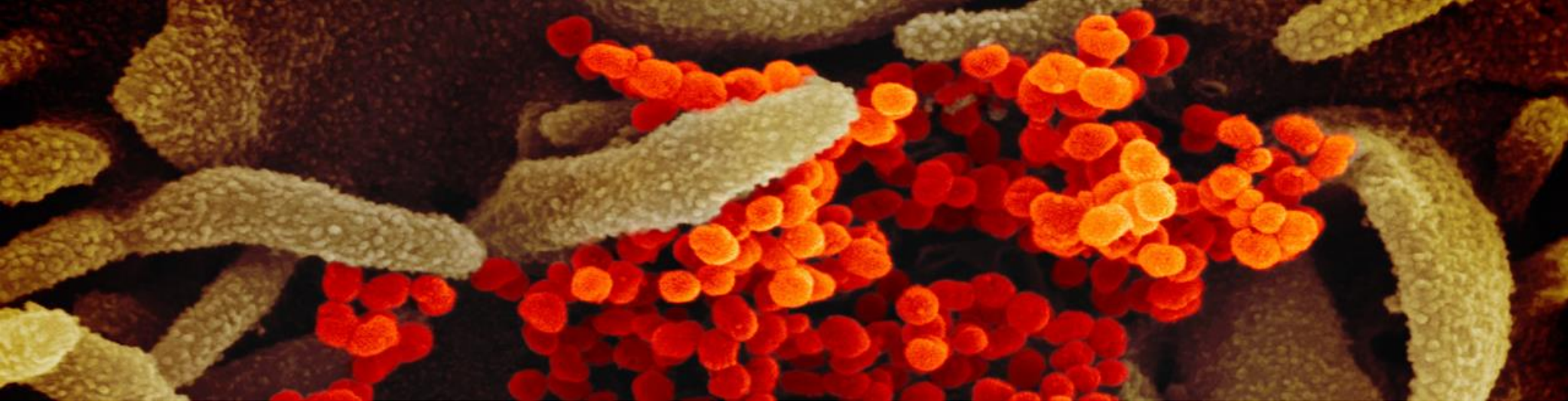


Coronavirus (COVID-19) Infection Survey

Headline Results for Northern Ireland

24th February 2023

INFORMATION ANALYSIS DIRECTORATE

Department of Health
An Roinn Sláinte
Männystrie O Poustie
www.health-ni.gov.uk

Introduction

This report is the latest in a series of weekly publications which will detail findings for Northern Ireland from the Coronavirus (COVID-19) Infection Survey (CIS). The findings set out in this report relate to the most recent week of the study up to 14th February 2023. CIS aims to estimate how many people have the infection and the number of new cases that occur over a given time as well as estimating how many people have developed antibodies to COVID-19.

The survey over time will help track the extent of infection and transmission of COVID-19 among people living in private households. The sample includes people who would not necessarily have otherwise been tested, and is intended to estimate the number of current positive cases in the community in Northern Ireland, including cases where people do not report to having any symptoms.

The Covid-19 Infection Survey has moved from collecting data and samples through home visits by a study worker to a more flexible approach for participants. An online questionnaire has been introduced and swab and blood samples are returned through the post (or by courier for some participants). Further information on what these changes mean and how the survey will continue to be valuable can be found in the recent ONS blog post and further information on the effects of the change in data collection method can be found in the ONS Quality Report: August 2022 and Quality Report: December 2022.

Proportion of people in Northern Ireland who had COVID-19

During the most recent week of the study (8 February – 14 February 2023), it is estimated that 29,700 people in Northern Ireland had COVID-19 (95% credible interval: 21,800 to 38,300). This equates to 1.62% of the population (95% credible interval: 1.19% to 2.09%) or around 1 in 60 people (95% credible interval: 1 in 85 to 1 in 50). This is based on statistical modelling of the trend in rates of positive nose and throat swab results.

Modelling suggests the trend in the percentage of people testing positive was uncertain in the week ending 14 February 2023 in Northern Ireland.

