



Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 29/06/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 27/06/2020

	Number	Percent
Total number of confirmed cases	25,438	
National cumulative incidence of confirmed cases per 100,000 population	534.2	
Total number of cases hospitalised	3,293	12.95
Total number of cases admitted to ICU	435	1.71
Total number of deaths among confirmed cases	1,474	5.79
Case fatality ratio (CFR, %)	5.79	
National cumulative incidence of confirmed deaths per 100,000 population	30.95	
Total number of outbreaks/clusters	1,429	
Total number of cases associated with clusters	11,803	46.4
Total number of imported cases	383	1.51
Number of cases in healthcare workers	8,201	32.24
Males	10,876	42.75
Females	14,532	57.13
M:F ratio	0.75	
Median age (years)	48	
Mean age (years)	51	
Age range (years)	0 - 106	

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:27 on 29/06/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.

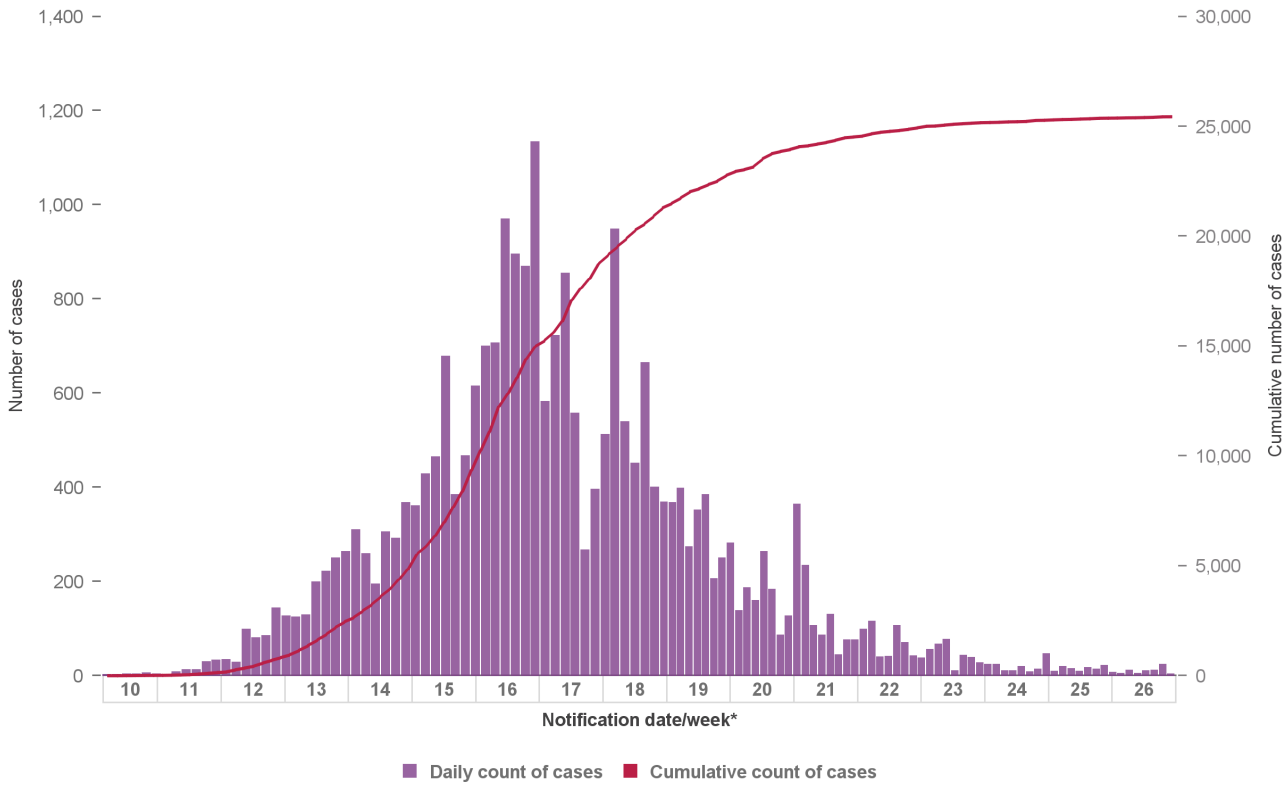


Figure 1a: Number* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date* to midnight 27/06/2020

