



COVID-19 Infection Survey

Results for Northern Ireland

11th December 2020

Introduction

This report is the latest in a series of weekly publications which will detail findings for Northern Ireland from the COVID-19 Infection Survey (CIS). The findings set out in this report relate to the most recent week of the study up to the 5th December 2020. Further analyses will be added to subsequent reports over the coming weeks. 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 in the community population (those in private residences). 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.

It is important to note that these statistics are based on a survey sample and differ from those reported in the [Department of Health Daily Dashboard](#) which are based on all laboratory confirmed tests for COVID-19 completed in Northern Ireland.

Proportion of people in Northern Ireland who had COVID-19

During the most recent week of the study (29th November – 5th December), it is estimated that 7,800 people in Northern Ireland had COVID-19 (95% credible interval: 4,400 to 12,100). This equates to 0.43% of the population (95% credible interval: 0.24% to 0.66%) or around 1 in 235 people (95% credible interval 1 in 415 to 1 in 150). This is based on statistical modelling of the trend in rates of positive nose and throat swab results.

Modelling suggests that in the most recent week, the percentage of people testing positive in Northern Ireland continues to decrease. In the latest six-week period, there were 14,929 swab tests taken in total from 7,043 participants. Of these, 88 participants tested positive from 65 different households. In the latest two-week period, of the 4,460 participants in the study, 25 tested positive from 22 households.

As this is a household survey, the figures do not include people staying in hospitals, care homes, students in halls of residence or other institutional settings. In these settings, rates of COVID-19 infection are likely to be different.

Positivity over time in Northern Ireland

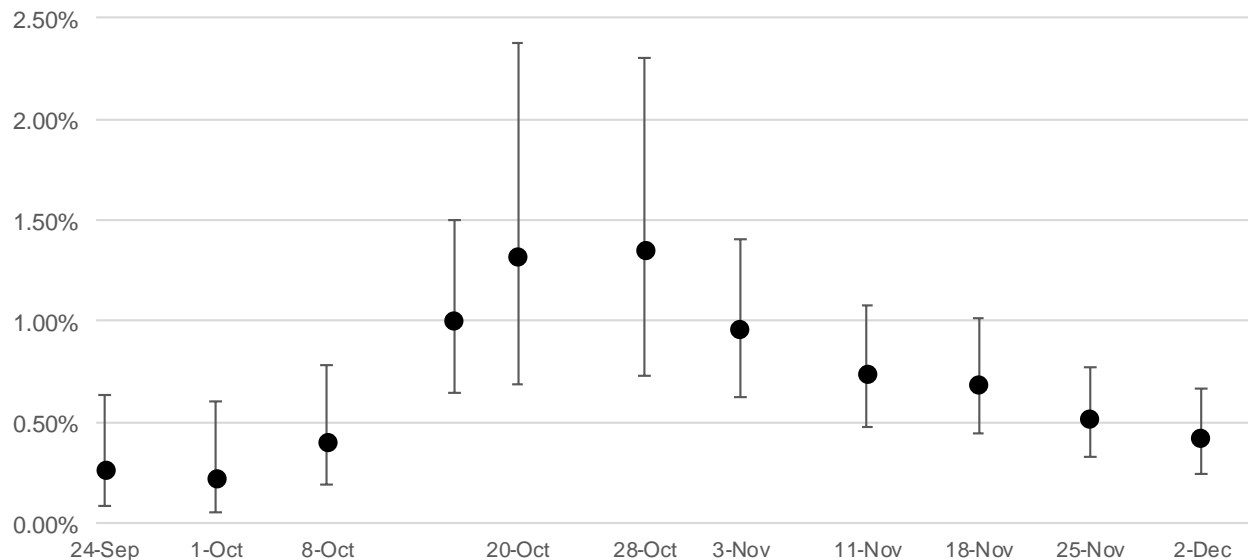
Due to relatively small number of tests and low number of positives within the sample, credible intervals are wide and therefore results should be interpreted with caution.

The percentage of people testing positive in Northern Ireland continues to decrease. 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.

