Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 16/11/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 14/11/2020

	Number	Percent
Total number of confirmed cases	67,900	
National cumulative incidence of confirmed cases per 100,000 population	1,425.91	
Total number of cases hospitalised	4,871	7.17
Total number of cases admitted to ICU	593	0.87
Total number of deaths among confirmed cases	1,725	2.54
Case fatality ratio (CFR, %)	2.54	
National cumulative incidence of confirmed deaths per 100,000 population	36.23	
Total number of outbreaks/clusters	8,311	
Total number of cases associated with clusters	35,450	52.21
Total number of imported cases	650	0.96
Number of cases in healthcare workers	11,283	16.62
Males	31,944	47.05
Females	35,934	52.92
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 09:15 on 16/11/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.
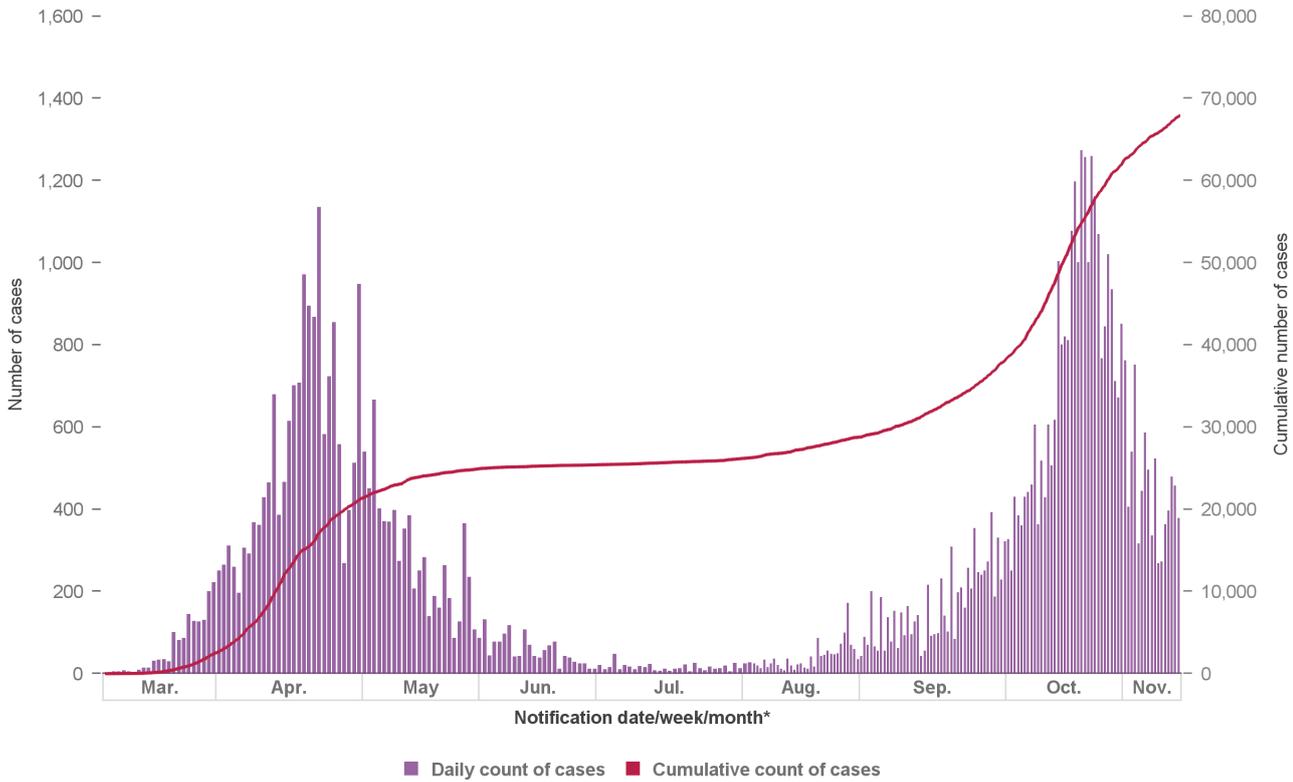
Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 14/11/2020

