Public Health England

Protecting and improving the nation's health

Weekly national Influenza and COVID-19 surveillance report

Week 34 report (up to week 33 data)
26 August 2021

Executive summary

This report summarises the information from the surveillance systems which are used to monitor Coronavirus Disease 2019 (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 33 (between 16 August and 22 August 2021) and for some indicators daily data up to 24 August 2021.

Surveillance indicators suggest that at a national level COVID-19 activity remained stable in most indicators, with slight increases in some indicators, in week 33 of 2021. Laboratory indicators suggest that influenza activity is very low.

Overall case rates increased slightly in week 33. Case rates increased slightly in most age groups and regions and in some ethnic groups. Overall Pillar 1 and Pillar 2 positivity remained stable compared to the previous week.

The number of reported acute respiratory incidents in the past week increased compared to the previous week. SARS-CoV-2 was identified in the majority of these.

COVID-19 hospitalisations remained stable in week 33. Deaths with COVID-19 decreased in the most recent week.

COVID-19 vaccine coverage was 63.9% for dose 1 at the end of week 33. COVID-19 vaccine coverage was 55.9% for dose 2 at the end of week 33, reaching over 90% in all cohorts over the age of 65 years and over 80% in all cohorts over 50 years.

Seroprevalence data indicates that approximately 97.7% of blood donors aged 17 and over have antibodies to SARS-CoV-2 from either infection or vaccination. Increases in seropositivity continue to be observed in those aged 17 to 29, following vaccination rollout.

Through Respiratory Datamart, there were no influenza positive samples detected in week 33. Other indicators for influenza such as hospital admissions and GP influenza-like illness consultation rates remain very low. Respiratory syncytial virus (RSV) positivity increased slightly from 13.9% in week 32 to 14.2% in week 33. Rhinovirus, parainfluenza, adenovirus and human metapneumovirus (hMPV) positivity remained low at 6.8%, 1.2%, 1.1% and 0.8% respectively.

Contents

Laboratory surveillance

Confirmed COVID-19 cases (England)

As of 9am on 24 August 2021, a total of 5,707,906 first positive cases have been confirmed for COVID-19 in England under Pillars 1 and 2, since the beginning of the pandemic.

Overall case rates increased slightly in week 33. Case rates increased slightly in most age groups and regions and in some ethnic groups. Overall Pillar 1 and Pillar 2 positivity remained stable compared to the previous week.

From the week 32 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 Polymerase Chain Reaction (PCR) testing only, unless otherwise stated (for example figure 2).

Changes to testing policies over time may impact on positivity rates.

Figure 1: Confirmed COVID-19 cases tested under Pillar 1 and Pillar 2, based on sample week with overall weekly PCR positivity for Pillars 1 and 2 (%)
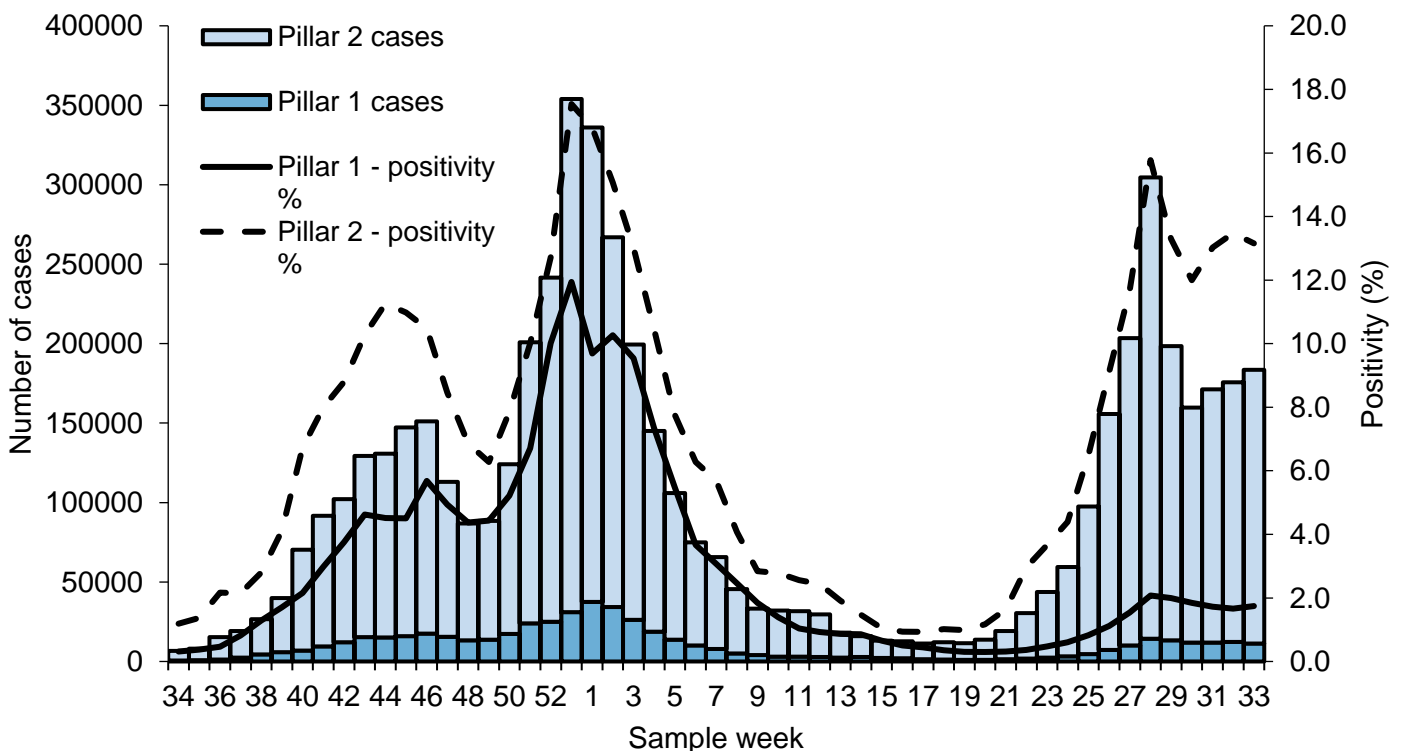
* The data are shown by the week the specimen was taken from the person being tested. This gives the most accurate analysis of this time progression, however, for the most recent week results for more samples are expected therefore this should be interpreted with caution.
* Positivity (excluding Figure 2) is calculated as the number of individuals testing positive during the week divided by the number of individuals tested during the week through Polymerase Chain Reaction (PCR) testing.

Figure 2: Weekly positivity (%) of confirmed COVID-19 and number of individuals tested by type of test, under Pillar 1 and 2 (SGSS and Respiratory DataMart)
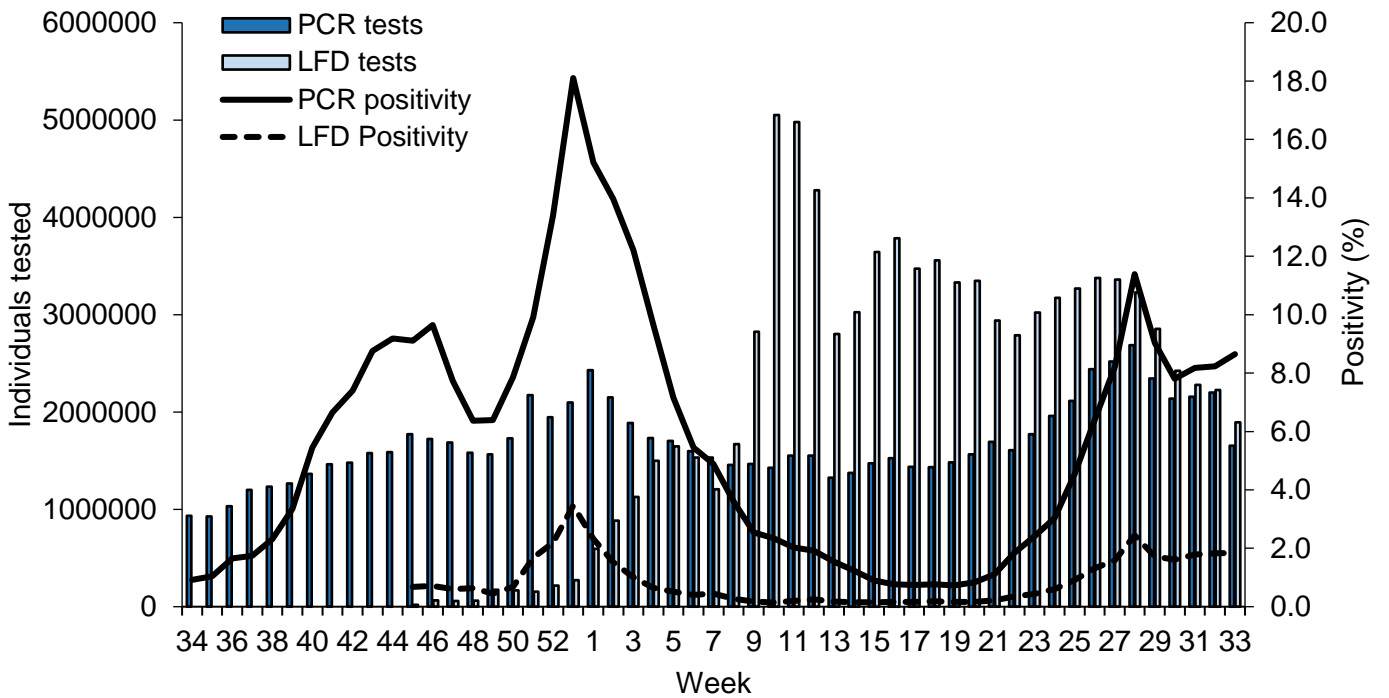
*For Figure 2 positivity is calculated as the number of individuals testing positive using a specific test type during the week, divided by the number of individuals tested using that specific test type during the week.
*Please note that an individual may appear under both PCR and LFD tests if they have been tested using both test types in a given week.

Age and sex

Figure 3: Age-sex pyramids for confirmed COVID-19 cases tested under Pillars 1 and 2 in weeks 32 and 33 (n=357,567)
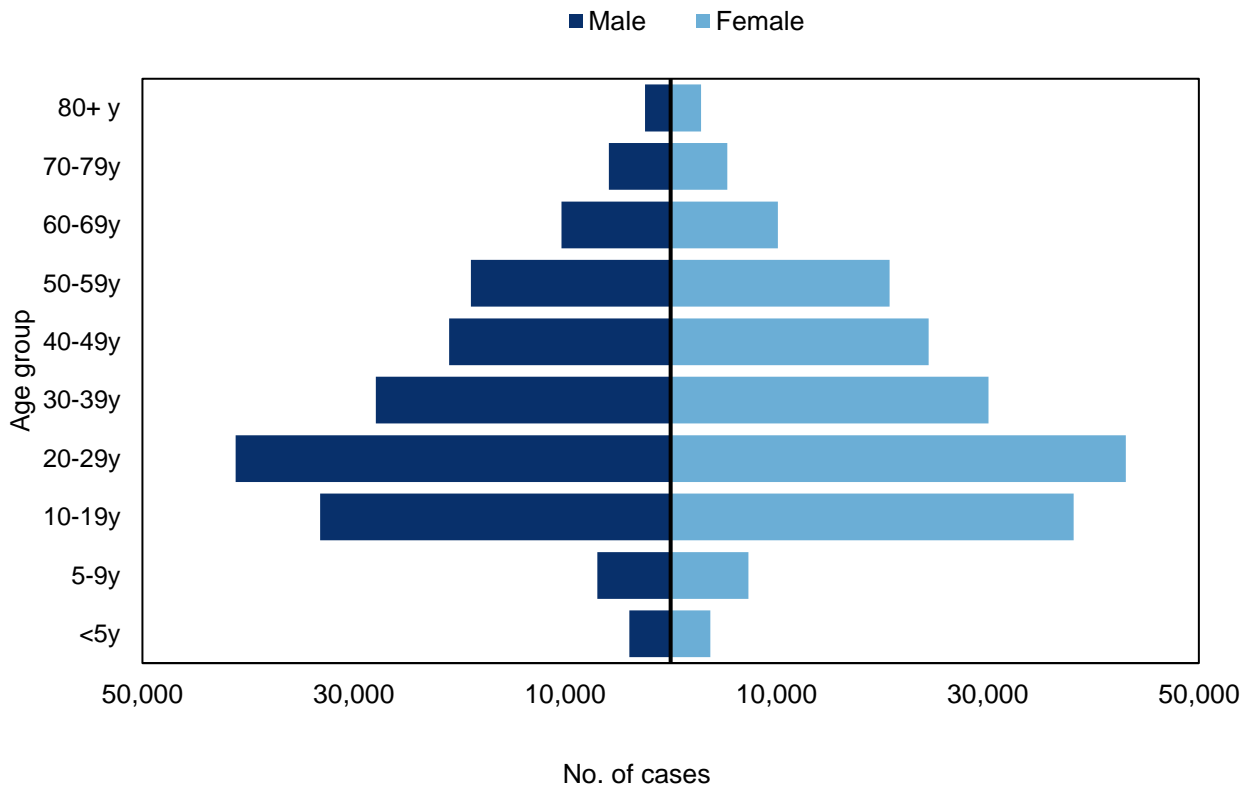
Figure 4: Weekly confirmed COVID-19 case rates per 100,000, tested under Pillar 1 and Pillar 2, by sex
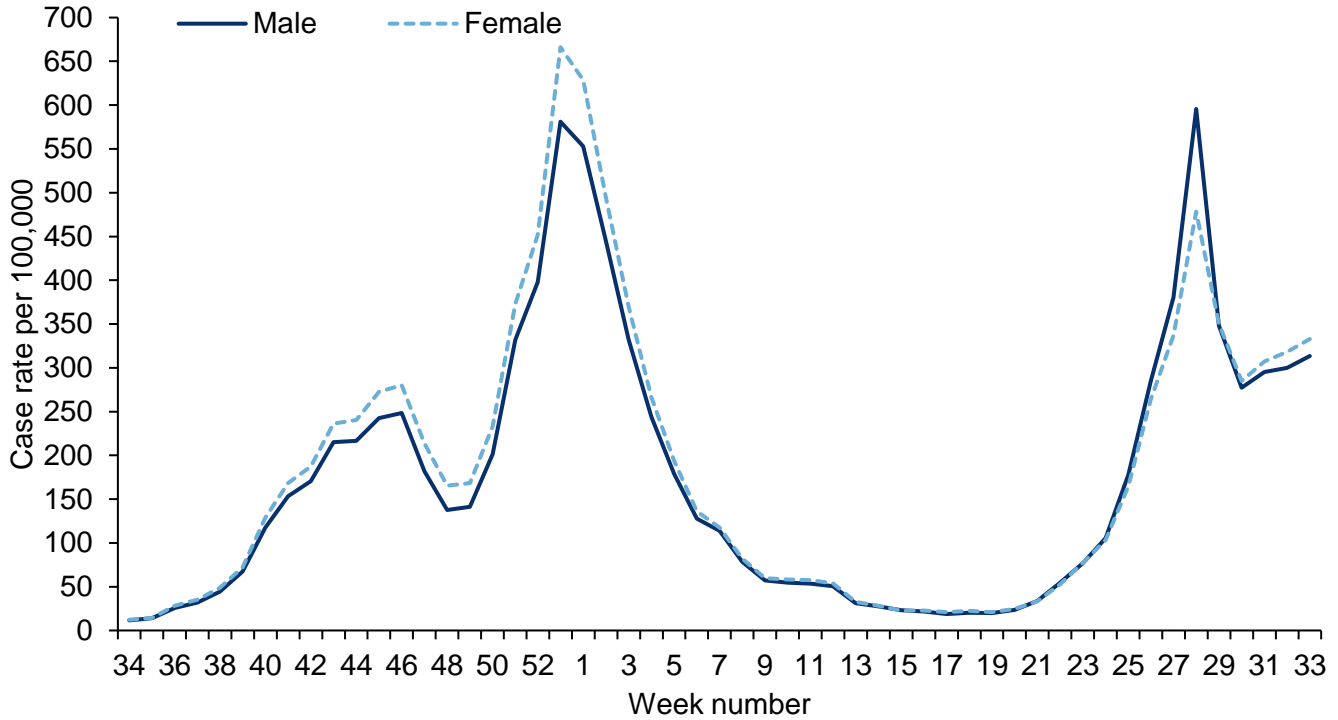
Figure 5: Weekly confirmed COVID-19 case rates per 100,000, tested under Pillar 1 and Pillar 2, by age group

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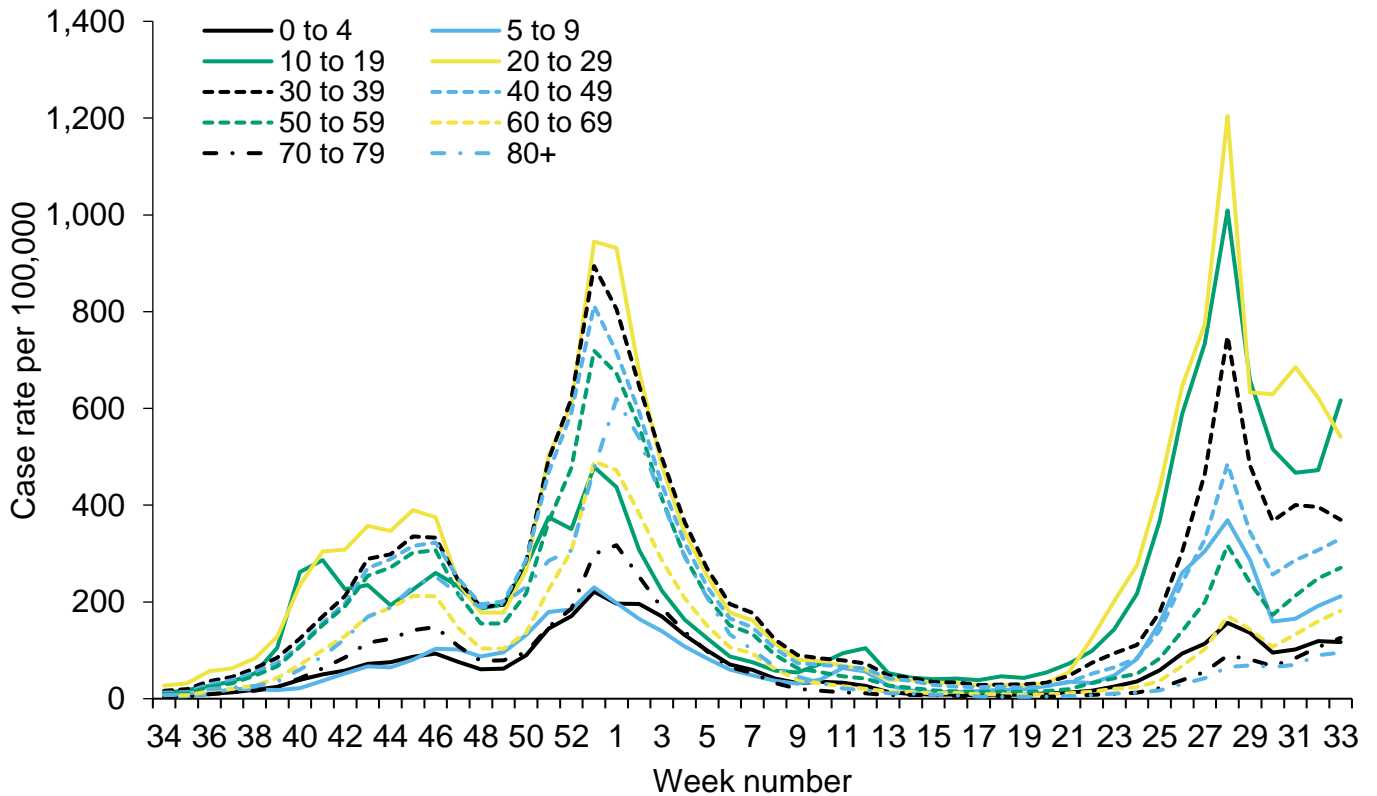
Figure 6: Weekly PCR positivity (%) of confirmed COVID-19 cases tested overall and by sex under (a) Pillar 1 and (b) Pillar 2, (SGSS and Respiratory DataMart)

(a)

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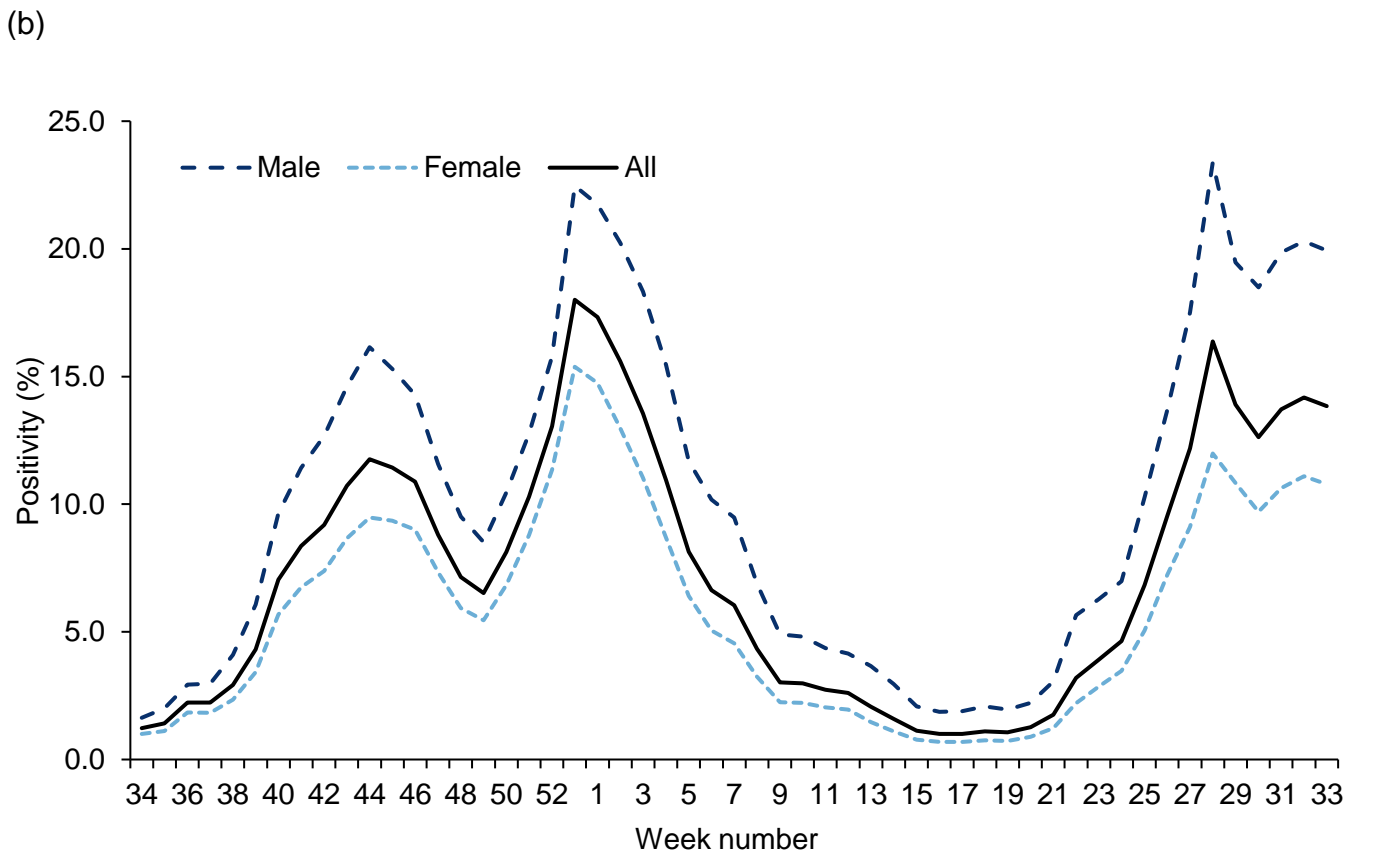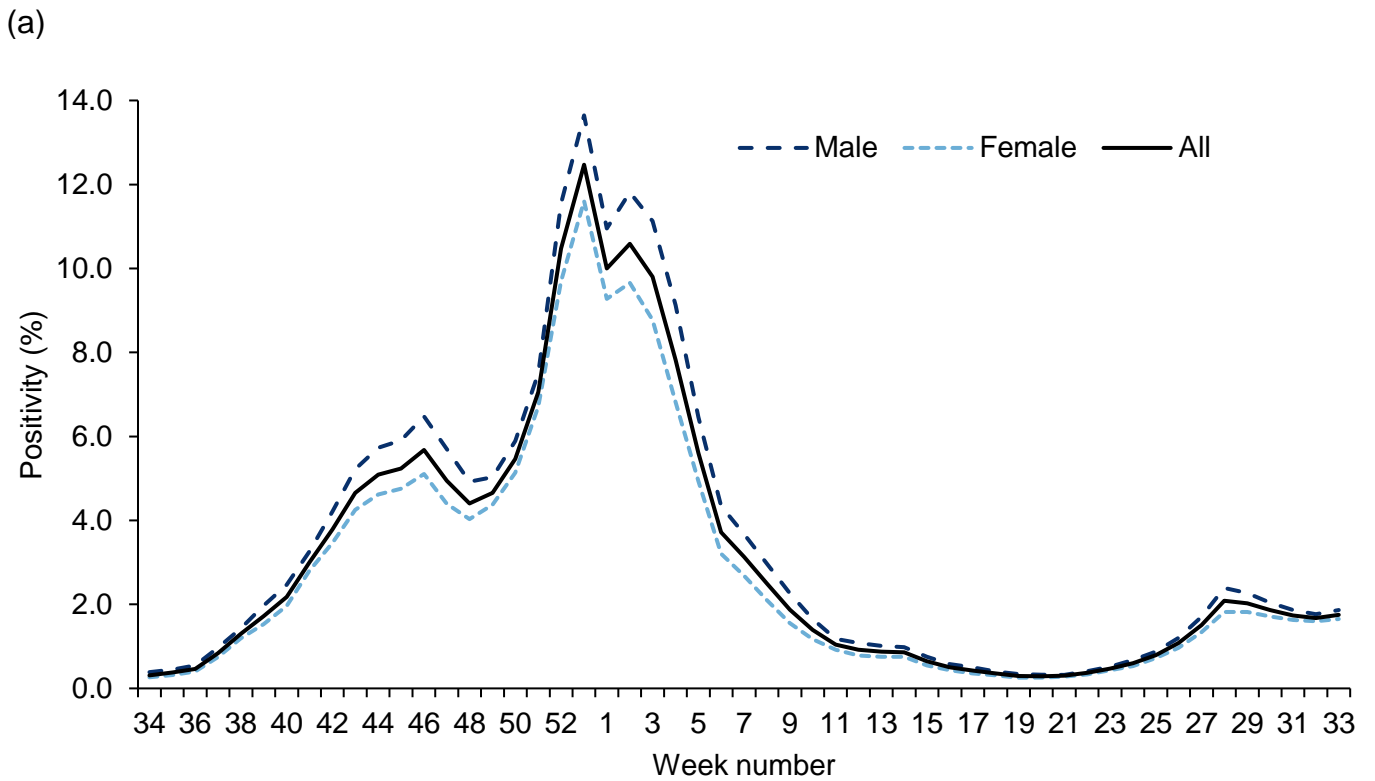
Figure 7: Weekly PCR positivity (%) of confirmed COVID-19 cases tested under Pillar 1, (a) by male and age group and (b) by female and age group and; under Pillar 2, (c) by male and age group and (d) by female and age group, (SGSS and Respiratory DataMart)

(a) Pillar 1 - Male
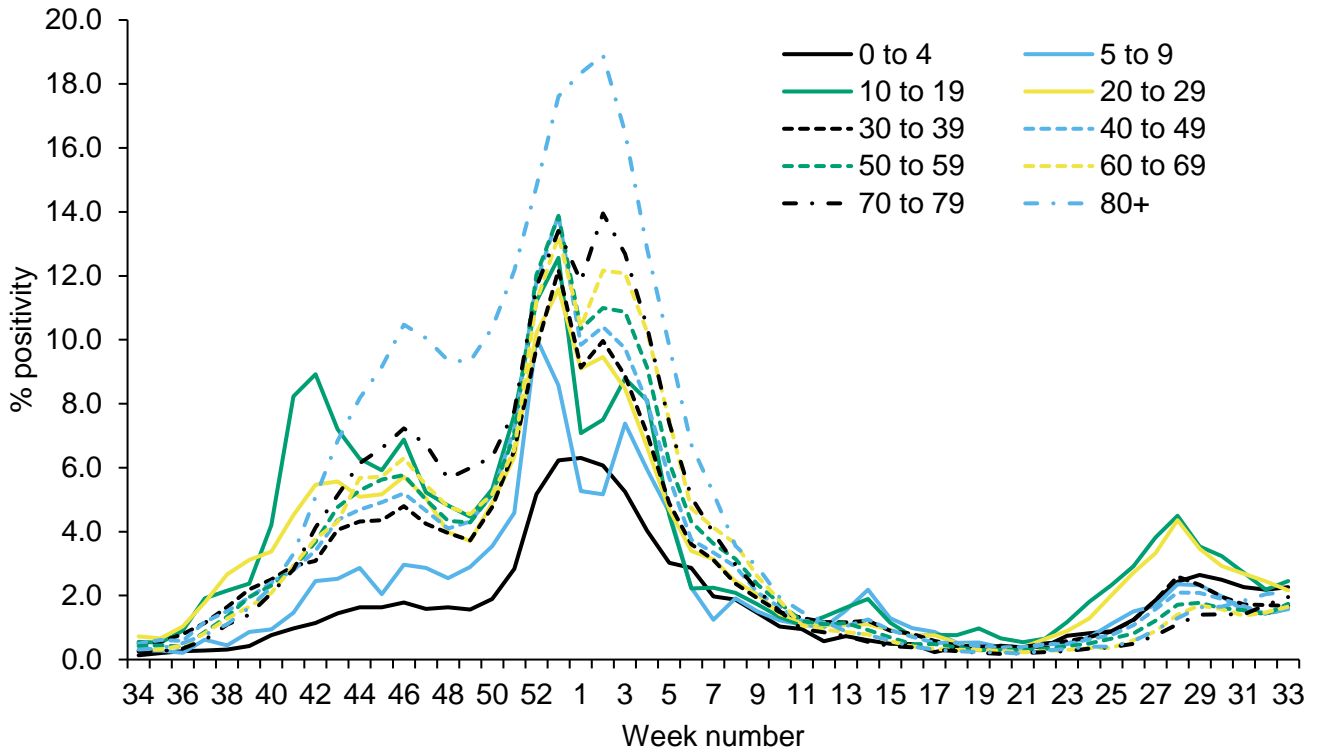
(b) Pillar 1 - Female
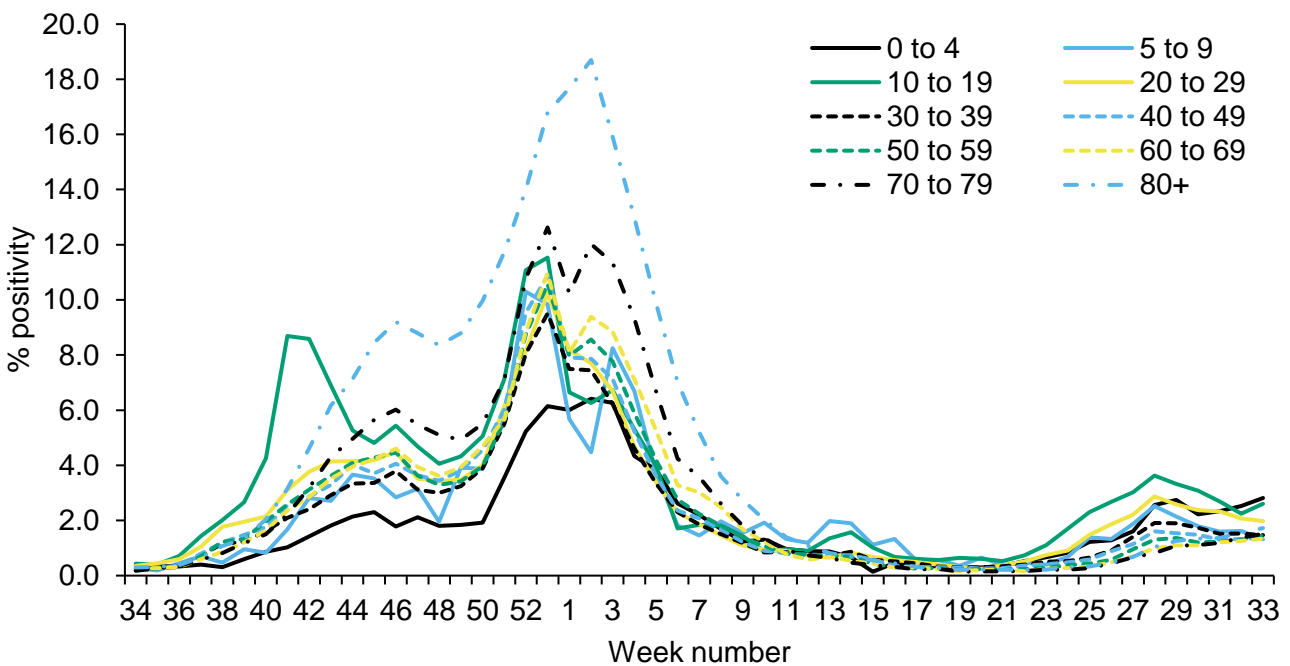
(c) Pillar 2 – Male
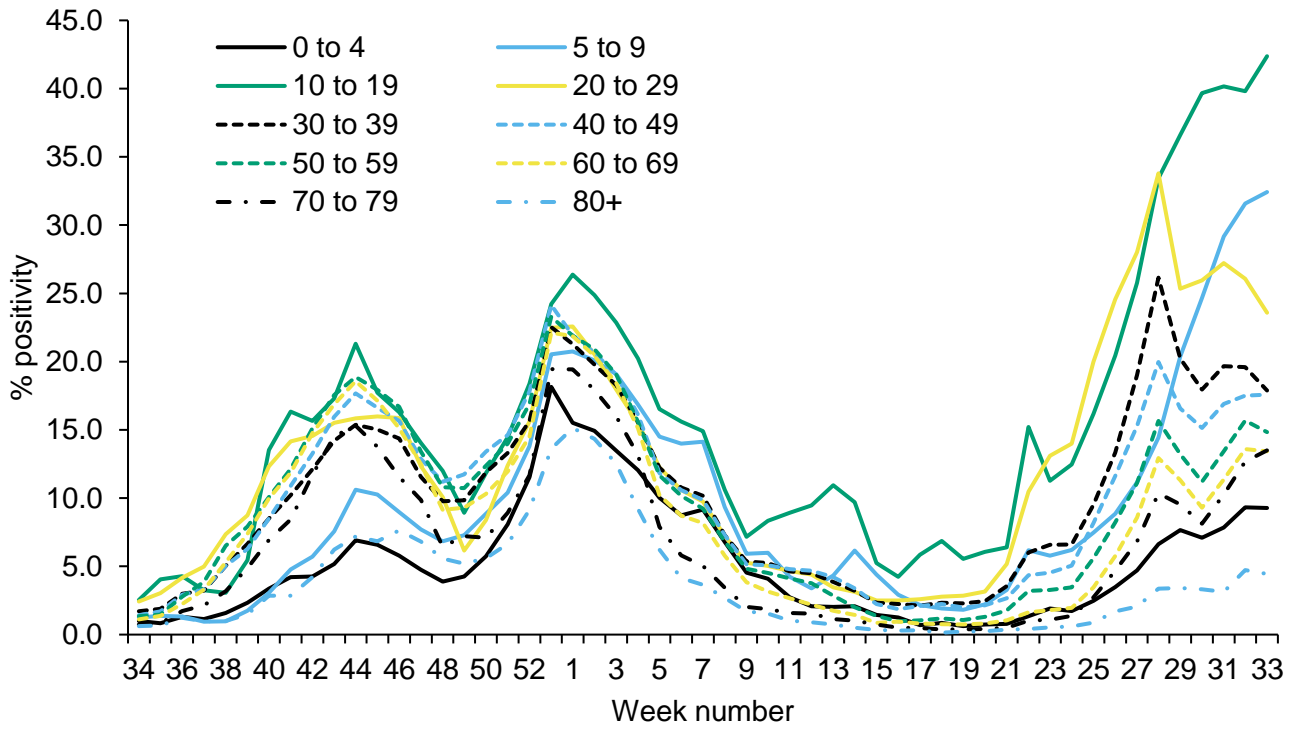
(d) Pillar 2 – Female
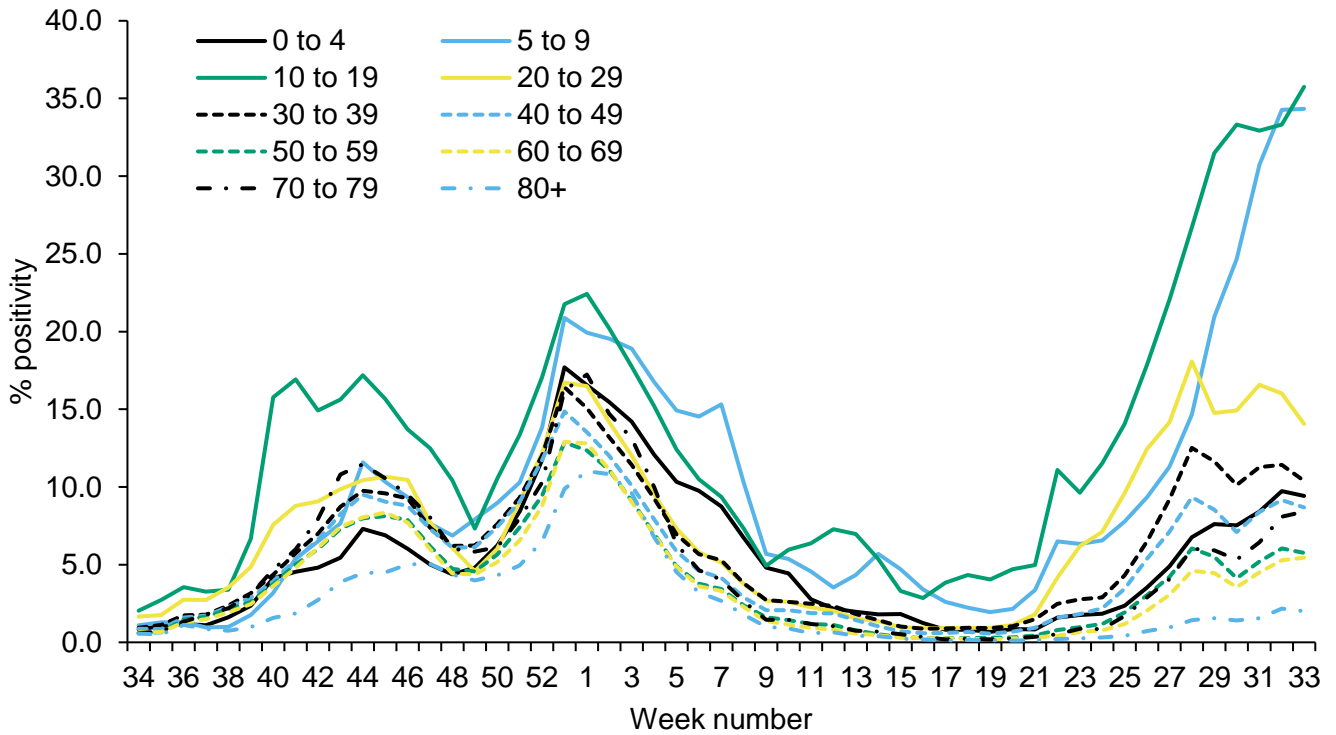
Geography

