



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 16/09/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 14/09/2020

	Number	Percent
Total number of confirmed cases	31,551	
National cumulative incidence of confirmed cases per 100,000 population	662.58	
Total number of cases hospitalised	3,469	10.99
Total number of cases admitted to ICU	452	1.43
Total number of deaths among confirmed cases	1,531	4.85
Case fatality ratio (CFR, %)	4.85	
National cumulative incidence of confirmed deaths per 100,000 population	32.15	
Total number of outbreaks/clusters	3,074	
Total number of cases associated with clusters	16,955	53.74
Total number of imported cases	567	1.8
Number of cases in healthcare workers	8,922	28.28
Males	13,974	44.29
Females	17,544	55.61
M:F ratio	0.8	
Median age (years)	45	
Mean age (years)	48	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:17 on 16/09/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

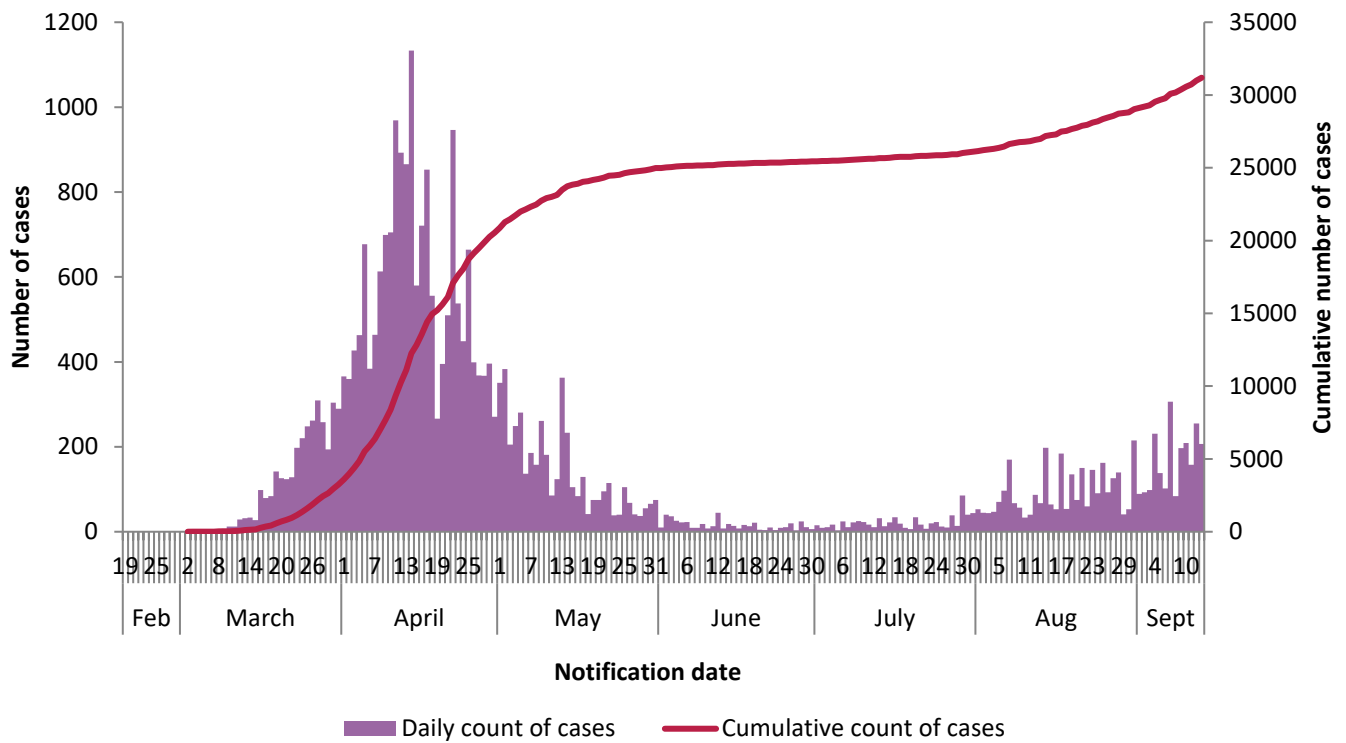


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 14/09/2020

*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

