UK Health Security Agency

# Weekly National Influenza and COVID-19 surveillance report

## Week 19 report (up to week 18 data)

## 11 May 2023

# Contents

For additional information including regional data on COVID-19 and other respiratory viruses, COVID-19 in educational settings, co- and secondary infections with COVID-19 and other data supplementary to this report, please refer to the accompanying graph pack.

# Corrections

An error was made at the data generation stage for Figure 5 and underlying data. The values for 5 to 9 year olds were accidentally put in the 50 to 59 years old category. There were subsequent shifts in younger age categories, shifting data for the 50 to 59 year olds to the 40 to 49 year olds, 40 to 49 year olds to the 30 to 39 year olds (and so on until back to 5 to 9 years old).

This mislabelling error has now been corrected.

An error was made during the data transcription stage for the production of Figure 34 and underlying data. The ILI rate for Week 48 data was incorrectly transcribed. This data point has now been corrected. Please note Figure 33 and Figure 34 share this dataset, however only Figure 34 was affected.

# Executive summary

This report summarises the information from the surveillance systems which are used to monitor coronavirus (COVID-19), influenza, and other seasonal respiratory viruses in England. References to COVID-19 represent the disease name and SARS-CoV-2 represent the virus name. The report is based on data from week 18 (between 1 and 7 May 2023) and for some indicators daily data up to 9 May 2023.

## Overall

Data in this week's report may be subject to changes in COVID-19 testing policy. In week 18, from most indicators, influenza activity remained low and stable compared with week 17. COVID-19 activity decreased across most indicators compared with the previous week.

## COVID-19

COVID-19 case rates through Pillar 1 decreased in week 18, in all age groups, ethnic groups and most regions.

Through Respiratory Datamart, SARS-CoV-2 positivity remained stable at 7.1% compared with 7.2% in the previous week.

Through primary care surveillance, COVID-19 indicators remained stable compared with the previous week.

The overall number of reported confirmed COVID-19 outbreaks decreased compared with the previous week. The highest number of incidents continue to be in care homes, with 11 confirmed SARS-CoV-2 outbreaks occurring in England in week 18 compared with 31 in week 17.

Overall, COVID-19 hospitalisations decreased slightly in week 18 compared with week 17. Hospitalisations were highest in the 85 years and over age group. ICU admission rates due to COVID-19 decreased slightly. Through syndromic surveillance indicators, emergency department attendances for covid-like illness remained stable.

Deaths with COVID-19 decreased in week 17 compared with week 16.

## Influenza

The majority of influenza detections in the most recent week have been influenza B across a number of surveillance systems.

In Respiratory Datamart, influenza positivity remained low and stable at 0.9% in week 18 compared with 1.0% in week 17. Highest positivity was seen in those aged 15 to 44 years at 2.1%. Influenza B positivity remained low at 0.7% in week 18 compared with 0.8% in week 17.

Through primary care surveillance, the influenza-like-illness consultations indicator decreased slightly in week 18 compared with the previous week and was within the baseline activity level range.

There were no confirmed influenza outbreaks reported in week 18 in England.

The influenza hospital admission rate remained low and stable week 18 compared with the previous week and is within the baseline range of activity. By UKHSA Centre, the highest hospitalisation rate was observed in the London region. By age group, the highest hospital admission rate for influenza was in adults aged 45 to 64 years old. Influenza ICU admissions remained low and stable in week 18 and remained within the baseline range of activity.

Emergency department attendances for influenza-like illness remained stable nationally.

## RSV

In Respiratory Datamart, the overall positivity for RSV remained low at 0.4%, with the highest positivity in those aged under 5 years at 1.5%. In week 18, the overall hospital admission rate for RSV remained low at 0.05 per 100,000. Emergency department attendances for acute bronchiolitis increased nationally**.**

## Other viruses

Adenovirus positivity decreased to 2.8%, with the highest positivity in children aged under 5 years old at 7.9%. Human metapneumovirus (hMPV) positivity decreased to 1.1%, with the highest positivity in children aged under 5 years old at 3.5%. Parainfluenza positivity decreased to 4.7%, with the highest positivity in those aged under 5 years old at 6.8%. Rhinovirus positivity increased to 12.4% overall, with the highest positivity in those aged under 5 years old at 31.1%.

## Other indicators

The primary care lower respiratory tract infection rate decreased in week 18.

During week 18, NHS 111 calls for cough and calls for cold or flu remained stable nationally.

Emergency department attendances for acute respiratory infection remained stable nationally.

There was no excess mortality detected in week 17.

# Laboratory surveillance

## Confirmed COVID-19 cases (England)

As of 9am on 7 May 2023, a total of 2,076,749 episodes have been confirmed for COVID-19 in England under Pillar 1, and 18,734,873 episodes under Pillar 2, since the beginning of the pandemic. COVID-19 case rates through Pillar 1 decreased in week 18, across all age groups, ethnic groups, and most regions. The number of Pillar 1 COVID-19 episodes decreased to 2,592 in week 18 compared with 3,361 in week 17.

### Data notes:

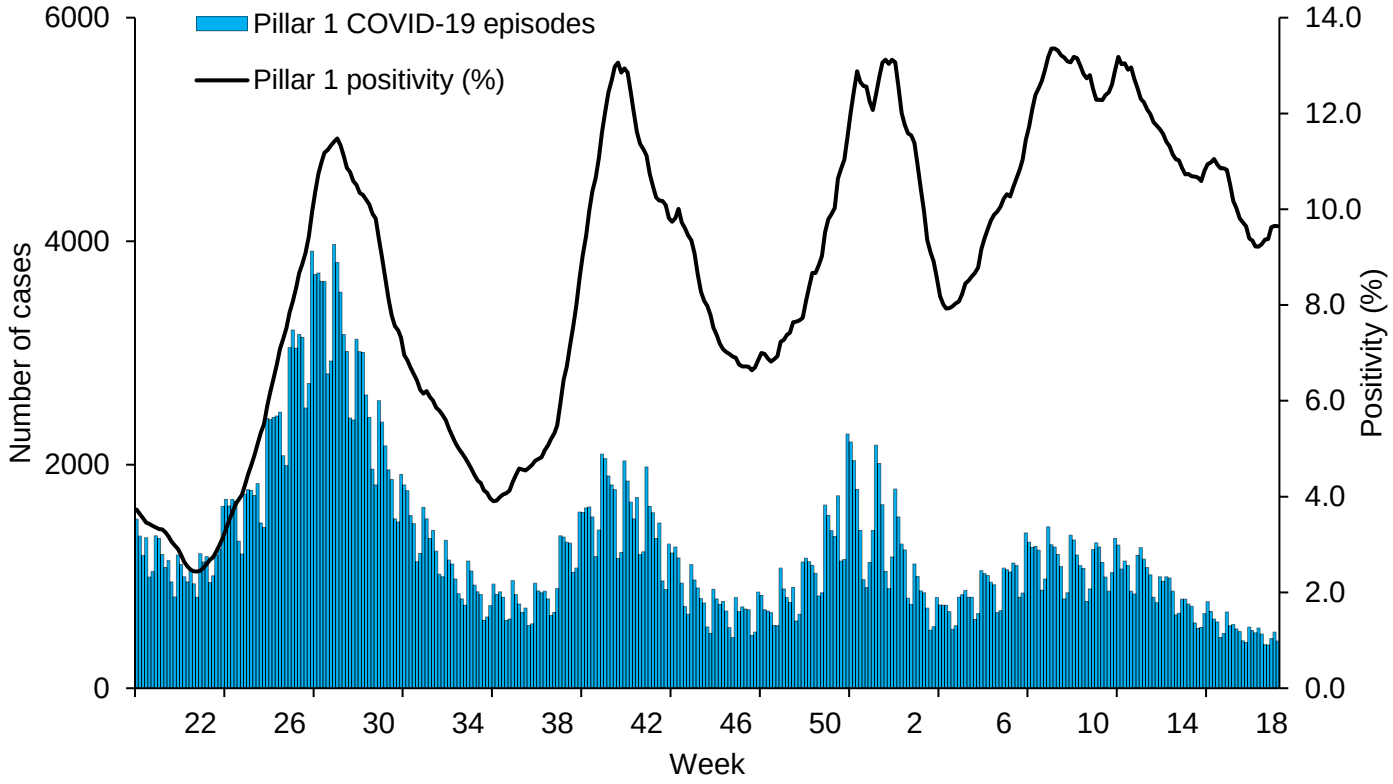
Changes to testing policies over time may affect positivity rates and incidence rates and should be interpreted accordingly. COVID-19 case reporting in England uses an episode-based definition which includes possible reinfections, each infection episode is counted separately if there are at least 91 days between positive test results (polymerase chain reaction (PCR) or rapid lateral flow device). Each infection episode begins with the earliest positive specimen date. Additionally, further changes in testing policy are in effect since 1 April 2023, which may affect case rates and positivity rates.

Positivity is presented as positivity by PCR testing only. In reports from week 16 2023 onwards, this is presented as a 7 day rolling average with the number of individuals testing positive during the preceding 7 days divided by the number of individuals tested during the preceding 7 days through PCR testing.

Data is shown by the date the specimen was taken from the person being tested. For the most recent week results for more samples are expected therefore this should be interpreted with caution.

Data source: Second Generation Surveillance System (SGSS)

**Figure 1: Confirmed COVID-19 episodes tested under Pillar 1, based on sample day with overall seven-day rolling average PCR positivity for Pillar 1 (%)**




## Ages and Sex

**Figure 2: Weekly confirmed COVID-19 case rates per 100,000, by episode, tested under Pillar 1, by sex**

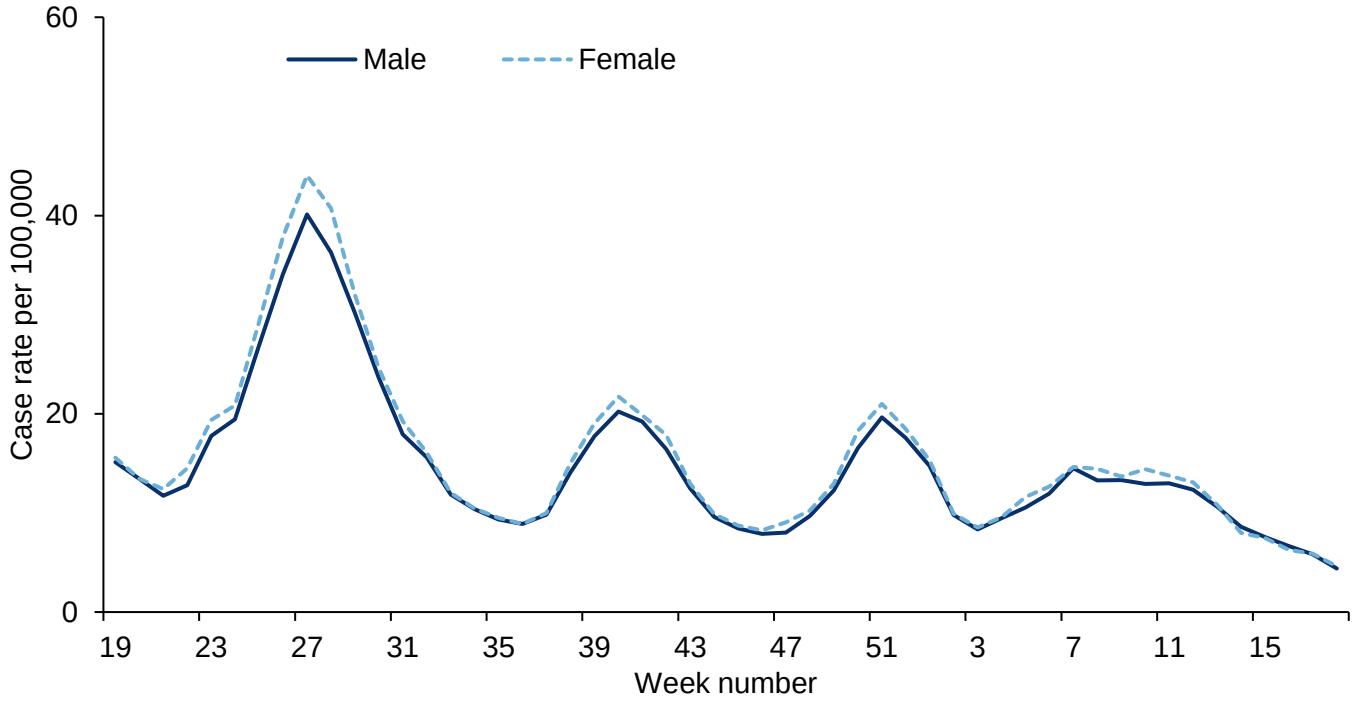


**Figure 3: Weekly confirmed COVID-19 case rates per 100,000, by episode, tested under Pillar 1, by age group**

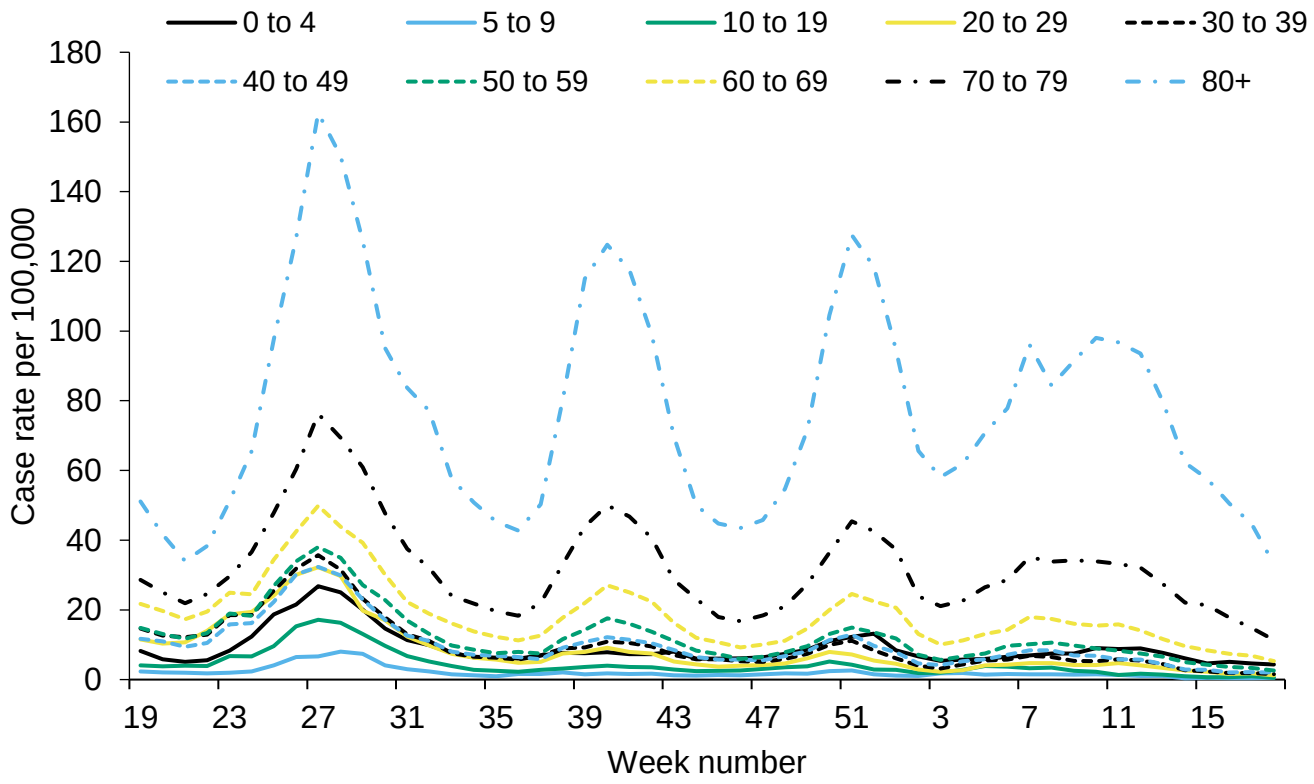



**Figure 4: Seven-day rolling average PCR positivity (%) of confirmed COVID-19 cases tested overall and by sex under Pillar 1**

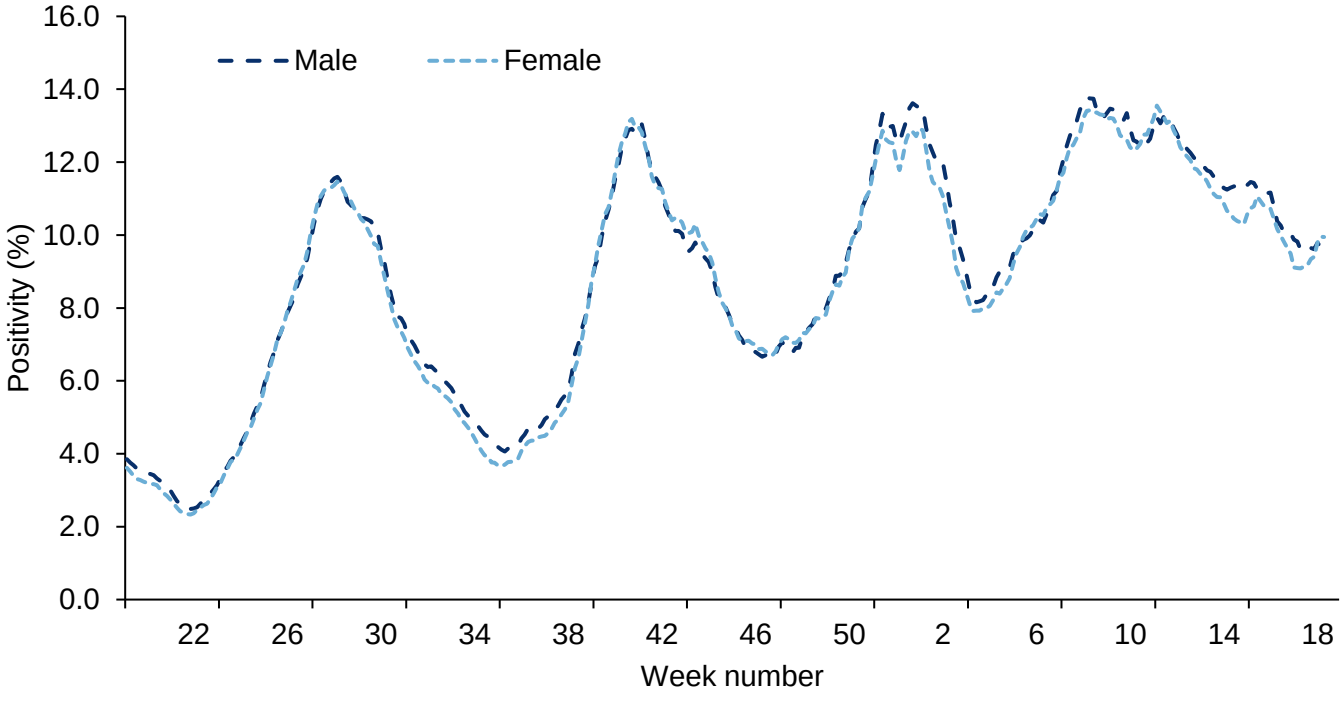
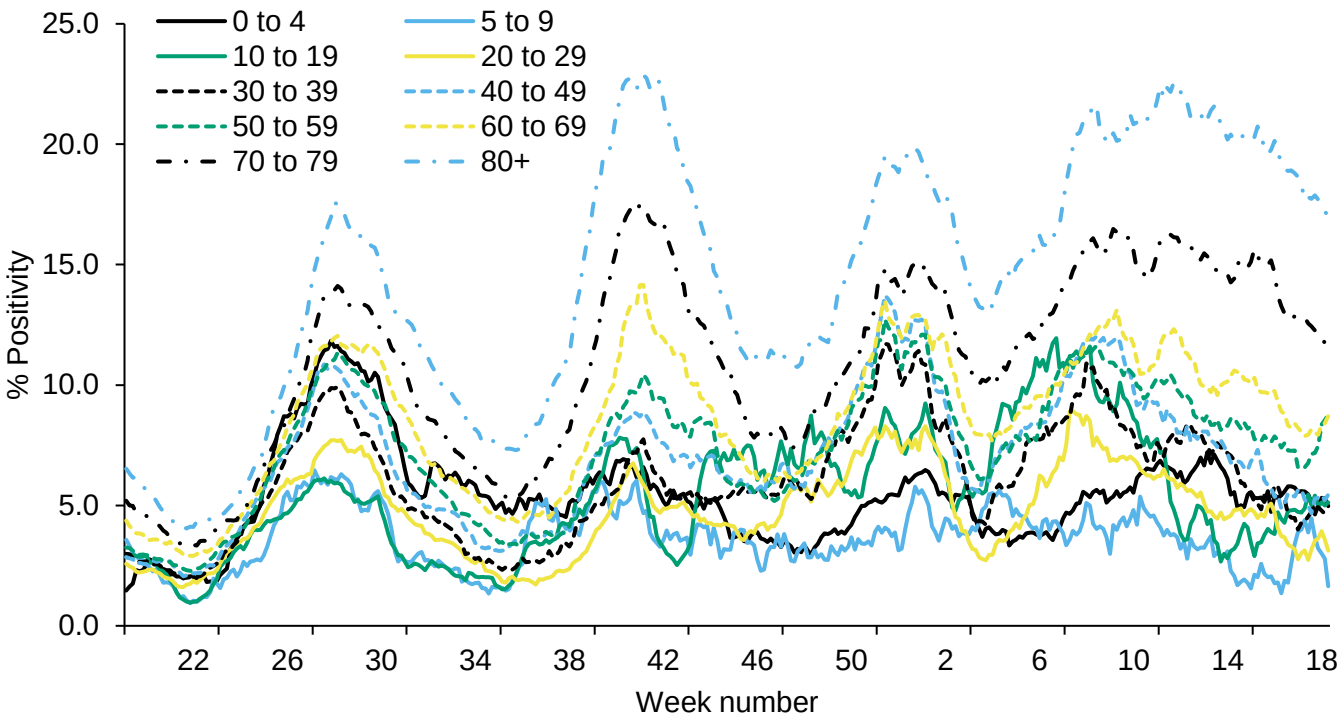
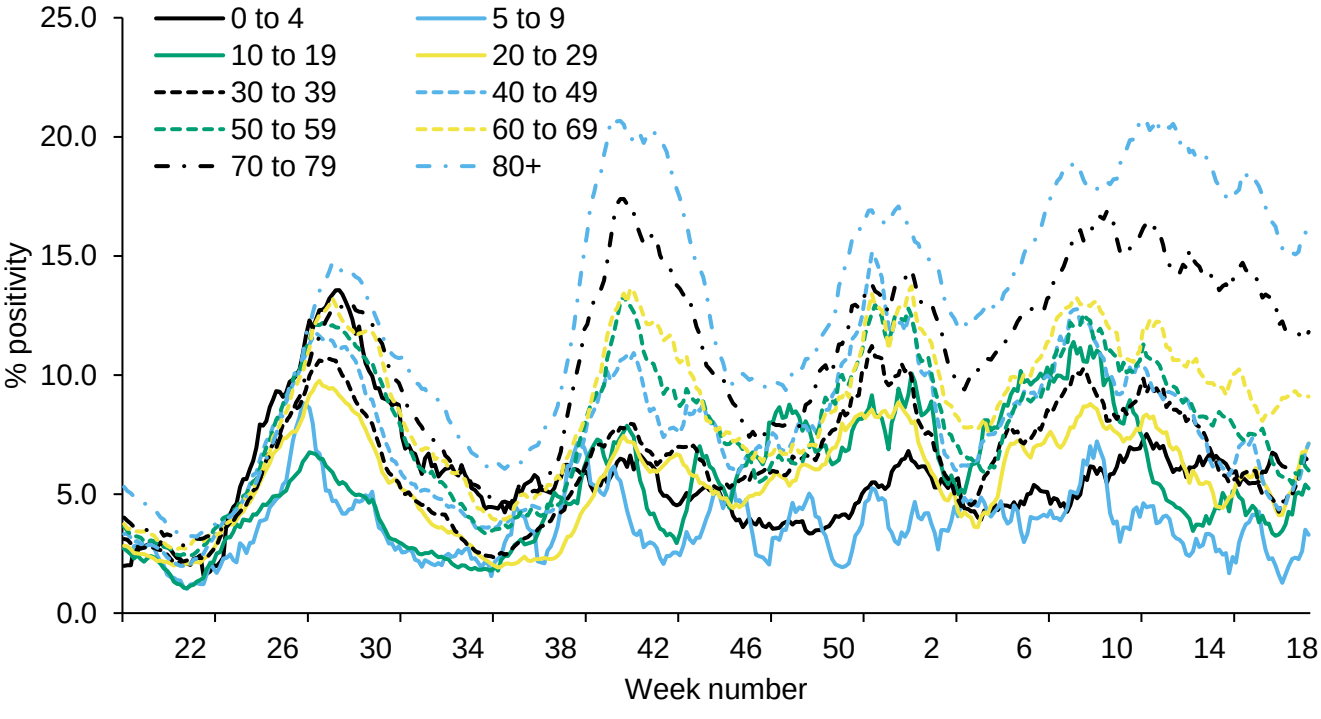


**Figure 5: Seven day rolling average PCR positivity (%) of confirmed COVID-19 cases tested under Pillar 1, (a) by male and age group and (b) by female and age group**

(a) Pillar 1 – Male




(b) Pillar 1 – Female



## Geography

**Figure 6: Weekly confirmed COVID-19 case rates by episode, per 100,000 population (Pillar 1), by UKHSA centres and sample week**

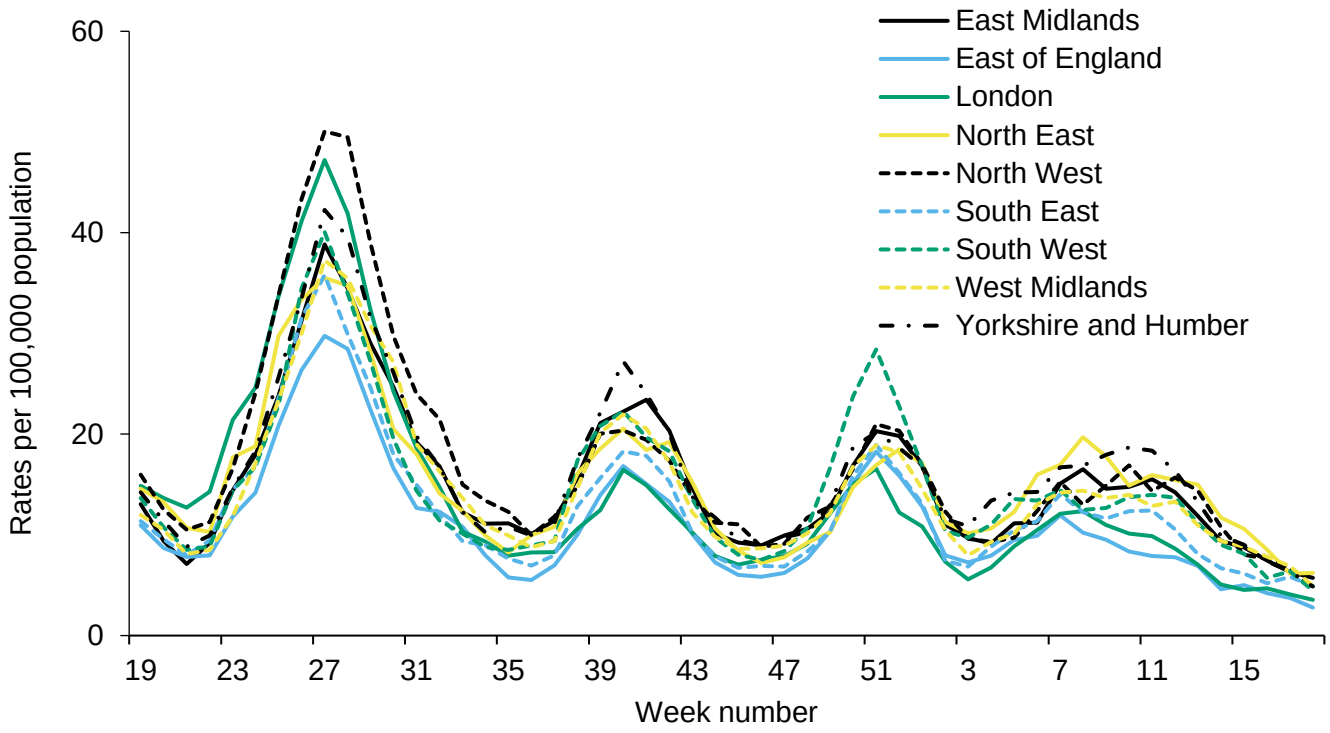



**Figure 7: Seven-day rolling average PCR positivity of confirmed COVID-19 cases tested under Pillar 1 (%) by UKHSA centres**

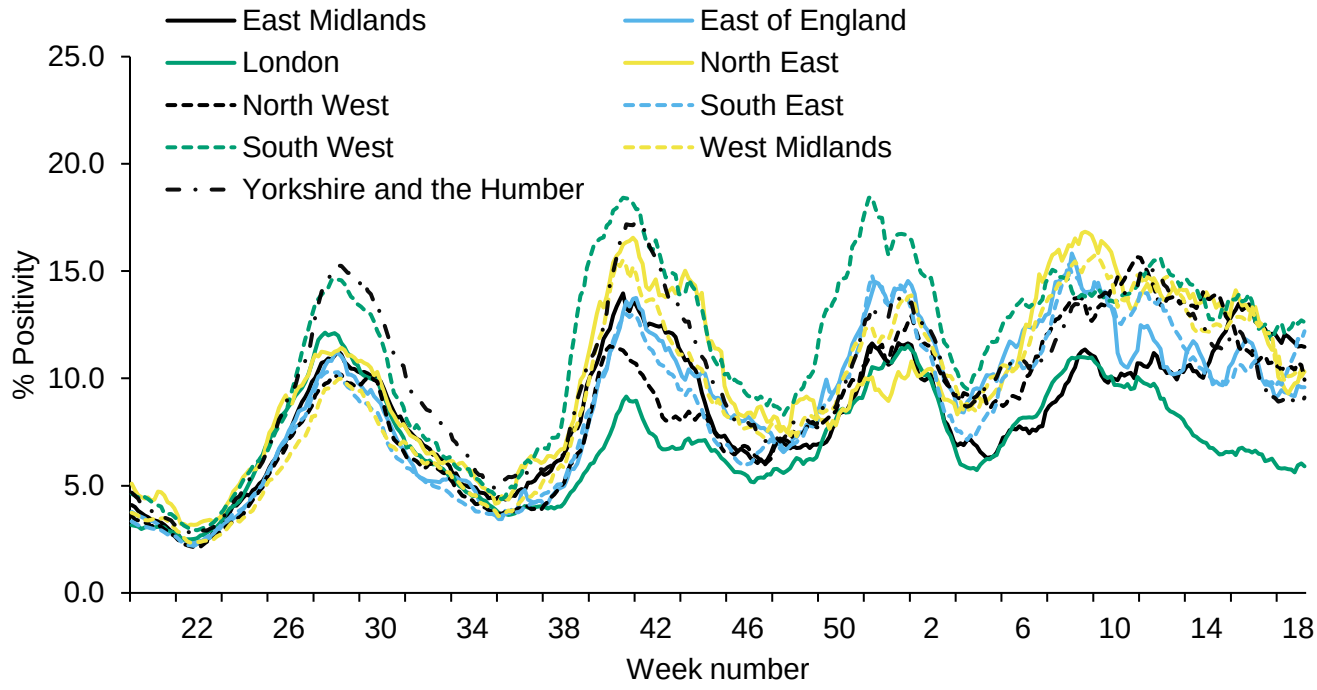
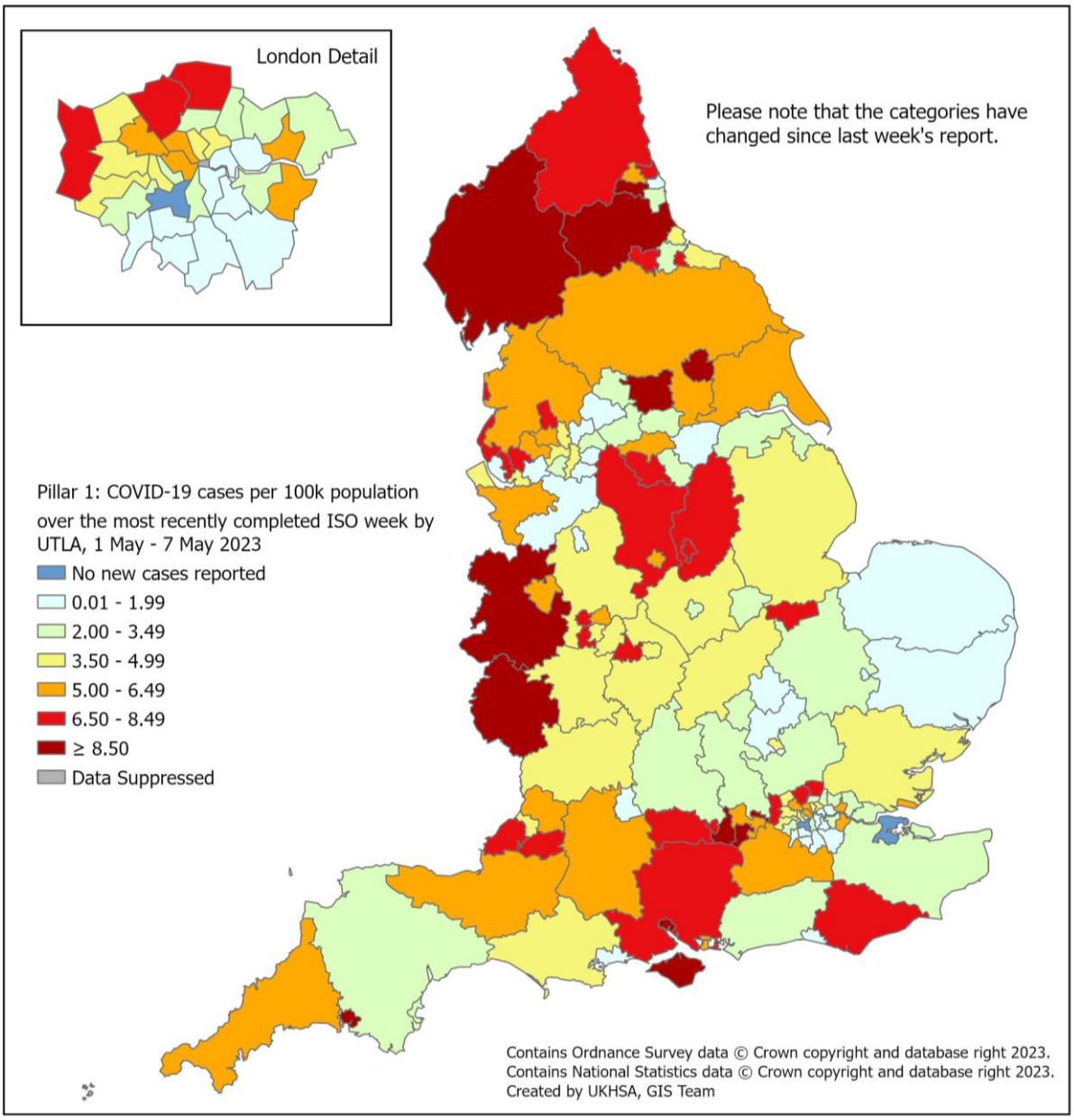
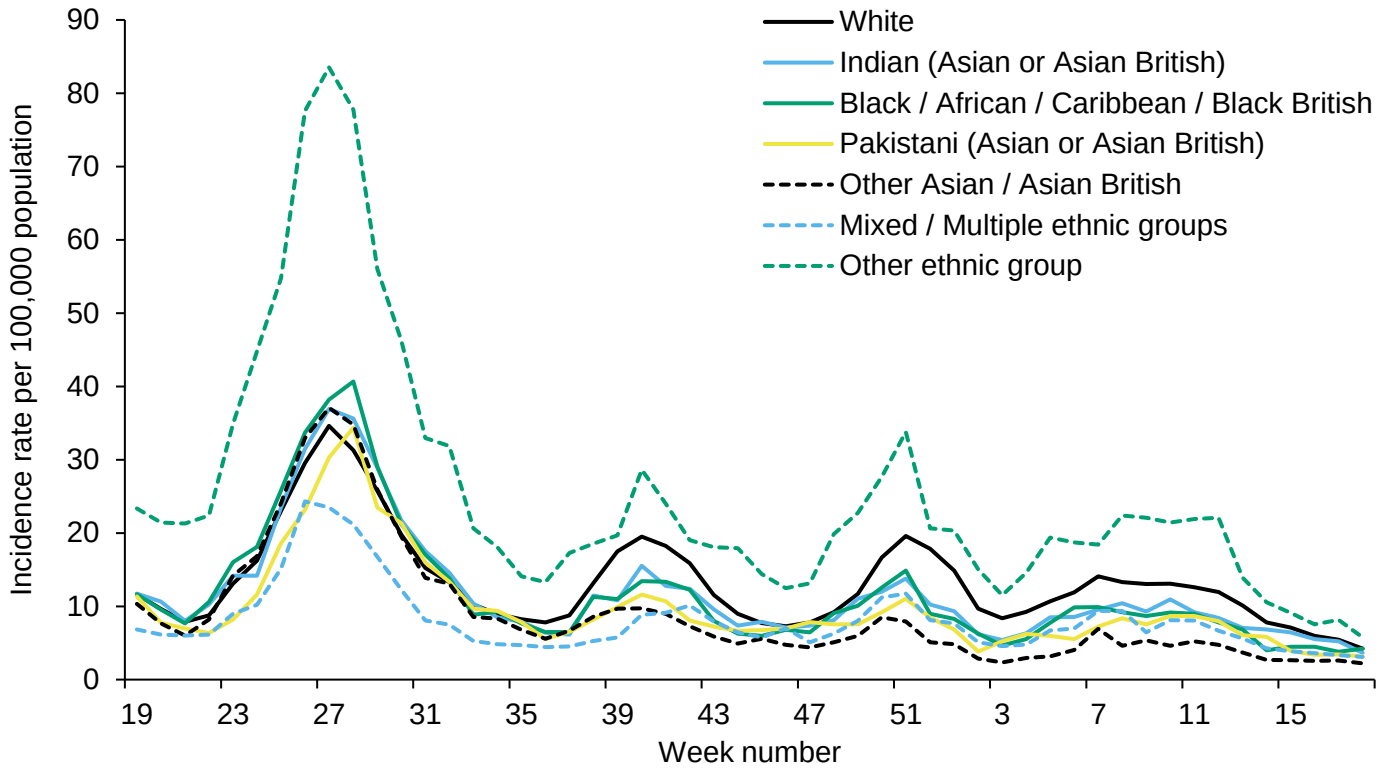


**Figure 8: Weekly rate of COVID-19 episodes per 100,000 population (Pillar 1), by upper-tier local authority (UTLA), England (box shows enlarged map of London area)**



## Ethnicity

**Figure 9: Weekly incidence per 100,000 population by ethnicity (Pillar 1), England**



# Respiratory DataMart system (England)

The Respiratory Datamart system began during the 2009 influenza pandemic to collate all laboratory testing information in England. It is now used as a sentinel laboratory surveillance tool, monitoring all major respiratory viruses in England. Sixteen laboratories in England will be reporting data for this season. As this is based on a sample of labs, SARS-CoV-2 positivity figures quoted here will differ from those quoted in the Confirmed COVID-19 cases section, however, they are included to allow comparison with data on other respiratory viruses.

In week 18, data is based on reporting from 13 out of the 16 sentinel laboratories.

In week 18, 7,016 respiratory specimens reported through the Respiratory DataMart System were tested for SARS-CoV-2. Of these, 496 samples were positive with an overall positivity of 7.1%, which remained stable compared to 7.2% in the previous week. The highest positivity was seen in those aged 65 years old and over at 9.6%.

In week 18, 3,784 respiratory specimens reported through the Respiratory DataMart System were tested for influenza. Of these, 35 samples tested positive for influenza; eight influenza A(not subtyped) and 27 influenza B (Figure 12). Overall, influenza positivity remained low and stable at 0.9% in week 18 compared with 1.0% the previous week, with the highest positivity seen in the 15 to 44 year old age group at 2.1%, compared with 2.4% in the previous week. Influenza B positivity remained low at 0.7% in week 18 compared with 0.8% in week 17. Influenza A(H3N2) remained low at 0.0%, compared with 0.0% in the previous week and influenza A(H1N1)pdm09 positivity remained low at 0.0% in week 18, the same as the previous week.

Adenovirus positivity decreased to 2.8% from 3.1% in the previous week, with the highest positivity in children aged younger than 5 years old at 7.9%.

Human metapneumovirus (hMPV) positivity decreased to 1.1% from 1.4% in the previous week, with the highest positivity in children aged younger than 5 years old at 3.5%.

Parainfluenza positivity decreased to 4.7% from 6.0% in the previous week, with the highest positivity in children aged younger than 5 years old at 6.8%.

Rhinovirus positivity overall increased to 12.4% compared with 10.9% in the previous week, with the highest positivity in those aged under 5 years old at 31.1%.

The overall positivity for RSV remained low at 0.4%, with the highest positivity in those aged under 5 years old at 1.5%.

