



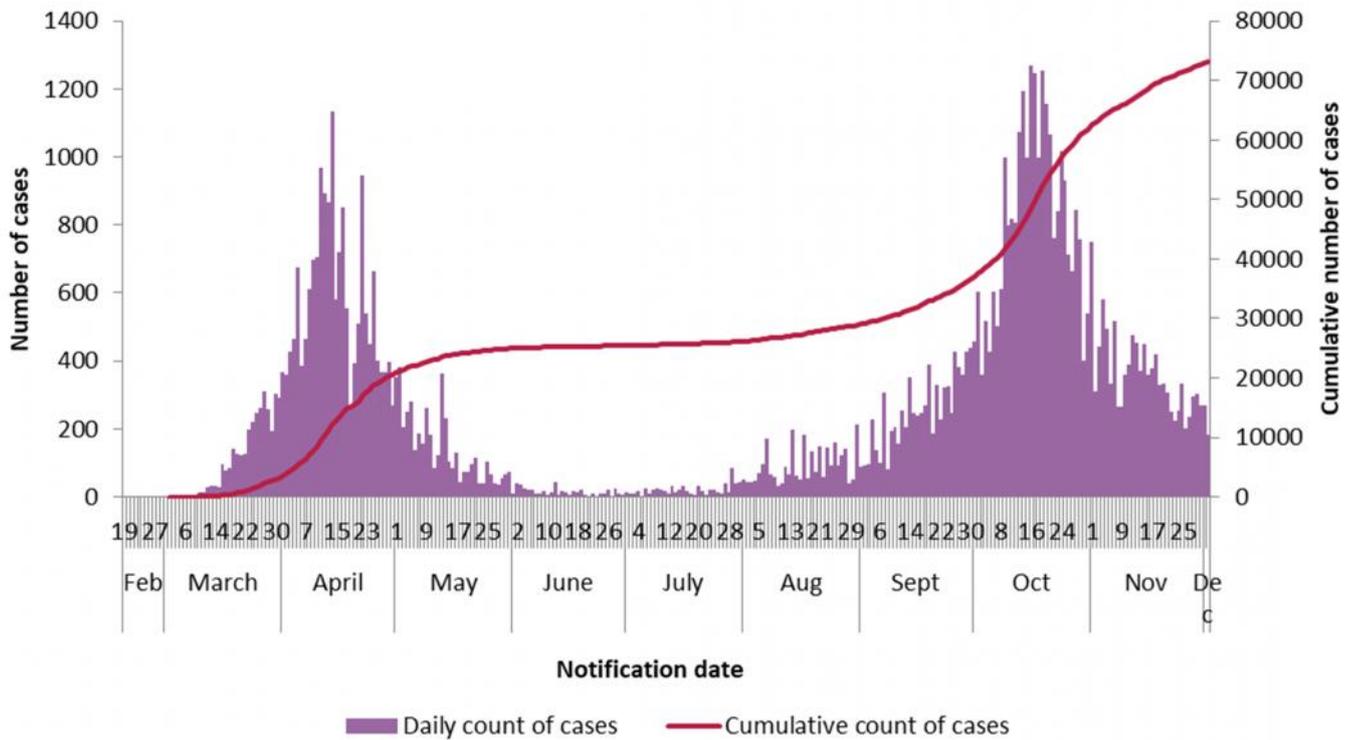
# Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 04/12/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 02/12/2020

