

Weekly national seasonal respiratory report

Week ending 18 July 2021 – week 28

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1. Introduction

Surveillance of influenza infection is a key public health activity as it is associated with significant morbidity and mortality during the winter months, particularly in those at risk of complications of flu, e.g., the elderly, those with chronic health problems, and pregnant women.

The spectrum of influenza illness varies from asymptomatic illness to mild/moderate symptoms to severe complications, including death. In light of the spectrum of influenza illness there is a need to have individual surveillance components which provide information on each aspect of the illness.

There is no single flu surveillance component that can describe the onset, severity and impact of influenza, or the success of its control measures each season across a community. To do so requires a number of complementary surveillance components which are either specific to influenza or its control, or which are derived from data streams providing information of utility for other PHS specialities (corporate surveillance data). Together, the influenza surveillance components provide a comprehensive and coherent picture of influenza-like-illness (ILI)/acute respiratory illness (ARI) activity on a timely basis throughout the flu season.

2. Main points

Overall assessment:

- Influenza activity is currently at **Baseline** level.
- Unlike SARS-CoV-2 surveillance data, influenza is reported in a seasonal cycle which, this season, runs from week 40 (28/09/20) to week 20 (17/05/21). This season, the weekly report on influenza infection and other respiratory pathogens will continue past week 20 until further notice.

In week 28 (week ending 18/07/2021), provisional data showed:

- The rate of influenza-like illness (ILI) was at **Baseline** activity level (0.2 per 100,000).
- The swab positivity of influenza was at **Baseline** activity level (0.0%, 0/2821).
- The incidence rate of influenza was at **Baseline** activity level (0.0 per 100,000 population).
- There were no influenza cases reported this week. The low numbers of influenza may be related to current SARS-CoV-2 interventions combined with the traditional low transmission of influenza during the summer months. However, data are provisional and may be subject to change.
- The proportion of total NHS24 calls for respiratory symptoms decreased from **Low** to **Baseline** activity level. NHS24 calls for respiratory symptoms in those aged <1 year remained at **Low** activity level, while for those aged 1-4 years remained at **Moderate** activity level. NHS24 calls for respiratory symptoms in those aged 15-44 years decreased from **Moderate** to **Low** activity level and in those aged 45-64 years decreased from **Low** to **Baseline** activity level. All other age groups remained at **Baseline** activity level.
- Parainfluenza remained at **Low** activity level. All other non-flu pathogens were at **Baseline** activity level.

