



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 07/12/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 05/12/2020

	Number	Percent
Total number of confirmed cases	74,226	
National cumulative incidence of confirmed cases per 100,000 population	1,558.76	
Total number of cases hospitalised	5,332	7.18
Total number of cases admitted to ICU	630	0.85
Total number of deaths among confirmed cases	1,840	2.48
Case fatality ratio (CFR, %)	2.48	
National cumulative incidence of confirmed deaths per 100,000 population	38.64	
Total number of outbreaks/clusters	9,746	
Total number of cases associated with clusters	40,863	55.05
Total number of imported cases	668	0.9
Number of cases in healthcare workers	12,264	16.52
Males	34,986	47.13
Females	39,207	52.82
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 09:46 on 07/12/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

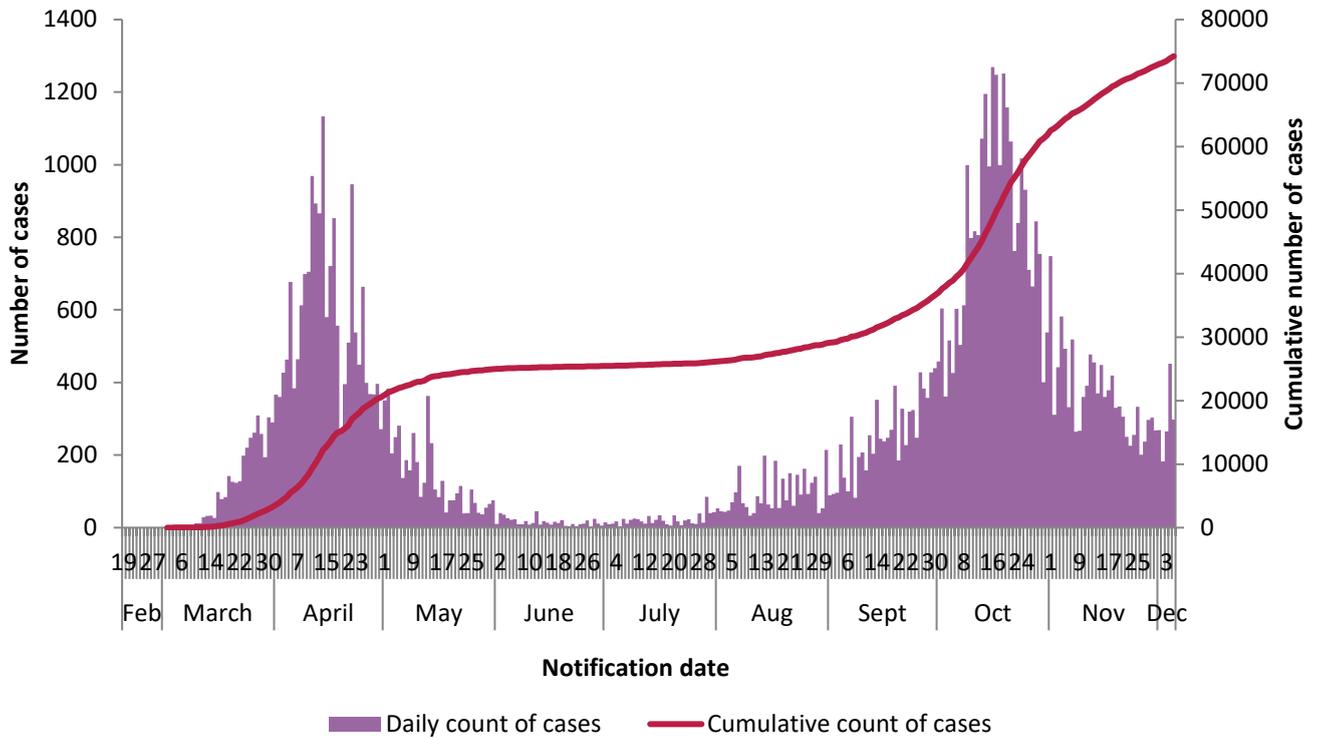


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 05/12/2020

*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

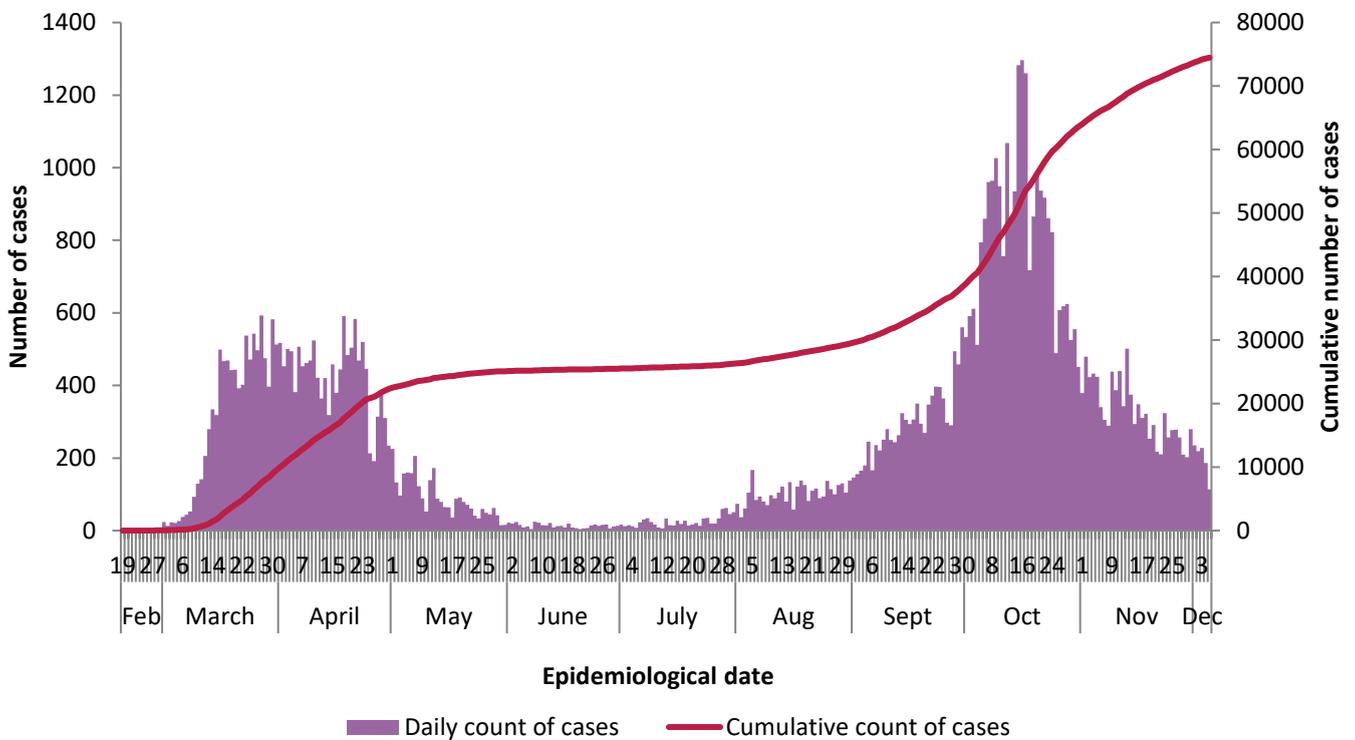


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 05/12/2020**

