# Epidemiology of COVID-19 in Ireland

Report prepared by HPSC on 07/10/2020 for National Public Health Emergency Team

Summary characteristics of confirmed COVID-19 cases notified in Ireland up to midnight 05/10/2020

| | Number | Percent |
|---|---|---|
| Total number of confirmed cases | 38,973 | |
| National cumulative incidence of confirmed cases per 100,000 population | 818.44 | |
| Total number of cases hospitalised | 3,701 | 9.5 |
| Total number of cases admitted to ICU | 478 | 1.23 |
| Total number of deaths among confirmed cases | 1,563 | 4.01 |
| Case fatality ratio (CFR, %) | 4.01 | |
| National cumulative incidence of confirmed deaths per 100,000 population | 32.82 | |
| Total number of outbreaks/clusters | 4,554 | |
| Total number of cases associated with clusters | 21,542 | 55.27 |
| Total number of imported cases | 607 | 1.56 |
| Number of cases in healthcare workers | 9,434 | 24.21 |
| Males | 17,670 | 45.34 |
| Females | 21,265 | 54.56 |
| M:F ratio | 0.83 | |
| Median age (years) | 43 | |
| Mean age (years) | 45 | |
| Age range (years) | 0 - 106 | |

Note: Data were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:15 on 07/10/2020 and are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.
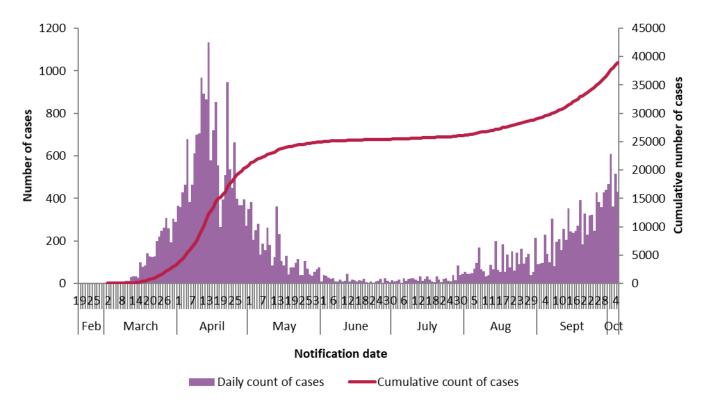
**Figure 1a: Number\* and cumulative number of confirmed COVID-19 cases notified in Ireland by notification date\* to midnight 05/10/2020**

\*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
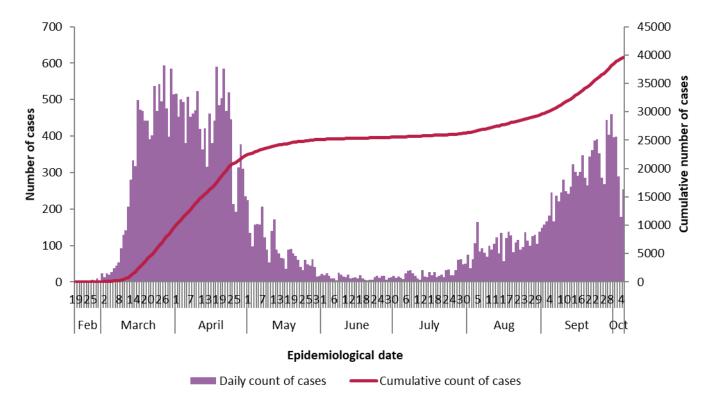


**Figure 1b: Number and cumulative number of confirmed COVID-19 cases notified in Ireland by epidemiological date\*\* to midnight 05/10/2020**

