Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 26/11/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 24/11/2020

	Number	Percent
Total number of confirmed cases	71,159	
National cumulative incidence of confirmed cases per 100,000 population	1,494.35	
Total number of cases hospitalised	5,139	7.22
Total number of cases admitted to ICU	616	0.87
Total number of deaths among confirmed cases	1,777	2.5
Case fatality ratio (CFR, %)	2.5	
National cumulative incidence of confirmed deaths per 100,000 population	37.32	
Total number of outbreaks/clusters	9,197	
Total number of cases associated with clusters	38,865	54.62
Total number of imported cases	659	0.93
Number of cases in healthcare workers	11,763	16.53
Males	33,463	47.03
Females	37,663	52.93
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 09:20 on 26/11/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.
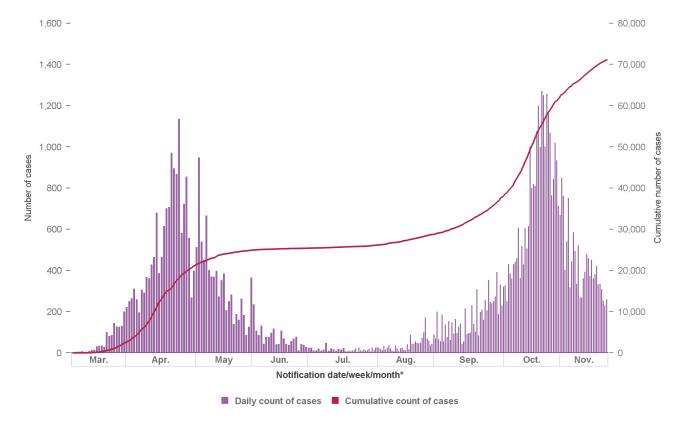
Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 24/11/2020

*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
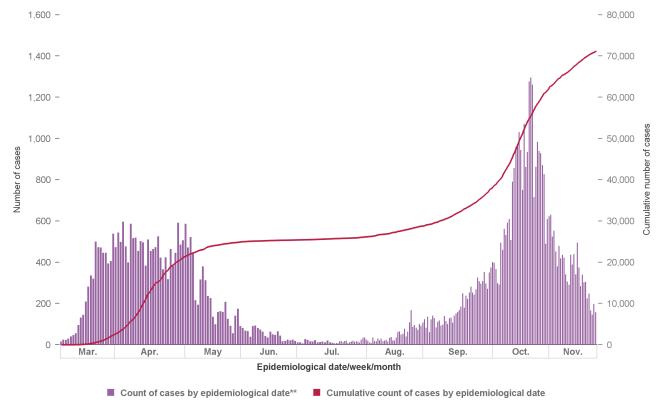

Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 24/11/2020**

**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.
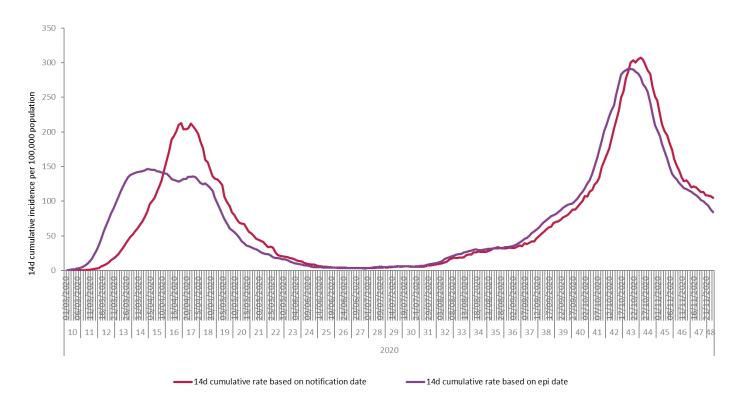
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date** to midnight 24/11/2020

* 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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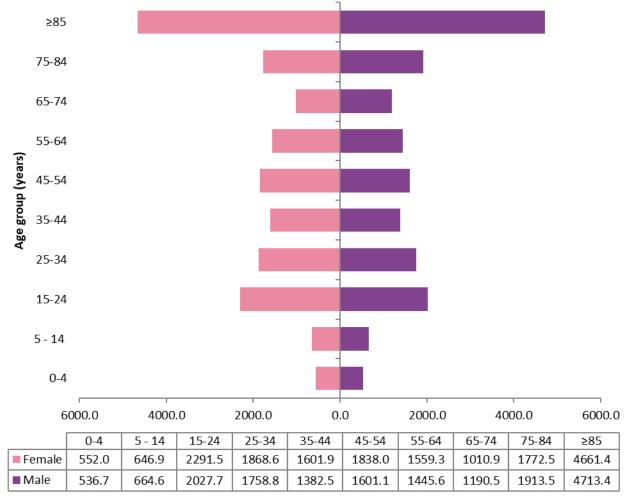
Table 1: Characteristics of confirmed COVID-19 cases notified in Ireland up to midnight on 24/11/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		**71,159**	**100**
Sex	Male:Female ratio	0.89	
	Male	33,463	47.03
	Female	37,663	52.93
	Unknown	33	0.05
Age	Median age (years)	39	
	Mean age (years)	41	
	Age range (years)	0 - 108	
	0-4 yrs	1,806	2.54
	5-14 yrs	4,433	6.23
	15-24 yrs	12,443	17.49
	25-34 yrs	11,983	16.84
	35-44 yrs	11,158	15.68
	45-54 yrs	10,774	15.14
	55-64 yrs	7,651	10.75
	65-74 yrs	4,108	5.77
	75-84 yrs	3,609	5.07
	85+ yrs	3,161	4.44
	Unknown	33	0.05