**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.

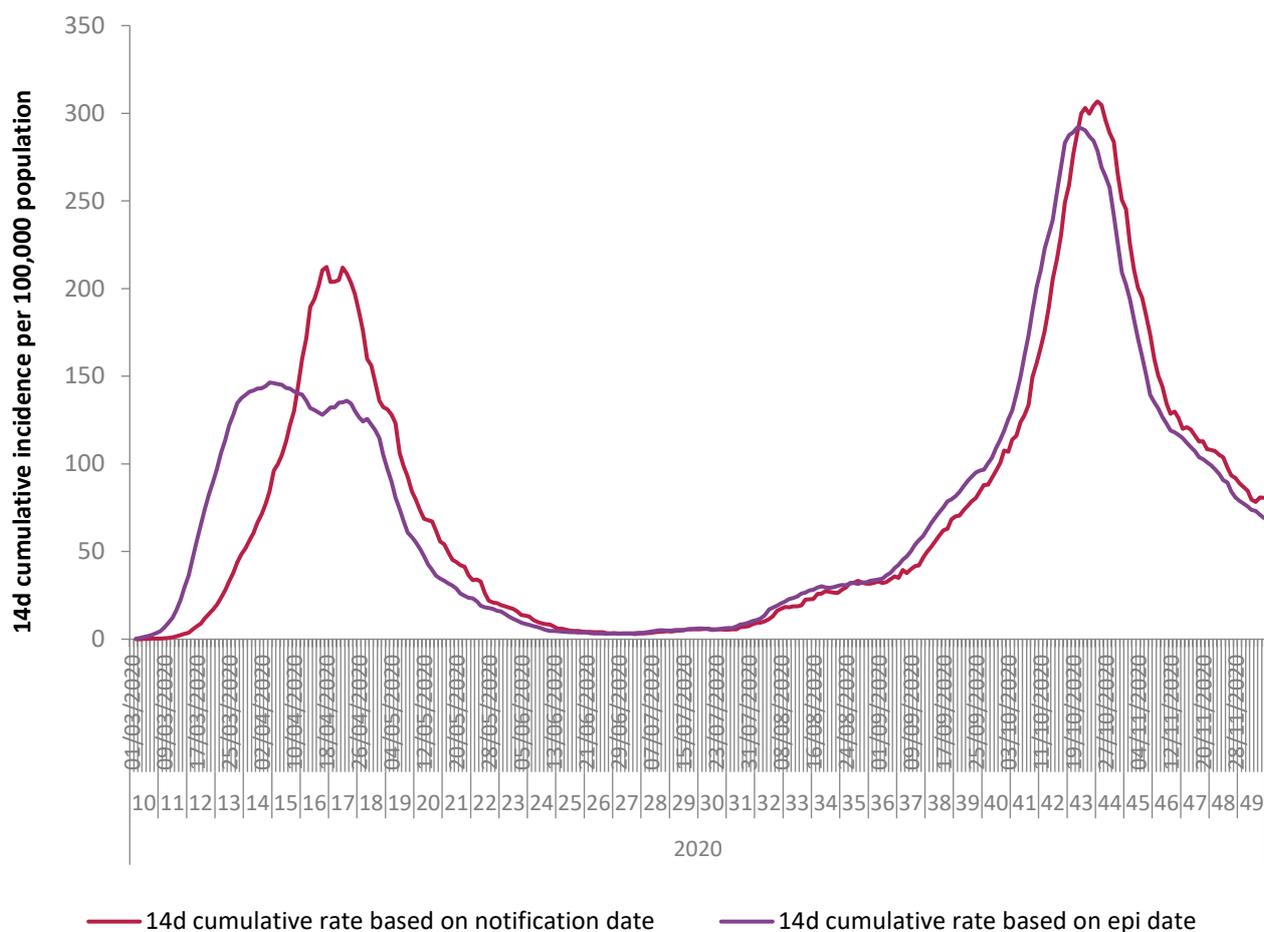


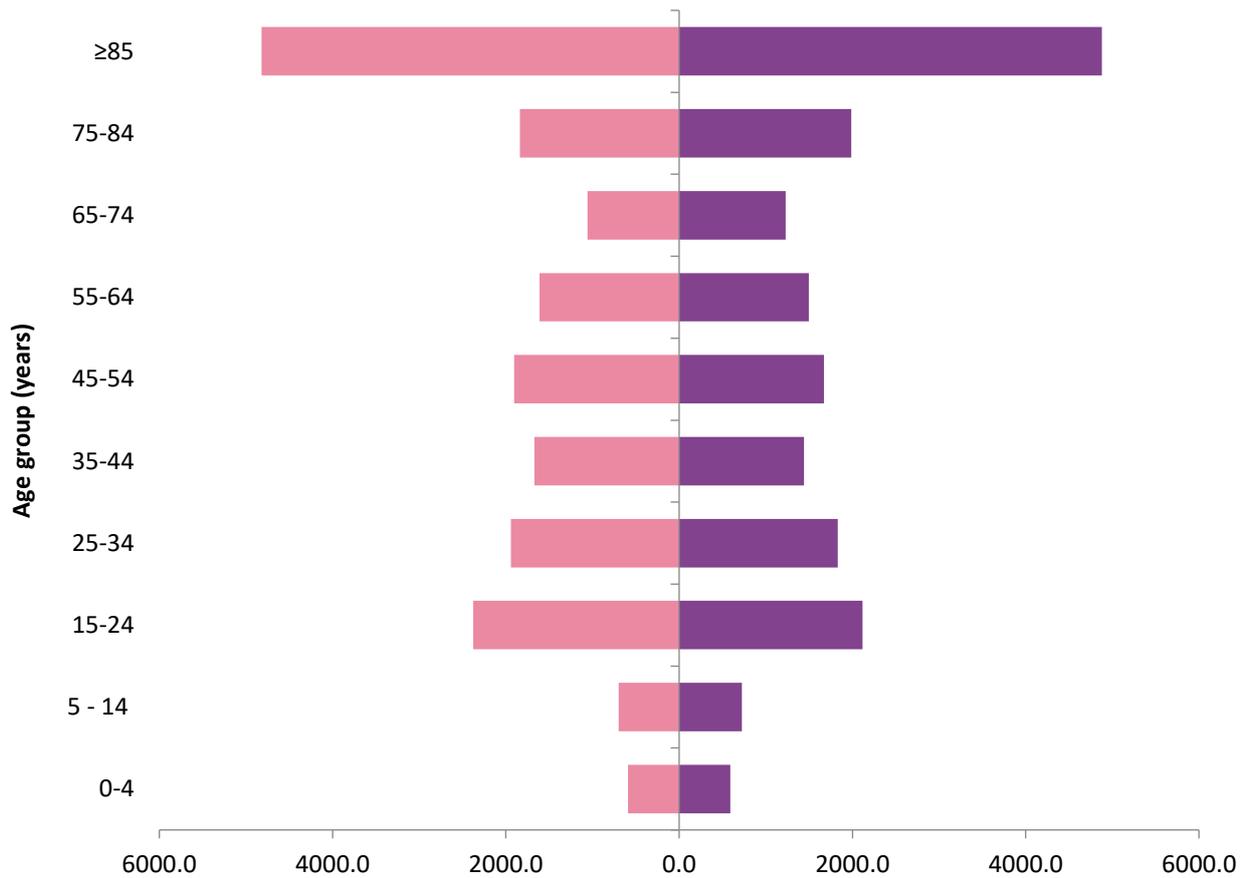
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 05/12/2020**

* 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 05/12/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		74,226	100
Sex	Male:Female ratio	0.89	
	Male	34,986	47.13
	Female	39,207	52.82
	Unknown	33	0.04
Age	Median age (years)	39	
	Mean age (years)	41	
	Age range (years)	0 - 108	
	0-4 yrs	1,959	2.64
	5-14 yrs	4,814	6.49
	15-24 yrs	12,948	17.44
	25-34 yrs	12,463	16.79
	35-44 yrs	11,630	15.67
	45-54 yrs	11,194	15.08
	55-64 yrs	7,912	10.66
	65-74 yrs	4,265	5.75
	75-84 yrs	3,744	5.04
	85+ yrs	3,269	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	589.7	699.3	2376.7	1940.7	1669.9	1903.8	1611.9	1056.9	1838.8	4818.7
Male	590.3	724.7	2118.3	1832.3	1440.9	1669.6	1495.1	1229.0	1985.2	4878.2

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 05/12/2020 (excluding 27 cases for whom age is unknown, 32 cases for whom sex is unknown and 1 case for whom both are unknown)

