Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 21/06/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 19/06/2020

	Number	Percent
Total number of confirmed cases	25,373	
National cumulative incidence of confirmed cases per 100,000 population	532.84	
Total number of cases hospitalised	3,282	12.94
Total number of cases admitted to ICU	419	1.65
Total number of deaths among confirmed cases	1,457	5.74
Case fatality ratio (CFR, %)	5.74	
National cumulative incidence of confirmed deaths per 100,000 population	30.6	
Total number of outbreaks/clusters	1,036	
Total number of cases associated with clusters	10,893	42.93
Total number of imported cases	373	1.47
Number of cases in healthcare workers	8,158	32.15
Males	10,845	42.74
Females	14,498	57.14
M:F ratio	0.75	
Median age (years)	48	
Mean age (years)	51	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:38 on 21/06/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.
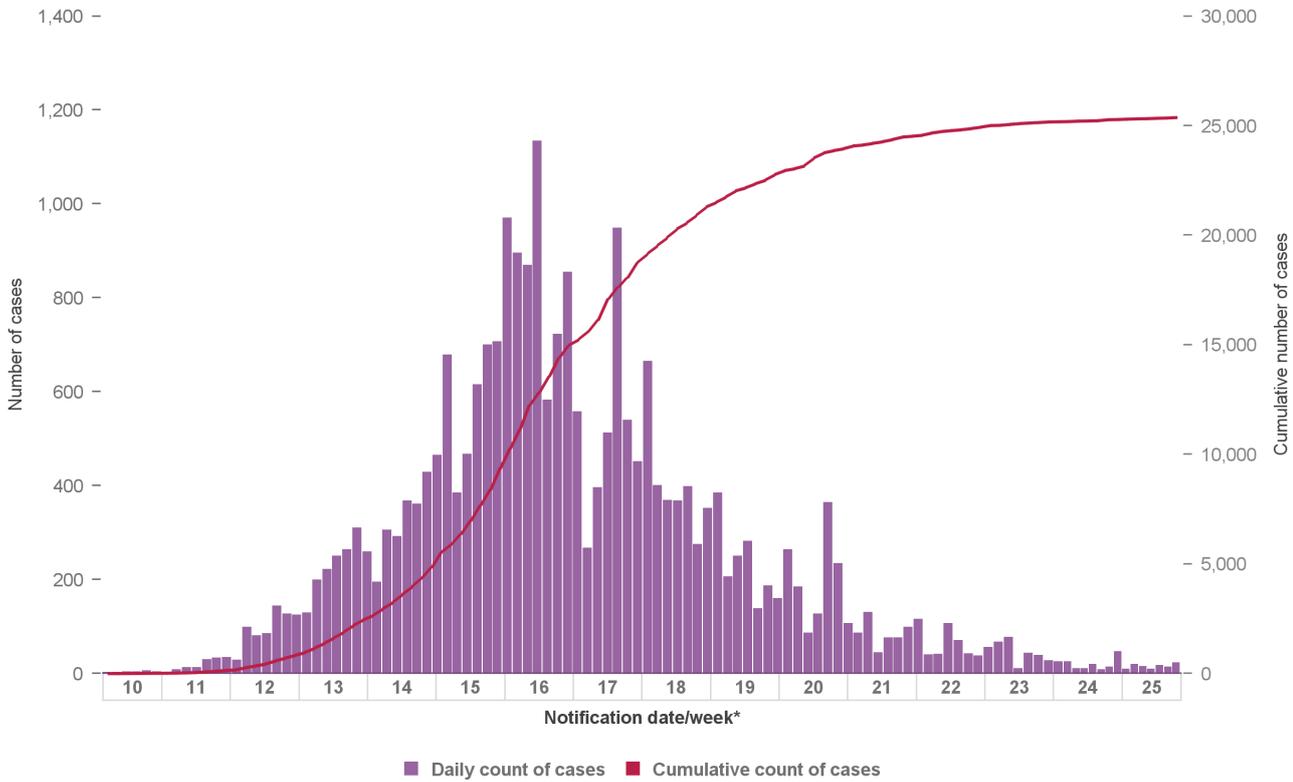
Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 19/06/2020

