Deaths involving coronavirus (COVID-19) in Scotland

Week 15
(6 to 12 April 2020)

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This statistical report details the provisional number of deaths associated with coronavirus (COVID-19) and the total number of deaths registered in Scotland, for weeks 1 to 15 of 2020.
Deaths involving coronavirus (COVID-19) up to 12th April 2020

Summary

As of 12th April, 962 deaths had been registered which mentioned COVID-19

The first mention of COVID-19 in a death registration was in the week beginning 16th March 2020.

Number of deaths varies by sex and age group

Age group 75-84 had most deaths, followed by 85+ and 65-74.

43.5% of all deaths were female, and 56.5% were male.

Deaths vary by location

Most deaths occur in hospitals (62.0%). Just under 1 in 4 deaths happen in care homes (24.6%). Over 1 in 10 deaths occur at home or non-institutional settings (13.3%).
Key Findings

Deaths involving COVID-19

- As at 12 April, there have been a total of 962 deaths registered in Scotland where the novel coronavirus (COVID-19) was mentioned on the death certificate. The first mention of COVID-19 in a registered death certificate was the week beginning 16th March 2020.
- Of the total number of deaths registered in week 15 (6 to 12 April), there were 608 where COVID-19 was mentioned on the death certificate (30.9% of the total) an increase of 326 from the previous week (30 March – 5 April).
- A quarter (25%) of COVID-19 deaths registered to date related to deaths in care homes. 62% of deaths were in hospitals and 13% of deaths were at home or non-institutional settings.
- Almost 70% of all deaths involving COVID-19 to date were of people aged 75 or over.
- This number is different from the count of deaths published daily on the gov.scot website, because the latter is based on deaths of those who have tested positive for COVID-19. The NRS figures published here include all deaths where COVID-19 (included suspected cases) was mentioned on the death certificate.

All Deaths

- The provisional total number of deaths registered in Scotland in week 15 of 2020 (6 to 12 April) was 1,969. This is an increase of 225 from the number registered in the previous week.
- The average number of deaths registered in the corresponding week over the previous five years was 1,100. This means that the overall number of deaths in week 15 of 2020 (6 to 12 April) was much higher than the average for this time of year.

Figure 1: Cumulative number of deaths involving COVID-19 by date of registration, Scotland, 2020

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Why are the NRS number of deaths different from the Scottish Government daily updates?

Put simply - they are two different measures that each have a valuable role in helping to monitor the number of deaths in Scotland involving COVID-19.

Scottish Government daily updates
These are provided by Health Protection Scotland (HPS) and count:
• all people who have had a positive test for COVID-19 and died within 28 days.

These are important because they are available earlier, and give a quicker indication of what is happening day by day and are broadly comparable with the figures released daily for the UK by the Department for Health and Social Care.

NRS weekly death totals
The figures in this publication count:
• all deaths where COVID-19 was mentioned on the death certificate by the doctor who certified the death. This includes cases where the doctor noted that there was suspected or probable coronavirus infection involved in the death.

As a result these weekly totals are likely to be higher than the daily figures - because the daily updates only include those who tested positive for the virus.

Using the complete death certificate allows NRS to analyse a lot of information, such as location of death and what other health conditions contributed to the death. We will start publishing more detailed breakdowns of the figures as soon as possible.

HPS Statistics COVID-19 Deaths (Positive tests)
- Person had been tested for COVID-19 and test is positive
- HPS matches electronic death registration records (NRS) to data on people who have tested positive to identify deaths
- HPS include this person in their count of people who have died with COVID-19

NRS Statistics COVID-19 Deaths (all mentions - confirmed or suspected)
- Person dies
- Death certificate states coronavirus 2019 was relevant to the cause of death
- Death certificate states 'presumed or 'suspected' coronavirus 2019 was relevant to cause of death
- NRS add both cases into count of people who have died

Therefore both NRS and HPS will include people who died and had a positive COVID-19 test. NRS statistics will additionally include those people who have died and whose death is suspected to be related to COVID-19 (but for whom there was no COVID-19 test performed or results available at the time of death).
Figure 2 illustrates the differences between the two sets of figures. In the early stages, the figures were closely aligned but over time they have diverged with the NRS figure higher than the HPS figure. This is due to the inclusion of probable and suspected COVID deaths whereas the HPS figure only includes deaths of those who had tested positive for the virus.

It should be noted that the apparent flattening of these curves over weekends are caused by a limited number of death registrations taking place at weekends and are not an indication that the curve has reached a plateau. Figures recorded on weekends will be artificially low and the numbers are likely to rise steeply at the beginning of the week as registrars catch up with the backlog of death registrations.

Figure 2: Cumulative number of deaths involving COVID-19 in Scotland using different data sources 2020

How are different age groups being impacted?