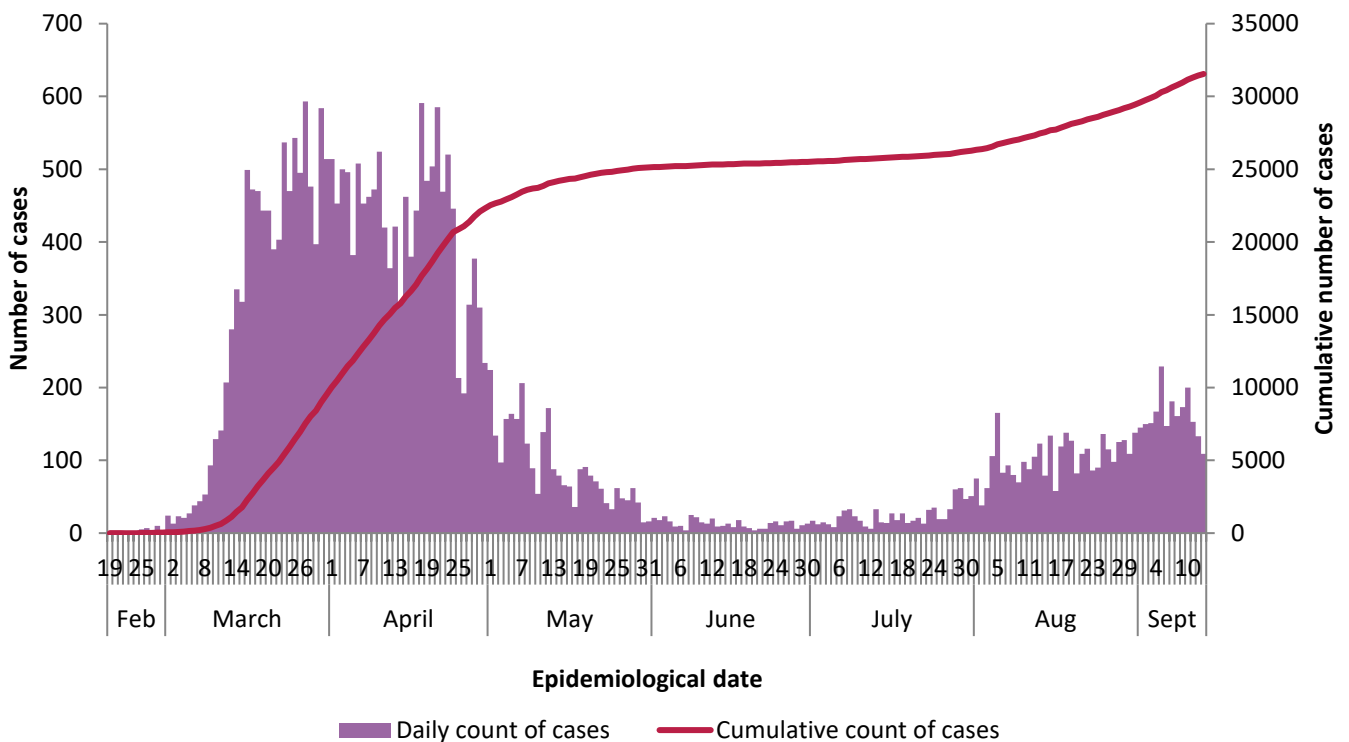


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 14/09/2020**

**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.

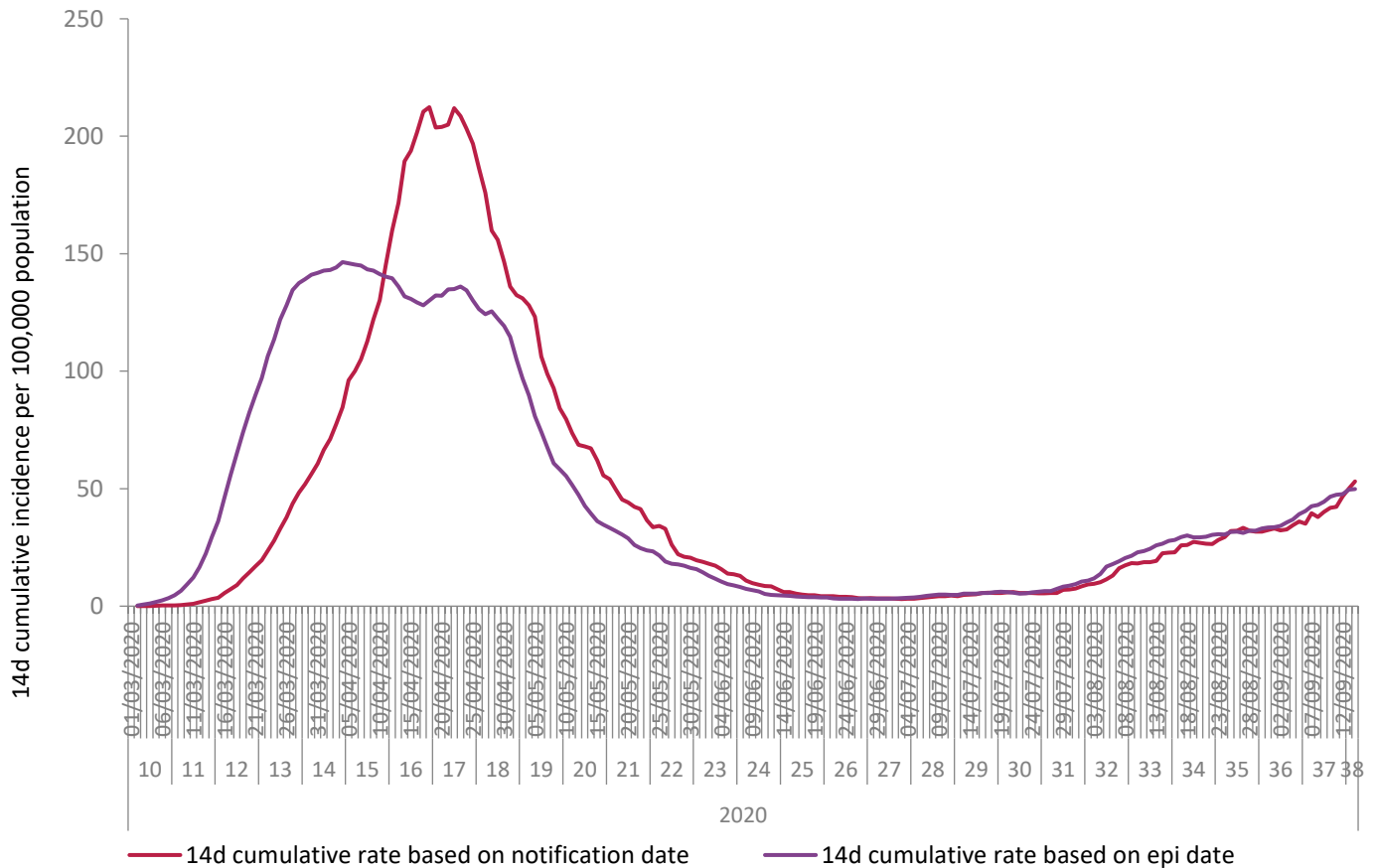


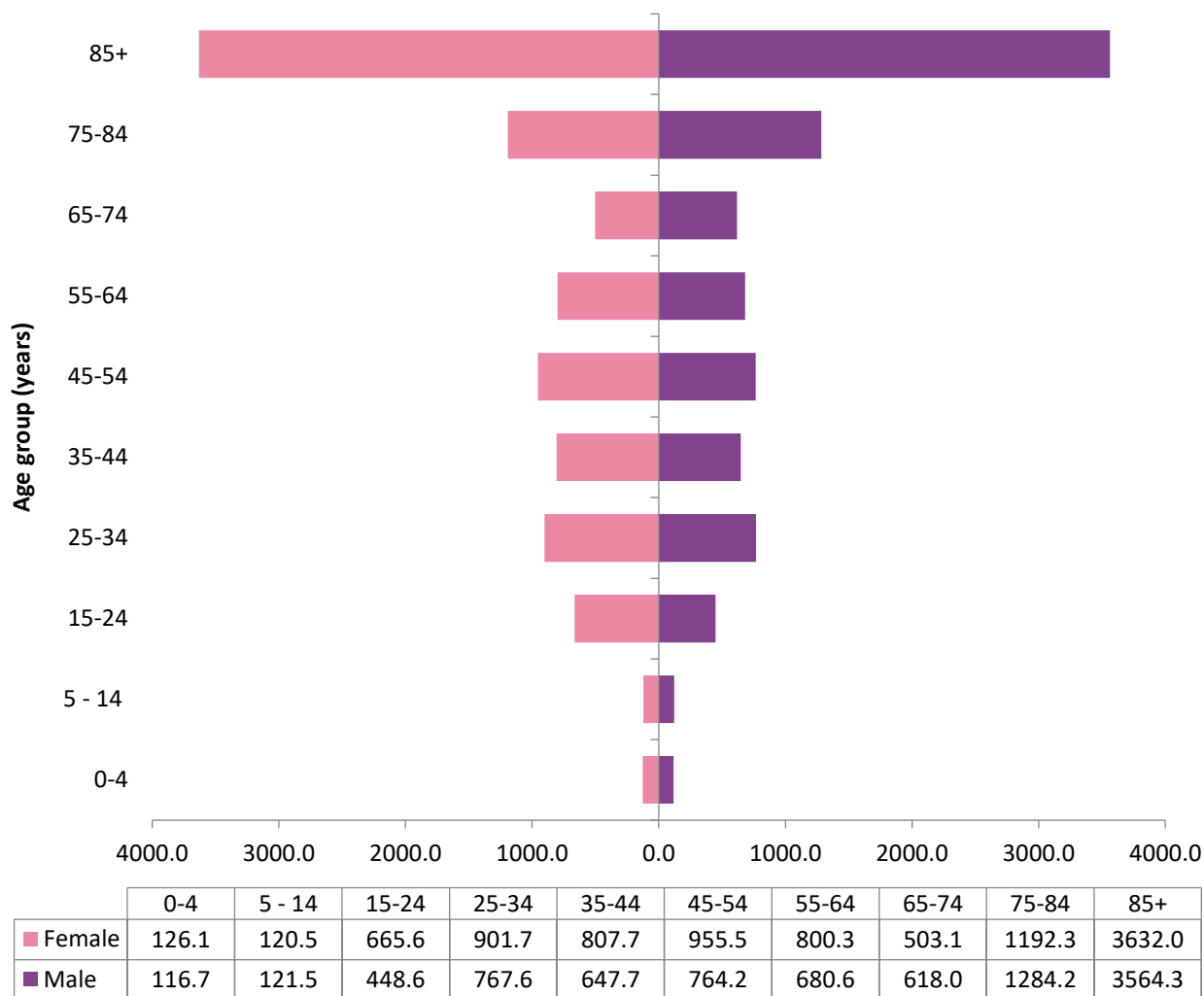
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 14/09/2020**

* 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

**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 14/09/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		31,551	100
Sex	Male:Female ratio	0.8	
	Male	13,974	44.29
	Female	17,544	55.61
	Unknown	33	0.1
Age	Median age (years)	45	
	Mean age (years)	48	
	Age range (years)	0 - 106	
	0-4 yrs	402	1.27
	5-14 yrs	818	2.59
	15-24 yrs	3,203	10.15
	25-34 yrs	5,530	17.53
	35-44 yrs	5,452	17.28
	45-54 yrs	5,395	17.1
	55-64 yrs	3,771	11.95
	65-74 yrs	2,092	6.63
	75-84 yrs	2,425	7.69
	85+ yrs	2,439	7.73
	Unknown	24	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 14/09/2020 (excluding 23 cases for whom age is unknown and 32 cases for whom sex is unknown and 1 case for whom both are unknown)

