Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 28/07/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 26/07/2020

	Number	Percent
Total number of confirmed cases	25,890	
National cumulative incidence of confirmed cases per 100,000 population	543.69	
Total number of cases hospitalised	3,349	12.94
Total number of cases admitted to ICU	437	1.69
Total number of deaths among confirmed cases	1,506	5.82
Case fatality ratio (CFR, %)	5.82	
National cumulative incidence of confirmed deaths per 100,000 population	31.63	
Total number of outbreaks/clusters	2,282	
Total number of cases associated with clusters	13,874	53.59
Total number of imported cases	442	1.71
Number of cases in healthcare workers	8,395	32.43
Males	11,092	42.84
Females	14,770	57.05
M:F ratio	0.75	
Median age (years)	48	
Mean age (years)	50	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:15 on 28/07/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.
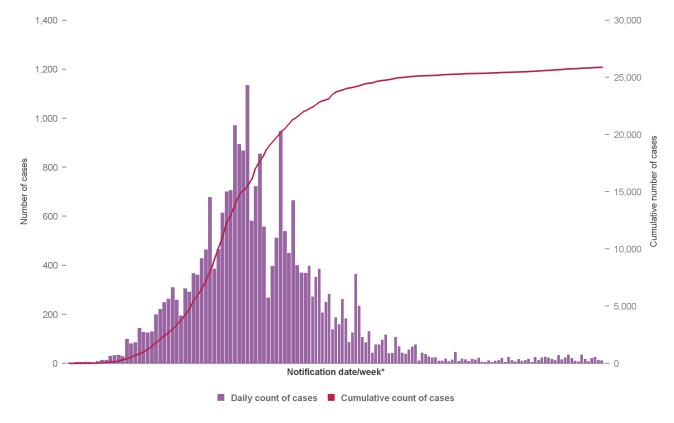
Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 26/07/2020

*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
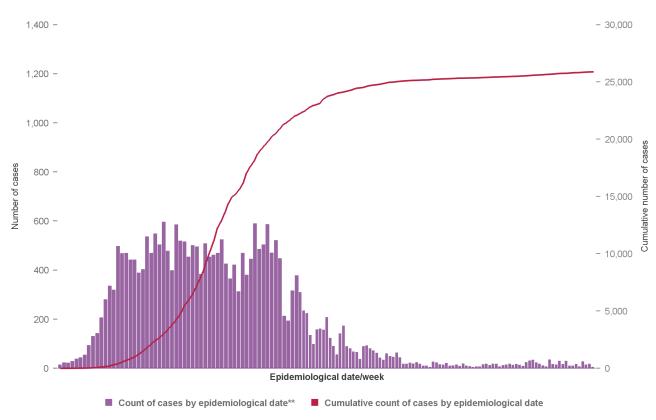

Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 26/07/2020**

**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 26/07/2020

* 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.
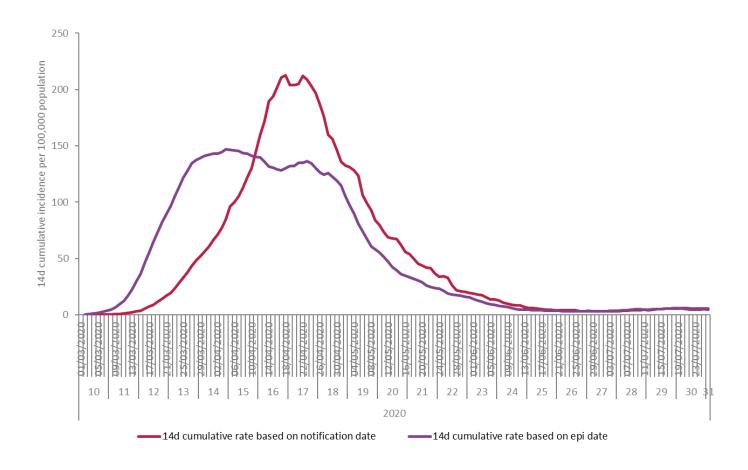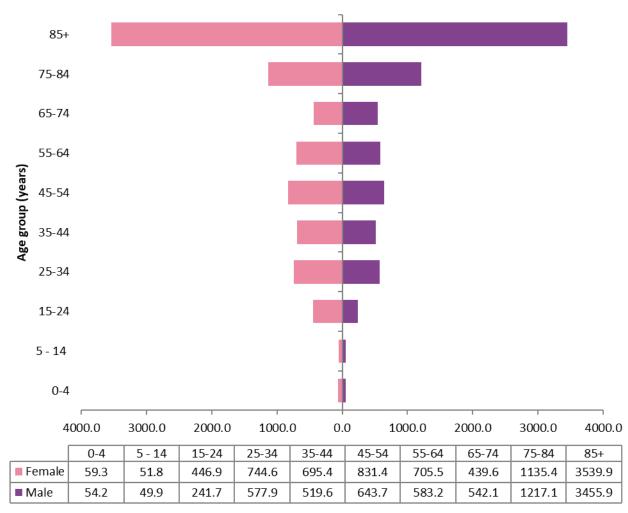
Table 1: Characteristics of confirmed COVID-19 cases notified in Ireland up to midnight on 26/07/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		**25,890**	**100**
Sex	Male:Female ratio	0.75	
	Male	11,092	42.84
	Female	14,770	57.05
	Unknown	28	0.11
Age	Median age (years)	48	
	Mean age (years)	50	
	Age range (years)	0 - 106	
	0-4 yrs	188	0.73
	5-14 yrs	343	1.32
	15-24 yrs	1,977	7.64
	25-34 yrs	4,386	16.94
	35-44 yrs	4,556	17.6
	45-54 yrs	4,629	17.88
	55-64 yrs	3,282	12.68
	65-74 yrs	1,831	7.07
	75-84 yrs	2,304	8.9
	85+ yrs	2,373	9.17
	Unknown	21	0.08