*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

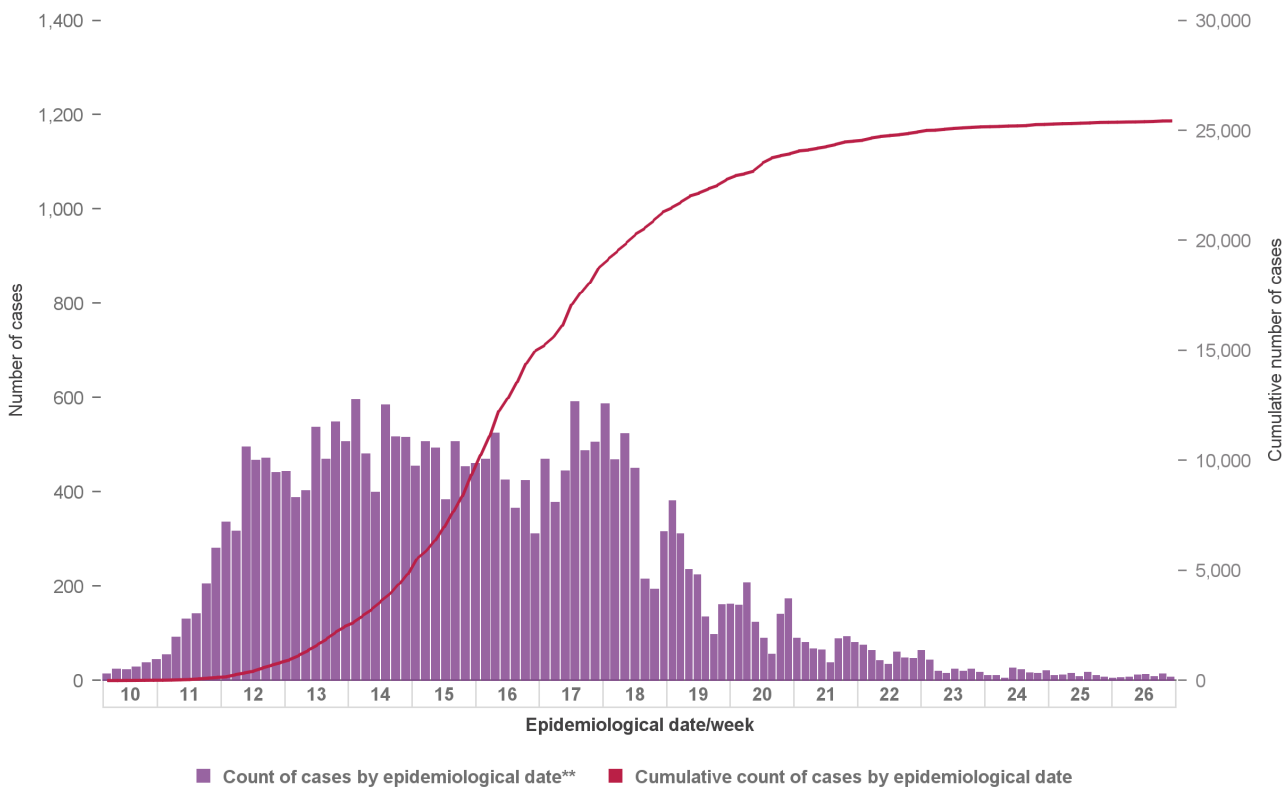


Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date to midnight 27/06/2020**