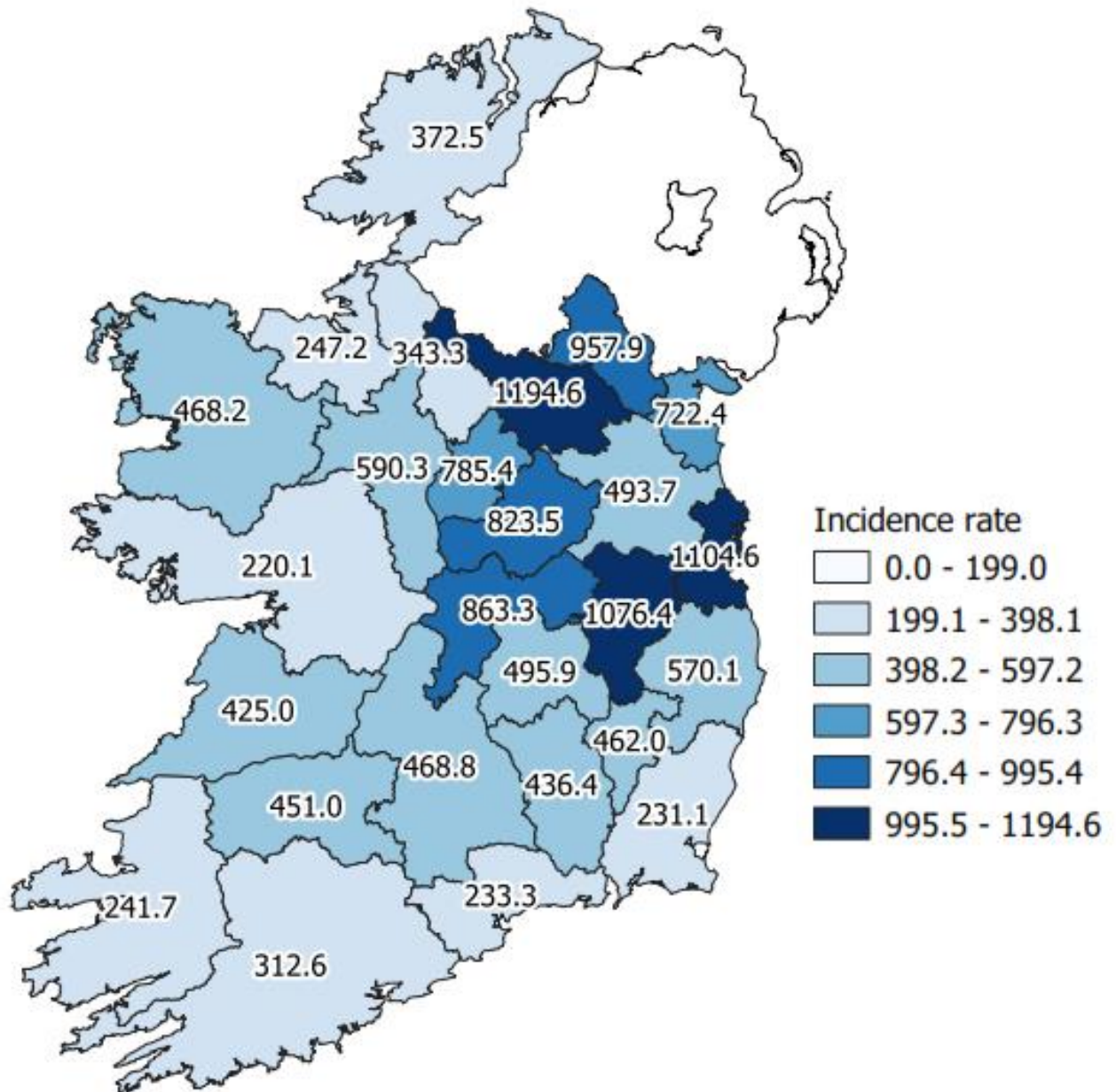


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 14/09/2020

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 14/09/2020

County Name	Number of cases	Percent
Carlow	263	0.83
Cavan	910	2.88
Clare	505	1.6
Cork	1,697	5.38
Donegal	593	1.88
Dublin	14,883	47.17
Galway	568	1.8
Kerry	357	1.13
Kildare	2,395	7.59
Kilkenny	433	1.37
Laois	420	1.33
Leitrim	110	0.35
Limerick	879	2.79
Longford	321	1.02
Louth	931	2.95
Mayo	611	1.94
Meath	963	3.05
Monaghan	588	1.86
Offaly	673	2.13
Roscommon	381	1.21
Sligo	162	0.51
Tipperary	748	2.37
Waterford	271	0.86
Westmeath	731	2.32
Wexford	346	1.1
Wicklow	812	2.57
Total	31,551	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 14/09/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	9,504	30.12%
Local transmission, incl. possible local transmission	20,910	66.27%
Travel abroad, incl. possible travel abroad	769	2.44%
Unknown	368	1.17%
Total	31,551	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 14/09/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	402	29	0.84	1	0.22
5-14 yrs	818	19	0.55	2	0.44
15-24 yrs	3203	85	2.45	5	1.11
25-34 yrs	5530	213	6.14	17	3.76
35-44 yrs	5452	279	8.04	38	8.41
45-54 yrs	5395	466	13.43	93	20.58
55-64 yrs	3771	512	14.76	131	28.98
65-74 yrs	2092	614	17.7	111	24.56
75-84 yrs	2425	765	22.05	48	10.62
85+ yrs	2439	486	14.01	6	1.33
Unknown	24	1	0.03	0	0
Total	31,551	3,469	100	452	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 14/09/2020