Notes:

- The results in this report are provisional and subject to revision.
- The positivity rate is the percentage of people who would have tested positive for COVID-19 on a polymerase chain reaction (PCR) test at a point in time. We use current COVID-19 infections to mean testing positive for SARS-CoV-2, with or without having symptoms, on a swab taken from the nose and throat. This is different to the incidence rate, which is a measure of only the new PCR positive cases in a given time period.
- As this is a household survey, the statistics refer to infections within the population living in private residential households. The figures exclude infections in hospitals, care homes and/or other communal establishments.
- The estimates are based on confirmed positive test results. The remaining swabs are either negative, which are included in the analysis, or are inconclusive, which are not included in the analysis. Some swabs are test failures, which are also not included in the analysis. The impact of excluding inconclusive results on the estimates of positive infections is likely to be very small and unlikely to affect the trend.
- Ratios do not represent a person's risk of becoming infected, since risk of infection depends on a number of factors including contact with others or vaccination status. The ratios presented are rounded to the nearest 100 if over 1,000, to the nearest 10 if under 1,000, to the nearest 5 if under 100 and to 1 if under 20. This may result in credible intervals that appear to be similar to the estimated average ratio.

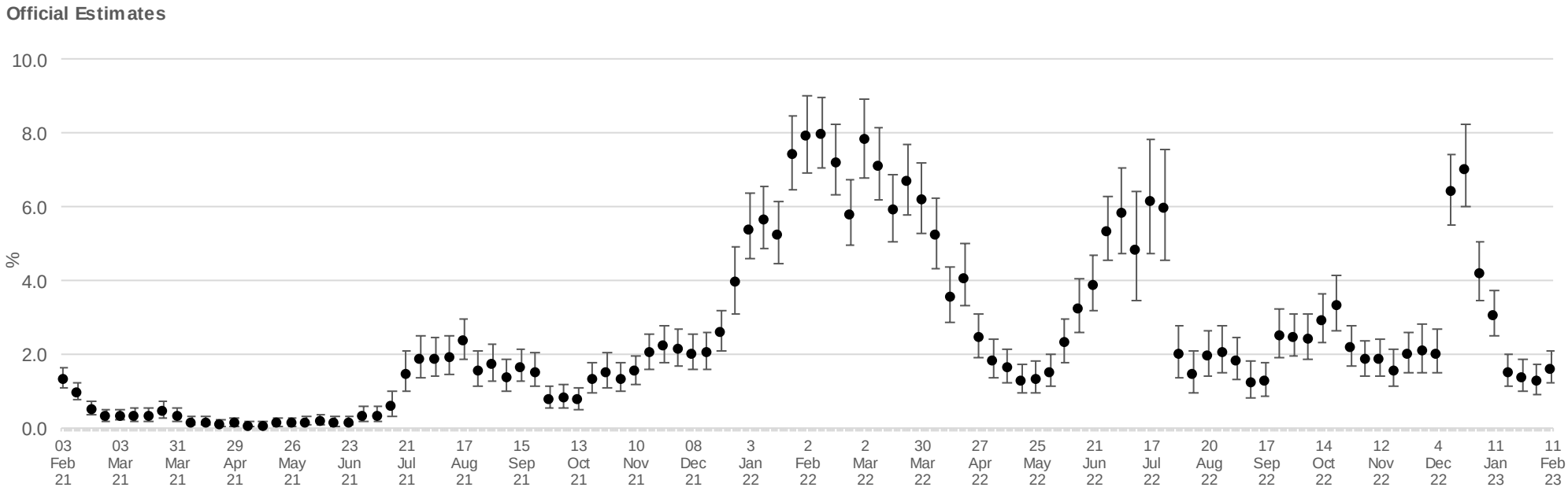
This week we have published a shorter release including our usual weekly update on estimates of COVID-19 positivity. We will publish our usual full bulletin including incidence, sub-regional and single year of age analysis on a monthly basis, and this shorter release on the other weeks. The full bulletin datasets can be found in the Coronavirus (COVID-19) Infection Survey datasets for England, Wales, Northern Ireland and Scotland. These datasets will be updated on a monthly basis.

Positivity over time in Northern Ireland

Due to relatively small number of tests and low number of positives within the sample, credible intervals are wide and therefore results should be interpreted with caution.