3. Results and commentary

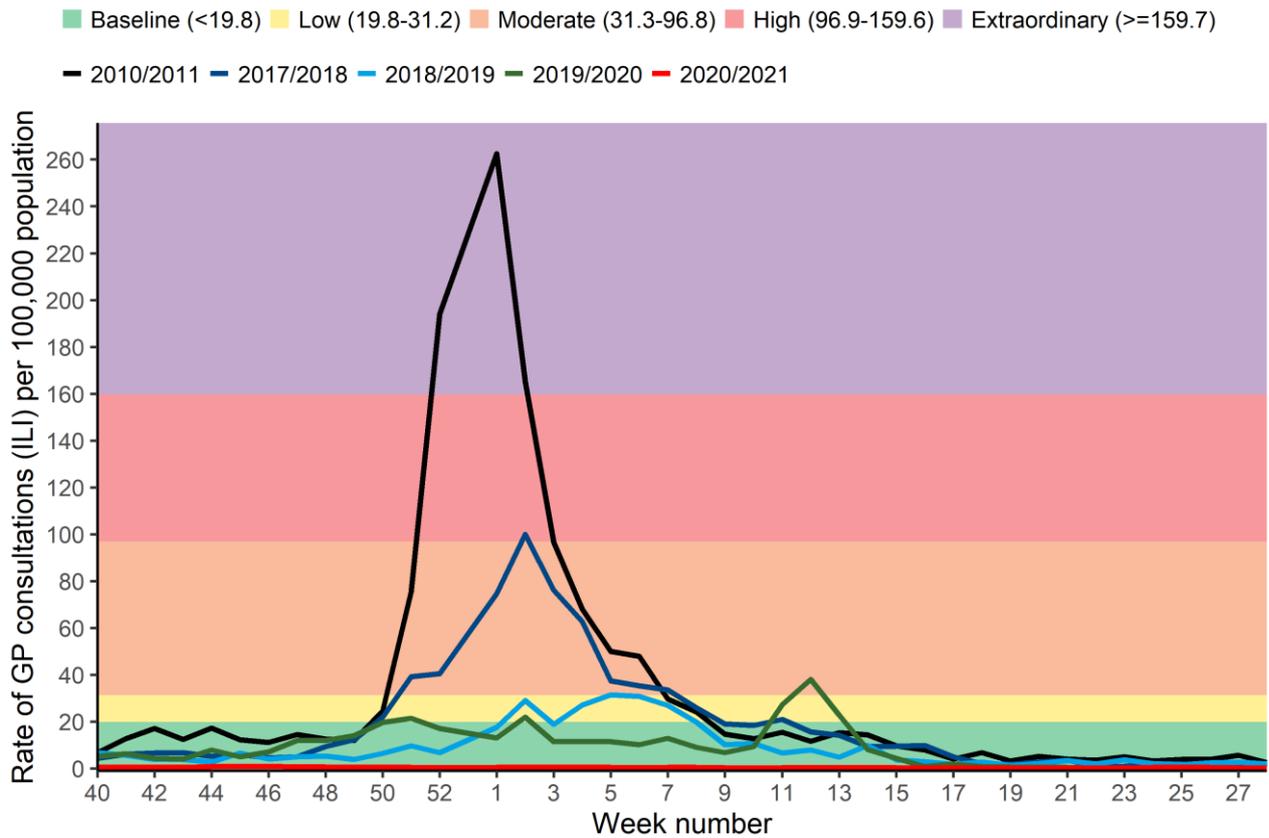
All indicators of influenza activity have shown a decline this season. The implementation of community mitigation measures such as social distancing and improved hand and respiratory hygiene, including the wearing of face masks, for preventing the spread of SARS-CoV-2, have likely contributed to the decrease in transmission of all respiratory infections. In addition, there have been restrictions in movement and social mixing since December 2020 as a result of lockdown measures across most areas of Scotland. PHS will continue to monitor activity related to all respiratory pathogens as lockdown eases and we move into different levels of restrictions as described on the Scottish Government website available at: <https://www.gov.scot/publications/coronavirus-covid-19-protection-levels/>

This season, it is also notable that uptake of flu vaccine is higher than recent years.

3.1. GP consultations for influenza-like illness (ILI)

- The overall rate of GP consultations for influenza-like illness (ILI) was at **Baseline activity level** in week 28 (0.2 per 100,000 population). The ILI rate in week 27 was 0.4 per 100,000 population (Figure 1).
- The highest rates were seen in those aged 45-64 years (0.6 per 100,000 population, **Baseline activity level**) and those aged 75+ years (0.3 per 100,000 population, **Baseline activity level**).
- Compared to previous seasons, the ILI rate shows a marked decrease. This decline may be due to changes in routine health seeking behaviour and also changes in the way GP consultations have been taking place during the ongoing pandemic.
- Due to COVID-19, the disease caused by SARS-CoV-2, health care services are functioning differently now compared to previous flu seasons, so the consultation rates are not directly comparable to historical data.

Figure 1: Weekly GP consultation rates for ILI (per 100,000 population) for season 2020/21 compared to seasons 2010/11, 2017/18, 2018/19 and 2019/20 (line graph).