Estimated percentage of the population in Northern Ireland testing positive for the coronavirus (COVID-19) on nose and throat swabs since 24 September 2020

Figure 1a:

Percentage of people testing positive for COVID-19 in Northern Ireland
Official Estimates

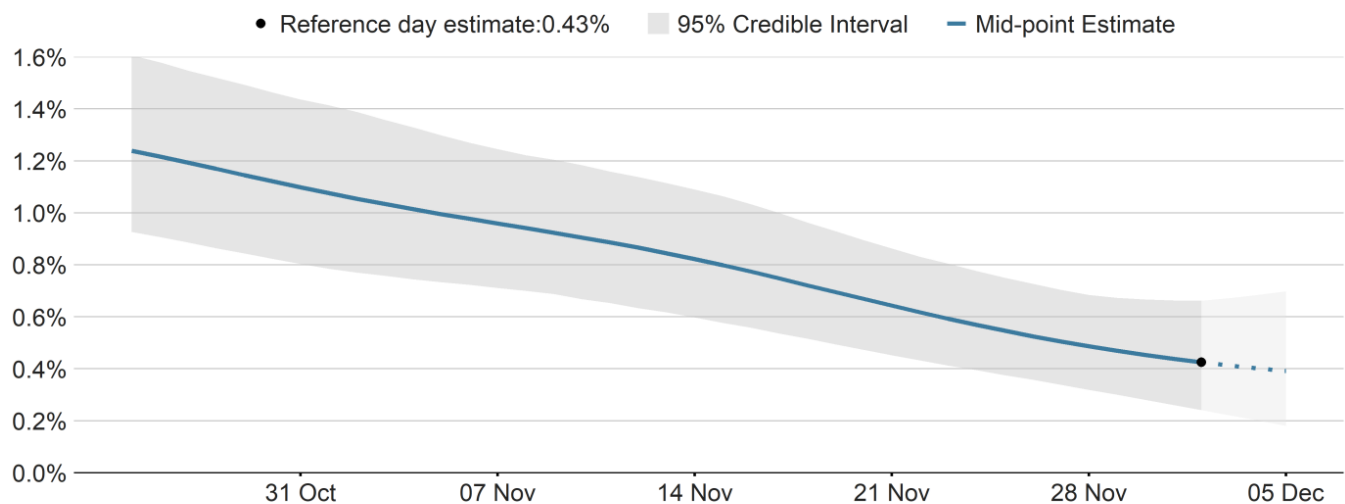


Source: Office for National Statistics - COVID-19 Infection Survey

Figure 1b:

Percentage of people testing positive for COVID-19 in Northern Ireland

Modelled daily estimates



The area marked with the dashed line and light grey area has a lower level of certainty due to lab results still being processed for this period
Data from 25 October to 05 December 2020

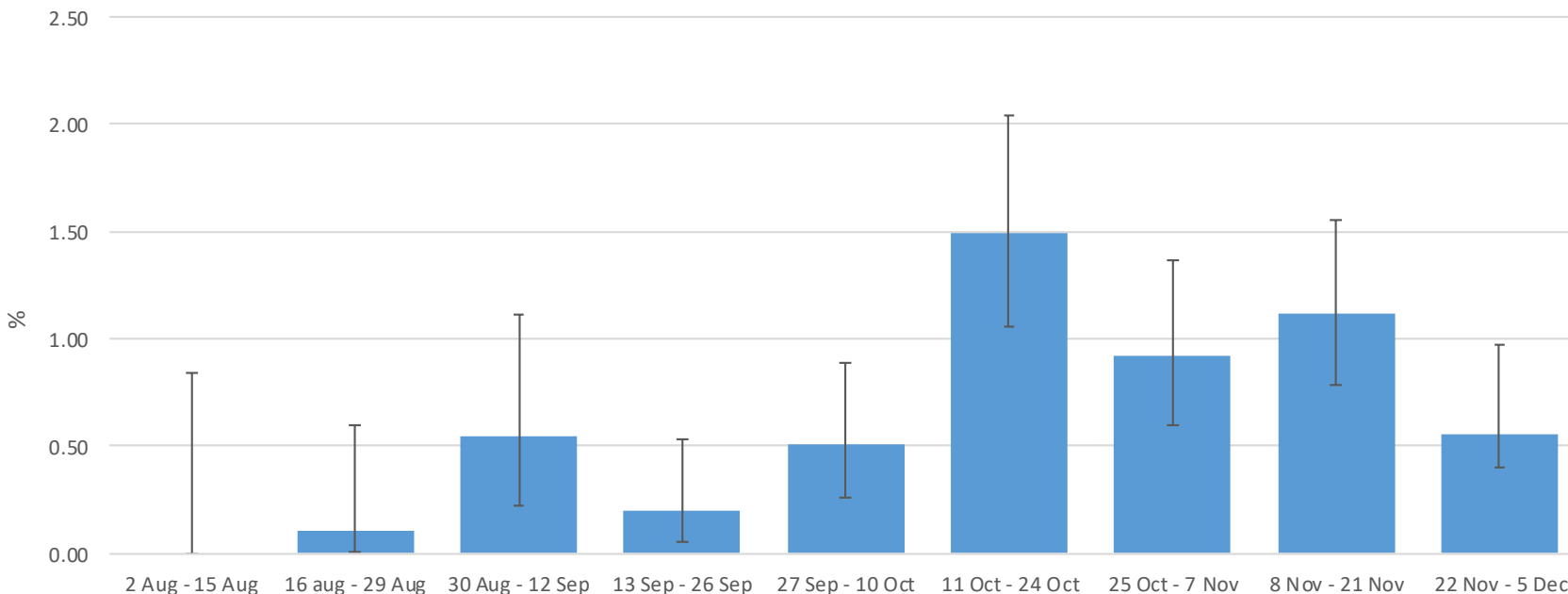
Source: Office for National Statistics - COVID-19 Infection Survey

