





Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 27/07/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 25/07/2020

	Number	Percent
Total number of confirmed cases	25,881	
National cumulative incidence of confirmed cases per 100,000 population	543.51	
Total number of cases hospitalised	3,346	12.93
Total number of cases admitted to ICU	438	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	13,860	53.55
Total number of imported cases	441	1.7
Number of cases in healthcare workers	8,390	32.42
Males	11,084	42.83
Females	14,769	57.07
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 27/07/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

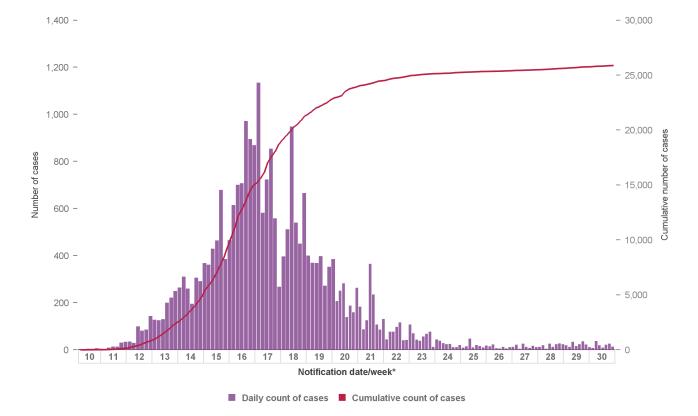


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 25/07/2020

*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

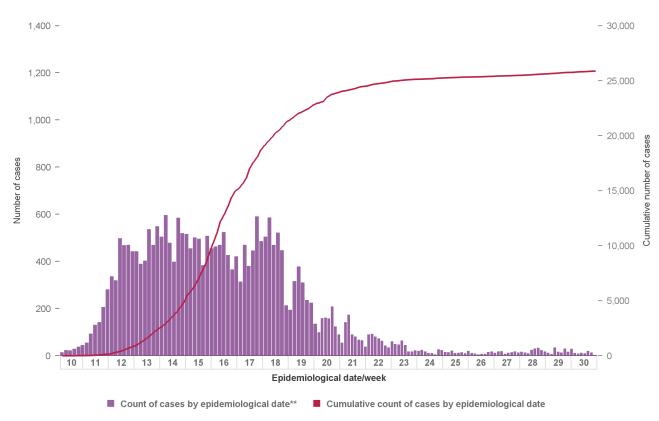


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date** to midnight 25/07/2020

