



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 17/08/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 15/08/2020

	Number	Percent
Total number of confirmed cases	27,257	
National cumulative incidence of confirmed cases per 100,000 population	572.4	
Total number of cases hospitalised	3,387	12.43
Total number of cases admitted to ICU	442	1.62
Total number of deaths among confirmed cases	1,516	5.56
Case fatality ratio (CFR, %)	5.56	
National cumulative incidence of confirmed deaths per 100,000 population	31.84	
Total number of outbreaks/clusters	2,497	
Total number of cases associated with clusters	14,840	54.44
Total number of imported cases	471	1.73
Number of cases in healthcare workers	8,501	31.19
Males	11,857	43.5
Females	15,370	56.39
M:F ratio	0.77	
Median age (years)	47	
Mean age (years)	50	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:20 on 17/08/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

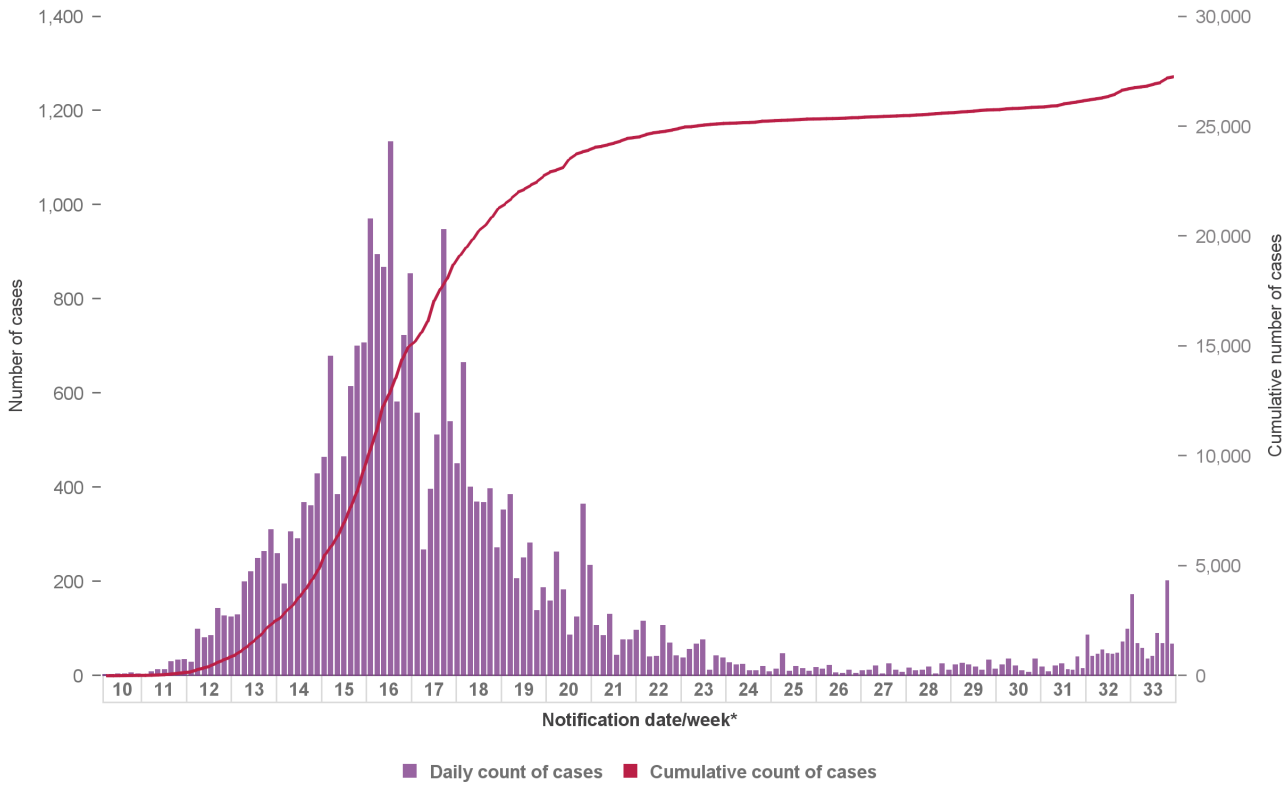


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 15/08/2020

*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

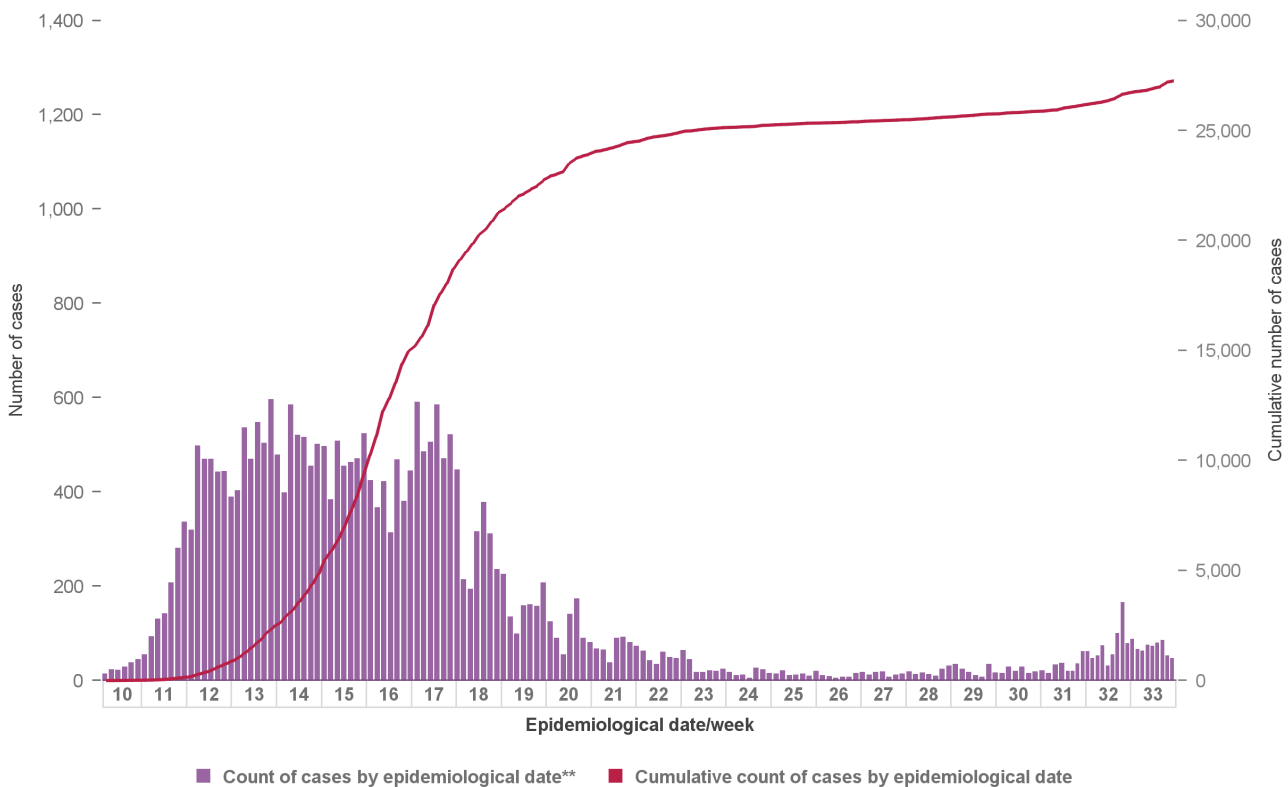


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 15/08/2020**

**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.

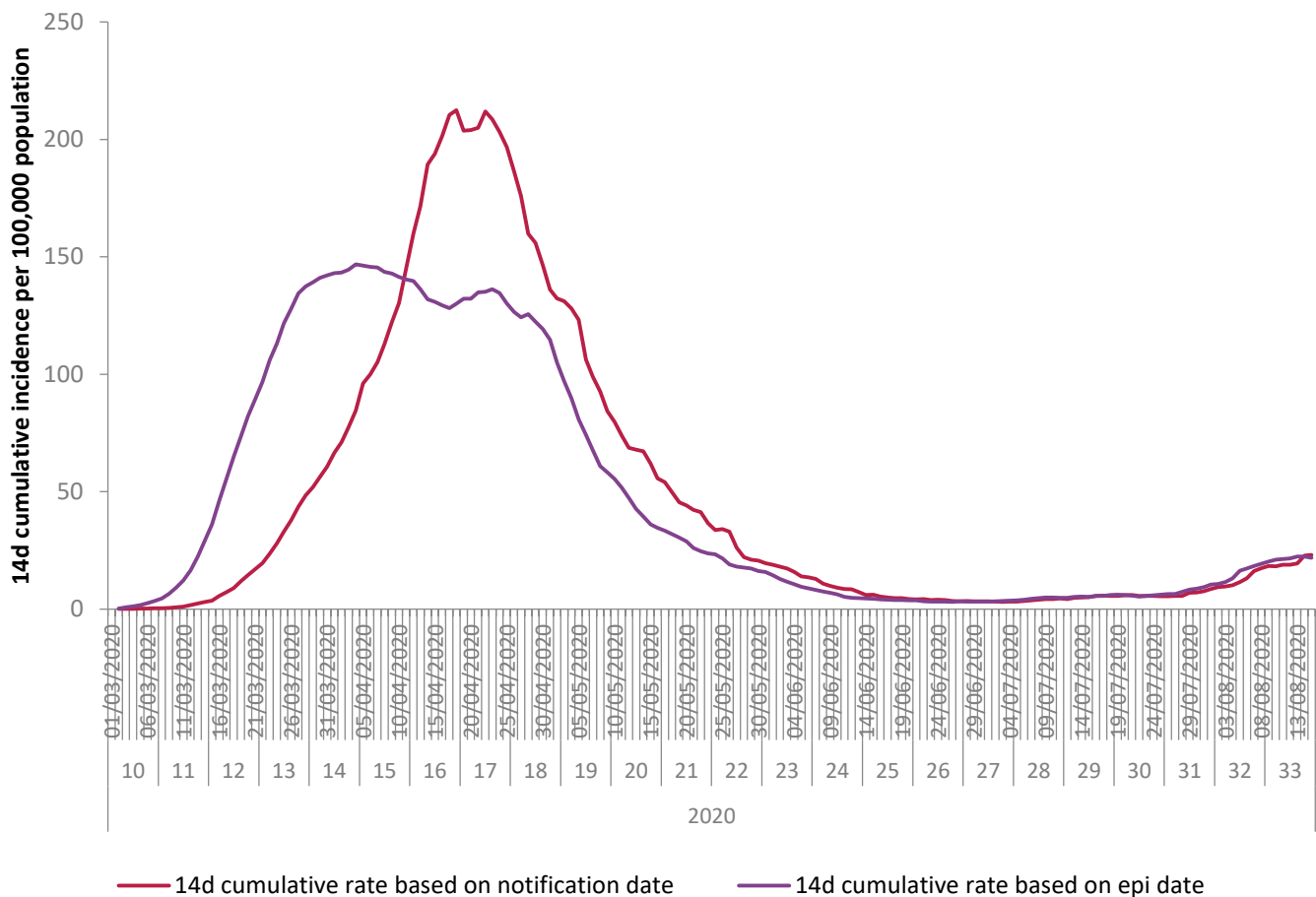


Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 15/08/2020**

* 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 15/08/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		27,257	100
Sex	Male:Female ratio	0.77	
	Male	11,857	43.5
	Female	15,370	56.39
	Unknown	30	0.11
Age	Median age (years)	47	
	Mean age (years)	50	
	Age range (years)	0 - 106	
	0-4 yrs	245	0.9
	5-14 yrs	442	1.62
	15-24 yrs	2,231	8.19
	25-34 yrs	4,719	17.31
	35-44 yrs	4,799	17.61
	45-54 yrs	4,832	17.73
	55-64 yrs	3,380	12.4
	65-74 yrs	1,883	6.91
	75-84 yrs	2,322	8.52
	85+ yrs	2,383	8.74
	Unknown	21	0.08

