Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 13/10/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 11/10/2020

	Number	Percent
Total number of confirmed cases	43,348	
National cumulative incidence of confirmed cases per 100,000 population	910.32	
Total number of cases hospitalised	3,848	8.88
Total number of cases admitted to ICU	502	1.16
Total number of deaths among confirmed cases	1,576	3.64
Case fatality ratio (CFR, %)	3.64	
National cumulative incidence of confirmed deaths per 100,000 population	33.1	
Total number of outbreaks/clusters	4,955	
Total number of cases associated with clusters	22,974	53
Total number of imported cases	613	1.41
Number of cases in healthcare workers	9,682	22.34
Males	19,895	45.9
Females	23,409	54
M:F ratio	0.85	
Median age (years)	42	
Mean age (years)	44	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:22 on 13/10/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.
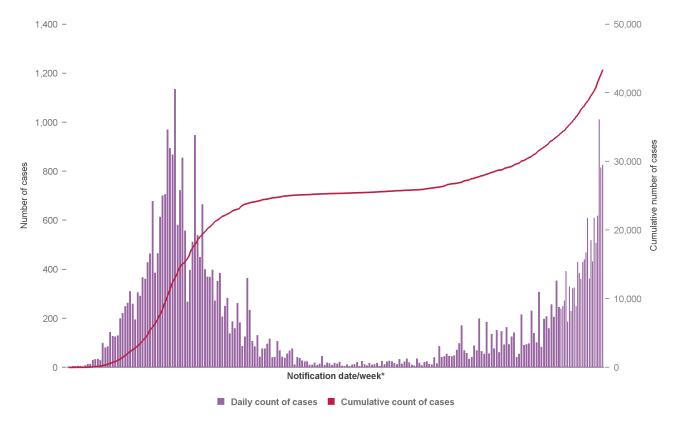
Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 11/10/2020

*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
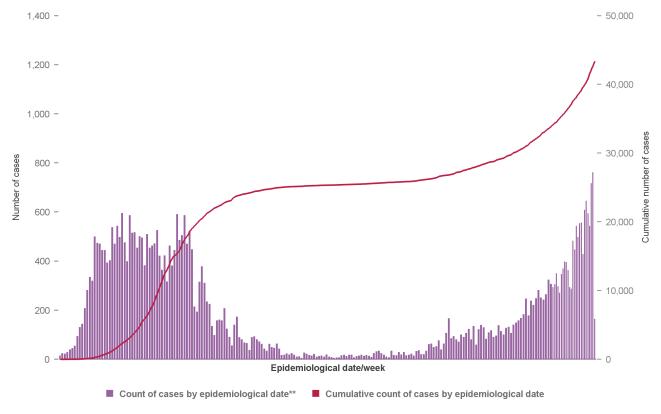

Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date** to midnight 11/10/2020

