

Recent trends and statistics in Covid-19 Cases, Testing, and Deaths

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Between the months of April and May, the total number of confirmed cases of Covid-19 increased significantly from over 8,089 to 22,541 (+14,452). When expressed as per 100,000 of the population, the rate of covid-19 cases increased from over 160 in April to almost 460 per 100,000 people in May. The number of deaths caused by Covid-19 also increased significantly from 287 in April to almost 1,430 in May: with the death rate rising from 6 to 29 per 100,000 people. Data provided by the Health Protection Surveillance Centre (HPSC) reveal that almost 3,000 covid-19 cases have been hospitalised, of which 383 cases have been admitted to ICU. The data suggest that younger people, particularly those aged less than 45, are less likely to become infected, less likely to be hospitalized when they are infected, and less likely to die due to Covid-19.

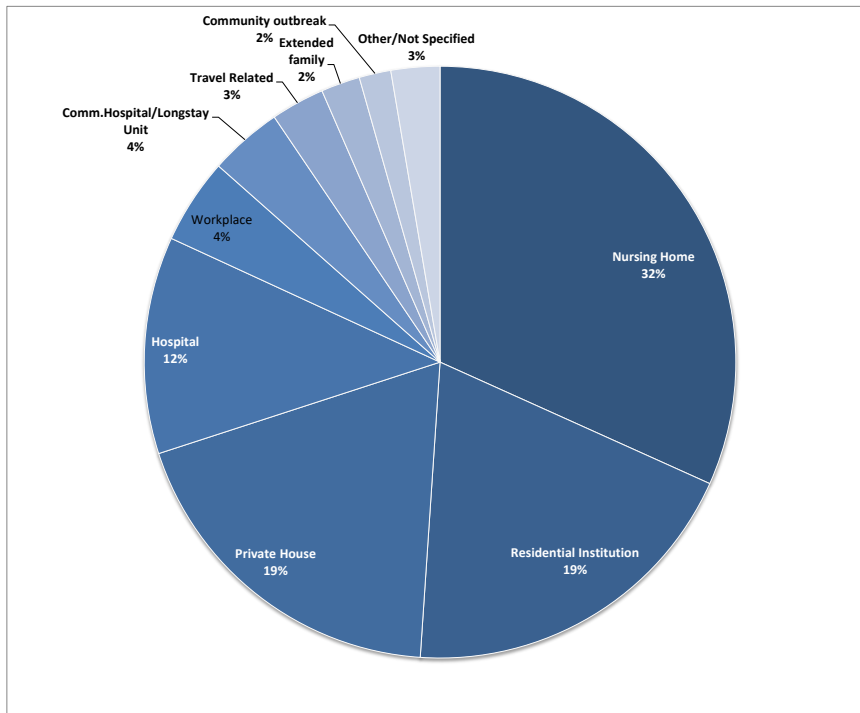
Table 1: Overview of Covid-19 Cases and Deaths, April-May 2020

| | 10-Apr-20 | 08-May-20 | Numeric Increase |
|---|--------------|--------------|------------------|
| Total Confirmed Cases | 8,089 | 22,541 | 14,452 |
| Rate Per 100,000 of the Population | 164 | 458 | 294 |
| Total Deaths | 287 | 1,429 | 1,142 |
| Rate Per 100,000 of the Population | 6 | 29 | 23 |
| Hospital Statistics* | | | |
| Number Hospitalised | 1,777 | 2,986 | 1,209 |
| <i>Of which</i> | | | |
| <i>Number Admitted to ICU</i> | <i>261</i> | <i>383</i> | <i>122</i> |

Source: Department of Health (2020); HSE (2020)*Note: Hospital statistics measured as of midnight on Friday 10-April and 8-May 2020

Figure 1 shows the share of clusters/outbreaks of Covid-19. As of May 8th, there was a total of 750 Covid-19 clusters – outbreaks of positive cases that are likely to be connected. The greatest proportion of Covid-19 clusters occurred in nursing homes at 32%. This is followed by residential institutions (19%), private households (19%), hospitals (12%), the workplace (4%) and community hospital/long stay units (4%). The lowest proportion of Covid-19 outbreaks occurred in the community (2%), from extended family (2%) and travel related (3%) clusters.