	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)	402	818	3,203	5,530	5,452	5,395	3,771	2,092	2,425	2,439	24
Cases hospitalised (n)	29	19	85	213	279	466	512	614	765	486	1
Cases hospitalised (%)	7.21	2.32	2.65	3.85	5.12	8.64	13.58	29.35	31.55	19.93	4.17
Cases admitted to ICU (n)	1	2	5	17	38	93	131	111	48	6	0
Cases admitted to ICU (%)	0.25	0.24	0.16	0.31	0.7	1.72	3.47	5.31	1.98	0.25	0
Deaths (n)	0	0	1	5	12	26	71	228	524	664	0
Case fatality ratio (%)	0	0	0.03	0.09	0.22	0.48	1.88	10.9	21.61	27.22	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 14/09/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	1,425		38	127	160	62	126	114	42	2,094
Nursing home	138		10	19	44	5	14	17	36	283
Other*	40	2	23	74	10	13	45	18	15	240
Residential institution	120		10	11	22	4	21	10	4	202
Hospital	67		4	4	14	2	10	5	6	112
Workplace	36		11	14	19	5	10	9	7	111
Comm. Hosp/Long-stay unit	4		4	2		4	6	5	5	30
Unknown	1							1		2
Total	1,831	2	100	251	269	95	232	179	115	3,074