*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
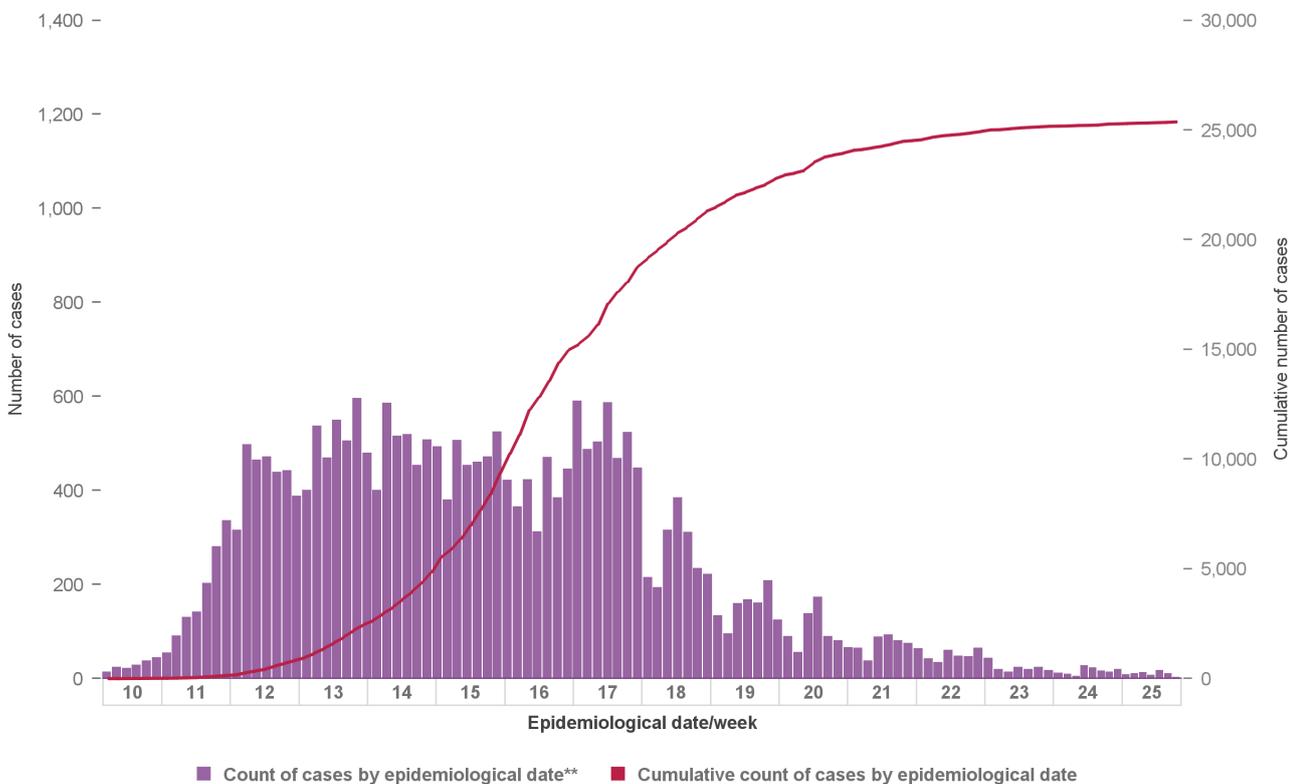

Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date** to midnight 19/06/2020