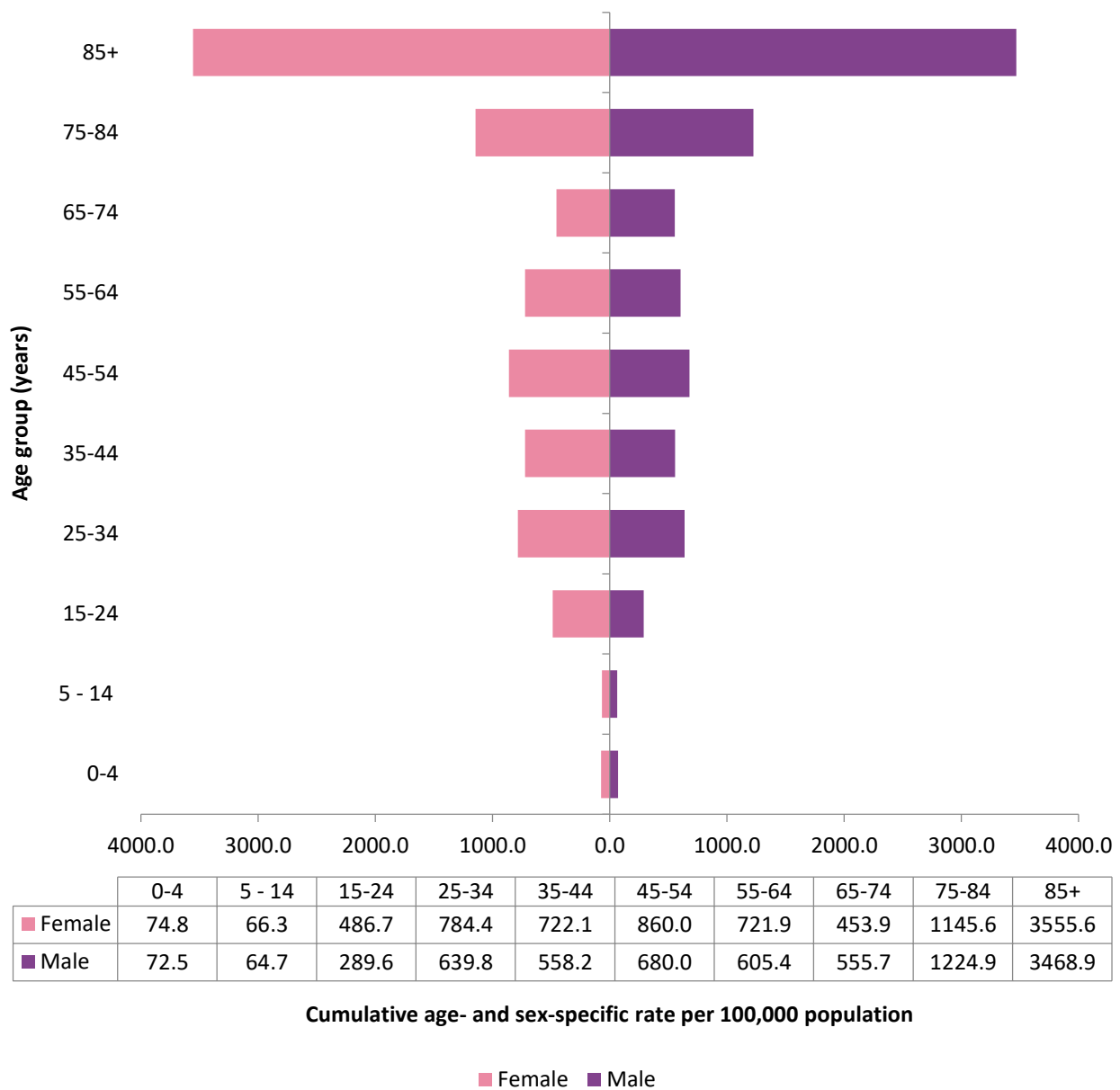


Figure 3: Cumulative age- and sex-specific incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 15/08/2020 (excluding 20 cases for whom age is unknown and 29 cases for whom sex is unknown and 1 case for whom both are unknown)

