Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 19/11/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 17/11/2020

	Number	Percent
Total number of confirmed cases	69,044	
National cumulative incidence of confirmed cases per 100,000 population	1,449.94	
Total number of cases hospitalised	4,954	7.18
Total number of cases admitted to ICU	600	0.87
Total number of deaths among confirmed cases	1,750	2.53
Case fatality ratio (CFR, %)	2.53	
National cumulative incidence of confirmed deaths per 100,000 population	36.75	
Total number of outbreaks/clusters	8,530	
Total number of cases associated with clusters	36,581	52.98
Total number of imported cases	655	0.95
Number of cases in healthcare workers	11,519	16.68
Males	32,449	47
Females	36,572	52.97
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 09:38 on 19/11/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.
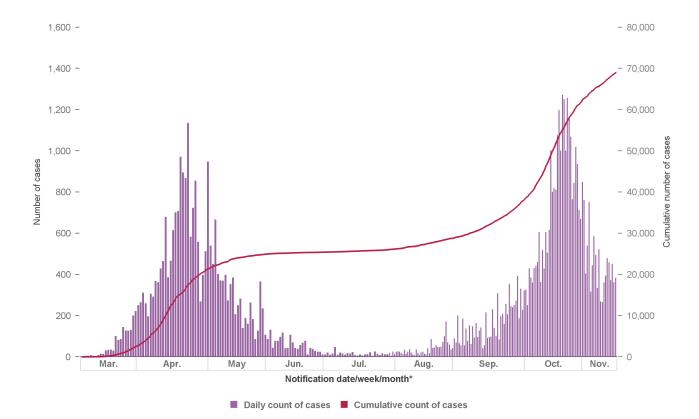
Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 17/11/2020

*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
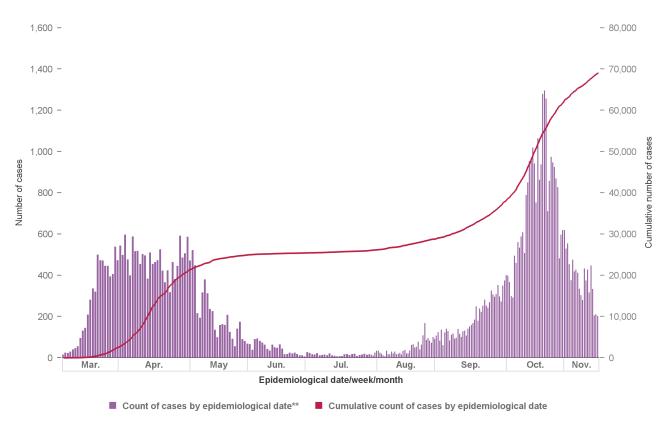

Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date** to midnight 17/11/2020

**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.
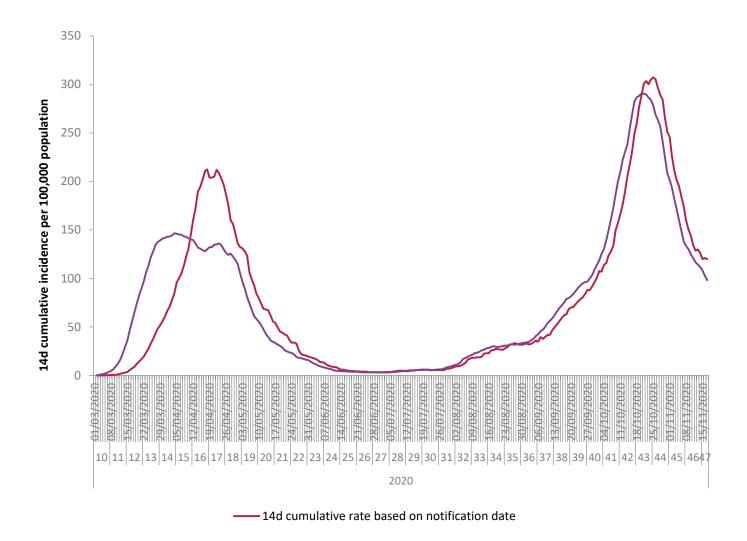
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date** to midnight 17/11/2020

* 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

**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 17/11/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		**69,044**	**100**
Sex	Male:Female ratio	0.89	
	Male	32,449	47
	Female	36,572	52.97
	Unknown	23	0.03
Age	Median age (years)	39	
	Mean age (years)	41	
	Age range (years)	0 - 108	
	0-4 yrs	1,735	2.51
	5-14 yrs	4,189	6.07
	15-24 yrs	11,989	17.36
	25-34 yrs	11,666	16.9
	35-44 yrs	10,828	15.68
	45-54 yrs	10,509	15.22
	55-64 yrs	7,476	10.83
	65-74 yrs	4,001	5.79
	75-84 yrs	3,511	5.09
	85+ yrs	3,108	4.5
	Unknown	32	0.05

