



COVID-19 Infection Survey

Results for Northern Ireland

30th October 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 23rd October 2020. Modelled positivity estimates are now reported for the first time for Northern Ireland. 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 (17-23 October), it is estimated that 24,300 people in Northern Ireland had COVID-19 (95% credible interval: 12,600 to 43,700). This equates to 1.32% of the population (95% credible interval: 0.68% to 2.38%) or around 1 in 80 people (95% credible interval 1 in 150 to 1 in 40). This is based on statistical modelling of the trend in rates of positive nose and throat swab results.

The modelled throat and nose swab results suggests that the number of COVID-19 cases in Northern Ireland has increased in recent weeks. In the latest six-week period, there were 11,624 swab tests, and a total of 69 positive tests, in 54 people from 39 households. In the latest two-week period, there were 4,109 swab tests, and a total of 50 positive tests, in 42 people from 30 households.

As this is a household survey, the figures do not include people staying in hospitals, care homes 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.

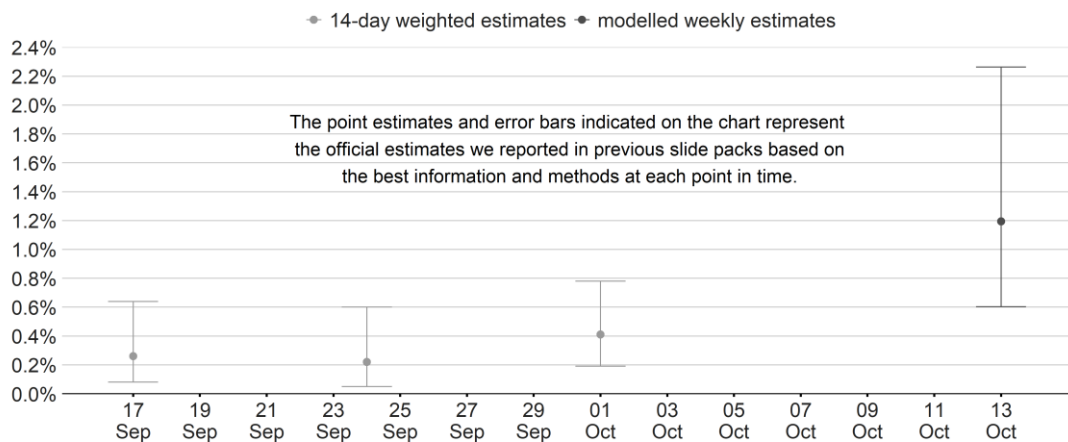
Positivity rates in Northern Ireland have increased in recent weeks. The official estimates of the percentage of people in NI previously testing positive for COVID-19 are set out in figure 1a while the modelled trends over time in the overall population for testing positive for COVID-19, including 95% 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 12 September 2020

Figure 1a:

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

Official Estimates

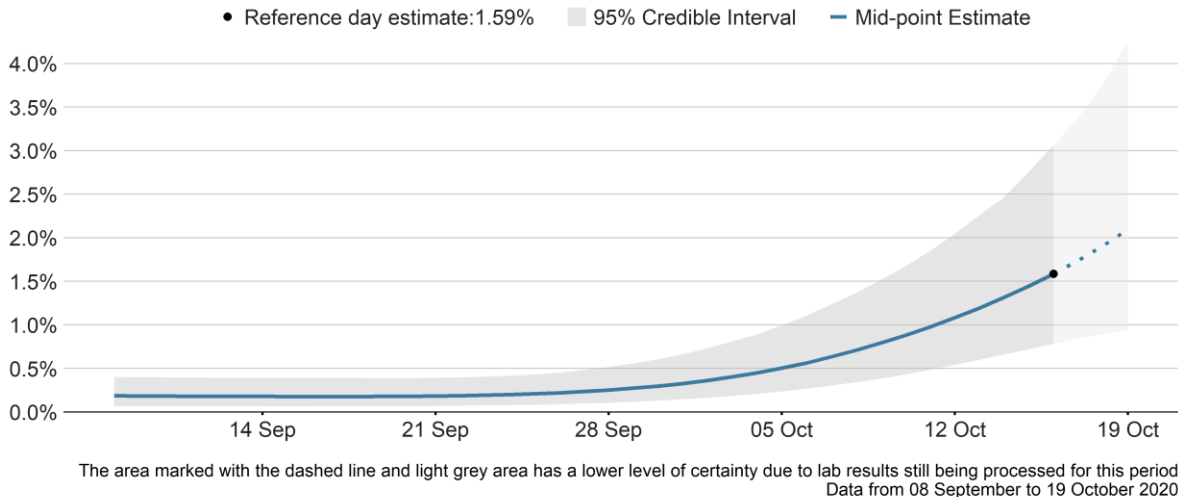


Data from 17 September to 13 October 2020

Figure 1b:

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

Modelled daily estimates



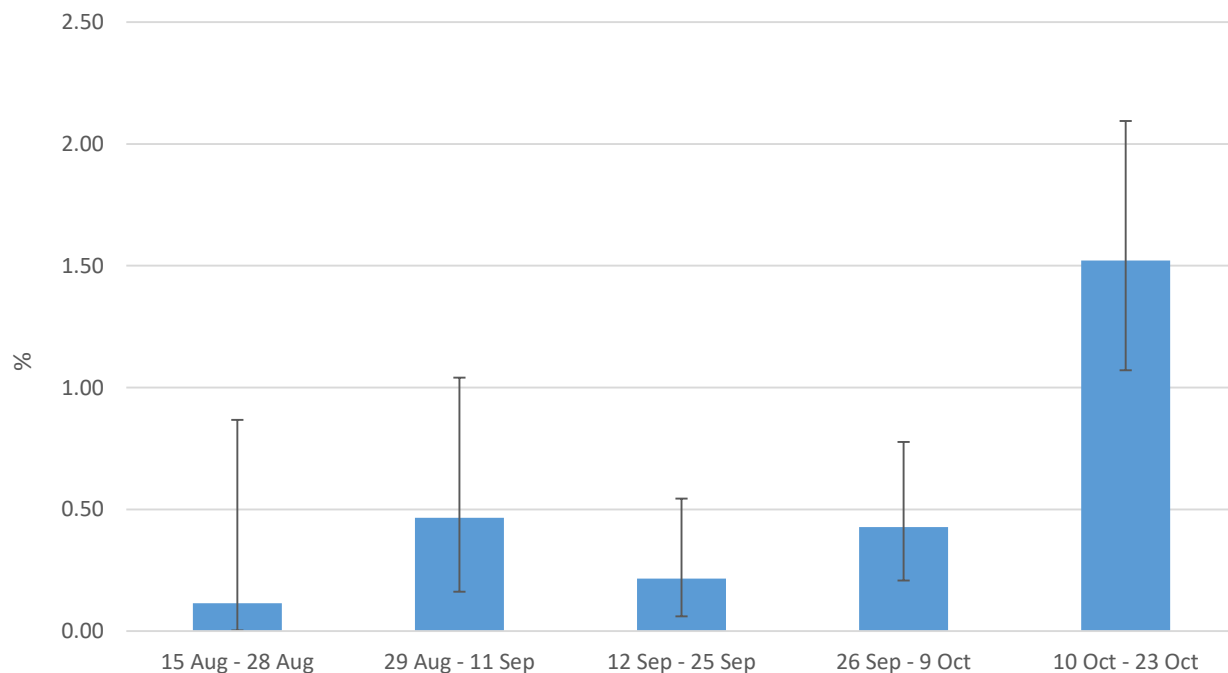
Source: Office for National Statistics - COVID-19 Infection Survey

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. These 14-day estimates are provided for context and also suggest that positivity rates have increased in recent weeks. The percentage testing positive in Northern Ireland in the latest 14-day period (10 to 23 October 2020) was 1.52% (95% confidence interval: 1.07% to 2.09%).

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 23 October 2020



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.

Methodology

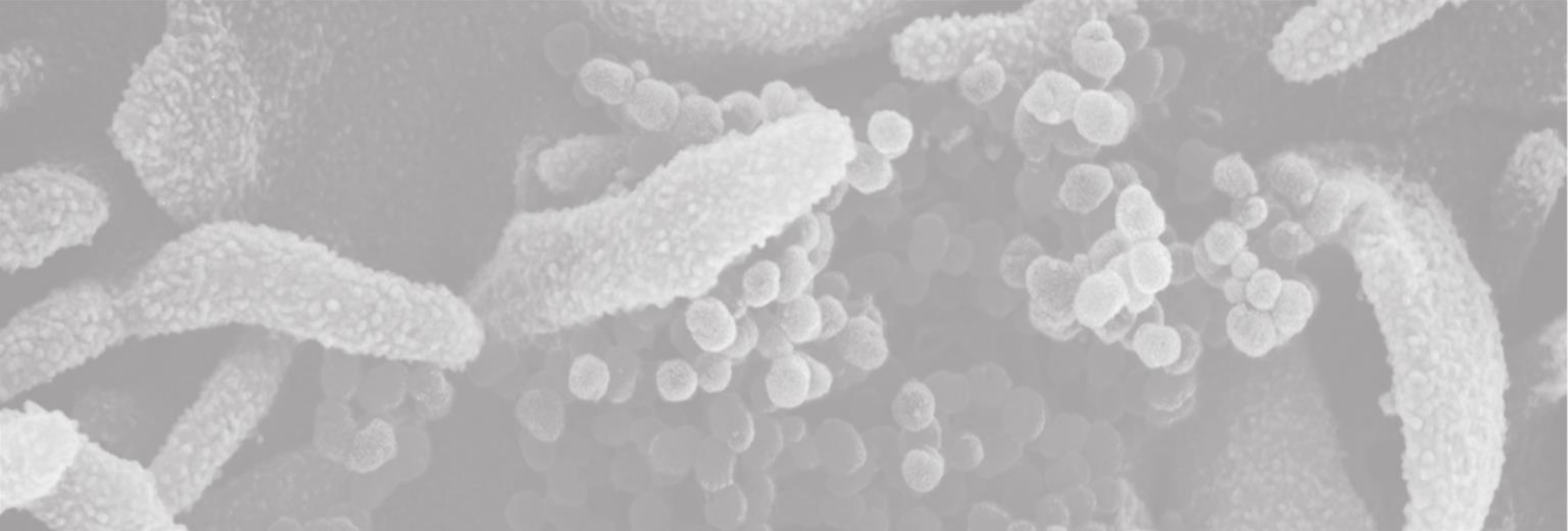
The results are based on nose and throat swabs provided by participants to the study. As well as looking at incidence overall, the survey will be used to examine the characteristics of those testing positive for COVID-19 and the extent to which those infected experience symptoms.

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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