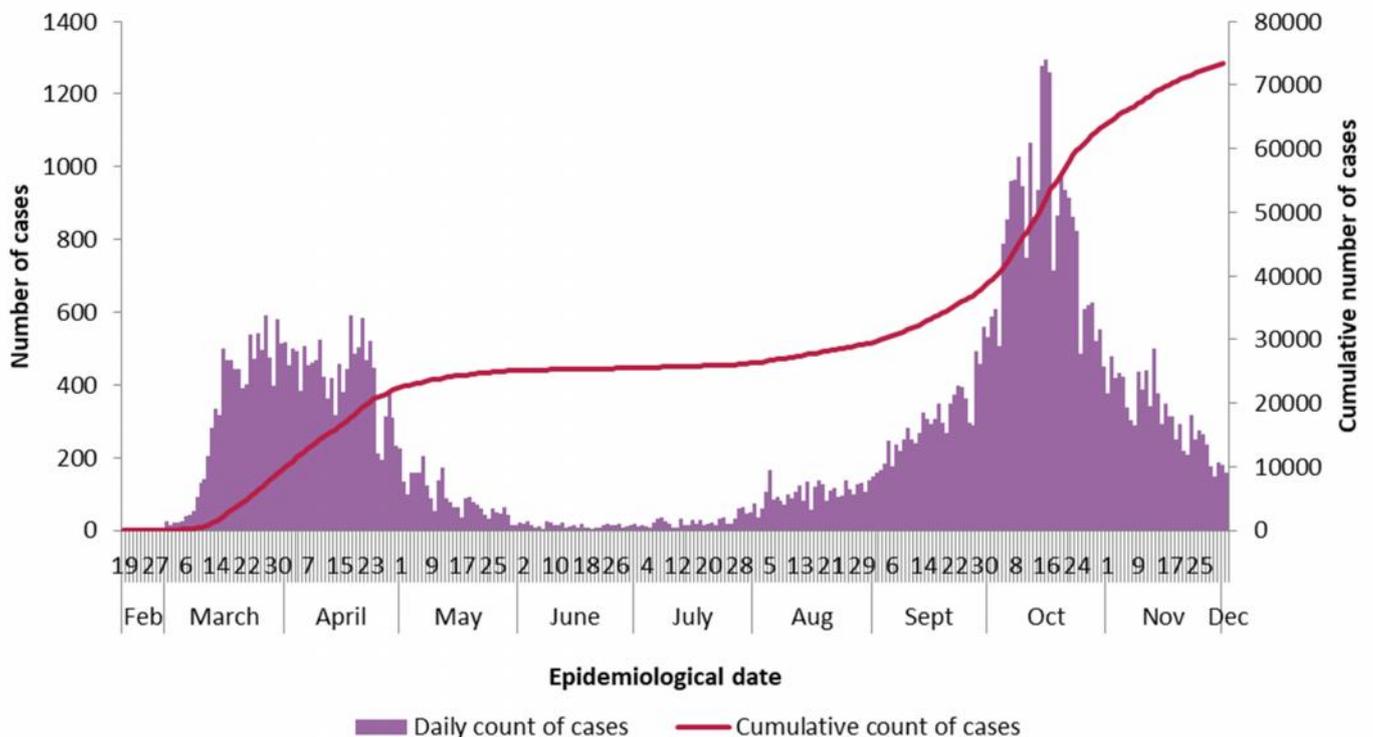
	Number	Percent
Total number of confirmed cases	73,226	
National cumulative incidence of confirmed cases per 100,000 population	1,537.76	
Total number of cases hospitalised	5,278	7.21
Total number of cases admitted to ICU	623	0.85
Total number of deaths among confirmed cases	1,827	2.5
Case fatality ratio (CFR, %)	2.5	
National cumulative incidence of confirmed deaths per 100,000 population	38.37	
Total number of outbreaks/clusters	9,640	
Total number of cases associated with clusters	40,571	55.41
Total number of imported cases	666	0.91
Number of cases in healthcare workers	12,137	16.57
Males	34,512	47.13
Females	38,683	52.83
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 09:30 on 04/12/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.