Figure 8: Weekly confirmed COVID-19 case rates per 100,000 population (Pillar 1 and Pillar 2), by PHE Centres and sample week
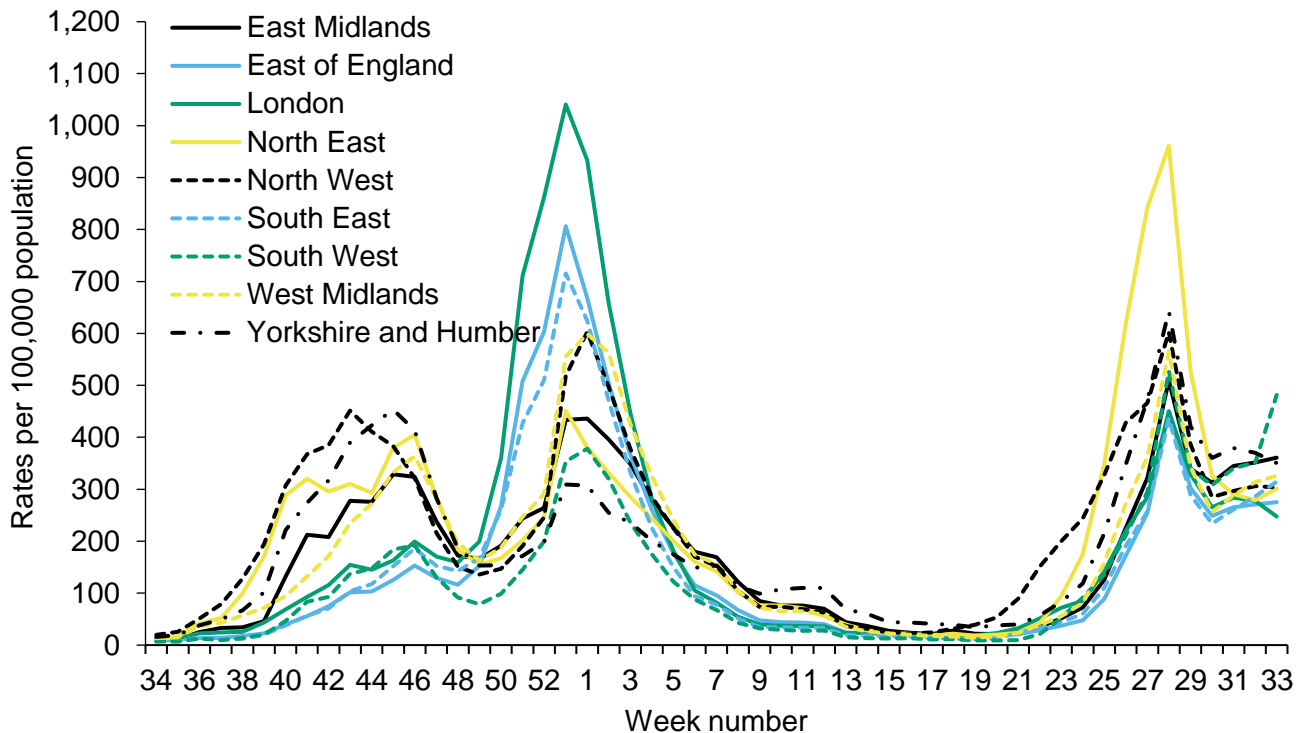
Figure 9: Weekly PCR positivity of confirmed COVID-19 cases tested under (a) Pillar 1 (%) and (b) Pillar 2 (%), by PHE Centres and sample week, (SGSS and Respiratory DataMart)

(a)

(b)

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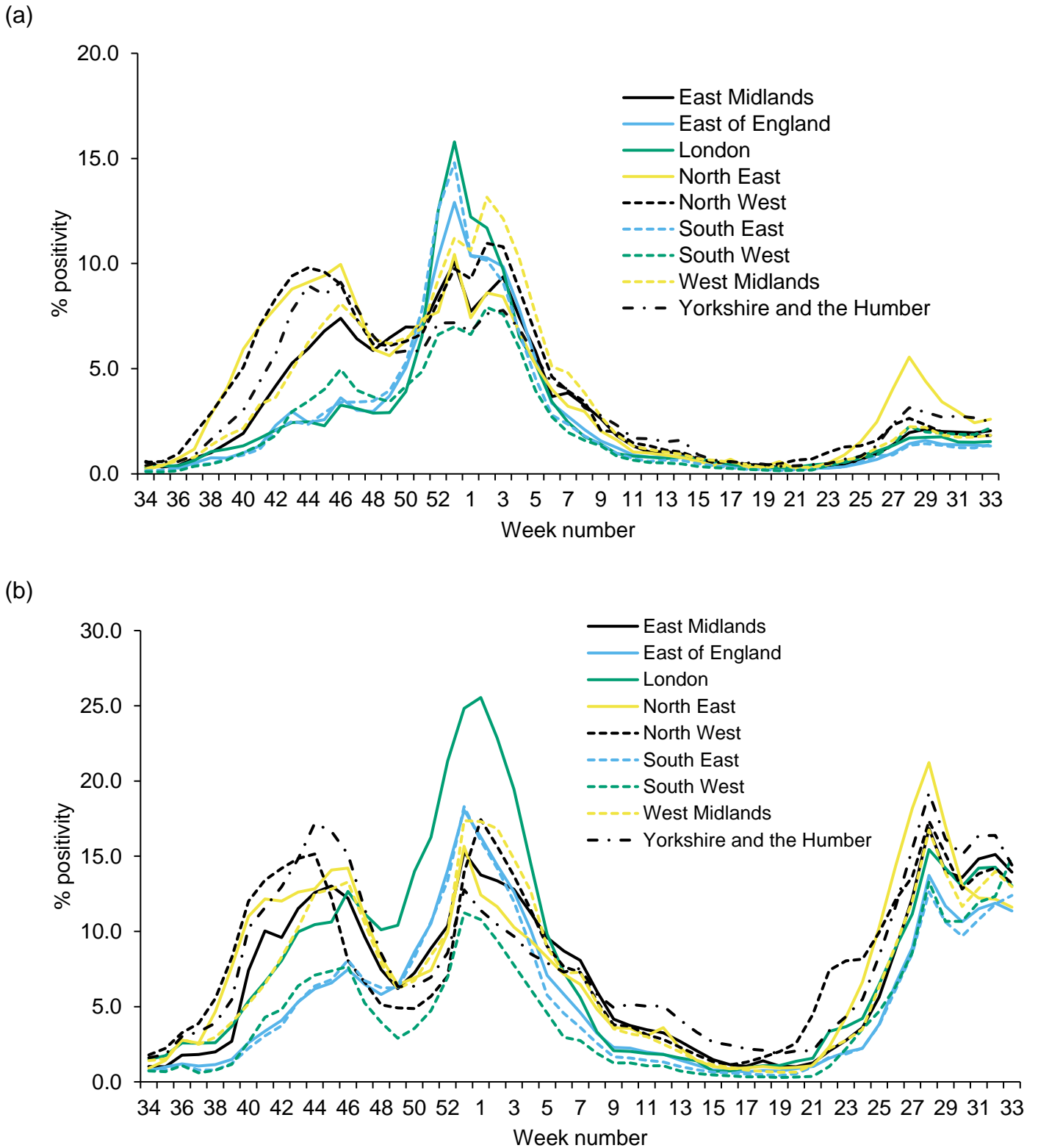
Figure 10: Weekly rate of COVID-19 cases per 100,000 population (Pillar 1 and 2), by upper-tier local authority, England (box shows enlarged map of London area)
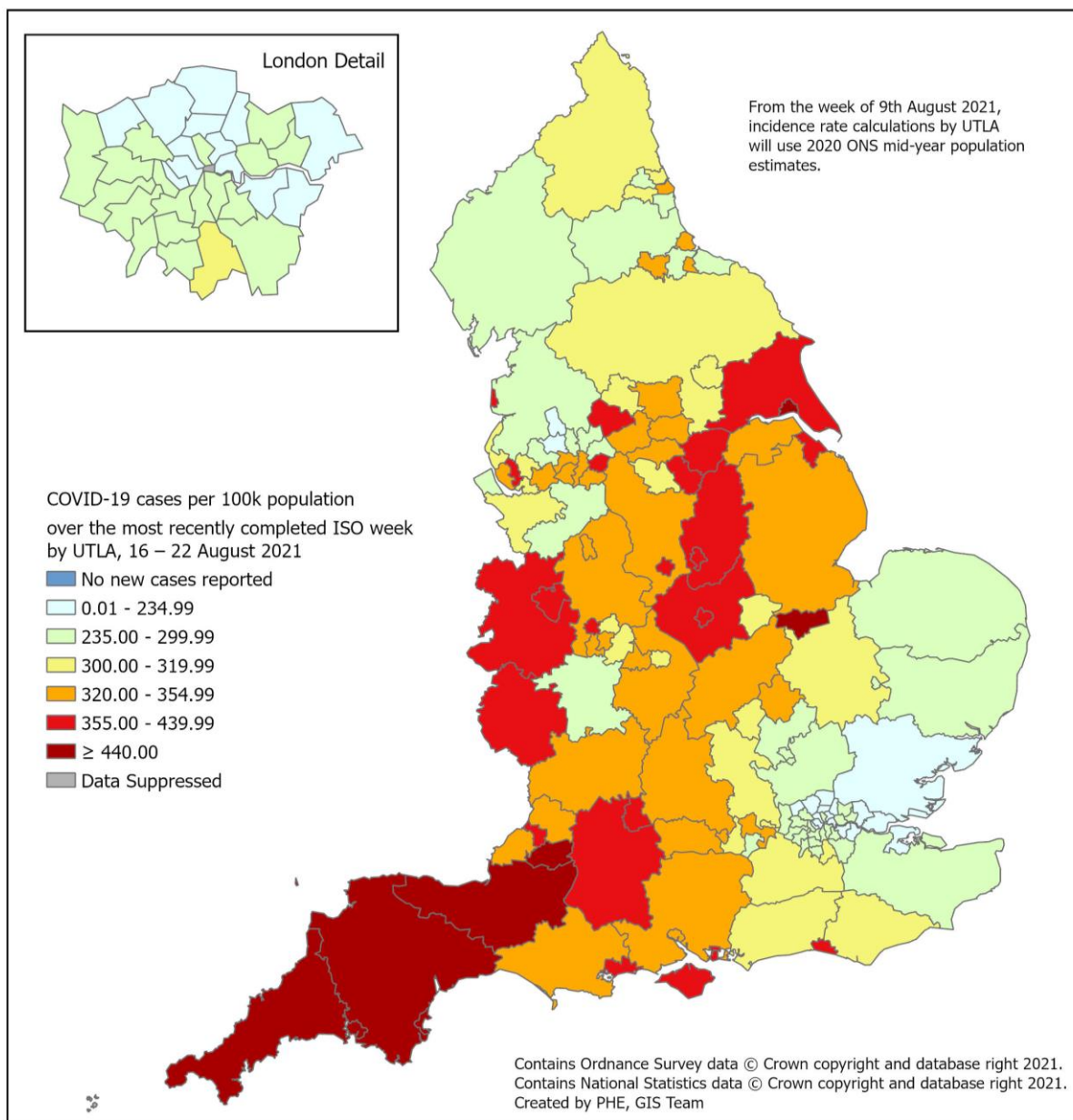
Ethnicity

Figure 11: Weekly incidence per 100,000 population by ethnicity, England
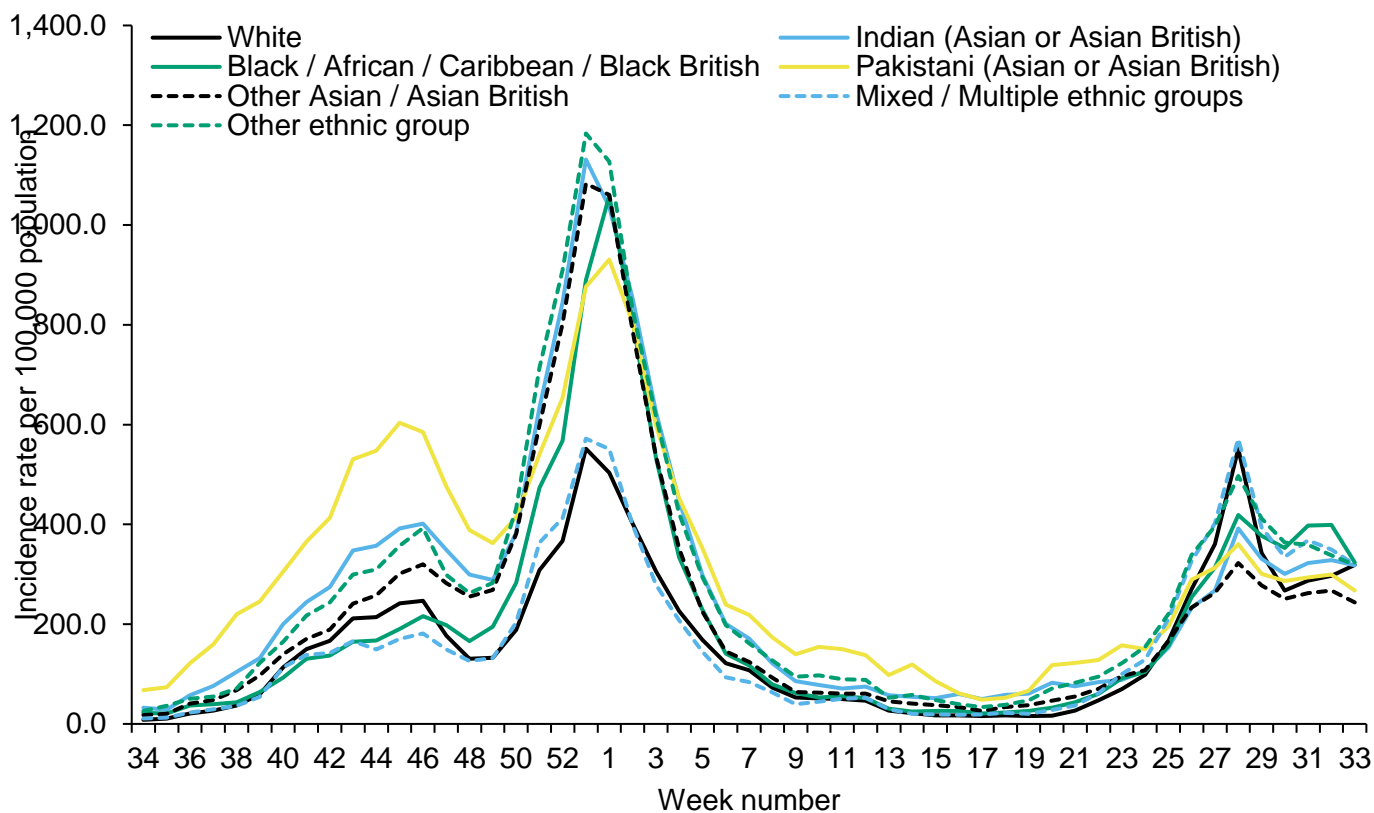
*the incidence rates on Figure 11 have been calculated using the mid-2019 ONS population estimates

Positivity by symptoms

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

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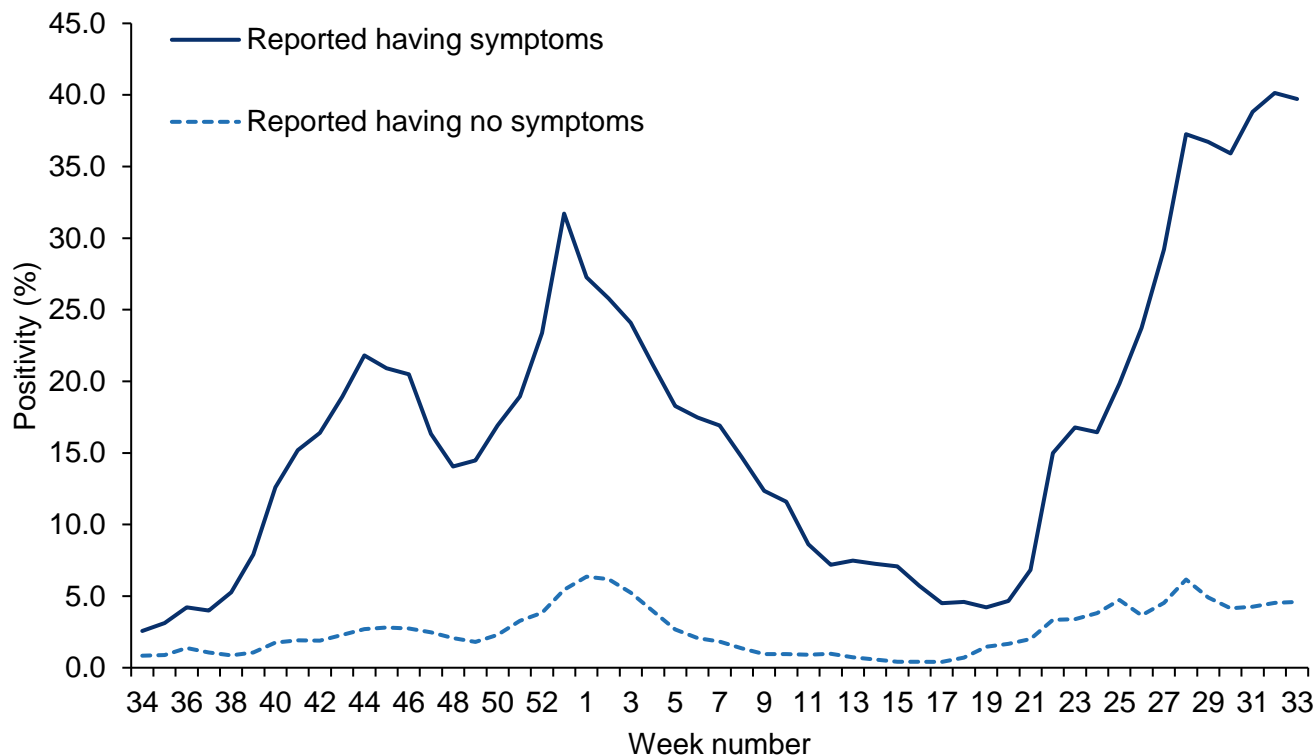
Possible SARS-CoV-2 reinfection in England

<u>Please note that this section will be updated monthly.</u> Last update was published 19 August 2021.

The following figures present population data 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. To the end of week 30 in 2021 (to 1 August 2021) 35,124 possible reinfections have been identified, of which 137 have been confirmed by identification of genetically distinct specimens from each illness episode (see Table 1).

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, as well as additional data on reinfections are available in the graph set published alongside this report.

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.

Table 1 summarises the definitions of different categories of COVID-19 infection accompanied by totals generated to 1 August 2021 (end week 30 2021) and review of 2,958 possible reinfections with sequencing data available. These data are skewed by the limited availability of sequencing data, particularly in the early months of the pandemic. More recently, widespread routine testing of asymptomatic individuals has taken place and this, together with surge testing, will lead to an increased number of asymptomatic reinfections being identified.

Figure 13 shows the weekly rates of possible reinfections 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) before the second positive test result together with the cumulative total of first infections (secondary Y-axis) and total first infections (secondary Y-axis) by week of onset.

Table 1: Different categories of COVID-19 infection with current totals generated by ongoing analysis in England to 04 August 2021 (end week 30 2021)

Infection type	Definition	Current totals
Primary infection/ first positive	the first positive PCR/ LFD test result for an individual	**5.2 million first positives**
Possible reinfection	identified based on two sequential positive test results (PCR or LFD) at least 90 days apart	**35,124 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	**1,325 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	**137 confirmed reinfections***
Persistent infection	*Nominally repeat test positives at between 14 and <90 day intervals (likely associated with immunosuppression)*	Unquantified

*This is out of 2,958 samples with sequencing data available

Figure 13: 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 30 2021)
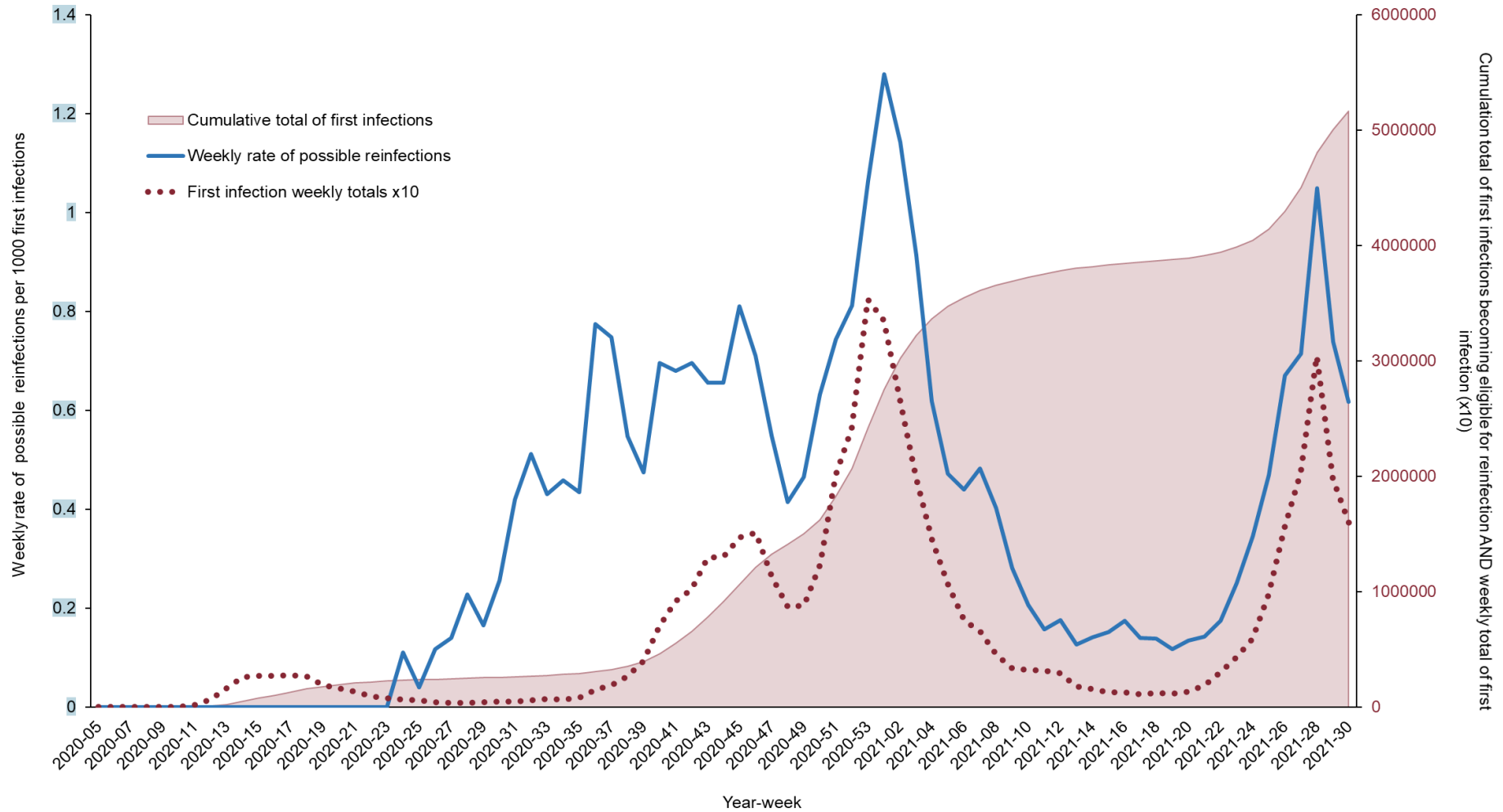
*These data have been derived independently based on Pillar 1 and Pillar 2 datasets and may therefore differ to previously published data

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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.16 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 33 2021, out of the 107,088 respiratory specimens reported through the Respiratory DataMart System (based on data received from 13 out of 16 laboratories), 2520 samples were positive for SARS-CoV-2 with an overall positivity of 2.4%. The highest positivity was noted in the 5 to 14-year olds at 5.1% in week 33. The overall influenza positivity remained very low at 0.0% in week 33, with none of the 2,268 samples testing positive for influenza.

Respiratory syncytial virus (RSV) positivity remained stable, changing from 13.9% in week 32 to 14.2% in week 33, with the highest positivity noted in the under 5-year olds which remained stable at 26.8%. Rhinovirus, parainfluenza, adenovirus and human metapneumovirus (hMPV) positivity remained low at 6.8%, 1.2%, 1.1% and 0.8% respectively in week 33 (Figure 16).

