Public Health Scotland COVID-19 Statistical Report
As at 4 May 2020
Introduction

On 1 March 2020, the first person in Scotland was tested positive for COVID-19. On the 17 March NHS Scotland was placed in emergency measures by the Cabinet Secretary. Schools have been closed since 20 March and the country has been in lockdown since 23 March.

Since the start of the outbreak Public Health Scotland (PHS) has been working closely with Scottish Government and health and care colleagues in supporting the surveillance and monitoring of COVID-19 amongst the population.

The primary focus of this report is a look at some of the demographic characteristics (age, sex, deprivation) of people affected by the virus. It also looks at some of the wider impact of the virus on the healthcare system, comparing recent trends in activity with historic norms.

There is a large amount of data being regularly published regarding COVID-19 (for example, Coronavirus in Scotland – Scottish Government and Deaths involving coronavirus in Scotland – National Records of Scotland). This report complements the range of existing data currently available.

The coronavirus pandemic is a rapidly evolving situation. This report provides an analysis of the data up to the 4 May 2020. Future reports will provide further data and analysis to contribute to the evidence base around the outbreak.
Main Points

- As at 4 May 2020, there have been 12,266 confirmed COVID-19 cases, equating to 225 confirmed cases per 100,000 population.

- 7,324 (60%) of confirmed cases, as at 4 May 2020, were female; 4,914 (40%) were male.

- The number of confirmed cases increases with age. For those aged 75+ the rate is 816 per 100,000 compared with 273 per 100,000 for those aged 45-64, a 3-fold difference.

- As at 3 May 2020, 495 confirmed COVID-19 patients have been treated in an Intensive Care Unit.

- After initially increasing to around 2,300 per day, the number of COVID-19 related contacts with NHS 24 has decreased to around 1,100.

- On average 180 people have attended the COVID-19 assessment centres each day, over the last two weeks. *(Please note NHS Grampian data is not included)*

- People from the most deprived areas are twice as likely to contact NHS 24, the COVID-19 hubs and assessment centres than those from the least deprived areas.

- There has been a significant reduction in A&E (56%) and hospital admissions (42%) since the lockdown came into place.
Results and Commentary

The analysis within this report is based on the period to 4 May 2020.

COVID-19 Confirmed Cases

The first part of this report contains information on cases of COVID-19 that have been confirmed by laboratory testing.

The total number of people within Scotland who have, or have had COVID-19, since the coronavirus outbreak began is unknown. The number of confirmed cases is likely to be an underestimate of the total number who have, or have had, COVID-19. This is because there are affected persons in the population infected with the virus, many of whom display mild symptoms and who do not require specialist hospitalised treatment. These people are not likely to have had a laboratory test for COVID-19.

For the reporting period of this report, those tested are mainly patients who are, or have been, in hospital. It also includes other groups of people such as key workers and some testing carried out in care homes. The number of confirmed cases includes people from all those groups who have been tested.

As the number of people being tested for COVID-19 increases, the pattern observed in the data within this report may change.

As at 4 May 2020;

- There have been **12,266** people in Scotland who have tested positive for COVID-19 since the start of the outbreak.

- This equates to **225** people per 100,000 population having tested positive for COVID-19.

The number of newly confirmed COVID-19 cases, on both a daily and cumulative basis, are shown in Figure 1 and Figure 2 respectively. This data is monitored and published daily on the Scottish Government Coronavirus website (https://www.gov.scot/coronavirus-covid-19/). The drop in the number of confirmed cases at weekends likely reflects that laboratories are doing less tests at the weekend.

*Note that the number of confirmed cases shown for each day may differ slightly from data published on the Scottish Government website. This is because the data below has some cases added retrospectively and assigned to days based on the most up to date records. This has no impact on the overall number of confirmed cases.*
Figure 1: Daily number of confirmed cases

Note: Date refers to the date the sample was received into the HPS Surveillance System.

Figure 2: Cumulative number of confirmed cases

Note: Date refers to the date the sample was received into the HPS Surveillance System.
Age and sex profile of confirmed cases

- Table 1 shows the number of confirmed cases by age and sex as at 4 May 2020. 60% of confirmed cases are female; 40% of confirmed case are male.
- One in four confirmed cases (24%) were in the 15-44 age group; 1 in 3 (33%) in the 45-64 age group and four in ten (41%) aged 65 years and over.
- 36 children aged under 5 years had tested positive for COVID-19.