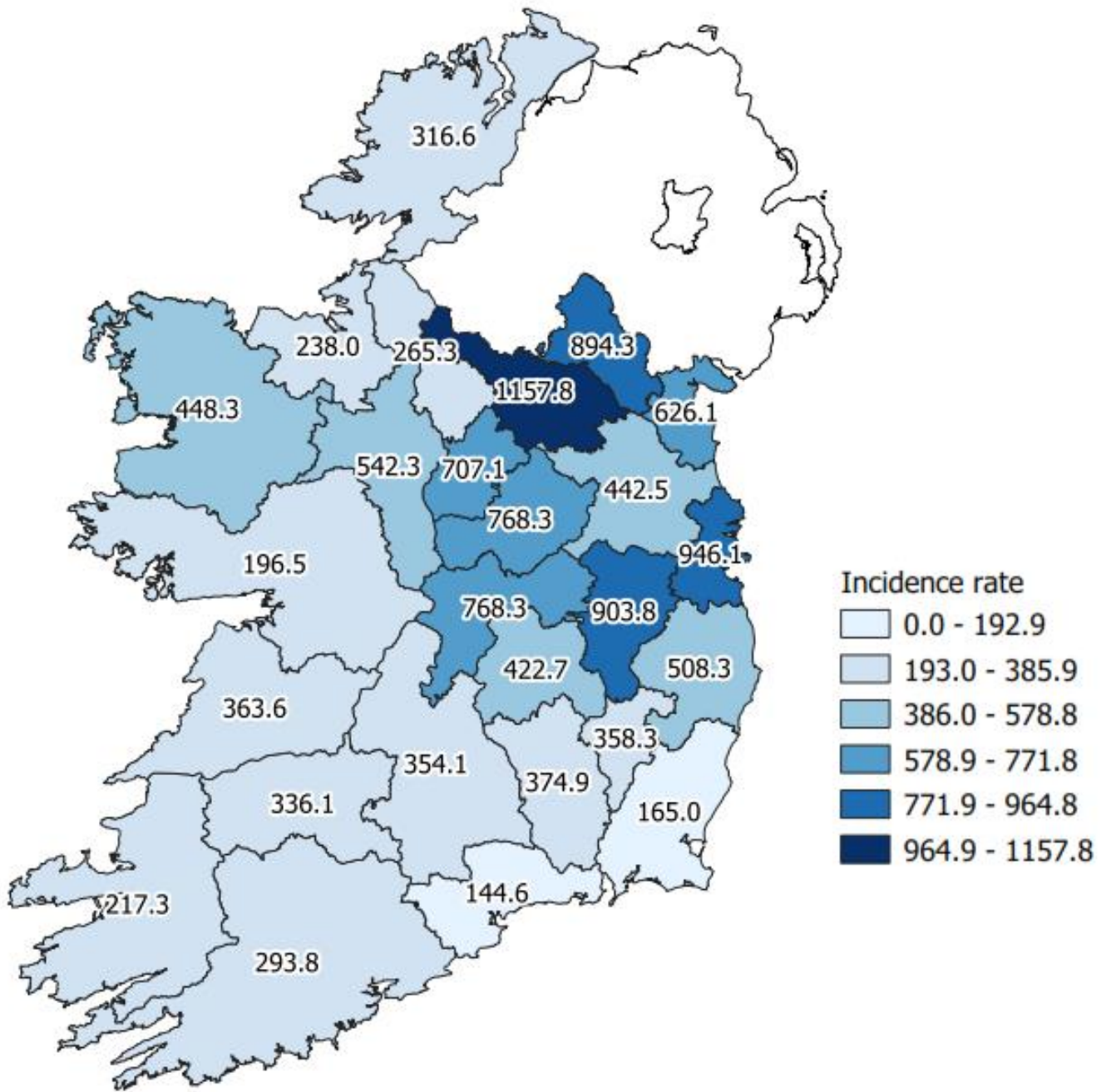


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 15/08/2020

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 15/08/2020

County Name	Number of cases	Percent
Carlow	204	0.75
Cavan	882	3.24
Clare	432	1.58
Cork	1,595	5.85
Donegal	504	1.85
Dublin	12,747	46.77
Galway	507	1.86
Kerry	321	1.18
Kildare	2,011	7.38
Kilkenny	372	1.36
Laois	358	1.31
Leitrim	85	0.31
Limerick	655	2.4
Longford	289	1.06
Louth	807	2.96
Mayo	585	2.15
Meath	863	3.17
Monaghan	549	2.01
Offaly	599	2.2
Roscommon	350	1.28
Sligo	156	0.57
Tipperary	565	2.07
Waterford	168	0.62
Westmeath	682	2.5
Wexford	247	0.91
Wicklow	724	2.66
Total	27,257	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 15/08/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	8,355	30.65%
Local transmission, incl. possible local transmission	18,114	66.46%
Travel abroad, incl. possible travel abroad	664	2.44%
Unknown	124	0.45%
Total	27,257	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 15/08/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	245	24	0.71	0	0
5-14 yrs	442	18	0.53	2	0.45
15-24 yrs	2231	81	2.39	5	1.13
25-34 yrs	4719	203	5.99	15	3.39
35-44 yrs	4799	277	8.18	38	8.6
45-54 yrs	4832	454	13.4	91	20.59
55-64 yrs	3380	503	14.85	128	28.96
65-74 yrs	1883	594	17.54	109	24.66
75-84 yrs	2322	753	22.23	48	10.86
85+ yrs	2383	479	14.14	6	1.36
Unknown	21	1	0.03	0	0
Total	27,257	3,387	100	442	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 15/08/2020

	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)	245	442	2,231	4,719	4,799	4,832	3,380	1,883	2,322	2,383	21
Cases hospitalised (n)	24	18	81	203	277	454	503	594	753	479	1
Cases hospitalised (%)	9.8	4.07	3.63	4.3	5.77	9.4	14.88	31.55	32.43	20.1	4.76
Cases admitted to ICU (n)	0	2	5	15	38	91	128	109	48	6	0
Cases admitted to ICU (%)	0	0.45	0.22	0.32	0.79	1.88	3.79	5.79	2.07	0.25	0
Deaths (n)	0	0	1	5	12	24	68	228	519	659	0
Case fatality ratio (%)	0	0	0.04	0.11	0.25	0.5	2.01	12.11	22.35	27.65	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 15/08/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Private house	1,202		15	96	124	54	117	82	29	1,719
Nursing home	131		10	17	42	5	14	17	36	272
Residential institution	106		10	8	18	4	21	10	4	181
Other*	13	2	8	36	7	8	30	11	10	125
Hospital	62		3	3	14	2	10	5	6	105
Workplace	15		9	6	14	1	8	3	4	60
Comm. Hosp/Long-stay unit	4		4	2		4	6	5	5	30
Unknown	4						1			5
Total	1,537	2	59	168	219	78	207	133	94	2,497

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

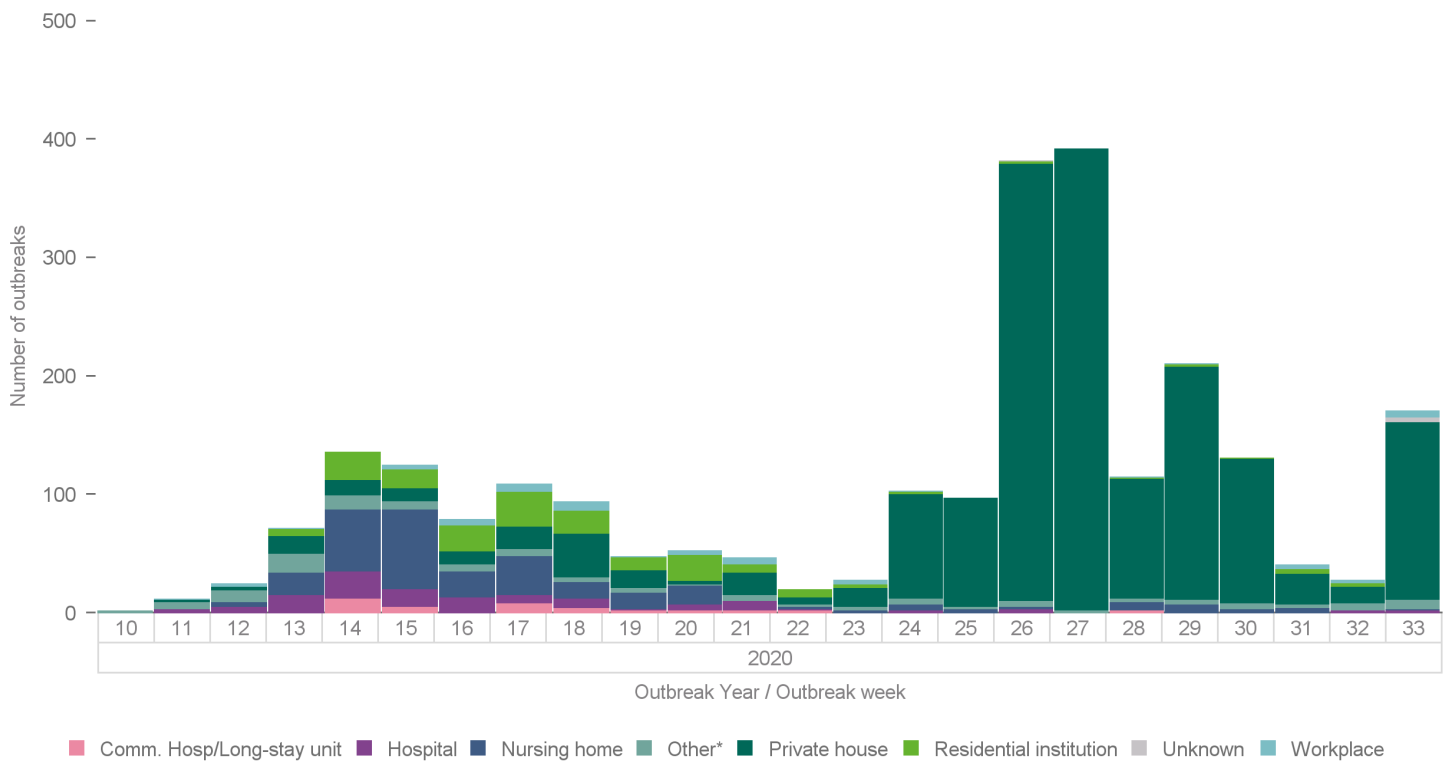


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 15/08/2020

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

Note: 1,661 COVID-19 outbreaks were reported on CIDR between week 24 and week 33 2020 (June 9th to 15th August). Of these, 1,572 were family outbreaks. Most of these family outbreaks occurred earlier and were reported between weeks 24 and 33 as a result of data validation: 1 occurred in February, 731 in March, 553 in April, 102 in May, 20 in June, 87 in July and 78 in August to date.