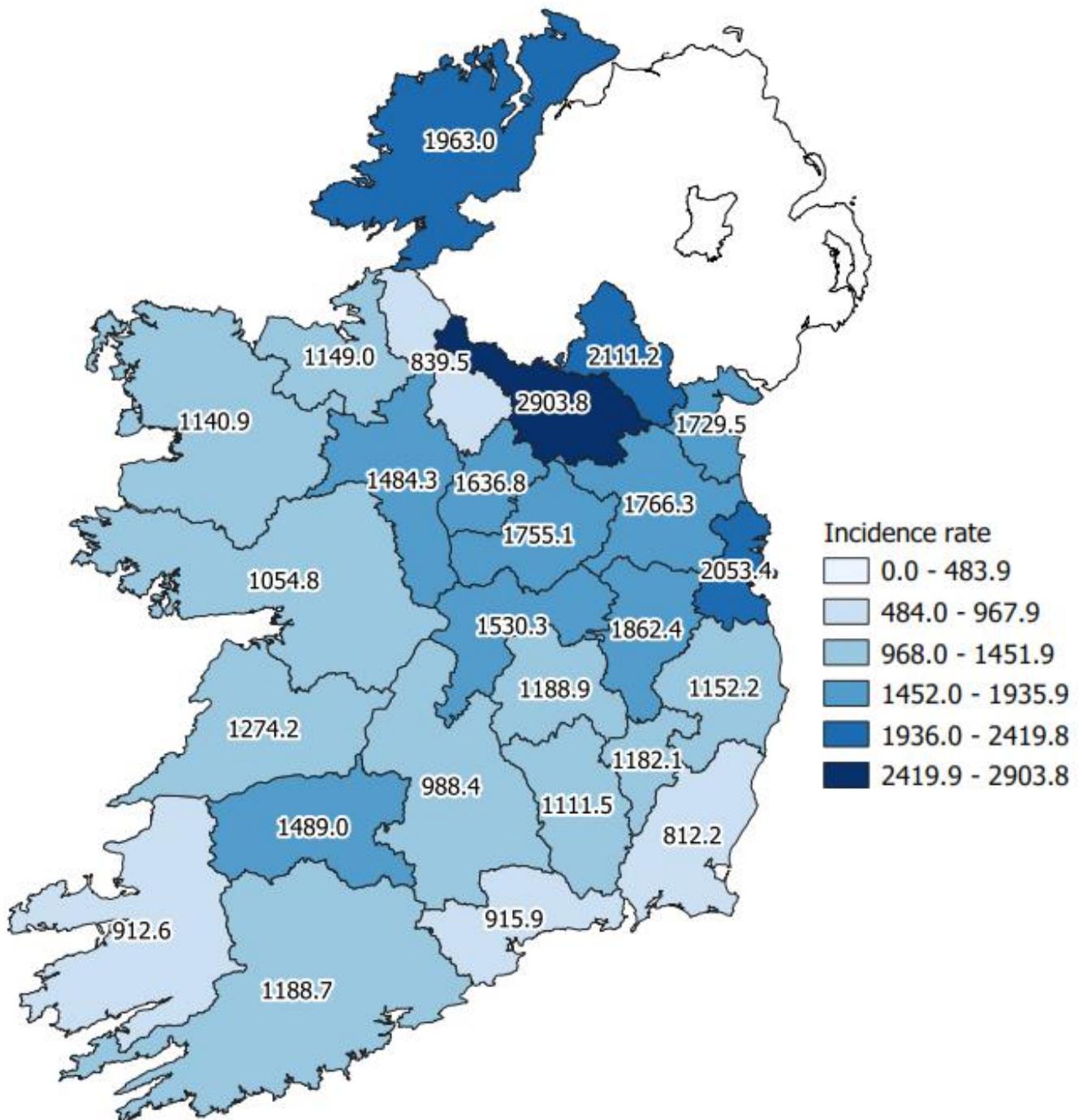


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 05/12/2020

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 05/12/2020

County Name	Number of cases	Percent
Carlow	673	0.91
Cavan	2,212	2.98
Clare	1,514	2.04
Cork	6,453	8.69
Donegal	3,125	4.21
Dublin	27,666	37.27
Galway	2,722	3.67
Kerry	1,348	1.82
Kildare	4,144	5.58
Kilkenny	1,103	1.49
Laois	1,007	1.36
Leitrim	269	0.36
Limerick	2,902	3.91
Longford	669	0.9
Louth	2,229	3
Mayo	1,489	2.01
Meath	3,445	4.64
Monaghan	1,296	1.75
Offaly	1,193	1.61
Roscommon	958	1.29
Sligo	753	1.01
Tipperary	1,577	2.12
Waterford	1,064	1.43
Westmeath	1,558	2.1
Wexford	1,216	1.64
Wicklow	1,641	2.21
Total	74,226	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 05/12/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	22,421	30.21%
Local transmission, incl. possible local transmission	49,948	67.29%
Travel abroad, incl. possible travel abroad	1,010	1.36%
Unknown	847	1.14%
Total	74,226	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 05/12/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	1959	58	1.09	2	0.32
5-14 yrs	4814	51	0.96	4	0.63
15-24 yrs	12948	171	3.21	8	1.27
25-34 yrs	12463	333	6.25	17	2.7
35-44 yrs	11630	422	7.91	54	8.57
45-54 yrs	11194	668	12.53	112	17.78
55-64 yrs	7912	763	14.31	165	26.19
65-74 yrs	4265	957	17.95	181	28.73
75-84 yrs	3744	1,183	22.19	79	12.54
85+ yrs	3269	724	13.58	8	1.27
Unknown	28	2	0.04	0	0
Total	74,226	5,332	100	630	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation, ICU admission and vital status 05/12/2020