*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
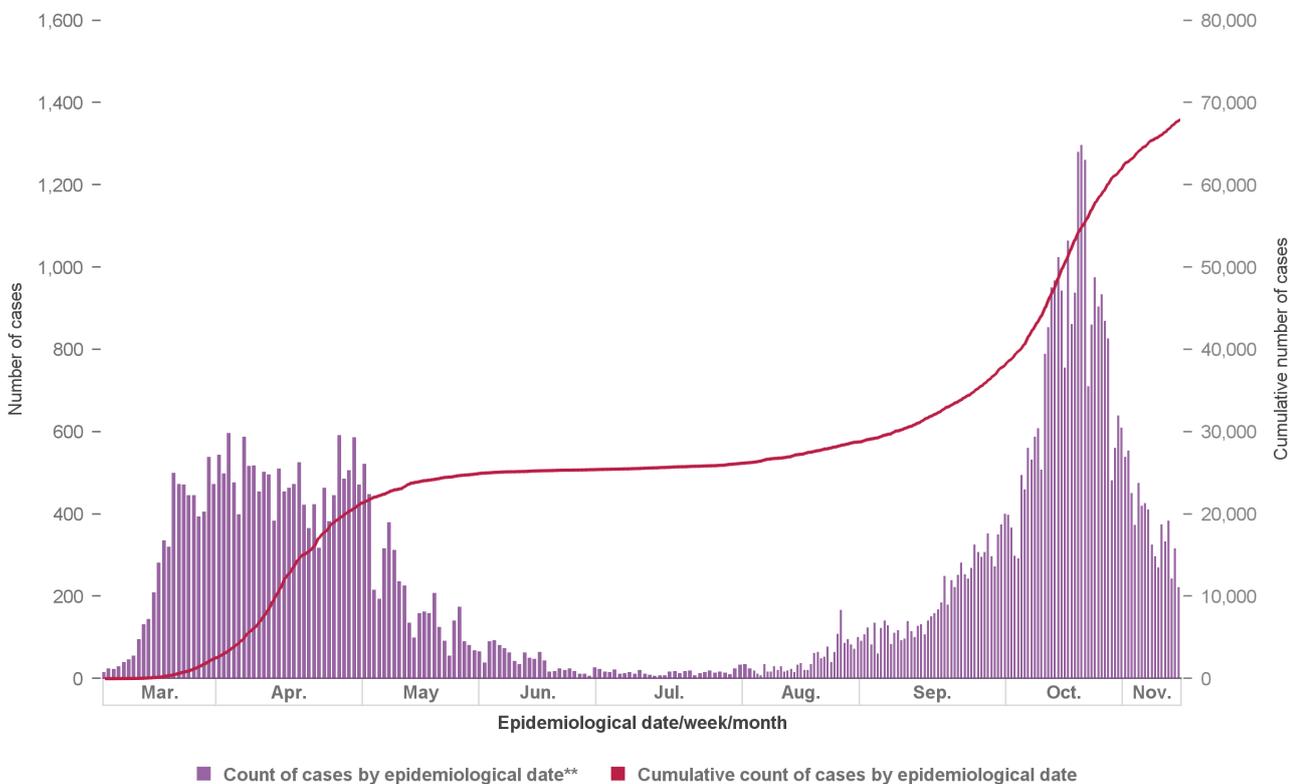

Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date** to midnight 14/11/2020