Figure 14: DataMart samples positive for influenza and weekly positivity (%) for influenza, England
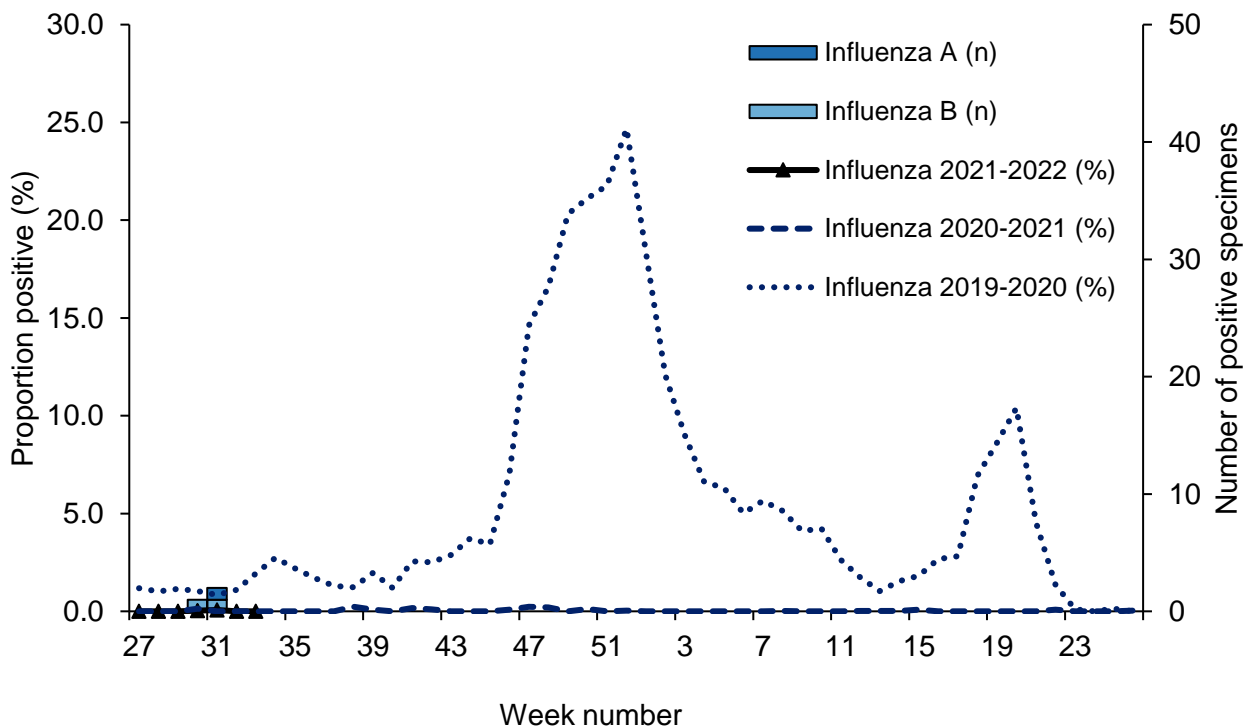
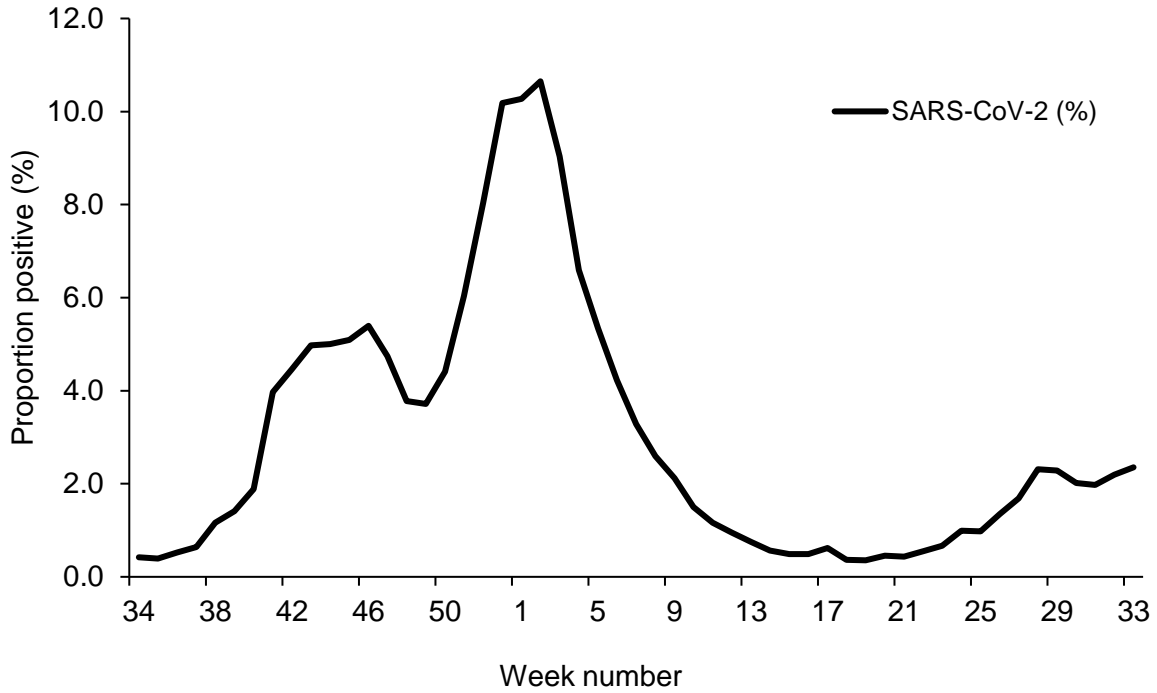**Figure 15: DataMart weekly positivity (%) for SARS-CoV-2, England**

Figure 16: DataMart weekly positivity (%) for other respiratory viruses, England
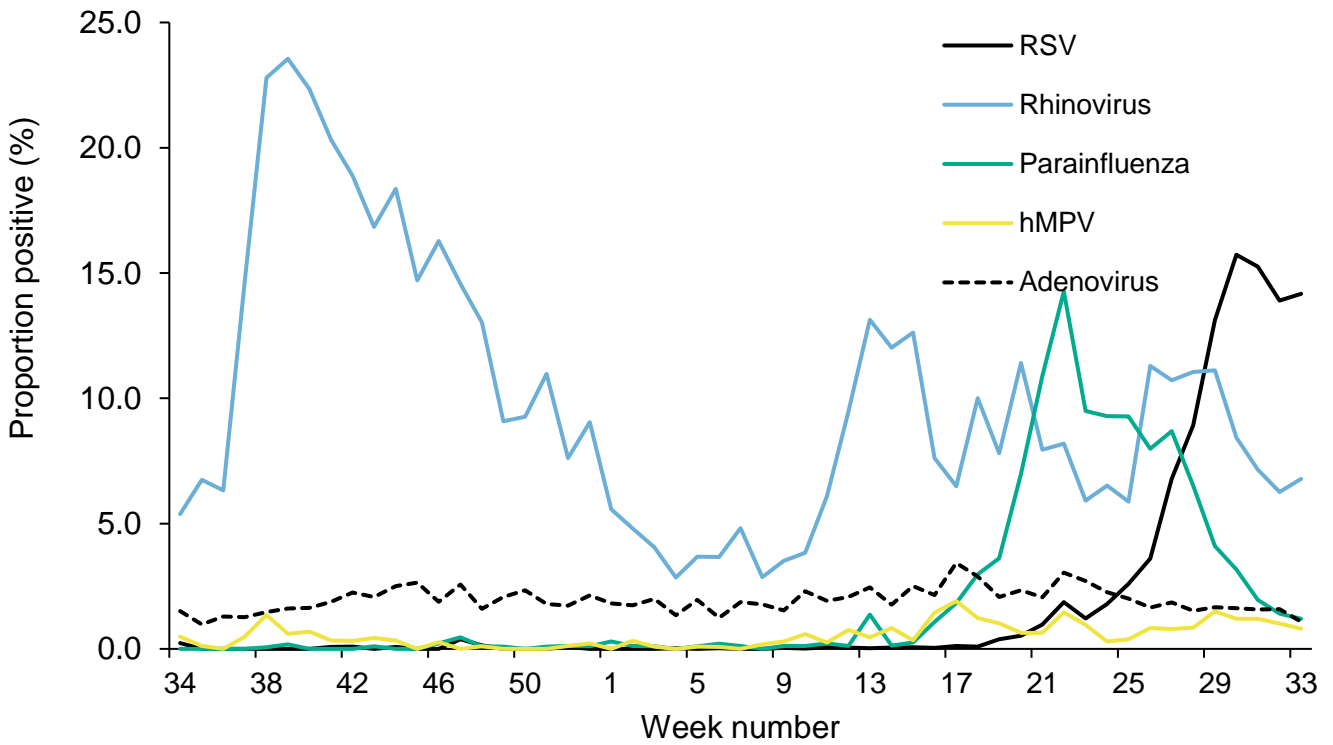
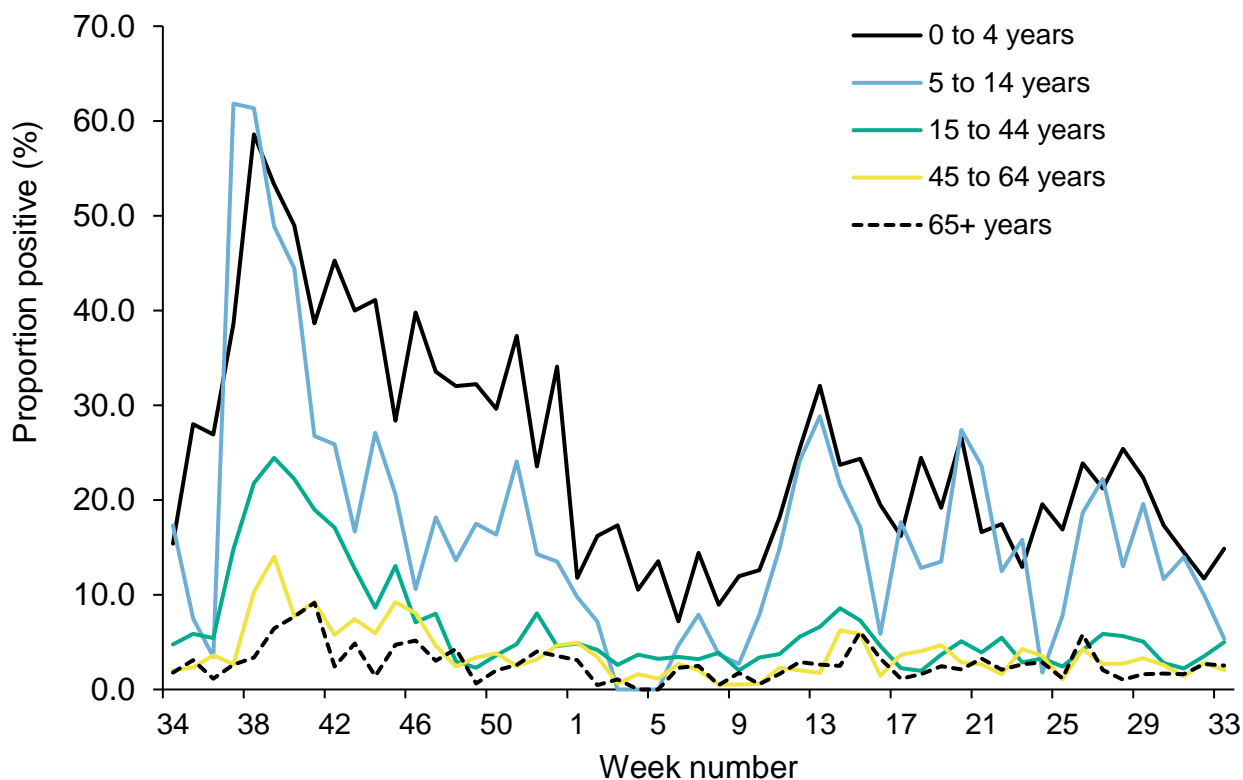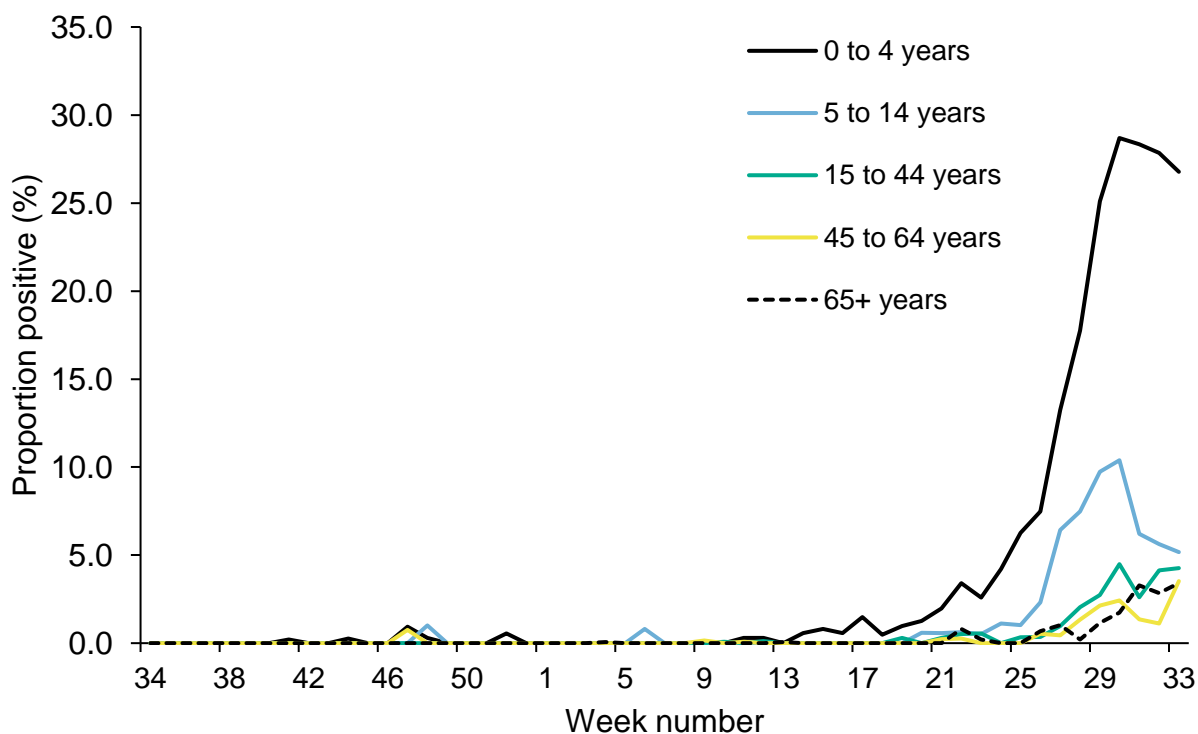**Figure 17: DataMart weekly positivity (%) for rhinovirus by age, England**

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 PHE 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 PHE 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. A national school helpline started operating on 17 September 2020 and a Universities helpline started operating on 7 October. This is likely to have had an impact on the number of situations or outbreaks being reported to HPTs in these settings.
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 PHE 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.

721 new ARI incidents have been reported in week 33 in the UK (Figure 19):

- 342 incidents were from care homes where 270 had at least one linked case that tested positive for SARS-CoV-2 where test results were available
- 103 incidents were from educational settings where 89 had at least one linked case that tested positive for SARS-CoV-2, and 4 for RSV
- 39 incidents were from hospitals, where 32 had at least one linked case that tested positive for SARS-CoV-2
- 57 incidents were from workplace settings where 46 had at least one linked case that tested positive for SARS-CoV-2
- 40 incidents were from food outlets or restaurants where 39 had at least one linked case testing positive for SARS-CoV-2
- 6 incidents were from prisons where 4 had at least one linked case testing positive for SARS-CoV-2
- 134 incidents were from other settings where 103 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
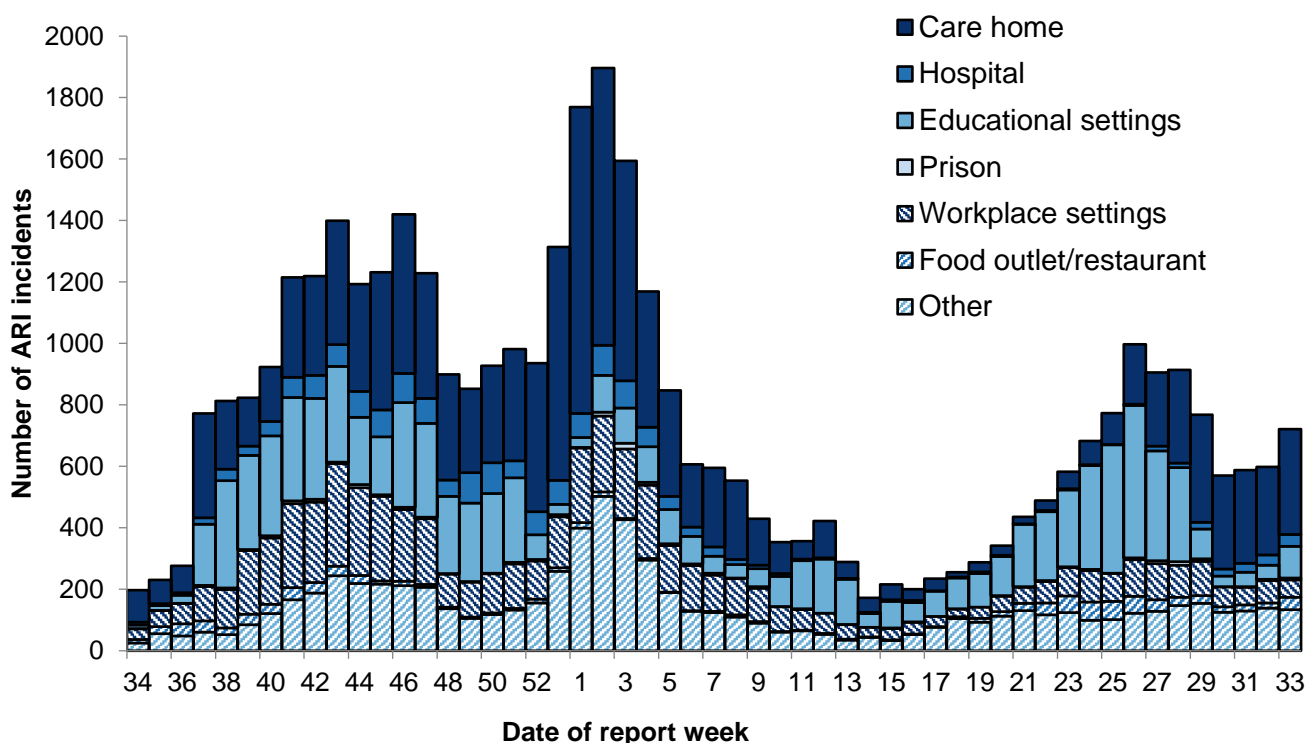
*Excludes data from Wales
* Please note that the number of outbreaks reported from Scotland since February 2021 has been retrospectively updated using a revised recording and reporting system.

Figure 20: Number of acute respiratory infection (ARI) incidents by setting, England
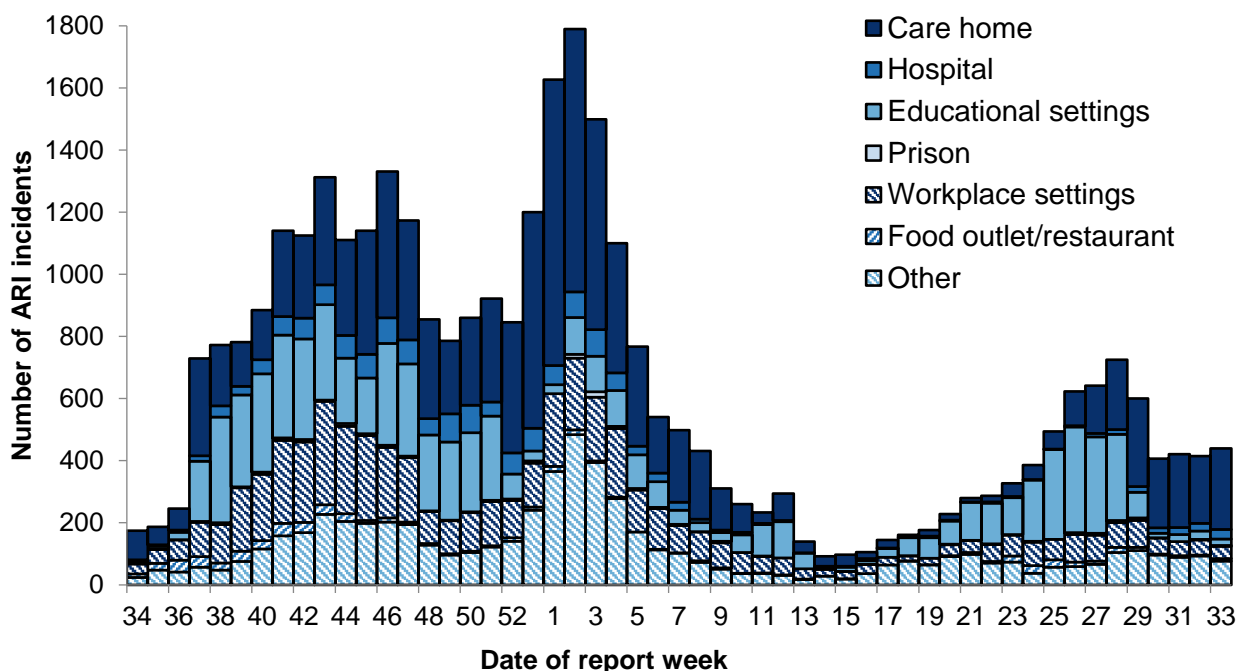
Figure 21: Number of acute respiratory infection (ARI) incidents in care homes by virus type, England
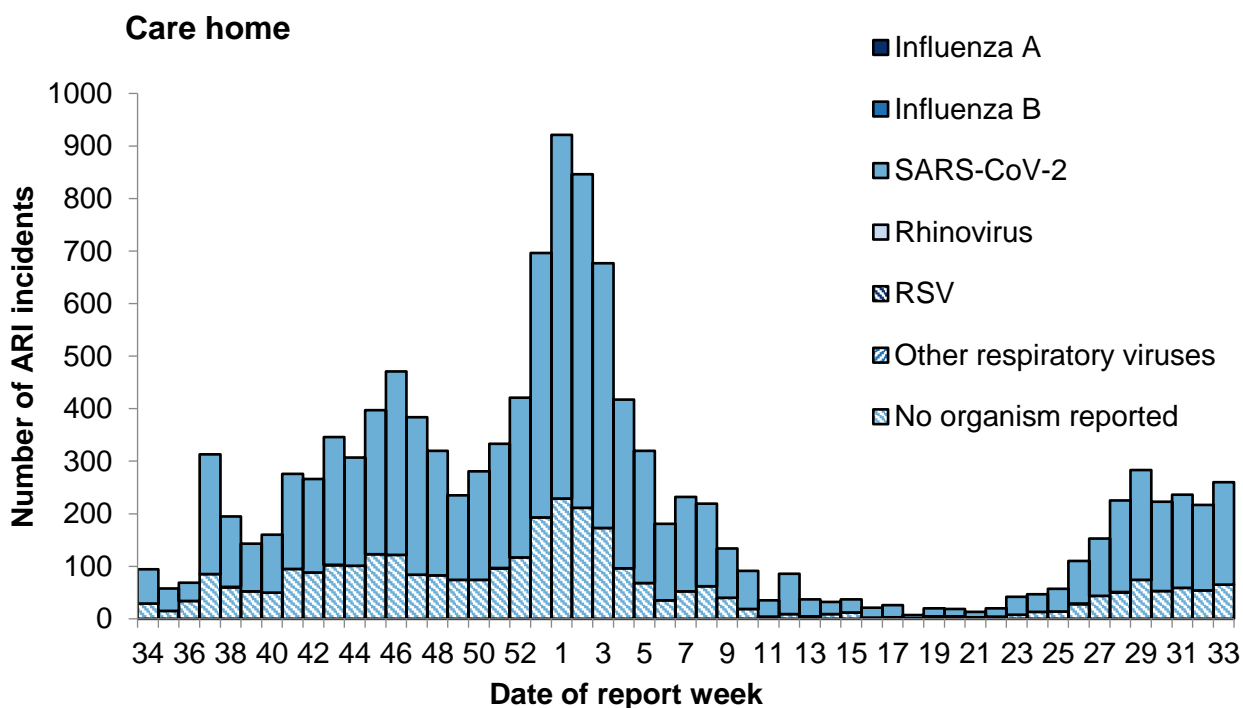
Figure 22: Number of acute respiratory infection (ARI) incidents in hospitals by virus type, England
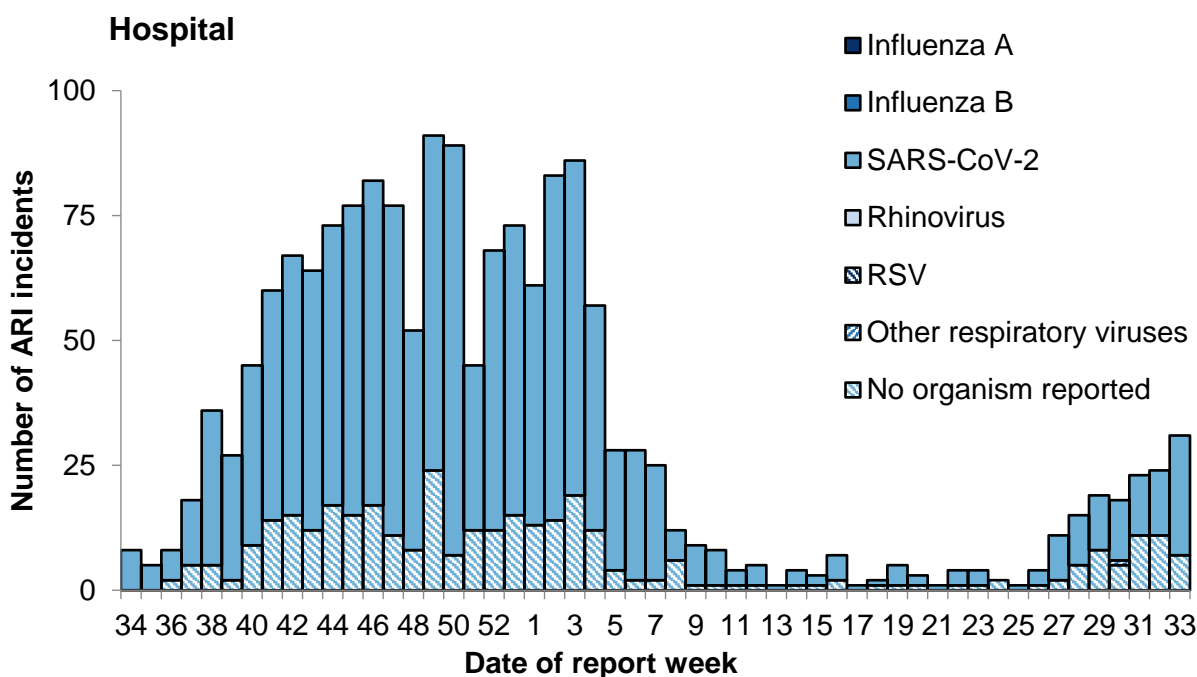
Figure 23: Number of acute respiratory infection (ARI) incidents in educational settings by virus type, England
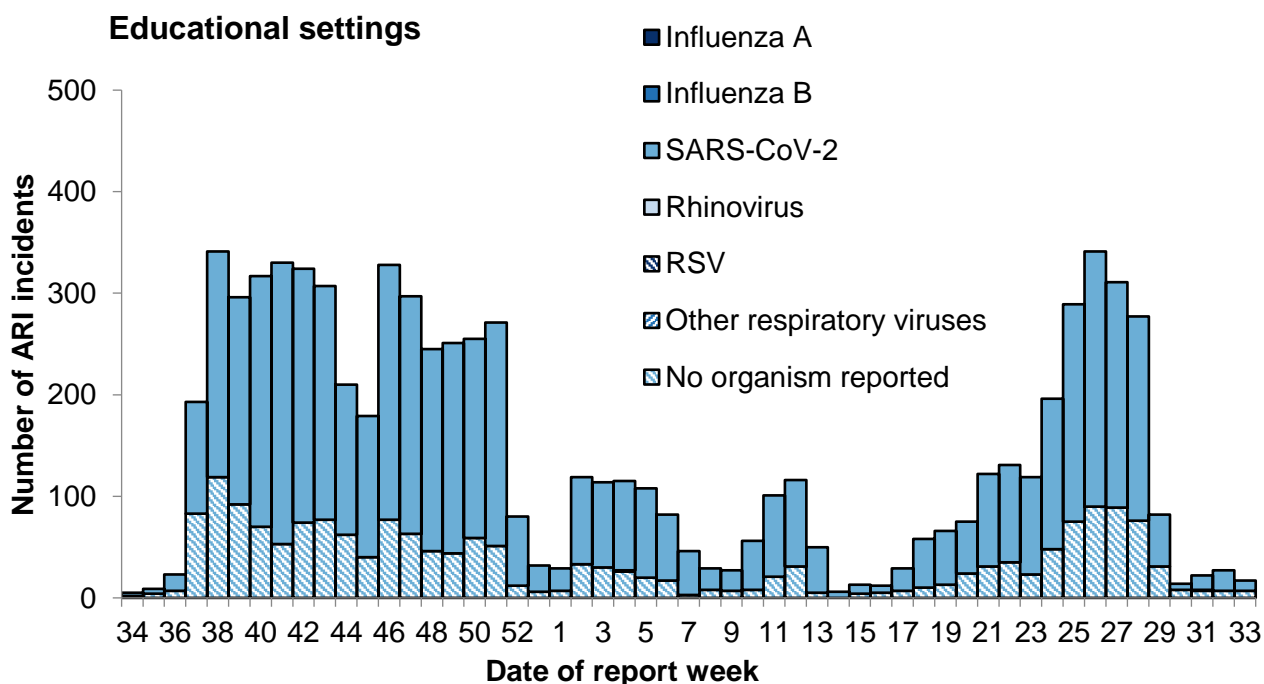
Figure 24: Number of acute respiratory infection (ARI) incidents in prisons by virus type, England
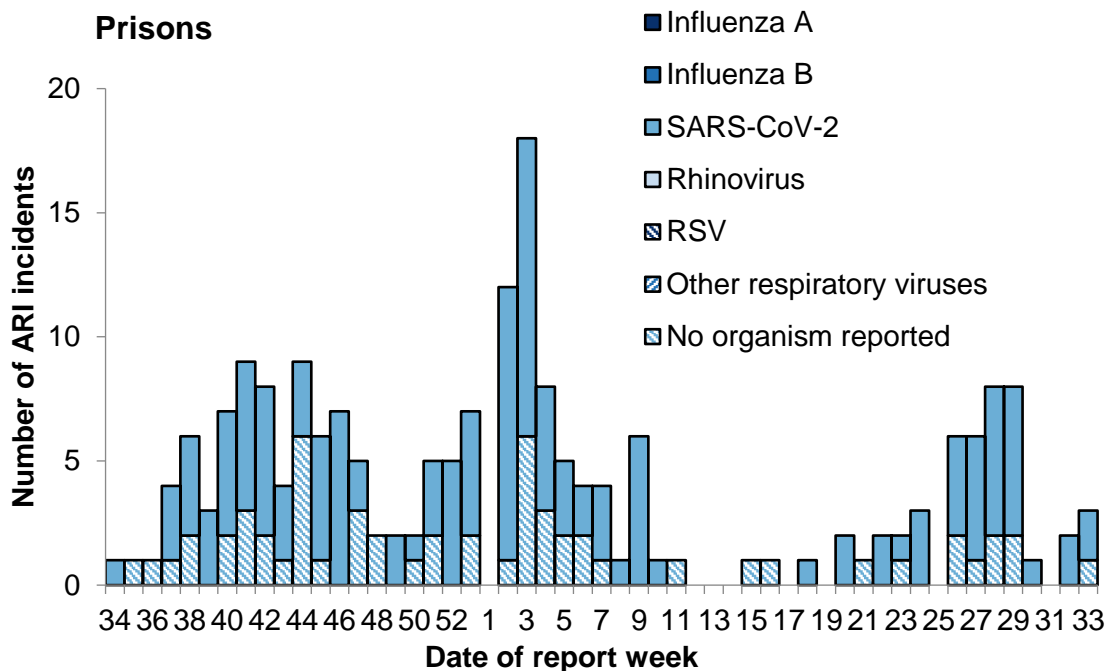
Figure 25: Number of acute respiratory infection (ARI) incidents in workplace settings by virus type, England
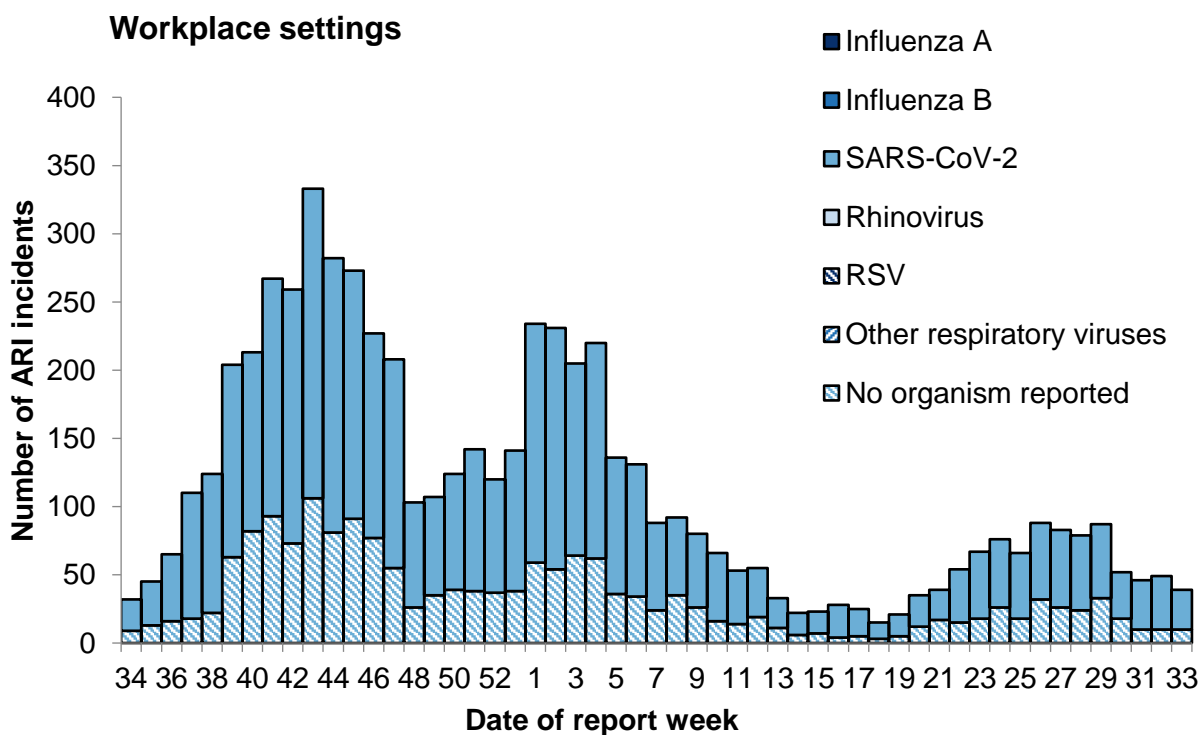
Figure 26: Number of acute respiratory infection (ARI) incidents in food outlet or restaurant settings by virus type, England
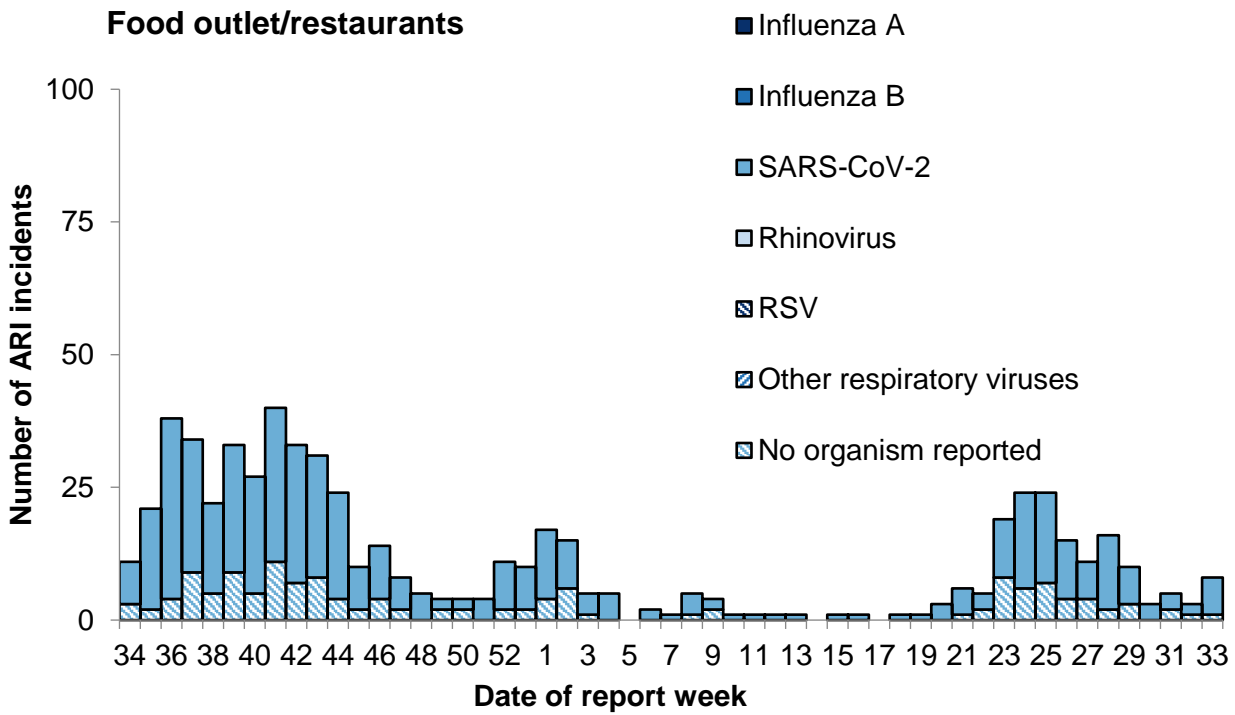
Figure 27: Number of acute respiratory infection (ARI) incidents in other settings by virus type from, England

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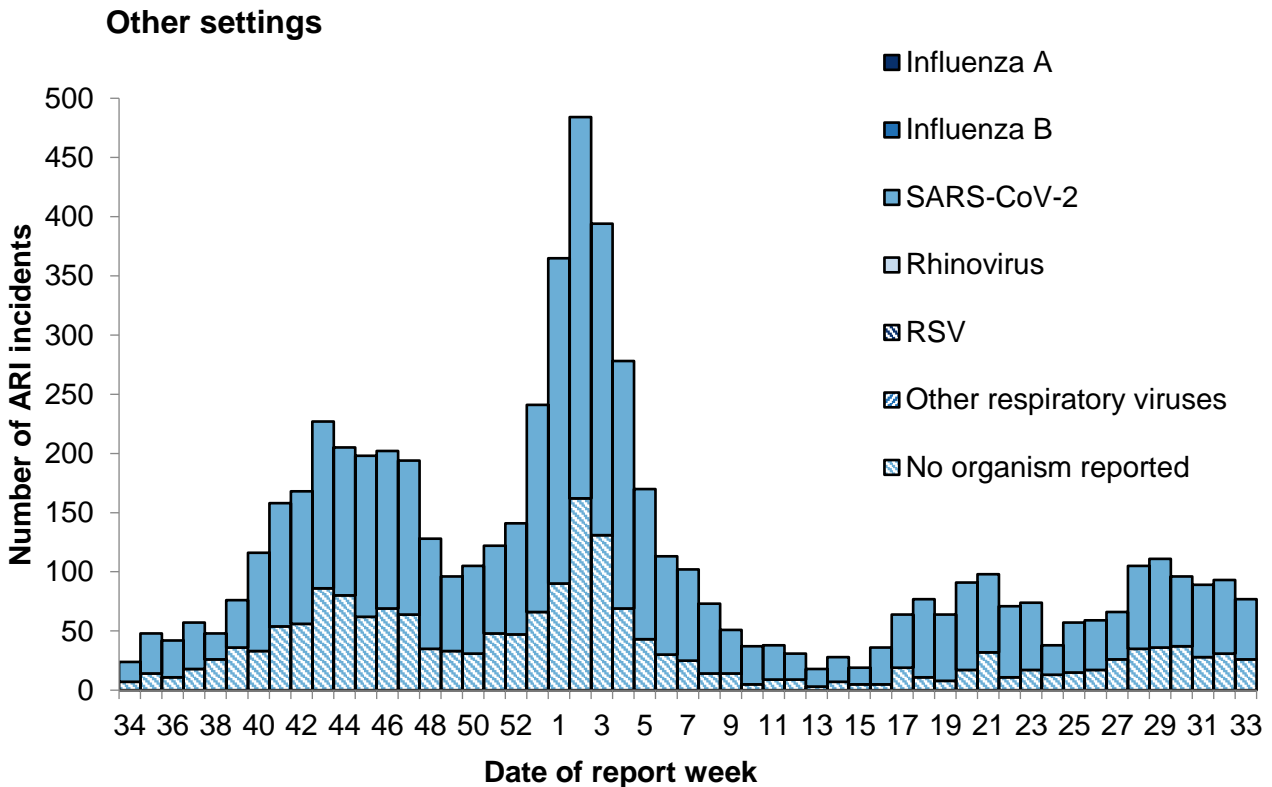
Table 2: Total number of situations and incidents by institution and PHE Centres over the past 4 weeks with the total number in the last week in brackets

PHE Centres	Care home	Hospital	Educational settings	Prisons	Workplace settings	Food outlet/ restaurant settings	Other settings	Total
East of England	115(26)	11(4)	0(0)	1(0)	4(1)	1(1)	42(11)	174(43)
East Midlands	86(28)	12(5)	23(7)	0(0)	35(12)	2(2)	37(7)	195(61)
London	52(10)	37(9)	15(4)	1(1)	8(1)	5(1)	58(11)	176(37)
North East	62(16)	0(0)	0(0)	0(0)	0(0)	0(0)	10(2)	72(18)
North West	86(26)	7(2)	3(0)	1(0)	67(13)	6(2)	44(7)	214(50)
South East	136(40)	6(3)	20(5)	0(0)	18(3)	1(0)	46(15)	227(66)
South West	205(52)	3(1)	12(3)	2(1)	29(7)	1(1)	49(9)	301(74)
West Midlands	53(17)	15(6)	6(1)	1(1)	14(1)	3(1)	30(8)	122(35)
Yorkshire and Humber	141(45)	5(1)	5(1)	0(0)	11(1)	0(0)	39(7)	201(55)
Total	936(260)	96(31)	84(21)	6(3)	186(8)	19(8)	355(77)	1682(439)

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 33, the highest percentage of confirmed COVID-19 cases by type of residence was seen in residential dwellings (Table 3).

