UK Health Security Agency

Weekly national Influenza and COVID-19 surveillance report

Week 10 report (up to week 9 data)

10 March 2022

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.

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 9 (between 28 February 2022 and 6 March 2022) and for some indicators daily data up to 8 March 2022.

Surveillance indicators suggest that at a national level COVID-19 activity increased in most indicators in week 9 of 2022. Laboratory indicators suggest that influenza activity is low.

Overall COVID-19 case rates increased in week 9. Case rates increased in all regions, ethnic groups and age groups. Overall Pillar 1 and Pillar 2 positivity increased compared to the previous week. Increases may be attributable to the gradual increase in social contacts over recent weeks, as seen in FluSurvey self-reported daily contact rates.

The legal requirements on self-isolation for cases of COVID-19 ended in week 9 (3 March 2022). Public health guidance remains in place for cases and their close contacts.

The overall number of reported acute respiratory incidents remained stable in the UK overall but increased slightly in England in the past week. SARS-CoV-2 was identified in the majority of these.

COVID-19 hospitalisations increased in week 9. Deaths with COVID-19 decreased in the most recent week.

COVID-19 vaccine coverage for all ages was 69.5% for dose 1 and 65.0% for dose 2 at the end of week 9. COVID-19 vaccine coverage for all ages for dose 3 was at 50.5% at the end of week 9, reaching over 80% in all cohorts over the age of 60.

Through Respiratory Datamart, influenza positivity is low at 1.1% in week 9. Other indicators for influenza such as hospital admissions and GP influenza-like illness consultation rates remain very low. Respiratory syncytial virus positivity remained low but increased slightly to 1.2% in week 9, with the highest positivity in the under 5 year olds at 4.3%. Rhinovirus positivity increased slightly to 12.4% and human metapneumovirus (hMPV) positivity remained low at 0.7% in week 9. Adenovirus positivity increased to 5.3% in week 9, while parainfluenza positivity remained low at 0.9% in week 9.

Laboratory surveillance

Confirmed COVID-19 cases (England)

From 31 January 2022, UKHSA moved all COVID-19 case reporting in England to use a new 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 lateral flow device (LFD)). Each infection episode begins with the earliest positive specimen date. Further information can be found on the UK COVID-19 dashboard.

As of 9am on 8 March 2022, a total of 16,321,911 episodes have been confirmed for COVID-19 in England under Pillars 1 and 2, since the beginning of the pandemic.

Overall COVID-19 case rates increased in week 9. Case rates increased in all regions, ethnic groups and age groups. Overall Pillar 1 and Pillar 2 positivity increased compared to the previous week.

* From the week 32 2021 report onwards, case rates have been updated to use the latest ONS population estimates for mid-2020. Previously case rates were calculated using the mid-2019 population estimates. Rates by ethnicity and IMD quantile will continue to be presented using the mid-2019 estimates, until the mid-2020 estimates become available.

* Please note that positivity is presented as positivity by PCR testing only, unless otherwise stated (for example figure 2).

* Changes to testing policies over time may impact on positivity rates and incidence rates, and should be interpreted accordingly.

* From 11 January 2022 the requirement for confirmatory PCR testing in individuals who test positive using a lateral flow device was temporarily removed. On 21 February, the government published a new plan for living with COVID-19.

* Data is shown by the week the specimen was taken from the person being tested. This gives the most accurate analysis of this time progression, however, for the most recent week results for more samples are expected therefore this should be interpreted with caution

* Positivity (excluding Figure 2) is calculated as the number of individuals testing positive during the week divided by the number of individuals tested during the week through PCR testing

* Data source: Second Generation Surveillance System (SGSS)

Figure 1: Confirmed COVID-19 episodes tested under Pillar 1 and Pillar 2, based on sample week with overall weekly PCR positivity for Pillars 1 and 2 (%)

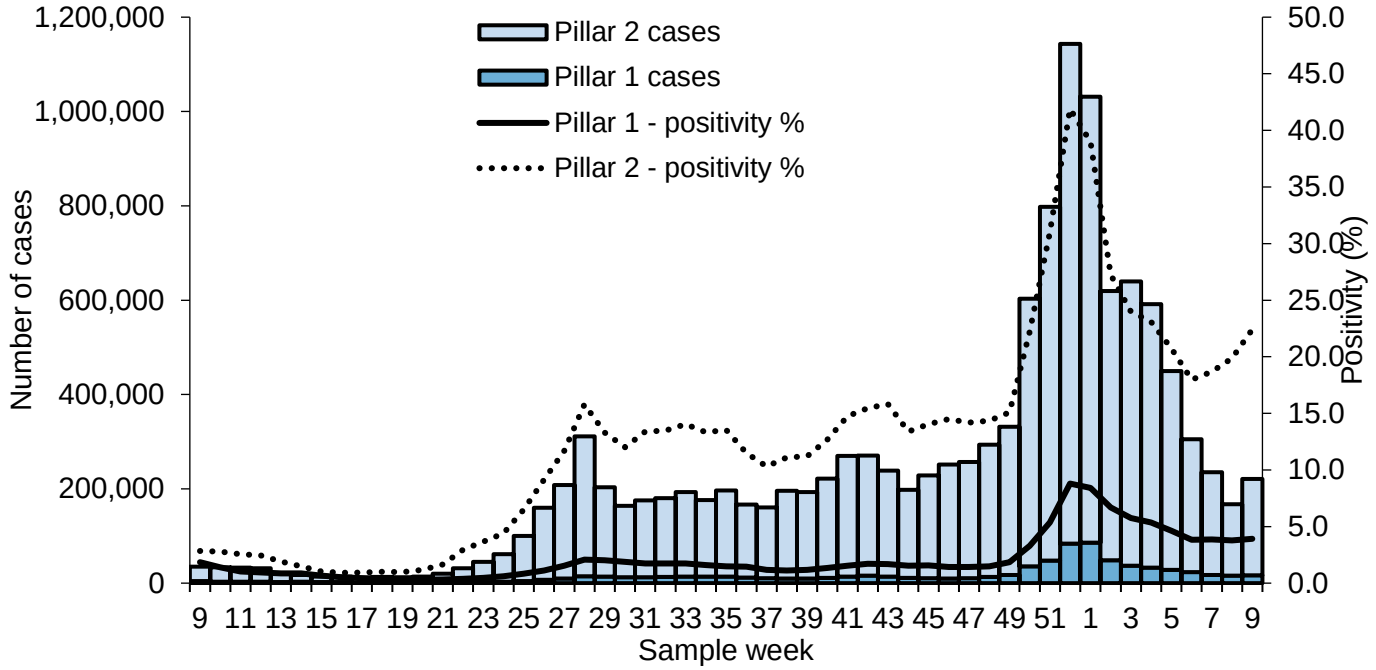
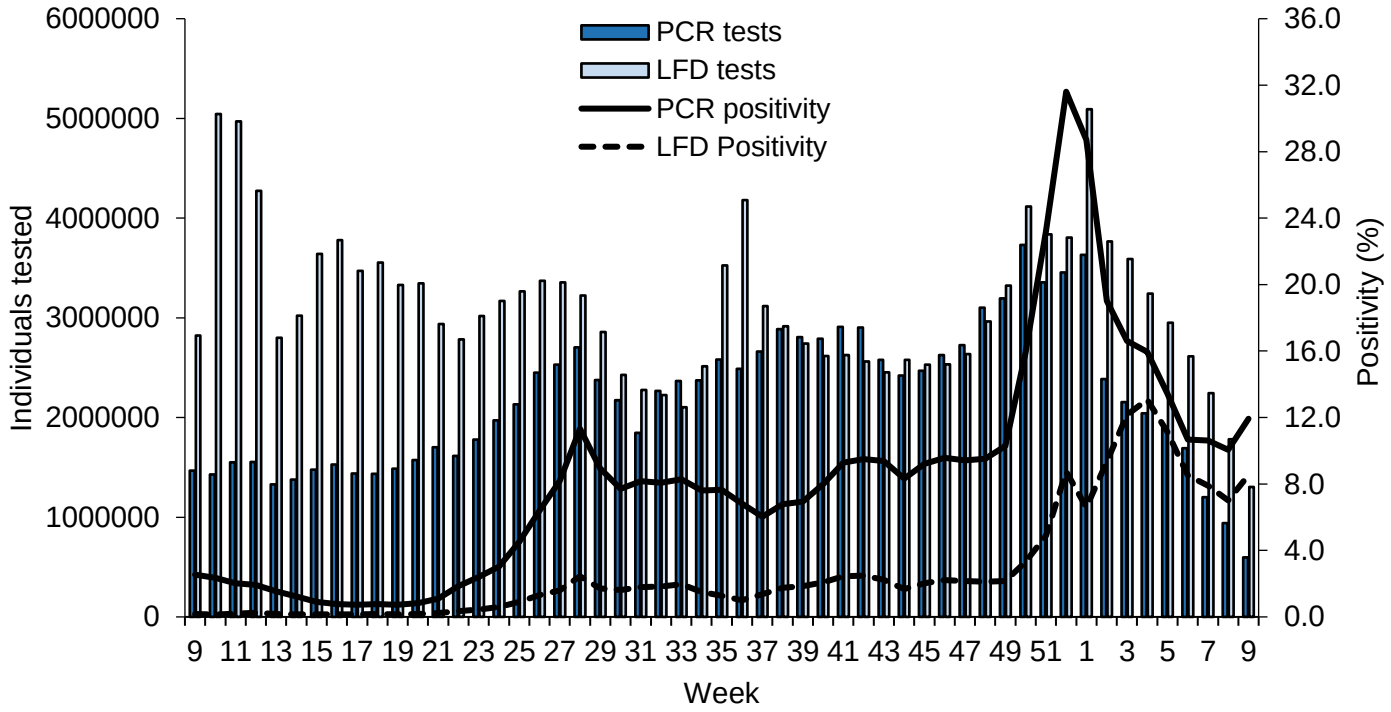


Figure 2: Weekly positivity (%) of confirmed COVID-19 and number of individuals tested by type of test, under Pillar 1 and 2



* For Figure 2 positivity is calculated as the number of individuals testing positive using a specific test type during the week, divided by the number of individuals tested using that specific test type during the week

* Please note that an individual may appear under both PCR and LFD tests if they have been tested using both test types in a given week

Age and sex

Figure 3: Age-sex pyramids for confirmed COVID-19 episodes tested under Pillars 1 and 2 in weeks 8 and 9 (n=386,735)

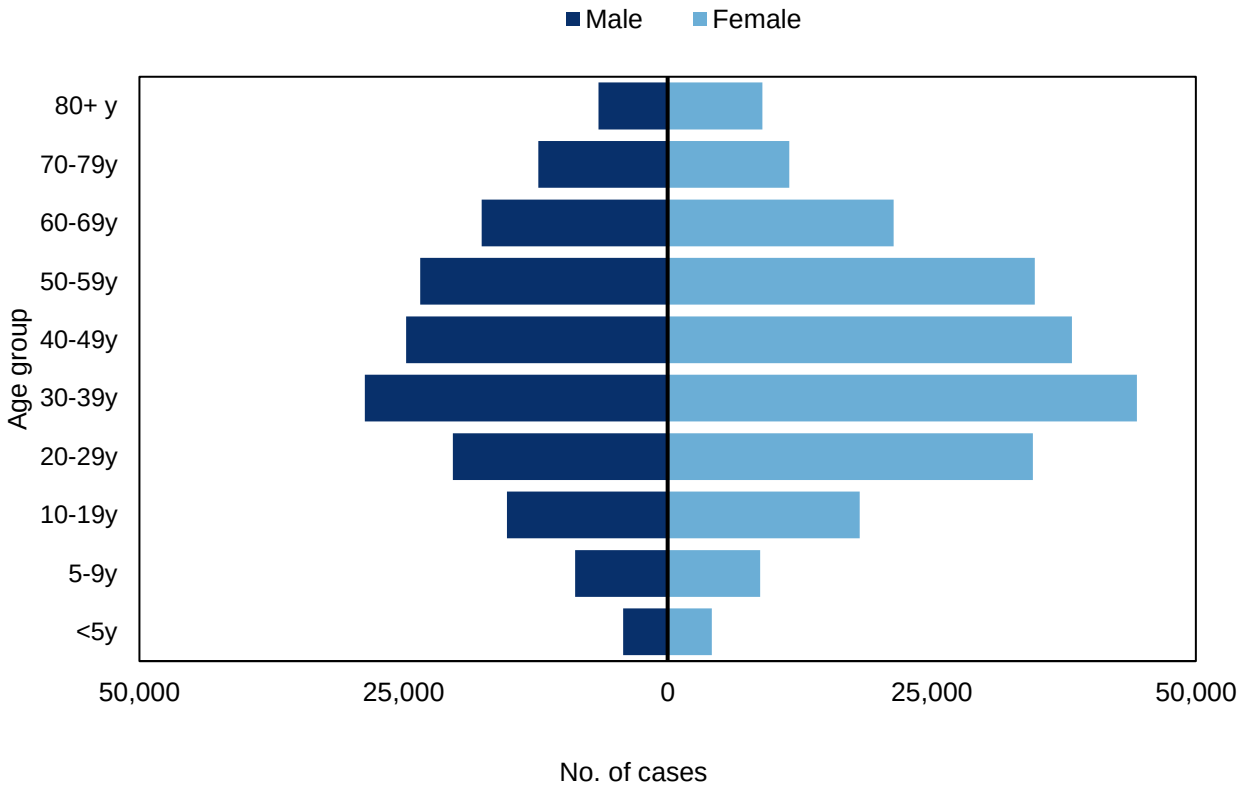


Figure 4: Weekly confirmed COVID-19 case rates per 100,000, by episode*, tested under Pillar 1 and Pillar 2, by sex

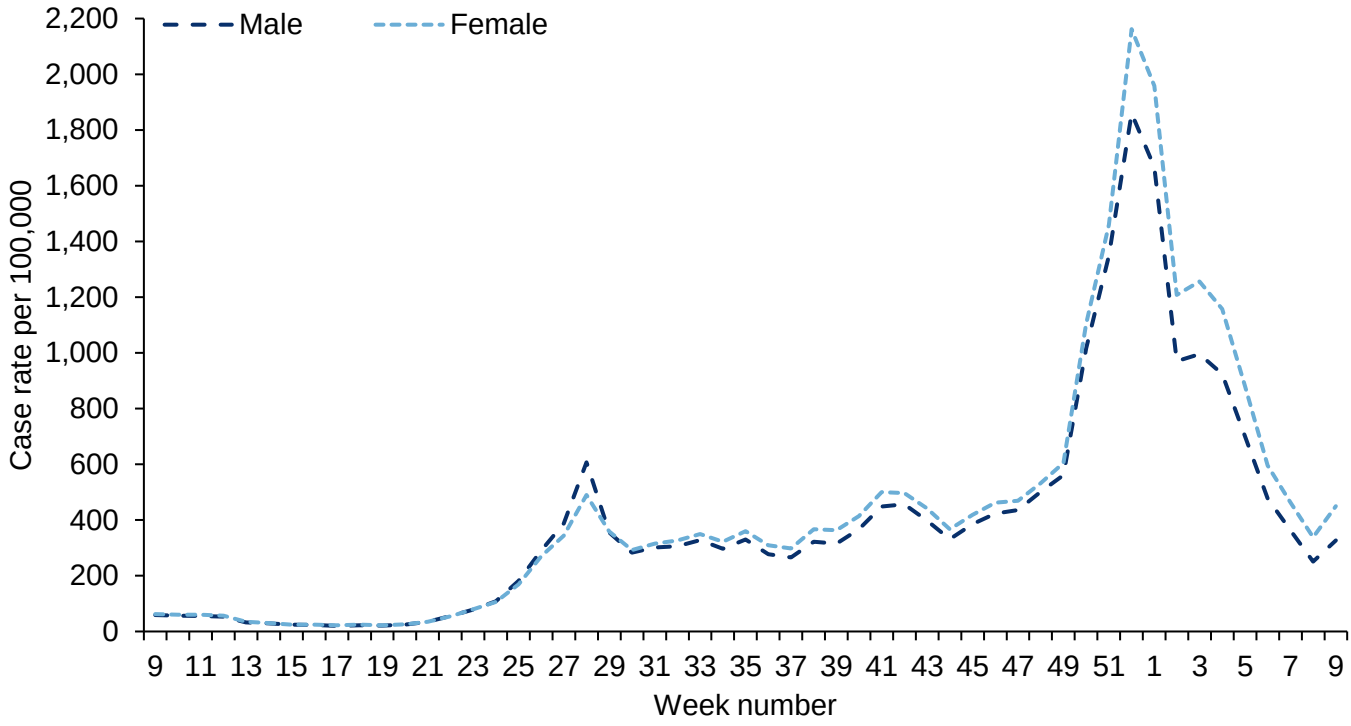
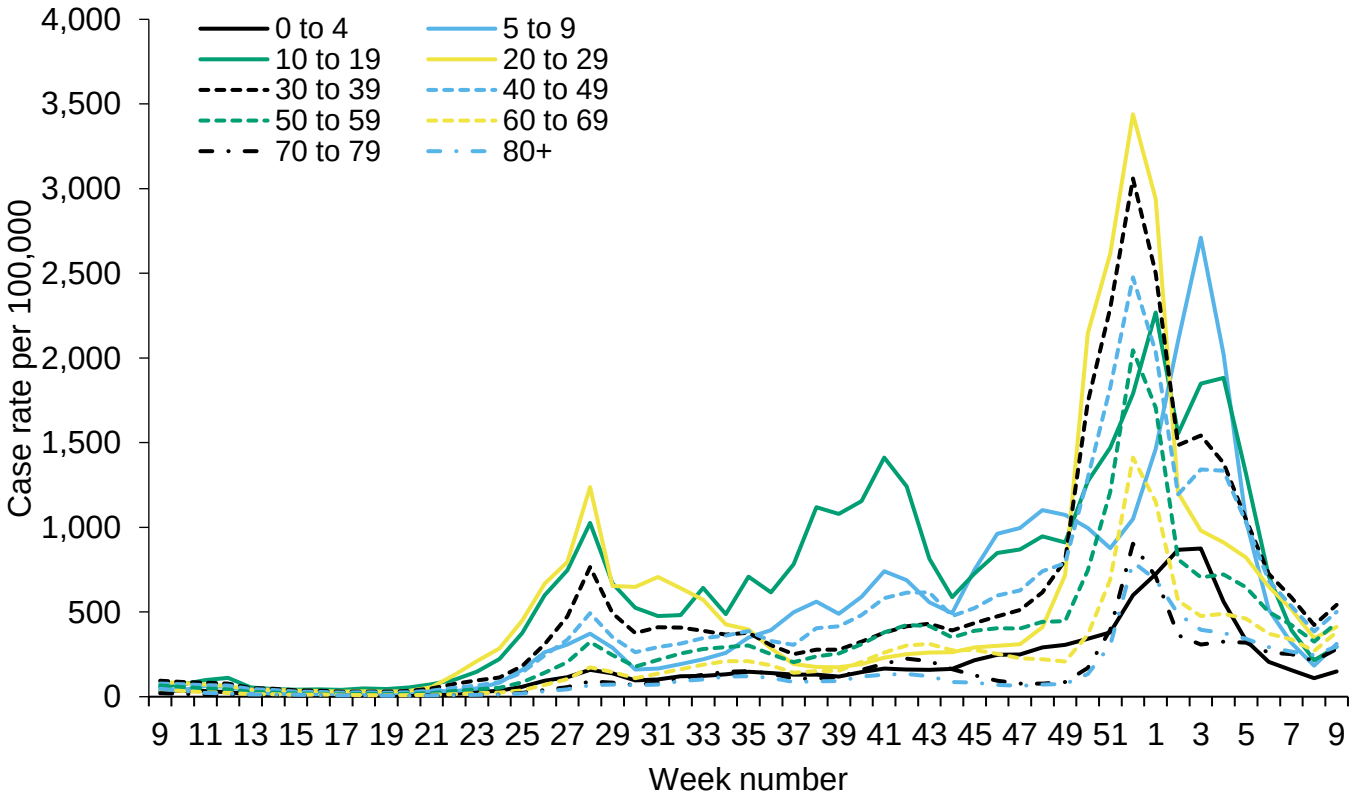


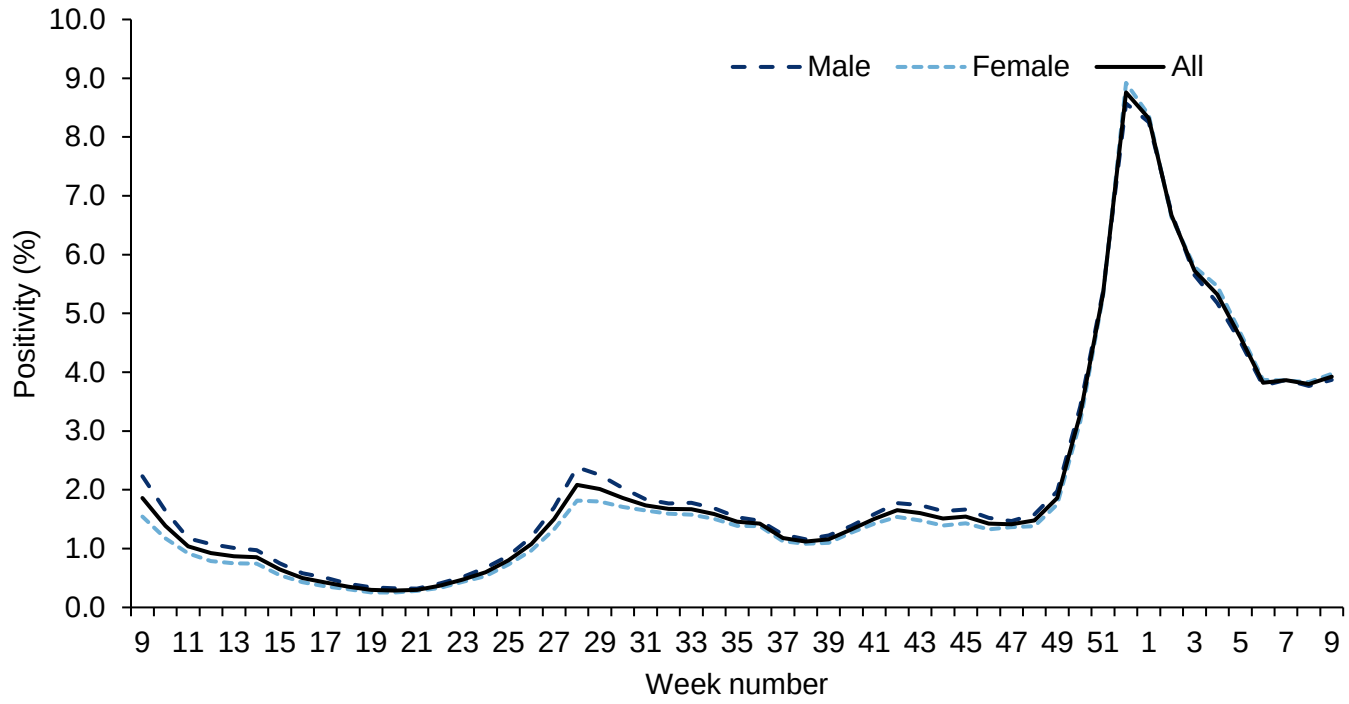
Figure 5: Weekly confirmed COVID-19 case rates per 100,000, by episode*, tested under Pillar 1 and Pillar 2, by age group



* Each infection episode is counted separately if there is at least 91 days between positive test results. Each infection episode begins with the earliest positive specimen date.

Figure 6: Weekly PCR positivity (%) of confirmed COVID-19 cases tested overall and by sex under (a) Pillar 1 and (b) Pillar 2

(a)



(b)

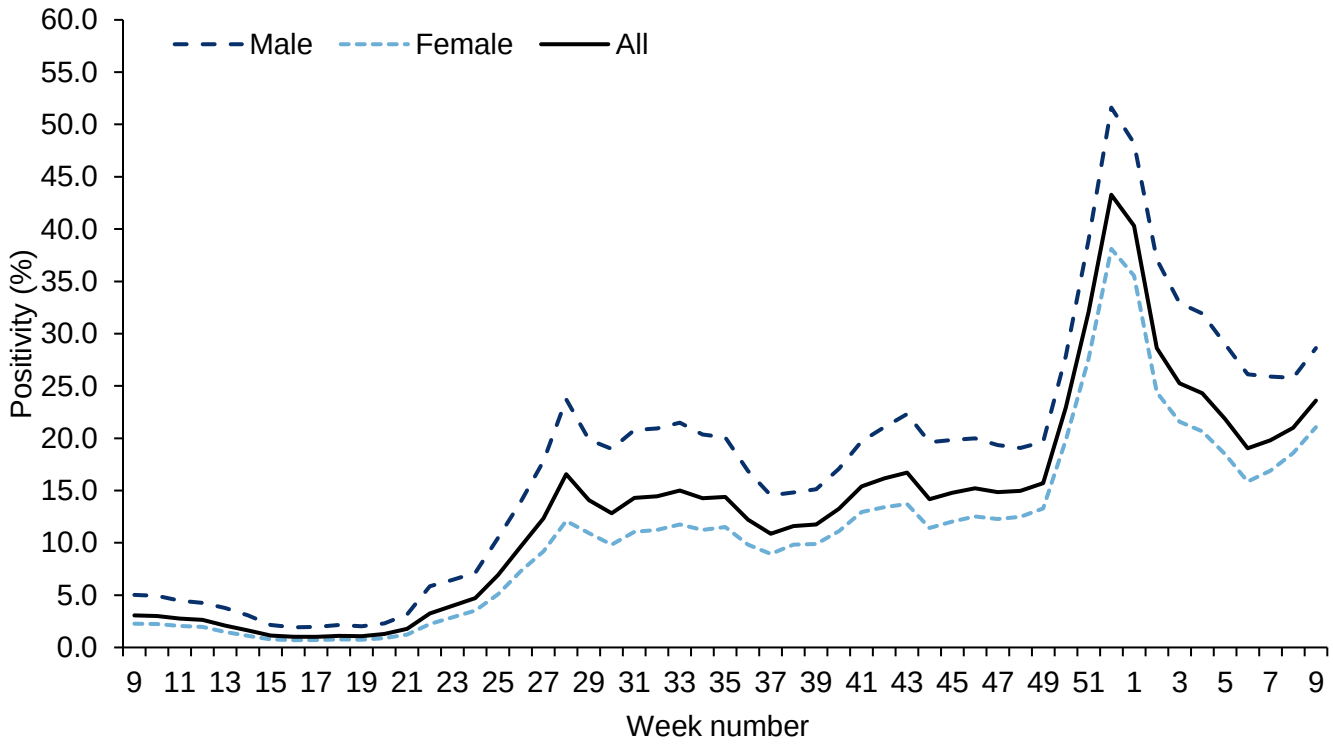
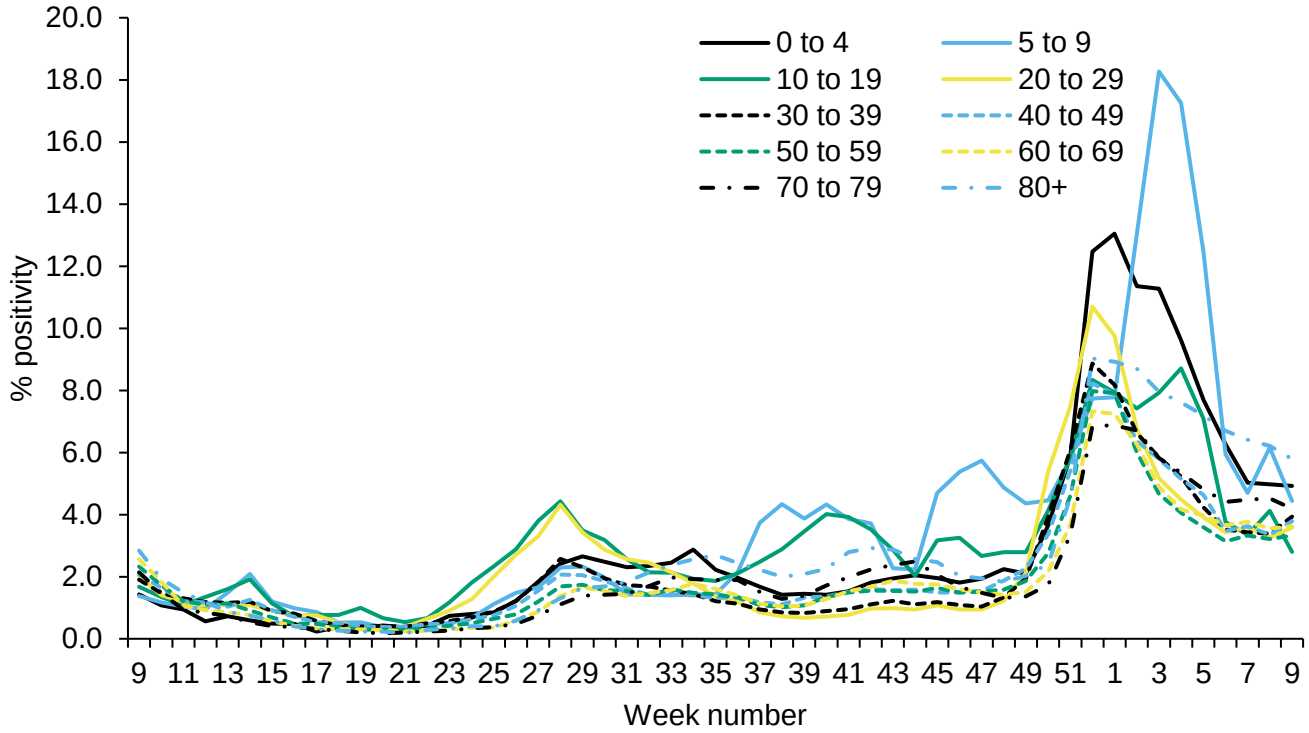
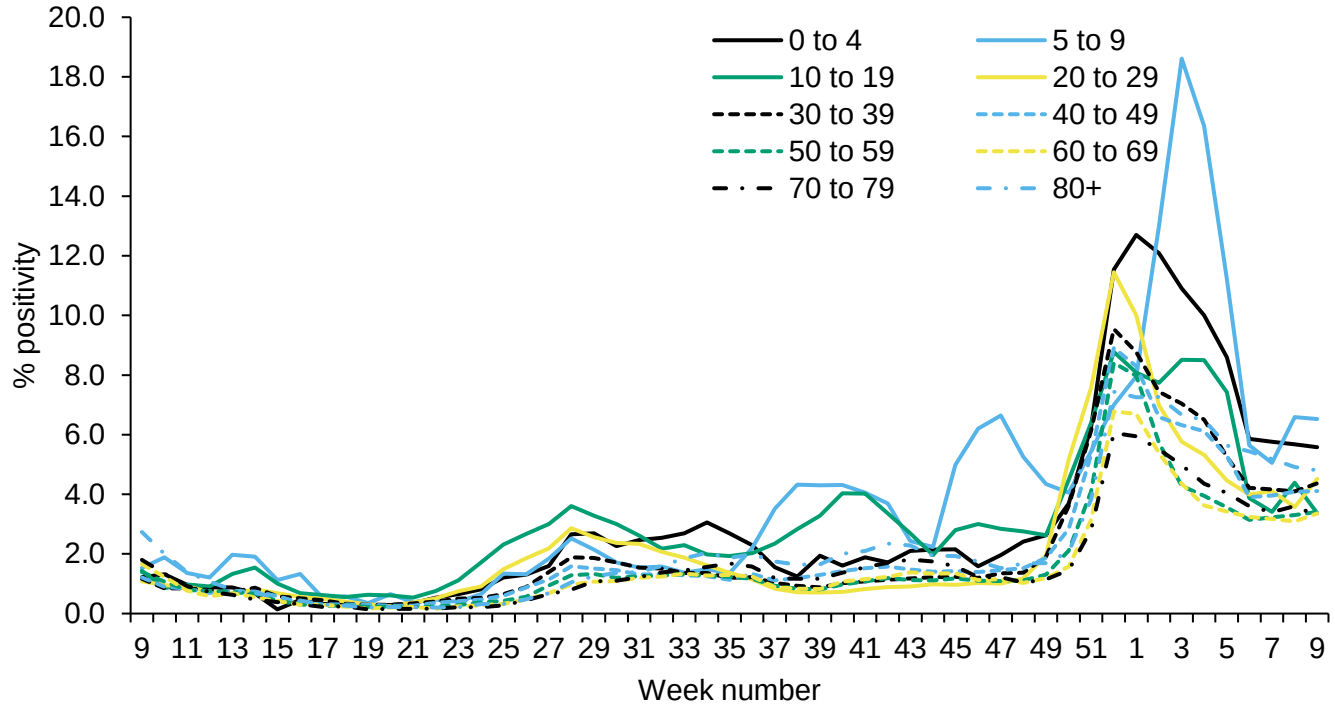


Figure 7: Weekly PCR positivity (%) of confirmed COVID-19 cases tested under Pillar 1, (a) by male and age group and (b) by female and age group and; under Pillar 2, (c) by male and age group and (d) by female and age group

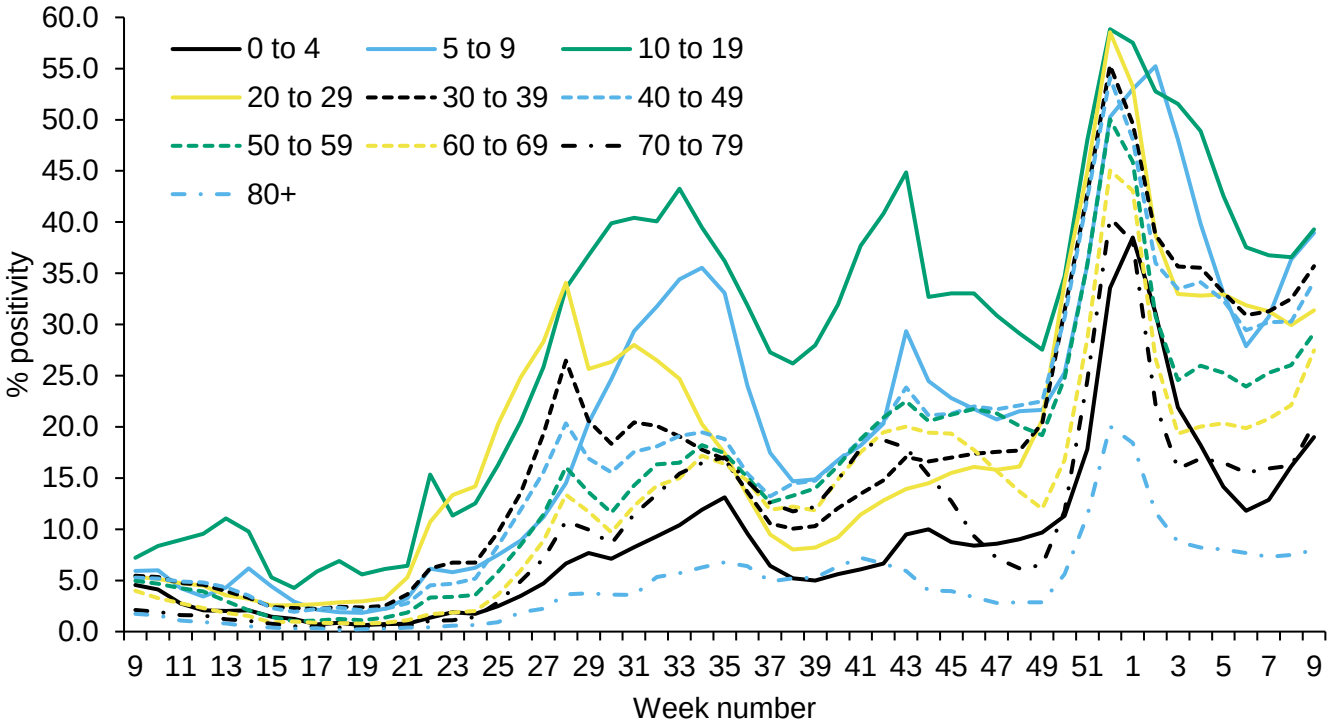
(a) Pillar 1 - Male



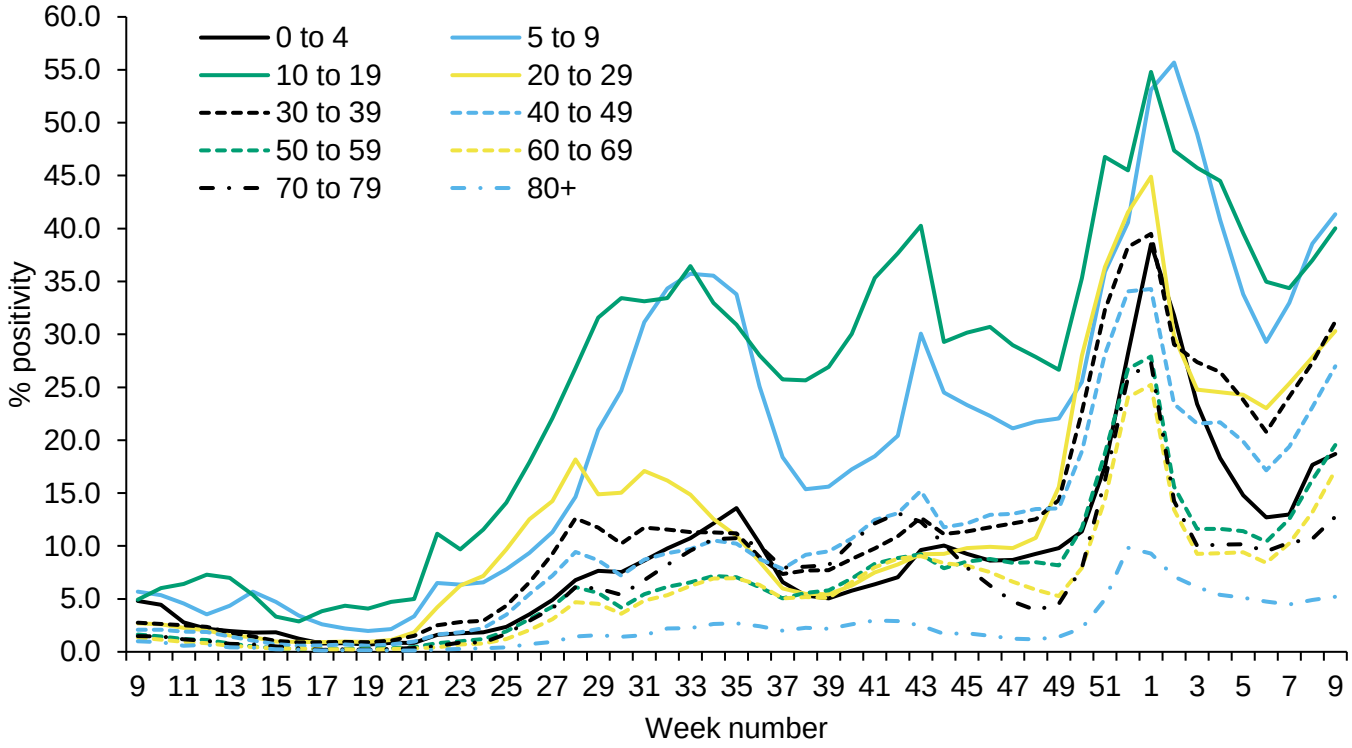
(b) Pillar 1 - Female



(c) Pillar 2 – Male

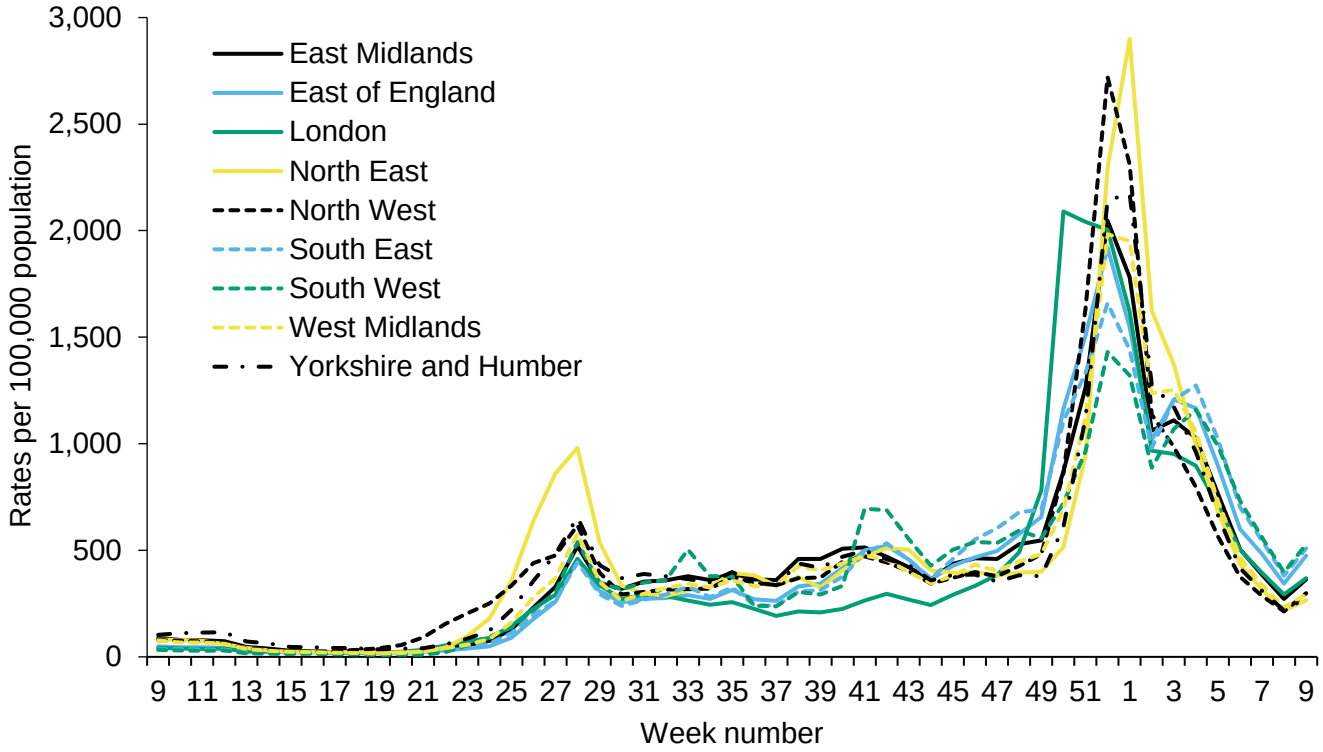


(d) Pillar 2 – Female



Geography

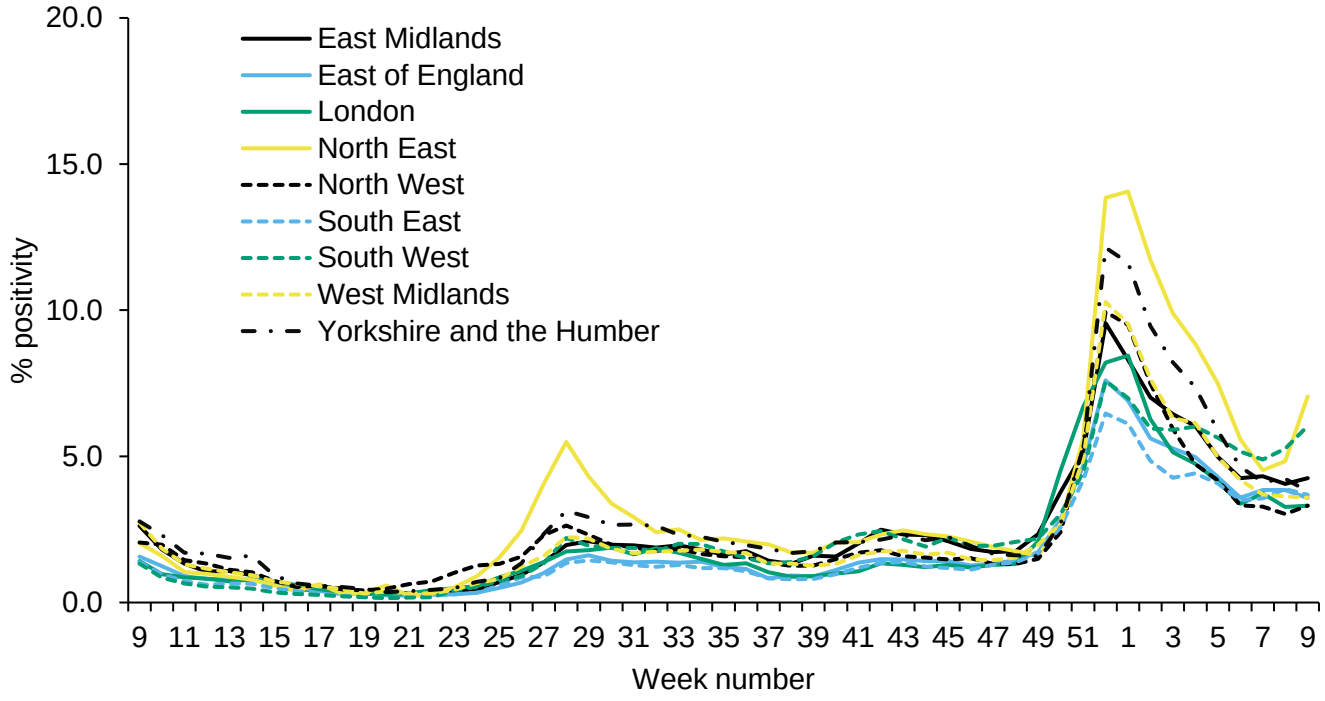
Figure 8: Weekly confirmed COVID-19 case rates by episode*, per 100,000 population (Pillar 1 and Pillar 2), by UKHSA Centres and sample week



* Each infection episode is counted separately if there is at least 91 days between positive test results. Each infection episode begins with the earliest positive specimen date.