	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)	1959	4814	12948	12463	11630	11194	7912	4265	3744	3269	28
Cases hospitalised (n)	58	51	171	333	422	668	763	957	1183	724	2
Cases hospitalised (%)	2.96	1.06	1.32	2.67	3.63	5.97	9.64	22.44	31.60	22.15	7.14
Cases admitted to ICU (n)	2	4	8	17	54	112	165	181	79	8	0
Cases admitted to ICU (%)	0.10	0.08	0.06	0.14	0.46	1.00	2.09	4.24	2.11	0.24	0
Deaths (n)	0	0	1	6	11	31	85	286	634	786	0
Case fatality ratio (%)	0	0	0.01	0.05	0.09	0.28	1.07	6.71	16.93	24.04	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 05/12/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC**	Total
Private house	4349	172	190	481	406	616	616	572	0	7402
Other*	255	72	160	78	128	246	60	144	2	1145
Nursing home	170	18	20	50	12	23	22	45	0	360
Workplace	107	19	22	50	37	27	30	27	0	319
Residential institution	154	16	17	35	9	30	17	10	0	288
Hospital	110	7	10	22	13	16	9	7	0	194
Comm. Hosp/Long-stay unit	6	4	3	0	5	7	5	5	0	35
Unknown	0	0	0	1	2	0	0	0	0	3
Total	5151	308	422	717	612	965	759	810	2	9746

*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.