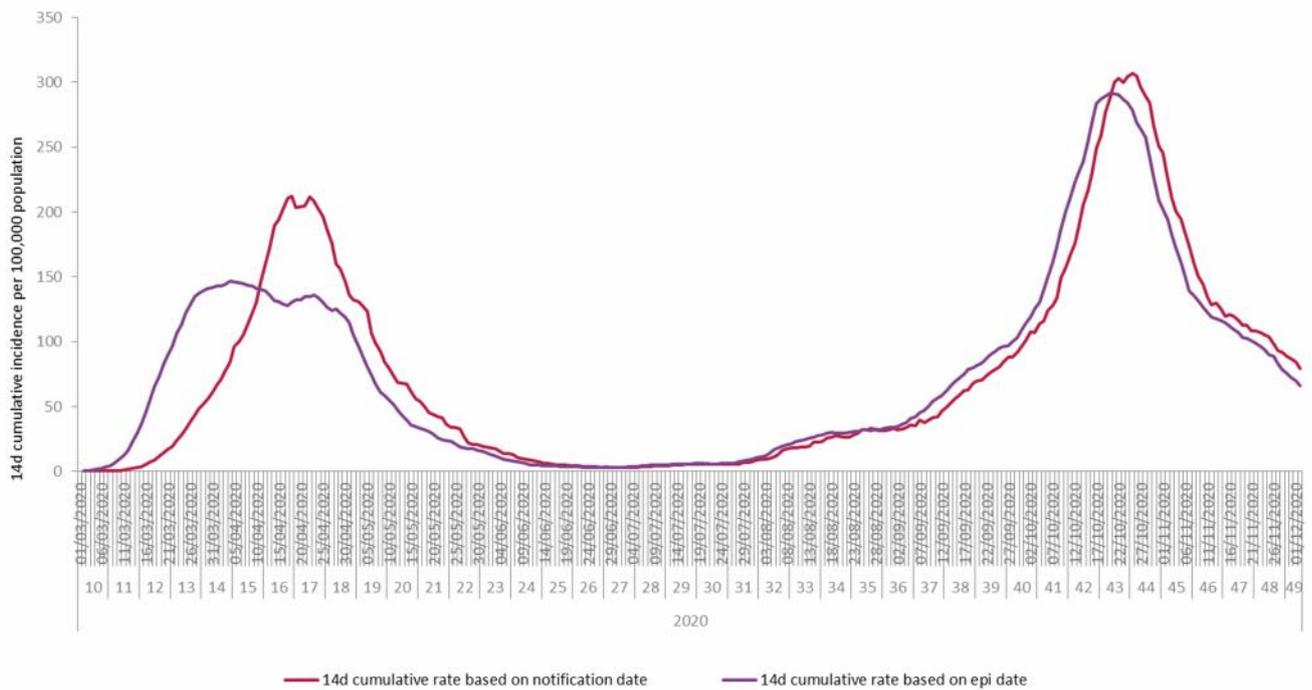
**Figure 1a: Number\* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date\* to midnight 02/12/2020**

\*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 02/12/2020**

\*\*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.



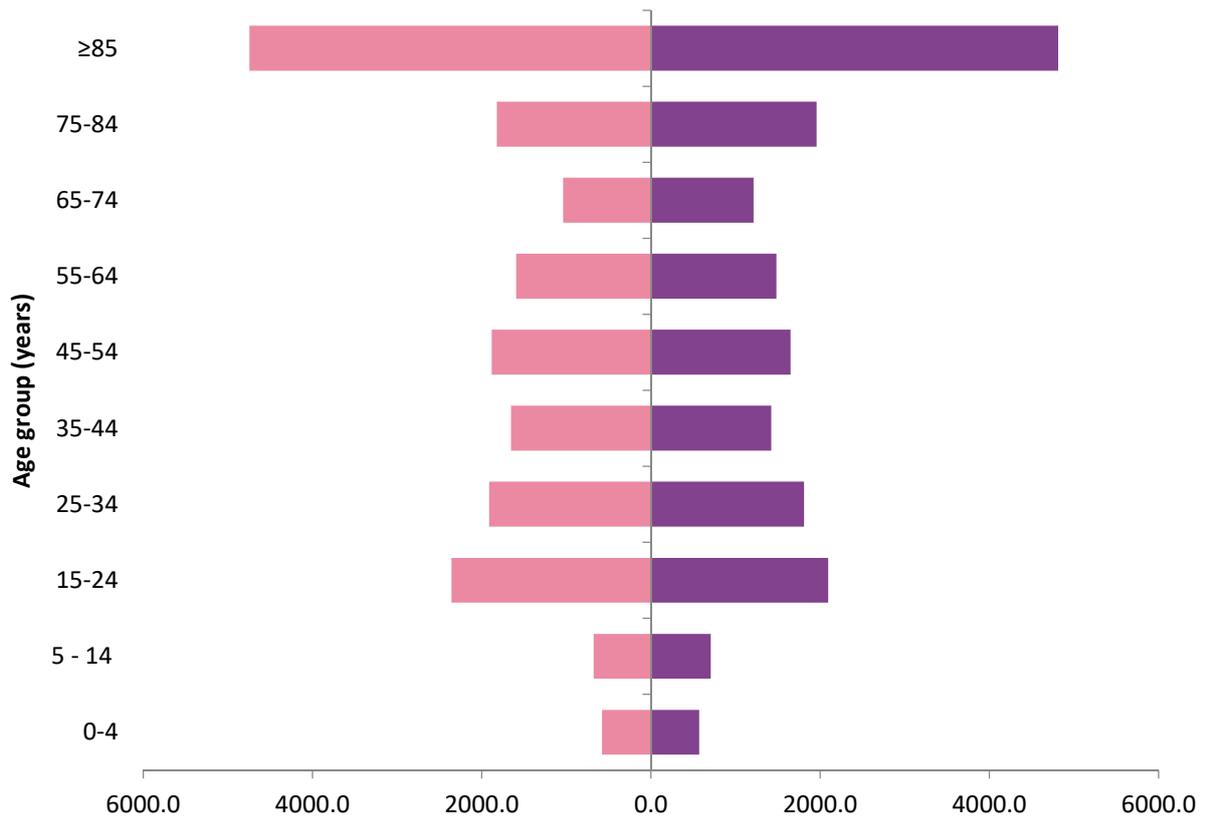
**Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification\* and epidemiological date\*\* to midnight 02/12/2020**