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

Type of residence	Week 28	Week 29	Week 30	Week 31	Week 32	Week 33
Residential dwelling (including houses, flats, sheltered accommodation)	93.2	93.0	91.0	89.8	89.9	90.4
Undetermined	2.9	3.1	3.7	3.6	3.6	3.2
Care/Nursing home	0.3	0.4	0.6	0.6	0.7	0.6
Residential institution (including residential education)	0.3	0.2	0.3	0.3	0.2	0.2
Other property classifications	0.7	0.6	0.7	0.7	0.6	0.7
House in multiple occupancy (HMO)	0.4	0.5	0.7	0.6	0.5	0.4
Medical facilities (including hospitals and hospices, and mental health)	2.2	2.0	2.9	4.2	4.4	4.4
Prisons, detention centres, secure units	0.1	0.1	0.1	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

* Please note that some address misclassifications have been identified in the 'Medical Facilities' category for recent weeks, thus making this group appear incorrectly larger. These are being investigated.

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.
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 2,654 participants completed the weekly surveillance survey in week 33, of which 63 (2.4%) reported fever or cough and 35 (1.3%) reported influenza-like illness (ILI). The most commonly used healthcare services reported by respondents remains telephoning a GP practice (Figure 28).

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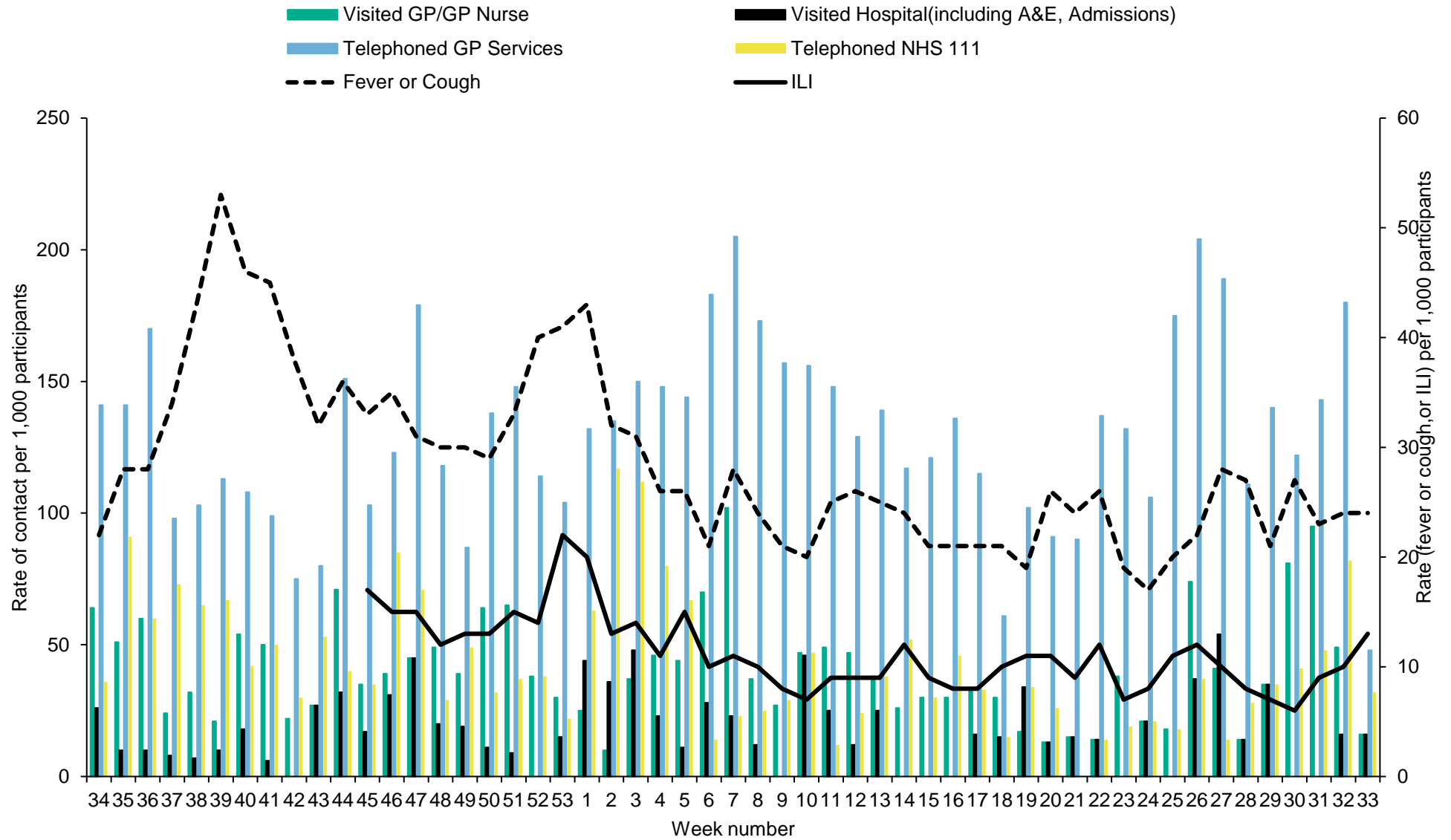
Google search queries

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 here.

During week 33, the overall and media-debiasing weighted Google search scores decreased (Figure 29).

Figure 29: Normalised Google search score for COVID-19 symptoms, with weighted score for media-debiasing and historical trend, England
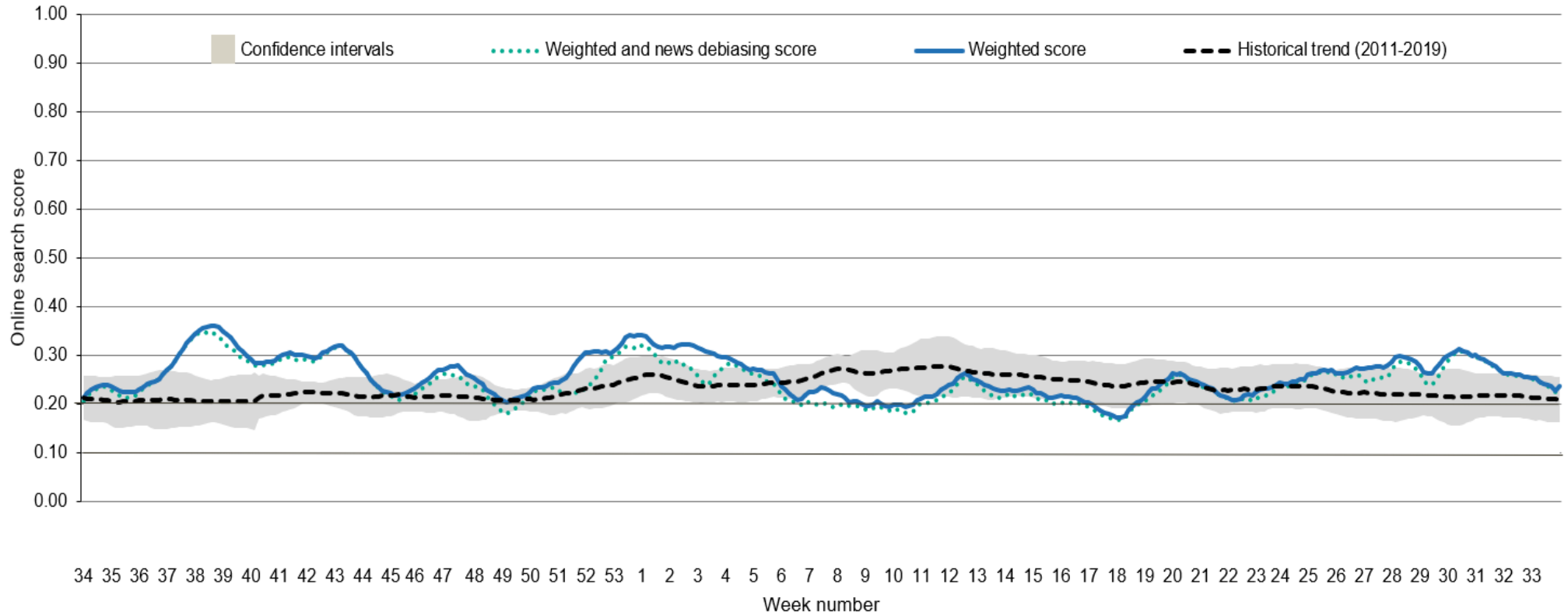
NHS 111

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 PHE 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 22 August, NHS 111 calls for cold/flu were stable and calls for cough increased slightly, remaining above seasonally expected levels (Figure 30 and 31).

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 PHE Remote Health Advice Syndromic Surveillance bulletin.

Figure 30: 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)

Cold or flu 23/08/2020 - 22/08/2021

Black line is 7 day moving average adjusted for bank holidays.
Black dotted line is baseline. Orange dotted line is expected pre-covid-19 level.
Grey columns show weekends and bank holidays.
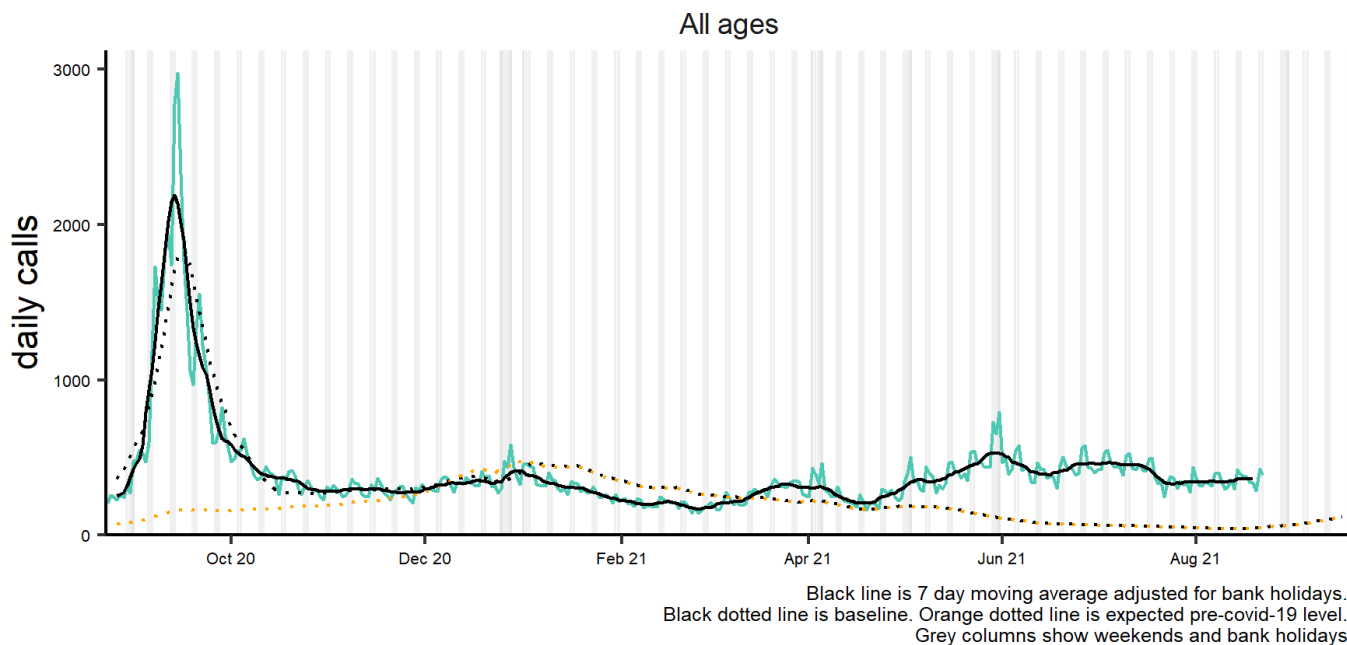
(b)

Cold or flu by age group (years) 23/08/2020 - 22/08/2021
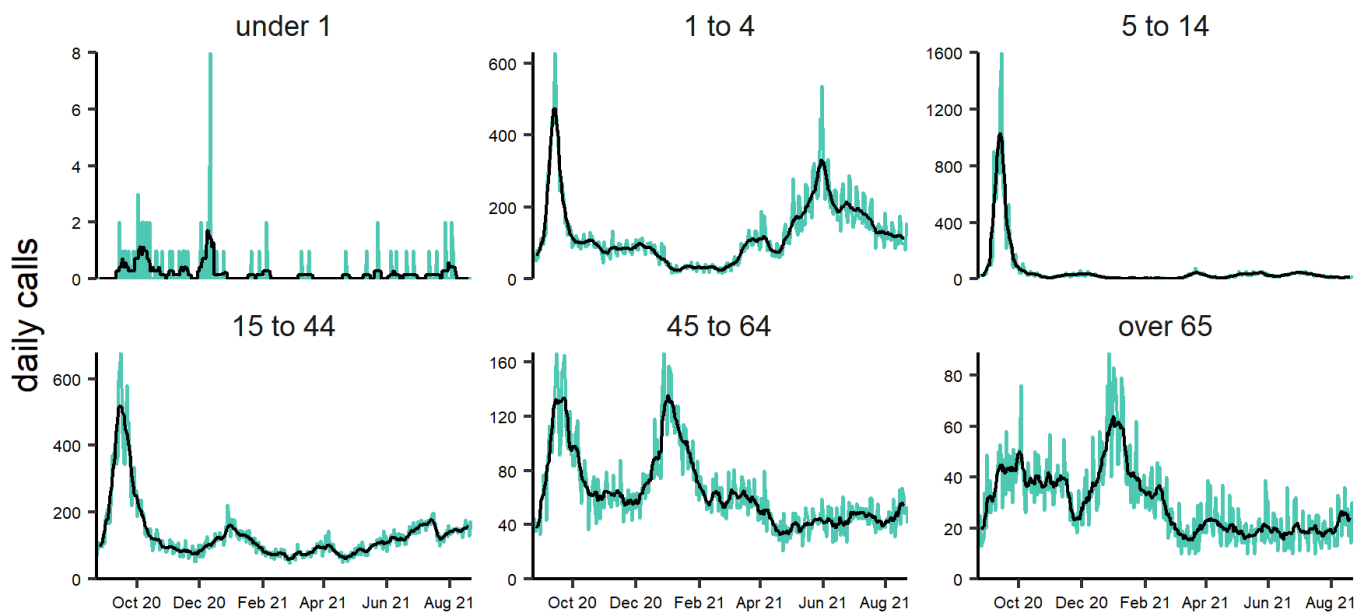
NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON. Black line is 7 day moving average adjusted for bank holidays.

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

(a)

Cough 23/08/2020 - 22/08/2021

Black line is 7 day moving average adjusted for bank holidays.
Black dotted line is baseline. Orange dotted line is expected pre-covid-19 level.
Grey columns show weekends and bank holidays.
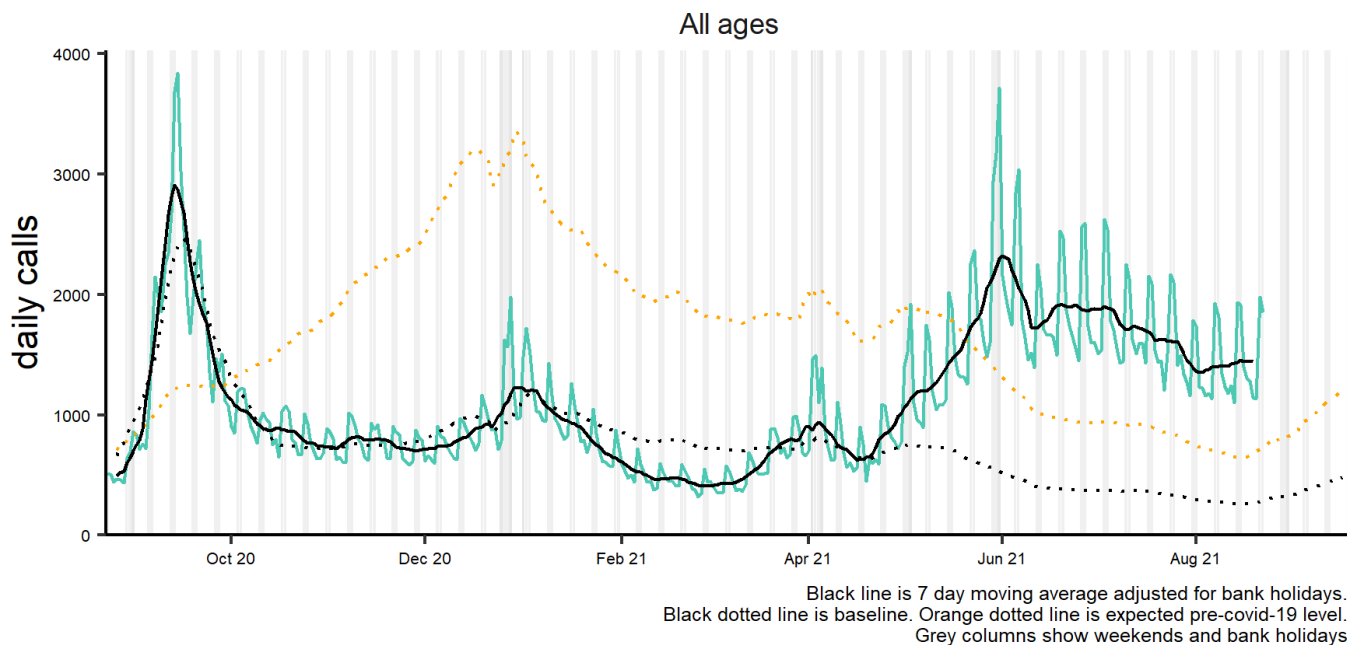
(b)

Cough by age group (years) 23/08/2020 - 22/08/2021

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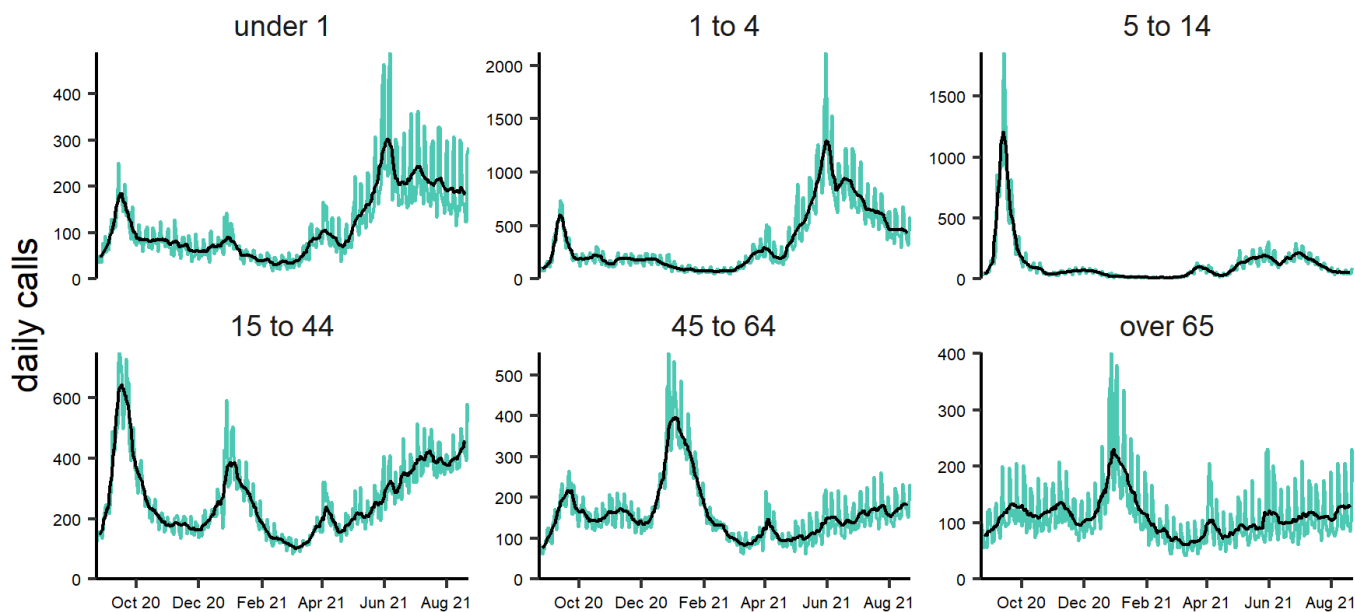
Primary care surveillance

RCGP (England)

The weekly ILI consultation rate through the RCGP surveillance was 1.0 per 100,000 registered population in participating GP practices in week 33 compared to 0.6 per 100,000 in the previous week. This is below the baseline threshold (12.2 per 100,000) (Figure 32). By age group, the highest rates were seen in the 1 to 4-year olds (2.9 per 100,000). The Lower Respiratory Tract Infections (LRTI) consultation rate was at 31.3 per 100,000 in week 33, compared to the rate of 28.7 per 100,000 in the previous week. The COVID-19-like indicator consultation rate was at 229.8 per 100,000 in week 33 compared to a rate of 199.3 per 100,000 in the previous week (Figure 33).

Figure 32: RCGP ILI consultation rates, all ages, England
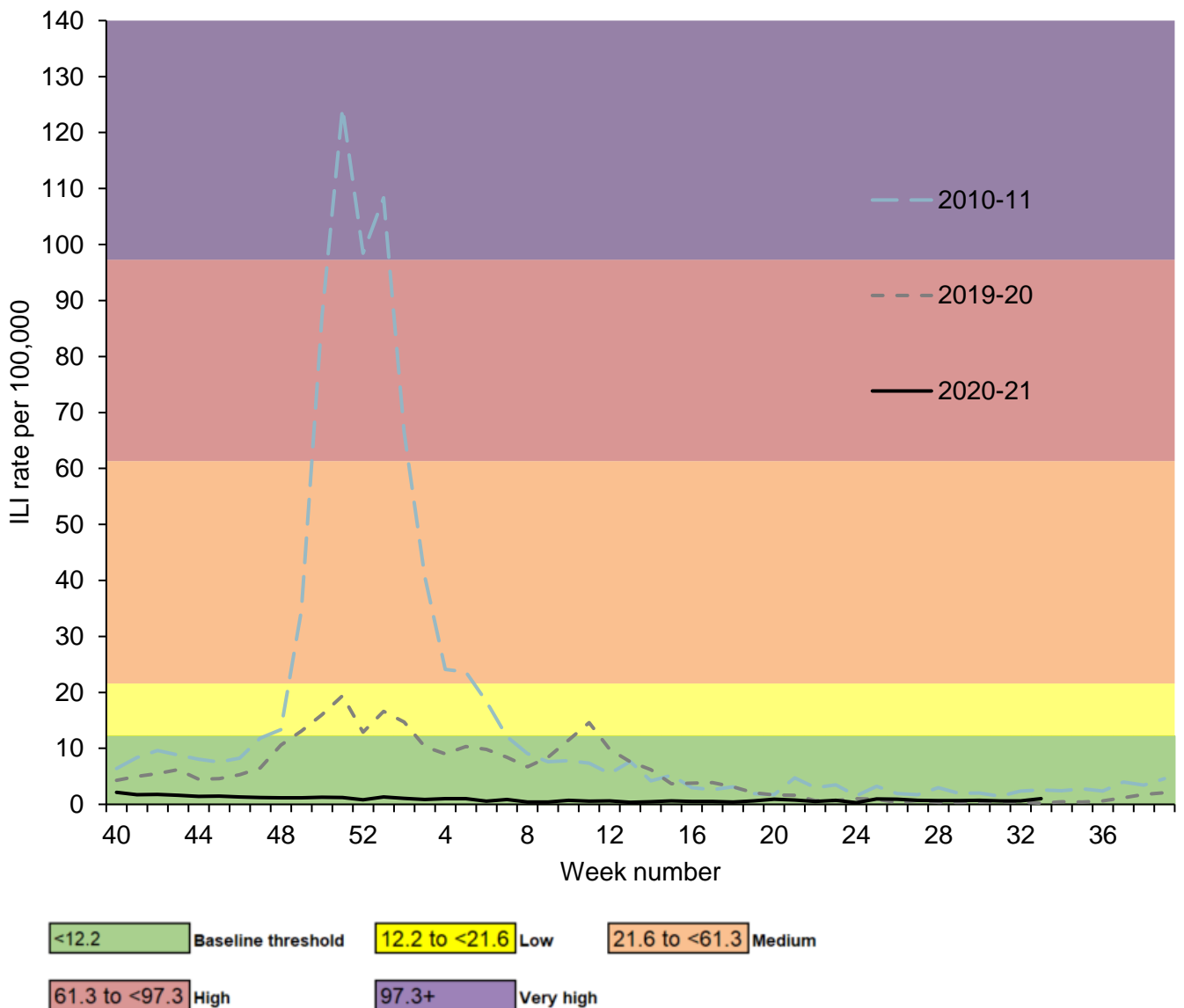
Figure 33: RCGP ILI, LRTI and COVID-19-like indicator consultation rates, England
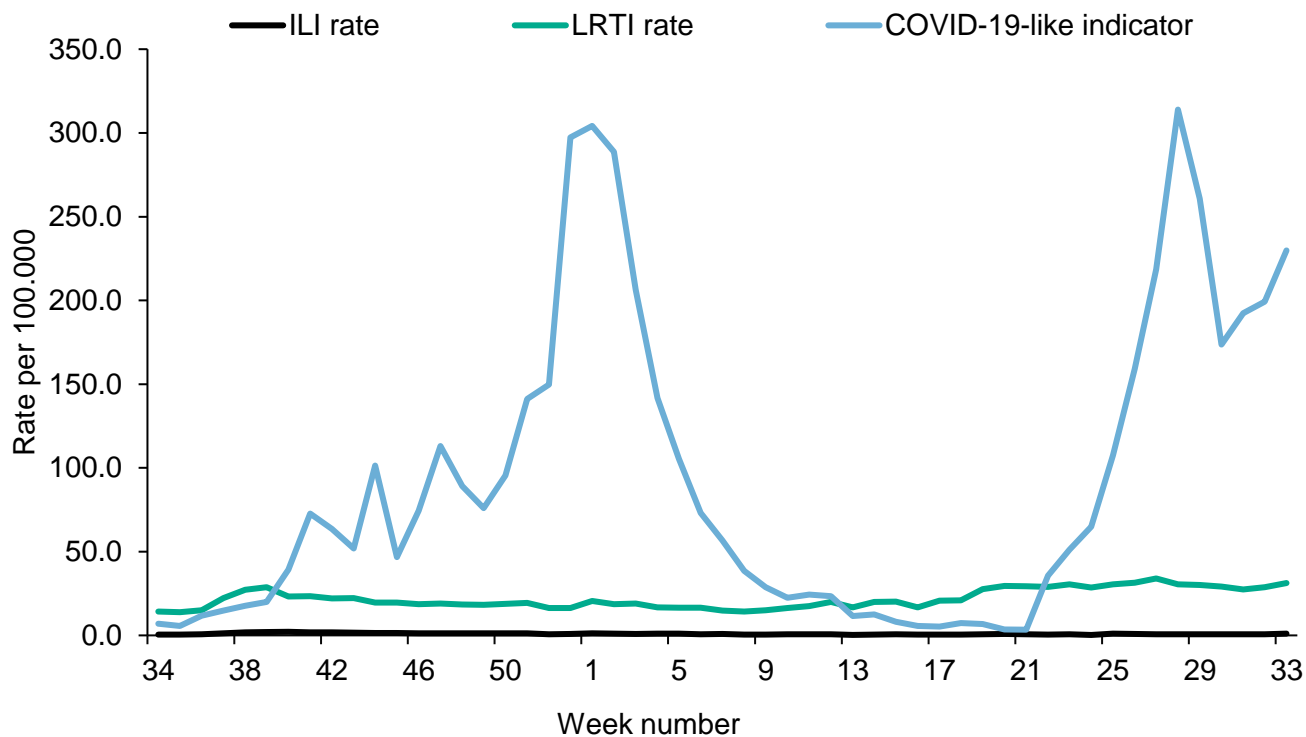
UK

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 15 to 44-year olds in Northern Ireland (1.6 per 100,000) and the 45 to 64-year olds in Scotland (0.8 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																		
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
England (RCGP)	0.6	0.5	0.5	0.4	0.6	0.9	0.7	0.5	0.7	0.3	1.0	0.9	0.7	0.7	0.7	0.7	0.6	0.6	1.0
Wales	0.5	0.0	0.0	0.3	0.8	0.5	0.0	0.5	0.7	0.3	0.3	0.3	0.5	1.5	0.8	0.3	1.0	0.6	0.9
Scotland	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.5	0.4	0.5	0.4	0.3	0.4	0.4	0.3	0.4	0.4
Northern Ireland	0.8	0.4	0.7	0.1	0.5	0.5	0.4	0.4	0.6	0.6	0.6	1.0	0.9	0.9	0.8	0.9	0.7	1.0	1.1

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 PHE webpage Sources of UK flu data: influenza surveillance in the UK.

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 22 August GP in-hours consultations for influenza-like illness remained stable (Figure 34).