**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 19/06/2020

* 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

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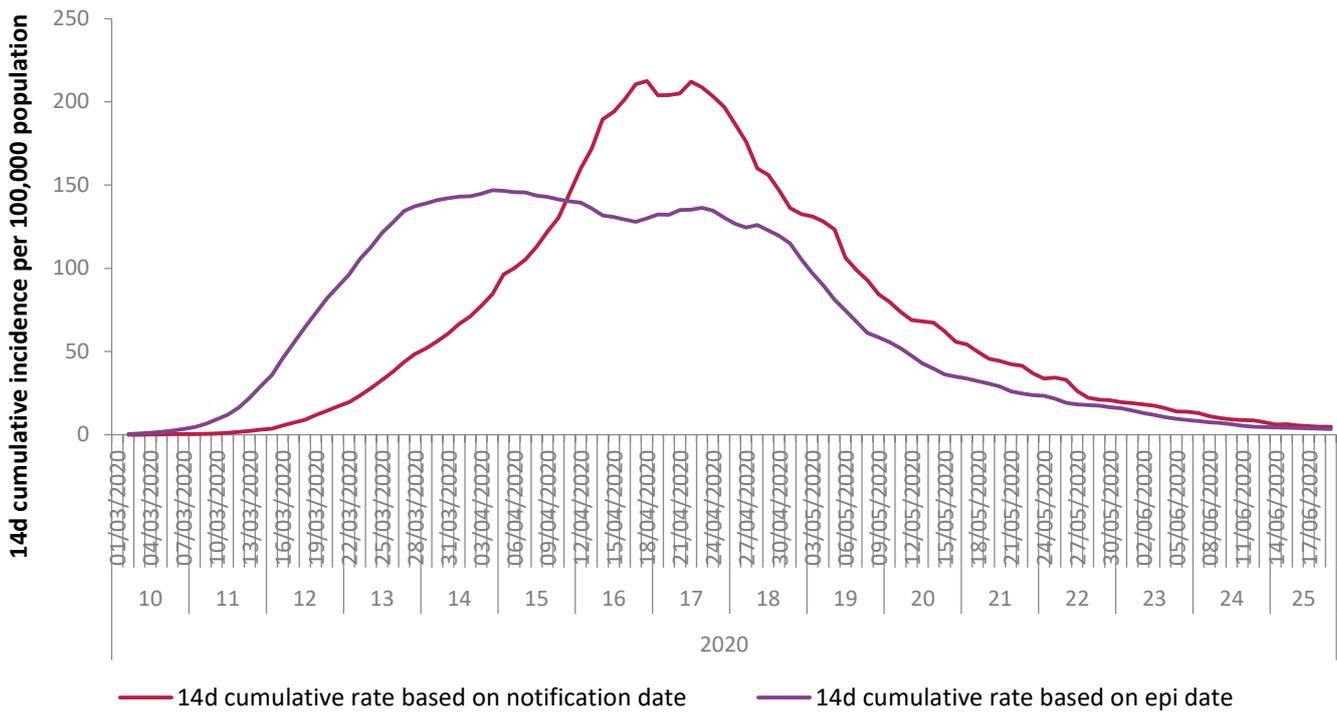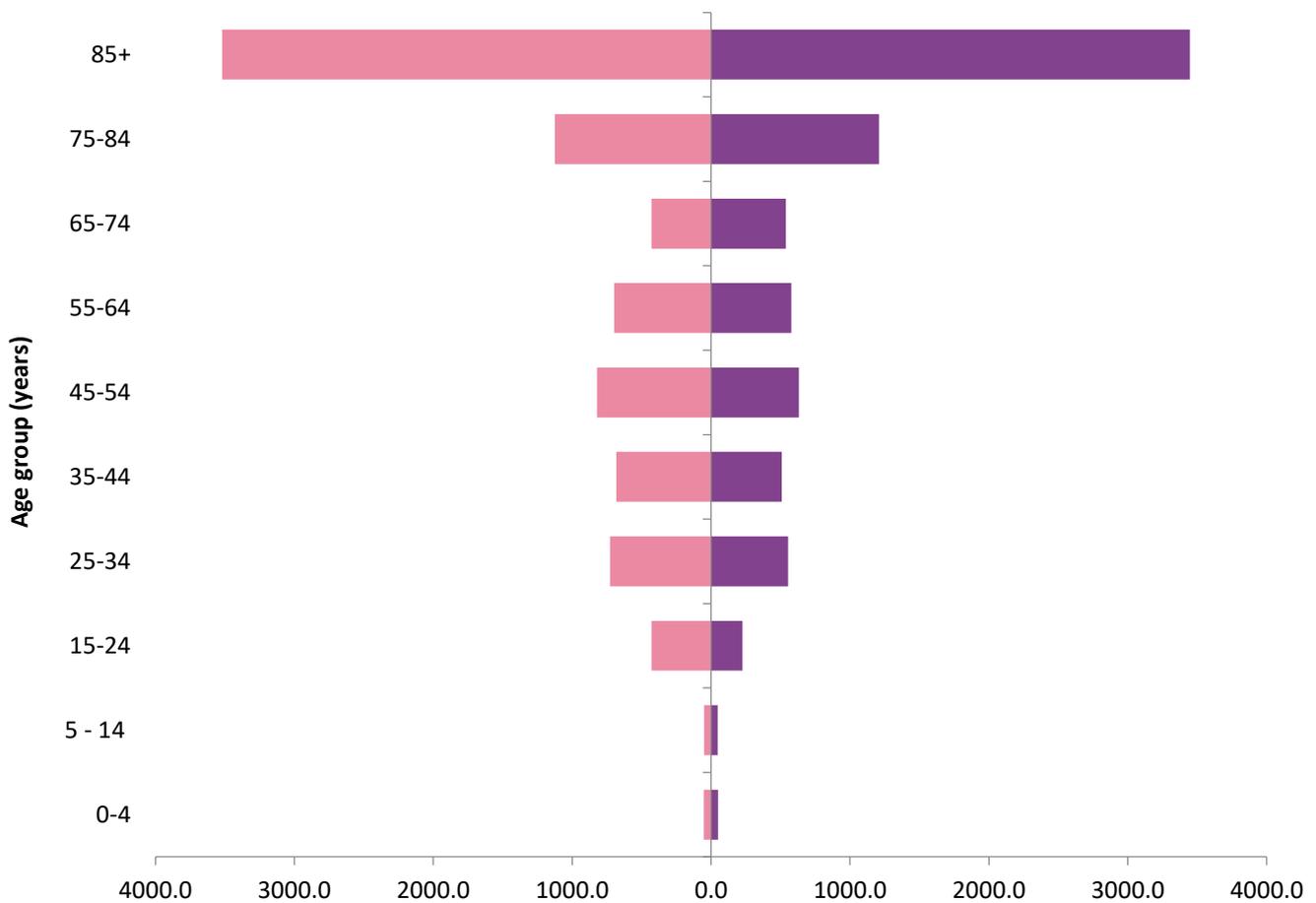
Table 1: Characteristics of confirmed COVID-19 cases notified in Ireland up to midnight on 19/06/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		25,373	100
Sex	Male:Female ratio	0.75	
	Male	10,845	42.74
	Female	14,498	57.14
	Unknown	30	0.12
Age	Median age (years)	48	
	Mean age (years)	51	
	Age range (years)	0 - 106	
	0-4 yrs	170	0.67
	5-14 yrs	326	1.28
	15-24 yrs	1,883	7.42
	25-34 yrs	4,253	16.76
	35-44 yrs	4,467	17.61
	45-54 yrs	4,559	17.97
	55-64 yrs	3,243	12.78
	65-74 yrs	1,801	7.1
	75-84 yrs	2,287	9.01
	85+ yrs	2,362	9.31
	Unknown	22	0.09

