



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 24/09/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 22/09/2020

	Number	Percent
Total number of confirmed cases	33,669	
National cumulative incidence of confirmed cases per 100,000 population	707.05	
Total number of cases hospitalised	3,552	10.55
Total number of cases admitted to ICU	467	1.39
Total number of deaths among confirmed cases	1,539	4.57
Case fatality ratio (CFR, %)	4.57	
National cumulative incidence of confirmed deaths per 100,000 population	32.32	
Total number of outbreaks/clusters	3,699	
Total number of cases associated with clusters	18,770	55.75
Total number of imported cases	585	1.74
Number of cases in healthcare workers	9,069	26.94
Males	15,016	44.6
Females	18,624	55.31
M:F ratio	0.81	
Median age (years)	44	
Mean age (years)	47	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:14 on 24/09/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

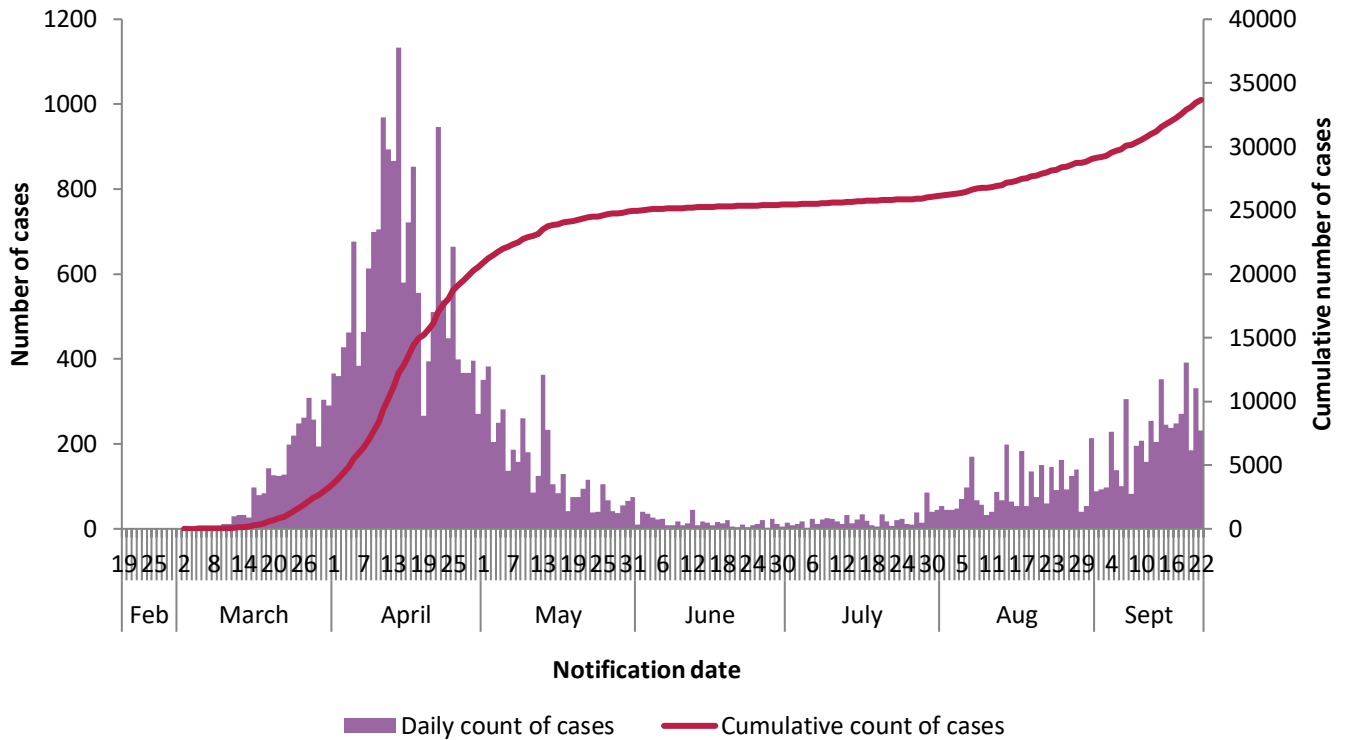


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 22/09/2020

*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

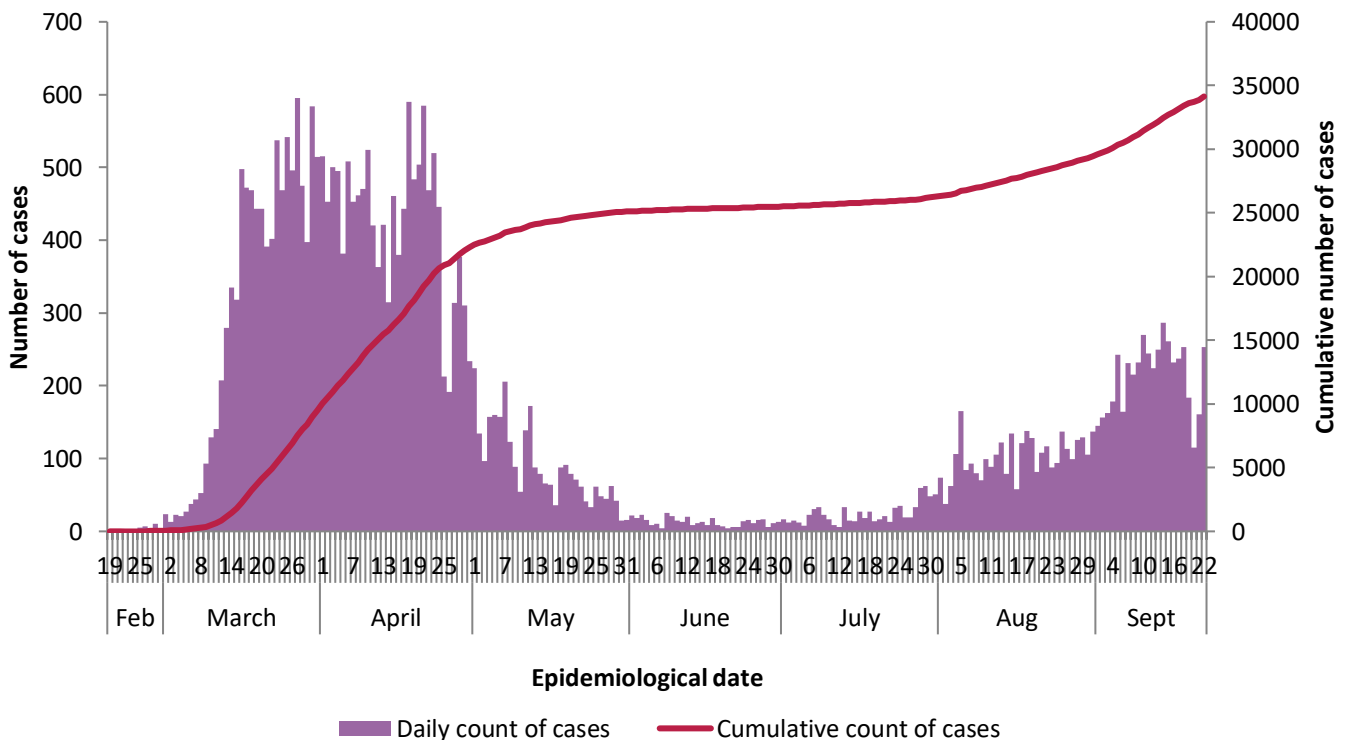


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 22/09/2020**

**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.

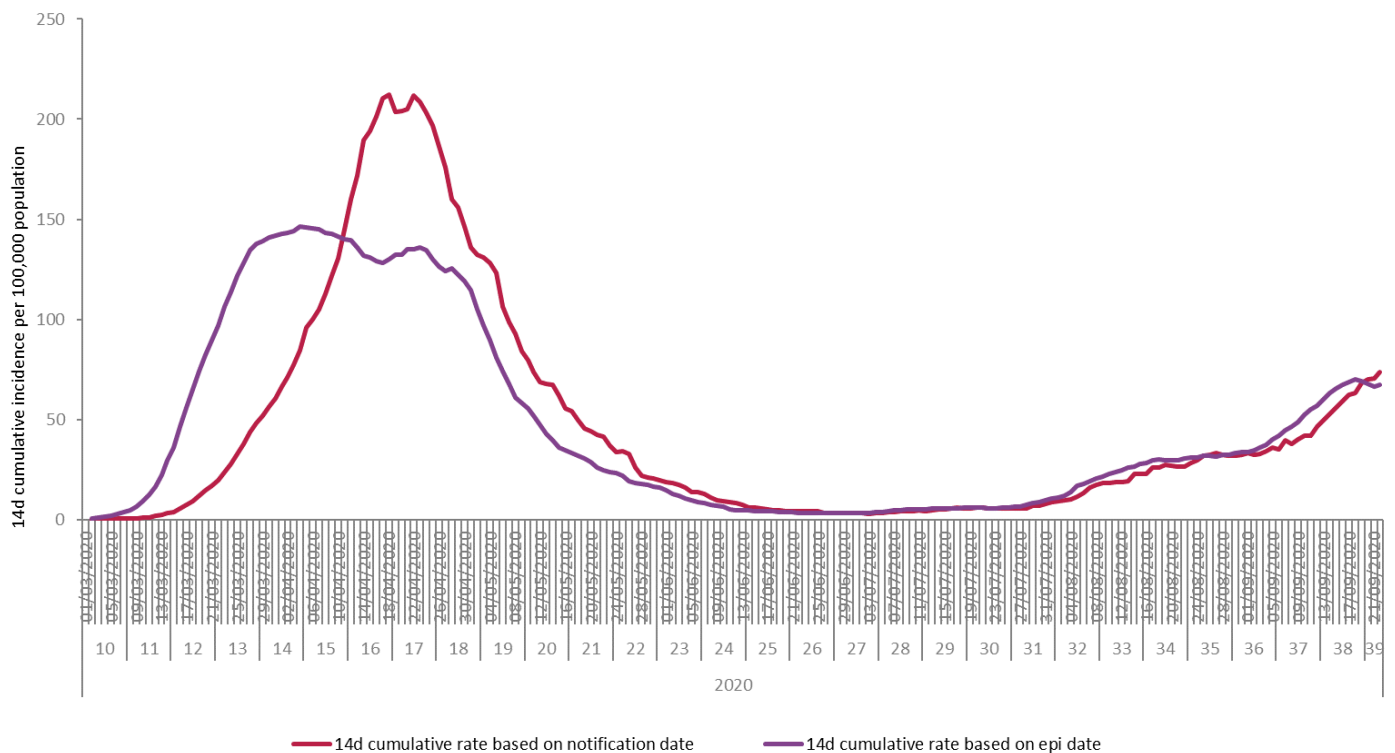


Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 22/09/2020**

* 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 22/09/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		33,669	100
Sex	Male:Female ratio	0.81	
	Male	15,016	44.6
	Female	18,624	55.31
	Unknown	29	0.09
Age	Median age (years)	44	
	Mean age (years)	47	
	Age range (years)	0 - 106	
	0-4 yrs	471	1.4
	5-14 yrs	1,000	2.97
	15-24 yrs	3,701	10.99
	25-34 yrs	5,896	17.51
	35-44 yrs	5,774	17.15
	45-54 yrs	5,679	16.87
	55-64 yrs	3,963	11.77
	65-74 yrs	2,216	6.58
	75-84 yrs	2,479	7.36
	85+ yrs	2,465	7.32
	Unknown	25	0.07