**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.

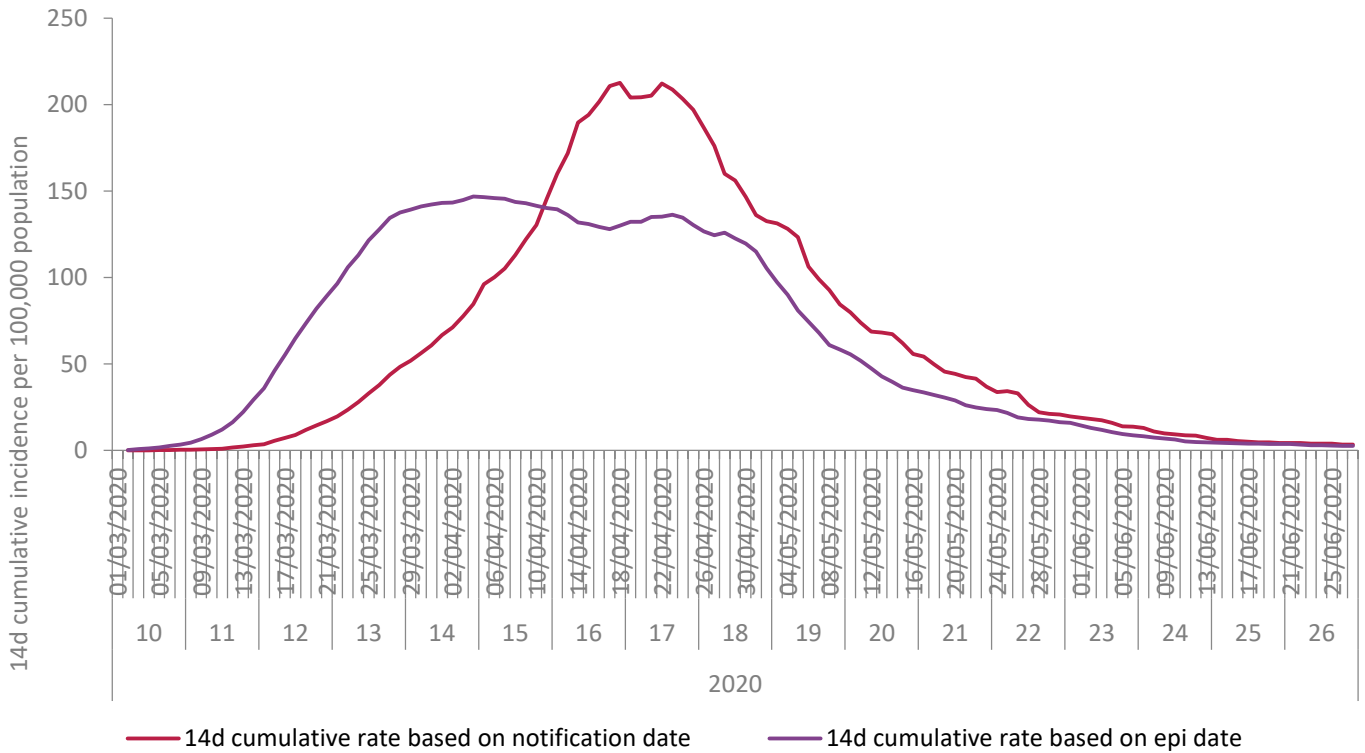


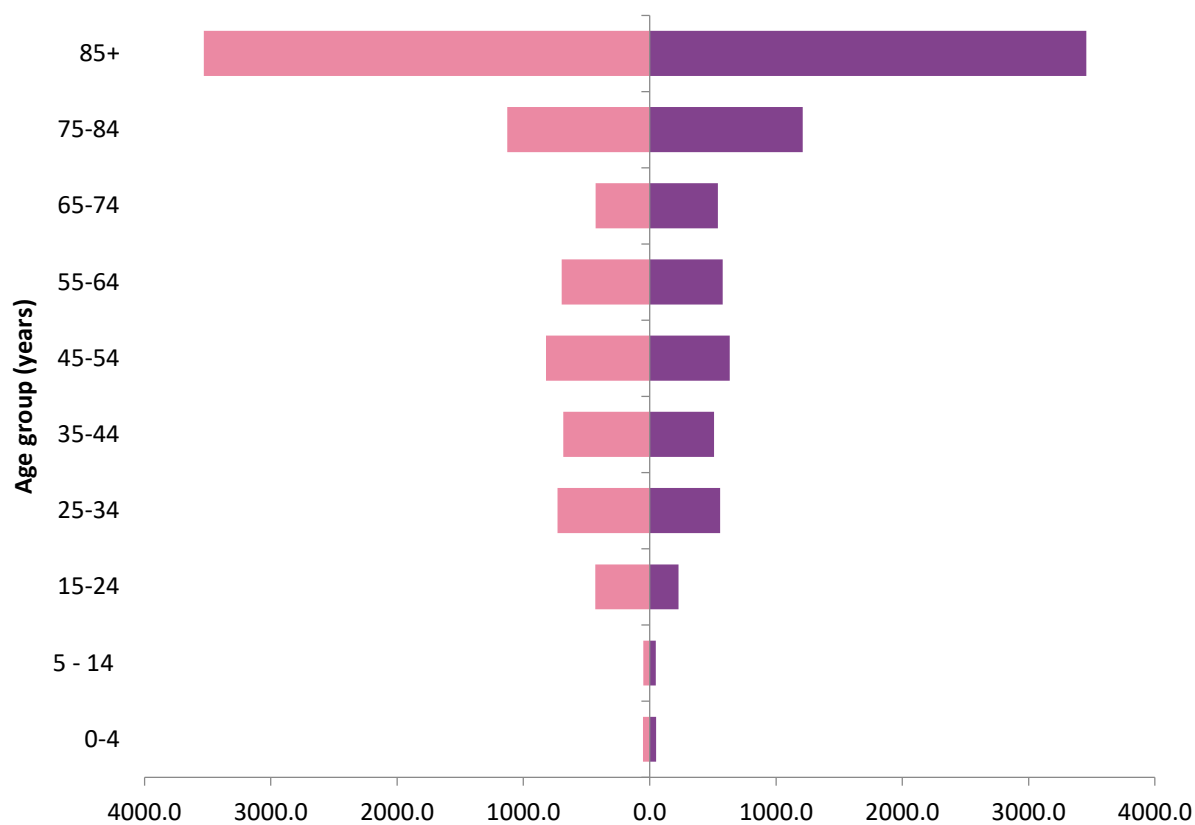
Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification* and epidemiological date to midnight 27/06/2020**

* 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 27/06/2020

Characteristic		Number of cases	Percent
Total number of confirmed cases		25,438	100
Sex	Male:Female ratio	0.75	
	Male	10,876	42.75
	Female	14,532	57.13
	Unknown	30	0.12
Age	Median age (years)	48	
	Mean age (years)	51	
	Age range (years)	0 - 106	
	0-4 yrs	171	0.67
	5-14 yrs	327	1.29
	15-24 yrs	1,891	7.43
	25-34 yrs	4,268	16.78
	35-44 yrs	4,480	17.61
	45-54 yrs	4,567	17.95
	55-64 yrs	3,249	12.77
	65-74 yrs	1,803	7.09
	75-84 yrs	2,291	9.01
	85+ yrs	2,369	9.31
	Unknown	22	0.09



	0-4	5 - 14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	51.9	49.4	431.4	729.3	685.1	822.2	697.3	427.9	1127.9	3530.9
Male	51.3	47.6	227.0	556.8	509.6	633.0	578.5	538.9	1211.5	3455.9

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 27/06/2020 (excluding 21 cases for whom age is unknown and 30 cases for whom sex is unknown and 1 cases for whom both is unknown)