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

Figure 34: GPIH clinical indicators for influenza-like illness GP consultations, England (a) nationally, (b) by age group and (c) by PHE Centre

(a)

Influenza-like illness 23/08/2020 - 22/08/2021

Black line is 7 day moving average adjusted for bank holidays.
Black dotted line is baseline. Orange dotted line is expected pre-covid-19 level.
Grey columns show weekends and bank holidays.
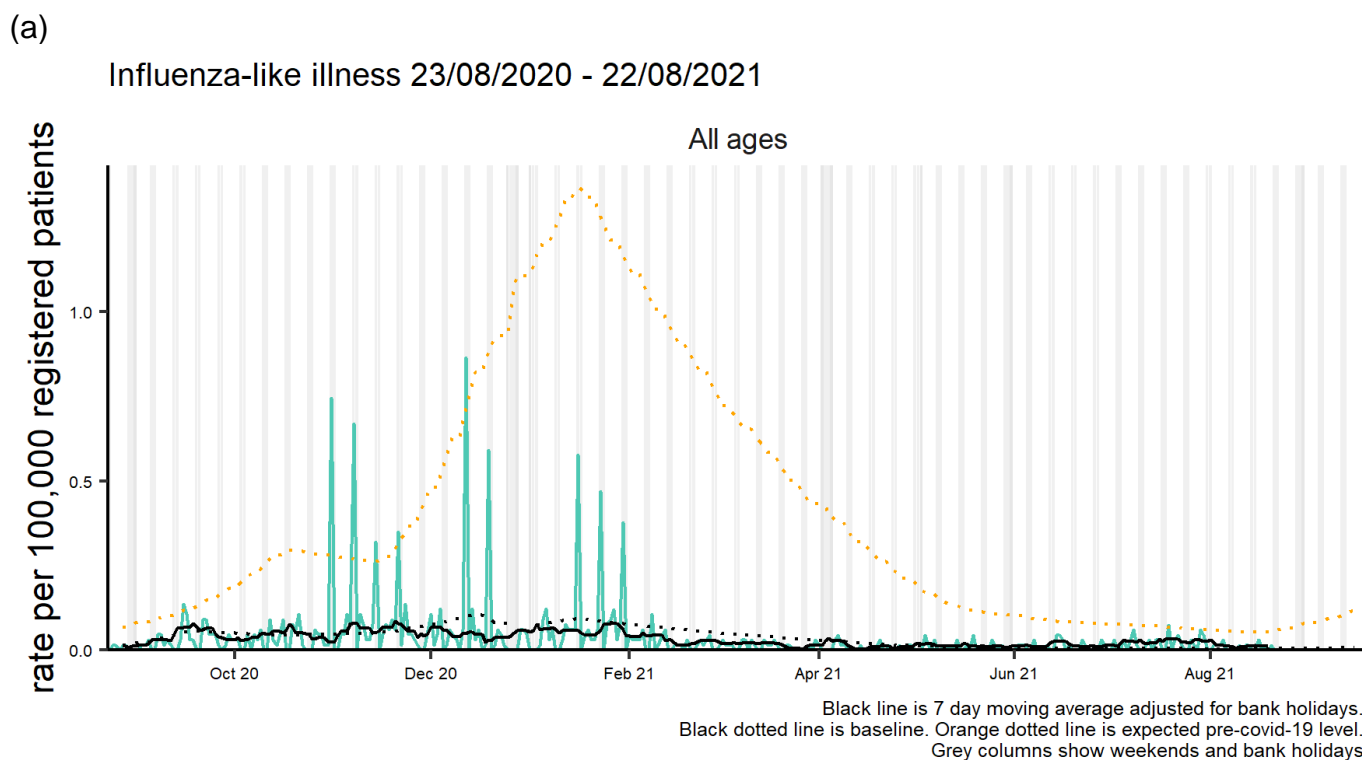
(b)

Influenza-like illness by age group (years) 23/08/2020 - 22/08/2021

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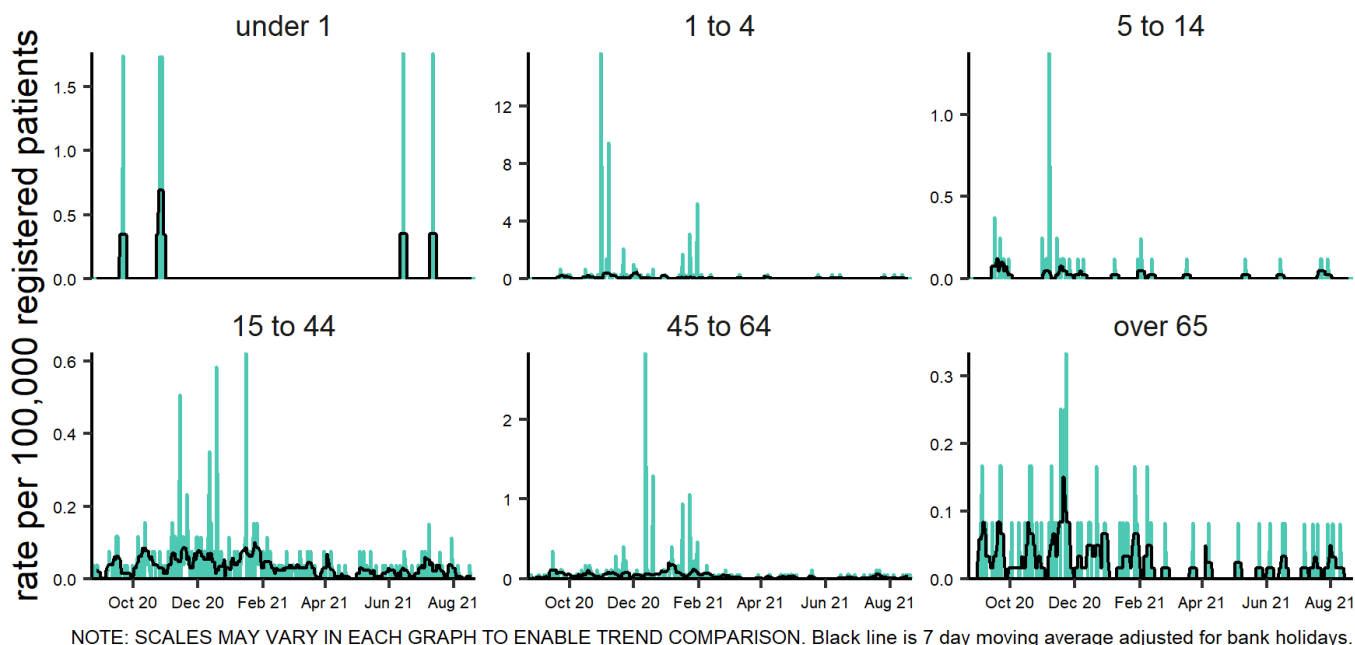
(c)

Influenza-like illness by PHE centre 23/08/2020 - 22/08/2021

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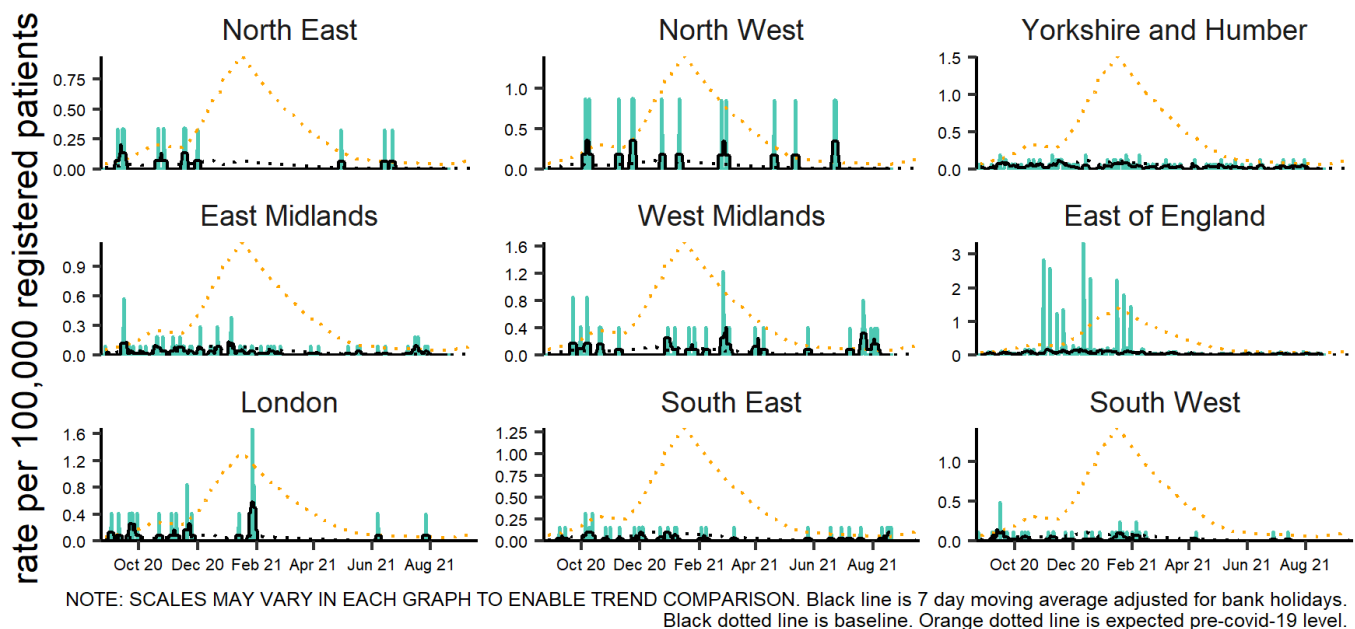
GPIH Baselines are modelled from historical data to give current seasonally expected levels. GP consultations rates decreased during 2020 due to changes in guidance on accessing health care, therefore separate modelled estimates are provided to show seasonally expected levels pre-covid-19.

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 22 August, GP out-of-hours and unscheduled care consultations for acute respiratory infections increased slightly, and for ILI remained stable (Figure 35 and 36).

Figure 35: GPOOH number of daily contacts for all ages for influenza-like illness, England

Influenza-like illness 23/08/2020 - 22/08/2021

Black line is 7 day moving average adjusted for bank holidays.
Black dotted line is baseline. Orange dotted line is expected pre-covid-19 level.
Grey columns show weekends and bank holidays.

43
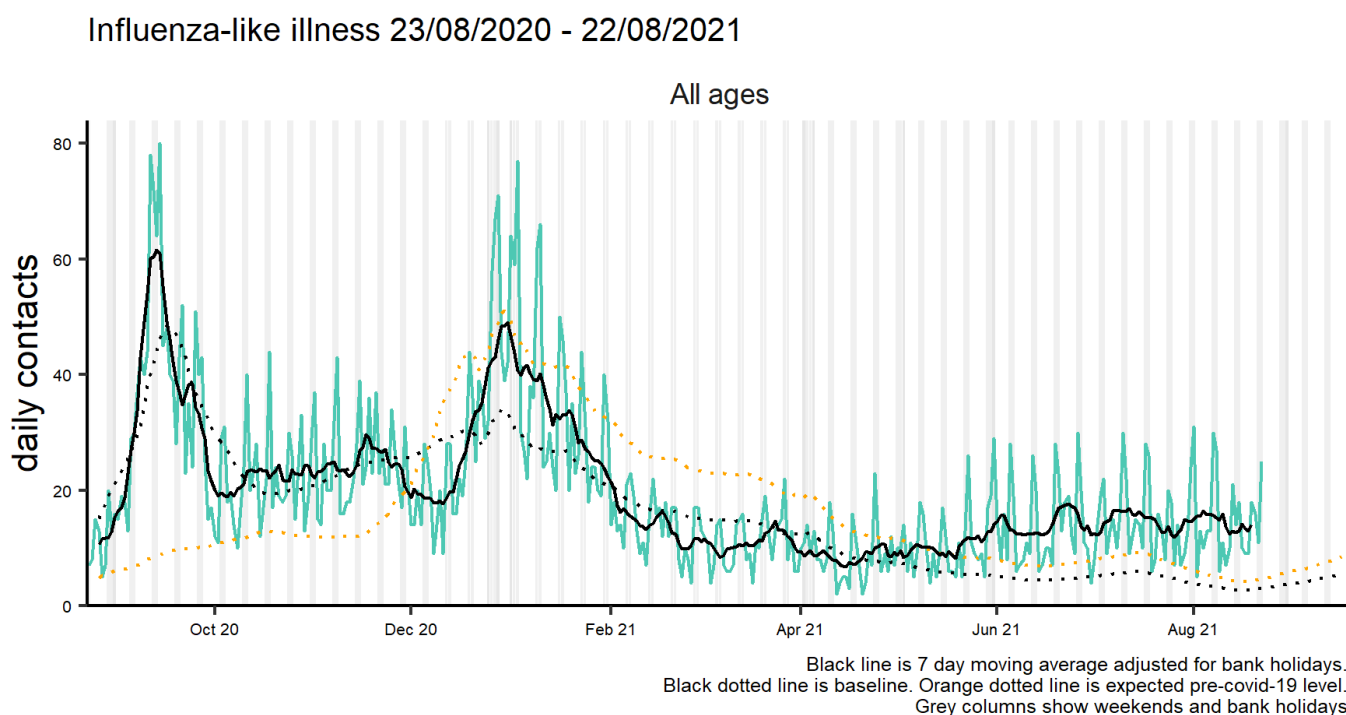
Figure 36: GPOOH number of daily contacts for acute respiratory infections, England (a) nationally and (b) by age group

(a)

Acute respiratory infection 23/08/2020 - 22/08/2021
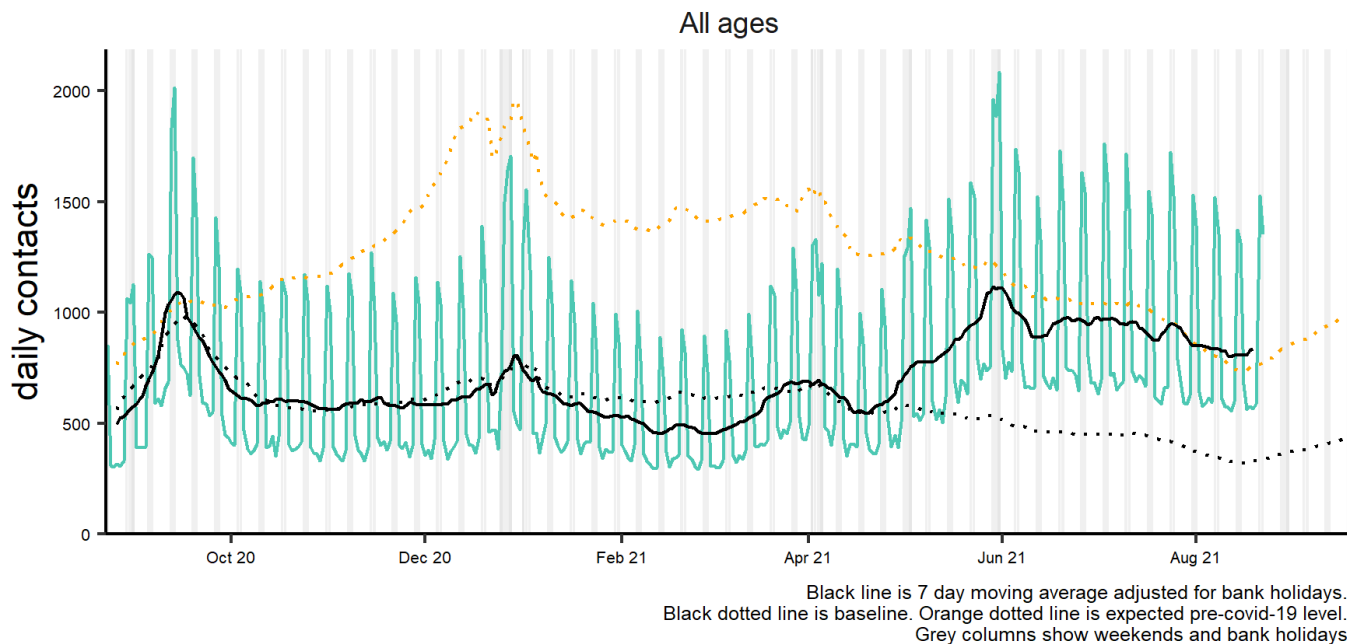
Black line is 7 day moving average adjusted for bank holidays.
Black dotted line is baseline. Orange dotted line is expected pre-covid-19 level.
Grey columns show weekends and bank holidays.

(b)

Acute respiratory infection by age group (years) 23/08/2020 - 22/08/2021

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

44
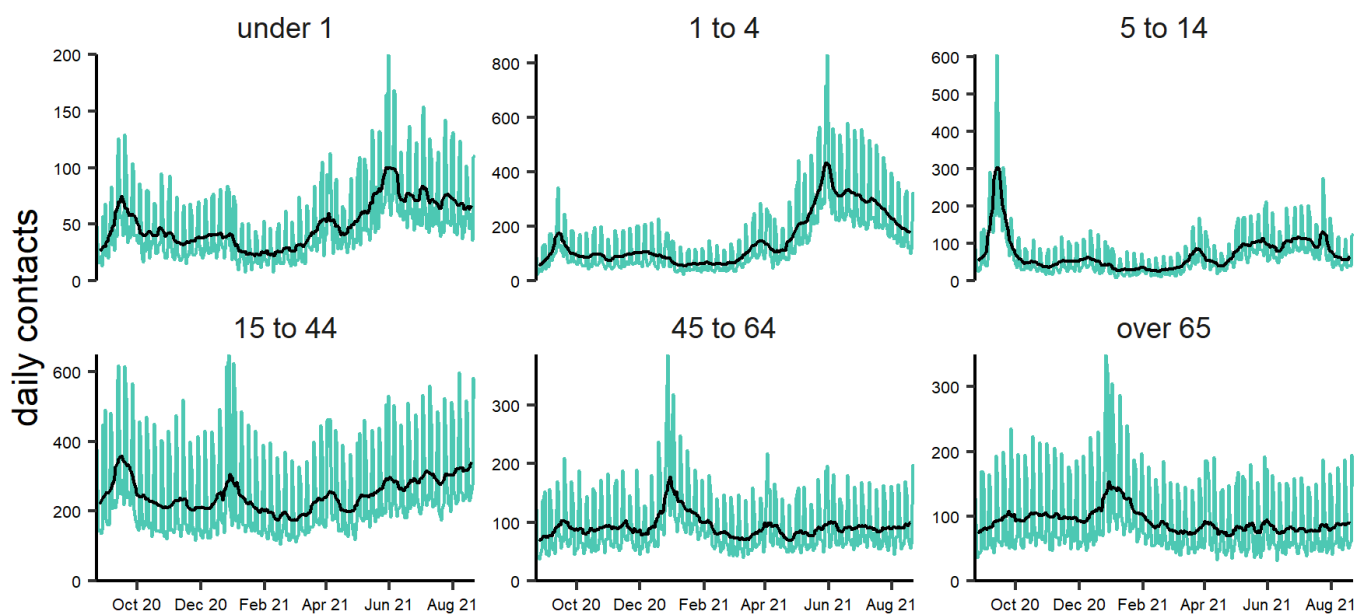
Sentinel swabbing scheme in the UK

In week 33 2021, 14 samples tested positive for SARS-CoV-2 with an overall positivity of 25.5% (14 out of 55) compared to 5.6% (3 out of 54) in the previous week, through the UK GP sentinel swabbing schemes (Figure 37).

Samples up to week 41 were only tested for SARS-CoV-2.

Figure 37: Number of influenza and COVID-19 positive samples and weekly positivity (%), UK GP sentinel swabbing scheme
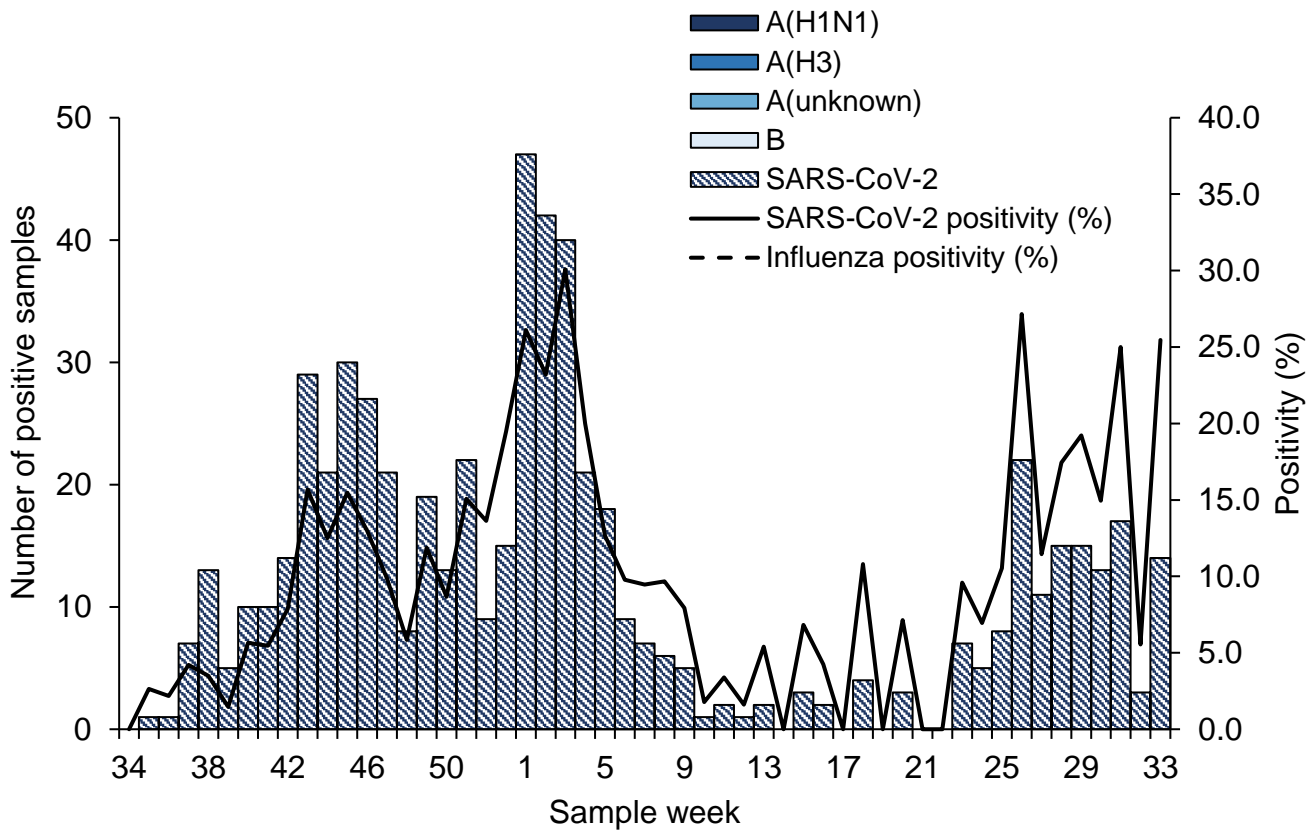
*For the most recent week, more samples are expected to be tested therefore the graph in Figure 37 should be interpreted with caution

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

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.

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

Hospitalisations, SARI Watch

In week 33, the overall weekly hospital admission rate for COVID-19 remained stable. There were no new hospital admissions to sentinel Trusts for influenza in week 33.

The hospitalisation rate for COVID-19 was at 7.74 per 100,000 in week 33 compared to 7.09 per 100,000 in the previous week.

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

Figure 38: Weekly overall hospital admission rates per 100,000 of new COVID-19 and influenza positive cases reported through SARI Watch, England
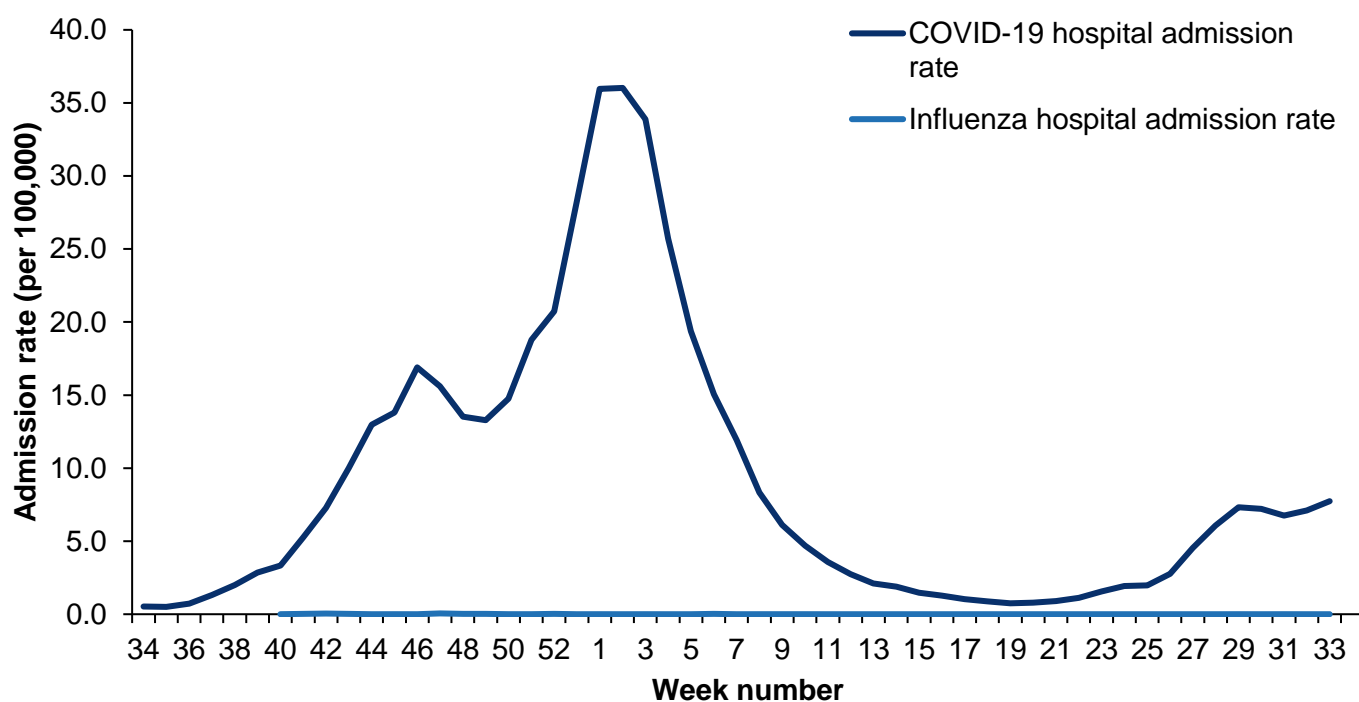
* influenza hospital admission rate is reported from week 40 2020 onwards
* influenza hospital admission rate based on 20 sentinel NHS trusts for week 33
* COVID-19 hospital admission rate based on 110 NHS trusts for week 33
* SARI Watch data are provisional.

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Figure 39: Weekly overall influenza hospital admission rates per 100,000 trust catchment population with MEM thresholds, SARI Watch, England

<0.99	Baseline threshold	0.99 to <2.65	Low	2.65 to <7.87	Medium
7.87 to <12.73	High	12.73+	Very high		
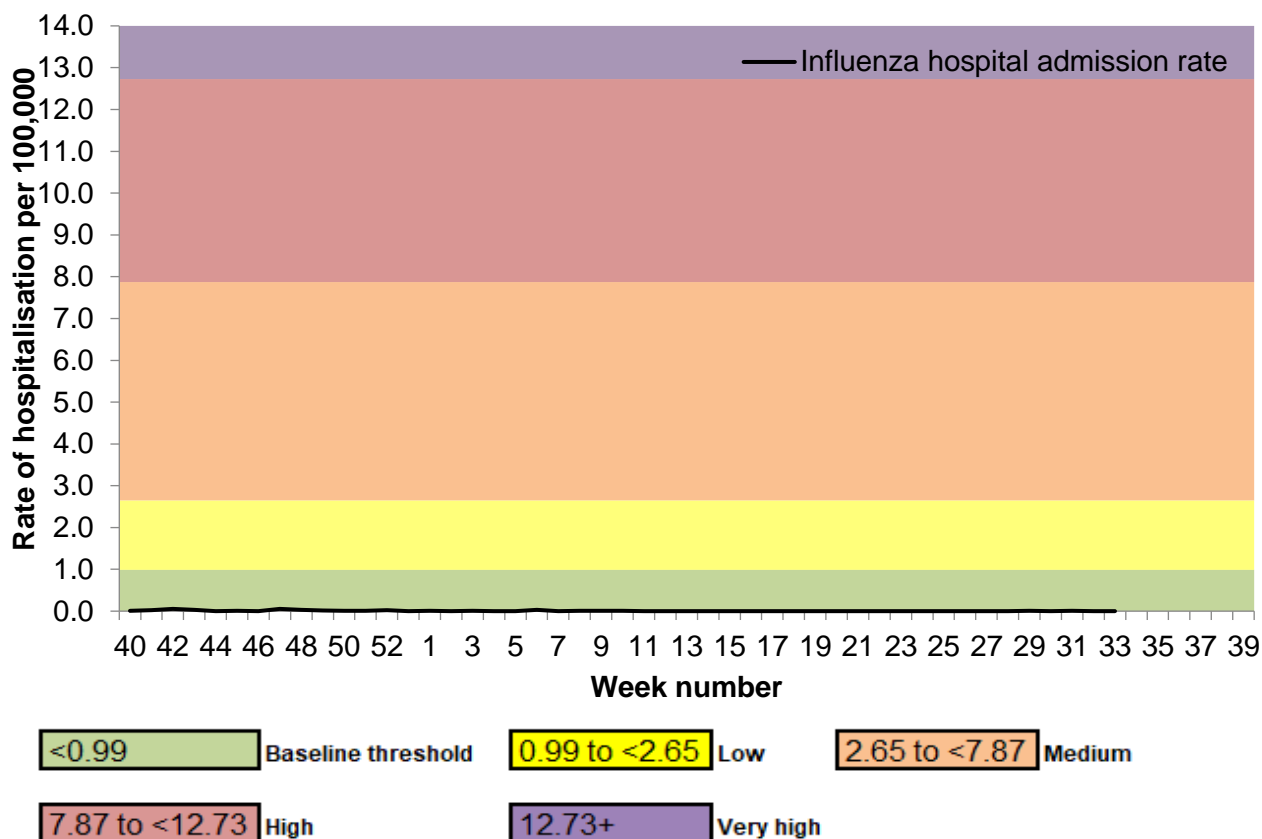
* the MEM thresholds used are those from the 2019 to 2020 season due to the pandemic

Figure 40: Weekly influenza hospital admissions by influenza type, SARI Watch, England

Figure 41: Weekly hospital admission rate by PHE Centre for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch

(a)

(b)

Figure 42: Weekly hospital admission rate by age group for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch

(a)

(b)
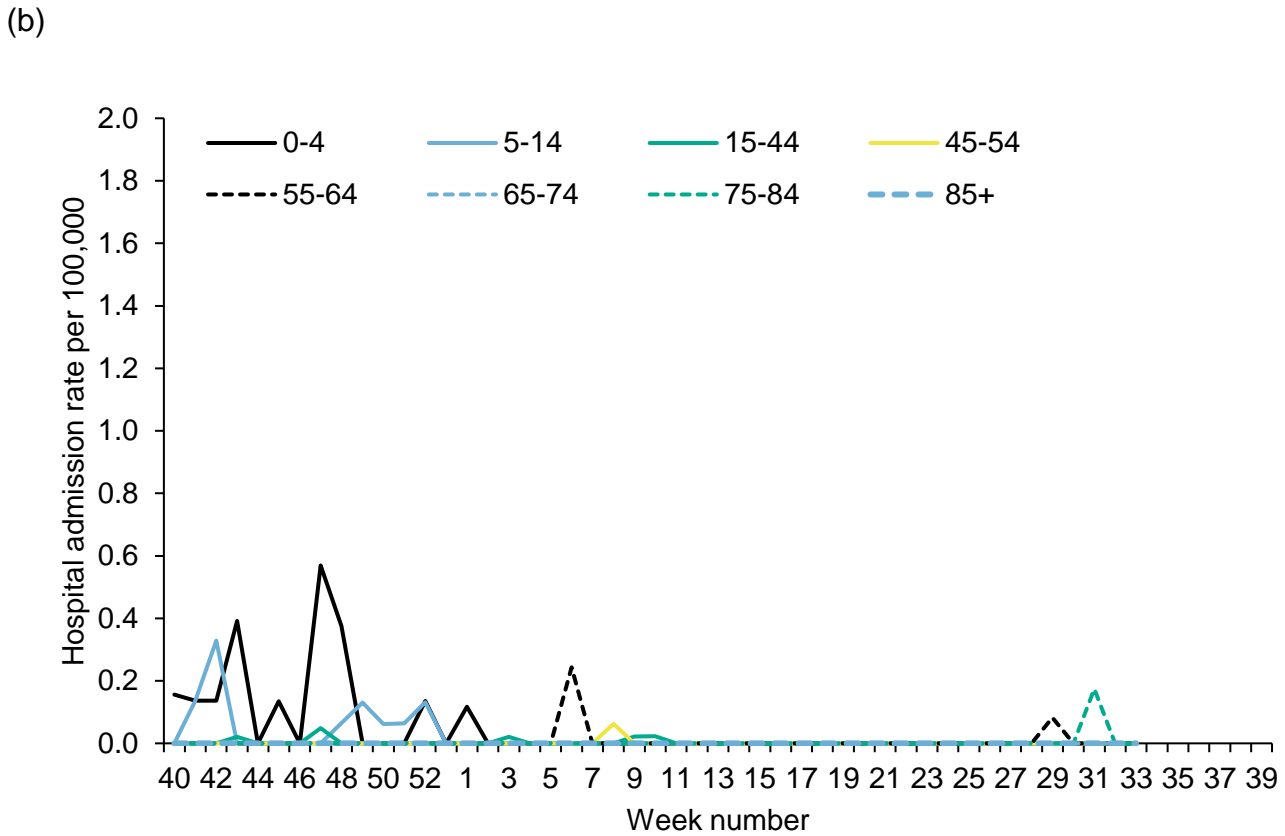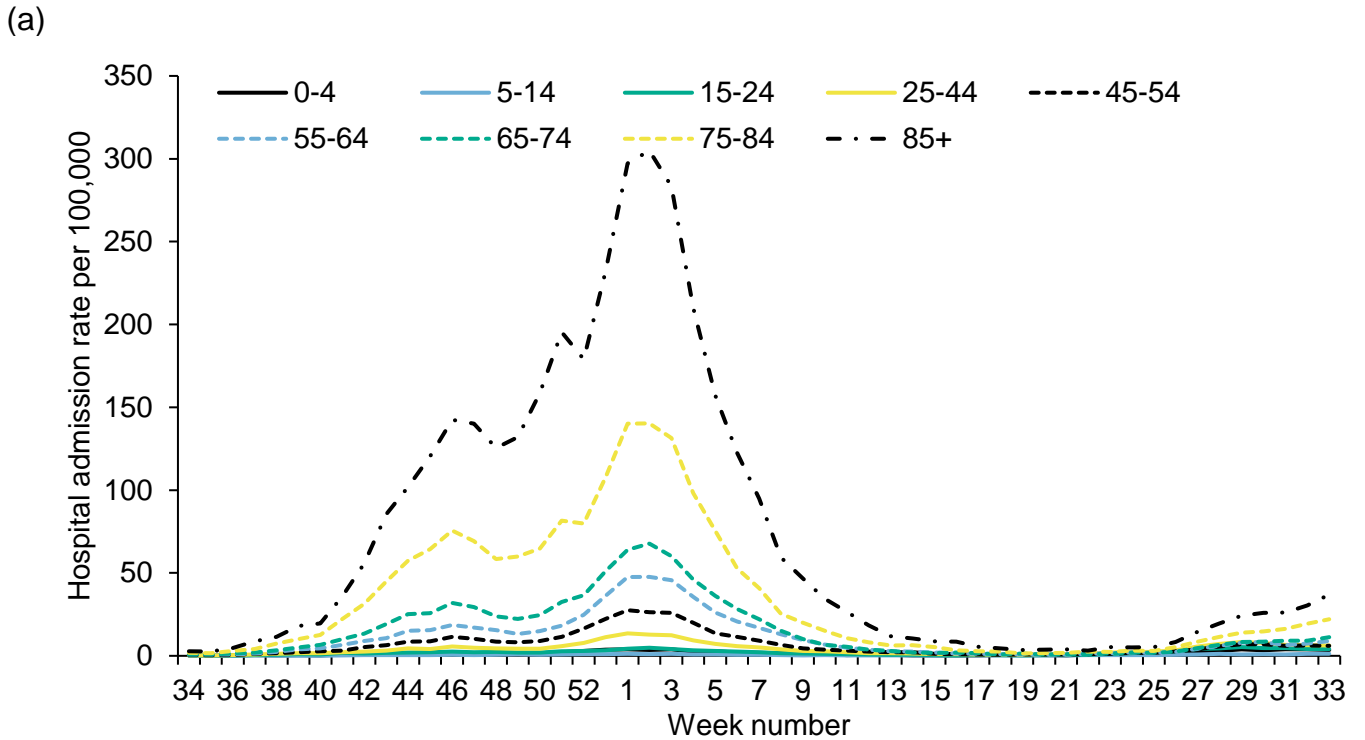
ICU or HDU admissions, SARI Watch

In week 33, the overall weekly ICU or HDU admission rates for COVID-19 remained stable. There were no new ICU or HDU admission for influenza in week 33.