	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	≥85
■ Female	531.0	610.0	2201.0	1819.0	1556.7	1797.7	1526.1	986.5	1725.0	4598.5
■ Male	514.9	629.6	1961.1	1713.9	1339.4	1557.4	1410.0	1157.4	1860.9	4605.0

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 17/11/2020 (excluding 31 cases for whom age is unknown, 22 cases for whom sex is unknown and 1 case for whom both are unknown)
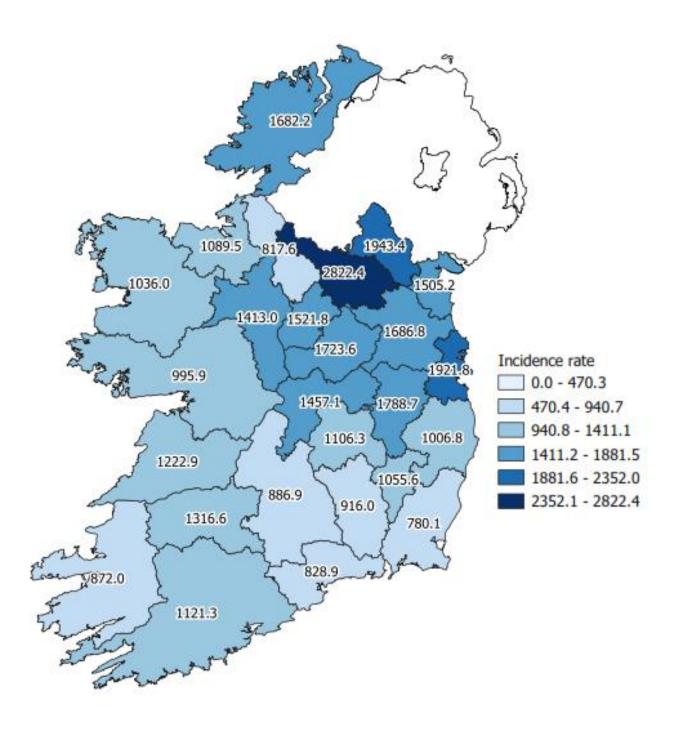
Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 17/11/2020

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 17/11/2020

County Name	Number of cases	Percent
Carlow	601	0.87
Cavan	2,150	3.11
Clare	1,453	2.1
Cork	6,087	8.82
Donegal	2,678	3.88
Dublin	25,894	37.5
Galway	2,570	3.72
Kerry	1,288	1.87
Kildare	3,980	5.76
Kilkenny	909	1.32
Laois	937	1.36
Leitrim	262	0.38
Limerick	2,566	3.72
Longford	622	0.9
Louth	1,940	2.81
Mayo	1,352	1.96
Meath	3,290	4.77
Monaghan	1,193	1.73
Offaly	1,136	1.65
Roscommon	912	1.32
Sligo	714	1.03
Tipperary	1,415	2.05
Waterford	963	1.39
Westmeath	1,530	2.22
Wexford	1,168	1.69
Wicklow	1,434	2.08
Total	**69,044**	**100**

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 17/11/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	21,686	31.41%
Local transmission, incl. possible local transmission	45,435	65.81%
Travel abroad, incl. possible travel abroad	968	1.40%
Unknown	955	1.38%
Total	**69,044**	**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 17/11/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	1735	53	1.07	1	0.17
5-14 yrs	4189	49	0.99	4	0.67
15-24 yrs	11989	156	3.15	8	1.33
25-34 yrs	11666	307	6.2	18	3
35-44 yrs	10828	396	7.99	49	8.17
45-54 yrs	10509	629	12.7	109	18.17
55-64 yrs	7476	720	14.53	158	26.33
65-74 yrs	4001	890	17.97	172	28.67
75-84 yrs	3511	1,090	22	73	12.17
85+ yrs	3108	662	13.36	8	1.33
Unknown	32	2	0.04	0	0
Total	**69,044**	**4,954**	**100**	**600**	**100**

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation, ICU admission and vital status 17/11/2020

	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)	1,735	4,189	11,989	11,666	10,828	10,509	7,476	4,001	3,511	3,108	32
Cases hospitalised (n)	53	49	156	307	396	629	720	890	1,090	662	2
Cases hospitalised (%)	3.05	1.17	1.3	2.63	3.66	5.99	9.63	22.24	31.05	21.3	6.25
Cases admitted to ICU (n)	1	4	8	18	49	109	158	172	73	8	0
Cases admitted to ICU (%)	0.06	0.1	0.07	0.15	0.45	1.04	2.11	4.3	2.08	0.26	0
Deaths (n)	0	0	1	7	12	30	81	269	598	752	0
Case fatality ratio (%)	0	0	0.01	0.06	0.11	0.29	1.08	6.72	17.03	24.2	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 17/11/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC	Total
Private house	3689	148	180	439	348	524	561	515		**6404**
Other*	225	67	153	64	108	215	58	124	2	**1016**
Nursing home	165	16	20	50	8	23	20	44		**346**
Workplace	96	18	21	44	32	24	26	22		**283**
Residential institution	143	16	17	33	10	30	16	10		**275**
Hospital	97	7	9	20	8	16	7	7		**171**
Comm. Hosp/Long-stay unit	7	4	2		4	6	5	5		**33**
Unknown					2					**2**
Total	**4422**	**276**	**402**	**650**	**520**	**838**	**693**	**727**	**2**	**8530**