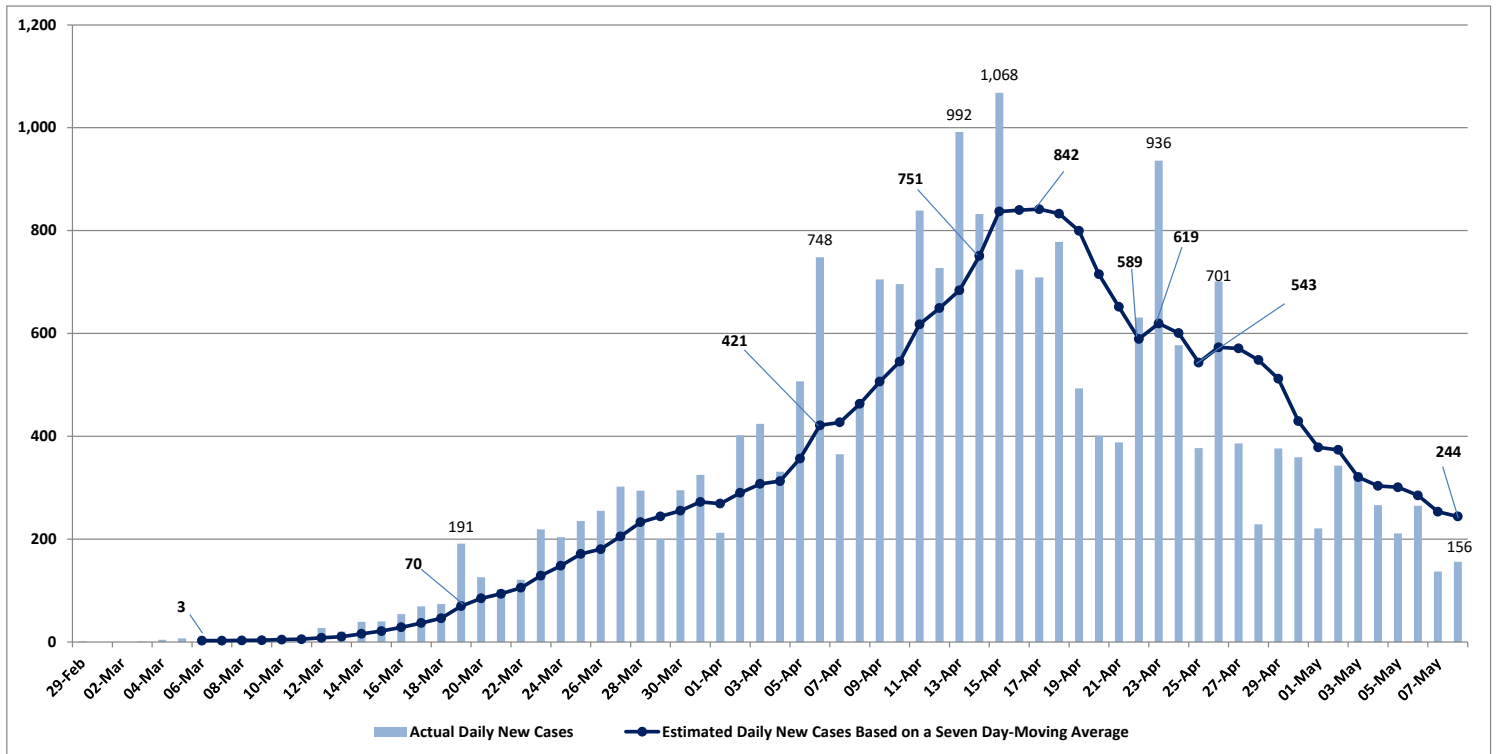
Figure 1: Share of Covid-19 clusters/outbreaks



Source: HPSC (2020)

Figure 2 shows recent trends in the number of daily new cases of covid-19 cases from February to May 2020, expressed daily as well as in a seven day-moving average. The number of newly confirmed cases of covid-19 increased substantially: rising from an average of 3 new cases per day at the beginning of March to a peak of 842 cases in mid-April. Since then, there has been a decline in the number of new confirmed cases: decreasing to 244 new cases at the start of May.