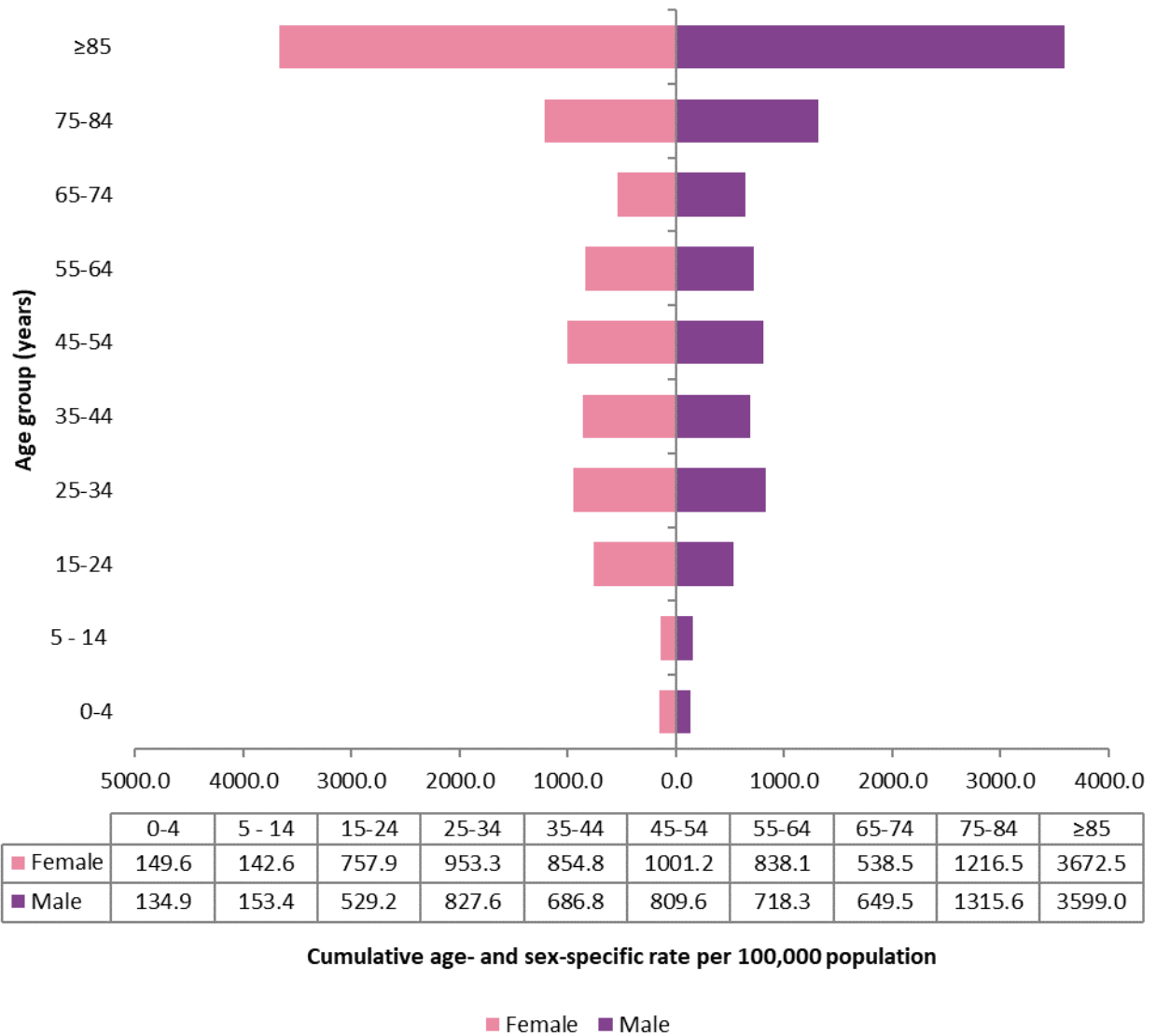


Figure 3: Cumulative age- and sex-specific incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 22/09/2020 (excluding 24 cases for whom age is unknown and 28 cases for whom sex is unknown and 1 case for whom both are unknown)