The ICU or HDU rate for COVID-19 was at 0.61 per 100,000 in week 33 compared to 0.53 per 100,000 in the previous week.

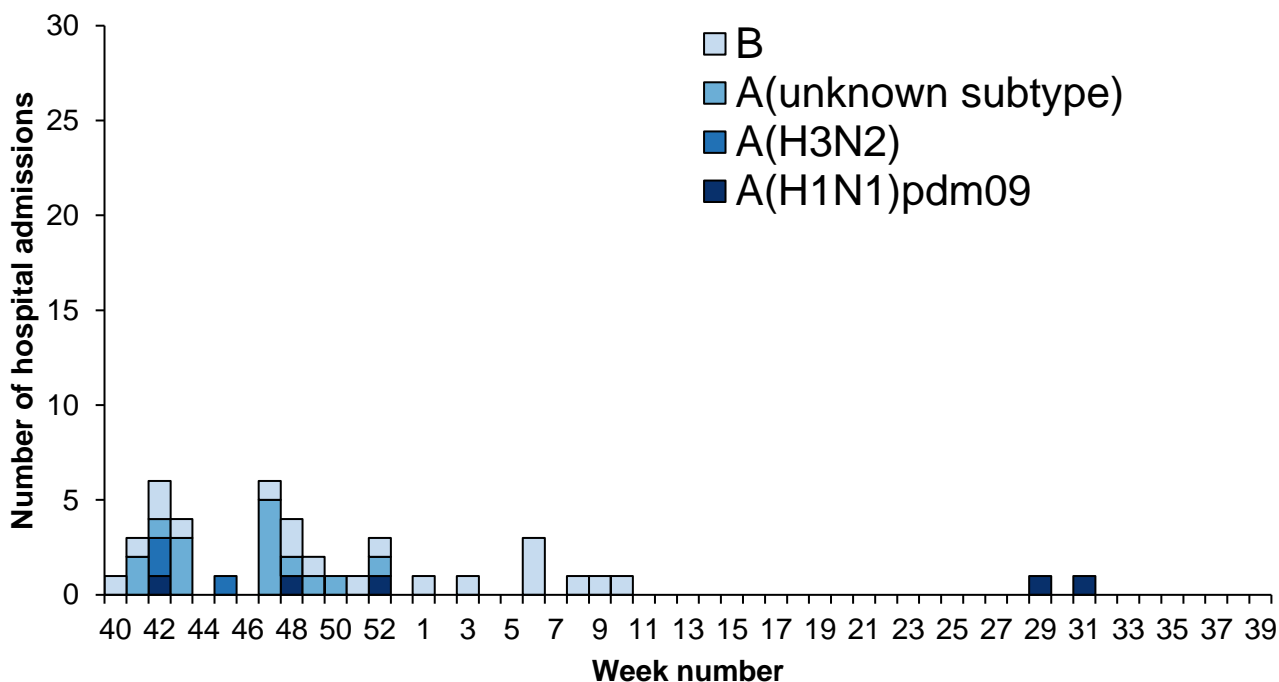By PHE Centre, the highest ICU or HDU admission rates for COVID-19 were observed in the East Midlands. By age groups, the highest ICU or HDU admission rates for COVID-19 were observed in the 55 to 64-year olds.

Figure 43: Weekly overall ICU or HDU admission rates per 100,000 of new COVID-19 and influenza positive cases reported through SARI Watch, England
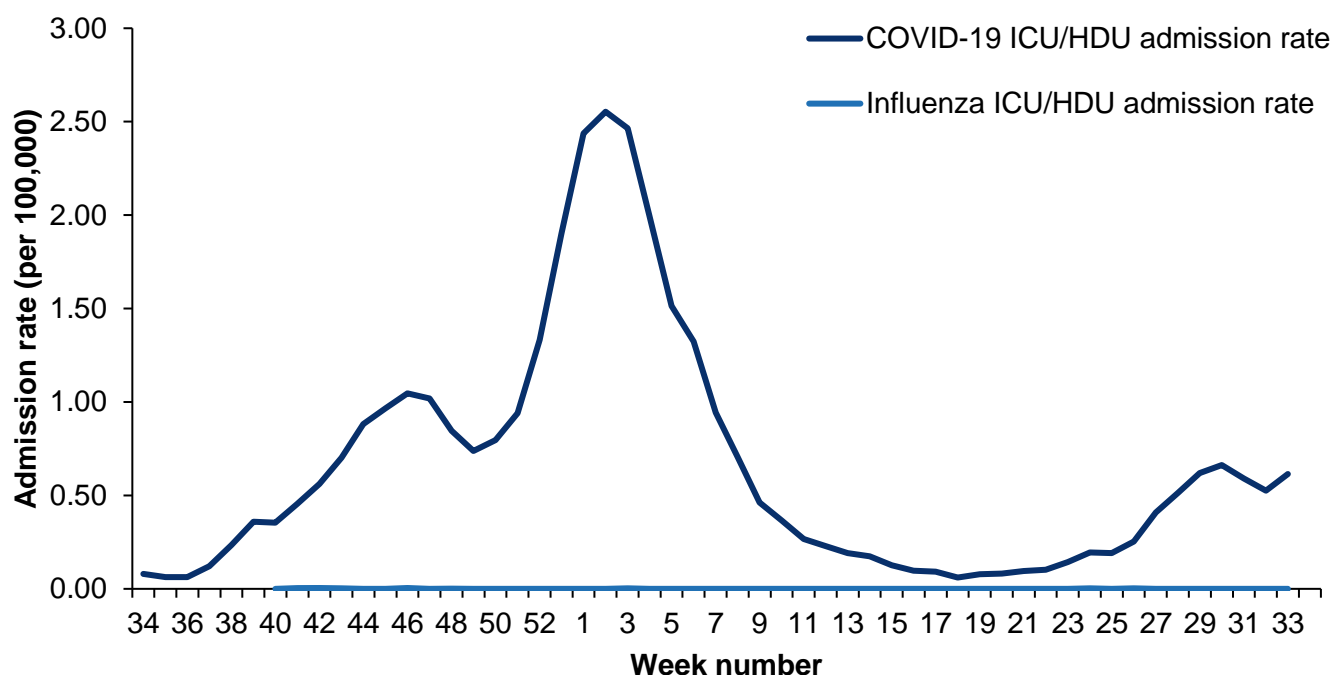
* influenza ICU or HDU admission rate is reported from week 40 2020 onwards
* influenza ICU or HDU admission rate based on 85 NHS trusts for week 33
* COVID-19 ICU or HDU admission rate based on 103 NHS trusts for week 33
* SARI Watch data are provisional.

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Figure 44: Weekly overall influenza ICU or HDU admission rates per 100,000 trust catchment population with MEM thresholds, SARI Watch, England

<0.11 Baseline threshold	0.11 to <0.32 Low	0.32 to <0.64 Medium
0.64 to <0.88 High	0.88+ Very high	
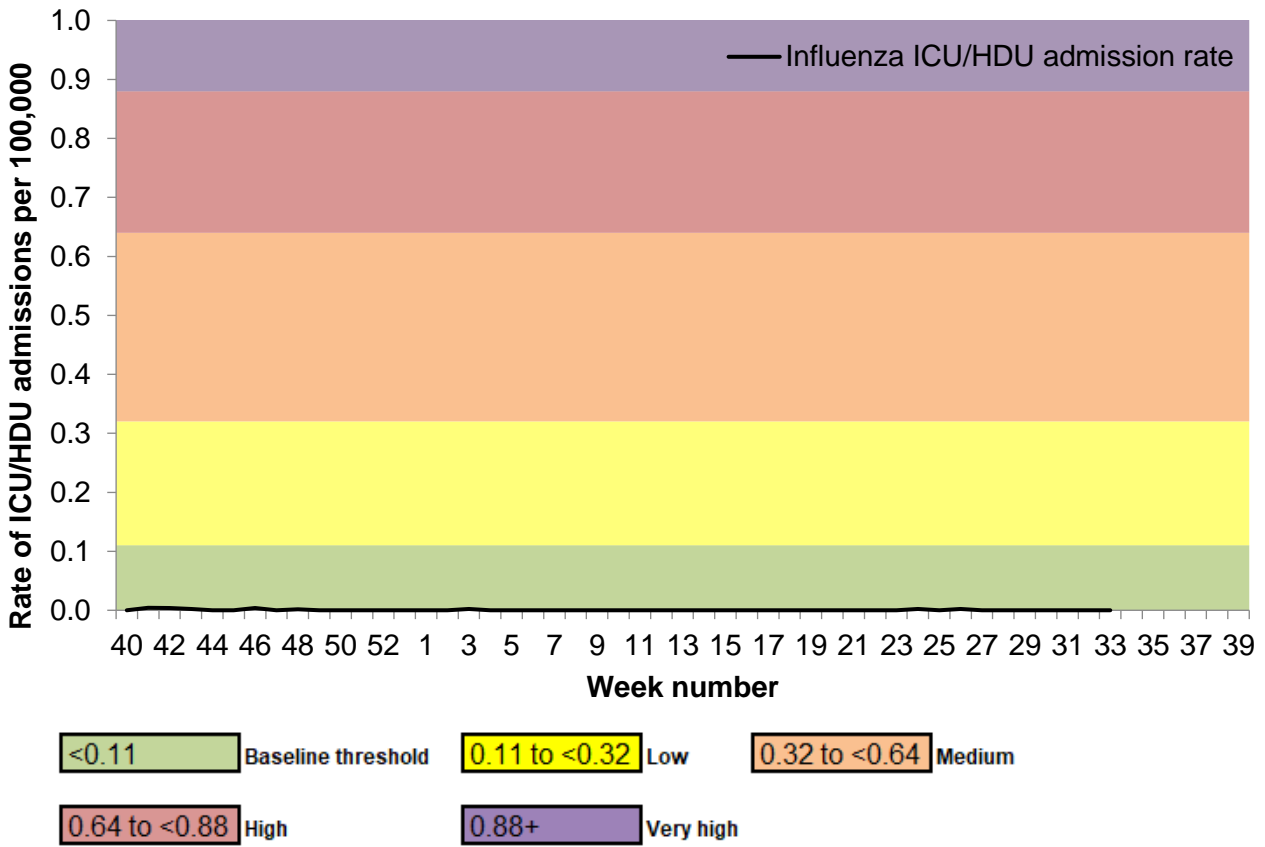
Figure 45: Weekly influenza ICU or HDU admissions by influenza type, SARI Watch, England
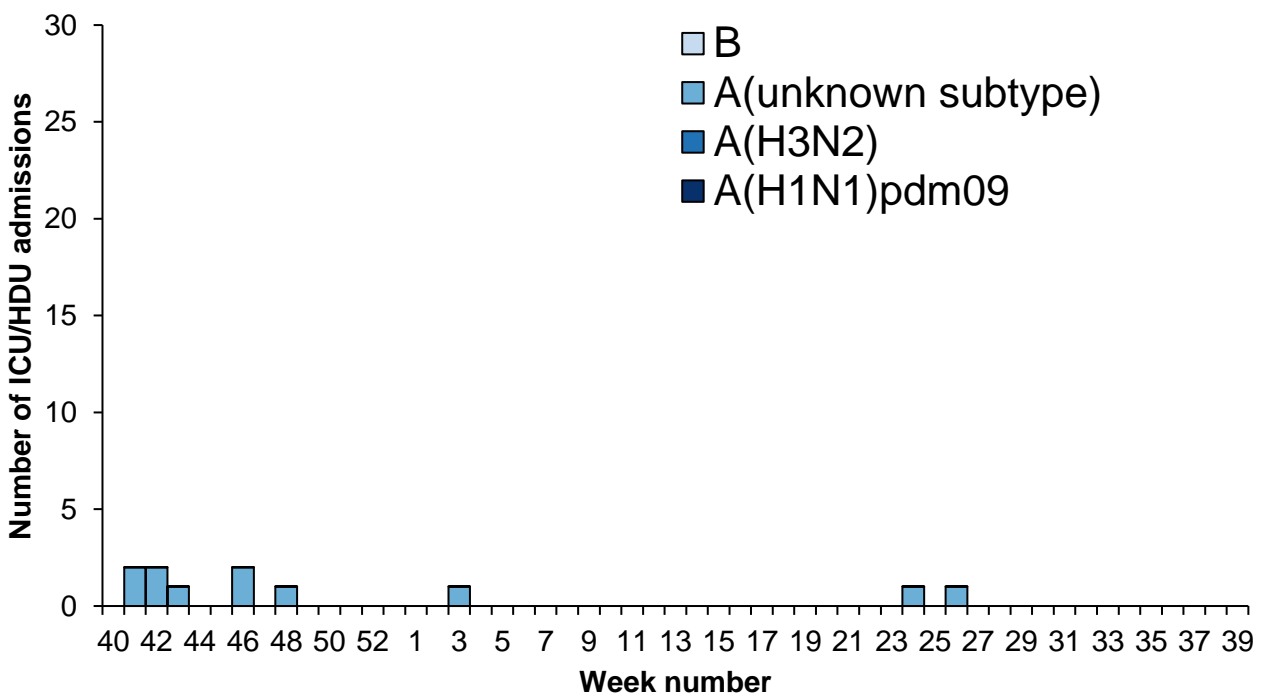
Figure 46: Weekly ICU or HDU admission rate by PHE Centre for new (a) COVID-19 positive cases and (b) influenza, reported through SARI Watch
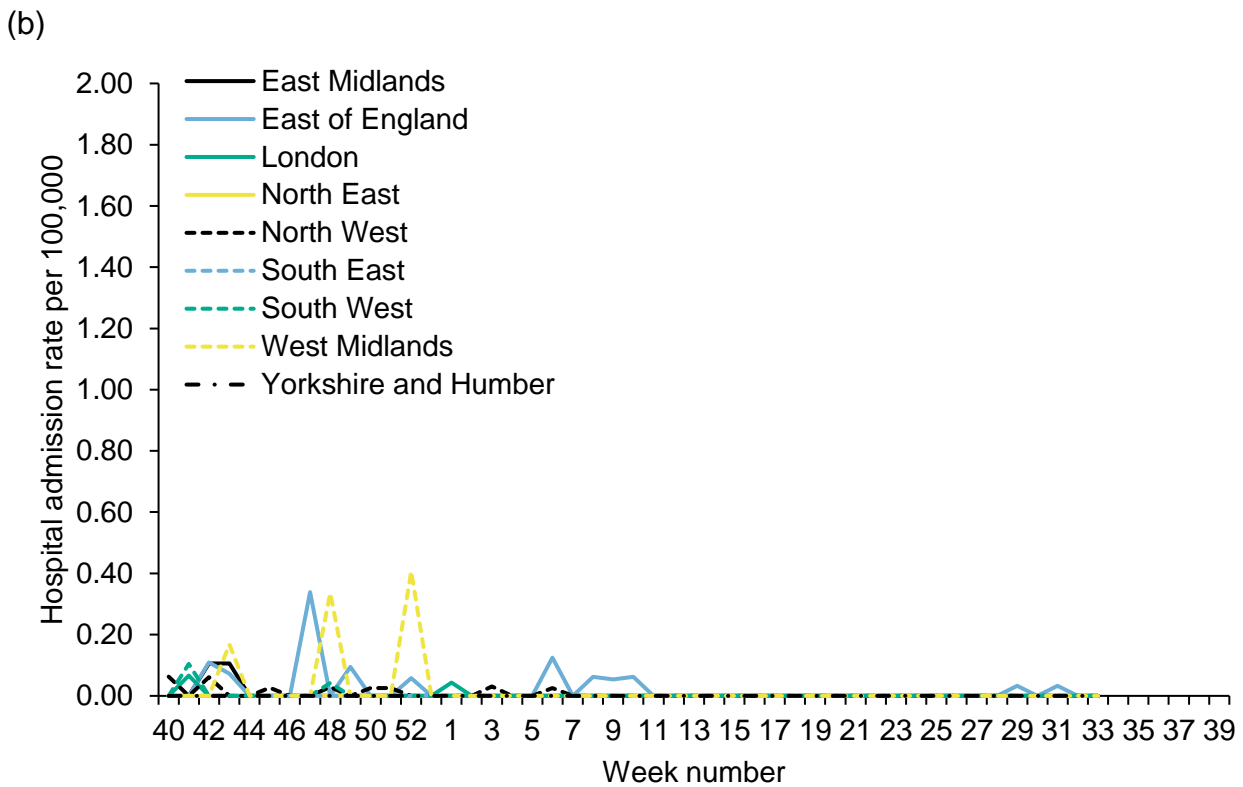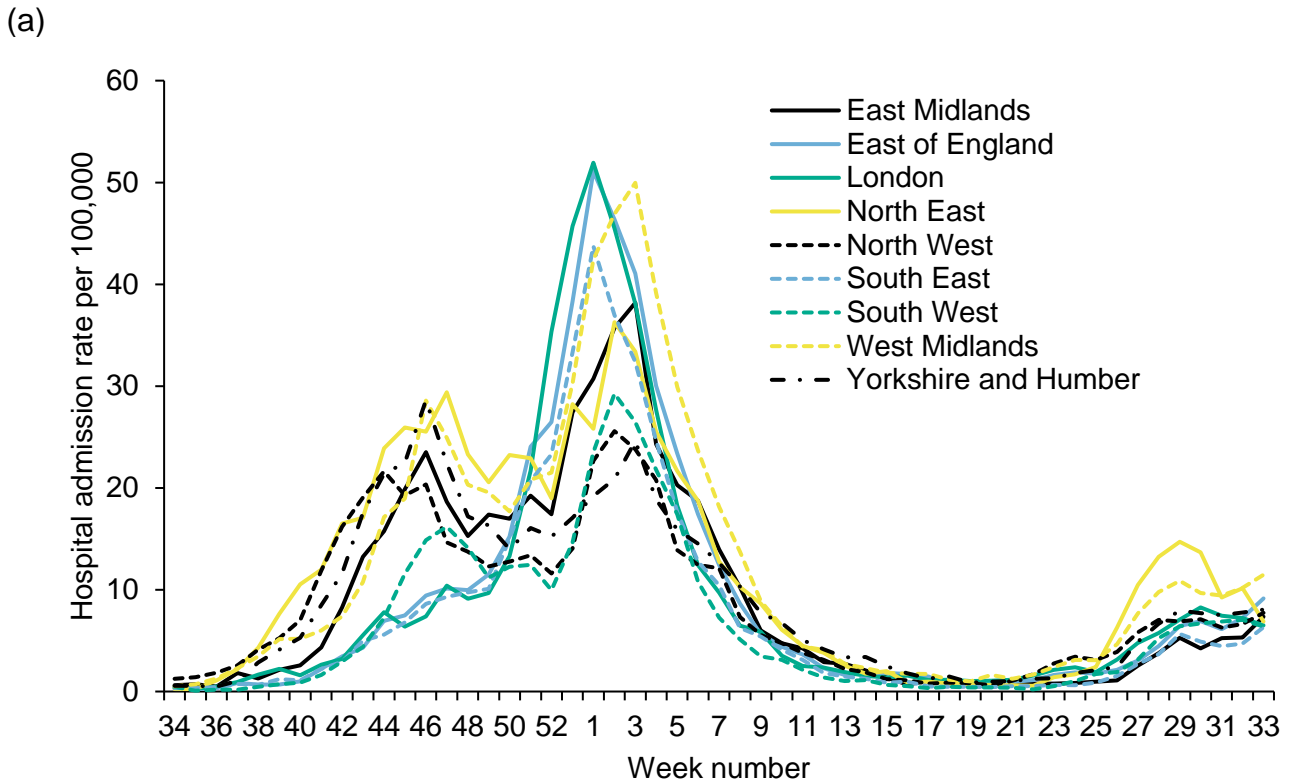
(a)

(b)
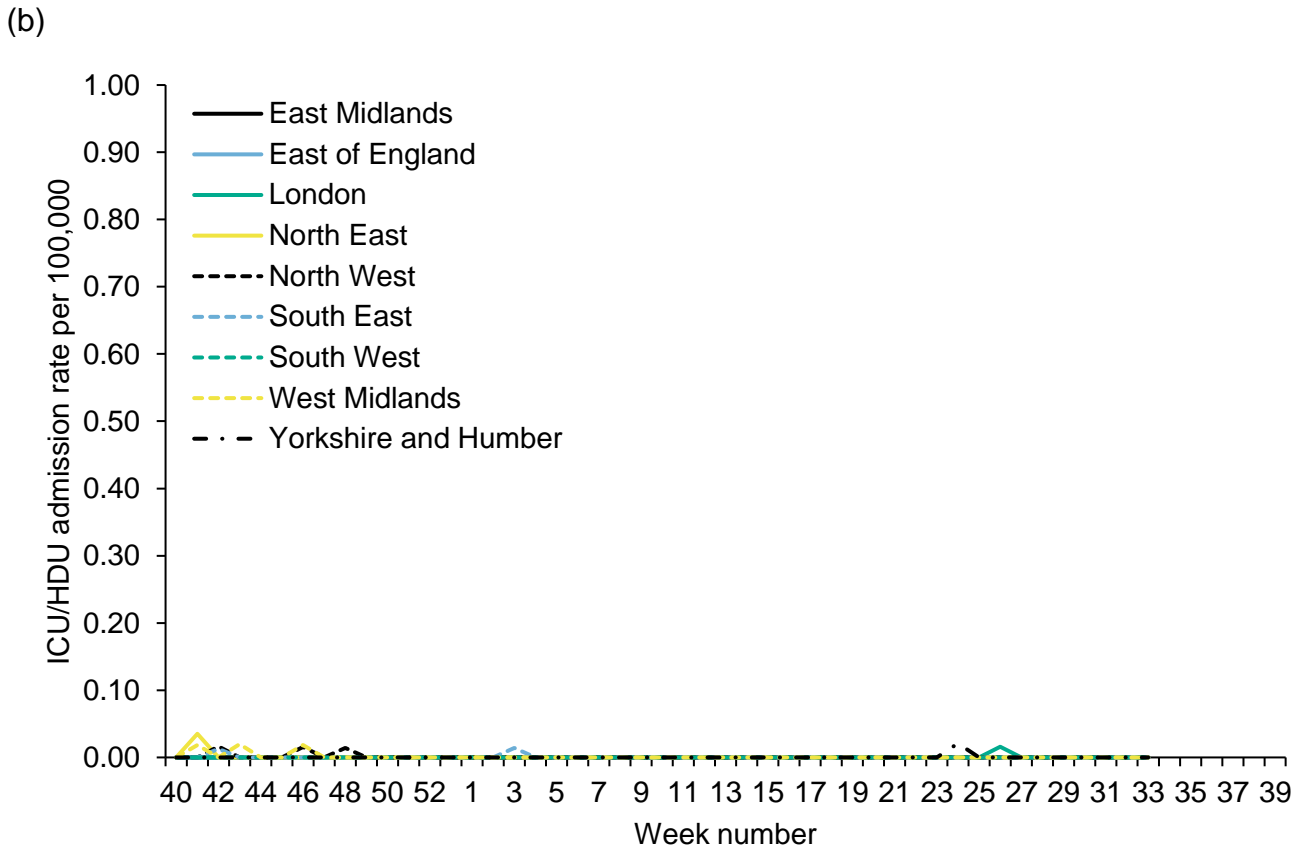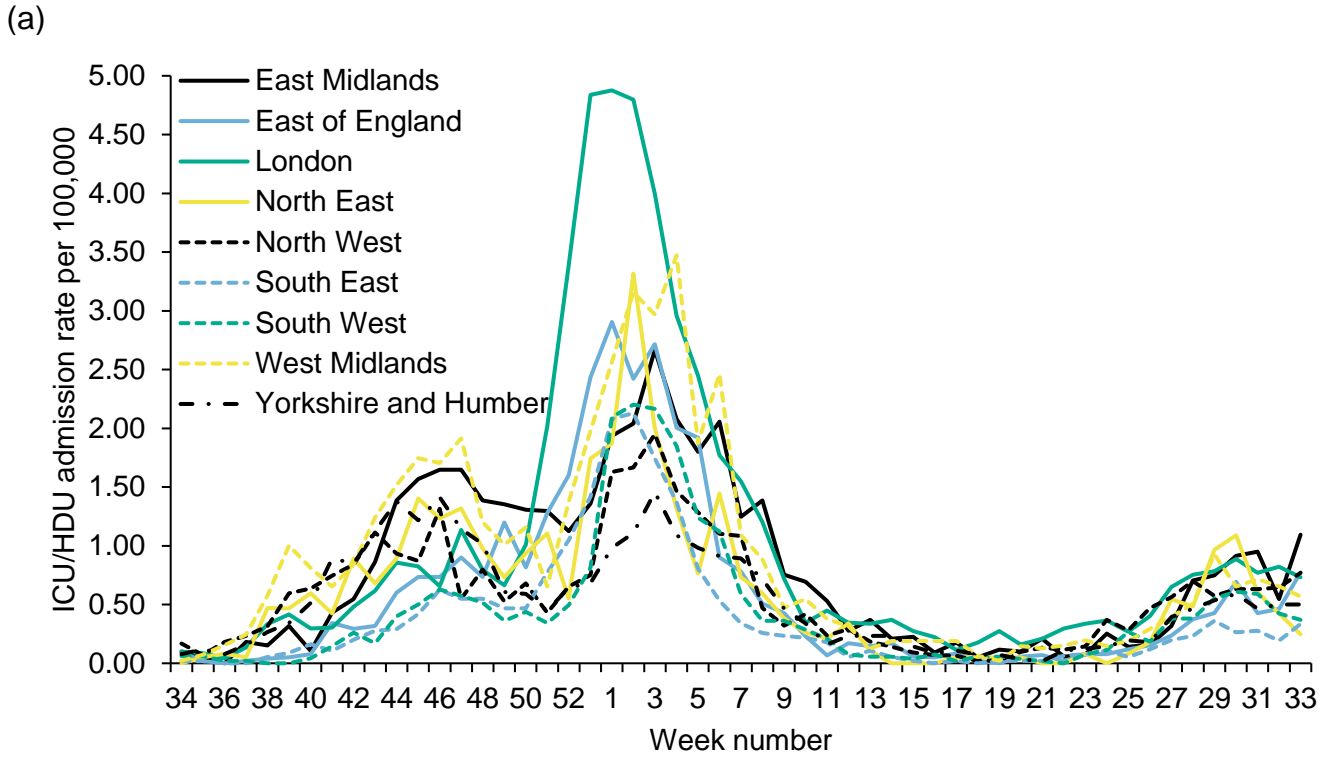
Figure 47: Weekly ICU or HDU admission rate by age group for new (a) COVID-19 positive cases and (b) influenza, reported through SARI Watch

(a)
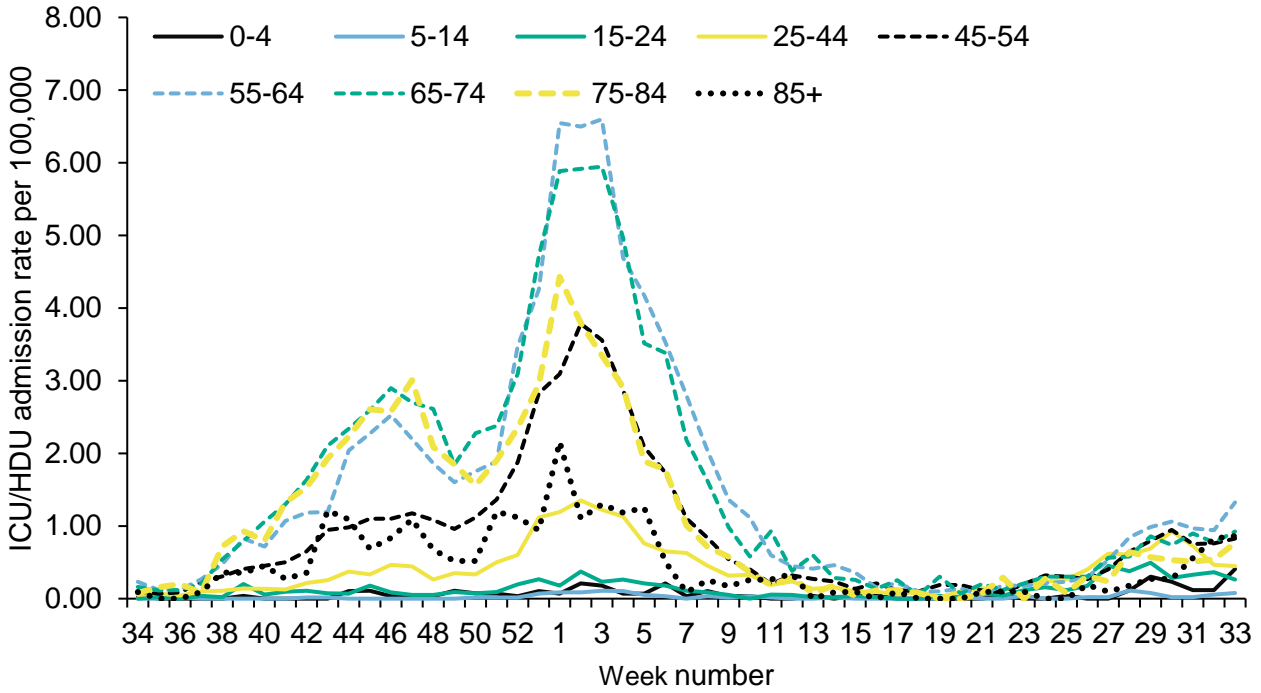
(b)
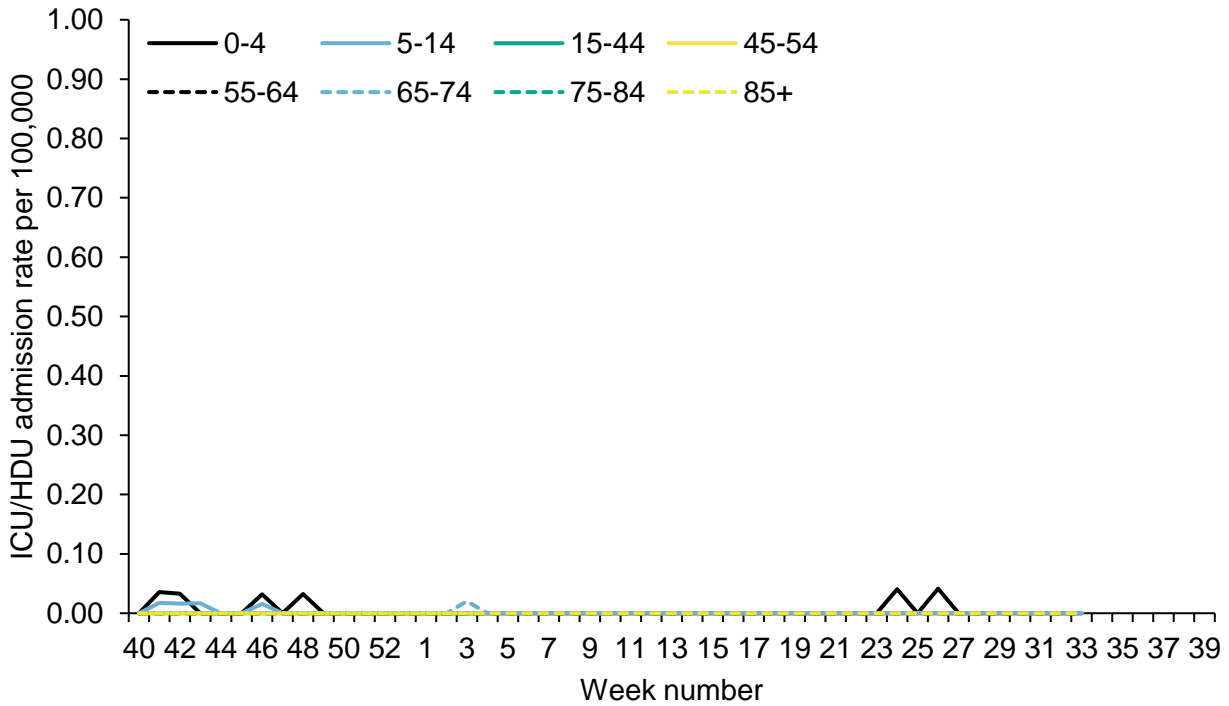
ECMO, SARI Watch

From week 34 2020, a total of 342 laboratory confirmed COVID-19 admissions have been reported from the 6 Severe Respiratory Failure (SRF) centres in the UK.

