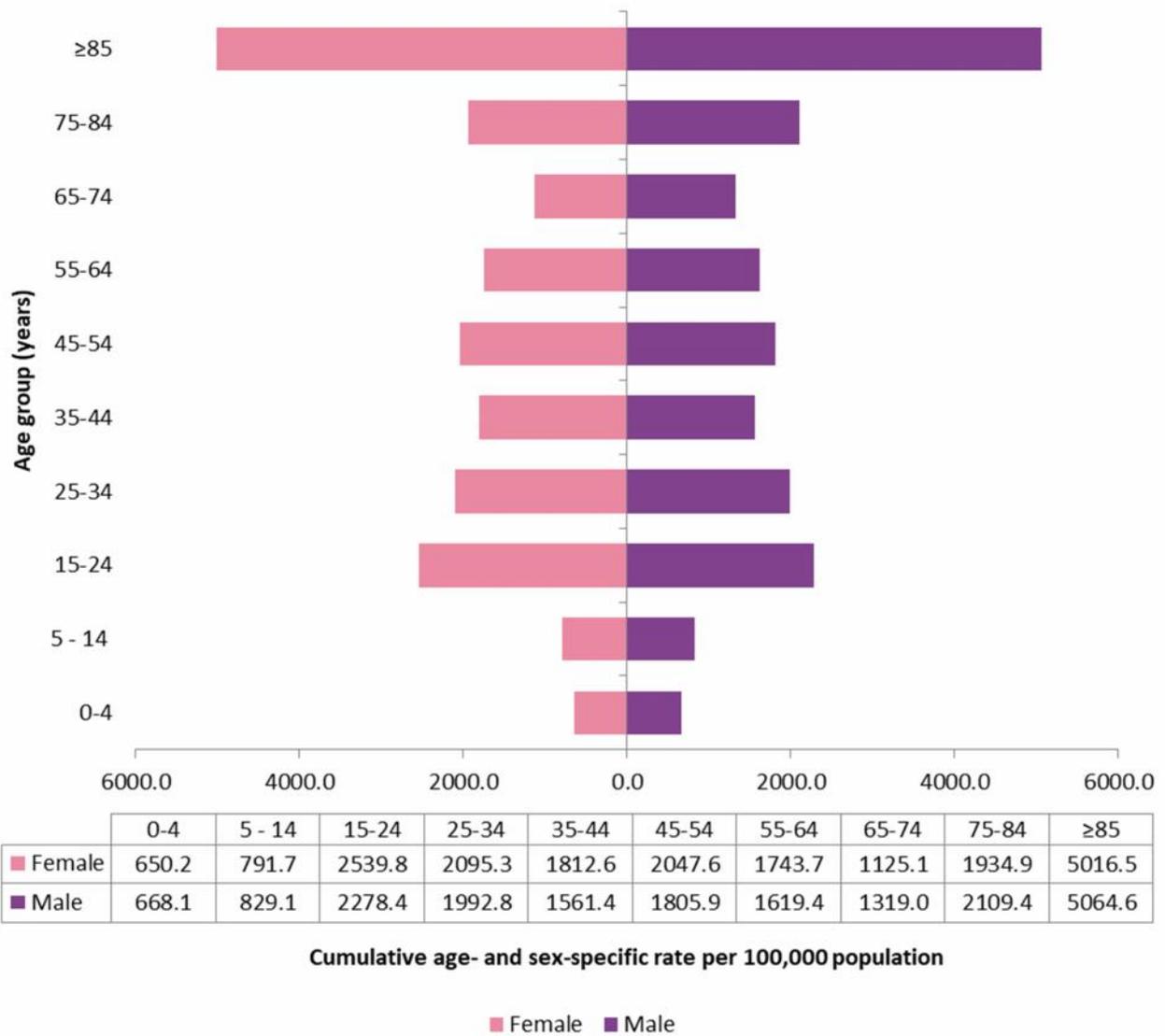
**Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification\* and epidemiological date\*\* to midnight 20/12/2020**