Notes:

1. These 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. The model used to provide these estimates is a Bayesian model: these provide 95% credible intervals. A credible interval gives an indication of the uncertainty of an estimate from data analysis. 95% credible intervals are calculated so that there is a 95% probability of the true value lying in the interval. The credible intervals were wider at the start of the study when there was fewer participants, they also widen slightly at the end as there is a delay in getting the associated swab results.
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. Modelled estimates include all swab results that are available at the time the official estimates are produced. Additional swab tests that become available after this are included in subsequent models, meaning that modelled estimates can change slightly as additional data is included.

The estimates for non-overlapping 14-day periods (which underpin the modelled official estimates) are presented in Figure 2 below and are provided for context. These 14-day estimates are different from and cannot be compared with the modelled estimates presented earlier in this report. The weighted percentage testing positive in Northern Ireland in the latest 14-day period (22nd November to 5th December 2020) was 0.64% (95% confidence interval: 0.40% to 0.97%). It should be noted that no positive cases were recorded in the study for the 14 day period ending 15th August.

Figure 2: Estimated percentage of the population in Northern Ireland testing positive for the coronavirus (COVID-19) by non-overlapping 14-day periods up to 5 December 2020



Source: Office for National Statistics - COVID-19 Infection Survey, Department of Health Information Analysis Directorate

Notes:

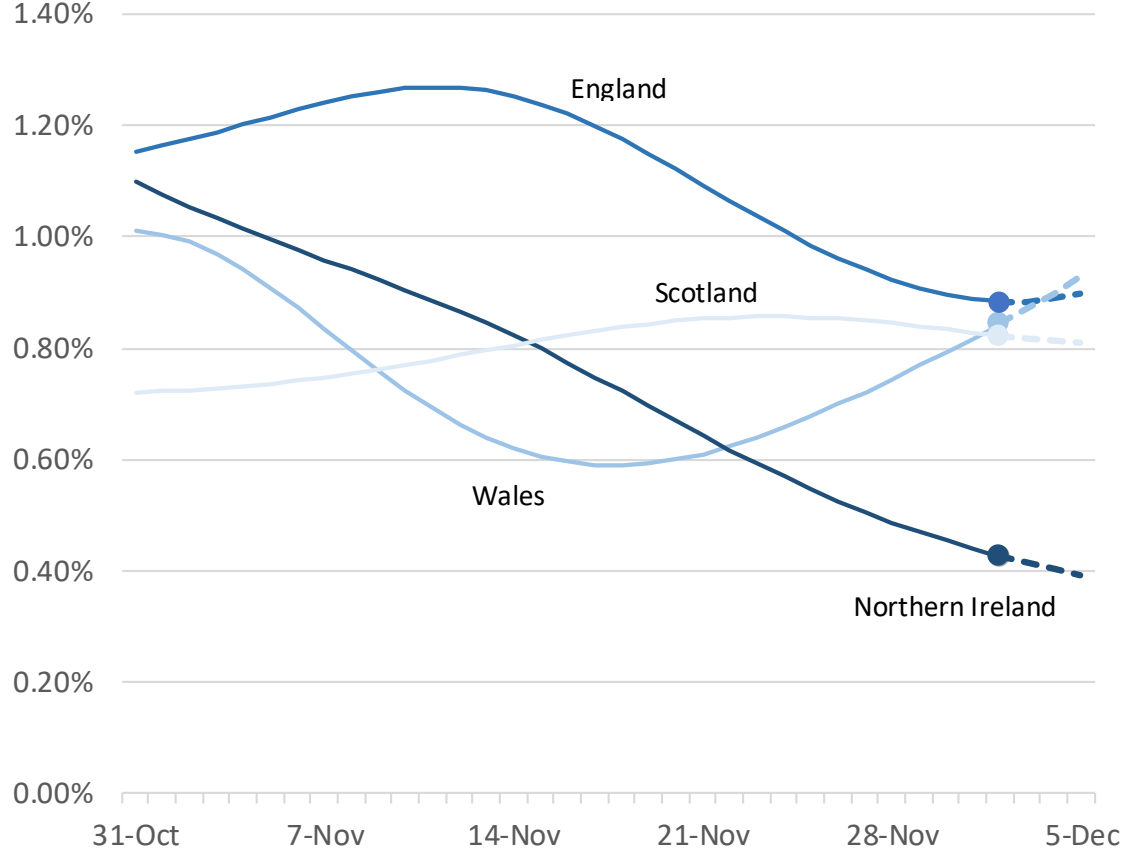
1. All results are provisional and subject to revision.
2. These statistics refer to infections reported in the community, by which we mean private households. These figures exclude infections reported in hospitals, care homes and/or other institutional settings.
3. It should be noted that averaging positivity rates over the past 14-day period can mask changes in the positivity rates that have occurred in the most recent week.