There were 4 new laboratory confirmed COVID-19 admission reported in week 33 (Figure 48).

Figure 48: Laboratory confirmed ECMO admissions (COVID-19, influenza and non-COVID-19 confirmed) to Severe Respiratory Failure centres in the UK
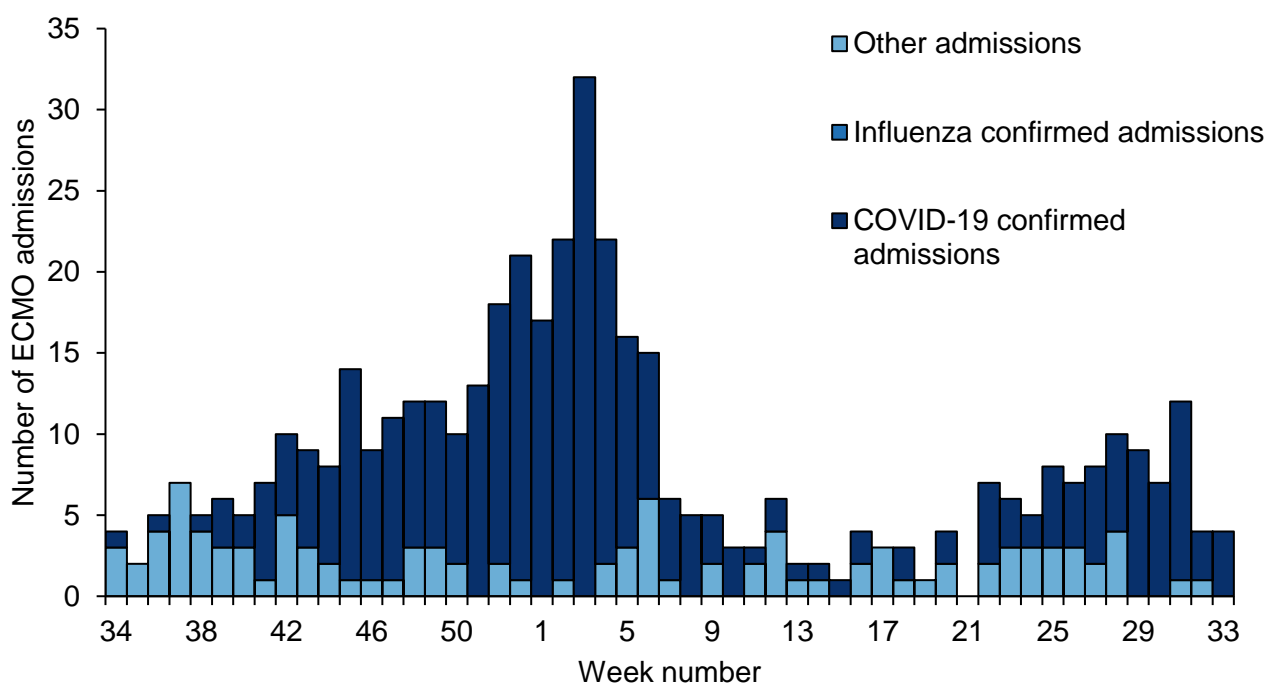
* SARI Watch data are provisional

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 49: Weekly overall hospitalisation (including ICU/HDU) admission rates per 100,000 of RSV positive cases reported through SARI Watch, England
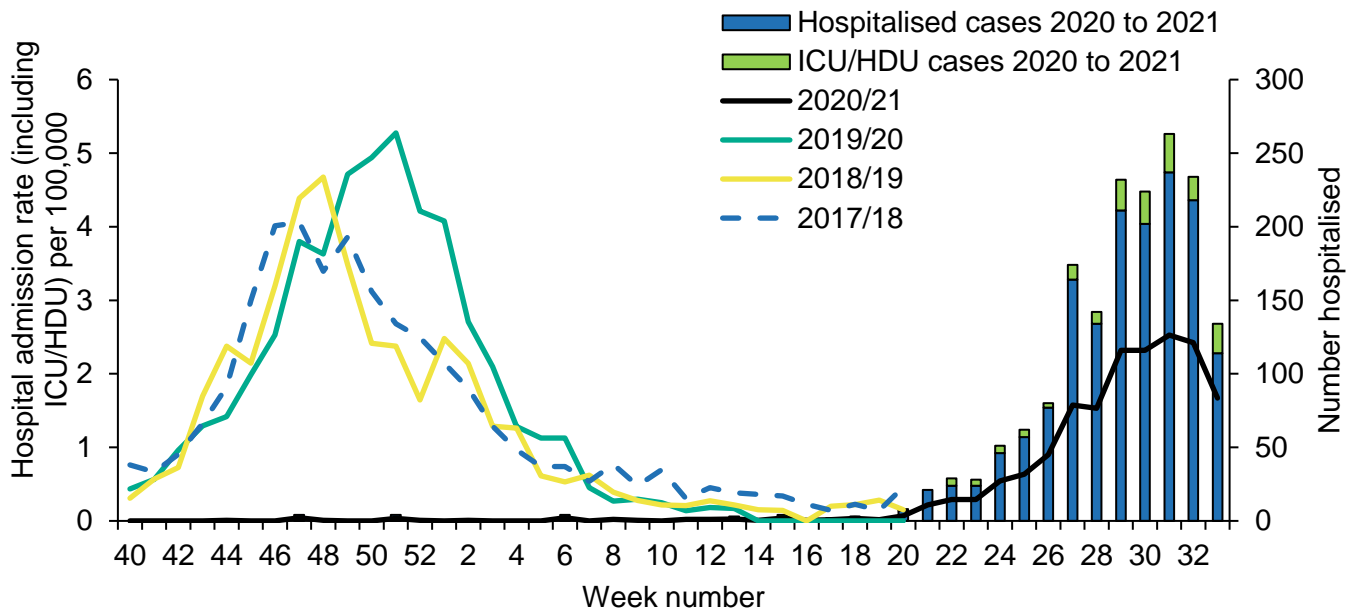
* Please note that in previous seasons, RSV SARI Watch surveillance has run from week 40 to week 20. In the 2020 to 2021 season this was extended to run throughout the year, to allow for surveillance of out-of-season trends

Figure 50: Weekly hospitalisation (including ICU/HDU) admission rates by age group for new RSV cases reported through SARI Watch in 2020 to 2021, England
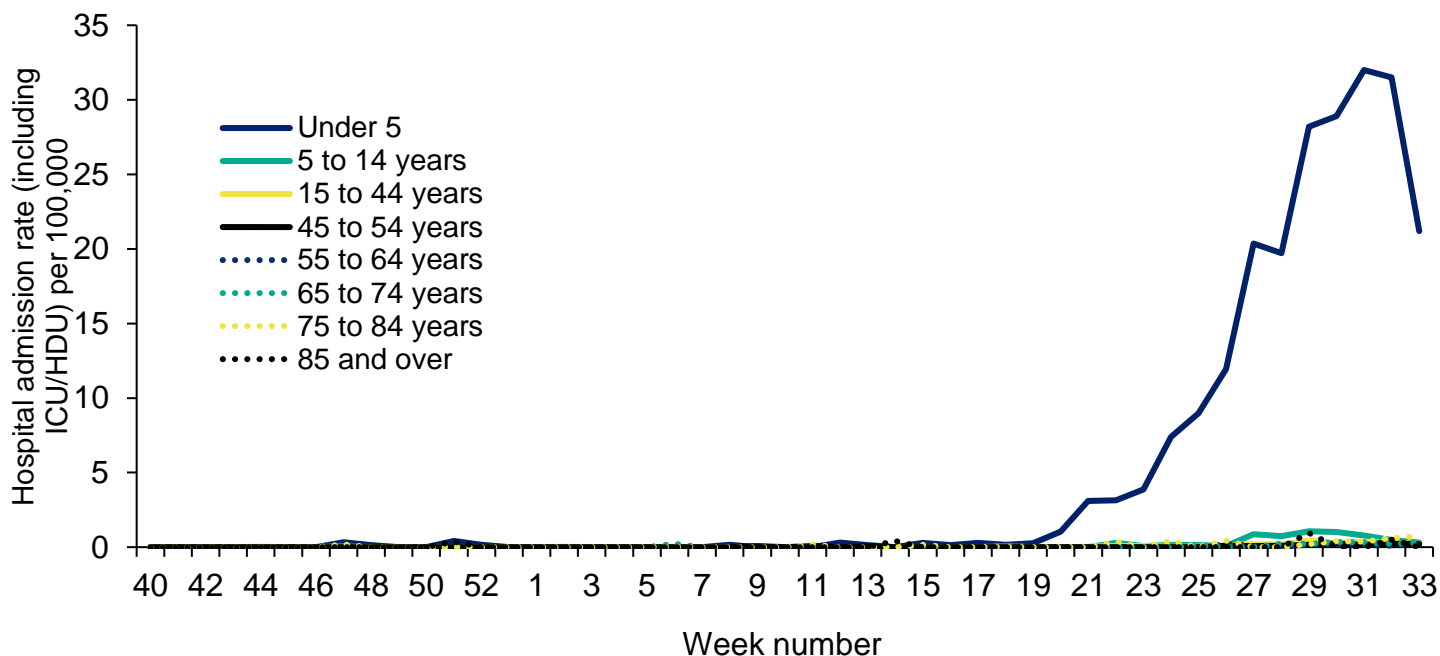
* Please note that rates are based on the number of hospitalised cases divided by the Trust catchment population, multiplied by 100,000
* SARI Watch data are provisional

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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 22 August 2021, the daily number of ED attendances as reported by 97 EDs for COVID-19-like infection increased (Figure 51).

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 PHE Emergency Department Syndromic Surveillance bulletin.

Figure 51: Daily ED attendances for COVID-19-like infections, England (a) nationally, (b) by age group and (c) by PHE Centre

(a)

Covid-19-like 23/08/2020 - 22/08/2021

Black line is 7 day moving average adjusted for bank holidays. Grey columns show weekends and bank holidays.
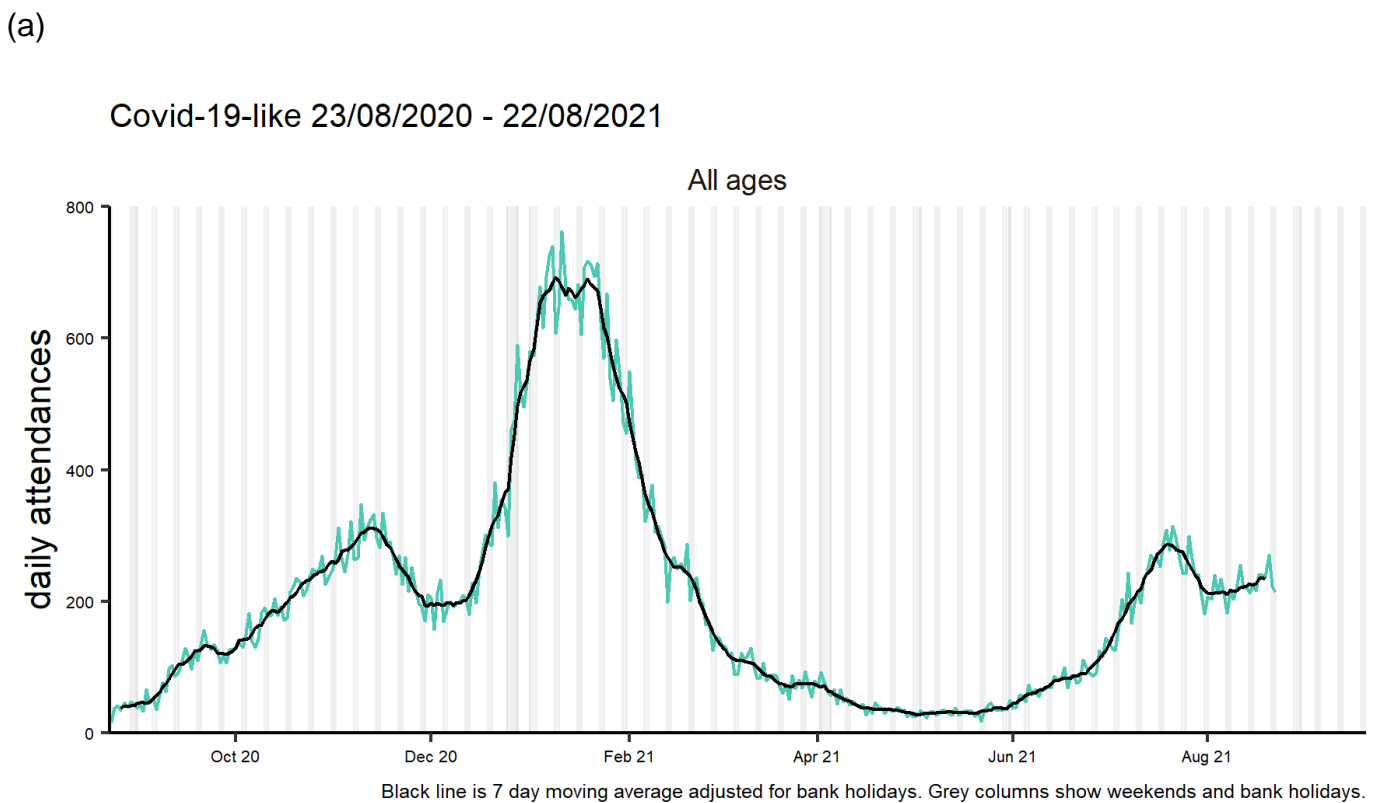
(b)

Covid-19-like by age group (years) 23/08/2020 - 22/08/2021
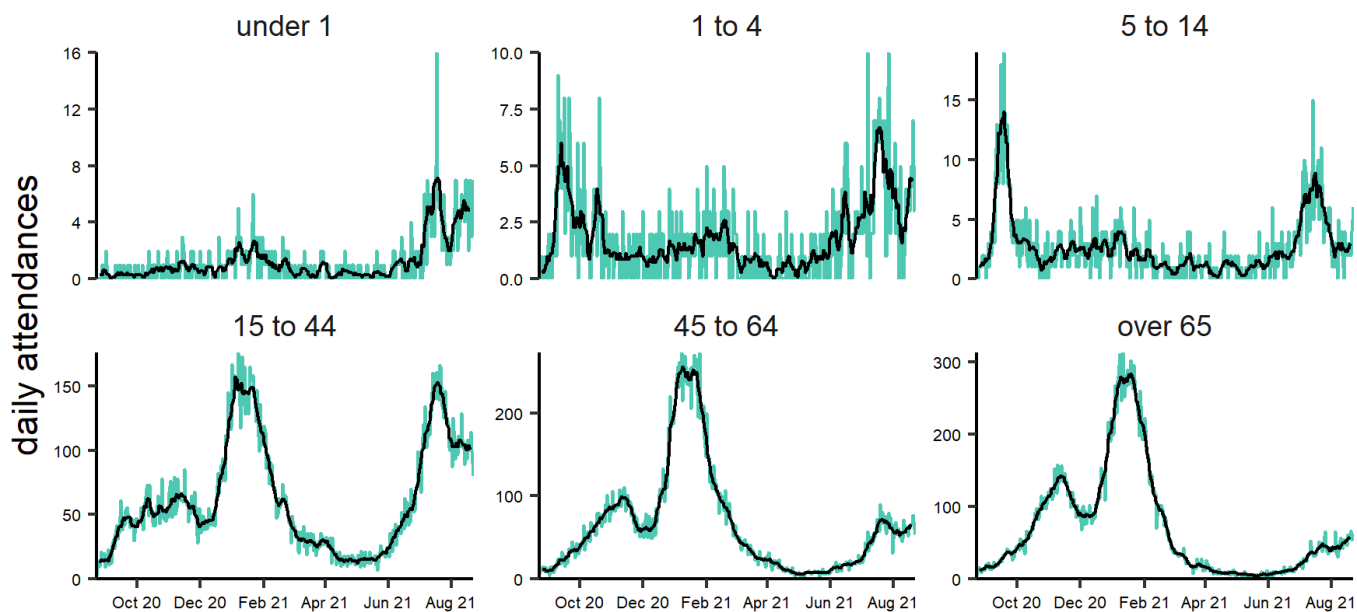
NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON. Black line is 7 day moving average adjusted for bank holidays.

(c)

Covid-19-like by PHE centre 23/08/2020 - 22/08/2021
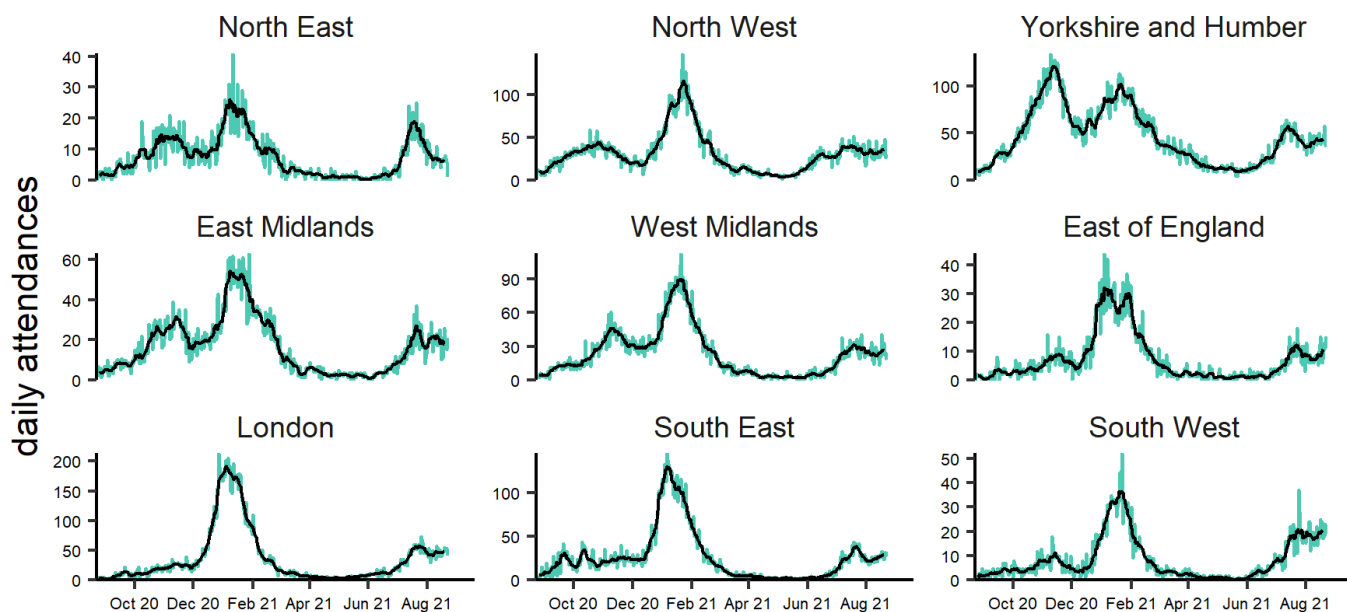
NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON. Black line is 7 day moving average adjusted for bank holidays.

Figure 52: Daily ED attendances for acute respiratory infections, England (a) nationally, (b) by age group and (c) by PHE Centre

(a)

Acute respiratory infection 23/08/2020 - 22/08/2021

(b)
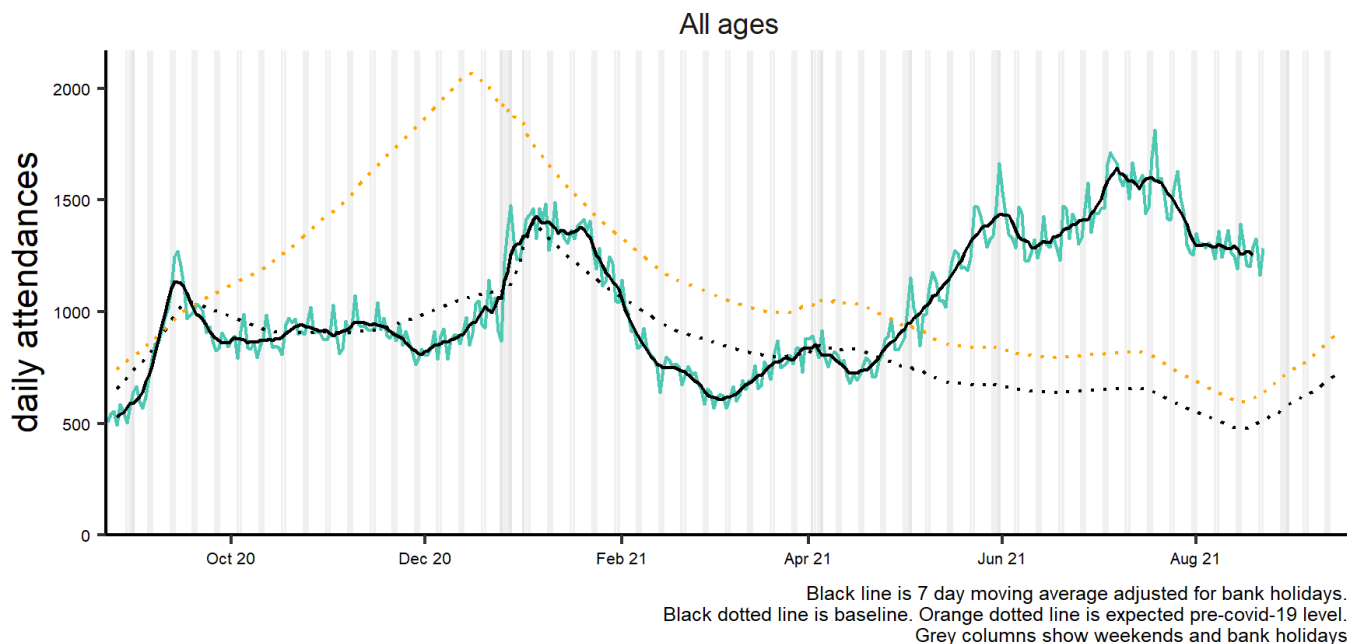
Acute respiratory infection by age group (years) 23/08/2020 - 22/08/2021
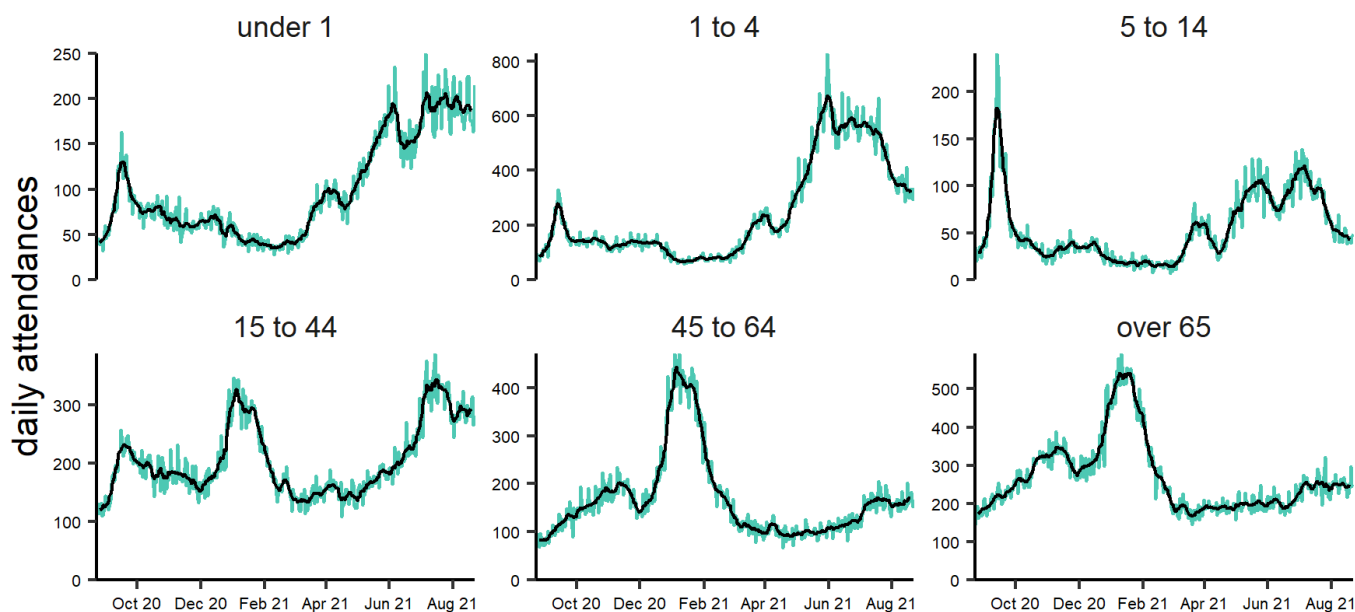
(c)

Acute respiratory infection by PHE centre 23/08/2020 - 22/08/2021
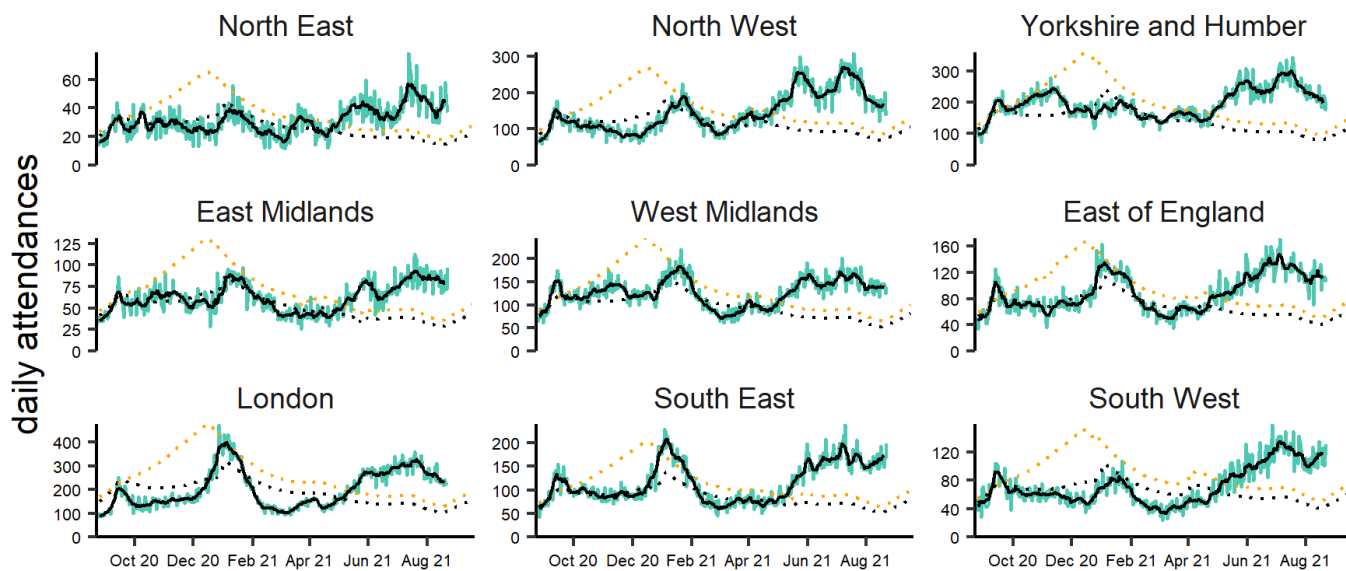
NOTE: SCALES MAY VARY IN EACH GRAPH TO ENABLE TREND COMPARISON. Black line is 7 day moving average adjusted for bank holidays. Black dotted line is baseline. Orange dotted line is expected pre-covid-19 level.

Mortality surveillance

Cumulative COVID-19 deaths

Changes to the definitions of COVID-19 related deaths in England are described in more detail in an accompanying PHE 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 laboratory-confirmed positive COVID-19 test and died within (equal to or less than) 28 days of the first positive specimen date
(b) 60 day definition: A death in a person with a laboratory-confirmed positive COVID-19 test and either: died within 60 days of the first specimen date OR died more than 60 days after the first 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 53 represents these differences by definition.

Figure 53: Number of deaths since by week of death and time since laboratory confirmation of COVID-19, England
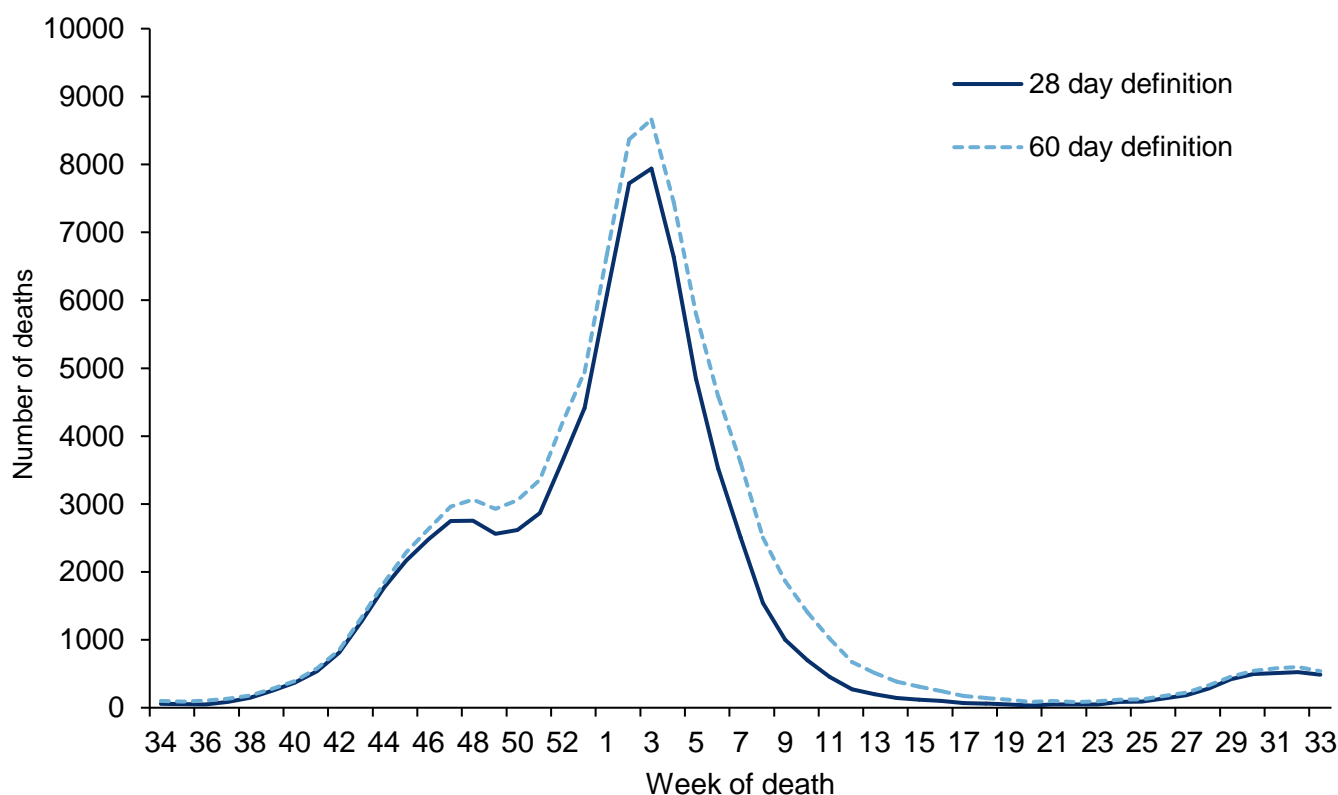
*The data are shown by the week of death. This gives the most accurate analysis of this time progression, however, for the most recent weeks' numbers more deaths are expected to be registered therefore this should be interpreted with caution.

