



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 03/09/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 01/09/2020

	Number	Percent
Total number of confirmed cases	29,111	
National cumulative incidence of confirmed cases per 100,000 population	611.34	
Total number of cases hospitalised	3,415	11.73
Total number of cases admitted to ICU	447	1.54
Total number of deaths among confirmed cases	1,519	5.22
Case fatality ratio (CFR, %)	5.22	
National cumulative incidence of confirmed deaths per 100,000 population	31.9	
Total number of outbreaks/clusters	2,810	
Total number of cases associated with clusters	15,964	54.84
Total number of imported cases	518	1.78
Number of cases in healthcare workers	8,678	29.81
Males	12,774	43.88
Females	16,309	56.02
M:F ratio	0.78	
Median age (years)	46	
Mean age (years)	49	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:31 on 03/09/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

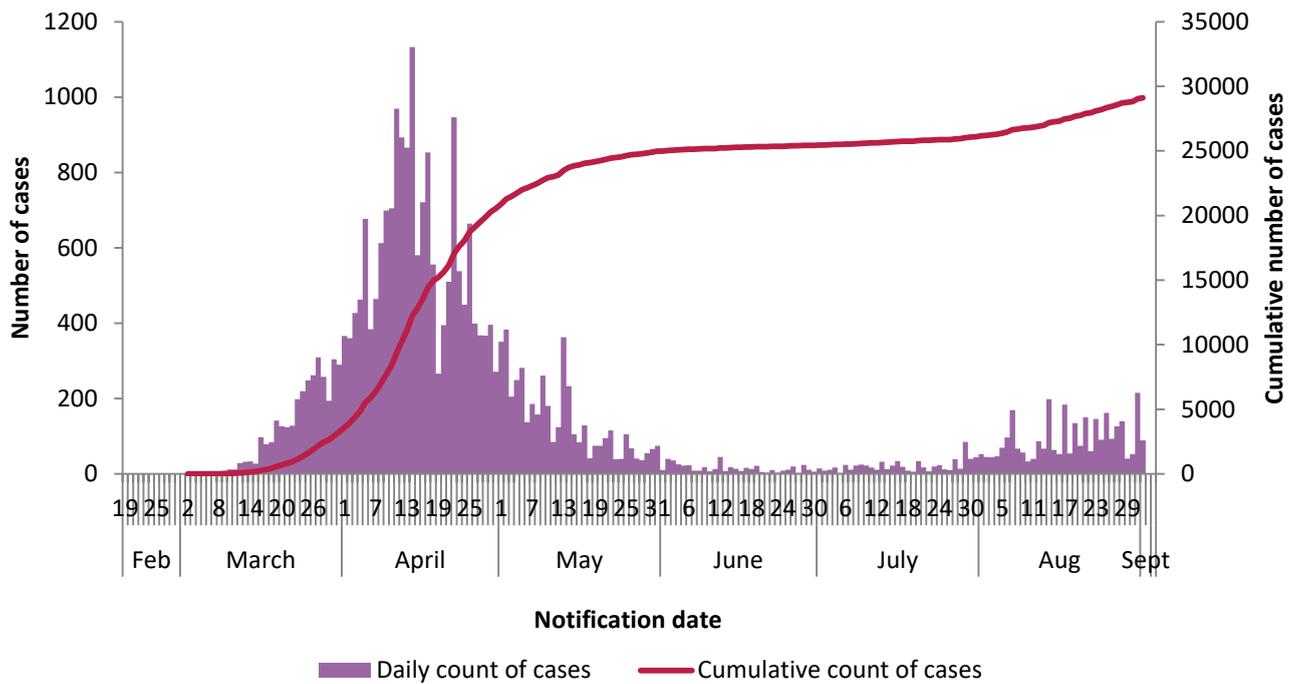


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 01/09/2020

*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

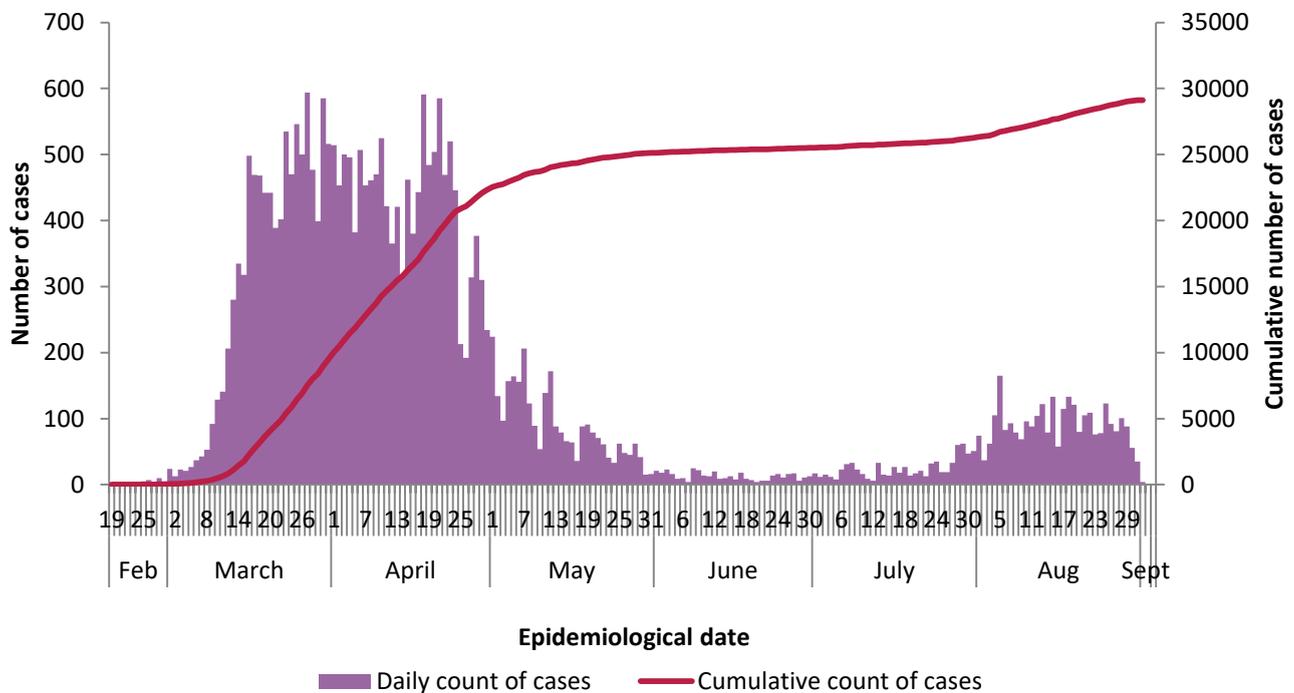


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 01/09/2020**

**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.

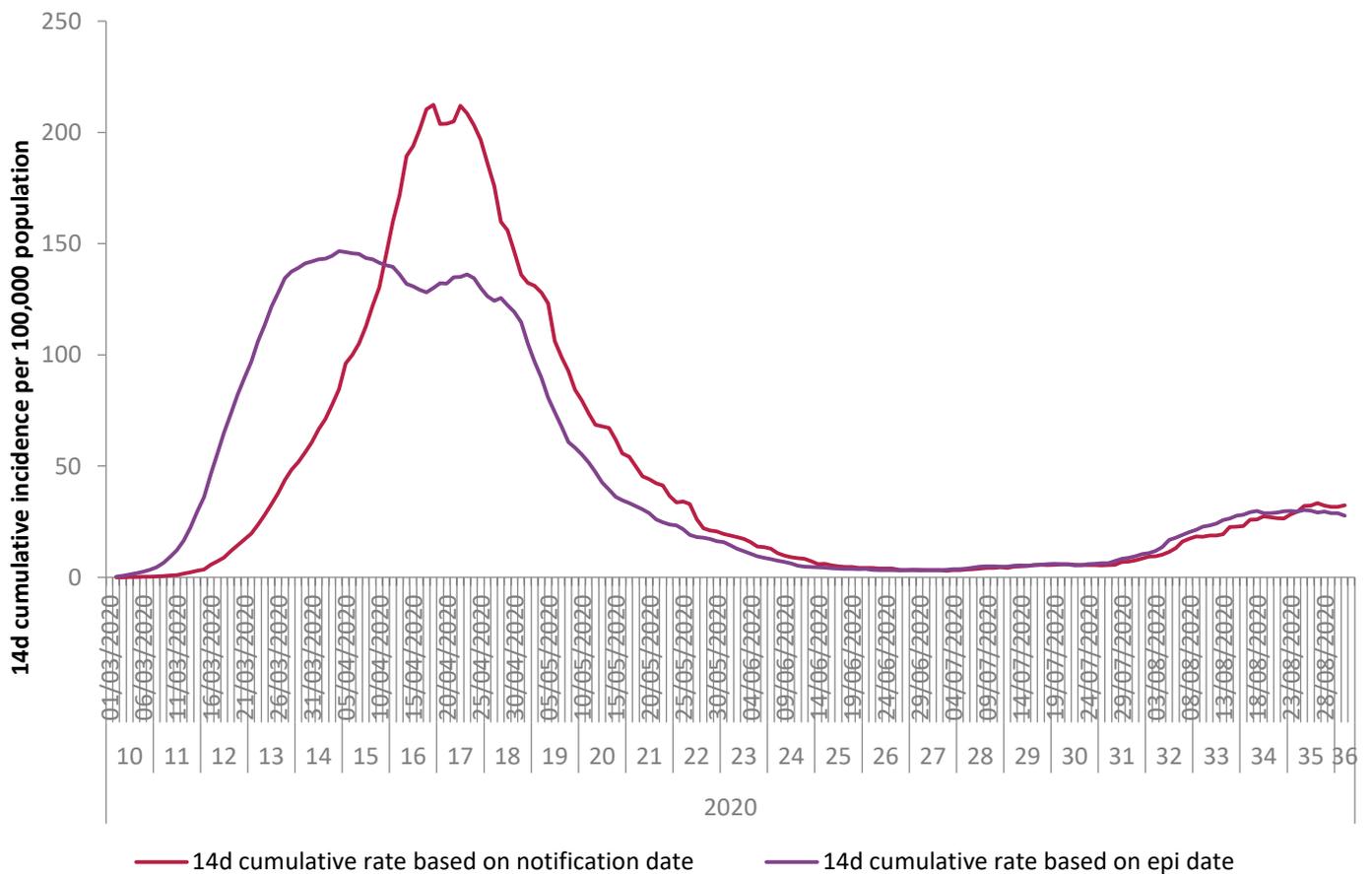


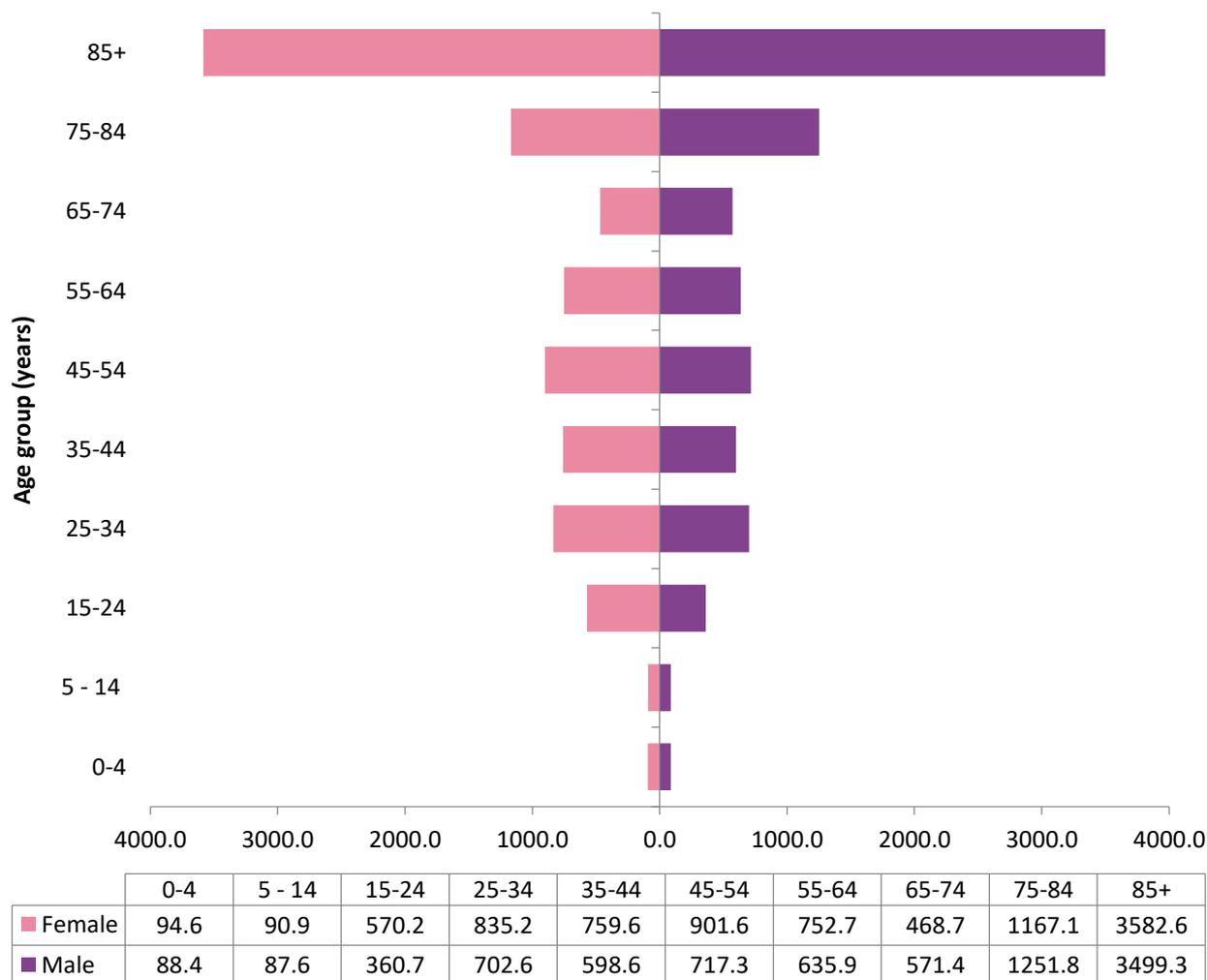
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 01/09/2020**

* 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 01/09/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		29,111	100
Sex	Male:Female ratio	0.78	
	Male	12,774	43.88
	Female	16,309	56.02
	Unknown	28	0.1
Age	Median age (years)	46	
	Mean age (years)	49	
	Age range (years)	0 - 106	
	0-4 yrs	303	1.04
	5-14 yrs	602	2.07