\* 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 20/12/2020**

Characteristic		Number of cases	Percent
<b>Total number of confirmed cases</b>		<b>80,258</b>	<b>100</b>
<b>Sex</b>	Male:Female ratio	0.9	
	Male	37,959	47.3
	Female	42,252	52.65
	Unknown	47	0.06
<b>Age</b>	Median age (years)	38	
	Mean age (years)	41	
	Age range (years)	0 - 108	
	0-4 yrs	2,190	2.73
	5-14 yrs	5,479	6.83
	15-24 yrs	13,879	17.29
	25-34 yrs	13,506	16.83
	35-44 yrs	12,618	15.72
	45-54 yrs	12,074	15.04
	55-64 yrs	8,565	10.67
	65-74 yrs	4,560	5.68
	75-84 yrs	3,958	4.93
	85+ yrs	3,400	4.24
	Unknown	29	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 20/12/2020 (excluding 28 cases for whom age is unknown, 46 cases for whom sex is unknown and 1 case for whom both are unknown)**

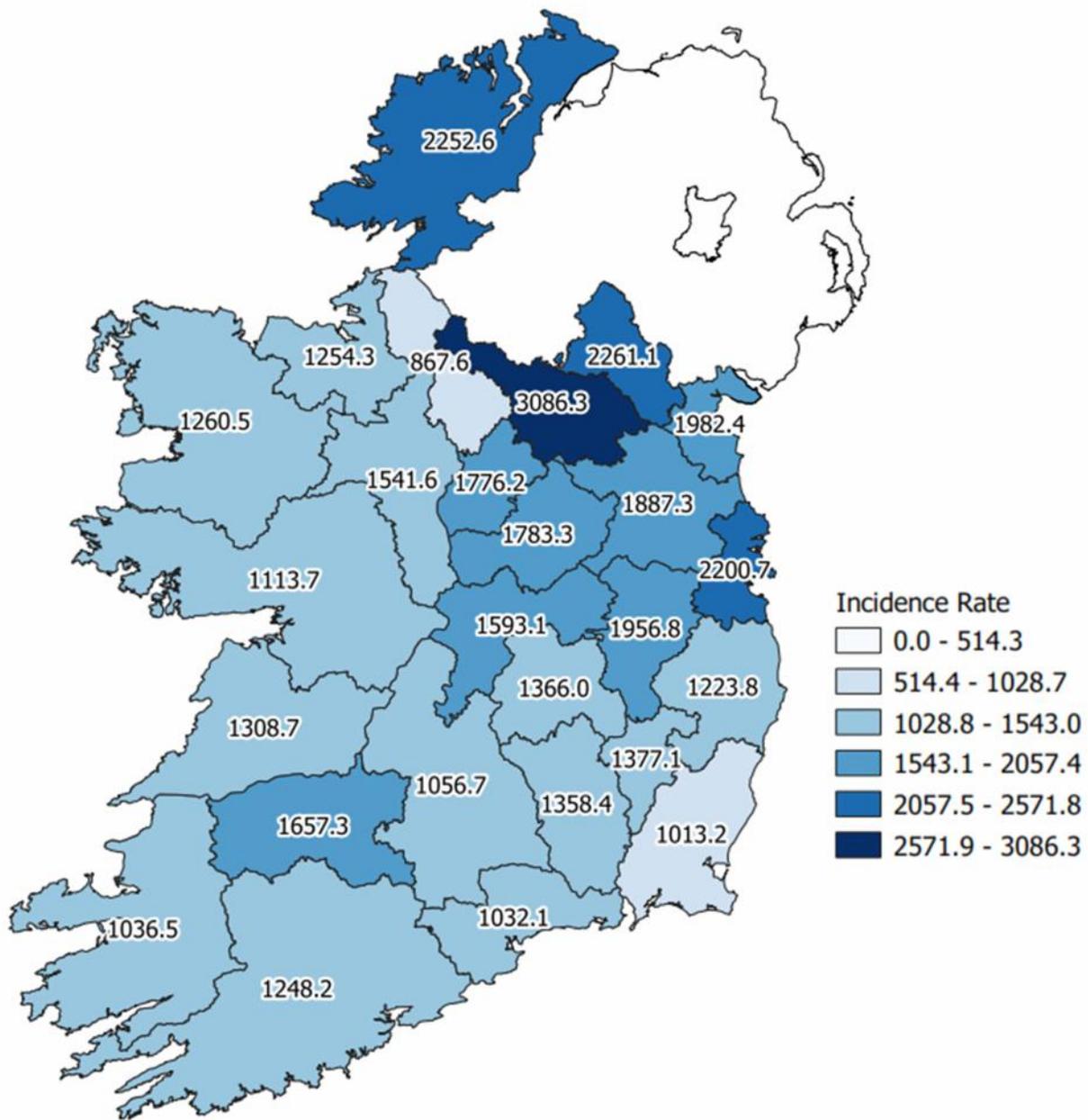


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 20/12/2020

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 20/12/2020**

County Name	Number of cases	Percent
Carlow	784	0.98
Cavan	2,351	2.93
Clare	1,555	1.94
Cork	6,776	8.44
Donegal	3,586	4.47
Dublin	29,652	36.95
Galway	2,874	3.58
Kerry	1,531	1.91
Kildare	4,354	5.43
Kilkenny	1,348	1.68
Laois	1,157	1.44
Leitrim	278	0.35