**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 14/11/2020

* 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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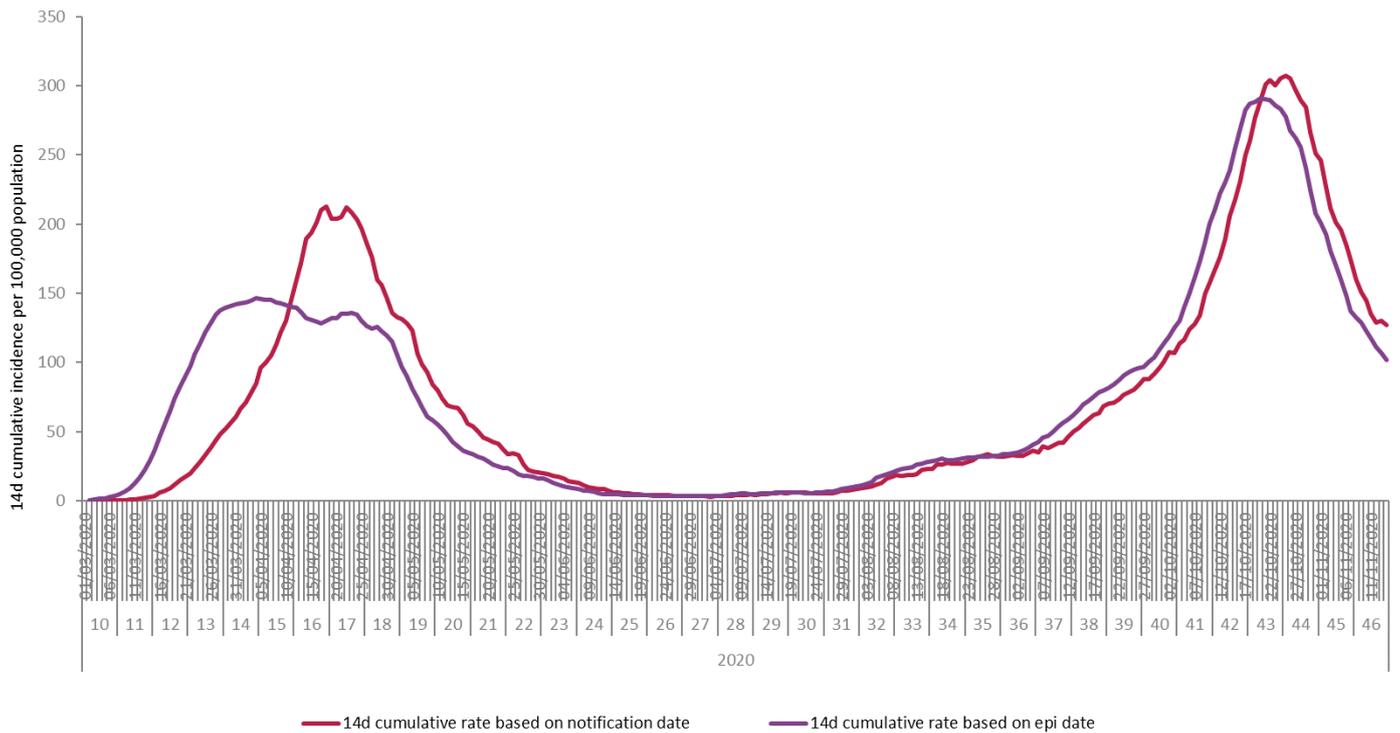
Table 1: Characteristics of confirmed COVID-19 cases notified in Ireland up to midnight on 14/11/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		**67,900**	**100**
Sex	Male:Female ratio	0.89	
	Male	31,944	47.05
	Female	35,934	52.92
	Unknown	22	0.03
Age	Median age (years)	39	
	Mean age (years)	41	
	Age range (years)	0 - 108	
	0-4 yrs	1,673	2.46
	5-14 yrs	4,069	5.99
	15-24 yrs	11,781	17.35
	25-34 yrs	11,485	16.91
	35-44 yrs	10,645	15.68
	45-54 yrs	10,329	15.21
	55-64 yrs	7,382	10.87
	65-74 yrs	3,952	5.82
	75-84 yrs	3,477	5.12
	85+ yrs	3,075	4.53
	Unknown	32	0.05

	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	≥85
■ Female	511.8	588.8	2163.3	1787.6	1526.3	1766.6	1504.7	974.4	1711.0	4560.3
■ Male	496.7	615.1	1926.5	1690.9	1320.9	1531.0	1394.5	1143.3	1839.6	4535.6