	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	51.3	49.1	429.3	727.5	683.0	821.2	697.0	427.9	1125.1	3519.7
Male	51.3	47.6	226.3	554.0	508.2	631.4	576.5	537.8	1210.4	3447.2

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 19/06/2020 (excluding 21 cases for whom age is unknown, 29 cases for whom sex is unknown and 1 case for whom both are unknown)
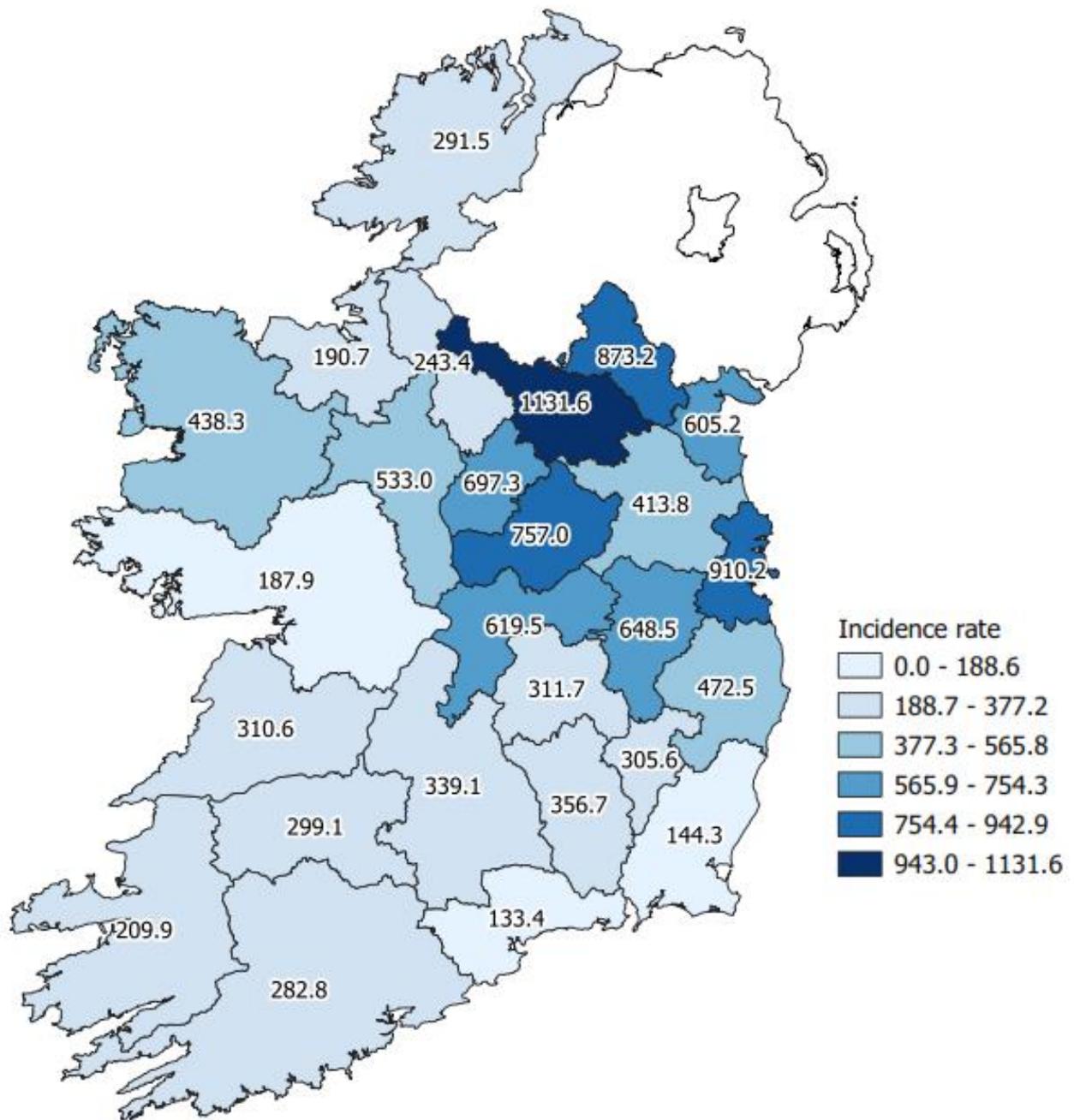
Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 19/06/2020