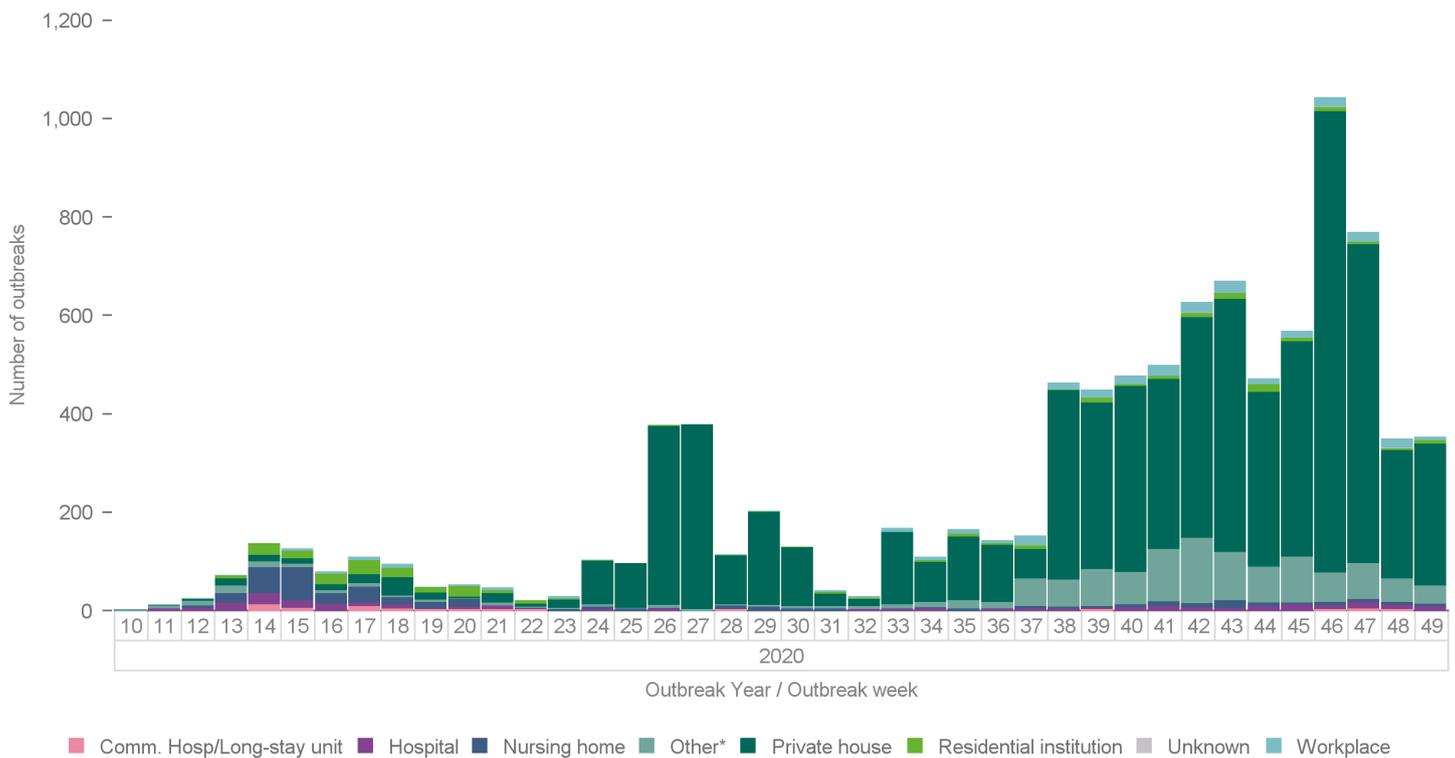


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 05/12/2020

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

Note: 8,910 COVID-19 outbreaks were reported on CIDR between week 24 and week 49 2020 (9th June to 5th December). Of these, 7,107 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, 2,614 in October, 951 in November and 37 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 05/12/2020

	Number	Percent
Total number of deaths	2,099	
Confirmed	1,840	87.66
Probable	95	4.53
Possible	164	7.81
Total number of cases hospitalised	958	45.64
Cases admitted to ICU	144	6.86
Cases not admitted to ICU	814	38.78
Total number of imported cases	5	0.24
Number of cases in healthcare workers	8	0.38
Number with underlying clinical conditions	1,951	92.95
Total number of male cases	1,066	50.79
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 05/12/2020

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	0.57
45-54 yrs	13	20	33	1.57
55-64 yrs	32	59	91	4.34
65-74 yrs	110	204	314	14.96
75-84 yrs	326	390	716	34.11
85+ yrs	542	382	924	44.02
Unknown	<5	<5	2	0.1
Total	1,033	1,066	2,099	100
Percent	49.21	50.79		