Figure 9: Weekly PCR positivity of confirmed COVID-19 cases tested under (a) Pillar 1 (%) and (b) Pillar 2 (%), by UKHSA Centres and sample week

(a)



(b)

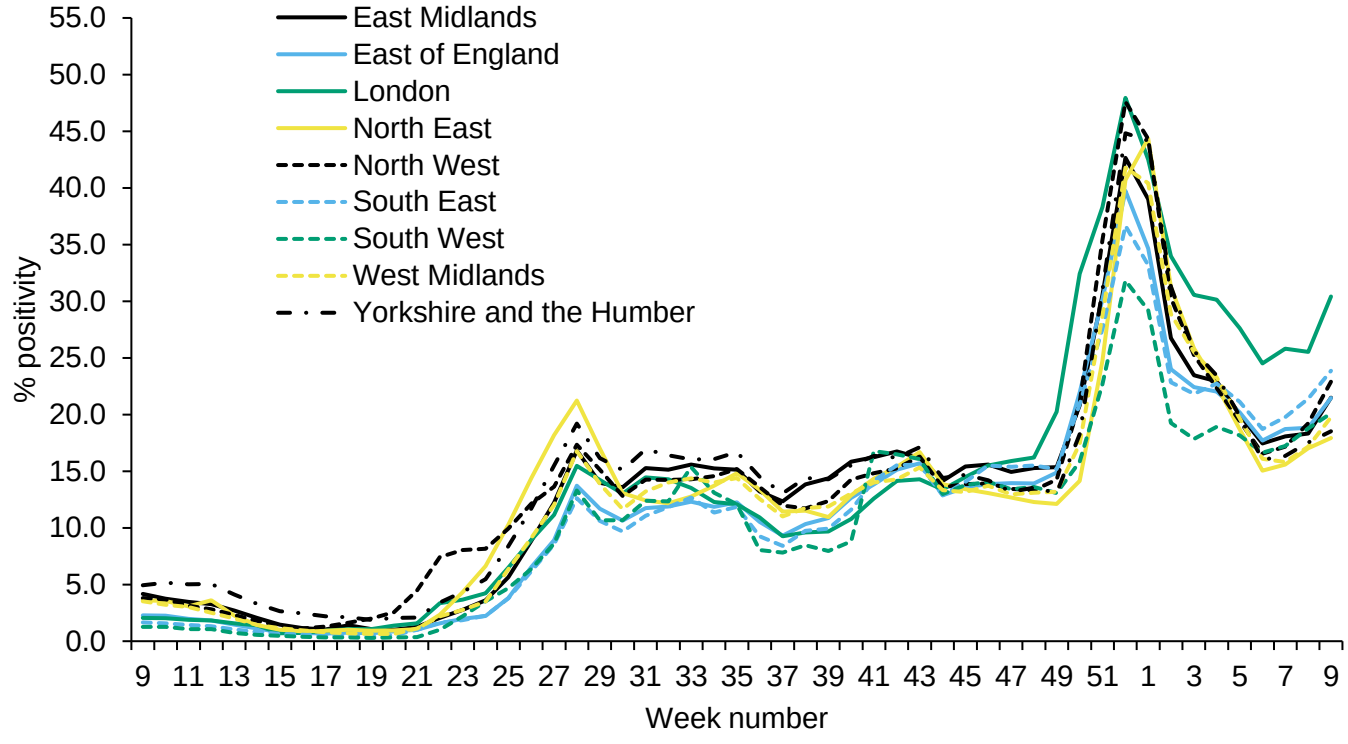
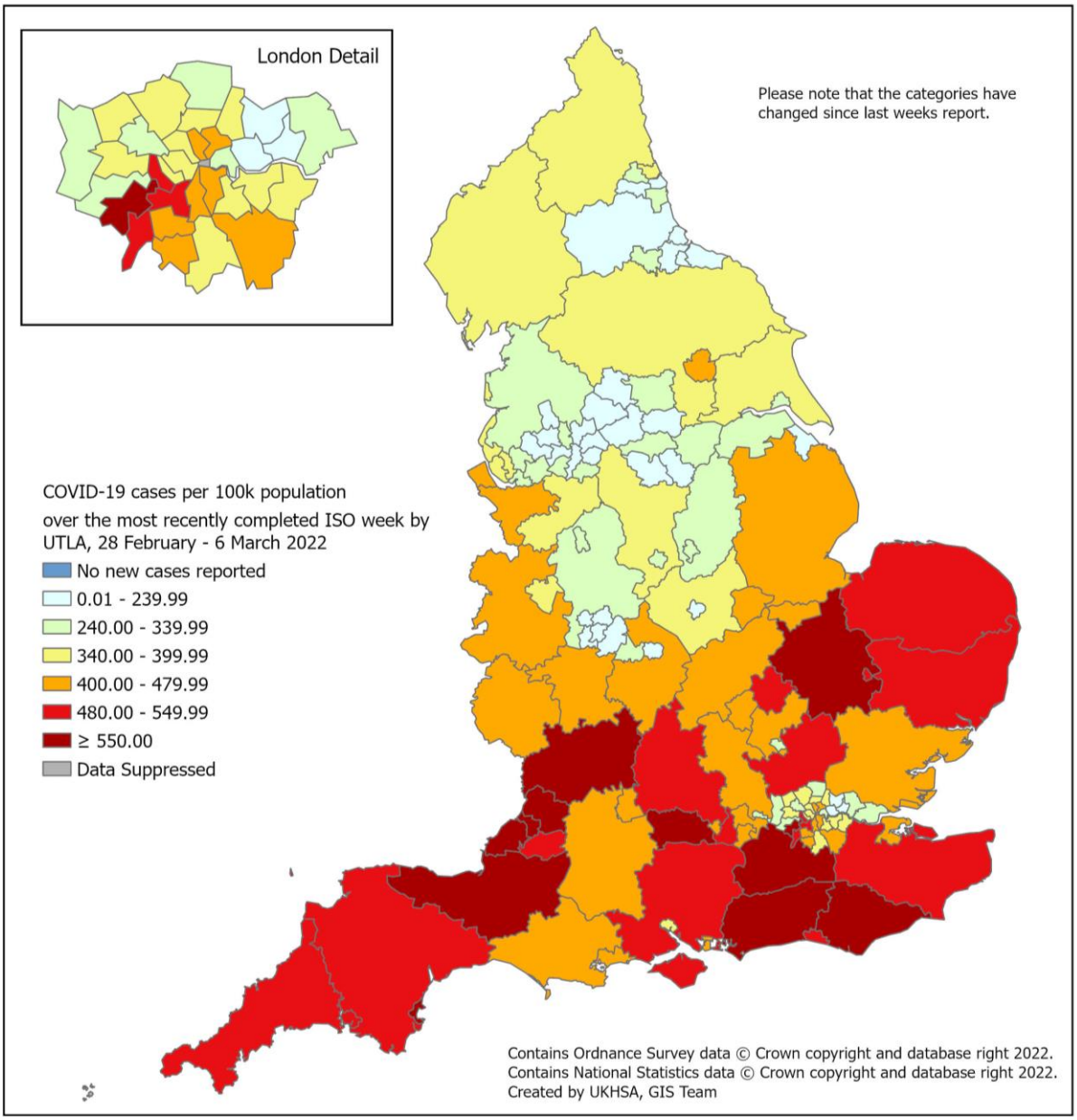
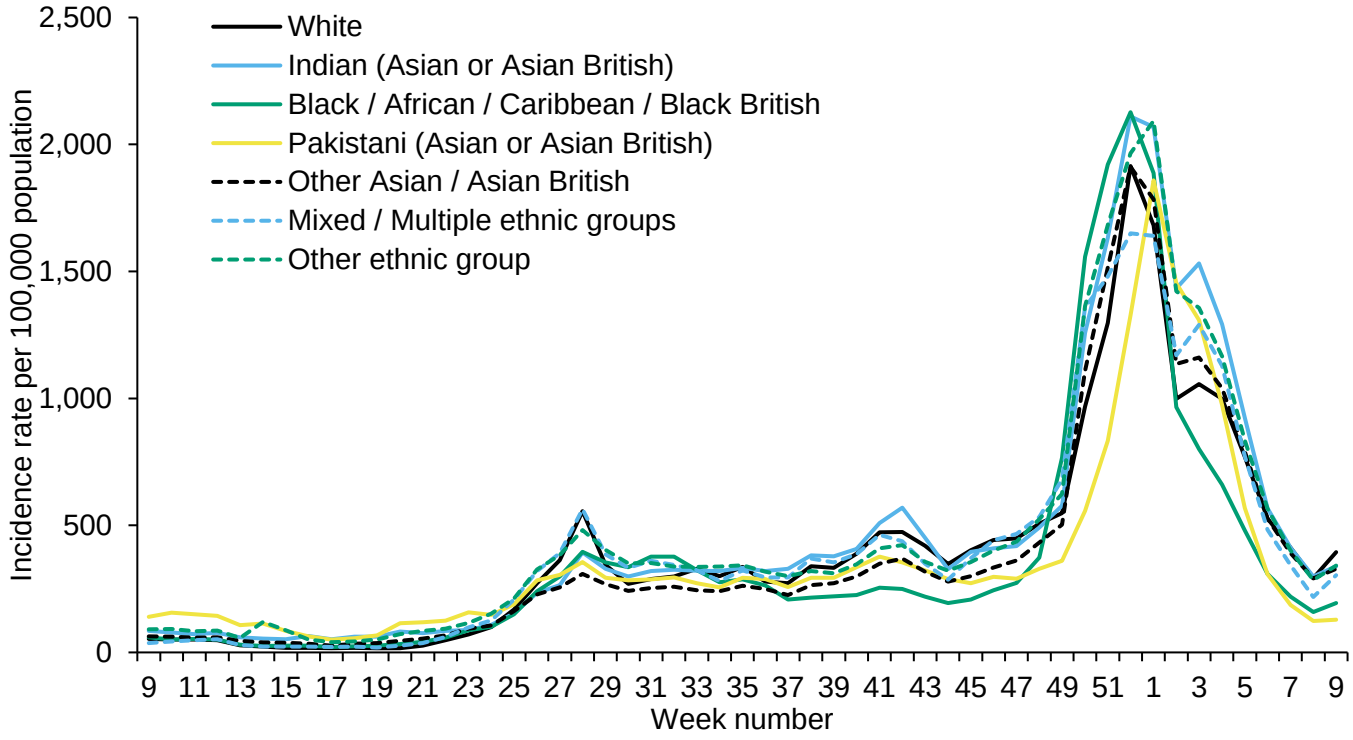


Figure 10: Weekly rate of COVID-19 episodes per 100,000 population (Pillar 1 and 2), by upper-tier local authority, England (box shows enlarged map of London area)



Ethnicity

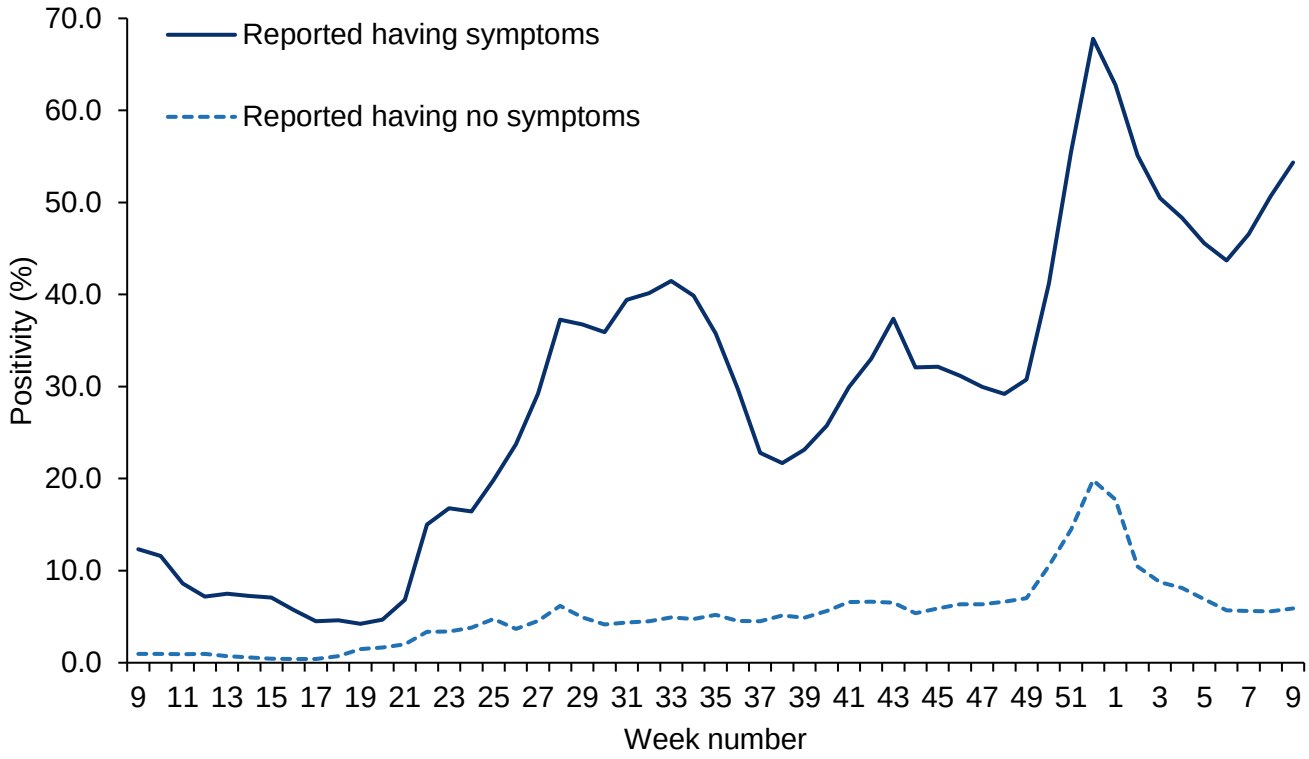
Figure 11: Weekly incidence per 100,000 population by ethnicity, England



*the incidence rates on Figure 11 have been calculated using the mid-2019 ONS population estimates

Positivity by symptoms

Figure 12: Weekly PCR positivity (%) of confirmed COVID-19 cases by symptoms reported on Pillar 2 test request



Possible SARS-CoV-2 reinfection in England

This section will be updated fortnightly. Last update was published 3 March 2022.

The following figures present population level reinfections based on the first time that individuals tested positive for SARS-CoV-2 through PCR and or lateral flow device testing in England together with those who have tested positive for SARS-CoV-2 through PCR and or lateral flow testing with an interval of at least 90 days between two consecutive positive tests. From 31 January 2022, UKHSA COVID-19 case reporting changed to an episode-based definition which includes possible reinfections (see What's new | Coronavirus in the UK). Reinfection summaries have been based on these data from report 5, 2022 onwards.

Data has been processed to week 7, 2022 (ending 20 February 2022, extracted 28 February 2022). Based on provisional figures to 20 February 2022, 678,305 reinfection episodes have been identified in England since the beginning of the pandemic, of which 7,165 are third episodes and 60 are fourth episodes; over 15 million first positives or primary infection episodes are included in the figures. There were 21,768 reinfection episodes identified in updated provisional figures for week 7 (ending 20 February 2022), accounting for 9.3% of all first or reinfection episodes with SARS-CoV-2 that week. Information on Omicron reinfections has been published in the UKHSA SARS-CoV-2 variants of concern and variants under investigation in England technical briefings. It is important to consider reinfections in the context of first infections and there is a 90-day delay before people with a first infection can become eligible for reinfection.

For a possible reinfection to be categorised as confirmed it requires sequencing of a specimen at each episode and for the later specimen to be genetically distinct from that sequenced from the earlier episode. Availability of such dual sequencing is currently very low for several reasons; sequencing was not widely undertaken early in the pandemic; LFD test results do not allow sequencing and some PCR samples have a low viral load where sequencing cannot be undertaken. To meet the definition of a probable reinfection requires sequencing at the later episode that identifies a variant that was not circulating at the time of the earlier episode. Further details on the methodology, with additional data on reinfections are available in the graph set published alongside this report.

Table 1 summarises the definitions of different categories of COVID-19 infection accompanied by totals generated to 20 February 2022 (week 7) based on standardised review of available sequencing data extracted on 28 February 2022. These data are skewed by the limited availability of sequencing data, particularly in the early months of the pandemic. Widespread routine testing of asymptomatic individuals is in place and this, together with surge testing, will lead to an increased number of asymptomatic reinfections being identified.

Table 1: Different categories of COVID-19 infection with current totals generated by episode-based reporting* in England, 20 February 2022 (end week 7, 2022)

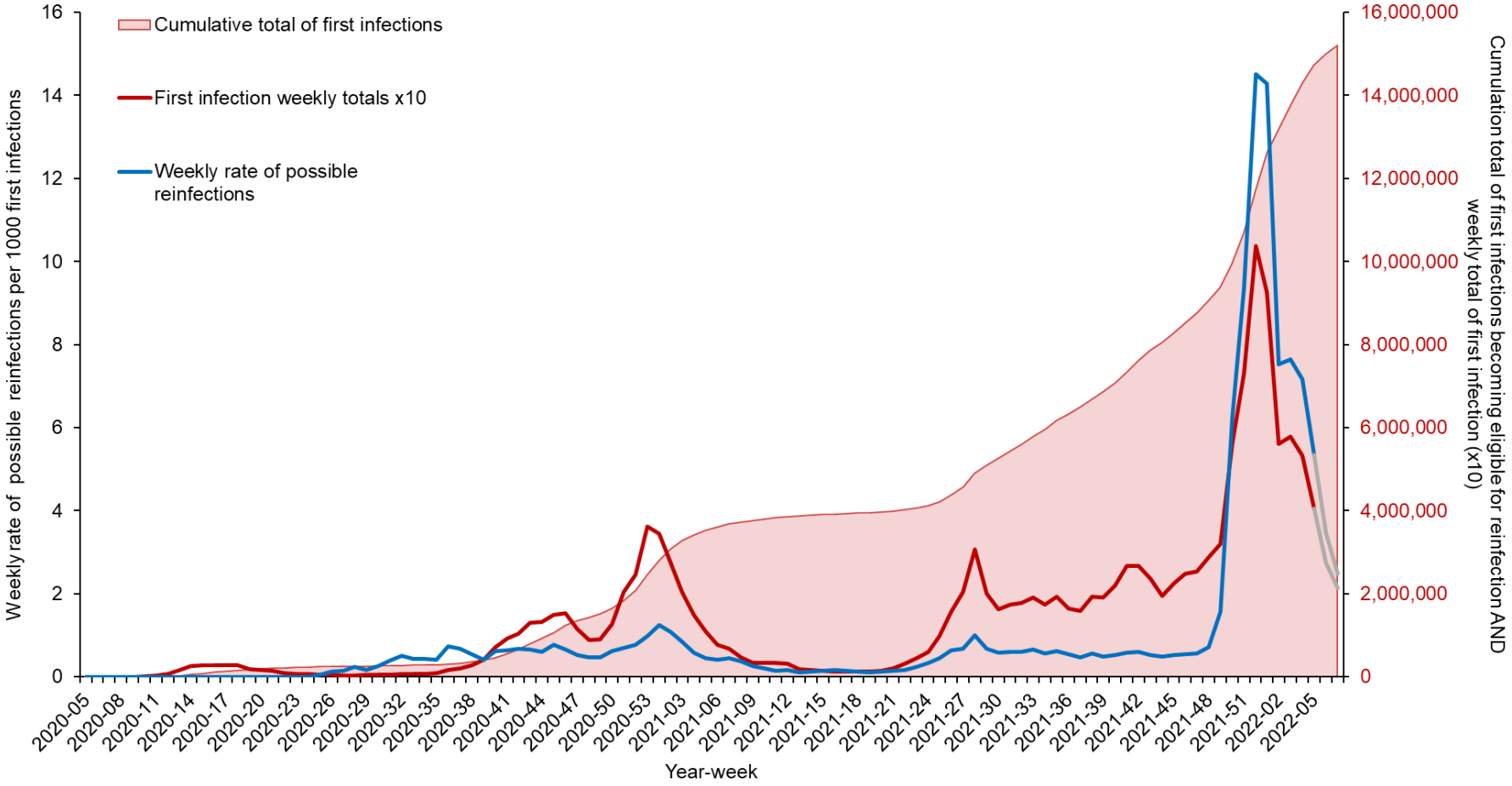
Infection type	Definition	Current totals
Primary infection/ first positive	The first positive PCR/ LFD test result for an individual	**15.2 million first positives**
Possible reinfection	Identified based on two sequential positive test results (PCR or LFD) at least 90 days apart	**669,711 possible reinfections***
Probable reinfection	Where only reinfection sample is available, and this is congruent with contemporaneous phylogeny OR the second event identifies a variant which was not in circulation at the time of first infection	**2,158 classified as probable***
Confirmed reinfection	Sequencing of a specimen at each episode of a possible reinfection with the later specimen genetically distinct from that sequenced at first episode	**4,830 confirmed reinfections***
Persistent infection	Nominally repeat test positives at between 14 and <90-day intervals (likely associated with immunosuppression)	Unquantified

*These totals are generated using the national episode level dataset from week 7, 2022. Some reinfection episodes have not yet been classified and so the total of possible, probable and confirmed will not equal all identified reinfection episodes for the same period.

Figure 13a shows the weekly rates of reinfection episodes per 1000 first infection episodes based on a cumulative denominator derived from total individuals with a first SARS-CoV-2 positive test result at a point 13 weeks (91 days) before the next positive test result together with the cumulative total of first infections (secondary Y-axis) by week of onset.

Figure 13b shows weekly rates of reinfection episodes per 1000 first infections based on a cumulative denominator derived from total individuals with a first SARS-CoV-2 positive test result at a point 13 weeks (91 days) broken down by age group into those under 30 years of age and those older than 30 years. The figure also shows weekly first infections in those under 30 years of age and those older than 30 years (secondary Y-axis). Both figures include provisional data to week 5 (ending 6 February 2022), and numbers in the most recent two weeks are expected to increase further.

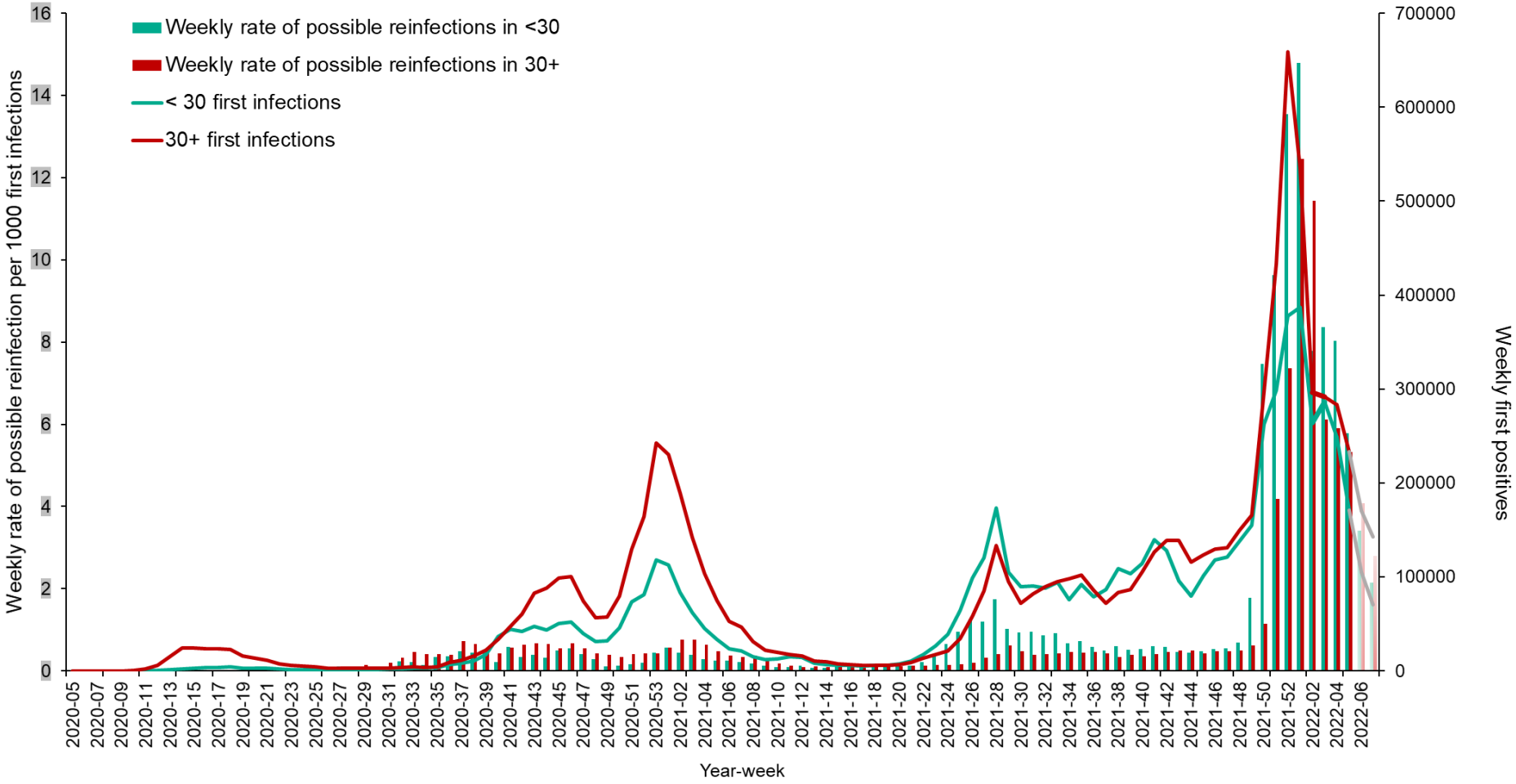
Figure 13 (a): The weekly rate of possible COVID-19 reinfections with cumulation of first infections becoming eligible for reinfection and weekly total of first infection* (England only to week 7 2022, provisional early data[Δ])



*This data has been derived independently based on Pillar 1 and Pillar 2 datasets and may therefore differ to previously published data

[Δ] Data in weeks 6 and 7 are early provisional data (represented by the grey lines) and are expected to change

Figure 13 (b): First COVID-19 positive tests results* & weekly rate of possible COVID-19 reinfections in England to week 7 2022, provisional early data[Δ]



*This data has been derived independently based on Pillar 1 and Pillar 2 datasets and may therefore differ to previously published data

[Δ] Data in weeks 6 and 7 are early provisional data (represented by the gey lines and dotted bars) and are expected to change

Respiratory DataMart system (England)

The Respiratory Datamart system was initiated 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. Seventeen 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 facilitate comparison with data on other respiratory viruses.

In week 9 of 2022, out of the 98,370 respiratory specimens reported through the Respiratory DataMart System (based on data received from 15 out of 17 laboratories), 3,766 samples were positive for SARS-CoV-2 with an overall positivity of 3.8%, compared to 3.2% in the previous week. The highest positivity was noted in the 5 to 14 year olds at 5.1% in week 9.

The overall influenza positivity remained low at 1.1% in week 9, with 66 of the 5,839 samples testing positive for influenza (including 29 influenza A(H3N2), 4 fluA(H1N1)pdm09, 31 influenza A(not subtyped) and 2 influenza B).

Respiratory syncytial virus (RSV) positivity remained low but increased slightly to 1.2% in week 9, with the highest positivity in the under 5 year olds at 4.3%. Rhinovirus positivity increased slightly to 12.4% and human metapneumovirus (hMPV) positivity remained low at 0.7% in week 9. Adenovirus positivity increased to 5.3% in week 9, while parainfluenza positivity remained low at 0.9% in week 9 (Figure 16).

Figure 14: DataMart samples positive for influenza and weekly positivity (%) for influenza, England

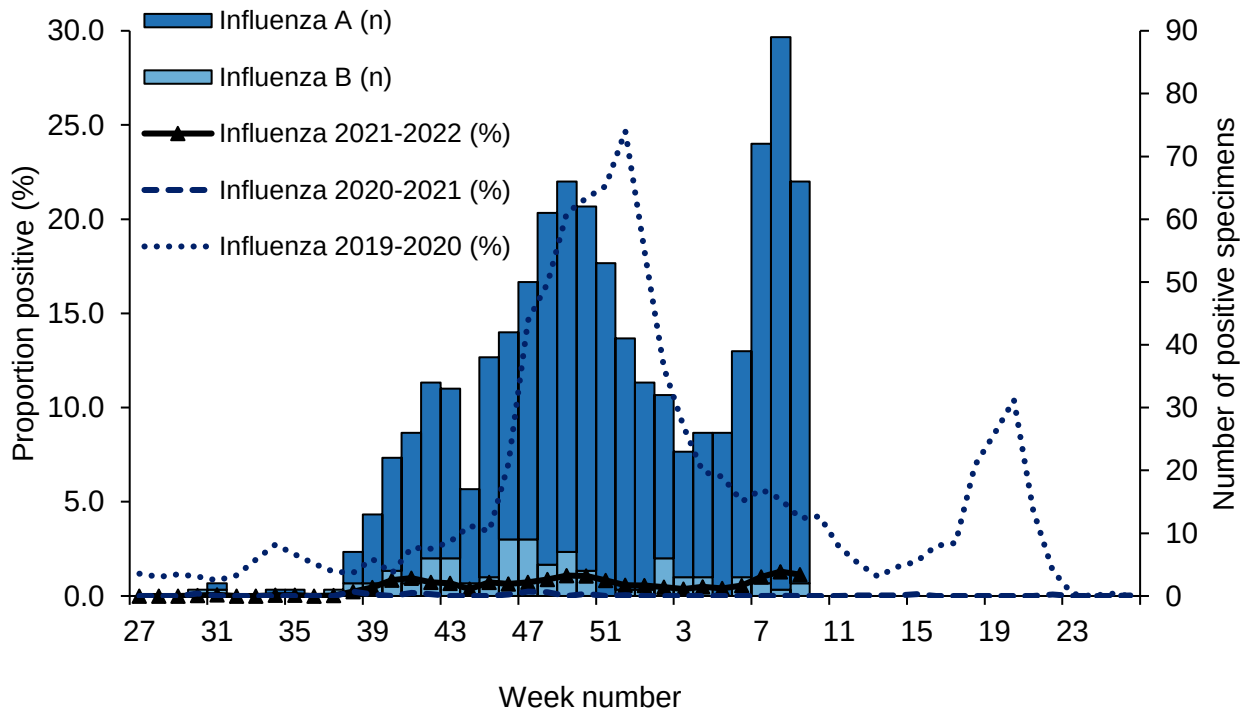


Figure 15: DataMart weekly positivity (%) for SARS-CoV-2, England

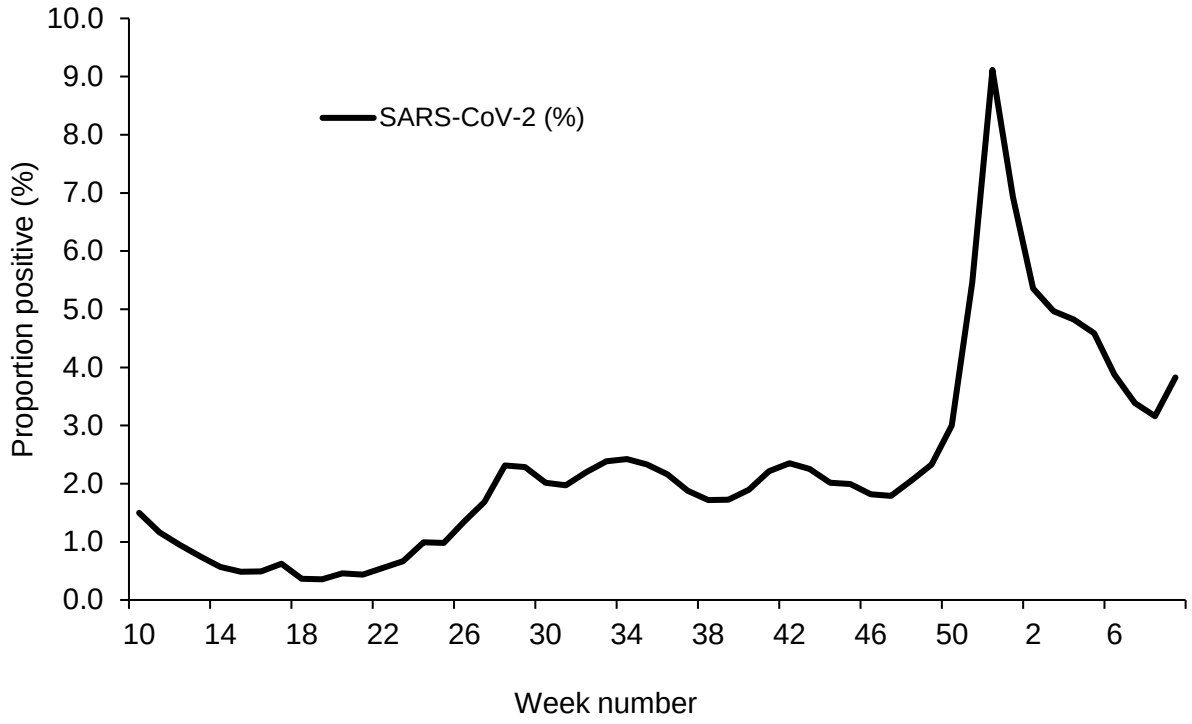


Figure 16: DataMart weekly positivity (%) for other respiratory viruses, England

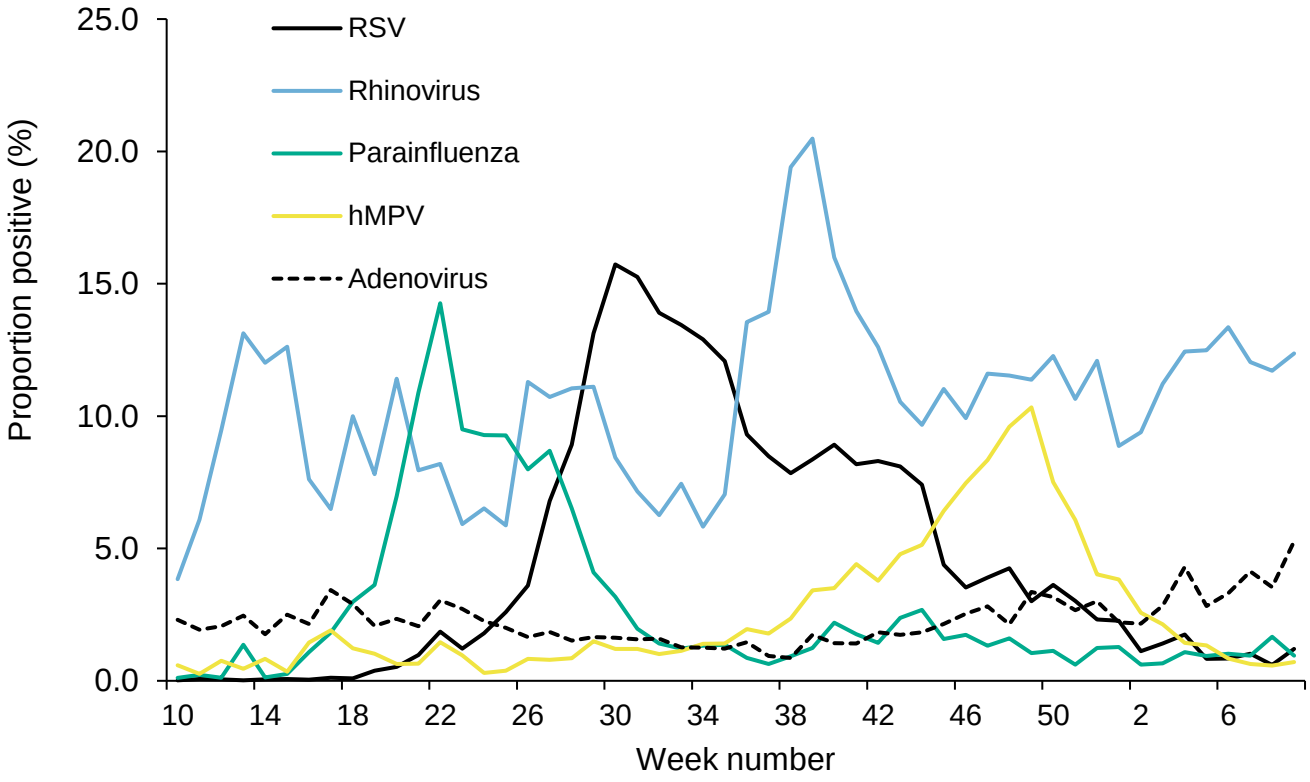


Figure 17: DataMart weekly positivity (%) for rhinovirus by age, England

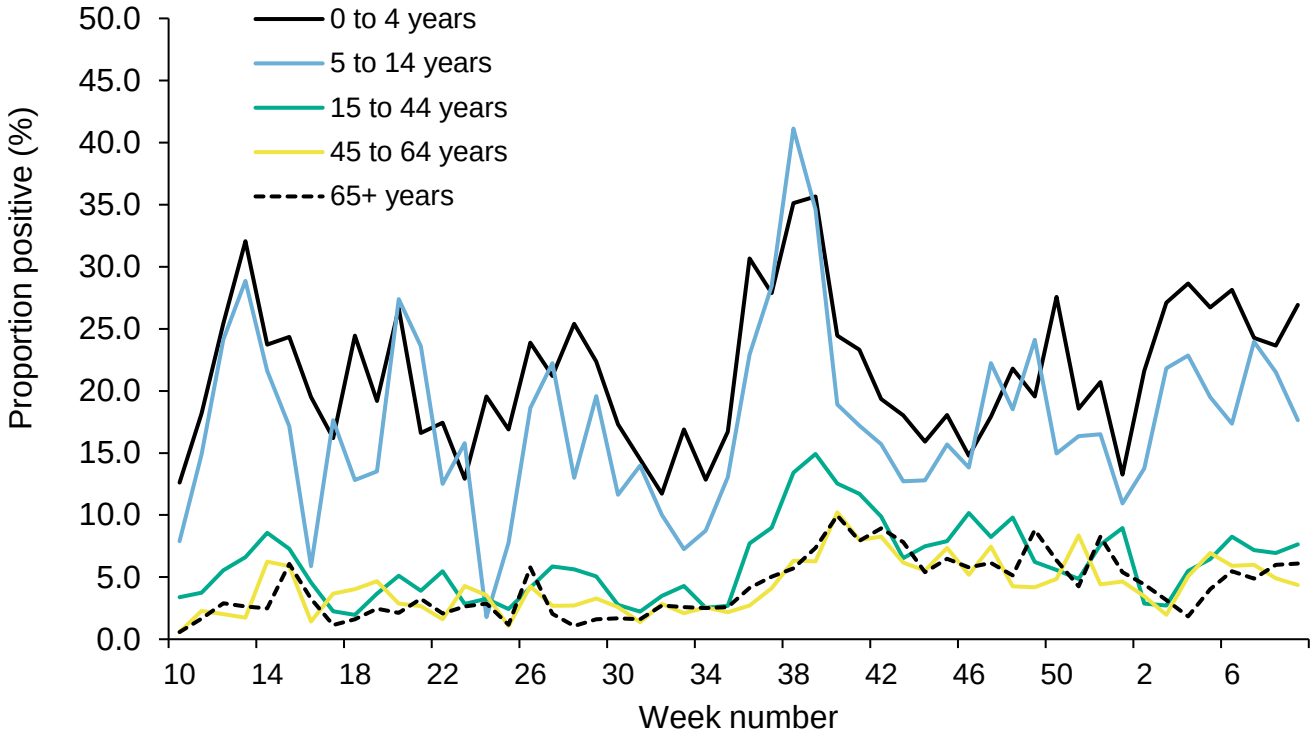
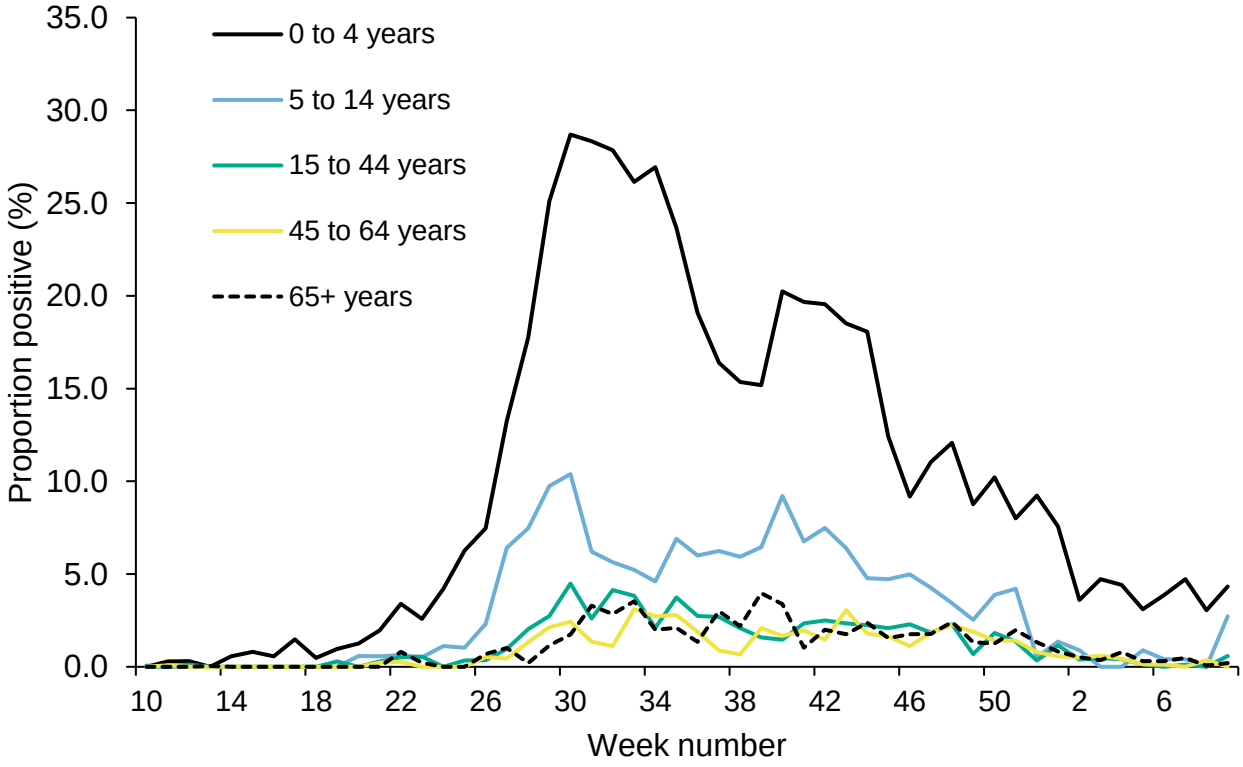


