Public Health Scotland COVID-19 Statistical Report
As at 10 August 2020
Contents

Introduction ...................................................................................................................................3
Main Points ...................................................................................................................................4
Results and Commentary .............................................................................................................5
    Test and Protect ....................................................................................................................5
    COVID-19 Confirmed Cases ...............................................................................................7
Updated Analysis of COVID-19 Outcomes by Ethnic Group .................................................9
COVID-19 across the NHS .....................................................................................................13
    Wider Impact of COVID-19 ...............................................................................................14
Contact ........................................................................................................................................15
Further Information .....................................................................................................................15
Open data ...................................................................................................................................15
Rate this publication ...................................................................................................................15
    Appendix 1 – Background information ............................................................................16
    Appendix 2 – PHS and Official Statistics .........................................................................17
Introduction

On 1 March 2020, the first person in Scotland was tested positive for COVID-19. On 17 March NHS Scotland was placed in an emergency footing by the Cabinet Secretary. Schools have been closed since 20 March and the country has been in lockdown since 23 March. Scotland entered phase one of easing out of lockdown on Friday 29 May, phase two on Friday 19 June and phase three on Friday 10 July.

Since 15 June 2020, Public Health Scotland publishes the total number of results, positive and negative, carried out across any NHSScotland Laboratories and UK Government Regional Testing Centres.

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.

This report shows the trends of the number of positive COVID-19 tests in Scotland, and looks at some of the wider impacts of the virus on the healthcare system, comparing recent trends in activity with historic norms. Since 17 June 2020 the report includes data on Test and Protect.

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 9 August 2020. Future reports will provide further data and analysis to contribute to the evidence base around the outbreak.

This report also includes an updated analysis of COVID-19 outcomes by Ethnic Group, which was initially published on 15 July.
Main Points

- Between 28 May to 9 August 2020, 1,465 individuals were recorded in the contact tracing software, from which 5,512 contacts have been traced.

- As at 9 August 2020, there have been 19,027 confirmed COVID-19 cases, equating to 348 confirmed cases per 100,000 population.

- Between 1 March 2020 and 5 August 2020, there had been 5,953 admissions to hospital with a laboratory confirmed test of COVID-19.

- As at 9 August 2020, 533 confirmed COVID-19 patients have been treated in an Intensive Care Unit. In the last week there were no patients who have ever been confirmed COVID-19 that were admitted to ICU.

- As at 9 August 2020, 379,133 people in Scotland have tested negative.

- There is clearer evidence of increased risks of serious illness due to COVID-19 in those of South Asian origin.

- There is evidence of an increased risk of hospital admission due to COVID-19 among those of Black, Caribbean or African ethnicity.
Results and Commentary

Test and Protect

On 26 May 2020, the Scottish Government set Test and Protect - Scotland’s approach to implementing the 'test, trace, isolate, support' strategy. This strategy is designed to minimise the spread of COVID-19.

Public Health Scotland is working closely with the Scottish Government and all local NHS Boards to implement ‘Test and Protect’. Since 28 May 2020, once an individual receives a positive result, a team of contact tracers will then gather details on individuals who have been in contact with the person who tested positive. The contact tracers will then proceed to contact these individuals and advise them to isolate.

The data within this report is the number of contacts which are recorded in the contact tracing software. The figures presented below are developmental and may be updated in subsequent publications. A case is generated by a positive test however an individual can have multiple tests, and all positive results are reported to the contact tracing system so that each result can be assessed by the contact tracer and followed up as required. In many cases, there is no follow up for a repeat positive test (because the person was already contact traced when their first positive result was reported). To reflect this, test and protect data now includes details on the number of individuals whose positive test resulted in contact tracing being undertaken. The number of individuals who tested positive is also more comparable with the figures given in the COVID-19 Confirmed Cases section of this report, which reports on new positive cases.