*Other outbreak location includes community, extended family, hotel, public house, retail outlet, travel related and all other locations.
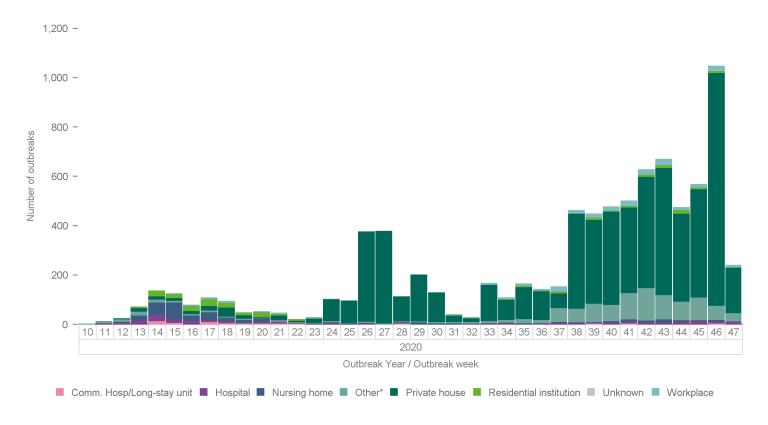
Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 17/11/2020

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

Note: 7,964 COVID-19 outbreaks were reported on CIDR between week 24 and week 47 2020 (9th June to 17th Nov). Of these, 6,091 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 47 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, 1,509 in September, 2,245 in October and 344 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 17/11/2020

		Number	Percent
Total number of deaths		2,009	
	Confirmed	1,750	87.11
	Probable	95	4.73
	Possible	164	8.16
Total number of cases hospitalised		892	44.4
	Cases admitted to ICU	131	6.52
	Cases not admitted to ICU	761	37.88
Total number of imported cases		6	0.3
Number of cases in healthcare workers		8	0.4
Number with underlying clinical conditions		1,860	92.58
Total number of male cases		1,015	50.52
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 17/11/2020

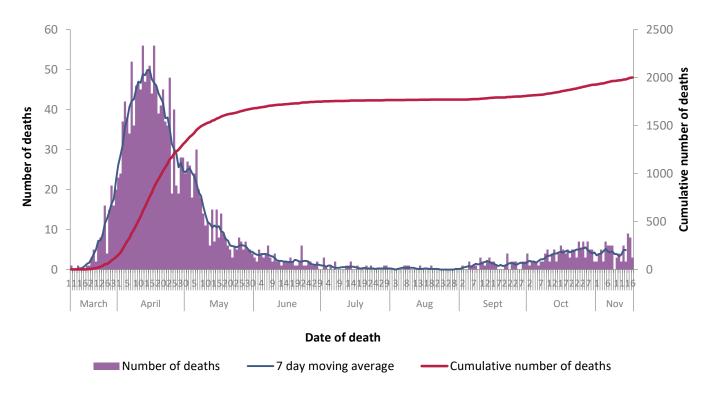| Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.05
25-34 yrs	<5	5	7	0.35
35-44 yrs	6	7	13	0.65
45-54 yrs	12	20	32	1.59
55-64 yrs	29	58	87	4.33
65-74 yrs	106	191	297	14.78
75-84 yrs	309	371	680	33.85
85+ yrs	527	363	890	44.3
Unknown	<5	<5	2	0.1
Total	**994**	**1,015**	**2,009**	**100**
Percent	**49.48**	**50.52**		

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 17/11/2020
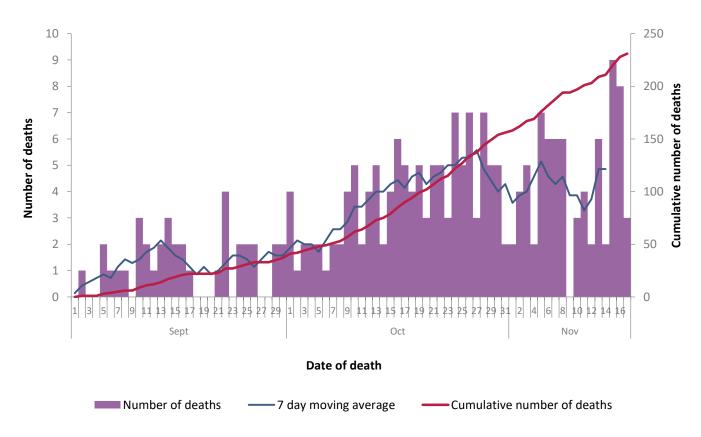

Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/09/2020 to midnight 17/11/2020

* 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 09:38 on 19/11/2020. 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.