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

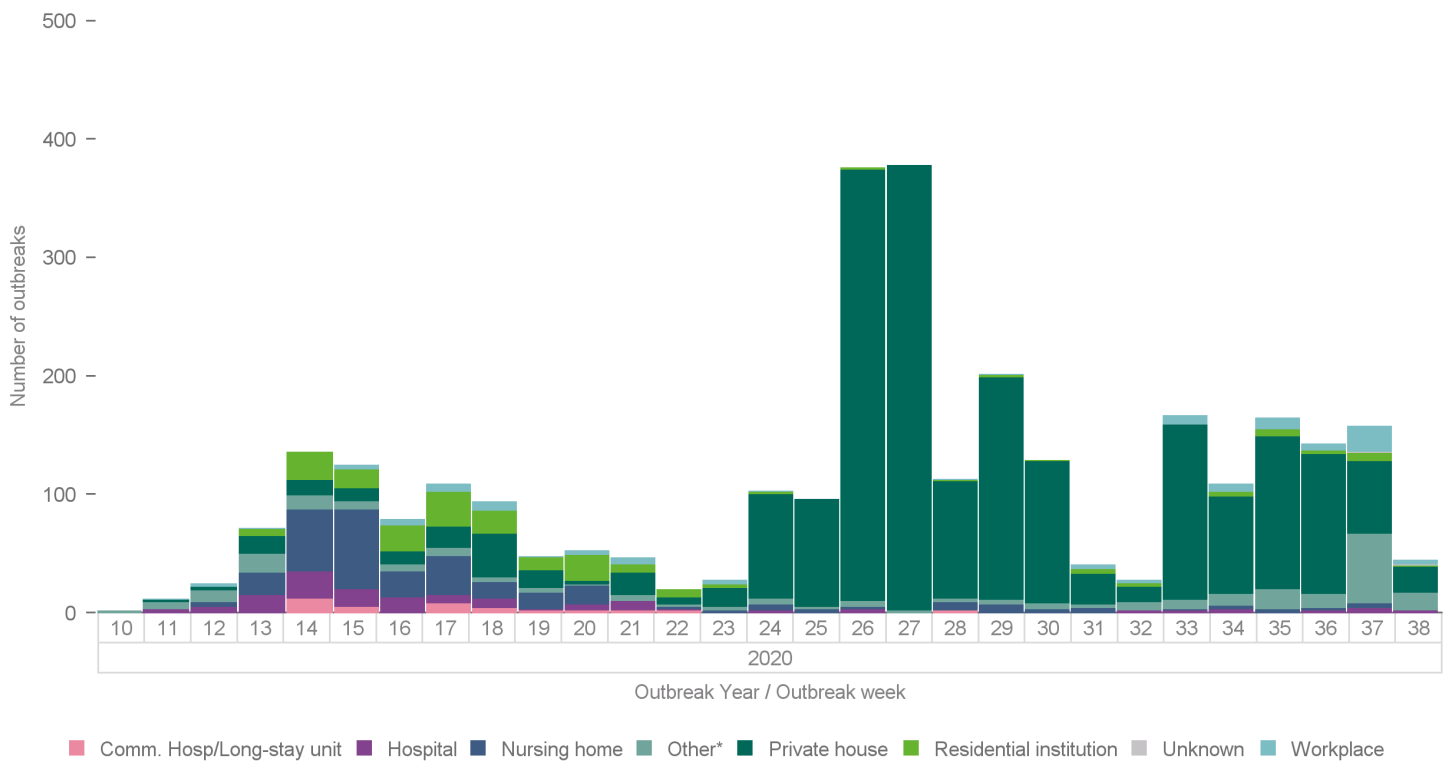


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 14/09/2020

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

Note: 2,238 COVID-19 outbreaks were reported on CIDR between week 24 and week 38 2020 to date (9th June to 14th September). Of these, 1,965 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 38 as a result of data validation: 1 occurred in February, 635 in March, 472 in April, 94 in May, 127 in June, 126 in July, 443 in August and 67 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 14/09/2020

	Number	Percent
Total number of deaths	1,788	
Confirmed	1,531	85.63
Probable	99	5.54
Possible	158	8.84
Total number of cases hospitalised	763	42.67
Cases admitted to ICU	97	5.43
Cases not admitted to ICU	666	37.25
Total number of imported cases	6	0.34
Number of cases in healthcare workers	8	0.45
Number with underlying clinical conditions	1,691	94.57
Total number of male cases	884	49.44
M:F ratio	0.98	
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 14/09/2020

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	18	28	1.57
55-64 yrs	26	50	76	4.25
65-74 yrs	94	159	253	14.15
75-84 yrs	279	329	608	34
85+ yrs	484	318	802	44.85
Unknown	<5	<5	2	0.11
Total	904	884	1,788	100
Percent	50.56	49.44		