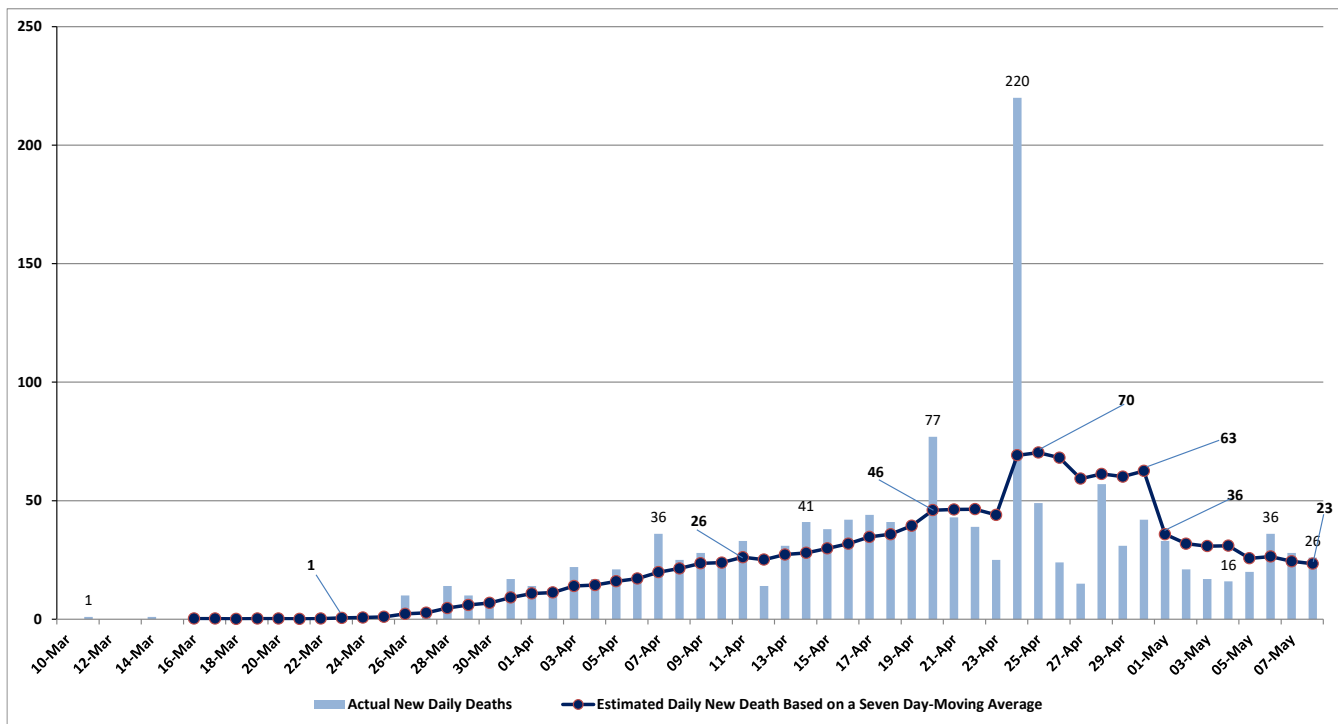
Figure 2: Actual and 7-day-average daily new confirmed covid-19 cases, February to May 2020



Source: Department of Health (2020); HSE (2020)

Figure 3 shows the actual and estimated number of daily new deaths that have occurred from covid-19 (based on a seven day moving average). During the months of March and April, the total number of reported new deaths from covid-19 rose steadily to a peak of 70 deaths in mid-April. The exceptional number of deaths on the 24 April is due to the inclusion of 185 ‘probable’ deaths to the official figures on this date – these represent deaths where a laboratory test has not been done but where a doctor believes a death is associated with COVID-19 (Department of Health, 2020c). However, since then there has been an overall decline in the number of new daily deaths reported: decreasing to 23 deaths on the 8th of May.

Figure 3: Actual and estimated daily new deaths from covid-19 cases (based on a seven day moving average), March to May 2020



Source: Department of Health (2020); HSE (2020) Note: Actual daily figures presented also account for deaths denotified following data validation.

The greatest number of deaths attributed to Covid-19 occurred in community residential settings at 857 or 62% of all reported deaths as of May 6. Included in this figure are 740 deaths which are associated with nursing home residents: representing 54% of the total deaths on this date (Department of Health, 2020).

Covid-19 Cases by Age Group and County

Table 2 compares the total number and rate of Covid-19 Cases by age group. Combined, the older population age-groups are the most affected by Covid-19: with almost 6,000 confirmed cases. As of May 8th, the greatest number of people in the older population infected by Covid-19 were aged 85 years and over at 2,200 cases. By comparison, fewer confirmed cases are evident among those in the younger population aged 0-4 years (120 cases) and 5-14 years (250 cases).

When expressed as per 100,000 of each age group’s population, the 85 years and over age group had the highest rate of confirmed Covid-19 cases at over 2,800 cases per 100,000 people. Conversely, the rate of confirmed Covid-19 cases was substantially lower for the younger population aged 5-14 years at 36 cases per 100,000 people.