\*\*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.
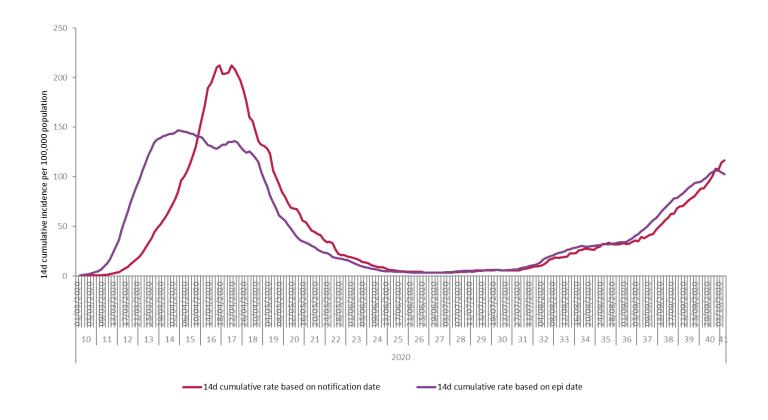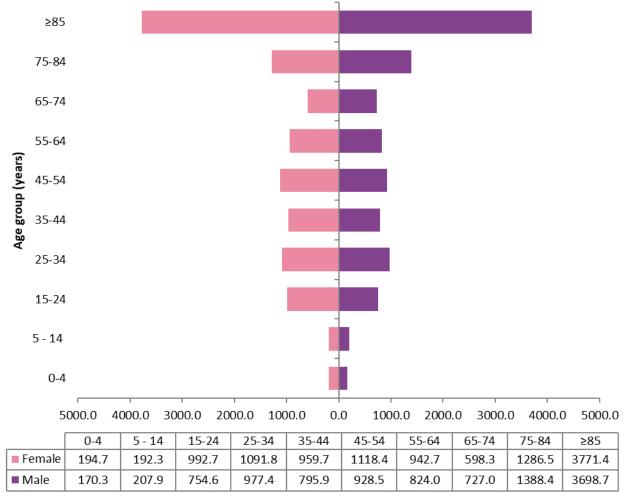
**Figure 2: Cumulative 14 day incidence rate of confirmed COVID-19 cases per 100,000 population notified in Ireland by notification\* and epidemiological date\*\* to midnight 05/10/2020**

\* 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 05/10/2020**

| Characteristic | | Number of cases | Percent |
|---|---|---|---|
| **Total number of confirmed cases** | | **38,973** | **100** |
| **Sex** | Male:Female ratio | 0.83 | |
| | Male | 17,670 | 45.34 |
| | Female | 21,265 | 54.56 |
| | Unknown | 38 | 0.1 |
| **Age** | Median age (years) | 43 | |
| | Mean age (years) | 45 | |
| | Age range (years) | 0 - 106 | |
| | 0-4 yrs | 606 | 1.55 |
| | 5-14 yrs | 1,353 | 3.47 |
| | 15-24 yrs | 5,030 | 12.91 |
| | 25-34 yrs | 6,847 | 17.57 |
| | 35-44 yrs | 6,574 | 16.87 |
| | 45-54 yrs | 6,418 | 16.47 |
| | 55-64 yrs | 4,498 | 11.54 |
| | 65-74 yrs | 2,472 | 6.34 |
| | 75-84 yrs | 2,619 | 6.72 |
| | 85+ yrs | 2,532 | 6.5 |
| | Unknown | 24 | 0.06 |

| | 0-4 | 5 - 14 | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | 75-84 | ≥85 |
|---|---|---|---|---|---|---|---|---|---|---|
| ■ Female | 194.7 | 192.3 | 992.7 | 1091.8 | 959.7 | 1118.4 | 942.7 | 598.3 | 1286.5 | 3771.4 |
| ■ Male | 170.3 | 207.9 | 754.6 | 977.4 | 795.9 | 928.5 | 824.0 | 727.0 | 1388.4 | 3698.7 |