Figure 18: DataMart weekly positivity (%) for RSV by age, England



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 an online web-based platform called HPZone. 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. A subset of these will meet the criteria of a confirmed outbreak, that is, where 2 or more laboratory confirmed cases (SARS-CoV-2, influenza or other respiratory pathogens) are linked to a particular setting. Incidents where suspected cases test negative for COVID-19 or other respiratory pathogens, or cases are subsequently found not to have direct links to the setting are discarded.
The number of ARI incidents in each setting with at least one laboratory confirmed case of COVID-19 (or other respiratory pathogen) are reported below. As outlined above, only a subset of these will go on to be confirmed as outbreaks.
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. A variety of arrangements are in place across UKHSA Centres, with local authorities and other stakeholders supporting HPTs in outbreak investigation in some areas without HPZone reporting. As a result, the number of outbreaks reported for some of the regions are underestimates.
2. For this academic year (2021 to 2022) the thresholds for reporting an outbreak in an educational setting have been revised. Clusters and outbreaks are now reported to the Health protection Team if any of the following criteria are met:

- 5 cases or 10% test-confirmed cases of COVID-19 within 10 days (whichever is reached first), among students or staff
- Evidence of severe illness e.g. students or staff members admitted to hospital or a death as a result of a COVID–19 infection
- For special education needs schools, residential schools and settings that operate with 20 or fewer children, pupils, students and staff at any one time, clusters and outbreaks are reported if the following criteria is met:
- 2 children, pupils, students and staff, who are likely to have mixed closely, test positive for COVID-19 within a 10-day period

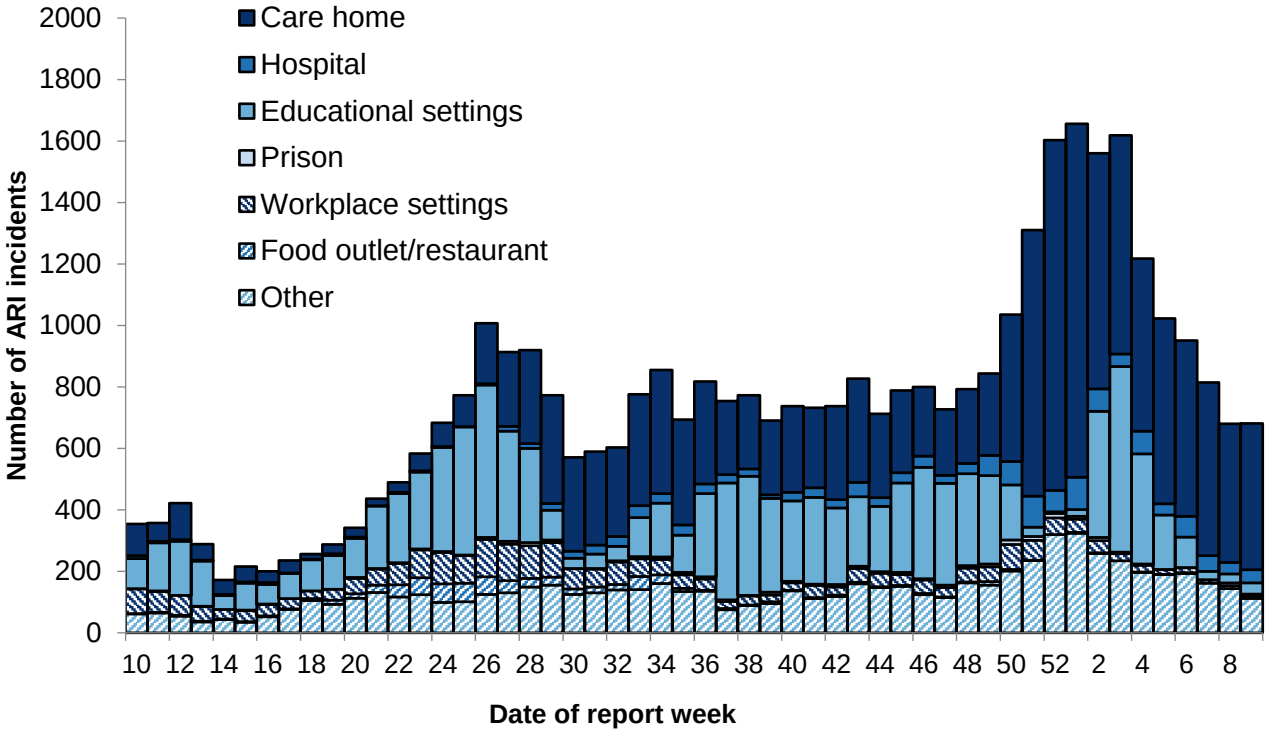
For more information on managing COVID-19 in educational settings please refer to the framework. This should be taken into consideration when comparing 2021 to 2022 season data against 2020 to 2021 season data.

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 taken into account when interpreting the weekly number of reported incidents by setting and caution should be used when making comparisons between settings.
4. In light of the above, comparisons between Regions and settings are not advised as they may be misleading.

681 new ARI incidents have been reported in week 9 in the UK (Figure 19):

- 476 incidents were from care homes where 357 had at least one linked case that tested positive for SARS-CoV-2 and 1 tested positive for influenza A(not subtyped)
- 37 incidents were from educational settings where 29 had at least one linked case that tested positive for SARS-CoV-2
- 42 incidents were from hospitals, where 25 had at least one linked case that tested positive for SARS-CoV-2 and 2 tested positive for influenza A(not subtyped)
- 7 incidents were from workplace settings where 5 had at least one linked case that tested positive for SARS-CoV-2
- 5 incidents were from a prison and had at least one linked case testing positive for SARS-CoV-2
- No incidents were from food outlets or restaurants
- 113 incidents were from other settings where 67 had at least one linked case that tested positive for SARS-CoV-2

Figure 19: Number of acute respiratory infection (ARI) incidents by setting, UK



*Excludes data from Wales

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

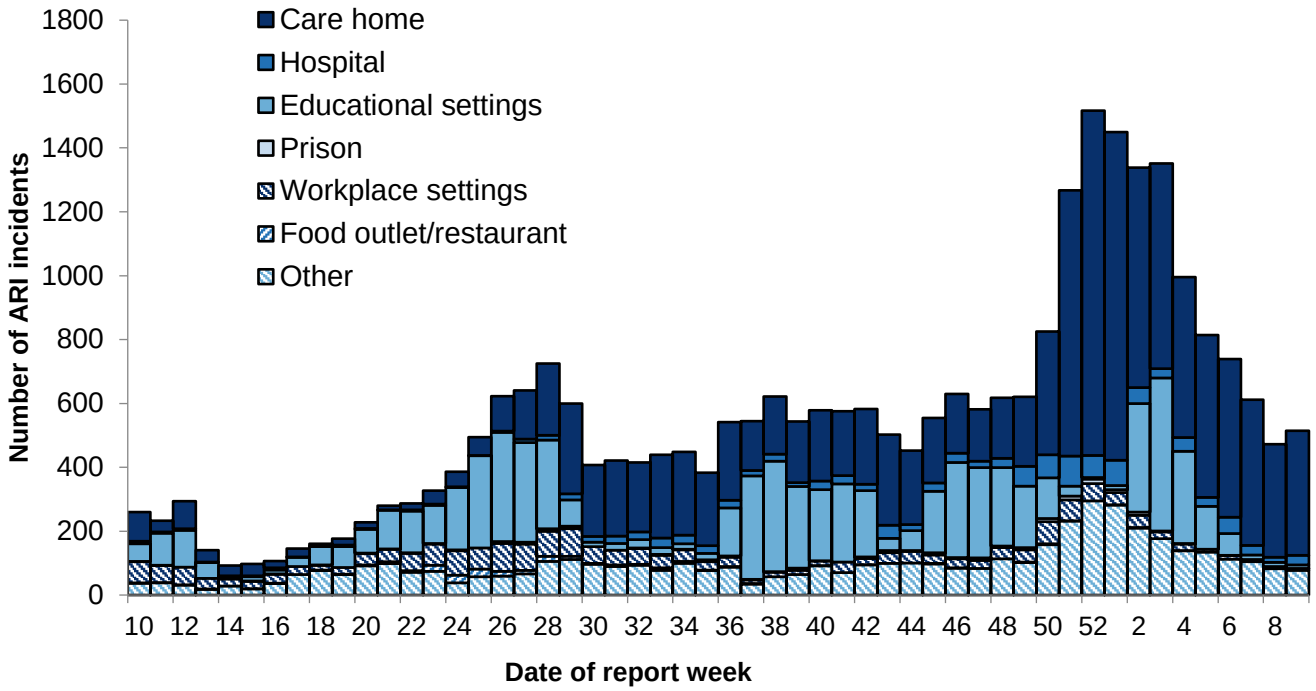


Figure 21: Number of acute respiratory infection (ARI) incidents in care homes by virus type, England

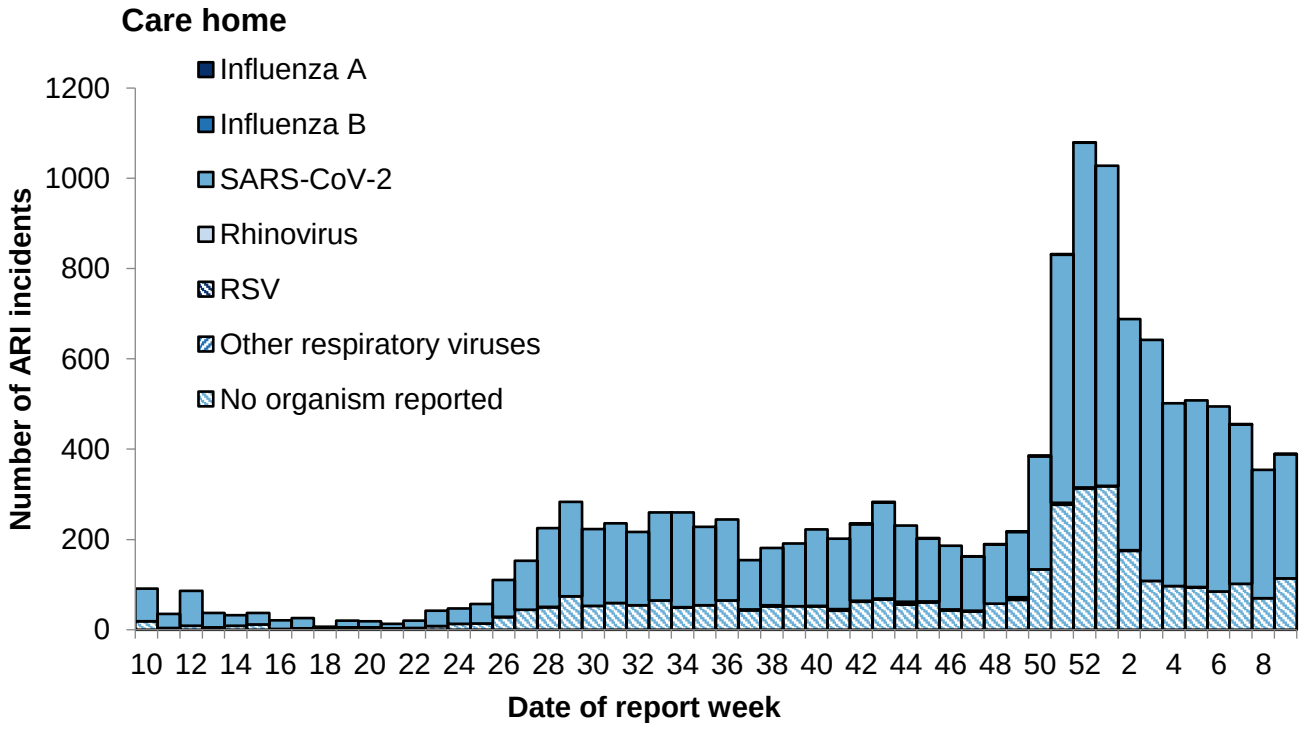


Figure 22: Number of acute respiratory infection (ARI) incidents in hospitals by virus type, England

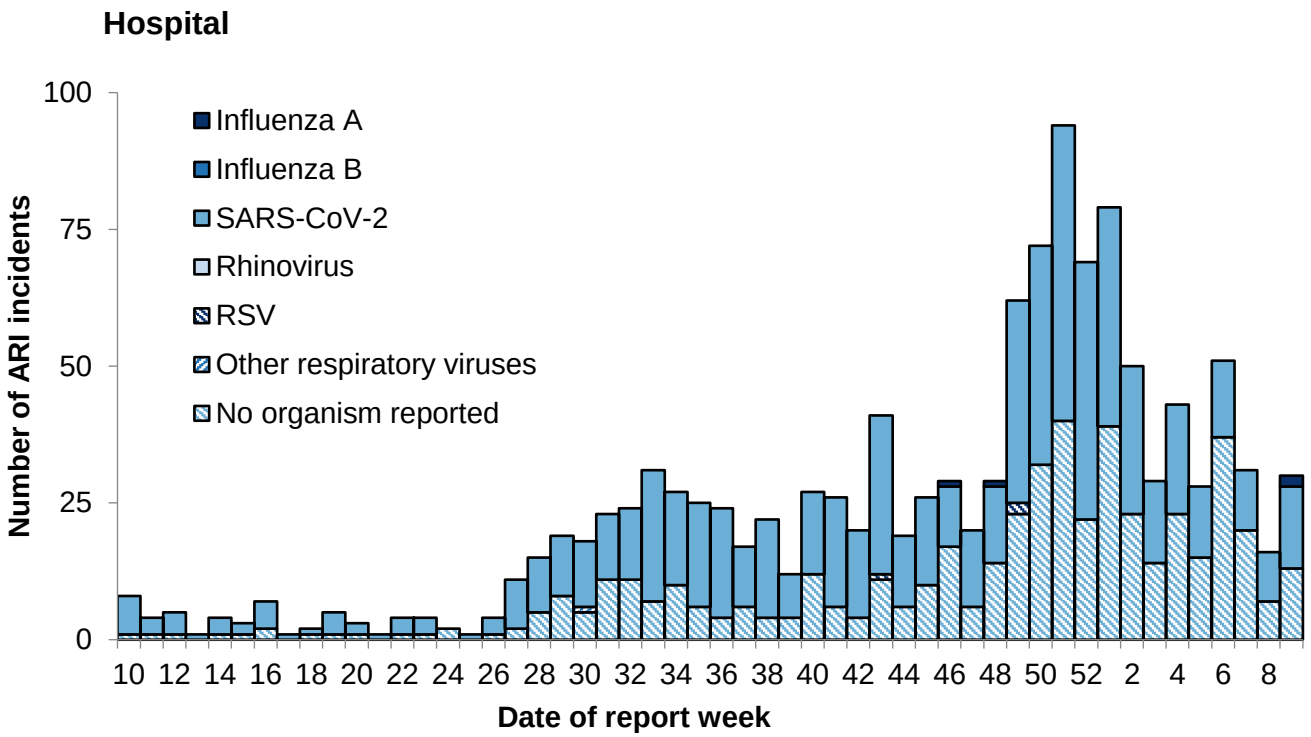


Figure 23: Number of acute respiratory infection (ARI) incidents in educational settings by virus type, England

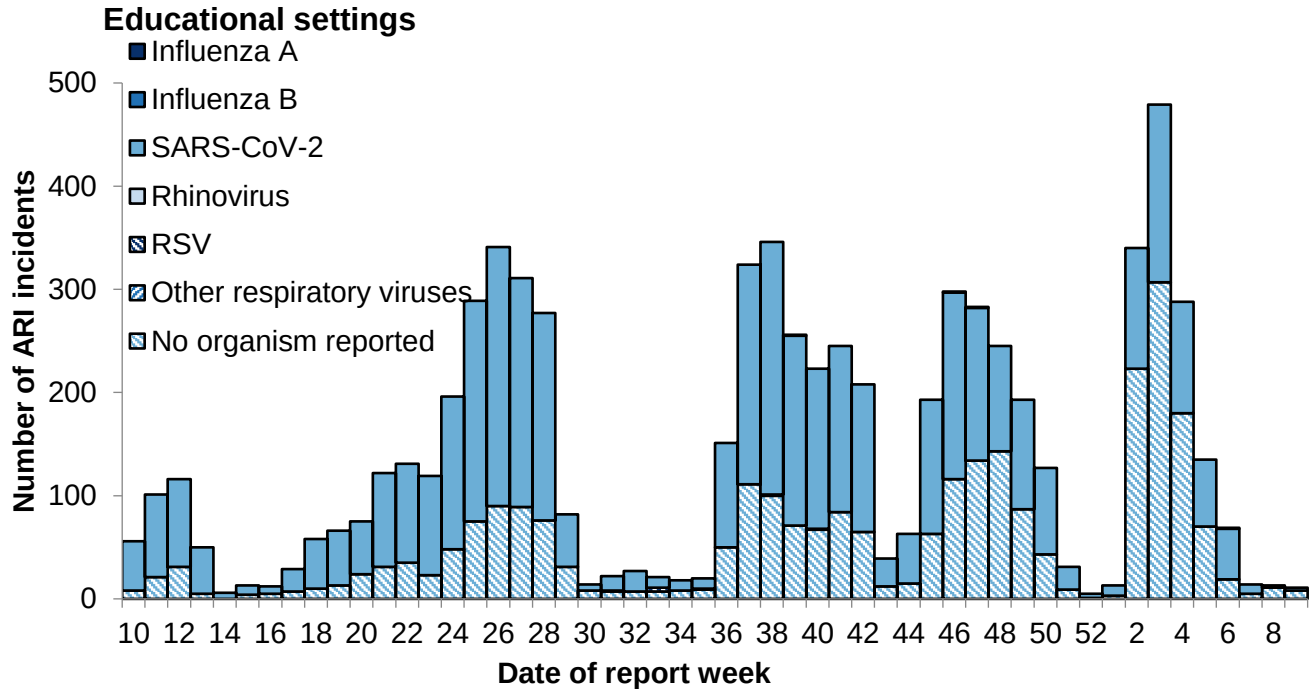


Figure 24: Number of acute respiratory infection (ARI) incidents in prisons by virus type, England

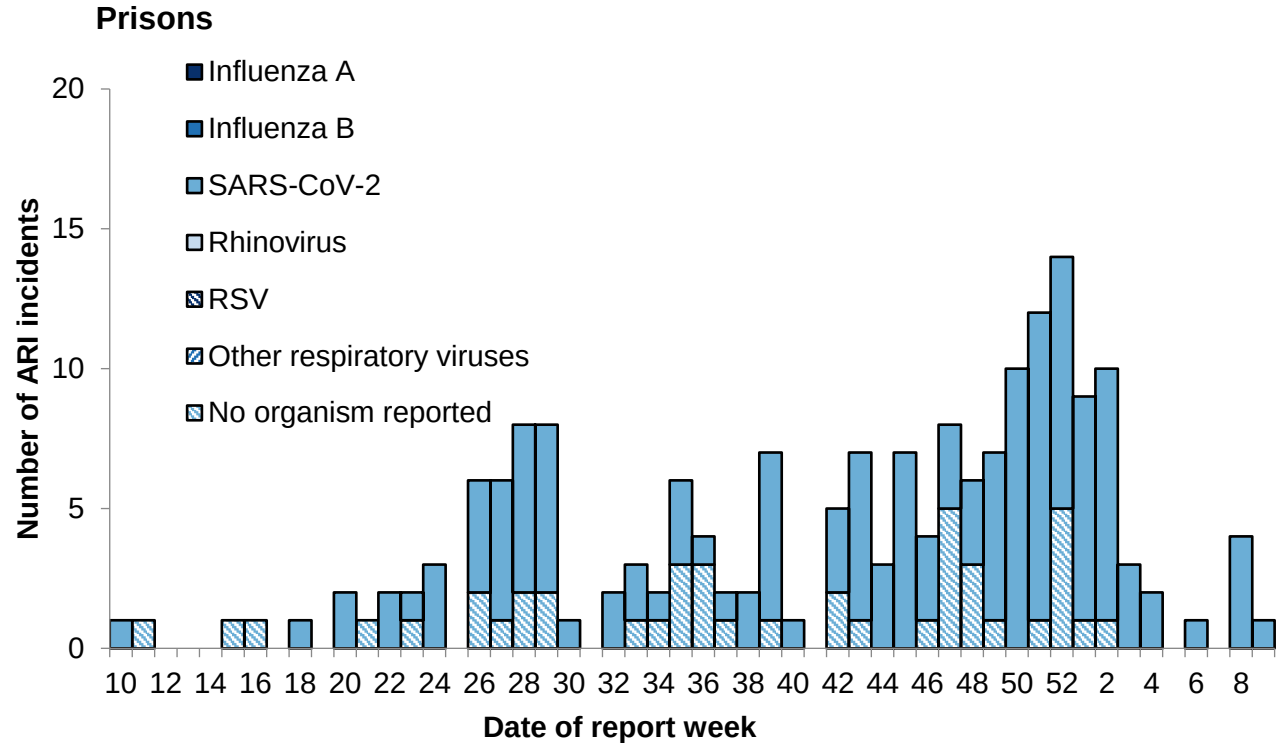


Figure 25: Number of acute respiratory infection (ARI) incidents in workplace settings by virus type, England

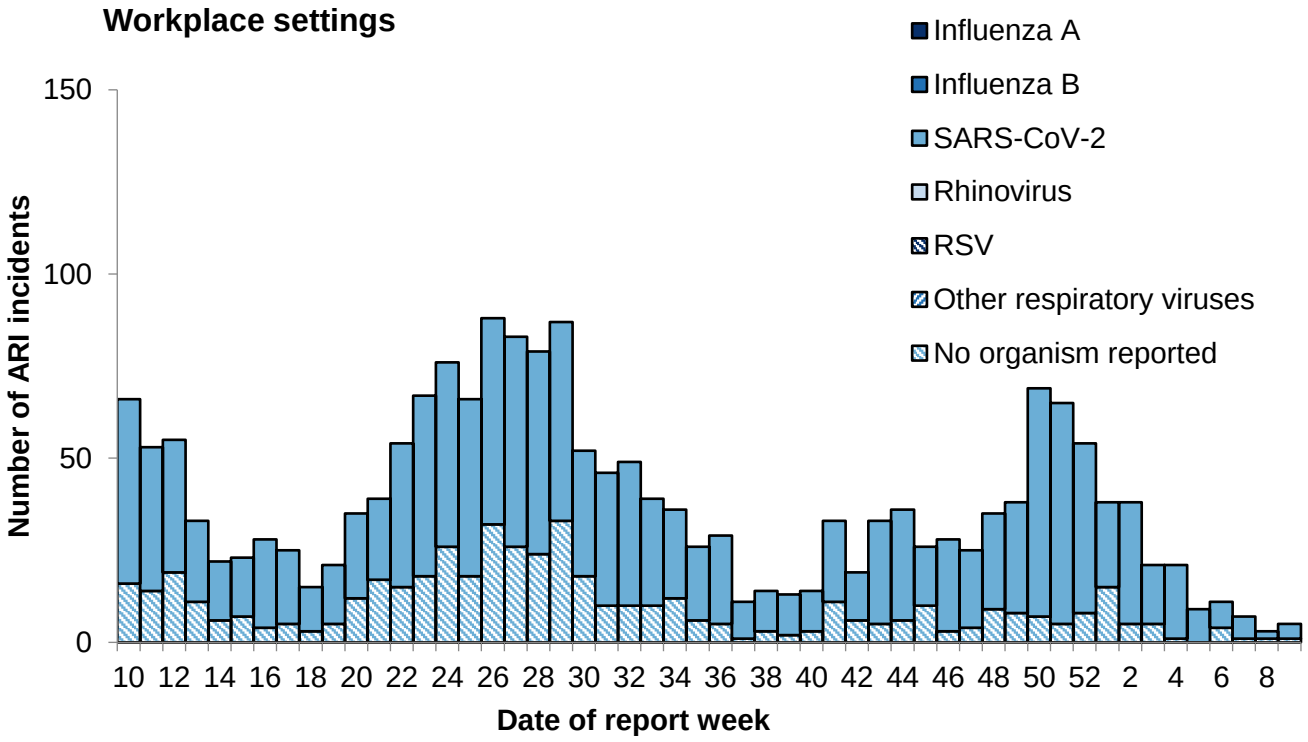


Figure 26: Number of acute respiratory infection (ARI) incidents in food outlet or restaurant settings by virus type, England

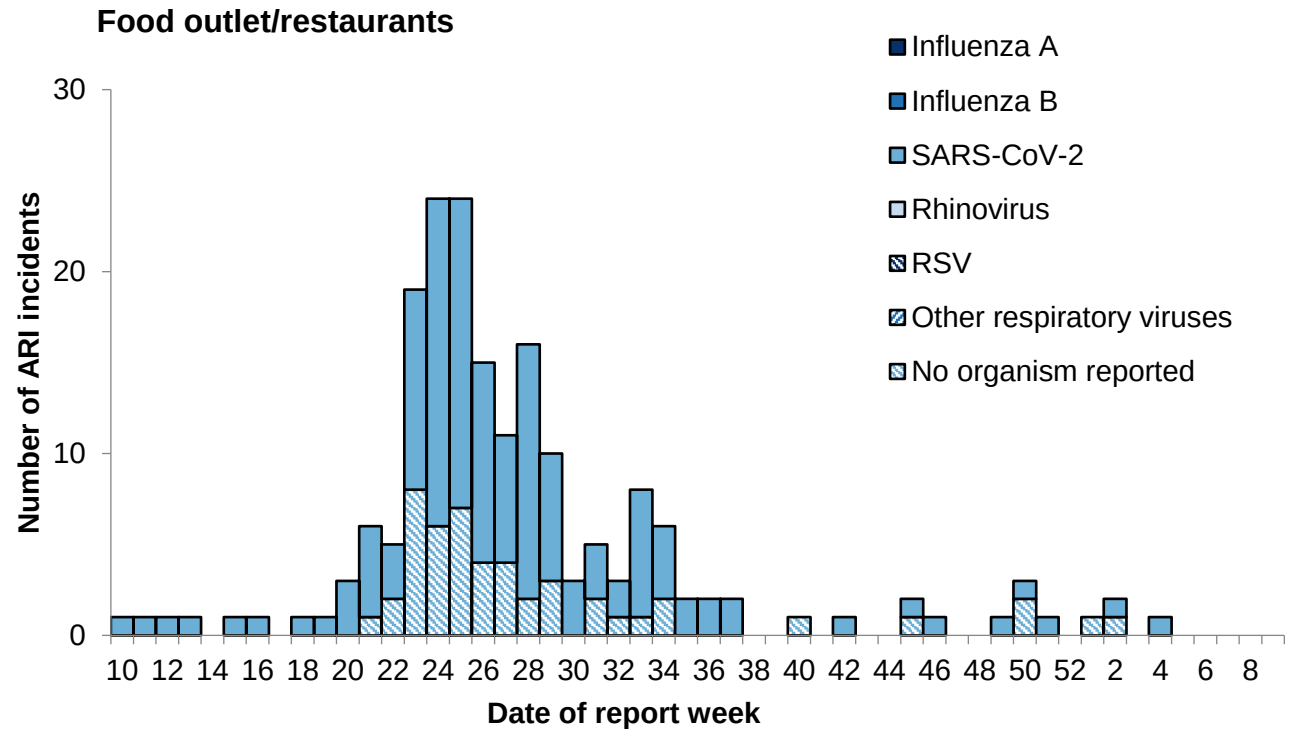


Figure 27: Number of acute respiratory infection (ARI) incidents in other settings by virus type from, England

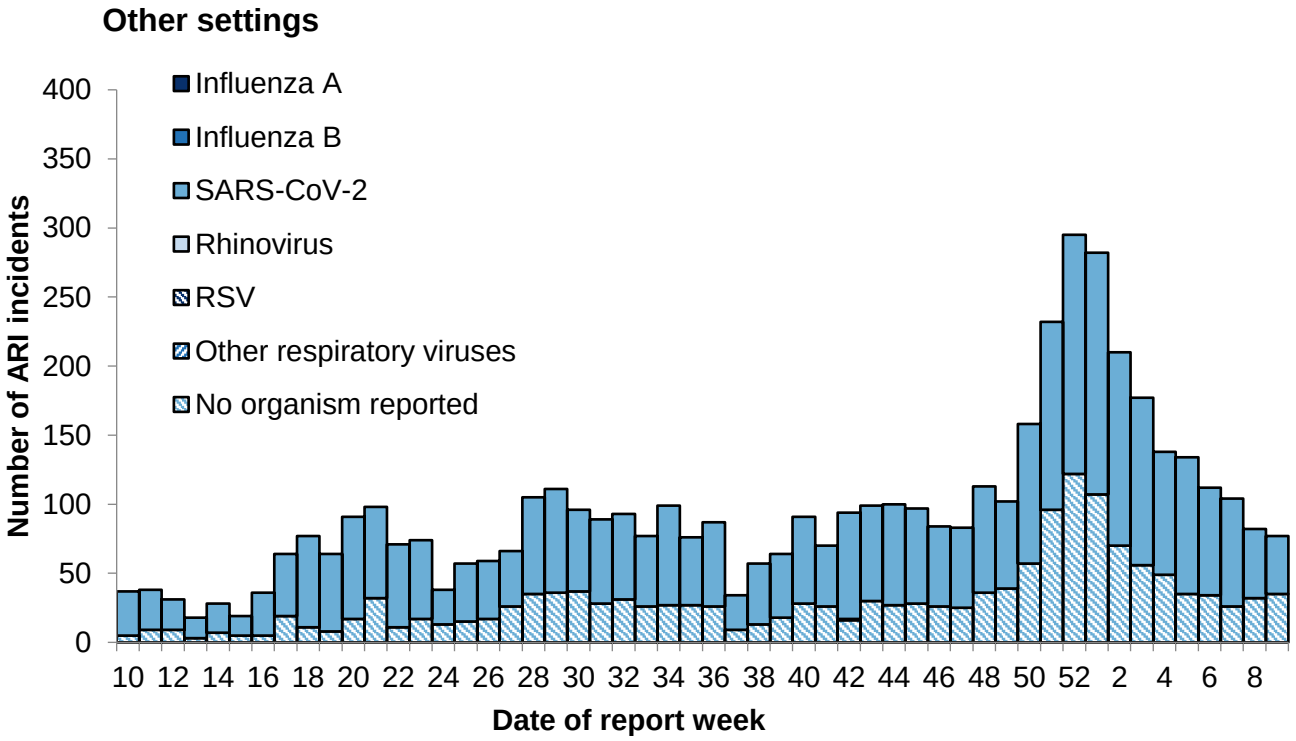


Table 2: Total number of situations and incidents by institution and UKHSA Centres over the past 4 weeks with the total number in the last week in brackets

UKHSA Centres	Care home	Hospital	Educational settings	Prisons	Workplace settings	Food outlet/ restaurant settings	Other settings	Total
East of England	182(44)	9(2)	0(0)	2(1)	0(0)	0(0)	85(21)	278(68)
East Midlands	191(49)	11(3)	10(0)	0(0)	12(1)	0(0)	52(7)	276(60)
London	88(23)	86(22)	46(7)	0(0)	2(1)	0(0)	49(16)	271(69)
North East	96(23)	0(0)	0(0)	0(0)	0(0)	0(0)	8(1)	104(24)
North West	142(23)	3(0)	10(0)	0(0)	11(2)	0(0)	26(5)	192(30)
South East	368(79)	5(0)	13(3)	2(0)	0(0)	0(0)	77(15)	465(97)
South West	475(104)	1(0)	19(1)	0(0)	1(1)	0(0)	30(7)	526(113)
West Midlands	50(4)	5(1)	5(0)	1(0)	0(0)	0(0)	8(0)	69(5)
Yorkshire and Humber	103(41)	8(2)	4(0)	1(0)	0(0)	0(0)	40(5)	156(48)
Total	1695(390)	128(30)	107(11)	6(1)	26(5)	0(0)	375(77)	2337(514)

COVID-19 cases by type of residence

Table 3 shows the proportion of confirmed COVID-19 cases according to their type of residence. Property classifications are derived from Ordnance Survey AddressBase and are matched to address details within the laboratory data. Properties are identified by unique property reference number (UPRN) and basic land property unit (BLPU). Cases with poor or no address data which failed the address matching and are classed as 'undetermined'. No fixed abode and overseas addresses identified by recording in the laboratory data.

In week 9, the highest percentage of confirmed COVID-19 episodes by type of residence was seen in residential dwellings (Table 3).

Table 3: Type of residence of confirmed COVID-19 episodes by percentage of total weekly cases

Type of residence	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
Residential dwelling (including houses, flats, sheltered accommodation)	94.9	94.5	94.0	94.1	93.4	94.2
Undetermined	1.9	1.9	2.0	1.9	2.2	1.9
Care/Nursing home	1.4	1.5	1.8	2.0	2.6	2.3
Residential institution (including residential education)	0.4	0.5	0.5	0.4	0.4	0.3
Other property classifications	0.5	0.6	0.7	0.6	0.5	0.5
House in multiple occupancy (HMO)	0.4	0.5	0.6	0.6	0.5	0.4
Medical facilities (including hospitals and hospices, and mental health)	0.3	0.3	0.4	0.3	0.3	0.3
Prisons, detention centres, secure units	0.1	0.1	0.2	0.1	0.1	0.1
Overseas address	0.0	0.0	0.0	0.0	0.0	0.0
No fixed abode	0.0	0.0	0.0	0.0	0.0	0.0

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: 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.

A total of 2,537 participants completed the weekly surveillance survey in week 9, of which 129 (5.1%) reported fever or cough and 30 (1.1%) reported ILI. The most commonly used healthcare services reported by respondents remains telephoning a GP practice (Figure 28).

Self-reported daily social contact patterns are reported for the first time this week. 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. More than half of participants now report two or more contacts.

Figure 28: FluSurvey participants self-reporting fever or cough and ILI symptoms, and trends in healthcare seeking behaviour among these participants, England

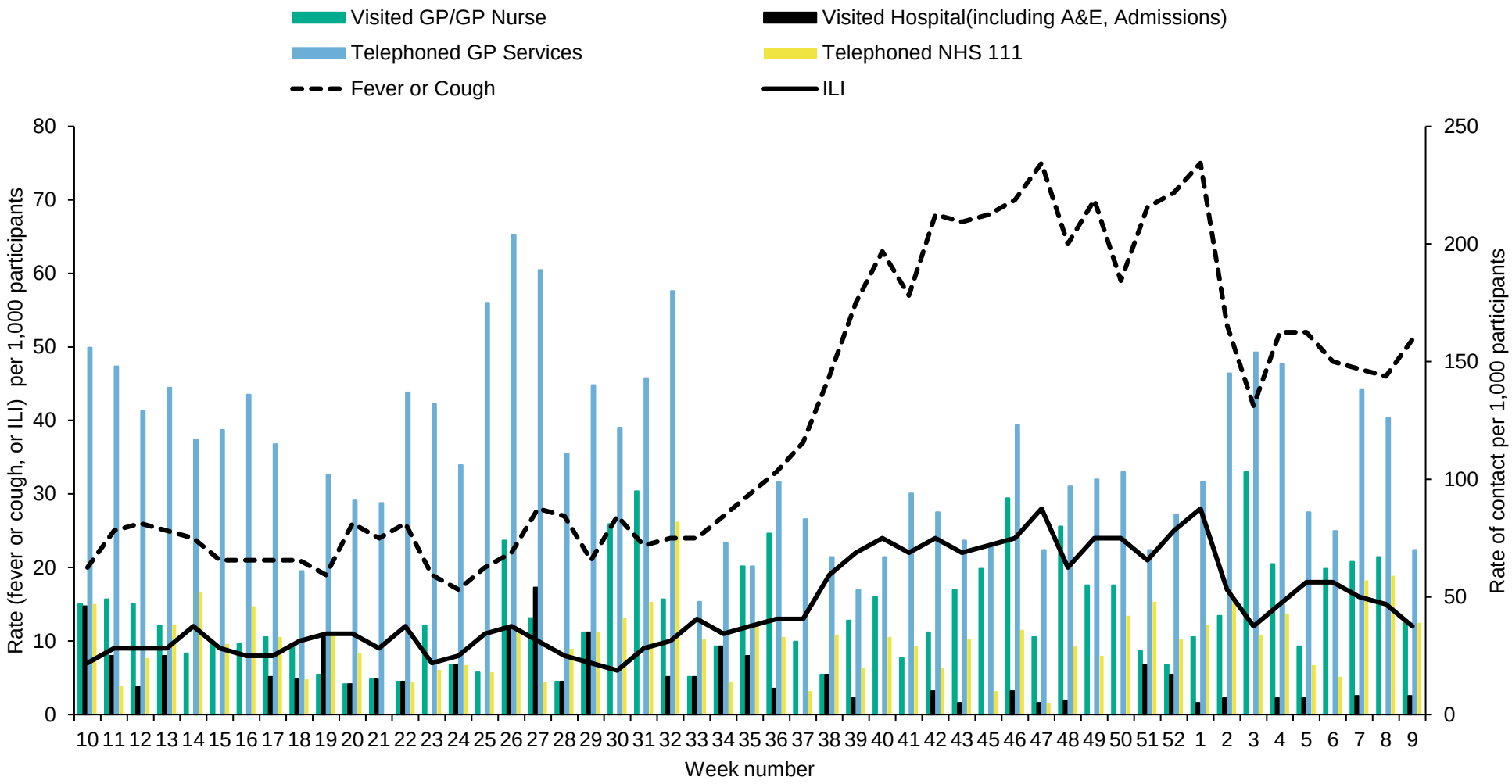
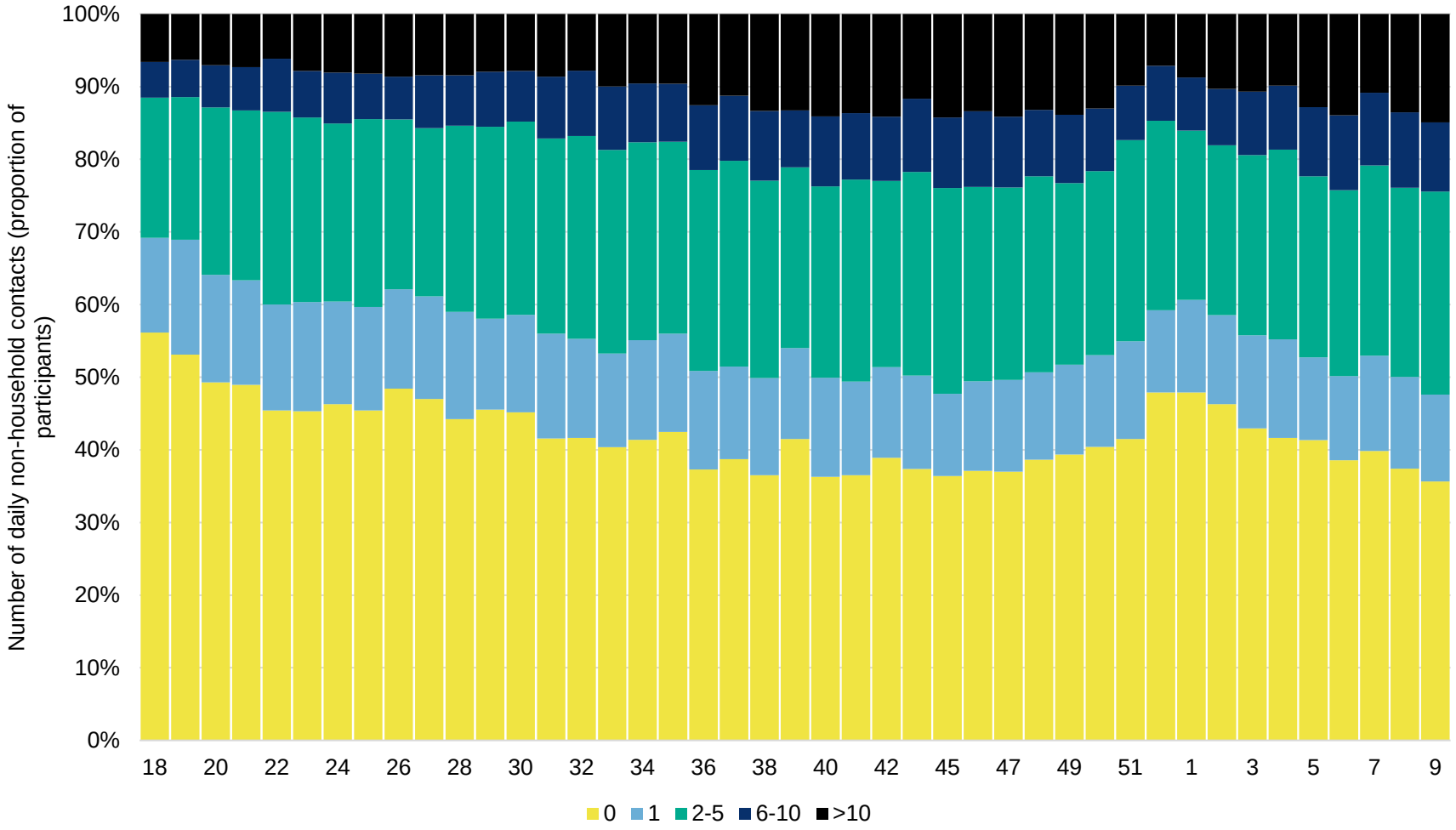


Figure 29: FluSurvey participants' self-reported number of social contacts outside the household



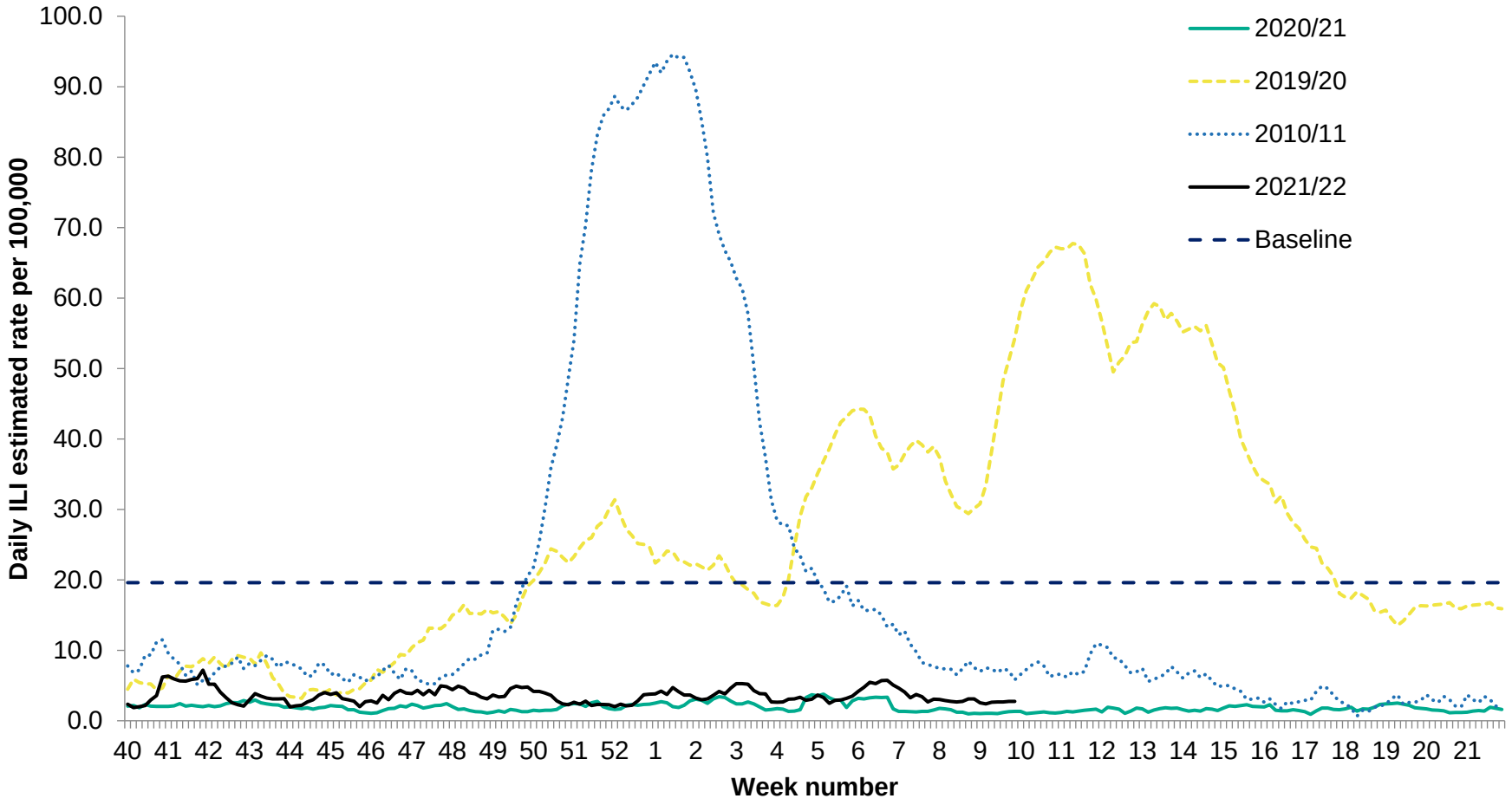
FluDetector

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 9, the daily ILI rate remained low and below the baseline threshold of 19.6 per 100,000 for the 2021 to 2022 season (Figure 30).