**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.

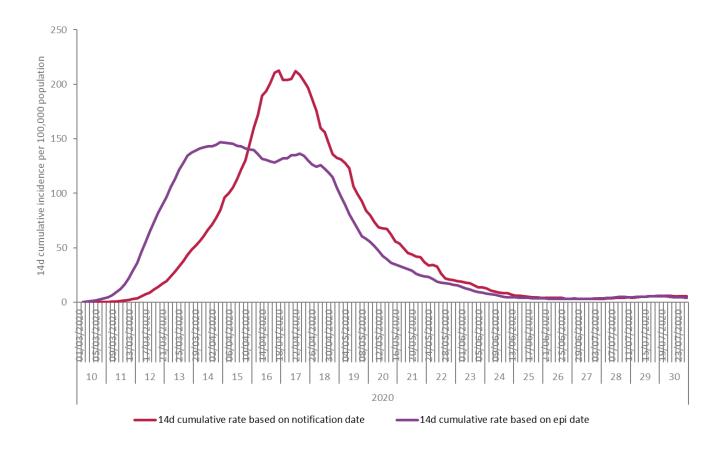


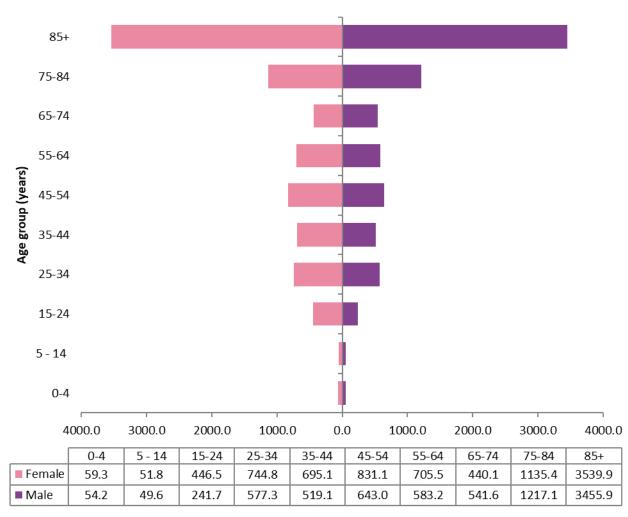
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date** to midnight 25/07/2020

* 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 25/07/2020

Characteristic		Number of cases	Percent	
Total number of confirme	d cases	25,881	100	
Sex	Male:Female ratio	0.75		
	Male	11,084	42.83	
	Female	14,769	57.07	
	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	342	1.32	
	15-24 yrs	1,976	7.63	
	25-34 yrs	4,385	16.94	
	35-44 yrs	4,553	17.59	
	45-54 yrs	4,626	17.87	
	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	



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 25/07/2020 (excluding 20 cases for whom age is unknown and 27 cases for whom sex is unknown and 1 case for whom both are unknown)