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 19/06/2020

County Name	Number of cases	Percent
Carlow	174	0.69
Cavan	862	3.4
Clare	369	1.45
Cork	1,535	6.05
Donegal	464	1.83
Dublin	12,263	48.33
Galway	485	1.91
Kerry	310	1.22
Kildare	1,443	5.69
Kilkenny	354	1.4
Laois	264	1.04
Leitrim	78	0.31
Limerick	583	2.3
Longford	285	1.12
Louth	780	3.07
Mayo	572	2.25
Meath	807	3.18
Monaghan	536	2.11
Offaly	483	1.9
Roscommon	344	1.36
Sligo	125	0.49
Tipperary	541	2.13
Waterford	155	0.61
Westmeath	672	2.65
Wexford	216	0.85
Wicklow	673	2.65
Total	**25,373**	**100**

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 19/06/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	9,315	36.71%
Local transmission, incl. possible local transmission	15,454	60.91%
Travel abroad, incl. possible travel abroad	589	2.32%
Unknown	15	0.06%
Total	**25,373**	**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 19/06/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	170	21	0.64	0	0
5-14 yrs	326	16	0.49	2	0.48
15-24 yrs	1883	70	2.13	5	1.19
25-34 yrs	4253	197	6	15	3.58
35-44 yrs	4467	263	8.01	34	8.11
45-54 yrs	4559	444	13.53	84	20.05
55-64 yrs	3243	488	14.87	124	29.59
65-74 yrs	1801	576	17.55	106	25.3
75-84 yrs	2287	735	22.39	43	10.26
85+ yrs	2362	470	14.32	6	1.43
Unknown	22	2	0.06	0	0
Total	**25,373**	**3,282**	**100**	**419**	**100**

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 19/06/2020

	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)	170	326	1,883	4,253	4,467	4,559	3,243	1,801	2,287	2,362	22
Cases hospitalised (n)	21	16	70	197	263	444	488	576	735	470	2
Cases hospitalised (%)	12.35	4.91	3.72	4.63	5.89	9.74	15.05	31.98	32.14	19.9	9.09
Cases admitted to ICU (n)	0	2	5	15	34	84	124	106	43	6	0
Cases admitted to ICU (%)	0	0.61	0.27	0.35	0.76	1.84	3.82	5.89	1.88	0.25	0
Deaths (n)	0	0	2	5	11	23	63	213	501	639	0
Case fatality ratio (%)	0	0	0.11	0.12	0.25	0.5	1.94	11.83	21.91	27.05	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 19/06/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	Total
Private house	33	6	50	118	6	59	28	25	**325**
Nursing home	130	10	15	38	5	9	17	36	**260**
Residential institution	113	9	7	17	4	20	10	4	**184**
Hospital	60	3	2	14	2	11	4	6	**102**
Other*	11	8	26	6	4	18	6	9	**88**
Workplace	8	5	5	14	1	8	3	4	**48**
Comm. Hosp/Long-stay unit	4	3	2		4	6	5	5	**29**
Total	**359**	**44**	**107**	**207**	**26**	**131**	**73**	**89**	**1,036**

