



UK Health
Security
Agency

National Influenza and COVID-19 surveillance report

Week 41 report (up to week 40 data)

12 October 2023

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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](#).

For additional information regarding data source please refer to [Sources of surveillance data for influenza, COVID-19 and other respiratory viruses](#)

Executive summary

As we move into the winter reporting period, these statistics are now updated weekly since respiratory virus activity is typically higher during the winter season. This report has also been extended to enable more granular surveillance of influenza, COVID-19 and other respiratory viruses through the winter to better support clinical and public health decision-making. In brief, this report includes more detail on:

- Influenza: virus characterisation and antiviral susceptibility
- acute respiratory infection (ARI) incidents in care homes and educational settings by virus type
- Google search trends for influenza and COVID-19 symptoms
- emergency department (ED) attendances
- hospital, intensive care unit (ICU) and high dependency unit (HDU) admission rates
- Influenza and COVID-19 vaccine uptake

A detailed description of the changes made can be found in the accompanying [changes to reporting over the winter period 2023 to 2024](#) document.

This report summarises the information from the surveillance systems which are used to monitor 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 40 (between 2 October and 8 October 2023).

Overall

In week 40, there were some early indications of increases in influenza-like-illness and influenza positivity, though no increase in hospitalisations. COVID-19 activity showed a mixed picture with stabilisation of pillar 1 positivity rates, outbreaks, ICU or HDU admissions and ED attendances but an increase in DataMart testing positivity rates and hospitalisations.

Influenza

Through Respiratory DataMart, influenza positivity increased slightly to 1.4% in week 40 compared to 0.8% in the previous week.

Through primary care surveillance, the influenza-like-illness (ILI) consultations indicator increased to 3.5 per 100,000 in week 40 compared to 2.8 per 100,000 the previous week and was within the baseline activity level range.

There was one influenza confirmed outbreak reported in England in week 40.

Overall, influenza hospitalisations remained low in week 40. Influenza ICU or HDU admissions increased slightly in week 40 compared to the previous week. There were 7 influenza ICU or HDU admissions in week 40.

ED attendances for ILI remained stable nationally.

COVID-19

Through Respiratory DataMart, SARS-CoV-2 positivity increased to 12.0% in week 40 compared to 11.3% in the previous week.

COVID-19 case rates and positivity rates through Pillar 1 remained stable in most age groups, regions and most ethnic groups in week 40.

The overall number of reported SARS-CoV-2 confirmed outbreaks remained stable compared to the previous week. 17 SARS-CoV-2 confirmed outbreaks were reported in week 40 in England.

Overall, COVID-19 hospitalisations increased to 6.13 per 100,000 in week 40 compared to 5.67 per 100,000 in the previous week. Hospitalisations were highest in the 85 years and over age group. COVID-19 ICU admissions remained low and stable in week 40 compared to the previous week.

Through syndromic surveillance indicators, emergency department attendances for covid-like illness decreased nationally.

Respiratory syncytial virus (RSV)

The overall positivity for RSV increased slightly to 3.3%, with the highest positivity in those aged under 5 years old at 14.9%. ED attendances for acute bronchiolitis increased nationally.

Other viruses

Adenovirus positivity increased slightly to 2.4%, with the highest positivity in children under 5 years old at 5.2%. Human metapneumovirus (hMPV) positivity remained low at 0.6%, with the highest positivity in children under 5 years old at 1.8%. Parainfluenza positivity remained low at 0.9%, with the highest positivity in those between 5 and 14 years old at 3.6%. Rhinovirus positivity decreased slightly to 18.7% overall, with the highest positivity in children under 5 years old at 36.9%.

Laboratory surveillance

Respiratory DataMart system (England)

In week 40, data is based on reporting from 12 out of the 16 sentinel laboratories.

In week 40, 3,848 respiratory specimens reported through the Respiratory DataMart System were tested for SARS-CoV-2. 462 samples were positive for SARS-CoV-2 with an overall positivity of 12.0%, which increased compared to 11.3% in the previous week. The highest positivity was seen in adults aged 65 years and over at 15.9%.

In week 40, 3,427 respiratory specimens reported through the Respiratory DataMart System were tested for influenza. 48 samples tested positive for influenza; 29 influenza A(not subtyped), 10 influenza A(H3N2), 3 influenza A(H1N1)pdm09 and 6 were influenza B (Figure 4). Overall, influenza positivity increased slightly to 1.4% in week 40 compared to 0.8% in the previous week.

Adenovirus positivity increased slightly to 2.4%, with the highest positivity in children under 5 years old at 5.2%.

Human metapneumovirus (hMPV) positivity remained low at 0.6%, with the highest positivity in children under 5 years old at 1.8%.

Parainfluenza positivity remained low at 0.9%, with the highest positivity in those between 5 and 14 years old at 3.6%.

Rhinovirus positivity decreased slightly to 18.7% overall, with the highest positivity in children under 5 years old at 36.9%.

The overall positivity for RSV increased slightly to 3.3%, with the highest positivity in those aged under 5 years old at 14.9%.

Figure 1. Respiratory DataMart weekly positivity (%) for a) influenza, SARS-Cov-2, RSV and Rhinovirus and b) Adenovirus, hMPV and Parainfluenza, England

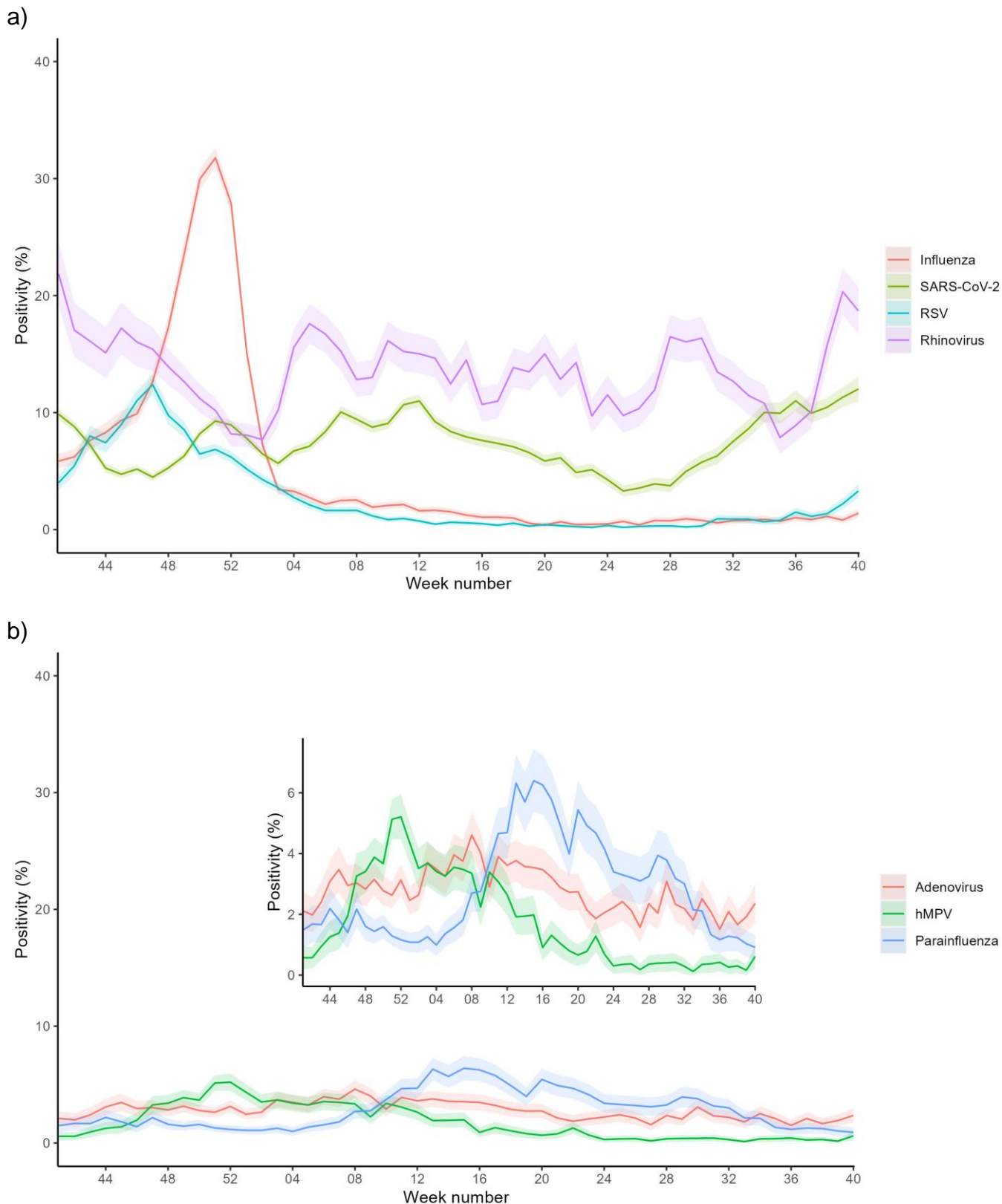
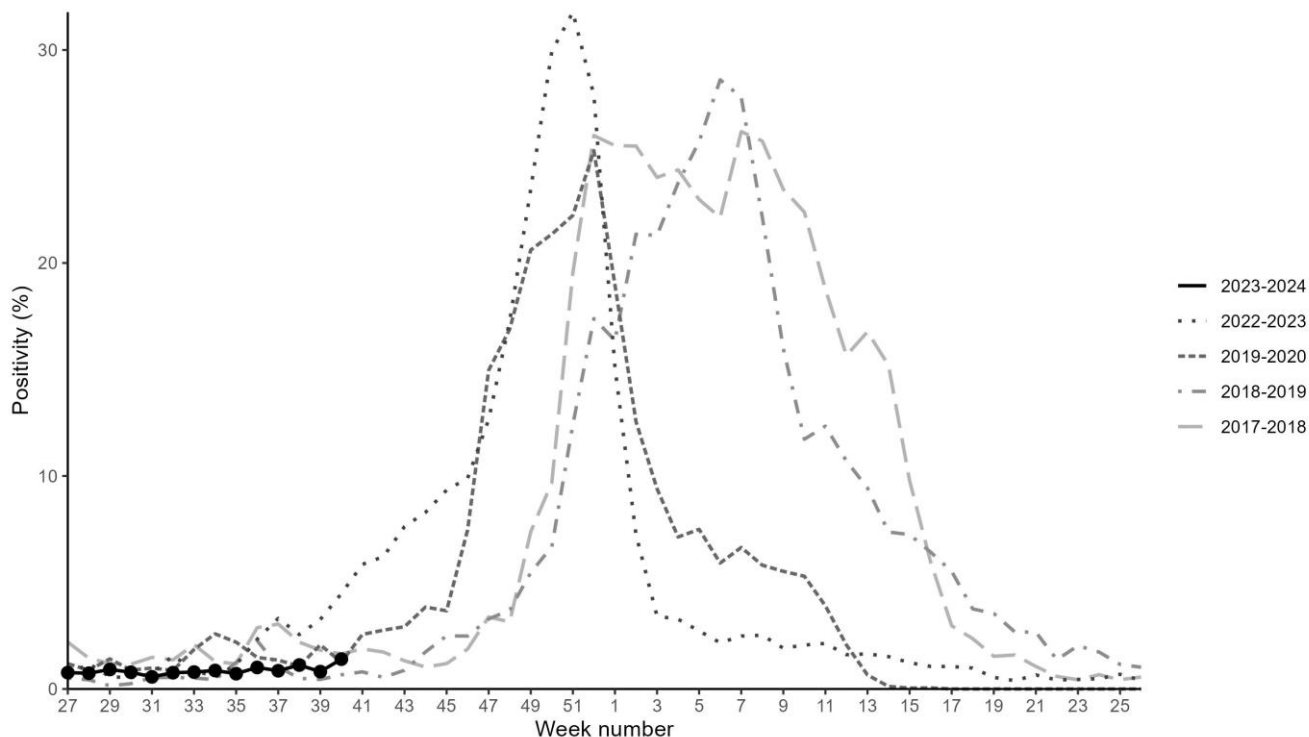


Figure 2. Respiratory DataMart weekly positivity (%) for influenza by year, England



Please note data from seasons 2020 to 2021 and 2021 to 2022 has been removed as there was low activity throughout.

Figure 3. Respiratory DataMart samples positive for influenza, England

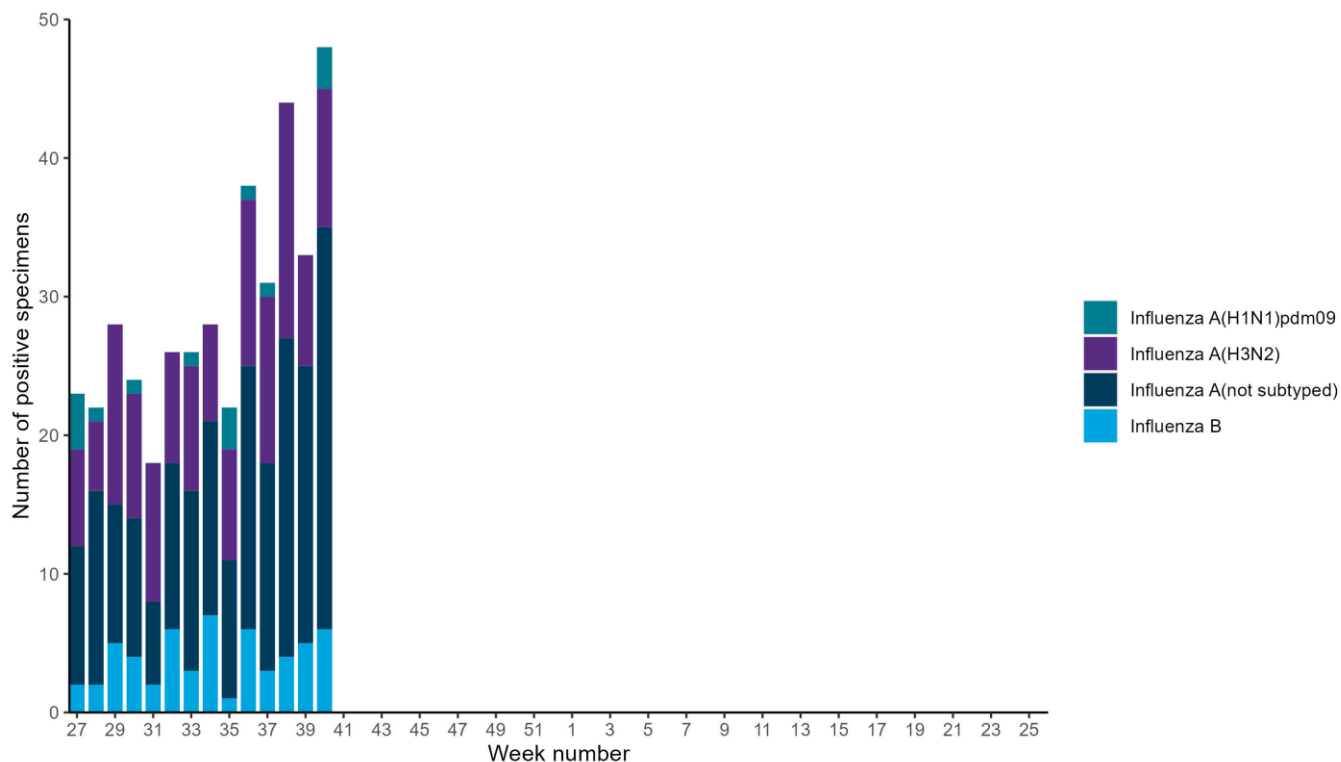


Figure 4. Respiratory DataMart weekly positivity (%) for influenza by age, England

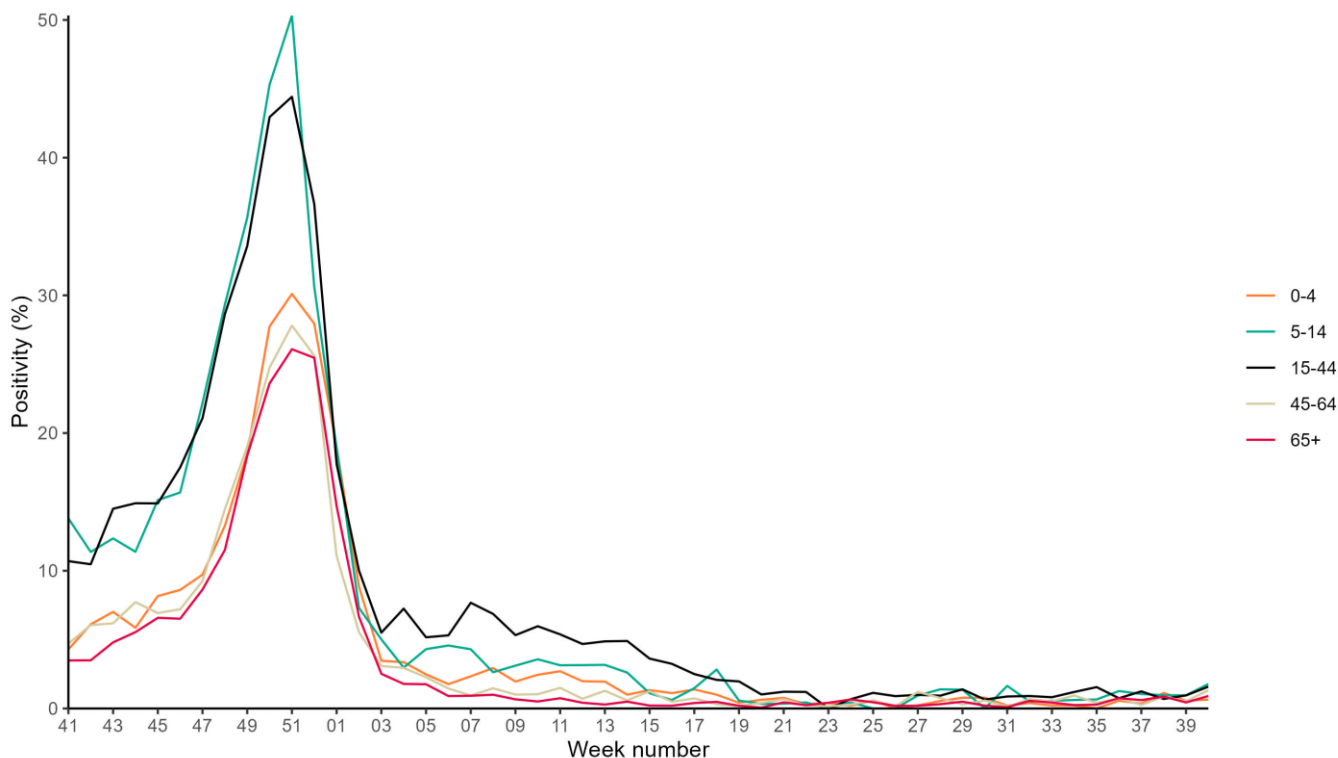


Figure 5. Respiratory DataMart weekly positivity (%) for SARS-CoV-2 by year, England

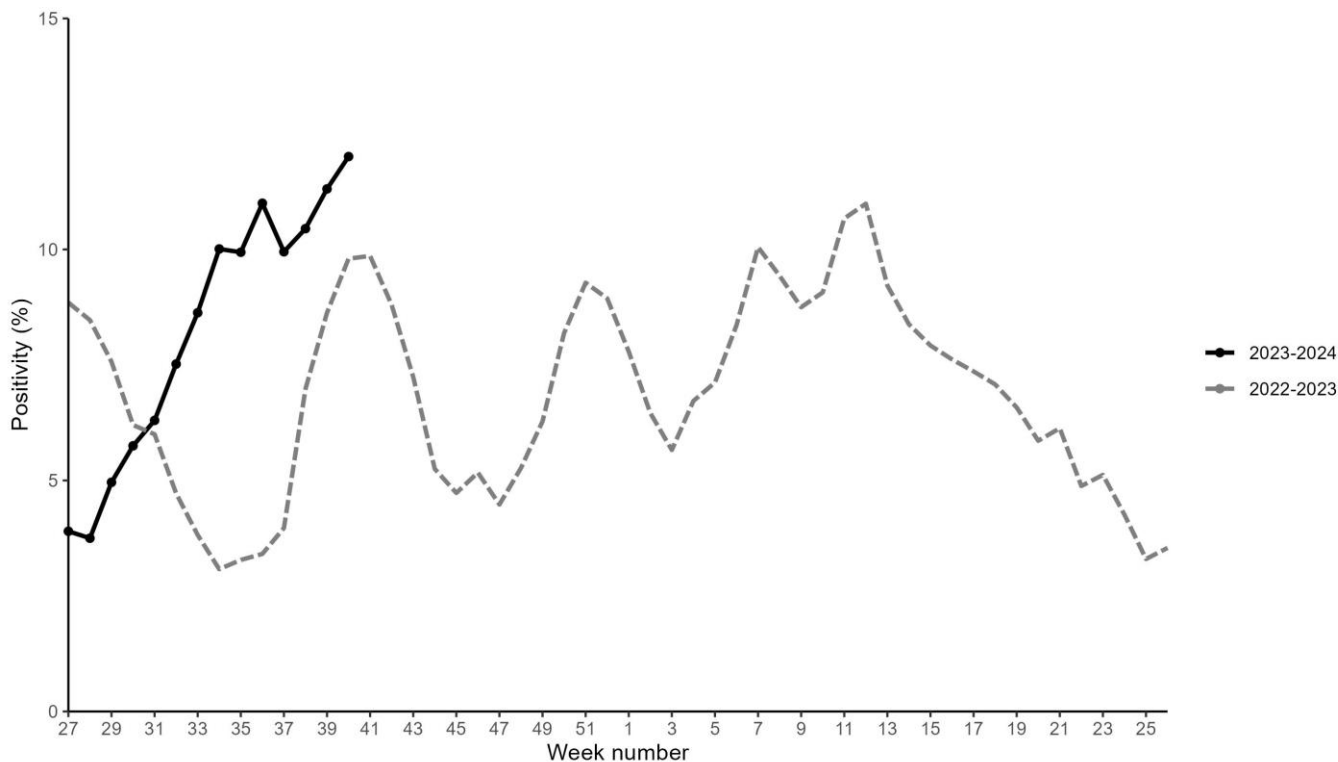


Figure 6. Respiratory DataMart weekly positivity (%) for SARS-CoV-2 by age, England