**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 11/10/2020

* 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.
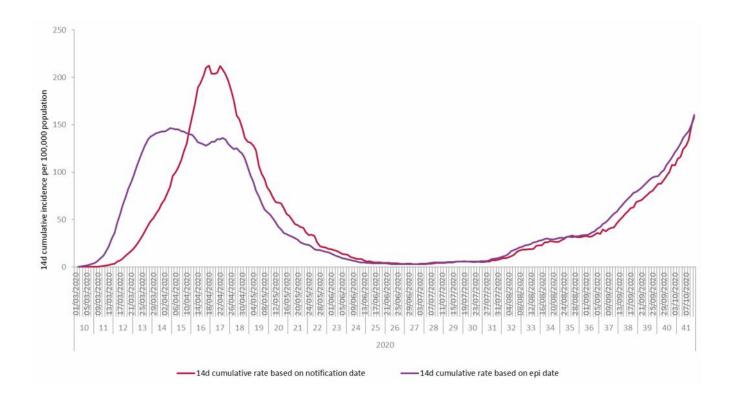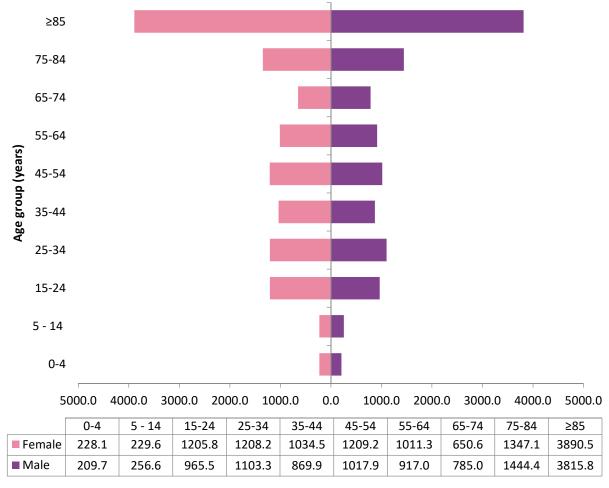
Table 1: Characteristics of confirmed COVID-19 cases notified in Ireland up to midnight on 11/10/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		**43,348**	**100**
Sex	Male:Female ratio	0.85	
	Male	19,895	45.9
	Female	23,409	54
	Unknown	44	0.1
Age	Median age (years)	42	
	Mean age (years)	44	
	Age range (years)	0 - 106	
	0-4 yrs	727	1.68
	5-14 yrs	1,645	3.79
	15-24 yrs	6,254	14.43
	25-34 yrs	7,646	17.64
	35-44 yrs	7,130	16.45
	45-54 yrs	6,983	16.11
	55-64 yrs	4,910	11.33
	65-74 yrs	2,678	6.18
	75-84 yrs	2,734	6.31
	85+ yrs	2,612	6.03
	Unknown	29	0.07

Table 1: Characteristics of confirmed COVID-19 cases notified in Ireland up to midnight on 11/10/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		**43,348**	**100**
Sex	Male:Female ratio	0.85	

	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	≥85
■ Female	228.1	229.6	1205.8	1208.2	1034.5	1209.2	1011.3	650.6	1347.1	3890.5
■ Male	209.7	256.6	965.5	1103.3	869.9	1017.9	917.0	785.0	1444.4	3815.8

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 11/10/2020 (excluding 28 cases for whom age is unknown and 43 cases for whom sex is unknown and 1 case for whom both are unknown)
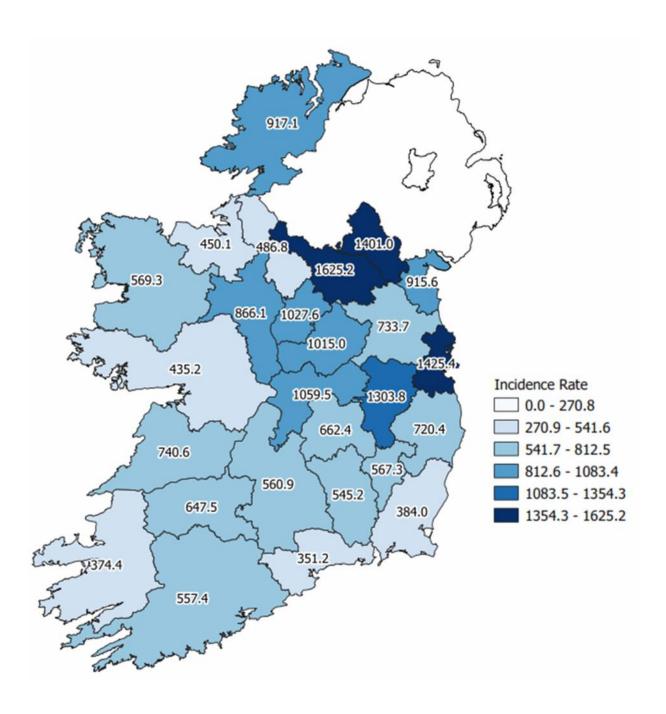
Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 11/10/2020