**Figure 10: Respiratory DataMart samples positive for influenza and weekly positivity (%) for influenza, England**

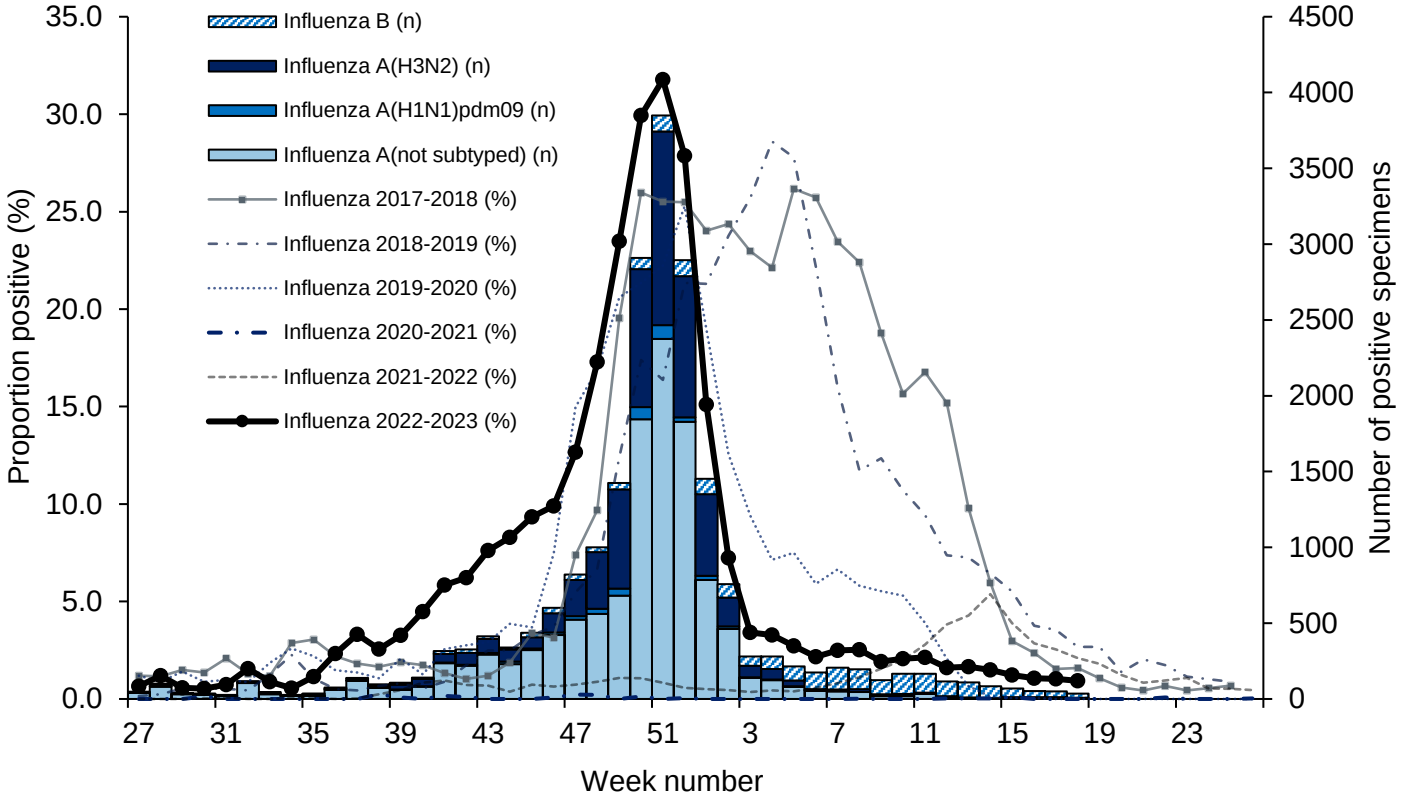



**Figure 11: Respiratory DataMart weekly positivity (%) for SARS-CoV-2, England**

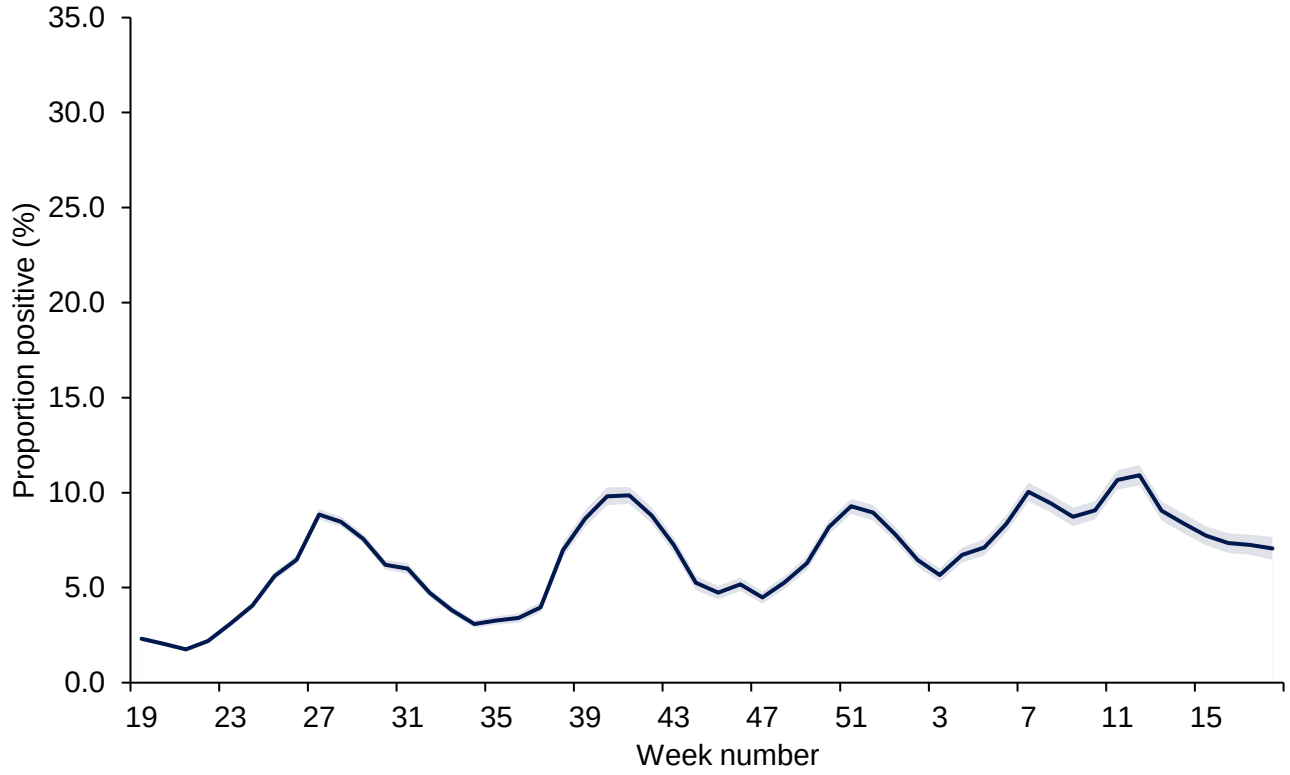


**Figure 12: Respiratory DataMart weekly positivity (%) for influenza, England**

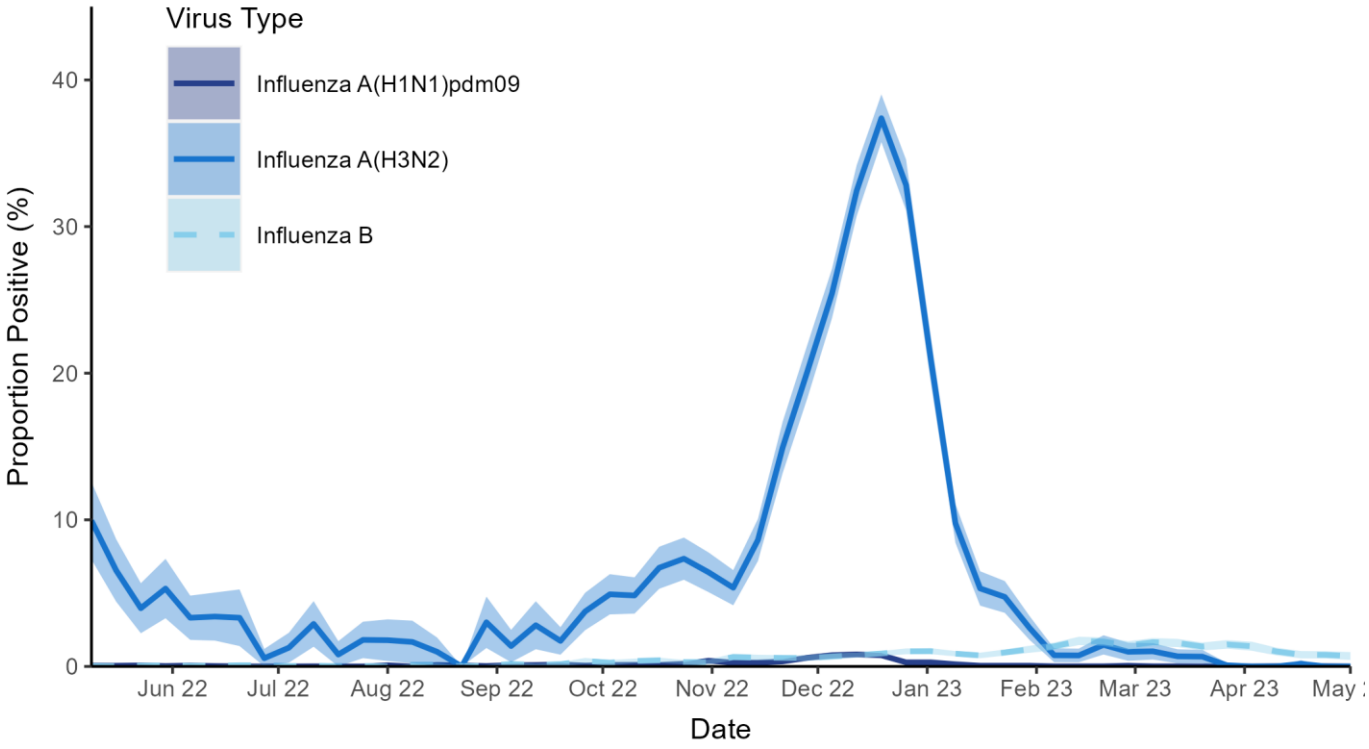



**Figure 13: Respiratory DataMart weekly positivity (%) for influenza by age, England**

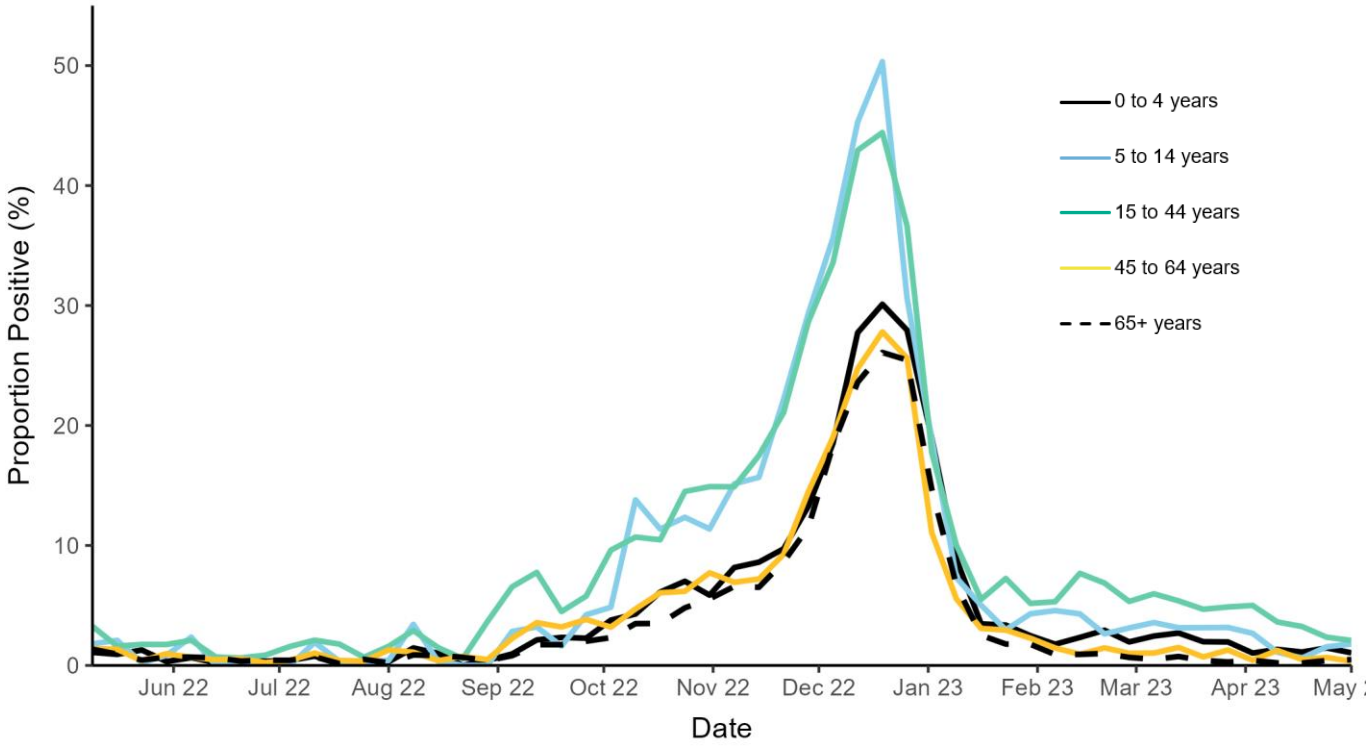


**Figure 14: Respiratory DataMart weekly positivity (%) for other viruses, England**

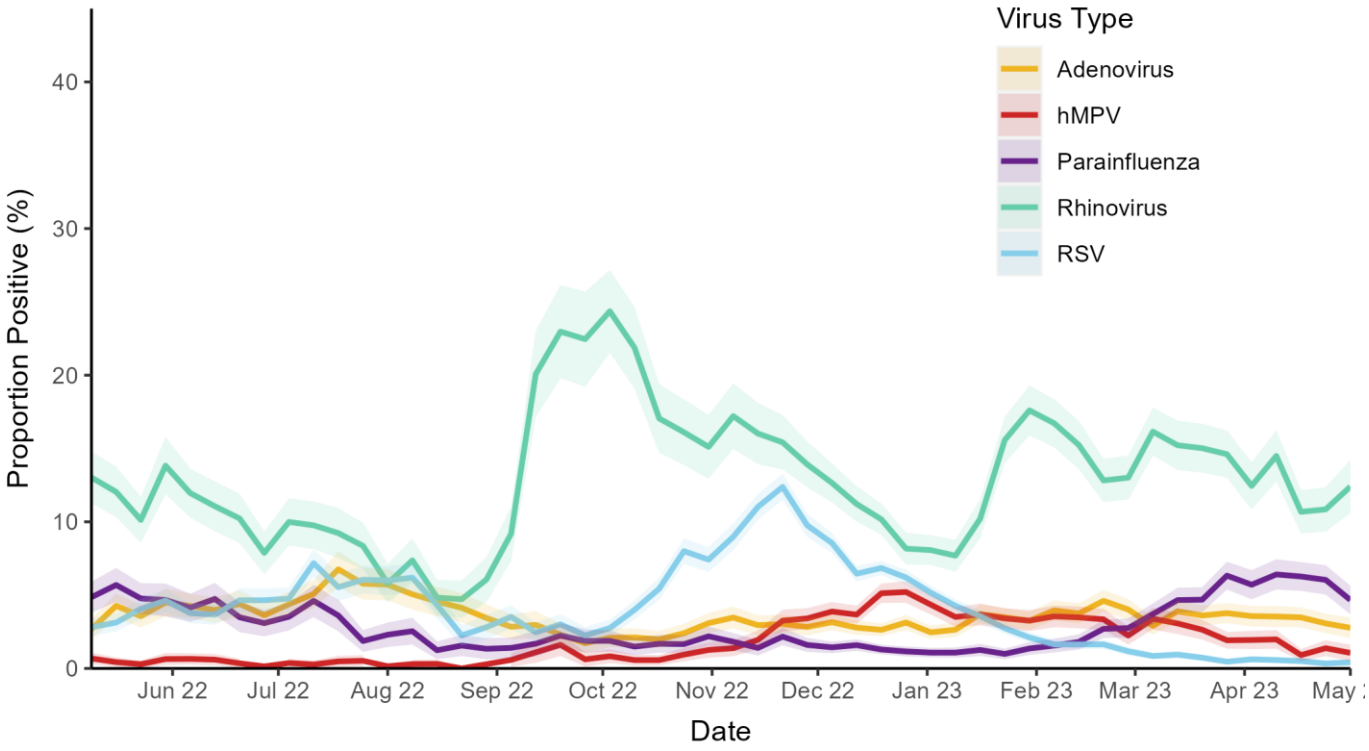



**Figure 15: Respiratory DataMart weekly positivity (%) for adenovirus by age, England**

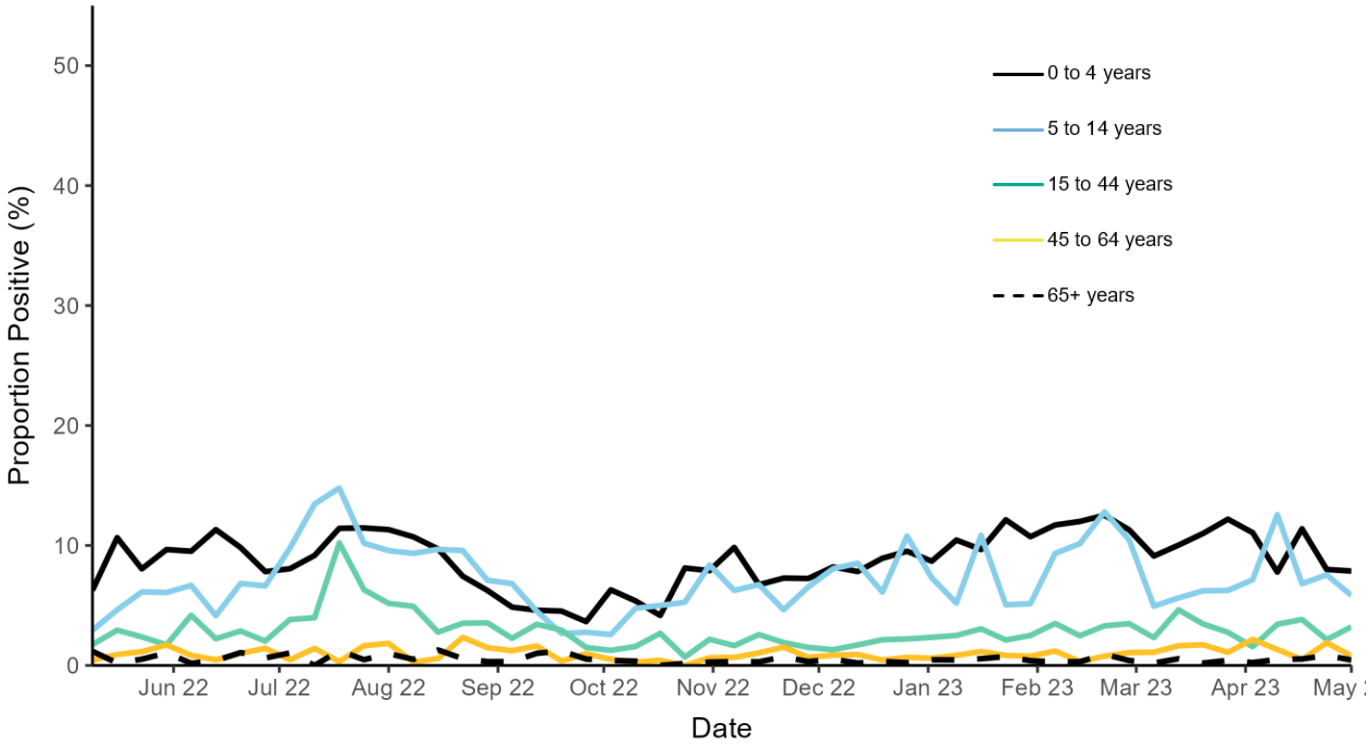


**Figure 16: Respiratory DataMart weekly positivity (%) for hMPV by age, England**

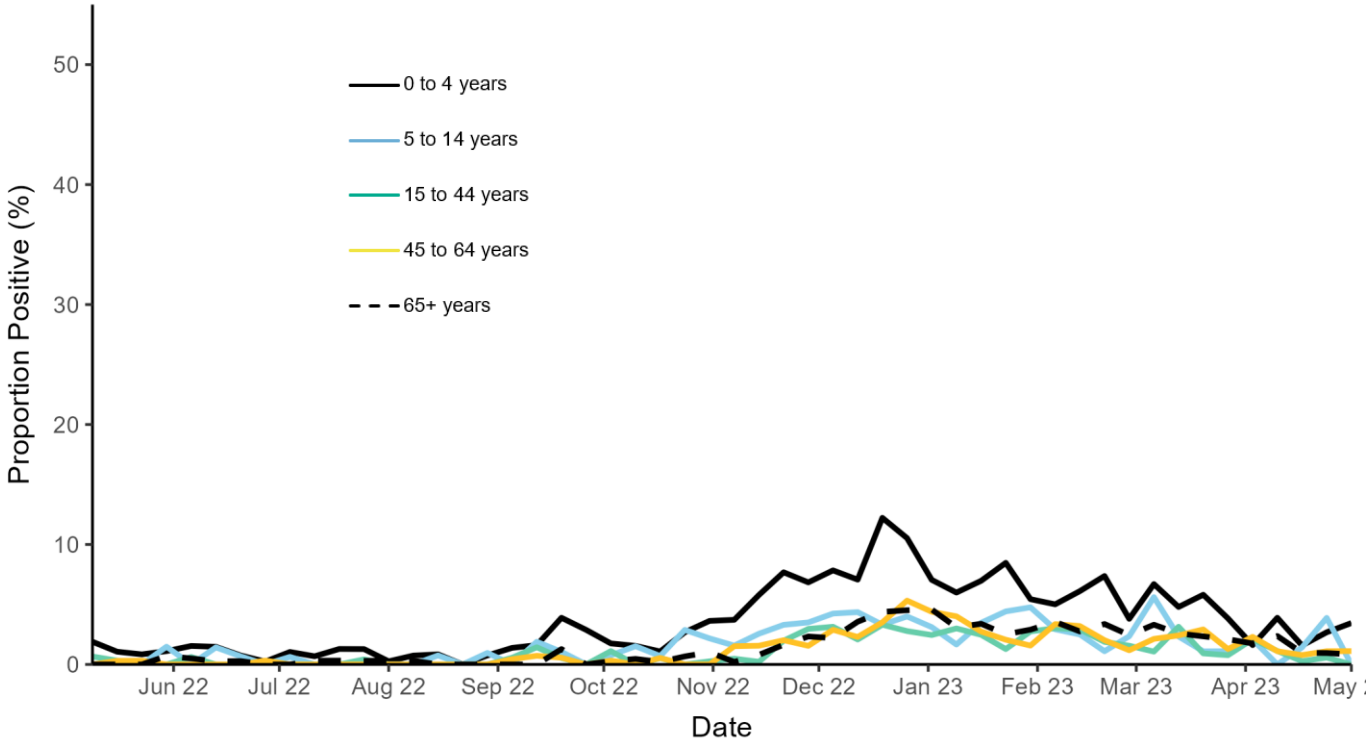



**Figure 17: Respiratory DataMart weekly positivity (%) for parainfluenza by age, England**

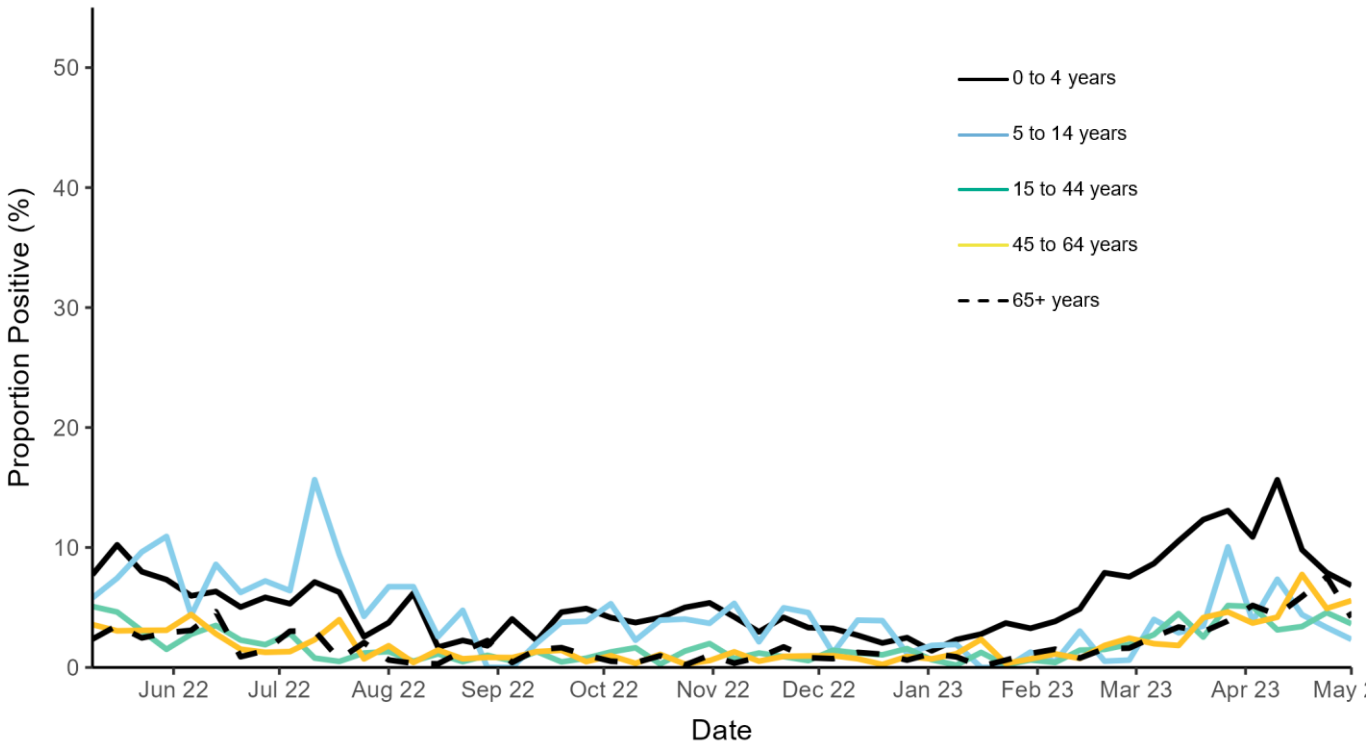


**Figure 18: Respiratory DataMart weekly positivity (%) for rhinovirus by age, England**

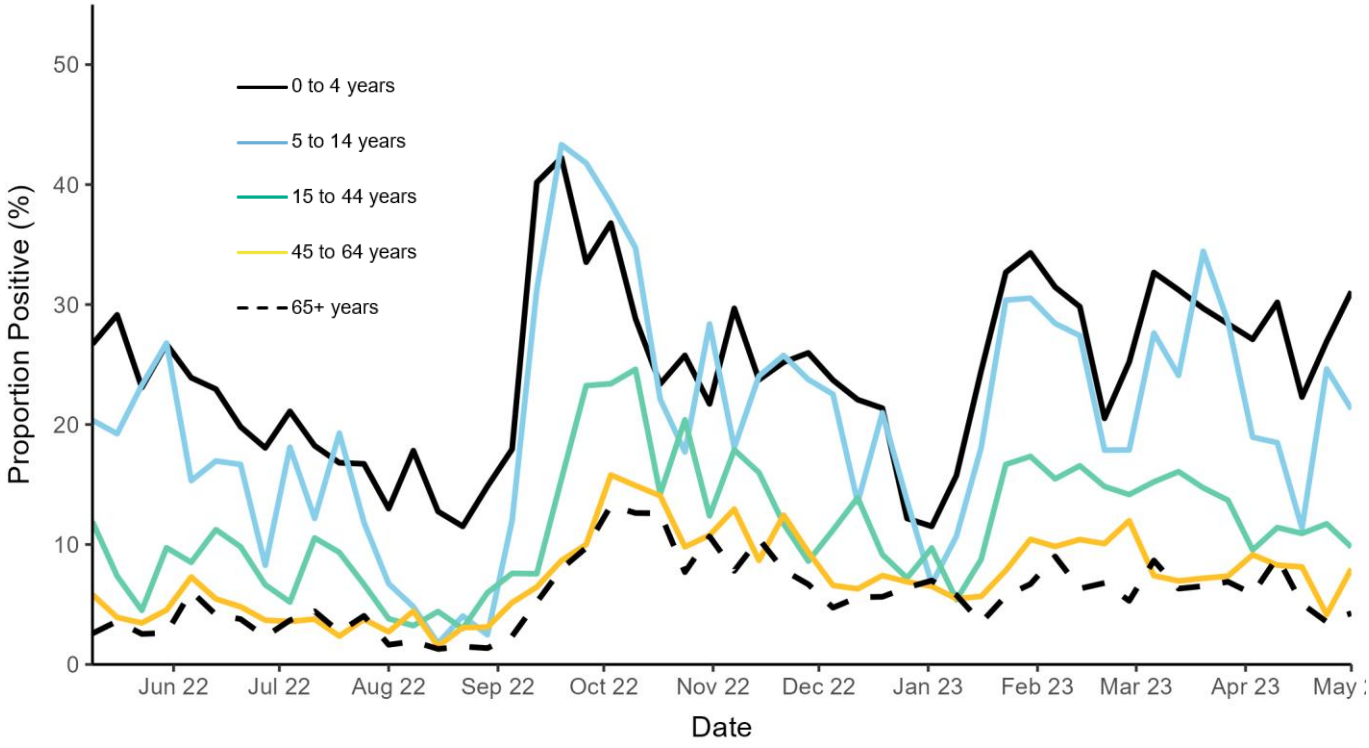
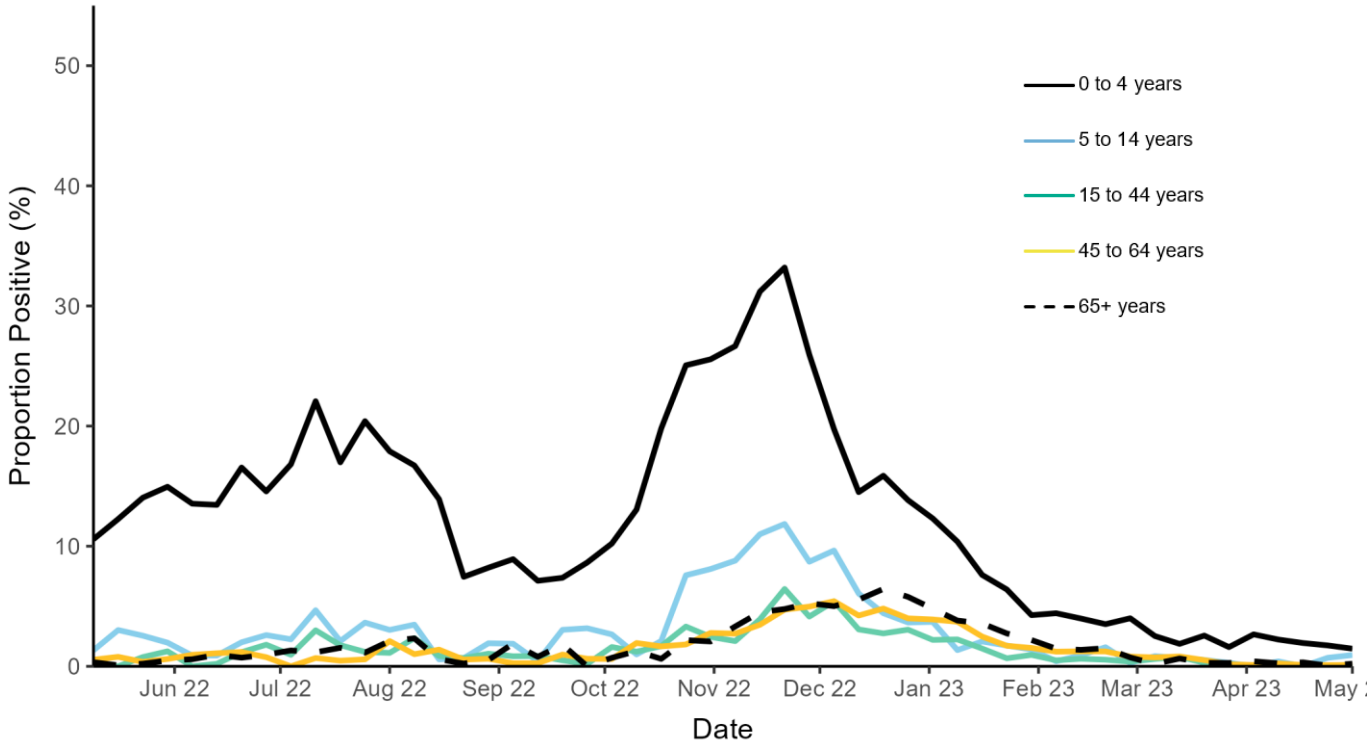



**Figure 19: Respiratory DataMart weekly positivity (%) for RSV by age, England**



# Community surveillance

## Acute respiratory infection incidents

Here we present data on acute respiratory infection (ARI) incidents in different settings that are reported to UKHSA Health Protection Teams (HPTs) and entered onto the HPZone case and incident management system. Incidents are suspected outbreaks of acute respiratory infections linked to a particular setting. All suspected outbreaks are further investigated by the HPT in liaison with local partners.

ARI includes presentations of both of influenza-like illness (ILI) and other acute viral respiratory infections (AVRI). Causal pathogens can include influenza A and B, respiratory syncytial virus (RSV), adenovirus, rhinovirus, parainfluenza, human metapneumovirus (hMPV), enterovirus and SARS-CoV-2.

Data for England, Scotland and Northern Ireland are included in the UK figures.

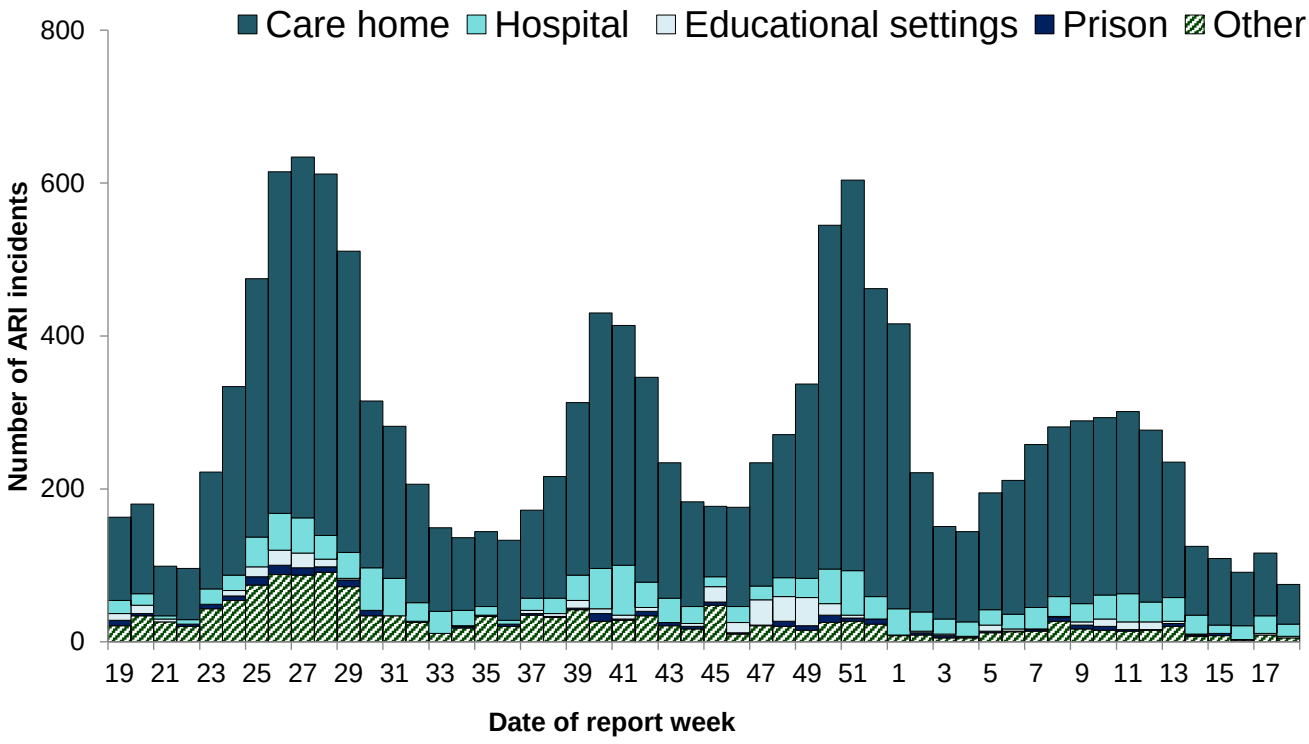
Data caveats:

1. The incidents captured on HPZone represent a subset of all ongoing ARI clusters and outbreaks in England rather than an exhaustive listing.
2. In addition, SARS-CoV-2 testing policies and public health guidance for different settings changed over time. This means that any interpretation of seasonal and temporal trends since March 2020 should take this into account.
3. It should be noted that the denominator for the different settings will vary significantly. For example, there are fewer hospitals than workplaces. In addition, the propensity to report incidents to UKHSA also varies significantly by setting. This needs to be considered when interpreting the weekly number of reported incidents by setting and caution should be used when making comparisons between settings.
4. Considering the above, comparisons between regions and settings are not advised as they may be misleading.
5. From 1 April 2023, changes to coronavirus (COVID-19) testing came into effect, as such data should be interpreted in the context of this change to testing.