Table 7: Number of OPEN clusters/outbreaks of COVID-19 by location and HSE area notified to midnight 15/08/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Comm. Hosp/Long-stay unit	1		1							2
Hospital	13							1		14
Nursing home	24			8	3		2			37
Other*	6	1		6	1	1	5	3	1	24
Private house	131		9	11	6	1	4	8	2	172
Residential institution	13		2	4	1					20
Unknown	4									4
Workplace	10		4	1	1			1		17
Total	202	1	16	30	12	2	11	13	3	290

Table 8: Number of CLOSED clusters/outbreaks of COVID-19 by location and HSE area notified to midnight 15/08/2020

Outbreak Location	E	HPSC	M	MW	NE	NW	S	SE	W	Total
Comm. Hosp/Long-stay unit	3		3	2		4	6	5	5	28
Hospital	49		3	3	14	2	10	4	6	91
Nursing home	107		10	9	39	5	12	17	36	235
Other*	7	1	8	30	6	7	25	8	9	101
Private house	1,071		6	85	118	53	113	74	27	1,547
Residential institution	93		8	4	17	4	21	10	4	161
Unknown							1			1
Workplace	5		5	5	13	1	8	2	4	43
Total	1,335	1	43	138	207	76	196	120	91	2,207

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

Table 9: Number and percentage of COVID-19 outbreaks/clusters in acute hospital settings and residential facilities* by HSE area notified in Ireland to midnight 15/08/2020

HSE area	Residential Facilities (RF)					Hospital			RFs and acute hospital settings	
	Comm. Hosp/Long-stay unit	Nursing home	Residential institution	Total (n)	Total (%)	Hospital	Total (n)	Total (%)	Total (n)	Total (%)
E	4	131	106	241	49.9	62	62	59.05	303	51.53
M	4	10	10	24	4.97	3	3	2.86	27	4.59
MW	2	17	8	27	5.59	3	3	2.86	30	5.1
NE		42	18	60	12.42	14	14	13.33	74	12.59
NW	4	5	4	13	2.69	2	2	1.9	15	2.55
S	6	14	21	41	8.49	10	10	9.52	51	8.67
SE	5	17	10	32	6.63	5	5	4.76	37	6.29
W	5	36	4	45	9.32	6	6	5.71	51	8.67
Total	30	272	181	483	100	105	105	100	588	100

*Residential facilities (RF) include nursing homes, community hospitals, long-stay units and residential institutions including mental health facilities, prisons and direct provision centres.

Table 10: Number of OPEN COVID-19 outbreaks in residential facilities* and the number of cases, hospitalised and deaths linked to those outbreaks by HSE area notified in Ireland to midnight on 15/08/2020

HSE area	Number of RF outbreaks	Total number ill	Cases linked RF outbreaks:		
			Number of cases	Number hospitalised	Total number who died
E	38	806	984	40	195
M	3	0	34	0	0
MW	12	117	163	29	20
NE	4	32	82	4	7
S	2	2	4	0	0
Total	59	957	1,267	73	222

Table 11: Number of CLOSED COVID-19 outbreaks in residential facilities* and the number of cases, hospitalised and deaths linked to those outbreaks by HSE area notified in Ireland to midnight on 15/08/2020

HSE area	Number of RF outbreaks	Total number ill	Cases linked RF outbreaks:		
			Number of cases	Number hospitalised	Total number who died
E	203	3,585	3,720	245	509
M	21	187	362	23	35
MW	15	297	234	35	34
NE	56	688	1,073	101	173
NW	13	74	242	32	36
S	39	534	361	23	28
SE	32	494	221	19	31
W	45	800	360	36	49
Total	424	6,659	6,573	514	895

*Residential facilities (RF) include nursing homes, community hospitals, long-stay units and residential institutions including mental health facilities, prisons and direct provision centres.

Table 12: Number of OPEN COVID-19 outbreaks in nursing homes (NH) and the total number ill, number of cases, hospitalised and deaths linked to those outbreaks by HSE area notified in Ireland to midnight on 15/08/2020

HSE area	Number of NH outbreaks	Total Number ill	Cases linked to NH outbreaks:		
			Number of cases	Number hospitalised	Total number who died
E	24	567	707	24	160
MW	8	62	110	26	20
NE	3	30	80	4	7
S	2	2	4	0	0
Total	37	661	901	54	187

Table 13: Number of CLOSED COVID-19 outbreaks in nursing homes (NH) and the total number ill, number of cases, hospitalised and deaths linked to those outbreaks by HSE area notified in Ireland to midnight on 15/08/2020

HSE area	Number of NH outbreaks	Total Number ill	Cases linked to NH outbreaks:		
			Number of cases	Number hospitalised	Total number who died
E	107	2,845	3,022	186	475
M	10	102	230	18	22
MW	9	244	221	34	33
NE	39	601	1,006	94	171
NW	5	44	129	22	22
S	12	224	132	11	14
SE	17	265	157	16	27
W	36	617	281	25	43
Total	235	4,942	5,178	406	807

Table 14: Number of OPEN COVID-19 outbreaks in acute hospitals and the total number ill, number of cases, hospitalised and deaths linked to those outbreaks by HSE area notified in Ireland to midnight on 15/08/2020

HSE area	Number of hospital outbreaks	Total number ill	Cases linked to outbreaks in hospitals:		
			Number of cases	Number hospitalised	Total number who died
E	13	106	64	5	0
SE	1	3	5	1	0
Total	14	109	69	6	0

Table 15: Number of CLOSED COVID-19 outbreaks in acute hospitals and the total number ill, number of cases, hospitalised and deaths linked to those outbreaks by HSE area notified in Ireland to midnight on 15/08/2020

HSE area	Number of acute hospital outbreaks	Total number ill	Cases linked to outbreaks in hospitals:		
			Number of cases	Number hospitalised	Total number who died
E	49	430	203	92	33
M	3	100	187	55	14
MW	3	52	53	18	8
NE	14	132	141	35	10
NW	2	7	16	7	1
S	10	164	160	40	8
SE	4	202	203	54	21
W	6	44	111	39	11
Total	91	1,131	1,074	340	106

Deaths among COVID-19 cases

Table 16: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 15/08/2020

	Number	Percent
Total number of deaths	1,774	
Confirmed	1,516	85.46
Probable	99	5.58
Possible	159	8.96
Total number of cases hospitalised	755	42.56
Cases admitted to ICU	93	5.24
Cases not admitted to ICU	662	37.32
Total number of imported cases	6	0.34
Number of cases in healthcare workers	8	0.45
Number with underlying clinical conditions	1,674	94.36
Total number of male cases	872	49.15
M:F ratio	0.97	
Median age (years)	84	
Mean age (years)	82	
Age range (years)	17 - 105	