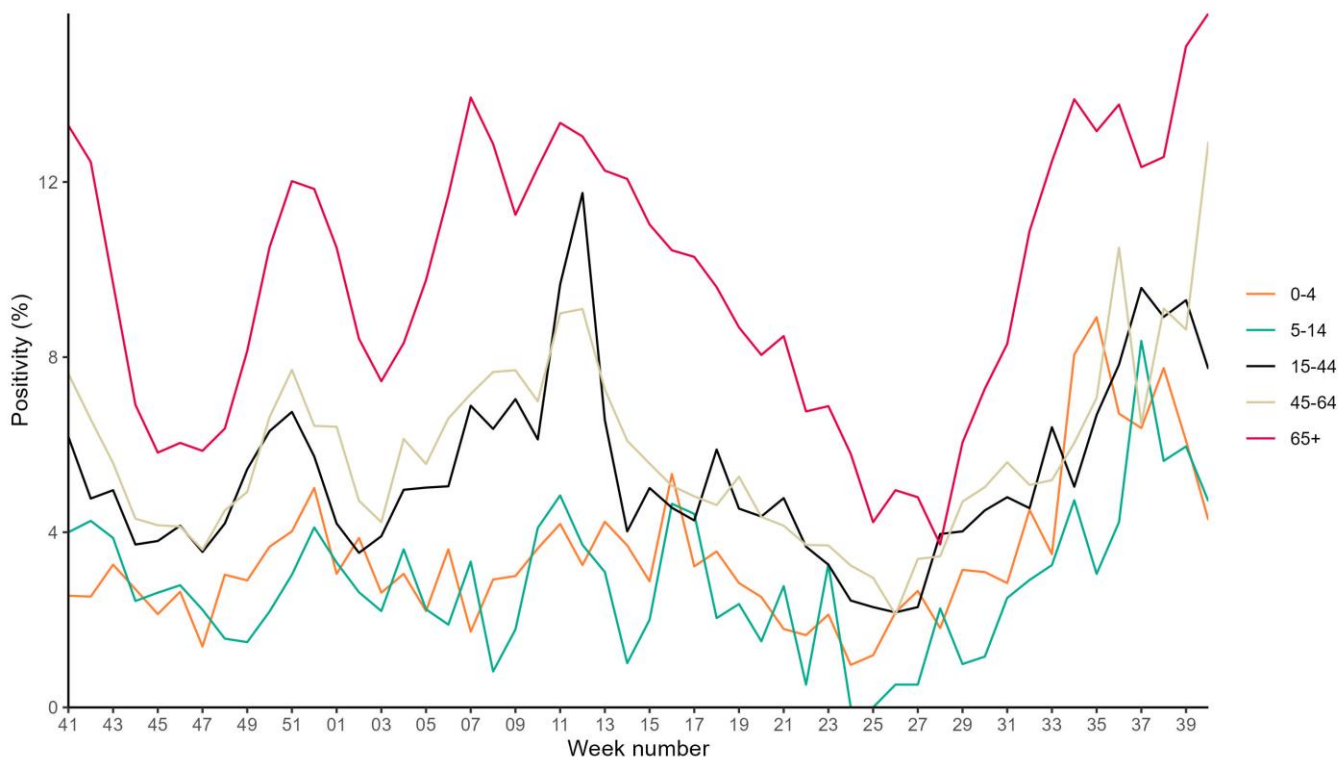


Figure 7. Respiratory DataMart weekly positivity (%) for RSV by year, England

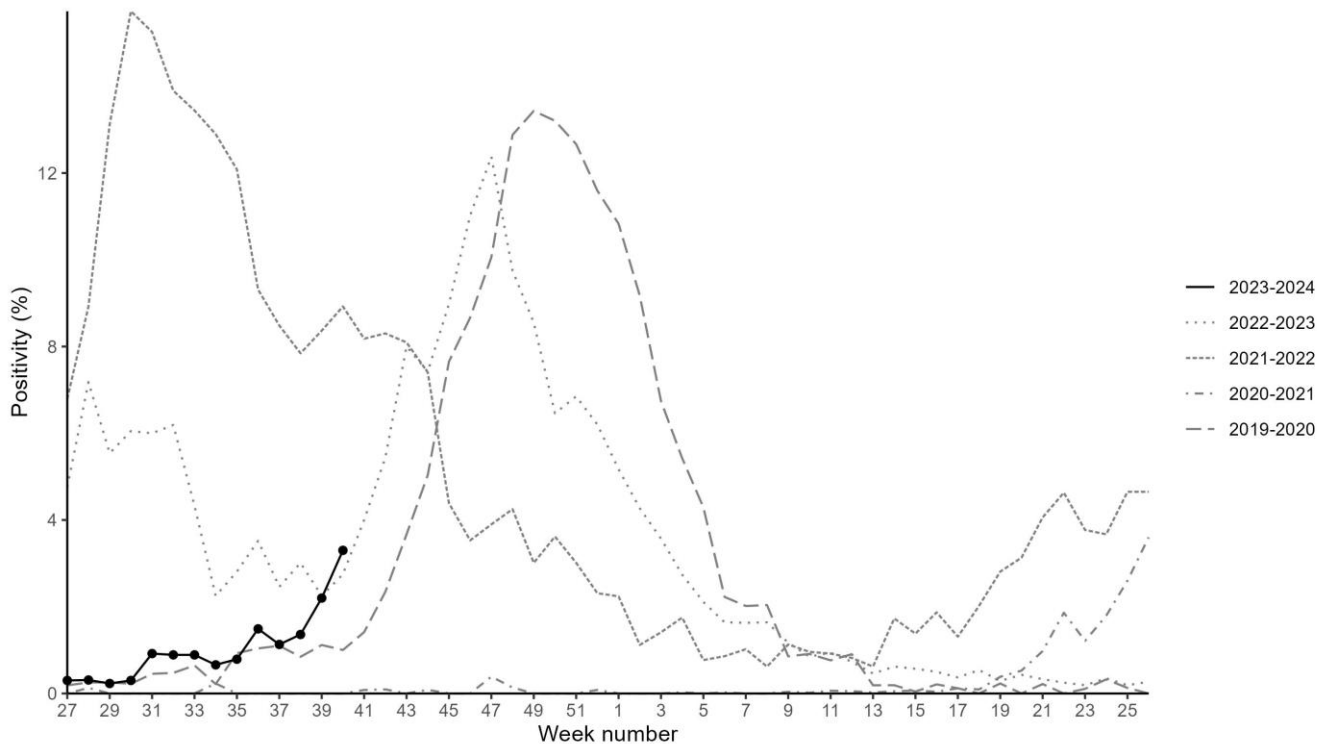
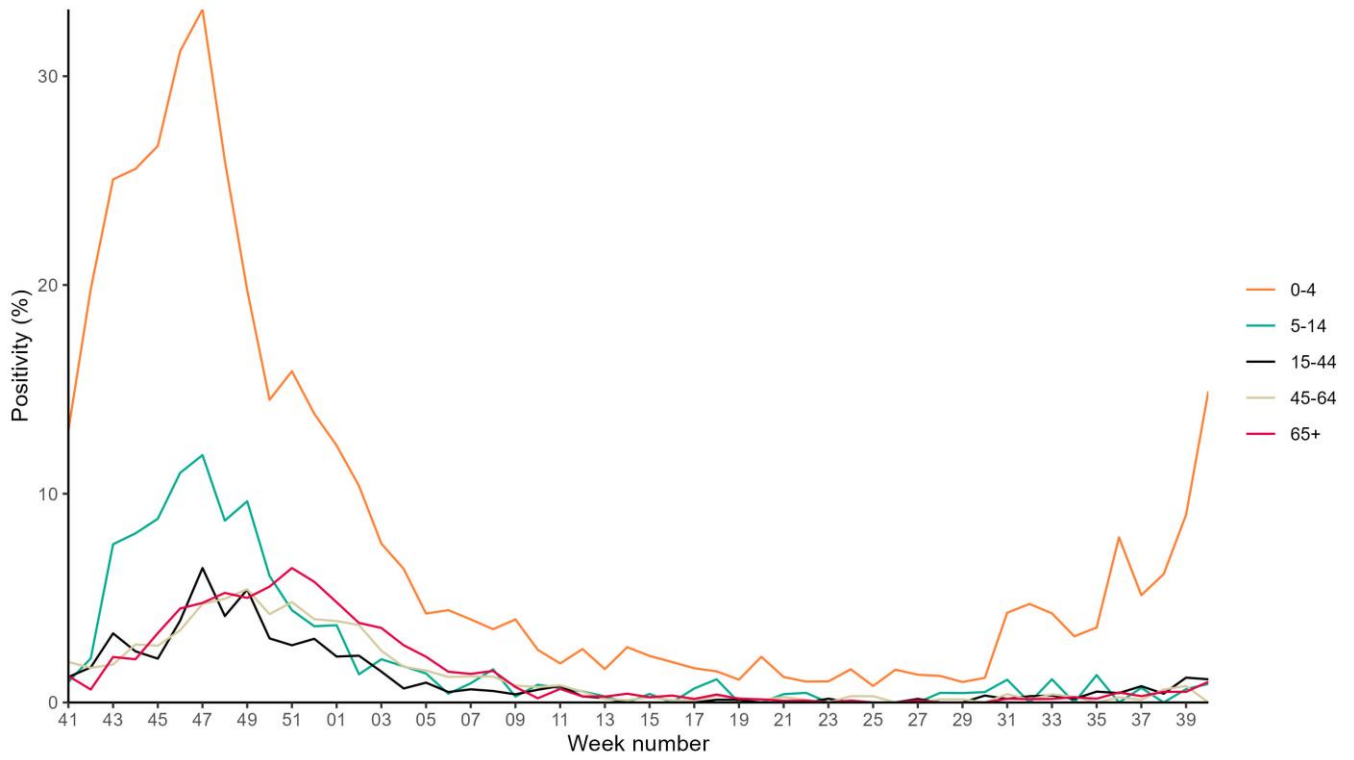


Figure 8. Respiratory DataMart weekly positivity (%) for RSV by age, England

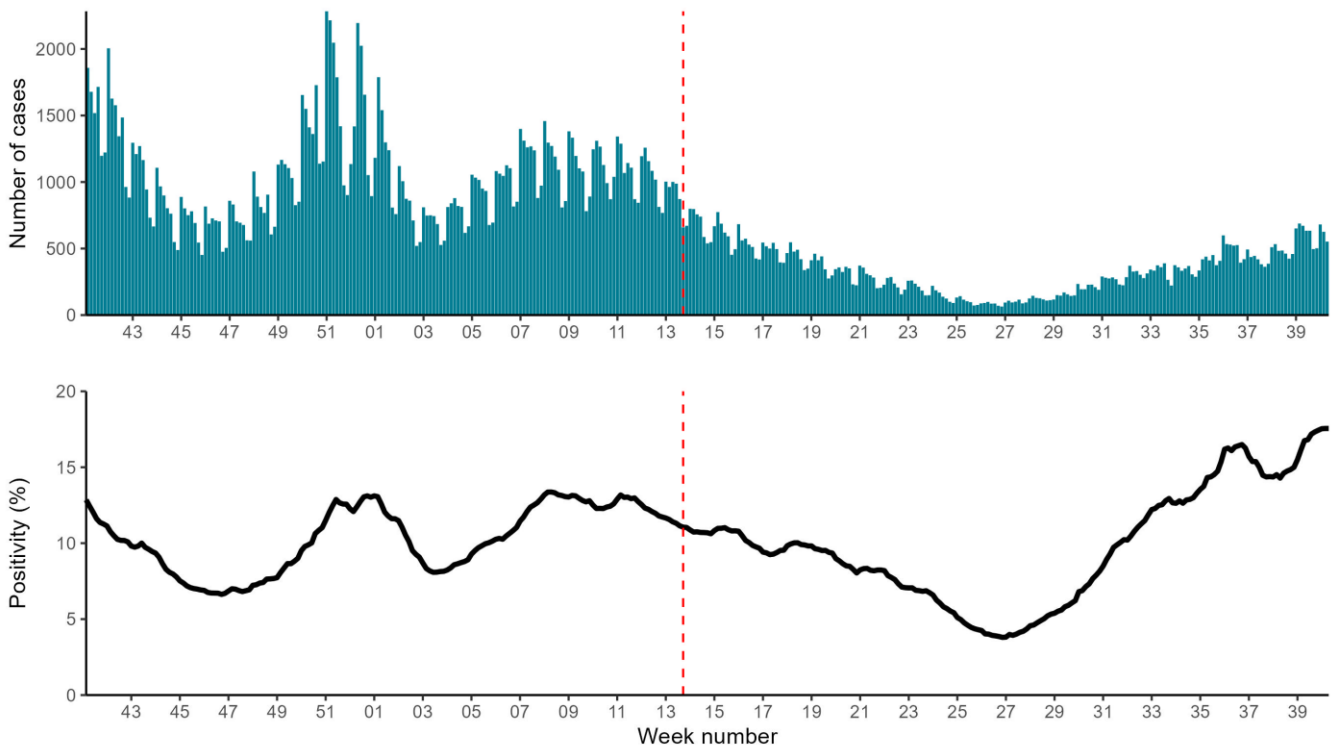


Confirmed COVID-19 cases (England)

As of 9am on 8 October 2023, a total of 2,138,031 episodes have been confirmed for COVID-19 in England under Pillar 1, and 18,828,806 episodes under Pillar 2, since the beginning of the pandemic. COVID-19 case rates through Pillar 1 remained stable in week 40.

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.

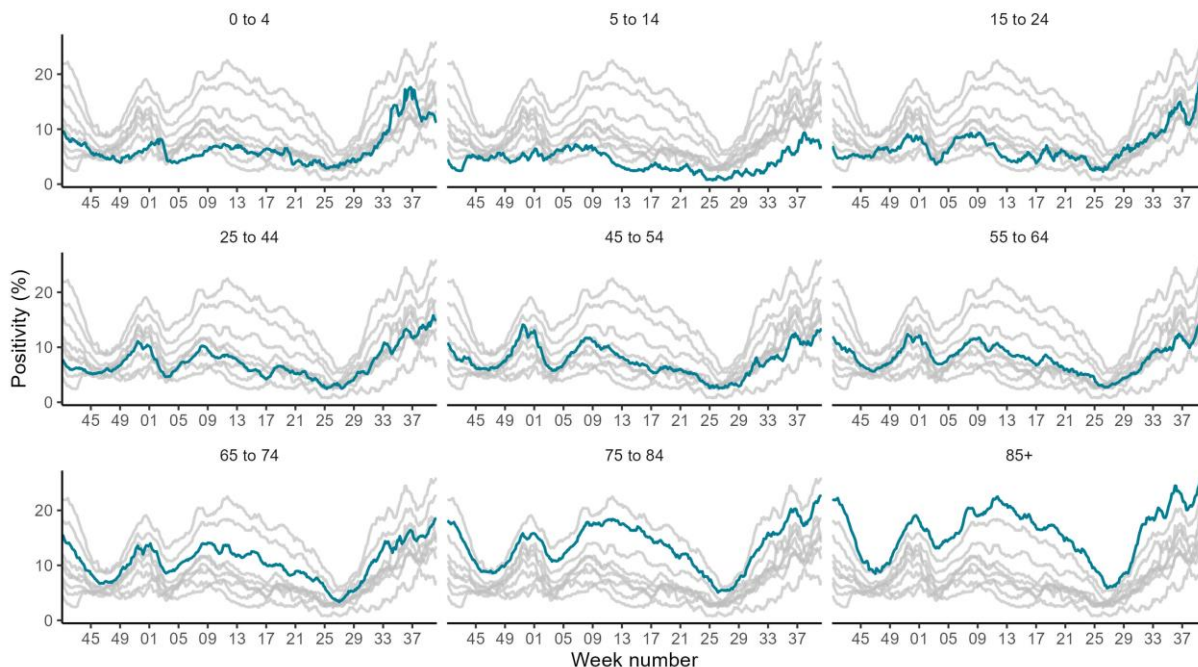
Figure 9. Confirmed COVID-19 episodes tested under Pillar 1, based on sample date with overall seven-day rolling average PCR positivity for Pillar 1 (%)



The vertical dashed line (red) denotes changes in testing policies.

Age

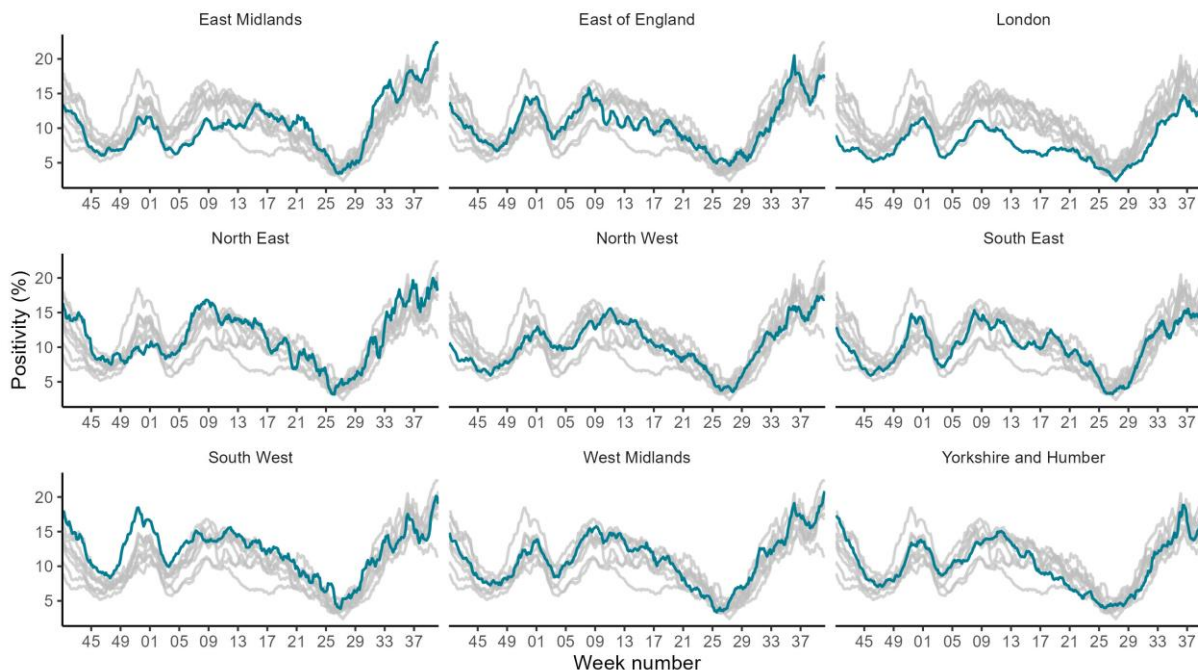
Figure 10. Seven-day rolling average PCR positivity (%) of confirmed COVID-19 cases tested under Pillar 1 by age group



*Please note the highlighted line corresponds to the age group in the subplot title, grey lines correspond to all other age groups

Geography

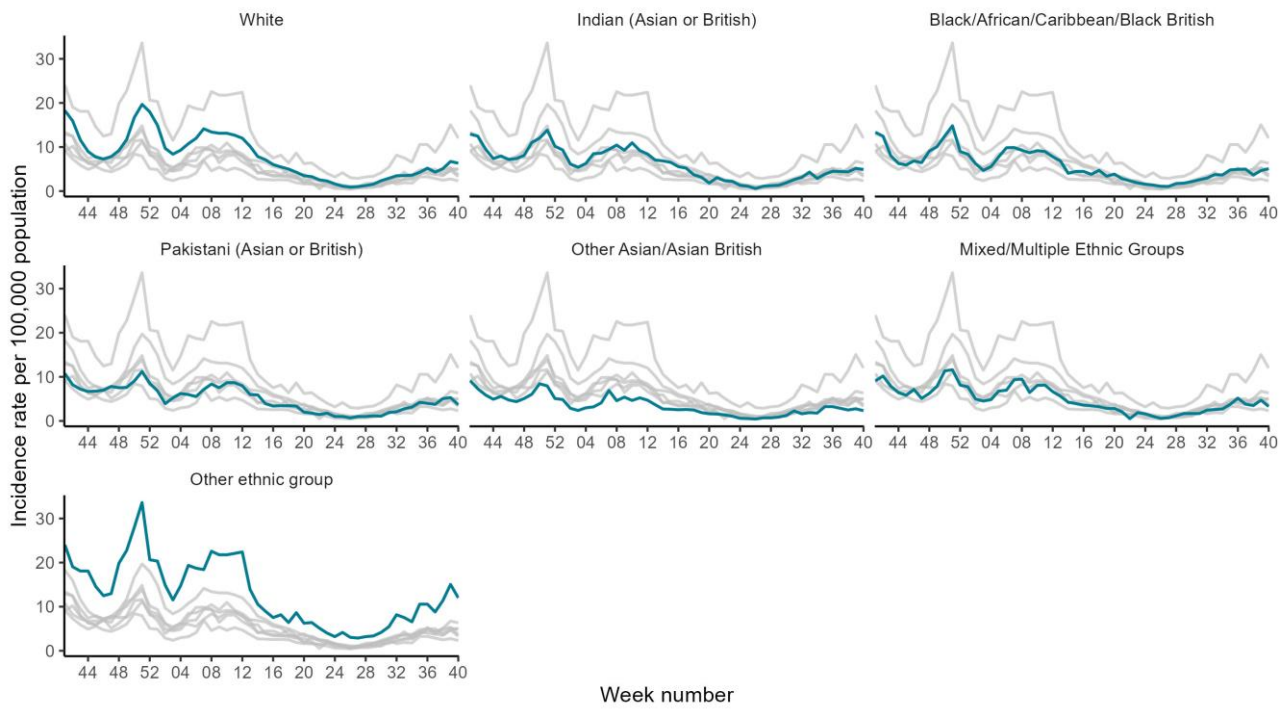
Figure 11. Seven-day rolling average PCR positivity (%) of confirmed COVID-19 cases tested under Pillar 1 by UKHSA region



*Please note the highlighted line corresponds to the UKHSA region in the subplot title, grey lines correspond to all other regions

Ethnicity

Figure 12. Weekly incidence per 100,000 population by ethnicity (Pillar 1), England



*Please note the highlighted line corresponds to the ethnicity in the subplot title, grey lines correspond to all other ethnicities

Microbiological surveillance

SARS-CoV-2 variants

UK Health Security Agency (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.

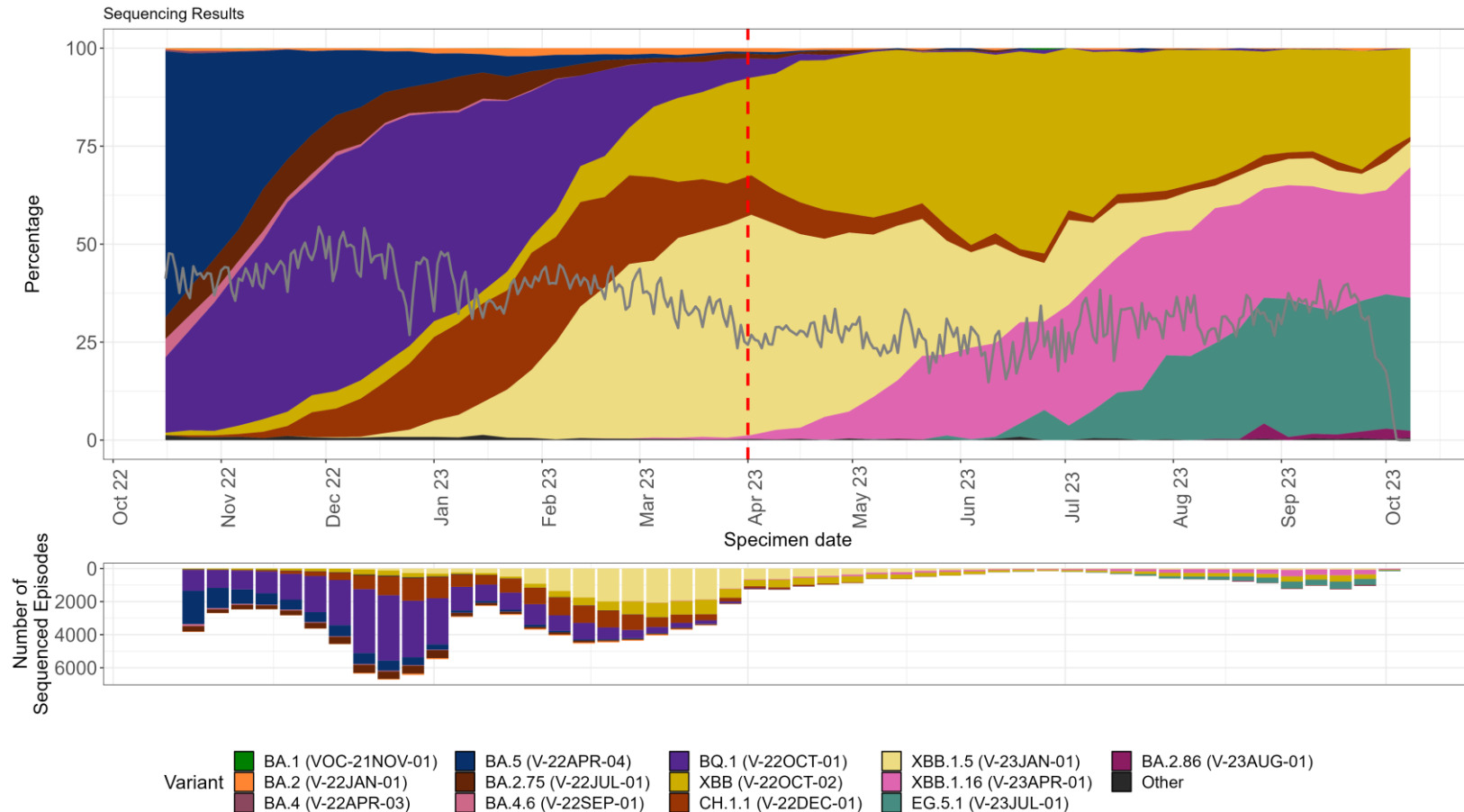
Since 29 May 2023, there has been an average 312 confirmed sequenced cases per week. Due to the small absolute numbers of confirmed sequenced cases, changes in variant proportions appear more pronounced in Figure 13.

The prevalence of different UKHSA-designated variants amongst sequenced episodes is presented in Figure 13.

Variants may include many sub-lineages that have not been individually designated for example XBB.1.9.2 within XBB (V-22OCT-02). As a result, prevalence of that variant appears to be increasing as a whole, masking the effect of one or more growing sub-lineages. Once a sub-lineage meets required thresholds to be declared a variant, it will be designated as a variant and prevalence of this sub-lineage in positive cases will then be identifiable in the data.

To account for sequencing delays, we report the proportion of variants from sequenced episodes between 25 September 2023 and 01 October 2023. Of those sequenced in this period, 0.2% were classified as BA.2 (V-22JAN-01), 0.3% as BQ.1 (V-22OCT-01), 25.7% as XBB (V-22OCT-02), 2.7% as CH.1.1 (V-22DEC-01), 7.4% as XBB.1.5 (V-23JAN-01), 26.5% as XBB.1.16 (V-23APR-01), 34.3% as EG.5.1 (V-23JUL-01), and 2.7% as BA.2.86 (V-23AUG-01).