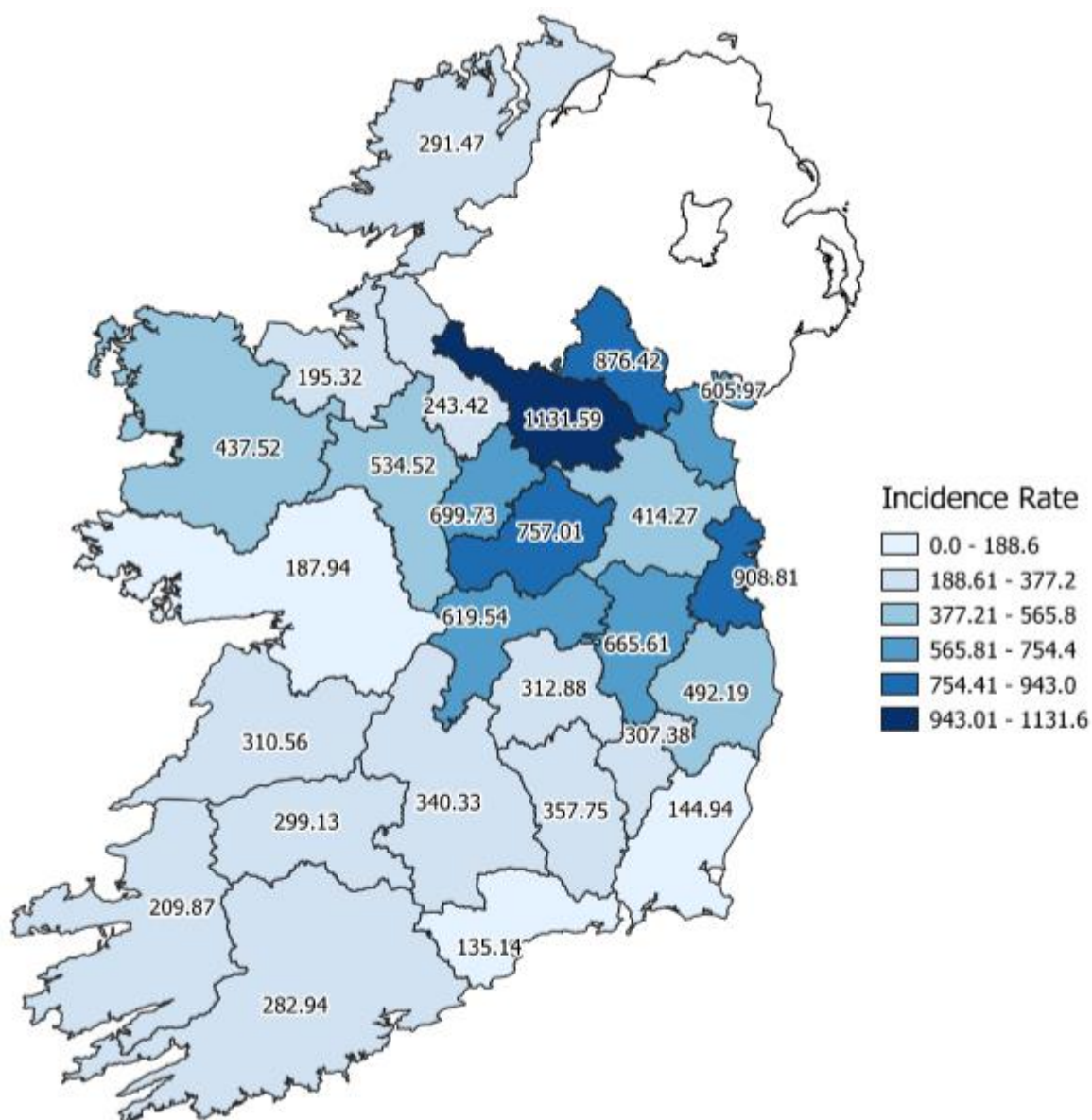


Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 27/06/2020

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 27/06/2020

County Name	Number of cases	Percent
Carlow	175	0.69
Cavan	862	3.39
Clare	369	1.45
Cork	1,536	6.04
Donegal	464	1.82
Dublin	12,245	48.14
Galway	485	1.91
Kerry	310	1.22
Kildare	1,481	5.82
Kilkenny	355	1.4
Laois	265	1.04
Leitrim	78	0.31
Limerick	583	2.29
Longford	286	1.12
Louth	781	3.07
Mayo	571	2.24
Meath	808	3.18
Monaghan	538	2.11
Offaly	483	1.9
Roscommon	345	1.36
Sligo	128	0.5
Tipperary	543	2.13
Waterford	157	0.62
Westmeath	672	2.64
Wexford	217	0.85
Wicklow	701	2.76
Total	25,438	100

Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 27/06/2020

Transmission classification*	Count of Events	%
Community transmission, incl. possible community transmission	8,899	34.98%
Local transmission, incl. possible local transmission	15,942	62.67%
Travel abroad, incl. possible travel abroad	592	2.33%
Unknown	5	0.02%
Total	25,438	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 27/06/2020

Age Group (years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)	Cases admitted to ICU (%)
0-4 yrs	171	21	0.64	0	0
5-14 yrs	327	16	0.49	2	0.46
15-24 yrs	1891	69	2.1	5	1.15
25-34 yrs	4268	196	5.95	15	3.45
35-44 yrs	4480	265	8.05	35	8.05
45-54 yrs	4567	444	13.48	91	20.92
55-64 yrs	3249	492	14.94	126	28.97
65-74 yrs	1803	580	17.61	110	25.29
75-84 yrs	2291	735	22.32	45	10.34
85+ yrs	2369	473	14.36	6	1.38
Unknown	22	2	0.06	0	0
Total	25,438	3,293	100	435	100

Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 27/06/2020

	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)	171	327	1,891	4,268	4,480	4,567	3,249	1,803	2,291	2,369	22
Cases hospitalised (n)	21	16	69	196	265	444	492	580	735	473	2
Cases hospitalised (%)	12.28	4.89	3.65	4.59	5.92	9.72	15.14	32.17	32.08	19.97	9.09
Cases admitted to ICU (n)	0	2	5	15	35	91	126	110	45	6	0
Cases admitted to ICU (%)	0	0.61	0.26	0.35	0.78	1.99	3.88	6.1	1.96	0.25	0
Deaths (n)	0	0	1	5	11	23	63	218	506	647	0
Case fatality ratio (%)	0	0	0.05	0.12	0.25	0.5	1.94	12.09	22.09	27.31	0

Outbreaks of COVID-19

Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 27/06/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	Total
Private house	379	6	51	118	12	108	28	26	728
Nursing home	121	10	16	38	5	9	17	37	253
Residential institution	99	9	7	17	4	21	10	4	171
Hospital	61	3	3	14	2	12	4	6	105
Other*	11	8	26	6	6	21	6	9	93
Workplace	7	5	5	14	1	8	3	4	47
Comm. Hosp/Long-stay unit	4	3	2		4	6	5	5	29
Unknown	2					1			3
Total	684	44	110	207	34	186	73	91	1,429