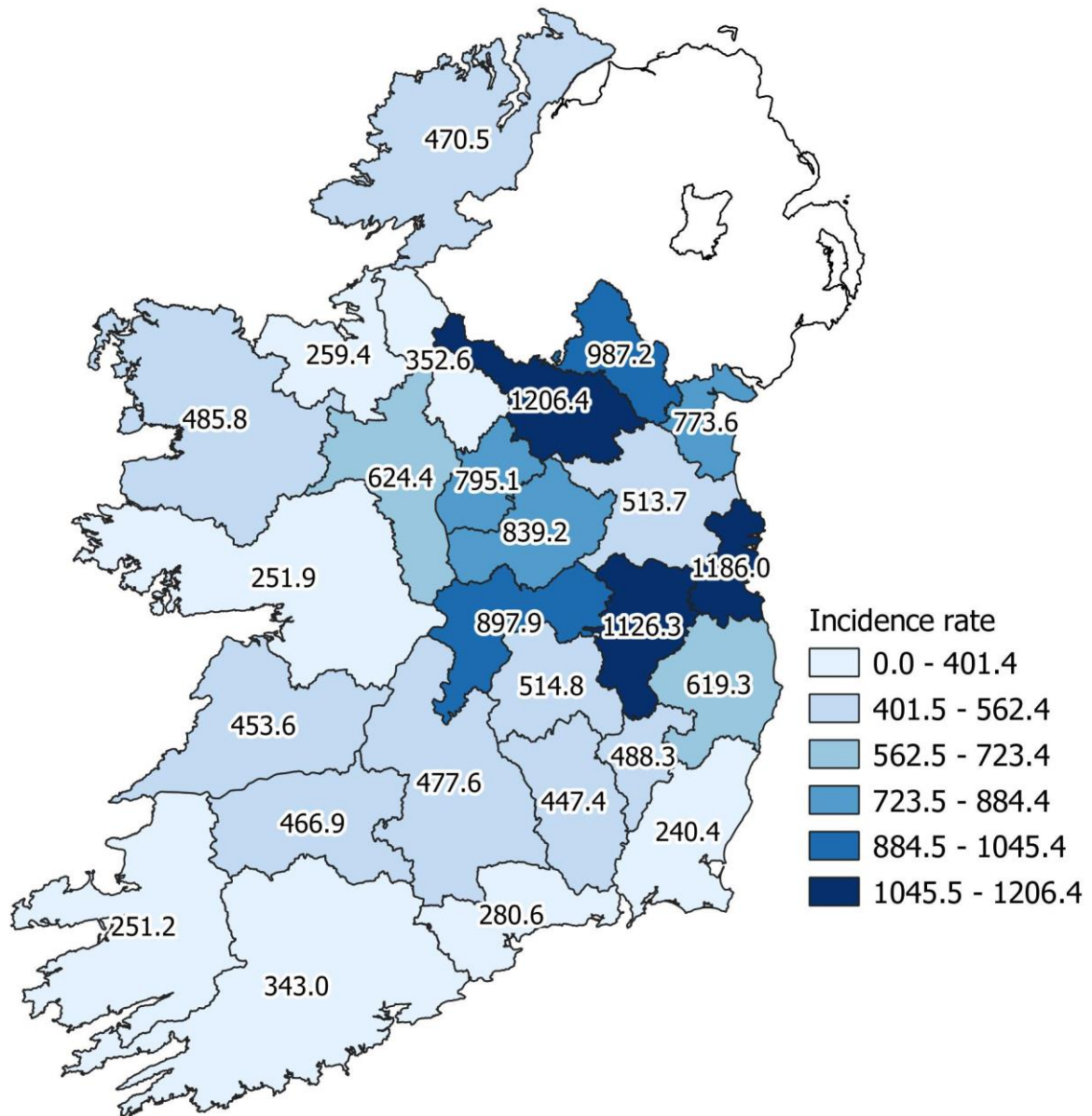


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 22/09/2020

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 22/09/2020

County Name	Number of cases	Percent
Carlow	278	0.83
Cavan	919	2.73
Clare	539	1.6
Cork	1,862	5.53
Donegal	749	2.22
Dublin	15,980	47.46
Galway	650	1.93
Kerry	371	1.1
Kildare	2,506	7.44
Kilkenny	444	1.32
Laois	436	1.29
Leitrim	113	0.34
Limerick	910	2.7
Longford	325	0.97
Louth	997	2.96
Mayo	634	1.88
Meath	1,002	2.98
Monaghan	606	1.8
Offaly	700	2.08
Roscommon	403	1.2
Sligo	170	0.5
Tipperary	762	2.26
Waterford	326	0.97
Westmeath	745	2.21
Wexford	360	1.07
Wicklow	882	2.62
Total	33,669	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 22/09/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	9,708	28.83%
Local transmission, incl. possible local transmission	22,798	67.71%
Travel abroad, incl. possible travel abroad	805	2.39%
Unknown	358	1.06%
Total	33,669	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 22/09/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	471	28	0.79	1	0.21
5-14 yrs	1000	18	0.51	2	0.43
15-24 yrs	3701	91	2.56	5	1.07
25-34 yrs	5896	214	6.02	17	3.64
35-44 yrs	5774	288	8.11	40	8.57
45-54 yrs	5679	480	13.51	97	20.77
55-64 yrs	3963	528	14.86	136	29.12
65-74 yrs	2216	631	17.76	115	24.63
75-84 yrs	2479	779	21.93	48	10.28
85+ yrs	2465	494	13.91	6	1.28
Unknown	25	1	0.03	0	0
Total	33,669	3,552	100	467	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 22/09/2020