\* 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 02/12/2020**

Characteristic		Number of cases	Percent
<b>Total number of confirmed cases</b>		<b>73,226</b>	<b>100</b>
<b>Sex</b>	Male:Female ratio	0.89	
	Male	34,512	47.13
	Female	38,683	52.83
	Unknown	31	0.04
<b>Age</b>	Median age (years)	39	
	Mean age (years)	41	
	Age range (years)	0 - 108	
	0-4 yrs	1,904	2.6
	5-14 yrs	4,671	6.38
	15-24 yrs	12,821	17.51
	25-34 yrs	12,291	16.79
	35-44 yrs	11,499	15.7
	45-54 yrs	11,062	15.11
	55-64 yrs	7,823	10.68
	65-74 yrs	4,204	5.74
	75-84 yrs	3,702	5.06
	85+ yrs	3,221	4.4
	Unknown	28	0.04



	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	≥85
Female	576.1	675.7	2355.6	1912.9	1654.0	1880.9	1591.6	1039.4	1821.0	4744.6
Male	570.9	705.8	2095.4	1808.4	1421.6	1650.3	1480.9	1213.8	1959.4	4813.1

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 01/12/2020 (excluding 27 cases for whom age is unknown, 30 cases for whom sex is unknown and 1 case for whom both are unknown)