Cumulative age- and sex-specific rate per 100,000 population
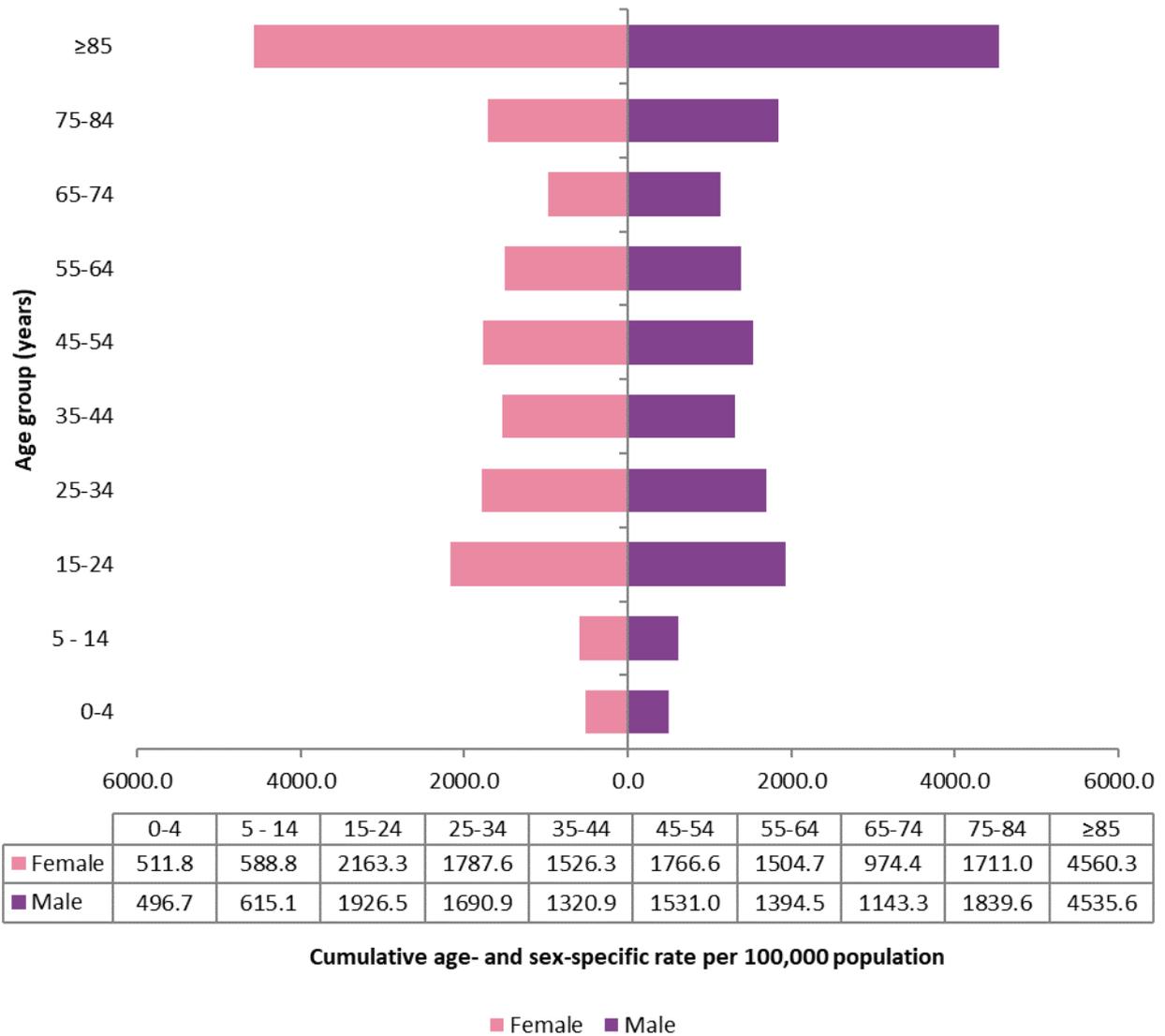
■ Female   ■ Male