	15-24 yrs	2,675	9.19
	25-34 yrs	5,094	17.5
	35-44 yrs	5,089	17.48
	45-54 yrs	5,078	17.44
	55-64 yrs	3,536	12.15
	65-74 yrs	1,940	6.66
	75-84 yrs	2,369	8.14
	85+ yrs	2,402	8.25
	Unknown	23	0.08



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 01/09/2020 (excluding 22 cases for whom age is unknown and 27 cases for whom sex is unknown and 1 case for whom both are unknown)

Table 2: Number of confirmed COVID-19 cases by county notified to midnight 01/09/2020

County Name	Number of cases	Percent
Carlow	249	0.86
Cavan	895	3.07
Clare	473	1.62
Cork	1,643	5.64
Donegal	540	1.85
Dublin	13,535	46.49
Galway	517	1.78
Kerry	329	1.13
Kildare	2,274	7.81
Kilkenny	403	1.38
Laois	385	1.32
Leitrim	86	0.3
Limerick	783	2.69
Longford	301	1.03
Louth	830	2.85
Mayo	588	2.02
Meath	905	3.11
Monaghan	573	1.97
Offaly	626	2.15
Roscommon	364	1.25
Sligo	157	0.54
Tipperary	716	2.46
Waterford	197	0.68
Westmeath	692	2.38
Wexford	300	1.03
Wicklow	750	2.58
Total	29,111	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 01/09/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	8,771	30.13%
Local transmission, incl. possible local transmission	19,389	66.60%
Travel abroad, incl. possible travel abroad	714	2.45%
Unknown	237	0.81%
Total	29,111	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 01/09/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	303	26	0.76	0	0
5-14 yrs	602	19	0.56	2	0.45
15-24 yrs	2675	82	2.4	5	1.12
25-34 yrs	5094	210	6.15	16	3.58
35-44 yrs	5089	280	8.2	38	8.5
45-54 yrs	5078	458	13.41	93	20.81
55-64 yrs	3536	504	14.76	129	28.86
65-74 yrs	1940	595	17.42	110	24.61
75-84 yrs	2369	759	22.23	48	10.74
85+ yrs	2402	481	14.08	6	1.34
Unknown	23	1	0.03	0	0
Total	29,111	3,415	100	447	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 01/09/2020

