Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 21/10/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 19/10/2020

	Number	Percent
Total number of confirmed cases	52,255	
National cumulative incidence of confirmed cases per 100,000 population	1,097.36	
Total number of cases hospitalised	4,055	7.76
Total number of cases admitted to ICU	519	0.99
Total number of deaths among confirmed cases	1,612	3.08
Case fatality ratio (CFR, %)	3.08	
National cumulative incidence of confirmed deaths per 100,000 population	33.85	
Total number of outbreaks/clusters	5,765	
Total number of cases associated with clusters	26,103	49.95
Total number of imported cases	616	1.18
Number of cases in healthcare workers	10,012	19.16
Males	24,311	46.52
Females	27,896	53.38
M:F ratio	0.87	
Median age (years)	40	
Mean age (years)	43	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:15 on 21/10/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.
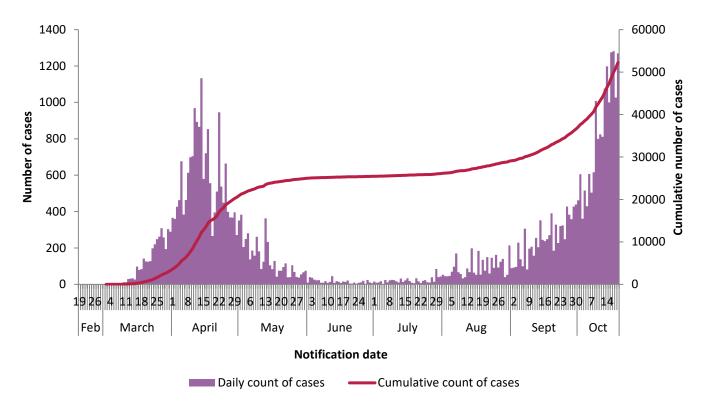
Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 19/10/2020

*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
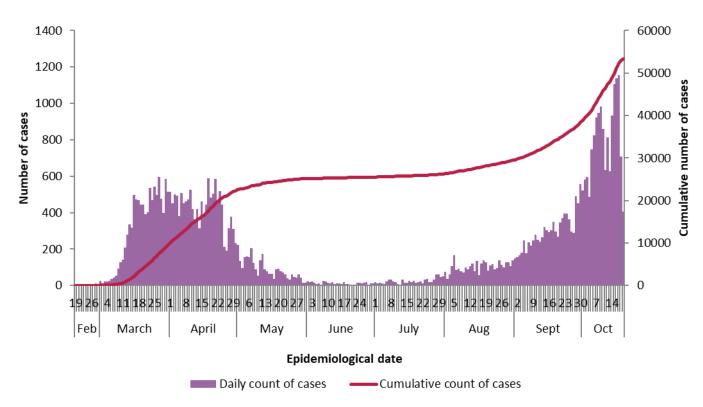

Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date** to midnight 19/10/2020