Limerick	3,230	4.02
Longford	726	0.9
Louth	2,555	3.18
Mayo	1,645	2.05
Meath	3,681	4.59
Monaghan	1,388	1.73
Offaly	1,242	1.55
Roscommon	995	1.24
Sligo	822	1.02
Tipperary	1,686	2.1
Waterford	1,199	1.49
Westmeath	1,583	1.97
Wexford	1,517	1.89
Wicklow	1,743	2.17
<b>Total</b>	<b>80,258</b>	<b>100</b>

**Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 20/12/2020**

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	24,020	29.93%
Local transmission, incl. possible local transmission	53,929	67.19%
Travel abroad, incl. possible travel abroad	1,076	1.34%
Unknown	1,233	1.54%
<b>Total</b>	<b>80,258</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 hospital, ICU and vital status as of midnight 20/12/2020**

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	2190	58	1.03	2	0.3
5-14 yrs	5479	56	0.99	4	0.61
15-24 yrs	13879	192	3.4	8	1.21
25-34 yrs	13506	351	6.21	18	2.73
35-44 yrs	12618	443	7.84	56	8.5
45-54 yrs	12074	704	12.45	119	18.06
55-64 yrs	8565	809	14.31	171	25.95
65-74 yrs	4560	1,022	18.08	188	28.53
75-84 yrs	3958	1,256	22.22	84	12.75
85+ yrs	3400	760	13.44	9	1.37
Unknown	29	2	0.04	0	0
<b>Total</b>	<b>80,258</b>	<b>5,653</b>	<b>100</b>	<b>659</b>	<b>100</b>

**Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 20/12/2020**

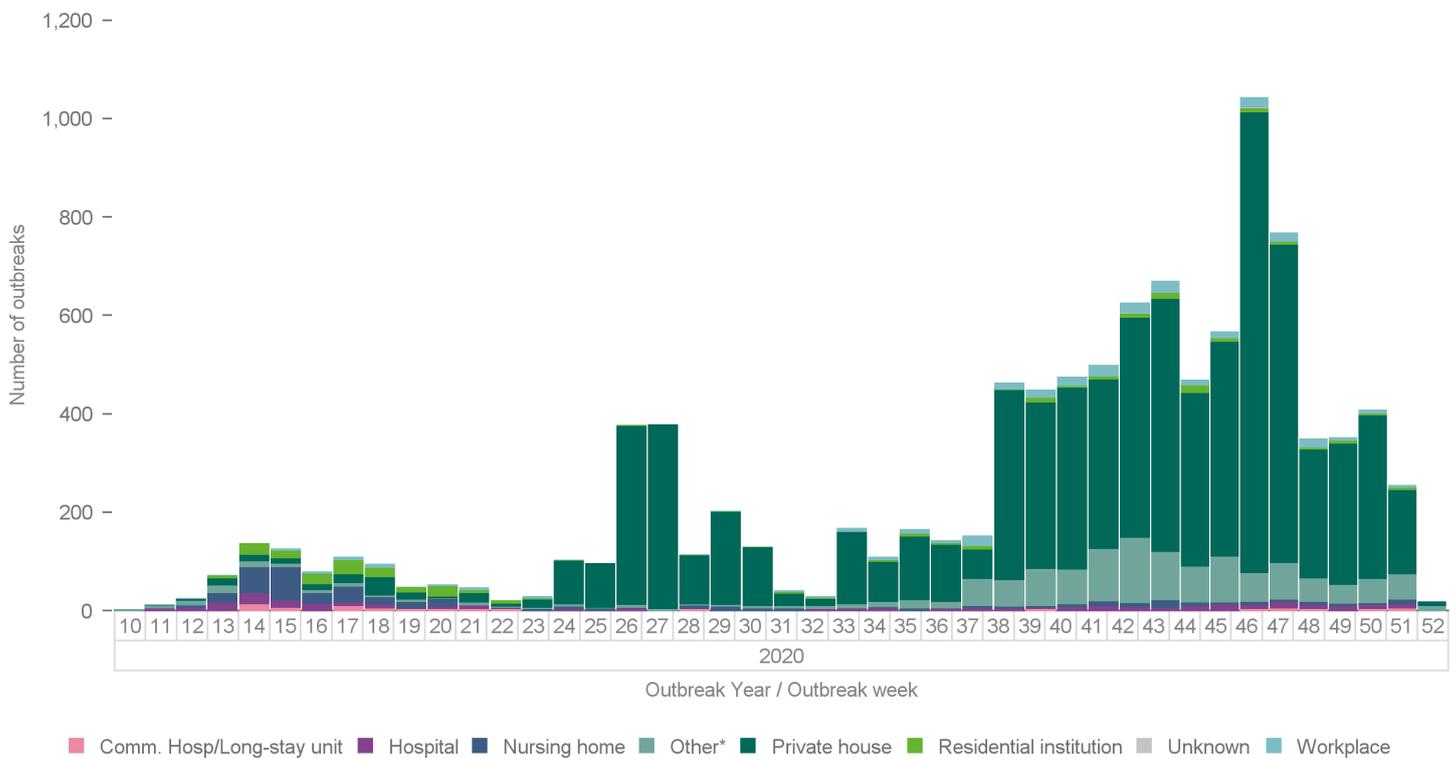
	0-4 yrs	5-14 yrs	15-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75-84 yrs	85+ yrs	Unknown
Number of cases (n)	2,190	5,479	13,879	13,506	12,618	12,074	8,565	4,560	3,958	3,400	29
Cases hospitalised (n)	58	56	192	351	443	704	809	1,022	1,256	760	2
Cases hospitalised (%)	2.65	1.02	1.38	2.6	3.51	5.83	9.45	22.41	31.73	22.35	6.9
Cases admitted to ICU (n)	2	4	8	18	56	119	171	188	84	9	0
Cases admitted to ICU (%)	0.09	0.07	0.06	0.13	0.44	0.99	2	4.12	2.12	0.26	0
Deaths (n)	0	0	2	6	13	35	84	293	658	820	0
Case fatality ratio (%)	0	0	0.01	0.04	0.1	0.29	0.98	6.43	16.62	24.12	0