Figure 13. Prevalence of SARS-CoV-2 variants amongst available sequences episodes for England from 10 October 2022 to 08 October 2023



The grey line indicates proportion of cases sequenced.

The vertical dashed lines (red) denote changes in policies:

- Line: April 2023 denotes changes in PCR testing in social care and hospital settings

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

Table 1. Total distribution of SARS-CoV-2 variants detected in England in the last 12 weeks, up to week 40 (week ending 08 October 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	23	27-09-2023
V-22APR-04	Omicron BA.5	7	10-09-2023
V-22JUL-01	Omicron BA.2.75	2	25-08-2023
V-22OCT-01	Omicron BQ.1	16	01-10-2023
V-22OCT-02	Omicron XBB	2691	05-10-2023
V-22DEC-01	Omicron CH.1.1	177	02-10-2023
V-23JAN-01	Omicron XBB.1.5	628	03-10-2023
V-23APR-01	Omicron XBB 1.16	2796	05-10-2023
V-23JUL-01	Omicron EG.5.1	2779	05-10-2023
V-23AUG-01	Omicron BA2.86	120	03-10-2023

*Sequencing data has a lag of approximately 2 weeks therefore the data presented should be interpreted in this context.

*Cumulative numbers may be revised up or down as a result of reclassification, 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 definition.

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.

In week 40 2023, the UKHSA Respiratory Virus Unit has genetically characterised 2 influenza A(H3N2) viruses, which were detected since week 34. Sequencing of the haemagglutinin (HA) gene shows that these A(H3N2) viruses belong in genetic subclade 3C.2a1b.2a.2 in the 2a.3a.1 subgroup. The Northern Hemisphere 2023/24 influenza A(H3N2) vaccine strain (an A/Darwin/9/2021-like virus) also belongs in genetic subclade 3C.2a1b.2a.2

Four influenza A(H1N1)pdm09 viruses have been characterised to date this season, with 3 belonging in genetic subgroup 6B.1A.5a.2a and one in subgroup 6B.1A.5a.2a.1. The Northern Hemisphere 2023/24 influenza A(H1N1)pdm09 vaccine strain (an A/Victoria/4897/2022 (H1N1)pdm09-like virus) also belongs in genetic subclade 6B.1A.5a, within the 6B.1A.5a.2a.1 cluster.

One influenza B/Victoria lineage virus has been genetically characterised belonging in subclade V1A3, within the subgroup V1A3a.2. The Northern Hemisphere 2023/24 influenza B/Victoria lineage vaccine strain (a B/Austria/1359417/2021-like virus) also belongs in this V1A3a.2 subclade/group.

At this early stage of the influenza season, it is too early to predict which influenza lineages will dominate throughout the season, and a close watch will be kept on the proportion of different viruses circulating to assist with the evaluation of vaccine effectiveness.

Table 2. Number of influenza viruses characterised by genetic and antigenic analysis at the UKHSA Respiratory Virus Unit since week 34/2023

(Sub)type	Genetic characterisation: Clade	Genetic characterisation: Number sequenced
A(H3N2)	3C.2a1b.2a.2a.3a.1	2
A(H1N1)pdm09	6B.1A.5a.2a	3
A(H1N1)pdm09	6B.1A.5a.2a.1	1
B/Victoria-lineage	V1A3a.2	1

Influenza antiviral susceptibility

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 34/2023 and 40/2023 have been analysed. No viruses with known markers of resistance to neuraminidase inhibitors or baloxavir were detected in this period.

Table 3: Antiviral susceptibility of influenza positive samples tested at UKHSA-RVU

(Sub)type	Neuraminidase Inhibitors: Susceptible	Neuraminidase Inhibitors: Reduced Susceptibility	Baloxavir: Susceptible	Baloxavir: Reduced Susceptibility
A(H3N2)	2	0	2	0
A(H1N1)pdm09	4	0	2	0
B/Victoria-lineage	1	0	1	0
Total	7	0	5	0

Community surveillance

Acute respiratory infection incidents (ARI)

Here we present data on ARI incidents in different settings that are reported to UKHSA Health Protection Teams (HPTs).

72 new ARI incidents have been reported in week 40 in England:

- 52 incidents were from care homes, where 14 had at least one linked case that tested positive for SARS-CoV-2, 2 for rhinovirus, one for influenza A(not subtyped) and one for RSV
- 6 incidents were from hospitals, where no test results were available
- 5 incidents were from educational settings, where one had at least one linked case that tested positive for SARS-CoV-2
- One incident was from a prison, where no test result was available
- 8 incidents were from other settings, where 2 had at least one linked case that tested positive for SARS-CoV-2

Figure 14. Number of ARI incidents by setting, England

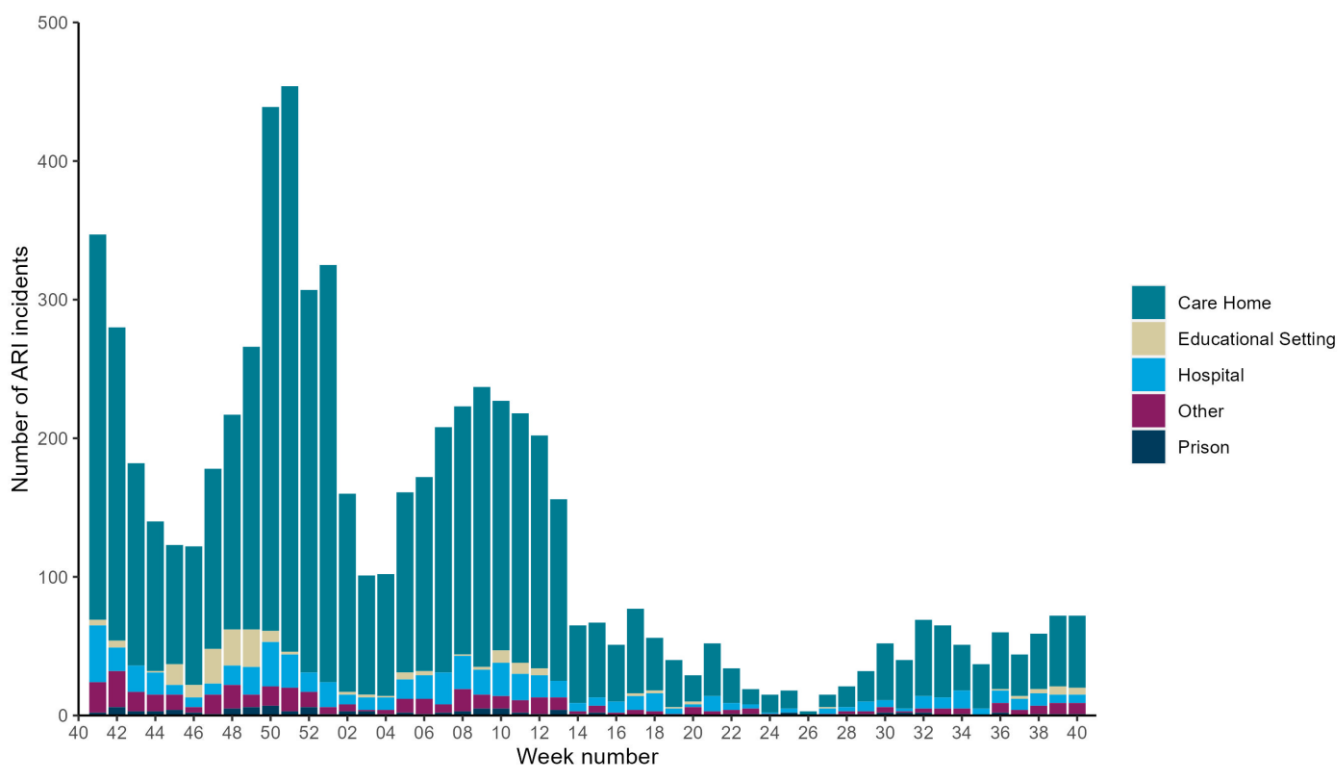


Figure 15. Number of ARI incidents in all settings by virus type, England

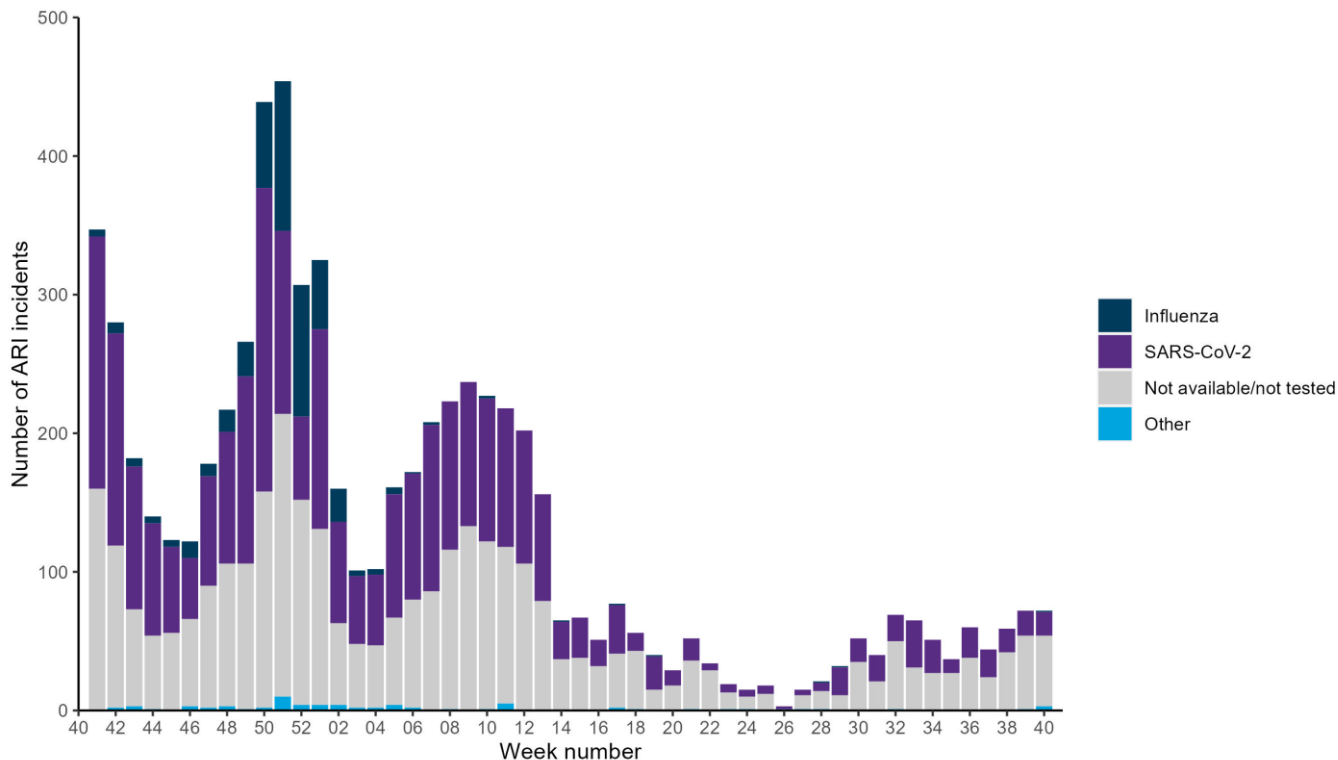


Figure 16. Number of ARI incidents in care homes by virus type, England

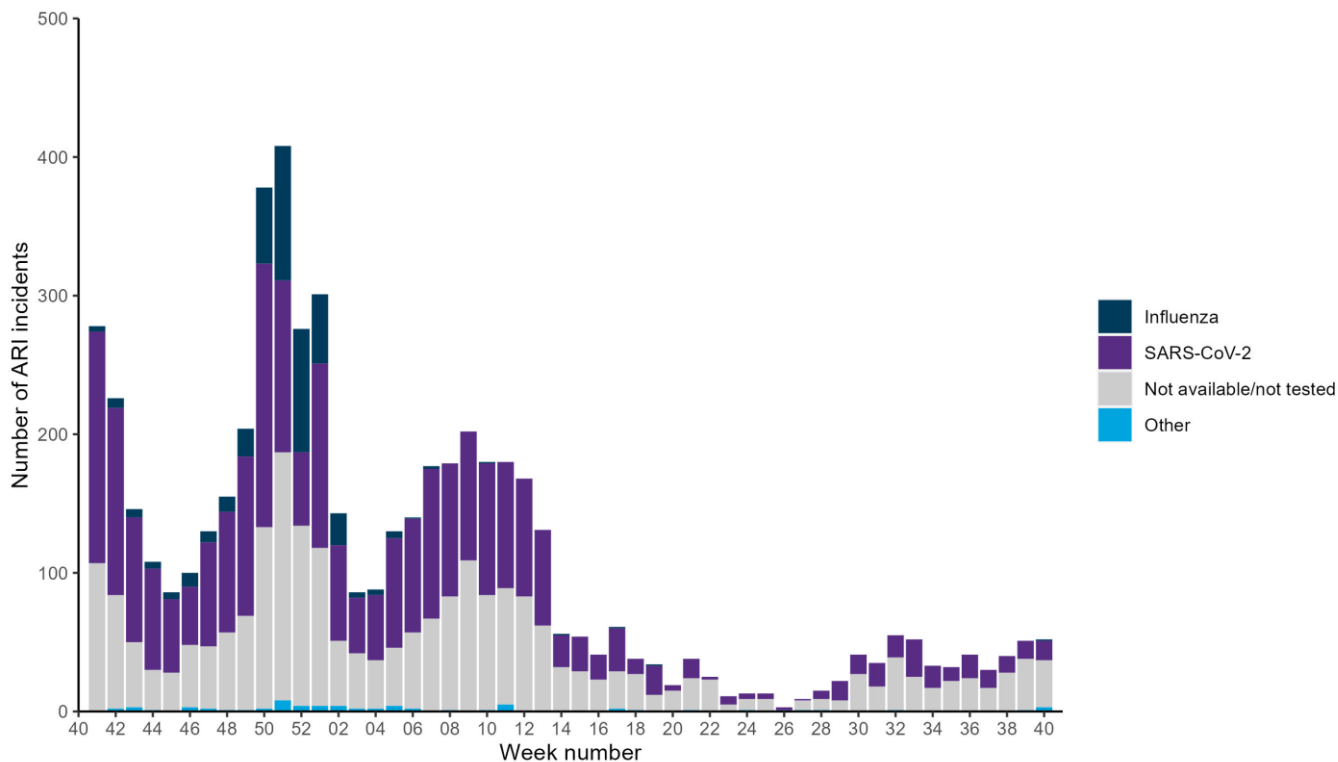
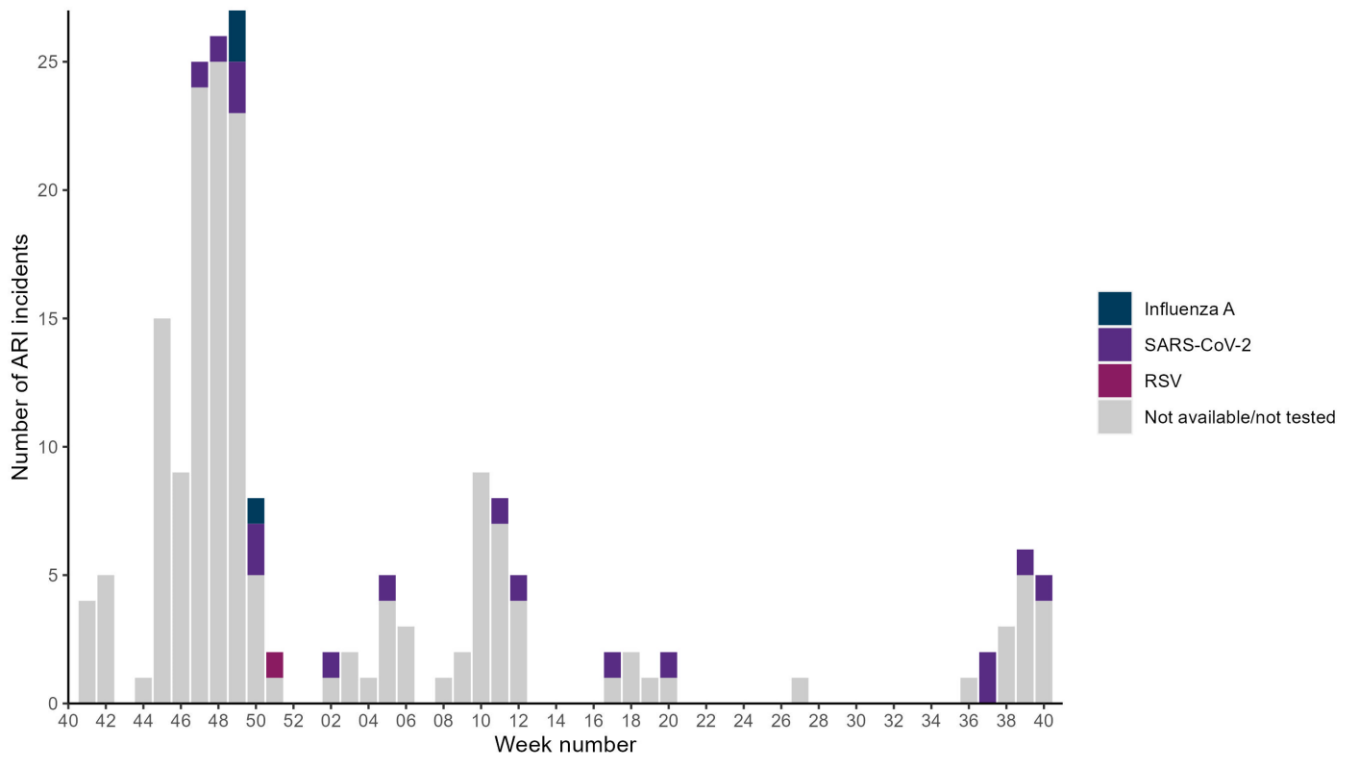


Figure 17. Number of ARI incidents in educational settings by virus type, England

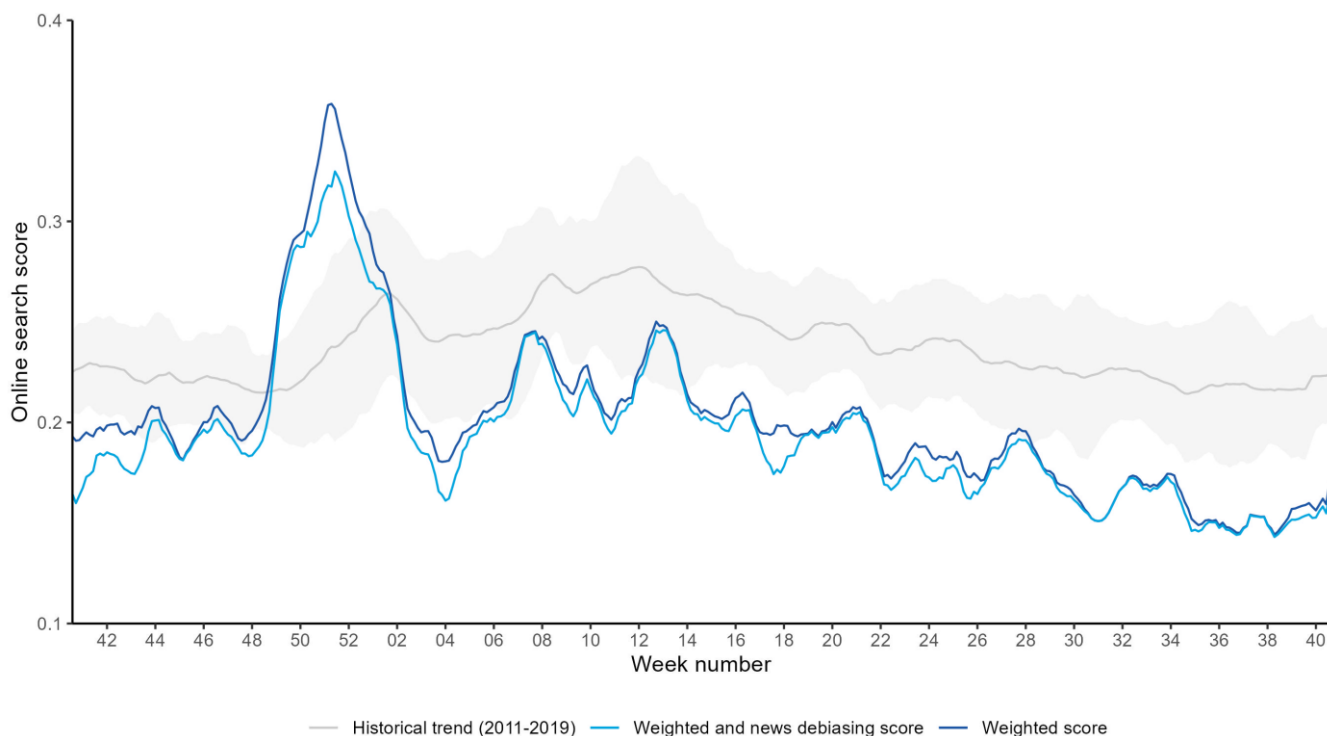


Google search queries

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 40, the overall and media-debiasing weighted Google search scores increased slightly compared to the previous week (Figure 18).

Figure 18. Normalised Google search score for COVID-19 symptoms, with weighted score for media-debiasing and historical trend, England



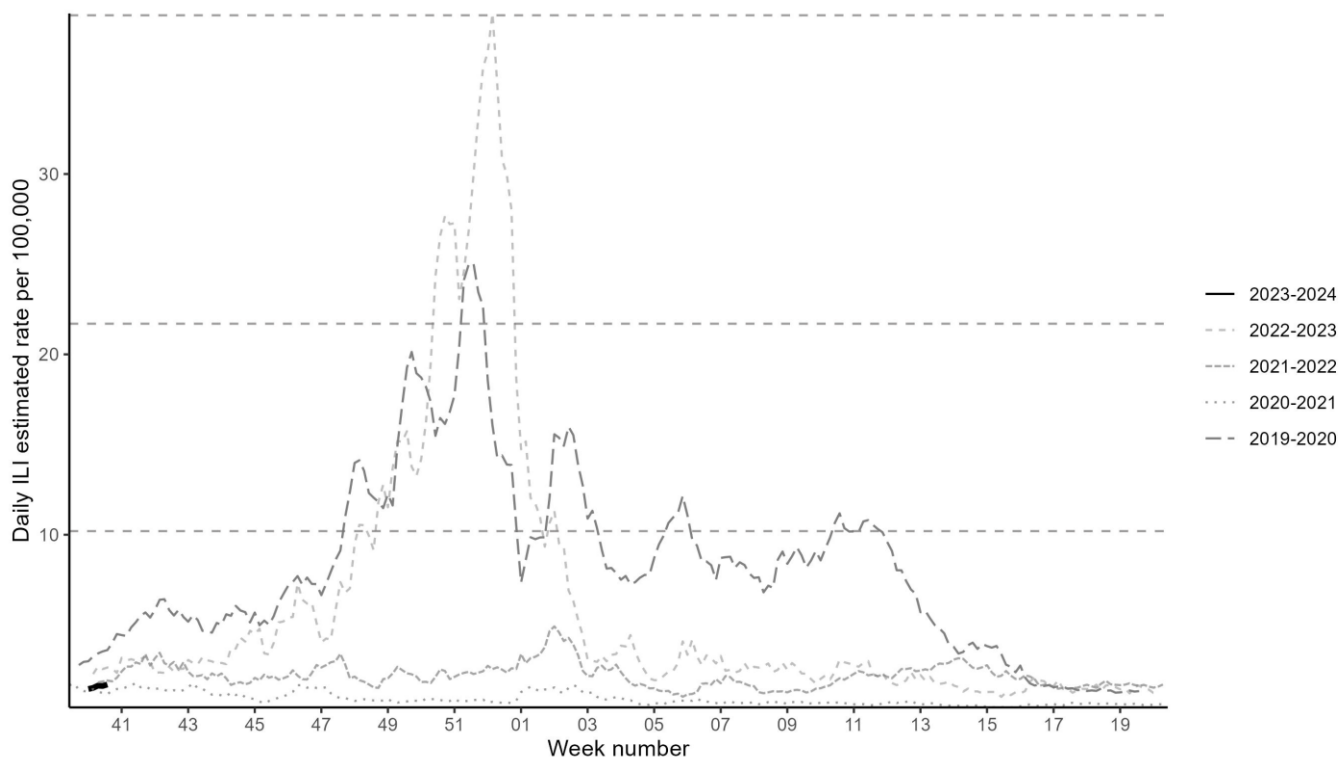
Flu Detector

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 40, the daily ILI rate was low and below the baseline threshold of 10.25 per 100,000 for the 2023 to 2024 season (Figure 19).