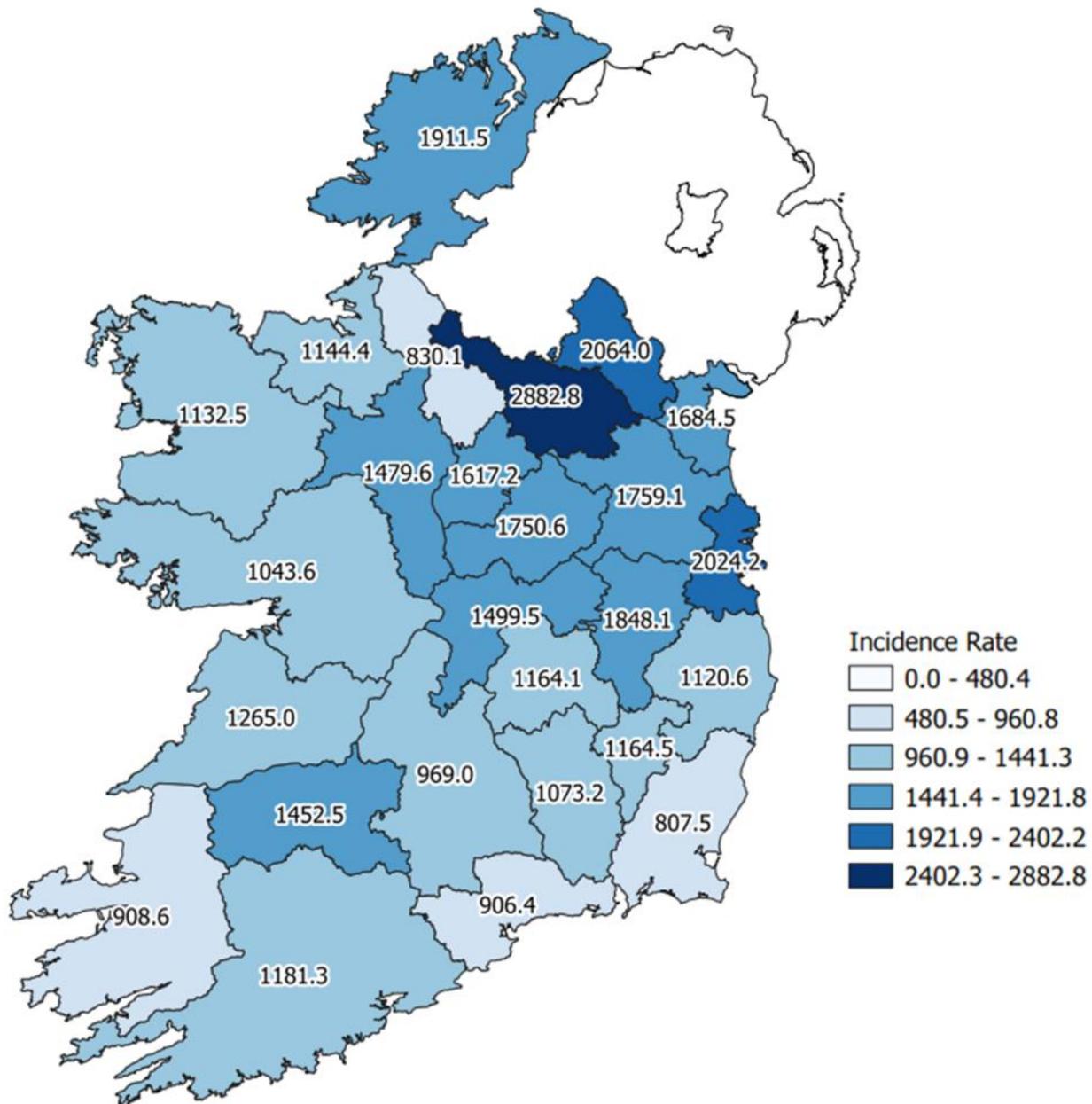


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 02/12/2020

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 02/12/2020**

<b>County Name</b>	<b>Number of cases</b>	<b>Percent</b>
Carlow	663	0.91
Cavan	2,196	3
Clare	1,503	2.05
Cork	6,413	8.76
Donegal	3,043	4.16
Dublin	27,273	37.24
Galway	2,693	3.68
Kerry	1,342	1.83
Kildare	4,112	5.62
Kilkenny	1,065	1.45
Laois	986	1.35
Leitrim	266	0.36
Limerick	2,831	3.87
Longford	661	0.9
Louth	2,171	2.96
Mayo	1,478	2.02
Meath	3,431	4.69
Monaghan	1,267	1.73
Offaly	1,169	1.6
Roscommon	955	1.3
Sligo	750	1.02
Tipperary	1,546	2.11
Waterford	1,053	1.44
Westmeath	1,554	2.12
Wexford	1,209	1.65
Wicklow	1,596	2.18
<b>Total</b>	<b>73,226</b>	<b>100</b>

**Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 02/12/2020**

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	22,090	30.17%
Local transmission, incl. possible local transmission	49,371	67.42%
Travel abroad, incl. possible travel abroad	1,000	1.37%
Unknown	765	1.04%
<b>Total</b>	<b>73,226</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 and ICU as of midnight 02/12/2020**

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	1904	56	1.06	2	0.32
5-14 yrs	4671	49	0.93	4	0.64
15-24 yrs	12821	169	3.2	8	1.28
25-34 yrs	12291	329	6.23	17	2.73
35-44 yrs	11499	420	7.96	52	8.35
45-54 yrs	11062	666	12.62	111	17.82
55-64 yrs	7823	758	14.36	165	26.48
65-74 yrs	4204	945	17.9	179	28.73
75-84 yrs	3702	1,173	22.22	77	12.36
85+ yrs	3221	711	13.47	8	1.28
Unknown	28	2	0.04	0	0
<b>Total</b>	<b>73,226</b>	<b>5,278</b>	<b>100</b>	<b>623</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 02/12/2020**