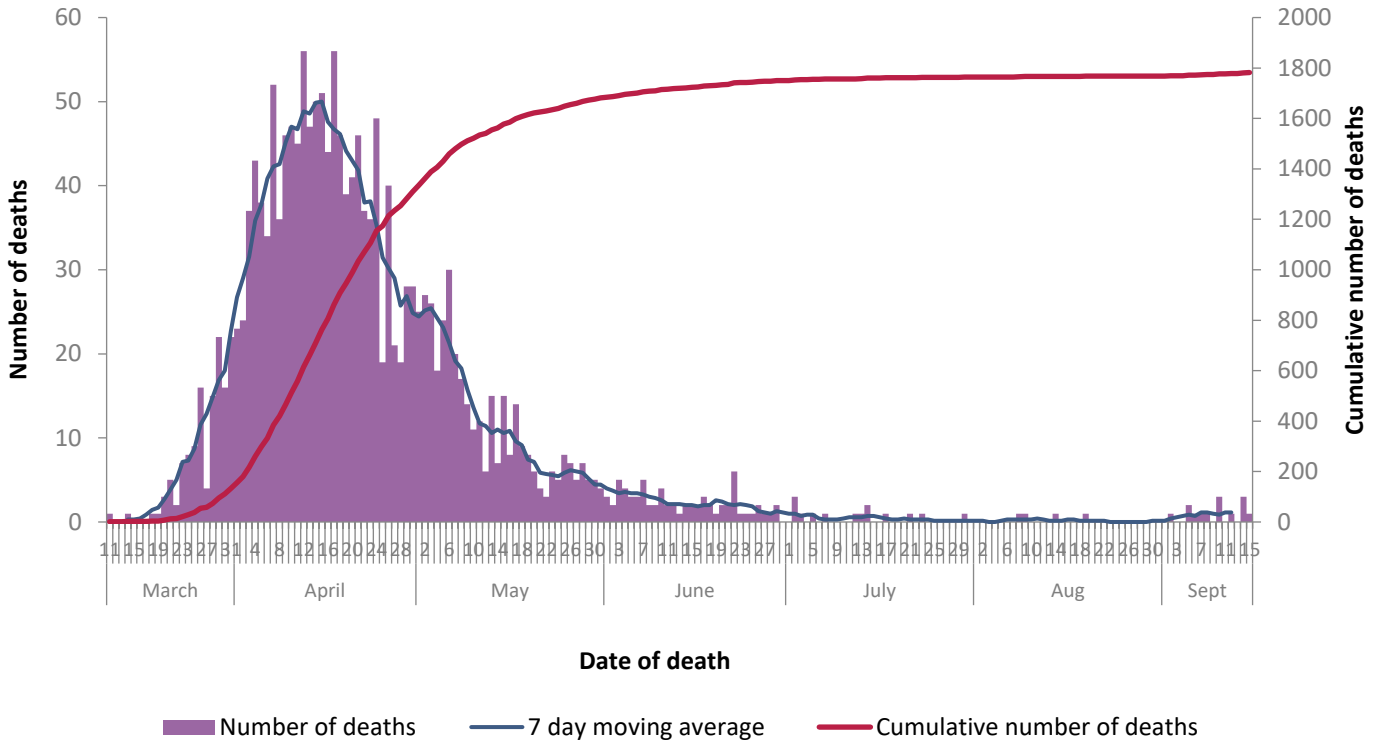


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 14/09/2020

* Date of death is not yet available for six cases

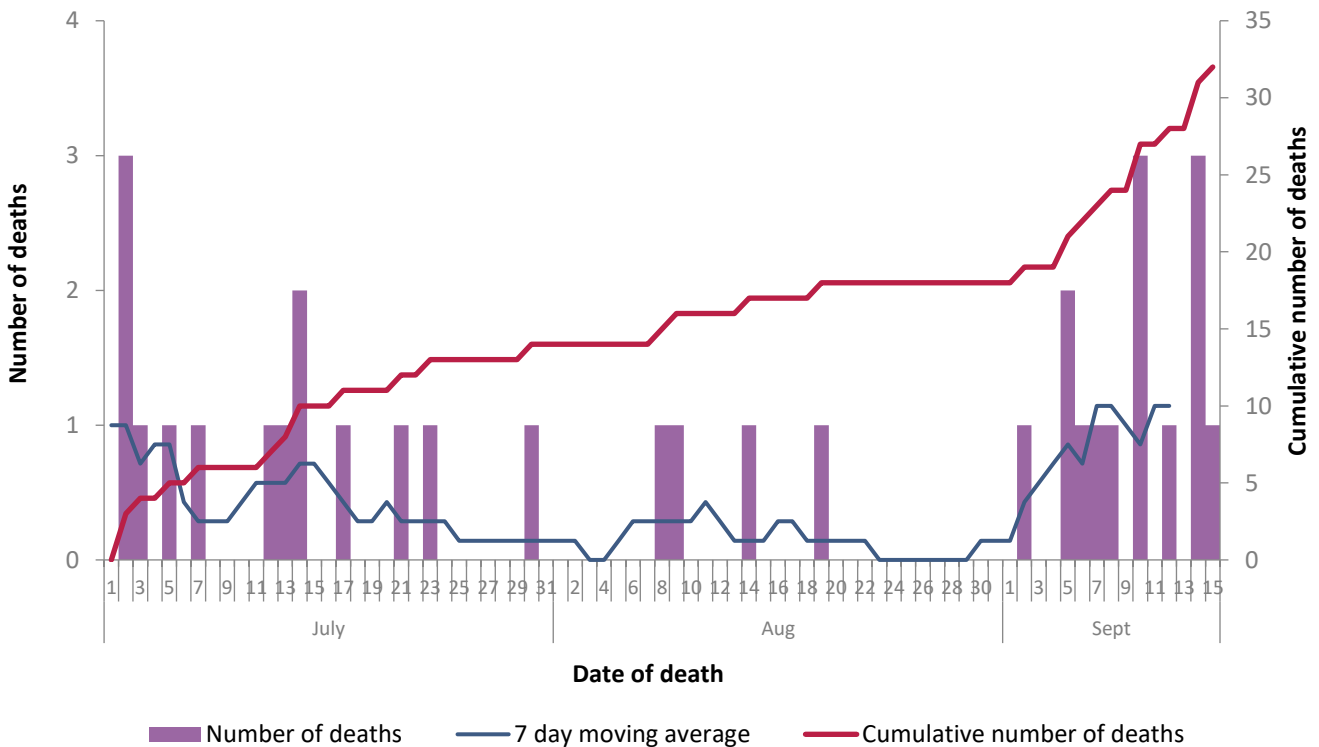


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/07/2020 to midnight 14/09/2020

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 09:17 on 16/09/2020. 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.