Figure 19. Daily estimated ILI Google search query rates per 100,000 population, England



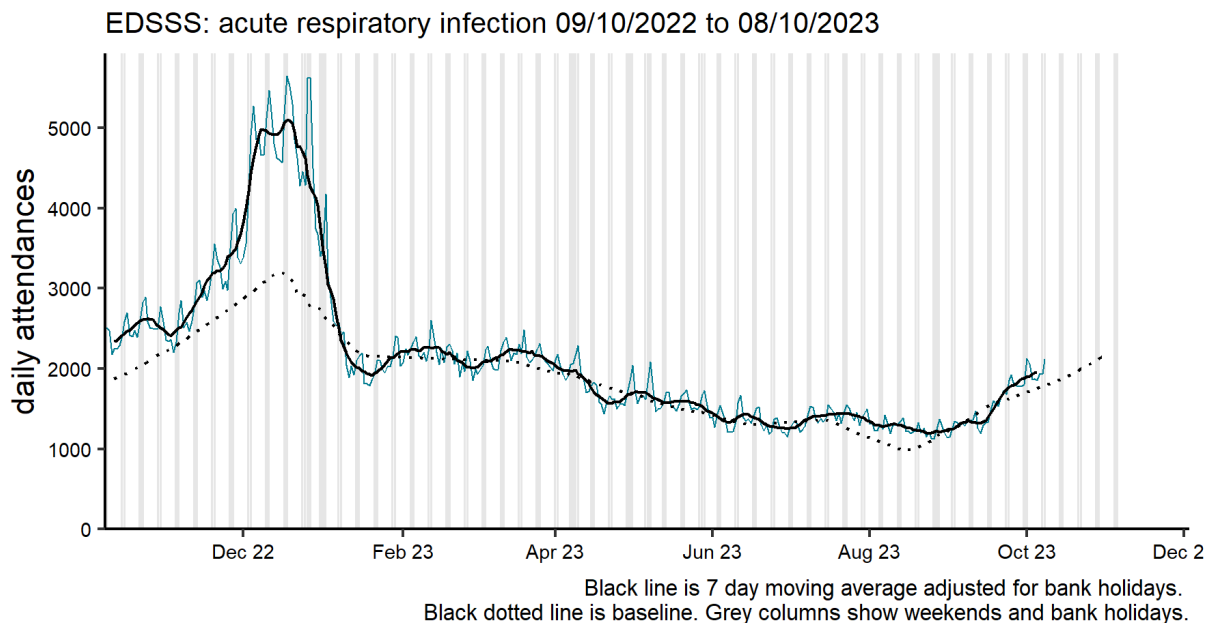
Syndromic surveillance

During week 40, NHS 111 calls for cold or flu decreased slightly nationally but were similar to seasonally expected level while calls for cough increased but were also similar to expected levels. GP in hours consultation rates for ILI increased in line with seasonally expected levels. ED attendances for ARI increased but were similar to expected levels (Figures 20). ED attendances for ILI remained stable nationally but just above expected levels (Figure 21). ED attendances for acute bronchiolitis increased in line with seasonal expectations, with increased attendances in those aged under 5 years (Figure 22). ED for covid-19-like illness decreased nationally, but remained elevated in those aged 45 years and over.

For further information on syndromic surveillance please see the [Syndromic Surveillance: weekly summaries](#).

Figure 20. Daily ED attendances for acute respiratory infection, England (a) nationally, (b) by age group

(a)



(b)

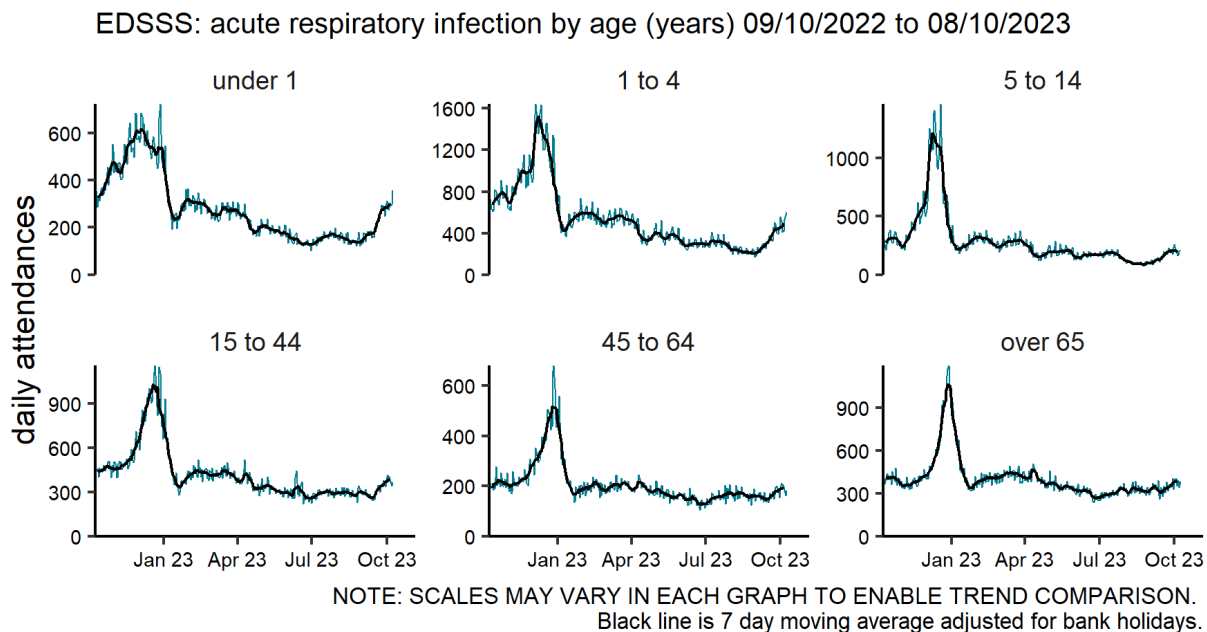
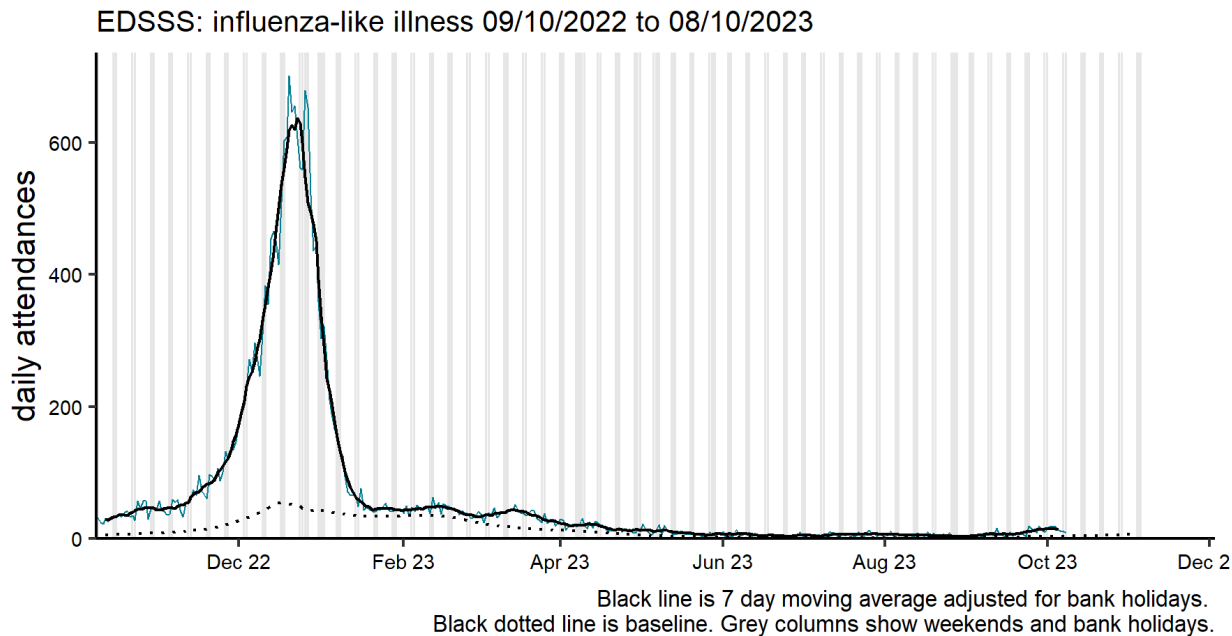


Figure 21. Daily ED attendances for influenza-like illness, England (a) nationally, (b) by age group

(a)



(b)

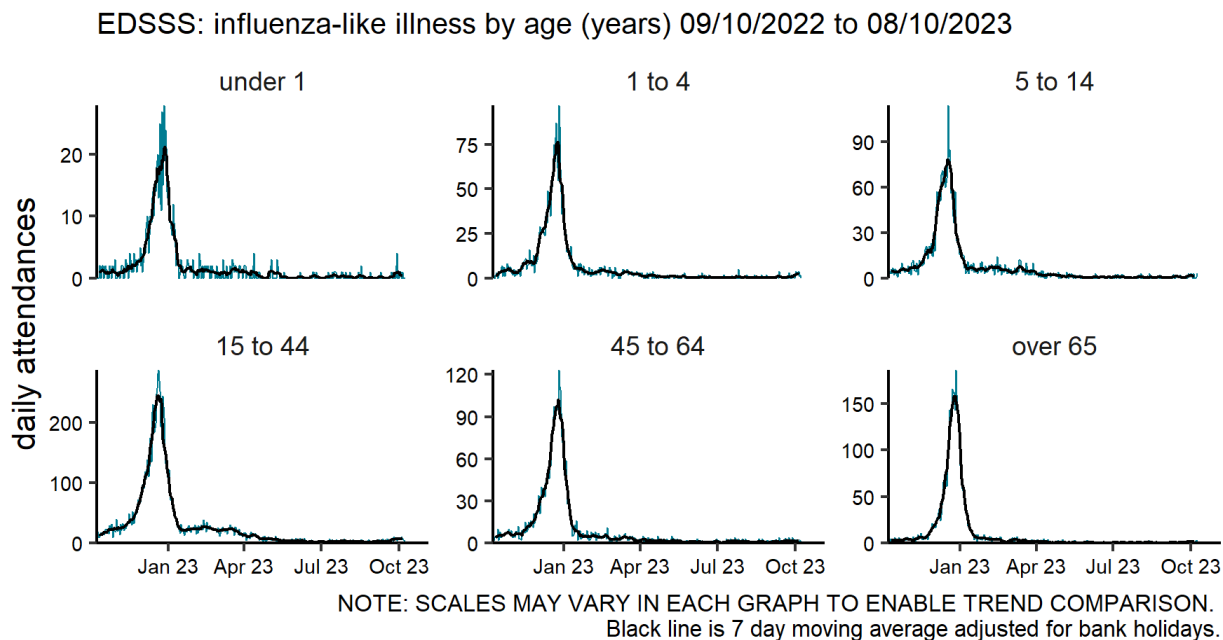
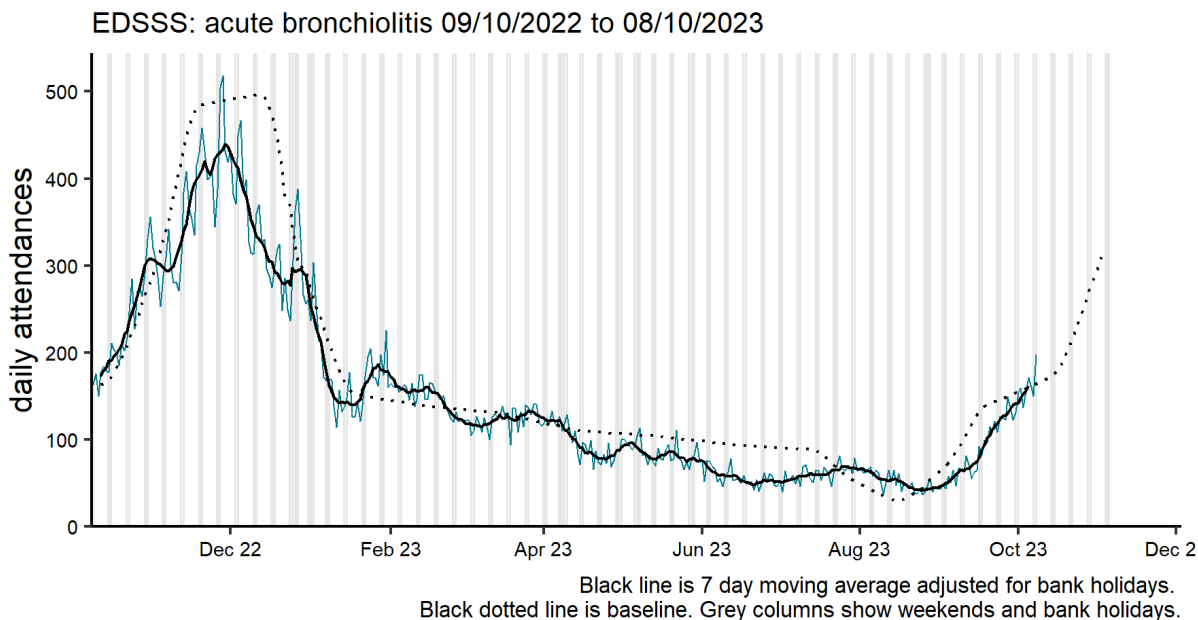
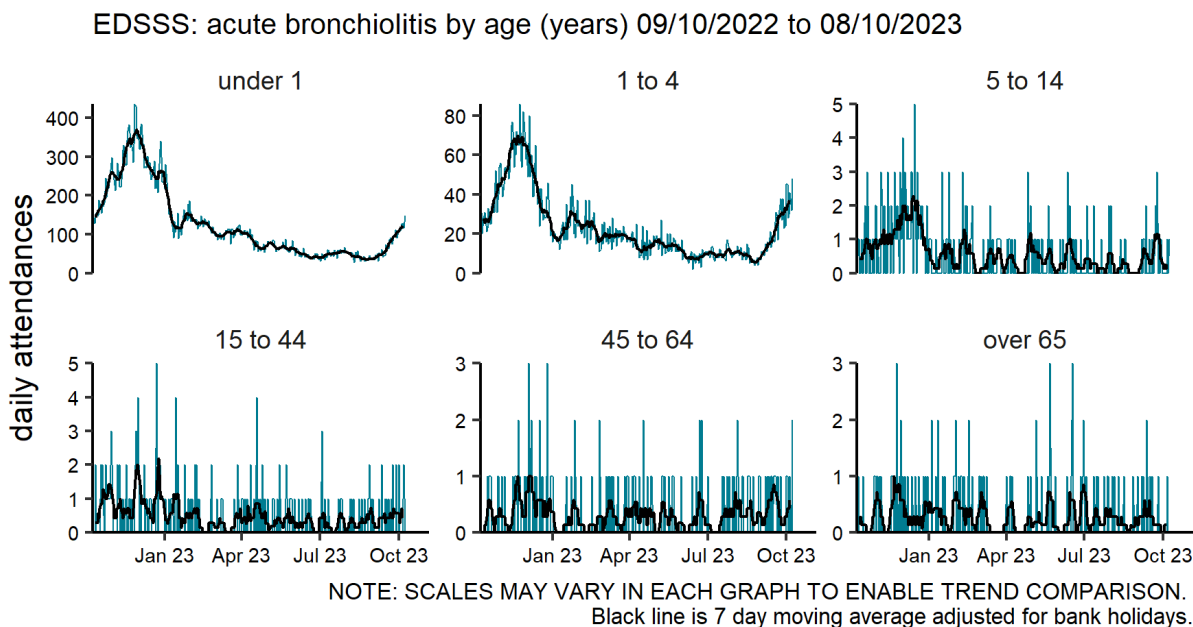


Figure 22. Daily ED attendances for acute bronchiolitis, England (a) nationally, (b) by age group*

(a)



(b)



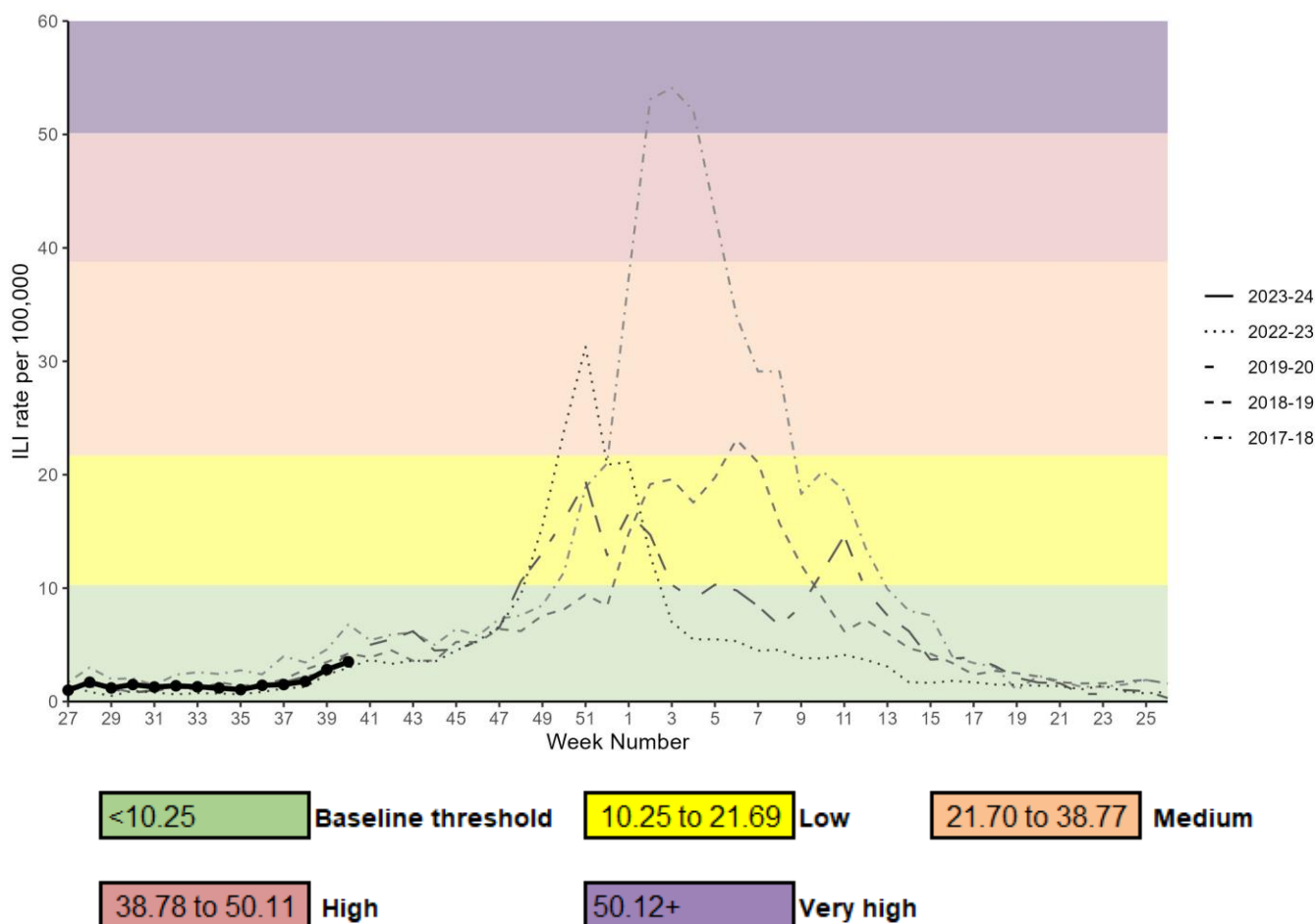
*Please note, there has been no update in week 14 for acute bronchiolitis syndromic surveillance.

Primary care surveillance

Royal College of General Practitioners (RCGP) Clinical Indicators (England)

The weekly ILI consultation rate through the RCGP surveillance increased to 3.5 per 100,000 registered population in participating GP practices in week 40 compared to 2.8 per 100,000 in the previous week. This is within baseline activity levels (less than 10.25 per 100,000) (Figure 23). By age group, the highest rates were seen in children under 1 year old (5.4 per 100,000) followed by those aged between 15 and 44 years old (4.1 per 100,000). The lower respiratory tract infections (LRTI) consultation rate increased slightly to 64.7 per 100,000 in week 40 compared to 54.4 per 100,000 in the previous week.

Figure 23. RCGP ILI consultation rates, all ages, England



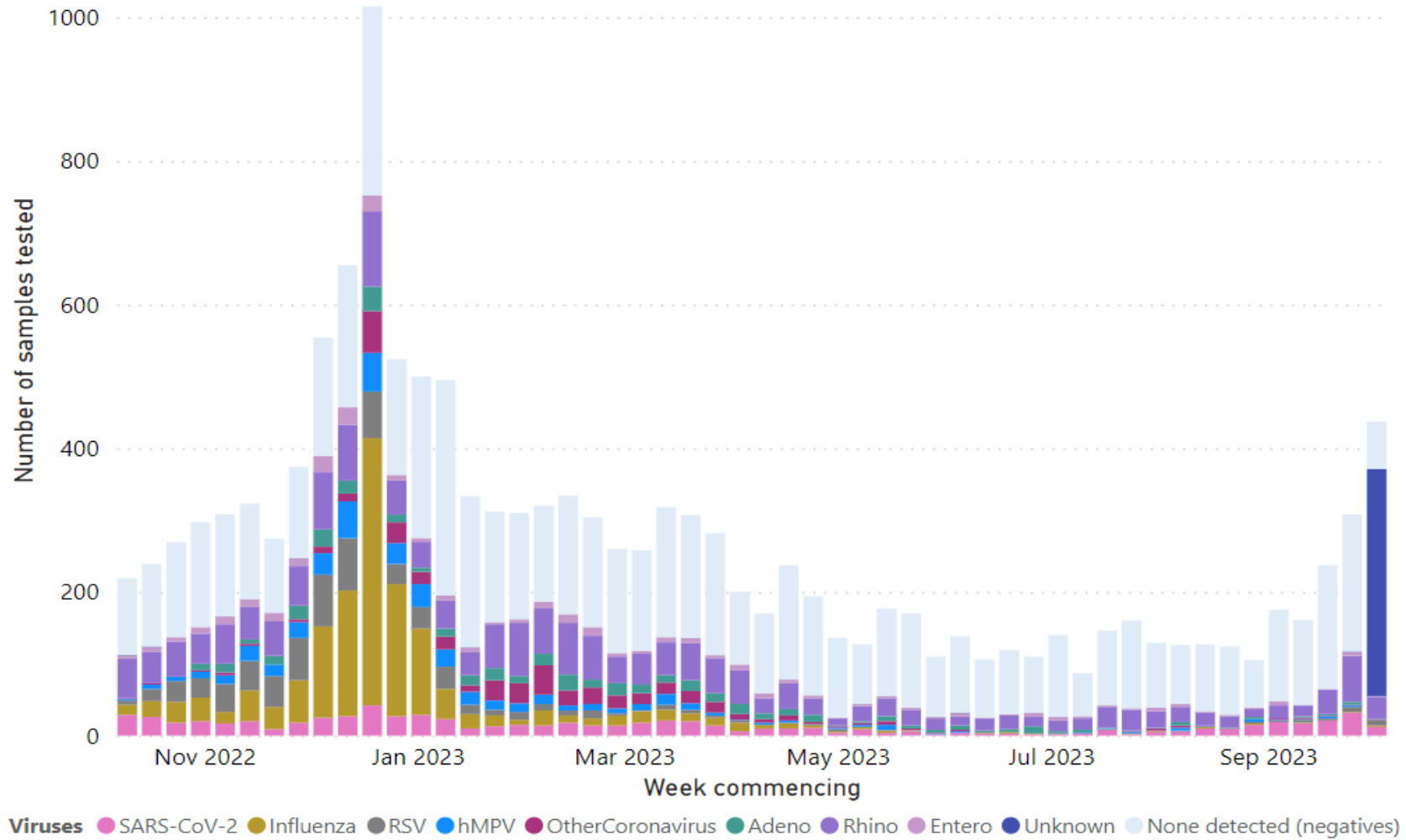
Moving Epidemic Method (MEM) thresholds are based on data from the 2015 to 2016 to the 2022 to 2023 seasons (data from 2019 to 2020 to the 2021 to 2022 seasons were excluded)

RCGP sentinel swabbing scheme in England

Based on the date samples were received in the reference laboratory, in week 40 2023 (week commencing 2 October 2023) 431 samples were tested through the GP sentinel swabbing scheme in England, of which 55 samples tested positive (Figure 24). Among all positive samples, 56.4% were positive for rhinovirus, 21.8% for SARS-CoV-2, 12.7% for RSV, 3.6% for influenza, 1.8% for adenovirus, 1.8% for other coronavirus (Figure 25).

Based on the date samples were taken, positivity for SARS-CoV-2 was 10.9%, positivity for RSV was 4.3% and positivity for influenza was 0.4% in week 39 (Figure 26). In week 40, positivity was not calculated as the total number of sample with a result was less than 20. Data for the most recent week will be updated retrospectively.