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

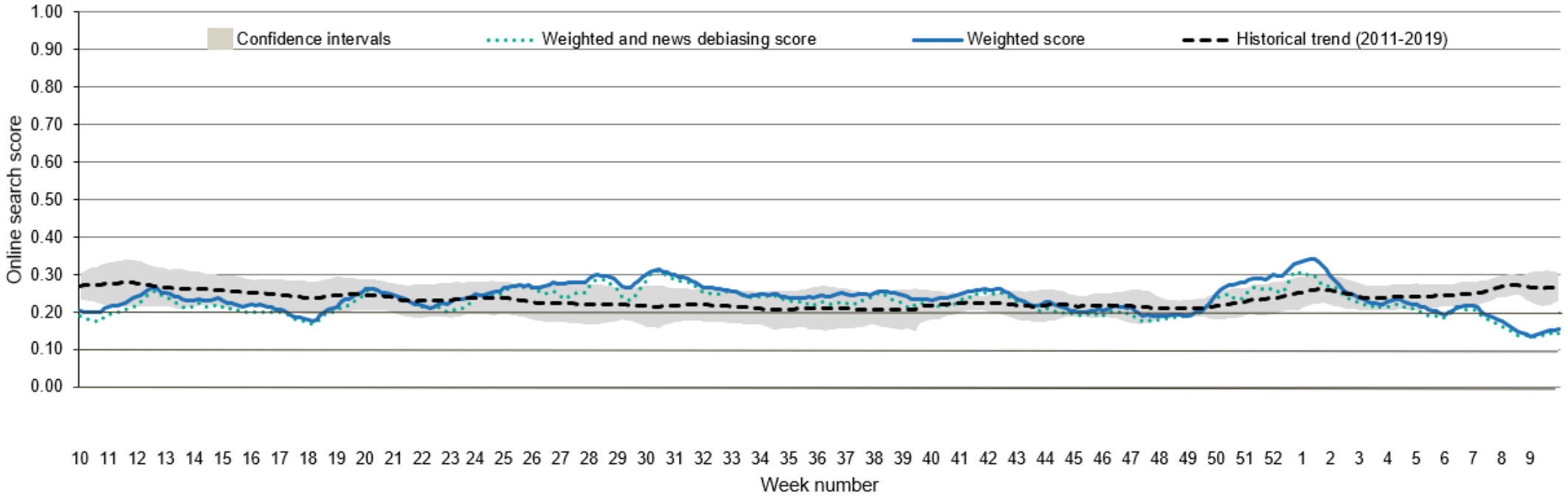


Google search queries

This is a web-based syndromic surveillance system which uses daily search query frequency statistics obtained from the Google Health Trends API. 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 has been 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 9, the overall and media-debiasing weighted Google search scores remained stable (Figure 31).

Figure 31: Normalised Google search score for COVID-19 symptoms, with weighted score for media-debiasing and historical trend, England



NHS 111

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

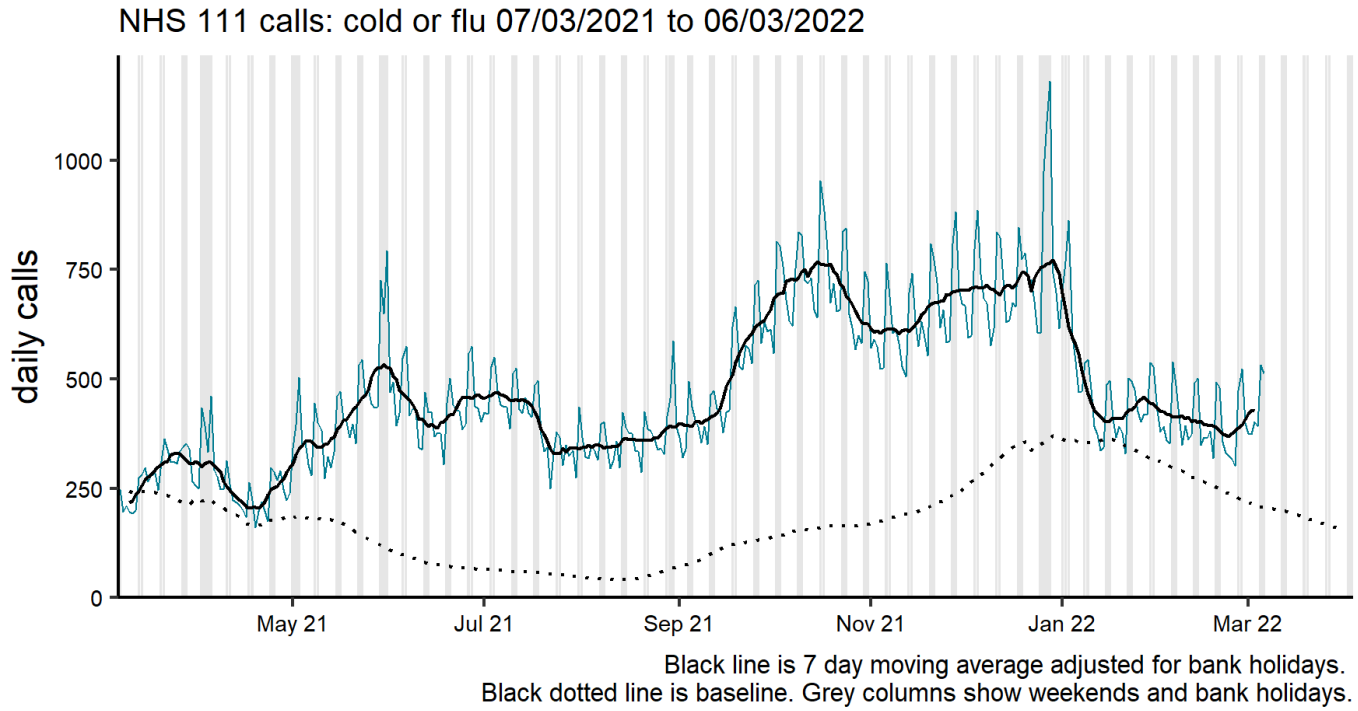
Up to 6 March, calls for cold or flu and cough increased slightly (Figure 32 and 33).

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

(a)



(b)

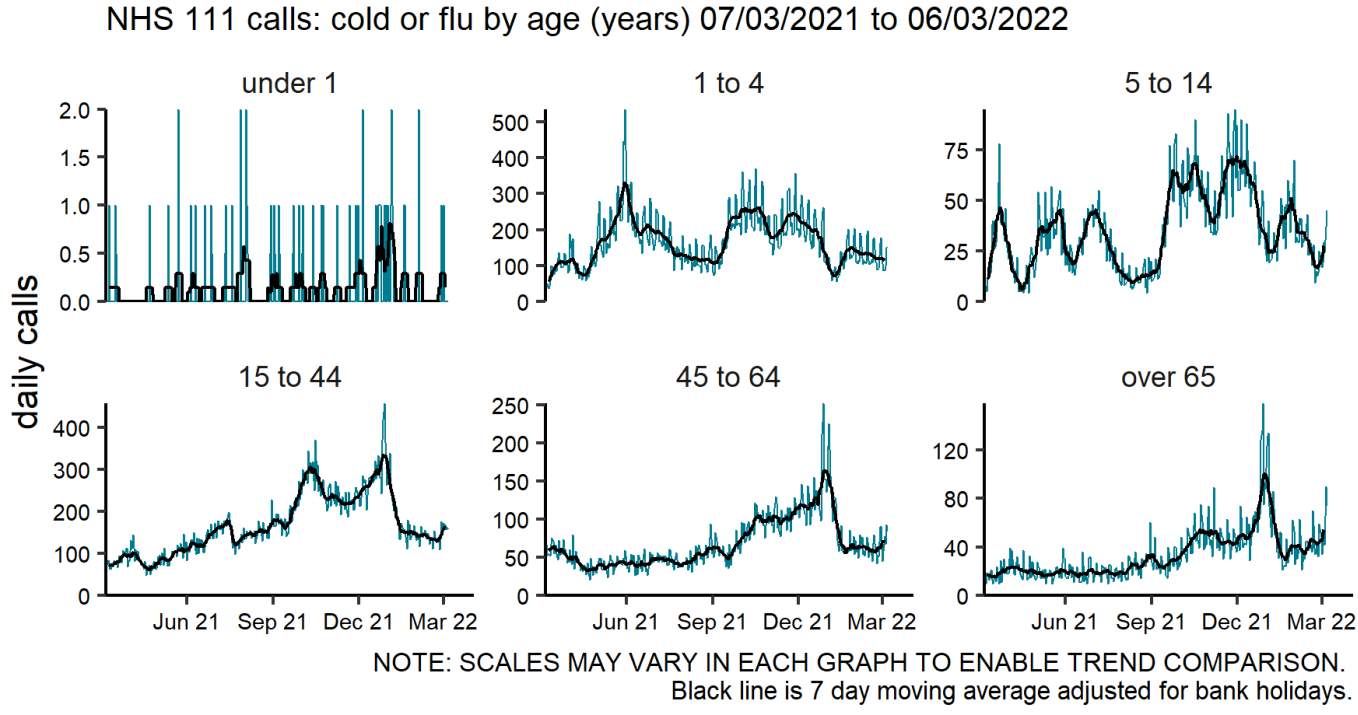
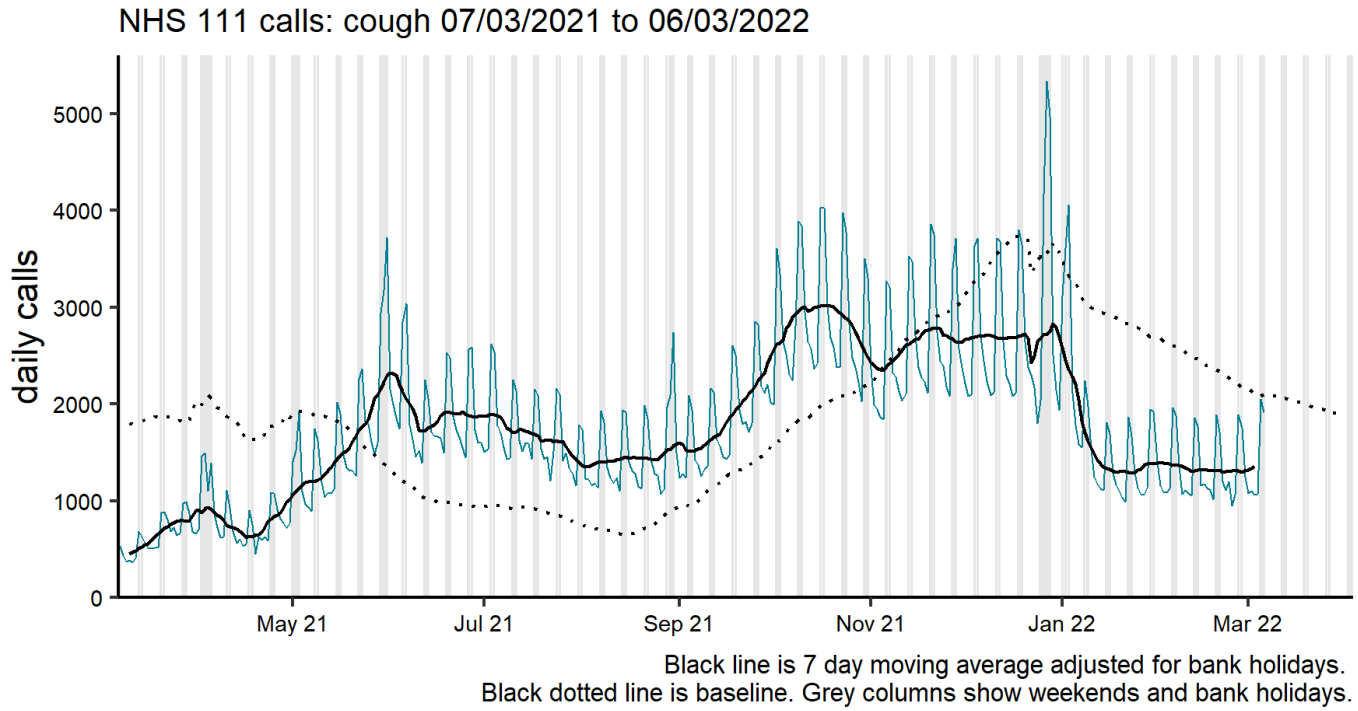
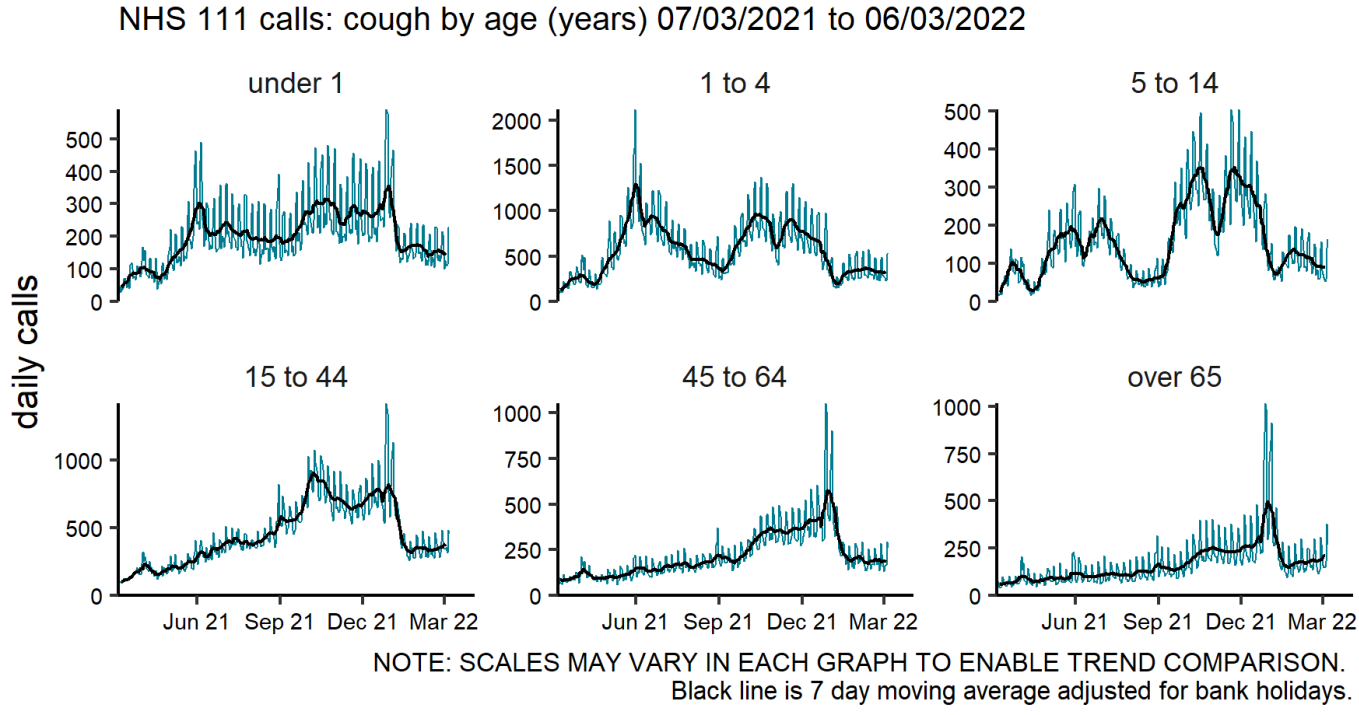


Figure 33: NHS 111 telephony indicators (and 7-day moving average) for number of daily cough calls, England (a) nationally and (b) by age group

(a)



(b)



Primary care surveillance

RCGP (England)

The weekly ILI consultation rate through the RCGP surveillance was 1.3 per 100,000 registered population in participating GP practices in week 9 compared to 1.0 per 100,000 in the previous week. This is below the baseline threshold (12.2 per 100,000) (Figure 34). By age group, the highest rates were seen in the under 1 year olds (4.9 per 100,000). The Lower Respiratory Tract Infections (LRTI) consultation rate was at 38.1 per 100,000 in week 9, compared to the rate of 36.6 per 100,000 in the previous week. The COVID-19 indicator rate was at 244.4 per 100,000 in week 9 compared to a rate of 227.8 per 100,000 in the previous week (Figure 35).

Figure 34: RCGP ILI consultation rates, all ages, England

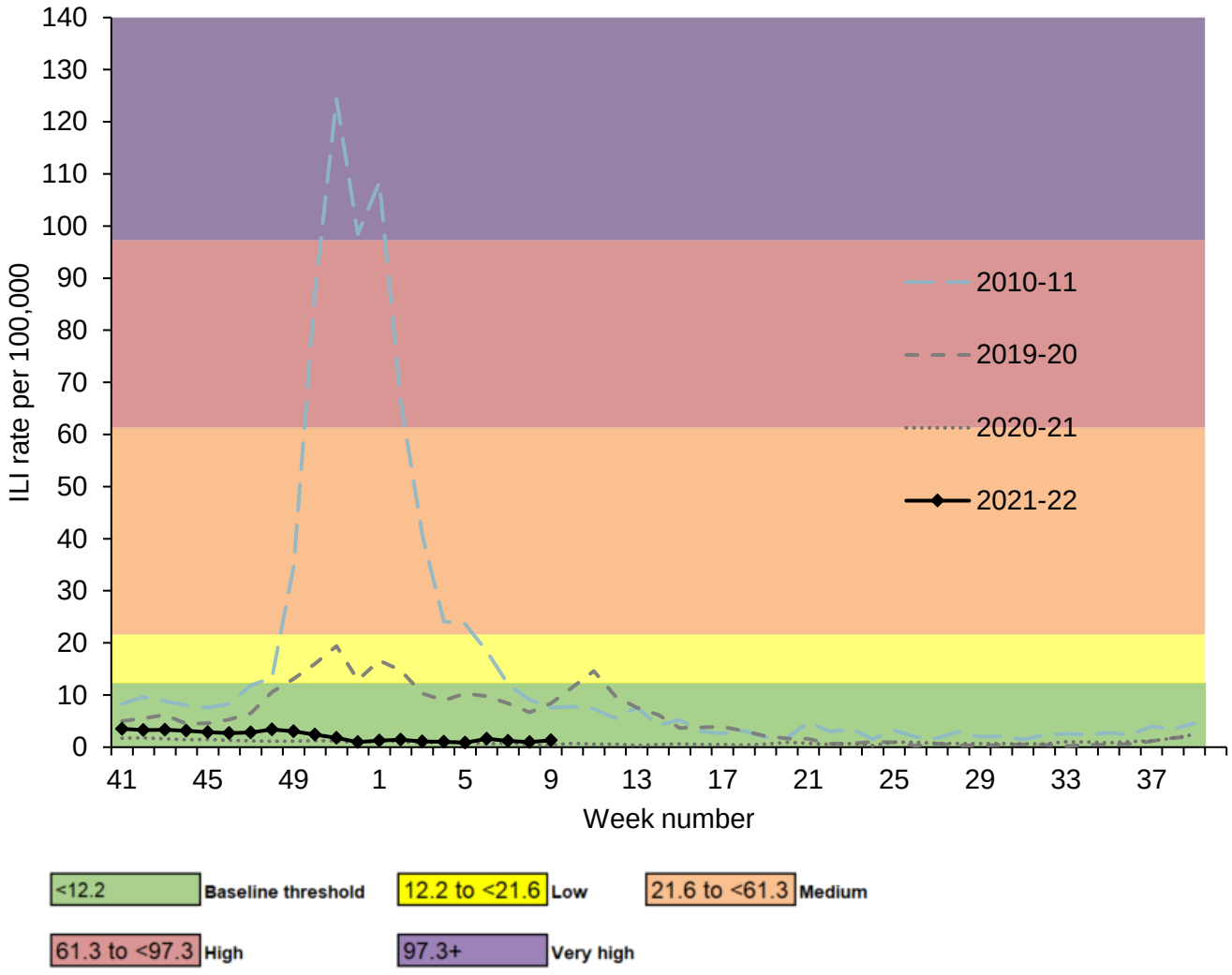
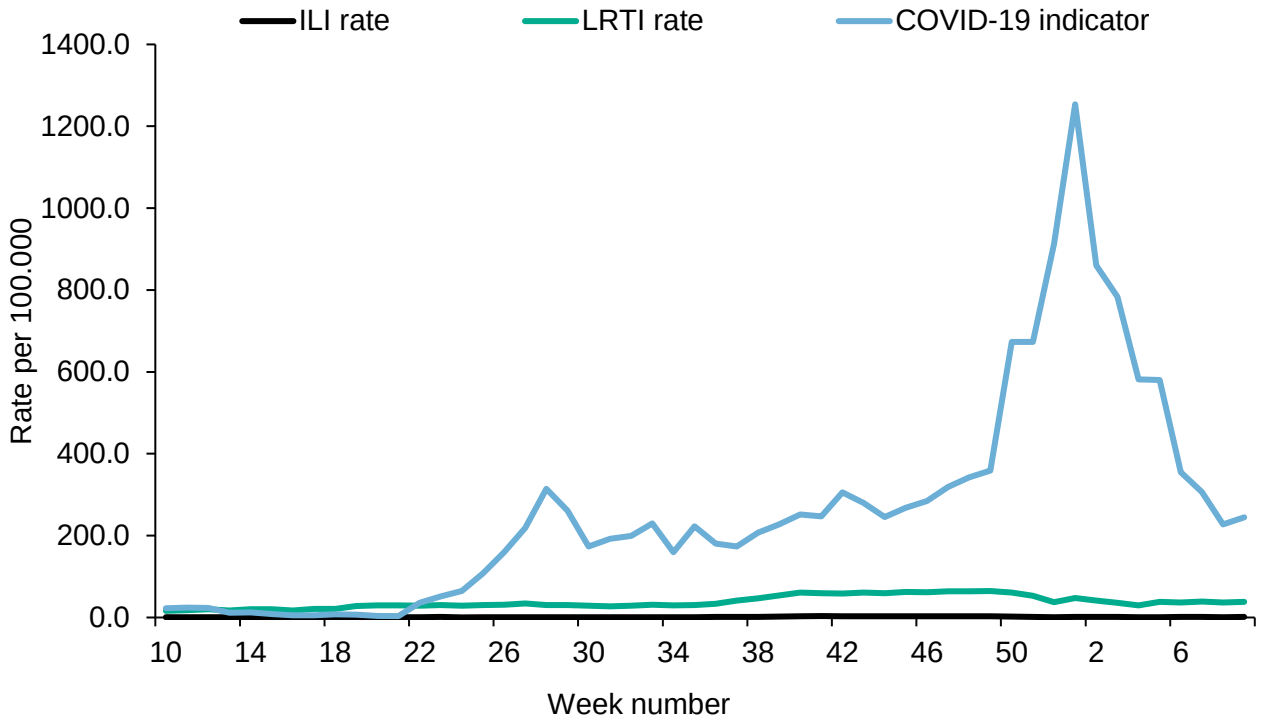


Figure 35: RCGP ILI, LRTI and COVID-19 indicator rates, England



UK

Overall, weekly ILI consultations rates were below baseline levels in all UK schemes (Table 4).

By age group, the highest rates were seen in the under 1 year olds in Scotland (2.3 per 100,000), in the 65 to 74 year olds and over in Wales (5.2 per 100,000) and in the 15 to 44 and the 65 to 74 year olds in Northern Ireland (1.3 per 100,000).

Table 4: GP ILI consultations in the UK for all ages with MEM thresholds applied

GP ILI consultation rates (all ages)	Week number																				
	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9
England (RCGP)	3.3	3.5	3.3	3.3	3.1	2.9	2.7	2.8	3.4	3.0	2.4	1.8	0.9	1.3	1.4	1.1	1.0	0.9	1.6	1.2	1.0	1.3
Wales	3.3	3.8	1.8	1.5	2.8	2.0	2.5	2.8	2.7	3.2	3.3	2.0	0.8	1.2	0.7	0.5	0.7	1.7	1.8	0.8	1.2	2.6
Scotland	0.8	2.3	3.6	2.8	0.9	2.5	1.9	2.1	4.0	4.8	3.3	0.9	0.7	0.6	0.9	0.6	0.7	0.5	0.5	0.7	0.8	0.9
Northern Ireland	1.5	2.2	1.2	1.7	1.6	1.7	2.3	2.3	2.8	1.5	1.7	1.2	1.1	1.5	1.3	1.3	0.8	0.8	0.9	1.3	0.9	1.0

Baseline threshold | Low | Medium | High | Very high

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 2009 to 2010), in a standardised approach across Europe. For MEM threshold values for each country, please visit the webpage Sources of UK flu data: influenza surveillance in the UK.

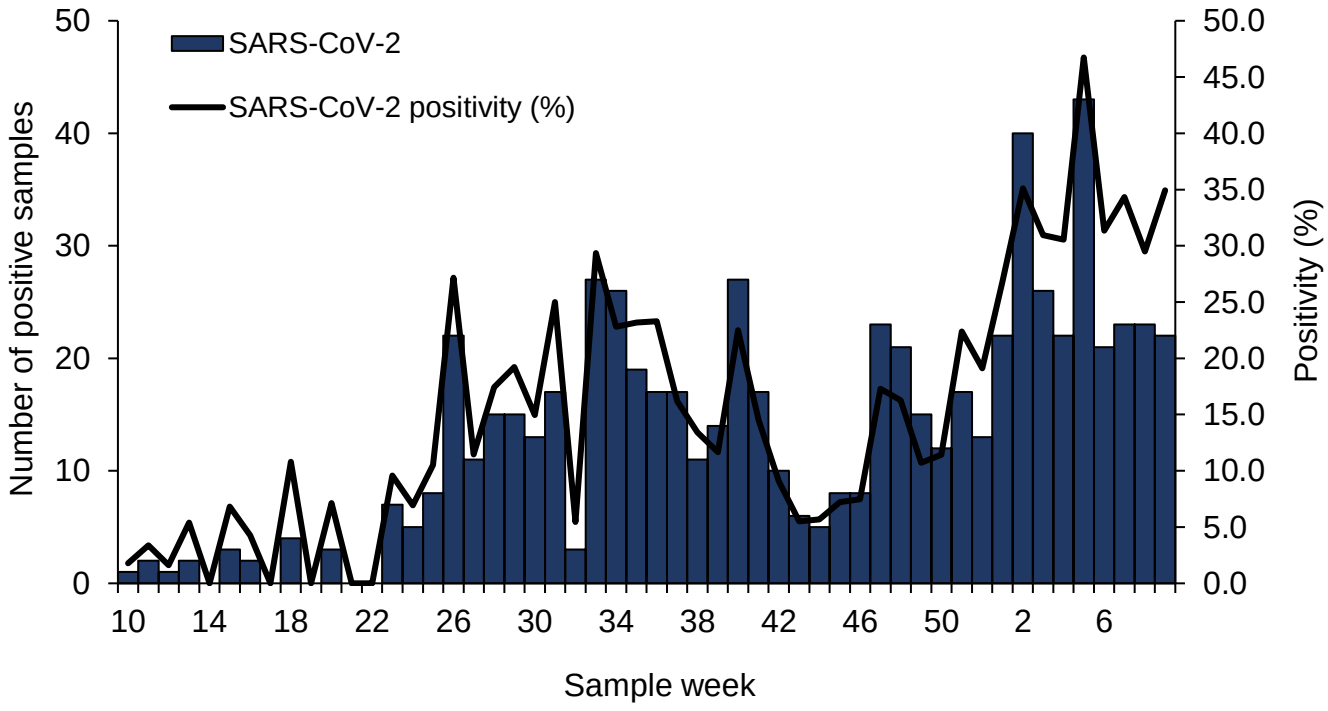
Sentinel swabbing scheme in the UK

In week 9 2022, 22 samples tested positive for SARS-CoV-2 with an overall positivity of 34.9% (22 out of 63) through the UK GP sentinel swabbing schemes (Figure 36).

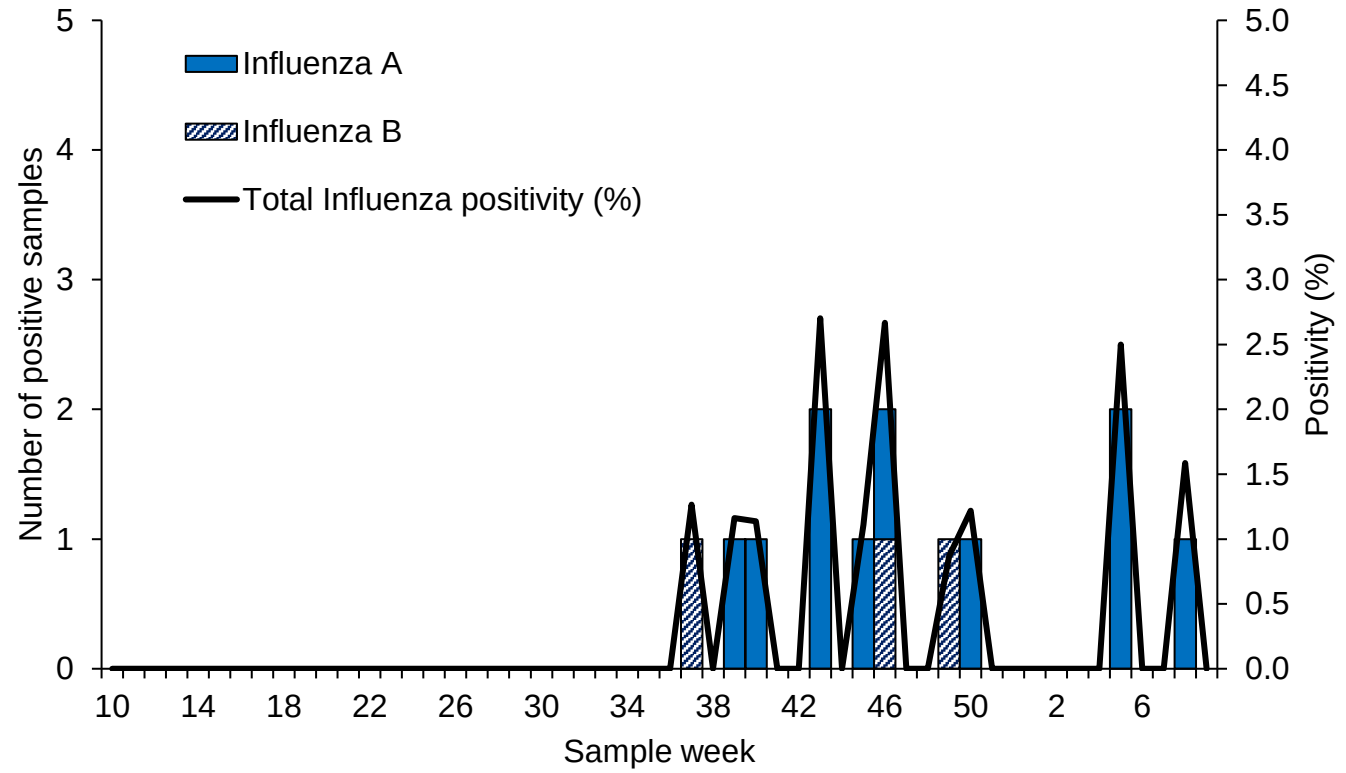
In week 9, no samples tested positive for influenza in England through the GP sentinel swabbing scheme with an overall positivity of 0.0% (0 out of 40), and 1 sample tested positive for RSV in England, with an overall positivity of 2.5% (1 out of 40).

Figure 36: Number of positive samples and weekly positivity (%) for (a) COVID-19 and (b) Influenza and (c) RSV, GP sentinel swabbing scheme

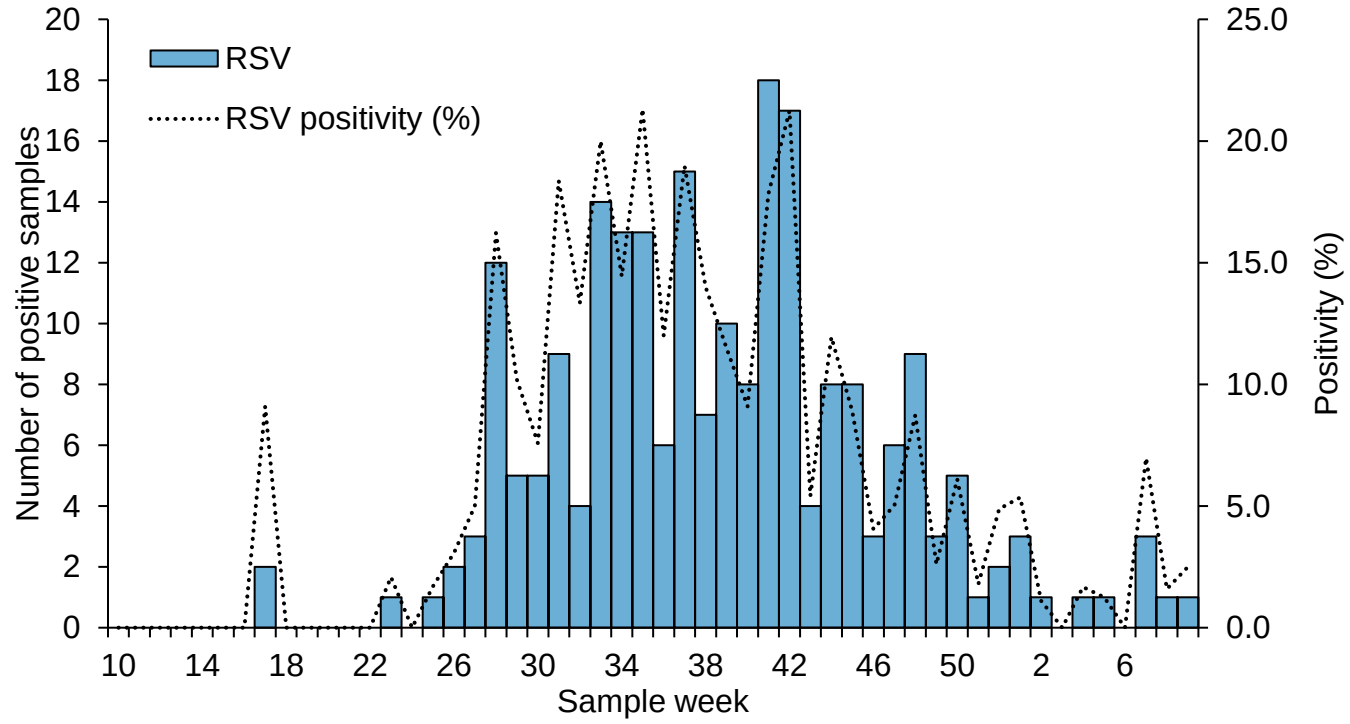
(a)



(b)



(c)



*For the most recent week, more samples are expected to be tested therefore the graphs in Figure 36 should be interpreted with caution

*Positivity (%) is not calculated when the total number tested is less than 10

GP In Hours, Syndromic Surveillance

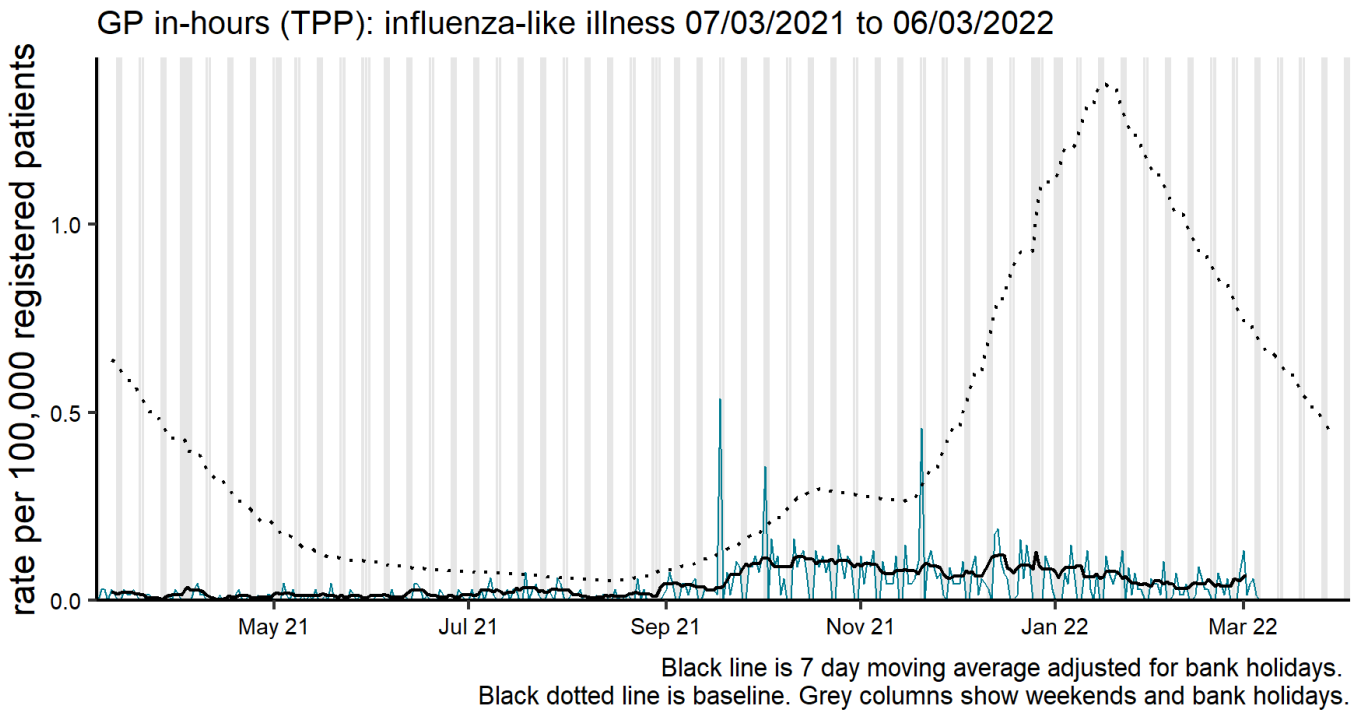
The GP In Hours (GPIH) syndromic surveillance system monitors the number of GP visits during regular hours of known clinical indicators.

Up to 6 March, GP in-hours consultations for influenza-like illness (ILI) were stable (Figure 37).