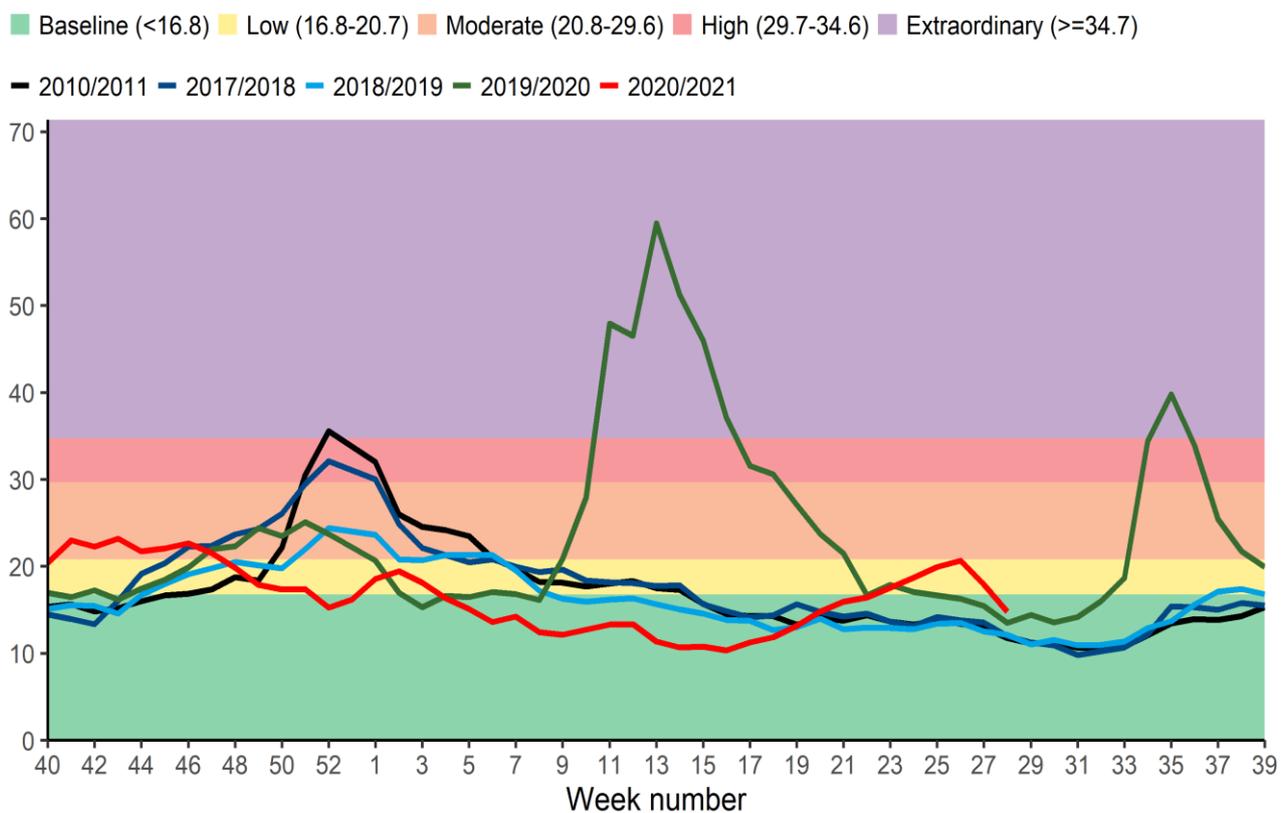


The colour bands represent the different activity levels. Scotland-level MEM thresholds includes data from seasons 2010/11 to 2018/19.

3.2. NHS24 respiratory calls

- The proportion of NHS24 calls that were for respiratory symptoms in week 28 decreased to **Baseline activity level** (Figure 2).
- NHS24 calls in the <1 year age group remained at **Low activity level** and for those aged 1-4 years remained at **Moderate activity level**.
- NHS24 calls for respiratory symptoms in those aged 15-44 years decreased from **Moderate to Low activity level** and in those aged 45-64 years decrease from **Low to Baseline activity level**. All other age groups remained at **Baseline activity level**.

Figure 2: Weekly NHS24 respiratory calls (%) for season 2020/21 compared to seasons 2010/11, 2017/18, 2018/19, and 2019/20.



The colour bands represent the different activity levels. Scotland-level MEM thresholds were calculated at the end of the 2019/20 season, and include data from seasons 2010/11 to 2018/19.

3.3. Microbiological surveillance

Laboratory confirmed influenza cases (ECOSS)

- There were no influenza cases detected this week.
- The swab positivity of influenza was at **Baseline activity level** (0.0%, 0/2821).
- The incidence rate of influenza was at **Baseline activity level** (0.0 per 100,000 population).
- There have been low numbers of flu diagnoses recorded during the winter season which officially ended in week 20 (week ending 23 May 2021). Since week 20, there have been seven flu diagnoses. This may be due to a combination of measures to prevent the spread of SARS-CoV-2, including restrictions on movement and social mixing, along with improved hand and respiratory hygiene.

Influenza genetic characterisation

Each year the West of Scotland Specialist Virology Centre (WoSSVC) conducts genetic characterisation of a small number of influenza samples. These include samples from influenza outbreaks, individuals seriously ill, individuals who have died due to influenza and individuals with suspected vaccine failure. The genetic characterisation data are used to: (1) examine if the circulating influenza strains match those included in the seasonal influenza vaccine; and, (2) monitor for changes in circulating influenza viruses. Further information on genetic characterisation will be provided when data are available.