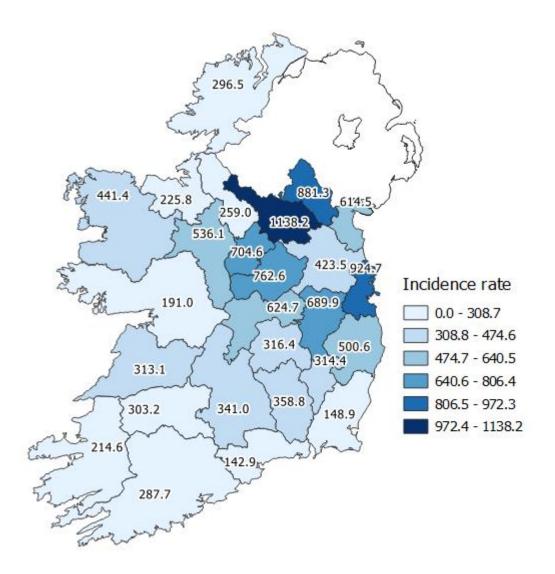


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 25/07/2020

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 25/07/2020

Carlow 179 0.69 Cavan 867 3.35 Clare 372 1.44 Cork 1,562 6.04 Donegal 472 1.82 Dublin 12,459 48.14 Galway 493 1.9 Kerry 317 1.22 Kildare 1,535 5.93 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 2.23 Meath 826 3.19 Monaghan 541 2.09 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64	County Name	Number of cases	Percent
Cavan 867 3.35 Clare 372 1.44 Cork 1,562 6.04 Donegal 472 1.82 Dublin 12,459 48.14 Galway 493 1.9 Kerry 317 1.22 Kildare 1,535 5.93 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 2.23 Meath 826 3.19 Monaghan 541 2.09 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64 Westmeath 677 2.62			
Clare 372 1.44 Cork 1,562 6.04 Donegal 472 1.82 Dublin 12,459 48.14 Galway 493 1.9 Kerry 317 1.22 Kildare 1,535 5.93 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 2.23 Meath 826 3.19 Monaghan 541 2.09 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64 Westmeath 677 2.62		179	0.69
Cork 1,562 6.04 Donegal 472 1.82 Dublin 12,459 48.14 Galway 493 1.9 Kerry 317 1.22 Kildare 1,535 5.93 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 2.23 Meath 826 3.19 Monaghan 541 2.09 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64	Cavan	867	3.35
Donegal 472 1.82 Dublin 12,459 48.14 Galway 493 1.9 Kerry 317 1.22 Kildare 1,535 5.93 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 2.23 Meath 826 3.19 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64 Westmeath 677 2.62	Clare	372	1.44
Dublin 12,459 48.14 Galway 493 1.9 Kerry 317 1.22 Kildare 1,535 5.93 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 2.23 Meath 826 3.19 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64	Cork	1,562	6.04
Galway 493 1.9 Kerry 317 1.22 Kildare 1,535 5.93 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 2.23 Meath 826 3.19 Monaghan 541 2.09 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64	Donegal	472	1.82
Kerry 317 1.22 Kildare 1,535 5.93 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 2.23 Meath 826 3.19 Monaghan 541 2.09 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64	Dublin	12,459	48.14
Kildare 1,535 5.93 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 2.23 Meath 826 3.19 Monaghan 541 2.09 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64 Westmeath 677 2.62	Galway	493	1.9
Kilkenny3561.38Laois2681.04Leitrim830.32Limerick5912.28Longford2881.11Louth7923.06Mayo5762.23Meath8263.19Monaghan5412.09Offaly4871.88Roscommon3461.34Sligo1480.57Tipperary5442.1Waterford1660.64Westmeath6772.62	Kerry	317	1.22
Laois 268 1.04 Leitrim 83 0.32 Limerick 591 2.28 Longford 288 1.11 Louth 792 3.06 Mayo 576 2.23 Meath 826 3.19 Monaghan 541 2.09 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64 Westmeath 677 2.62	Kildare	1,535	5.93
Leitrim 83 0.32 Limerick 591 2.28 Longford 288 1.11 Louth 792 3.06 Mayo 576 2.23 Meath 826 3.19 Monaghan 541 2.09 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64 Westmeath 677 2.62	Kilkenny	356	1.38
Limerick 591 2.28 Longford 288 1.11 Louth 792 3.06 Mayo 576 2.23 Meath 826 3.19 Monaghan 541 2.09 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64 Westmeath 677 2.62	Laois	268	1.04
Longford 288 1.11 Louth 792 3.06 Mayo 576 2.23 Meath 826 3.19 Monaghan 541 2.09 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64 Westmeath 677 2.62	Leitrim	83	0.32
Louth 792 3.06 Mayo 576 2.23 Meath 826 3.19 Monaghan 541 2.09 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64 Westmeath 677 2.62	Limerick	591	2.28
Mayo 576 2.23 Meath 826 3.19 Monaghan 541 2.09 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64 Westmeath 677 2.62	Longford	288	1.11
Meath 826 3.19 Monaghan 541 2.09 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64 Westmeath 677 2.62	Louth	792	3.06
Monaghan 541 2.09 Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64 Westmeath 677 2.62	Мауо	576	2.23
Offaly 487 1.88 Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64 Westmeath 677 2.62	Meath	826	3.19
Roscommon 346 1.34 Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64 Westmeath 677 2.62	Monaghan	541	2.09
Sligo 148 0.57 Tipperary 544 2.1 Waterford 166 0.64 Westmeath 677 2.62	Offaly	487	1.88
Tipperary5442.1Waterford1660.64Westmeath6772.62	Roscommon	346	1.34
Waterford1660.64Westmeath6772.62	Sligo	148	0.57
Westmeath 677 2.62	Tipperary	544	2.1
	Waterford	166	0.64
Wayford 222 0.96	Westmeath	677	2.62
VVEXIDIU 223 0.80	Wexford	223	0.86
Wicklow 713 2.75	Wicklow	713	2.75
Total 25,881 100	Total	25,881	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 25/07/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	8,183	31.62%
Local transmission, incl. possible local transmission	17,040	65.84%
Travel abroad, incl. possible travel abroad	633	2.45%
Unknown	25	0.10%
Total	25,881	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 25/07/2020