	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)	471	1,000	3,701	5,896	5,774	5,679	3,963	2,216	2,479	2,465	25
Cases hospitalised (n)	28	18	91	214	288	480	528	631	779	494	1
Cases hospitalised (%)	5.94	1.8	2.46	3.63	4.99	8.45	13.32	28.47	31.42	20.04	4
Cases admitted to ICU (n)	1	2	5	17	40	97	136	115	48	6	0
Cases admitted to ICU (%)	0.21	0.2	0.14	0.29	0.69	1.71	3.43	5.19	1.94	0.24	0
Deaths (n)	0	0	1	6	12	26	71	230	528	665	0
Case fatality ratio (%)	0	0	0.03	0.1	0.21	0.46	1.79	10.38	21.3	26.98	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 22/09/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	1,801		48	137	191	79	144	154	56	2,610
Other*	58	2	30	90	15	22	51	20	25	313
Nursing home	141		11	19	44	5	15	17	37	289
Residential institution	123		11	11	23	4	22	10	4	208
Workplace	42		11	17	20	11	10	10	10	131
Hospital	68		4	4	14	2	11	5	6	114
Comm. Hosp/Long-stay unit	6		4	2		4	6	5	5	32
Unknown	2									2
Total	2,241	2	119	280	307	127	259	221	143	3,699