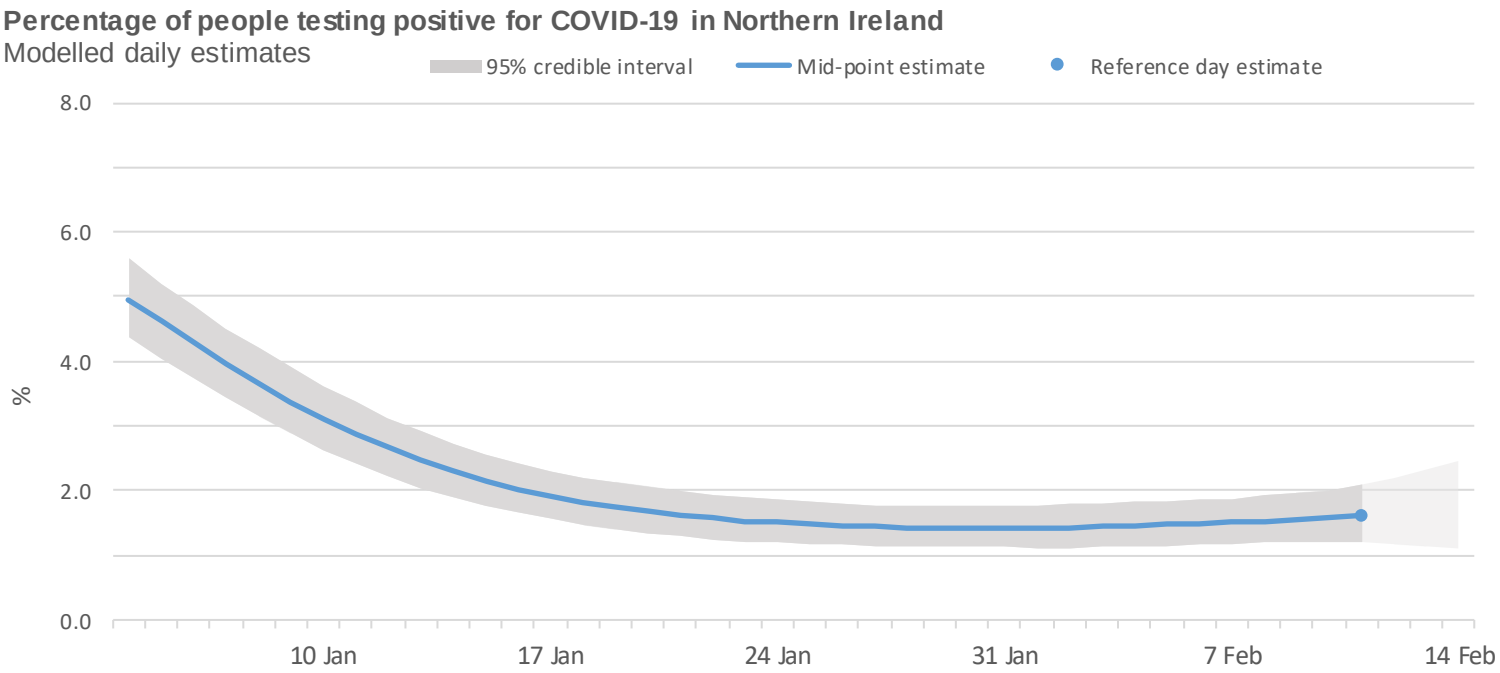
Modelling suggests the trend in the percentage of people testing positive was uncertain in the week ending 14 February 2023 in Northern Ireland. The official estimates of the percentage of people in NI previously testing positive for COVID-19 are set out in figure 1a while the modelled trends over time in the overall population for testing positive for COVID-19, including 95% credible intervals, are shown in figure 1b (overleaf). These estimates are calculated using a regression model which adjusts the survey results to be more representative of the overall population in terms of age, sex, and region.

Figure 1a: Estimated percentage of the population in Northern Ireland testing positive for the coronavirus (COVID-19) on nose and throat swabs



The point estimates and error bars indicated on the chart represent the official estimates reported in previous weeks based on the best information and methods at each point in time.