Table 1: Total number of confirmed cases by age group and sex as at 04 May 2020

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>Rate per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 4</td>
<td>15</td>
<td>20</td>
<td>36</td>
<td>13</td>
</tr>
<tr>
<td>5 - 14</td>
<td>27</td>
<td>30</td>
<td>57</td>
<td>10</td>
</tr>
<tr>
<td>15 - 44</td>
<td>905</td>
<td>2074</td>
<td>2,990</td>
<td>146</td>
</tr>
<tr>
<td>45 - 64</td>
<td>1,612</td>
<td>2,483</td>
<td>4,108</td>
<td>274</td>
</tr>
<tr>
<td>65 - 74</td>
<td>731</td>
<td>534</td>
<td>1,267</td>
<td>219</td>
</tr>
<tr>
<td>75 - 84</td>
<td>967</td>
<td>957</td>
<td>1,924</td>
<td>568</td>
</tr>
<tr>
<td>85+</td>
<td>651</td>
<td>1,226</td>
<td>1,878</td>
<td>1,478</td>
</tr>
<tr>
<td>All Age groups</td>
<td>4,914</td>
<td>7,324</td>
<td>12,266</td>
<td>225</td>
</tr>
</tbody>
</table>

Note: Row and Columns do not add up due to 34 cases of unknown sex or age.

Among those aged 15-44 years, more than twice as many females than males have been confirmed as having COVID-19. There are likely to be a number of reasons behind this difference, including the testing of NHS and care home staff who are predominately female.

Confirmation of COVID-19 was more common in older than younger age groups. Figure 3 shows the increasing risk with age. As at 4 May 2020, 816 per 100,000 people aged over 75 years were confirmed as having COVID-19. This contrasts with a rate of 274 per 100,000 for those aged 45-64 years, a 3-fold difference.
Figure 3: Confirmed case rate per 100,000 population by age group and sex as at 4 May 2020
Deprivation profile of confirmed cases

Figure 4 shows the number of confirmed COVID-19 cases by deprivation category from the most deprived 20% of the population to the least deprived 20% of the population. While there is no evidence of an overall trend over deprivation groups, the highest proportion of confirmed cases (23%) was accounted for by the most deprived 20% of the population. There are a number of factors that could affect the trend in confirmed cases by deprivation, including the geographical spread of the infection and the underlying health of the population. Further, the deprivation profile of those people tested who are not patients (e.g. key health and care workers), may differ from those that are patients and this will be reflected in the data.

Figure 4: Number of confirmed cases across deprivation categories
Patients in Intensive Care

COVID-19 varies in severity from very mild symptoms through to those requiring hospital admission and the most ill who require intensive care treatment and supported ventilation. This section looks at the age and sex profile of those patients who have been admitted into Intensive Care Units (ICU).

Note that this analysis does not include patients in High Dependency Unit (HDU) wards. As this data becomes available, this will be further analysed and published. Also, this analysis only contains adult ICU information.

A total of 495 COVID-19 patients had been admitted into ICU with some staying for more than two weeks.

Table 2 shows the age and sex profile of patients who are, or have been, in ICU (up to 03 May 2020) with a confirmed laboratory test for COVID-19.

Most ICU patients to date have been in the 45 – 64 years age group (272; 55%).

Table 2: Number of Confirmed COVID-19 patients who have been admitted to ICU, by age group and sex

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 44</td>
<td>29</td>
<td>16</td>
<td>45</td>
</tr>
<tr>
<td>45 - 64</td>
<td>183</td>
<td>89</td>
<td>272</td>
</tr>
<tr>
<td>65 - 74</td>
<td>111</td>
<td>31</td>
<td>142</td>
</tr>
<tr>
<td>75 - 84</td>
<td>25</td>
<td>7</td>
<td>32</td>
</tr>
<tr>
<td>85+</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td><strong>All Age groups</strong></td>
<td><strong>350</strong></td>
<td><strong>145</strong></td>
<td><strong>495</strong></td>
</tr>
</tbody>
</table>

1 Mar 2020 to 3 May 2020.
Anyone aged <15 has been excluded from this analysis.

The 65-74 age group had the highest rate of admission into ICU and more males than females had been admitted to ICU for treatment, accounting for 71% of patients. The age distribution for COVID-19 ICU population is not dissimilar to the age distribution seen in other countries. Critically ill older patients may also receive less invasive life support treatments and these will often be delivered outwith ICUs.

A report by the Scottish Intensive Care Audit Group (SICSAG) is being published shortly and this will provide a more detailed analysis of patients being treated in intensive care units.
Figure 5: Patients in ICU: rate per 100,000 population by age group and sex as at 3 May 2020

1 Mar 2020 to 3 May 2020.
Anyone aged <15 has been excluded from this analysis.
COVID-19 Activity in the Community

Before the COVID-19 outbreak, when GP Practices and Dentists are open during the day, NHS 24’s 111 service generally only advises self-care or for people to contact their GP, unless it is immediately life threatening, in which case they contact a 999 Ambulance. When GP Practices and Dentists are closed, NHS 24 can direct people to Primary Care Out of Hours services for further clinical input, which could involve a Nurse or GP visiting the person at home or arranging attendance at a Primary Care Emergency Centre.