*Other outbreak location includes community, extended family, hotel, public house, retail outlet, travel related and all other locations.
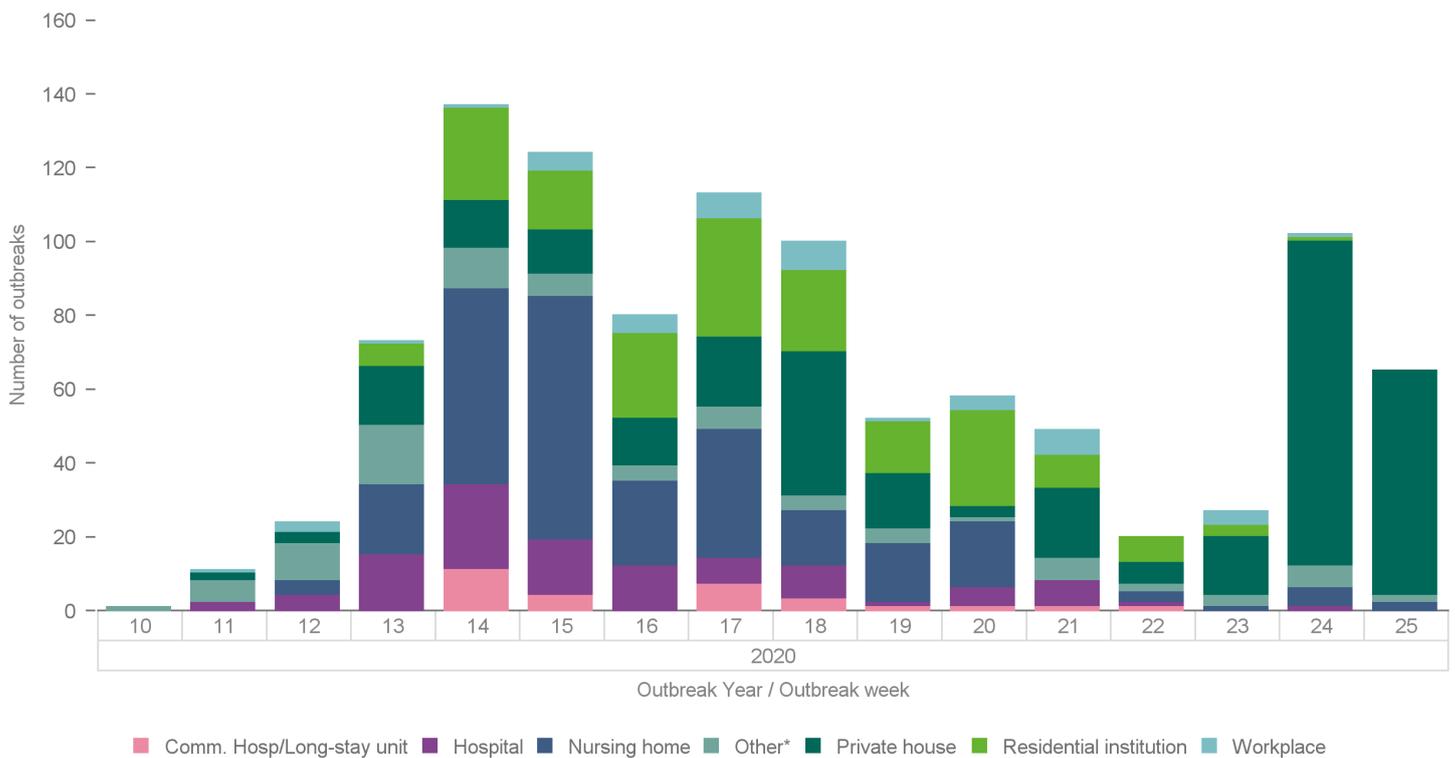
Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 19/06/2020

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

Note: In week 24 and week 25 (up to 19/06/2020), 167 new COVID-19 outbreaks were reported on CIDR, of which 154 were family outbreaks. Of these, 66 family outbreaks occurred in March, 69 family outbreaks occurred in April, 15 family outbreaks occurred in May 2020 and 4 family outbreaks occurred in June 2020.