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

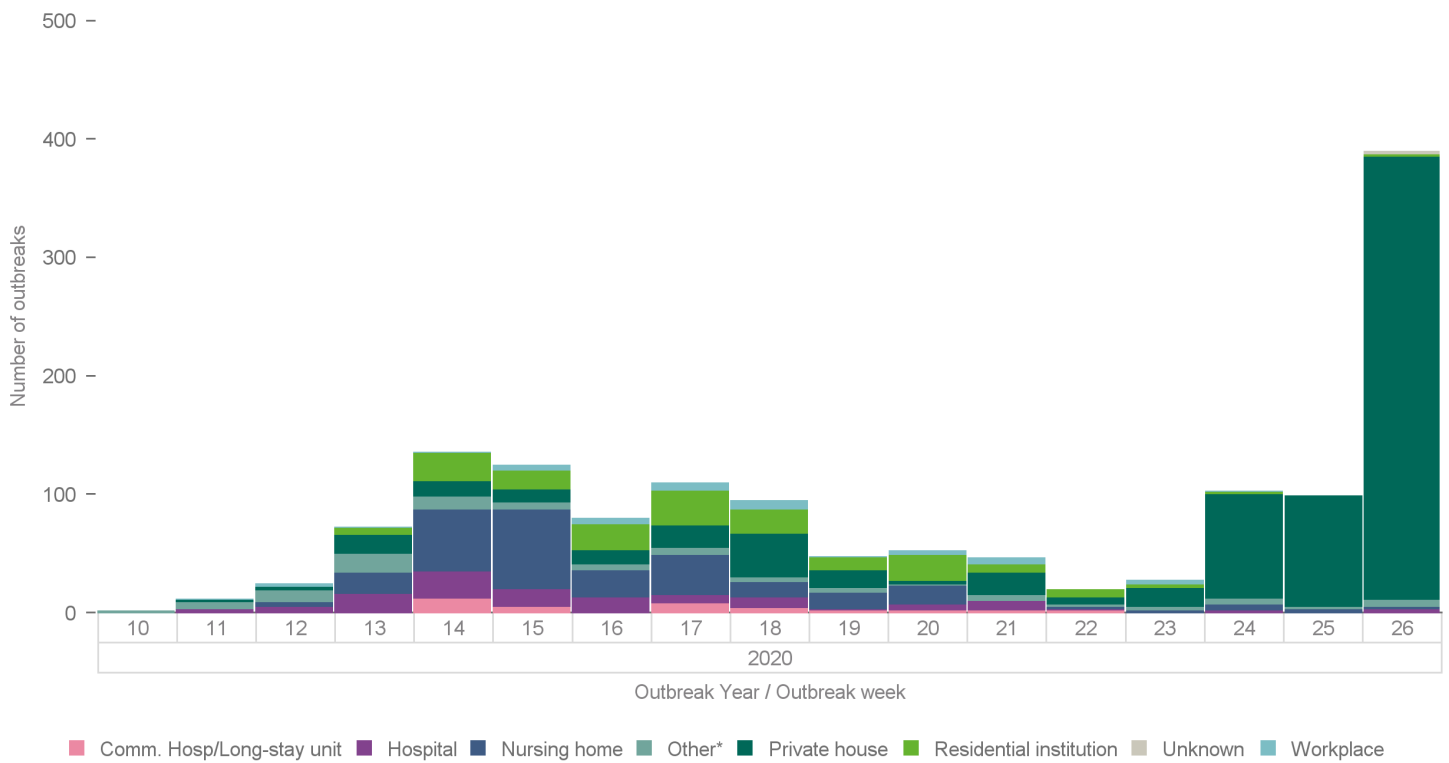


Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 27/06/2020

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

Note: In week 24 and 25, 200 new COVID-19 outbreaks were reported on CIDR, of which 187 were family outbreaks. Of these, 76 family outbreaks occurred in March, 66 family outbreaks occurred in April and 15 family outbreaks occurred in May 2020

In week 26 (21/06/2020 - 27/06/2020), 369 new COVID-19 outbreaks were reported on CIDR, of which 369 were family outbreaks. Of these, 171 family outbreaks occurred in March, 128 family outbreaks occurred in April and 23 family outbreaks occurred in May 2020.

Table 7: Number of OPEN clusters/outbreaks of COVID-19 by location and HSE area notified to midnight 27/06/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	Total
Comm. Hosp/Long-stay unit	1		1						2
Hospital	17	3	3				2	2	27
Nursing home	28	1	12	6			2	9	58
Other*	5	3	12		1				21
Private house	8	5	24	16			2	5	60
Residential institution	21	3	5	3				1	33
Workplace	2	5	3	5		1		4	20
Total	82	20	60	30	1	1	6	21	221

Table 8: Number of CLOSED clusters/outbreaks of COVID-19 by location and HSE area notified to midnight 27/06/2020

Outbreak Location	E	M	MW	NE	NW	S	SE	W	Total
Comm. Hosp/Long-stay unit	3	3	1		4	6	5	5	27
Hospital	44			14	2	12	2	4	78
Nursing home	93	9	4	32	5	9	15	28	195
Other*	6	5	14	6	5	21	6	9	72
Private house	371	1	27	102	12	108	26	21	668
Residential institution	78	6	2	14	4	21	10	3	138
Unknown	2					1			3
Workplace	5		2	9	1	7	3		27
Total	602	24	50	177	33	185	67	70	1,208