75 new ARI incidents have been reported in week 18 in the UK (Figure 20):

- 52 incidents were from care homes, where 23 had at least one linked case that tested positive for SARS-CoV-2, one influenza A(not subtyped) and one rhinovirus
- 16 incidents were from hospitals, where four had at least one linked case that tested positive for SARS-CoV-2
- Two incidents were from educational settings, where no tests results were available.
- Five incidents were from other settings, where two had at least one linked case that tested positive for SARS-CoV-2

**Figure 20: Number of acute respiratory infection (ARI) incidents by setting, UK**




*Excludes data from Wales

**Figure 21: Number of acute respiratory infection (ARI) incidents by setting, England**

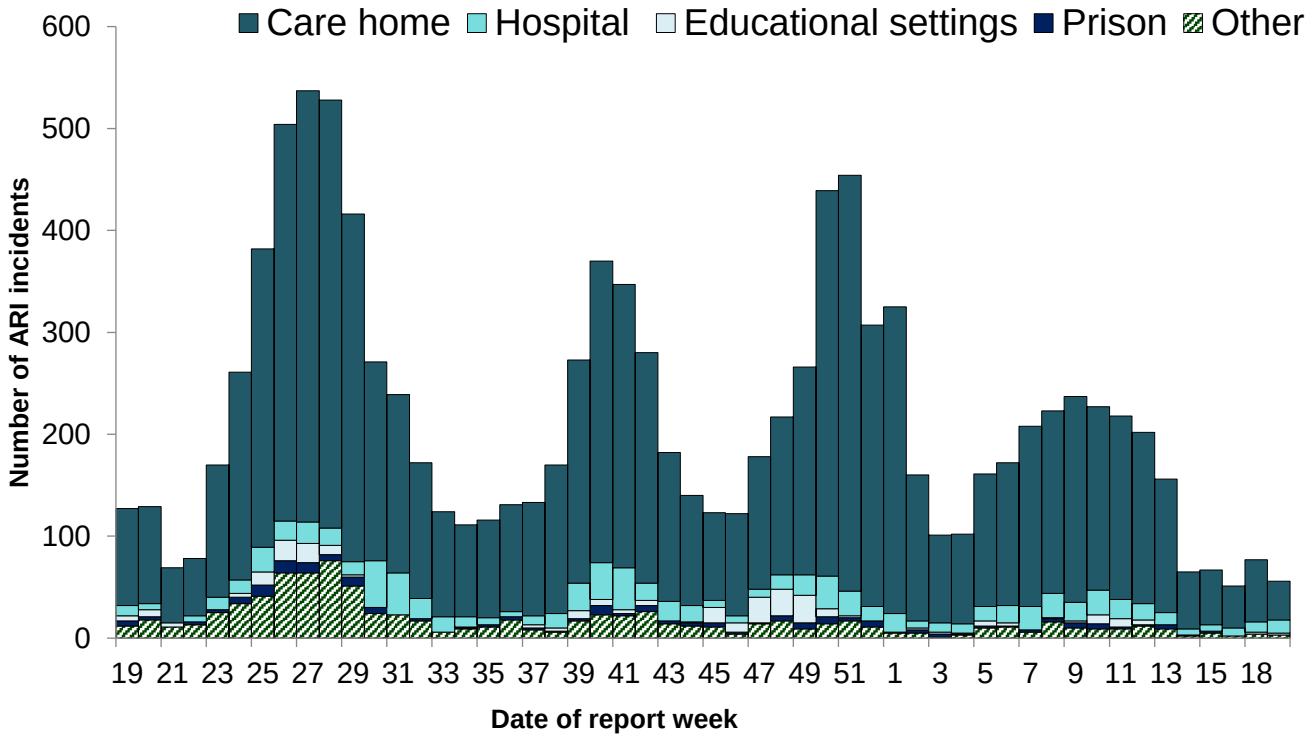



**Figure 22: Number of acute respiratory infection (ARI) incidents in care homes by virus type, England**

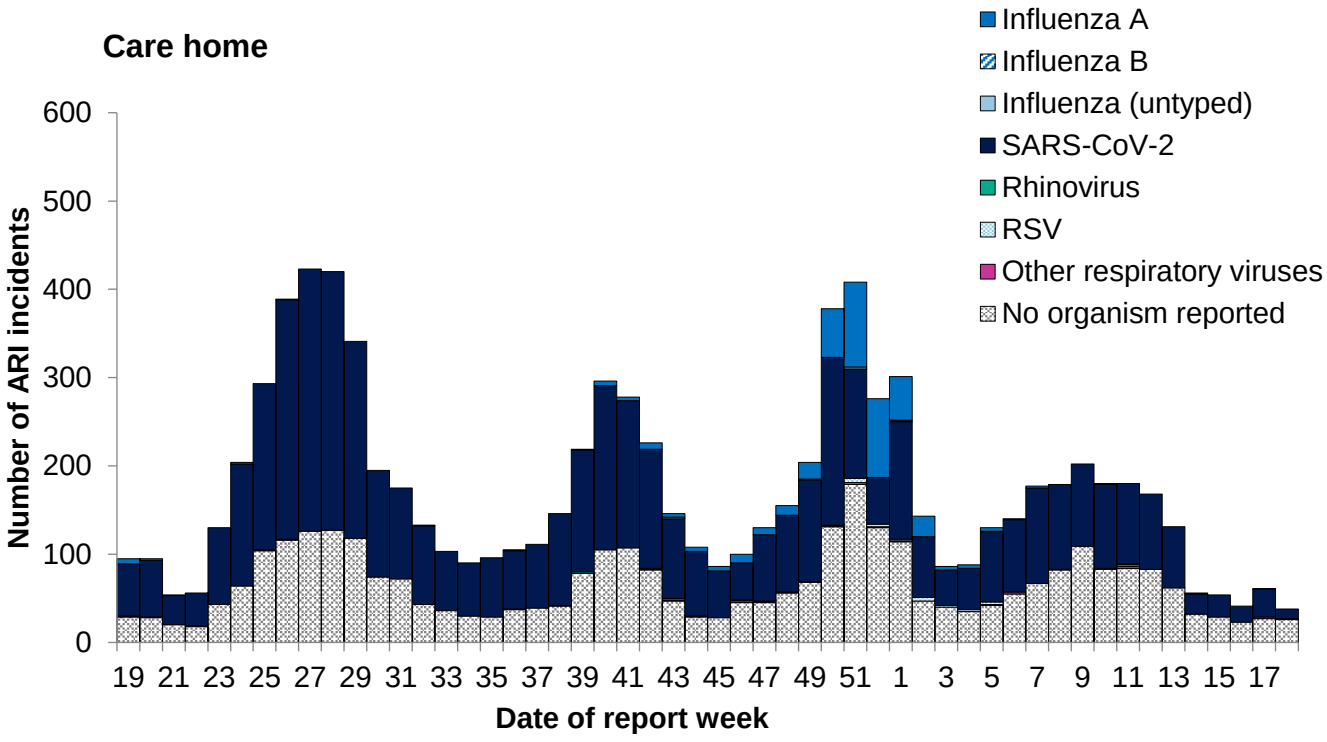


**Figure 23: Number of acute respiratory infection (ARI) incidents in hospitals by virus type, England**

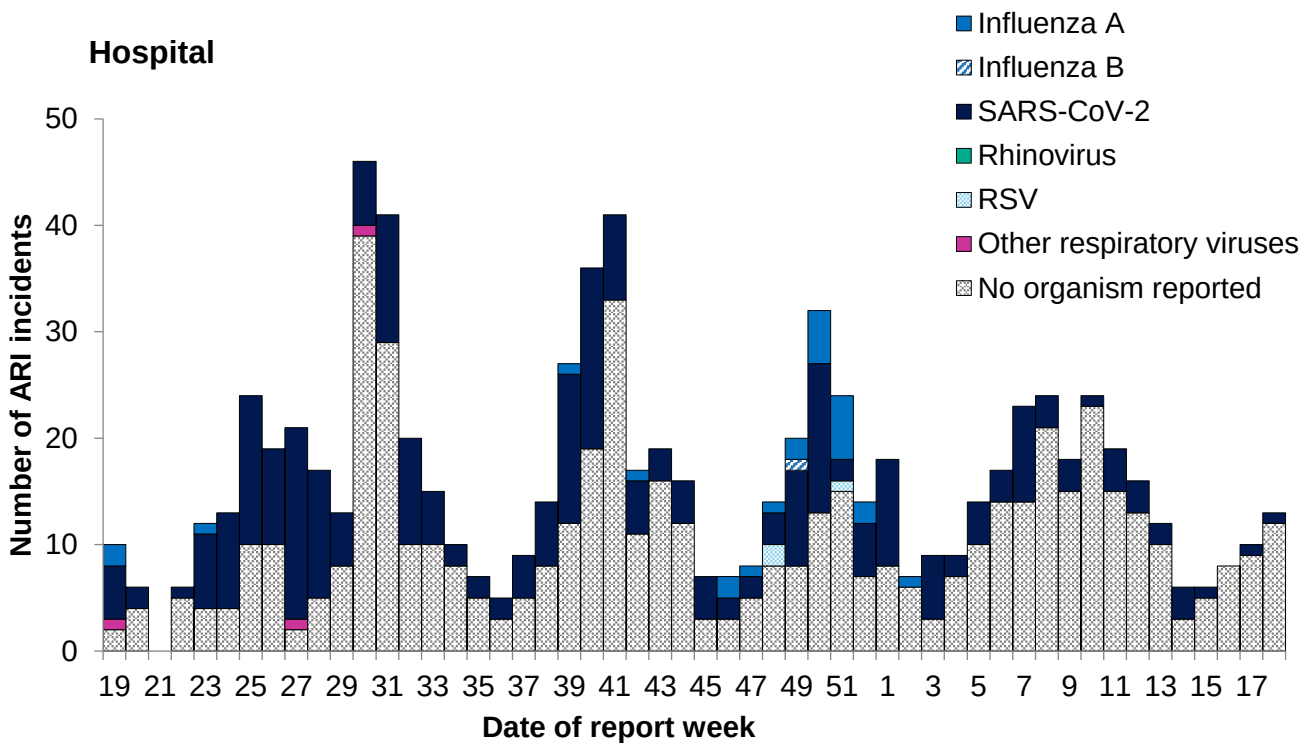


**Figure 24: Number of acute respiratory infection (ARI) incidents in educational settings by virus type, England**

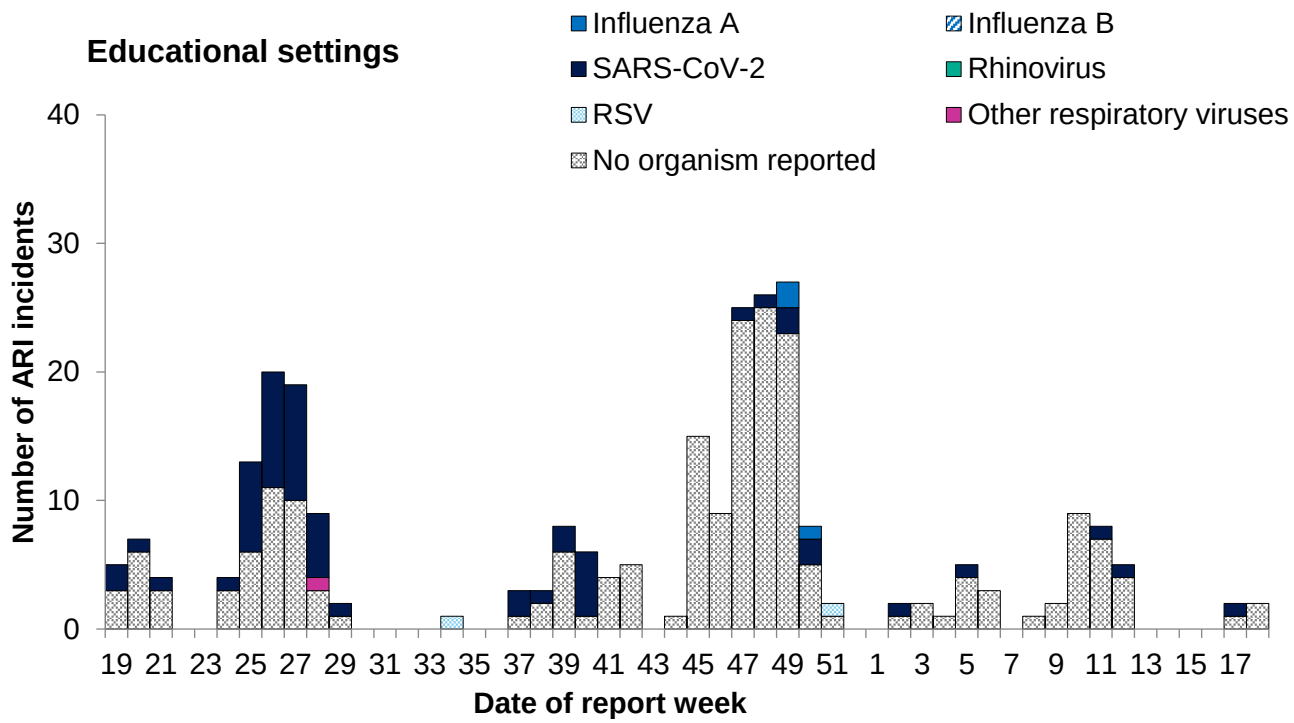



**Figure 25: Number of acute respiratory infection (ARI) incidents in prisons by virus type, England**

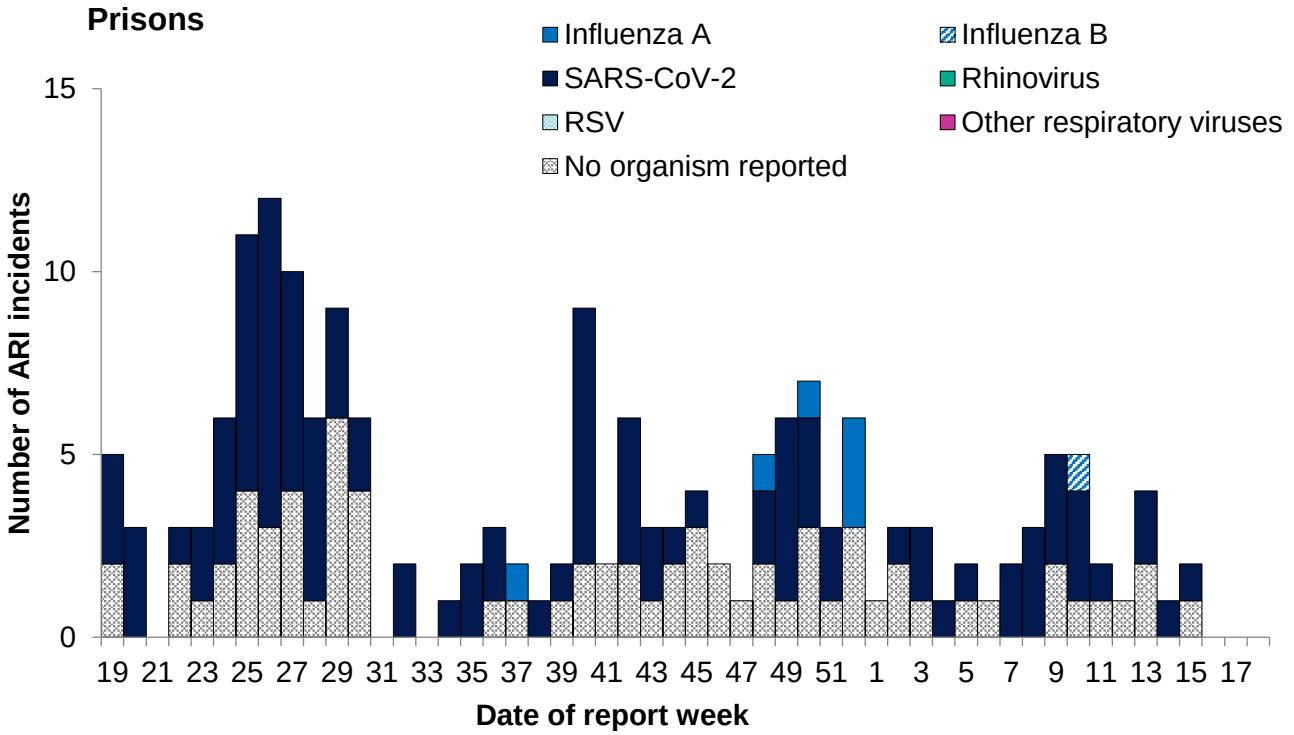


**Figure 26: Number of acute respiratory infection (ARI) incidents in other settings by virus type from, England**

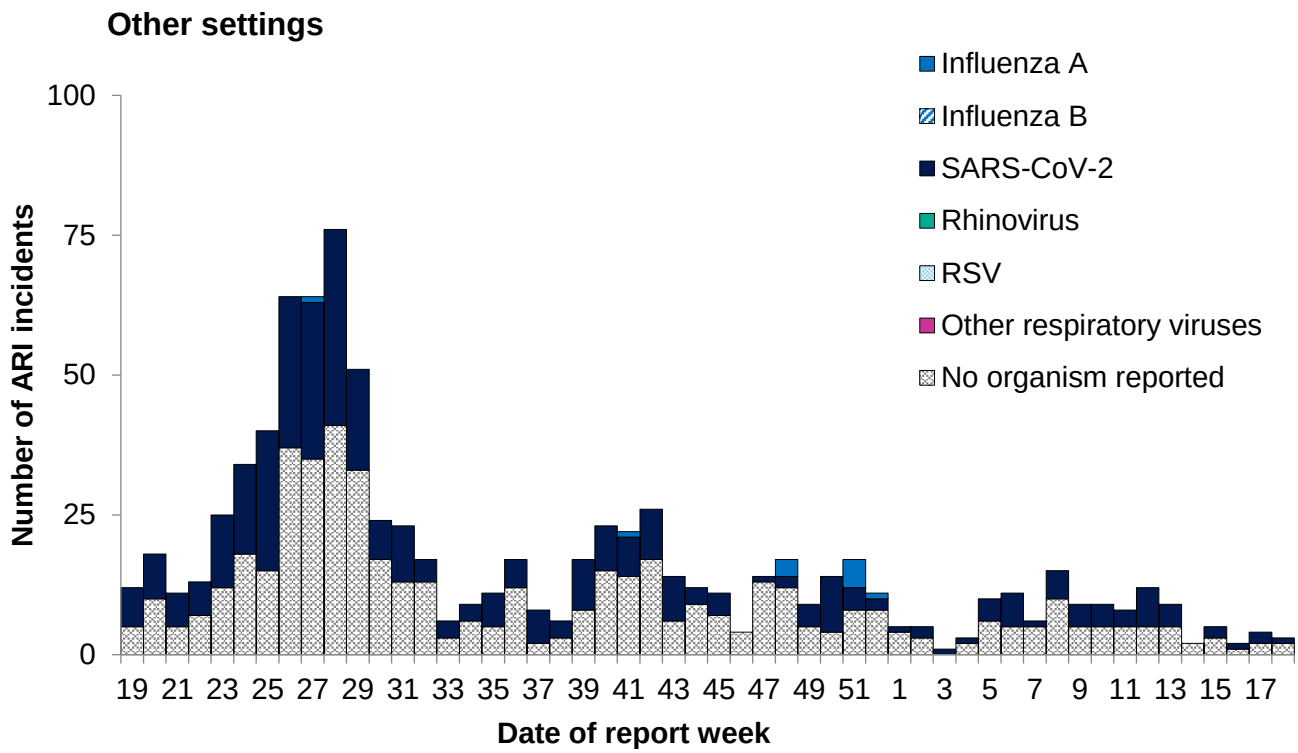


**Table 1: Total number of situations and incidents by institution and UKHSA centres over the past 4 weeks with the total number in the last week in brackets**

| UKHSA Centres | Care Home | Hospital | Educational Setting | Prison | Other | Grand Total |
|---|---|---|---|---|---|---|
| East of England | 17(6) | 0(0) | 0(0) | 2(0) | 0(0) | 19(6) |
| East Midlands | 3(3) | 0(0) | 0(0) | 1(0) | 0(0) | 4(3) |
| London | 23(7) | 26(9) | 0(0) | 0(0) | 5(1) | 54(17) |
| North East | 29(0) | 0(0) | 0(0) | 0(0) | 1(1) | 30(1) |
| North West | 5(0) | 0(0) | 1(1) | 0(0) | 0(0) | 6(1) |
| South East | 2(2) | 0(0) | 0(0) | 0(0) | 0(0) | 2(2) |
| South West | 92(29) | 0(0) | 0(0) | 0(0) | 4(1) | 96(30) |
| West Midlands | 12(6) | 2(1) | 0(0) | 0(0) | 1(0) | 15(7) |
| Yorkshire and Humber | 29(8) | 2(0) | 1(1) | 0(0) | 2(1) | 34(10) |
| **Grand Total** | **212(61)** | **30(10)** | **2(2)** | **3(0)** | **13(4)** | **260(77)** |

# FluSurvey

An internet-based surveillance system has been developed based on FluSurvey. FluSurvey is a web tool survey designed to monitor trends of influenza-like illness (ILI) in the community using self-reported respiratory symptoms from registered participants. The platform has been adapted to capture respiratory symptoms, exposure risk and healthcare seeking behaviours among registered participants to contribute to national surveillance of COVID-19 activity as well as influenza activity since week 44 2020.

Note that ILI is defined as sudden onset of symptoms with at least one of fever (chills), malaise, headache, muscle pain and at least one of cough, sore throat, shortness of breath.

During week 18, there were 1,882 participants completing the weekly symptoms questionnaire of which  120 (6.4%) reported fever or cough and 29 (1.5%) reported influenza like illness (ILI). Both COVID-19 related symptoms and influenza like illness (ILI) amongst participants completing the weekly symptoms survey continue to decrease and have been at low levels since wk 12.

Healthcare seeking behaviour amongst participants reporting respiratory symptoms relating to COVID-19 (cough, fever or loss of smell) showed that participants reporting symptoms were more likely to visit their GP provider (Figure 7).

Self-reported daily social contact patterns are also reported. A contact is defined as a person outside the household who is approached at a distance of less than one metre, on the day prior to survey completion. There remains variation on social mixing patterns amongst participants as people are meeting more individuals outside of their households (Figure 28).

**Figure 27: FluSurvey participants self-reporting fever or cough and ILI symptoms, and trends in healthcare seeking behaviour among these participants, England**

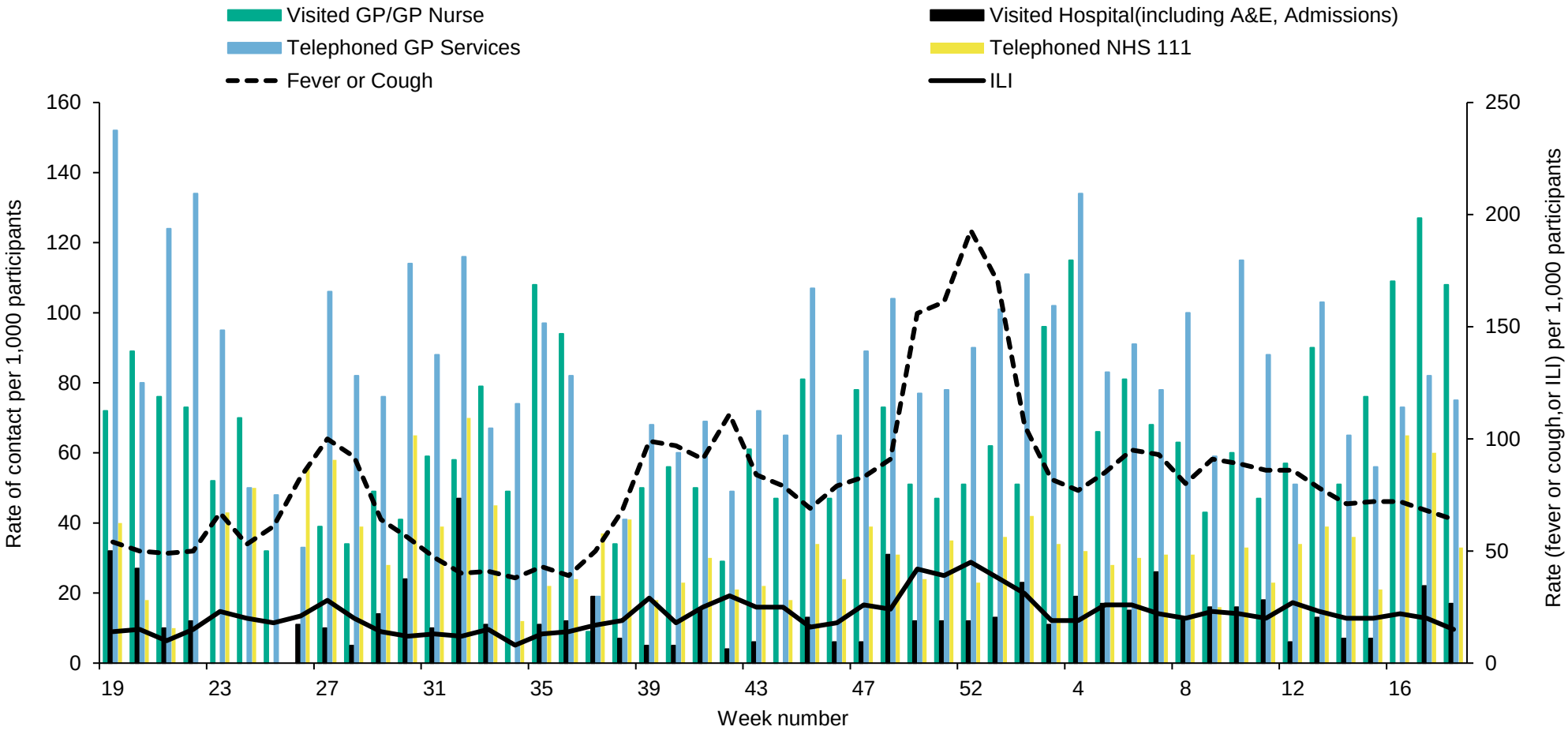
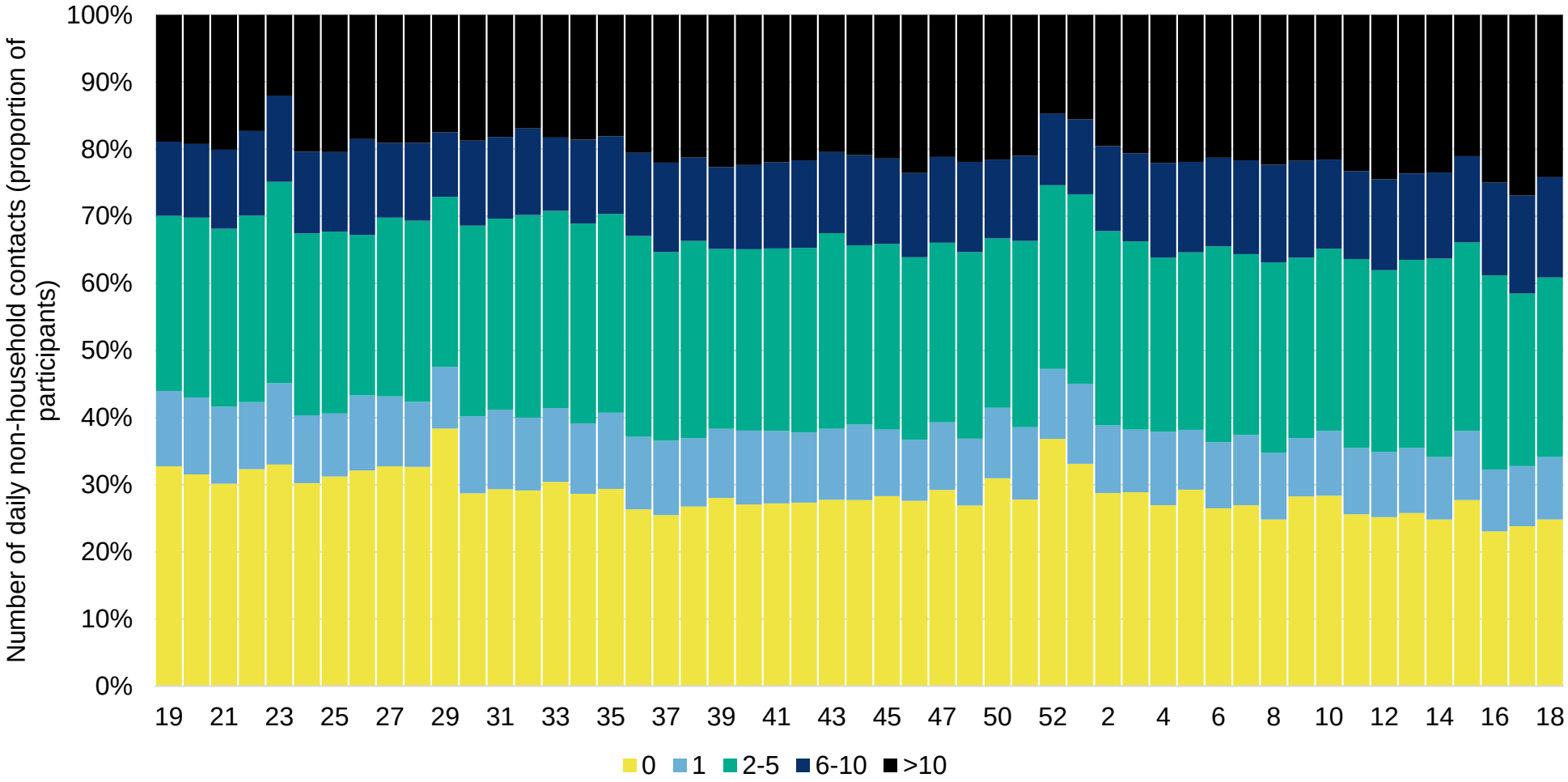


**Figure 28: FluSurvey participants' self-reported number of social contacts outside the household**

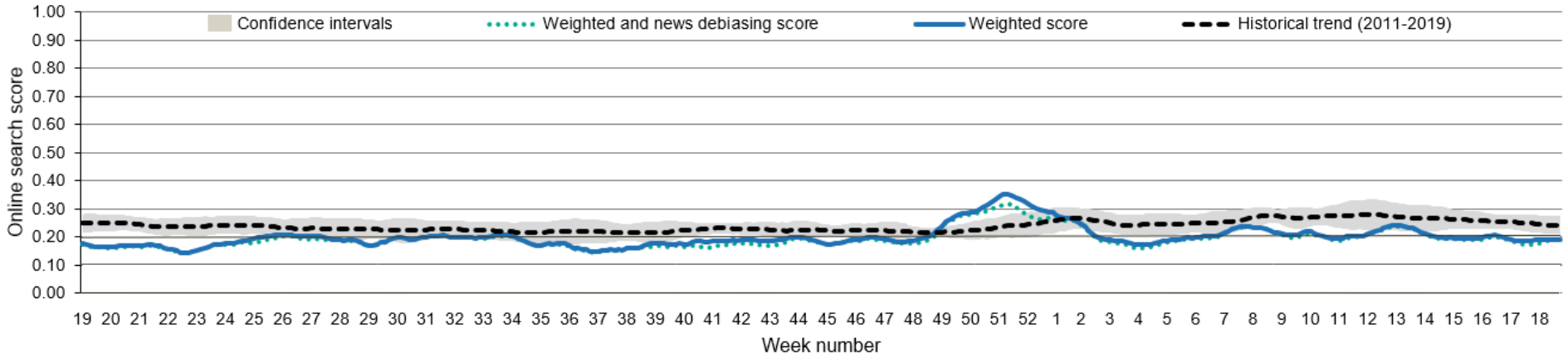


# Google search queries

This is a web-based syndromic surveillance system which uses daily search query frequency statistics obtained from the Google Health Trends API (Application Programming Interface). This model focuses on search queries about COVID-19 symptoms as well as generic queries about ‘coronavirus’ (for example ‘COVID-19’). The search query frequency time series is weighted based on symptom frequency as reported in other data sources. Frequency of searches for symptoms is compared with a baseline calculated from historical daily data. Further information on this model is available online.

During week 18, the overall and media-debiasing weighted Google search scores remained stable compared to week 17 (Figure 29).

**Figure 29: Normalised Google search score for COVID-19 symptoms, with weighted score for media-debiasing and historical trend, England**



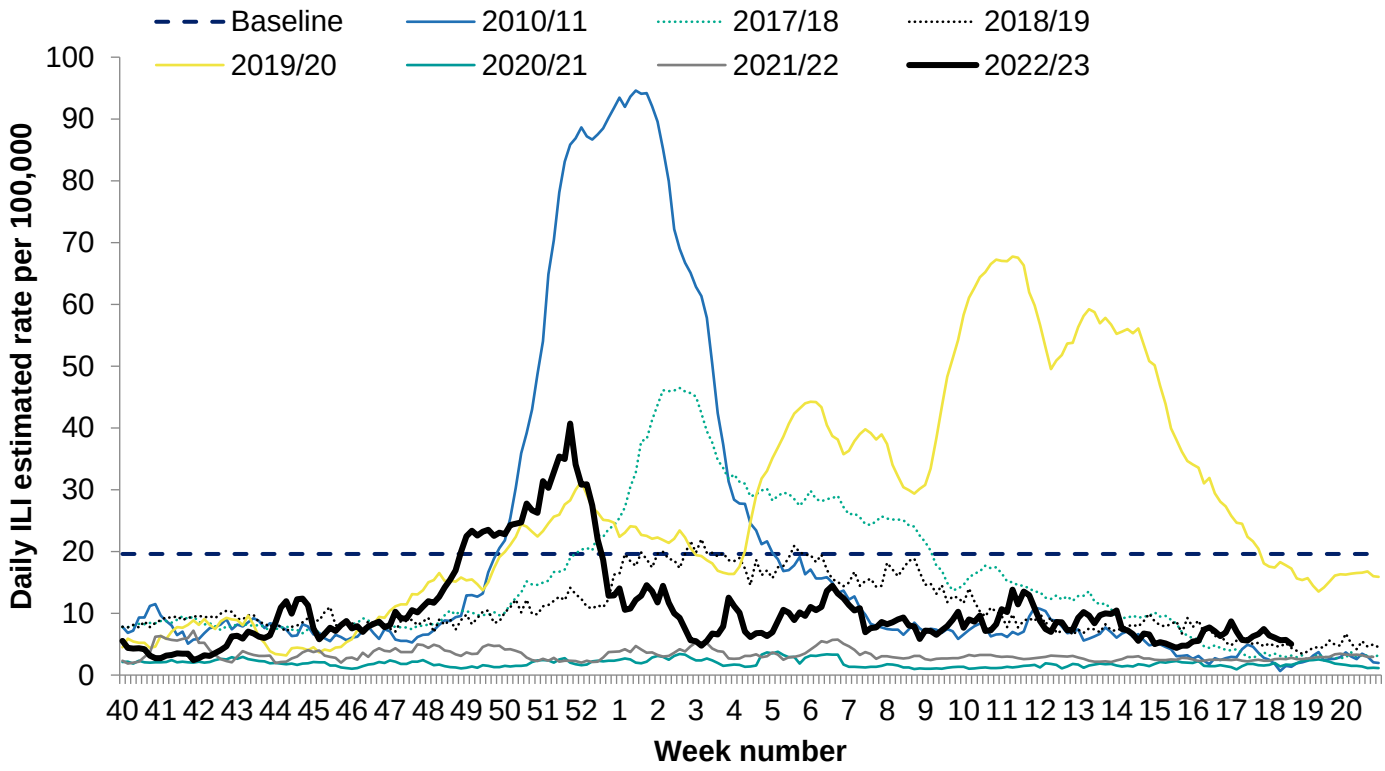
# Flu Detector

FluDetector is a web-based model which assesses internet-based search queries for ILI in the general population.

Daily ILI rate estimates are based on uniformly averaged search query frequencies for a week-long period (including the current day and the 6 days before it).

For week 18, the daily ILI rate decreased slightly compared to week 17 and remained below the baseline threshold of 19.6 per 100,000 for the 2022 to 2023 season (Figure 30).

**Figure 30: Daily estimated ILI Google search query rates per 100,000 population, England**



# NHS 111

Please note that different syndromic surveillance indicators (NHS 111, GP in hours, GP out of hours and emergency department attendances) presented here have been included in previous versions of this report. All indicators previously presented will continue to be published Syndromic Surveillance bulletins.

The NHS 111 service monitors daily trends in phone calls made to the service in England, to capture trends in infectious diseases such as influenza and norovirus.

Please note that the number of NHS 111 calls are still lower than usual due to widely publicised disruption faced by a clinical software system. The NHS 111 call data presented in this report should therefore be interpreted with some caution.

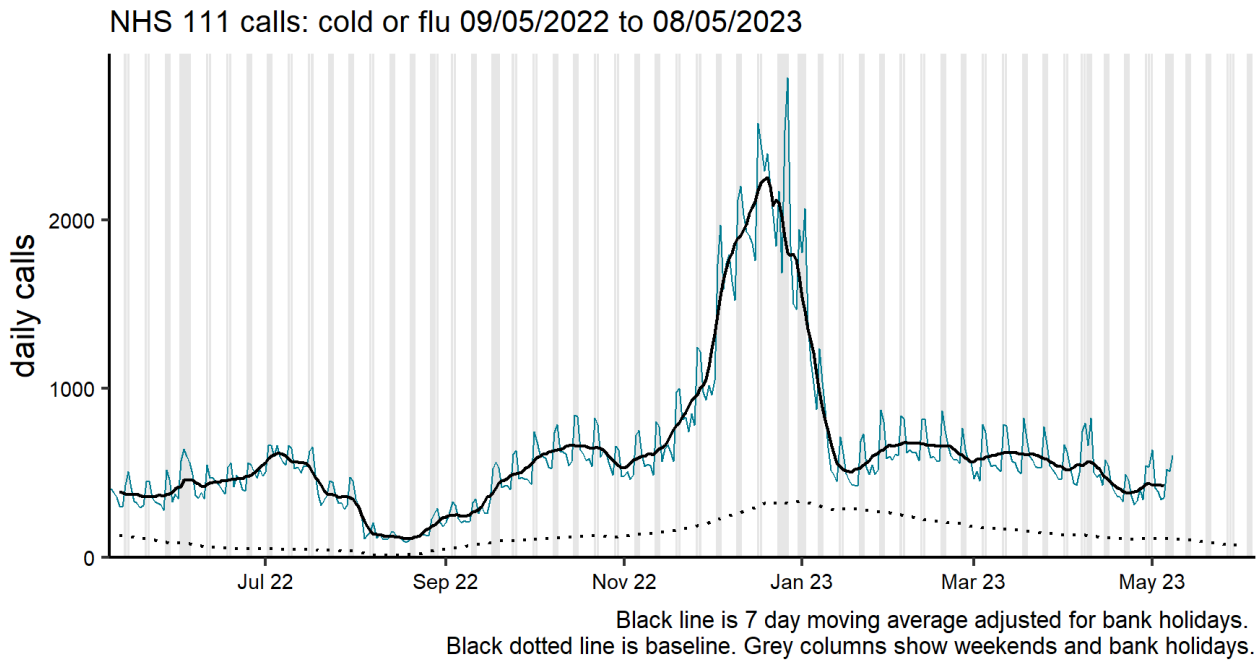
During week 18, NHS 111 calls for cough and calls for cold or flu remained stable nationally (Figure 31 and 32).

Please note that NHS 111 callers (from 11 May 2020) who are assessed as having probable COVID-19 symptoms are now triaged using symptom specific pathways such as cold or flu, which are included in routine syndromic indicators.

Further information about these caveats is available from the Remote Health Advice Syndromic Surveillance bulletin.

**Figure 31: NHS 111 telephony indicators (and 7-day moving average) for number of daily cold or flu calls, England (a) nationally and (b) by age group**

(a)




(b)

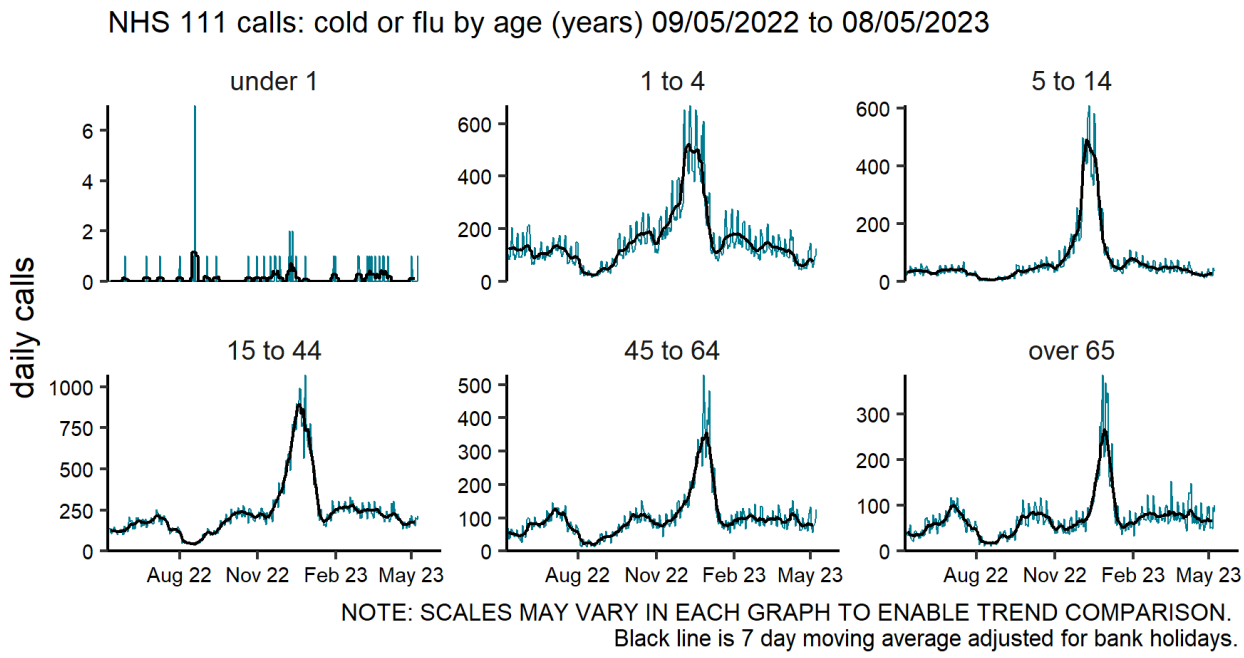
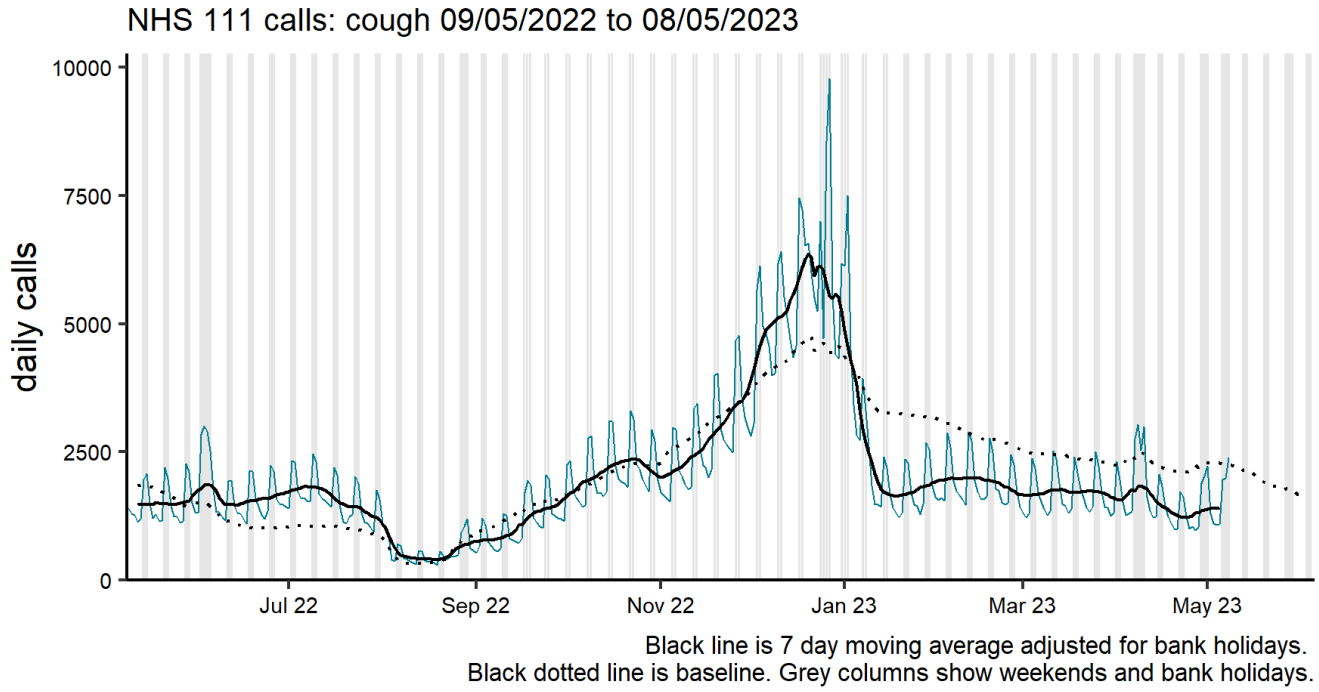
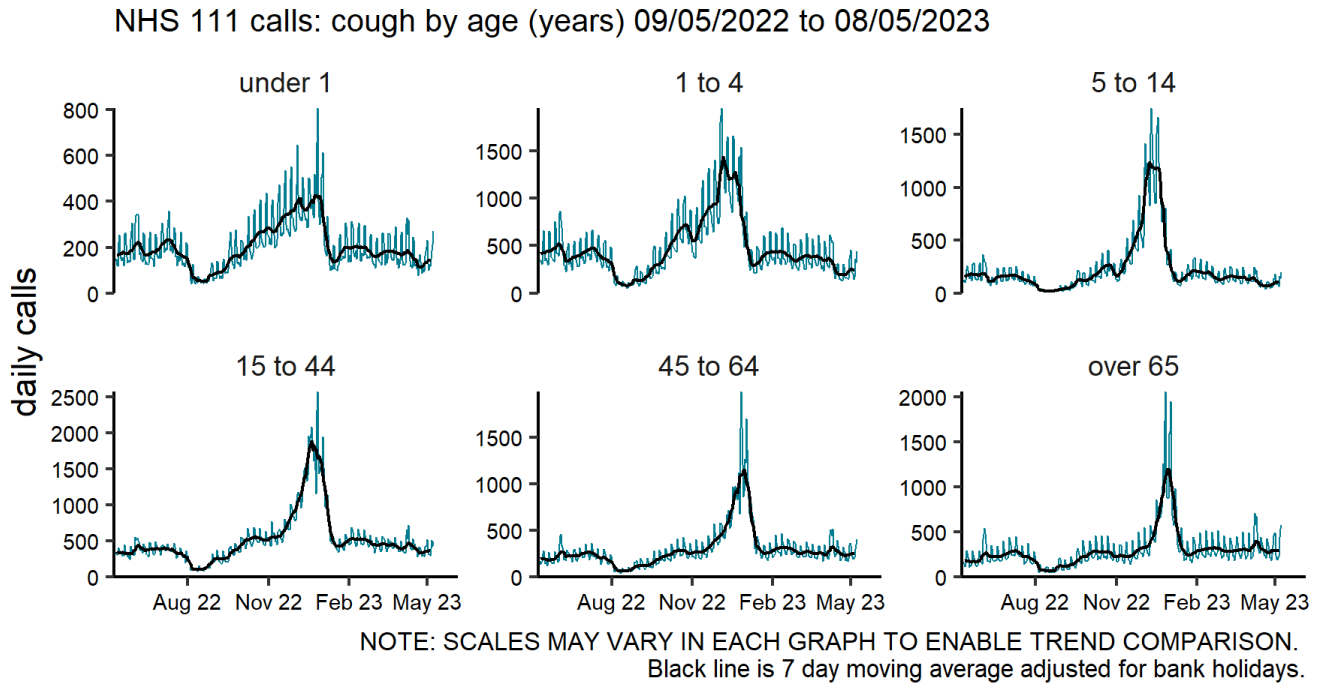


**Figure 32: NHS 111 telephony indicators (and 7-day moving average) for number of daily cough calls, England (a) nationally and (b) by age group**

(a)




(b)



# Primary care surveillance

## RCGP (England)

The weekly ILI consultation rate through the RCGP surveillance decreased slightly to 1.5 per 100,000 registered population in participating GP practices in week 18 compared to 1.7 per 100,000 in the previous week and remained within baseline activity levels (less than 11.47 per 100,000) (Figure 33). By age group, the highest rates were seen in those aged between 45 and 64 years (2.0 per 100,000) followed adults aged between 15 and 44 years old (1.7 per 100,000).