There are also important differences in the proportion of those diagnosed with Covid-19 who are hospitalised. About 15% of children aged less than 4 years who tested positive for Covid-19 are hospitalised. This dropped to between 4% and 6% of those aged between

5 and 45 years. However, the rate of hospitalisation increased substantially for those in the older population - to 19% of those aged 85 years and over, and to 32% of those aged between 65-74 years and 75-84 years respectively.

Table 2: Total Number and Rate of Covid-19 Cases by age group

| Age Group | Total Population | Total Cases (n) | Cases Hospitalised (n) | % of Diagnosed Covid-19 Hospitalised by Age Group | Total Cases Per 100,000 of population age group |
|-----------|------------------|-----------------|------------------------|---|---|
| 0-4 | 315,200 | 119 | 18 | 15.1 | 38 |
| 5-14 | 693,700 | 252 | 17 | 6.7 | 36 |
| 15-24 | 618,100 | 1,582 | 65 | 4.1 | 256 |
| 25-34 | 620,000 | 3,707 | 179 | 4.8 | 598 |
| 35-44 | 776,900 | 3,919 | 240 | 6.1 | 504 |
| 45-54 | 661,600 | 4,111 | 404 | 9.8 | 621 |
| 55-64 | 539,700 | 2,958 | 436 | 14.7 | 548 |
| 65-74 | 404,100 | 1,661 | 524 | 31.5 | 411 |
| 75-84 | 214,900 | 2,136 | 676 | 31.6 | 994 |
| 85+ | 77,300 | 2,200 | 425 | 19.3 | 2,846 |

Source: HPSC (2020); Population estimates obtained from CSO (2019). Note: Statistics on Covid-19 cases measured as of midnight on Friday 8th of May

Table 3 compares the total number and rate of Covid-19 deaths by age group. As of May 8th, the highest number of deaths attributed to Covid-19 were among people aged between 65-74 years with over 410 deaths, and those aged 85 years and over at almost 530 deaths. Comparatively, there were far fewer deaths among the younger population aged between 15-54: with the total number of deaths ranging between 2 and 20.

The highest death rate attributed to Covid-19 were among those aged 85 years and over, with over 680 deaths per 100,000 people. For those aged 25-34 years the death rate was substantially lower, at 1 per 100,000 people.

Table 3: Total Number and Rate of Covid-19 Deaths by age group

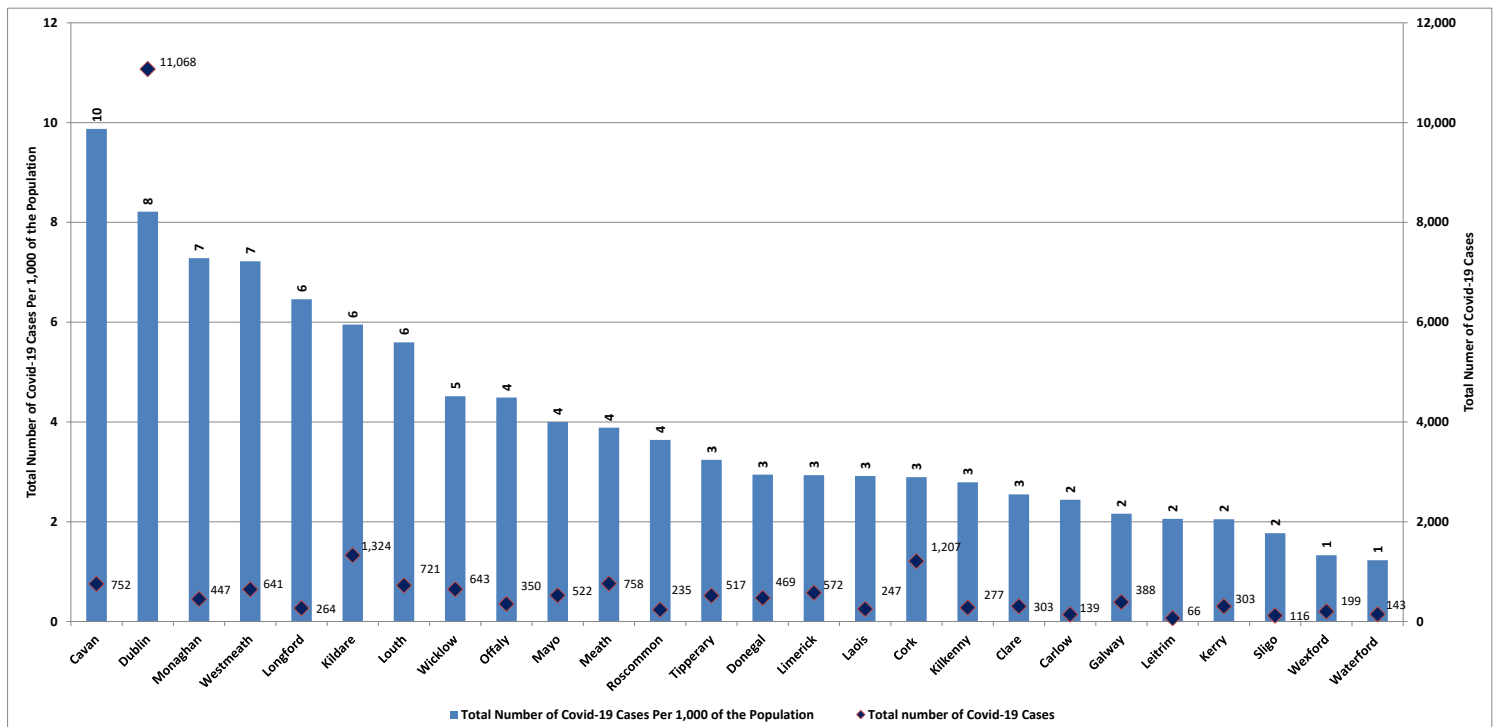
| Age Group | Total Population | Total Deaths (n) | Total Deaths Per 100,000 of population age group |
|-----------|------------------|------------------|--|
| 0-4 | 315,200 | 0 | 0 |
| 5-14 | 693,700 | 0 | 0 |
| 15-24 | 618,100 | 2 | 0 |
| 25-34 | 620,000 | 5 | 1 |
| 35-44 | 776,900 | 10 | 1 |
| 45-54 | 661,600 | 21 | 3 |
| 55-64 | 539,700 | 51 | 9 |
| 65-74 | 404,100 | 176 | 44 |
| 75-84 | 214,900 | 411 | 191 |
| 85+ | 77,300 | 527 | 682 |