**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 05/10/2020 (excluding 23 cases for whom age is unknown and 37 cases for whom sex is unknown and 1 case for whom both are unknown)**
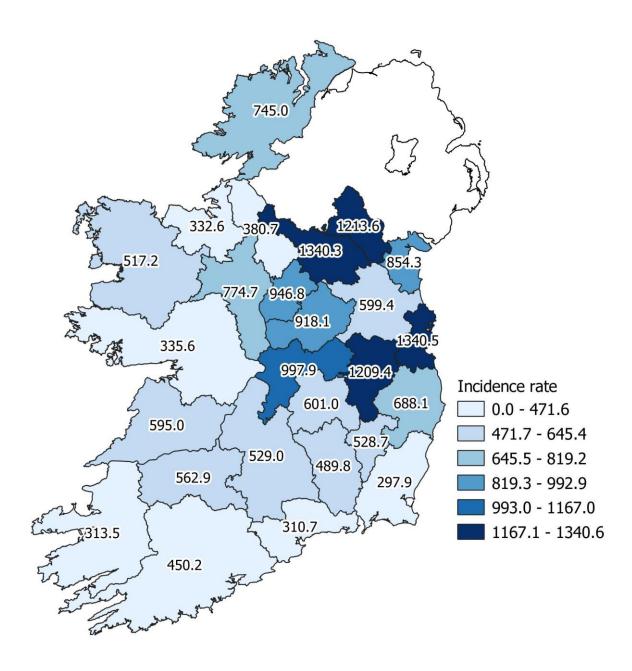
**Figure 4: Cumulative incidence rates of confirmed cases of COVID-19 per 100,000 population notified in Ireland to midnight 05/10/2020**

*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 05/10/2020**

| County Name | Number of cases | Percent |
| --- | --- | --- |
| Carlow | 301 | 0.77 |
| Cavan | 1,021 | 2.62 |
| Clare | 707 | 1.81 |
| Cork | 2,444 | 6.27 |
| Donegal | 1,186 | 3.04 |
| Dublin | 18,061 | 46.34 |
| Galway | 866 | 2.22 |
| Kerry | 463 | 1.19 |
| Kildare | 2,691 | 6.9 |
| Kilkenny | 486 | 1.25 |
| Laois | 509 | 1.31 |
| Leitrim | 122 | 0.31 |
| Limerick | 1,097 | 2.81 |
| Longford | 387 | 0.99 |
| Louth | 1,101 | 2.83 |
| Mayo | 675 | 1.73 |
| Meath | 1,169 | 3 |
| Monaghan | 745 | 1.91 |
| Offaly | 778 | 2 |
| Roscommon | 500 | 1.28 |
| Sligo | 218 | 0.56 |
| Tipperary | 844 | 2.17 |
| Waterford | 361 | 0.93 |
| Westmeath | 815 | 2.09 |
| Wexford | 446 | 1.14 |
| Wicklow | 980 | 2.51 |
| **Total** | **38,973** | **100** |

**Table 3: Number of confirmed COVID-19 cases by WHO transmission classification notified to midnight 05/10/2020**

| Transmission classification* | Count of Events | % |
|---|---|---|
| Community transmission, incl. possible community transmission | 10,908 | 27.99% |
| Local transmission, incl. possible local transmission | 26,408 | 67.76% |
| Travel abroad, incl. possible travel abroad | 862 | 2.21% |
| Unknown | 795 | 2.04% |
| **Total** | **38,973** | **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 05/10/2020**

| Age Group (years) | Number of cases (n) | Cases hospitalised (n) | Cases hospitalised (%) | Cases admitted to ICU (n) | Cases admitted to ICU (%) |
|---|---|---|---|---|---|
| 0-4 yrs | 606 | 34 | 0.92 | 1 | 0.21 |
| 5-14 yrs | 1353 | 27 | 0.73 | 2 | 0.42 |
| 15-24 yrs | 5030 | 102 | 2.76 | 5 | 1.05 |
| 25-34 yrs | 6847 | 223 | 6.03 | 17 | 3.56 |
| 35-44 yrs | 6574 | 300 | 8.11 | 42 | 8.79 |
| 45-54 yrs | 6418 | 496 | 13.4 | 97 | 20.29 |
| 55-64 yrs | 4498 | 559 | 15.1 | 137 | 28.66 |
| 65-74 yrs | 2472 | 661 | 17.86 | 122 | 25.52 |
| 75-84 yrs | 2619 | 802 | 21.67 | 49 | 10.25 |
| 85+ yrs | 2532 | 496 | 13.4 | 6 | 1.26 |
| Unknown | 24 | 1 | 0.03 | 0 | 0 |
| **Total** | **38,973** | **3,701** | **100** | **478** | **100** |