The lower respiratory tract infections (LRTI) consultation rate decreased slightly to 46.0 per 100,000 in week 18 compared to 50.4 per 100,000 in the previous week. The COVID-19 indicator rate remained stable at 16.5 per 100,000 in week 18 compared to 16.9 per 100,000 in the previous week (Figure 34).

**Figure 33: RCGP influenza-like illness (ILI) consultation rates, all ages, England**

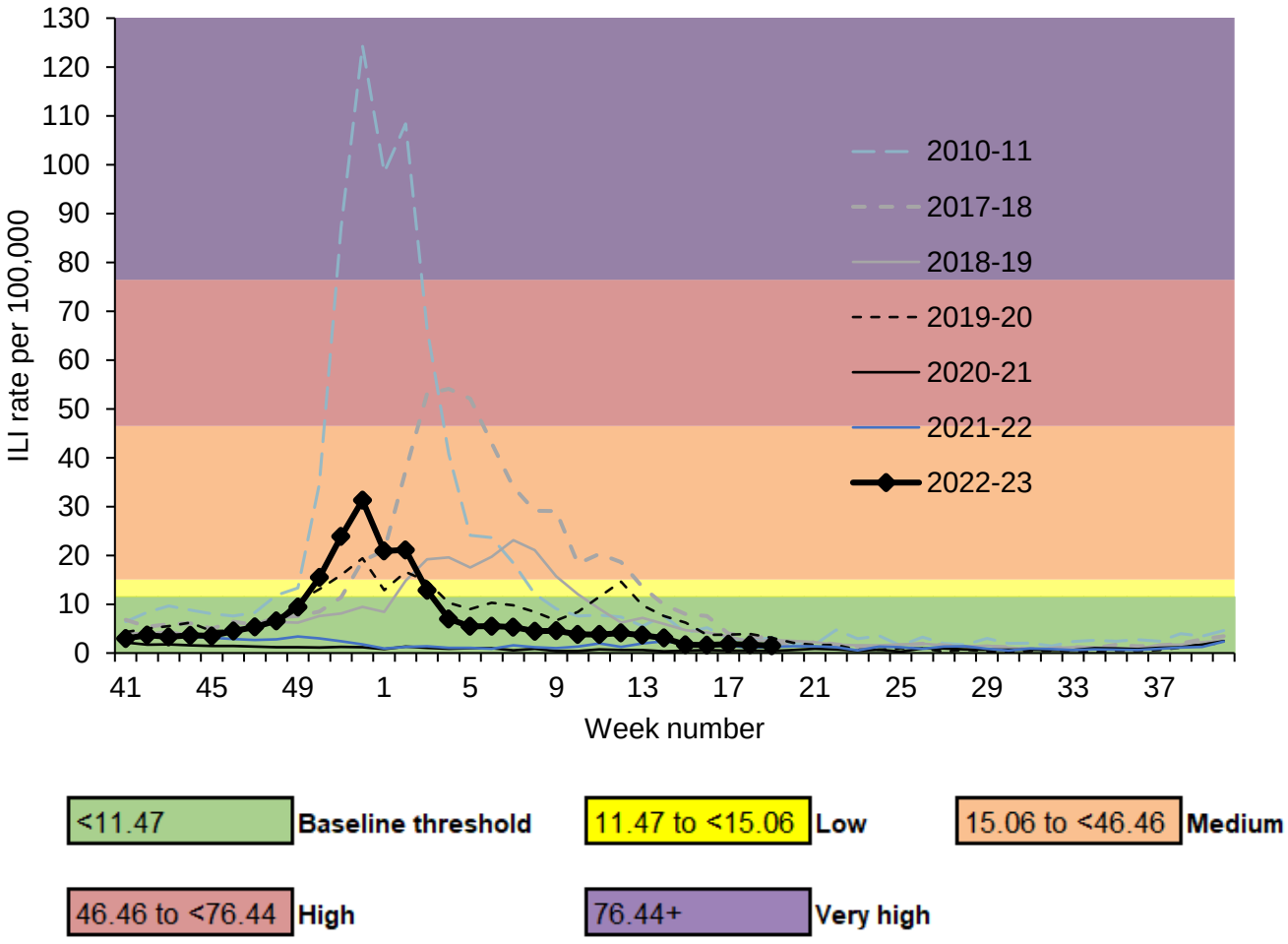
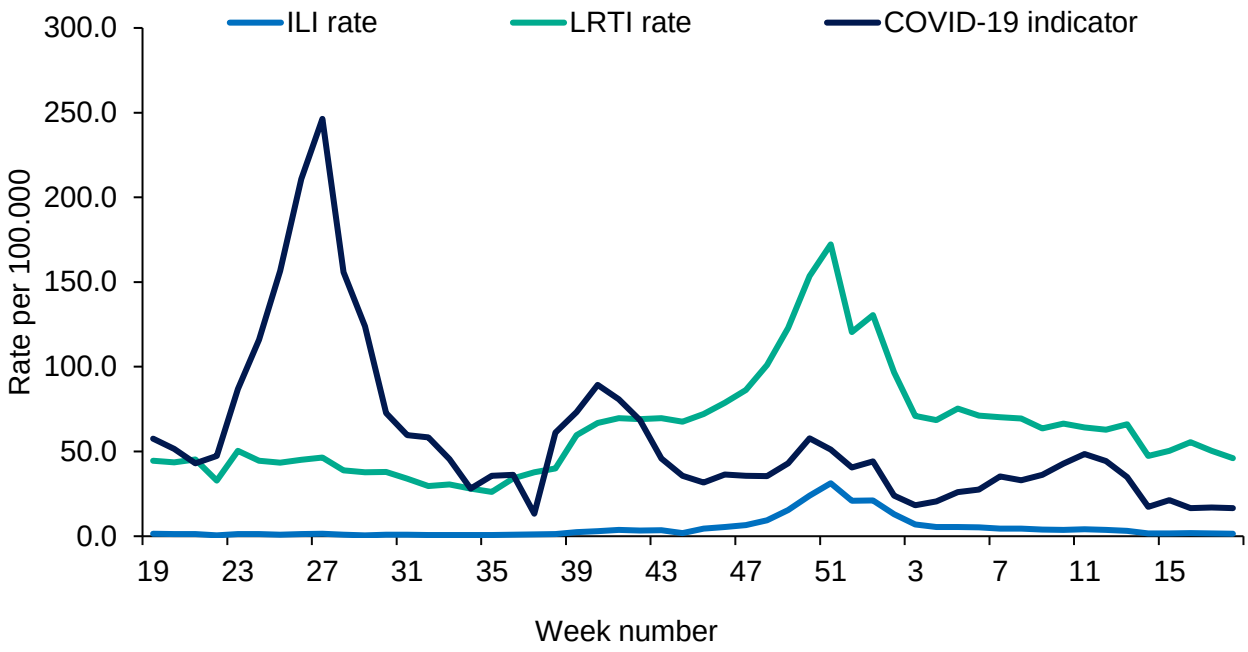


**Figure 34: RCGP ILI, LRTI and COVID-19 indicator rates, England**



# UK

Overall, weekly ILI consultations remained at baseline activity levels in all devolved administrations.

By age group, the highest incidence was in adults between 45 and 64 years old in England (2.0 per 100,000), in adults aged 75 years and above in Scotland (1.6 per 100,000), in those aged between 65 and 74 years in Northern Ireland (2.8 per 100,000), and in children between 5 and 14 years old in Wales (2.2 per 100,000).

**Table 2: GP ILI consultation rates in the UK for all ages with MEM (Moving Epidemic Method) thresholds applied**

| GP ILI consultation rates per 100,000 | Week Number | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 47 | 48 | 49 | 50 | 51 | 52 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| **England (RCGP)** | 6.6 | 9.4 | 15.5 | 23.9 | 31.3 | 20.9 | 21.1 | 12.9 | 7.0 | 5.5 | 5.5 | 5.3 | 4.5 | 4.6 | 3.8 | 3.8 | 4.1 | 4.3 | 3.1 | 1.7 | 1.6 | 1.8 | 1.7 | 1.5 |
| **Wales** | 4.3 | 7.8 | 14.1 | 24.2 | 39.1 | 34.8 | 23.7 | 15.3 | 6.5 | 3.5 | 5.2 | 4.8 | 4.3 | 3.7 | 4.0 | 4.9 | 2.2 | 3.7 | 3.9 | 2.3 | 3.7 | 1.8 | 1.9 | 1.5 |
| **Scotland** | 3.1 | 5.9 | 7.2 | 11.1 | 20.2 | 31.9 | 20.7 | 16.0 | 9.7 | 5.7 | 3.8 | 6.5 | 3.9 | 5.9 | 3.0 | 3.4 | 2.5 | 2.1 | 1.9 | 1.7 | 3.4 | 3.5 | 0.4 | 0.9 |
| **Northern Ireland** | 4.9 | 5.0 | 6.0 | 9.4 | 17.8 | 14.0 | 17.7 | 10.3 | 6.4 | 3.3 | 4.2 | 3.4 | 2.6 | 3.3 | 2.7 | 3.0 | 3.0 | 4.3 | 2.2 | 2.2 | 1.5 | 0.7 | 1.6 | 1.1 |

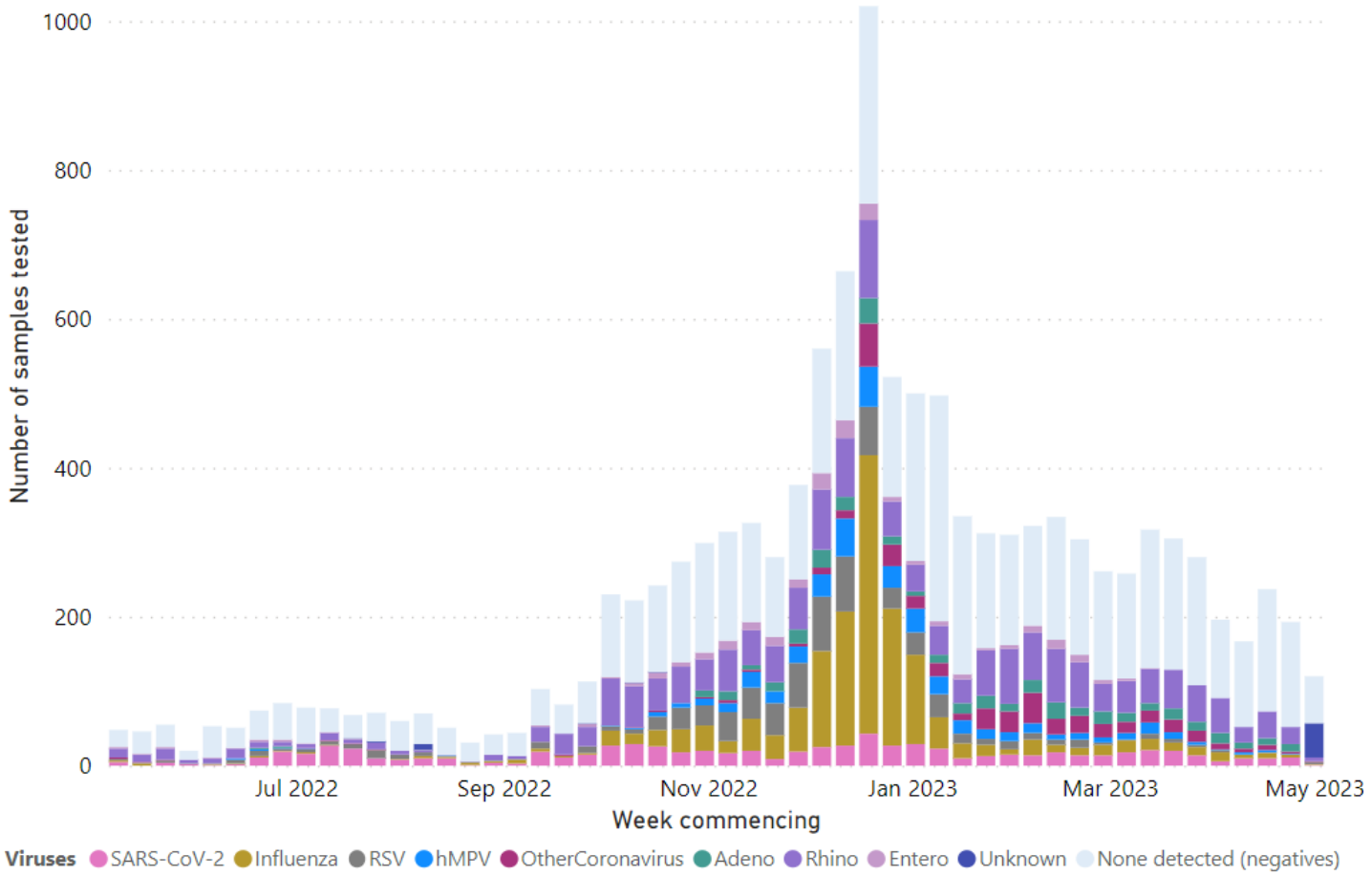
The Moving Epidemic Method (MEM) has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for GP ILI consultations for the start of influenza activity (based on 10 seasons excluding 2020 to 2021), in a standardised approach across Europe.

# Sentinel swabbing scheme in England

Based on the date samples were received in the reference laboratory, in week 18 of 2023, 120 samples were tested through the GP sentinel swabbing scheme in England, of which 11 samples tested positive (Figure 35). Among positive samples with a known virus type, 45% tested positive for rhinovirius, 27% tested positive for RSV, 9% tested positive for SARS-CoV-2, 9% tested positive for influenza and 9% tested positive for a seasonal coronavirus (Figure 36).

Based on the date samples were taken, sample numbers were too low this week to update Figure 37 and Figure 38. Positivity (%) is not calculated when the total number tested based on sample date was less than 20 (Figure 38).

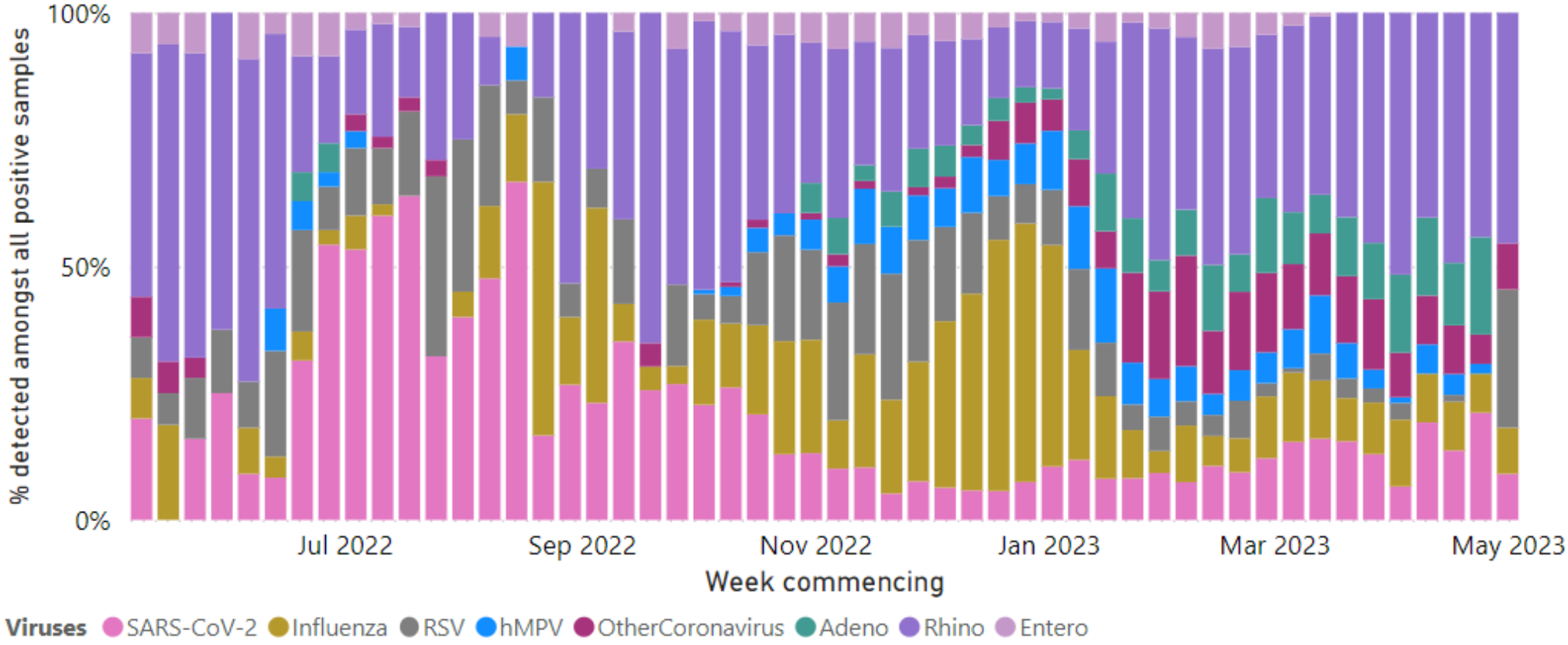
**Figure 35: Number of samples tested for SARS-Cov-2, influenza, and other respiratory viruses in England by week, GP sentinel swabbing**




Unknown category corresponds to samples with no result yet.

Source: RCGP Research and Surveillance Centre sentinel primary care practices (RCGP Virology Dashboard)

**Figure 36. Proportion of detections of SARS-CoV-2, influenza, and other respiratory viruses amongst virologically positive respiratory surveillance samples in England by week, GP sentinel swabbing scheme**




Source: RCGP Research and Surveillance Centre sentinel primary care practices (RCGP Virology Dashboard)

**Figure 37: Number of positives samples for influenza A (by subtype) and B in England by week, GP sentinel swabbing**

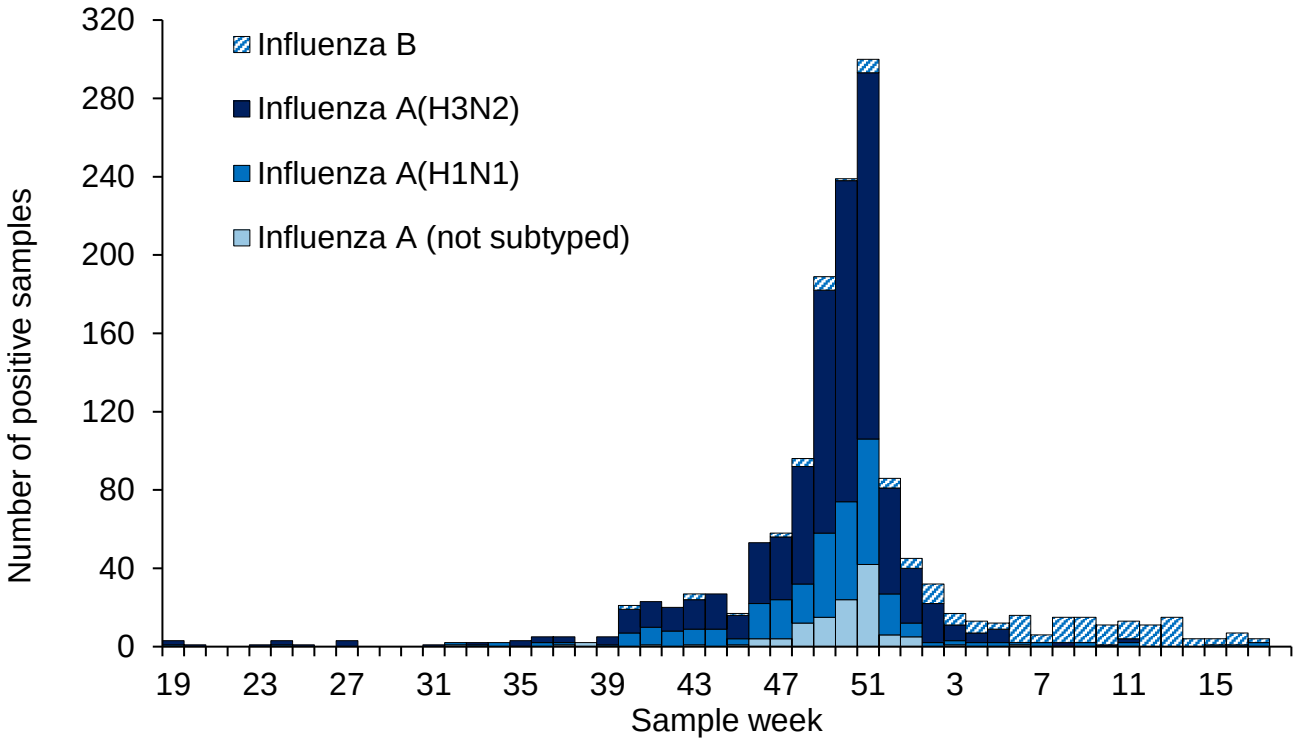
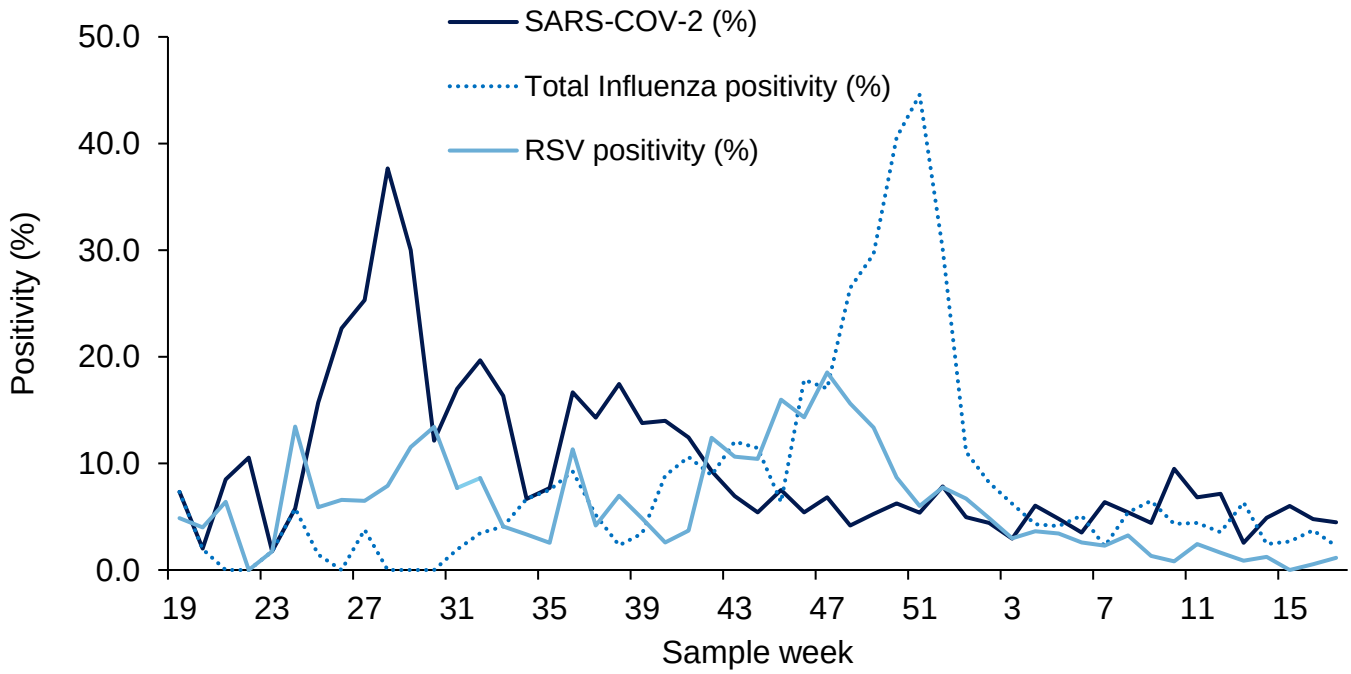



**Figure 38: Weekly positivity (%) for COVID-19, Influenza and RSV in England by week, GP sentinel swabbing**



# GP In Hours, Syndromic Surveillance

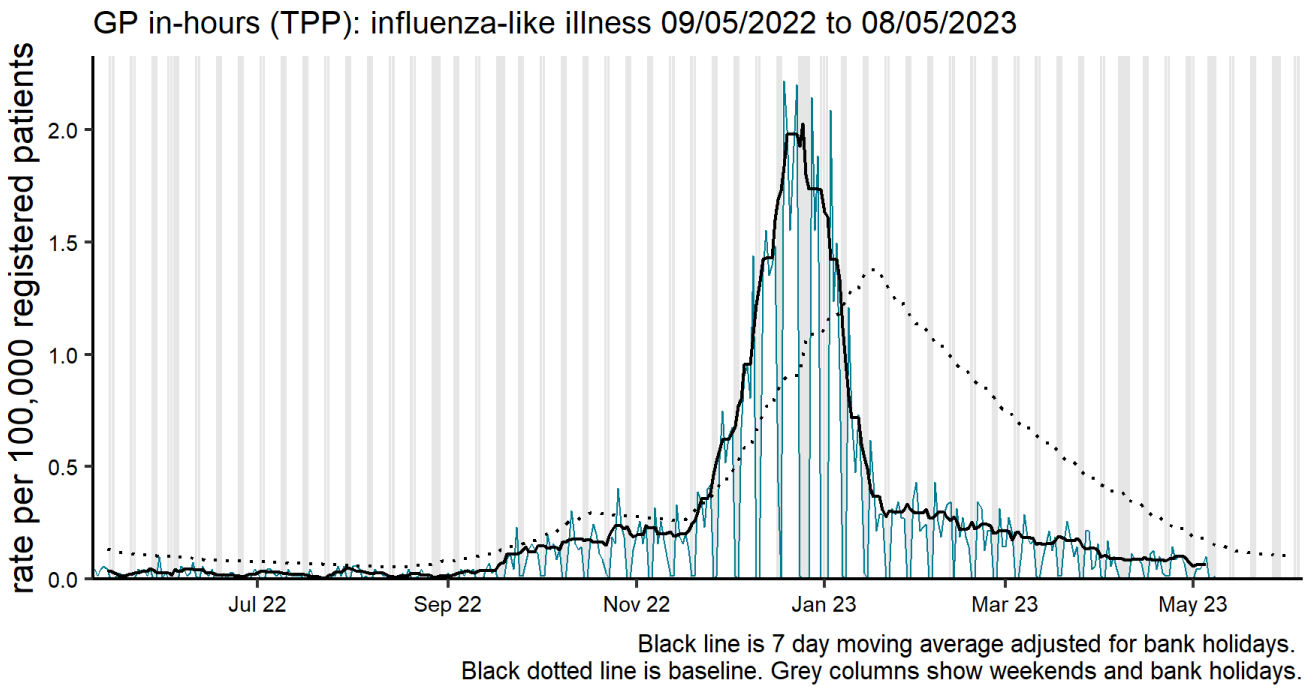
The GP In Hours (GPIH) syndromic surveillance system monitors the number of GP visits during regular hours of known clinical indicators.

During week 18, the rate of GP in hours consultations for influenza-like illness remained stable nationally and below the baseline levels (Figure 39).

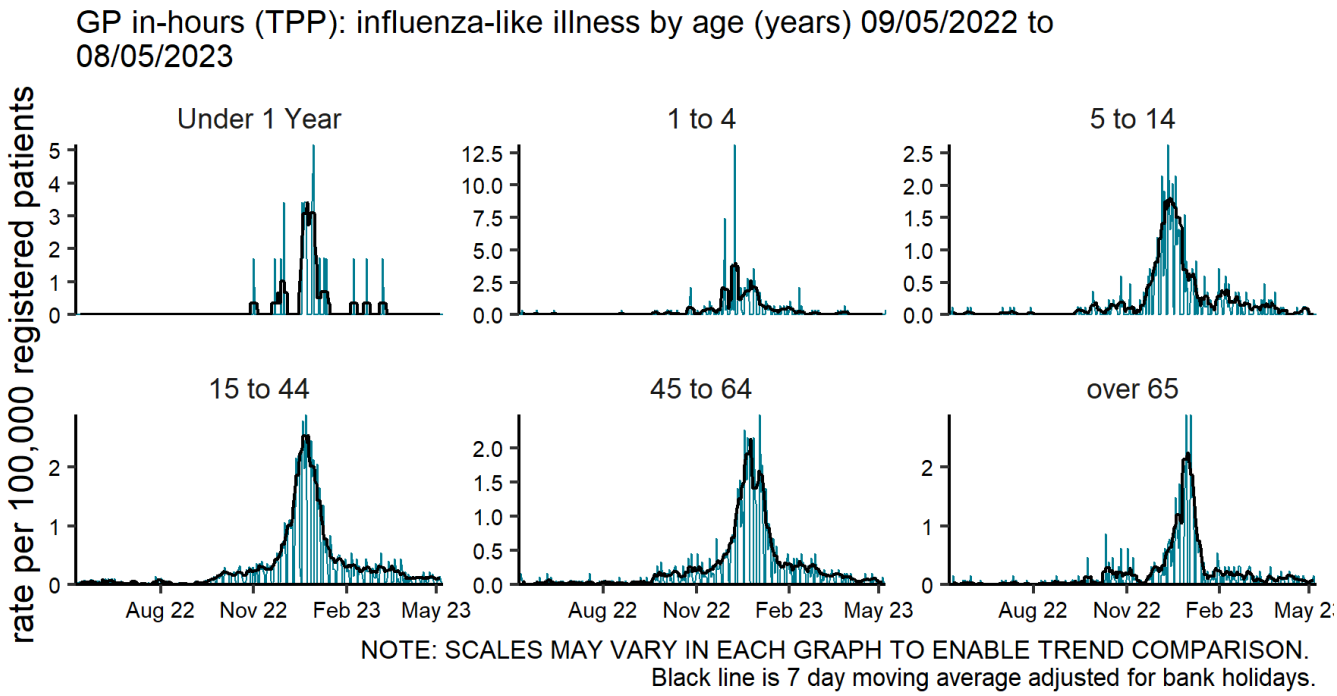
Further indicators and information about caveats are available from the GP In Hours Syndromic Surveillance bulletin.

**Figure 39: GPIH clinical indicators for influenza-like illness GP consultations, England (a) nationally, (b) by age group and (c) by UKHSA centre**

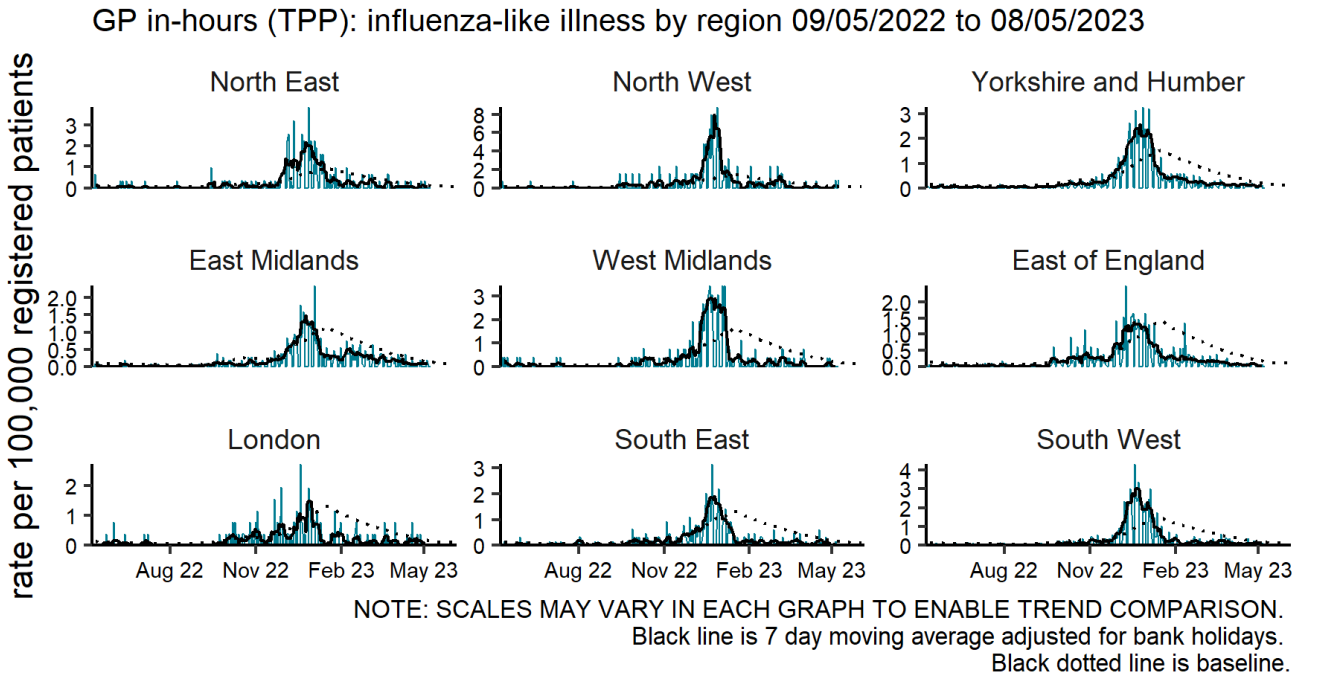
(a)



(b)




(c)




GPIH Baselines are modelled from historical data to give current seasonally expected levels. GP consultations rates decreased during 2020 due to changes in guidance on accessing health care, therefore separate modelled estimates are provided to show seasonally expected levels pre-COVID-19.

# GP Out of Hours, Syndromic Surveillance

The GP Out of Hours (GPOOH) syndromic surveillance system monitors the numbers of daily unscheduled visits and calls to GPs during evenings, overnight, on weekends and on public holidays. This system covers around 55% of England's out of hour activity.

Due to a disruption with a GPOOH clinical software system provider, GPOOH data from 4 August onwards is not currently available. Data from GPOOH systems will be added back into this report once available. The most recent data is available in previous reports.

# Secondary care surveillance

## SARI Watch

The Severe Acute Respiratory Infection (SARI) Watch surveillance system was established in 2020 to report the number of laboratory-confirmed influenza and COVID-19 cases admitted to hospital and critical care units (ICU and HDU) in NHS acute trusts across England. This has replaced the UK Severe Influenza Surveillance Schemes (USISS) Mandatory and Sentinel data collections for influenza surveillance used in previous seasons, and the COVID-19 hospitalisations in England surveillance system (CHESS) collections for COVID-19 surveillance.

The weekly rate of new admissions of COVID-19, influenza and RSV cases is based on the trust catchment population of those NHS Trusts who made a new return. This may differ from other published figures such as the total number of people currently in hospital with COVID-19.

The Moving Epidemic Method (MEM) thresholds for influenza hospital and ICU or HDU admissions are calculated based on the 2016 to 2017 to the 2021 to 2022 seasons (data from 2020 to 2021 was excluded due to the COVID-19 pandemic). These thresholds have been applied to data from the 2022 to 2023 season onwards.

Trends in hospital and critical care admission rates need to be interpreted in the context of testing recommendations. Please note that routine asymptomatic testing for SARS-CoV-2 through NHS settings has been paused from 31 August 2022, therefore SARI-Watch data should be interpreted with this in mind.

Similarly trends in influenza hospitalisation and critical care admission should be interpreted in the context of testing practices. In recent years there has been wider implementation of rapid molecular point of care tests for influenza in hospital settings. From a public health surveillance perspective it is important to consider a step change in influenza case ascertainment in more recent years.

On 16 February 2023, UKHSA issued a reminder to acute Trusts that influenza A samples from critical care should be subtyped in line with existing guidance. This may impact on the ratio of subtyped to unsubtyped in surveillance data.

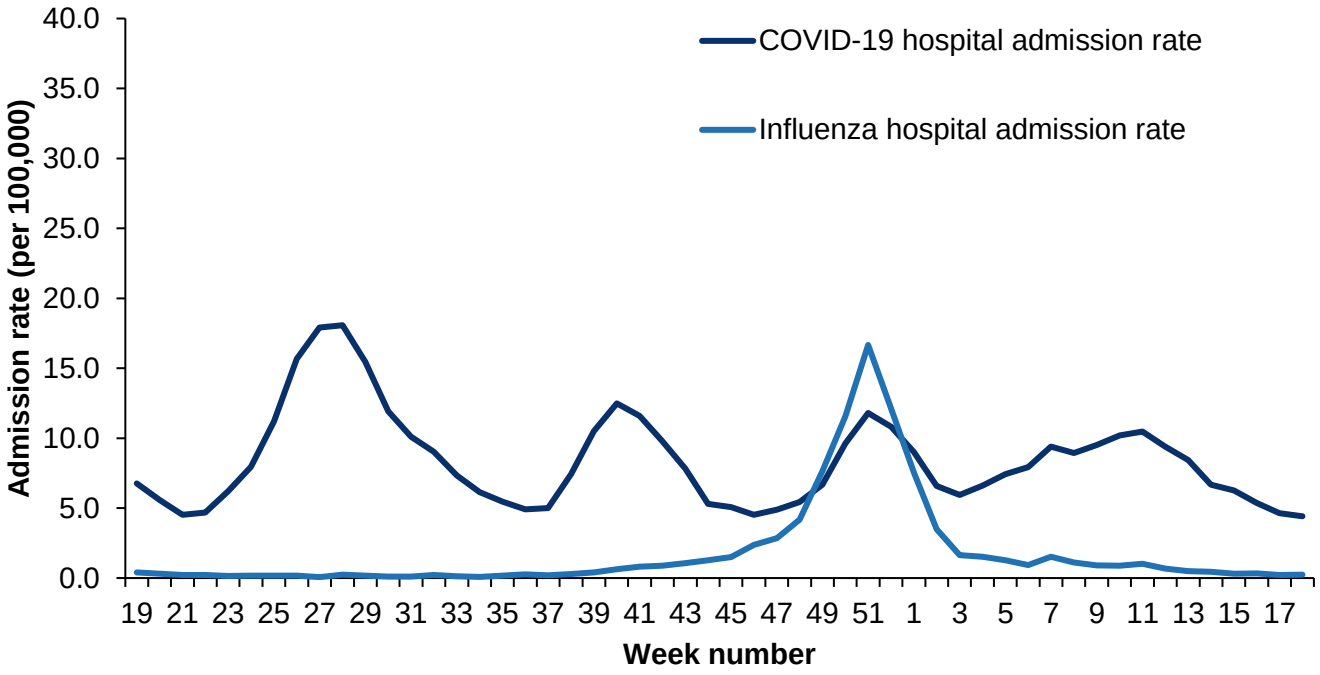
# Hospitalisations, SARI Watch

In week 18 (ending 7 May 2023), the overall weekly hospital admission rate for COVID-19 decreased slightly to 4.42 per 100,000 compared to 4.63 per 100,000 in the previous week.