- Almost 70% of all deaths involving COVID-19 to date were of people aged 75 or over.
- The age distribution of COVID-19 deaths is slightly younger than all deaths with the greatest proportion of deaths in people age 75-84 (37.3%) compared with age 85+ (34.3%) for all deaths.

What are the number of deaths broken down by sex?

- Of all deaths to date involving COVID-19, 56.5% were male (544) and 43.5% were female (418).
How do the number of deaths differ across Scotland?

- In week 15 (6 to 12 April), the Health Board area with the highest number of deaths involving COVID-19 was Greater Glasgow and Clyde with 193 deaths (also the highest number of COVID-19 deaths to date with 315).
- The Health Board area with the highest rate of COVID-19 deaths to date was also Greater Glasgow and Clyde with 2.7 deaths per 10,000 population.
- Western Isles was the only health board area with no deaths to date involving COVID-19.
Figure 4: Deaths involving COVID-19 registered between weeks 1 and 15 (year to 12th April), 2020 by Health Board of residence, Scotland\(^1\)

Rates per 10,000 population are based on population in mid-2018 as these are the most recent population estimates at the time of publication.
How do these weekly death figures compare with those produced by ONS (for England and Wales)?

The figures are produced using same definition as those published by the ONS for England and Wales, so are broadly comparable.

One minor difference is how the registration weeks are defined:
- Weeks used by ONS (for England and Wales) run from Saturday to Friday
- NRS weeks (for Scotland) run from Monday to Sunday (this is the ISO8601 standard week).

In practice, this is likely to have very little impact on comparisons as there are currently very few registrations that take place on Saturdays and Sundays.

You can view the latest figures from ONS for England and Wales here and the latest figures from NISRA for Northern Ireland are available here. Please note that the figures for the rest of the UK are a week behind those for Scotland.

Figure 5: Deaths by week of registration, Scotland, 2020
Figure 5 shows that in 2020 up to week 13, the number of weekly registered deaths in Scotland had been broadly in line with the five year average.

In week 15 (6 to 12 April), the number of registered deaths from all causes were 79% (869 deaths) higher than the five year average. Further analysis of these excess deaths by cause of death is being carried out and will be included in a future publication.

Deaths involving COVID-19 as a percentage of all deaths has increased from 16% in week 14 to 31% in week 15.

**Where have COVID-19 deaths taken place?**

Of the 962 deaths involving COVID-19 which were registered to date, a quarter (25%) related to deaths in care homes. 62% of deaths were in hospitals and 13% of deaths were at home or non-institutional settings.
Why focus on date of registration rather than the actual date of death?

The figures throughout this report are based on the date a death was registered rather than the date the death occurred. When someone dies, their family (or a representative) have to make an appointment with a registrar to register the death. Legally this must be done within 8 days, although in practice there is, on average, a 3 day gap between a death occurring and being registered.

This therefore means that the latest trend in COVID-19 deaths by date of registration (the NRS headline measure) has a lag of around 3 days when compared with the figures on date of death. Figure 6 below illustrates this – of the 354 deaths which were registered by 5 April, all had all occurred by 1 April.

This publication includes all deaths which were registered by 12 April. There will, however, be deaths which occurred before 12 April but were not yet registered. In order to include a more complete analysis based on date of death, we need to wait an additional week to allow the registration process to fully complete. The trend based on date of death therefore only includes deaths which occurred by 5 April as the vast majority of these have now been registered – so although this gives a more accurate picture, it takes more time to compile. However, they are valuable statistics and provide a clearer understanding of the impact and progress of COVID-19, when used alongside the other available daily and operational data.

In Summary

The death count based on date of registration is more timely but is incomplete.

The death count based on date of death is more complete and gives a more accurate trend on the progress of the virus, but less timely (a one week delay compared to date of registration figures).
Things you should know about how these statistics are compiled

Figures are based on the date of registration. In Scotland deaths must be registered within 8 days but in practice, the average time between death and registration is around 3 days.

Figures are allocated to weeks based on the ISO8601 standard. Weeks begin on a Monday and end on a Sunday. Often weeks at the beginning and end of a year will overlap the preceding and following years (e.g. week 1 of 2020 began on Monday 30 December 2019) so the weekly figures may not sum to any annual totals which are subsequently produced.

Deaths involving COVID-19 are defined as those where COVID-19 is mentioned on the death certificate, either as the underlying cause of death or as a contributory cause. Cause of death is coded according to the International Statistical Classification of Diseases and Related Health Conditions 10th Revision (ICD-10). The relevant codes included in this publication are U07.1 and U07.2.

Figures include deaths where ‘suspected’ or ‘probable’ COVID-19 appears on the death certificate.

Data are provisional and subject to change in future weekly publications. The data will be finalised in June 2021.
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