	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)	1904	4671	12821	12291	11499	11062	7823	4204	3702	3221	28
Cases hospitalised (n)	56	49	169	329	420	666	758	945	1173	711	2
Cases hospitalised (%)	2.9	1.0	1.3	2.7	3.7	6.0	9.7	22.5	31.7	22.1	7.1
Cases admitted to ICU (n)	2	4	8	17	52	111	165	179	77	8	0
Cases admitted to ICU (%)	0.1	0.1	0.1	0.1	0.5	1.0	2.1	4.3	2.1	0.2	0
Deaths (n)	0	0	1	6	11	31	83	282	633	780	0
Case fatality ratio (%)	0	0	0.0	0.0	0.1	0.3	1.1	6.7	17.1	24.2	0

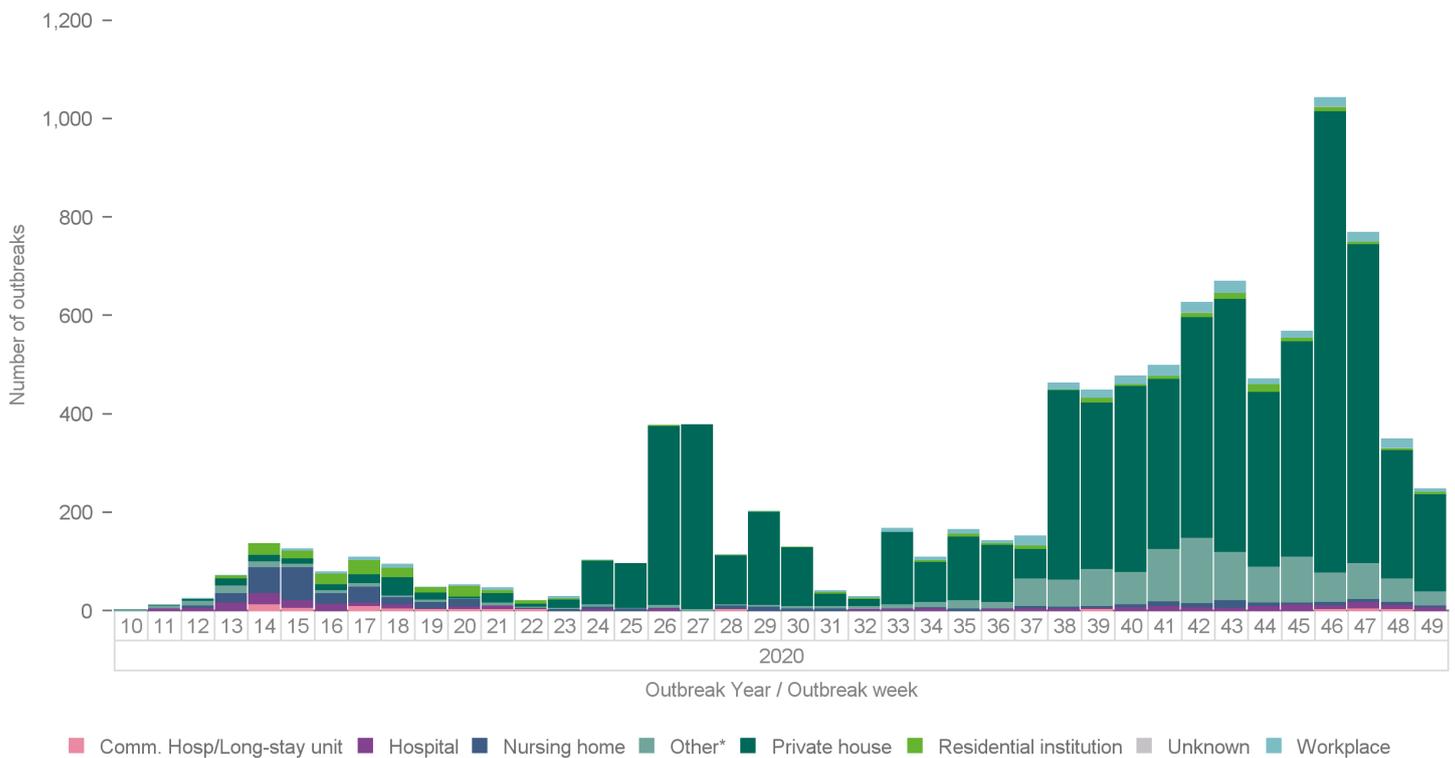
## Outbreaks of COVID-19

**Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 02/12/2020**

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC**	Total
Private house	4278	172	190	480	404	612	616	559	0	7311
Other*	252	72	160	78	127	245	60	141	2	1137
Nursing home	170	17	20	50	12	22	22	45	0	358
Workplace	107	19	22	50	37	27	30	26	0	318
Residential institution	152	16	17	35	9	30	17	10	0	286
Hospital	108	7	10	22	13	16	9	7	0	192
Comm. Hosp/Long-stay unit	6	4	3	0	5	7	5	5	0	35
Unknown				1	2					3
<b>Total</b>	<b>5073</b>	<b>307</b>	<b>422</b>	<b>716</b>	<b>609</b>	<b>959</b>	<b>759</b>	<b>793</b>	<b>2</b>	<b>9640</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 02/12/2020**

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