By UKHSA centre, the highest hospital admission rate for COVID-19 was observed in the South East (increasing slightly whilst there was a mixed picture in the remaining eight UKHSA regions). By age group, the highest hospital admission rate for confirmed COVID-19 continues to be in the 85 year olds and over (decreasing in all elderly age groups and decreasing or stabilising in younger age groups).

In week 18 (ending 7 May 2023), the overall weekly hospital admission rate for influenza remained stable at 0.24 per 100,000 compared to 0.23 per 100,000 in the previous week. The rate in the latest week remained within baseline activity levels. By UKHSA Centre, the highest hospitalisation rate was observed in London (0.94 per 100,000). By age group, the highest hospital admission rate for influenza was in adults aged between 45 and 54 years old (0.49 per 100,000). There were 22 new hospital admissions to sentinel Trusts for influenza (four influenza A[not subtyped] and 18 influenza B in week 18).

**Figure 40: Weekly overall hospital admission rates of new COVID-19 and influenza positive cases per 100,000 population reported through SARI Watch, England**

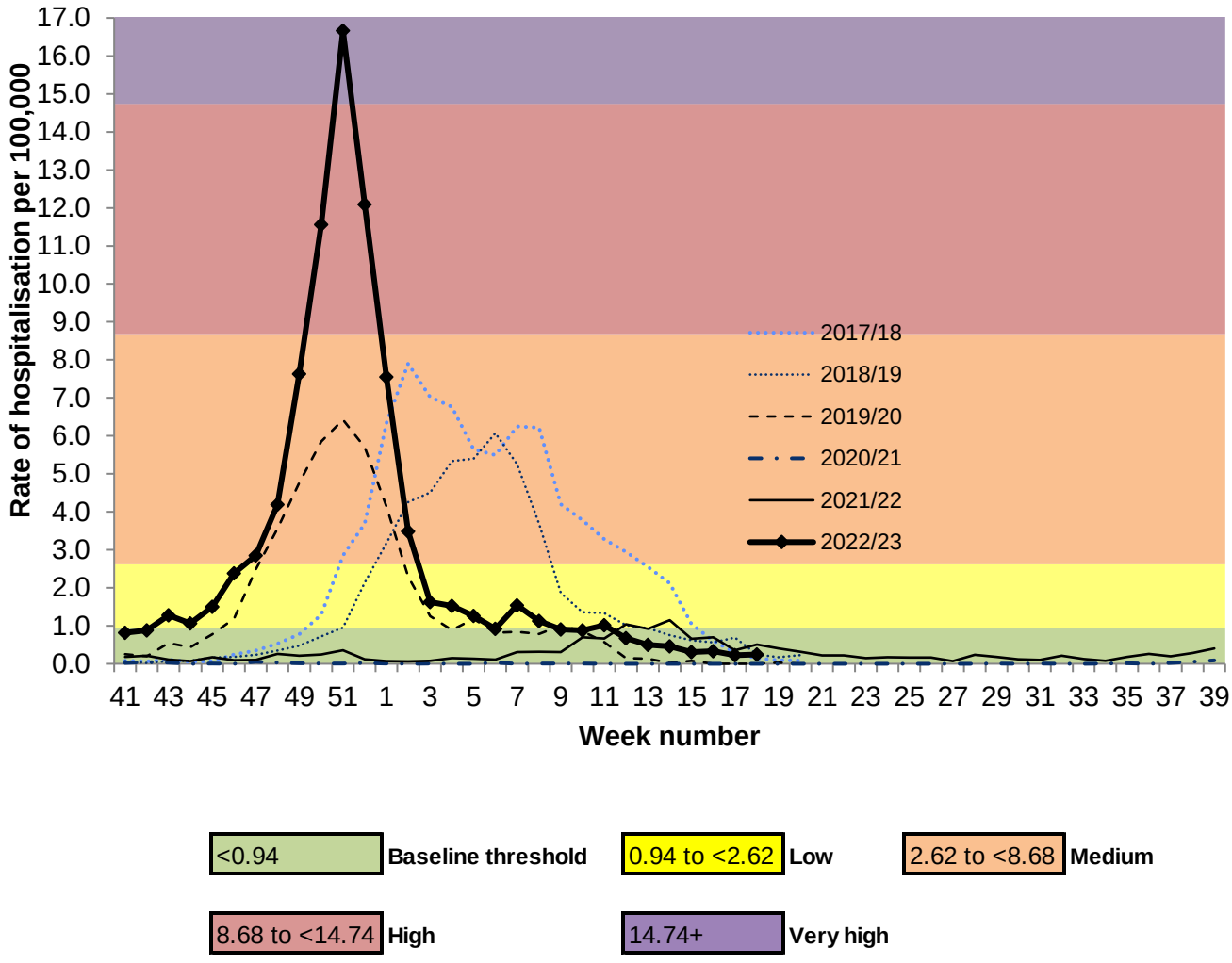



* Influenza hospital admission rate based on 19 sentinel NHS trusts for week 18

* COVID-19 hospital admission rate based on 85 NHS trusts for week 18

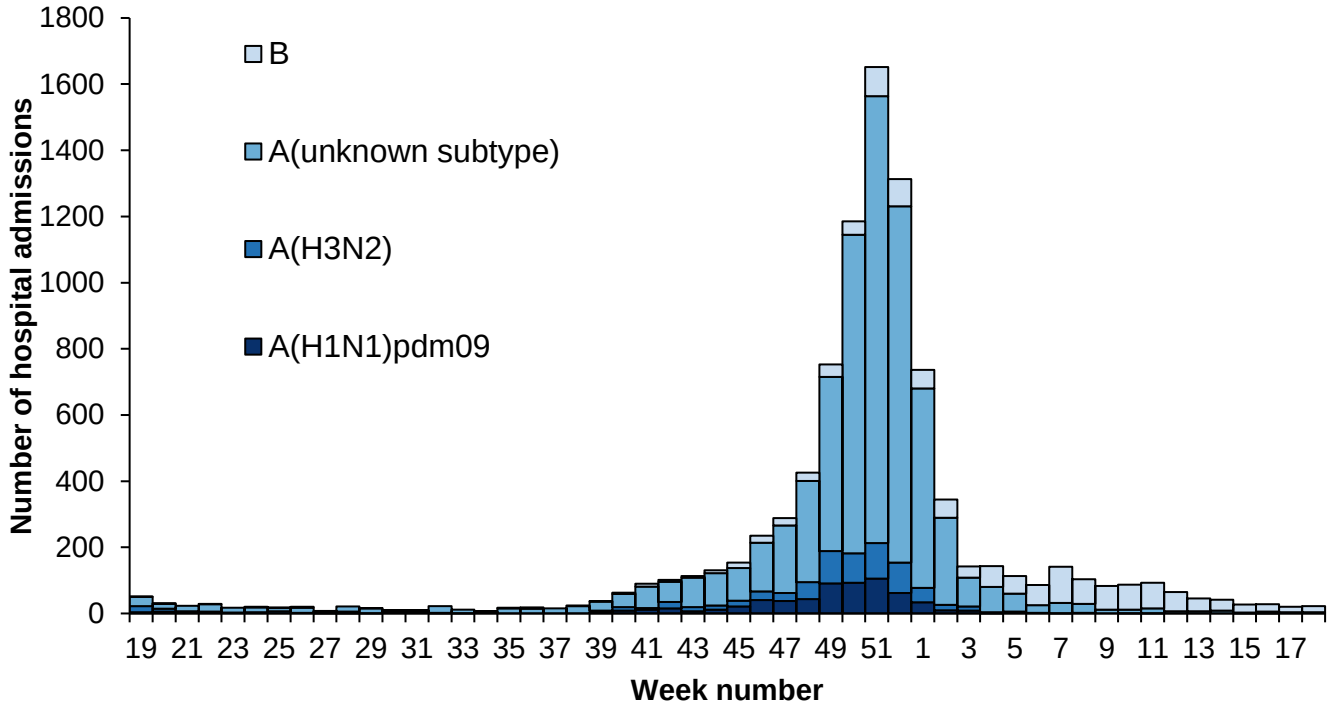
* SARI Watch data is provisional and subject to retrospective updates

**Figure 41: Weekly overall influenza hospital admission rates per 100,000 trust catchment population with MEM thresholds, SARI Watch, England**




* MEM thresholds are based on data from the 2016 to 2017 to the 2021 to 2022 seasons (data from 2020 to 2021 was excluded due to the COVID-19 pandemic).

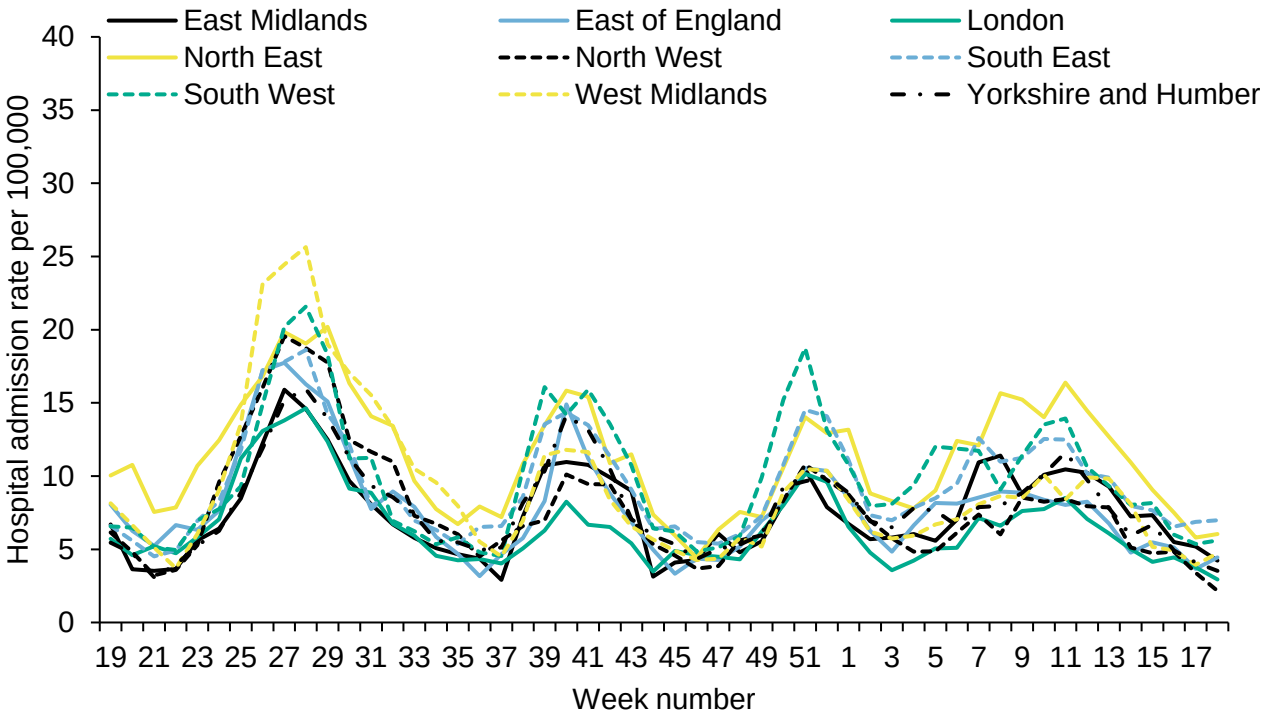
**Figure 42: Weekly influenza hospital admissions by influenza type, SARI Watch, England**



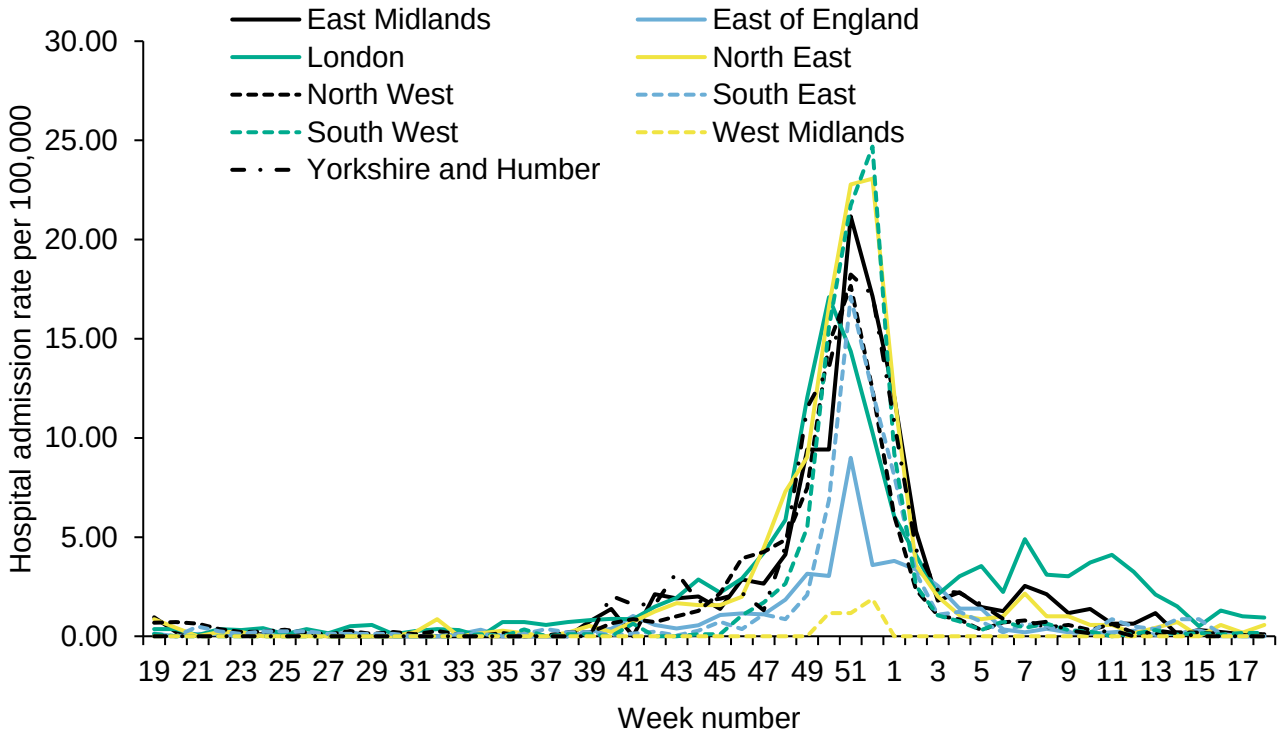

*Number of influenza hospital admissions based on sentinel NHS trusts

**Figure 43: Weekly hospital admission rate by UKHSA centre for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch***

(a)



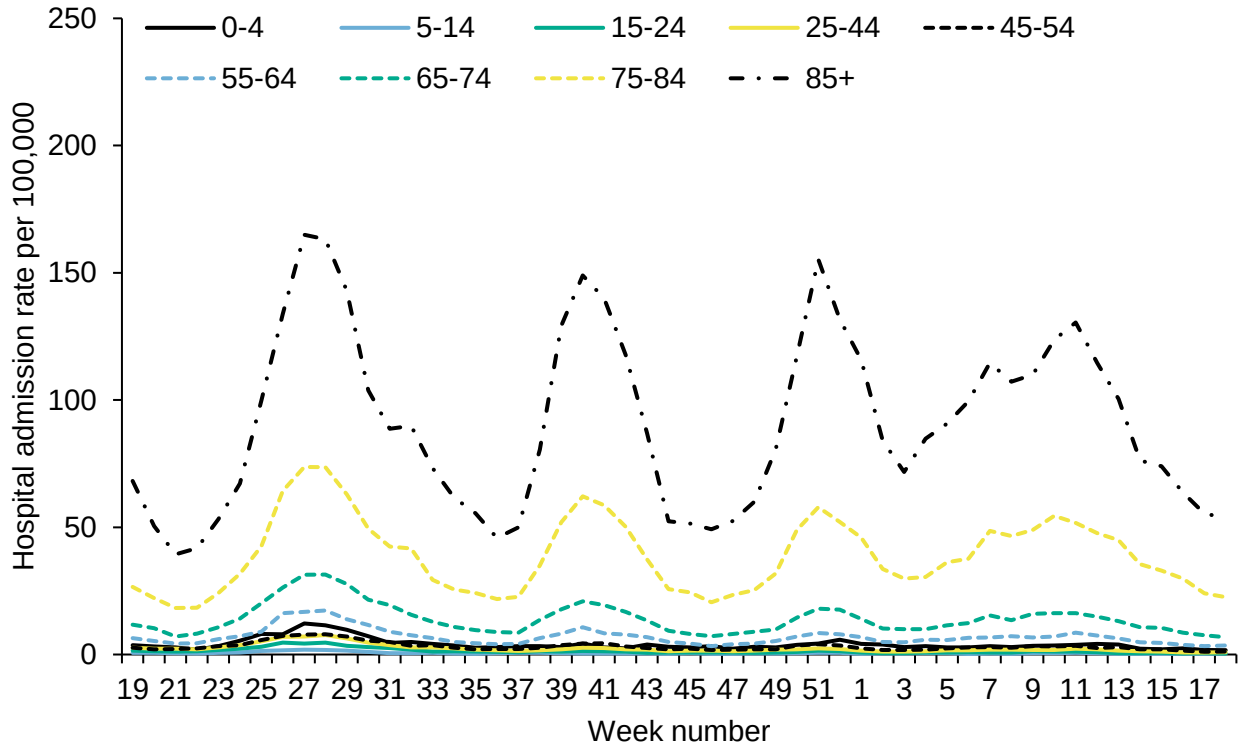

(b)



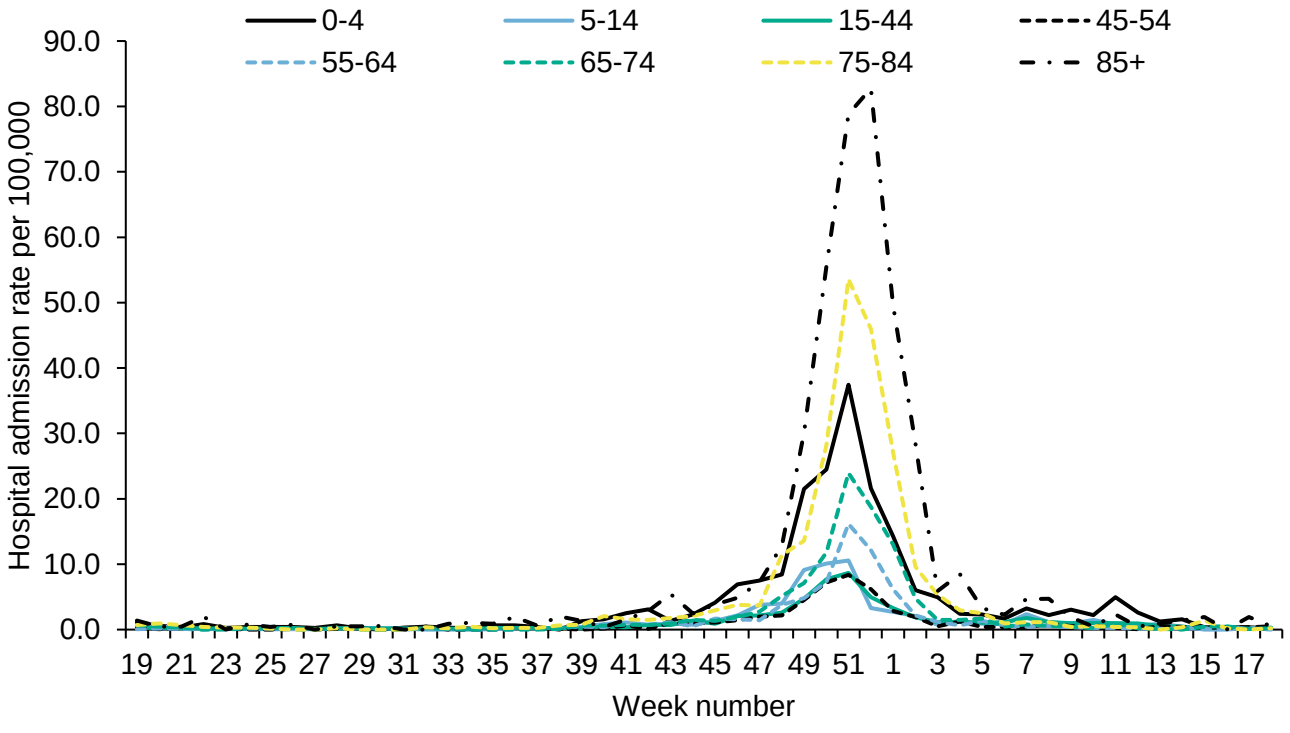

** Rates in some regions may not include all influenza surveillance sentinel sites from week to week*

**Figure 44: Weekly hospital admission rate by age group for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch**

(a)




(b)



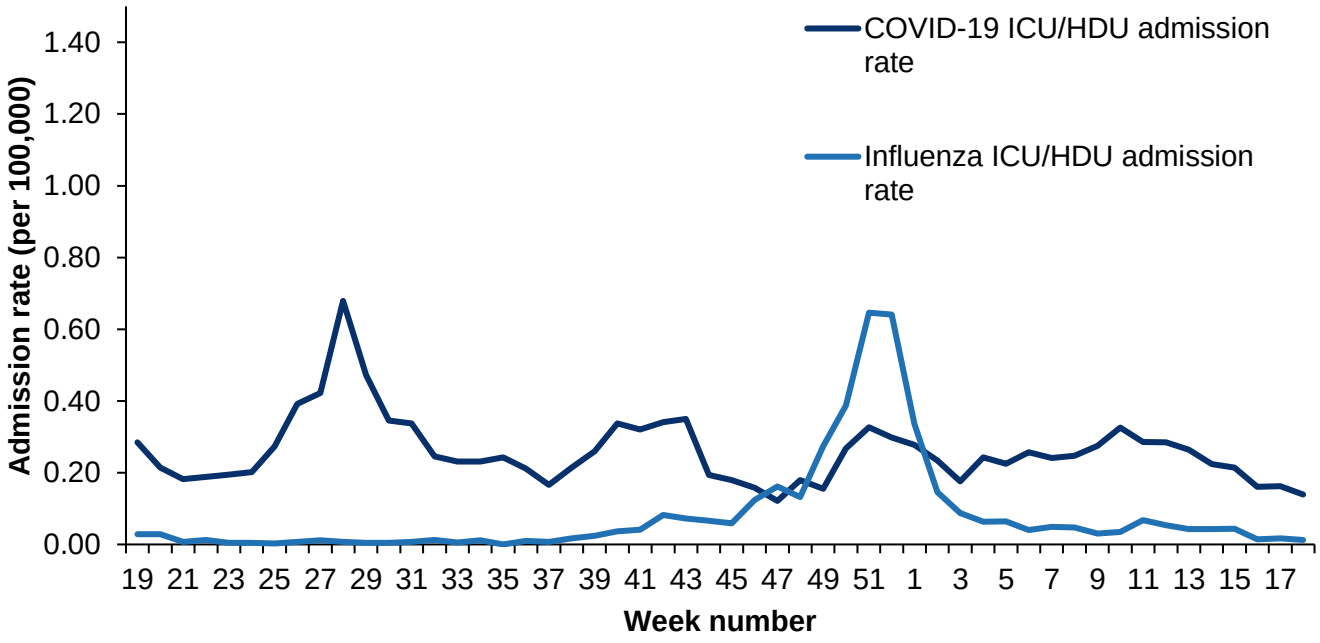
# ICU or HDU admissions, SARI Watch

In week 18 (ending 7 May 2023), the overall ICU or HDU admission rate for COVID-19 remained very low, decreasing slightly to 0.14 per 100,000 compared to 0.16 per 100,000 in the previous week. Note that ICU or HDU admissions rate may represent a lag from admission to hospital to an ICU or HDU ward.

By UKHSA centre, the highest ICU or HDU admission rate for COVID-19 was observed in the London. By age group, the highest ICU or HDU admission rate for confirmed COVID-19 was observed in those aged between 75 and 84 year olds.

In week 18, the overall ICU or HDU rate for influenza remained low and stable at 0.01 per 100,000, the same as the previous week. The rate in the latest week remained within baseline activity levels. There were five new case reports of an ICU or HDU admission for influenza in week 18, four tested positive for influenza B, one tested positive for influenza A(not subtyped).

**Figure 45: Weekly overall ICU or HDU admission rates of new COVID-19 and influenza positive cases per 100,000 population reported through SARI Watch, England**




* Influenza ICU or HDU admission rate based on 92 NHS trusts for week 18

* COVID-19 ICU or HDU admission rate based on 78 NHS trusts for week 18

* SARI Watch data is provisional and subject to retrospective updates

**Figure 46: Weekly overall influenza ICU or HDU admission rates per 100,000 trust catchment population with MEM thresholds, SARI Watch, England**

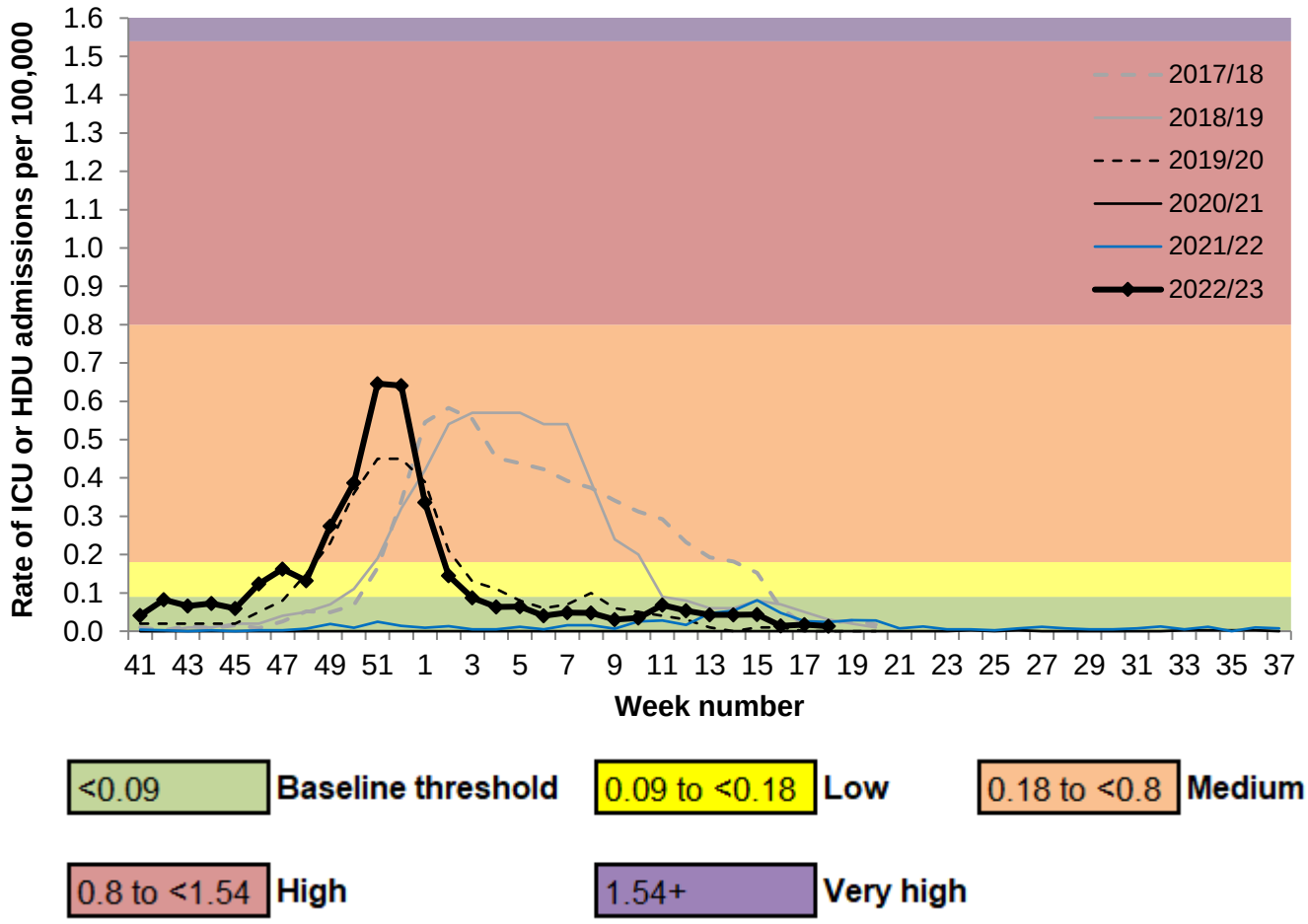


**Figure 47: Weekly influenza ICU or HDU admissions by influenza type, SARI Watch, England**

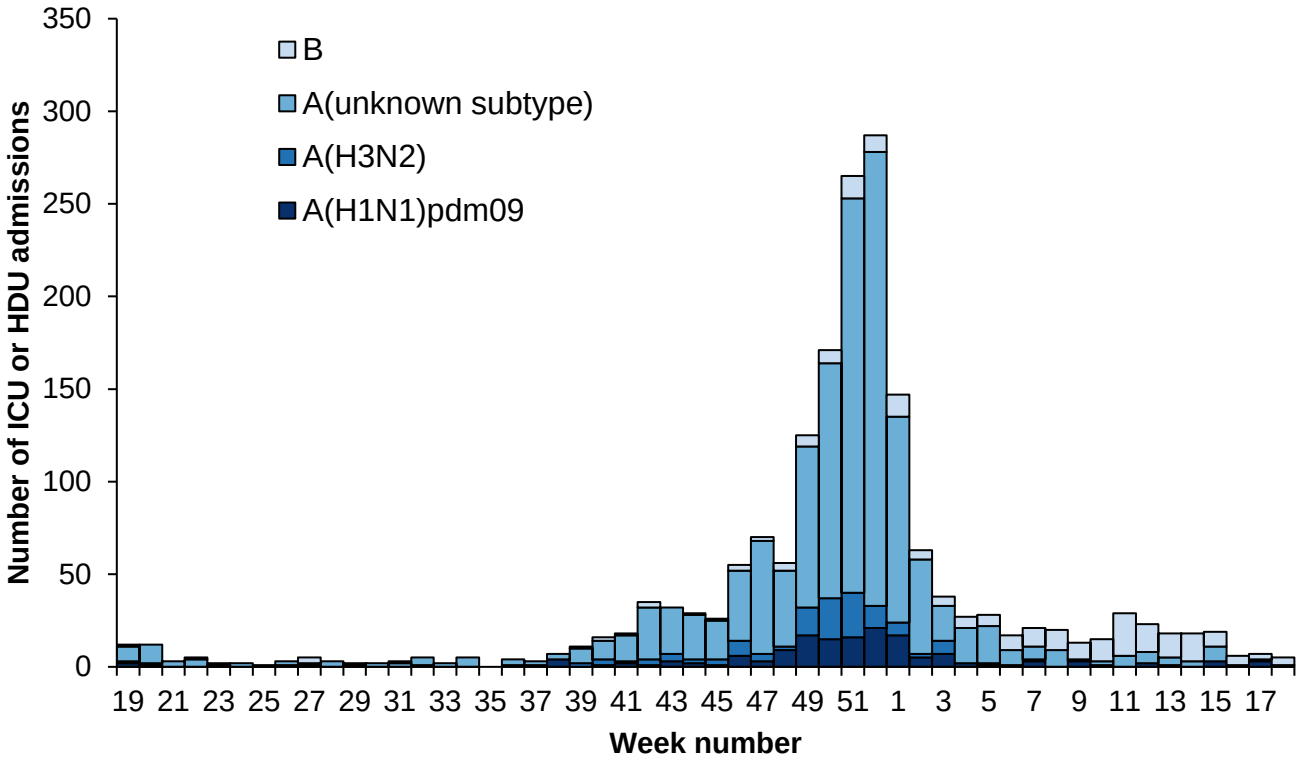
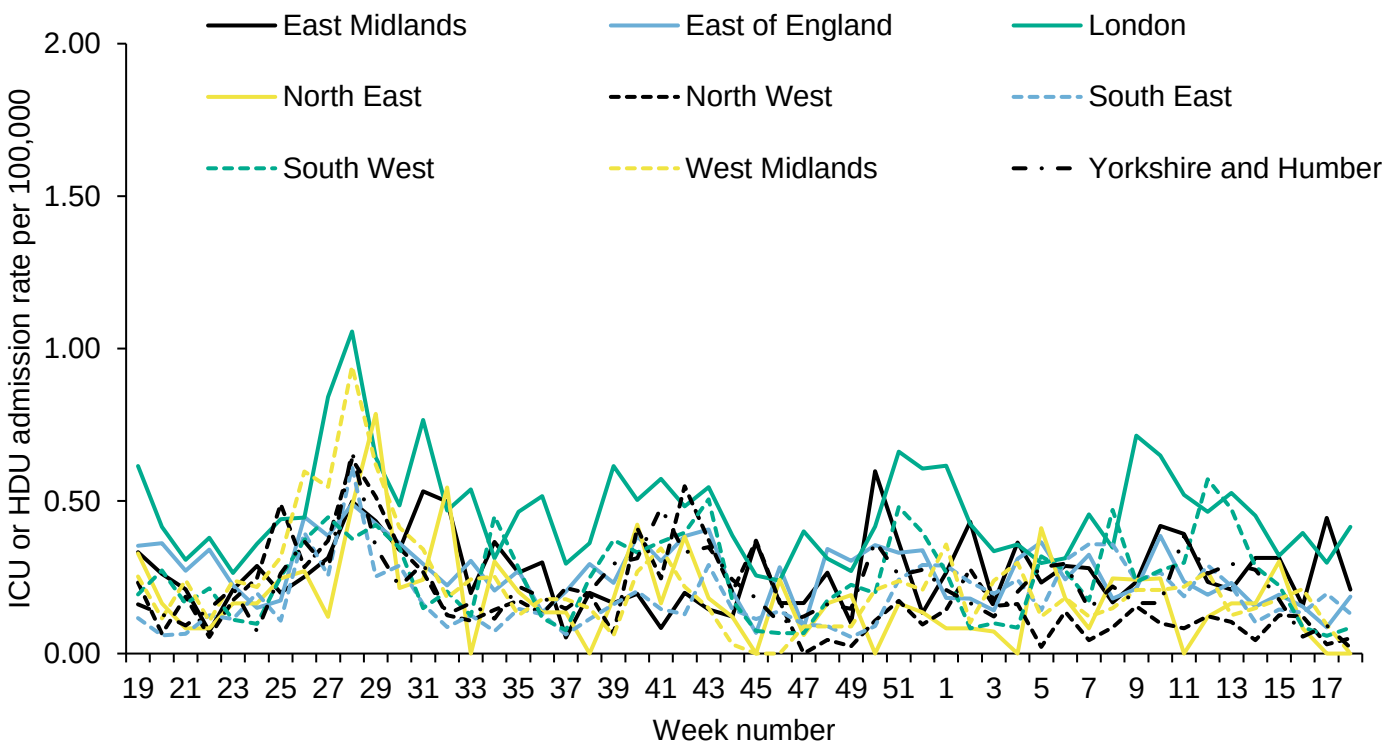


**Figure 48: Weekly ICU or HDU admission rate by UKHSA centre for new (a) COVID-19 positive cases and (b) influenza, reported through SARI Watch**

(a)




(b)

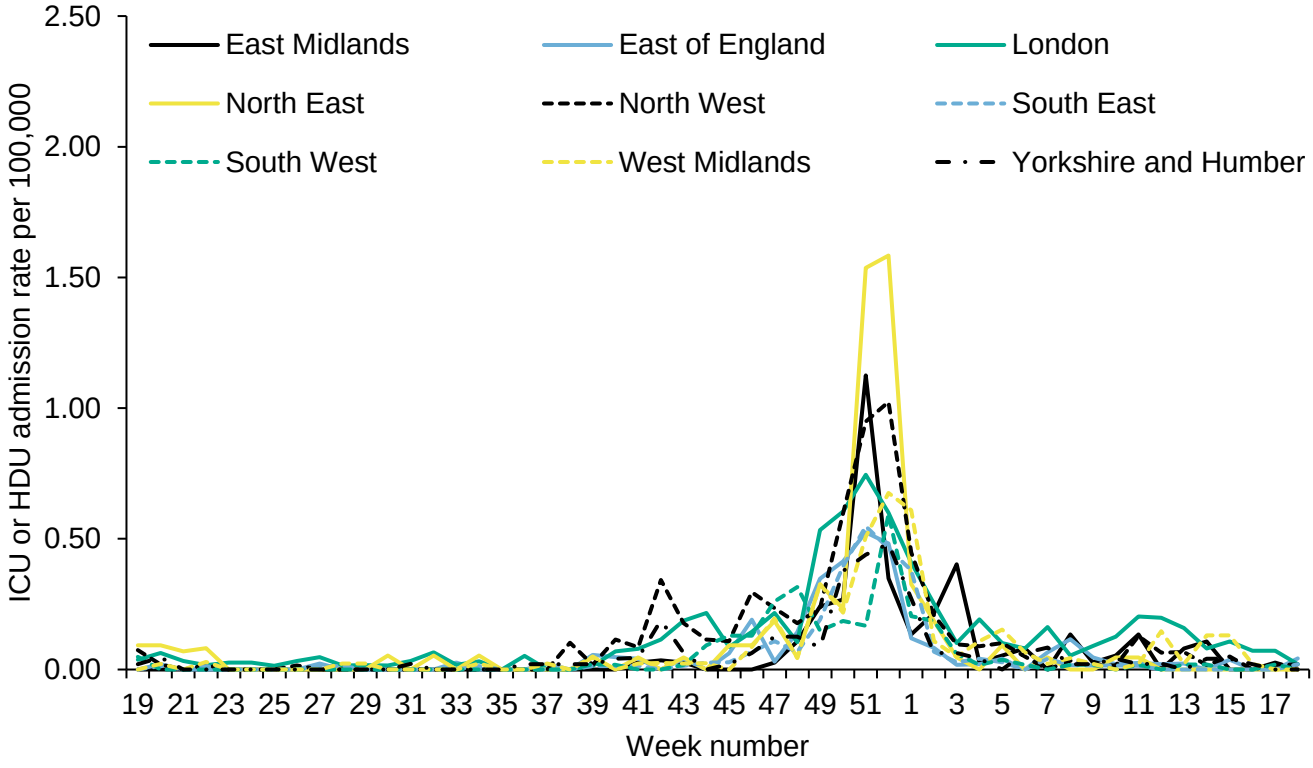
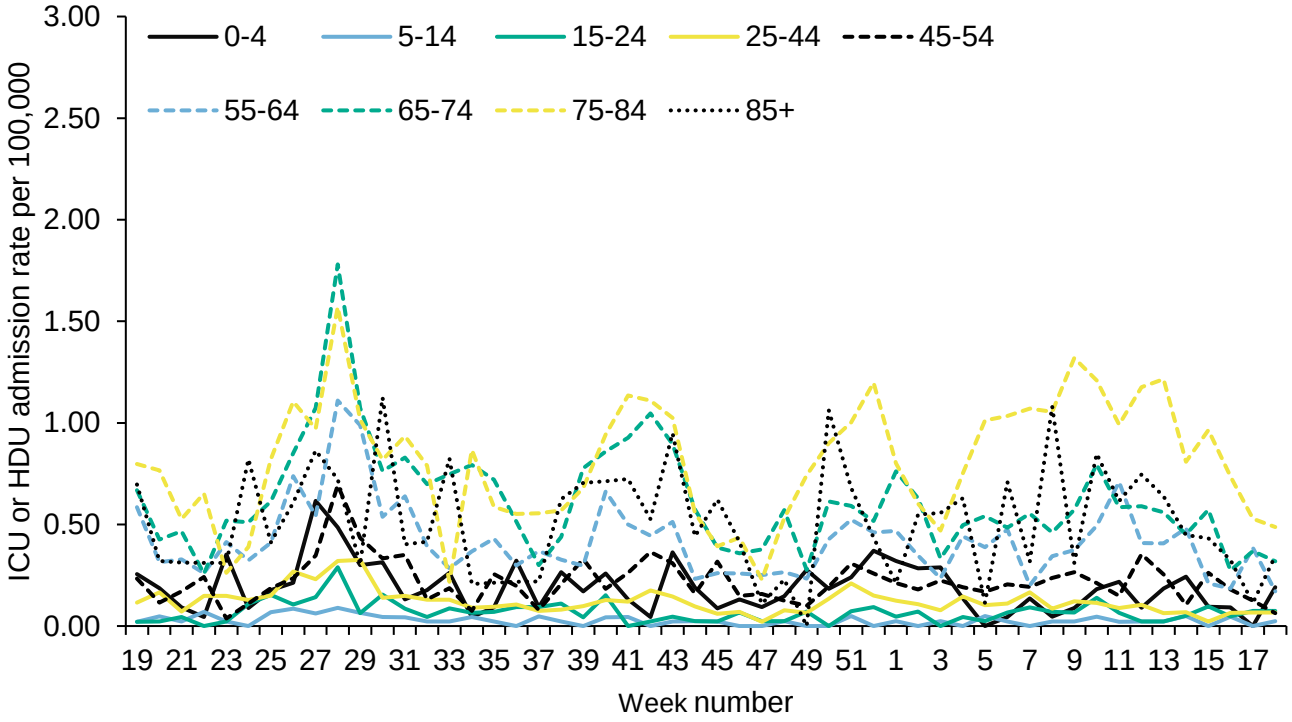
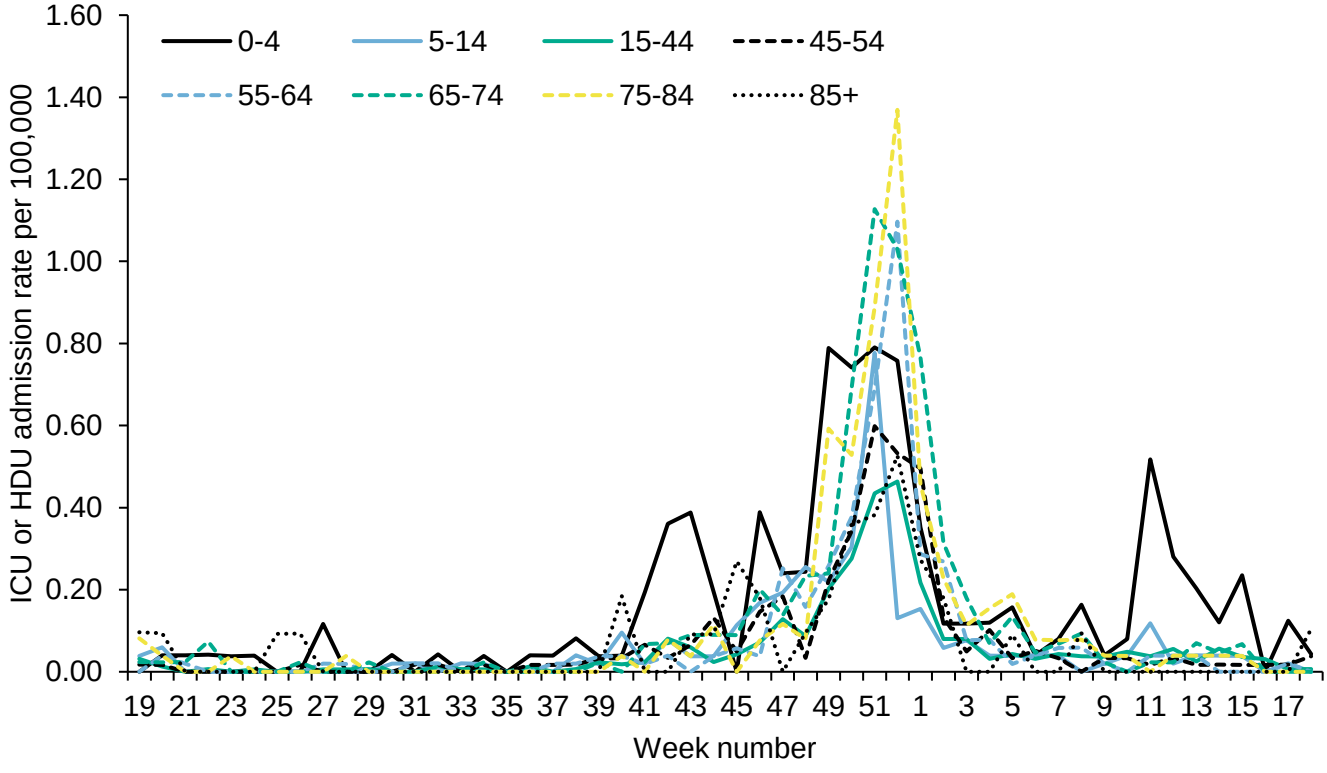