	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)	303	602	2,675	5,094	5,089	5,078	3,536	1,940	2,369	2,402	23
Cases hospitalised (n)	26	19	82	210	280	458	504	595	759	481	1
Cases hospitalised (%)	8.58	3.16	3.07	4.12	5.5	9.02	14.25	30.67	32.04	20.02	4.35
Cases admitted to ICU (n)	0	2	5	16	38	93	129	110	48	6	0
Cases admitted to ICU (%)	0	0.33	0.19	0.31	0.75	1.83	3.65	5.67	2.03	0.25	0
Deaths (n)	0	0	1	5	12	25	68	228	521	659	0
Case fatality ratio (%)	0	0	0.04	0.1	0.24	0.49	1.92	11.75	21.99	27.44	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 01/09/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	1,400		27	103	139	55	122	89	30	1,965
Nursing home	134		10	18	44	5	14	17	36	278
Residential institution	114		10	10	20	4	21	10	4	193
Other*	19	2	10	45	7	11	38	13	11	156
Hospital	63		3	4	14	2	10	5	6	107
Workplace	27		10	7	16	1	9	7	4	81
Comm. Hosp/Long-stay unit	4		4	2		4	6	5	5	30
Total	1,761	2	74	189	240	82	220	146	96	2,810

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

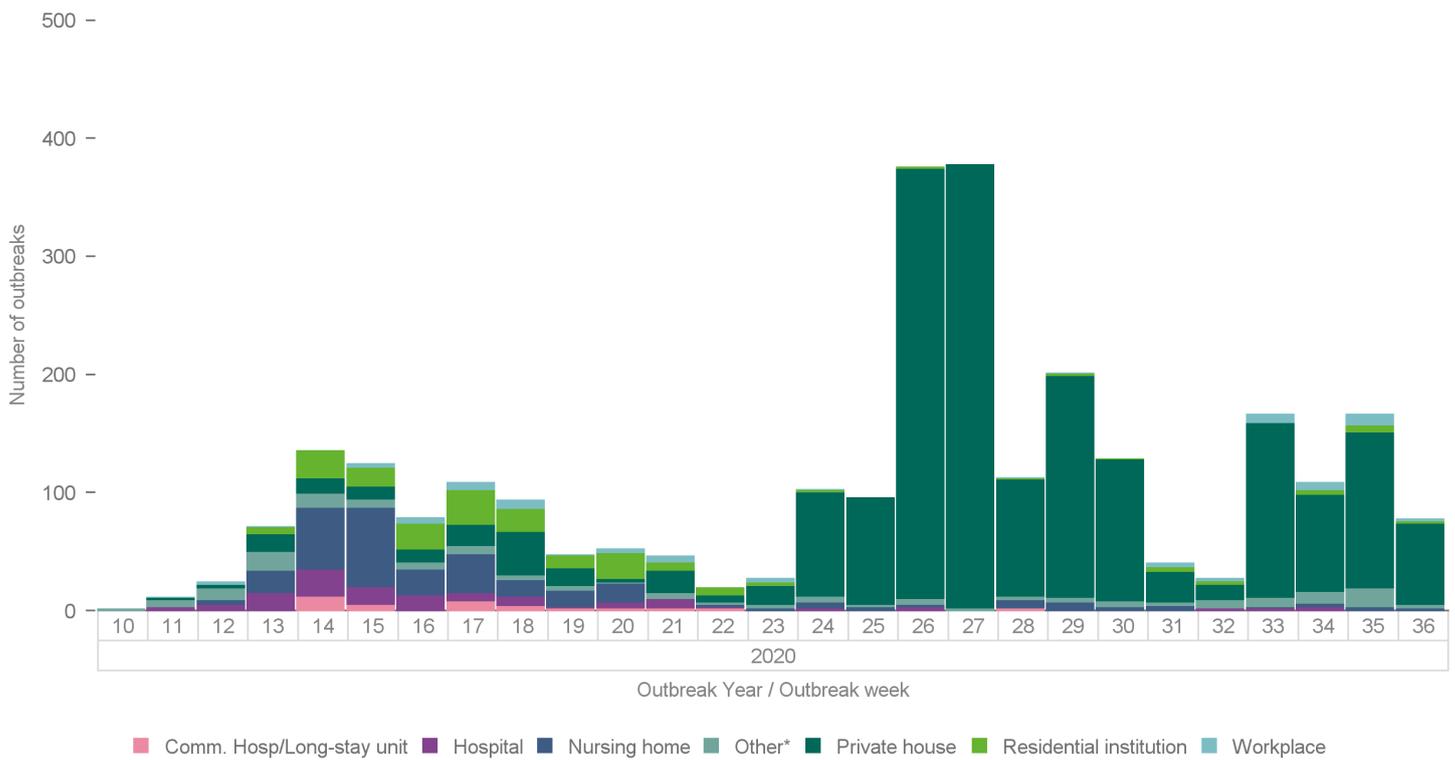


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 01/09/2020

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

Note: 1,991 COVID-19 outbreaks were reported on CIDR between week 24 and week 36 2020 to date (9th June to 1st September). Of these, 1,839 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 36 as a result of data validation: 1 occurred in February, 634 in March, 472 in April, 94 in May, 127 in June, 125 in July, 374 in August and 12 in September to date.

Deaths among COVID-19 cases

Table 7 : Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 01/09/2020

	Number	Percent
Total number of deaths	1,777	
Confirmed	1,519	85.48
Probable	99	5.57
Possible	159	8.95
Total number of cases hospitalised	758	42.66
Cases admitted to ICU	94	5.29
Cases not admitted to ICU	664	37.37
Total number of imported cases	6	0.34
Number of cases in healthcare workers	8	0.45
Number with underlying clinical conditions	1,677	94.37
Total number of male cases	874	49.18
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 01/09/2020

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	0.73
45-54 yrs	10	17	27	1.52
55-64 yrs	25	48	73	4.11
65-74 yrs	94	159	253	14.24
75-84 yrs	279	326	605	34.05
85+ yrs	484	314	798	44.91
Unknown	<5	<5	2	0.11
Total	903	874	1,777	100
Percent	50.82	49.18		