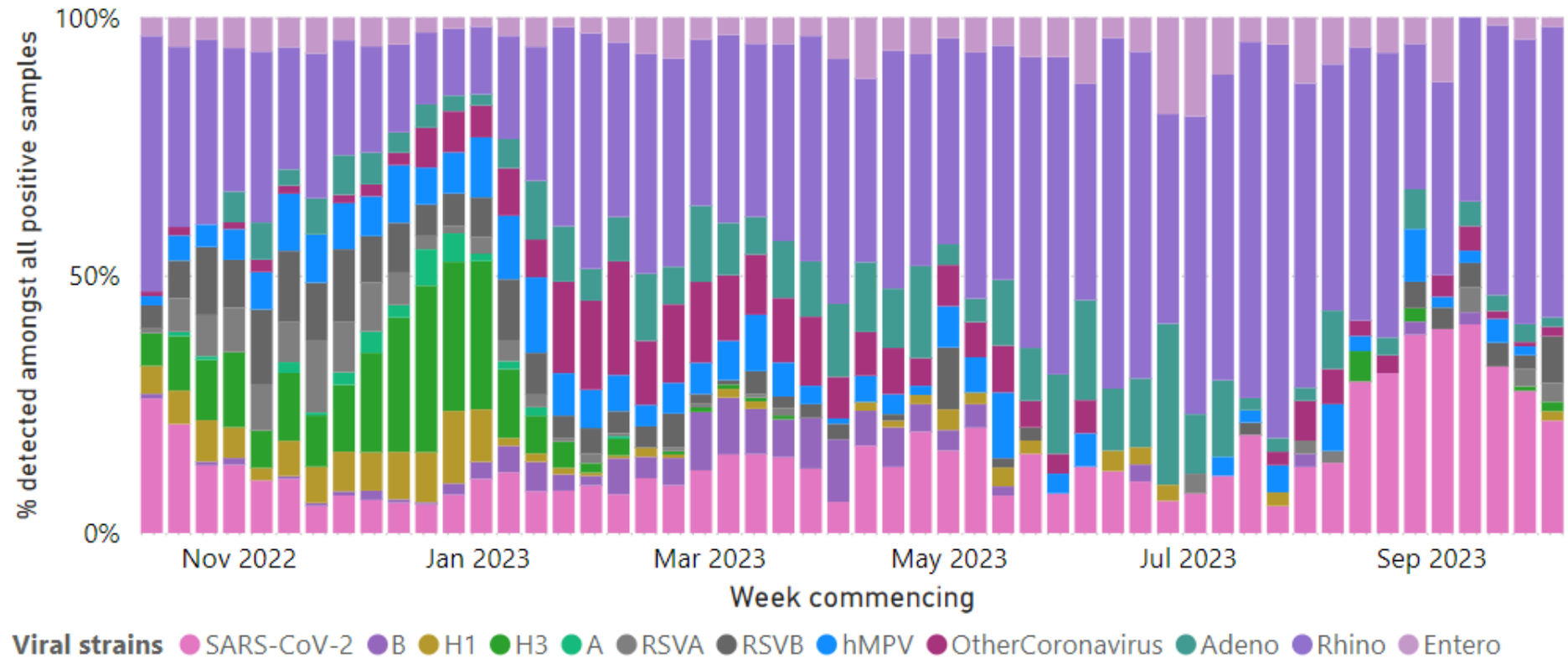
Figure 24. Number of samples tested for SARS-CoV-2, influenza, and other respiratory viruses in England by week, GP sentinel swabbing



Unknown category corresponds to samples with no result yet.

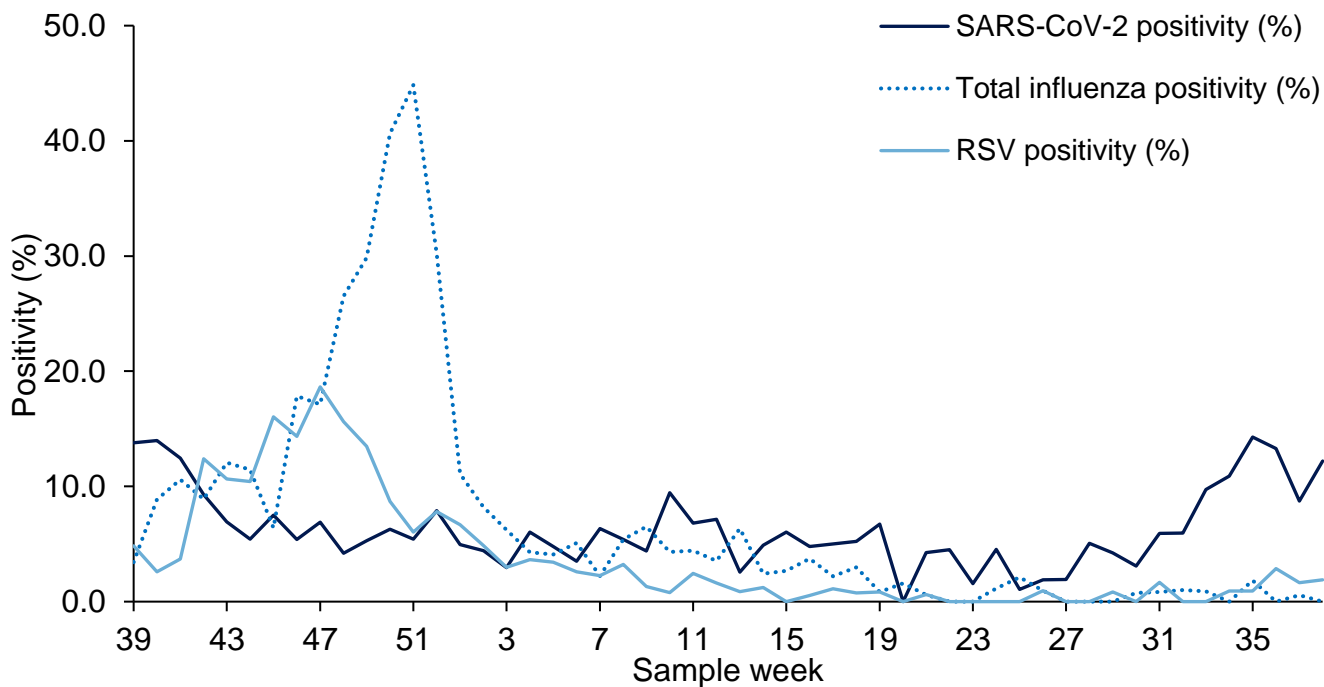
Source: RCGP Research and Surveillance Centre sentinel primary care practices ([RCGP Virology Dashboard](#))

Figure 25. Proportion of detections of SARS-CoV-2, influenza, and other respiratory viral strains 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 26. Weekly positivity (%) for COVID-19, influenza and RSV in England by week, GP sentinel swabbing



Secondary care surveillance

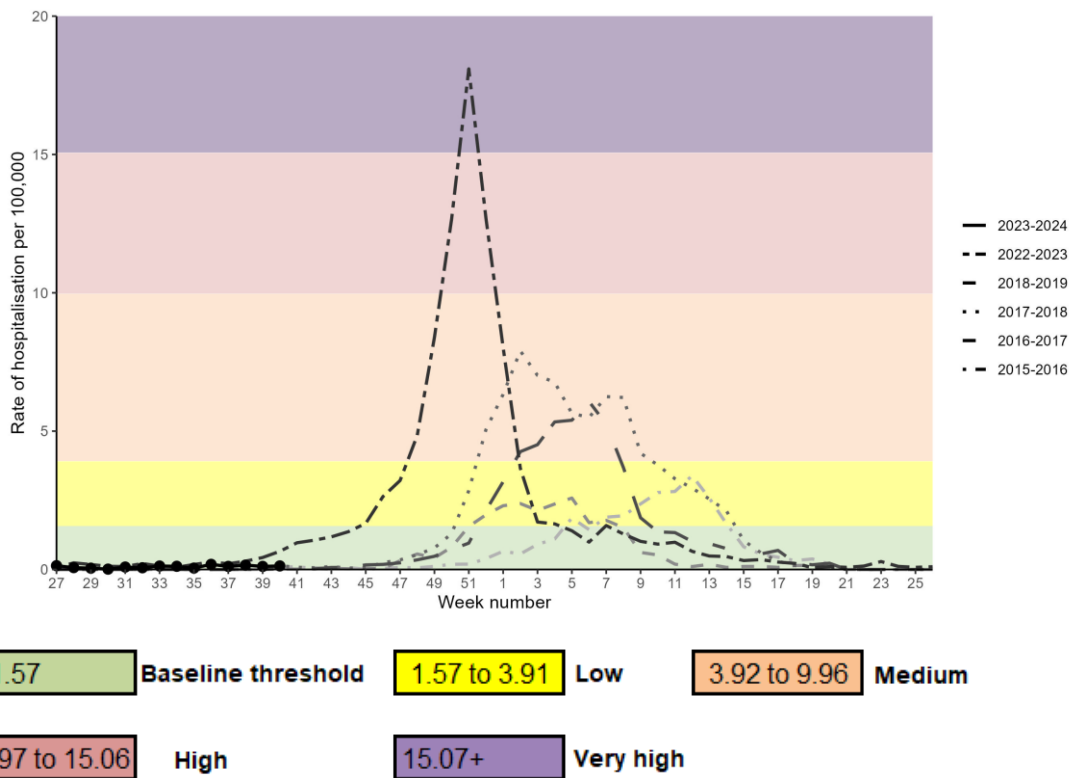
Influenza, SARI Watch

Surveillance of influenza hospitalisations to all levels of care is based on data from a small sentinel network of acute NHS trusts in England. Surveillance of admissions to ICU or HDU for influenza is mandatory with data required from all acute NHS trusts in England.

In week 40 (ending 8 October 2023), the overall weekly hospital admission rate for influenza remained low at 0.13 per 100,000 compared to 0.11 per 100,000 in the previous week. The rate in the latest week remained at baseline activity levels. By UKHSA region, the highest hospital admission rate was observed in the South West. By age group, the highest hospital admission rate was in those aged 85 years and over. There were 13 new hospital admissions for influenza (7 influenza A(not subtyped), 4 influenza A(H3N2), and 2 influenza B).

In week 40, the overall ICU or HDU rate for influenza increased slightly to 0.02 per 100,000 compared to 0.00 per 100,000 in week 39. The rate in the latest week remained at baseline activity levels. There were 7 new case reports of an ICU or HDU admission for influenza in week 40 (3 influenza A(not subtyped), 3 influenza B and one influenza A(H3N2)).

Figure 27. Weekly overall influenza hospital admission rates per 100,000 trust catchment population with MEM thresholds, SARI Watch, England

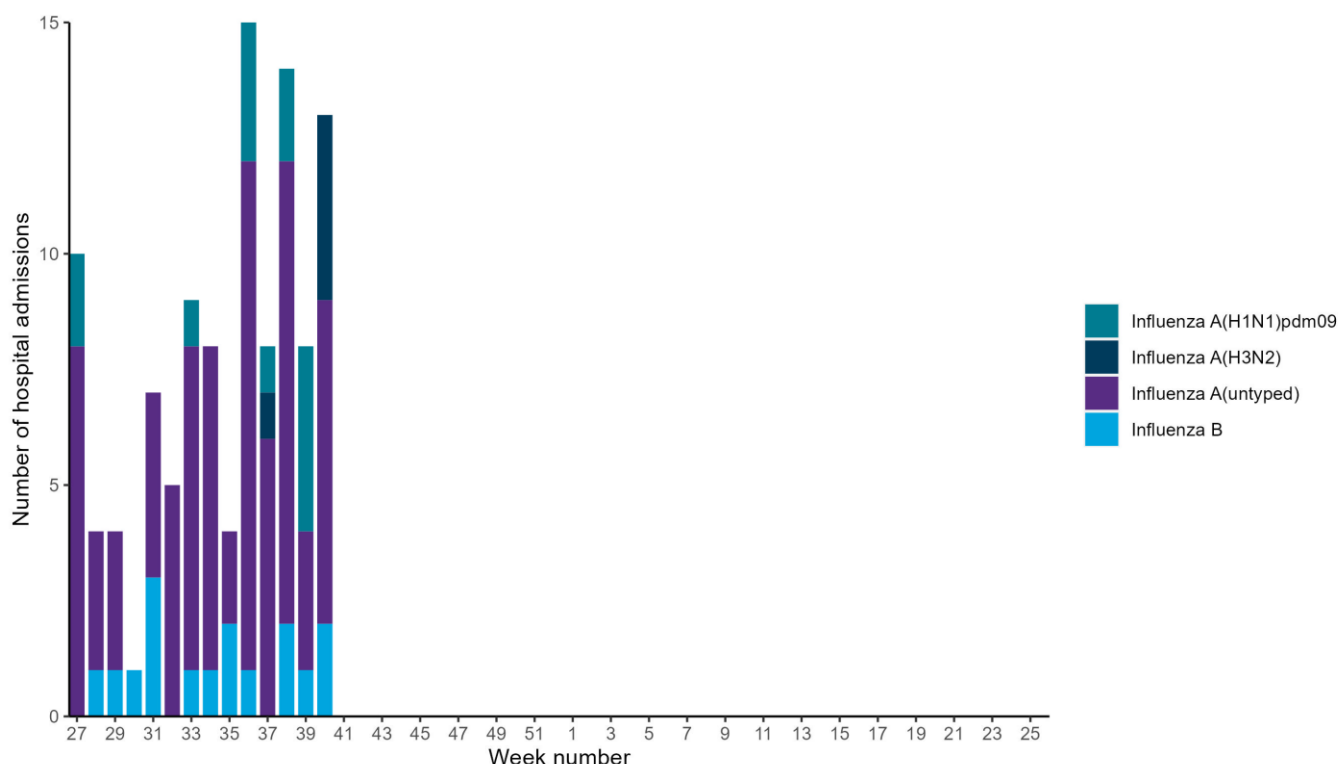


MEM thresholds are based on data from the 2016 to 2017 to the 2021 to 2022 seasons (data from 2020 to 2021 was excluded due to the COVID-19 pandemic).

Influenza hospital admission rate based on 23 sentinel NHS trusts for week 40.

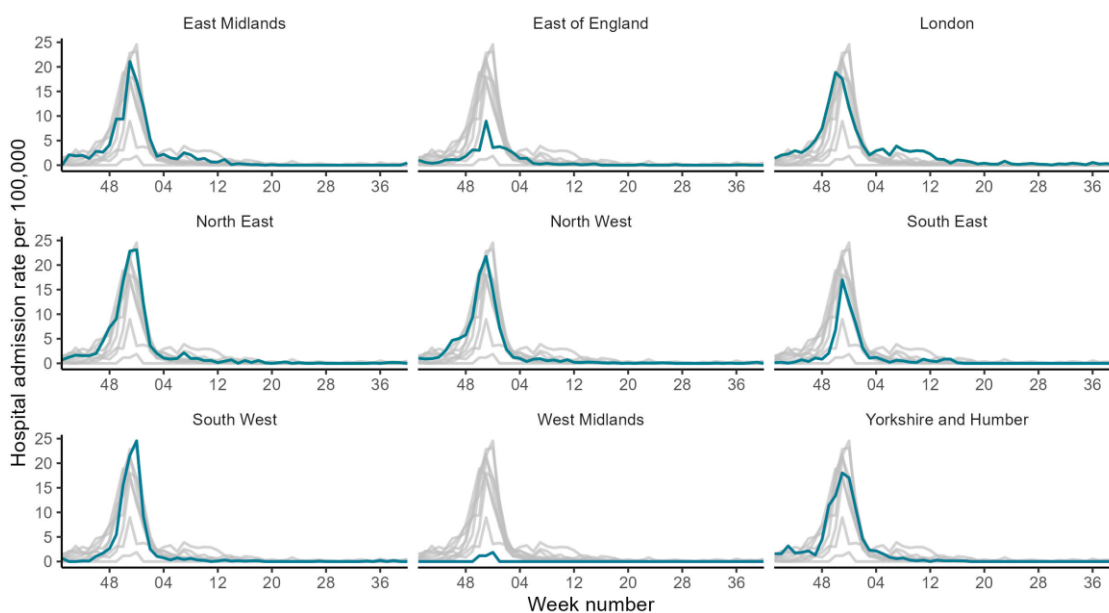
SARI Watch data is provisional and subject to retrospective updates.

Figure 28. Weekly influenza hospital admissions by influenza type, SARI Watch, England



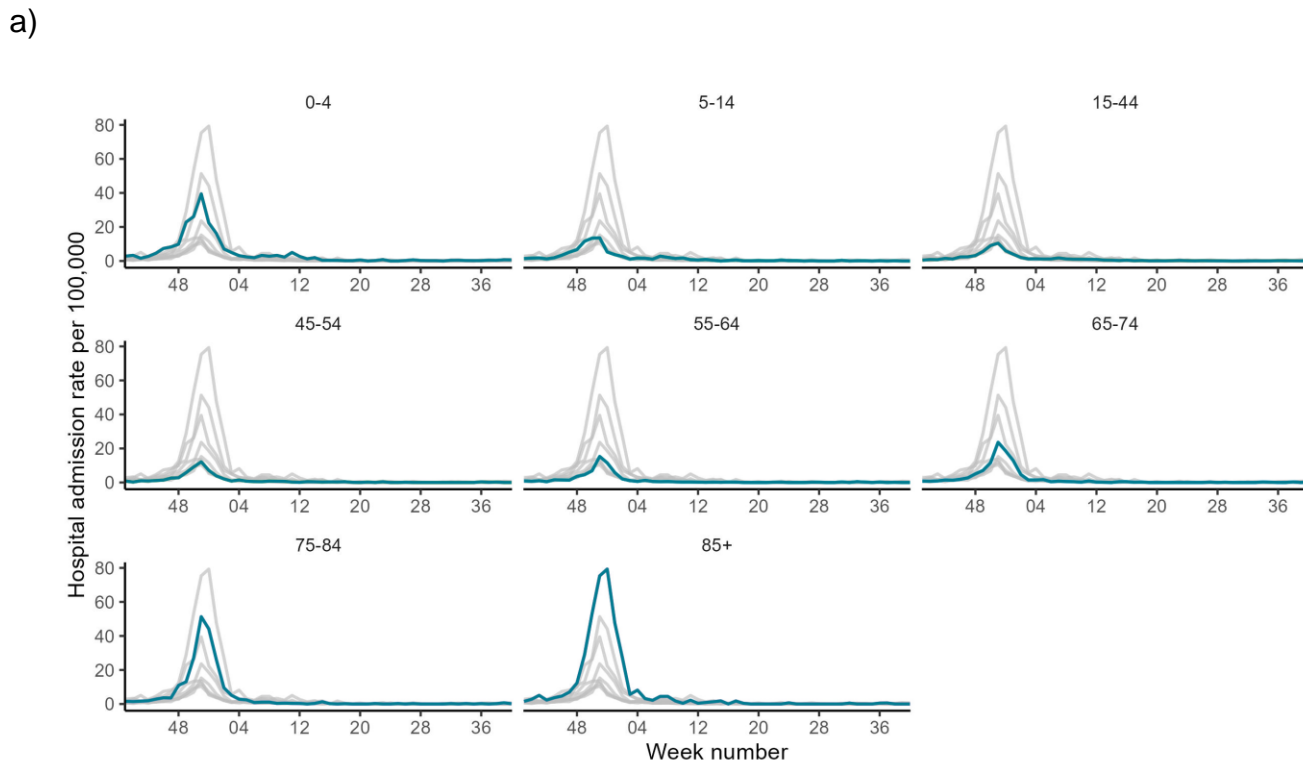
*Number of influenza hospital admissions based on sentinel NHS trusts

Figure 29. Weekly hospital admission rate by UKHSA region for new influenza reported through SARI Watch*



Rates in some regions may not include all influenza surveillance sentinel sites from week to week. Please note the highlighted line corresponds to the UKHSA region in the subplot title, grey lines correspond to all other regions.

Figure 30. Weekly hospital admission rate by age group for new influenza reported through SARI Watch - a) fixed y-axis, b) adjusted y-axis



Please note the highlighted line corresponds to the age group in the subplot title, grey lines correspond to all other age groups

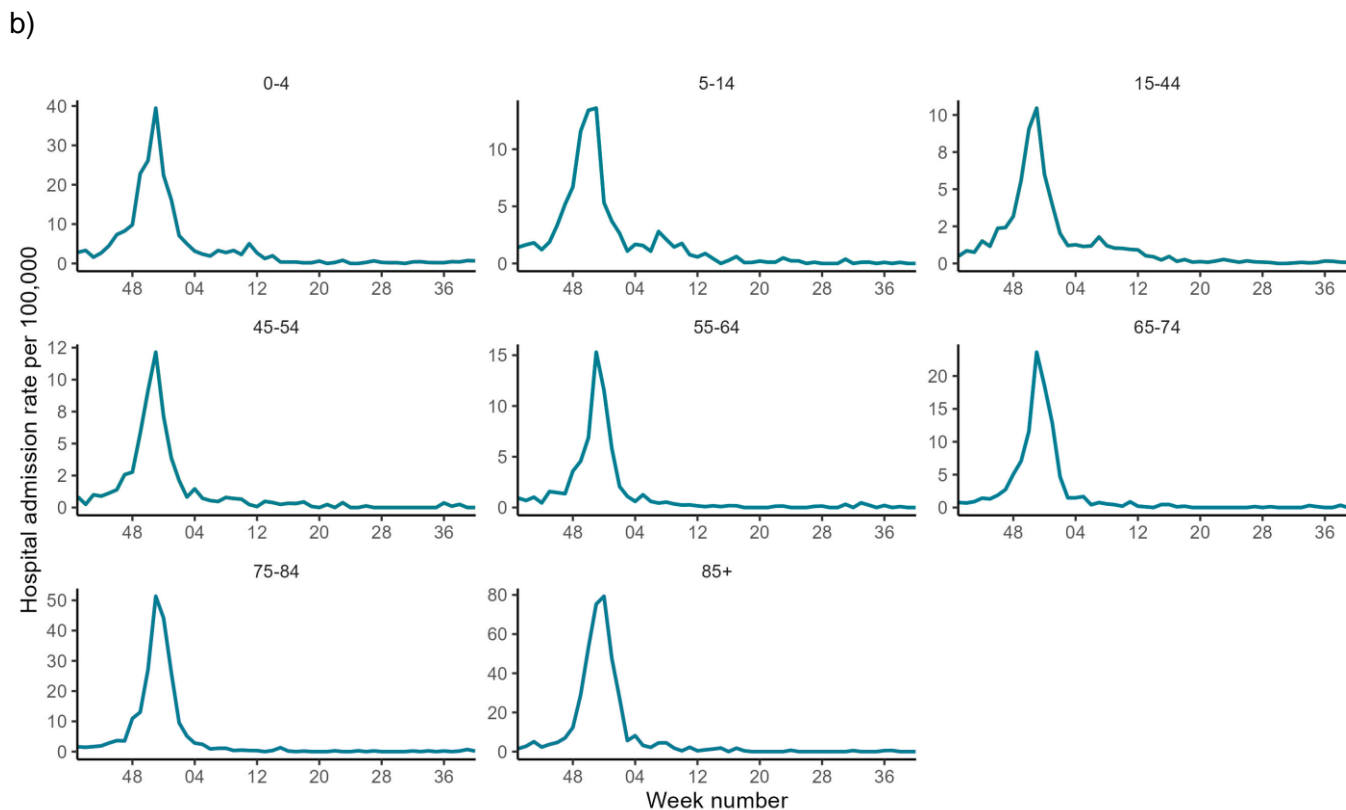
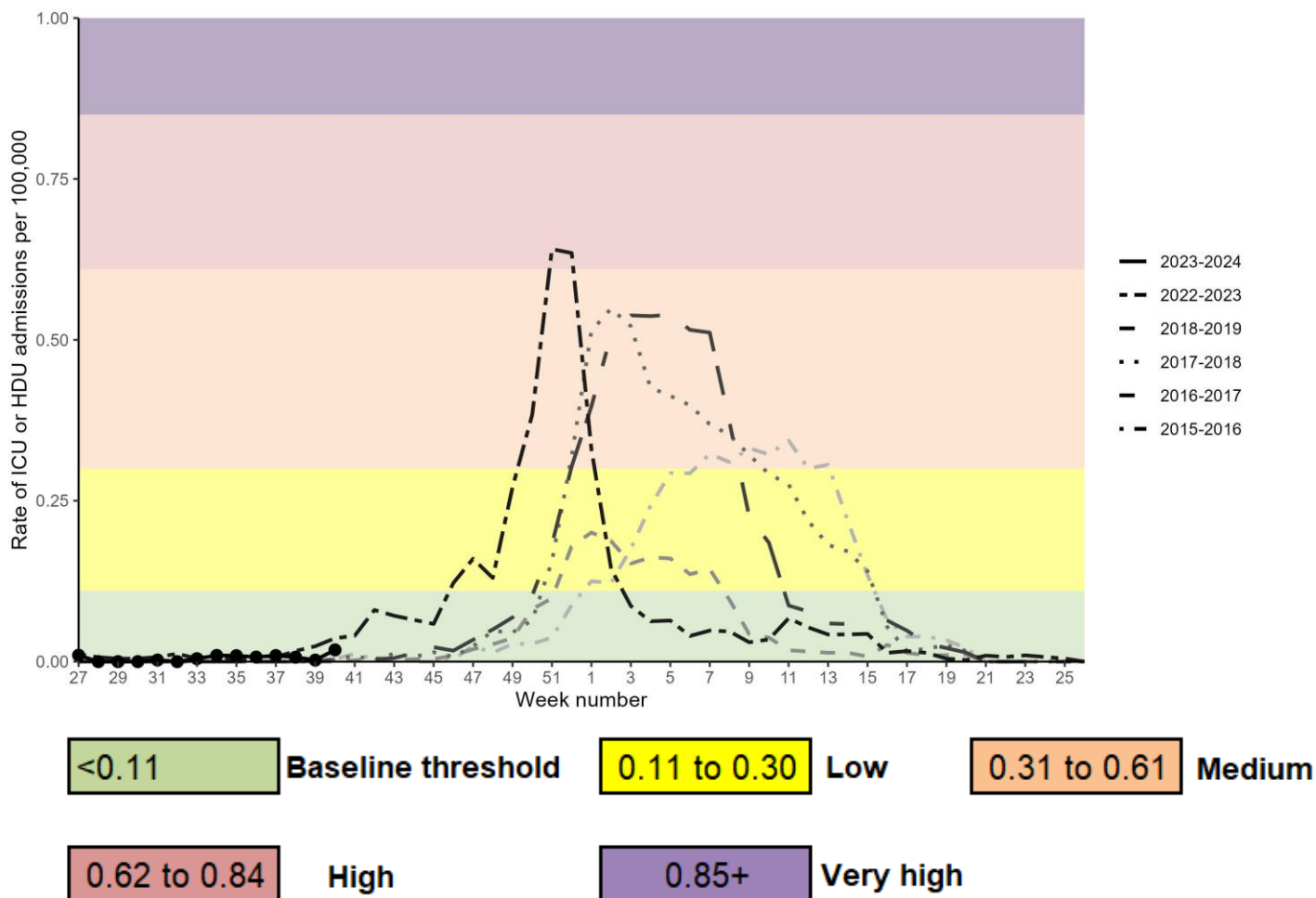


Figure 31. Weekly overall influenza ICU or HDU admission rates per 100,000 trust catchment population with MEM thresholds, SARI Watch, England



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).