Source: HPSC (2020). Note: Statistics on Covid-19 cases measured as of midnight on Friday 8th of May

Figure 4 shows the total number of confirmed Covid-19 cases by county. As of 8 May, Dublin had the highest number of reported Covid-19 cases at just over 11,000. This county was followed by Kildare (1,324), Cork (1,207) and Meath (758). The counties with the lowest number of confirmed cases of Covid-19 were Leitrim (66); Sligo (116) and Carlow (139).

When expressed per 1,000 of each county’s population, Cavan had the highest rate of reported cases in the country: with 10 per 1,000 people infected by Covid-19. High rates of confirmed Covid-19 cases were also evident in Monaghan at 7 and Dublin at 8 per 1,000 people. By comparison, the lowest rate of confirmed Covid-19 cases were Waterford and Wexford, with 1 per 1,000 people infected with Covid-19 respectively.

Figure 4: Total Number and Rate of Covid-19 Cases by County



Source: HPSC (2020); Population estimates for each county obtained from CSO (2016). Note: Statistics on Covid-19 cases measured as of midnight on Friday 8th of May

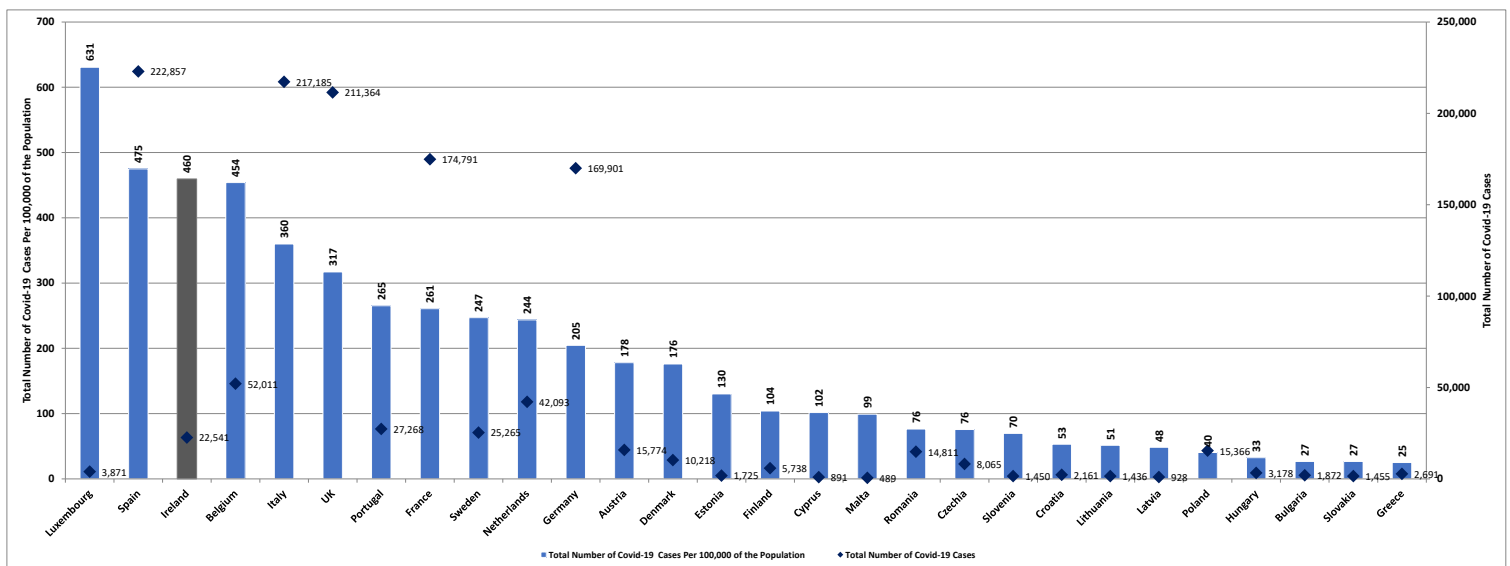
Covid-19: Ireland in a EU comparative context

At the start of May, the total number of reported Covid-19 cases reached 1.3 million and the total number of deaths had increased to 145,000 across the EU Member States. It is important to note that the comparative data presented below should be interpreted with caution due to the differences between countries in testing rates and procedures. Figure 5 shows the total number of confirmed cases of Covid-19 across the EU-28 Member States. At this time, Spain had the highest number of Covid-19 cases at almost 223,000 and was followed by Italy (217,000), UK (211,000), France (175,000) and Germany

(170,000). Ireland had the tenth highest number of reported Covid-19 cases: with over 22,500 people infected. Malta had the lowest number of confirmed cases at 489.

Notwithstanding, there are significant differences in the regional distribution of the Covid-19 pandemic when the number of reported cases is expressed per 100,000 of each EU MS population. Luxembourg had the highest rate of covid-19 cases at 630 per 100,000 people and was followed by Spain (475), Ireland (460), Belgium (450), Italy (360) and the UK (317). The rate of Covid-19 cases was lowest in Greece at 25 per 100,000 people.