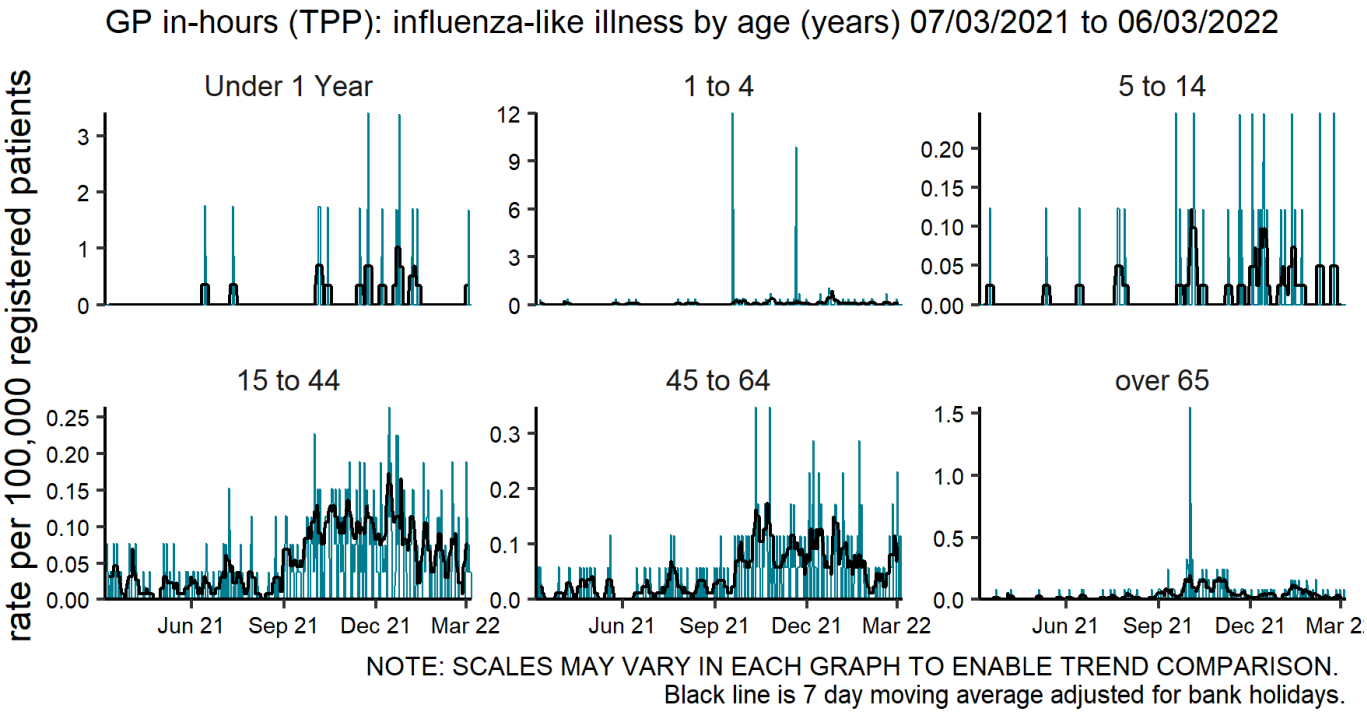
Further indicators and information about caveats are available from the GP In Hours Syndromic Surveillance bulletin.

Figure 37: GPIH clinical indicators for influenza-like illness GP consultations, England (a) nationally, (b) by age group and (c) by UKHSA Centre

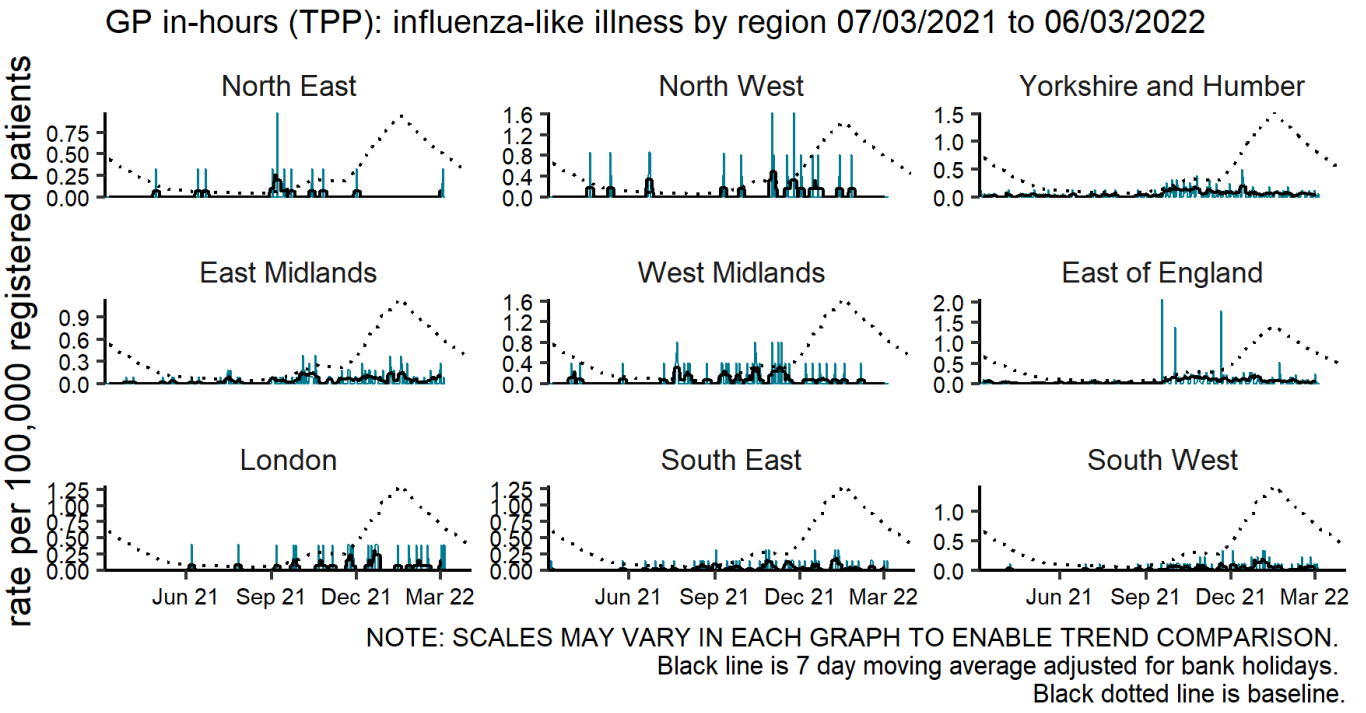
(a)



(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.

Up to 6 March, GP out-of-hours and unscheduled care consultations for ARI remained stable and below seasonally expected levels. GP out-of-hours and unscheduled care consultations for ILI increased slightly (Figure 38 and 39).

Figure 38: GPOOH number of daily contacts for all ages for influenza-like illness, England

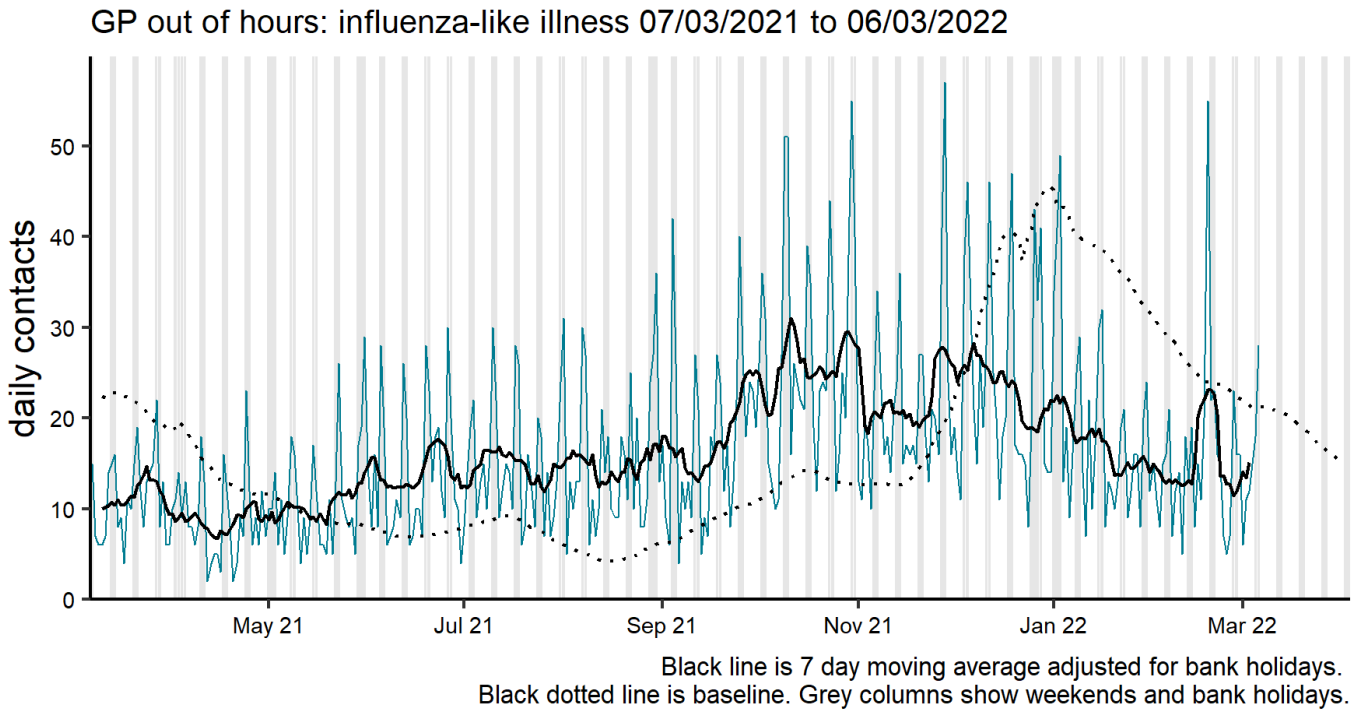
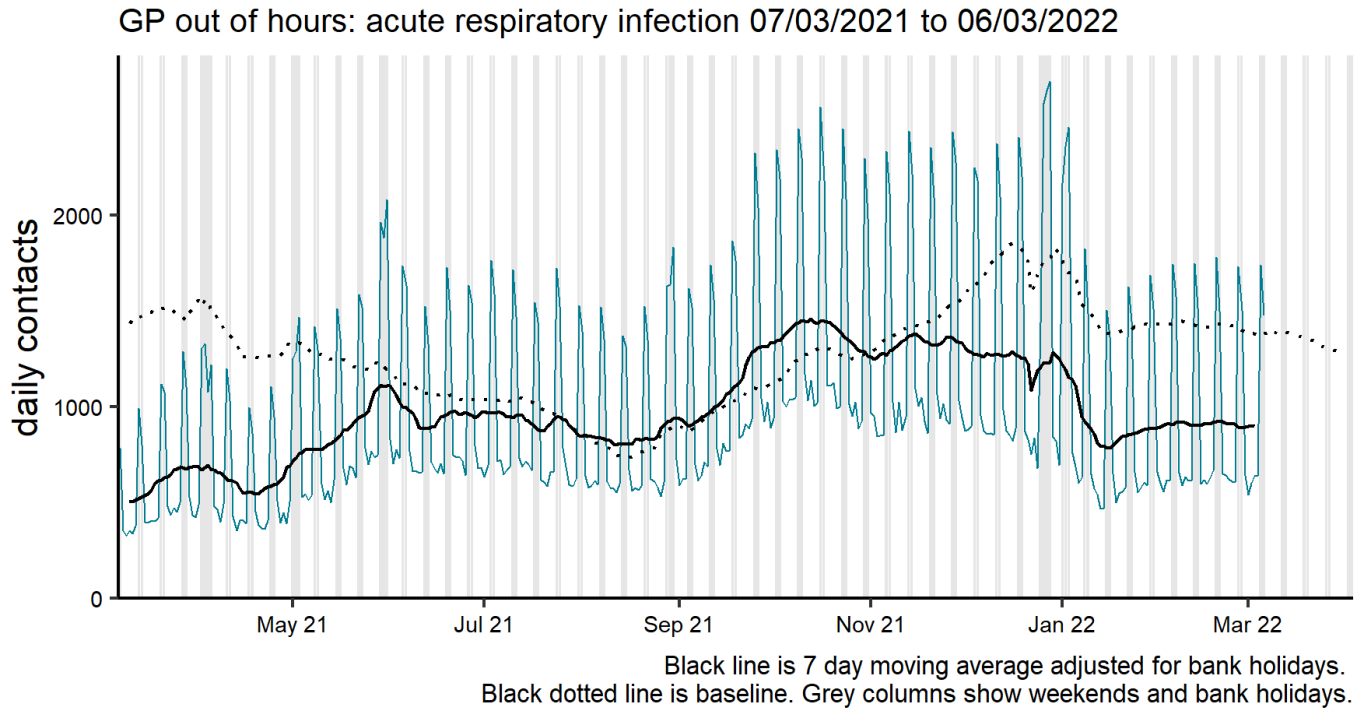
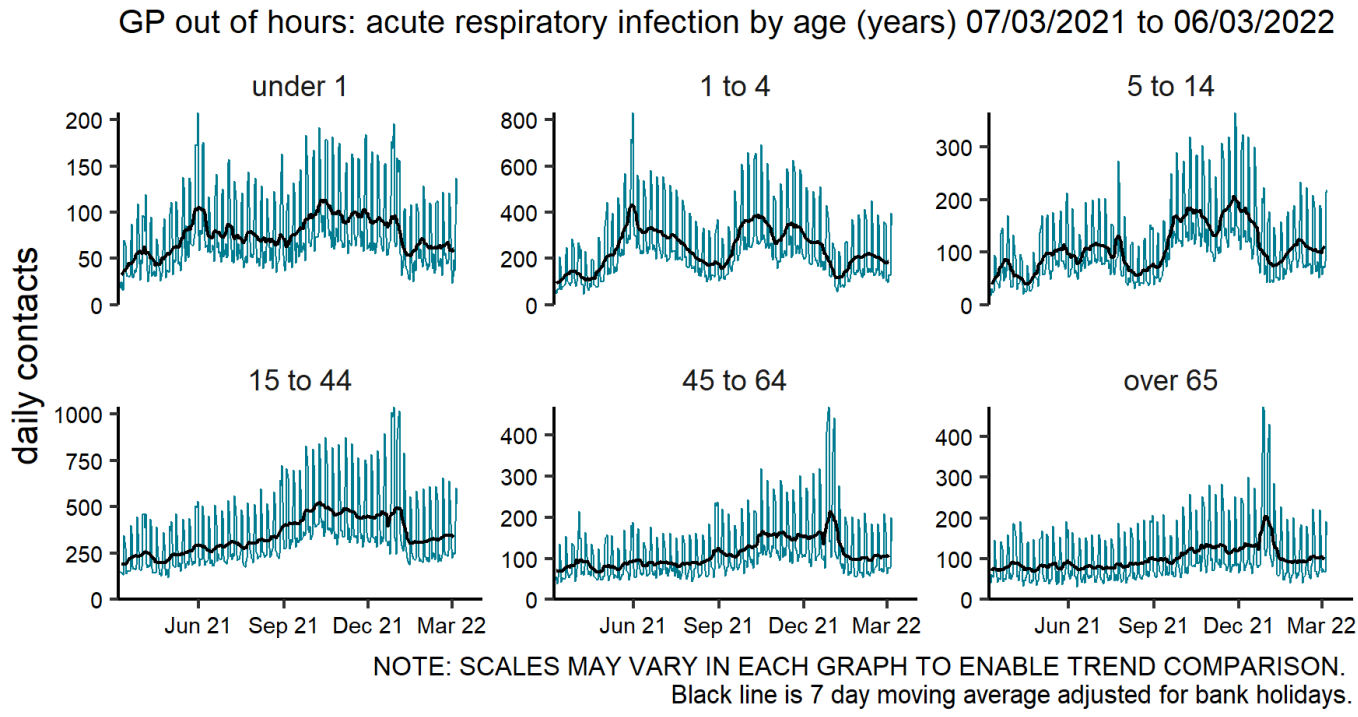


Figure 39: GPOOH number of daily contacts for acute respiratory infections, England (a) nationally and (b) by age group

(a)



(b)



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 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 2014 to 2015 to the 2018 to 2019 seasons (data from 2019 to 2020 was excluded due to the COVID-19 pandemic). These thresholds have been applied to data from the 2019 to 2020 season onwards.

Trends in hospital and critical care admission rates need to be interpreted in the context of testing recommendations.

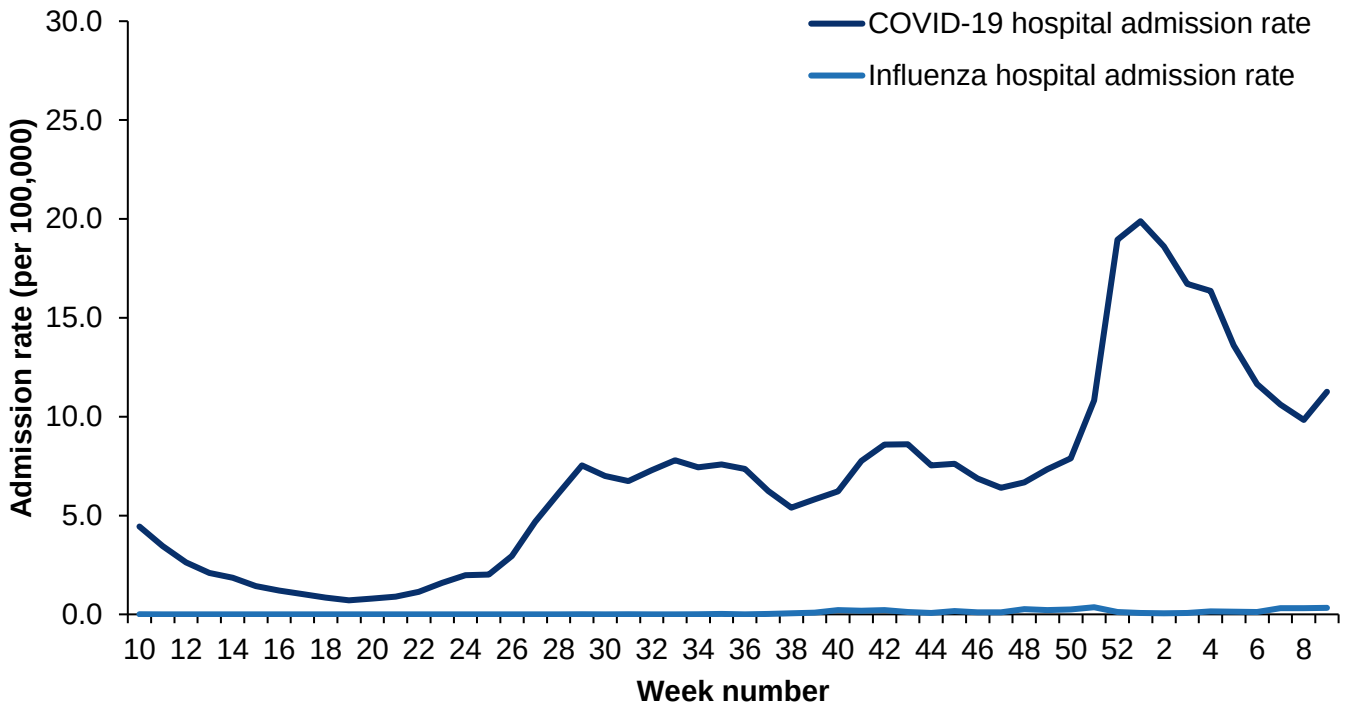
Hospitalisations, SARI Watch

In week 9, the overall weekly hospital admission rate for COVID-19 increased. The hospitalisation rate for COVID-19 was at 11.26 per 100,000 in week 9 compared to 9.84 per 100,000 in the previous week.

By UKHSA centre, the highest hospital admission rate for COVID-19 was observed in the South West. By age group, the highest hospital admission rate for confirmed COVID-19 was in the 85 year olds and over.

The hospitalisation rate for influenza was at 0.33 per 100,000 in week 9 compared to 0.32 per 100,000 in the previous week. There were 36 new hospital admissions to sentinel Trusts for influenza (10 influenza A(H3N2) and 26 influenza A(not subtyped) in week 9.

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



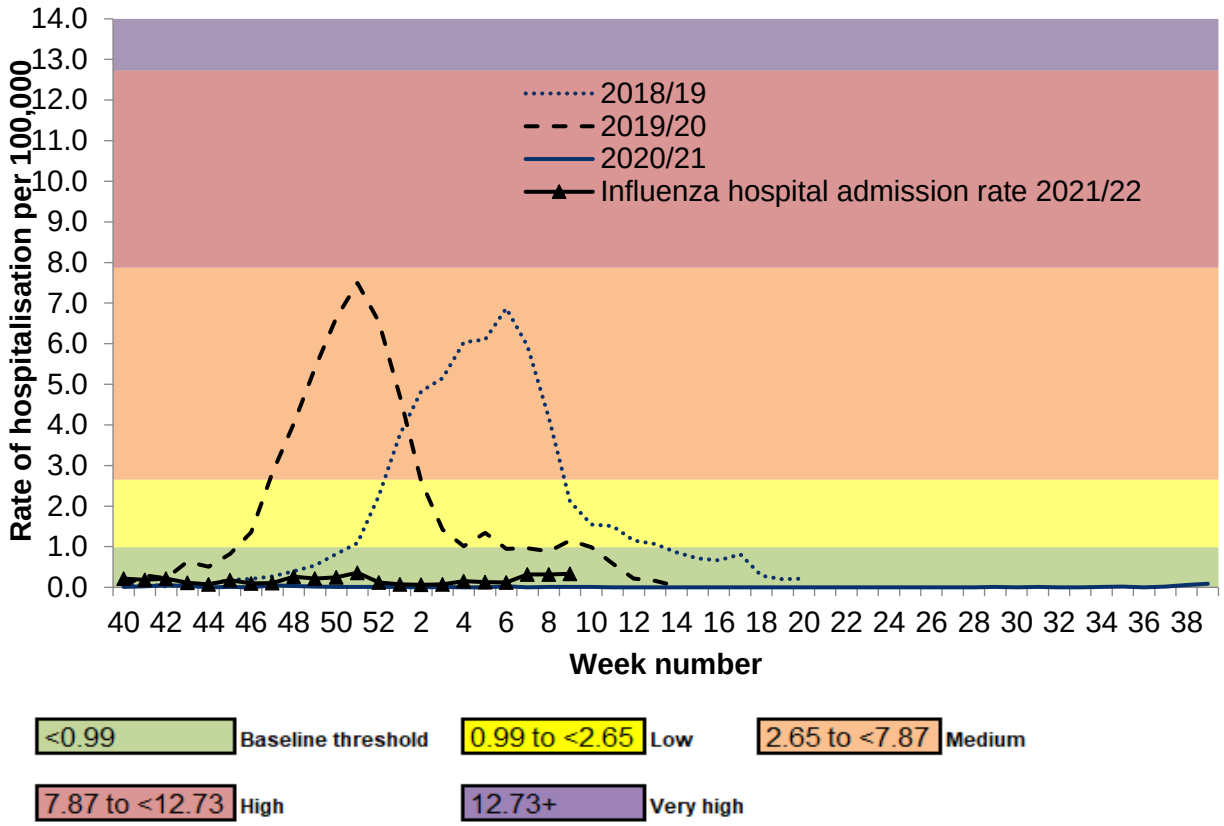
* influenza hospital admission rate is reported from week 10 2021 onwards

* influenza hospital admission rate based on 24 sentinel NHS trusts for week 9

* COVID-19 hospital admission rate based on 105 NHS trusts for week 9

* SARI Watch data is provisional

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 2014 to 2015 to the 2018 to 2019 seasons (data from 2019 to 2020 was excluded due to the COVID-19 pandemic).

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

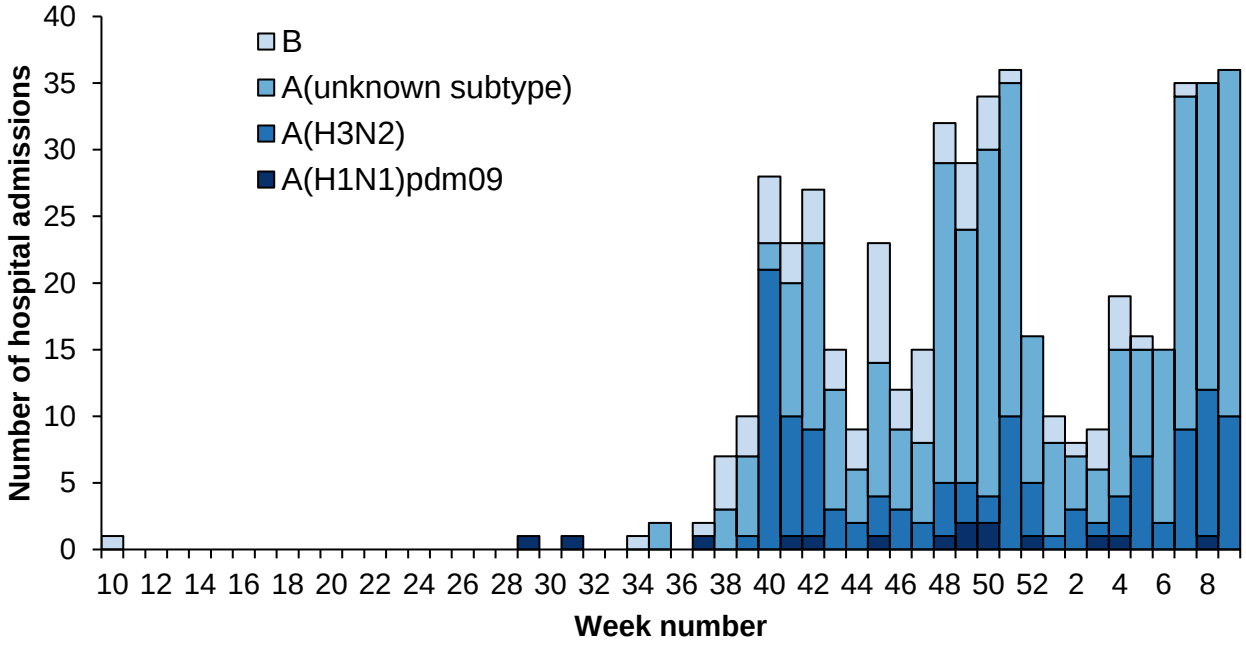
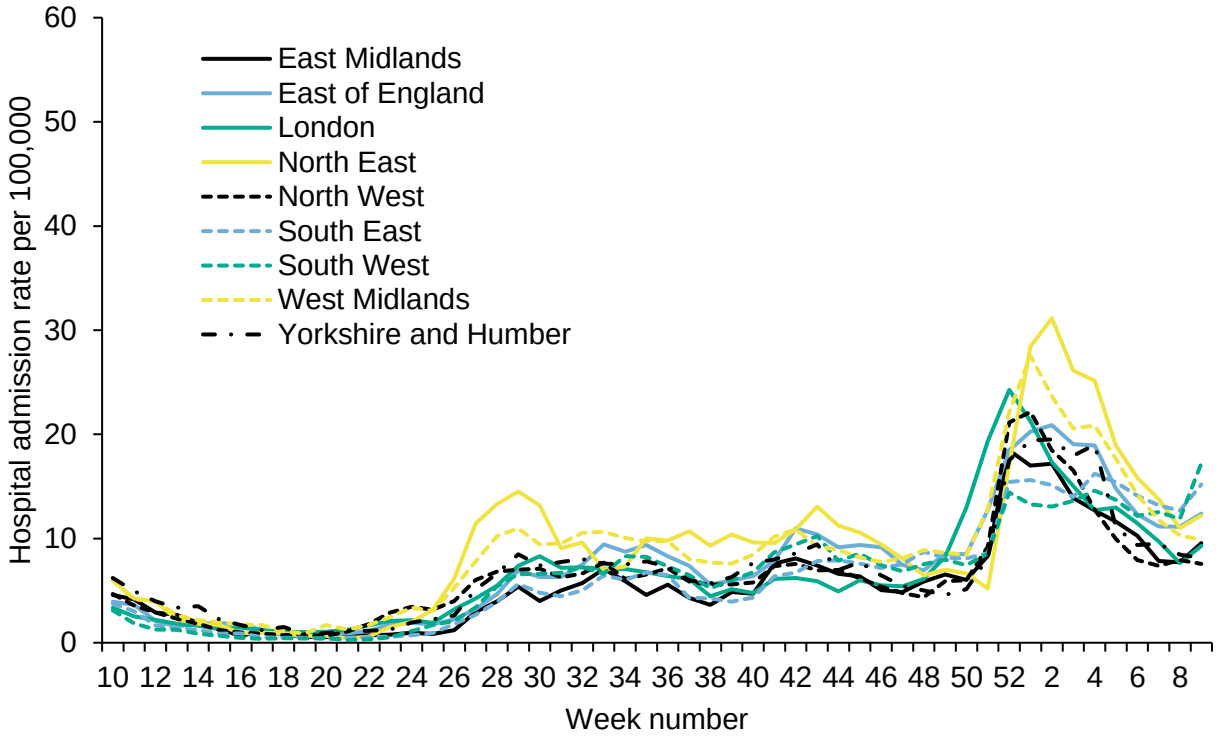


Figure 43: Weekly hospital admission rate by UKHSA Centre for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch

(a)



(b)

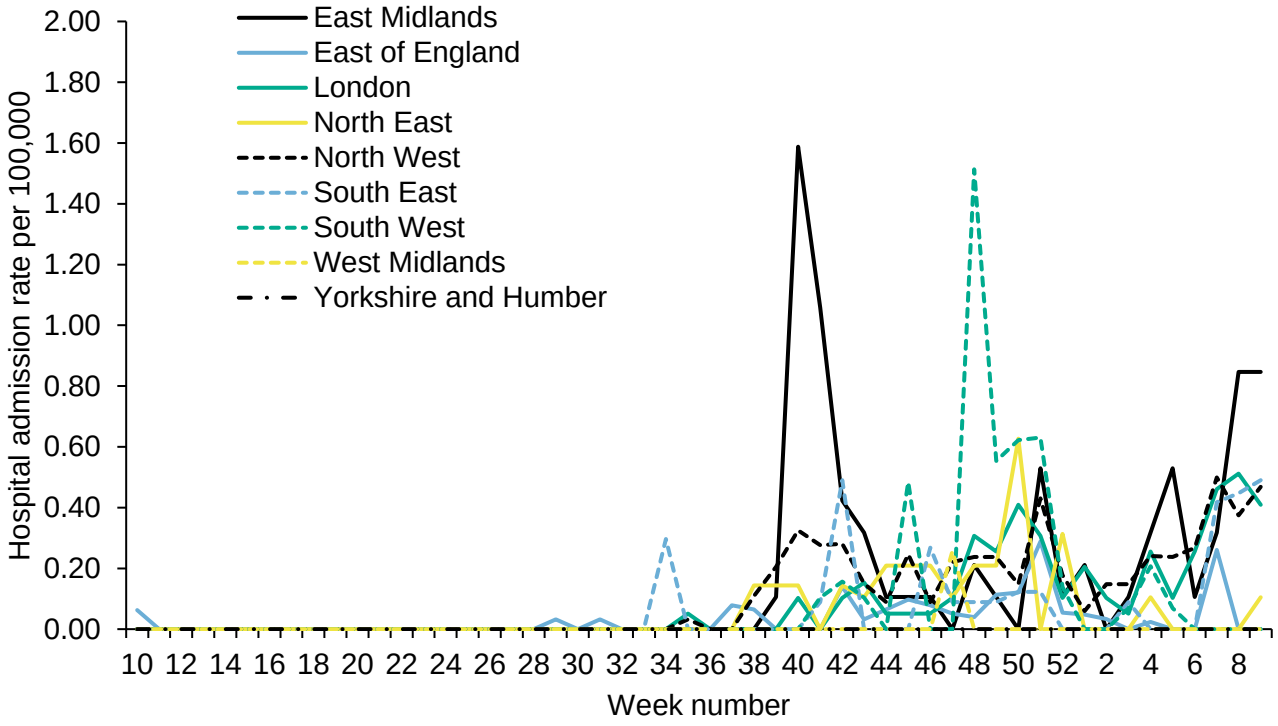
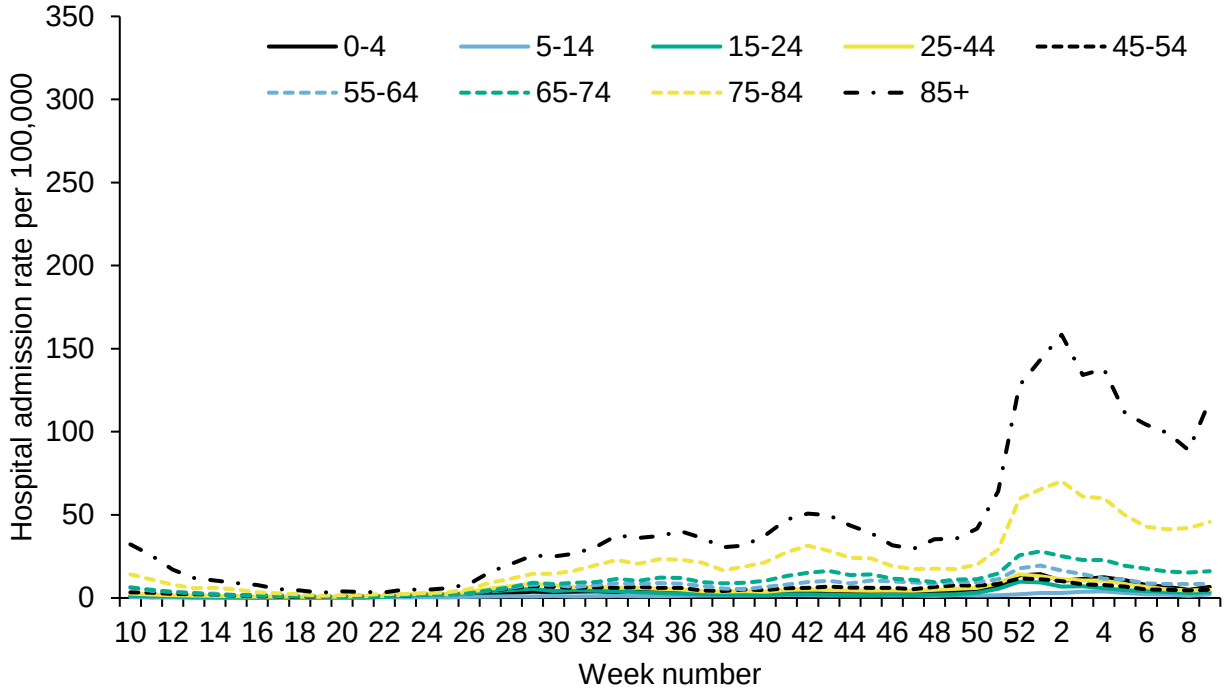
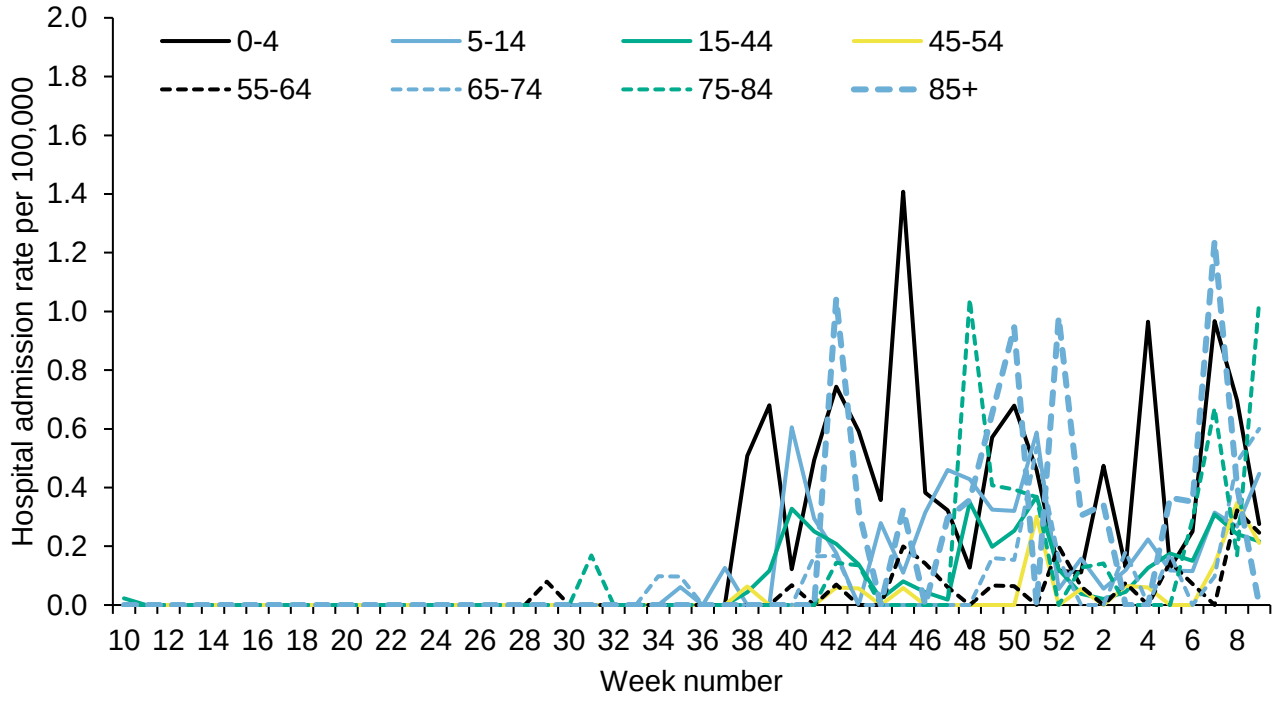


Figure 44: Weekly hospital admission rate by age group for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch

(a)



(b)



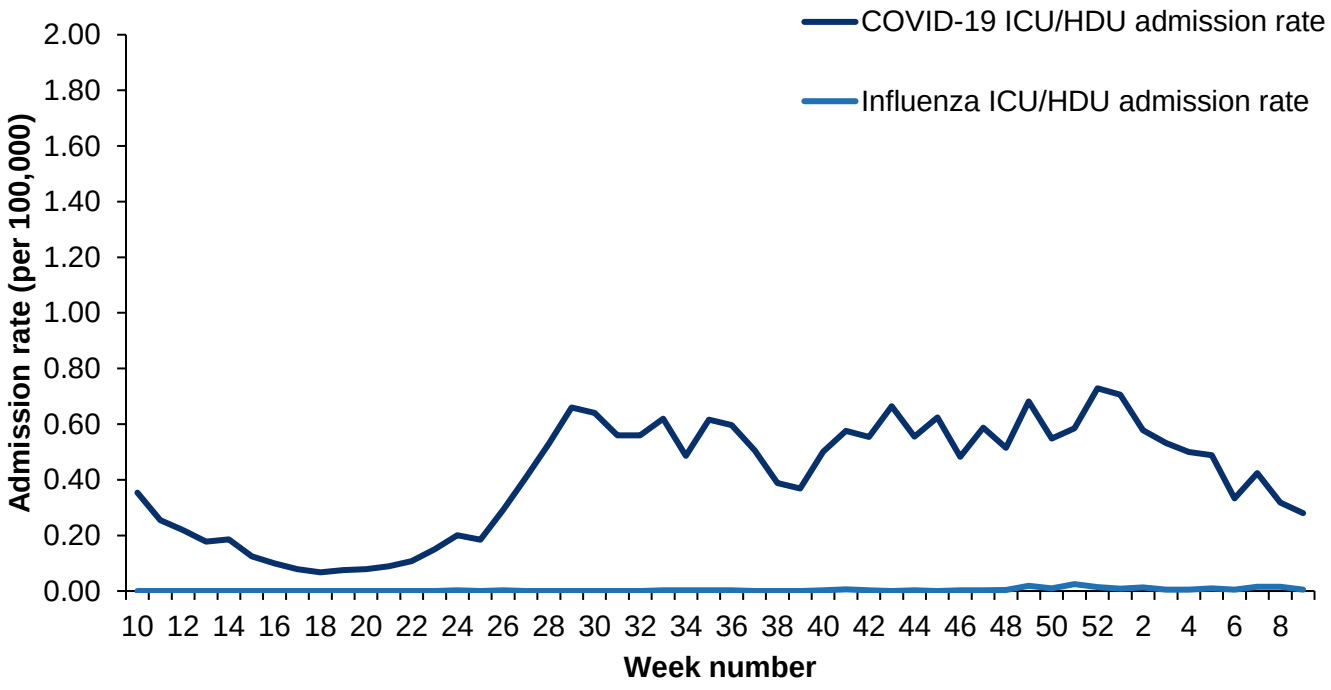
ICU or HDU admissions, SARI Watch

In week 9, the overall weekly ICU or HDU admission rates for COVID-19 decreased. The ICU or HDU rate for COVID-19 was at 0.28 per 100,000 in week 9 compared to 0.32 per 100,000 in the previous week.

By UKHSA Centre, the highest ICU or HDU admission rates for COVID-19 were observed in the East of England. By age groups, the highest ICU or HDU admission rates for COVID-19 were observed in the 75 to 84-year olds.

The ICU or HDU rate for influenza was at 0.01 per 100,000 in week 9 compared to 0.02 per 100,000 in the previous week. There were 2 new case reports of ICU or HDU admissions for influenza (2 influenza A(not subtyped)) in week 9.