Non-influenza respiratory pathogens

Non-flu respiratory pathogens including adenovirus, coronavirus (non-SARS-CoV-2), human meta pneumovirus (HMPV), *Mycoplasma pneumoniae* (MPN), rhinovirus and respiratory syncytial virus (RSV) were at **Baseline activity level**.

Parainfluenza remained at **Low activity level**, with 46 laboratory-confirmed cases in Scotland during week 28 (0.84 cases per 100,000 population). Data are provisional and are subject to change. In week 27, there were 68 laboratory-confirmed cases (1.2 cases per 100,000 population).

4. Further information

4.3. Influenza surveillance in Scotland

- For further information on influenza and the influenza surveillance system in Scotland, please visit the [influenza page on our website](#).
- For caveats and notes explaining the vaccine uptake data and the methodologies used in this report, please see [Appendix 2](#).
- The technical document on reporting rates of influenza-like illness (ILI) consultations from General Practitioners in Scotland has been published on our [website](#). This report provides background to reporting of primary care consultation rates for ILI in Scotland plus: (1) a description of the 2017/18 data issues and end of season revision of ILI consultation rates; and (2) the application of the Moving Epidemic Method (MEM) to Scottish ILI consultation rate data.

4.4. UK and international influenza reports

- [PHE Weekly national flu and COVID-19 report](#)
- [PHE Surveillance of influenza and other seasonal respiratory viruses in the UK Winter 2020 to 2021](#)
- [Flu News Europe website](#)
- [WHO influenza update](#)
- [EuroMOMO website](#)

5. Glossary

All-cause mortality

Vital statistics of total number of deaths, regardless of cause.

Activity level

In the context of the Moving Epidemic Method (MEM), the epidemiological activity can be defined into 5 activity levels. The activity levels based on the MEM uses 4 thresholds (Epidemic, Medium, High and Very high) and are categorised as: baseline activity (when activity is below epidemic threshold); low activity (when activity is between epidemic and medium thresholds); moderate activity (when activity is between medium and high thresholds); high activity (when activity is between high and very high thresholds); Extraordinary activity (when activity is above very high threshold). Knowing influenza activity levels allows comparisons over time and across countries also to influence/time the prescribing of antiviral medication

Case-fatality rate (CFR)

The CFR is measure of the severity of a disease and is defined as the proportion of deaths within a defined population of cases

Electronic Communication of Surveillance in Scotland (ECOSS)

National laboratory surveillance system that captures laboratory results from diagnostic and reference laboratories in Scotland

Incidence rate

Number of new laboratory positive test results expressed as a rate per 100,000 Scottish population ([mid-year estimates](#)). Virological data is dynamic, therefore, the incidence rate will change week to week as more data become available.

Influenza-like illness (ILI)

Influenza virus infections can cause a range of symptoms which are non-specific and resemble the clinical picture of a variety of other pathogens. A clinical diagnosis is often referred as influenza-like illness (ILI) by General Practitioners (GP). In Scotland, the recommended surveillance case definition for ILI is an individual presenting in primary care with an acute respiratory illness with physician-diagnosed fever or complaint of feverishness in the previous 7 days. It is important to note that: the surveillance case definition for ILI is not necessarily intended to capture all cases but to describe trends over time. The individual diagnosis and clinical electronic recording of ILI is at clinical discretion of the GP; ILI is not the same as a laboratory confirmation of influenza and any clinical diagnosis based on signs and symptoms will miss some influenza infections and include some non-influenza infections.

Influenza

Influenza (flu) is a contagious respiratory illness caused by influenza viruses. There are two main types of influenza virus: Types A and B. The influenza A and B viruses that routinely

spread in people (human influenza viruses) are responsible for seasonal flu epidemics each year. Current subtypes of influenza A viruses found in people are influenza A(H1N1) and influenza A(H3N2) viruses. Currently circulating influenza B viruses belong to one of two lineages: B/Yamagata and B/Victoria.

Moving Epidemic Method (MEM)

MEM is a methodology used for setting thresholds and classifying epidemiological activity levels. This methodology was adopted by the UK, the European Centre for Disease Prevention and Control (ECDC) and World Health Organisation (WHO) to define influenza activity levels.

Swab positivity

Proportion of positive laboratory results among a defined number of laboratory tested samples, i.e. number of positives divided by total number of laboratory tests done. Virological data is dynamic, therefore, the swab positivity will change retrospectively week to week as more data becomes available.