Figure 5: Total Number and Rate of Covid-19 Cases across EU-28 Member States

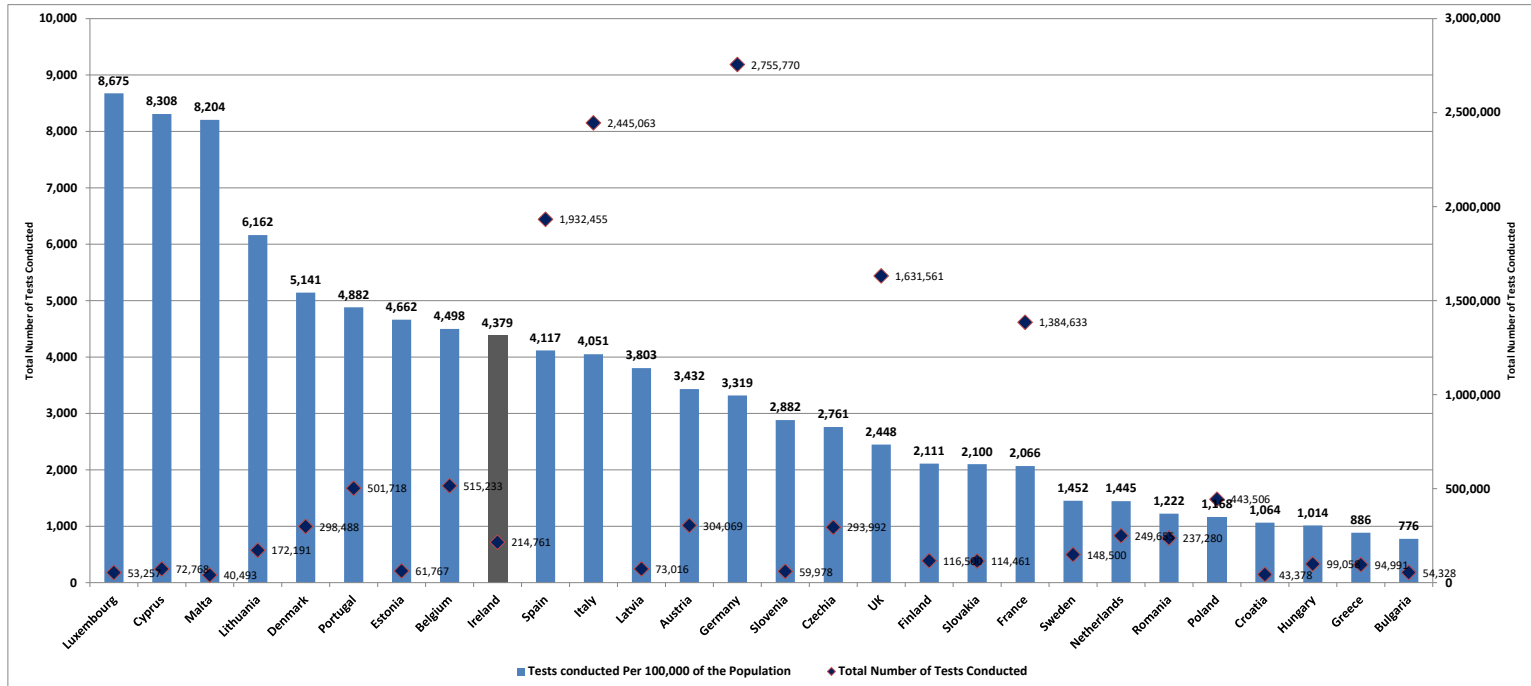


Source: Worldometer (2020); John Hopkins University & Medicine (2020). Population estimates obtained from Eurostat (2020). Note: statistics on Covid-19 cases as of 8 May 2020

Figure 6 shows the total number and rate of Covid-19 testing by EU Member State. Germany had the highest number of Covid-19 tests in the EU-28 at over 2.7 million and was followed by Italy (2.4m), Spain (1.9m), UK (1.6m) and France (1.4m).

