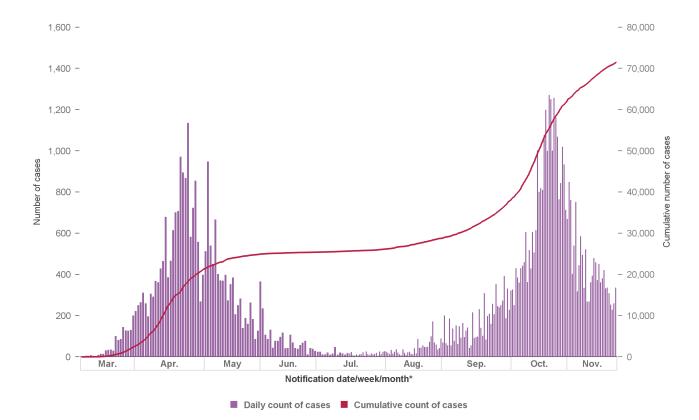# Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 27/11/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 25/11/2020
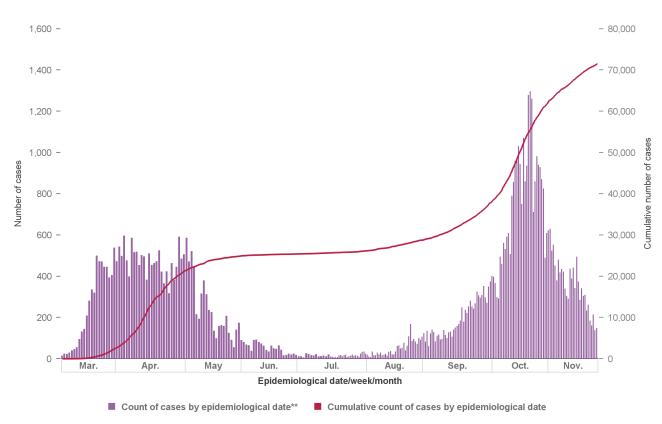
	Number	Percent
Total number of confirmed cases	71,493	
National cumulative incidence of confirmed cases per 100,000 population	1,501.37	
Total number of cases hospitalised	5,158	7.21
Total number of cases admitted to ICU	619	0.87
Total number of deaths among confirmed cases	1,784	2.5
Case fatality ratio (CFR, %)	2.5	
National cumulative incidence of confirmed deaths per 100,000 population	37.46	
Total number of outbreaks/clusters	9,345	
Total number of cases associated with clusters	39,289	54.96
Total number of imported cases	659	0.92
Number of cases in healthcare workers	11,803	16.51
Males	33,625	47.03
Females	37,833	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 09:56 on 27/11/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.
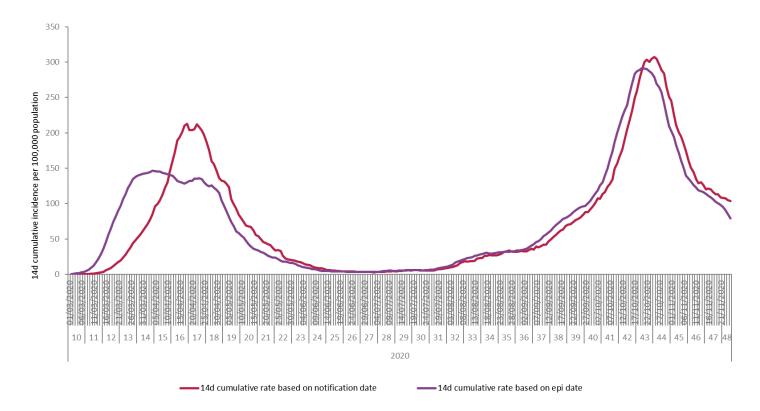
Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 25/11/2020

*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 25/11/2020**

**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 25/11/2020

* 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 25/11/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		**71,493**	**100**
Sex	Male:Female ratio	0.89	
	Male	33,625	47.03
	Female	37,833	52.92
	Unknown	35	0.05
Age	Median age (years)	39	
	Mean age (years)	41	
	Age range (years)	0 - 108	
	0-4 yrs	1,819	2.54
	5-14 yrs	4,468	6.25
	15-24 yrs	12,506	17.49
	25-34 yrs	12,037	16.84
	35-44 yrs	11,205	15.67
	45-54 yrs	10,830	15.15
	55-64 yrs	7,679	10.74
	65-74 yrs	4,123	5.77
	75-84 yrs	3,620	5.06
	85+ yrs	3,172	4.44
	Unknown	34	0.05

	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	≥85
■ Female	556.9	650.8	2302.1	1876.2	1609.3	1846.6	1565.1	1016.7	1776.3	4679.4
■ Male	539.7	670.7	2039.0	1767.3	1387.7	1610.4	1450.8	1192.7	1921.3	4726.4