**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 19/10/2020

* 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.
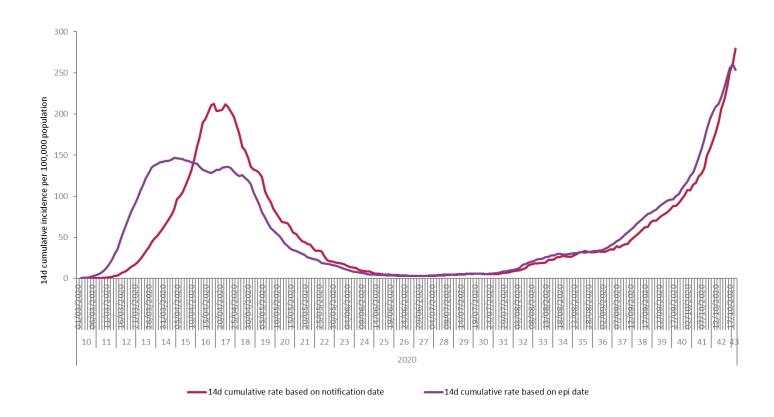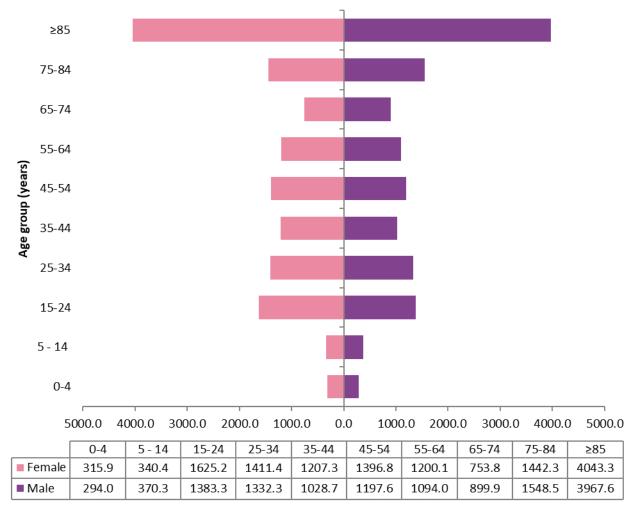
Table 1: Characteristics of confirmed COVID-19 cases notified in Ireland up to midnight on 19/10/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		**52,255**	**100**
Sex	Male:Female ratio	0.87	
	Male	24,311	46.52
	Female	27,896	53.38
	Unknown	48	0.09
Age	Median age (years)	40	
	Mean age (years)	43	
	Age range (years)	0 - 106	
	0-4 yrs	1,013	1.94
	5-14 yrs	2,404	4.6
	15-24 yrs	8,667	16.59
	25-34 yrs	9,068	17.35
	35-44 yrs	8,370	16.02
	45-54 yrs	8,134	15.57
	55-64 yrs	5,841	11.18
	65-74 yrs	3,085	5.9
	75-84 yrs	2,929	5.61
	85+ yrs	2,715	5.2
	Unknown	29	0.06

	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	≥85
■ Female	315.9	340.4	1625.2	1411.4	1207.3	1396.8	1200.1	753.8	1442.3	4043.3
■ Male	294.0	370.3	1383.3	1332.3	1028.7	1197.6	1094.0	899.9	1548.5	3967.6

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 19/10/2020 (excluding 28 cases for whom age is unknown and 47 cases for whom sex is unknown and 1 case for whom both are unknown)
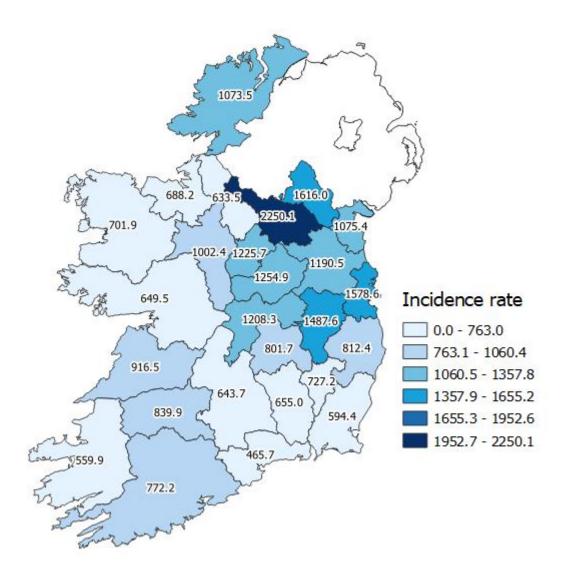
Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 19/10/2020

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 19/10/2020

County Name	Number of cases	Percent
Carlow	414	0.79
Cavan	1,714	3.28
Clare	1,089	2.08
Cork	4,192	8.02
Donegal	1,709	3.27
Dublin	21,269	40.7
Galway	1,676	3.21
Kerry	827	1.58
Kildare	3,310	6.33
Kilkenny	650	1.24
Laois	679	1.3
Leitrim	203	0.39
Limerick	1,637	3.13
Longford	501	0.96
Louth	1,386	2.65
Mayo	916	1.75
Meath	2,322	4.44
Monaghan	992	1.9
Offaly	942	1.8
Roscommon	647	1.24
Sligo	451	0.86
Tipperary	1,027	1.97
Waterford	541	1.04
Westmeath	1,114	2.13
Wexford	890	1.7
Wicklow	1,157	2.21
Total	**52,255**	**100**