**Table 5: Number and proportion of confirmed cases of COVID-19 notified in Ireland by age-group, hospitalisation and ICU admission 05/10/2020**

| | 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) | 606 | 1,353 | 5,030 | 6,847 | 6,574 | 6,418 | 4,498 | 2,472 | 2,619 | 2,532 | 24 |
| Cases hospitalised (n) | 34 | 27 | 102 | 223 | 300 | 496 | 559 | 661 | 802 | 496 | 1 |
| Cases hospitalised (%) | 5.61 | 2 | 2.03 | 3.26 | 4.56 | 7.73 | 12.43 | 26.74 | 30.62 | 19.59 | 4.17 |
| Cases admitted to ICU (n) | 1 | 2 | 5 | 17 | 42 | 97 | 137 | 122 | 49 | 6 | 0 |
| Cases admitted to ICU (%) | 0.17 | 0.15 | 0.1 | 0.25 | 0.64 | 1.51 | 3.05 | 4.94 | 1.87 | 0.24 | 0 |
| Deaths (n) | 0 | 0 | 1 | 6 | 12 | 29 | 74 | 234 | 533 | 674 | 0 |
| Case fatality ratio (%) | 0 | 0 | 0.02 | 0.09 | 0.18 | 0.45 | 1.65 | 9.47 | 20.35 | 26.62 | 0 |

## Outbreaks of COVID-19

**Table 6: Number of clusters/outbreaks COVID-19 by location and HSE area notified to midnight 05/10/2020**

| Outbreak Location | E | HPSC | M | MW | NE | NW | S | SE | W | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Private house | 2,155 | | 58 | 147 | 245 | 125 | 233 | 184 | 103 | **3,250** |
| Other* | 102 | 2 | 42 | 103 | 26 | 46 | 75 | 27 | 43 | **466** |
| Nursing home | 148 | | 12 | 19 | 45 | 7 | 15 | 18 | 36 | **300** |
| Residential institution | 126 | | 12 | 11 | 26 | 5 | 22 | 10 | 5 | **217** |
| Workplace | 51 | | 13 | 16 | 24 | 19 | 14 | 13 | 13 | **163** |
| Hospital | 73 | | 5 | 4 | 17 | 4 | 12 | 5 | 6 | **126** |
| Comm. Hosp/Long-stay unit | 6 | | 4 | 2 | | 4 | 6 | 5 | 5 | **32** |
| **Total** | **2,661** | **2** | **146** | **302** | **383** | **210** | **377** | **262** | **211** | **4,554** |

*Other outbreak location includes community, extended family, hotel, public house, retail outlet, travel related and all other locations.
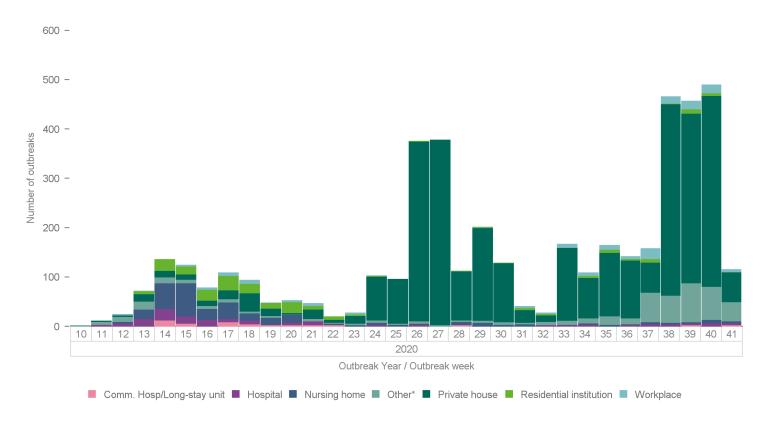
**Figure 5: Trend in number of COVID-19 clusters by location and week notified to midnight 05/10/2020**

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

Note: 3,718 COVID-19 outbreaks were reported on CIDR between week 24 and week 41 2020 to date (9th June to 5th October). Of these, 3,124 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 41 as a result of data validation: 1 occurred in February, 636 in March, 474 in April, 94 in May, 126 in June, 127 in July, 531 in August, 1,119 in September and 16 in October to date.