From 28 May to 9 August 2020, the test and protect figures are:

Cases* – 2,225 (of which 2,160 have completed contact tracing)
Individuals** - 1,465
Contacts traced – 5,512

*A case is generated for each positive result with a test date on or after 28 May. This includes tests derived from Scottish laboratories and from UK Government laboratories.

**An individual is a unique person who has had a positive test. An individual can have multiple positive tests which results in multiple cases within the test and protect system. In these figures, each person is only counted once.

Data by NHS Board is presented in Table 1 for the most recent two weeks. Table 1 shows the number of individuals and the number of contacts by NHS Board. Note that the number of positive cases of COVID-19 in Scotland is low. Therefore, comparisons between NHS Boards should be made with caution due to the small numbers involved and the variation in complexity of cases which the Boards are dealing with at any point in time (e.g. some cases will be straight-forward with a low number of contacts to be traced; others will be more complex with a higher number to be traced). These figures will be updated in subsequent weeks to incorporate any additional contacts who had not had their tracing completed by the time the analysis was undertaken.
Table 1: Number of individuals and the number of contacts by NHS Board

<table>
<thead>
<tr>
<th>NHS Board</th>
<th>Week of first positive result</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 Aug – 8 Aug</td>
<td>26 Jul – 1 Aug</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual</td>
<td>Contacts</td>
<td>Individual</td>
<td>Contacts</td>
<td>Contacts</td>
<td>Contacts</td>
</tr>
<tr>
<td>Ayrshire &amp; Arran</td>
<td>7</td>
<td>92</td>
<td>3</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Borders</td>
<td>*</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Dumfries &amp; Galloway</td>
<td>*</td>
<td>2</td>
<td>5</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Fife</td>
<td>6</td>
<td>16</td>
<td>4</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>Forth Valley</td>
<td>6</td>
<td>14</td>
<td>4</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Grampian</td>
<td>182</td>
<td>883</td>
<td>33</td>
<td>146</td>
<td></td>
</tr>
<tr>
<td>Greater Glasgow &amp; Clyde</td>
<td>50</td>
<td>183</td>
<td>32</td>
<td>211</td>
<td></td>
</tr>
<tr>
<td>Highland</td>
<td>*</td>
<td>19</td>
<td>*</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Lanarkshire</td>
<td>11</td>
<td>45</td>
<td>5</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>Lothian</td>
<td>15</td>
<td>58</td>
<td>23</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td>Orkney</td>
<td>*</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Shetland</td>
<td>*</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Tayside</td>
<td>8</td>
<td>58</td>
<td>5</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>Western Isles</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Unknown Health Board**</td>
<td>*</td>
<td>4</td>
<td>*</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Scotland</td>
<td>293</td>
<td>1382</td>
<td>118</td>
<td>697</td>
<td></td>
</tr>
</tbody>
</table>

* Denotes data which has been suppressed due to risk of disclosure.
** Please note this includes individuals with no information on their Health Board of residence and from elsewhere in the UK

Figures for the most recent week are provisional and will be updated in next week’s publication.

Data is extracted Sunday 9 August 2020 at 8pm. Data relates to tests up to 8 August 2020. Weekly data presented from Sunday to Saturday to allow a 24-hour contact period. Figures are provisional and may change as the test and protect tool is updated by contact tracers.

**Future publication plans**

Public Health Scotland are currently working with NHS Boards to introduce a new Case Management System (CMS) for contact tracing in Scotland. NHS Boards have migrated to the new CMS and PHS will be increasing the level of information presented during the coming weeks. The CMS will enable a greater level of granularity in the data available to us about contact tracing, including the demographics (for example age, sex, deprivation status) of individuals, and information on the time taken to reach individuals who had tested positive and whose case had been transferred to contact tracing, and time taken to reach their contacts.
COVID-19 Confirmed Cases

This part of the report contains information on positive and negatives cases of COVID-19 that have been confirmed by testing carried out through NHSScotland laboratories and now include those testing at a Regional Testing Centre (RTCs) as part of the UK Government testing programme. This includes tests done at the drive through centres, mobile units, and home testing kits.