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 19/10/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	14,521	27.79%
Local transmission, incl. possible local transmission	32,624	62.43%
Travel abroad, incl. possible travel abroad	905	1.73%
Unknown	4,205	8.05%
Total	**52,255**	**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 19/10/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	1013	42	1.04	1	0.19
5-14 yrs	2404	36	0.89	4	0.77
15-24 yrs	8667	123	3.03	6	1.16
25-34 yrs	9068	261	6.44	17	3.28
35-44 yrs	8370	327	8.06	46	8.86
45-54 yrs	8134	528	13.02	98	18.88
55-64 yrs	5841	605	14.92	144	27.75
65-74 yrs	3085	714	17.61	140	26.97
75-84 yrs	2929	873	21.53	56	10.79
85+ yrs	2715	543	13.39	7	1.35
Unknown	29	3	0.07	0	0
Total	**52,255**	**4,055**	**100**	**519**	**100**

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation, ICU admission and vital status 19/10/2020

	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)	1,013	2,404	8,667	9,068	8,370	8,134	5,841	3,085	2,929	2,715	29
Cases hospitalised (n)	42	36	123	261	327	528	605	714	873	543	3
Cases hospitalised (%)	4.15	1.5	1.42	2.88	3.91	6.49	10.36	23.14	29.81	20	10.34
Cases admitted to ICU (n)	1	4	6	17	46	98	144	140	56	7	0
Cases admitted to ICU (%)	0.1	0.17	0.07	0.19	0.55	1.2	2.47	4.54	1.91	0.26	0
Deaths (n)	0	0	1	7	12	29	76	242	555	690	0
Case fatality ratio (%)	0	0	0.01	0.08	0.14	0.36	1.3	7.84	18.95	25.41	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 19/10/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	HPSC	Total
Private house	2560	66	154	337	192	346	208	249		4112
Other*	145	85	127	40	70	140	36	79	2	724
Nursing home	154	15	20	47	8	16	18	41		319
Residential institution	128	12	13	31	6	26	11	6		233
Workplace	70	14	19	32	23	17	15	16		206
Hospital	75	7	5	18	4	15	5	7		136
Comm. Hosp/Long-stay unit	6	5	2		4	7	5	5		34
Unknown					1					1
Total	3138	204	340	505	308	567	298	403	2	5765

*Other outbreak location includes community, extended family, hotel, public house, retail outlet, travel related and all other locations.
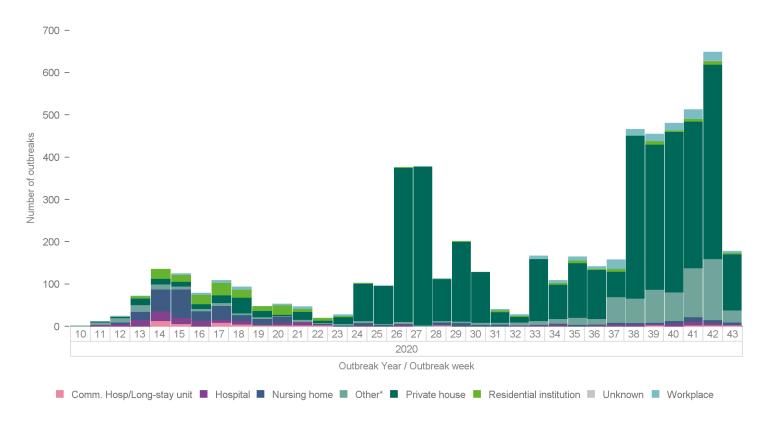
Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 19/10/2020

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

Note: 4,927 COVID-19 outbreaks were reported on CIDR between week 24 and week 43 2020 to date (9th June to 19th October). Of these, 3,938 were family outbreaks. Based on the earliest date associated with each outbreak, a large proportion of these family outbreaks occurred earlier and were reported between weeks 24 and 43 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, 532 in August, 1,452 in September and 496 in October to date.