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 25/11/2020 (excluding 33 cases for whom age is unknown, 34 cases for whom sex is unknown and 1 case for whom both are unknown)
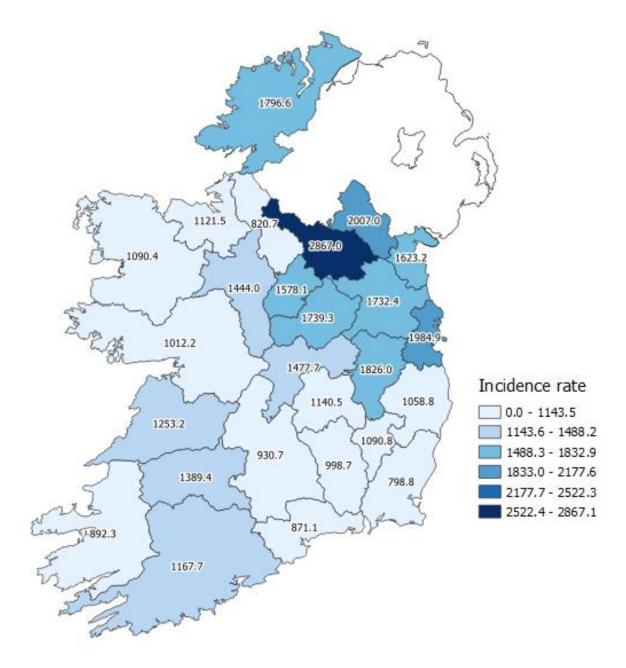
Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 25/11/2020

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 25/11/2020

County Name	Number of cases	Percent
Carlow	621	0.87
Cavan	2,184	3.05
Clare	1,489	2.08
Cork	6,339	8.87
Donegal	2,860	4
Dublin	26,744	37.41
Galway	2,612	3.65
Kerry	1,318	1.84
Kildare	4,063	5.68
Kilkenny	991	1.39
Laois	966	1.35
Leitrim	263	0.37
Limerick	2,708	3.79
Longford	645	0.9
Louth	2,092	2.93
Mayo	1,423	1.99
Meath	3,379	4.73
Monaghan	1,232	1.72
Offaly	1,152	1.61
Roscommon	932	1.3
Sligo	735	1.03
Tipperary	1,485	2.08
Waterford	1,012	1.42
Westmeath	1,544	2.16
Wexford	1,196	1.67
Wicklow	1,508	2.11
Total	**71,493**	**100**

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 25/11/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	21,790	30.48%
Local transmission, incl. possible local transmission	47,948	67.07%
Travel abroad, incl. possible travel abroad	989	1.38%
Unknown	766	1.07%
Total	**71,493**	**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 25/11/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	1819	56	1.09	2	0.32
5-14 yrs	4468	49	0.95	4	0.65
15-24 yrs	12506	166	3.22	8	1.29
25-34 yrs	12037	315	6.11	17	2.75
35-44 yrs	11205	412	7.99	52	8.4
45-54 yrs	10830	651	12.62	110	17.77
55-64 yrs	7679	744	14.42	163	26.33
65-74 yrs	4123	921	17.86	178	28.76
75-84 yrs	3620	1,144	22.18	77	12.44
85+ yrs	3172	698	13.53	8	1.29
Unknown	34	2	0.04	0	0
Total	**71,493**	**5,158**	**100**	**619**	**100**

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation, ICU admission and vital status 25/11/2020

	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)	1819	4468	12506	12037	11205	10830	7679	4123	3620	3172	34
Cases hospitalised (n)	56	49	166	315	412	651	744	921	1144	698	2
Cases hospitalised (%)	3.1	1.1	1.3	2.6	3.7	6.0	9.7	22.3	31.6	22.0	5.9
Cases admitted to ICU (n)	2	4	8	17	52	110	163	178	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	0.3	0.0
Deaths (n)	0	0	1	6	12	30	83	273	614	765	0
Case fatality ratio (%)	0	0	0	0	0.1	0.3	1.1	6.6	17.0	24.1	0.0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 25/11/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC	Total
Private house	4139	163	185	473	387	597	601	538		**7083**
Other*	243	68	159	75	119	238	58	133	2	**1095**
Nursing home	166	16	20	51	10	22	21	44		**350**
Workplace	102	19	22	49	36	26	29	27		**310**
Residential institution	148	16	17	34	10	30	16	10		**281**
Hospital	103	7	11	22	12	16	9	7		**187**
Comm. Hosp/Long-stay unit	6	4	2		5	7	5	5		**34**
Unknown				1	4					**5**
Total	**4907**	**293**	**416**	**705**	**583**	**936**	**739**	**764**	**2**	**9345**