Table 17: Number of deaths in all COVID-19 cases by sex and age group notified in Ireland up to midnight 15/08/2020

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	16	26	1.47
55-64 yrs	26	47	73	4.11
65-74 yrs	93	160	253	14.26
75-84 yrs	279	324	603	33.99
85+ yrs	483	315	798	44.98
Unknown	<5	<5	2	0.11
Total	902	872	1,774	100
Percent	50.85	49.15		

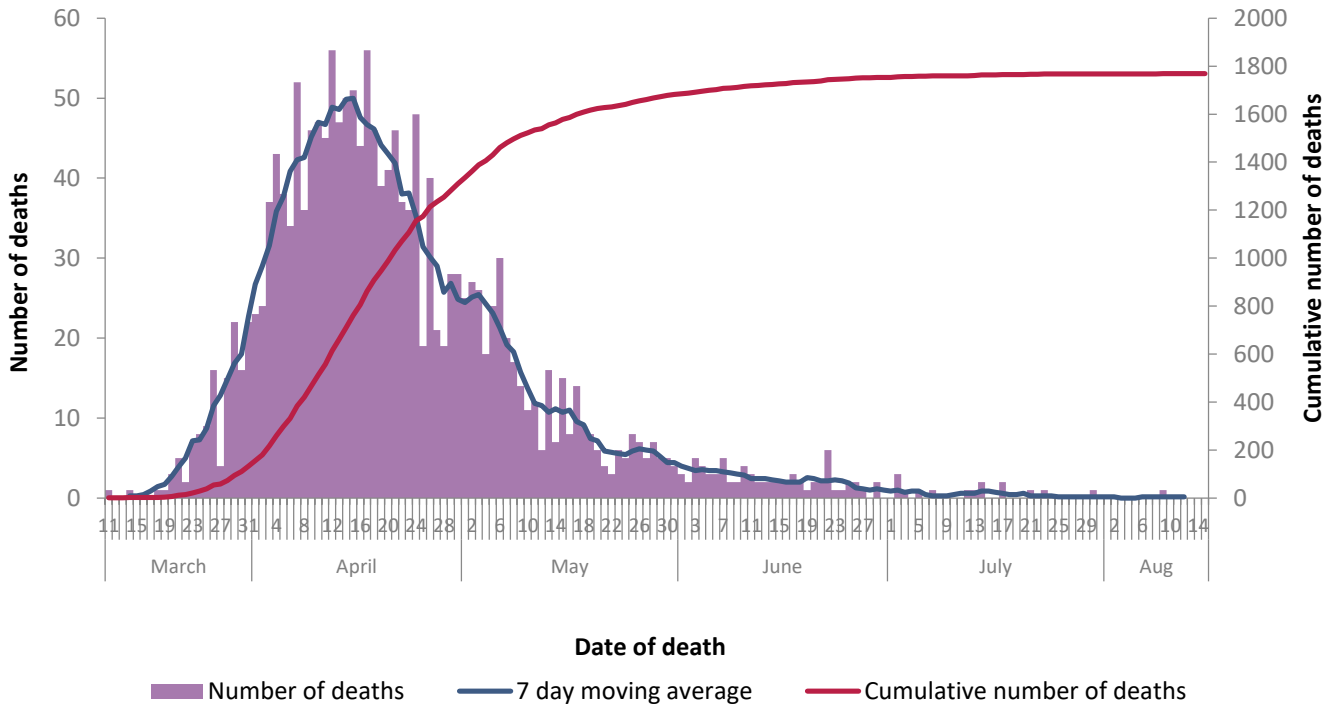


Figure 6a: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 15/08/2020 (n=1769)

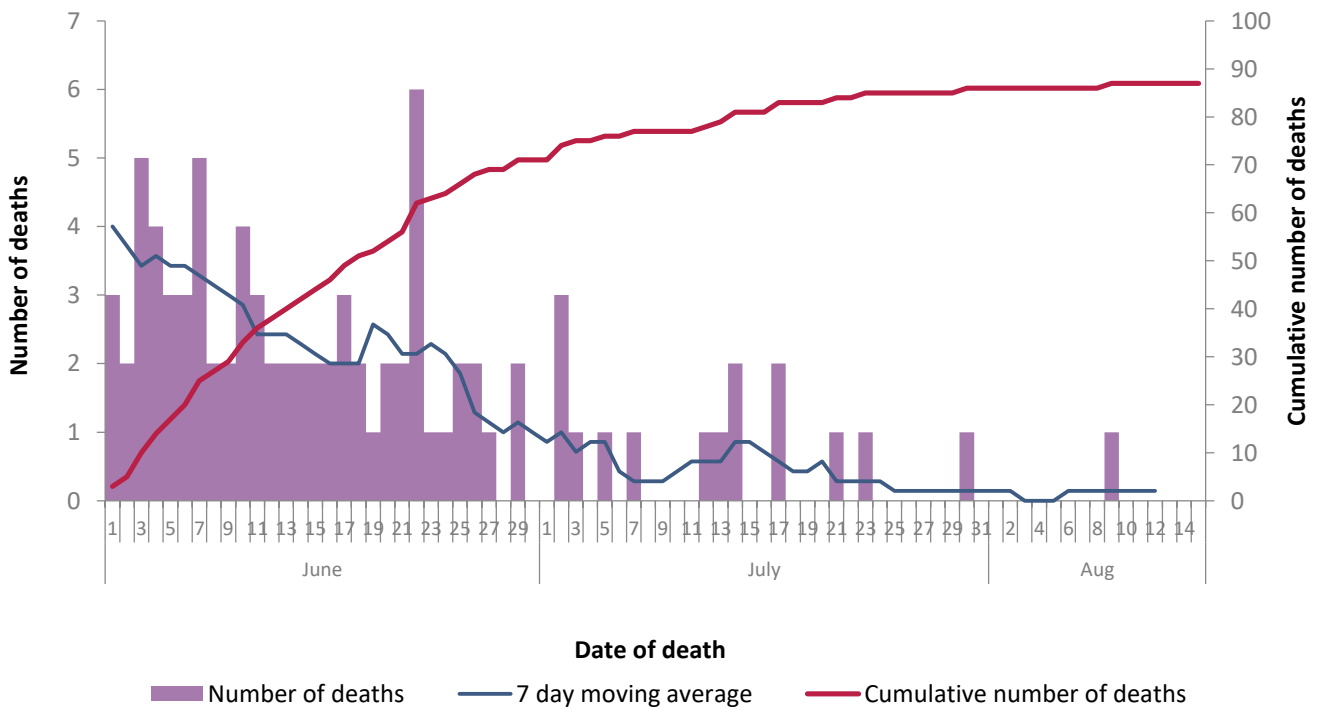


Figure 6b: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total, 01/06/2020 to midnight 15/08/2020 (n=87)

* 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 09:20 on 17/08/2020. 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.
- 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.