As of 8 May, Luxembourg had the highest rate of tests for Covid-19 at almost 9,000 per 100,000 people and was followed by Cyprus and Malta at 8,000 tests respectively. Ireland had the ninth highest rate of Covid-19 tests in the EU-28 at 4,000 tests per 100,000 people. The EU MS with the lowest rate of Covid-19 testing was Bulgaria at 780 tests and Greece at 890 per 100,000 people.

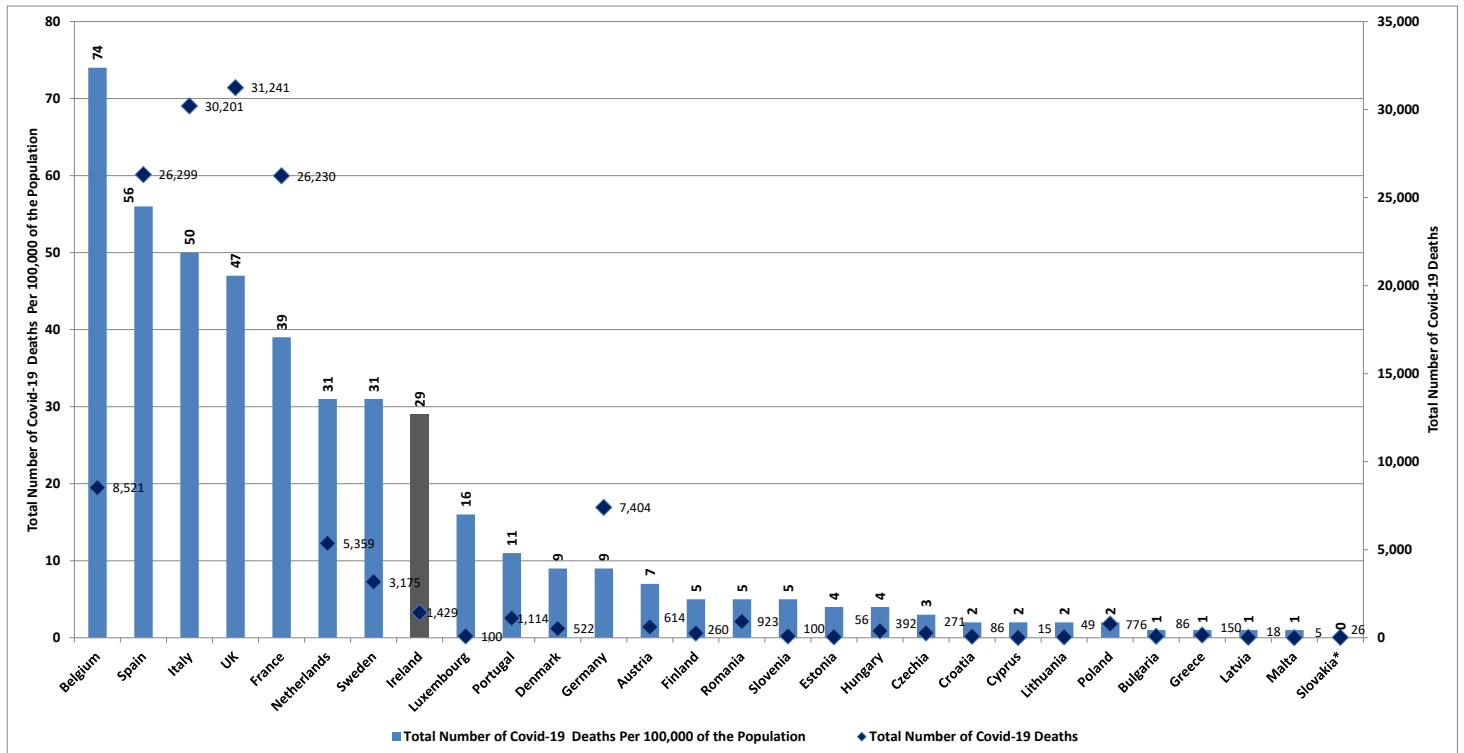
Figure 6: Total Number and Rate of Covid-19 Tests by EU-28 Member State