In response to COVID-19, NHS 24 adapted their service provision. People who are concerned about COVID-19, or who experience symptoms, are advised to seek advice from NHS Inform website, the COVID-19 advice helpline or to contact NHS 24’s 111 service if their symptoms worsen and they need clinical advice, following which they may be;

- provided with self care advice or be asked to contact their own GP
- referred to a COVID-19 community hub for further clinical telephone triage, they may then be asked to attend assessment centre or receive a home visit by a Nurse or Doctor
- referred directly to acute services via the Scottish Ambulance Service or advised to attend hospital, depending on their symptoms.
COVID-19 Contacts with NHS 24 111 and COVID-19 Advice Helpline

Figure 6 shows the trends in contacts with the 111 service where COVID-19 has been recorded as the reason for a person contacting the service, and also the number of calls to the dedicated COVID-19 advice helpline (this COVID-19 advice helpline information is published daily by the Scottish Government).

There are three distinct peaks in calls to the helpline: one when it first opened (at a similar time as the announcement that schools were to close), one the following week when lockdown was announced and finally a smaller peak at the end of March. Since then calls have been steadily falling, with lows at the weekends indicating a lower caller demand.

COVID-19 contacts with the 111 service saw a sharp increase prior to the opening of the COVID-19 helpline. From the 23 March 2020, the 111 service now directs people with COVID-19 symptoms to the COVID-19 community hubs for further triage. Contacts to NHS 24 (Monday to Friday 8am – 6pm) which are non COVID-19 related are now referred directly to the patient’s GP. From the 28 March to the 9 April there were over 2,000 COVID-19 daily contacts with the 111 service, which have since reduced to around 1,200-1,300 per day.

Figure 6: Number of NHS 24 111 COVID-19 Contacts and COVID-19 Advice Helpline calls
Figure 7 shows the rate per 100,000 population of NHS 24 calls related to COVID-19. The under 5 years age group had a rate of contact noticeably higher than the other age groups.

**Figure 7: Rates of NHS 24 111 COVID-19 contacts, by age group**
NHS 24 111 COVID-19 contacts by deprivation category

The level of COVID-19 calls to NHS 24 111 service by deprivation category is shown in Figure 8. There is a strong association between contacting NHS 24 and deprivation. More than one in four (28%) people who contacted this service were living in the most deprived areas in Scotland. Figure 8 shows that contacts with the 111 service were twice as likely to have been made by those living in the most deprived areas.

Figure 8: Number of NHS 24 111 COVID-19 contacts, by deprivation category
COVID-19 Community Hub and Assessment Centres

People may have multiple consultations with a COVID-19 Community Hub and Assessment Centre depending on their pathway of care. For example, upon referral by NHS 24 (or other services) they will be clinically triaged over the telephone by the community hub and they may then go on to have a consultation in person at an assessment centre; this would result in one person having two consultations.

Between the 23 March and 3 May 46,945 people had a total of 55,860 consultations with COVID-19 Community Hubs and Assessment Centres. (Data excludes NHS Grampian)

- Overall COVID-19 related activity was highest on the 7 April with 1,839 consultations
- 86% of all consultations were advice calls.
- 59% of all consultations were with females.
- 28% of all consultations were with people living in the most deprived areas in Scotland.
COVID-19 Community Hub and Assessment Centre, Consultations by Type

Figure 9 shows COVID-19 activity by day of the week broken down by consultation type. A person may contact the Community Hub for advice and then may be asked to come to the Assessment Centre or have a home visit. The number of consultations peaked on 5 April with around 1,800 across all types of consultations. Since then there have been around 1,200 consultations per day.

Figure 9: Daily COVID-19 COVID Hubs and Assessment Centre Consultations

Please note figures do not include NHS Grampian as data could not be extracted from their IT system at time of writing
COVID-19 Community Hubs and Assessment Centres, Individuals by Age Group

Figure 10 shows the number of people per 100,000 population accessing COVID-19 Community Hubs and Assessment Centres. The age groups with the highest rate of contact were the under 5’s years and those aged 85 years and over. This pattern mirrors pre COVID-19 contacts with urgent care services, with the highest rates of access in the youngest and oldest age groups.

**Figure 10: Number of individuals contacting COVID-19 Hubs and Assessment Centres per 100,000 population, by age group**

Please note figures do not include NHS Grampian as data could not be extracted from their IT system at time of writing.
COVID-19 Community Hub and Assessment Centre, by Deprivation category

Figure 11 shows that contact with the Community Hubs and Assessment Centres were twice as likely to have been made by people living in the most deprived areas.