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

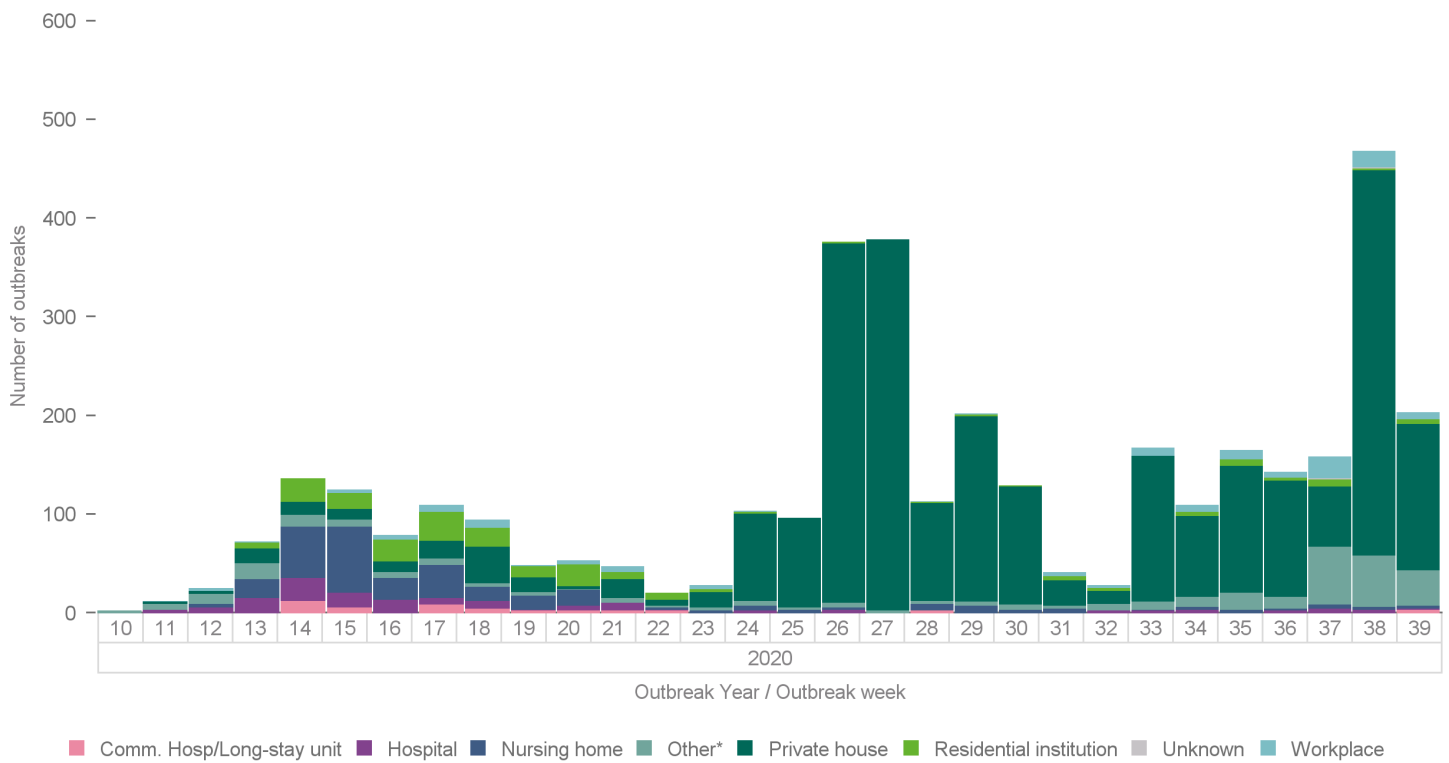


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 22/09/2020

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

Note: 2,863 COVID-19 outbreaks were reported on CIDR between week 24 and week 39 2020 to date (9th June to 22nd September). Of these, 2,497 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 39 as a result of data validation: 1 occurred in February, 636 in March, 473 in April, 94 in May, 126 in June, 127 in July, 522 in August and 518 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 22/09/2020

	Number	Percent
Total number of deaths	1,796	
Confirmed	1,539	85.69
Probable	99	5.51
Possible	158	8.8
Total number of cases hospitalised	766	42.65
Cases admitted to ICU	97	5.4
Cases not admitted to ICU	669	37.25
Total number of imported cases	6	0.33
Number of cases in healthcare workers	8	0.45
Number with underlying clinical conditions	1,700	94.65
Total number of male cases	889	49.5
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 22/09/2020

Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.06
25-34 yrs	<5	<5	6	0.33
35-44 yrs	6	7	13	0.72
45-54 yrs	10	18	28	1.56
55-64 yrs	26	50	76	4.23
65-74 yrs	96	159	255	14.2
75-84 yrs	279	333	612	34.08
85+ yrs	485	318	803	44.71
Unknown	<5	<5	2	0.11
Total	907	889	1,796	100
Percent	50.5	49.5		