Figure 3: Cumulative age- and sex-specific incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 14/11/2020 (excluding 31 cases for whom age is unknown, 21 cases for whom sex is unknown and 1 case for whom both are unknown)
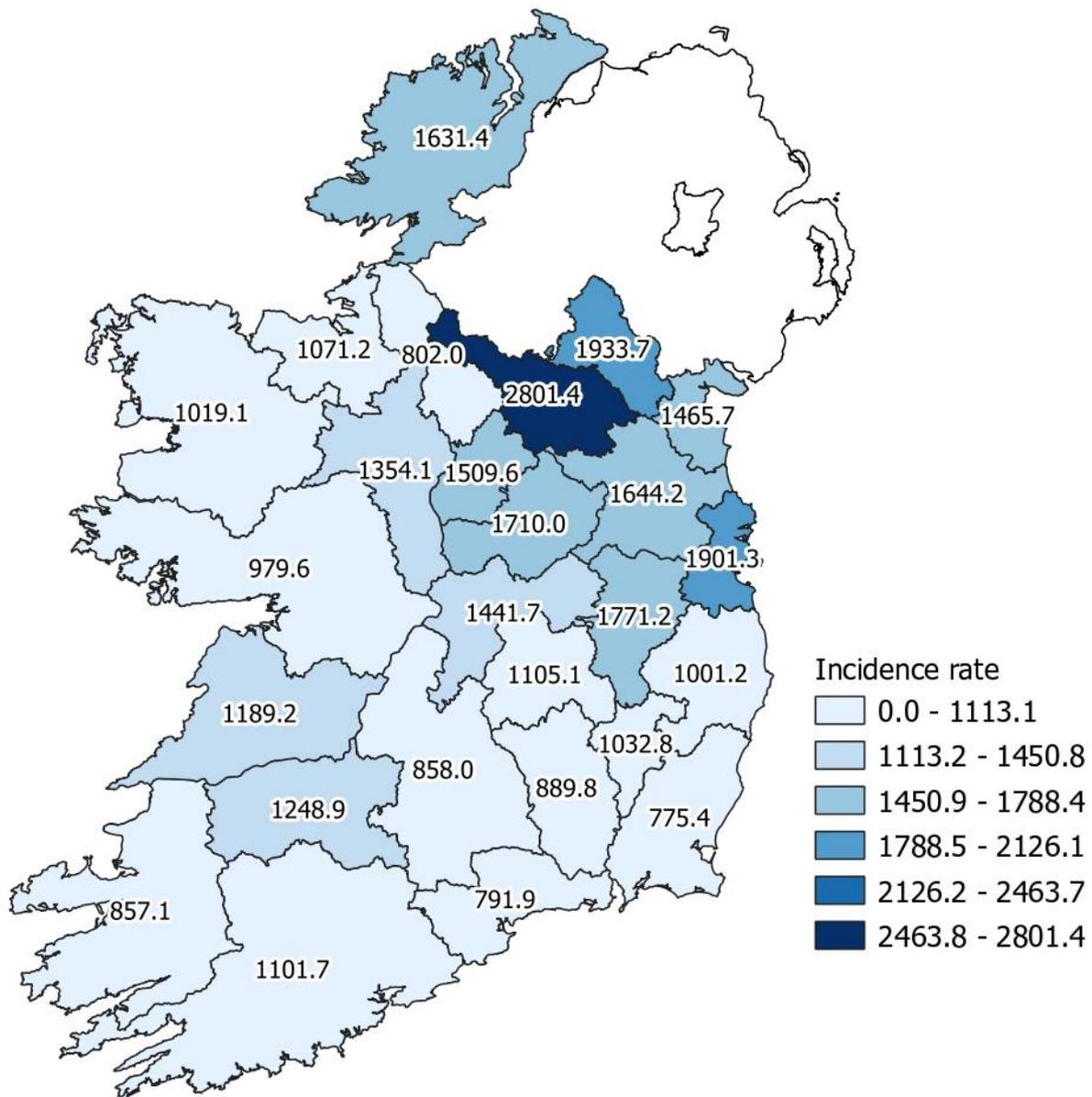
Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 14/11/2020

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 14/11/2020

County Name	Number of cases	Percent
Carlow	588	0.87
Cavan	2,134	3.14
Clare	1,413	2.08
Cork	5,981	8.81
Donegal	2,597	3.82
Dublin	25,618	37.73
Galway	2,528	3.72
Kerry	1,266	1.86
Kildare	3,941	5.8
Kilkenny	883	1.3
Laois	936	1.38
Leitrim	257	0.38
Limerick	2,434	3.58
Longford	617	0.91
Louth	1,889	2.78
Mayo	1,330	1.96
Meath	3,207	4.72
Monaghan	1,187	1.75
Offaly	1,124	1.66
Roscommon	874	1.29
Sligo	702	1.03
Tipperary	1,369	2.02
Waterford	920	1.35
Westmeath	1,518	2.24
Wexford	1,161	1.71
Wicklow	1,426	2.1
Total	**67,900**	**100**

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 14/11/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	21,716	31.98%
Local transmission, incl. possible local transmission	44,054	64.88%
Travel abroad, incl. possible travel abroad	958	1.41%
Unknown	1,172	1.73%
Total	**67,900**	**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 14/11/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	1673	52	1.07	1	0.17
5-14 yrs	4069	49	1.01	4	0.67
15-24 yrs	11781	151	3.1	8	1.35
25-34 yrs	11485	301	6.18	17	2.87
35-44 yrs	10645	392	8.05	48	8.09
45-54 yrs	10329	621	12.75	108	18.21
55-64 yrs	7382	707	14.51	158	26.64
65-74 yrs	3952	877	18	169	28.5
75-84 yrs	3477	1,070	21.97	72	12.14
85+ yrs	3075	649	13.32	8	1.35
Unknown	32	2	0.04	0	0
Total	**67,900**	**4,871**	**100**	**593**	**100**

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation, ICU Admission and vital status 14/11/2020