*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 27/06/2020

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	121	99	224	49.45	61	61	58.1	285	51.08
M	3	10	9	22	4.86	3	3	2.86	25	4.48
MW	2	16	7	25	5.52	3	3	2.86	28	5.02
NE		38	17	55	12.14	14	14	13.33	69	12.37
NW	4	5	4	13	2.87	2	2	1.9	15	2.69
S	6	9	21	36	7.95	12	12	11.43	48	8.6
SE	5	17	10	32	7.06	4	4	3.81	36	6.45
W	5	37	4	46	10.15	6	6	5.71	52	9.32
Total	29	253	171	453	100	105	105	100	558	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 27/06/2020

HSE area	Number of RF outbreaks	Total number ill	Cases linked RF outbreaks:		
			Number of cases	Number hospitalised	Total number who died
E	50	1,267	1,417	78	251
M	4	8	41	1	1
MW	18	225	267	48	43
NE	9	152	344	26	53
SE	2	11	14	5	1
W	10	226	148	8	20
Total	93	1,889	2,231	166	369

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 27/06/2020

HSE area	Number of RF outbreaks	Total number ill	Cases linked RF outbreaks:		
			Number of cases	Number hospitalised	Total number who died
E	174	3,118	2,930	187	434
M	18	180	331	22	33
MW	7	149	109	14	10
NE	46	561	795	77	123
NW	13	74	241	32	36
S	36	485	310	17	25
SE	30	479	205	14	28
W	36	576	213	26	30
Total	360	5,622	5,134	389	719

*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 27/06/2020

HSE area	Number of NH outbreaks	Total Number ill	Cases linked to NH outbreaks:		
			Number of cases	Number hospitalised	Total number who died
E	28	854	1,025	47	209
M	1		31	0	1
MW	12	148	216	47	43
NE	6	142	336	26	53
SE	2	11	14	5	1
W	9	207	148	8	20
Total	58	1,362	1,770	133	327

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 27/06/2020

HSE area	Number of NH outbreaks	Total Number ill	Cases linked to NH outbreaks:		
			Number of cases	Number hospitalised	Total number who died
E	93	2,561	2,504	145	409
M	9	102	208	17	20
MW	4	114	106	13	9
NE	32	488	736	70	121
NW	5	44	129	22	22
S	9	175	80	5	11
SE	15	250	141	11	24
W	28	413	134	15	24
Total	195	4,147	4,038	298	640

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 27/06/2020

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	17	128	67	9	3
M	3	100	184	44	13
MW	3	51	52	18	7
SE	2	155	159	41	14
W	2	32	33	11	3
Total	27	466	495	123	40

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 27/06/2020

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	44	382	185	75	25
NE	14	132	141	35	10
NW	2	7	16	7	1
S	12	212	209	44	11
SE	2	51	48	17	5
W	4	12	78	27	8
Total	78	796	677	205	60

Deaths among COVID-19 cases

Table 16: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 27/06/2020

	Number	Percent
Total number of deaths	1,735	
Confirmed	1,474	84.96
Probable	101	5.82
Possible	160	9.22
Total number of cases hospitalised	725	41.79
Cases admitted to ICU	89	5.13
Cases not admitted to ICU	636	36.66
Total number of imported cases	5	0.29
Number of cases in healthcare workers	7	0.4
Number with underlying clinical conditions	1,606	92.56
Total number of male cases	857	49.39
M:F ratio	0.98	
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 27/06/2020

Age group (years)	Female	Male	Total	Percent
15-24 yrs	<5	<5	1	0.06
25-34 yrs	<5	<5	5	0.29
35-44 yrs	5	7	12	0.69
45-54 yrs	10	15	25	1.44
55-64 yrs	24	44	68	3.92
65-74 yrs	89	155	244	14.06
75-84 yrs	268	324	592	34.12
85+ yrs	477	309	786	45.3
Unknown	<5	<5	2	0.12
Total	878	857	1,735	100
Percent	50.61	49.39		