Threshold

In the context of influenza surveillance, thresholds help to: 1) to characterise influenza activity levels; 2) to indicate when the influenza season has begun; and 3) to detect periods of increased activity or atypical activity.

6. Contacts

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7. Next publication

Further information and data for this publication are available from the [publication page](#) on our website.

The next release of this publication will be 28 July 2021.

8. 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.

9. Appendices

Appendix 1 – Publication metadata

Publication title

PHS weekly national seasonal respiratory report

Description

Summary epidemiological information on seasonal influenza and other seasonal respiratory infections activity in Scotland. As of 13th January 2021, influenza vaccine uptake data for the 2020/21 season are included in the weekly report (the first report since the introduction of the Vaccine Transformation Programme).

Theme

Infections in Scotland

Topic

Information on seasonal influenza and other seasonal respiratory infections

Format

PDF

Data source(s)

This report includes a number of data sources: (1) GP consultations for influenza-like illness (ILI); (2) Secondary care virology (ECOSS); and, (3) GPIT and manual returns (templates) for vaccine uptake data. Detailed explanation on the data source can be found on the [PHS website](#).

Date that data are acquired

Up to the Monday prior to release date.

Release date

Every Wednesday during the flu season.

Frequency

For influenza reporting this is normally weekly from week 40 2020 to week 20 2021 and four weekly from week 21 2021 to week 39 2021. This season, weekly reporting will continue past week 20 until further notice. The influenza vaccine uptake data are updated on a 4-weekly basis.

Timeframe of data and timeliness

The data on infection surveillance are up to date to the Monday preceding publication.

NHS boards submit data on vaccine uptake on a 4-weekly basis throughout the winter flu season and the data are reported and updated every four weeks.

Continuity of data

Data on infection and related surveillance are produced weekly from week 40 2020 to week 20 2021 and then four-weekly from week 21 2021 to week 39 2021. The influenza vaccine uptake data are updated on a four weekly basis throughout the winter season from week 51, 2020 to week 15, 2021.

Revisions statement

These data are not subject to planned major revisions. However, the Clinical and Protecting Health Directorate of PHS aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and may be updated in the future.

Revisions relevant to this publication

The following update has been made to swab positivity denominator for week 26 for influenza in ECOSS:

Previous Denominator	Updated Denominator
2,770	3,027

The following update has been made to activity level for week 27 for Rhinovirus:

Reported Activity level	Updated Activity level
Baseline	Low

Concepts and definitions

See Glossary

Relevance and key uses of the statistics

The data are used to gauge the start, peak and duration of the influenza season and describe the current impact and the severity of the influenza season in Scotland each winter. Such information allows comparison with prior influenza seasons and with current activity across the UK, Europe and globally. All the GP consultation data depends on GPs using the appropriate Read codes and this is variable between practices.

Accuracy

1) GP Consultations for ILI received by PHS as weekly automated aggregated data extracts from the GP practice systems. These data are subject to limited data quality assurances. All GP consultation data depends on GPs using the appropriate Read codes and this is variable between practices. The ILI data are subject to adjustment by statistical methods to allow comparison between seasons – these methods are outlined in a separate technical document. ILI rates may change slightly from week to week due to data reporting delays.

2) Secondary care virology (ECOSS) data are subject to a data quality and assurance processes.

3) NHS 24 data: In October 2017, NHS24 changed over from a legacy system to a new IT system.

4) Vaccine uptake data – The Vaccine Transformation Programme (VTP) is being developed throughout Scotland (Appendix 2). This involves a model where NHS boards and Health and Social Care Partnerships (HSCP) are responsible for delivering the vaccination programme. In season 2020/21, there has been a mixed delivery model for influenza vaccination which varies considerably by NHS board and data collection is complex. The vaccine uptake data are subject to data quality and assurance processes. To ensure data accuracy, confirmation and verification with NHS boards is in place. PHS work with boards to improve the process of data collection and ensure the quality of data.

Completeness

1) GP consultations for influenza-like illness (ILI) – approximately 98% (923/940) of GP practices routinely report to PHS.