	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)	1,673	4,069	11,781	11,485	10,645	10,329	7,382	3,952	3,477	3,075	32
Cases hospitalised (n)	52	49	151	301	392	621	707	877	1,070	649	2
Cases hospitalised (%)	3.11	1.20	1.28	2.62	3.68	6.01	9.58	22.19	30.77	21.11	6.25
Cases admitted to ICU (n)	1	4	8	17	48	108	158	169	72	8	0
Cases admitted to ICU (%)	0.06	0.10	0.07	0.15	0.45	1.05	2.14	4.28	2.07	0.26	0
Deaths (n)	0	0	1	7	12	30	79	265	588	743	0
Case fatality ratio (%)	0	0	0.01	0.06	0.11	0.29	1.07	6.71	16.91	24.16	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 14/11/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC	Total
Private house	3,581	116	180	438	342	500	561	509		**6,227**
Other*	223	62	149	62	104	206	58	119	2	**985**
Nursing home	163	16	20	52	8	22	20	44		**345**
Workplace	92	17	21	44	32	23	22	22		**273**
Residential institution	141	16	17	33	10	30	15	10		**272**
Hospital	94	7	8	20	6	17	6	7		**165**
Comm. Hosp/Long-stay unit	7	4	2		4	6	5	5		**33**
Unknown	7	1			2	1				**11**
Total	**4,308**	**239**	**397**	**649**	**508**	**805**	**687**	**716**	**2**	**8,311**

*Other outbreak location includes community, extended family, hotel, public house, retail outlet, travel related and all other locations.
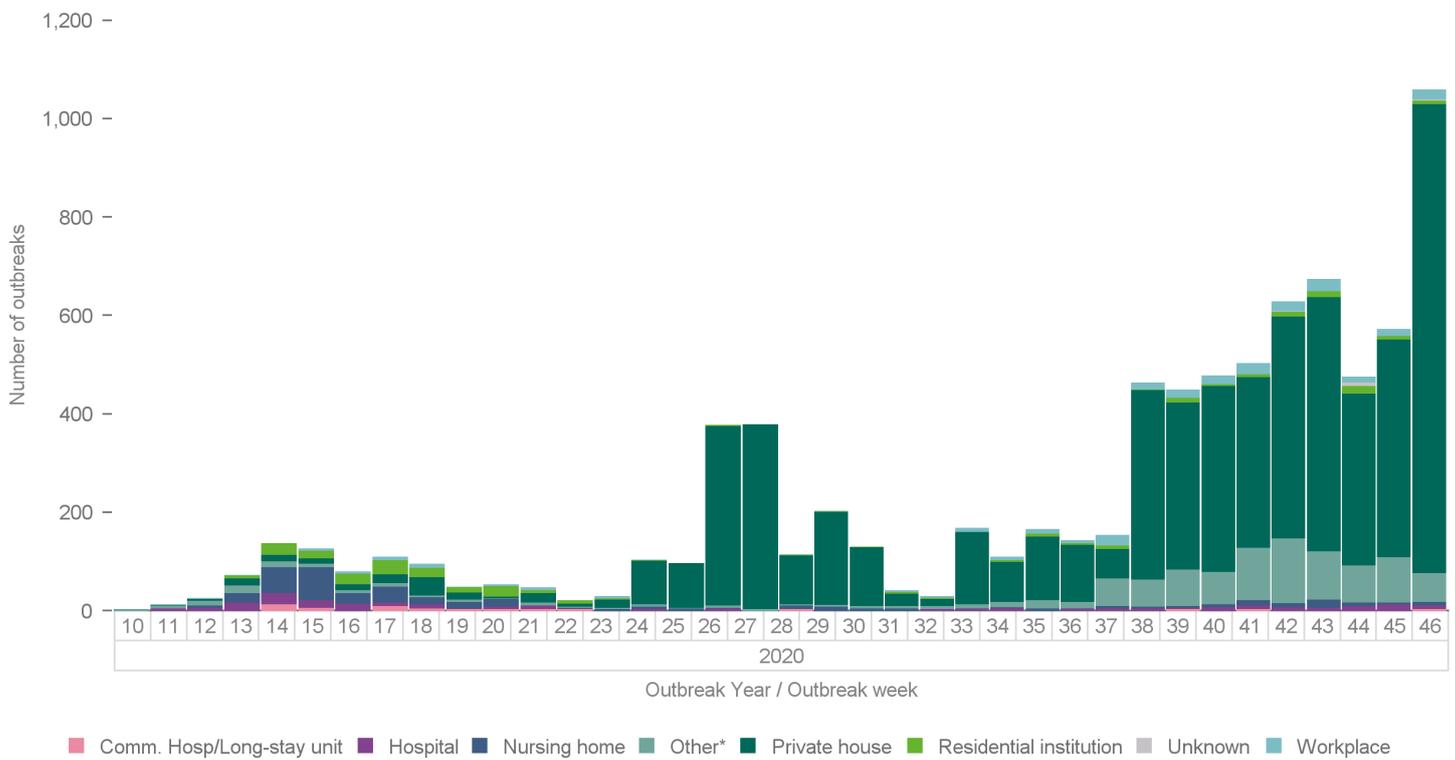
Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 14/11/2020