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	342	18	0.54	2	0.46
15-24 yrs	1976	76	2.27	5	1.14
25-34 yrs	4385	198	5.92	15	3.42
35-44 yrs	4553	274	8.19	36	8.22
45-54 yrs	4626	449	13.42	91	20.78
55-64 yrs	3282	498	14.88	127	29
65-74 yrs	1831	587	17.54	110	25.11
75-84 yrs	2304	745	22.27	46	10.5
85+ yrs	2373	477	14.26	6	1.37
Unknown	21	1	0.03	0	0
Total	25,881	3,346	100	438	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 25/07/2020

	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	Unknow n
Number of cases (n)	188	342	1,976	4,385	4,553	4,626	3,282	1,831	2,304	2,373	21
Cases hospitalised (n)	23	18	76	198	274	449	498	587	745	477	1
Cases hospitalised (%)	12.23	5.26	3.85	4.52	6.02	9.71	15.17	32.06	32.34	20.1	4.76
Cases admitted to ICU (n)	0	2	5	15	36	91	127	110	46	6	0
Cases admitted to ICU (%)	0	0.58	0.25	0.34	0.79	1.97	3.87	6.01	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 25/07/2020

Outbreak Location	E	HPSC	М	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.

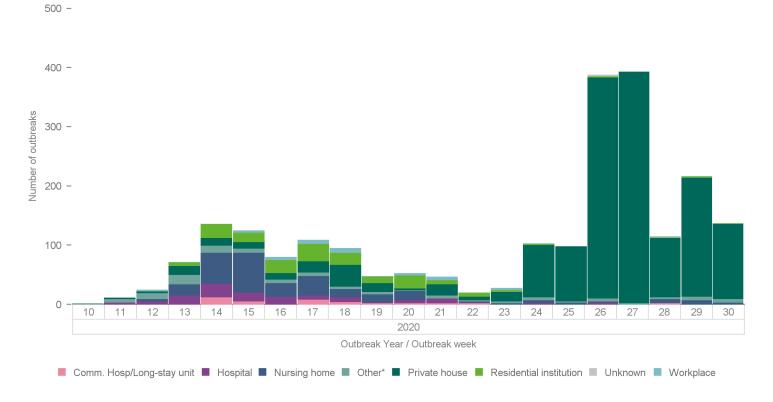


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 25/07/2020

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

Note: 1443 COVID-19 outbreaks were reported on CIDR between week 24 and week 30 2020 (June 7th to July 25th). Of these, 1,390 were family outbreaks. Most of these family outbreaks occurred earlier and were reported between weeks 24 and 30 as a result of data validation: 1 occurred in February, 607 in March, 444 in April, 97 in May, 13 in June and 5 in July.

Deaths among COVID-19 cases

Table 7: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 25/07/2020

	Number	Percent
Total number of deaths	1,764	
Confirmed	1,506	85.37
Probable	100	5.67
Possible	158	8.96
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 25/07/2020

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		

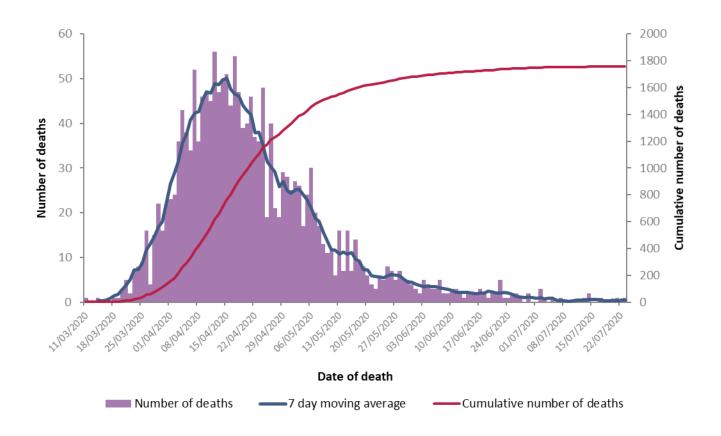


Figure 6: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 25/07/2020

* 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 10:19 on 27/07/2020. 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 \geq 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.