Deaths among COVID-19 cases

Table 7: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 19/06/2020

		Number	Percent
Total number of deaths		1,715	
	Confirmed	1,457	84.96
	Probable	98	5.71
	Possible	160	9.33
Total number of cases hospitalised		717	41.81
	Cases admitted to ICU	86	5.01
	Cases not admitted to ICU	631	36.79
Total number of imported cases		6	0.35
Number of cases in healthcare workers		7	0.41
Number with underlying clinical conditions		1,578	92.01
Total number of male cases		850	49.56
M:F ratio		0.98	
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 19/06/2020

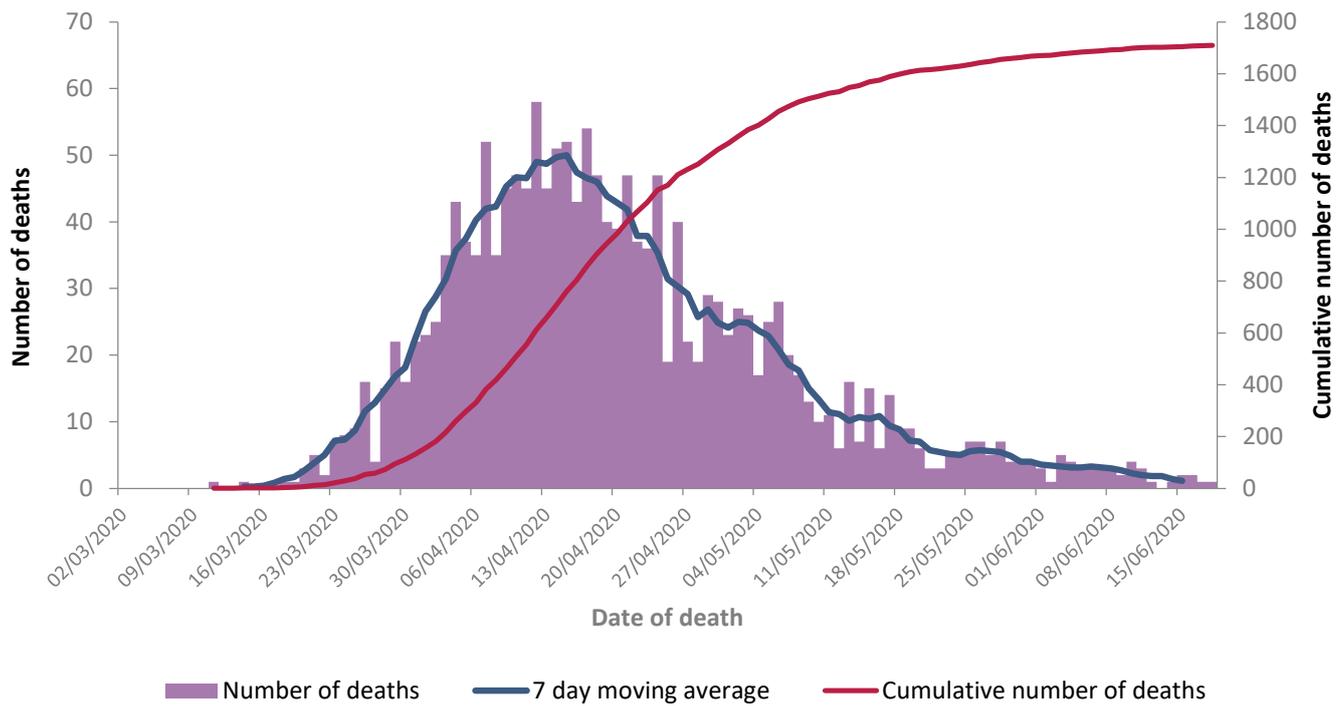| Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	2	0.12
25-34 yrs	<5	<5	5	0.29
35-44 yrs	5	7	12	0.7
45-54 yrs	10	15	25	1.46
55-64 yrs	24	44	68	3.97
65-74 yrs	87	152	239	13.94
75-84 yrs	266	320	586	34.17
85+ yrs	467	309	776	45.25
Unknown	<5	<5	2	0.12
Total	**865**	**850**	**1,715**	**100**
Percent	**50.44**	**49.56**		

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 19/06/2020

* 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

Sincere thanks are extended to all those who are participating in the collection of data and reporting of data used in this report. This includes 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 21/06/2020. 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.