Appendix 1: Trends in confirmed COVID-19 cases notified in Ireland by HSE area

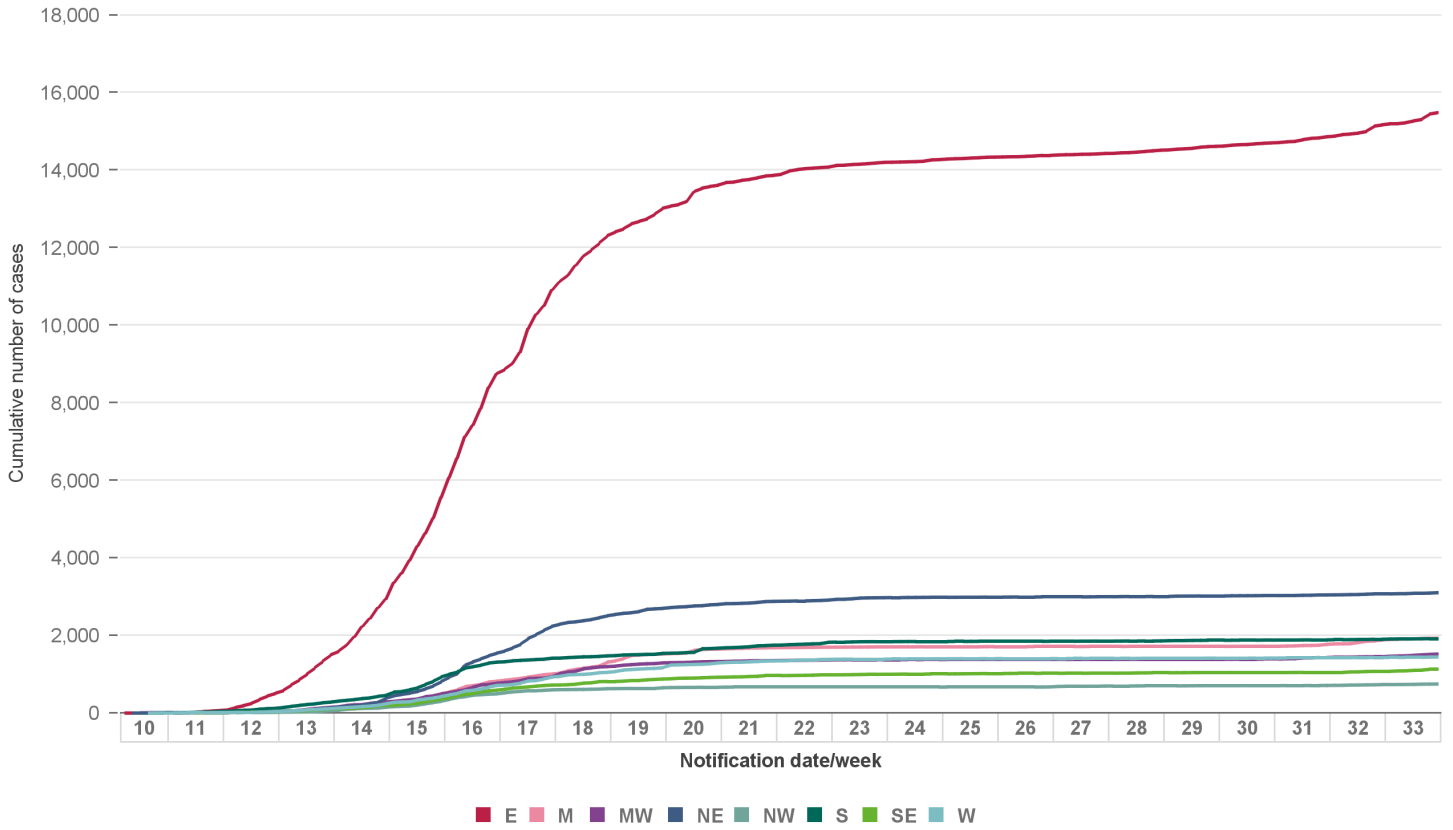


Figure A: Cumulative number of confirmed COVID-19 cases notified in Ireland by date/week of notification and HSE area to midnight 15/08/2020