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.

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

As at 9 August 2020;

• There have been 19,027 people in Scotland who have tested positive, at any site in Scotland (NHS and UK Government Regional Testing centres), for COVID-19 since the start of the outbreak.

• This equates to 348 people per 100,000 population having tested positive for COVID-19.

• There have been 379,133 people in Scotland who have tested negative, at any site in Scotland (NHS and UK Government Regional Testing Centres), since the start of the outbreak.

A person can have multiple tests but will only ever be counted once.

The number of confirmed COVID-19 cases, on a daily basis, are shown in Figure 1. Figure 1 shows a decreasing 7-day moving average for positive cases across Scotland. There was a decreasing trend between 20 April 2020 to around the end of June, which levelled off through July. There was a slight increase over the past two weeks. This data is monitored and published daily on the Scottish Government Coronavirus website. The drop in the number of confirmed cases at weekends likely reflects that laboratories are doing fewer 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: Epidemic curve for first laboratory positive sample for COVID-19 cases by date of specimen with 7-day rolling average (includes NHS Laboratory and UK Govt testing centre data)

Note: Specimen date was not available for historical UK Government Regional Testing centres data between 15 and 25 April. As a sample date is required to report in ECOSS (Electronic Communication of Surveillance in Scotland) these samples were assigned a specimen date in the mid-point within this date range (20 April).

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

For a small number of laboratory results initially reported as positive on subsequent additional testing the laboratory result may be amended to negative, and the individual no longer managed as a confirmed case.
Updated Analysis of COVID-19 Outcomes by Ethnic Group

Public Health Scotland published an initial analysis of available data on 20 May on the variation in outcomes by ethnic group among those who had tested positive for COVID-19. An update using more complete data on ethnicity was published on 15 July. This concluded that there was emerging evidence of increased risks of serious illness due to COVID-19 in those of South Asian origin, particularly in relation to those needing critical care or dying within 28 days of a positive test. This is a further update of those results including data on positive cases that have subsequently been confirmed as at 9 July.

The analysis focussed on the risk of a more serious outcome due to COVID-19, requiring hospitalisation or intensive care or dying within 28 days following a positive swab test result. A positive test result alone is unlikely to be an interpretable outcome to compare among population groups due to policy changes that have affected eligibility for testing regardless of symptomatic status.

Further information on the methods used can be found in the previous publication on 15 July. Ethnic group was collected from patients’ hospital records data. Ethnic group categories are based on the Scottish census ethnicity categories which are used as a standard across the NHS in Scotland. As in the earlier reports some aggregation of ethnic groups has been necessary to improve precision of statistical comparisons. However further data on individual ethnic groups is presented in the supplementary tables which accompany this report.

Table 2 shows the number of patients affected by ethnic group updated with data as at 9 July. Ethnic group was available from hospital records for 5692, or 87% of, these patients. Among these, ethnic minority groups accounted for 3% of those affected, only slightly less than the 4% recorded at the 2011 census.

### Table 2: COVID-19 hospital admission or death by ethnic group

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>count</th>
<th>%</th>
<th>Rate Ratio</th>
<th>95% C.I.</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>5521</td>
<td>97.00</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Black/Caribbean/African</td>
<td>23</td>
<td>0.40</td>
<td>1.69</td>
<td>(1.05, 2.72)</td>
</tr>
<tr>
<td>Chinese</td>
<td>7</td>
<td>0.12</td>
<td>0.67</td>
<td>(0.30, 1.46)</td>
</tr>
<tr>
<td>South Asian</td>
<td>79</td>
<td>1.39</td>
<td>1.54</td>
<td>(1.18, 2.01)</td>
</tr>
<tr>
<td>Mixed or Other Ethnic Group</td>
<td>62</td>
<td>1.09</td>
<td>1.94</td>
<td>(1.43, 2.62)</td>
</tr>
<tr>
<td>Total*</td>
<td>5692</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Excludes 842 cases with refused or unknown ethnicity; C.I. = confidence interval

South Asian ethnic groups (Pakistani, Indian and Bangladeshi) accounted for just over 1% of patients, similar to the proportion of the population recorded at the last census. Further disaggregation of the Black/Caribbean/African, South Asian and White ethnic groups is
shown in the supplementary Excel tables accompanying this report, alongside the population proportions from the 2011 census for comparison.