Influenza ICU or HDU admission rate based on 91 NHS trusts for week 40.

SARI Watch data is provisional and subject to retrospective updates.

Figure 32. Weekly influenza ICU or HDU admissions by influenza type, as reported by SARI Watch, England

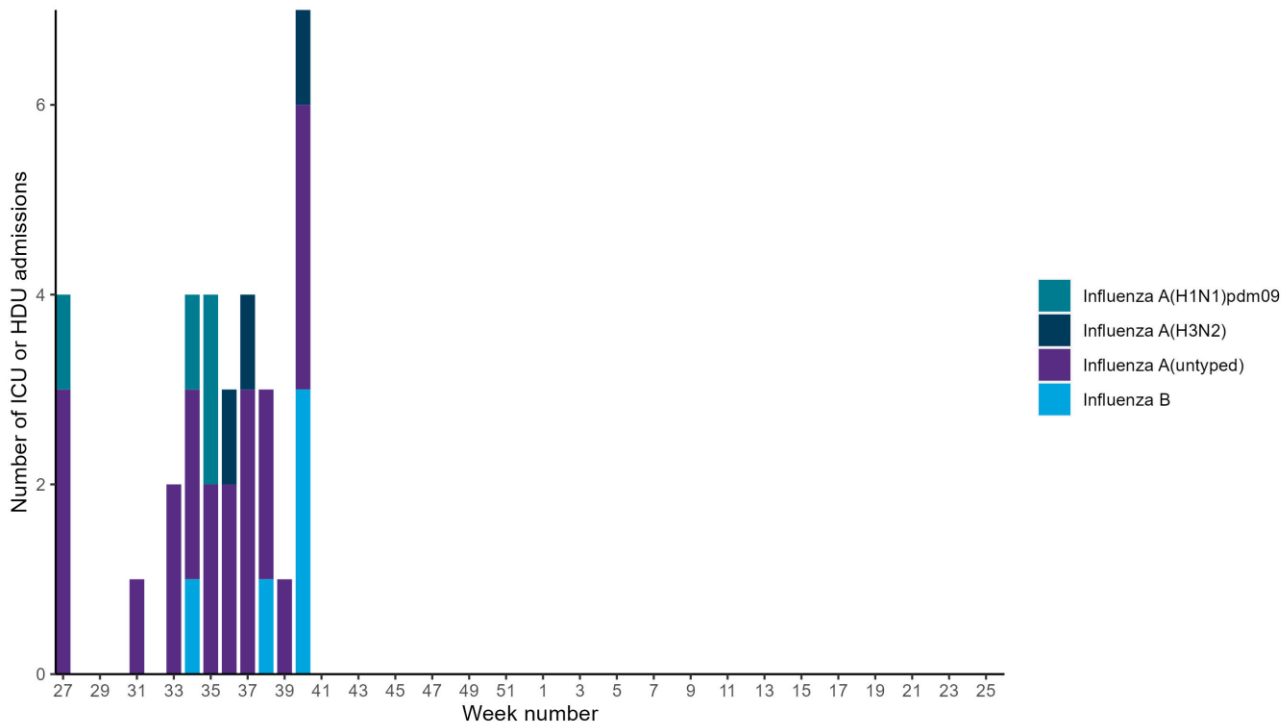
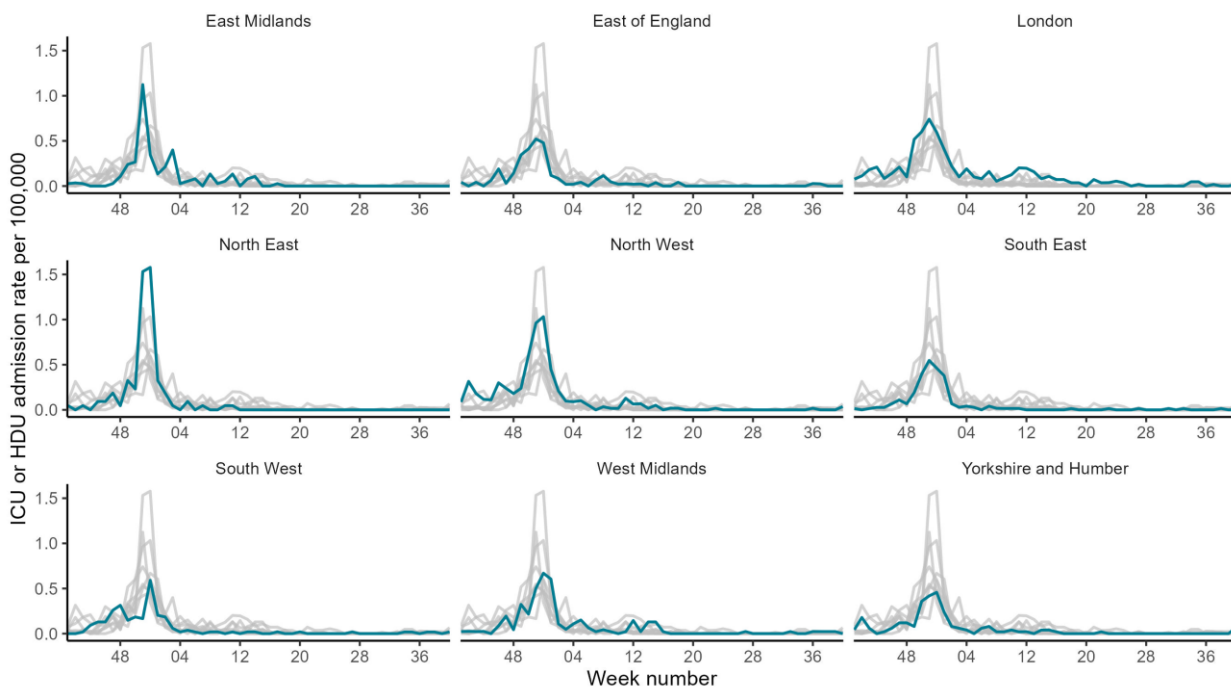
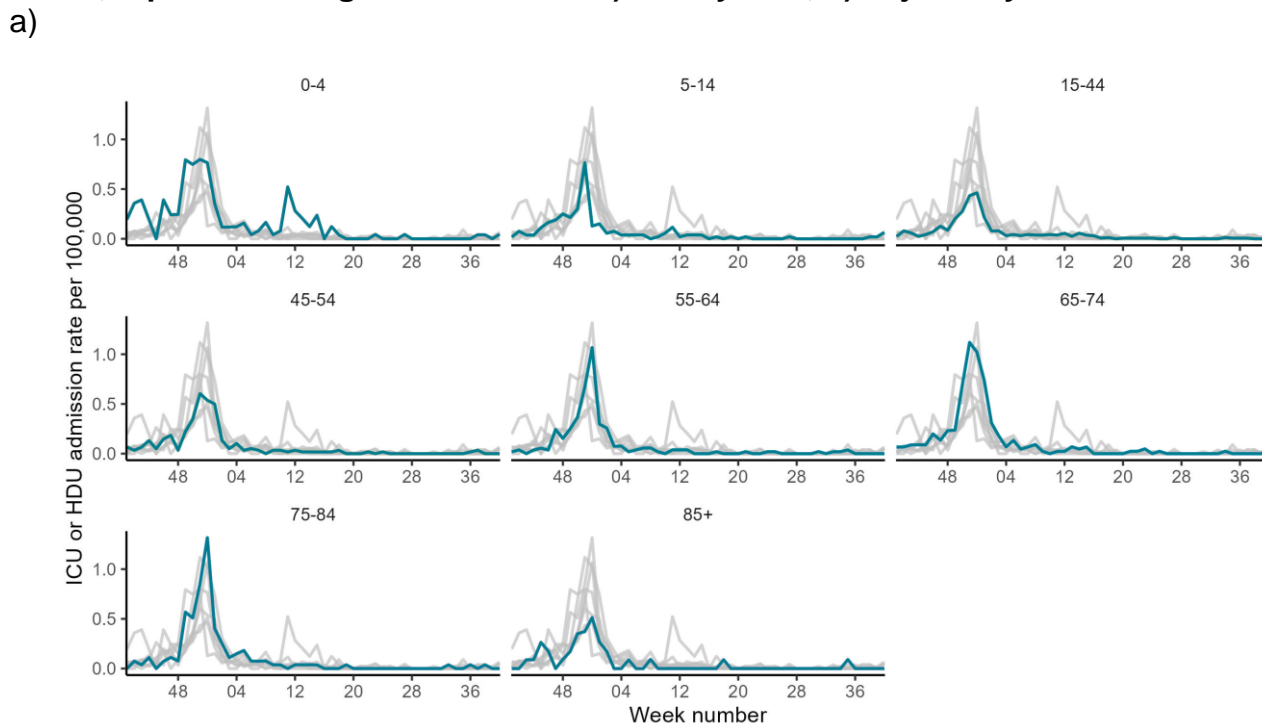


Figure 33. Weekly ICU or HDU admission rate by UKHSA region for new influenza, reported through SARI Watch

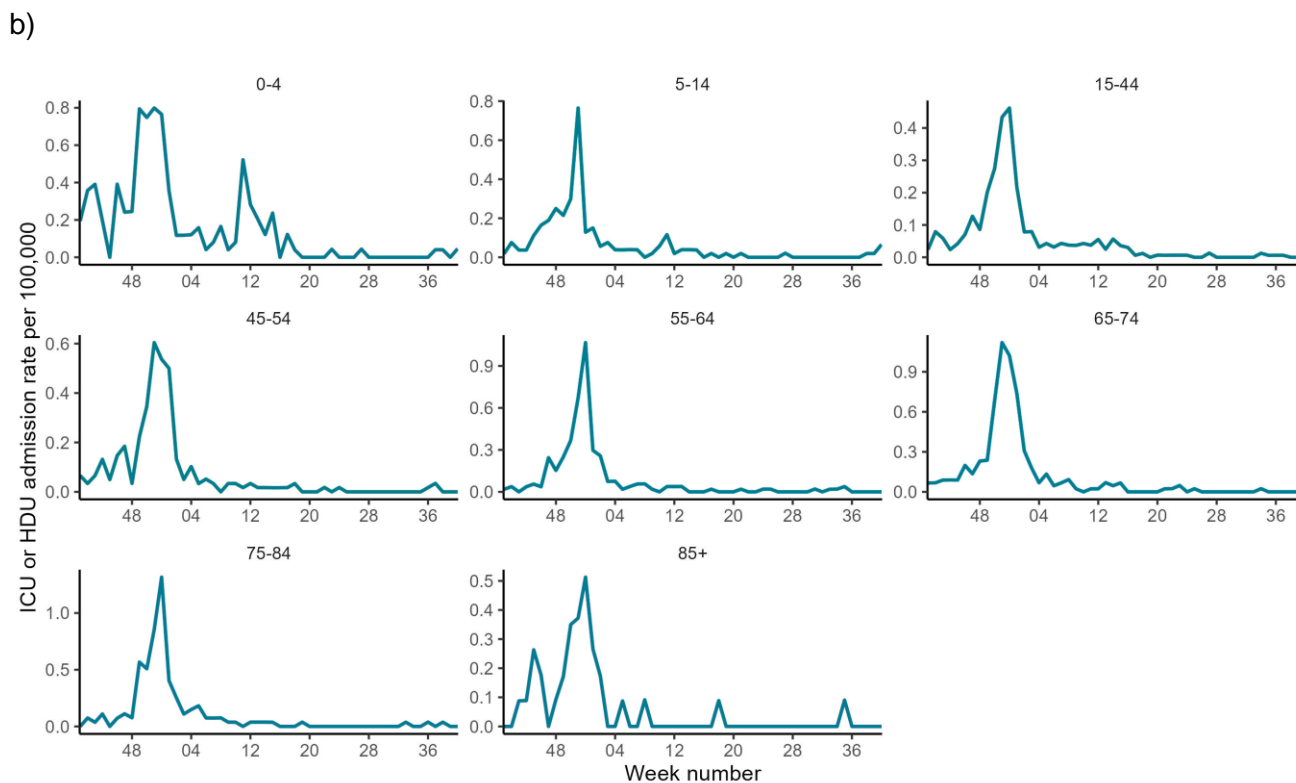


Please note the highlighted line corresponds to the UKHSA region in the subplot title, grey lines correspond to all other regions.

Figure 34. Weekly ICU or HDU admission rate by age group for new influenza cases, reported through SARI Watch - a) fixed y-axis, b) adjusted y-axis



Please note the highlighted line corresponds to the age group in the subplot title, grey lines correspond to all other age groups.



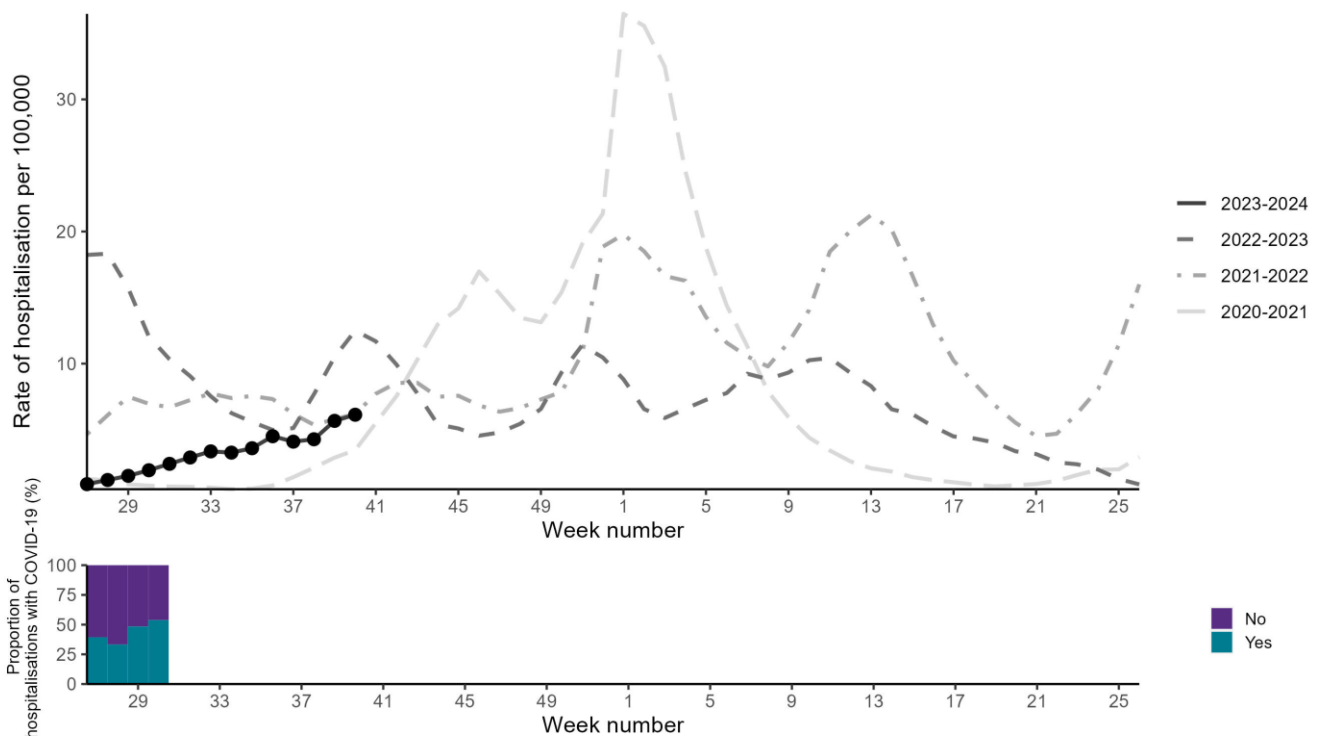
COVID-19, SARI Watch

Surveillance of COVID-19 hospitalisations to all levels of care and surveillance of admissions to ICU or HDU for COVID-19 are both mandatory with data required from all acute NHS trusts in England.

In week 40 (ending 8 October 2023), the overall weekly hospital admission rate for COVID-19 increased to 6.13 per 100,000 compared to 5.67 per 100,000 in the previous week. By UKHSA region, the highest hospital admission rate for COVID-19 was observed in the North East. By age group, the highest hospital admission rate for COVID-19 continues to be in those aged 85 years old and over.

In week 40 (ending 8 October 2023), the overall weekly ICU or HDU admission rate for COVID-19 remained stable at 0.20 per 100,000, compared to 0.20 per 100,000 in the previous week. Note that ICU or HDU admission rates may represent a lag from admission to hospital to an ICU or HDU ward. The ICU or HDU admission rate for COVID-19 by UKHSA region or by age group fluctuated at low levels in week 40 due to low underlying numbers.

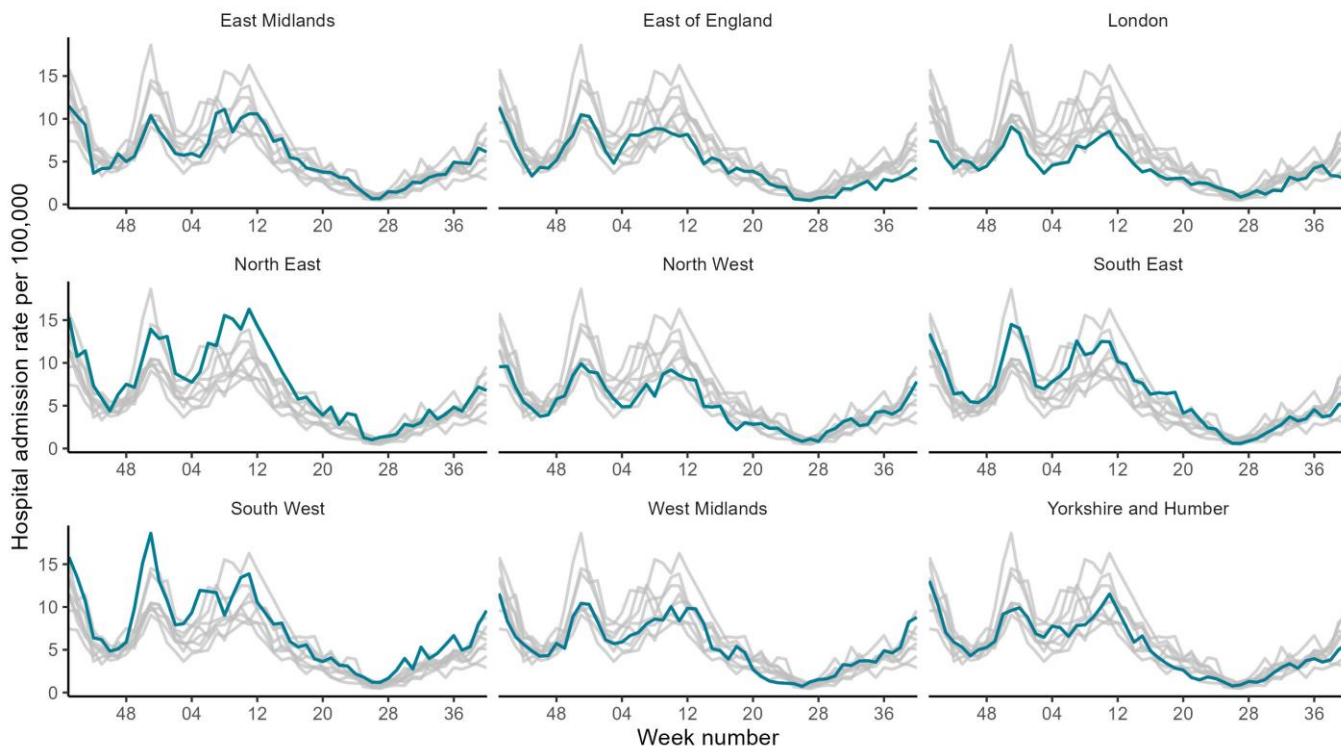
Figure 35. Weekly overall COVID-19 hospital admission rates per 100,000 trust catchment population, as reported through SARI Watch, England



COVID-19 hospital admission rate based on 87 NHS trusts for week 40.

SARI Watch data is provisional and subject to retrospective updates.

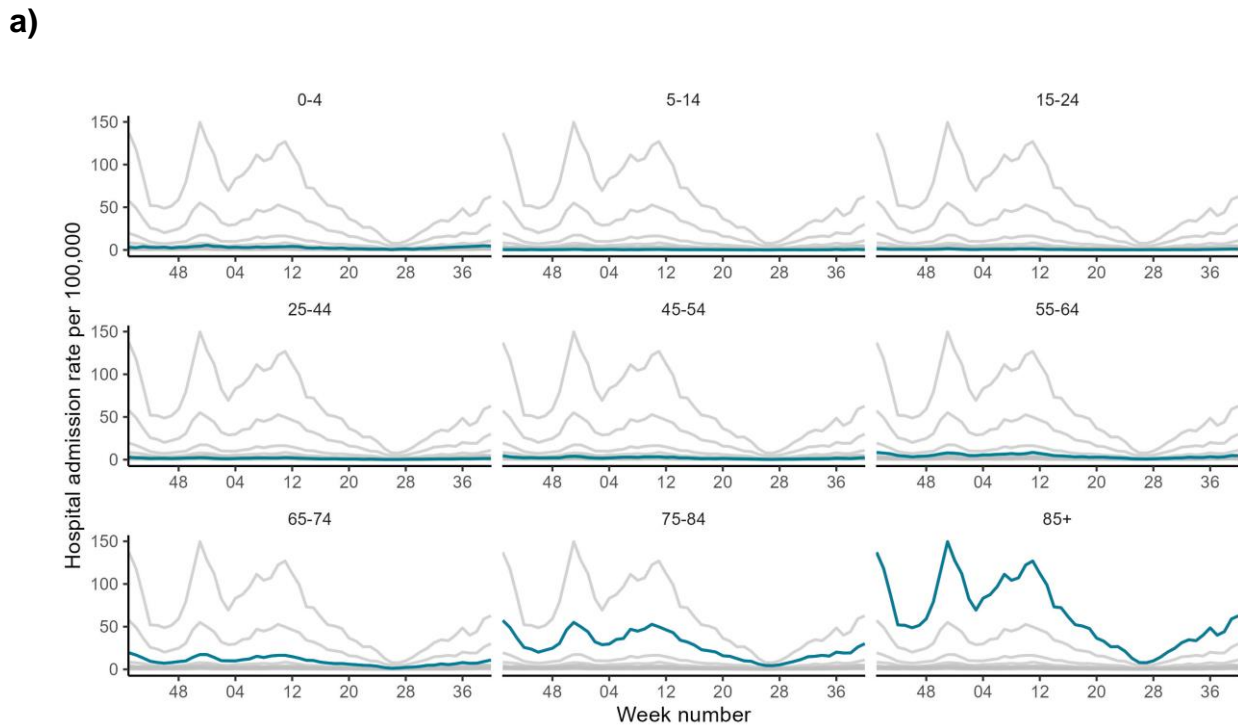
Figure 36. Weekly hospital admission rate by UKHSA region for new COVID-19 positive cases reported through SARI Watch*



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

Please note the highlighted line corresponds to the UKHSA region in the subplot title, grey lines correspond to all other regions.