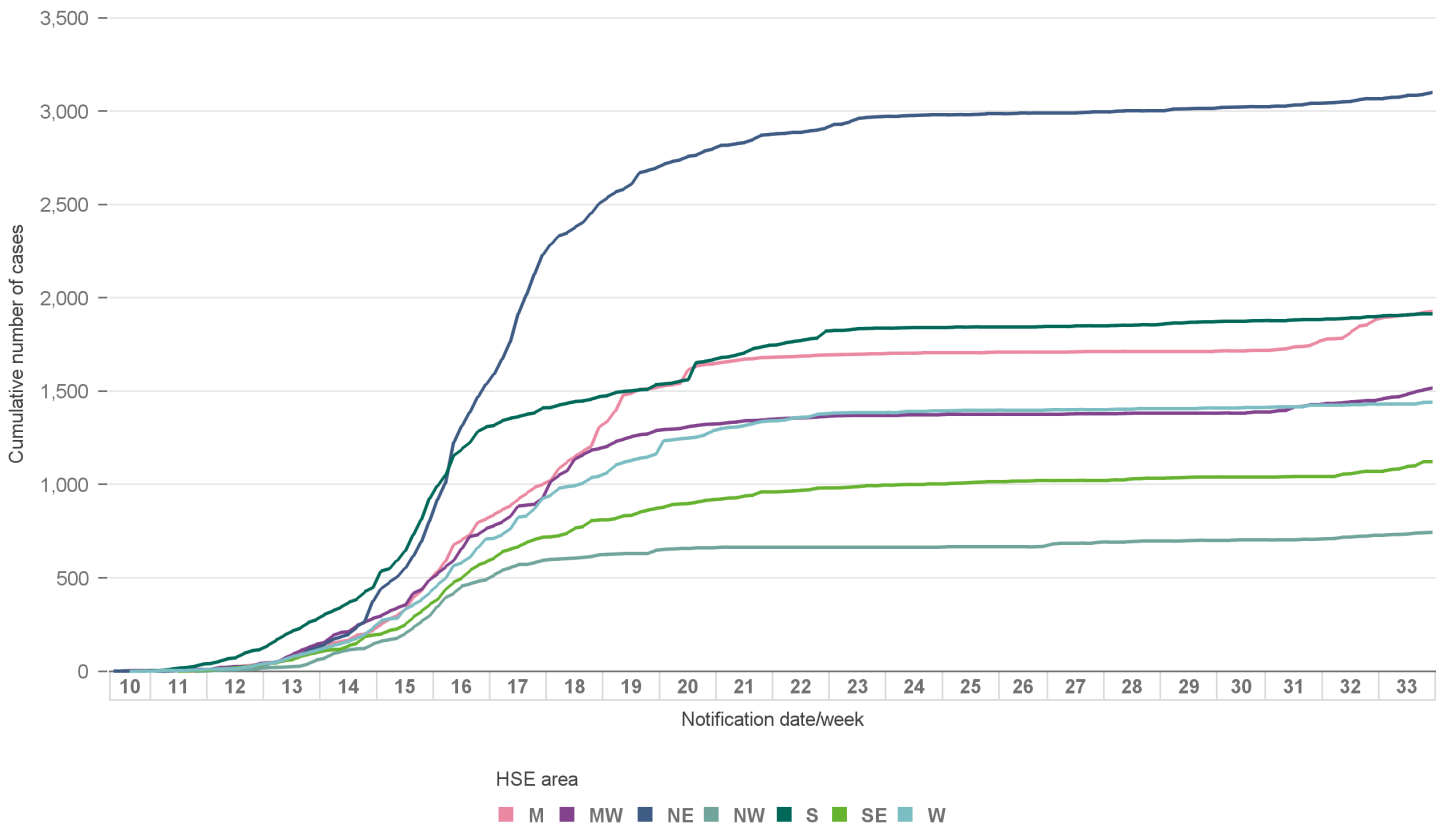


Figure B: Cumulative number of confirmed COVID-19 cases notified in Ireland by date/week of notification and HSE area (excluding HSE East) to midnight 15/08/2020

Appendix 1: Trends in confirmed COVID-19 cases notified in Ireland by HSE area

Table A: Cumulative number of confirmed COVID-19 cases notified in Ireland by week of notification and HSE area to midnight 15/08/2020

Week	E	M	MW	NE	NW	S	SE	W	Total
10	5		4	1		3		3	16
11	62	5	12	6	2	40	6	10	143
12	503	39	43	33	17	117	33	38	823
13	1,493	129	145	127	61	278	101	112	2,446
14	2,941	221	284	377	147	451	195	234	4,850
15	5,567	492	489	806	300	927	358	422	9,361
16	8,744	817	765	1,539	491	1,310	587	710	14,963
17	10,914	1,002	931	2,232	595	1,412	719	926	18,731
18	12,305	1,308	1,194	2,505	625	1,472	811	1,046	21,266
19	13,014	1,520	1,290	2,696	649	1,536	873	1,165	22,743
20	13,609	1,647	1,325	2,798	662	1,669	920	1,288	23,918
21	13,863	1,682	1,350	2,876	666	1,747	962	1,342	24,488
22	14,077	1,695	1,366	2,910	666	1,823	983	1,380	24,900
23	14,200	1,702	1,372	2,972	666	1,838	997	1,386	25,133
24	14,270	1,706	1,375	2,981	666	1,842	1,006	1,396	25,242
25	14,335	1,710	1,377	2,987	667	1,846	1,016	1,399	25,337
26	14,379	1,711	1,377	2,992	670	1,847	1,022	1,400	25,398
27	14,429	1,713	1,381	2,996	693	1,852	1,024	1,403	25,491
28	14,513	1,715	1,383	3,004	698	1,857	1,036	1,409	25,615
29	14,613	1,715	1,383	3,016	703	1,873	1,041	1,412	25,756
30	14,702	1,720	1,389	3,026	704	1,879	1,042	1,414	25,876
31	14,859	1,767	1,428	3,043	709	1,884	1,044	1,427	26,161
32	15,166	1,884	1,451	3,069	730	1,900	1,073	1,431	26,704
33	15,482	1,928	1,518	3,101	745	1,916	1,125	1,442	27,257

Appendix 2: Epidemiological weeks, 2020-2021

Table B: List of epidemiological weeks, start and end dates, 2020

Year	Week	Start date	End date
2020	1	29/12/2019	04/01/2020
2020	2	05/01/2020	11/01/2020
2020	3	12/01/2020	18/01/2020
2020	4	19/01/2020	25/01/2020
2020	5	26/01/2020	01/02/2020
2020	6	02/02/2020	08/02/2020
2020	7	09/02/2020	15/02/2020
2020	8	16/02/2020	22/02/2020
2020	9	23/02/2020	29/02/2020
2020	10	01/03/2020	07/03/2020
2020	11	08/03/2020	14/03/2020
2020	12	15/03/2020	21/03/2020
2020	13	22/03/2020	28/03/2020
2020	14	29/03/2020	04/04/2020
2020	15	05/04/2020	11/04/2020
2020	16	12/04/2020	18/04/2020
2020	17	19/04/2020	25/04/2020
2020	18	26/04/2020	02/05/2020
2020	19	03/05/2020	09/05/2020
2020	20	10/05/2020	16/05/2020
2020	21	17/05/2020	23/05/2020
2020	22	24/05/2020	30/05/2020
2020	23	31/05/2020	06/06/2020
2020	24	07/06/2020	13/06/2020
2020	25	14/06/2020	20/06/2020
2020	26	21/06/2020	27/06/2020
2020	27	28/06/2020	04/07/2020
2020	28	05/07/2020	11/07/2020
2020	29	12/07/2020	18/07/2020
2020	30	19/07/2020	25/07/2020
2020	31	26/07/2020	01/08/2020
2020	32	02/08/2020	08/08/2020
2020	33	09/08/2020	15/08/2020
2020	34	16/08/2020	22/08/2020
2020	35	23/08/2020	29/08/2020
2020	36	30/08/2020	05/09/2020
2020	37	06/09/2020	12/09/2020
2020	38	13/09/2020	19/09/2020

2020	39	20/09/2020	26/09/2020
2020	40	27/09/2020	03/10/2020
2020	41	04/10/2020	10/10/2020
2020	42	11/10/2020	17/10/2020
2020	43	18/10/2020	24/10/2020
2020	44	25/10/2020	31/10/2020
2020	45	01/11/2020	07/11/2020
2020	46	08/11/2020	14/11/2020
2020	47	15/11/2020	21/11/2020
2020	48	22/11/2020	28/11/2020
2020	49	29/11/2020	05/12/2020
2020	50	06/12/2020	12/12/2020
2020	51	13/12/2020	19/12/2020
2020	52	20/12/2020	26/12/2020
2020	53	27/12/2020	02/01/2021