Figure 1b:



The area marked with light grey has a lower level of certainty due to lab results still being processed for this period
Data from 4 January 2022 to 14 February 2023

Source: Office for National Statistics – Coronavirus (COVID-19) Infection Survey

Notes:

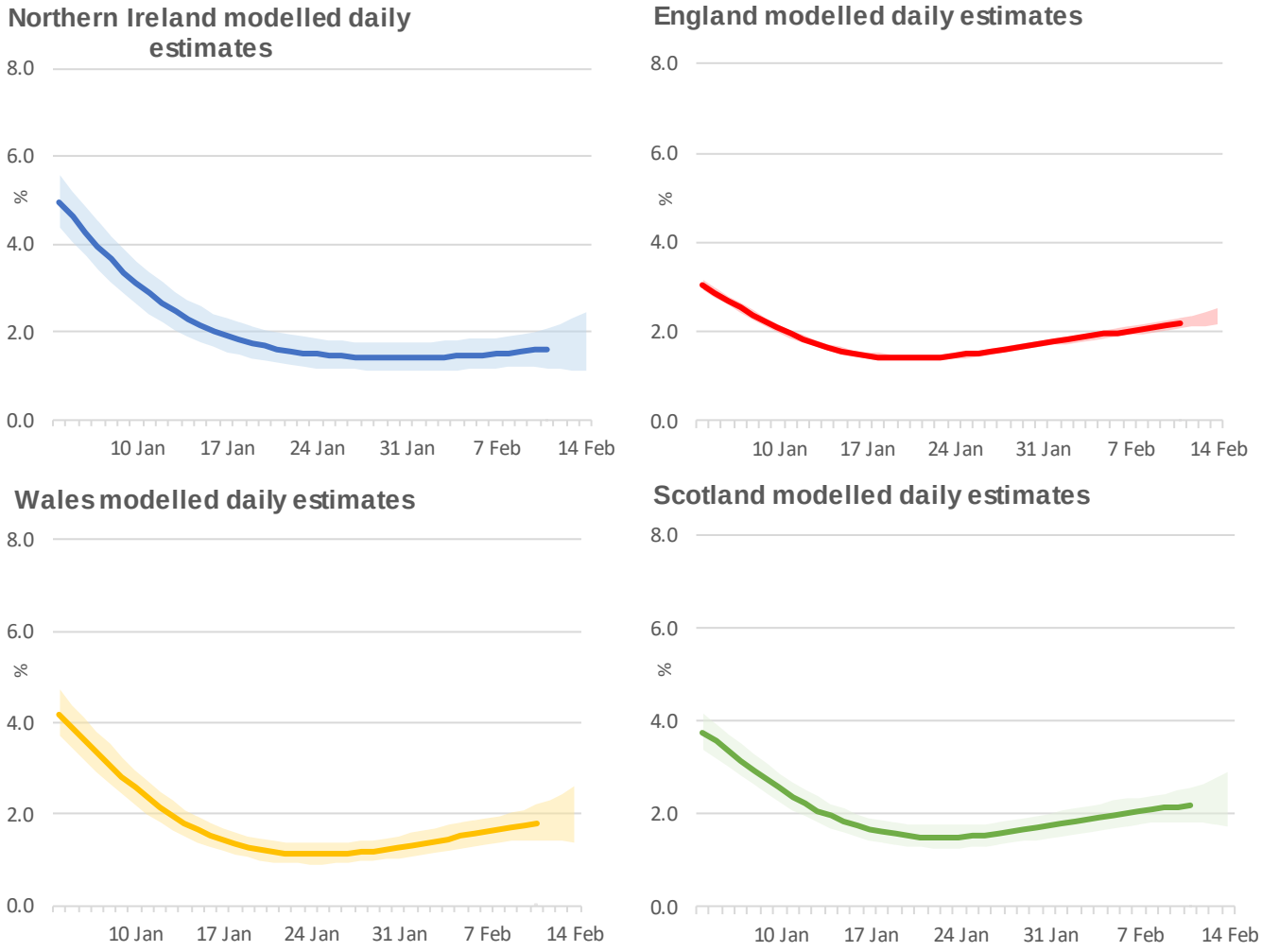
1. Modelled results are provisional and subject to revision.
2. All estimates are subject to uncertainty, given that a sample is only part of the wider population. A credible interval gives an indication of the uncertainty of an estimate from data analysis. The 95% credible intervals are calculated so that there is a 95% probability of the true value lying in the interval. A wider interval indicates more uncertainty in the estimate. Overlapping credible intervals indicate that there may not be a true difference between two estimates.
3. Official reported estimates are plotted at a reference point believed to be most representative of the given week. To improve stability in the modelling while maintaining relative timeliness of estimates, the official estimates that are reported here are based on the midpoint of the reference week.
4. Official estimates (Figure 1a) should be used to understand the positivity rate for a single point in time and are the best and most stable estimates, used in all previous outputs. They are based on a reference day from the statistical model of the trend in rates of positive nose and throat swab results for the latest week. The modelled estimates (Figure 1b) are more suited to understand the recent trend. This is because the model is regularly updated to include new test results and smooths the trend over time. As swabs are not necessarily analysed in date order by the laboratory, we have not yet received test results for all swabs taken on the dates included in this analysis. Therefore, caution should be taken in over-interpreting small movements in the very latest trends.
5. Trends are described by comparing the probability that the estimate for the reference day is higher or lower than the estimate for 7 and 14 days prior.