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 11/10/2020

County Name	Number of cases	Percent
Carlow	323	0.75
Cavan	1,238	2.86
Clare	880	2.03
Cork	3,026	6.98
Donegal	1,460	3.37
Dublin	19,205	44.3
Galway	1,123	2.59
Kerry	553	1.28
Kildare	2,901	6.69
Kilkenny	541	1.25
Laois	561	1.29
Leitrim	156	0.36
Limerick	1,262	2.91
Longford	420	0.97
Louth	1,180	2.72
Mayo	743	1.71
Meath	1,431	3.3
Monaghan	860	1.98
Offaly	826	1.91
Roscommon	559	1.29
Sligo	295	0.68
Tipperary	895	2.06
Waterford	408	0.94
Westmeath	901	2.08
Wexford	575	1.33
Wicklow	1,026	2.37
Total	**43,348**	**100**

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 11/10/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	12,072	27.85%
Local transmission, incl. possible local transmission	28,531	65.82%
Travel abroad, incl. possible travel abroad	882	2.03%
Unknown	1,863	4.30%
Total	**43,348**	**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 and hospital, ICU and vital status as of midnight 11/10/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	727	38	0.99	1	0.2
5-14 yrs	1645	31	0.81	2	0.4
15-24 yrs	6254	109	2.83	5	1
25-34 yrs	7646	241	6.26	17	3.39
35-44 yrs	7130	309	8.03	44	8.76
45-54 yrs	6983	507	13.18	97	19.32
55-64 yrs	4910	573	14.89	142	28.29
65-74 yrs	2678	685	17.8	135	26.89
75-84 yrs	2734	832	21.62	53	10.56
85+ yrs	2612	521	13.54	6	1.2
Unknown	29	2	0.05	0	0
Total	**43,348**	**3,848**	**100**	**502**	**100**

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 11/10/2020

	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)	727	1,645	6,254	7,646	7,130	6,983	4,910	2,678	2,734	2,612	29
Cases hospitalised (n)	38	31	109	241	309	507	573	685	832	521	2
Cases hospitalised (%)	5.23	1.88	1.74	3.15	4.33	7.26	11.67	25.58	30.43	19.95	6.9
Cases admitted to ICU (n)	1	2	5	17	44	97	142	135	53	6	0
Cases admitted to ICU (%)	0.14	0.12	0.08	0.22	0.62	1.39	2.89	5.04	1.94	0.23	0
Deaths (n)	0	0	1	7	12	29	73	236	540	678	0
Case fatality ratio (%)	0	0	0.02	0.09	0.17	0.42	1.49	8.81	19.75	25.96	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 11/10/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	2,312		59	150	292	152	246	193	126	**3,530**
Other*	113	2	59	116	30	57	94	29	56	**556**
Nursing home	149		14	20	46	7	16	18	36	**306**
Residential institution	127		12	11	28	5	23	10	5	**221**
Workplace	61		13	17	29	18	14	14	14	**180**
Hospital	73		5	5	18	4	14	5	6	**130**
Comm. Hosp/Long-stay unit	6		4	2		4	6	5	5	**32**
Total	**2,841**	**2**	**166**	**321**	**443**	**247**	**413**	**274**	**248**	**4,955**