## Outbreaks of COVID-19

**Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 20/12/2020**

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC	Total
Private house	4,585	181	200	535	472	636	673	621		7,903
Other*	267	81	163	89	156	266	69	162	2	1,255
Nursing home	175	18	21	50	12	24	26	46		372
Workplace	113	20	23	55	38	27	32	27		335
Residential institution	155	16	18	39	9	31	17	10		295
Hospital	123	8	10	23	15	17	8	8		212
Comm. Hosp/Long-stay unit	8	4	3		5	7	6	5		38
Unknown					2					2
<b>Total</b>	<b>5,426</b>	<b>328</b>	<b>438</b>	<b>791</b>	<b>709</b>	<b>1,008</b>	<b>831</b>	<b>879</b>	<b>2</b>	<b>10,412</b>

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



**Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 20/12/2020**

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

Note: 9,619 COVID-19 outbreaks were reported on CIDR between week 24 and week 51 2020 (9th June to 20th December). Of these, 7,659 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, 1,511 in September, 2,632 in October, 1,242 in November and 281 to date in December.

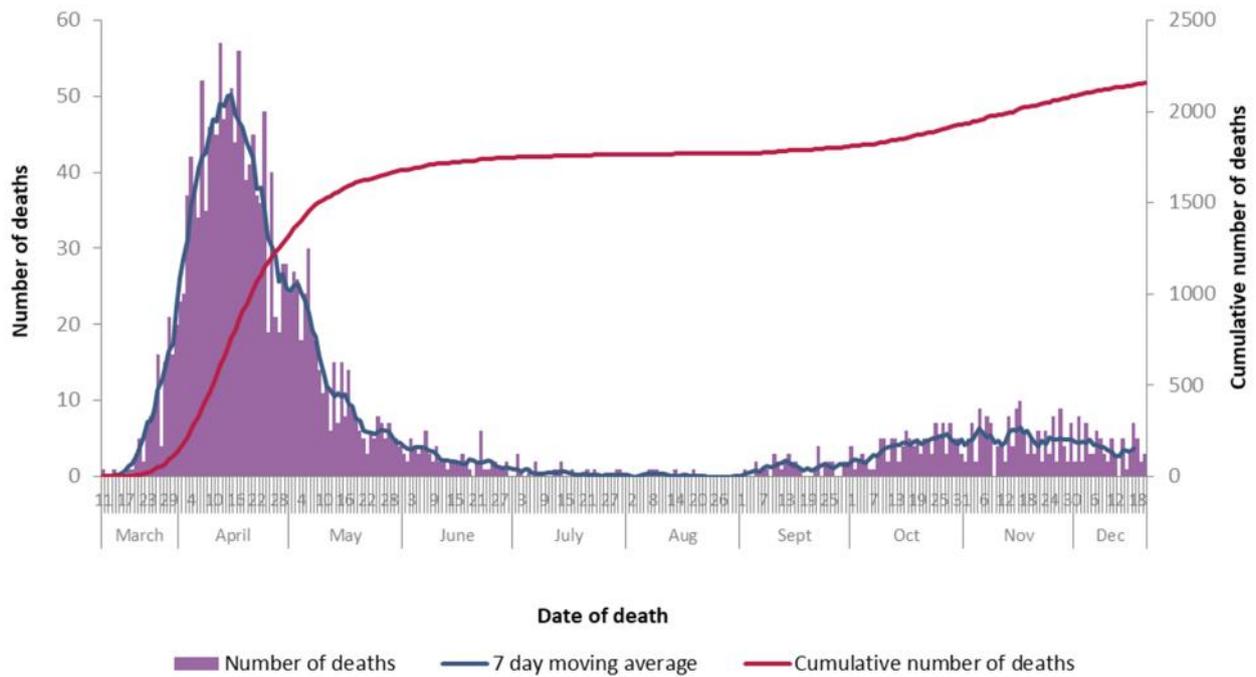