Positivity in the UK

During the most recent week of the study, based on statistical modelling of the trend in rates of positive nose and throat swab results, 1.62% of the NI population (95% credible interval: 1.19% to 2.09%) had COVID-19. It is estimated that for the same period 2.18% (95% credible interval: 2.07% to 2.29%) of the population in England had COVID-19. It was estimated that 1.79% (95% credible interval: 1.42% to 2.19%) of the population in Wales and 2.18% (95% credible interval: 1.81% to 2.56%) of people in Scotland had COVID-19.

The percentage of people testing positive for coronavirus (COVID-19) continued to increase in England, Wales and Scotland, and the trend was uncertain in Northern Ireland, in the week ending 14 February 2023.

Figure 2: Modelled daily estimate of percentage of the population testing positive for the COVID-19 across the UK



Due to the relatively smaller number of tests in Northern Ireland, Wales and Scotland in the sample, credible intervals are wider and therefore results should be interpreted with caution. Wide credible intervals mean that differences between the central estimates within and between nations may appear smaller or more exaggerated than what they really are.

Variant Analysis

Currently, the variants under surveillance in the UK are:

- Omicron, including sub-lineages BA.2, BA.4 and BA.5, and their sub-lineages.

The cycle threshold (Ct) value reflects the quantity of virus (also known as viral load) found in a swab test. A lower Ct value indicates a higher viral load. The latest Ct values of coronavirus (COVID-19) positive tests, as well as analysis of the genetic lineages of COVID-19 seen in the samples that are sequenced, are provided in the Coronavirus (COVID-19) Infection Survey dataset.

Since the end of June 2022, most COVID-19 infections in the UK have been Omicron variant BA.5 or its sub-lineages, more recently the majority of which were the sub-lineage BQ.1. However, since mid-January 2023, BA.2.75 and its sub-lineages (that includes XBB and its sub-lineages, and CH.1.1 and its sub-lineages) comprised the largest proportion of all sequenced infections, at 74.5% in the week ending 12 February 2023. The sub-lineage CH.1.1 and its sub-lineages comprised 32.2%, and the sub-lineage XBB and its sub-lineages (including XBB.1.5) comprised 40.3%, of sequenced infections in the week ending 12 February 2023. The variant BQ.1 comprised 19.8%, and other BA.5 variants (and sub-lineages, excluding BQ.1) comprised 3.2%, of all sequenced COVID-19 infections.

More information on how variants from positive tests on the survey are measured can be found in the ONS Understanding COVID-19 Variants blog and the Coronavirus (COVID-19) Infection Survey methods article.

We last published our main variant analysis in our COVID-19 Infection Survey, Northern Ireland: Weekly Report 8th July 2022. This showed a very high proportion of infections compatible with the BA.4 and BA.5 variants, so we have not included a breakdown of infections by variants in this release. Infections by variant will continued to be monitored and analysis will be reintroduced when considered helpful.