Figure 37. Weekly hospital admission rate by age group for new COVID-19 positive cases reported through SARI Watch - a) fixed y-axis, b) adjusted y-axis



Please note the highlighted line corresponds to the age group in the subplot title, grey lines correspond to all other age groups.

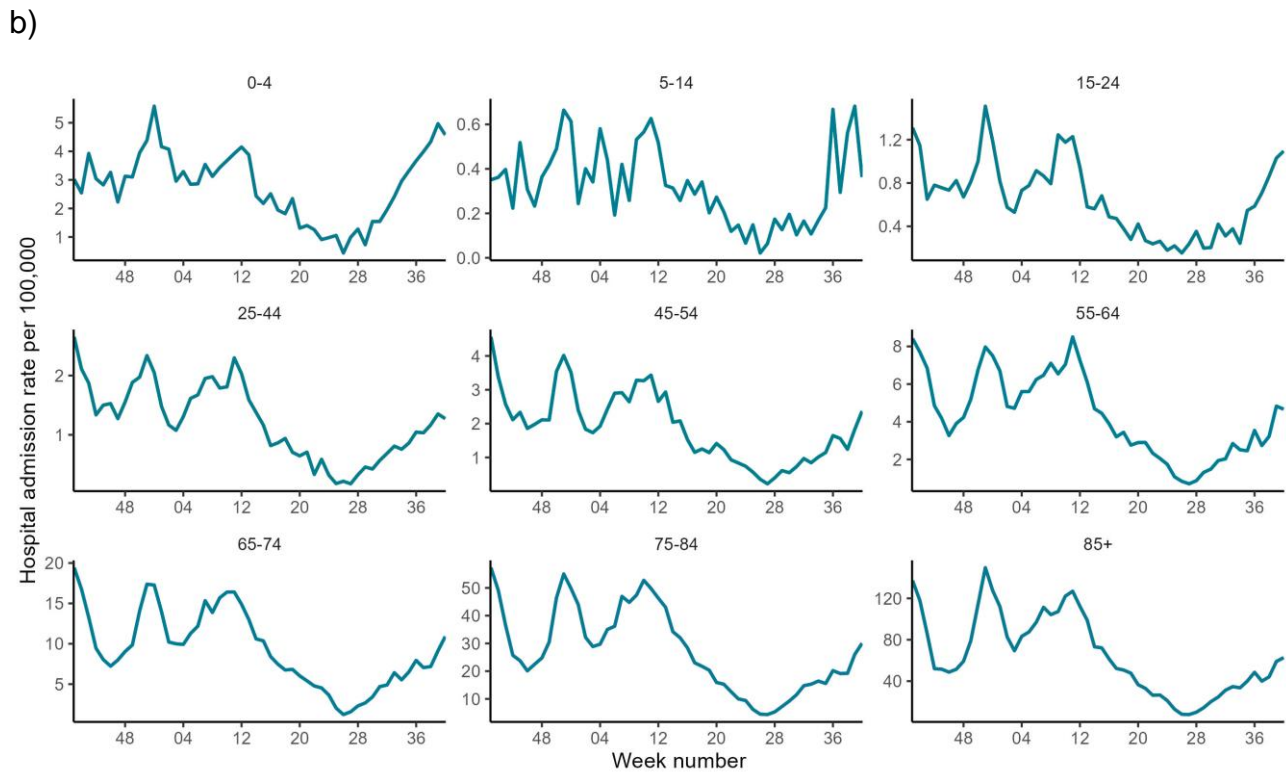
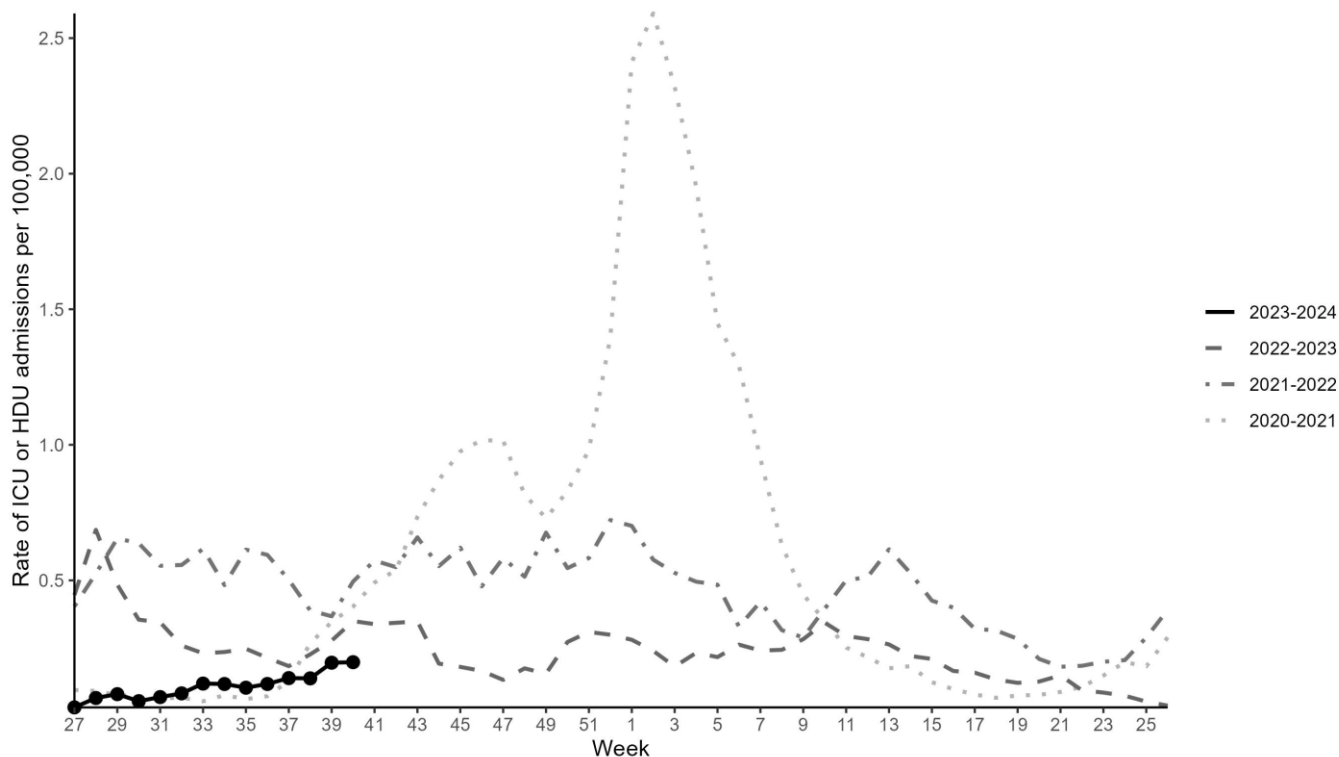


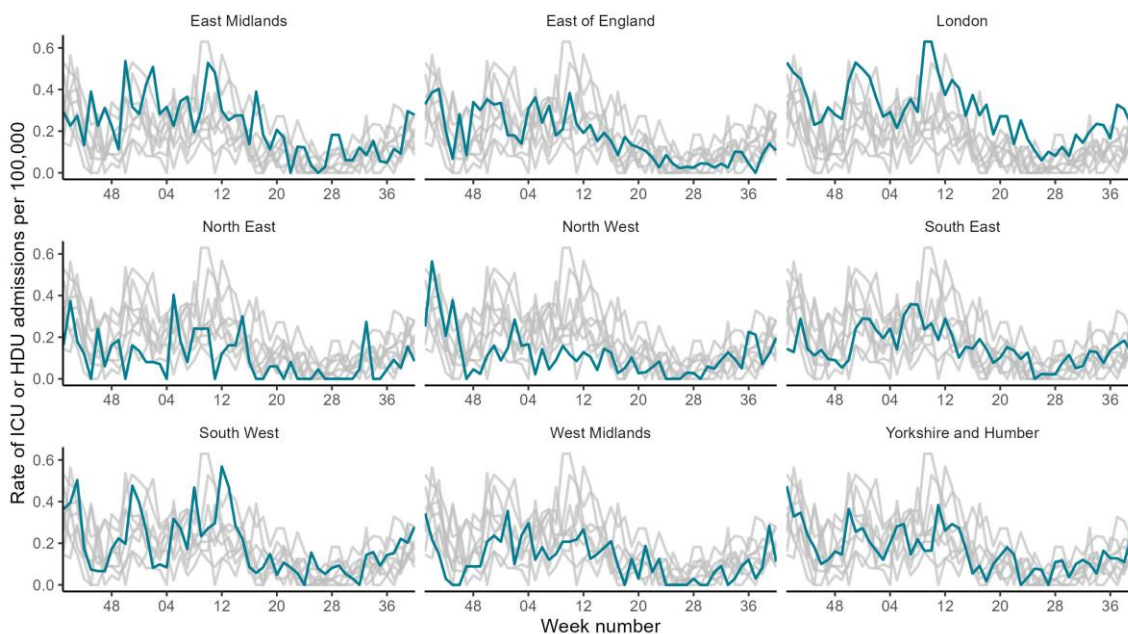
Figure 38. Weekly overall COVID-19 ICU or HDU admission rates per 100,000 trust catchment population, as reported through SARI Watch, England



COVID-19 ICU or HDU admission rate based on 71 NHS trusts for week 40.

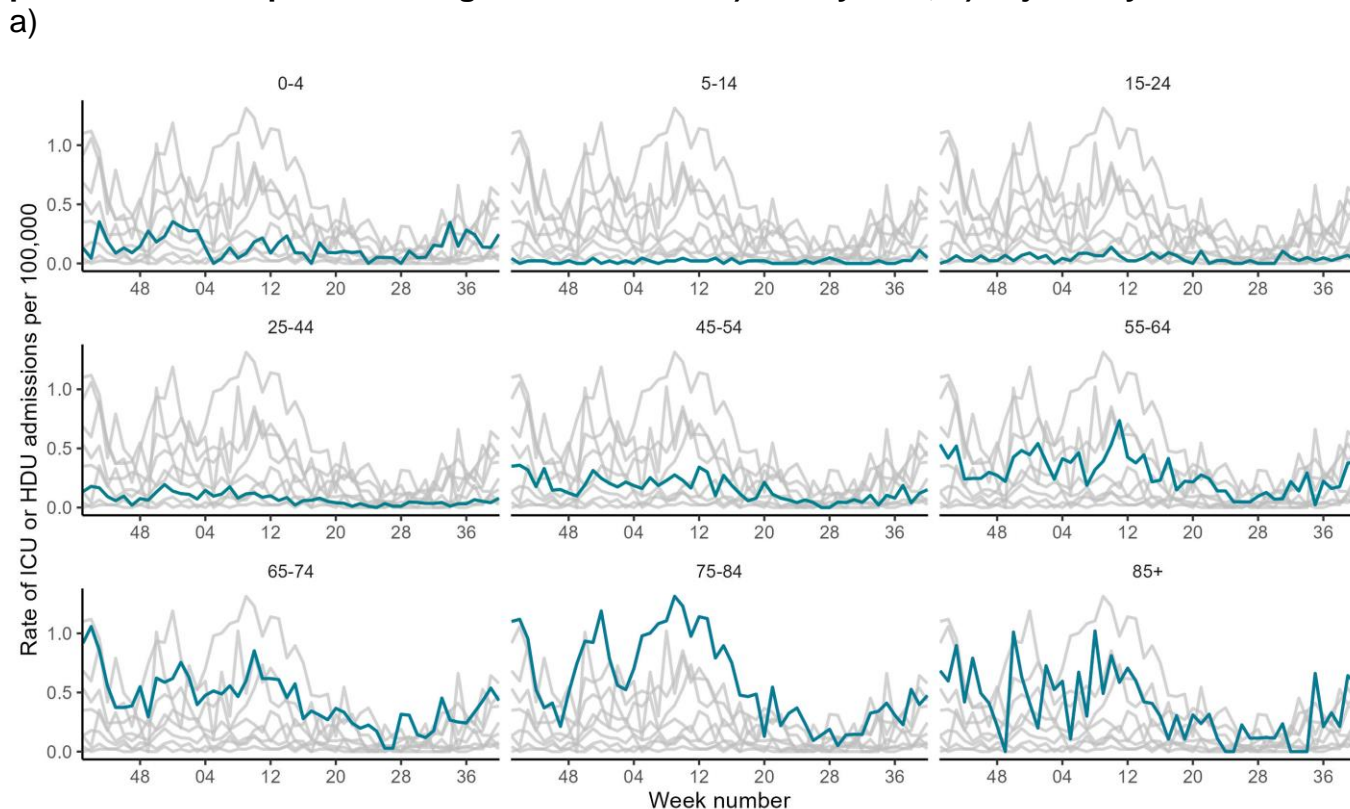
SARI Watch data is provisional and subject to retrospective updates.

Figure 39. Weekly ICU or HDU admission rate by UKHSA region for new COVID-19 positive cases reported through SARI Watch

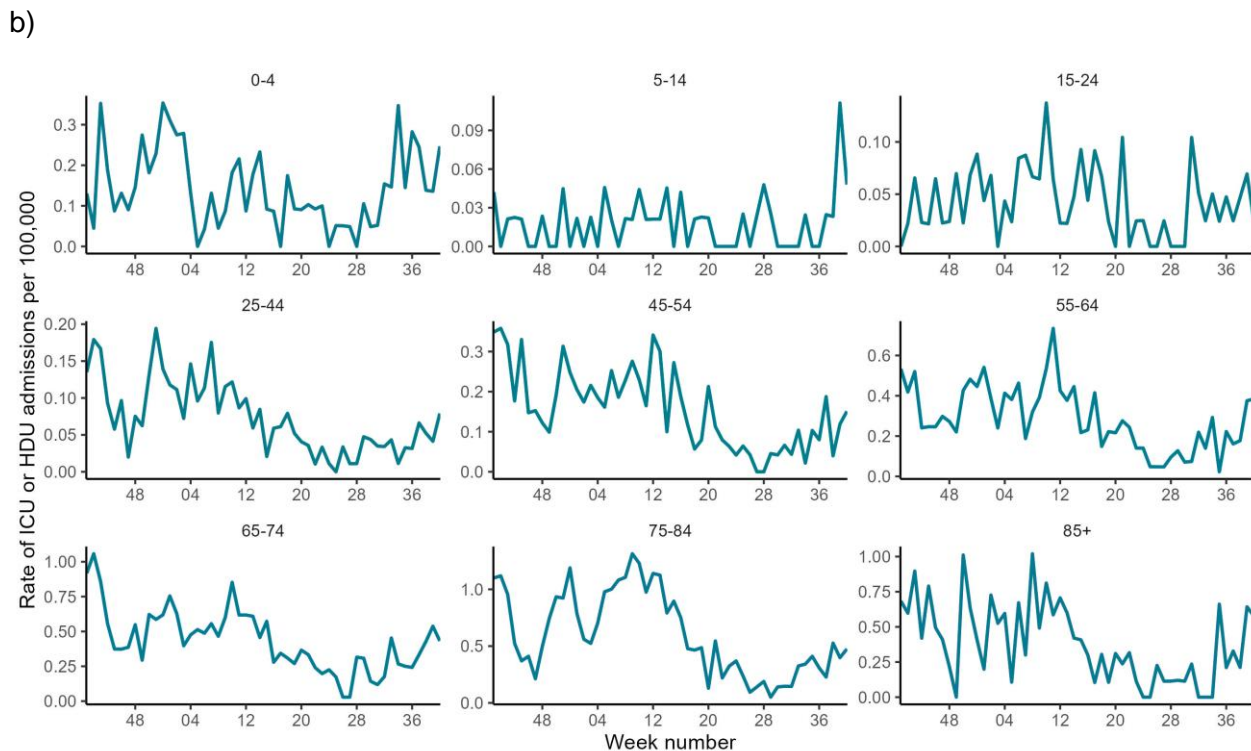


Please note the highlighted line corresponds to the UKHSA region in the subplot title, grey lines correspond to all other regions.

Figure 40. Weekly ICU or HDU admission rate by age group for new (a) COVID-19 positive cases reported through SARI Watch - a) fixed y-axis, b) adjusted y-axis



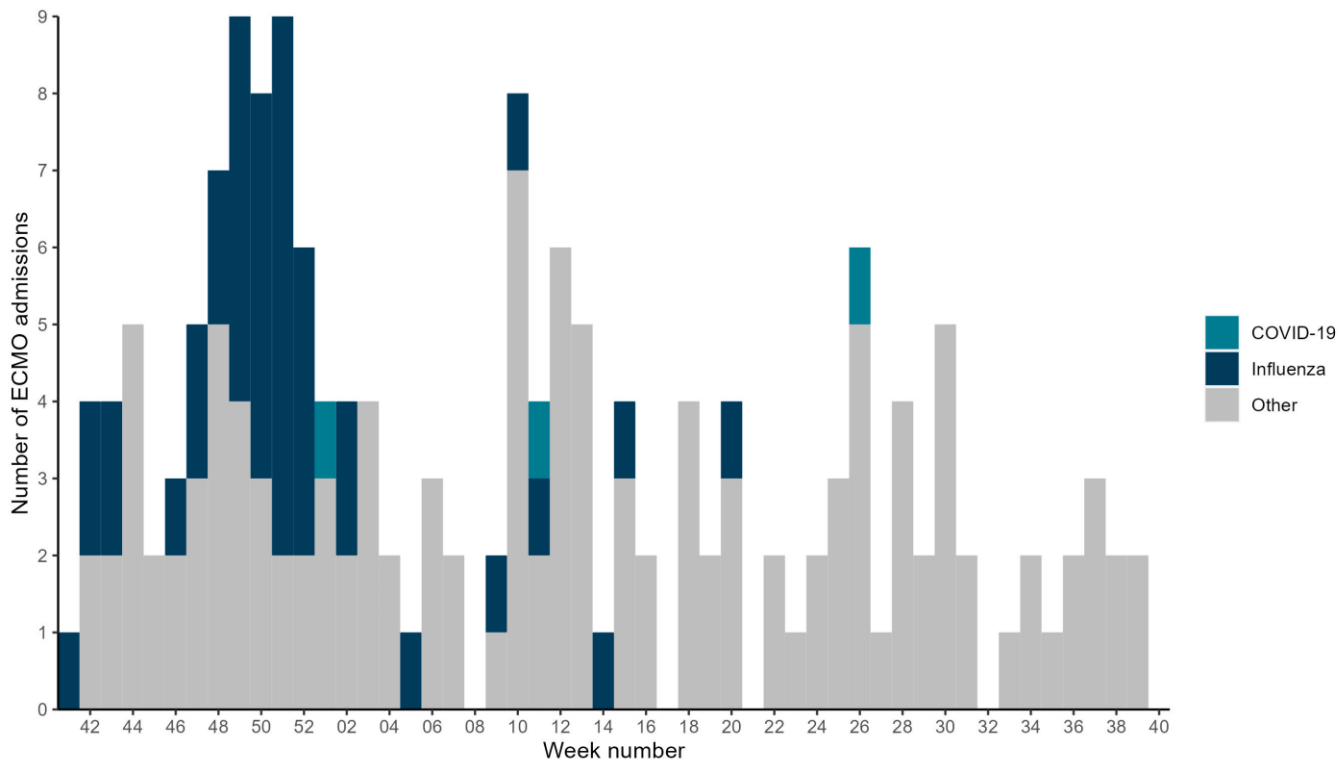
Please note the highlighted line corresponds to the age group in the subplot title, grey lines correspond to all other age groups.



ECMO, SARI Watch

There were no new extra corporeal membrane oxygenation (ECMO) admissions reported in week 40 from the 7 Severe Respiratory Failure (SRF) centres in the UK.

Figure 41. 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 40, the overall hospital admission rate for RSV remained stable at 0.49 per 100,000 compared to 0.50 per 100,000 in the previous week. The highest rate was seen in the under 5 year olds at 6.57 per 100,000, which decreased from 7.91 per 100,000 in the previous week.

Figure 42. Weekly overall hospital admission rates (including ICU or HDU) of RSV positive cases per 100,000 population reported through SARI Watch, England

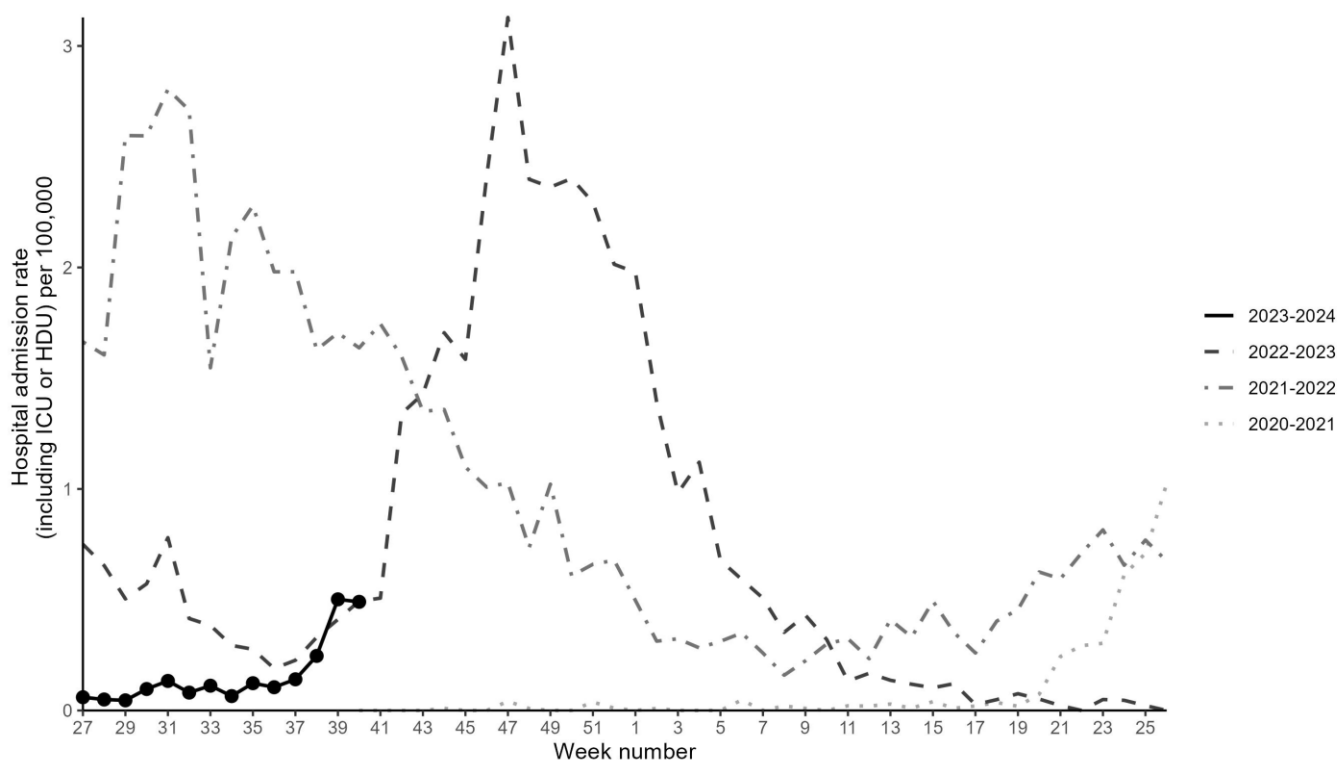


Figure 43. Weekly overall hospital admission of RSV positive cases reported through SARI Watch, England