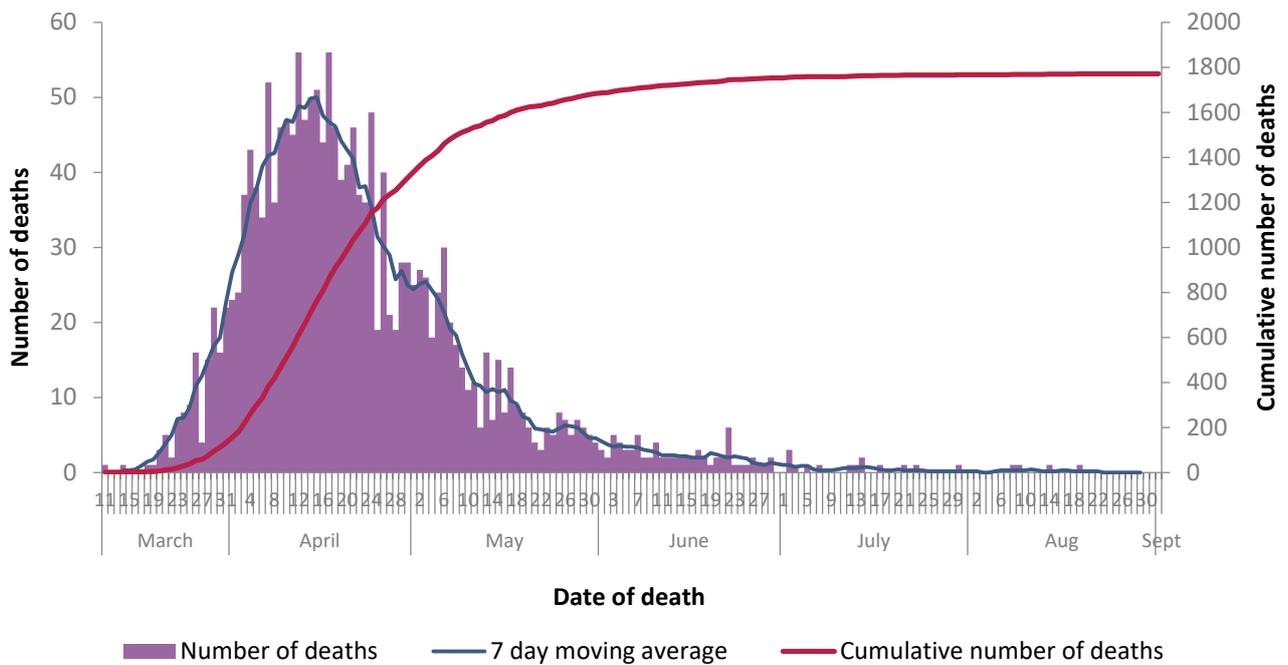


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 01/09/2020

* Date of death is not yet available for six cases

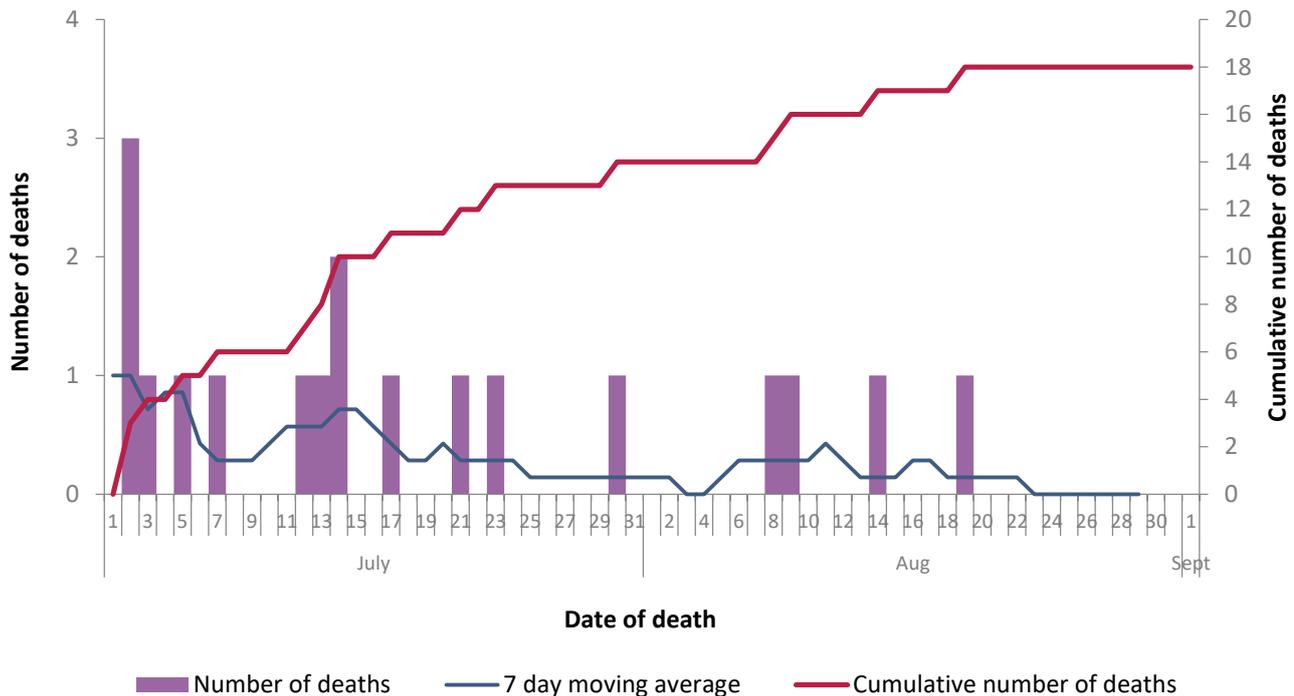


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/07/2020 to midnight 01/09/2020

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

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 09:31 on 03/09/2020. 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.