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

Note: 7,475 COVID-19 outbreaks were reported on CIDR between week 24 and week 46 2020 (9th June to 14th Nov). Of these, 5,921 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 46 as a result of data validation: 1 occurred in February, 636 in March, 474 in April, 94 in May, 126 in June, 127 in July, 533 in August, 1,509 in September, 2,130 in October and 289 to date in November.

Deaths among COVID-19 cases

Table 7: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 14/11/2020

		Number	Percent
Total number of deaths		1,984	
	Confirmed	1,725	86.95
	Probable	95	4.79
	Possible	164	8.27
Total number of cases hospitalised		877	44.2
	Cases admitted to ICU	125	6.3
	Cases not admitted to ICU	752	37.9
Total number of imported cases		6	0.3
Number of cases in healthcare workers		8	0.4
Number with underlying clinical conditions		1,841	92.79
Total number of male cases		1,001	50.45
M:F ratio		1.02	
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 14/11/2020

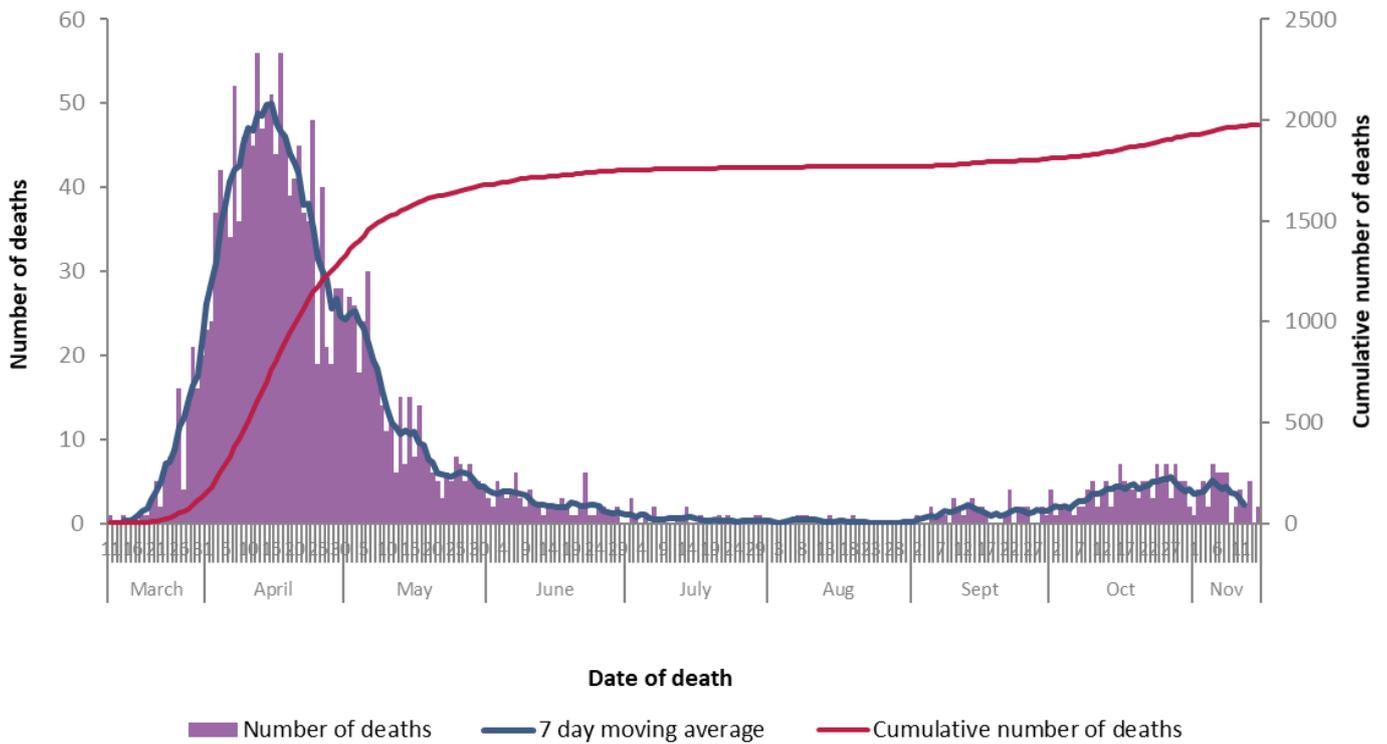| Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.05
25-34 yrs	<5	5	7	0.35
35-44 yrs	6	7	13	0.66
45-54 yrs	12	20	32	1.61
55-64 yrs	27	58	85	4.28
65-74 yrs	106	187	293	14.77
75-84 yrs	303	367	670	33.77
85+ yrs	524	357	881	44.41
Unknown	<5	<5	2	0.1
Total	**983**	**1,001**	**1,984**	**100**
Percent	**49.55**	**50.45**		