Table 2 shows rate ratios which compare the incidence rate of hospital admission or death from confirmed COVID-19 across different ethnic groups relative to the White group based on a case-control method (see 20 May report and McKeigue et al. 2020 for further information). These compare COVID-19 cases with other patients in the same GP practice accounting for age and sex differences. A value higher than 1 indicates a higher rate, and a value lower than 1 a lower rate, relative to the White group. Rates were estimated to be around 69% higher in the Black/Caribbean/African group, and 54% higher in the South Asian group, in comparison with the White group. Lower rates were observed in the Chinese group, though with only 7 cases over the period, we cannot be confident this reflects an actual reduced risk in the population.

Living in more deprived areas (based on the Scottish Index of Multiple Deprivation quintiles) and care home residence were both independently associated with a higher risk of a serious illness, but did not account for the higher rates in these minority ethnic groups.

Table 3 shows results when restricting to COVID-19 patients with the most severe outcomes, i.e. admission to an intensive care unit (ICU) or death within 28 days following a positive test result. Ethnic group was available for 2648, or 87%, of these patients. Of these, 2.3% were from an ethnic minority group.

The rate of severe disease was estimated to be around 2-fold higher among South Asians, and in the Mixed or Other Ethnic Group, in comparison with the White Group. Due to the very small numbers of cases in the Black/Caribbean/African and Chinese groups, it was not possible to estimate rates with certainty for these groups. Table 4 summarises the results of further analyses of the data for the South Asian group adjusting for other potential explanatory factors.

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>count</th>
<th>%</th>
<th>Rate Ratio</th>
<th>95% C.I.</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>2586</td>
<td>97.66</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Black/Caribbean/African</td>
<td>5</td>
<td>0.19</td>
<td>1.18</td>
<td>(0.45, 3.06)</td>
</tr>
<tr>
<td>Chinese</td>
<td>2</td>
<td>0.08</td>
<td>0.50</td>
<td>(0.12, 2.14)</td>
</tr>
<tr>
<td>South Asian</td>
<td>34</td>
<td>1.28</td>
<td>1.99</td>
<td>(1.32, 2.98)</td>
</tr>
<tr>
<td>Mixed or Other Ethnic Group</td>
<td>21</td>
<td>0.79</td>
<td>2.12</td>
<td>(1.26, 3.58)</td>
</tr>
<tr>
<td>Total*</td>
<td>2648</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Excludes 388 cases with refused or unknown ethnicity; C.I.=confidence interval
Table 4: Comparison of rates of severe disease among South Asians relative to the White group

<table>
<thead>
<tr>
<th>Explanatory factors</th>
<th>Rate Ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted for age, sex and GP practice</td>
<td>1.99</td>
<td>(1.32, 2.98)</td>
</tr>
<tr>
<td>Adjusted for age, sex, GP practice, deprivation quintile and care home residence</td>
<td>2.31</td>
<td>(1.50, 3.56)</td>
</tr>
<tr>
<td>Adjusted for age, sex, GP practice, deprivation quintile, care home residence and diabetic status</td>
<td>1.94</td>
<td>(1.25, 3.00)</td>
</tr>
</tbody>
</table>

C.I.=confidence interval

Increased rates were not explained by differences in deprivation, residential care home status or diabetic status.