Figure 11: COVID-19 Community Hubs and Assessment centres, by deprivation category

Please note figures do not include NHS Grampian as data could not be extracted from their IT system at time of writing.
Wider Impact of COVID-19 on A&E and Hospitals Admissions

The response to the COVID-19 pandemic is likely to have a wider impact on health and care as a result of the lockdown, economic pressures and changes to health services. This section focuses on data that are currently available to help understand this impact, including attendances at A&E, NHS 24, GP Out of Hours and admissions into hospital. This information includes both COVID-19 related and non-COVID-19 related activity. More detailed information is available at NHS Board and Health and Social Care Partnership (HSCP) level.

Accident & Emergency attendances

Across Scotland, A&E services would normally see around 25,000 attendances per week. However, following the introduction of lockdown measures on the 18 March, weekly attendances saw a rapid decrease of 56% to around 11,000 (Figure 12). The number of attendances is slowly starting to increase, with attendances for the week ending 26 April reaching 15,000.

This overall reduction has a number of possible causes, such as fewer traffic and workplace related injuries or reluctance to use A&E services during the lockdown period.

Figure 12: Weekly A&E attendances across NHS Scotland
Admissions to Hospital

Data on hospital admissions normally comes from the SMR01 dataset, which is the official source for published data on hospital admissions. However, there is a time lag in these data being submitted and therefore cannot be used to monitor the impact of COVID-19 at this time. The data below use the RAPID dataset (Rapid And Preliminary Inpatient Data), a more limited but up to date management information flow which provides broadly comparable figures on numbers of admissions. Figure 13 shows the trend in the number of admissions to hospital at a Scotland level, based on the RAPID data. For comparison, the figure also shows average numbers of admissions over the two previous years. The substantial (42%) reduction in admissions since early March is evident.

Planned admissions to hospital started to decrease on the 16 March as hospitals began to create capacity to cope with anticipated pressure from COVID-19. There has been about a 30% reduction in the level of emergency admissions and a 60% reduction in the level of planned admissions. More detailed information is available.

Figure 13: Number of hospital admissions across Scotland, compared with the average over the previous two years (Source: RAPID dataset)
Calls to the NHS 24 111 service

Figure 14 shows that calls to NHS 24 have increased in the latter part of March. It also highlights the increase in activity over the Easter holiday period compared with the average activity in 2018 - 2019.

**Figure 14: Number of calls to the NHS 24 111 Service, compared with 2018-19 average**
Primary Care Out of Hours service

Figure 15 shows the OOH activity mirrored the previous two-year average until Monday 23 March when the COVID-19 community hubs and assessment centres opened. People in the out of hours period with COVID-19 symptoms would not attend an out of hours service but be directed towards a COVID-19 community hub and assessment centre. This helps to explain the reduction we can see compared with the previous two year average.

**Figure 15: Number of consultations with Primary Care OOH services compared with previous years**
Contact
Public Health Scotland
phs.statsgov@nhs.net

Further Information
COVID surveillance in Scotland
Scottish Government
National Records of Scotland

UK and international COVID reports
Public health England
European Centre for Disease Prevention and Control
WHO
International Severe Acute Respiratory Emerging Infection Consortium.

The next release of this publication will be 13 May 2020.

Open data
Data from this publication is available to download from the Scottish Health and Social Care Open Data Portal.
Appendices

Appendix 1 – Background information

In late December 2019, the People’s Republic of China reported an outbreak of pneumonia due to unknown cause in Wuhan City, Hubei Province.

In early January 2020, the cause of the outbreak was identified as a new coronavirus. While early cases were likely infected by an animal source in a ‘wet market’ in Wuhan, ongoing human-to-human transmission is now occurring.

There are a number of coronaviruses that are transmitted from human-to-human which are not of public health concern. However, COVID-19 can cause respiratory illness of varying severity. Currently, there is no vaccine and no specific treatment for infection with the virus.

On the 30 January 2020 the World Health Organization declared that the outbreak constitutes a Public Health Emergency of International Concern.

Extensive measures have been implemented across many countries to slow the spread of COVID-19. In the UK the current recommendations are for everyone to stay at home as much as possible and severely restrict their interactions with others outside the household.

Further information for the public on COVID-19 can be found on NHS Inform.
Appendix 2 – PHS and Official Statistics

About Public Health Scotland (PHS)

PHS is a knowledge-based and intelligence driven organisation with a critical reliance on data and information to enable it to be an independent voice for the public’s health, leading collaboratively and effectively across the Scottish public health system, accountable at local and national levels, and providing leadership and focus for achieving better health and wellbeing outcomes for the population. Our statistics comply with the Code of Practice for Statistics in terms of trustworthiness, high quality and public value. This also means that we keep data secure at all stages, through collection, processing, analysis and output production, and adhere to the ‘five safes’.