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 is reported from week 10 2021 onwards

* influenza ICU or HDU admission rate based on 95 NHS trusts for week 9

* COVID-19 ICU or HDU admission rate based on 98 NHS trusts for week 9

* SARI Watch data is provisional

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

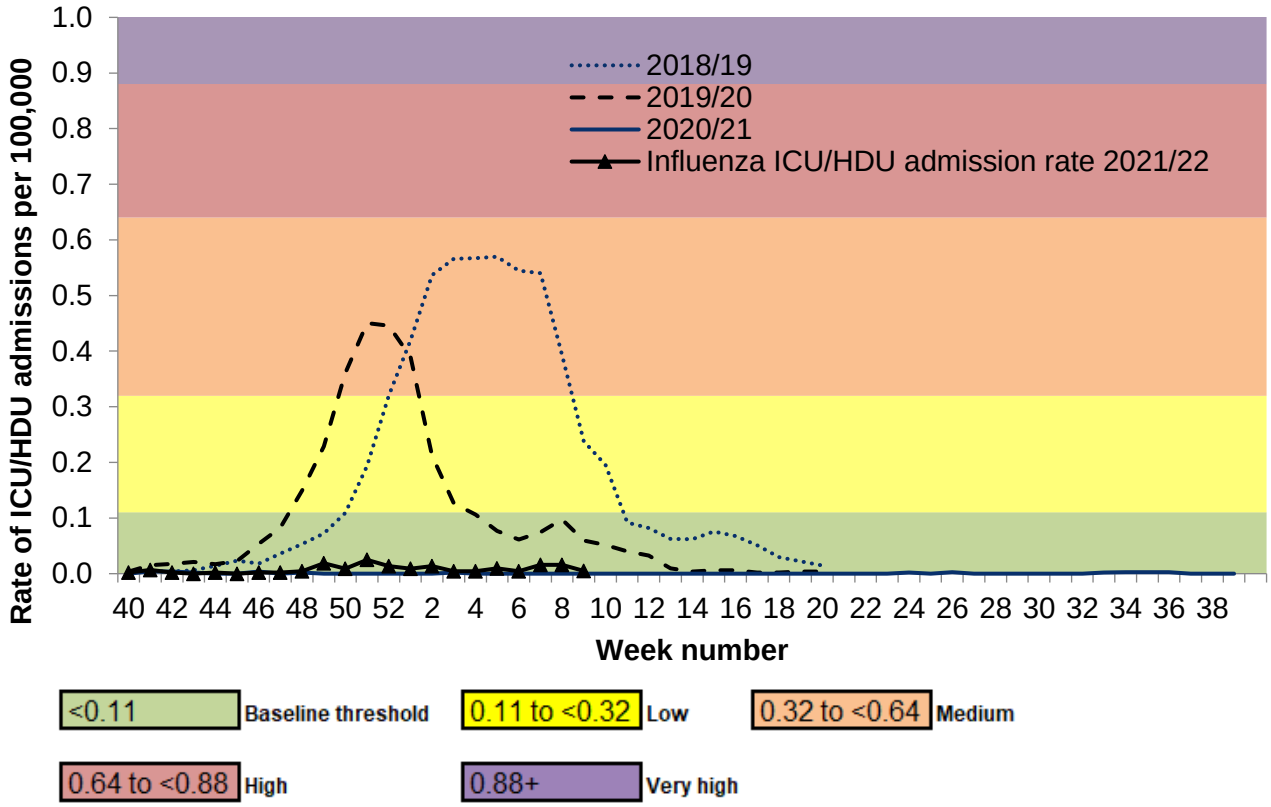


Figure 47: Weekly influenza ICU or HDU admissions by influenza type, SARI Watch, England

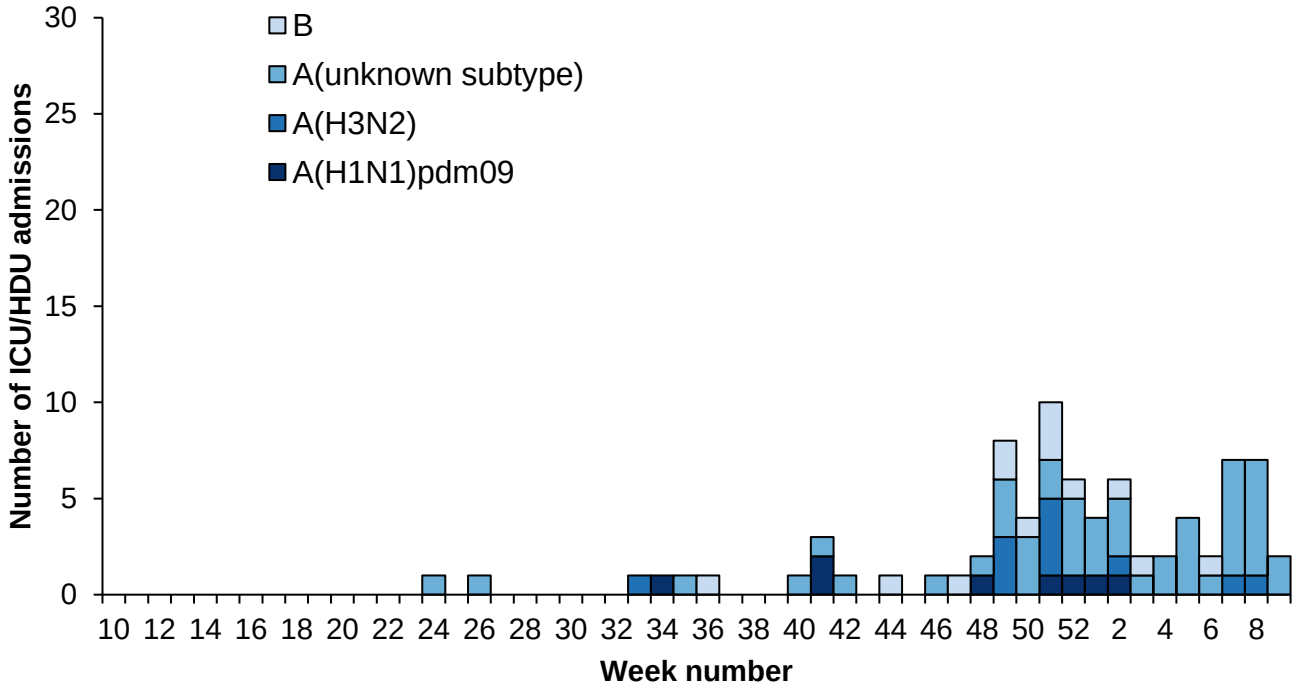
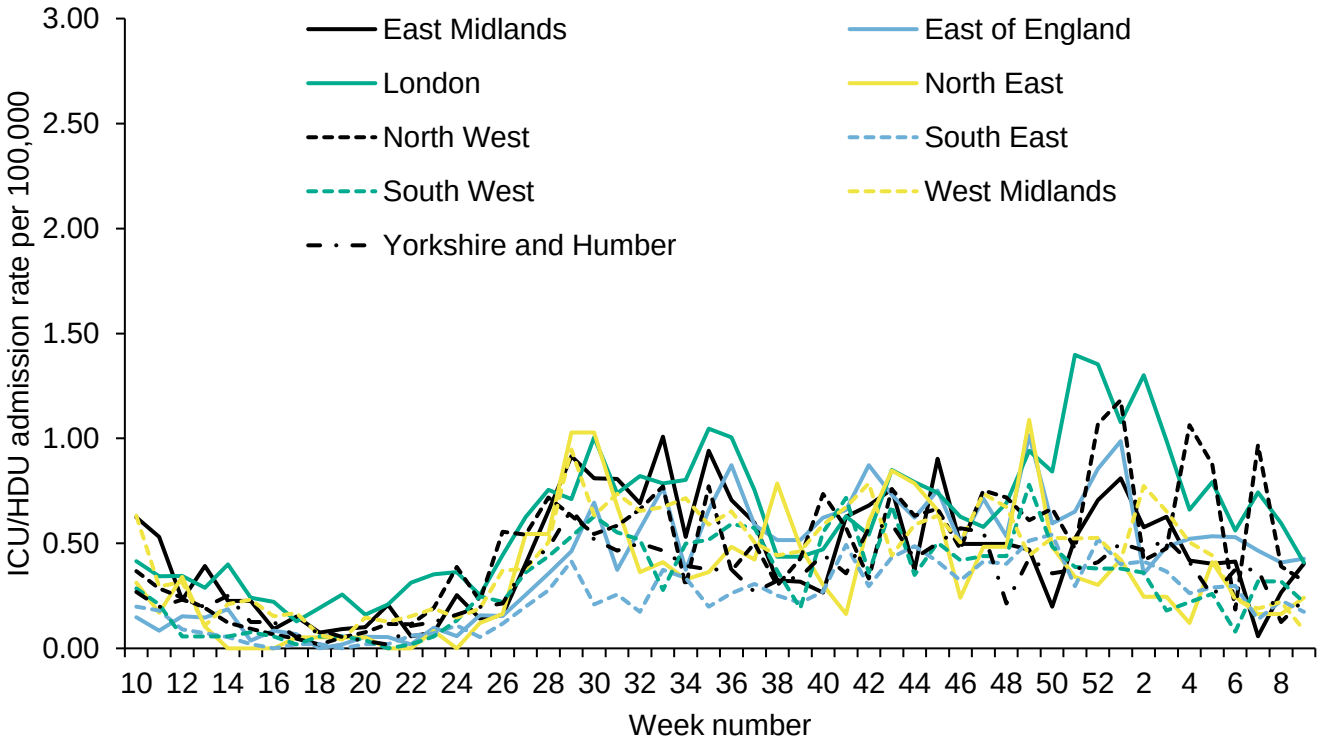


Figure 48: Weekly ICU or HDU admission rate by UKHSA Centre for new (a) COVID-19 positive cases and (b) influenza, reported through SARI Watch

(a)



(b)

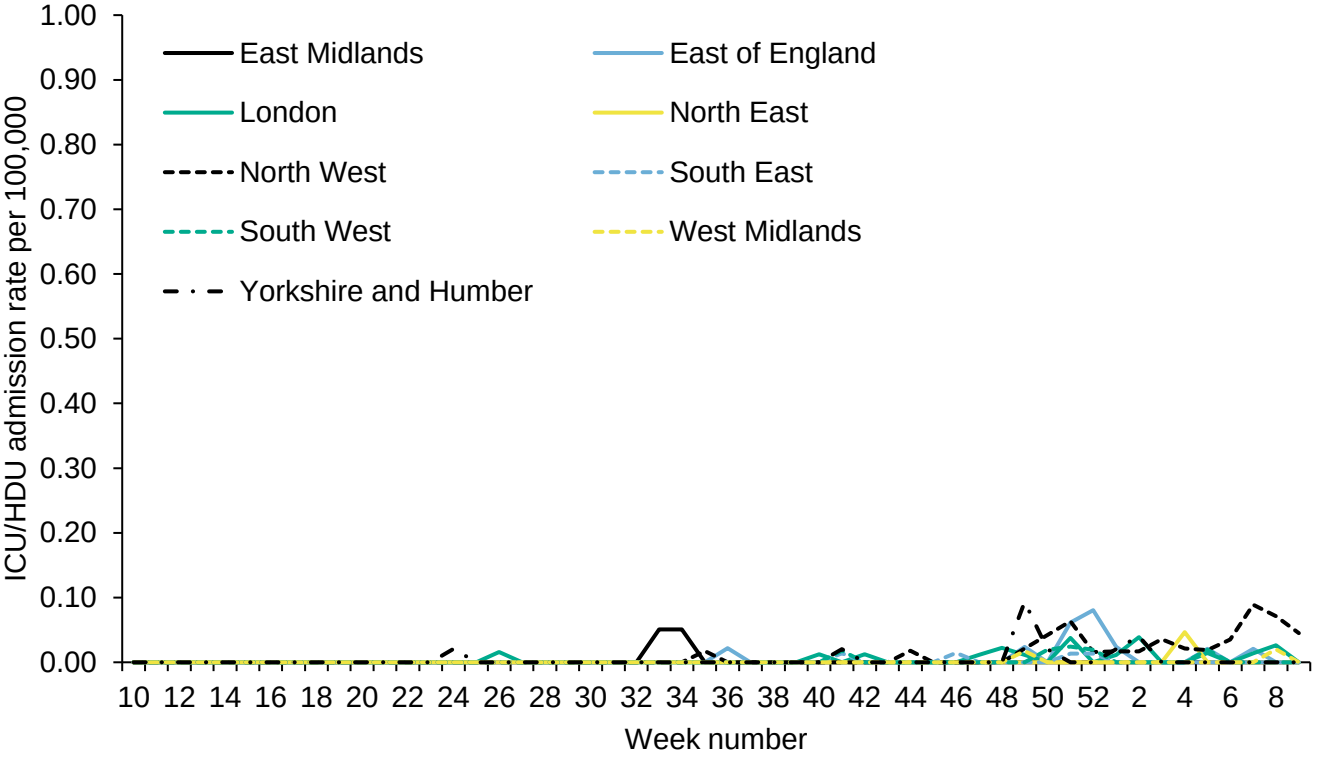
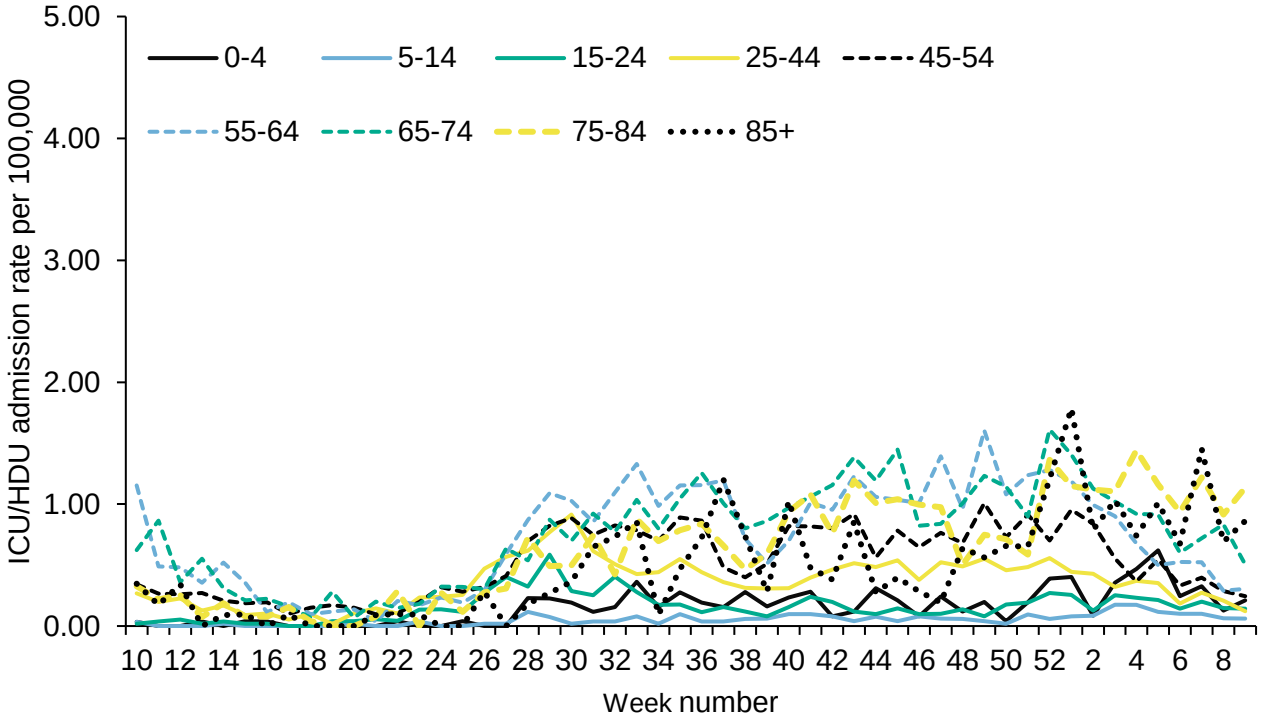
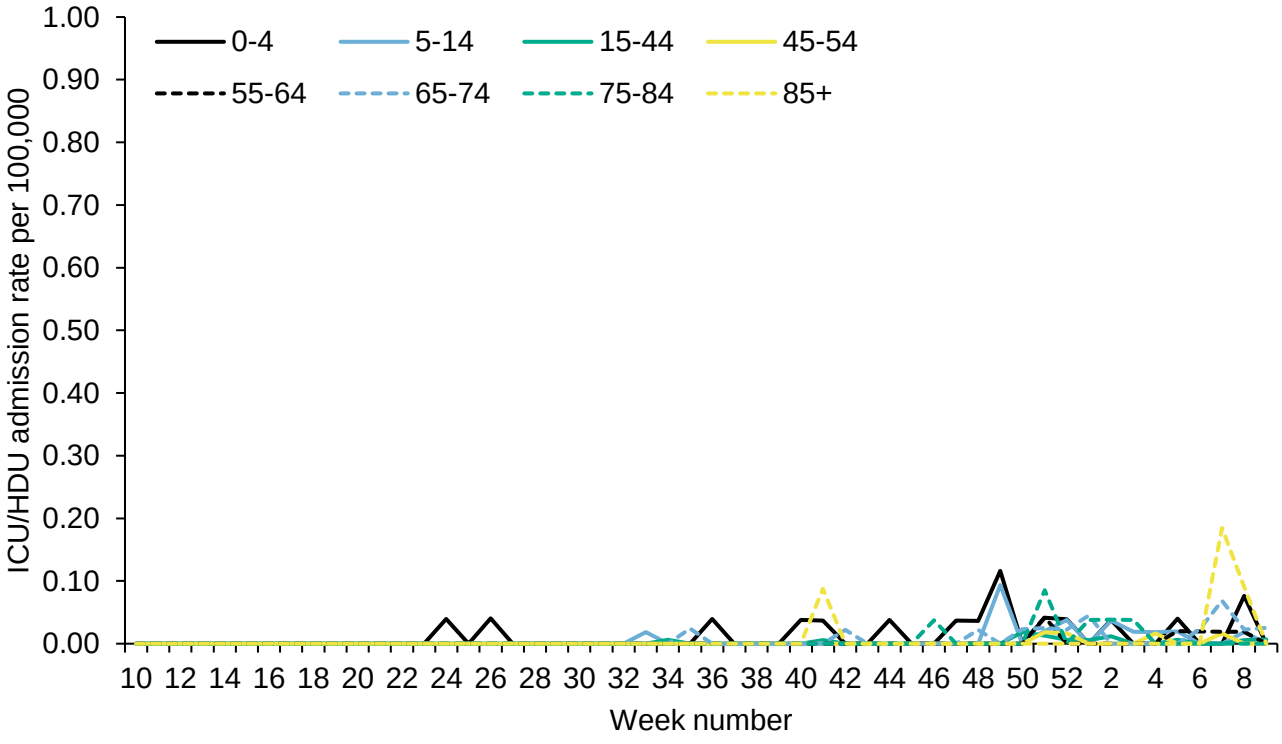


Figure 49: Weekly ICU or HDU admission rate by age group for new (a) COVID-19 positive cases and (b) influenza, reported through SARI Watch

(a)



(b)

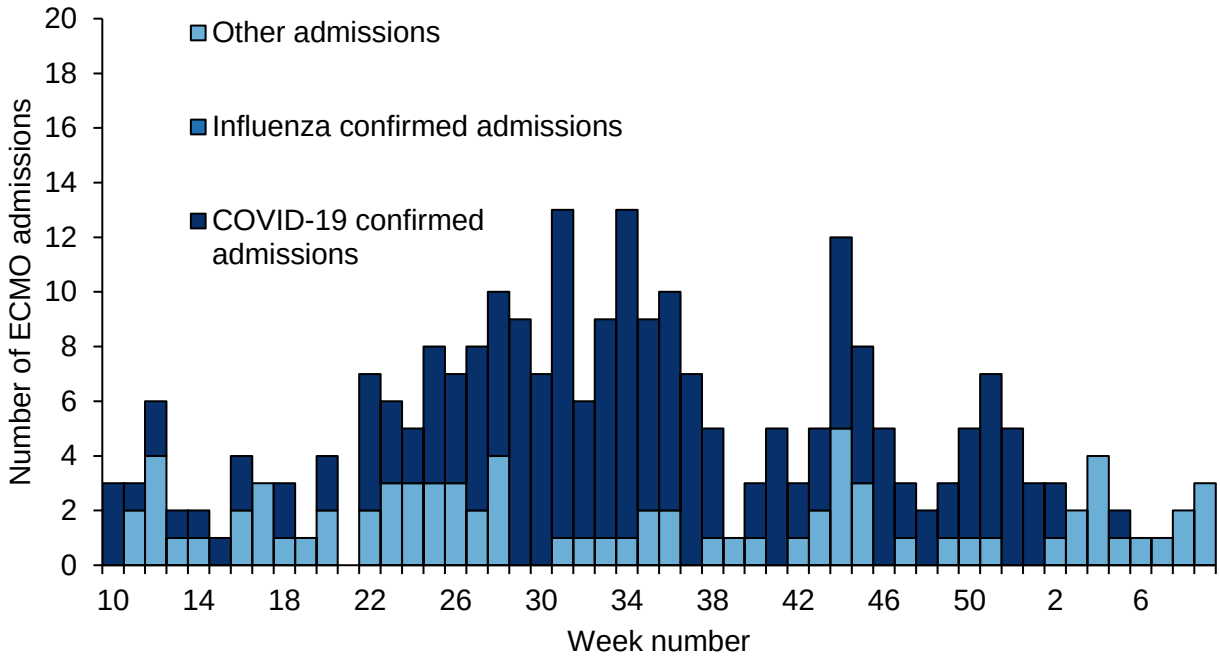


ECMO, SARI Watch

From week 10 2021, a total of 181 laboratory confirmed COVID-19 admissions have been reported from the 6 Severe Respiratory Failure (SRF) centres in the UK.

There were no new laboratory confirmed COVID-19 admission reported in week 9 (Figure 50).

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

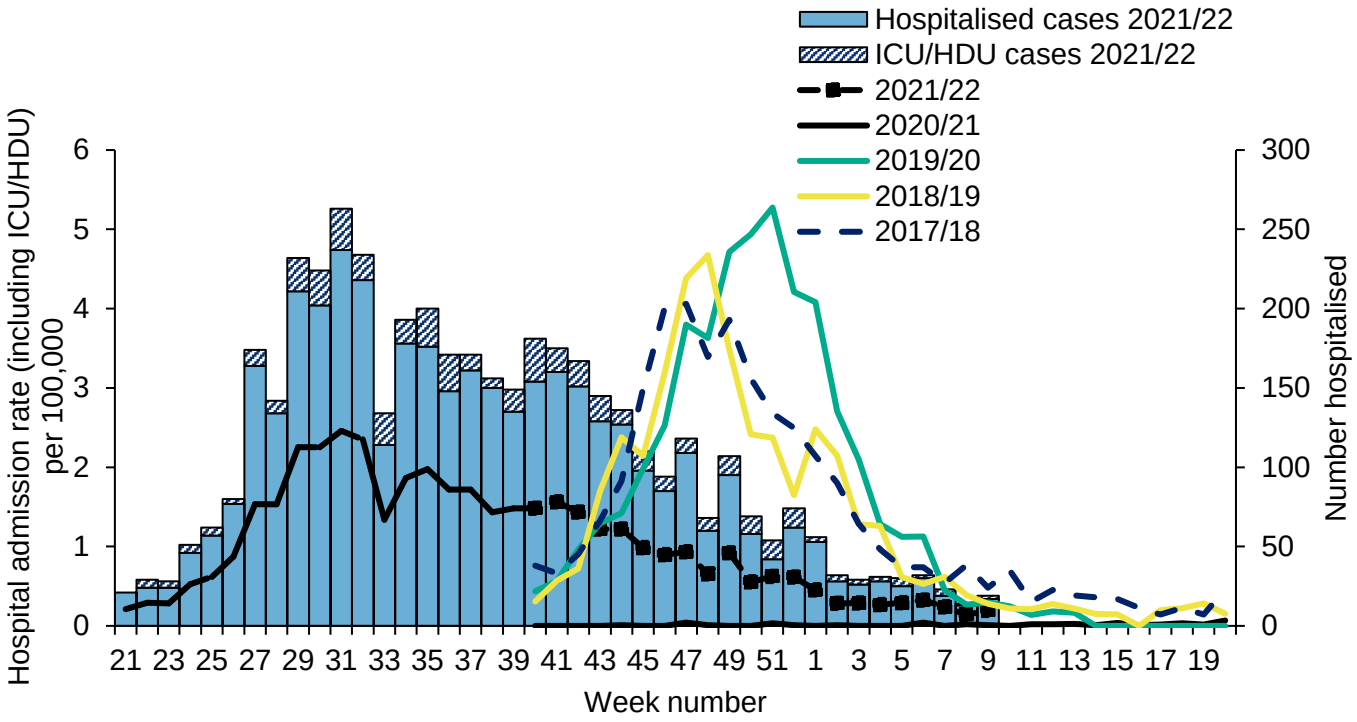


* SARI Watch data is provisional

RSV admissions, SARI Watch

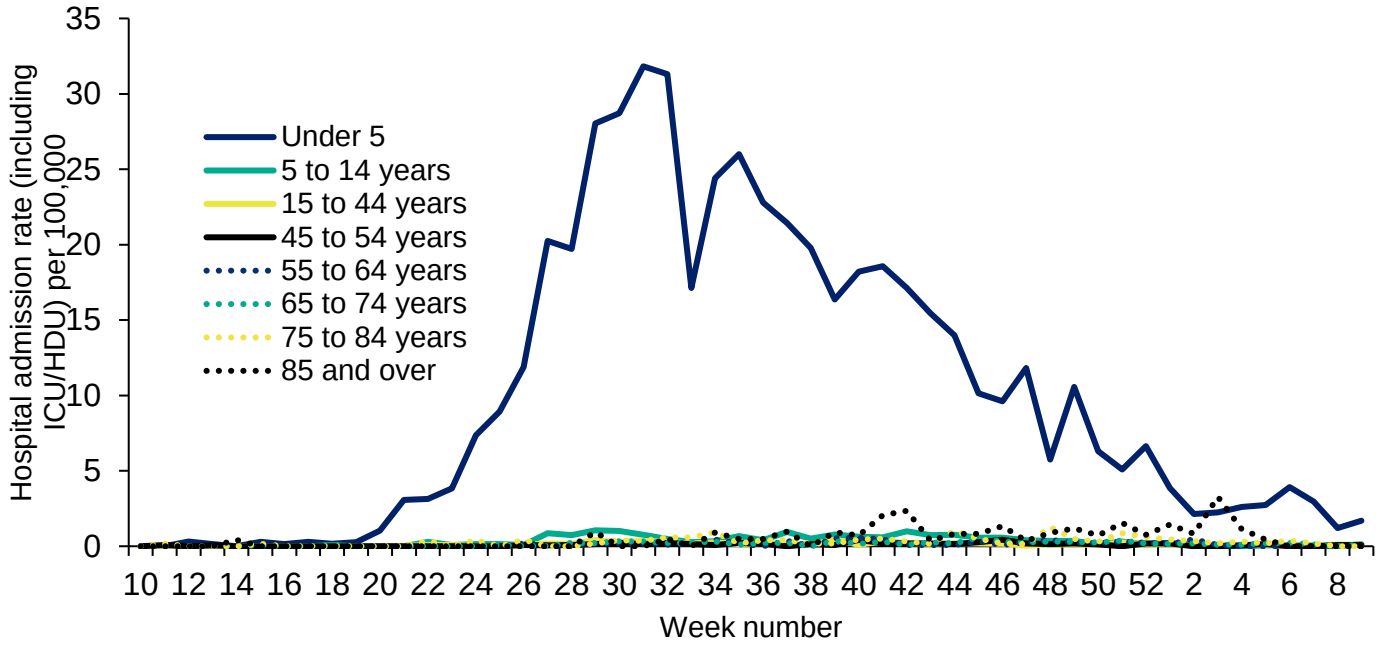
Data on hospitalisations, including ICU/HDU admissions, with Respiratory Syncytial Virus (RSV) are shown below. RSV SARI Watch surveillance is sentinel.

Figure 51: Weekly overall hospital admission rates (including ICU/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 this was extended to run throughout the year, to allow for surveillance of out-of-season trends

Figure 52: Weekly hospitalisation (including ICU/HDU) admission rates by age group for new RSV cases reported through SARI Watch in 2021 to 2022, England



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

* SARI Watch data is provisional

Emergency Department attendances, Syndromic surveillance

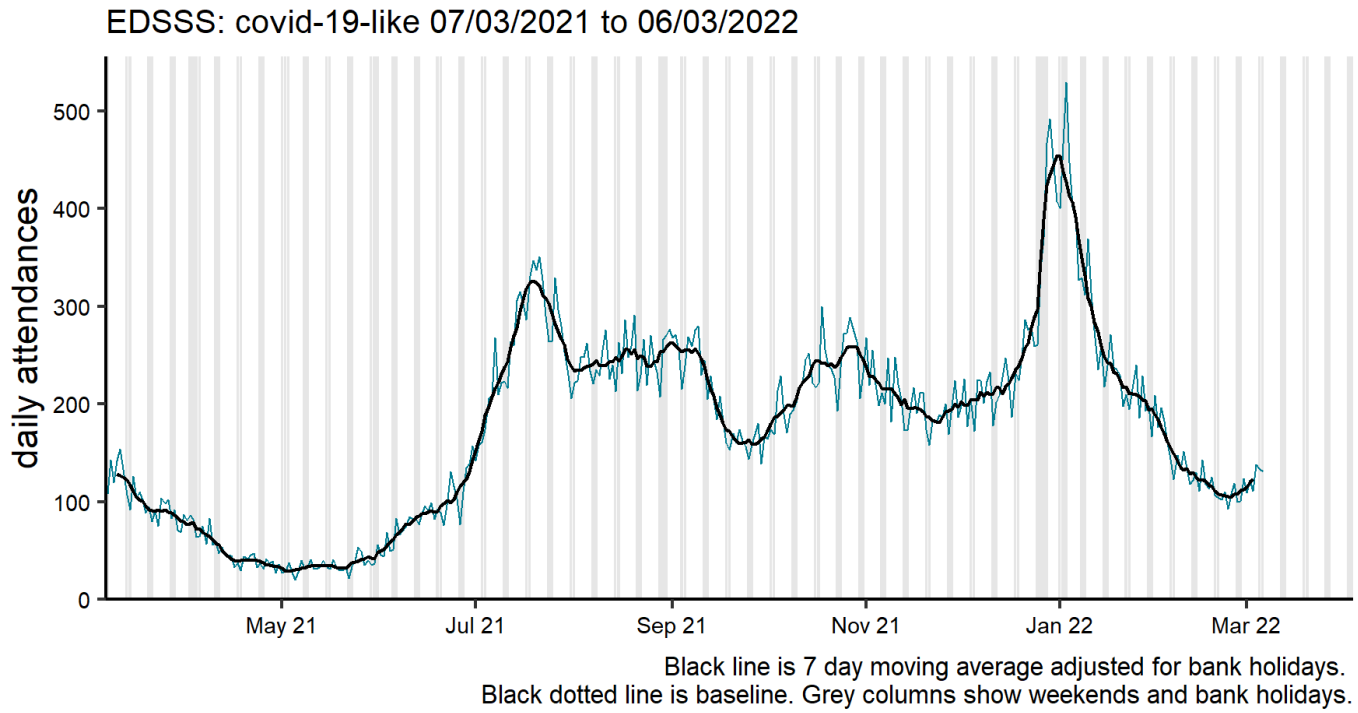
The Emergency Department Syndromic Surveillance System (EDSSS) monitors the daily visits in a network of emergency departments across England.

Up to 6 March, the daily number of Emergency Department (ED) attendances as reported by 111 EDs for acute respiratory infection increased slightly in those aged 5 to 14 years. COVID-19-like attendances increased, particularly in the East of England and the South East, and in those aged 5 to 14 years (Figure 53).

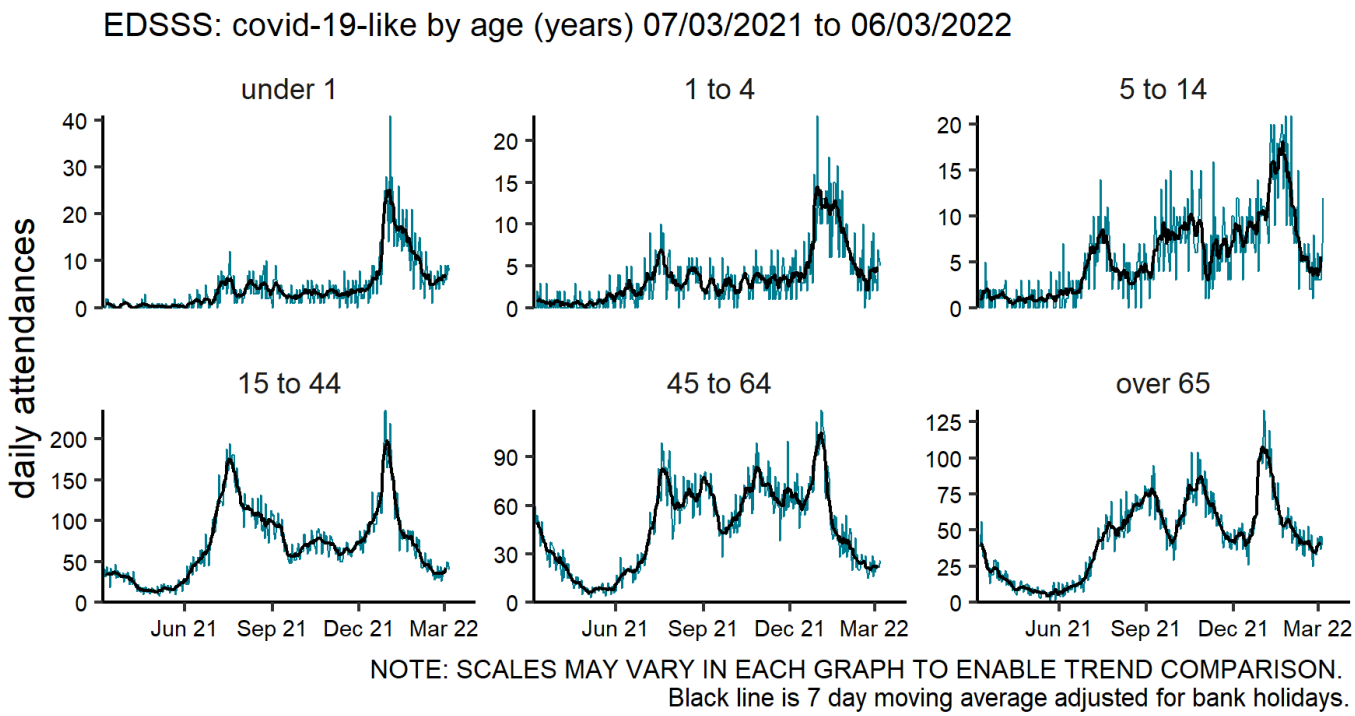
Please note: the COVID-19-like ED indicator is an underestimation of the number of COVID-19 attendances as it only includes attendances with a COVID-19-like diagnosis as their primary diagnosis. The EDSSS COVID-19-like indicator should therefore be used to monitor trends in ED attendances and not to estimate actual numbers of COVID-19 ED attendances. 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)

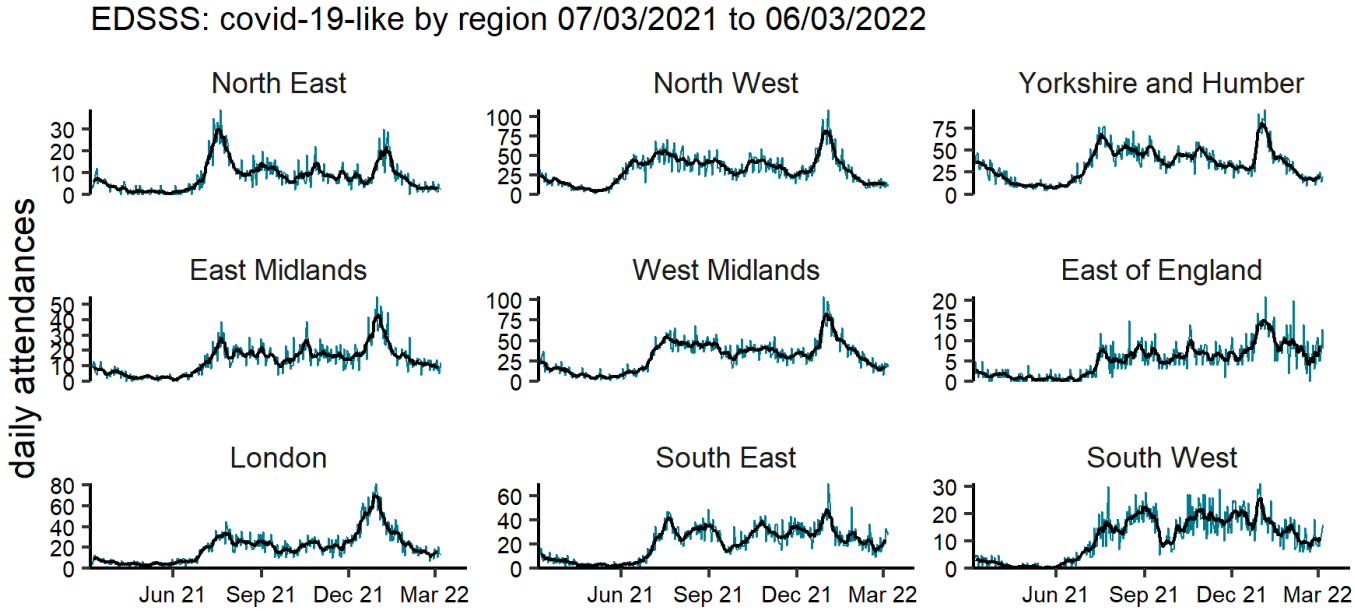


(b)



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

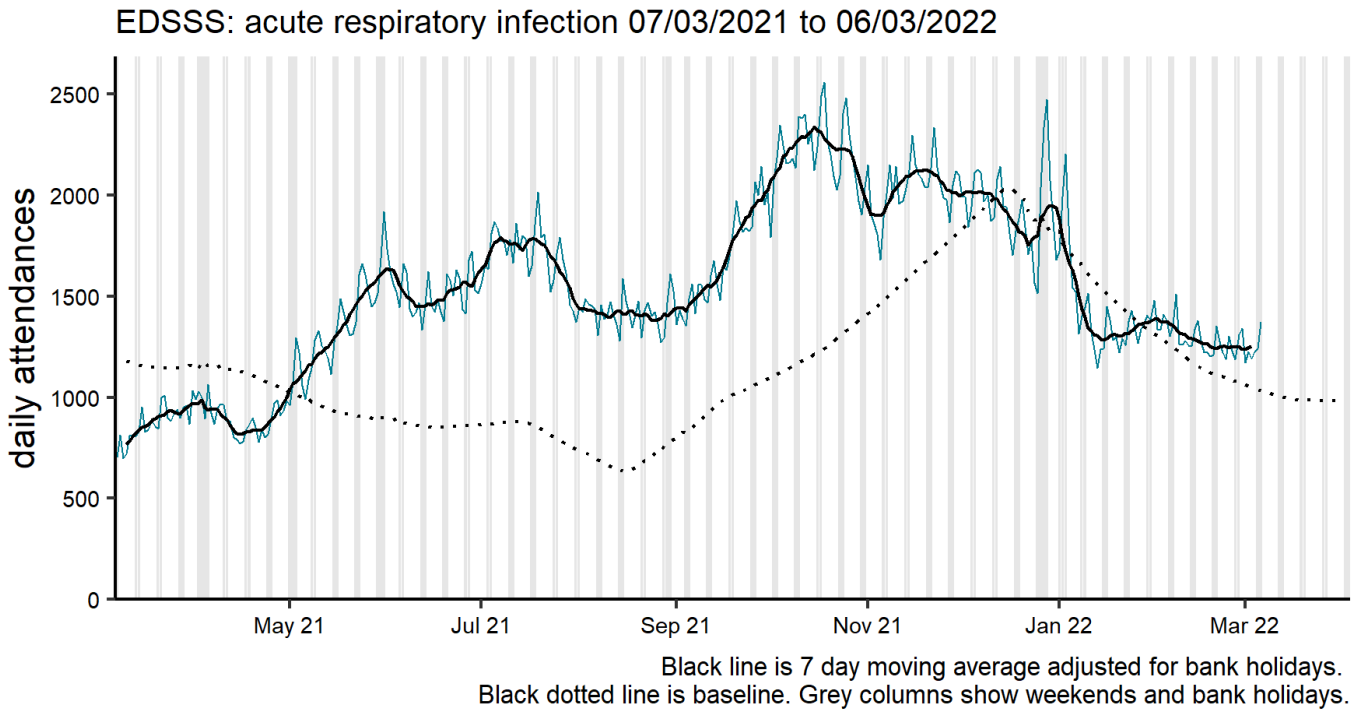
(c)



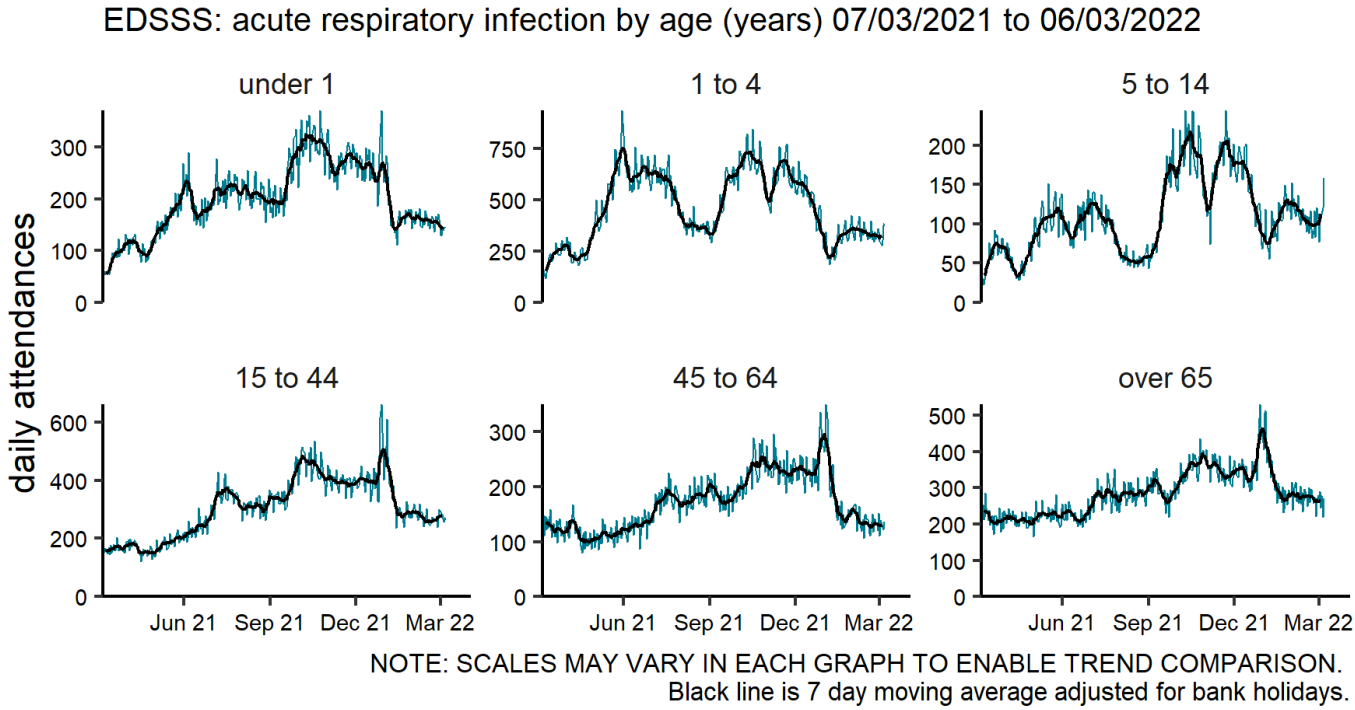
NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON.
Black line is 7 day moving average adjusted for bank holidays.
Black dotted line is baseline.