Source: Worldometer (2020); Population estimates obtained from Eurostat (2020). Note: statistics on Covid-19 tests as of 8 May 2020

Figure 7 shows the total number and rate of deaths attributed directly to Covid-19 by EU MS. In nominal terms, the UK recorded the highest number of deaths at over 31,000 and was followed by Italy (30,000), Spain (26,000) and France (26,000). The lowest number of deaths caused by Covid-19 was in Malta with 5 deaths at this time.

Figure 7: Total Number and Rate of Covid-19 Deaths across EU-28 Member States



Source: Worldometer (2020); Population estimates obtained from Eurostat (2020). Note: statistics on Covid-19 deaths as of 8 May 2020. *Slovakia’s death rate is 5 per 1m people in its population

As of May 8, Belgium recorded the highest rate of Covid-19 deaths among its population in the EU-28 at 74 deaths per 100,000 people. This is followed by a rate of 56 in Spain, 50 in Italy and 47 deaths per 100,000 people in the UK. Ireland had the eighth highest rate of Covid-19 deaths in the EU-28 at 29 deaths per 100,000 people. The lowest rate of Covid-19 deaths was in Malta, Latvia, Greece and Bulgaria at 1 death per 100,000 people respectively.

It is important to note that the differences in death rates by country also relate to the reporting methods applied. While some EU MS are only counting confirmed deaths in hospitals, in countries such as Belgium potential deaths in nursing homes are also included – even in the event of Covid-10 not being confirmed as a cause of death. This in turn may explain the higher death rate in Belgium compared to other EU MS.

References

Central Statistics Office (2016) Population 2011 to 2016 by Age Group, Sex, County and City and Census Year [online] available at:

<https://statbank.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=E2022&PLanguage=0>

Central Statistics Office (2019) *Population Estimates (Persons in April) by Age Group, Sex and Year* [online] available at:

<https://statbank.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0>

Department of Health (2020) *Statements from the National Public Health Emergency Team* [February-May 2020] [online] available at:

<https://www.gov.ie/en/publications/?organisation=department-of-health>

Eurostat (2019) *Population on 1 January by age and sex* [online] available at:

https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjan&lang=en

Health Protection Surveillance Centre (2020) *Epidemiology of COVID-19 in Ireland* [online] available at: <https://www.hpsc.ie/a->

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Health Service Executive (2020) *Covid-19 Updates* [online] available at:

<https://www.hse.ie/eng/services/news/newsfeatures/covid19-updates/covid19-updates.html>

John Hopkins University & Medicine (2020) *COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE)* [Online] available at:

<https://coronavirus.jhu.edu/map.html>

Worldometer (2020) *COVID-19 Coronavirus Pandemic* [online] available at:

<https://www.worldometers.info/coronavirus/>