## Deaths among COVID-19 cases

Table 7: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 20/12/2020

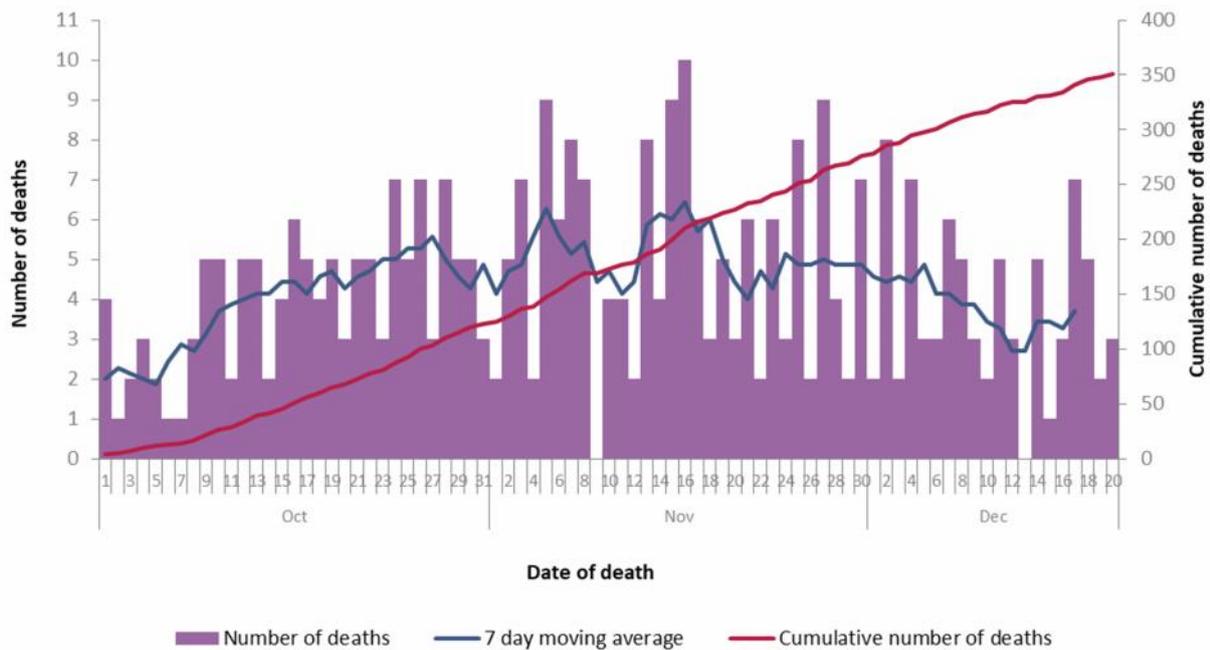
	Number	Percent
Total number of deaths	2,171	
Confirmed	1,911	88.02
Probable	95	4.38
Possible	165	7.6
Total number of cases hospitalised	994	45.79
Cases admitted to ICU	154	7.09
Cases not admitted to ICU	840	38.69
Total number of imported cases	5	0.23
Number of cases in healthcare workers	8	0.37
Number with underlying clinical conditions	2,018	92.95
Total number of male cases	1,106	50.94
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 20/12/2020

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	8	14	0.64
45-54 yrs	15	22	37	1.7
55-64 yrs	30	60	90	4.15
65-74 yrs	111	210	321	14.79
75-84 yrs	333	407	740	34.09
85+ yrs	564	395	959	44.17
Unknown	<5	<5	2	0.09
<b>Total</b>	<b>1,065</b>	<b>1,106</b>	<b>2,171</b>	<b>100</b>
<b>Percent</b>	<b>49.06</b>	<b>50.94</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 20/12/2020**



**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 20/12/2020**

\* 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 09:21 on 22/12/2020. 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.