2) Secondary care virology (ECOSS) – all Scottish laboratories submit positive results. Currently only five main laboratories submit influenza negative results. Virological data is dynamic, therefore, the swab positivity and absolute numbers will change retrospectively week to week as more data becomes available. Data completeness is not available at the time of this report

3) Vaccine uptake data – 2020/21 season 'flu vaccine uptake data are provisional data using various data capture systems used in each NHS board as part of the VTP. The data are captured directly both from the GP IT systems and from data submission using manual templates to PHS on a 4-weekly basis. This ensures every NHS boards submits uptake data although completeness varies for some cohorts

Comparability

Public Health England, weekly national influenza report:

<https://www.gov.uk/government/statistics/weekly-national-flu-reports-2019-to-2020-season/>;

Public Health Agency influenza weekly surveillance bulletin: [Seasonal influenza \(flu\) surveillance | HSC Public Health Agency \(hscni.net\)](#)

Joint ECDC WHO-Euro influenza weekly report: <https://flunewseurope.org/>

Accessibility

It is the policy of Public Health Scotland to make its web sites and products accessible according to published guidelines. More information on accessibility can be found on the [PHS website](#).

Coherence and clarity

The report includes detail on the background to the influenza-like illnesses in Scotland as well as analysis results. The report has been produced using the standard PHS publications template.

Value type and unit of measurement

1) GP consultations for influenza-like illness (ILI) are presented as rates per 100,000 population.

2) Secondary care virology (ECOSS) data for influenza are presented as numbers of laboratory detections, proportion of positive samples (%), i.e. swab positivity and incidence rate of influenza (rate per 100,000 Scottish population). The number of laboratory detections of other non-influenza respiratory pathogens are presented as activity levels per pathogen.

3) Vaccine uptake data is presented as proportion (%) of national figures for each cohort.

Disclosure

The PHS protocol on Statistical Disclosure Protocol is followed.

Official Statistics designation

Official statistics

UK Statistics Authority Assessment

Not assessed

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14 July 2021

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Date of first publication

10 October 2019

Help email

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Date form completed

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Appendix 2 – Activity level for respiratory pathogens in Scotland

The activity levels for various respiratory pathogen used in the report are summarised in the Table 2.

Table 2- Activity levels for respiratory pathogens.

	Baseline	Low	Moderate	High	Extraordinary
GP consultation rates for ILI	0 - < 19.8	19.8 - < 31.3	31.3 - < 96.9	96.9 - < 159.6	>= 159.6 per 100,000 population
NHS24 respiratory calls	0% - < 16.8%;	16.8% - < 20.8%	20.8% - < 29.7%	29.7% - < 34.7%	>= 34.7%)
ECOSS swab positivity	0% < 7.4%	7.4% - < 19.5%	19.5% - < 38.3%	38.3% - < 51.7%	>= 51.7%
ECOSS incidence rate	0 - < 2.8	2.8 - < 4.6	4.6 - < 16.6	16.6 - < 29.4	>= 29.4 per 100,000 population
Adenovirus	0 - < 0.8	0.8 - < 1.7	1.7 - < 2.2	2.2 - < 2.5	>= 2.5 per 100,000 population
Coronavirus (non-COVID-19)	0 - < 0.6	0.6 - < 1.0	1.0 - < 2.3	2.3 - < 3.2	>= 3.2 per 100,000 population)
Human metapneumovirus	0 - < 0.3	0.3 - < 1.1	1.1 - < 1.4	1.4 - < 1.6	>= 1.6 per 100,000 population)
Mycoplasma pneumoniae	0 - < 0.2	0.2 - < 0.6	0.6 - < 1.0	1.0 - < 1.2	>= 1.2 per 100,000 population)
Parainfluenza	0 - < 0.5	0.5 - < 1.2	1.2 - < 1.4	1.4 - < 1.6	>= 1.6 per 100,000 population)
Respiratory syncytial virus	0 - < 1.5	1.5 - < 4.4	4.4 - < 5.6	5.6 - < 6.3	>= 6.3 per 100,000 population)
Rhinovirus	0 - < 1.9	1.9 - < 3.9	3.9 - < 5.1	5.1 - < 5.7	>= 5.7 per 100,000 population).

Appendix 3 – Early access details

Pre-Release Access

Under terms of the "Pre-Release Access to Official Statistics (Scotland) Order 2008", PHS is obliged to publish information on those receiving Pre-Release Access ("Pre-Release Access" refers to statistics in their final form prior to publication). The standard maximum Pre-Release Access is five working days. Shown below are details of those receiving standard Pre-Release Access.

Standard Pre-Release Access:

Scottish Government Health Department

NHS board Chief Executives

NHS board Communication leads

Appendix 4 – 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'](#).