Note: 8,889 COVID-19 outbreaks were reported on CIDR between week 24 and week 49 2020 (9th June to 1st December). Of these, 6,963 were family outbreaks. Based on the earliest date associated with each outbreak, some of these family outbreaks occurred earlier and were reported between weeks 24 and 49 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, 2,586 in October, 933 in November and 23 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 02/12/2020**

	Number	Percent
Total number of deaths	2,086	
Confirmed	1,827	87.58
Probable	95	4.55
Possible	164	7.86
Total number of cases hospitalised	950	45.54
Cases admitted to ICU	140	6.71
Cases not admitted to ICU	810	38.83
Total number of imported cases	5	0.24
Number of cases in healthcare workers	8	0.38
Number with underlying clinical conditions	1,939	92.95
Total number of male cases	1,060	50.81
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 02/12/2020**

Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.05
25-34 yrs	<5	<5	6	0.29
35-44 yrs	5	7	12	0.58
45-54 yrs	13	20	33	1.58
55-64 yrs	30	59	89	4.27
65-74 yrs	109	201	310	14.86
75-84 yrs	325	390	715	34.28
85+ yrs	539	379	918	44.01
Unknown	<5	<5	2	0.1
<b>Total</b>	<b>1,026</b>	<b>1,060</b>	<b>2,086</b>	<b>100</b>
<b>Percent</b>	<b>49.19</b>	<b>50.81</b>		