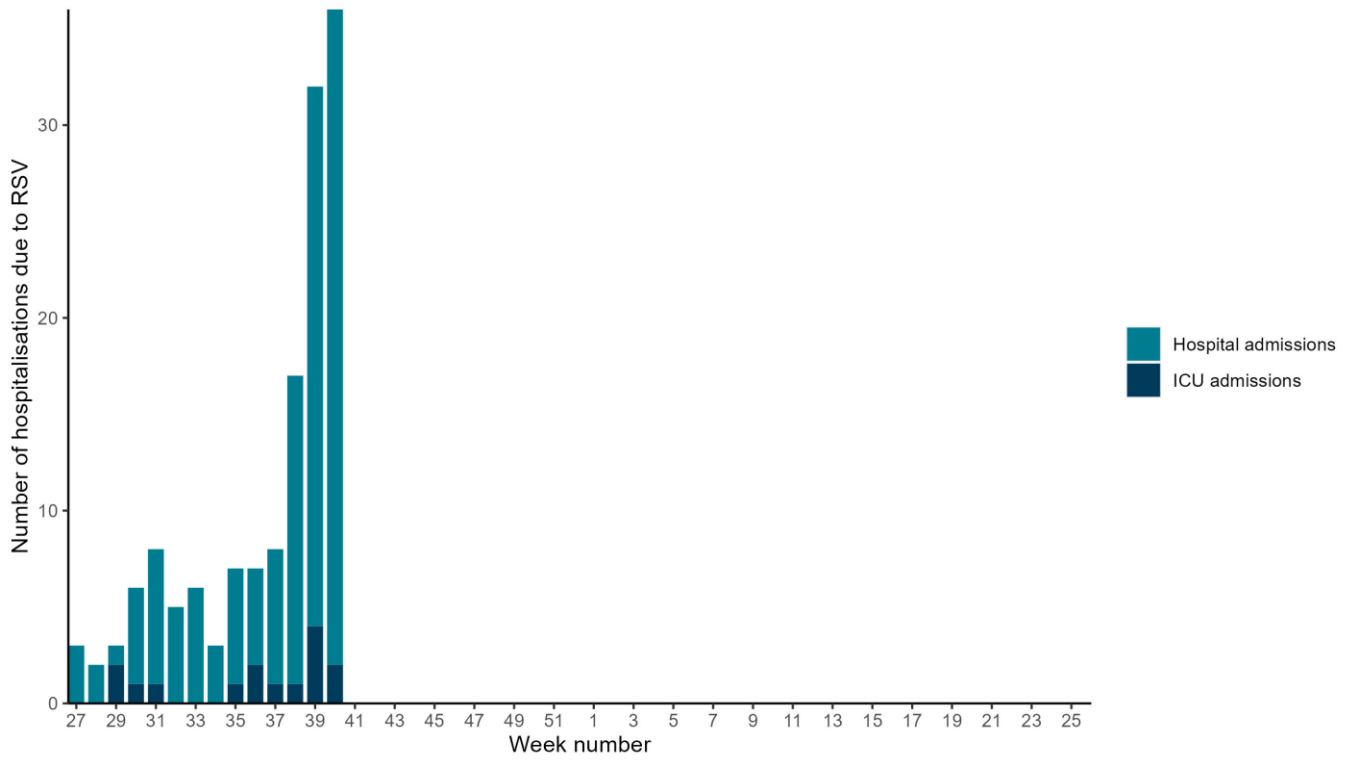
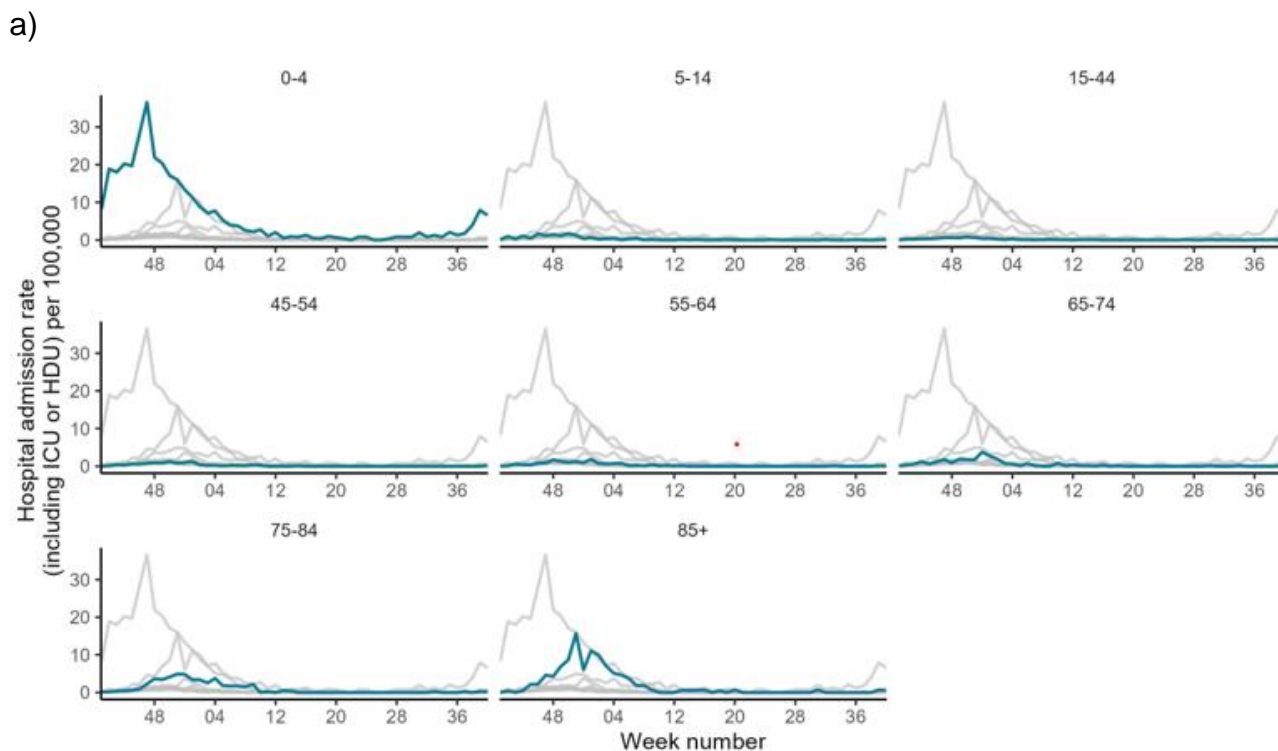
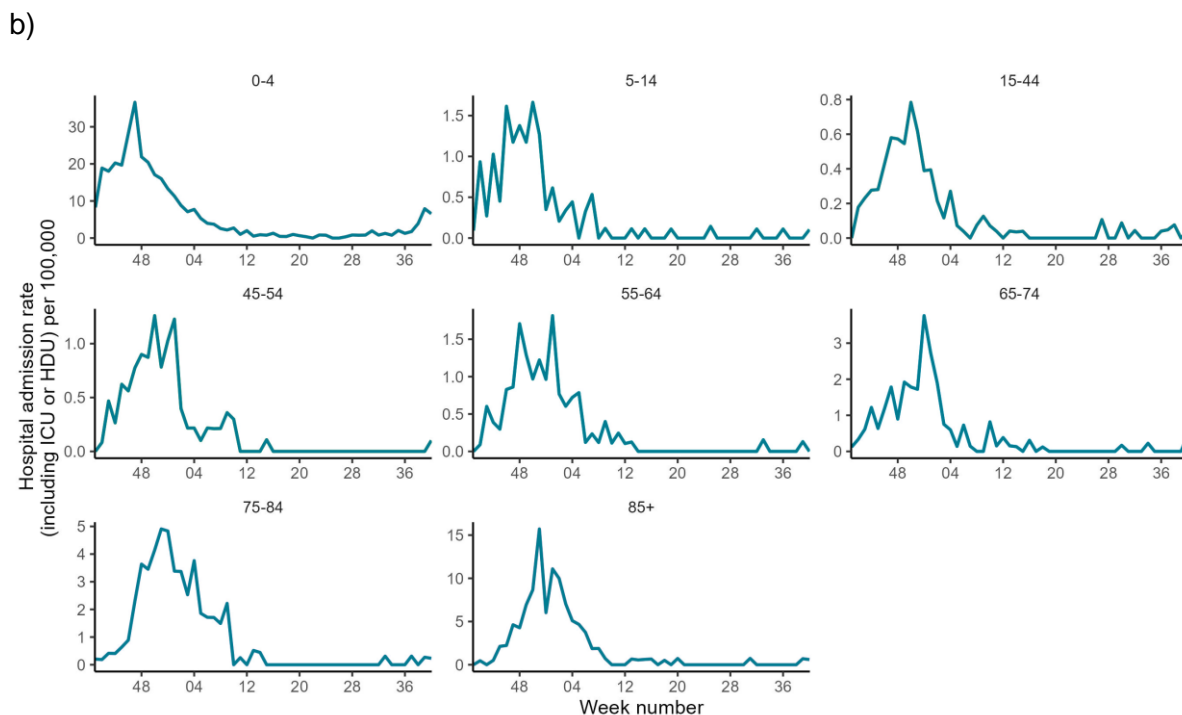


Figure 44. Weekly hospitalisation (including ICU or HDU) admission rates by age group for new RSV cases reported through SARI Watch, England - a) fixed y-axis, b) adjusted y-axis



Please note the highlighted line corresponds to the age group in the subplot title, grey lines correspond to all other age groups.



SARI Watch data is provisional.

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

Mortality surveillance

COVID-19 deaths

For further information on COVID-19 related deaths in England please see the [COVID-19 dashboard for death](#).

Daily excess all-cause mortality (England)

For further information on excess all-cause mortality in England please see the [Fingertips excess mortality in England report](#), which uses Office for National Statistics (ONS) death registration data and the [all-cause mortality surveillance report](#), which uses the European mortality monitoring (EuroMOMO) model to identify weeks with higher than expected mortality.

Influenza vaccination

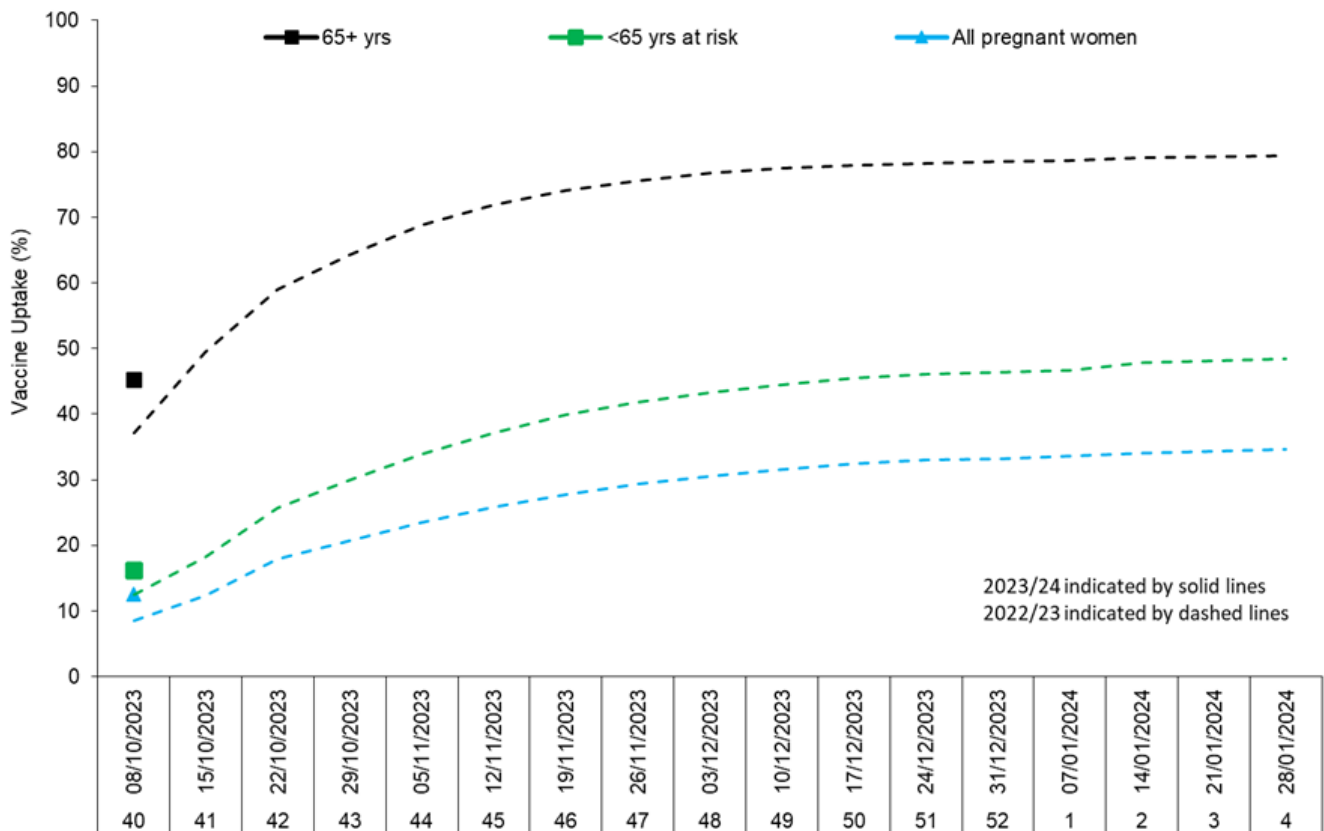
Influenza vaccine uptake in GP patients

For the first time in the 2023 to 2024 season, weekly influenza vaccine uptake data from GP patients is reported today.

Up to week 40 of 2023, in 39.6% of GP practices reporting weekly to ImmForm for the main collection, the provisional proportion of people in England who had received the 2023 to 2024 influenza vaccine in targeted groups was as follows:

- 16.1% in under 65 years in a clinical risk group
- 12.5% in all pregnant women
- 45.3% in all 65 year olds and over

Figure 45. Provisional weekly snapshot of vaccine uptake (extracted from GP practice records) for 65 years and over, pregnant women and at-risk groups for the 2023/24 season, in comparison with last season (2022/23)

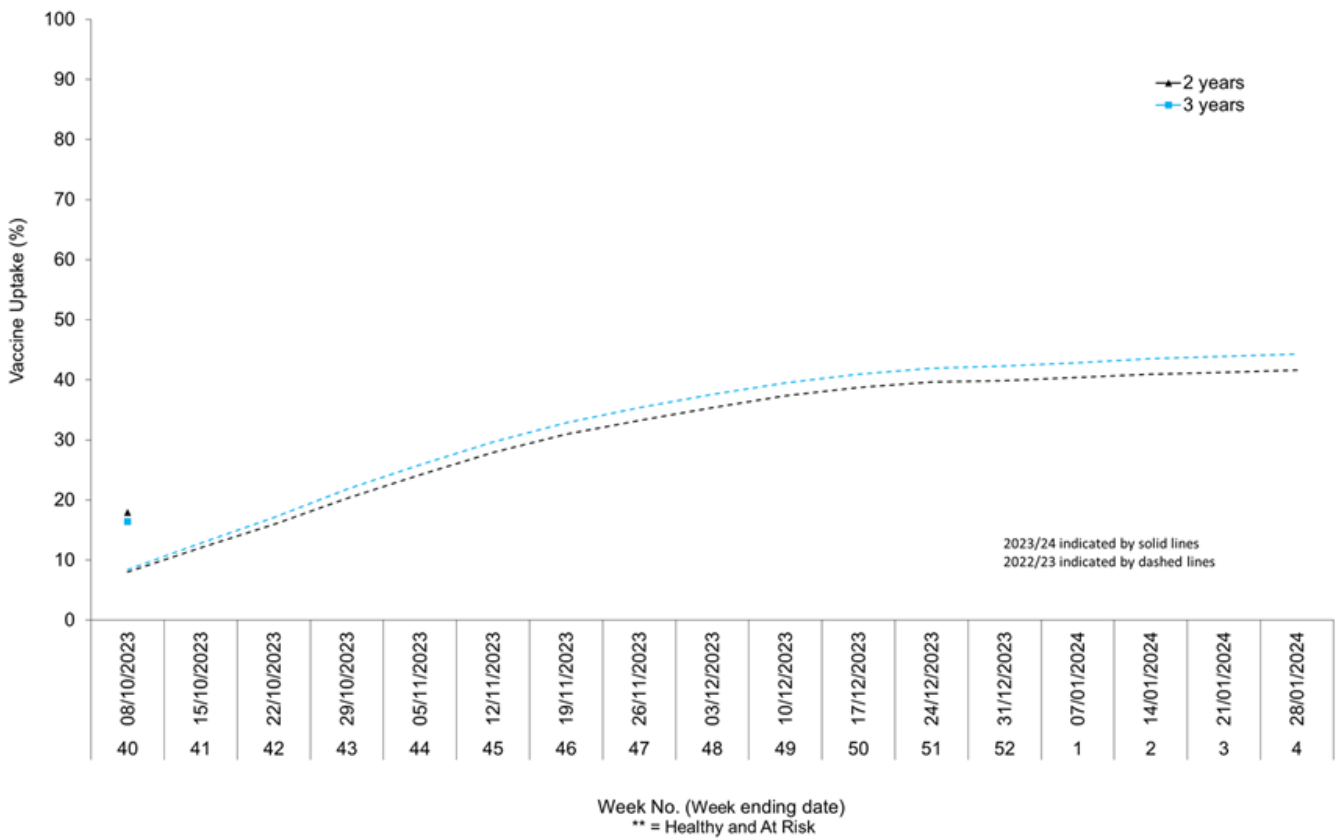


* = excluding pregnant women without other risk factors ** = Healthy and At Risk

In 2023 to 2024, all 2 and 3 year olds continue to be eligible for influenza vaccination through their GPs. Up to week 40 of 2023, in 39.8% of GP practices reporting weekly to ImmForm for the childhood collection, the provisional proportion of children in England who had received the 2023 to 2024 influenza vaccine in targeted groups was as follows:

- 17.9% in all 2 year olds
- 16.4% in all 3 year olds

Figure 46. Provisional weekly snapshot of vaccine uptake (extracted from GP records) for children aged 2-3 years old in the 2023/2024 season in comparison with last season (2022/2023) and a pandemic season 2020/2021 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 40 2023 (week ending 8 October 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 as age on 31 March 2024. 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. There are significant changes in the data feeds that provide these statistics. It is therefore necessary to report the autumn campaign on a fixed denominator, the population as at 31 of August 2023. 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.

Autumn 2023 Campaign

Immunity derived from vaccination declines over time, JCVI has recommended an autumn 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 in time for winter 2023 to 2024.

The autumn 2023 data reported below covers any dose administered from the 1 September 2024 provided there is at least 20 days from the previous dose. Eligible groups for the autumn campaign are defined in the COVID-19 healthcare guidance [Green Book](#)

Table 7 presents coverage as measured against the total population and includes people who are not yet due to have their autumn 2023 booster, specifically those turning 65 years of age by the 31 March 2024. 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.

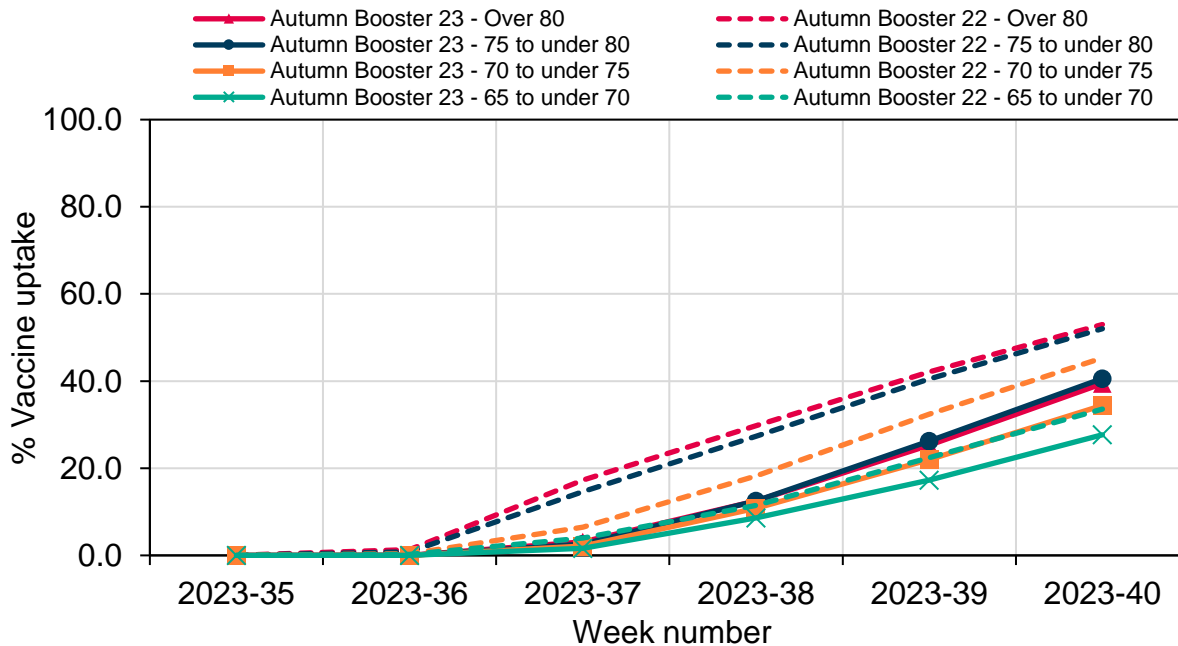
By the end of week 40 2023 (week ending 8 October 2023), 35.3% (3,942,129 out of 11,164,326) of all people aged over 65 years old who are living and resident in England who had been vaccinated with an autumn 2023 booster dose since 1 September 2023, Table 4 and Figure 47.

Table 4. Provisional cumulative people vaccinated by age with a dose of COVID-19 vaccine from the 1 September 2023 as part of the autumn 2023 campaign in England

National	People in NIMS cohort who are living and resident in England	Vaccinated since 1 September 2023*	Percentage vaccine uptake
Over 80	3,010,182	1,186,973	39.4
75 to under 80	2,458,682	998,269	40.6
70 to under 74	2,672,292	919,920	34.4
65 to under 70	3,023,170	836,967	27.7
Aged 65 and over	11,164,326	3,942,129	35.3

*Autumn 2023 booster defined as any dose of vaccine given after 1 September 2023, provided there is an interval of at least 20 since any previous dose.

Figure 47. Cumulative weekly COVID-19 vaccine uptake in those who are living and resident in England vaccinated with a autumn 2023 booster since 1 September 2023



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

Proportion of people vaccinated by time since last vaccination

Table 5. 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	3,010,182	1,187,051	39.4	904,354	30.0	814,456	27.1
75 to under 80	2,458,682	998,327	40.6	710,016	28.9	659,136	26.8
70 to under 75	2,672,292	919,995	34.4	70,322	2.6	1,540,702	57.7
65 to under 70	3,023,170	837,074	27.7	55,744	1.8	1,918,001	63.4
60 to under 65	3,691,023	377,106	10.2	52,007	1.4	2,942,547	79.7
55 to under 60	4,133,235	250,098	6.1	41,378	1.0	3,402,804	82.3
50 to under 55	4,127,778	178,263	4.3	29,630	0.7	3,362,060	81.4
45 to under 50	3,873,067	112,732	2.9	18,146	0.5	3,016,308	77.9
40 to under 45	4,410,433	88,123	2.0	13,913	0.3	3,268,554	74.1
35 to under 40	4,711,499	69,959	1.5	10,520	0.2	3,307,696	70.2
30 to under 35	4,788,980	54,651	1.1	8,289	0.2	3,236,879	67.6
25 to under 30	4,416,848	36,147	0.8	6,334	0.1	2,966,609	67.2
20 to under 25	3,787,791	23,125	0.6	4,562	0.1	2,654,009	70.1
18 to under 20	1,402,413	5,451	0.4	2,515	0.2	946,657	67.5
16 to under 18	1,430,176	2,520	0.2	2,277	0.2	868,523	60.7
12 to under 16	2,994,199	2,200	0.1	5,970	0.2	1,249,849	41.7
5 to under 12	4,998,730	209	0.0	7,907	0.2	465,228	9.3

Table 5 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 index of multiple deprivation (IMD), for those aged 65 and over can be found in the backing tables.

A regional breakdown of the ethnicity data is available in this reports [accompanying data files](#).

COVID-19 data on the real-world effectiveness of the COVID-19 vaccines, and on COVID-19 vaccination in pregnancy is available in [the COVID-19 vaccine surveillance reports](#).

COVID-19 management information on the number of COVID-19 vaccinations provided by the NHS in England is available on the [COVID-19 vaccinations](#) webpage.

UK COVID-19 daily vaccination figures and definitions is available on 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.

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

For further information on the global influenza situation please see the [World Health Organization \(WHO\) Influenza update](#).

Influenza in Europe

For further information on influenza in Europe please see the [Joint ECDC-WHO Europe Influenza weekly update](#).

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

For further information, please see the [Latest WHO update on 14 July 2023](#) and the [Latest UKHSA avian influenza technical briefing 14 July 2023](#)

Middle East respiratory syndrome coronavirus (MERS-CoV)

For further information please see the [WHO Disease Outbreak News Reports](#) and the [WHO publishes monthly updates](#).

[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](#)

[RCGP Virology Dashboard](#)

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www.gov.uk/government/organisations/uk-health-security-agency

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