Deaths among COVID-19 cases

Table 7: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 19/10/2020

		Number	Percent
Total number of deaths		1,868	
	Confirmed	1,612	86.3
	Probable	95	5.09
	Possible	161	8.62
Total number of cases hospitalised		808	43.25
	Cases admitted to ICU	104	5.57
	Cases not admitted to ICU	704	37.69
Total number of imported cases		6	0.32
Number of cases in healthcare workers		8	0.43
Number with underlying clinical conditions		1,757	94.06
Total number of male cases		933	49.95
M:F ratio		1	
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 19/10/2020

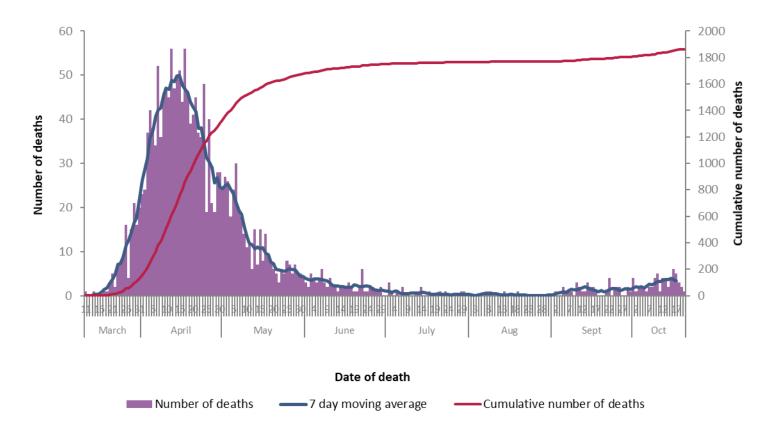| Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.05
25-34 yrs	<5	5	7	0.37
35-44 yrs	6	7	13	0.7
45-54 yrs	11	20	31	1.66
55-64 yrs	27	55	82	4.39
65-74 yrs	99	169	268	14.35
75-84 yrs	291	345	636	34.05
85+ yrs	496	332	828	44.33
Unknown	<5	<5	2	0.11
Total	**935**	**933**	**1,868**	**100**
Percent	**50.05**	**49.95**		

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 19/10/2020
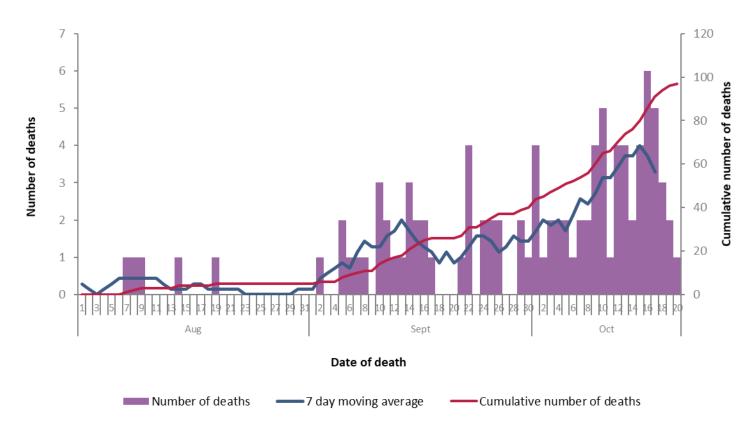

Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/08/2020 to midnight 19/10/2020
* Date of death is not yet available for six cases

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

Report prepared by COVID-19 Epidemiology Team, HPSC

1. Data Source

Data are based on statutory notifications and were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:15 on 21/10/2020. 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.