Methodology

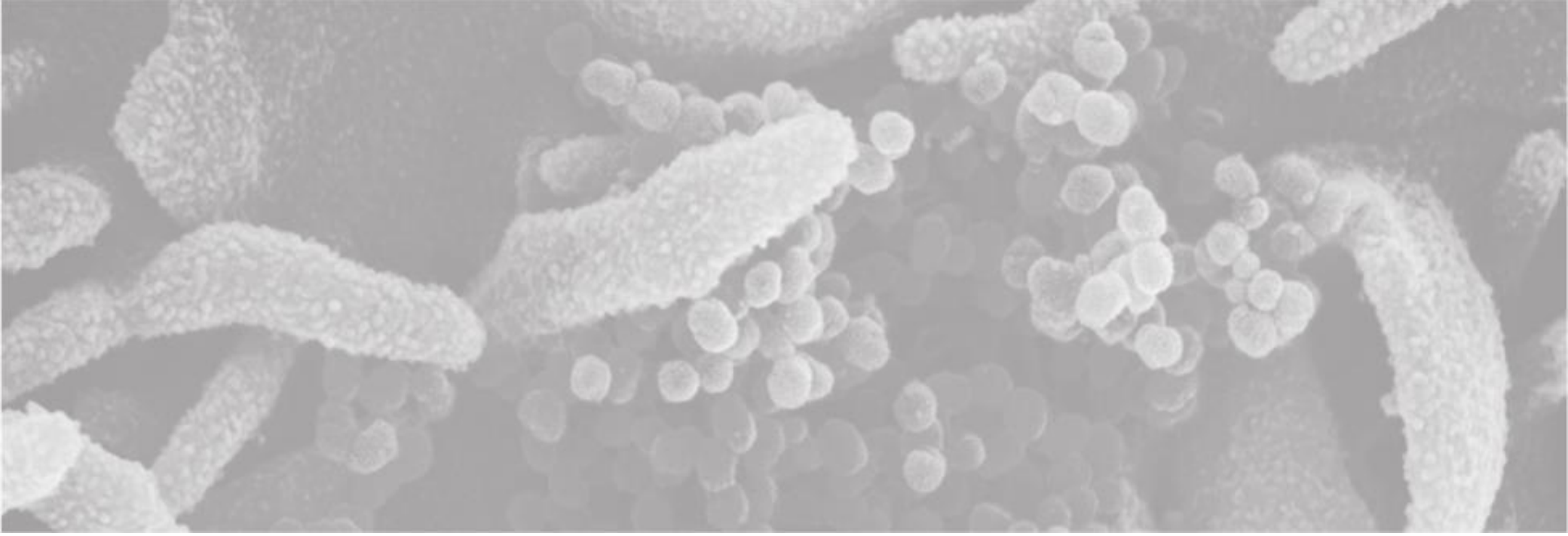
The results are based on nose and throat swabs provided by participants to the study. As well as looking at incidence overall, the survey will be used to examine the characteristics of those testing positive for COVID-19 and the extent to which those infected experience symptoms.

Extending the COVID-19 Infection Survey to Northern Ireland has been achieved by a collaboration between the Department of Health, Public Health Agency (PHA), Northern Ireland Statistics and Research Agency (NISRA) and the Office for National Statistics (ONS) and its various survey partners. Fieldwork commenced in Northern Ireland on 27th July 2020. It is important to note that there is a significant degree of uncertainty with the estimates. This is because, despite a large sample of participants, the number of positive cases identified is small. Estimates are provided with 95% confidence intervals to indicate the range within which we may be confident the true figure lies.

The results are for private households only and do not apply to those in hospitals, care homes and/or other communal establishments.

The Office for National Statistics (ONS) publishes **weekly statistical bulletins and references tables, including results for England, Wales, Scotland and Northern Ireland** on its website. Further detail (including information on sample size) for Northern Ireland is available in the ONS **Coronavirus (COVID-19) Infection Survey datasets.**

Further information about quality and methodology can be found on the **ONS website**.



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