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, 0.43% of the NI population (95% credible interval: 0.24% to 0.66%) had COVID-19. It is estimated that for the same period 0.88% (95% credible interval: 0.83% to 0.94%) of the population in England had the coronavirus (COVID-19). It was estimated that 0.84% (95% credible interval: 0.83% to 0.94%) of the population in England had the coronavirus (COVID-19). It was estimated that 0.84% (95% credible interval: 0.57% to 1.17%) of the population in Wales and 0.82% (95% credible interval: 0.61% to 1.06%) of people in Scotland had the coronavirus.

There is some uncertainty around the individual point estimates for the nations. Estimates for the last few days of the series, shown as dashed lines in the chart below, have more uncertainty.

Figure 3: Modelled daily estimate of percentage of the population testing positive for the COVID-19 across the UK



Source: Office for National Statistics - COVID-19 Infection Survey, Department of Health Information Analysis Directorate

Methodology

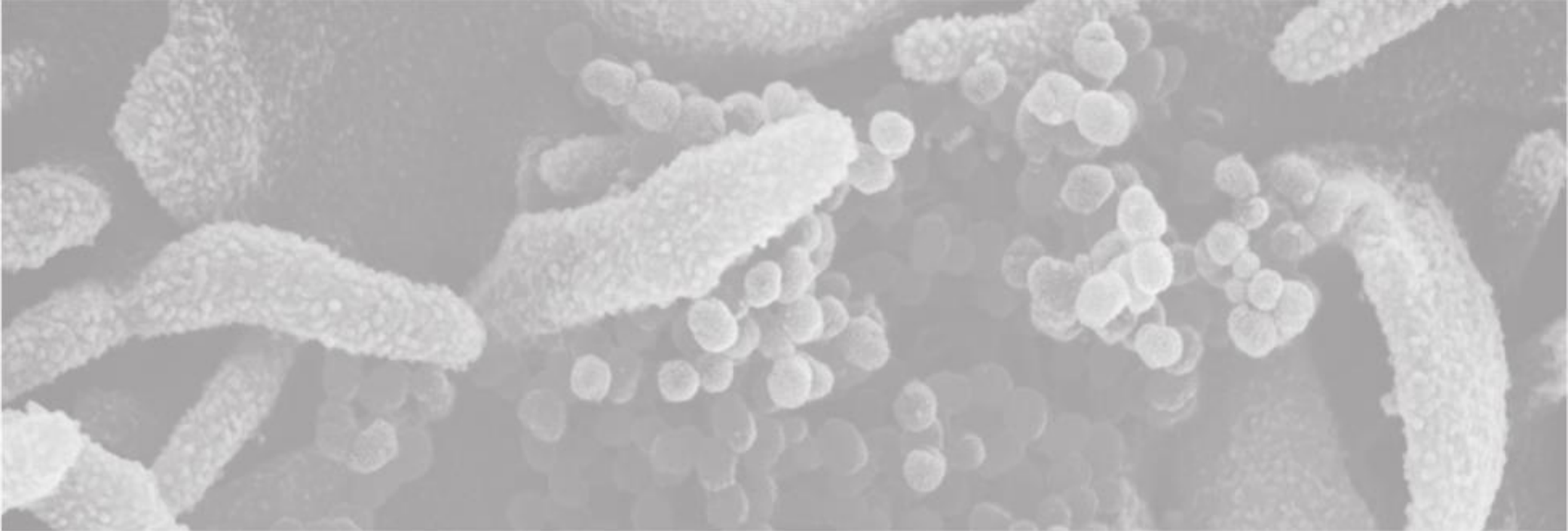
The results are based on nose and throat swabs provided by participants to the study. As well as looking at incidence overall, the survey will be used to examine the characteristics of those testing positive for COVID-19 and the extent to which those infected experience symptoms.

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 or other institutional settings.

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 information about quality and methodology can be found on the [ONS website](#).



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