## Deaths among COVID-19 cases

**Table 7: Summary of deaths in all COVID-19 cases notified in Ireland up to midnight 05/10/2020**

|  |  | Number | Percent |
|---|---|---|---|
| Total number of deaths |  | 1,816 |  |
|  | Confirmed | 1,563 | 86.07 |
|  | Probable | 95 | 5.23 |
|  | Possible | 158 | 8.7 |
| Total number of cases hospitalised |  | 776 | 42.73 |
|  | Cases admitted to ICU | 98 | 5.4 |
|  | Cases not admitted to ICU | 678 | 37.33 |
| Total number of imported cases |  | 6 | 0.33 |
| Number of cases in healthcare workers |  | 8 | 0.44 |
| Number with underlying clinical conditions |  | 1,718 | 94.6 |
| Total number of male cases |  | 898 | 49.45 |
| 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 05/10/2020**

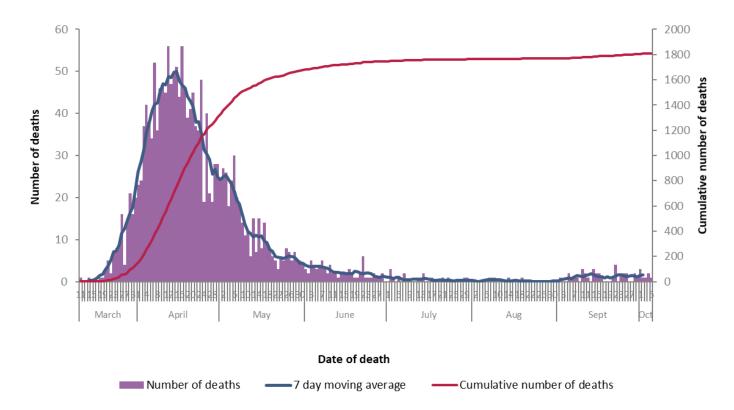| Age group (years) | Female | Male | Total | Percent |
|---|---|---|---|---|
| 15-24 yrs | <5 | <5 | 1 | 0.06 |
| 25-34 yrs | <5 | <5 | 6 | 0.33 |
| 35-44 yrs | 6 | 7 | 13 | 0.72 |
| 45-54 yrs | 11 | 20 | 31 | 1.71 |
| 55-64 yrs | 27 | 52 | 79 | 4.35 |
| 65-74 yrs | 98 | 162 | 260 | 14.32 |
| 75-84 yrs | 281 | 333 | 614 | 33.81 |
| 85+ yrs | 490 | 320 | 810 | 44.6 |
| Unknown | <5 | <5 | 2 | 0.11 |
| **Total** | **918** | **898** | **1,816** | **100** |
| **Percent** | **50.55** | **49.45** |  |  |

**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 05/10/2020**

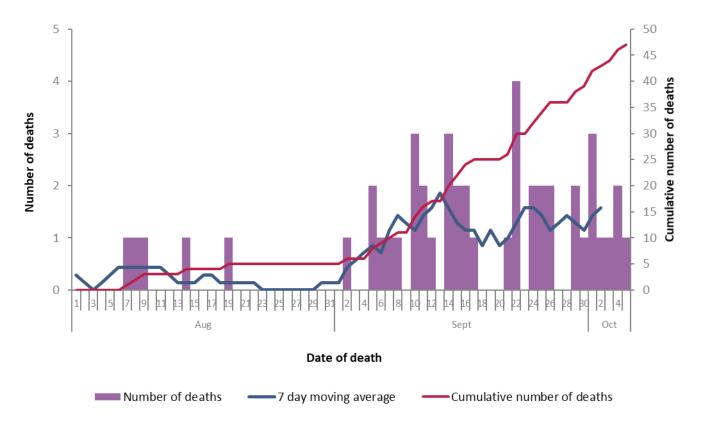* Date of death is not yet available for six cases



**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, 01/08/2020 to midnight 05/10/2020**

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**

### 1. Data Source

Data are based on statutory notifications and were extracted from Computerised Infectious Disease Reporting (CIDR) system at 09:15 on 07/10/2020. 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.