**Figure 49: Weekly ICU or HDU admission rate by age group for new (a) COVID-19 positive cases and (b) influenza, reported through SARI Watch**

(a)



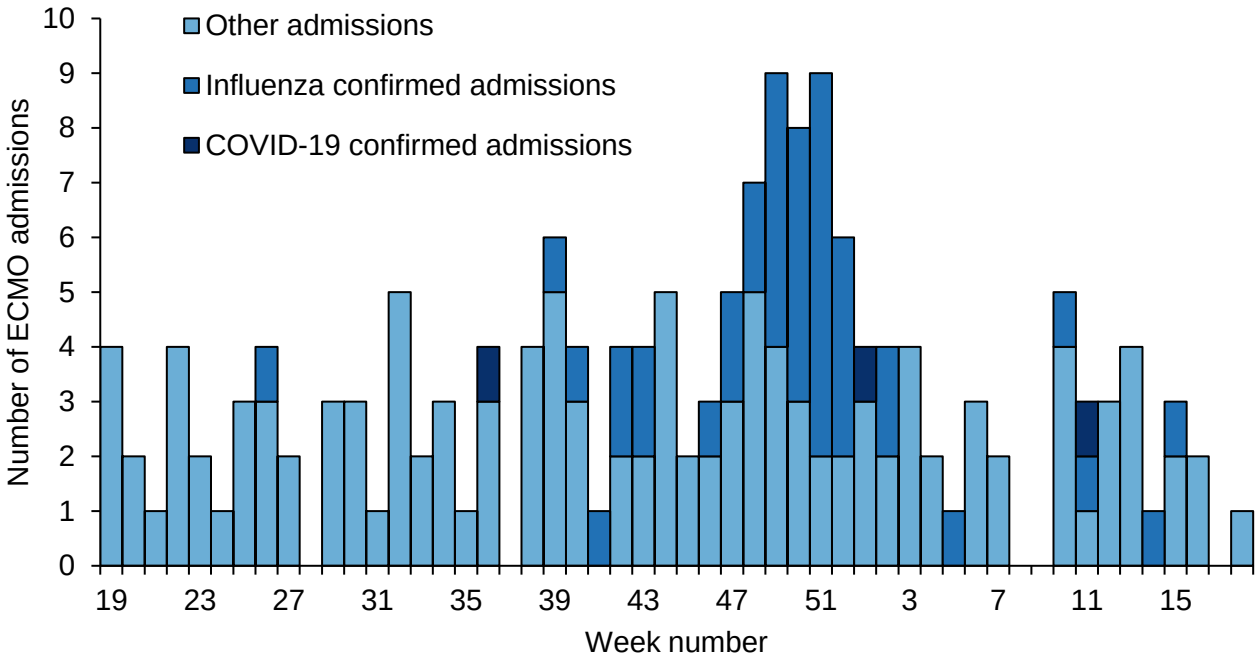

(b)



# ECMO, SARI Watch

There was one new ECMO admission in adults reported in week 18 (Figure 50).

**Figure 50: Laboratory confirmed ECMO admissions in adults (COVID-19, influenza and non-COVID-19 confirmed) to Severe Respiratory Failure centres in the UK**



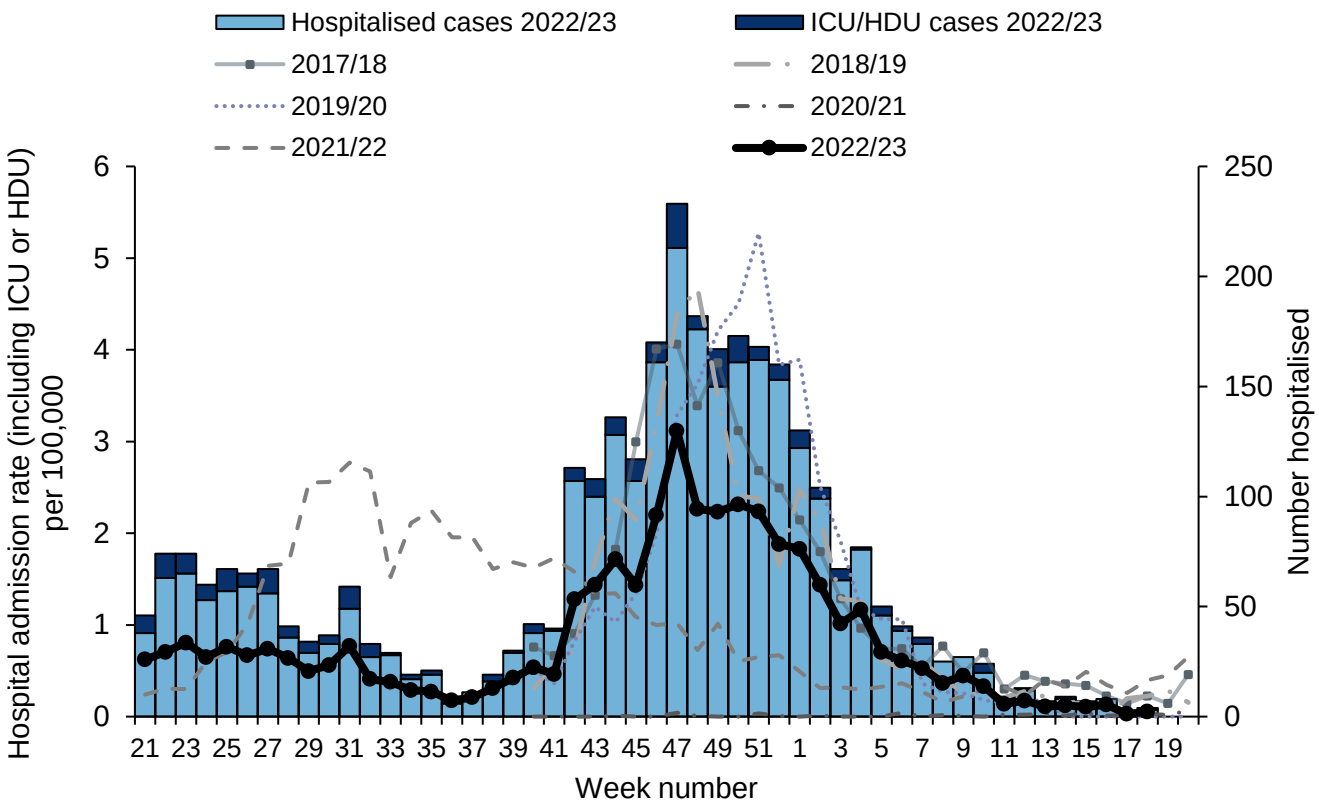

* SARI Watch data is provisional and subject to retrospective updates

# RSV admissions, SARI Watch

Data on hospitalisations, including ICU or HDU admissions, with respiratory syncytial virus (RSV) are shown below. RSV SARI Watch surveillance is sentinel.

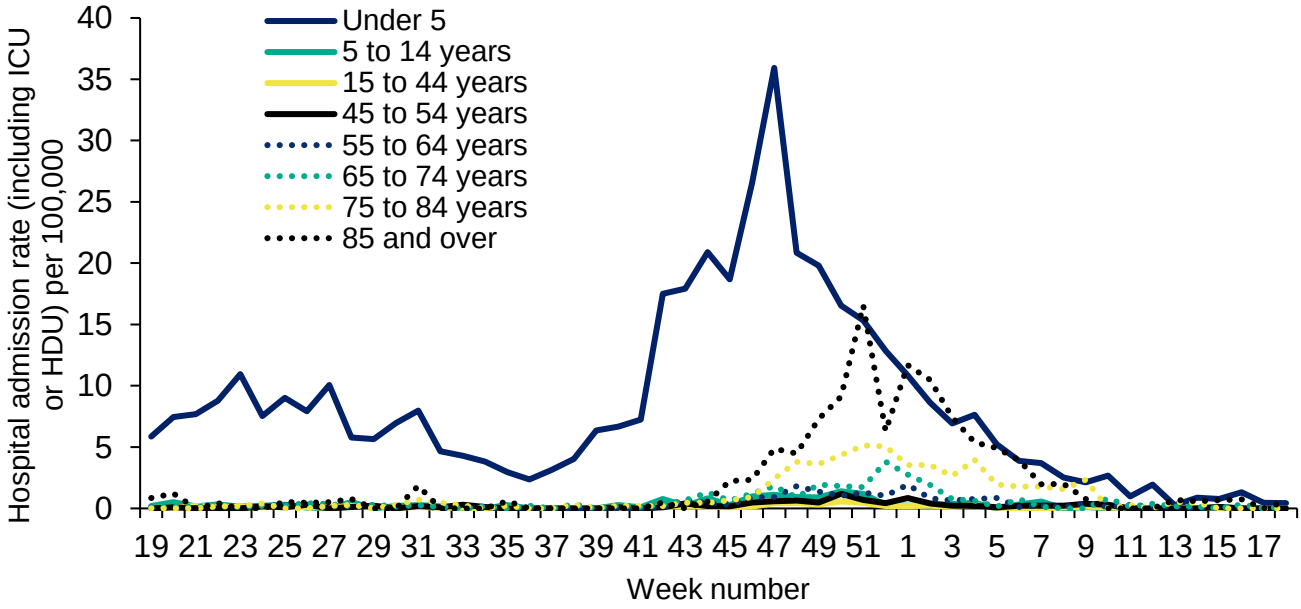
In week 18, the overall hospital admission rate for RSV continued to fluctuate at low levels. In week 18, the rate was 0.05 per 100,000, compared to 0.03 per 100,00 in the previous week. Hospital admission rates are fluctuating at low levels across all age groups.

**Figure 51: Weekly overall hospital admission rates (including ICU or HDU) of RSV positive cases per 100,000 population reported through SARI Watch, England**




* Please note that in previous seasons, RSV SARI Watch surveillance has run from week 40 to week 20. In the 2020 to 2021 season onwards this was extended to run throughout the year, to allow for surveillance of out-of-season trends.

**Figure 52: Weekly hospitalisation (including ICU or HDU) admission rates by age group for new RSV cases reported through SARI Watch, England**




* SARI Watch data is provisional and subject to retrospective updates

* Please note that rates are based on the number of hospitalised cases divided by the Trust catchment population, multiplied by 100,000

# Emergency Department attendances, Syndromic surveillance

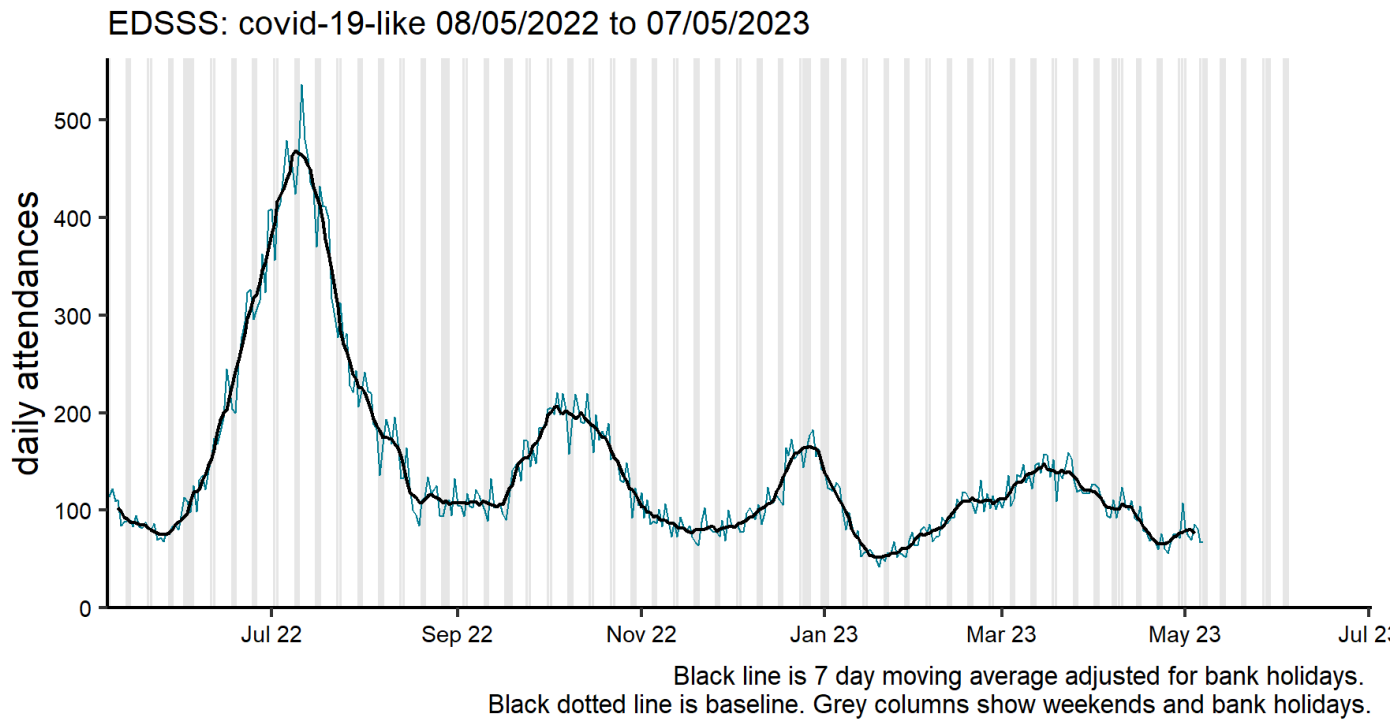
The Emergency Department Syndromic Surveillance System (EDSSS) monitors the daily visits in a network of emergency departments across England.

During week 18, attendances for acute bronchiolitis increased (Figure 56) and attendances for covid-19-like illness, acute respiratory infection and influenza like illness remained stable nationally (Figure 53, 54 and 55).

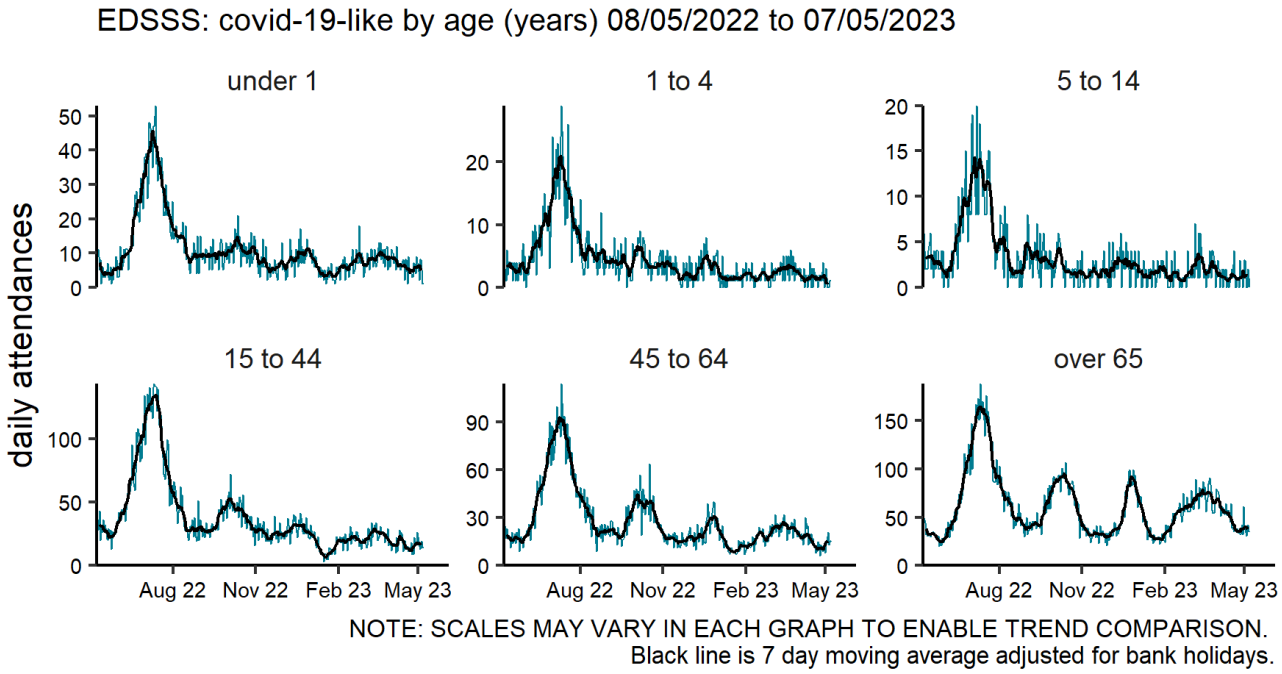
Please note: the COVID-19-like ED indicator is an underestimation of the number of COVID-19 attendances as it only includes attendances with a COVID-19-like diagnosis as their primary diagnosis. The EDSSS COVID-19-like indicator should therefore be used to monitor trends in ED attendances and not to estimate actual numbers of COVID-19 ED attendances. Remodelled EDSSS baselines have been refitted during week 6 to account for post-COVID-19 changes in health care seeking behaviour. Further information about these caveats is available from the Emergency Department Syndromic Surveillance bulletin.

**Figure 53: Daily ED attendances for COVID-19-like infections, England (a) nationally, (b) by age group and (c) by UKHSA centre**

(a)



(b)


EDSSS: covid-19-like by age (years) 08/05/2022 to 07/05/2023
under 1
1 to 4
5 to 14
15 to 44
45 to 64
over 65
daily attendances
Aug 22
Nov 22
Feb 23
May 23
NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.
Black line is 7 day moving average adjusted for bank holidays.

(c)

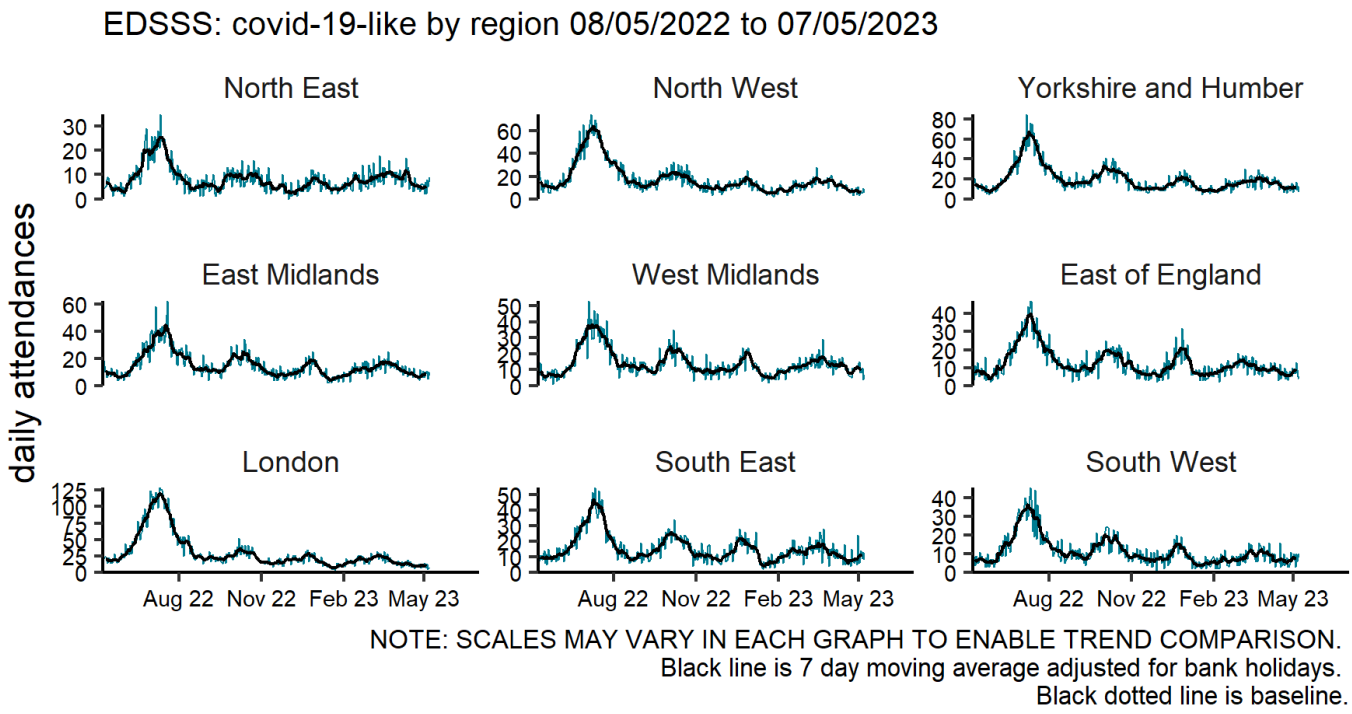
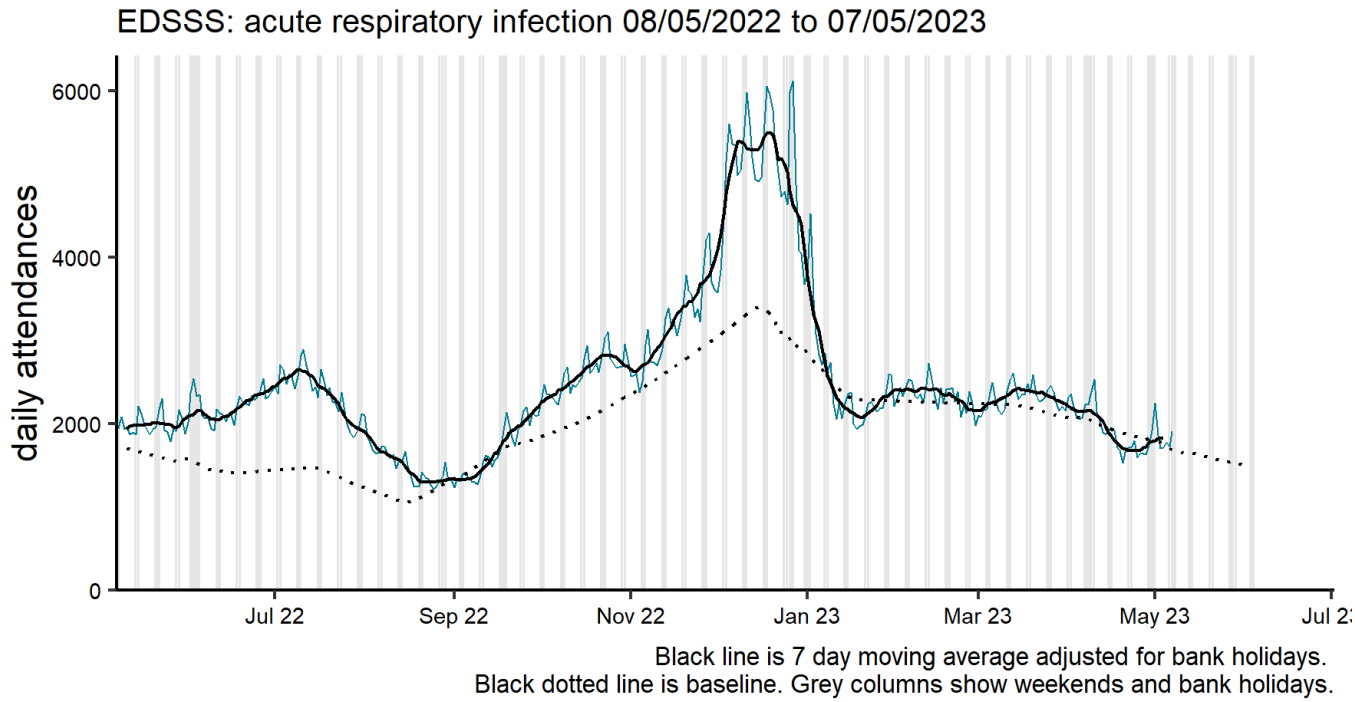
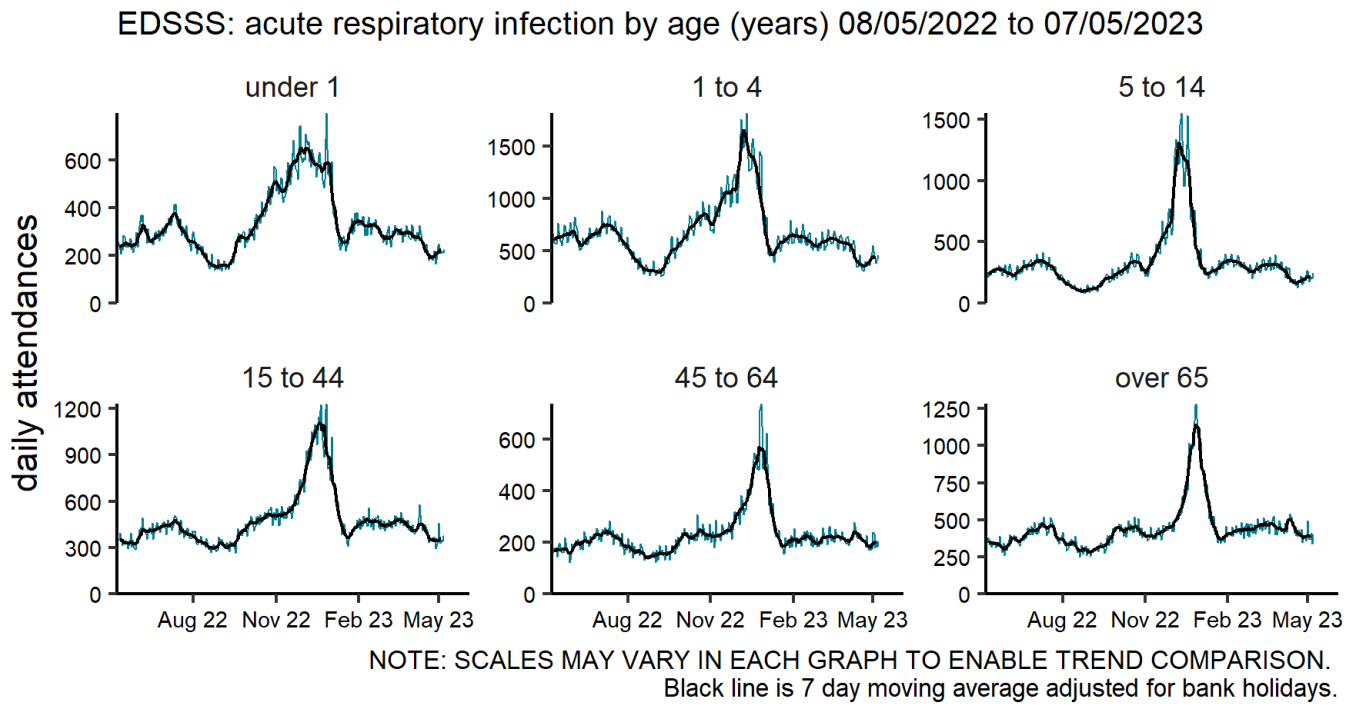

EDSSS: covid-19-like by region 08/05/2022 to 07/05/2023
North East
North West
Yorkshire and Humber
East Midlands
West Midlands
East of England
London
South East
South West
daily attendances
Aug 22
Nov 22
Feb 23
May 23
NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.
Black line is 7 day moving average adjusted for bank holidays.
Black dotted line is baseline.

**Figure 54: Daily ED attendances for acute respiratory infection, England (a) nationally, (b) by age group and (c) by UKHSA centre**

(a)




(b)



(c)

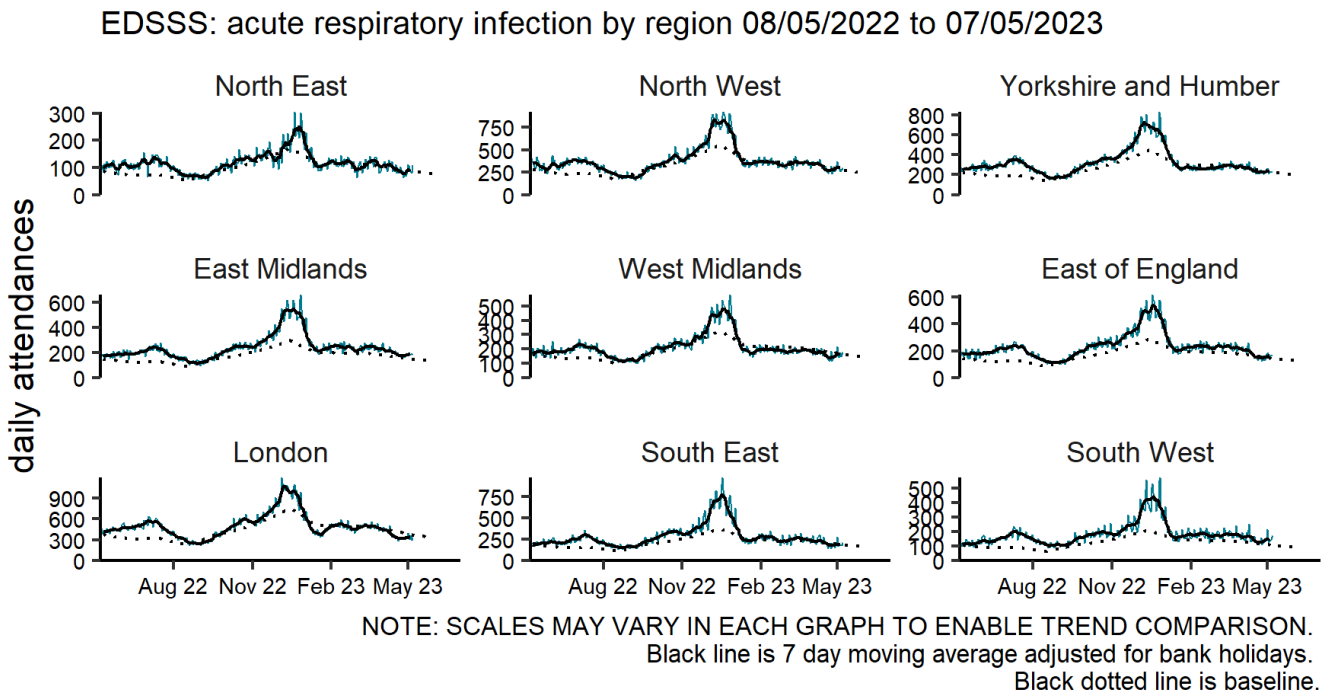
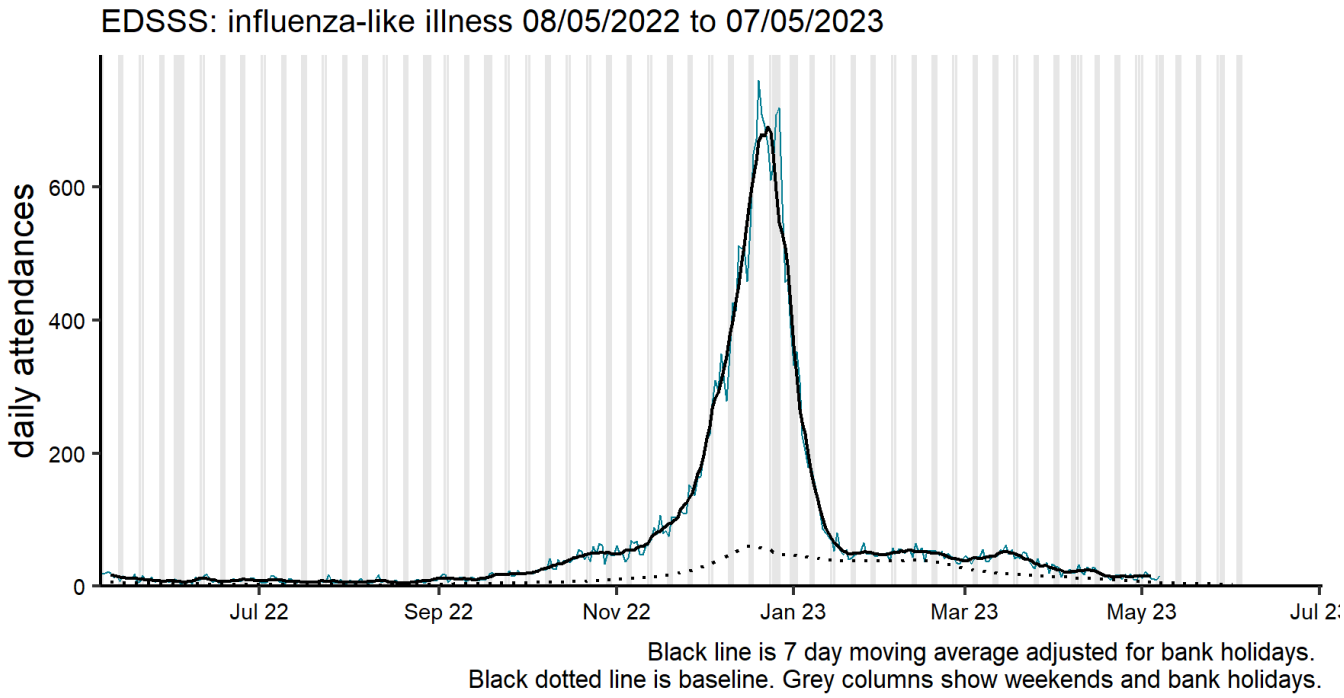
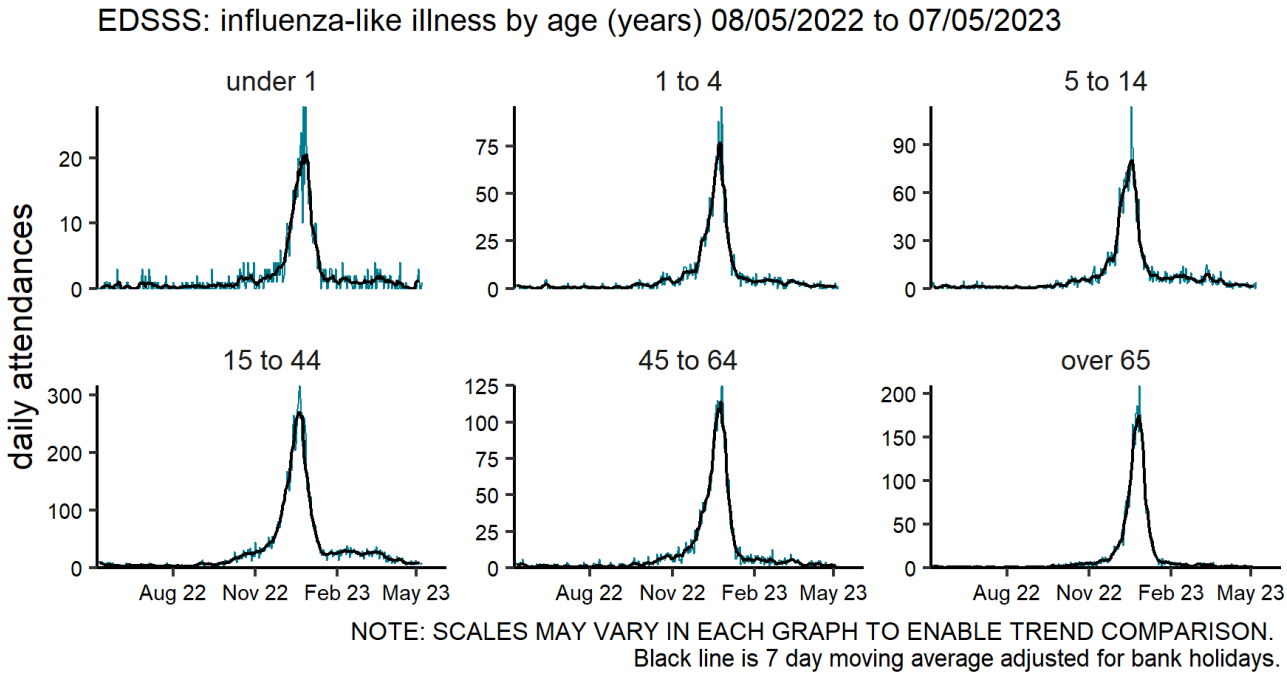



**Figure 55: Daily ED attendances for influenza-like illness, England (a) nationally, (b) by age group and (c) by UKHSA centre**

(a)



(b)


EDSSS: influenza-like illness by age (years) 08/05/2022 to 07/05/2023
under 1
1 to 4
5 to 14
15 to 44
45 to 64
over 65
daily attendances
Aug 22
Nov 22
Feb 23
May 23
NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.
Black line is 7 day moving average adjusted for bank holidays.