	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	≥85
■ Female	552.0	646.9	2291.5	1868.6	1601.9	1838.0	1559.3	1010.9	1772.5	4661.4
■ Male	536.7	664.6	2027.7	1758.8	1382.5	1601.1	1445.6	1190.5	1913.5	4713.4

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 24/11/2020 (excluding 32 cases for whom age is unknown, 32 cases for whom sex is unknown and 1 case for whom both are unknown)
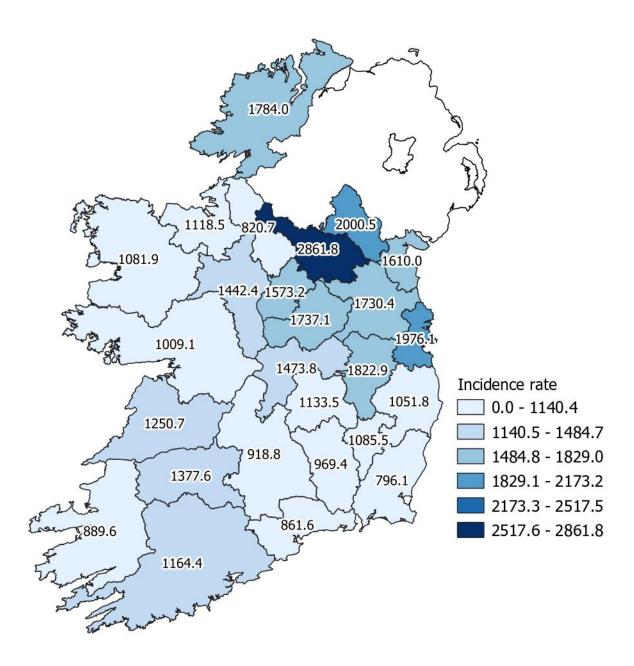
Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 24/11/2020

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 24/11/2020

County Name	Number of cases	Percent
Carlow	618	0.87
Cavan	2,180	3.06
Clare	1,486	2.09
Cork	6,321	8.88
Donegal	2,840	3.99
Dublin	26,625	37.42
Galway	2,604	3.66
Kerry	1,314	1.85
Kildare	4,056	5.7
Kilkenny	962	1.35
Laois	960	1.35
Leitrim	263	0.37
Limerick	2,685	3.77
Longford	643	0.9
Louth	2,075	2.92
Mayo	1,412	1.98
Meath	3,375	4.74
Monaghan	1,228	1.73
Offaly	1,149	1.61
Roscommon	931	1.31
Sligo	733	1.03
Tipperary	1,466	2.06
Waterford	1,001	1.41
Westmeath	1,542	2.17
Wexford	1,192	1.68
Wicklow	1,498	2.11
Total	**71,159**	**100**

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 24/11/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	21,668	30.45%
Local transmission, incl. possible local transmission	47,756	67.11%
Travel abroad, incl. possible travel abroad	987	1.39%
Unknown	748	1.05%
Total	71,159	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, hospitalistion and ICU admission as of midnight 24/11/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	1806	55	1.07	1	0.16
5-14 yrs	4433	49	0.95	4	0.65
15-24 yrs	12443	165	3.21	8	1.3
25-34 yrs	11983	315	6.13	17	2.76
35-44 yrs	11158	410	7.98	51	8.28
45-54 yrs	10774	647	12.59	110	17.86
55-64 yrs	7651	742	14.44	163	26.46
65-74 yrs	4108	919	17.88	178	28.9
75-84 yrs	3609	1,140	22.18	76	12.34
85+ yrs	3161	695	13.52	8	1.3
Unknown	33	2	0.04	0	0
Total	71,159	5,139	100	616	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation, ICU admission and vital status 24/11/2020

	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)	1806	4433	12443	11983	11158	10774	7651	4108	3609	3161	33
Cases hospitalised (n)	55	49	165	315	410	647	742	919	1140	695	2
Cases hospitalised (%)	3.05	1.11	1.33	2.63	3.67	6.01	9.70	22.37	31.59	21.99	6.06
Cases admitted to ICU (n)	1	4	8	17	51	110	163	178	76	8	0
Cases admitted to ICU (%)	0.06	0.09	0.06	0.14	0.46	1.02	2.13	4.33	2.11	0.25	0
Deaths (n)	0	0	1	6	12	30	83	271	611	763	0
Case fatality ratio (%)	0	0	0.01	0.05	0.11	0.28	1.08	6.60	16.93	24.14	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 24/11/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC	Total
Private house	4074	163	184	456	386	560	601	535		**6959**
Other*	240	68	158	75	119	231	56	134	2	**1083**
Nursing home	166	16	20	50	10	22	21	44		**349**
Workplace	100	19	22	48	36	25	27	26		**303**
Residential institution	147	16	17	34	10	30	16	10		**280**
Hospital	103	7	9	22	12	16	9	7		**185**
Comm. Hosp/Long-stay unit	6	4	2		5	7	5	5		**34**
Unknown					4					**4**
Total	**4836**	**293**	**412**	**685**	**582**	**891**	**735**	**761**	**2**	**9197**