Total number of confirmed cases	**25,890**	**100**
Sex	Male:Female ratio	0.75

	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	59.3	51.8	446.9	744.6	695.4	831.4	705.5	439.6	1135.4	3539.9
Male	54.2	49.9	241.7	577.9	519.6	643.7	583.2	542.1	1217.1	3455.9

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 26/07/2020 (excluding 20 cases for whom age is unknown and 27 cases for whom sex is unknown and 1 case for whom both are unknown)
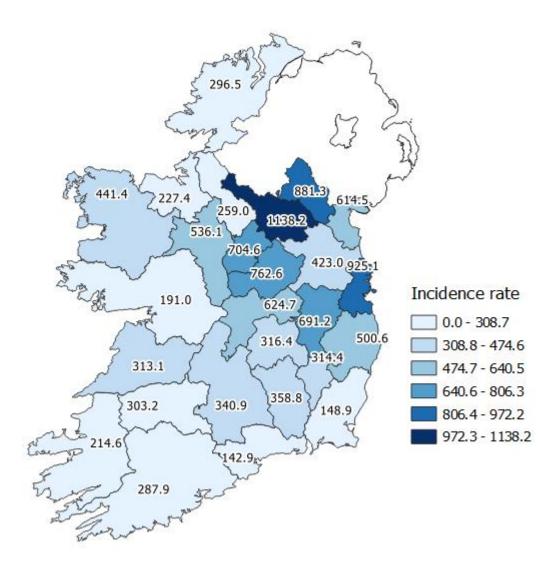
Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 26/07/2020

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 26/07/2020

County Name	Number of cases	Percent
Carlow	179	0.69
Cavan	867	3.35
Clare	372	1.44
Cork	1,563	6.04
Donegal	472	1.82
Dublin	12,464	48.14
Galway	493	1.9
Kerry	317	1.22
Kildare	1,538	5.94
Kilkenny	356	1.38
Laois	268	1.04
Leitrim	83	0.32
Limerick	591	2.28
Longford	288	1.11
Louth	792	3.06
Mayo	576	2.22
Meath	825	3.19
Monaghan	541	2.09
Offaly	487	1.88
Roscommon	346	1.34
Sligo	149	0.58
Tipperary	544	2.1
Waterford	166	0.64
Westmeath	677	2.61
Wexford	223	0.86
Wicklow	713	2.75
Total	**25,890**	**100**

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 26/07/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	8,180	31.60%
Local transmission, incl. possible local transmission	17,054	65.87%
Travel abroad, incl. possible travel abroad	633	2.44%
Unknown	23	0.09%
Total	**25,890**	**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 26/07/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	188	23	0.69	0	0
5-14 yrs	343	18	0.54	2	0.46
15-24 yrs	1977	76	2.27	5	1.14
25-34 yrs	4386	198	5.91	15	3.43
35-44 yrs	4556	274	8.18	36	8.24
45-54 yrs	4629	451	13.47	91	20.82
55-64 yrs	3282	498	14.87	127	29.06
65-74 yrs	1831	588	17.56	109	24.94
75-84 yrs	2304	745	22.25	46	10.53
85+ yrs	2373	477	14.24	6	1.37
Unknown	21	1	0.03	0	0
Total	**25,890**	**3,349**	**100**	**437**	**100**