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 14/11/2020
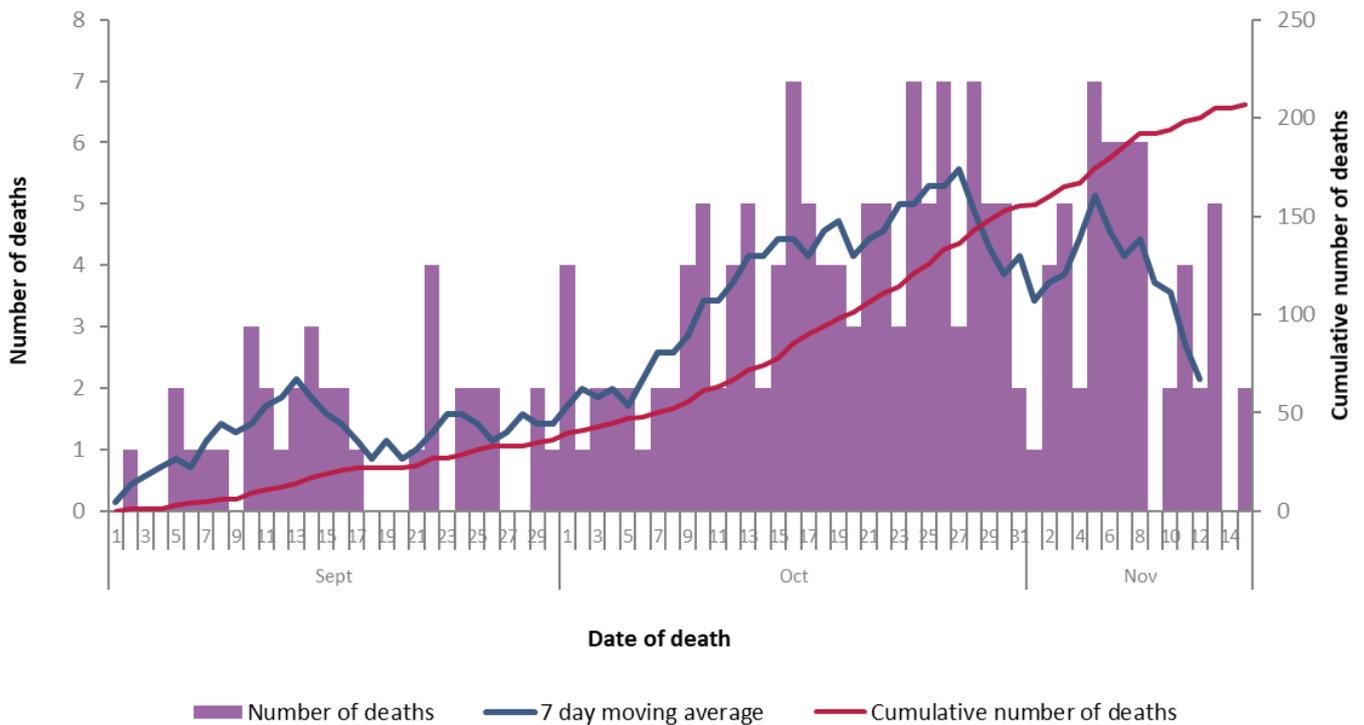

Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/09/2020 to midnight 14/11/2020

* Date of death is not yet available for six 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 09:15 on 16/11/2020. 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.