*Other outbreak location includes community, extended family, hotel, public house, retail outlet, travel related and all other locations.
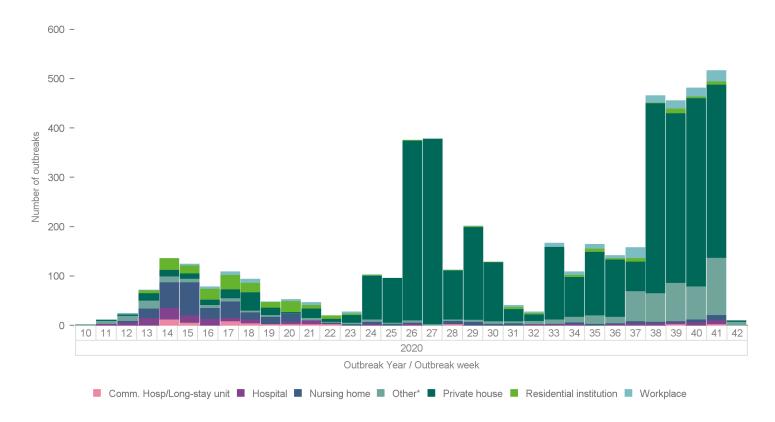
Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 11/10/2020

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

Note: 4,202 COVID-19 outbreaks were reported on CIDR between week 24 and week 42 2020 to date (9th June to 11th October). Of these, 3,468 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 41 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, 531 in August, 1,353 in September and 126 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 11/10/2020

		Number	Percent
Total number of deaths		1,830	
	Confirmed	1,576	86.12
	Probable	95	5.19
	Possible	159	8.69
Total number of cases hospitalised		784	42.84
	Cases admitted to ICU	100	5.46
	Cases not admitted to ICU	684	37.38
Total number of imported cases		6	0.33
Number of cases in healthcare workers		8	0.44
Number with underlying clinical conditions		1,729	94.48
Total number of male cases		910	49.73
M:F ratio		0.99	
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 11/10/2020

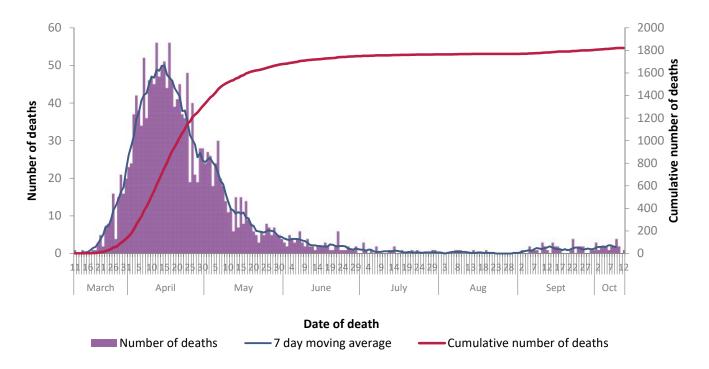| Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.05
25-34 yrs	<5	5	7	0.38
35-44 yrs	6	7	13	0.71
45-54 yrs	11	20	31	1.69
55-64 yrs	26	52	78	4.26
65-74 yrs	98	164	262	14.32
75-84 yrs	283	338	621	33.93
85+ yrs	491	324	815	44.54
Unknown	<5	<5	2	0.11
Total	**920**	**910**	**1,830**	**100**
Percent	**50.27**	**49.73**		

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 11/10/2020

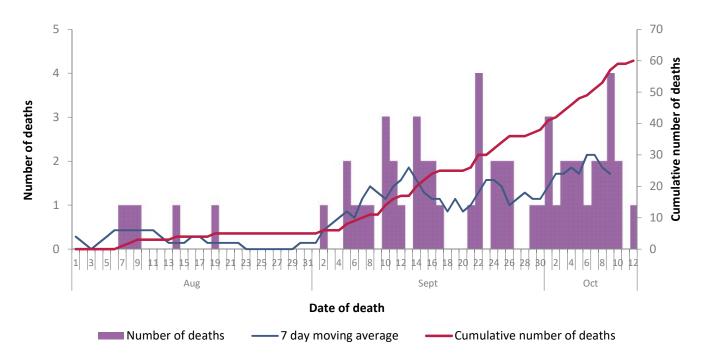* Date of death is not yet available for six cases

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 11/10/2020

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

Technical Notes

1. Data Source

Data are based on statutory notifications and were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:22 on 13/10/2020. 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 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.

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.

- 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.