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 26/07/2020

	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)	188	343	1,977	4,386	4,556	4,629	3,282	1,831	2,304	2,373	21
Cases hospitalised (n)	23	18	76	198	274	451	498	588	745	477	1
Cases hospitalised (%)	12.23	5.25	3.84	4.51	6.01	9.74	15.17	32.11	32.34	20.1	4.76
Cases admitted to ICU (n)	0	2	5	15	36	91	127	109	46	6	0
Cases admitted to ICU (%)	0	0.58	0.25	0.34	0.79	1.97	3.87	5.95	2	0.25	0
Deaths (n)	0	0	1	5	12	24	67	225	515	657	0
Case fatality ratio (%)	0	0	0.05	0.11	0.26	0.52	2.04	12.29	22.35	27.69	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 26/07/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	1,080		6	78	118	52	113	69	27	**1,543**
Nursing home	129		10	17	41	5	13	17	37	**269**
Residential institution	103		9	7	17	4	21	10	4	**175**
Other*	14	1	8	31	6	7	26	9	9	**111**
Hospital	61		3	3	14	2	10	4	6	**103**
Workplace	8		5	5	14	1	8	2	4	**47**
Comm. Hosp/Long-stay unit	4		4	2		4	6	5	5	**30**
Unknown	2					1	1			**4**
Total	**1,401**	**1**	**45**	**143**	**210**	**76**	**198**	**116**	**92**	**2,282**

*Other outbreak location includes community, extended family, hotel, public house, retail outlet, travel related and all other locations.
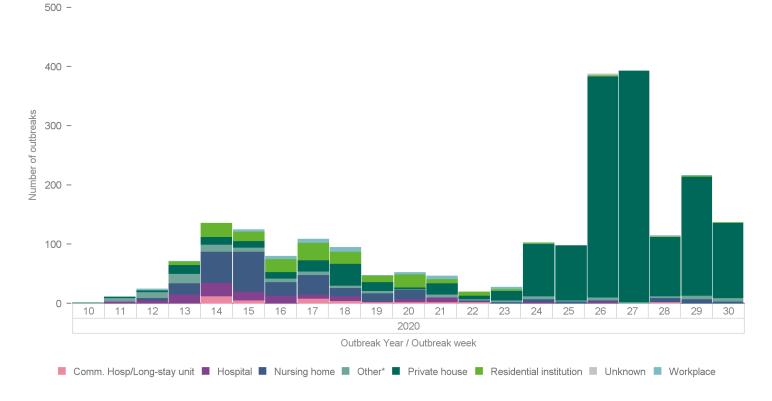
Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 26/07/2020

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

Note: 1453 COVID-19 outbreaks were reported on CIDR between week 24 and week 31 2020 (June 7th to July 26th). Of these, 1,398 were family outbreaks. Most of these family outbreaks occurred earlier and were reported between weeks 24 and 31 as a result of data validation: 1 occurred in February, 608 in March, 447 in April, 97 in May, 13 in June and 9 in July.

Deaths among COVID-19 cases

Table 7: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 26/07/2020

		Number	Percent
Total number of deaths		1,764	
	Confirmed	1,506	85.37
	Probable	101	5.73
	Possible	157	8.9
Total number of cases hospitalised		748	42.4
	Cases admitted to ICU	92	5.22
	Cases not admitted to ICU	656	37.19
Total number of imported cases		6	0.34
Number of cases in healthcare workers		8	0.45
Number with underlying clinical conditions		1,662	94.22
Total number of male cases		869	49.26
M:F ratio		0.97	
Median age (years)		84	
Mean age (years)		82	
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 26/07/2020

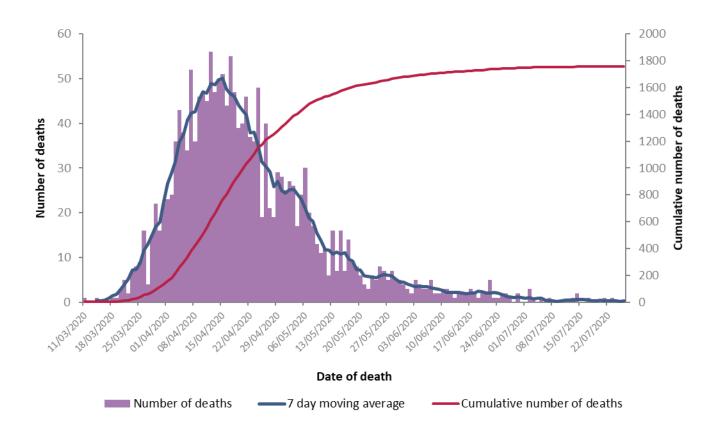| Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.06
25-34 yrs	<5	<5	5	0.28
35-44 yrs	6	7	13	0.74
45-54 yrs	10	16	26	1.47
55-64 yrs	25	47	72	4.08
65-74 yrs	92	158	250	14.17
75-84 yrs	276	324	600	34.01
85+ yrs	481	314	795	45.07
Unknown	<5	<5	2	0.11
Total	**895**	**869**	**1,764**	**100**
Percent	**50.74**	**49.26**		

Figure 6: 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 26/07/2020

* Date of death is not yet available for five 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 09:15 on 28/07/2020. 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.

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.