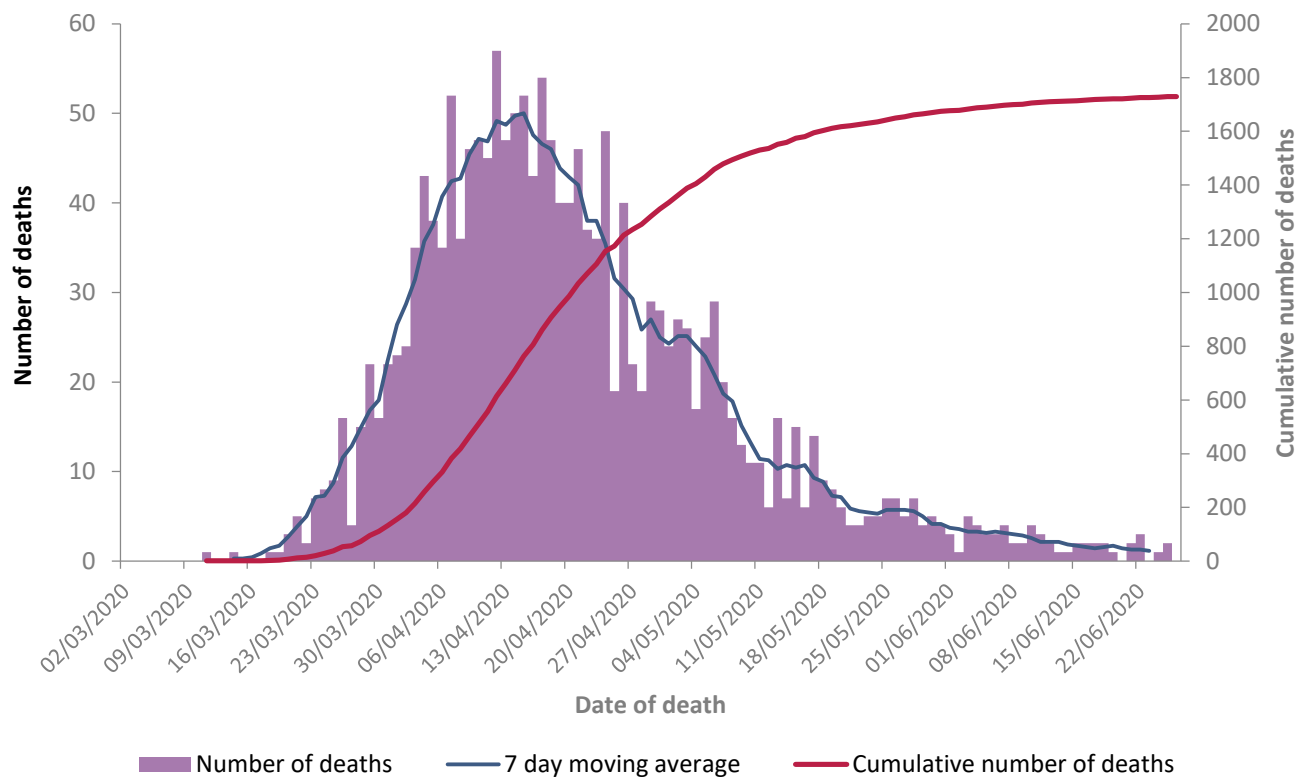


Figure 6: Daily and 7 day moving average number of deaths among COVID-19 cases notified in Ireland by date of death and cumulative total to midnight 27/06/2020

* Date of death is not yet available for six 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 this report. This includes 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 09:27 on 6/29/20. 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.

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

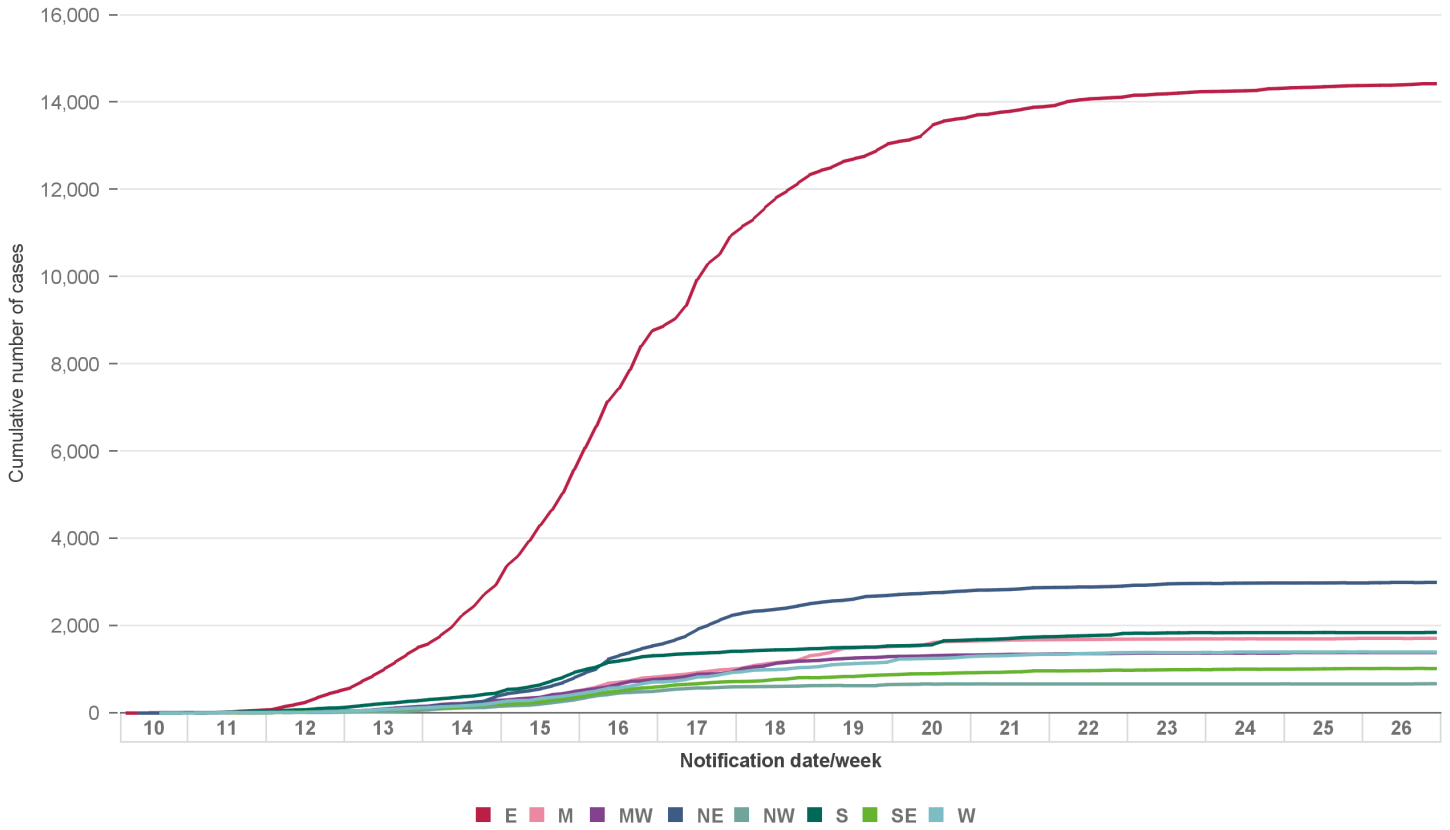


Figure A: Cumulative number of confirmed COVID-19 cases notified in Ireland by date/week of notification and HSE area to midnight 27/06/2020