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

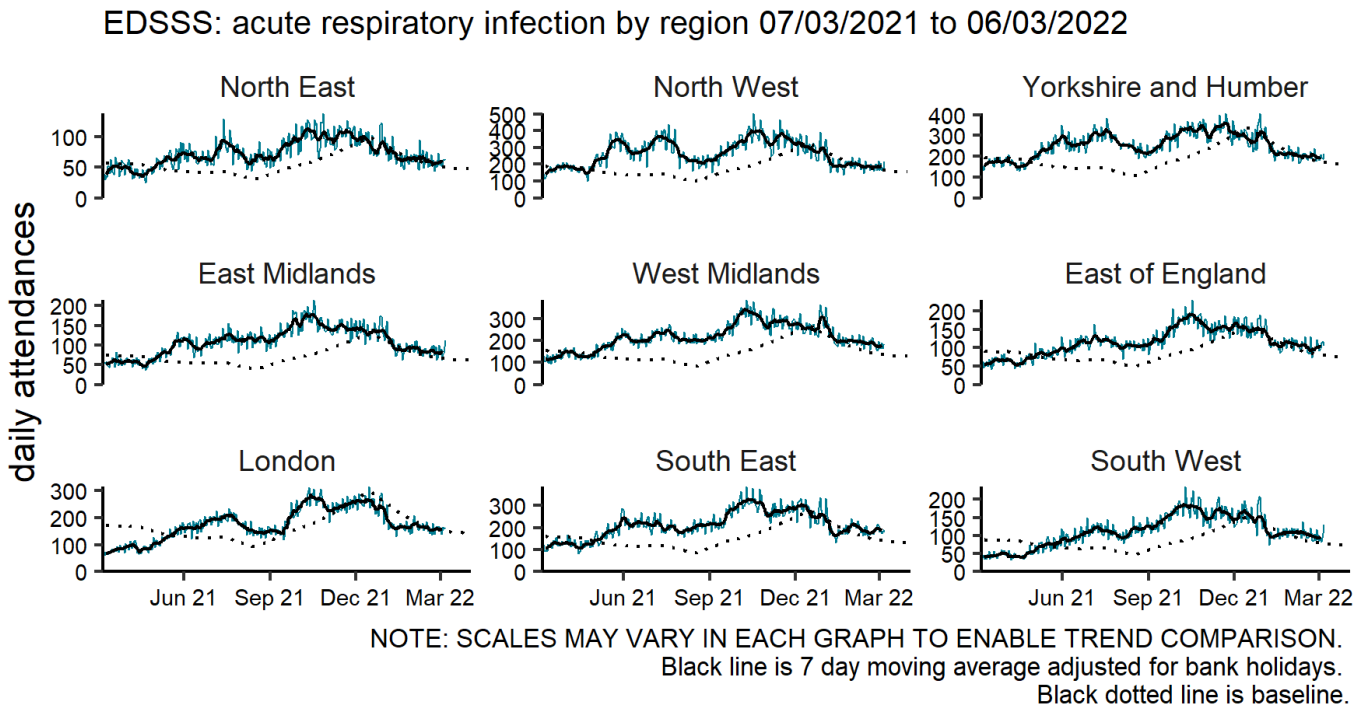
(a)



(b)



(c)


EDSSS: acute respiratory infection by region 07/03/2021 to 06/03/2022
North East
North West
Yorkshire and Humber
East Midlands
West Midlands
East of England
London
South East
South West
daily attendances
Jun 21
Sep 21
Dec 21
Mar 22
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

Changes to the definitions of COVID-19 related deaths in England are described in more detail in an accompanying technical summary.

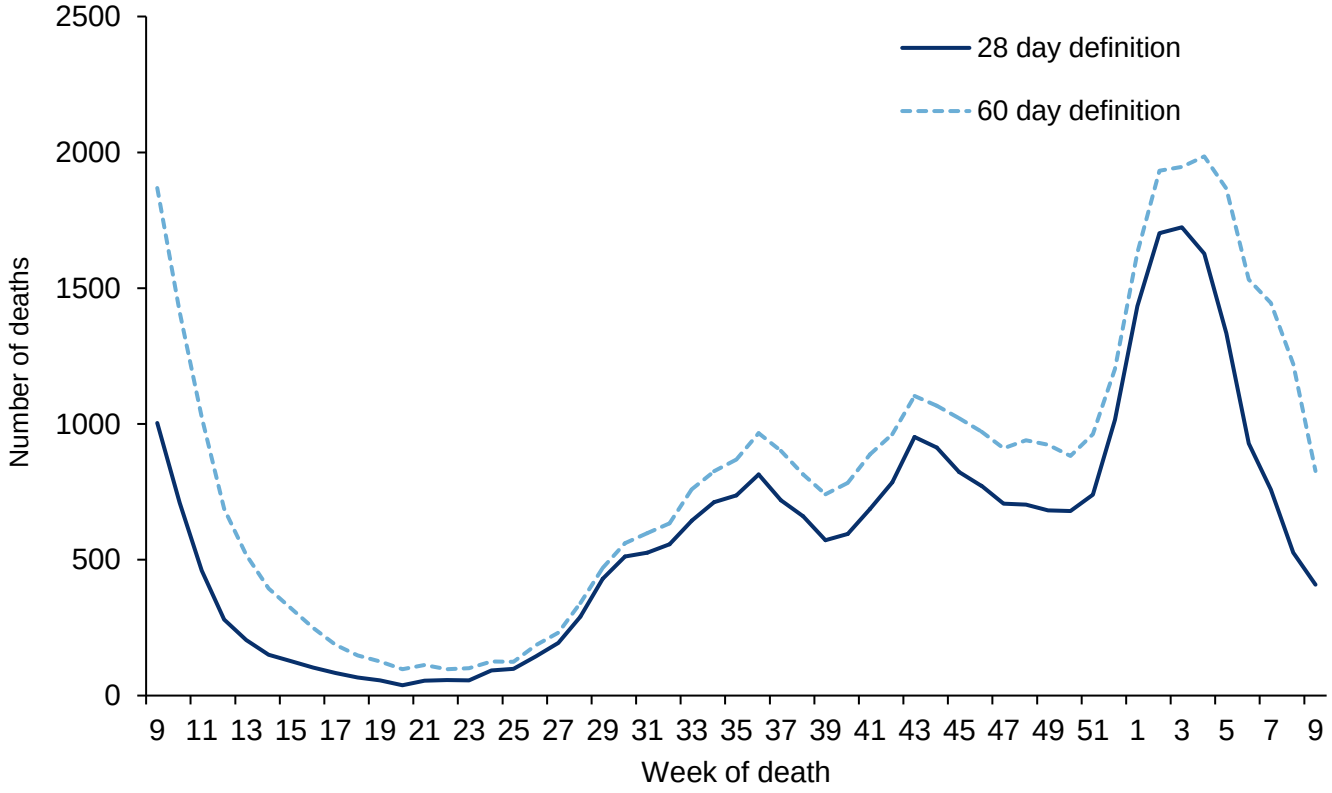
The current definitions used for mortality surveillance of COVID-19 in England are:

(a) 28 day definition: A death in a person with a positive COVID-19 test and died within (equal to or less than) 28 days of the most recent episode of infection

(b) 60 day definition: A death in a person with a positive COVID-19 test and either: died within 60 days of the episode specimen date OR died more than 60 days after the episode specimen date only if COVID-19 is mentioned on the death certificate

The introduction of these definitions will affect the numbers which have been presented in past reports and therefore Figure 55 represents these differences by definition.

Figure 55: Number of deaths by week of death and time since a positive COVID-19 test, England



*Data is shown by the week of death. This gives the most accurate analysis of this time progression, however, for the most recent weeks' numbers more deaths are expected to be registered therefore this should be interpreted with caution

Figure 56: Age-sex pyramid of deaths within 28 or 60 days of a positive COVID-19 test, for the past year

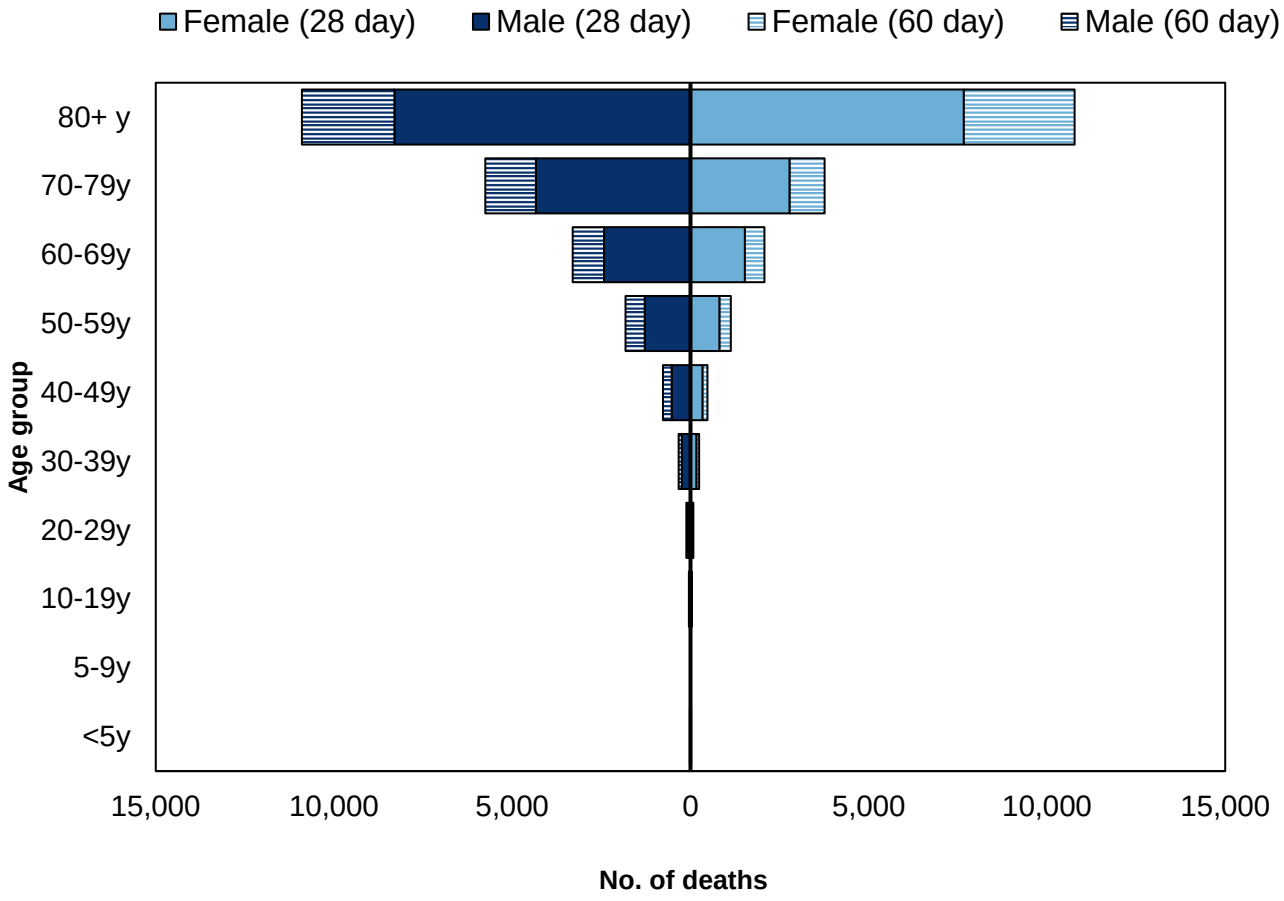


Table 5: Ethnic group (%) of deaths within 28 or 60 days of a positive COVID-19 test, England, for the past year

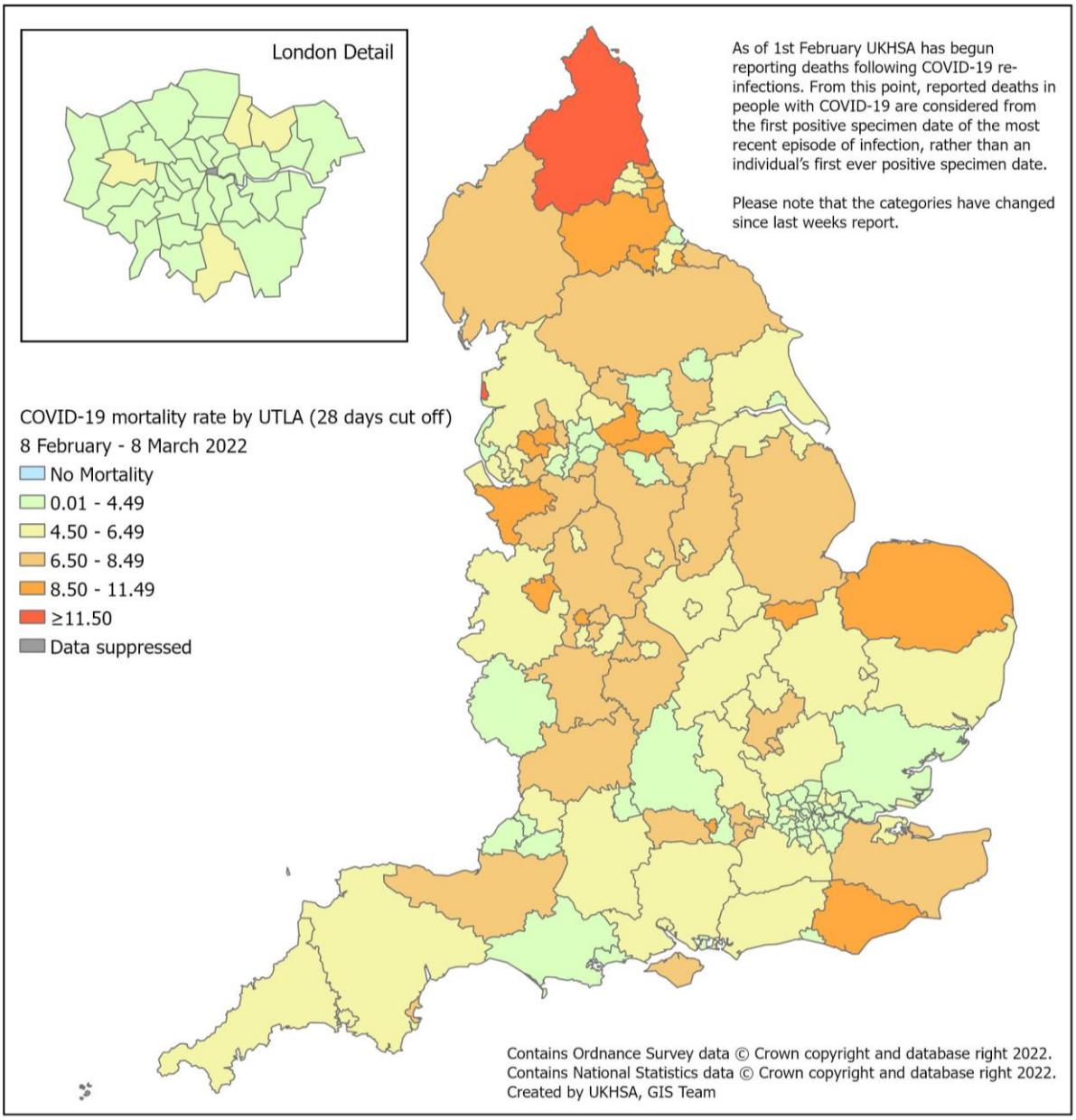
Ethnicity	28 day definition	60 day definition
White	88.1	88.3
Asian / Asian British	6.5	6.4
Black / African / Caribbean / Black British	3.9	3.8
Mixed / Multiple ethnic groups	0.5	0.6
Other ethnic group	0.9	1.0

Table 6: Cumulative number of deaths within 28 or 60 days of a positive COVID-19 test by UKHSA Centres, for the past year

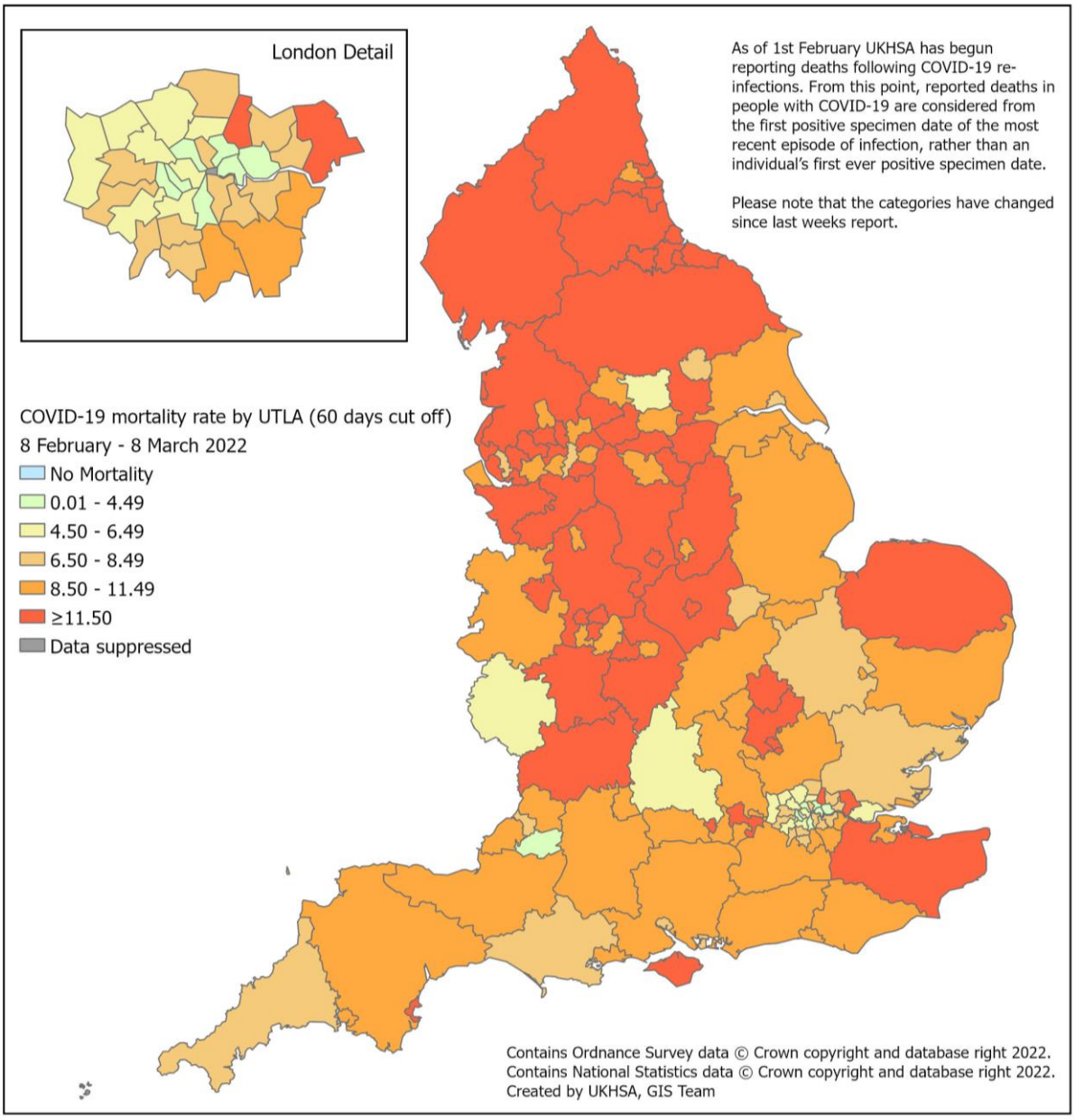
UKHSA Centres	28 day definition	60 day definition
North East	2,047	2,736
North West	5,246	7,044
Yorkshire and Humber	3,724	4,870
West Midlands	3,565	4,899
East Midlands	3,011	4,086
East of England	3,131	4,369
London	3,532	4,925
South East	3,526	4,997
South West	2,513	3,338

Figure 57: Cumulative mortality rate of COVID-19 cases per 100,000 population tested under Pillars 1 and 2 for the past 4 weeks by (a) 28 day definition and (b) 60 day definition

(a)



(b)


London Detail
As of 1st February UKHSA has begun reporting deaths following COVID-19 re-infections. From this point, reported deaths in people with COVID-19 are considered from the first positive specimen date of the most recent episode of infection, rather than an individual's first ever positive specimen date.
Please note that the categories have changed since last weeks report.
COVID-19 mortality rate by UTLA (60 days cut off)
8 February - 8 March 2022
No Mortality
0.01 - 4.49
4.50 - 6.49
6.50 - 8.49
8.50 - 11.49
≥11.50
Data suppressed
Contains Ordnance Survey data © Crown copyright and database right 2022.
Contains National Statistics data © Crown copyright and database right 2022.
Created by UKHSA, GIS Team

Daily excess all-cause mortality (England)

Deaths occurring from 1 January 2020 to 2 March 2022 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 and the baseline was from the same day of the year in the previous 5 years plus or minus 7 days with an extrapolated time trend, and with 2 and 3 standard deviation (SD) limits shown (Figure 58).

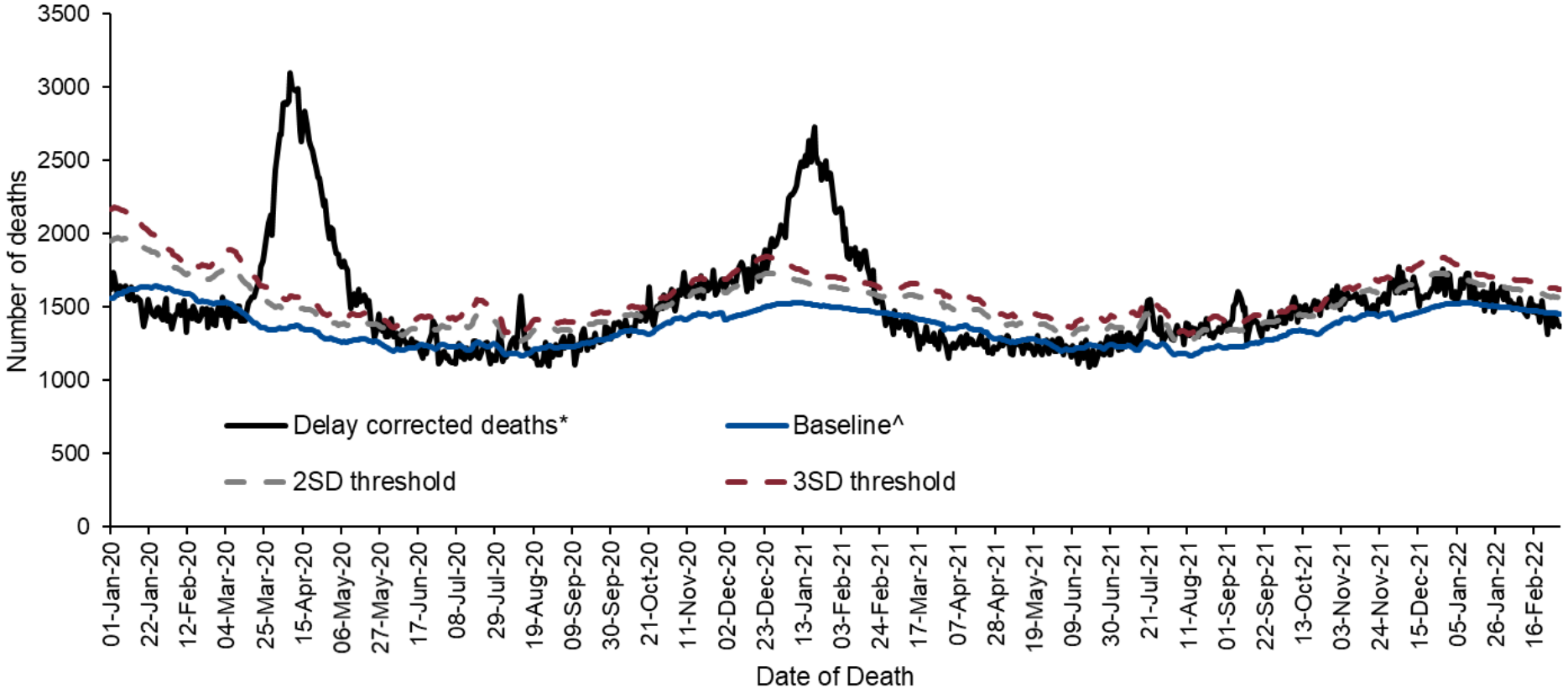
Weeks in which at least 2 days exceeded the 3SD threshold are shown in Table 7 and the daily difference from the baseline by age and region is given in Figure 59.

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.

The current week's model supersedes models presented in previous week.

No excess all-cause mortality was observed in week 8 overall, by age or sub-nationally. Week 36 of 2021 included a heatwave period of 3 days with high temperatures (mean Central England Temperature >20c) which may have contributed to the excess seen in this week. The excess mortality noted in week 33 of 2020 and week 29 of 2021 coincide with heat waves (Figure 58, 59 and Table 7).

Figure 58: Daily excess all-cause deaths in all ages, England, 1 January 2020 to 2 March 2022



^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

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.

Table 7: Excess all-cause deaths by (a) age group and (b) UKHSA centres, England

(a)

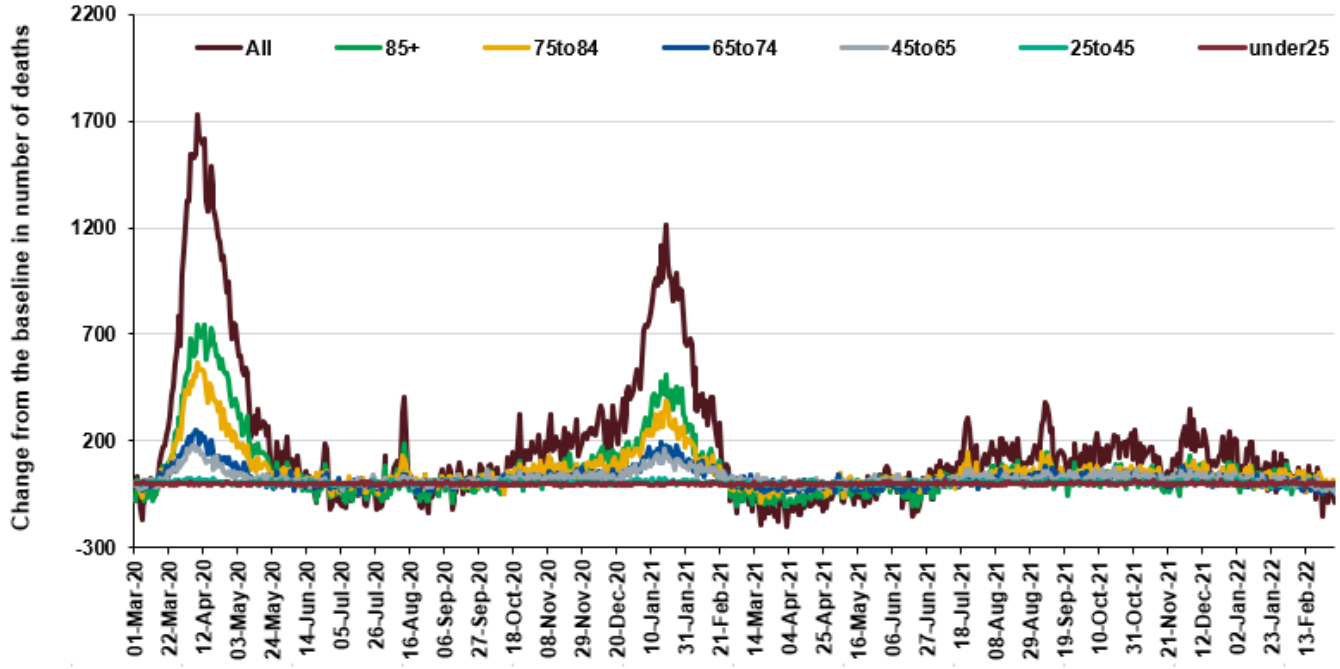
Age Group	Excess detected in week 8 2022?	Weeks in excess from week 10 to 53 2020	Weeks in excess from week 1 to 52 2021	Weeks in excess from week 1 2022
All	x	13 to 21, 33, 43, 45, 50, 52 to 53	01 to 07, 31 to 32, 35 to 36, 40 to 43	None
under 25	x	None	None	None
25 to 44	x	14 to 16	None	None
45 to 64	x	12 to 19, 49 to 50, 52 to 53	01 to 08, 23, 29, 36, 38, 40 to 44, 48, 49	None
65 to 74	x	13 to 19, 46, 48, 52 to 53	01 to 07, 36, 43, 48	None
75 to 84	x	13 to 21, 33, 45, 49, 52 to 53	01 to 07, 32, 36, 40	None
85+	x	13 to 21, 33, 53	01 to 07, 36	None

(b)

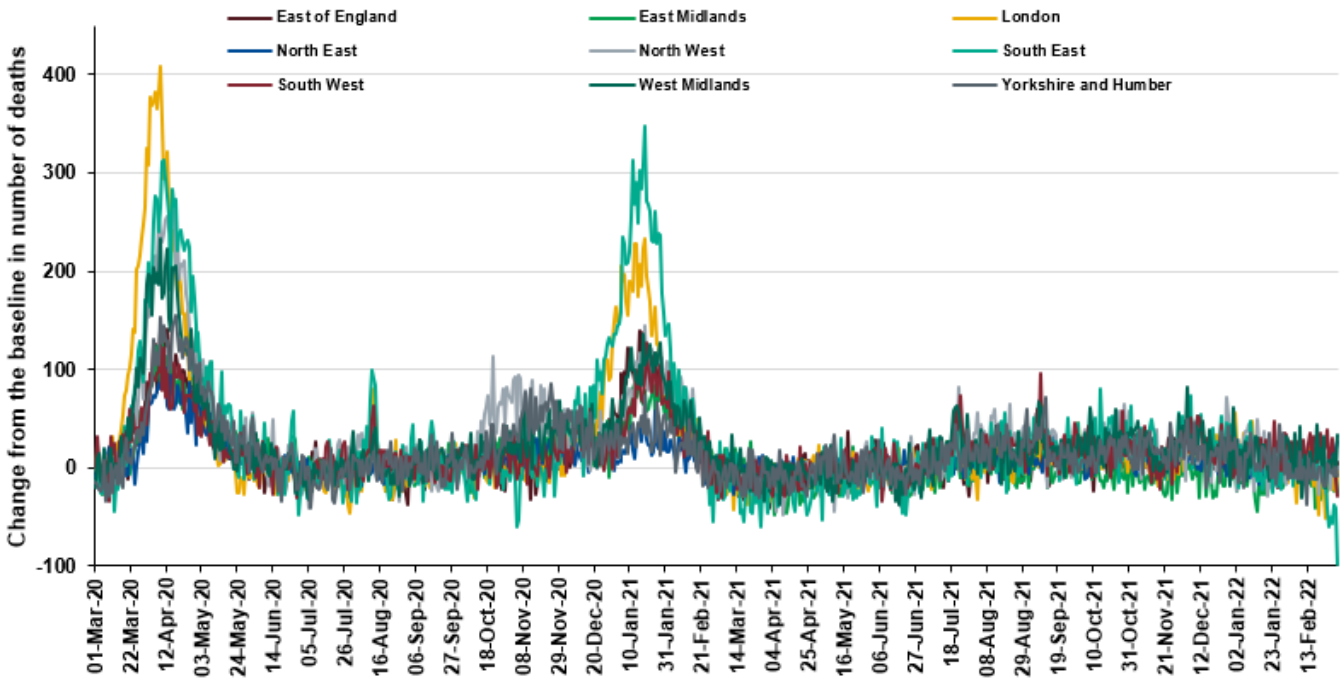
UKHSA Centres	Excess detected in week 8 2022?	Weeks in excess from week 10 to 53 2020	Weeks in excess from week 1 to 52 2021	Weeks in excess from week 1 2022
East of England	x	14 to 19, 52 to 53	01 to 07	None
East Midlands	x	13 to 19, 48	01 to 07	None
London	x	12 to 19, 33, 52 to 53	01 to 06, 36	None
North East	x	14 to 21	02 to 04	None
North West	x	13 to 19, 33, 42 to 47	01 to 07, 31 to 32, 36, 43	None
South East	x	13 to 21, 33, 50 to 53	01 to 07, 36	None
South West	x	13 to 19, 33	02 to 07, 29, 36	None
West Midlands	x	13 to 20, 45, 48	01 to 07, 29, 36, 40, 48	None
Yorkshire and Humber	x	14 to 21, 23, 43 to 50	02 to 04, 32, 35 to 36	None

Figure 59: Daily excess all-cause deaths by (a) age group and (b) UKHSA centres, England, 1 March 2020 to 2 March 2022

(a)



(b)



Microbiological surveillance

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.

The UKHSA Respiratory Virus Unit has genetically characterised 243 influenza A(H3N2) viruses, collected since week 40 of 2021. Of the characterised influenza A(H3N2) viruses where the age of the individual sampled is known, 56% are from individuals in age groups that would not normally be eligible for influenza vaccination.

Sequencing of the haemagglutinin (HA) gene shows that these A(H3N2) viruses belong in genetic subclade 3C.2a1b; 233 within a cluster designated 3C.2a1b.2a.2. The Northern Hemisphere 2021/22 influenza A(H3N2) vaccine strain (an A/Cambodia/e0826360/2020-like virus) also belongs in genetic subclade 3C.2a1b, within the 2a.1 genetic group. Ten A(H3N2) viruses collected in weeks 50 of 2021 to week 4 of 2022, fall within a cluster designated 3C.2a1b.1a. Viruses within this genetic cluster have been detected in recent months in West and South Africa.

Eight influenza B viruses, collected since the start of the season in week 40 of 2021 have been genetically characterised and belong in genetic clade 1A.3 of the B/Victoria lineage, characterised by deletion of three amino acids in the haemagglutinin (HA), in a subgroup designated 1A.3a.2. The N. Hemisphere 2021/22 B/Victoria-lineage quadrivalent and trivalent vaccine component virus (a B/Washington/02/2019-like virus) belongs in genetic clade 1A.3.

Eleven influenza A(H1N1)pdm09 viruses have been characterised to date this season, belonging in genetic subgroup 6B.1A.5a. Four fall within a cluster designated 6B.1A.5a.1, with two collected from returning travellers. Seven A(H1N1)pdm09 viruses also belong in genetic subgroup 6B.1A.5a, within a cluster designated 6B.1A.5a.2. The Northern Hemisphere 2021/22 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 detection of circulating A(H3N2) and influenza B viruses is in accordance with predominant detections internationally over the period of August and September 2021, and from week 40 to date.

The Respiratory Virus Unit has confirmed by genome sequencing the detection of live attenuated influenza vaccine (LAIV) viruses in 39 influenza A and or influenza B positive samples collected since week 37 of 2021, from children aged 2 to ≤16 years of age.

Antiviral susceptibility

Influenza positive samples are 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 week 40 of 2021 and week 2 of 2022 have been analysed. No viruses with known markers of resistance to neuraminidase inhibitors were detected in 186 A(H3N2), 4 A(H1N1)pdm09 and 8 B/Victoria-lineage neuraminidase gene sequences. No viruses with known markers of resistance to baloxavir marboxil were detected in 160 A(H3N2), 3 A(H1N1)pdm09 and 8 B/Victoria-lineage PA gene sequences (cap-dependent endonuclease).

An A(H3N2) virus with an E199G amino acid substitution in the PA gene, present as a mixed population (37% E199G) was detected in a sample taken from a child in mid-January. This substitution has been reported previously as causing a minor reduction in baloxavir susceptibility (4.4-fold) *in vitro*, detected post treatment in a phase 2 paediatric study. No clinical details are available yet, with investigations ongoing.

Table 8: Antiviral susceptibility of influenza positive samples tested at UKHSA-RVU

(Sub)type	Neuraminidase Inhibitors		Baloxavir	
	Susceptible	Reduced Susceptibility	Susceptible	Reduced Susceptibility
A(H3N2)	186	0	160	1
A(H1N1)pdm09	4	0	3	0
B/Victoria-lineage	8	0	8	0

SARS-CoV-2 variants

UKHSA conducts surveillance of SARS-CoV-2 variants. Further information including an overview of variants, information on new variants and detailed surveillance of particular variants of concern can be found on GOV.UK and in the latest technical briefing.

Antimicrobial susceptibility

Table 9 shows in the 12 weeks up to week 9 2022, the proportion of all lower respiratory tract isolates of Streptococcus pneumoniae, Haemophilus influenzae, Staphylococcus aureus, MRSA and MSSA tested and susceptible to antibiotics. These organisms are the key 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 9: Antimicrobial susceptibility surveillance in lower respiratory tract

Organism	Antibiotic	Specimens tested (N)	Specimens susceptible (%)
S. pneumoniae	Penicillin	1,086	86
	Macrolides	1,241	83
	Tetracycline	1,242	82
H. influenzae	Amoxicillin/ampicillin	7,018	53
	Co-amoxiclav	7,677	56
	Macrolides	2,271	5
	Tetracycline	7,855	98
S. aureus	Methicillin	3,152	93
	Macrolides	3,651	70
MRSA	Clindamycin	158	44
	Tetracycline	196	68
MSSA	Clindamycin	2,265	78
	Tetracycline	2,795	93

* Macrolides = erythromycin, azithromycin and clarithromycin

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 to 2021 influenza season when the SGSS CDR module was used instead due to a UKHSA SGSS AMR data infrastructure issue which has now been resolved. Therefore, the above results are not directly comparable to the results reported between weeks 41, 2020 and 5, 2021. The AMR module of SGSS was used during the 2019 to 2020 influenza season. There has been a reduction in the total number of bacterial positive lower respiratory tract clinical samples reported to UKHSA since mid-March 2020.

COVID-19 sero-prevalence surveillance

Since week 42 2021, updates on COVID-19 sero-prevalence estimates have been published in the weekly COVID-19 vaccine surveillance report.

Influenza vaccination

Influenza vaccine uptake in GP patients

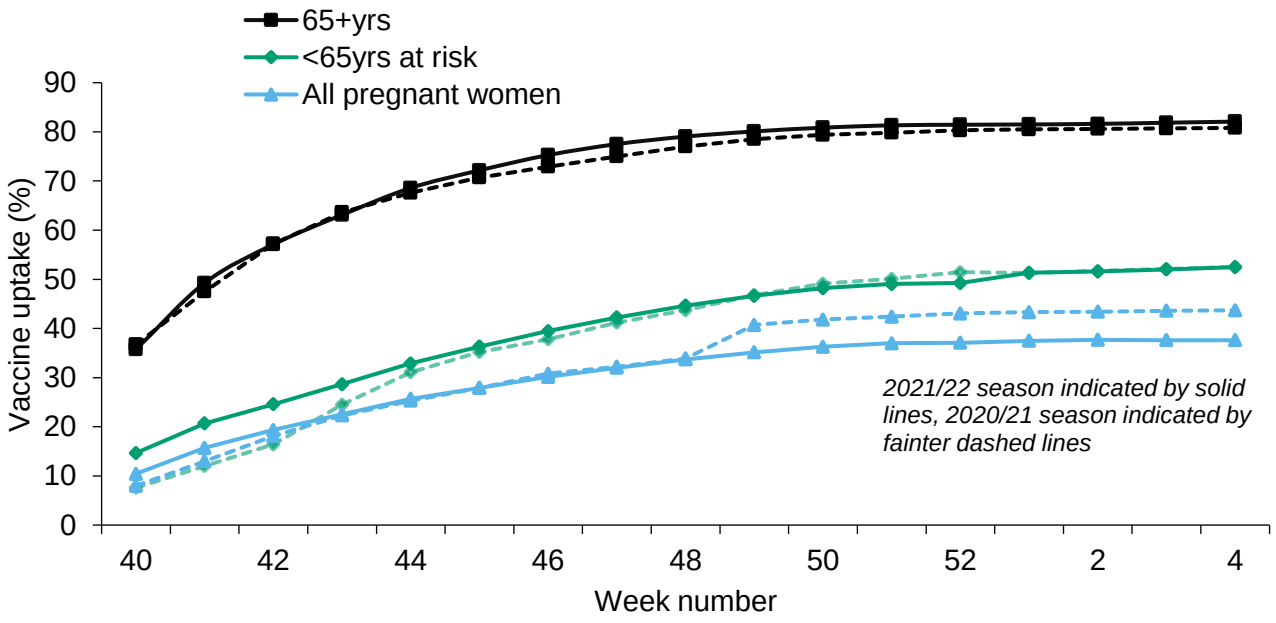
The last publication of weekly vaccine uptake data for the 2021 to 2022 season was on 3 February 2022. That data showed that up to week 4 2022, in 87.6 % of GP practices reporting weekly to ImmForm for the main collection, the provisional proportion of people in England who had received the 2021 to 2022 influenza vaccine in targeted groups was as follows:

- 52.5% in under 65 years in a clinical risk group
- 37.6% in all pregnant women
- 82.1% in all 65 year olds and over
- 85.1% in 65 year olds and over and in a clinical risk group
- 45.5% in those aged 50 to 64 who are NOT in a clinical risk group

A data quality issue in recent returns from one GP system supplier associated with a recent coding change regarding pregnancy data is currently being investigated and will be addressed in subsequent monthly updates.

Weekly vaccine coverage data is provisional.The sample of GP practices included in the data may change from week to week, resulting in changes to reported cumulative uptake.

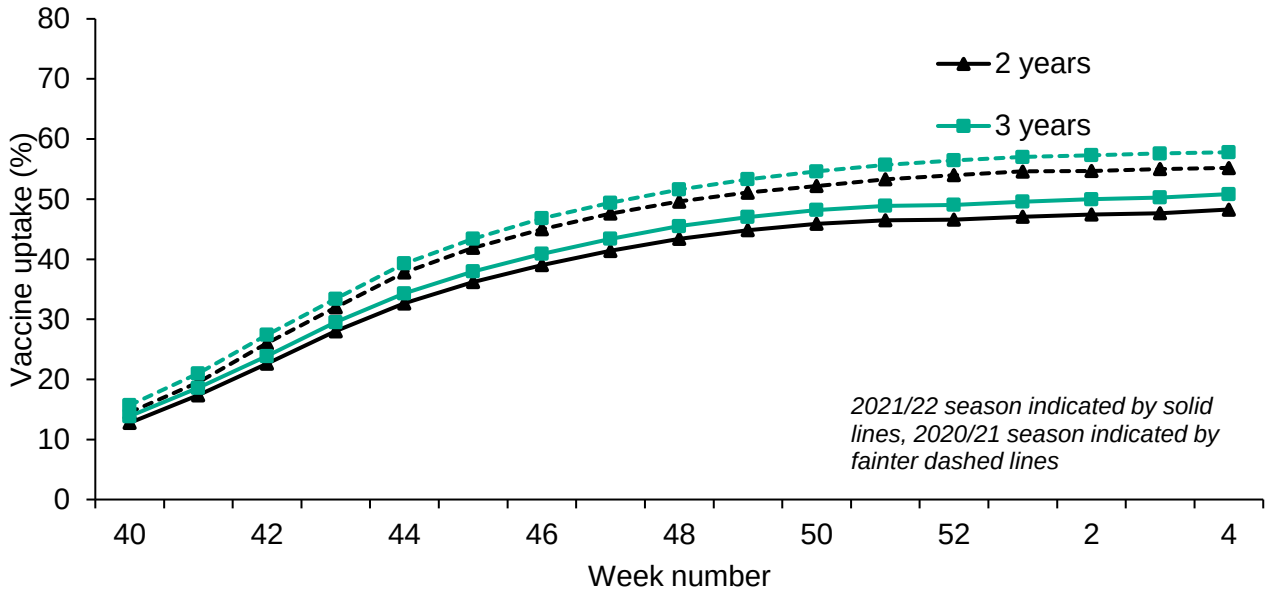
Figure 60: Cumulative weekly influenza vaccine uptake by target group in England



In 2021 to 2022, all 2 and 3 year olds continue to be eligible for influenza vaccination through their GPs. Up to week 4 2022, in 88.1% of GP practices reporting weekly to ImmForm for the childhood collection, the provisional proportion of children in England who had received the 2021 to 2022 influenza vaccine in targeted groups was as follows:

- 48.3% in all 2 year olds
- 50.8% in all 3 year olds

Figure 61: Cumulative weekly influenza vaccine uptake in 2 and 3 year olds, in England



As in previous seasons week 4 data is the last weekly publication during the Influenza season. Monthly data covering vaccinations that were given between 1 September and 31 January 2022 has been published. This is the fifth publication of monthly data this season and comparator data is available for previous seasons. The monthly GP report includes ethnicity data for at-risk groups, pregnant women and for the first time, 65 years and over.