The effect of including all registered deaths with a probable or suspected cause of COVID-19 from National Records for Scotland, in addition to deaths among those who tested positive, was also explored. After adjusting for diabetes the higher rate among South Asians was still apparent with a rate ratio of 1.64, with 95% CI from 1.09 to 2.48, based on 3891 cases.

The results reported here provide an update to those reported on 15 July and 20 May using more recent data. The addition of further positive cases of COVID-19 during this period has provided more certainty on the statistical estimates reported here. The numbers of people with a serious outcome within ethnic minority groups remains consistent with the relatively low population proportions counted in the last census. However, the statistical models used here take account of differences in demographics by geographical location across ethnic groups to estimate risks more precisely.

Given the small numbers in many minority ethnic groups, the statistical models are not often able to estimate rates reliably when using more specific ethnic group categories. Risk estimates for the White Irish and White Polish groups are shown in the supplementary Excel tables accompanying this report. Confidence intervals do no indicate that rates differ in comparison with the wider White group based on these data. Further discussion of the strengths and limitations of the analysis are provided in the report from the 15 July.

Conclusions

An analysis of hospital admission and more severe outcomes among people who have tested positive for COVID-19 has been updated with more recent data to improve the precision of statistical estimates of risk among ethnic minority groups.

There is clearer evidence of increased risks of serious illness due to COVID-19 in those of South Asian origin, with a 2-fold increase in the risk of needing critical care or dying within 28 days of a positive test. This increase is still apparent after accounting for diabetes and when COVID-19 deaths in those never testing positive are included.
There is evidence of an increased risk of hospital admission due to COVID-19 among those of Black, Caribbean or African ethnicity.
COVID-19 across the NHS

Charts for a number of measures related to COVID-19 service use in the NHS were presented in the report up until July 15. These are now available to view in an Excel spreadsheet.

This includes:

- Number of positive confirmed cases per day and cumulative total
- Positive cases by age, sex and SIMD
- COVID-19 admissions to hospital
- COVID-19 patients admitted to ICU (Intensive Care Unit)
- COVID19 Hub and Assessment Consultations
- COVID-19 related contacts to NHS 24 and calls to Coronavirus helpline
- SAS (Scottish Ambulance Service) Incidents related to COVID-19

Further commentary on these measures can be found in the 15 July statistical report.
Wider Impact of COVID-19

The COVID-19 pandemic has direct impacts on health as a result of illness, hospitalisations and deaths due to COVID-19. However, the pandemic also has wider impacts on health and on health inequalities. Reasons for this may include:

- Individuals being reluctant to use health services because they do not want to burden the NHS or are anxious about the risk of infection.
- The health service delaying preventative and non-urgent care such as some screening services and planned surgery.
- Other indirect effects of interventions to control COVID-19, such as mental or physical consequences of distancing measures.

The surveillance workstream of the social and systems recovery cell aims to provide information and intelligence on the wider impacts of COVID-19 on health, healthcare and health inequalities that are not directly due to COVID-19.

The wider impact dashboard can be viewed online and includes the following topics:

- A&E Attendances
- Hospital admission
- NHS 24 111 completed contacts
- Primary Care Out of Hours Service
- Scottish Ambulance Service
- Cardiovascular
- Immunisation – uptake of first, second and third dose of 6-in-1 vaccine
- MMR Immunisation Data
- Child Health Visitors
- Excess deaths
- Stillbirths and Infant Deaths

These analyses are based on a selected range of data sources that are available to describe changes in health service use in Scotland during the COVID-19 pandemic. More detailed information is available at NHS Board and Health and Social Care Partnership (HSCP) level.
Contact

Public Health Scotland
phs.statsgov@nhs.net

Further Information

COVID surveillance in Scotland
Scottish Government
Daily Dashboard by Public Health Scotland 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 19 August 2020.

Open data

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

Rate this publication

Let us know what you think about this publication via the link at the bottom of this publication page on the PHS website.
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.

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’.