(c)

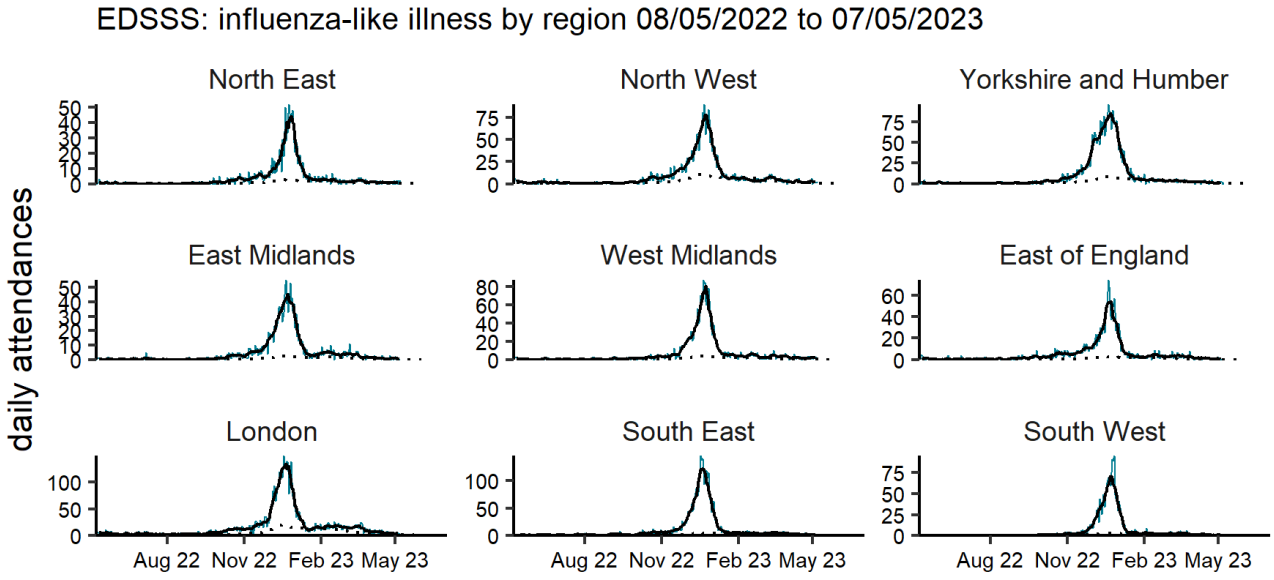
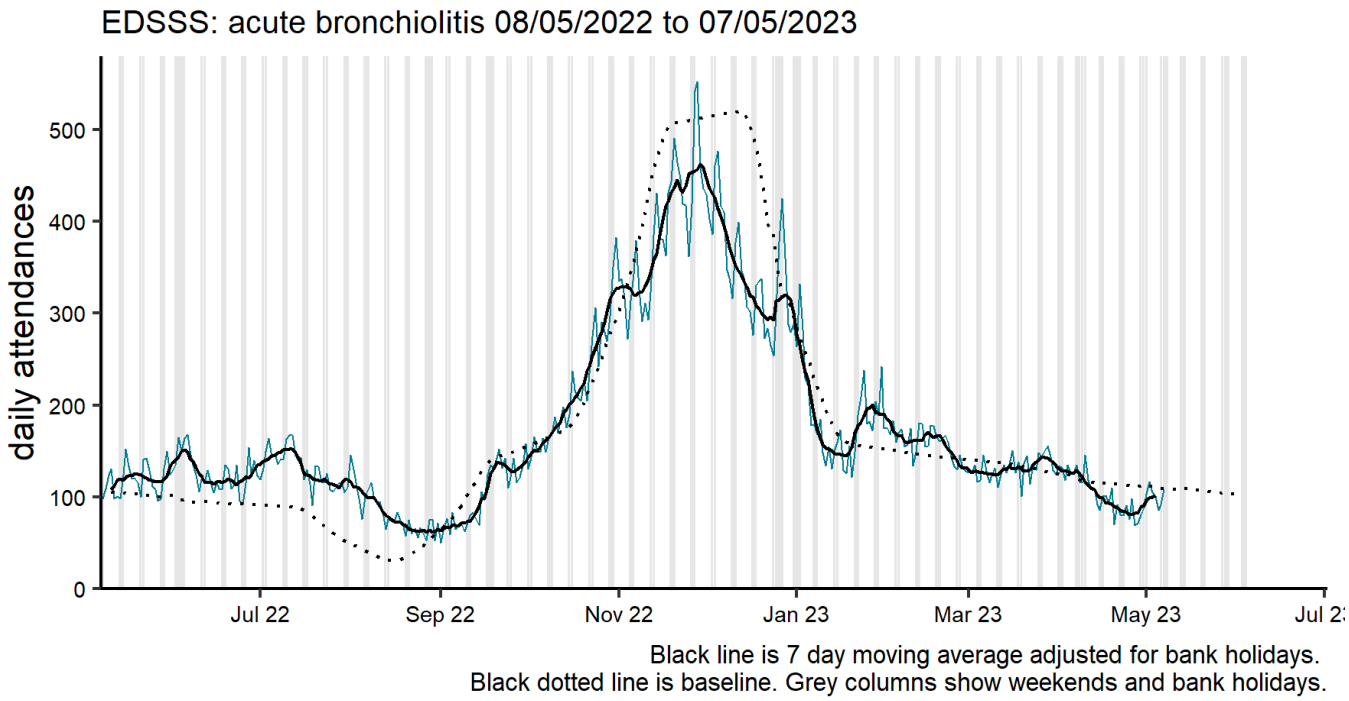
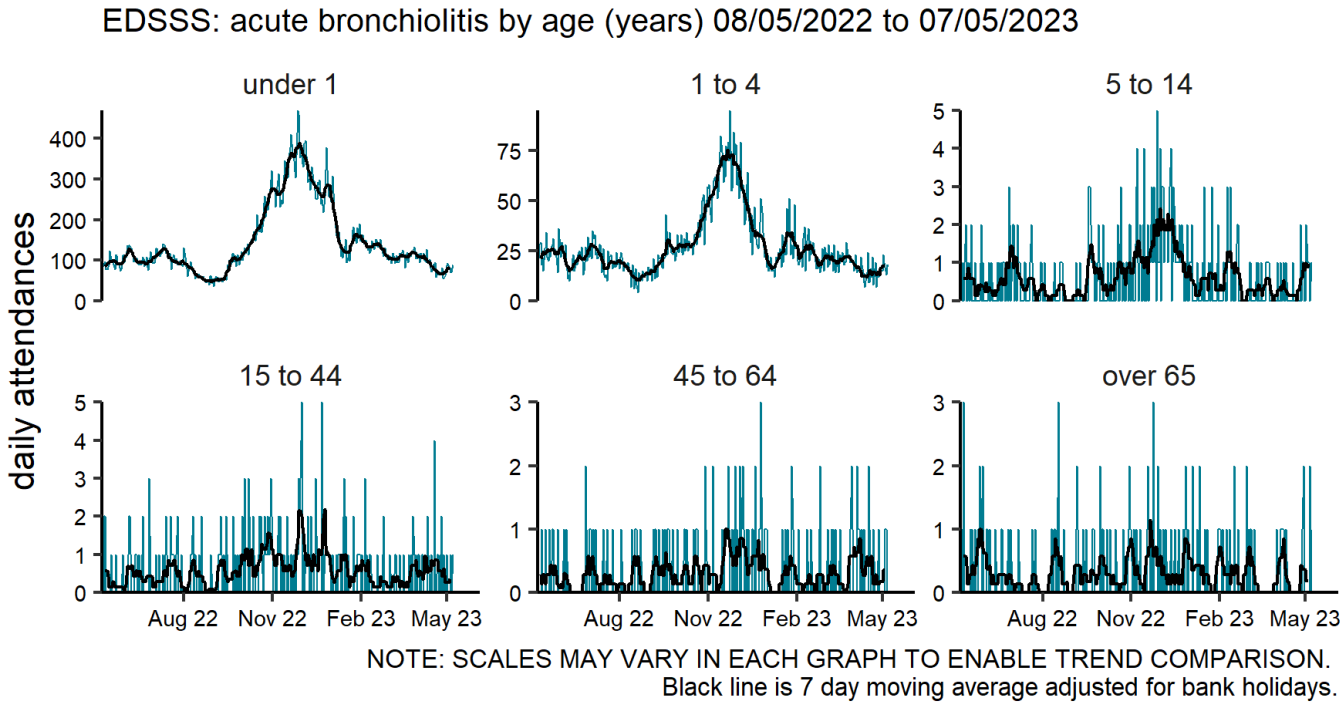

EDSSS: influenza-like illness by region 08/05/2022 to 07/05/2023
North East
North West
Yorkshire and Humber
East Midlands
West Midlands
East of England
London
South East
South West
daily attendances
Aug 22
Nov 22
Feb 23
May 23
NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.
Black line is 7 day moving average adjusted for bank holidays.
Black dotted line is baseline.

**Figure 56: Daily ED attendances for acute bronchiolitis, England (a) nationally, (b) by age group and (c) by UKHSA centre***

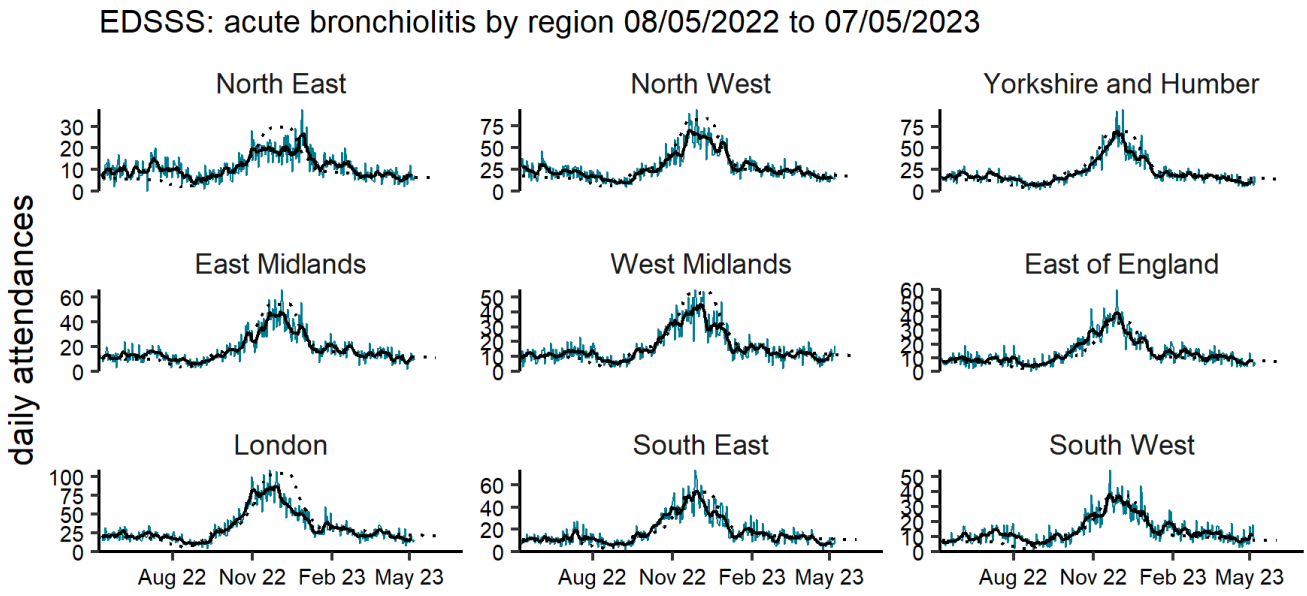
(a)




(b)



(c)



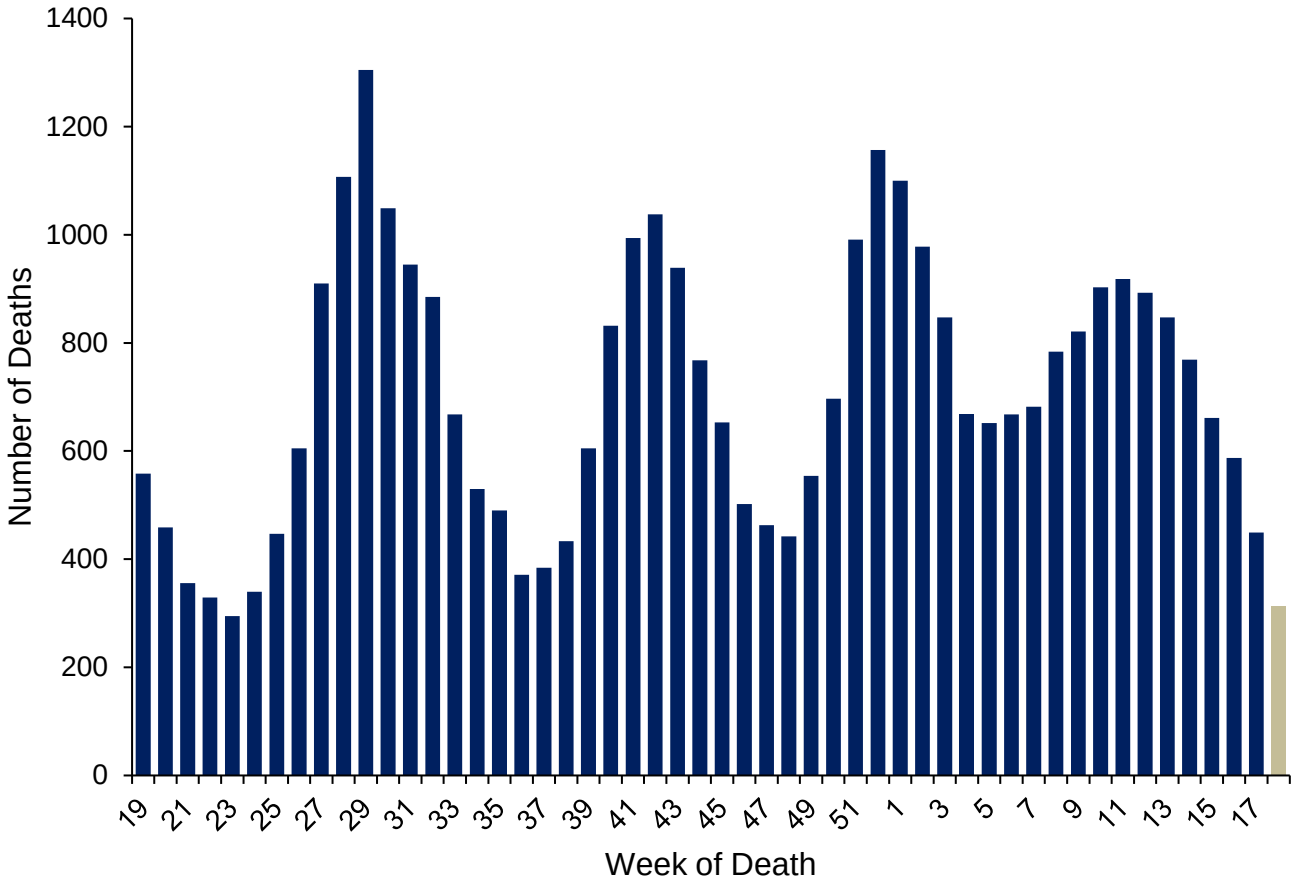

NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.
Black line is 7 day moving average adjusted for bank holidays.
Black dotted line is baseline.

# Mortality surveillance

## COVID-19 deaths

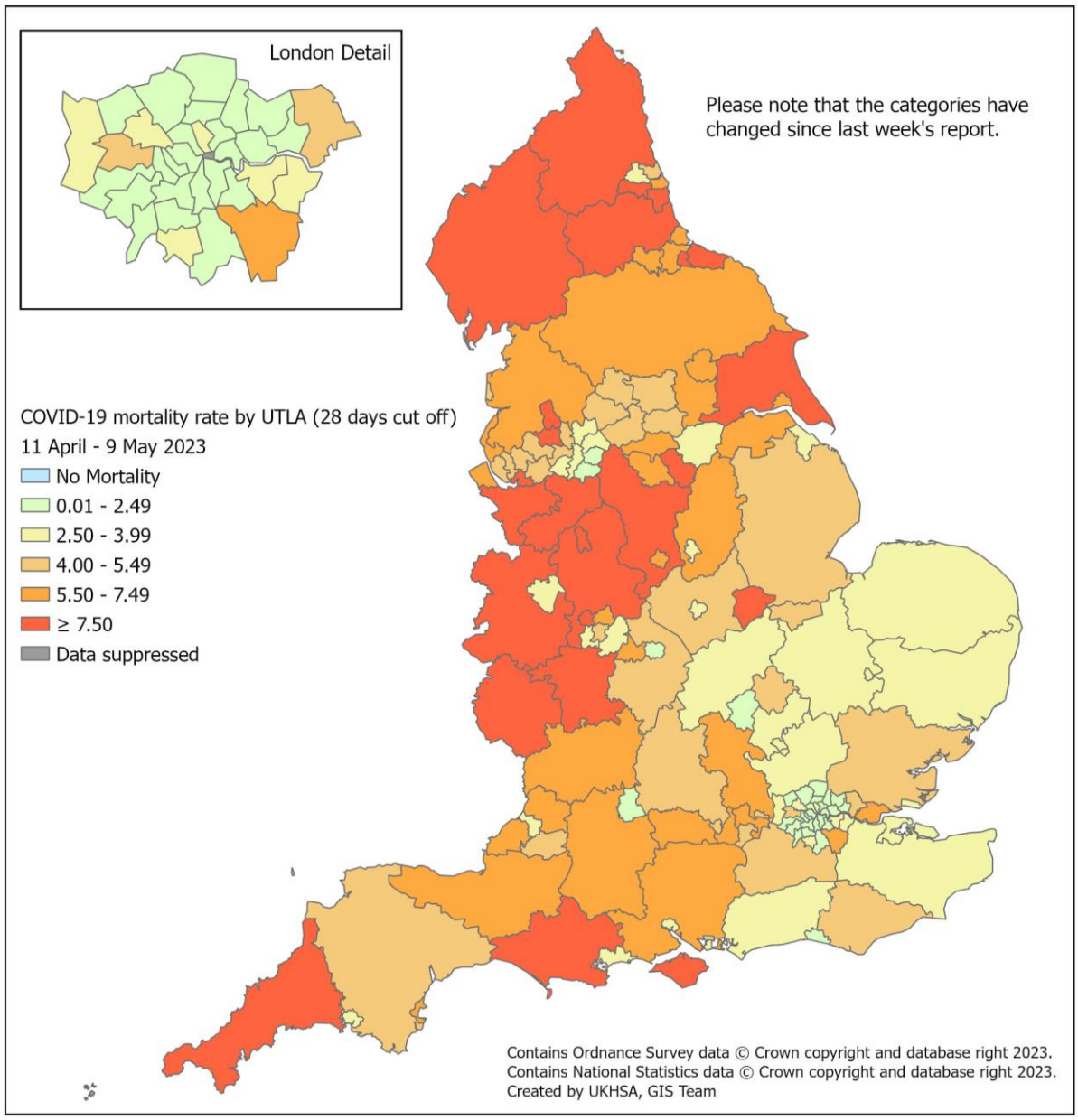
COVID-19 related deaths by the 28 day definition are reported below. This metric includes a death in a person with a positive COVID-19 test who died within (equal to or less than) 28 days of the first positive specimen date in the most recent episode of infection.

**Figure 57: Weekly deaths within 28 days of a positive COVID-19 test, England***




*The most recent week is shaded grey due to reporting delay as more deaths are expected to be reported, therefore this should be interpreted with caution.

**Figure 58: Cumulative mortality rate of deaths within 28 days of a positive COVID-19 test per 100,000 population for weeks 15 to 18**



# Daily excess all-cause mortality (England)

Deaths occurring from 1 January 2020 to 28 April 2023 were assessed to calculate the daily excess above a baseline using age-group and region specific all cause deaths as provided daily by the General Register Office (GRO). The deaths were corrected to allow for delay to registration based on past data on these delays. The baseline until November 2020 was from the same day of the year in the previous 5 years plus or minus 7 days with an extrapolated time trend. The baseline from December 2020 to March 2021 only uses the same days +/- 7 days from the past 3 low flu years with no trend, and the baseline from April 2021 onwards is set to be the same as the previous years baseline. Along with the baseline 2 and 3 standard deviation (SD) limits shown (Figure 59).

Weeks in which at least 2 days exceeded the 3SD threshold are shown in Table 3 and the daily difference from the baseline by age and region is given in Figures 60 and 61.

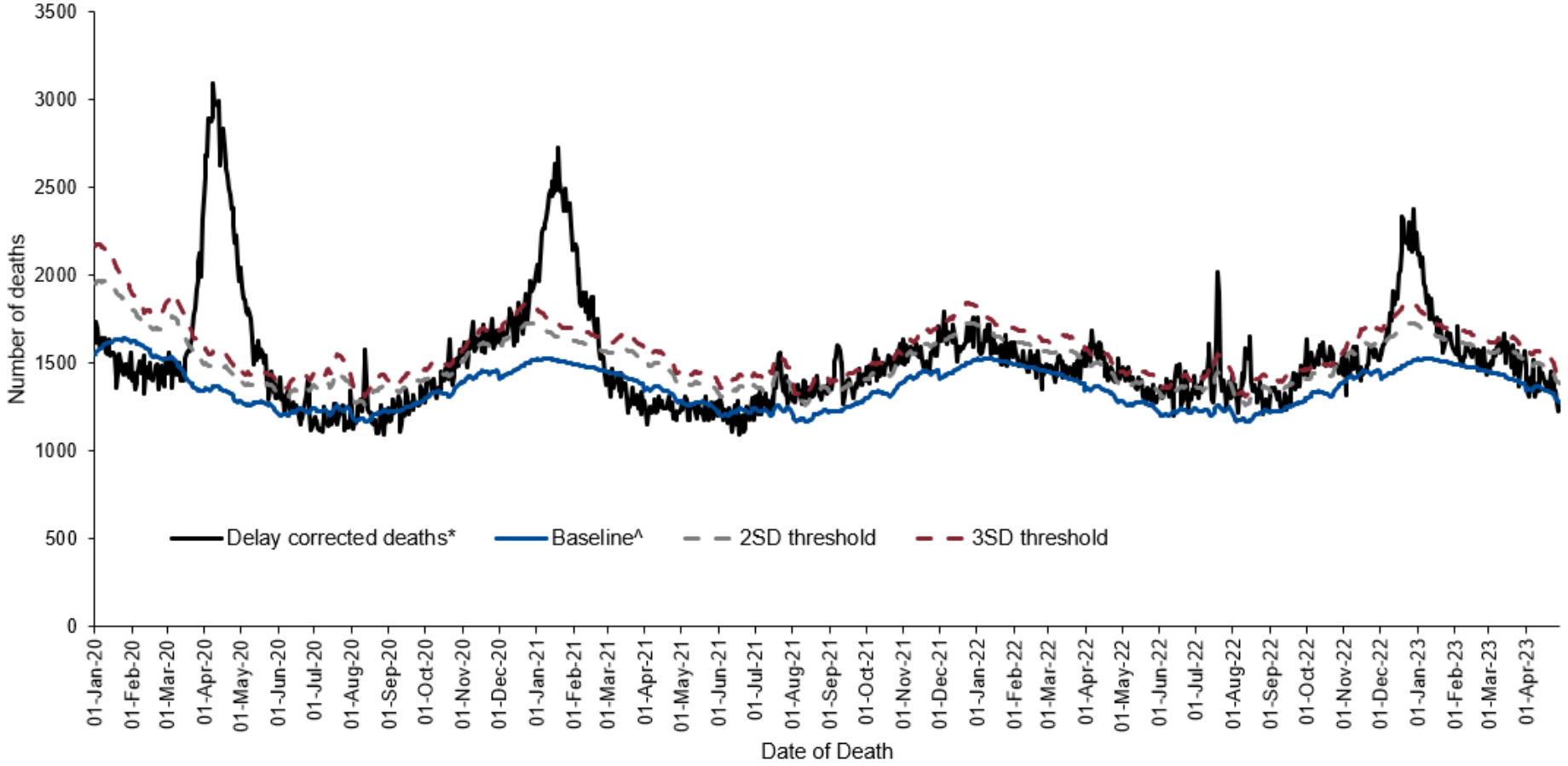
Note that as this data is by date of death with delay corrections, numbers are subject to change each week, particularly for more recent days, especially given recent bank holidays. The current week's model supersedes models presented in previous week.

There was no excess mortality in week 17.

Note that level 3 heat-health alerts were issued for June 17 to 18, July 11 to 21, and August 9 to 16 2022, and a level 4 heat-health alert issued for July 18 to 19 2022.

Other measures of excess mortality published by UKHSA are the Fingertips excess mortality in England report, which uses ONS death registration data and the all-cause mortality surveillance report, which uses the EuroMOMO model to measure excess deaths.

**Figure 59: Daily excess all-cause deaths in all ages, England, 1 January 2020 to 28 April 2023**




^Baseline calculation:

January to November 2020: same day in previous 5 years plus or minus 1 week with a linear trend

December 2020 to March 2021: past 3 low flu years plus or minus 2 weeks, no trend

March 2021 onwards: same baseline as 2020

*Corrected for delay to registration from death.

**Table 3: Excess all-cause deaths by (a) age group and (b) UKHSA centres, England**

(a)

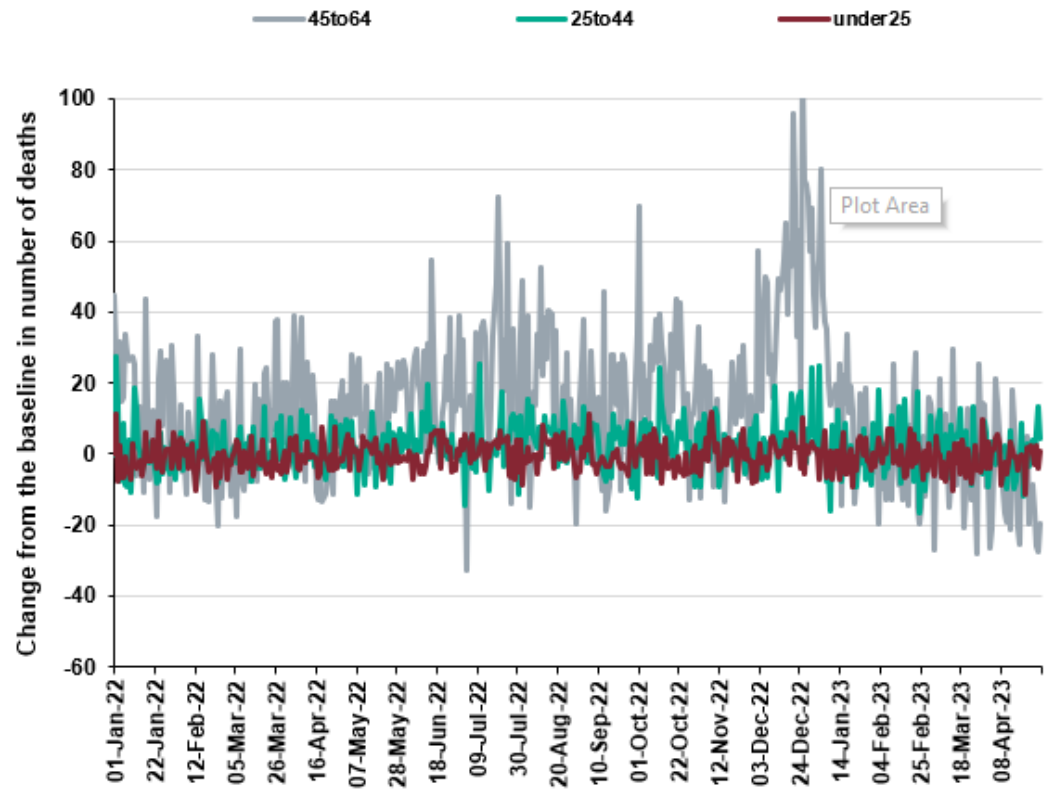
| Age Group | Excess detected in week 17 2023 | Weeks in excess from week 10 to 53 2020 | Weeks in excess from week 1 to 52 2021 | Weeks in excess from week 1 to 52 2022 | Weeks in excess from week 1 2023 |
|---|---|---|---|---|---|
| All | No | 13 to 21, 33, 43, 45, 50, 52 to 53 | 01 to 07, 29, 31 to 32, 35 to 36, 40 to 44, 48 | 14 to 15, 17 to 18, 23 to 24, 27 to 29, 31 to 33, 39 to 42, 49 to 52 | 01 to 02 |
| under 25 | No | None | None | None | None |
| 25 to 44 | No | 14 to 16 | None | None | None |
| 45 to 64 | No | 12 to 19, 49 to 50, 52 to 53 | 01 to 08, 23, 29 to 30, 36, 41 to 44, 48 to 49 | 29, 42, 49 to 52 | 01 |
| 65 to 74 | No | 13 to 19, 46, 48, 52 to 53 | 01 to 07, 36, 43, 48 | 32, 50 to 52 | 01 |
| 75 to 84 | No | 13 to 21, 33, 45, 49, 52 to 53 | 01 to 07, 32, 36, 40, 42 | 14 to 18, 22 to 25, 28 to 29, 31 to 32, 38 to 42, 49 to 52 | 01 to 02, 04 |
| 85+ | No | 13 to 21, 33, 53 | 01 to 07, 31, 36 | 23, 28 to 29, 32, 39, 50 to 52 | 01 to 02 |

(b)

| UKHSA Centres | Excess detected in week 17 2023 | Weeks in excess from week 10 to 53 2020 | Weeks in excess from week 1 to 52 2021 | Weeks in excess from week 1 to 52 2022 | Weeks in excess from week 1 2023 |
|---|---|---|---|---|---|
| East of England | No | 14 to 19, 52 to 53 | 01 to 07 | 23, 27, 29, 51 to 52 | None |
| East Midlands | No | 13 to 19, 48 | 01 to 07 | 29, 52 | None |
| London | No | 12 to 19, 33, 52 to 53 | 01 to 06, 36 | 29, 50 to 52 | None |
| North East | No | 14 to 21 | 02 to 04 | 52 | 01 |
| North West | No | 13 to 19, 33, 42 to 47 | 01 to 07, 31 to 32, 36, 43 | 14 to 15, 29 to 30, 32, 39, 42, 50 to 52 | 01 to 02 |
| South East | No | 13 to 21, 33, 50 to 53 | 01 to 07, 36, 41, 49 | 14, 28, 32, 40 to 42, 49 to 52 | 01 to 02 |
| South West | No | 13 to 19, 33 | 02 to 07, 29, 36 | 17, 29, 32, 34, 39, 50 to 52 | 01 |
| West Midlands | No | 13 to 20, 45, 48 | 01 to 07, 29, 36, 40, 48 | 13, 29, 32, 41, 51 to 52 | 01 |
| Yorkshire and Humber | No | 14 to 21, 23, 43 to 50 | 02 to 04, 32, 35 to 36 | 15, 29, 32, 42, 50 to 52 | 01 |

**Figure 60: Daily excess all-cause deaths by age group, England, 1 January 2022 to 28 April 2023**

(a)




(b)

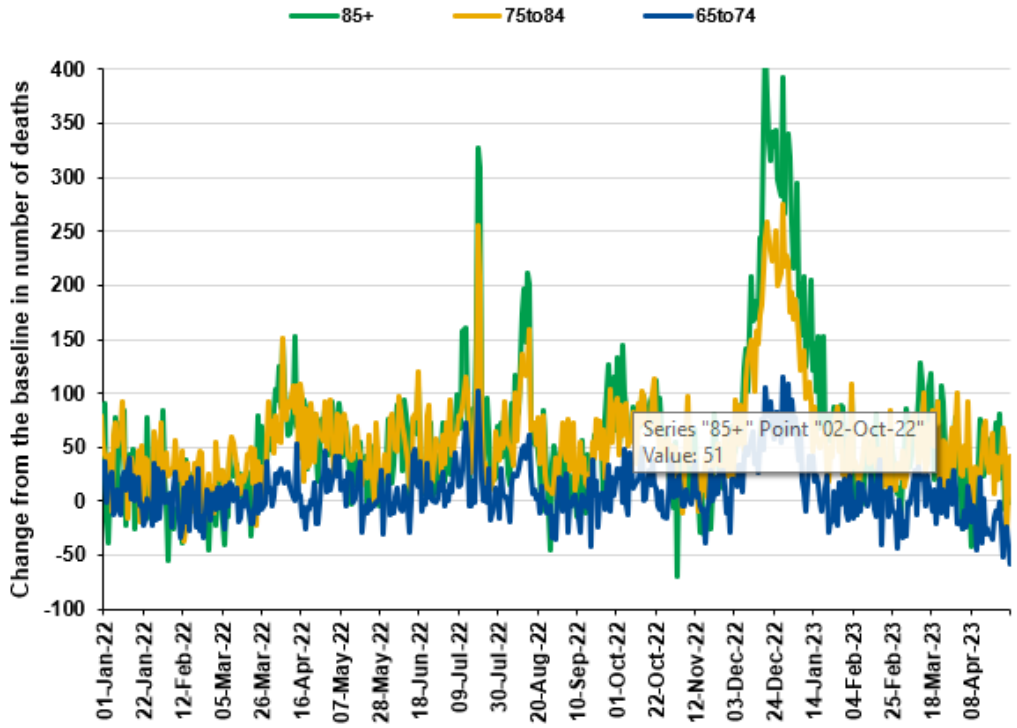
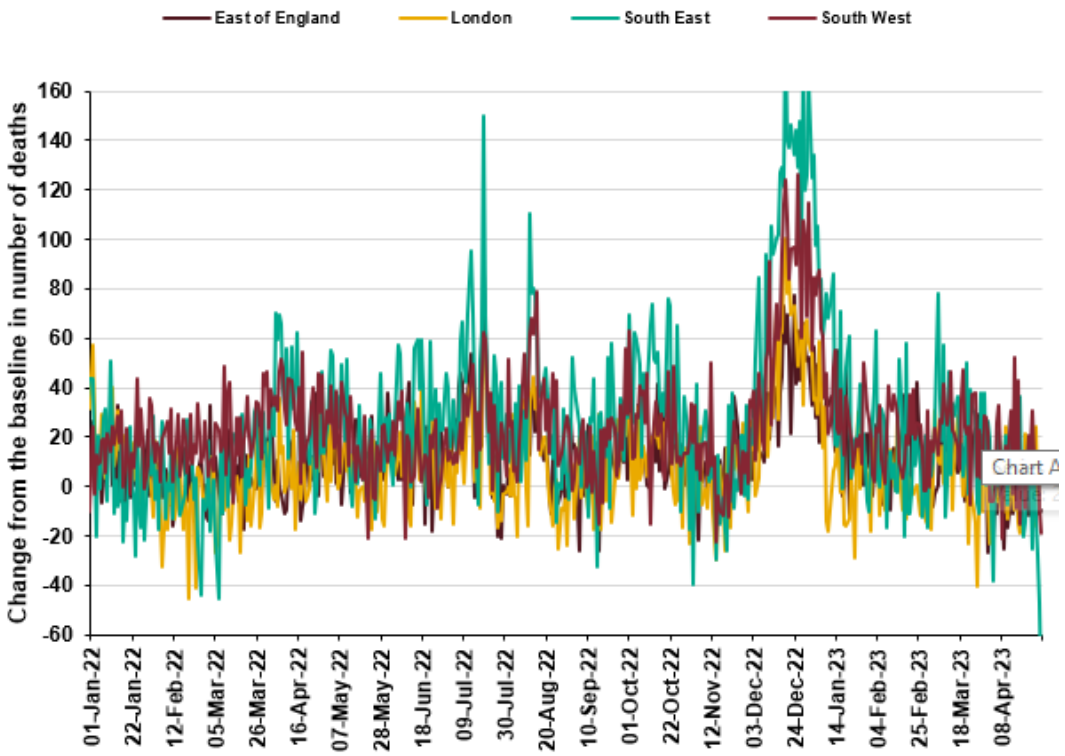
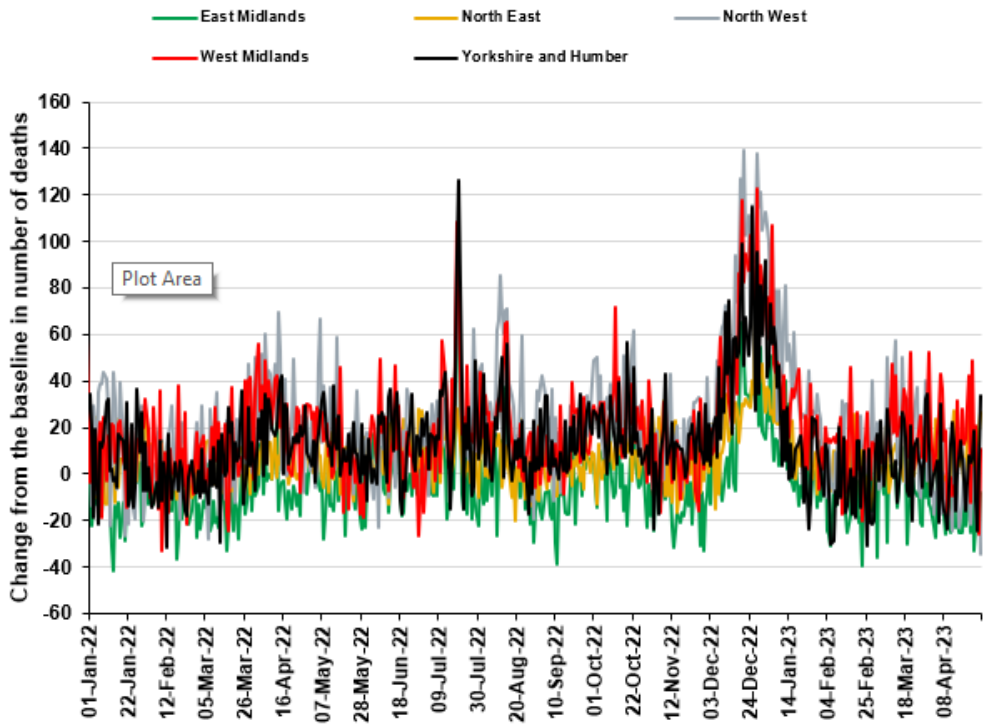


**Figure 61: Daily excess all-cause deaths by UKHSA centre, England, 1 January 2022 to 28 April 2023**

(a)




(b)



# Microbiological surveillance

## Influenza virus characterisation

UKHSA characterises the properties of influenza viruses through one or more tests, including genome sequencing (genetic analysis) and haemagglutination inhibition (HI) assays (antigenic analysis). These data are used to compare how similar the currently circulating influenza viruses are to the strains included in seasonal influenza vaccines, and to monitor for changes in circulating influenza viruses. The interpretation of genetic and antigenic data sources is complex due to a number of factors, for example, not all viruses can be cultivated in sufficient quantity for antigenic characterisation, so that viruses with sequence information may not be able to be antigenically characterised as well. Occasionally, this can lead to a biased view of the properties of circulating viruses, as the viruses which can be recovered and analysed antigenically, may not be fully representative of majority variants, and genetic characterisation data does not always predict the antigenic characterisation.

Between week 40 2022 and week 19 2023, the UKHSA Respiratory Virus Unit have genetically characterised, by sequencing of the haemagglutinin (HA) gene, 2,565 influenza A viruses (1,694 A(H3N2) and 871 A(H1N1)pdm09 viruses) and 152 influenza B viruses.

The 1,694 influenza A(H3N2) viruses genetically characterised, all belong in the genetic subclade 3C.2a1b.2a.2. The Northern Hemisphere 2022/23 influenza A(H3N2) vaccine strain (an A/Darwin/9/2021-like virus) also belongs in this 3C.2a1b.2a.2 genetic subclade.

The 871 influenza A(H1N1)pdm09 viruses characterised to date this season, all belong in genetic subgroup 6B.1A.5a.2. The Northern Hemisphere 2022/23 influenza A(H1N1)pdm09 vaccine strain (an A/Victoria/2570/2019-like virus) also belongs in genetic subclade 6B.1A.5a, within the 6B.1A.5a.2 cluster.

The 152 influenza B/Victoria lineage viruses have been genetically characterised, all belonging in subclade V1A3, within the subgroup V1A3a.2. The Northern Hemisphere 2022/23 influenza B/Victoria lineage vaccine strain (a B/Austria/1359417/2021-like virus) also belongs in this V1A3a.2 subclade/group.

The Respiratory Virus Unit has confirmed by genome sequencing the detection of live attenuated influenza vaccine (LAIV) viruses in two influenza A positive samples and nine influenza B positive samples collected since week 40, all from children aged between 2 and 16 years of age.

# Influenza antiviral susceptibility

Influenza positive samples are genome sequenced and screened for mutations in the virus neuraminidase (NA) and the cap-dependent endonuclease (PA) genes known to confer neuraminidase inhibitor or baloxavir resistance, respectively. The samples tested are routinely obtained for surveillance purposes, but diagnostic testing of patients suspected to be infected with antiviral-resistant virus is also performed.

Influenza virus sequences from samples collected between weeks 40 2022 and 19 2023 have been analysed. Analysis of 1,494 A(H3N2) viruses by sequencing found two oseltamivir resistant viruses. One oseltamivir resistant virus with an E119V amino acid substitution present as a mixed population (80% E119V) was collected from an adult, post-oseltamivir treatment, in January 2023. An R292K mutation was detected transiently, in a viral subpopulation (25%), and was undetectable in a sample taken 9 days later, while the E119V mutation was maintained over 19 days. The patient was not treated with zanamivir. A second oseltamivir resistant virus with an E119V amino acid substitution (100% E119V) was collected from an immune compromised adult in February 2023. Follow up of this case is ongoing. Of 811 A(H1N1)pdm09 NA sequences analysed, one oseltamivir resistant virus with an H275Y amino acid substitution present as a mixed population (80% H275Y) was detected. The sample was collected from an immune compromised adult, post oseltamivir treatment, in December 2022. No viruses with known markers of resistance to neuraminidase inhibitors were detected in 146 influenza B NA sequences analysed.

No viruses with known markers of resistance to baloxavir marboxil were detected in 1,201 A(H3N2), 614 A(H1N1)pdm09 and 107 influenza B PA sequences analysed.

**Table 4: Antiviral susceptibility of influenza positive samples tested at UKHSA-RVU**

| (Sub)type | Neuraminidase Inhibitors | | Baloxavir | |
|---|---|---|---|---|
| | Susceptible | Reduced Susceptibility | Susceptible | Reduced Susceptibility |
| A(H3N2) | 1,492 | 2 | 1,201 | 0 |
| A(H1N1)pdm09 | 810 | 1 | 614 | 0 |
| B/Victoria-lineage | 146 | 0 | 107 | 0 |

# SARS-CoV-2 variants

UKHSA conducts genomic surveillance of SARS-CoV-2 variants.

This section provides an overview of new and current circulating variants in England.