Influenza vaccine uptake in school age children

Provisional monthly data on influenza vaccine uptake in children of school years Reception to Year 11 has been published, showing the provisional proportion of children who received the 2021 to 2022 influenza vaccine via school, pharmacy or GP practice between 1 September and 31 January 2022.

Influenza vaccine uptake in healthcare workers

Provisional monthly data on influenza vaccine uptake in frontline healthcare workers has been published, showing vaccine uptake at national, commissioning region, and Trust level, and by staff group, between 1 September and 31 January 2022.

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 9 2022 (week ending 6 March 2022) was extracted from the National Immunisation Management Service (NIMS). The data presented this week is the provisional proportion of living people in England who had received at least one dose, two doses and three doses of a COVID-19 vaccination by age group. The overall vaccine uptake in the population for those with at least dose 1 was 69.5%, 65.0% for dose 2 and 50.5% for dose 3. The breakdown by sex showed vaccine uptake in males was 67.0% and 71.8% in females for dose 1. For dose 2 vaccine uptake by sex was 62.6% in males and 67.6% in females. For dose 3 vaccine uptake by sex was 47.9% in males and 53.4% in females. The vaccine uptake rate in adults aged 18 and over was 81.8% (41,043,787/50,202,781) for dose 1; 78.6% (39,447,738/50,202,781) for dose 2 and 63.1% (31,692,321/ 50,202,781) for dose 3.

Table 9: Provisional cumulative COVID-19 vaccine uptake by age in England

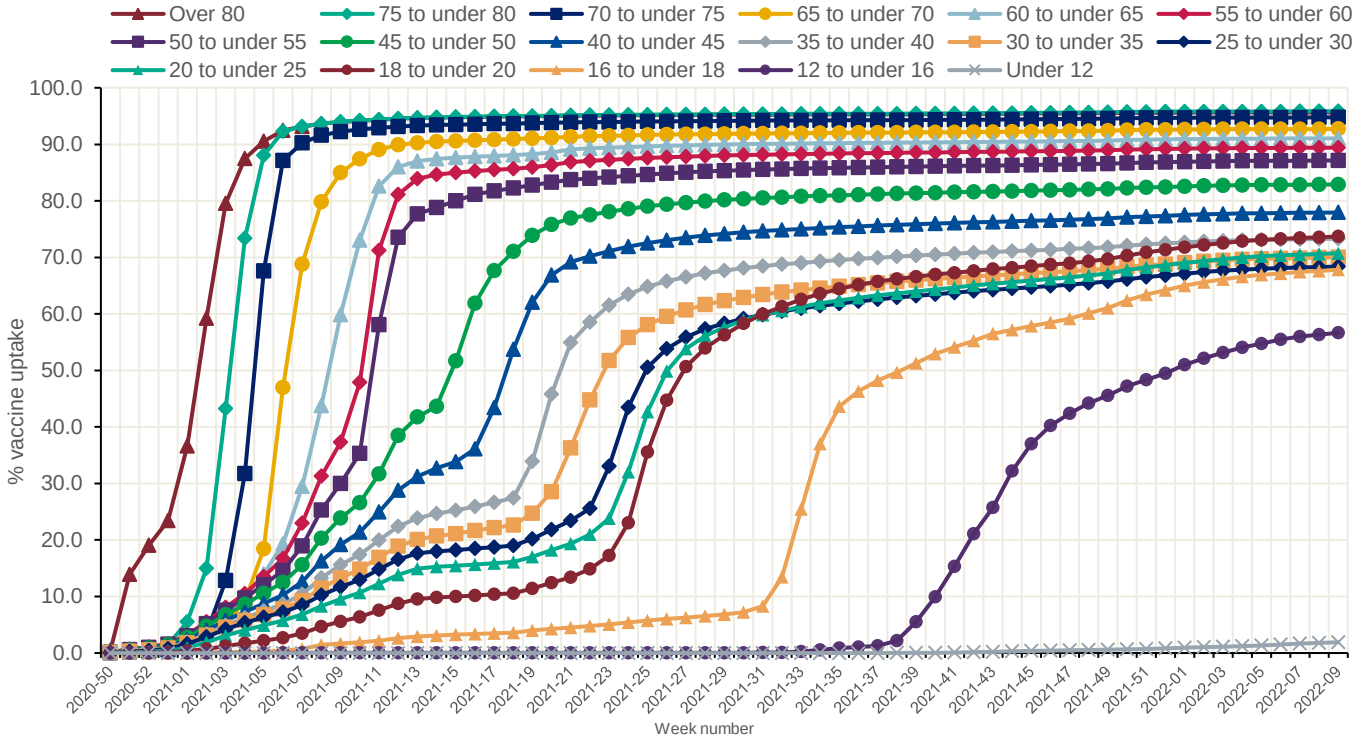
NATIONAL	People in NIMS cohort	Vaccinated with at least 1 dose		Vaccinated with at least 2 doses		Vaccinated with at least 3 doses	
		Number vaccinated	% vaccine uptake	Number vaccinated	% vaccine uptake	Number vaccinated	% vaccine uptake
Over 80	2,741,083	2,621,938	95.7	2,604,097	95.0	2,499,910	91.2
75 to under 80	2,137,009	2,048,247	95.8	2,033,480	95.2	1,972,311	92.3
70 to under 75	2,848,907	2,699,817	94.8	2,676,956	94.0	2,583,444	90.7
65 to under 70	2,914,659	2,702,582	92.7	2,671,326	91.7	2,531,048	86.8
60 to under 65	3,506,931	3,193,114	91.1	3,146,875	89.7	2,890,492	82.4
55 to under 60	4,121,972	3,685,270	89.4	3,620,919	87.8	3,230,223	78.4
50 to under 55	4,250,984	3,704,270	87.1	3,623,776	85.2	3,128,226	73.6
45 to under 50	4,002,020	3,317,396	82.9	3,220,546	80.5	2,612,411	65.3
40 to under 45	4,221,272	3,290,086	77.9	3,160,323	74.9	2,395,373	56.7
35 to under 40	4,605,325	3,375,775	73.3	3,200,402	69.5	2,231,715	48.5
30 to under 35	4,859,854	3,402,698	70.0	3,171,442	65.3	2,031,745	41.8
25 to under 30	4,566,580	3,122,582	68.4	2,861,864	62.7	1,692,283	37.1
20 to under 25	4,035,681	2,855,005	70.7	2,546,764	63.1	1,401,626	34.7
18 to under 20	1,390,504	1,025,007	73.7	908,969	65.4	491,517	35.3
16 to under 18	1,377,287	933,838	67.8	696,156	50.5	133,238	9.7
12 to under 16	2,889,376	1,637,078	56.7	805,114	27.9	6,566	0.2
Under 12	8,562,428	163,225	1.9	25,729	0.3	38	0.0
Total*	**63,031,872**	**43,778,833**	**69.5**	**40,975,150**	**65.0**	**31,832,411**	**50.5**

*Caution should be exercised when summing the regional or age figures as the sum of the regions will not equal the England total. This is due to individuals vaccinated in England who have a registered address in Scotland or Wales or where their address is unknown. There were also vaccinations where the individual had an unknown region and age group.

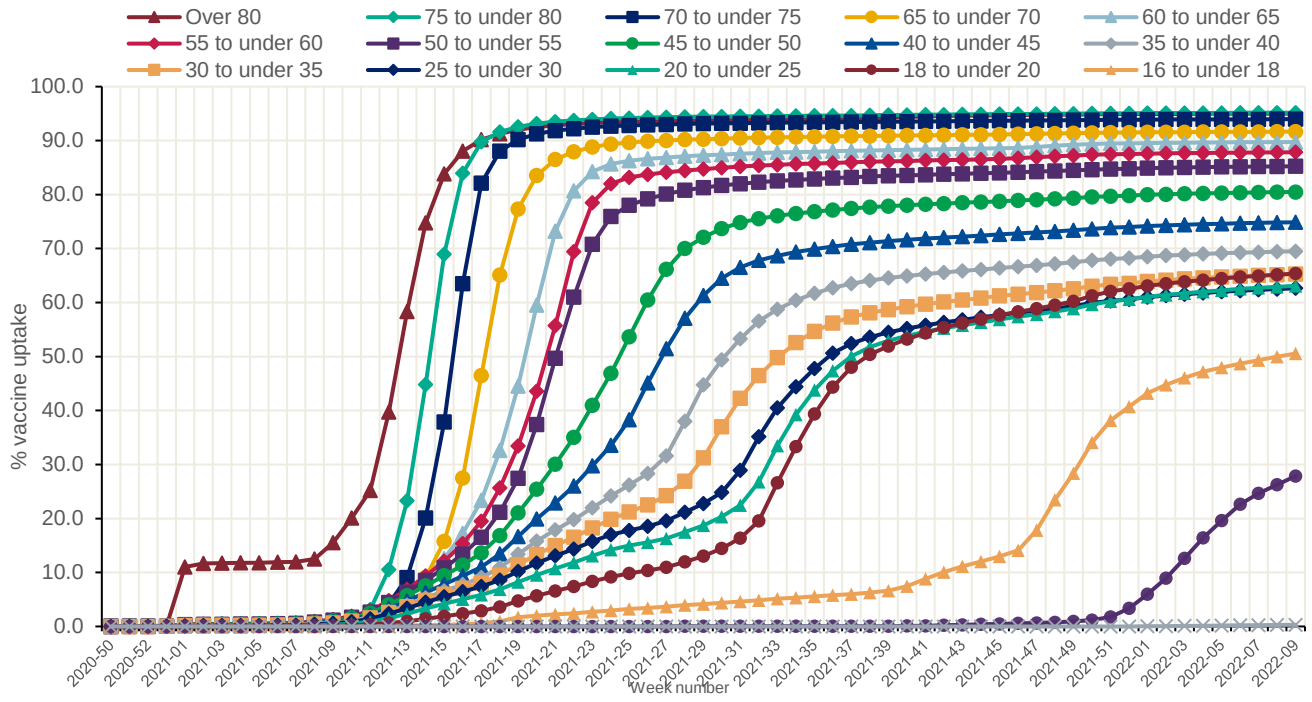
Data is provisional and subject to change following further validation checks. Any changes to historic figures will be reflected in the most recent publication. Please note that numbers published by UKHSA are for public health surveillance purposes only.

Figure 62: Cumulative weekly COVID-19 vaccine uptake by age in England for (a) Dose 1, (b) Dose 2 and (c) Dose 3 (please note the data for this graph is shown from week 35 (week ending 5 September 2021))

(a)



(b)


Over 80
75 to under 80
70 to under 75
65 to under 70
60 to under 65
55 to under 60
50 to under 55
45 to under 50
40 to under 45
35 to under 40
30 to under 35
25 to under 30
20 to under 25
18 to under 20
16 to under 18
% vaccine uptake
Week number

(c)

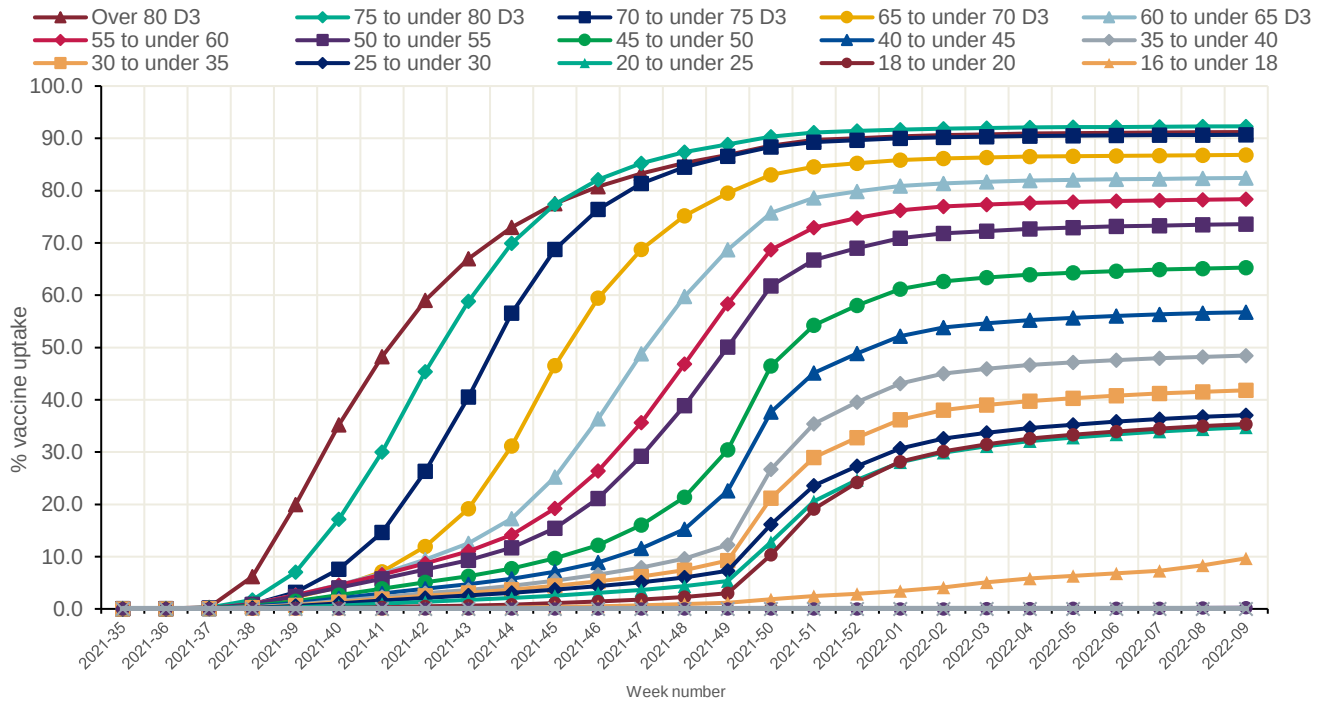

Over 80 D3
75 to under 80 D3
70 to under 75 D3
65 to under 70 D3
60 to under 65 D3
55 to under 60
50 to under 55
45 to under 50
40 to under 45
35 to under 40
30 to under 35
25 to under 30
20 to under 25
18 to under 20
16 to under 18
% vaccine uptake
Week number

Figure 63: Age-Sex pyramid for COVID-19 vaccine uptake by age in England for Dose 1

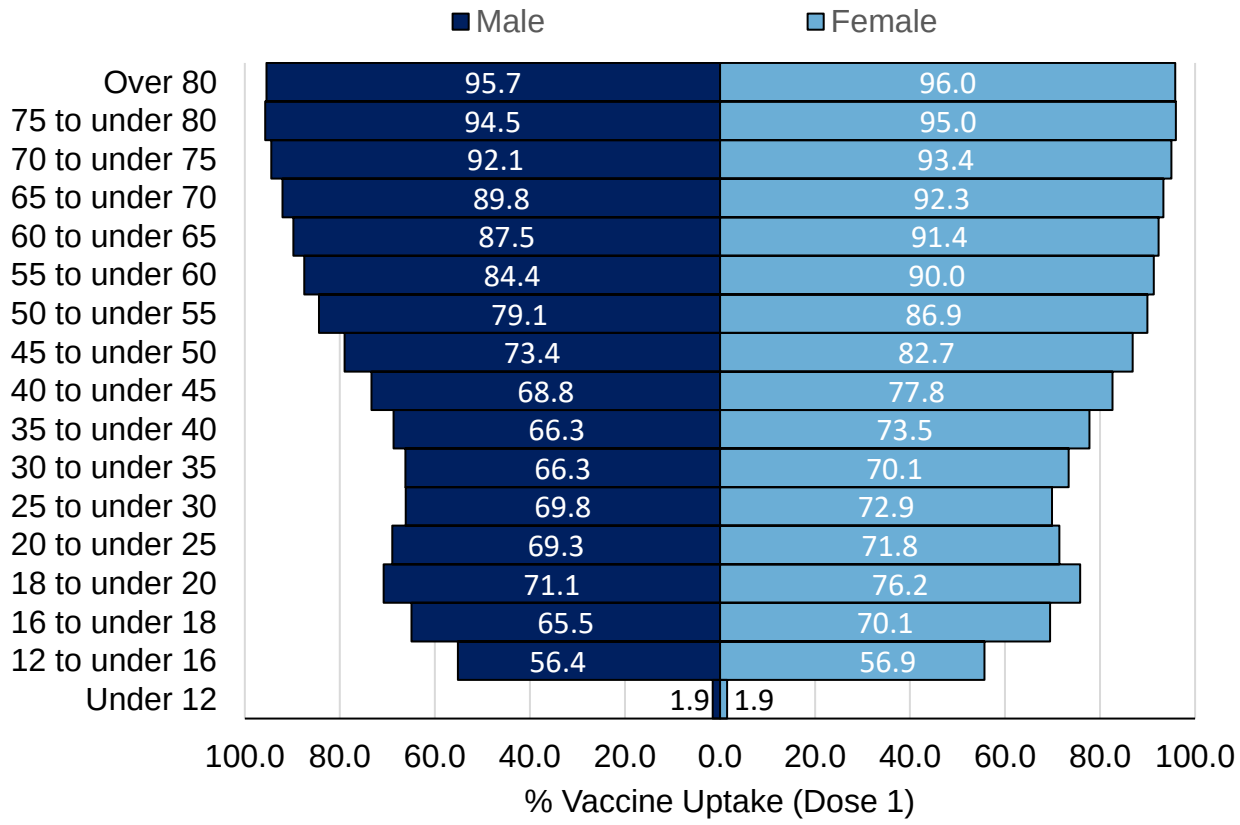


Figure 64: Age-Sex pyramid for COVID-19 vaccine uptake by age in England for Dose 2

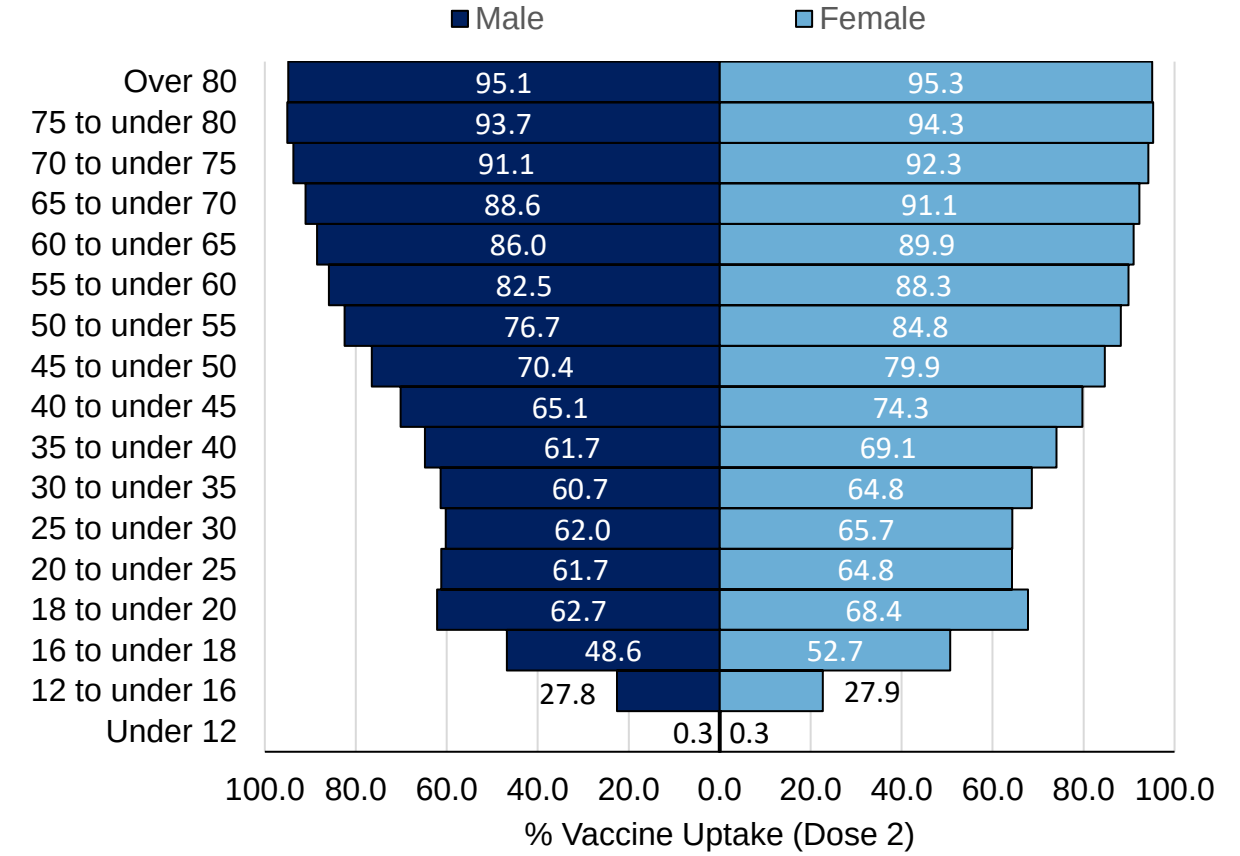
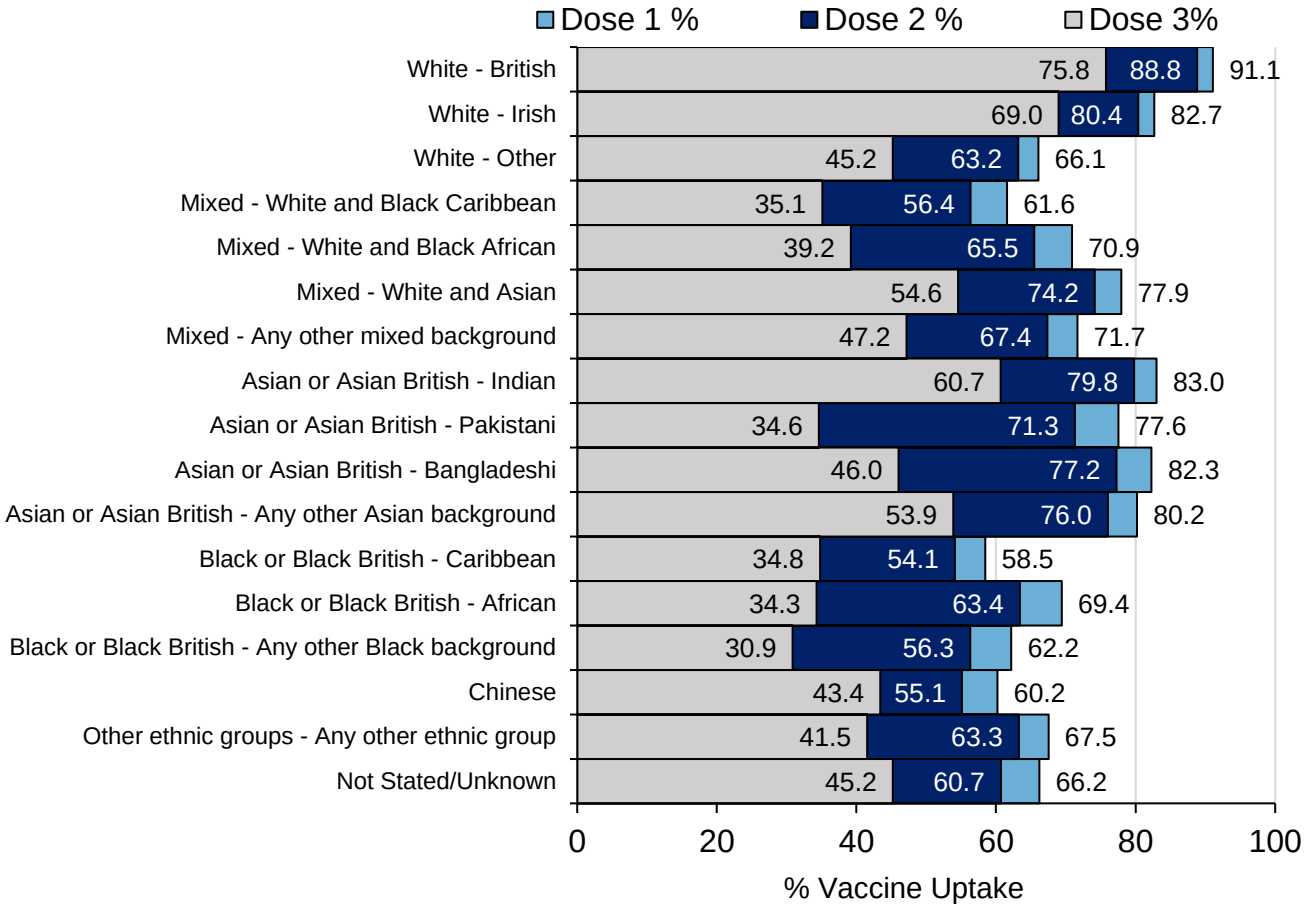


Figure 65: Cumulative weekly COVID-19 vaccine uptake by ethnicity in those living and resident in England, aged 18 and over.



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

From the 6 January 2021 (week 1 of 2021), the Joint Committee on Vaccination and Immunisation (JCVI) advised initially prioritising delivery of the first vaccine dose to maximise the public health impact in the short term and reduce the number of preventable deaths from COVID-19. See statement.

From week 46, UKHSA have started to report on those in the population with at least 3 doses of COVID-19 vaccine. These figures count the number of doses a person has had in chronological order and include vaccinations given before the start of the programme where data is available to provide a more complete record of the population coverage estimates.

For UK COVID-19 daily counts of vaccinations, please see the Vaccinations' section of the UK COVID-19 dashboard.

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.

International update

Global COVID-19 update

Globally, up to 8 March 2022, a total of 446,981,075 cases of COVID-19 infection have been reported worldwide, including 6,006,775 COVID-19 related deaths.

For further information on the global COVID-19 situation please see the WHO COVID-19 situation reports.

Figure 66: Global map of cumulative COVID-19 cases

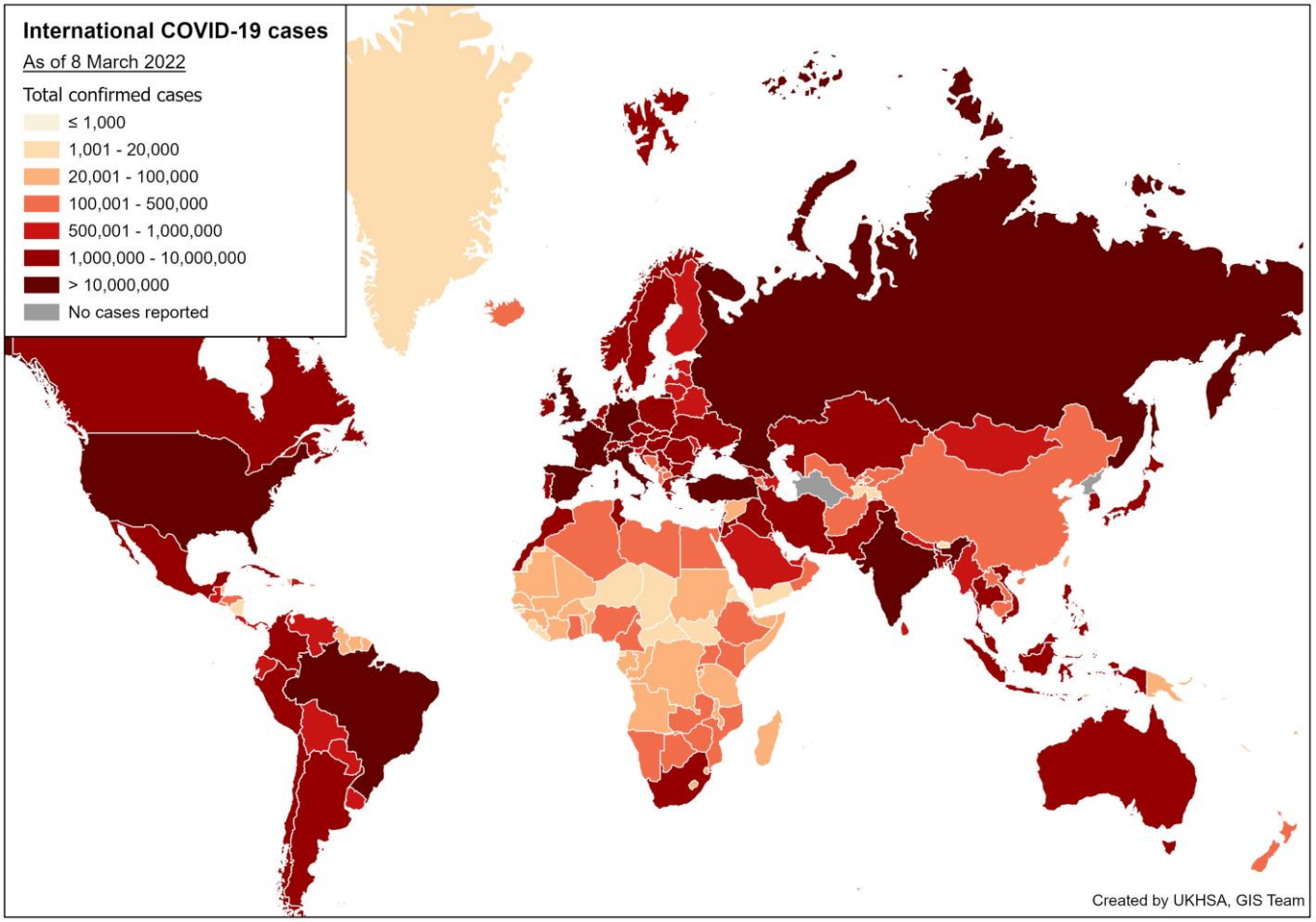


Figure 67: Global map of percentage change in weekly COVID-19 case incidence rate per 100,000 population compared to the previous week

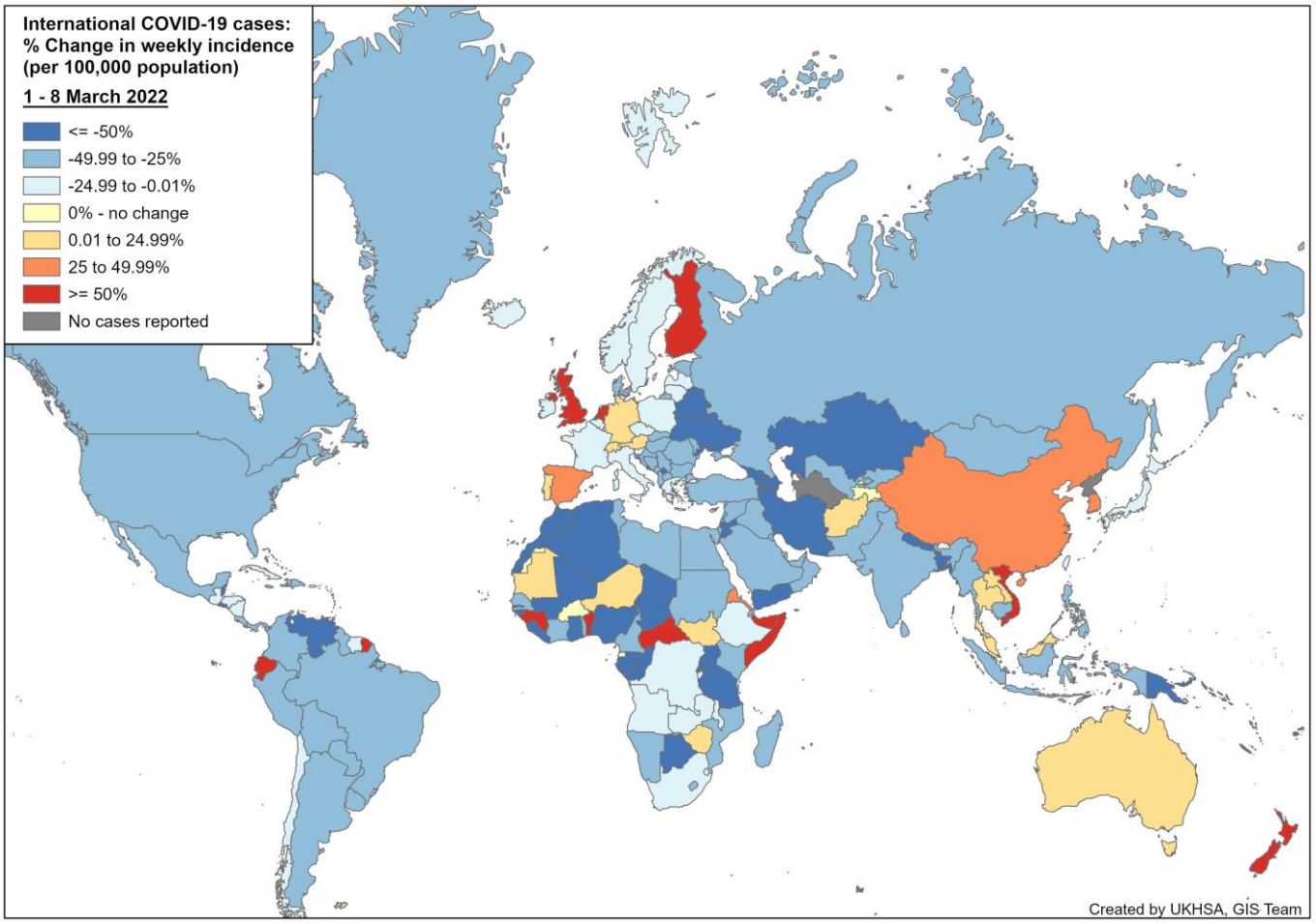
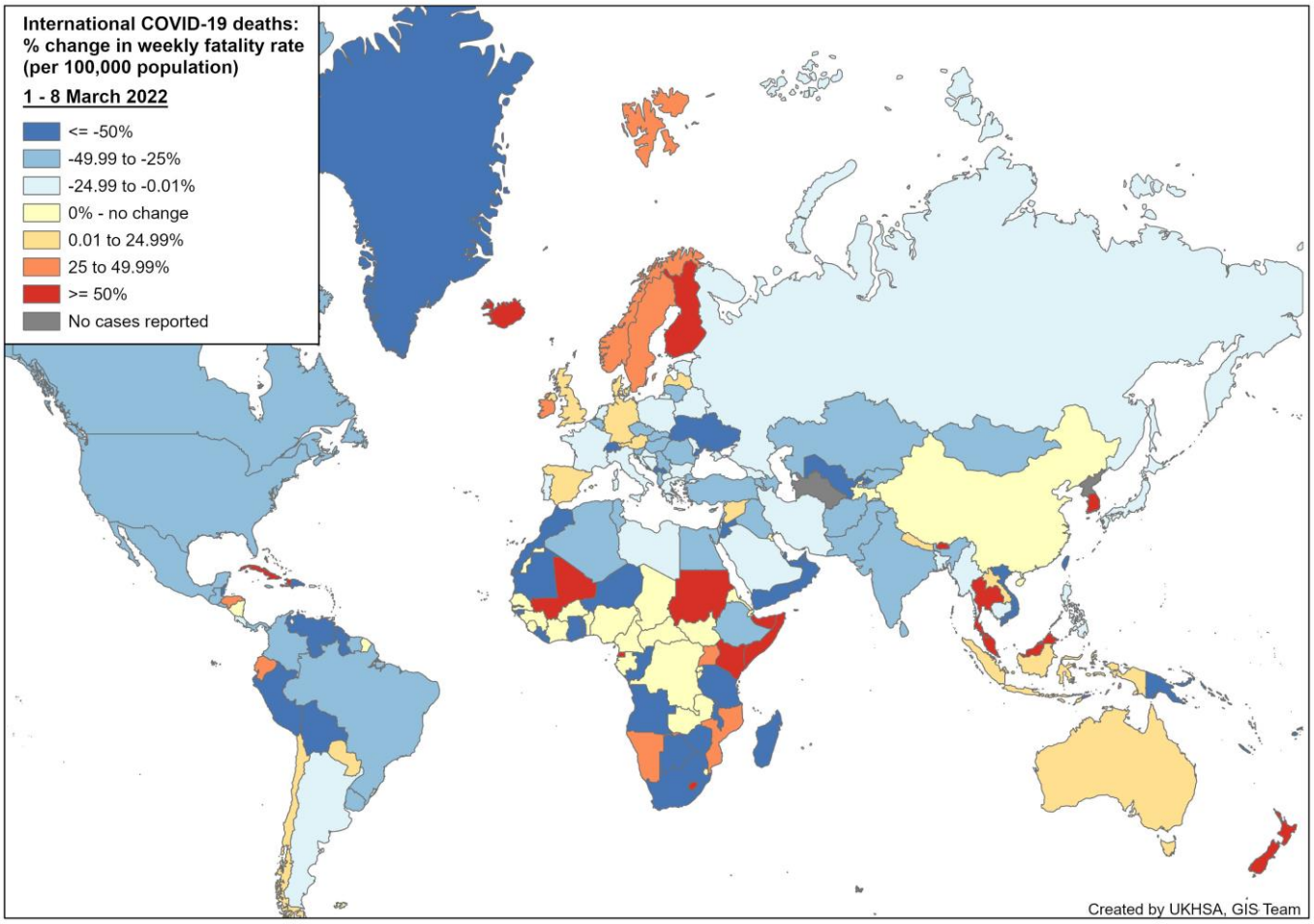


Figure 68: Global map of percentage change in weekly COVID-19 fatality rate per 100,000 population compared to the previous week



Global influenza update

Updated on 21 February 2022 (based on data up to 6 February 2022) (WHO website).

In the temperate zones of the northern hemisphere, influenza activity decreased with detections of mainly influenza A(H3N2) viruses and B/Victoria lineage viruses reported. In the temperate zones of the southern hemisphere, influenza activity remained low overall, although increased detections of influenza A(H3N2) were reported in some countries in temperate South America.

In North America, influenza virus detections decreased and were predominantly A(H3N2) among those detected and subtyped. Influenza detections remained low compared to similar periods in past seasons (except 2020 to 2021).

In Europe, influenza activity appeared to decrease. Influenza A(H3N2) predominated.

In East Asia, influenza activity with mainly influenza B/Victoria lineage detections decreased in China. Influenza illness indicators and activity remained low in the rest of the subregion.

In Western Asia, influenza activity continued to decrease. In Northern Africa, influenza activity increased with influenza A(H3N2) and A(H1N1)pdm09 detections.

In the Caribbean and Central American countries, some influenza activity was reported with influenza A(H3N2) predominating.

In tropical South America, some influenza activity was reported with influenza A(H3N2) predominating.

In tropical Africa, influenza activity was reported mainly from Eastern Africa with influenza A(H3N2) predominating followed by influenza B/Victoria lineage, and from Middle Africa with influenza B predominantly followed by influenza A (both subtypes).

In Southern Asia, influenza virus detections of predominantly influenza A(H3N2) decreased.

In South-East Asia, mainly influenza A(H3N2) detections were reported as well as some influenza B.

The WHO GISRS laboratories tested more than 490,516 specimens during the period 24 January 2022 to 6 February 2022. A total of 12,368 were positive for influenza viruses, of which 8,423 (68.1%) were typed as influenza A and 3,945 (31.9%) as influenza B. Of the sub-typed influenza A viruses, 171 (6.4%) were influenza A(H1N1)pdm09 and 2,483 (93.6%) were influenza A(H3N2). Of the characterized B viruses, 4 (0.1%) belonged to the B-Yamagata lineage and 3,713 (99.9%) to the B-Victoria lineage.

Influenza in Europe

Updated on 2 March 2022, up to week 8 of 2022 (Joint ECDC-WHO Europe Influenza weekly update)

Influenza activity started to increase in the region in week 49, with different levels of activity across Europe and a dominant circulation of mostly influenza A(H3) viruses, although some countries have also reported influenza A(H1)pdm09 viruses. To date this season, the highest percentage positivity of influenza viruses in sentinel primary care specimens from patients presenting with ILI or ARI was during week 52 2021, declining thereafter. Positivity rose again in week 8 of 2022.

For week 8 of 2022, of 38 countries and areas reporting on intensity of influenza activity, 24 reported baseline-intensity (across the Region), 9 reported low-intensity (across the Region) and 5 reported medium-intensity (Armenia, Estonia, Georgia, Kazakhstan and Slovakia).

Of 38 countries and areas reporting on geographic spread of influenza viruses, 7 reported no activity (Armenia, Belarus, Israel, Kazakhstan, Malta, Poland and Kosovo), 19 reported sporadic spread (across the Region), 3 reported local spread (Germany, North Macedonia and Slovakia), 3 reported regional spread (Albania, France and Serbia) and 6 reported widespread activity (Estonia, Georgia, Hungary, Ireland, Republic of Moldova and Slovenia).

For week 8 of 2022, of 948 sentinel specimens tested for influenza viruses, 92 were positive.

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.

Other respiratory viruses

Avian influenza

Latest WHO update on 21 January

Since the previous WHO update on 13 December 2021, one human case of infection with an influenza A(H5N1) virus from the UK, 9 human cases of infection with avian influenza A(H5N6) viruses from China, and 5 human cases of infection with avian influenza A(H9N2) viruses from China were reported officially.

Middle East respiratory syndrome coronavirus (MERS-CoV)

Latest update on 17 November 2021 (WHO website).

Up to 17 August 2021, 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 the on-going surveillance since September 2012.

On 2 February 2021, the National IHR Focal Point of the United Arab Emirates (UAE) notified WHO of one laboratory-confirmed case of MERS-CoV (WHO website).

Between 12 March and 31 July 2021, the National IHR Focal Point of Saudi Arabia reported 4 additional cases of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) infection, including one associated death. (WHO website).

On 17 November 2021, the National IHR Focal Point of the United Arab Emirates (UAE) notified WHO of one laboratory-confirmed case of Middle East respiratory syndrome coronavirus (MERS-CoV) in UAE (WHO website).

From September 2012 until 18 November 2021, a total of 2,583 laboratory-confirmed cases of MERS-CoV and 888 associated deaths were reported globally to WHO under the International Health Regulations (IHR 2005).

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

PHE monitoring of the effectiveness of COVID-19 vaccination

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

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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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Published: 10 March 2022