*Other outbreak location includes community, extended family, hotel, public house, retail outlet, travel related and all other locations.
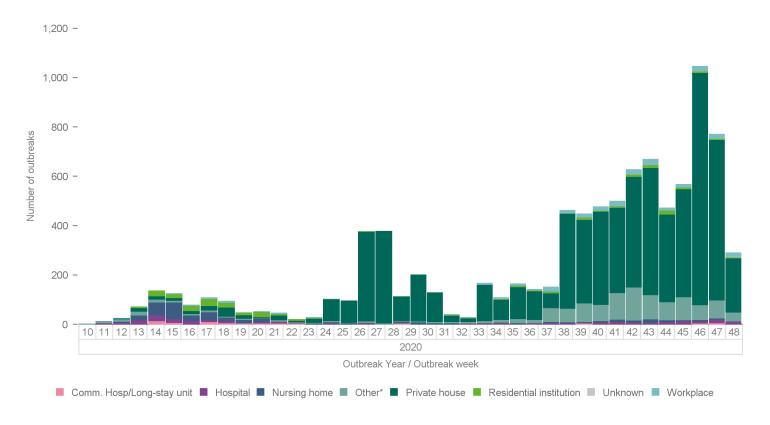
Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 25/11/2020

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

Note: 8,507 COVID-19 outbreaks were reported on CIDR between week 24 and week 48 2020 (9th June to 25th November). Of these, 6,761 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, 2,518 in October and 738 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 25/11/2020

		Number	Percent
Total number of deaths		2,043	
	Confirmed	1,784	87.32
	Probable	95	4.65
	Possible	164	8.03
Total number of cases hospitalised		916	44.84
	Cases admitted to ICU	133	6.51
	Cases not admitted to ICU	783	38.33
Total number of imported cases		6	0.29
Number of cases in healthcare workers		8	0.39
Number with underlying clinical conditions		1,900	93
Total number of male cases		1,039	50.86
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 25/11/2020

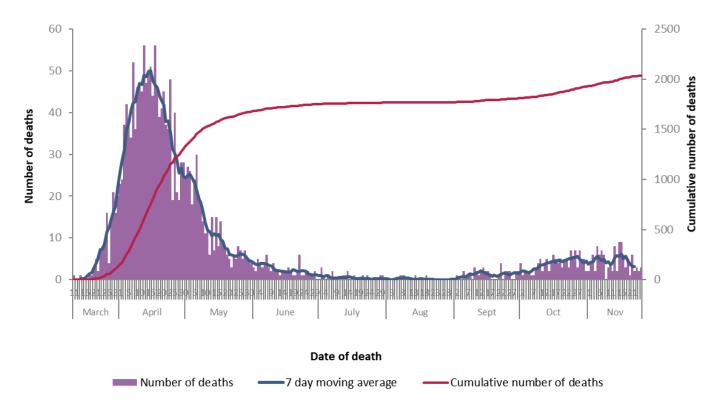| Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.05
25-34 yrs	<5	<5	6	0.29
35-44 yrs	6	7	13	0.64
45-54 yrs	12	20	32	1.57
55-64 yrs	30	59	89	4.36
65-74 yrs	107	194	301	14.73
75-84 yrs	314	382	696	34.07
85+ yrs	530	373	903	44.2
Unknown	<5	<5	2	0.1
Total	**1,004**	**1,039**	**2,043**	**100**
Percent	**49.14**	**50.86**		

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 25/11/2020
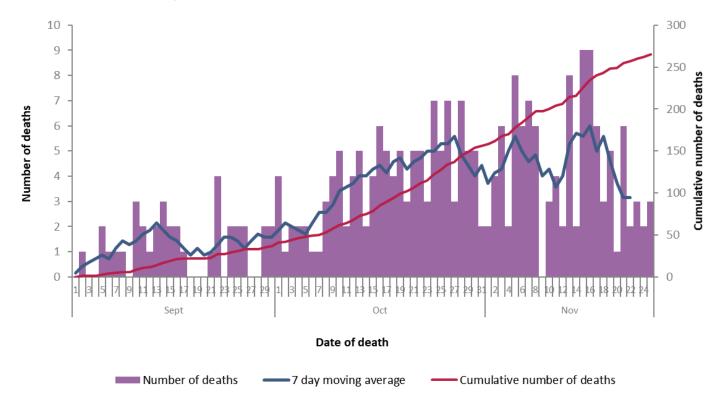

Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/09/2020 to midnight 25/11/2020

* 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 09:56 on 27/11/2020. 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.