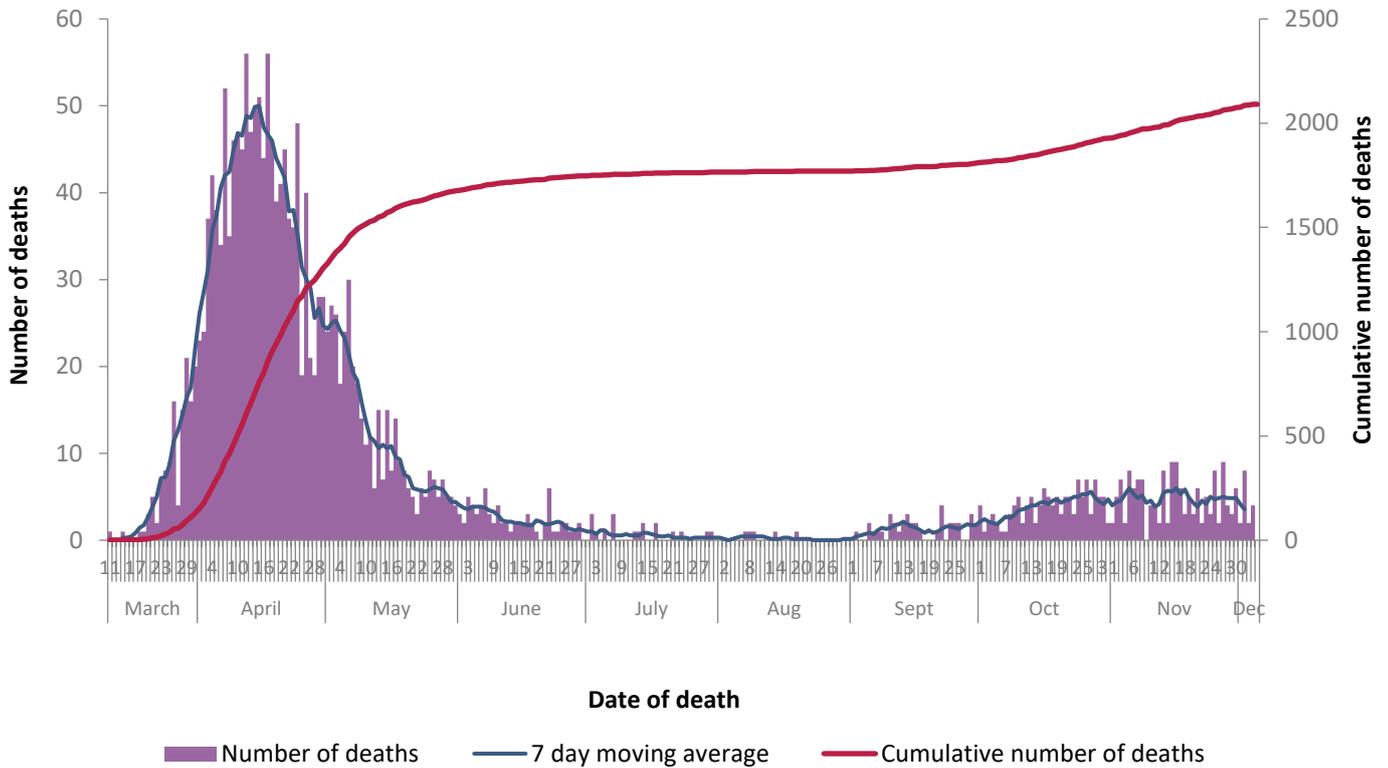


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 05/12/2020

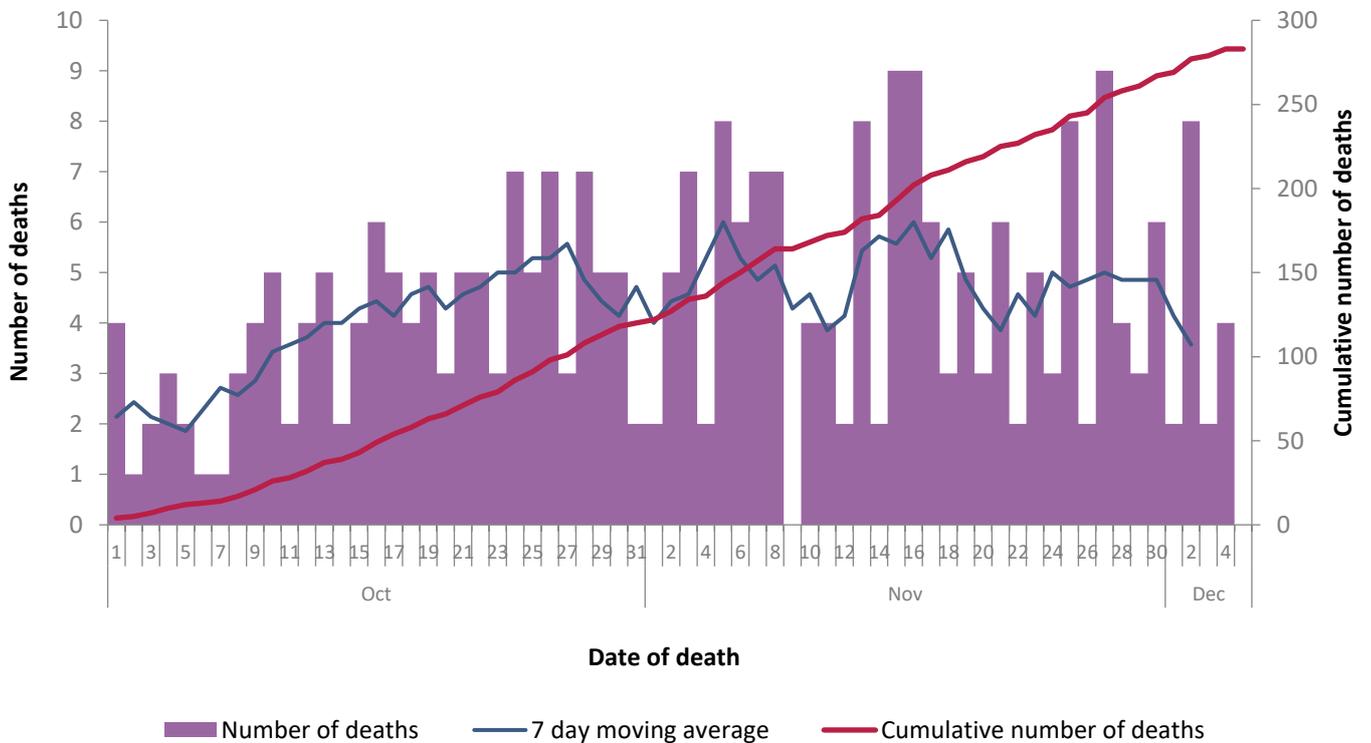


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total from 01/10/2020 to midnight 05/12/2020

* 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 09:46 on 07/12/2020. 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.