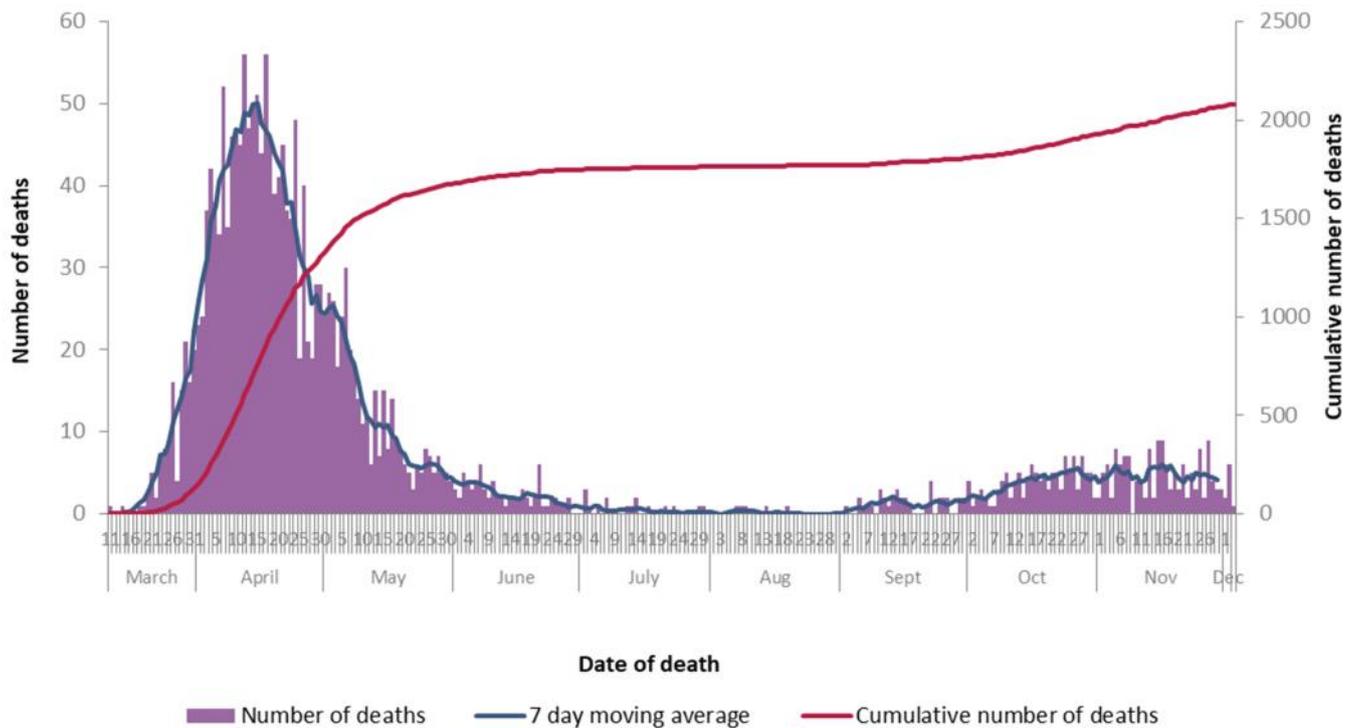


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 02/12/2020

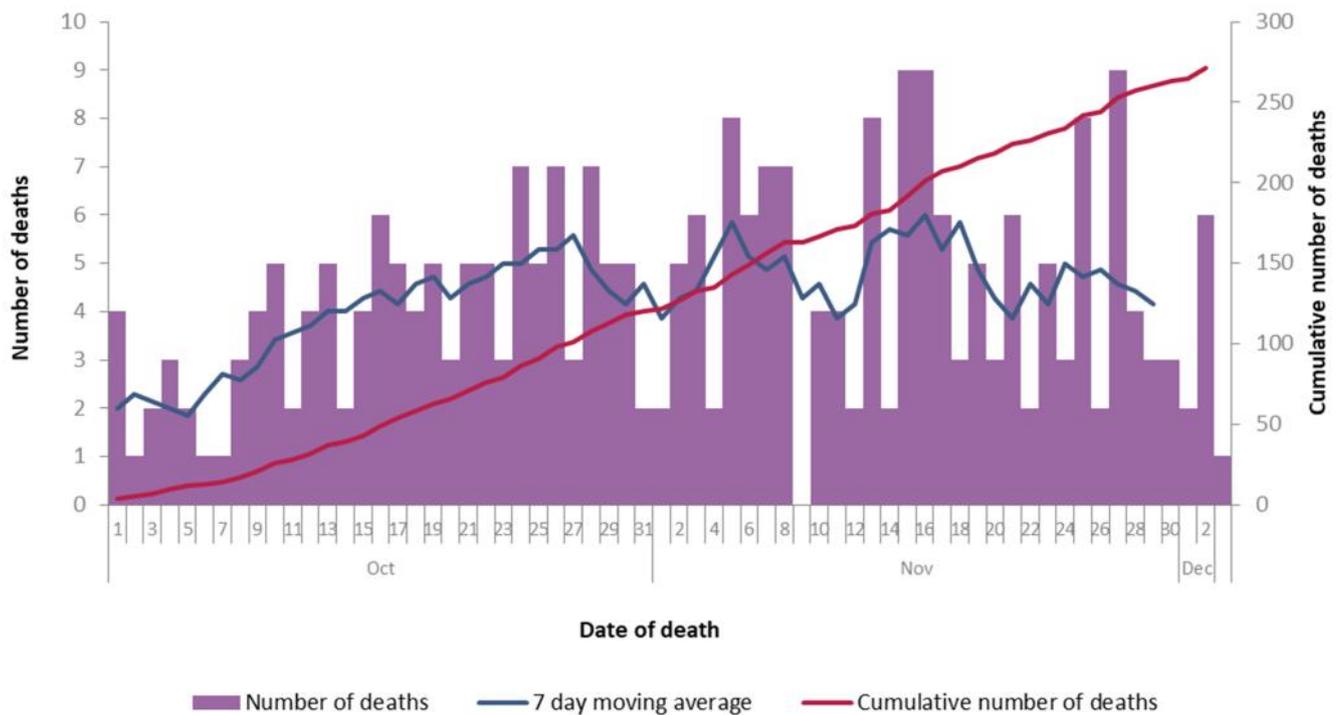


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total from 01/10/2020 to midnight 02/12/2020

\* 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 09:30 on 04/12/2020. 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.