*Other outbreak location includes community, extended family, hotel, public house, retail outlet, travel related and all other locations.
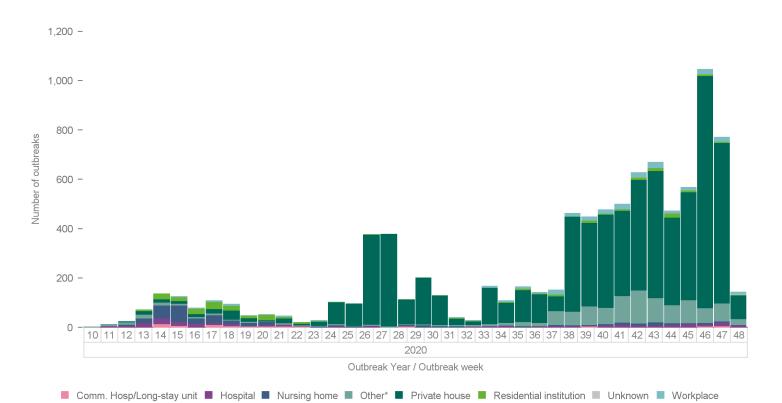
Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 24/11/2020

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

Note: 8,361 COVID-19 outbreaks were reported on CIDR between week 24 and week 48 2020 (9th June to 24th November). Of these, 6,644 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 48 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, 2,473 in October and 666 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 24/11/2020

		Number	Percent
Total number of deaths		2,036	
	Confirmed	1,777	87.28
	Probable	95	4.67
	Possible	164	8.06
Total number of cases hospitalised		909	44.65
	Cases admitted to ICU	133	6.53
	Cases not admitted to ICU	776	38.11
Total number of imported cases		6	0.29
Number of cases in healthcare workers		8	0.39
Number with underlying clinical conditions		1,892	92.93
Total number of male cases		1,033	50.74
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 24/11/2020

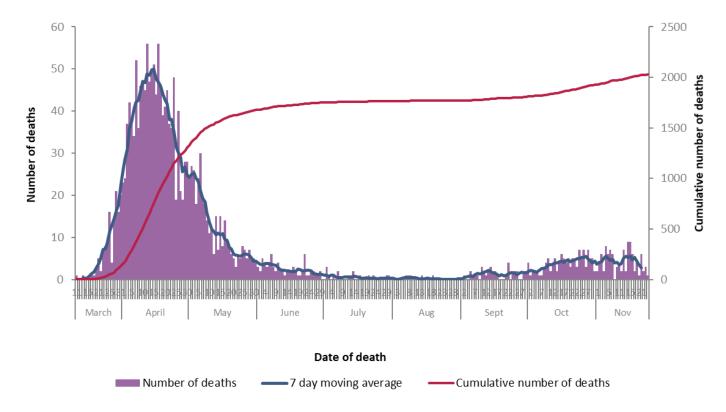| Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.05
25-34 yrs	<5	<5	6	0.29
35-44 yrs	6	7	13	0.64
45-54 yrs	12	20	32	1.57
55-64 yrs	30	59	89	4.37
65-74 yrs	107	192	299	14.69
75-84 yrs	314	379	693	34.04
85+ yrs	529	372	901	44.25
Unknown	<5	<5	2	0.1
Total	**1,003**	**1,033**	**2,036**	**100**
Percent	**49.26**	**50.74**		

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 24/11/2020
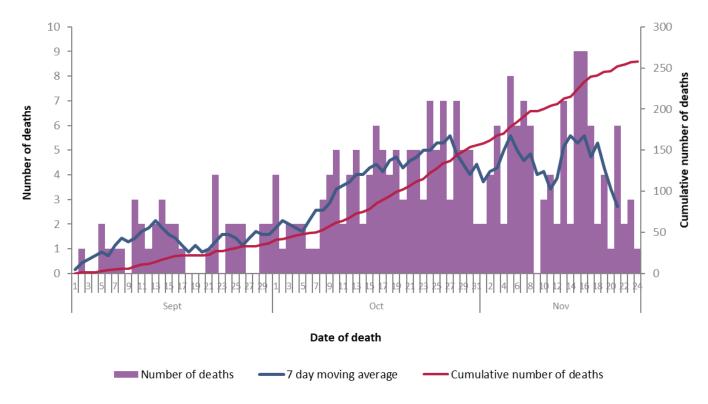

Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/09/2020 to midnight 24/11/2020

* 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 09:20 on 26/11/2020. 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.