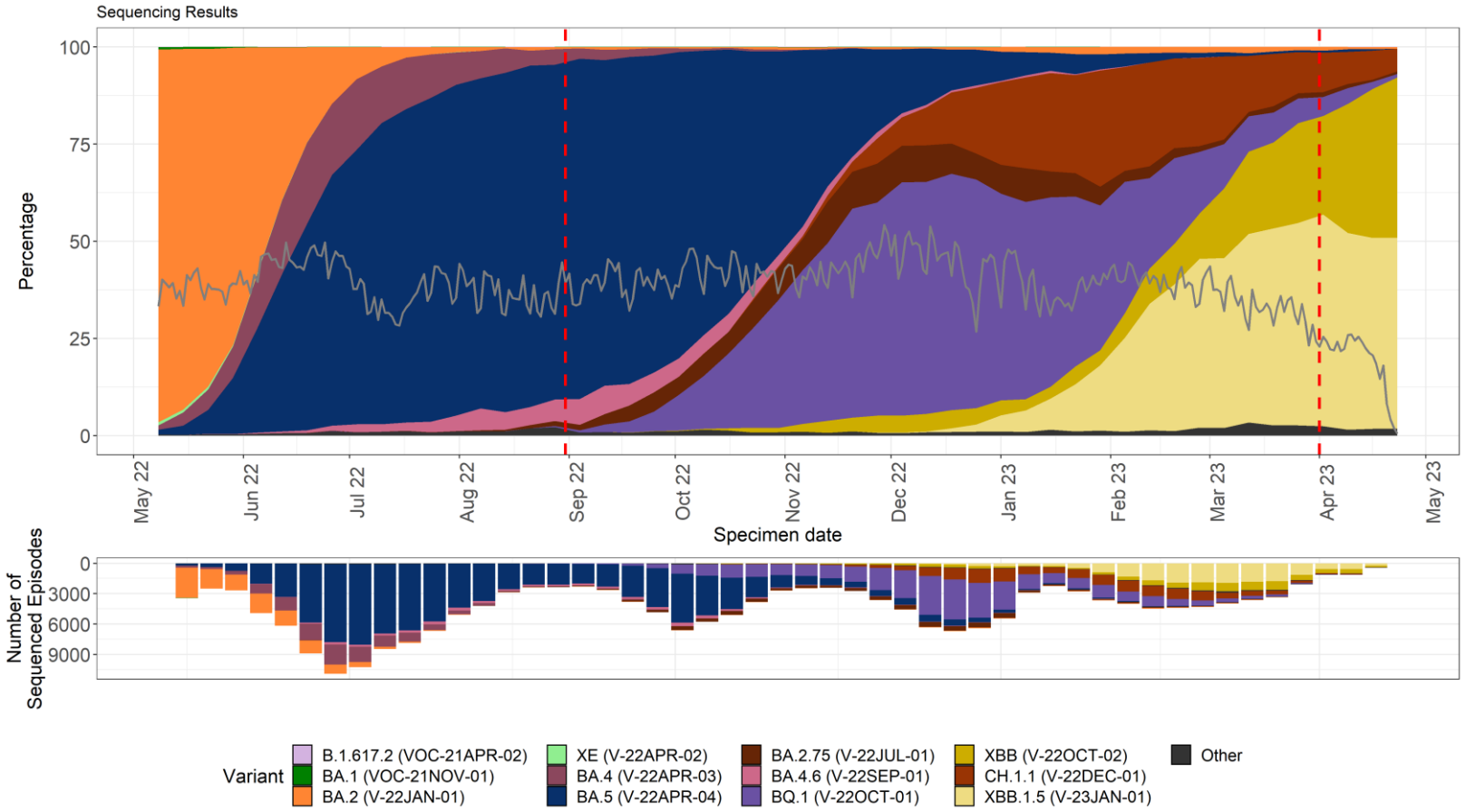
Detailed surveillance of particular variants of concerns can be found in recent technical briefings.

Information on whole genome sequencing coverage can be found in the accompanying slide set.

The prevalence of different UKHSA-designated variants amongst sequenced episodes is presented in Figure 62.

To account for sequencing delays, we report the proportion of variants from sequenced episodes between 10 April 2023 and 16 April 2023. Of those sequenced in this period, 49.1% were classified as XBB.1.5 (V-23JAN-01), 38.4% as XBB (V-22OCT-02), 7.5% as CH.1.1 (V-22DEC-01), 1.8% as BQ.1 (V-22OCT-01), 0.5% as BA.2.75 (V-22JUL-01), 0.5% as BA.2 (V-22JAN-01), 0.4% as BA.5 (V-22APR-04), and 1.7% as Other.

**Figure 62. Prevalence of SARS-CoV-2 variants amongst available sequences episodes for England from 2 May 2022 up to 23 April 2023**




The grey line indicates proportion of cases sequenced.
The vertical dashed lines (red) denote changes in policies:

- End of August line denotes the changes in asymptomatic testing
- April 2023 line denotes further changes in testing policy.

Note: Recombinants such as XD, are not specified but are largely within the 'Other' group currently as numbers are too small.

As of week 16 2023, XBB.1.5 remains the most commonly circulating variant in England (Table 5).

**Table 5. Total distribution of SARS-CoV-2 variants detected in England in the last 12 weeks, up to week 16 (week ending 23 April 2023)**

| Variant | Other names by which this variant is known | Total confirmed (sequencing) cases in the last 12 weeks | Last reported specimen date |
|---|---|---|---|
| V-22JAN-01 | Omicron BA.2 | 477 | 19/04/2023 |
| V-22APR-03 | Omicron BA.4 | 4 | 16/02/2023 |
| V-22APR-04 | Omicron BA.5 | 476 | 15/03/2023 |
| V-22JUL-01 | Omicron BA.2.75 | 654 | 20/04/2023 |
| V-22SEP-01 | Omicron BA.4.6 | 6 | 23/02/2023 |
| V-22OCT-01 | Omicron BQ.1 | 5,389 | 20/04/2023 |
| V-22OCT-02 | Omicron XBB | 6,411 | 23/04/2023 |
| V-22DEC-01 | Omicron CH.1.1 | 6,858 | 22/04/2023 |
| V-23JAN-01 | Omicron XBB.1.5 | 15,741 | 20/04/2023 |

*****Sequencing data has a lag of approximately two weeks therefore the presented numbers should be interpreted in this context

*Cumulative numbers may be revised up or down due to reclassification of results, re-infections and changes to diagnostic tests, new variants, or public health management levels

*Confirmed individuals are confirmed COVID-19 cases with a validated sequencing result meeting the confirmed case definitions

# Antimicrobial susceptibility

Table 6 shows in the 12 weeks up to week 18 2023, the proportion of all lower respiratory tract isolates of *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Staphylococcus aureus*, MRSA (Methicillin-resistant *Staphylococcus aureus*) and MSSA (methicillin-susceptible *Staphylococcus aureus*) tested and susceptible to antibiotics. These organisms are the important causes of community-acquired pneumonia (CAP), and the choice of antibiotics reflects the British Thoracic Society empirical guidelines for management of CAP in adults.

**Table 6. Antimicrobial susceptibility surveillance in lower respiratory tract**

| Organism | Antibiotic | Specimens tested‡ (N) | Specimens susceptible (%) |
|---|---|---|---|
| ***S. pneumoniae*** | Penicillin | 3,453 | 88 |
| | Macrolides | 3,930 | 82 |
| | Tetracycline | 3,640 | 82 |
| ***H. influenzae*** | Amoxicillin/ampicillin | 18,056 | 37 |
| | Co-amoxiclav | 23,186 | 45 |
| | Macrolides | 4,342 | 4 |
| | Tetracycline | 21,848 | 99 |
| ***S. aureus*** | Methicillin | 6,635 | 94 |
| | Macrolides | 7,866 | 69 |
| **MRSA** | Clindamycin | 295 | 44 |
| | Tetracycline | 349 | 75 |
| **MSSA** | Clindamycin | 4,622 | 75 |
| | Tetracycline | 5,259 | 93 |

* Macrolides = erythromycin, azithromycin and clarithromycin

‡ Specimen types = lower respiratory tract, bronchial, lung, alveolar lavage, pleura, chest, sputum, endotracheal aspirate, and pleural fluid

Data source: UKHSA's SGSS AMR module, please note that this is different to the data source used in the reports published between weeks 41 2020 to 05 2021 inclusive of the 2020/21 influenza season when the SGSS CDR module was used instead due to a PHE (now UKHSA) SGSS AMR data infrastructure issue which has now been resolved. Therefore, the above results are not directly comparable to the results sreported between weeks 41 2020 and 05 2021. The AMR module of SGSS was used during the 2019/20 influenza season.

# COVID-19 vaccination

## COVID-19 vaccine uptake in England

COVID-19 vaccinations began in England on 8 December 2020 during week 50 2020 (week ending 13 December 2020). Cumulative data up to week 18 2023 (week ending 7 May 2023) was extracted from the National Immunisation Management Service (NIMS). The data presented this week is the provisional proportion of living people resident in England who had received COVID-19 vaccinations. Individuals vaccinated in England who have a registered address outside of England or where their address, age, or sex is unknown have been excluded. Due to changes in GP practice lists, in order to include newly registered patients and remove those who are no longer resident, there will be slight variation to the figures to reflect those who are currently resident in England.

Age is calculated on the date data is extracted. The weekly vaccine coverage data is extracted on a Tuesday with data capped to the previous Sunday and all backing data is updated each week going back to the start of the programme.

Data is provisional and subject to change following further validation checks. Any changes to historic figures will be reflected in the most recent publication. Please note that numbers published by UKHSA are for public health surveillance purposes only.

### Spring 2023 Campaign

Immunity derived from vaccination declines over time, JCVI has recommended a Spring 2023 campaign with the primary objective to boost immunity in those at higher risk from COVID-19 and thereby optimise protection against severe COVID-19, specifically hospitalisation and death.

The Spring 2023 data reported below covers any booster dose administered from the 3 April 2023 provided there is at least 3 months from the previous dose. Eligible groups for the Spring campaign are defined in the COVID-19 healthcare guidance Green Book and include residents in all adults aged 75 years and over, residents in a care home for older adults, and individuals aged 5 years and over who are immunosuppressed.

Table 7 presents coverage as measured against the total population and includes people who are not yet due to have their Spring 2023 booster. It is important that unvaccinated individuals, especially vulnerable adults, receive a primary course of vaccination, irrespective of whether individuals have had previous infection. To understand the data in the context of vaccine waning across the whole COVID-19 programme, we present Table 8 which shows how recently a person who is living and resident in England has been vaccinated either through the primary vaccination campaign or a subsequent booster campaign.

By the end of week 18 2023 (week ending 7 May 2023), 36.4% (1,963,936 out of 5,390,336) of all people aged over 75 years old who are living and resident in England who had been vaccinated with an Spring 2023 booster dose since 3 April 2023, Table 7 and Figure 63.

**Table 7: Provisional cumulative people vaccinated by age with a booster of COVID-19 vaccine from the 3 April 2023 as part of the Spring 2023 campaign in England**

| National | People in NIMS cohort who are living and resident in England | Vaccinated with an Spring booster since 3 April 2023 * | Percentage vaccine uptake |
|---|---|---|---|
| Over 80 | 2,961,405 | 1,181,849 | 39.9 |
| 75 to under 80 | 2,428,931 | 782,087 | 32.2 |
| Aged 75 and over | 5,390,336 | 1,963,936 | 36.4 |

*Spring 2023 booster defined as any additional dose of vaccine after a 2 dose primary course provided there is an interval of at least 3 months and it is given since the 3 April 2023.

**Table 8: Provisional cumulative people vaccinated by age and sex with a Spring 2023 booster of COVID-19 vaccine from the 3 April 2023 as part of the Spring campaign in England**

| AGE | MALE | | | FEMALE | | |
|---|---|---|---|---|---|---|
| | People in NIMS Cohort | Vaccinated with an Spring booster since 3 April 2023 * | % Vaccine Uptake | People in NIMS Cohort | Vaccinated with an Spring booster since 3 April 2023 * | % Vaccine Uptake |
| Over 80 | 1,224,553 | 512,015 | 41.8 | 1,735,371 | 669,792 | 38.6 |
| 75 to under 80 | 1,135,406 | 377,862 | 33.3 | 1,291,893 | 404,187 | 31.3 |
| Aged 75 and over | 2,359,959 | 889,877 | 37.7 | 3,027,264 | 1,073,979 | 35.5 |

*Spring 2023 booster defined as any additional dose of vaccine after a 2 dose primary course provided there is an interval of at least 3 months and it is given since the 3 April 2023.

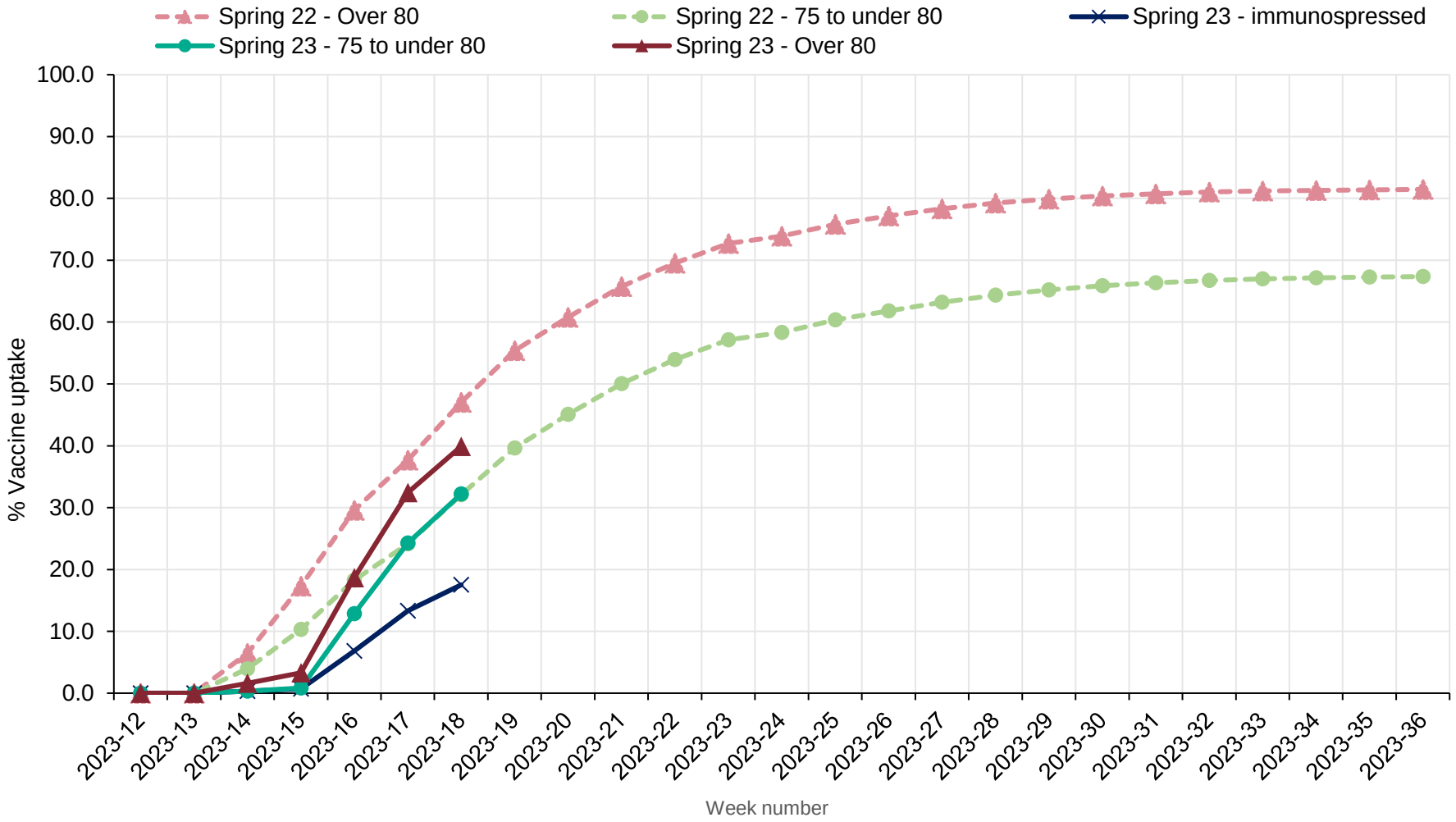
By the end of week 18 2023 (week ending 7 May 2023), 17.5% (377,790 out of 2,157,569) of all people aged 5 years and over who are immunosuppressed, and living and resident in England who had been vaccinated with an Spring 2023 booster dose since 3 April 2023, Table 9 and Figure 63.

**Table 9: Provisional cumulative people vaccinated by age with a booster of COVID-19 vaccine from the 3 April 2023 as part of the Spring campaign in England**

| National | People in NIMS cohort who are living and resident in England | Vaccinated with an Spring booster since 3 April 2023 * | Percentage vaccine uptake |
|---|---|---|---|
| Aged over 5 years and immunosuppressed | 2,157,569 | 377,790 | 17.5 |

*Spring 2023 booster defined as any additional dose of vaccine after a 2 dose primary course provided there is an interval of at least 3 months and it is given since the 3 April 2023.

**Figure 63. Cumulative weekly COVID-19 vaccine uptake in those who are living and resident in England vaccinated with a Spring 2023 booster since 3 April 2023.**




Please note that this graph shows data for the Spring 2022 campaign and does not correspond to the date axis but is aligned to the current Spring 2023 campaign to allow comparison of both.

# Proportion of people vaccinated by time since last vaccination

**Table 10: Provisional cumulative people vaccinated with any dose of COVID-19 vaccine in the last 3 months, 3 to 6 months and vaccinated more than 6 months ago**

| National | People in NIMS cohort who are living and resident in England | Vaccinated in the last 3 months (84 days) | | Vaccinated 3 to 6 months ago (85 to 168 days) | | Vaccinated 6 months ago (169 or more days) | |
|---|---|---|---|---|---|---|---|
| | | Numbers vaccinated | Percentage vaccinated | Numbers vaccinated | Percentage vaccinated | Numbers vaccinated | Percentage vaccinated |
| Over 80 | 2,961,405 | 1,185,078 | 40.0 | 93,091 | 3.1 | 1,579,392 | 53.3 |
| 75 to under 80 | 2,428,931 | 783,737 | 32.3 | 75,163 | 3.1 | 1,480,604 | 61.0 |
| 70 to under 75 | 2,676,833 | 95,250 | 3.6 | 93,085 | 3.5 | 2,349,553 | 87.8 |
| 65 to under 70 | 3,008,662 | 56,305 | 1.9 | 130,060 | 4.3 | 2,614,503 | 86.9 |
| 60 to under 65 | 3,651,083 | 33,572 | 0.9 | 254,876 | 7.0 | 3,051,752 | 83.6 |
| 55 to under 60 | 4,127,901 | 21,164 | 0.5 | 320,610 | 7.8 | 3,353,908 | 81.2 |
| 50 to under 55 | 4,148,474 | 15,144 | 0.4 | 345,226 | 8.3 | 3,240,031 | 78.1 |
| 45 to under 50 | 3,863,933 | 9,597 | 0.2 | 102,048 | 2.6 | 3,046,920 | 78.9 |
| 40 to under 45 | 4,369,669 | 7,634 | 0.2 | 83,929 | 1.9 | 3,270,142 | 74.8 |
| 35 to under 40 | 4,676,692 | 6,377 | 0.1 | 74,710 | 1.6 | 3,307,184 | 70.7 |
| 30 to under 35 | 4,783,048 | 5,941 | 0.1 | 68,782 | 1.4 | 3,247,796 | 67.9 |
| 25 to under 30 | 4,411,747 | 5,524 | 0.1 | 53,900 | 1.2 | 2,971,672 | 67.4 |
| 20 to under 25 | 3,815,128 | 4,498 | 0.1 | 39,807 | 1.0 | 2,667,336 | 69.9 |
| 18 to under 20 | 1,400,407 | 2,988 | 0.2 | 17,324 | 1.2 | 949,053 | 67.8 |
| 16 to under 18 | 1,416,260 | 3,090 | 0.2 | 23,973 | 1.7 | 855,460 | 60.4 |
| 12 to under 16 | 2,979,997 | 9,169 | 0.3 | 31,488 | 1.1 | 1,314,805 | 44.1 |
| 5 to under 12 | 5,008,081 | 13,858 | 0.3 | 46,531 | 0.9 | 453,086 | 9.0 |

Table 10 is presented to provide an overview of how recently a person has been vaccinated either through the primary vaccination campaign or subsequent booster campaigns. This helps us understand the data in the context of vaccine waning across the whole COVID-19 programme. Breakdowns by Ethnicity, and IMD, for those aged 75 and over can be found in the backing tables.

**Figure 64. Provisional cumulative people vaccinated with any dose of COVID-19 vaccine in the last 3 months, 3 to 6 months and vaccinated more than 6 months ago**

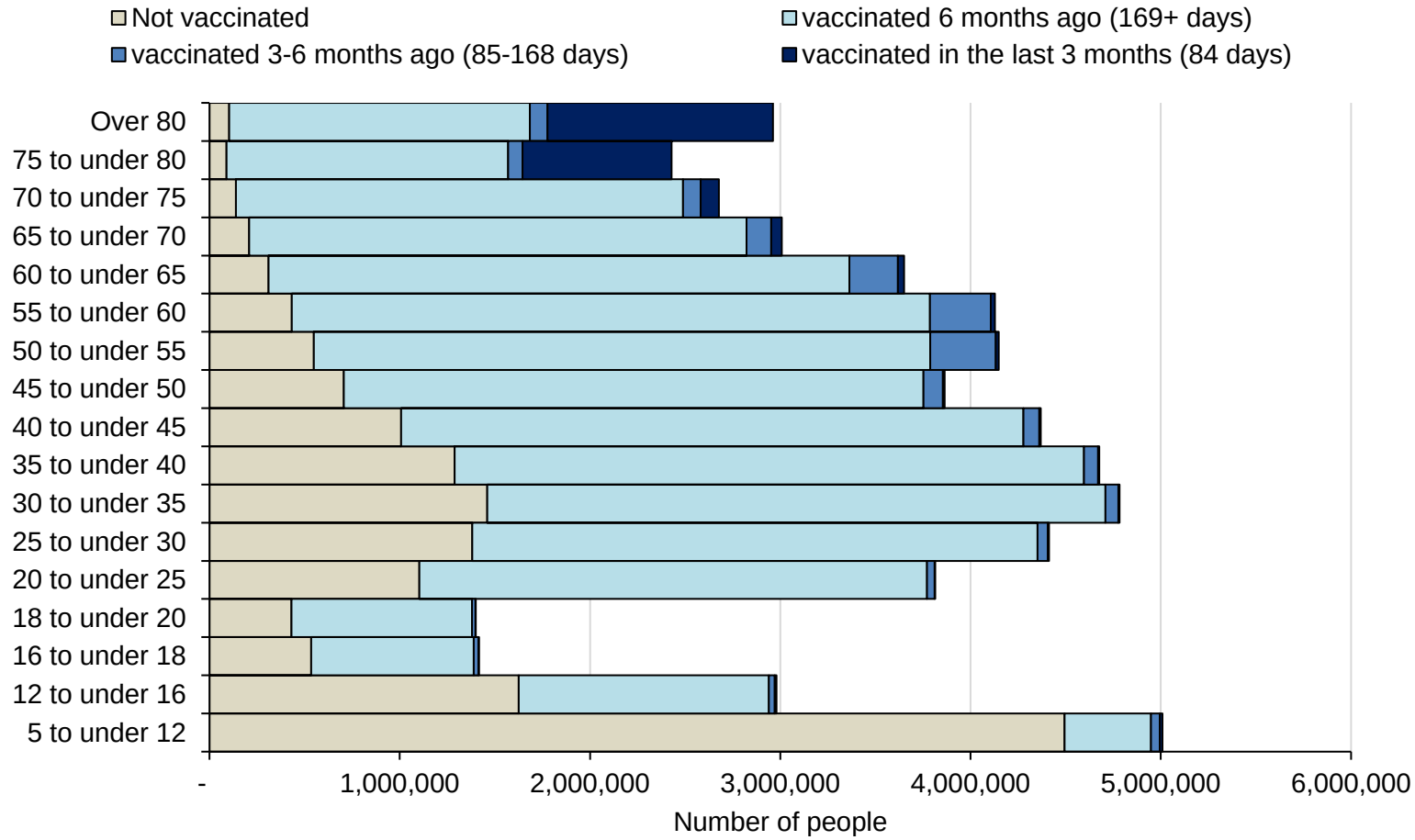


**Figure 65. Provisional cumulative people vaccinated with any dose of COVID-19 vaccine in the last 3 months, 3 to 6 months and vaccinated more than 6 months ago by ethnicity in those living and resident in England, aged 75 and over**

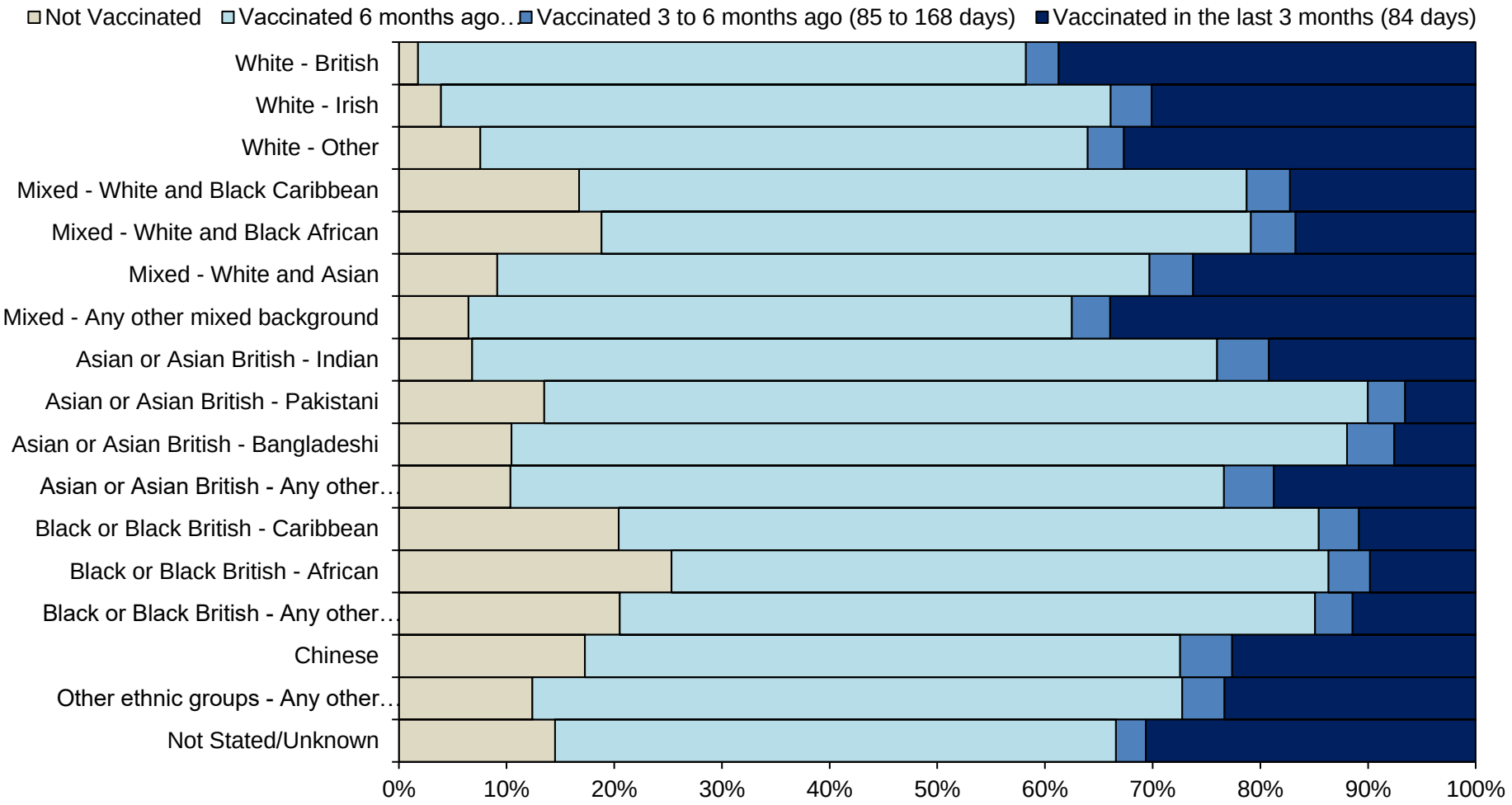
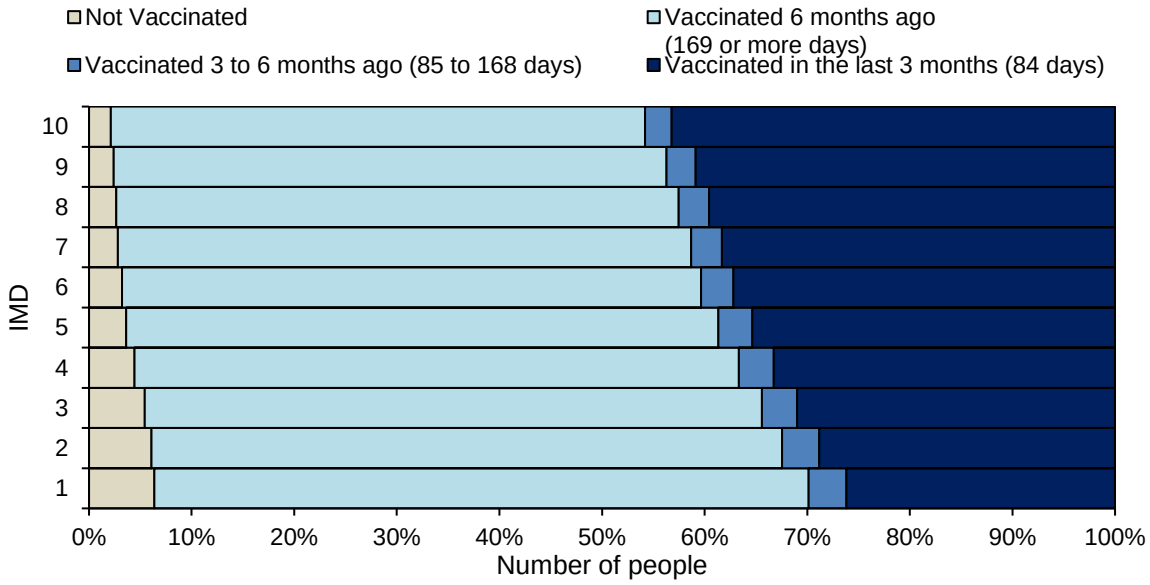


**Figure 66. Provisional cumulative people vaccinated with any dose of COVID-19 vaccine in the last 3 months, 3 to 6 months and vaccinated more than 6 months ago by indices of multiple deprivation (IMD)* in those living and resident in England, aged 75 and over.**




*Decile 1 represents the most deprived 10% (or decile) of small areas in England and Decile 10 represents the least deprived 10% (or decile) of small areas in England.

For a regional breakdown of the ethnicity data, please see the data file that accompanies this report.

The immunosuppressed group has been updated to included a wider cohort who are eligible for vaccination and therefore is not comparable to data previously used in this report. Detailed information on the NHS Digital characterisation of the immunosuppressed group can be found on the NHS Digital website, including the previous definition which can be found here.

For COVID-19 data on the real-world effectiveness of the COVID-19 vaccines, and on COVID-19 vaccination in pregnancy, please see the COVID-19 vaccine surveillance reports.

For COVID-19 management information on the number of COVID-19 vaccinations provided by the NHS in England, please see the COVID-19 vaccinations webpage.

For UK COVID-19 daily vaccination figures and definitions, please see the Vaccinations' section of the UK COVID-19 dashboard

The population coverage data representing the evergreen offer of doses 1, 2, and 3 has changed little in recent months and are no longer presented in both the UKHSA weekly flu and COVID-19 surveillance reports and in the UK COVID-19 Dashboard. Both the UKHSA weekly flu and COVID-19 surveillance reports and in the UK COVID-19 Dashboard now highlight data

on the most recent vaccination campaign in those at higher risk from COVID-19 as immunity derived from vaccination declines over time. The overall vaccine uptake in the living and resident population for those with at least dose 1, 2 and 3 doses is still available within the backing tables for this section and in the dashboard APIs.

For a summary of the differences in denominators used to present administrative vaccine uptake by NHS England and vaccine coverage by UKHSA since the start of the COVID-19 programme, please see explainer here. Please note that some administrative vaccine uptake data uses an ONS mid-year estimate as a denominator because not all devolved administrations have a national vaccine register. Please note that not everyone in the numerator will be in the denominator for administrative vaccine uptake where ONS mid-year estimates are used.

# International update

## Global COVID-19 update

For further information on the global COVID-19 situation please see the World Health Organization (WHO) COVID-19 situation reports.

## Global influenza update

Updated 1 May 2023 (based on data up to 16 April 2023) (WHO website).

Globally, influenza detections decreased further due to decreased detections in the northern hemisphere, while some countries in the southern hemisphere reported increased influenza detections in recent week.

In the countries of North America, most indicators of influenza activity were at levels typically observed between influenza seasons. Influenza A(H1N1)pdm09 and B viruses predominated in the United States of America (USA), whereas influenza B viruses predominated in Canada.

In Europe, overall influenza detections decreased and influenza positivity from sentinel sites decreased to the epidemic threshold of 10% at the regional level. Overall, influenza B viruses predominated in both sentinel and non-sentinel surveillance as all subregions experienced a wave of influenza B activity after an initial influenza A wave. Of the few influenza A viruses detected, the majority were influenza A(H1N1)pdm09. Influenza detections decreased or were stable in all reporting countries.

In Central Asia, influenza activity remained very low with sporadic influenza B/Victoria lineage detections reported in Tajikistan and Uzbekistan.

In Northern Africa, no influenza detections were reported.

In Western Asia, influenza activity decreased overall with detectiosn of all seasonsal influenza subtypes.

In East Asia, influenza activity decreased overall, although a sharp increase of mainly influenza A(H1N1)pdm09 detections was reported in Hong Kong Special Administrative Region (SAR), China. A low level of influenza detections continued to be reported in the Republic of Korea.

In the Caribbean and Central American countries, influenza activity of mainly influenza B/Victoria lineage viruses was low or below baseline in most countries, although

increases in influenza activity were reported in a few countries and activity was at a moderate level in Jamaica.

In the tropical countries of South America, influenza activity increased during this reporting period due to increased detections of A(H1N1)pdm09 in Peru and slight increases were reported in a few other countries.

In tropical Africa, influenza detections were low in reporting countries. Influenza A virus detections outnumbered B virus detections.

In Southern Asia, influenza activity remained low with influenza A(H3N2) predominant followed by B/Victoria lineage viruses. Increased activity was reported in Bhutan and Sri Lanka.

In South-East Asia, influenza activity remained elevated mainly due to detections in Malaysia and Singapore. In Malaysia, activity decreased but there was an increased proportion of
influenza A viruses over the past several weeks and influenza A viruses predominated during this period. Influenza A(H3N2) viruses remained predominant in Singapore.

In the temperate zones of the southern hemisphere, influenza activity remained low, however influenza activity increased slightly in Australia and Chile and in pneumonia surveillance in South Africa. Influenza A viruses were predominant and among the subtyped viruses, influenza A(H1N1)pdm09 predominated in these countries.

The WHO GISRS laboratories tested more than 355,524 specimens during that time period. 27,958 were positive for influenza viruses, of which 21,176 (75.7%) were typed as influenza A and 6,782 (24.3%) as influenza B. Of the sub-typed influenza A viruses, 12,988 (70.2%) were influenza A(H1N1)pdm09 and 5,525 (29.8%) were influenza A(H3N2). Of the characterized B viruses, 100% (839) belonged to the B/Victoria lineage.

## Influenza in Europe

Updated data for week 17 (Joint ECDC-WHO Europe Influenza weekly update).

The percentage of all sentinel primary care specimens from patients presenting with ILI or ARI symptoms that tested positive for an influenza virus decreased to 7% from 9% in the previous week, which is below the epidemic threshold set at 10%.

Of 41 countries and areas reporting on geographic spread of influenza viruses, 4 reported no activity (Azerbaijan, Kazakhstan, Kyrgyzstan and Uzbekistan), 15 reported sporadic spread (across the Region), 5 reported local spread (Bosnia and Herzegovina, Czechia, Estonia, Georgia and Romania), 8 reported regional spread (Albania, Bulgaria, Croatia, Hungary, Latvia, Lithuania, Russia and Ukraine) and 9 reported widespread activity (across the Region).

For week 17, 133 (7%) of 1,909 sentinel specimens tested positive for an influenza virus; 75% were type B and 25% were type A. Of 13 subtyped A viruses, 92% were A(H1)pdm09 and 8% A(H3). All 33 type B viruses ascribed to a lineage were B/Victoria. Of 27 countries and areas across the Region that each tested at least 10 sentinel specimens in week 17, 10 reported a rate of influenza virus detections at or above 10% (median 17%; range 10% - 35%): Estonia (35%), Slovenia (29%), Hungary (22%), Norway (19%), Kosovo (18%), Ukraine (15%), Slovakia (12%), Germany (12%), Italy (10%) and Denmark (10%).

For the season to date, 27,815 (22%) of 124,669 sentinel specimens tested positive for an influenza virus. More influenza type A (n=19 492, 70%) than type B (n=8 323, 30%) viruses have been detected. Of 15,758 subtyped A viruses, 10,068 (64%) were A(H3) and 5,690 (36%) were A(H1)pdm09. All 2,534 influenza type B viruses ascribed to a lineage were B/Victoria (70% of type B viruses were reported without a lineage). All detected B/Yamagata viruses were confirmed as LAIV related detections and are not included in the season’s count.

For week 17, 988 of 33,537 specimens from non-sentinel sources (such as hospitals, schools, primary care facilities not involved in sentinel surveillance, or nursing homes and other institutions) tested positive for an influenza virus; 738 (75%) were type B and 250 (25%) were type A. Of 30 subtyped A viruses, 24 (80%) were A(H1)pdm09 and 6 (20%) A(H3). All 20 type B viruses ascribed to a lineage were B/Victoria.

For the season to date, more influenza type A (n=193,356, 76%) than type B (n=63,665, 25%) viruses have been detected. Of 56,335 subtyped A viruses, 31,193 (55%) were A(H1)pdm09 and 25,142 (45%) were A(H3). All 5,089 influenza type B viruses ascribed to a lineage were B/Victoria (92% of type B viruses were reported without a lineage). All detected B/Yamagata viruses were confirmed as LAIV related detections and are not included in the season’s count.

## Influenza in North America

For further information on influenza in the United States of America please see the Centre for Disease Control weekly influenza surveillance report. For further information on influenza in Canada please see the Public Health Agency weekly influenza report.

## Influenza in Australia

For further information on influenza in Australia please see the Australian Influenza Surveillance Report and Activity Updates.

# Other respiratory viruses

## Avian influenza and other zoonotic influenza

Latest WHO update on 24 April 2023

From 4 March to 24 April 2023, three human cases of infection with influenza A(H9N2) viruses and two human cases of infection with influenza A(H1N1) viruses were reported officially. Two of the A(H9N2) cases and both A(H1N1) variant cases were mentioned in the previous risk assessment of 3 March 2023. Additionally, one human case of infection with an influenza A(H3N8) virus and one human case of infection with an A(H5N1) virus were reported.

The overall public health risk from currently known influenza viruses at the human-animal interface has not changed, and the likelihood of sustained human-to-human transmission of these viruses remains low. Human infections with viruses of animal origin are expected at the human-animal interface wherever these viruses circulate in animals.

Latest UKHSA avian influenza technical briefing 29 March 2023

See also the WHO Disease Outbreak News Reports for more information.

## Middle East respiratory syndrome coronavirus (MERS-CoV)

From April 2012 to March 2023, a total of 2,604 laboratory-confirmed cases of MERS-CoV and 936 associated deaths were reported globally to WHO under the International Health Regulations (IHR 2005).

Between 29 December 2021 and 31 October 2022, four laboratory-confirmed cases of MERS-CoV were reported to WHO by the Ministry of Health of the Kingdom of Saudi Arabia. No deaths were reported (WHO website).

On 28 April 2022, the National IHR Focal point of Oman notified WHO of one case of MERS-CoV in Oman (WHO website).

Between 22 March and 3 April 2022, the National IHR Focal Point of Qatar reported 2 laboratory-confirmed cases of Middle East respiratory syndrome coronavirus (MERS-CoV) infection to the WHO (WHO website).

A total of 5 cases of Middle East respiratory syndrome coronavirus, MERS-CoV, (3 imported and 2 linked cases) have been confirmed in the UK through ongoing surveillance since September 2012.

Further information on management and guidance of possible cases is available online. The latest ECDC MERS-CoV risk assessment highlights that risk of widespread transmission of MERS-CoV remains very low.

# Related links

Previous national COVID-19 reports

Previous weekly influenza reports

Annual influenza reports

COVID-19 vaccine surveillance reports

Previous COVID-19 vaccine surveillance reports

Public Health England (PHE) monitoring of the effectiveness of COVID-19 vaccination

Investigation of SARS-CoV-2 variants of concern: technical briefings

Sources of surveillance data for influenza, COVID-19 and other respiratory viruses

UKHSA has delegated authority, on behalf of the Secretary of State, to process Patient Confidential Data under Regulation 3 The Health Service (Control of Patient Information) Regulations 2002

Regulation 3 makes provision for the processing of patient information for the recognition, control and prevention of communicable disease and other risks to public health.

# About the UK Health Security Agency

The UK Health Security Agency is an executive agency, sponsored by the Department of Health and Social Care.



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