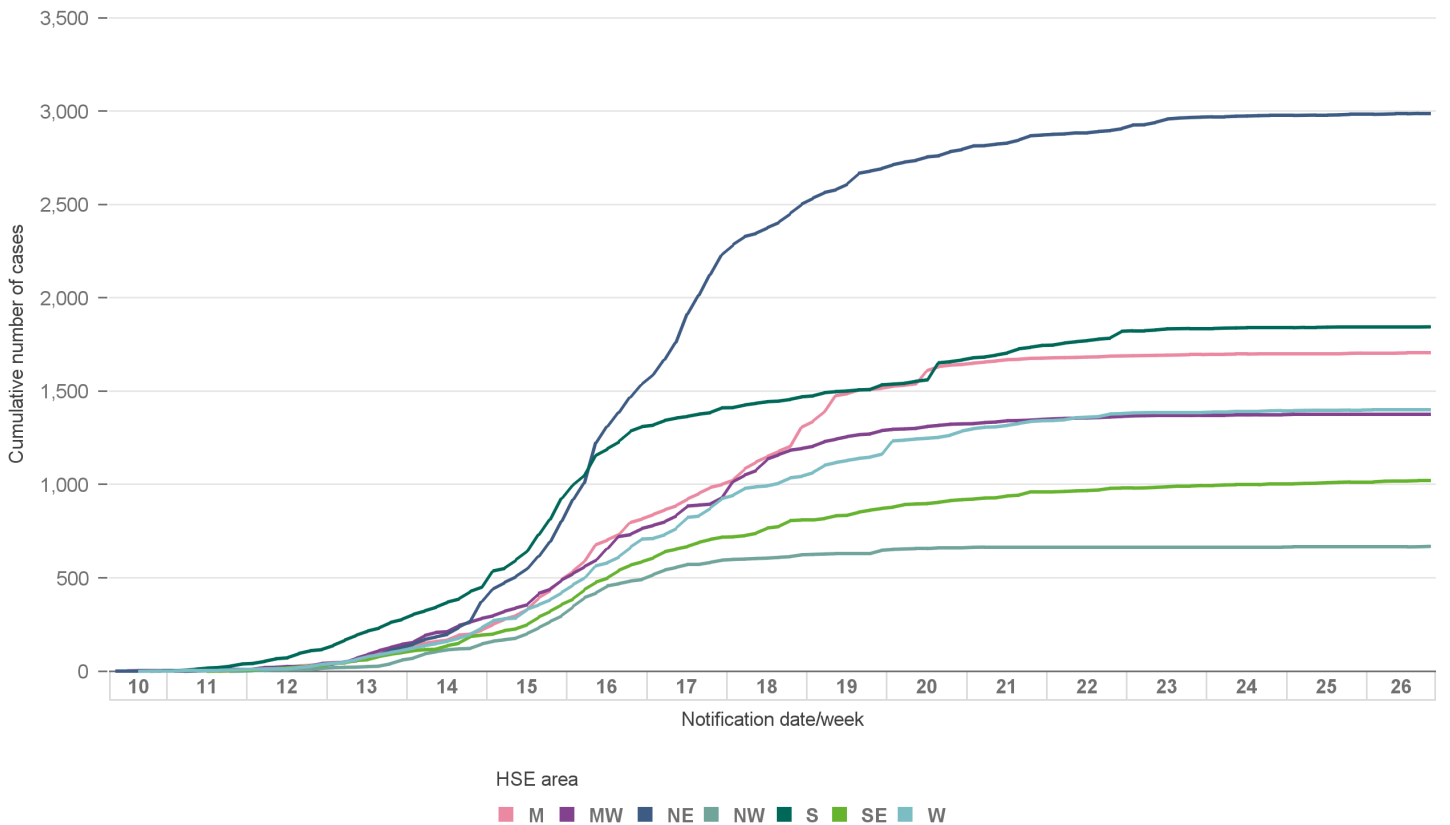


Figure B: Cumulative number of confirmed COVID-19 cases notified in Ireland by date/week of notification and HSE area (excluding HSE East) to midnight 27/06/2020

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 27/06/2020

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	504	39	43	33	17	117	33	38	824
13	1,496	129	145	127	61	278	101	112	2,449
14	2,946	221	284	376	147	452	195	234	4,855
15	5,578	492	489	805	298	928	358	422	9,370
16	8,761	816	765	1,536	492	1,311	587	709	14,977
17	10,935	1,001	931	2,229	596	1,412	719	925	18,748
18	12,331	1,307	1,194	2,502	625	1,471	811	1,045	21,286
19	13,044	1,517	1,290	2,693	649	1,535	873	1,164	22,765
20	13,642	1,644	1,326	2,795	662	1,668	920	1,287	23,944
21	13,899	1,678	1,350	2,873	666	1,746	962	1,343	24,517
22	14,116	1,690	1,366	2,907	666	1,822	982	1,381	24,930
23	14,243	1,697	1,372	2,969	666	1,837	996	1,387	25,167
24	14,315	1,701	1,375	2,978	666	1,841	1,005	1,397	25,278
25	14,381	1,705	1,377	2,984	667	1,845	1,015	1,400	25,374
26	14,427	1,706	1,377	2,989	670	1,846	1,022	1,401	25,438

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