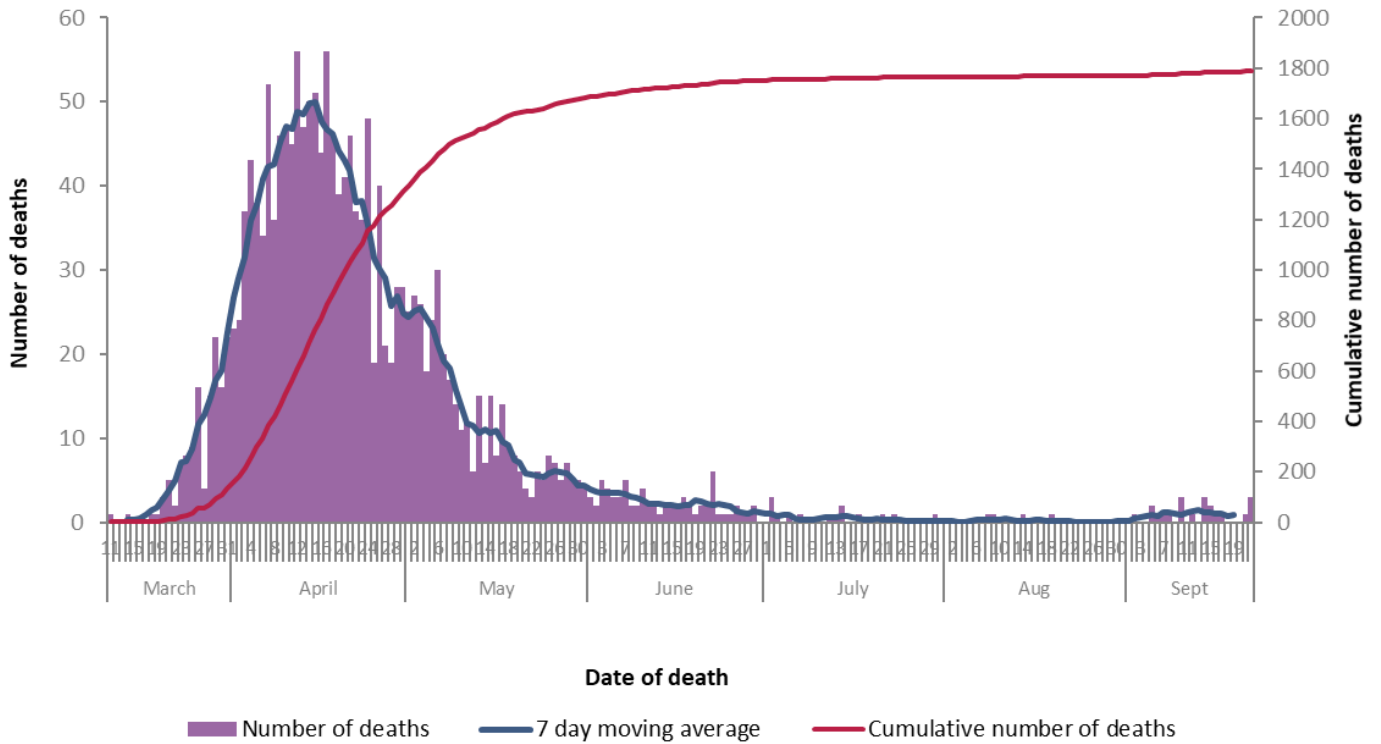


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 22/09/2020

* Date of death is not yet available for six cases

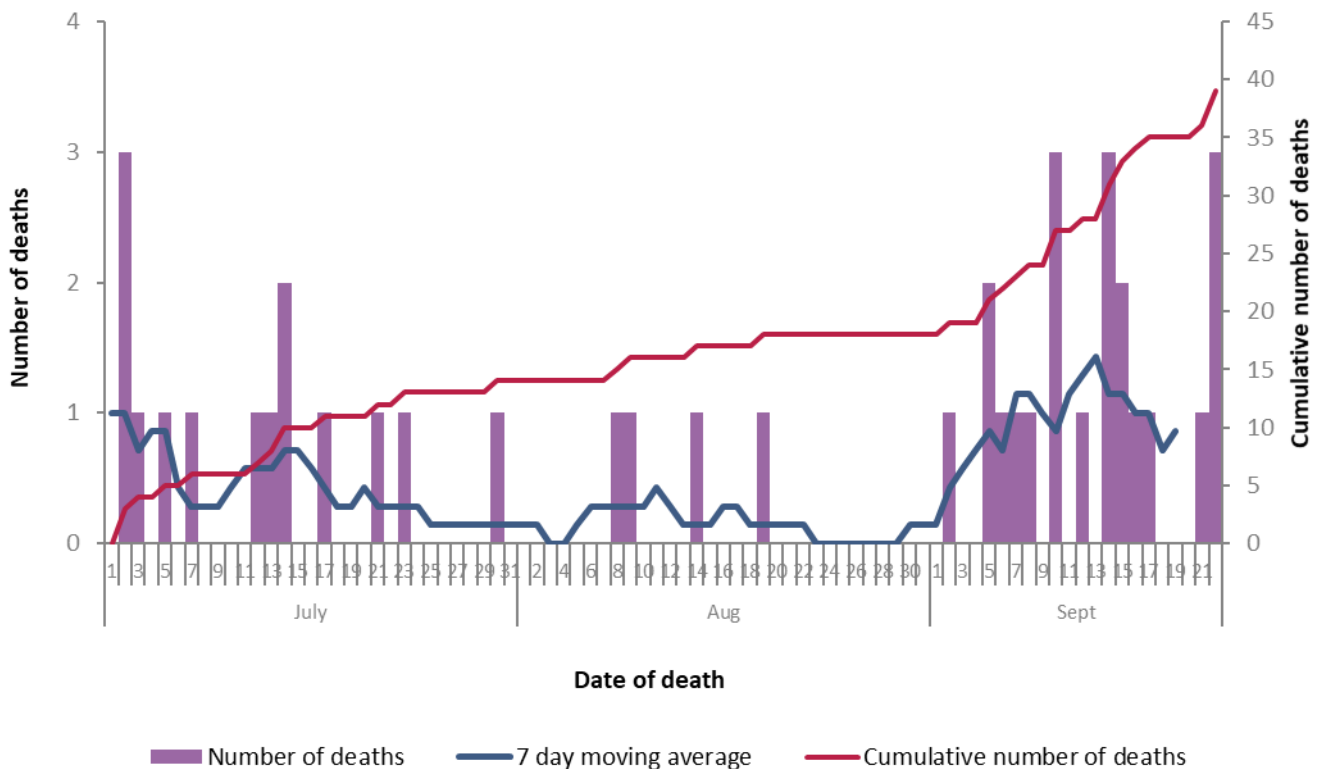


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/07/2020 to midnight 22/09/2020

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 09:14 on 24/09/2020. 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.
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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.