Figure 54: Age-sex pyramid of laboratory confirmed COVID-19 deaths, for the past year
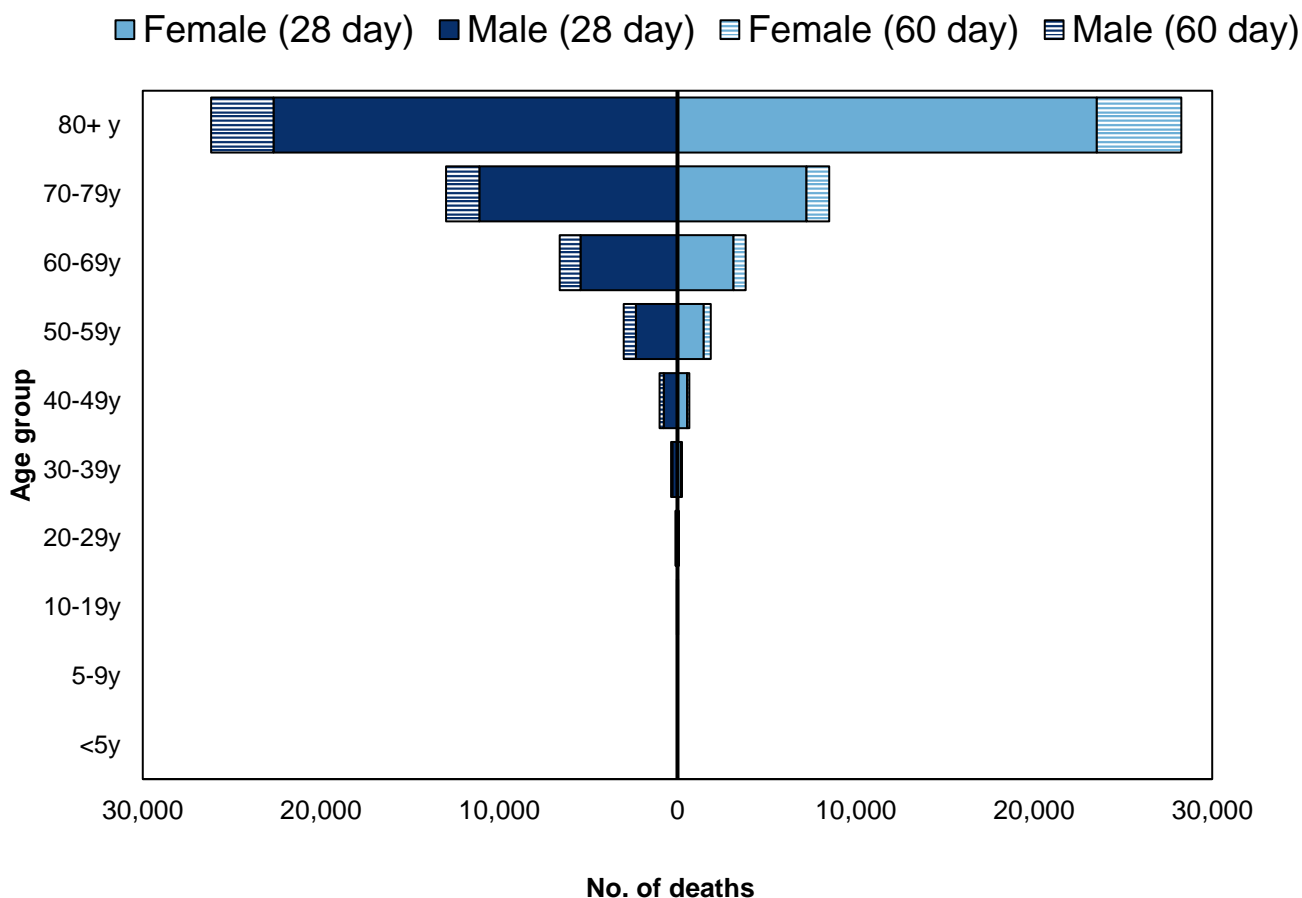
Table 5: Ethnic group (%) of COVID-19 deaths and time since laboratory confirmation of COVID-19, England, for the past year

Ethnicity	28 day definition	60 day definition
White	88.8	88.8
Asian / Asian British	7.4	7.4
Black / African / Caribbean / Black British	2.8	2.8
Mixed / Multiple ethnic groups	0.5	0.5
Other ethnic group	0.5	0.5

Table 6: Cumulative number of COVID-19 deaths since and time since laboratory confirmation of COVID-19 by PHE Centres, for the past year

PHE Centres	28 day definition	60 day definition
North East	4,159	4,927
North West	12,539	14,922
Yorkshire and Humber	7,842	9,279
West Midlands	9,349	11,185
East Midlands	7,472	8,865
East of England	9,900	11,728
London	9,803	11,804
South East	12,252	14,549
South West	5,152	6,020

Figure 55: 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

From the week of 9th August 2021, incidence
rate calculations by UTLA will use 2020
ONS mid-year population estimates.

COVID-19 mortality rate by UTLA (60 days cut off)
27 July 2021 - 24 August 2021 (60 days)

- No Mortality
- 0.01 - 1.74
- 1.75 - 3.24
- 3.25 - 6.49
- 6.50 - 12.49
- ≥ 12.50
- Data suppressed

Contains Ordnance Survey data © Crown copyright and database right 2021.
Contains National Statistics data © Crown copyright and database right 2021.
Created by PHE, GIS Team

Daily excess all-cause mortality (England)

Deaths occurring from 01 January 2020 to 18 August 2021 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 56).

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 56.

Note that as these data are 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.

Excess all-cause mortality was observed in week 32, overall and in the North West. No significant excess mortality was observed by age. The excess mortality noted in week 33 2020 and week 29 2021 coincide with heat waves (Figure 56, 57 and Table 7).

Figure 56: Daily excess all-cause deaths in all ages, England, 01 January 2020 to 18 August 2021
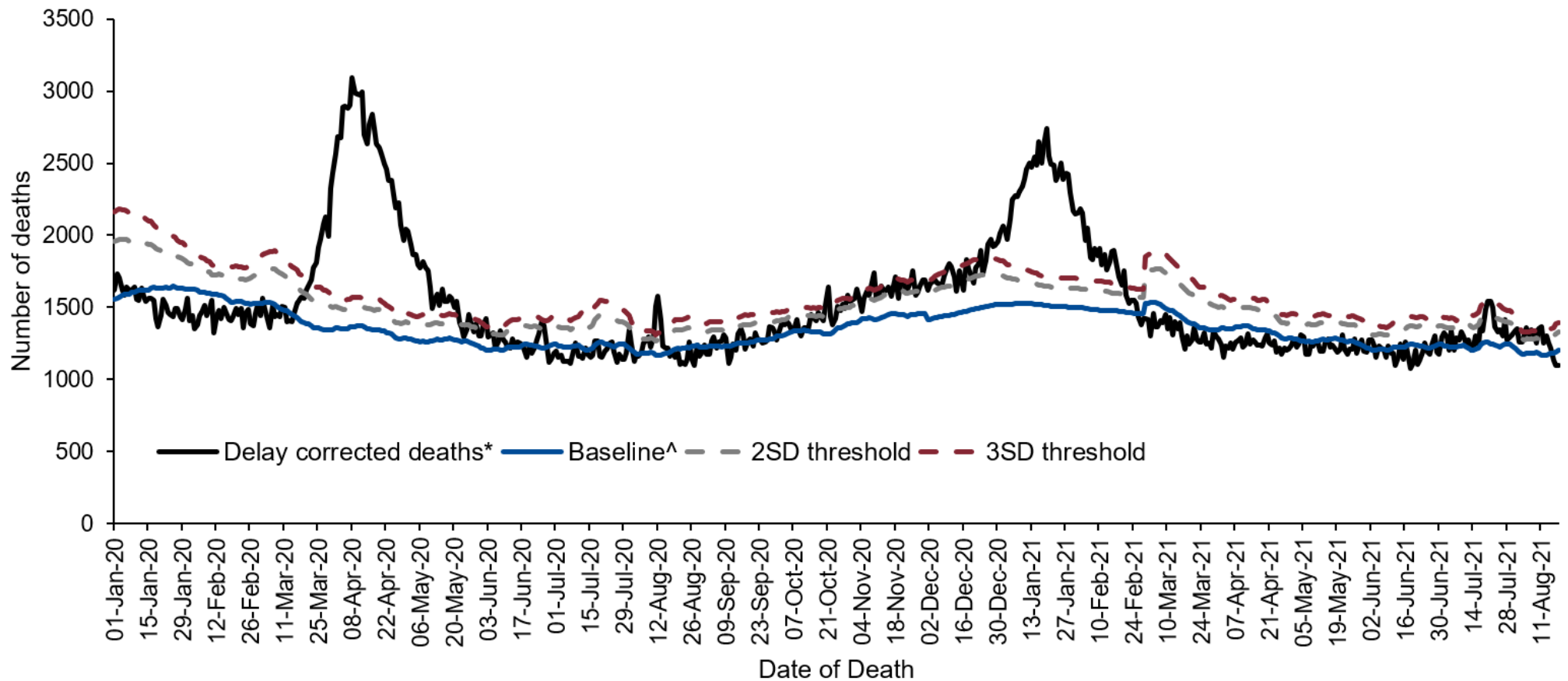
^Baseline calculation:

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

December 2020 to February 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 PHE are the Fingertips excess mortality in England report, which uses ONS death registration data; and the PHE 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) PHE centres, England

(a)

Age Group	Excess detected in week 32 2021?	Weeks in excess from week 10 to 53 2020	Weeks in excess from week 01 to 32 2021
All	✓	13 to 21, 33, 43, 45 to 46, 50, 52 to 53	01 to 07, 31 to 32
under 25	x	None	None
25 to 44	x	14 to 16	None
45 to 64	x	12 to 19, 49 to 50, 52 to 53	01 to 08, 29 to 30
65 to 74	x	13 to 19, 46, 48, 52 to 53	01 to 07
75 to 84	x	13 to 21, 33, 45, 49, 52 to 53	01 to 07
85+	x	13 to 21, 33, 53	01 to 07

(b)

PHE Centres	Excess detected in week 32 2021?	Weeks in excess from week 10 to 53 2020	Weeks in excess from week 01 to 32 2021
East of England	x	14 to 19, 52, 53	01 to 07
East Midlands	x	13 to 19, 48	01 to 07
London	x	12 to 19, 33, 52 to 53	01 to 06
North East	x	14 to 21	02 to 04
North West	✓	13 to 19, 33, 42 to 47	01 to 07, 32
South East	x	13 to 21, 33, 50 to 53	01 to 07
South West	x	13 to 19, 33	01 to 07, 29
West Midlands	x	13 to 20, 45, 48, 53	01 to 07, 29
Yorkshire and Humber	x	14 to 21, 23, 43, 45 to 50	02 to 04

Figure 57: Daily excess all-cause deaths by (a) age group and (b) PHE centres, England, 01 March 2020 to 18 August 2021

(a)
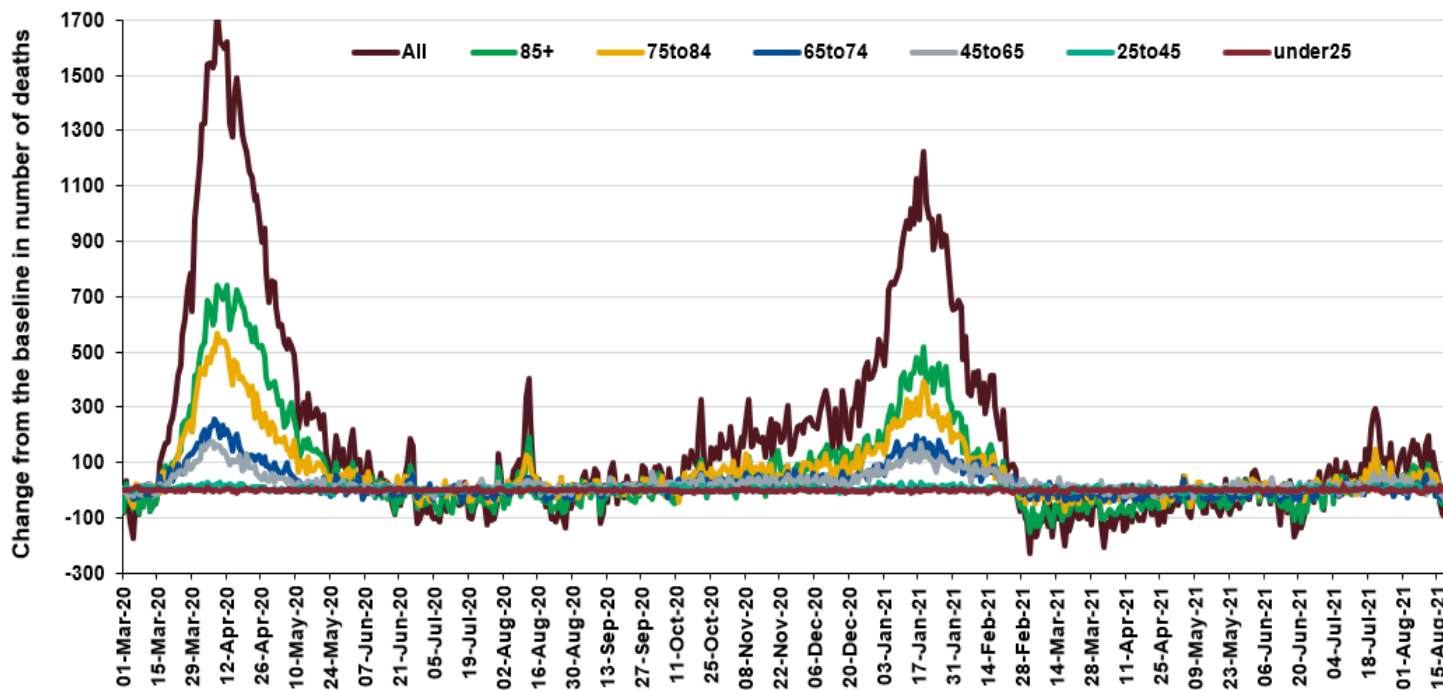
(b)
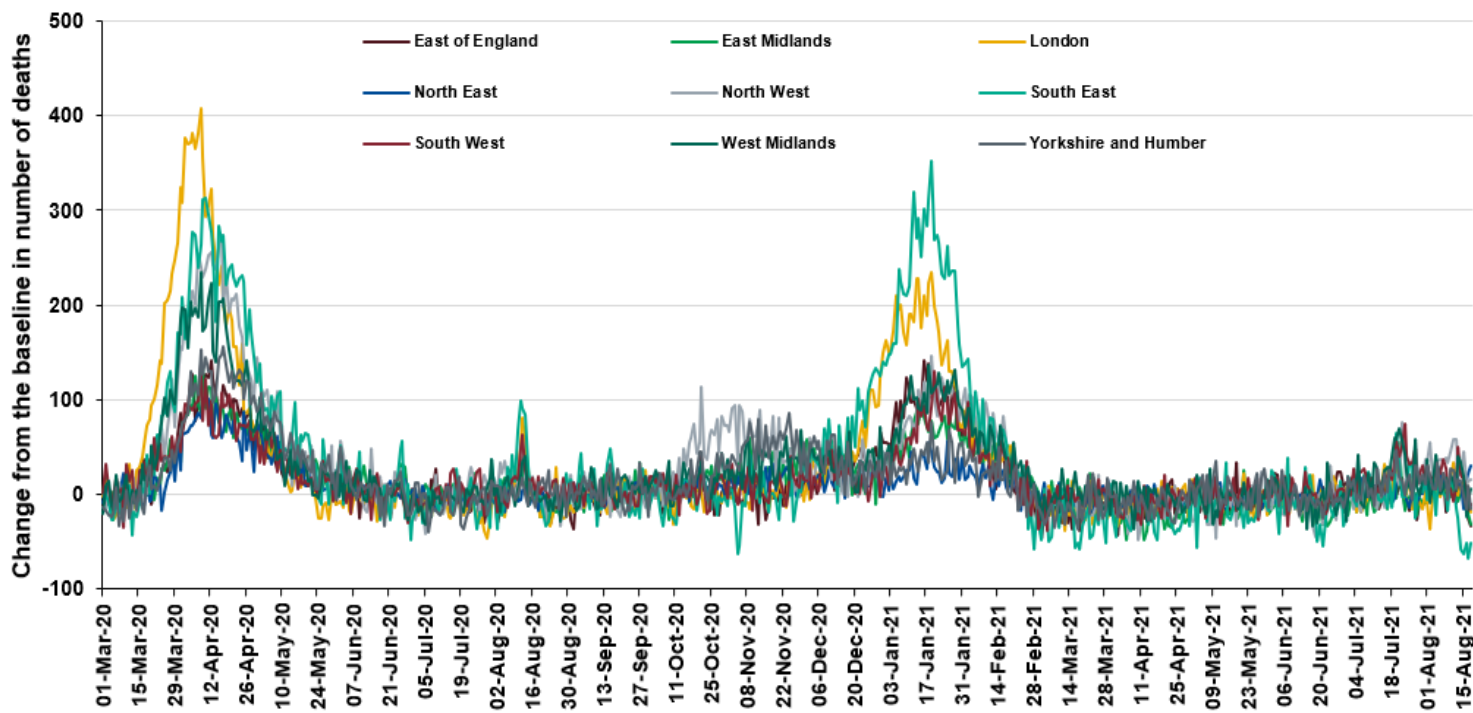
Microbiological surveillance

SARS-CoV-2 variants

PHE 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 here, and in the latest technical briefing here.

Antimicrobial susceptibility

Table 8 shows in the 12 weeks up to week 33 2021, the proportion of all lower respiratory tract isolates of Streptococcus pneumoniae, Haemophilus influenza, 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 8: Antimicrobial susceptibility surveillance in lower respiratory tract

Organism	Antibiotic	Specimens tested (N)	Specimens susceptible (%)
S. pneumoniae	Penicillin	1,421	83
	Macrolides	1,587	79
	Tetracycline	1,555	80
H. influenzae	Amoxicillin/ampicillin	5,488	58
	Co-amoxiclav	6,005	65
	Macrolides	1,673	6
	Tetracycline	6,041	98
S. aureus	Methicillin	4,481	93
	Macrolides	5,069	71
MRSA	Clindamycin	251	47
	Tetracycline	301	69
MSSA	Clindamycin	3,112	77
	Tetracycline	3,911	93

* Macrolides = erythromycin, azithromycin and clarithromycin

Data source: PHE'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 PHE 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 05 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 PHE since mid-March 2020

COVID-19 sero-prevalence surveillance

The results from testing samples provided by healthy adult blood donors aged 17 years and older, supplied by the NHS Blood and Transplant (NHS BT collection) between weeks 35 2020 and week 32 2021 are summarised. This programme has previously involved testing approximately 1,000 donor samples from 2 different NHS regions each week. As of week 44 2020, approximately 250 samples from each geographic NHS region are tested each week. The COVID-19 vaccination campaign began on the 8 December 2020 (week 50) with a phased roll out by age and risk group.

Seroprevalence in Adults aged 17 years and older (Blood Donors)

The results presented here are based on testing blood donor samples with Roche nucleoprotein (N) and Roche spike (S) antibody assays.

Nucleoprotein (Roche N) assays only detect post-infection antibodies, whereas spike (Roche S) assays will detect both post-infection antibodies and vaccine-induced antibodies. Thus, changes in seropositivity for the Roche N assay will reflect the effect of natural infection. Increases in seropositivity as measured by S antibody will reflect both infection and vaccination. Antibody responses to both targets will reflect infection or vaccination occurring at least 2 to 3 weeks previously given the time taken to generate a COVID-19 antibody response. Donors have been asked to defer donations for at least 7 full days post vaccination.

This report presents Roche N and Roche S seropositivity estimates on the same set of samples, using a 4-week rolling prevalence for national and age group estimates and a 12-week rolling prevalence for regional estimates. Seroprevalence estimates reported are based on seropositivity which are unadjusted for the sensitivity and specificity of the assays used.

National prevalence

Overall population weighted (by age group, sex and NHS region) antibody prevalence among blood donors aged 17 years and older in England was 18.7% (95% CI 17.7% - 19.7%) using the Roche N assay and 97.7% (95% CI 97.3% - 98.1%) using the Roche S assay for the period 19 July – 13 August (weeks 29-32 2021). 1,216 / 6,888 were Roche N positive and 6740/6,894 samples were Roche S positive. This compares with 17.1% (95% CI 16.2% - 18.1%) Roche N seropositivity and 95.5% (95% CI 94.9% - 96.0%) Roche S seropositivity for the period of 21 June 2021 – 16 July 2021 (weeks 25-28 2021).

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Seropositivity (weighted by region, age group and sex) varies over time. Figure 58 shows the overall 4-weekly rolling proportion seropositive over time for the Roche N and Roche S assays. Seropositivity estimates are plotted weekly using the mid-point of a rolling 4-weekly period.

Regional prevalence of infection over time

Seropositivity (weighted by age group and sex) using the Roche N assay which detects infection only, varies by region (Figure 59).

Regional seropositivity estimates are plotted using the mid-point of a 12-weekly rolling period that reduces to 8 weekly in the most recent weeks to allow for a more representative current estimate of seropositivity. Previously, regional Roche N seropositivity was reported using a 4-week rolling period; however, this was changed due to the difficulty interpreting regional trends when using a 4-weekly window, given the fluctuation in sampling locations each week for some regions.

In London, the 12-weekly rolling seropositivity increased from 23.9% (95% CI 22.4% - 25.5%) in weeks 13-24 2021 to 25.2% (95% CI 23.3% - 27.3%) in weeks 25-32 2021.

Data from the Midlands show the proportion seropositive increased from 16.3% (95% CI 15.0% - 17.6%) in weeks 13-24 2021 to 19.4% (95% CI 17.8% - 21.2%) in weeks 25-32 2021.

Seropositivity in the North East and Yorkshire region increased slightly from 15.0% (95% CI 13.7% - 16.4%) in weeks 13-24 2021 to 16.3% (95% CI 14.5% - 18.3%) in weeks 25-32 2021.

Data from the North West show that seropositivity has increased from 17.5% (95% CI 16.0% - 19.0%) in weeks 13-24 2021 to 22.6% (95% CI 20.7% - 24.7%) in weeks 25-32 2021.

Seropositivity increased in the South East region from 11.9% (95% CI 10.8% - 13.1%) in weeks 13-24 2021 to 13.7% (95% CI 12.1% - 15.4%) in weeks 25-32 2021.

In the South West region, seropositivity has remained stable at 9.1% (95% CI 8.1% - 10.3%) in weeks 13-24 2021 and 9.6% (95% CI 8.3% - 11.1%) in weeks 25-32 2021.

In the East of England, seropositivity has remained stable at 13.5% (95% CI 12.2% - 14.9%) in weeks 13-24 2021 and 14.0% (95% CI 12.4% - 15.7%) in weeks 25-32 2021.

London has consistently seen the highest Roche N seropositivity with the lowest observed in the South West.

Prevalence by age group

Seropositivity estimates by age group using the Roche N and Roche S assays are presented below. Prevalence for all age groups for weeks 41-44 has been excluded due to a change in sampling strategy from week 44 which resulted in a small number of samples from older age groups in some regions which makes interpretation of trends for this period difficult.

Based on testing samples using the Roche N assay (Figure 60) as a marker of infection, the highest seropositivity has consistently been observed in those aged 17-29 and the lowest in those aged 70-84. Recent increases in N seropositivity has been observed in some age groups. Prevalence in individuals aged 17-29 has increased from 24.4% (95% CI 21.8%- 27.3%) in weeks 25-28 to 28.4% (95% CI 25.3% - 31.6%) in weeks 29-32. An increase in 40 to 49-year olds was observed from 17.5% (95% CI 15.5% – 19.8%) in weeks 25-28 to 20.9% (95%CI 18.6% - 23.3%) in weeks 29-32. A small increase has also been seen in the 30 to 39-year olds from 18.4% (95% CI 16.4%- 20.5%) in week 25-28 to 20.2% (95% CI 18.0% - 22.7%) in weeks 29-32.

Seropositivity in those aged 70-84 decreased from 9.2% (95% CI 6.9% - 12.1%) in weeks 25-28 to 7.7% (95% CI 5.6% - 10.7%) in weeks 29-32 2021. Fluctuations in seropositivity have been observed in this age group previously and given the small numbers of samples within this age group, estimates are prone to variation. Roche N seropositivity has continued to plateau across 50 to 59 and 60 to 69-year olds.

The small increases in Roche N seropositivity seen in some age groups is consistent with recent increases of case numbers seen from other surveillance data.

The sharp increases in seropositivity across all age groups using the Roche S assay reflect the presence of antibodies induced by vaccination (Figure 60).

Roche S seropositivity increased earliest in those aged 70-84 and since week 13 plateaued, reaching 99.7% (95% CI 98.9% - 99.9%) in weeks 29-32 2021. Seropositivity in those aged 60-69 has also plateaued since week 16 reaching 98.9% (95% CI 98.2% - 99.3%) in weeks 29-32 2021. A plateauing in Roche S seropositivity since week 19 has been observed in those aged 50-59 reaching 99.0% (95% CI 98.4% - 99.3%) in weeks 29-32 2021. A plateauing in seropositivity has been observed in the 40 to 49-year olds since week 23 reaching 97.8% (95% CI 96.8% – 98.5%) in weeks 29-32. Plateauing is now being observed in the 30 to 39-year olds reaching 95.6% (95% CI 94.3%- 96.6%) in weeks 29-32. Increases In seropositivity are still being observed in those aged 17-29, increasing from 87.4% (95% CI 85.1% - 89.4%) in weeks 25-28 2021 to 96.2% (95% CI 94.6% - 97.3%) in weeks 29-32 2021.

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Seropositivity estimates for S antibody in blood donors are likely to be higher than would be expected in the general population, whilst seropositivity estimates for N antibody may underestimate the proportion of the population previously infected. This probably reflects the fact that donors are more likely to be vaccinated and potentially less likely to be exposed to natural infection than age matched individuals in the general population.

Vaccination is making an important contribution to the overall Roche S increases observed since the roll out of the vaccination programme, initially amongst individuals aged 50 years and above who were prioritised for vaccination as part of the phase 1 programme and more recently in younger adults as part of phase 2 of the vaccination programme.

Figure 58: Overall 4-weekly rolling SARS-CoV-2 antibody seroprevalence (% seropositive) in blood donors
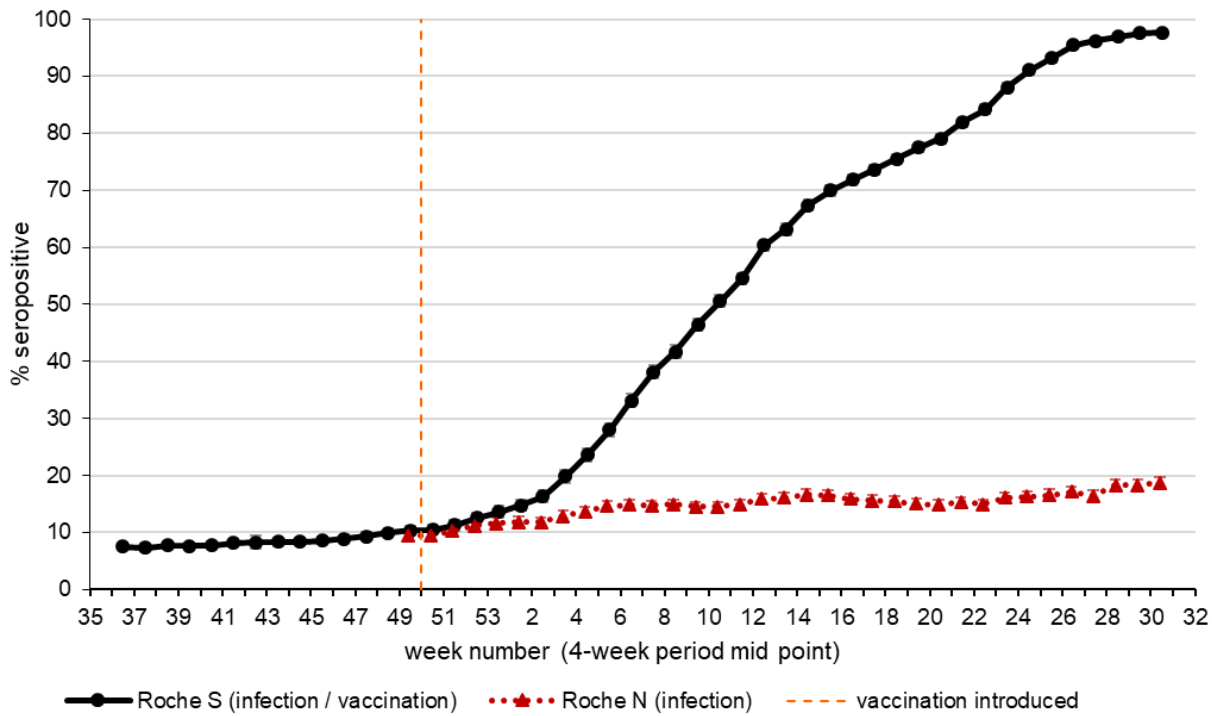
Figure 59: 4-weekly rolling SARS-CoV-2 antibody seroprevalence (% seropositive) in blood donors by region, using Roche N test; error bars show 95% confidence intervals
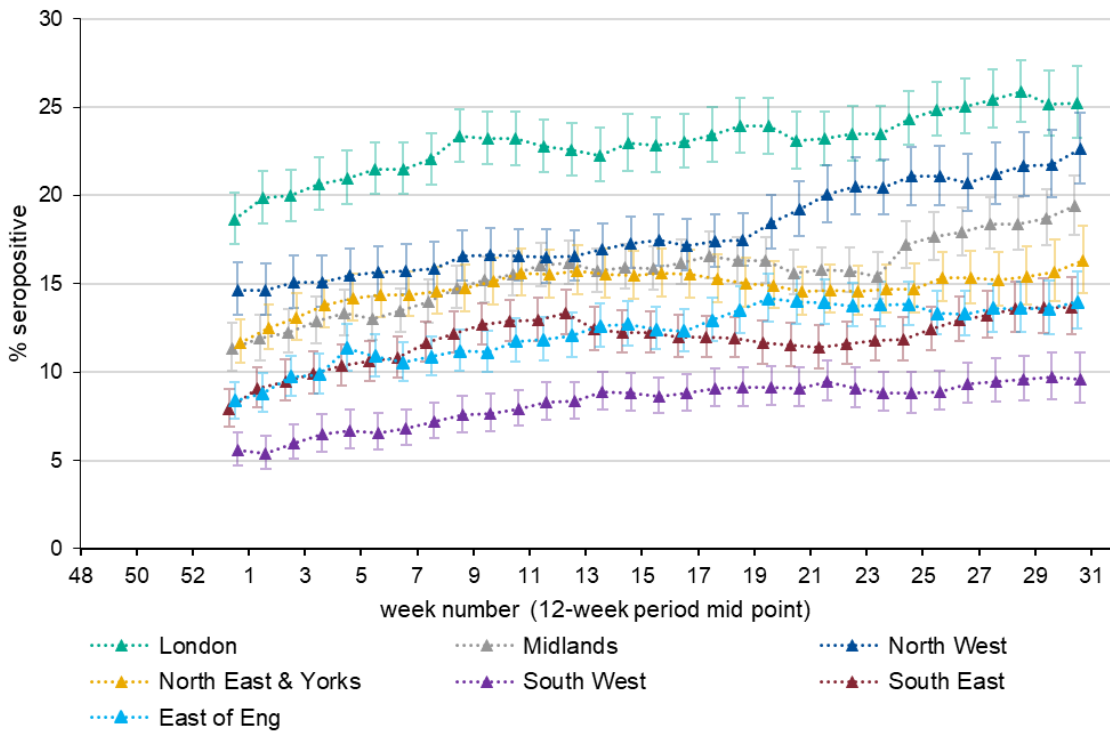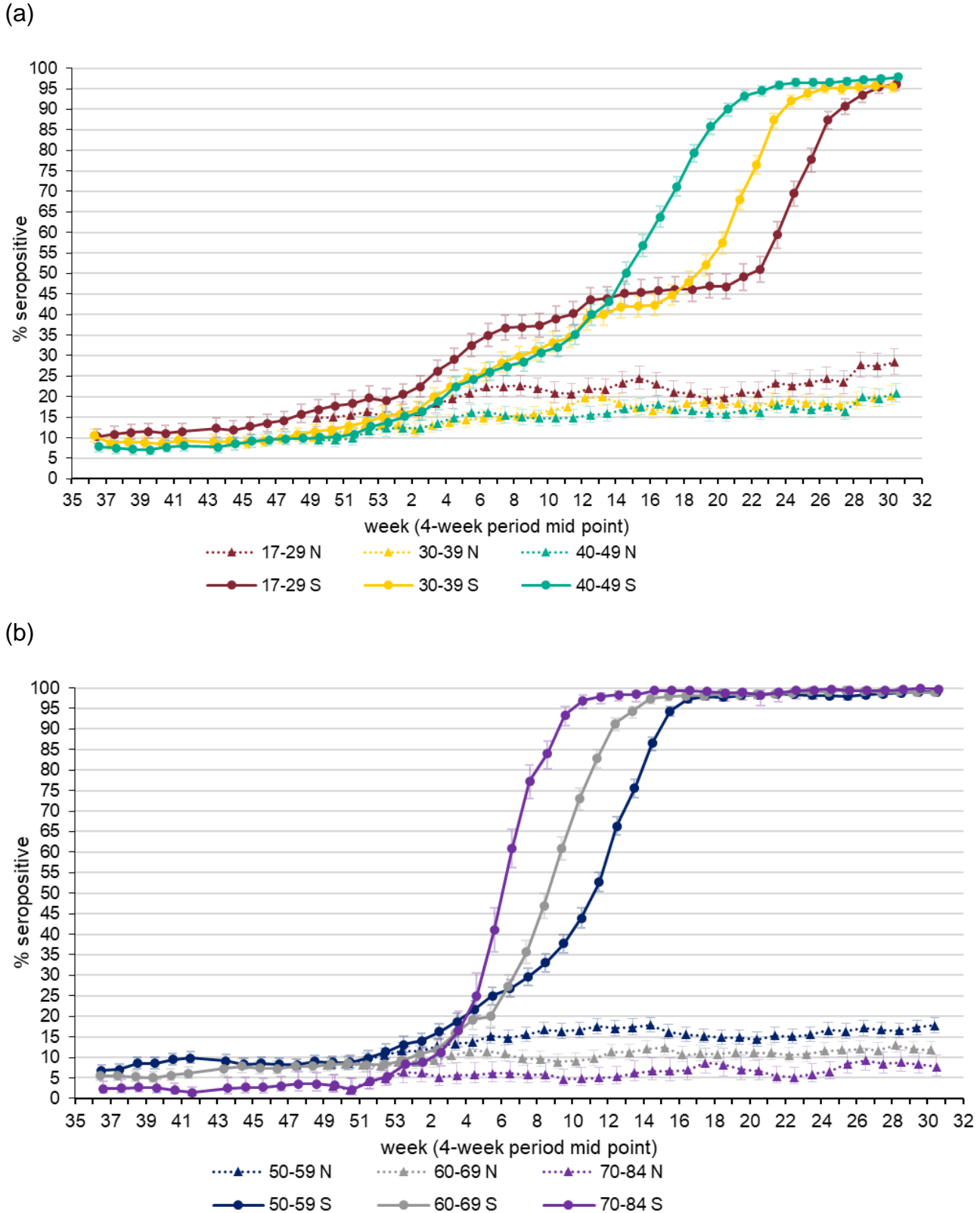

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Figure 60: Population weighted 4-weekly rolling SARS-CoV-2 antibody seroprevalence (% seropositive) in blood donors from the Roche S and Roche N assays by a) age groups 17 to 29, 30 to 39 and 40 to 49, b) age group 50 to 59, 60 to 69 and 70 to 84

(a)

(b)

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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 33 2021 (week ending 22 August 2021) was extracted from the National Immunisation Management Service (NIMS). The data presented this week is the provisional proportion of people in England who had received one dose and two doses of a COVID-19 vaccination by age group. The overall vaccine uptake in the population for dose 1 was 63.9% and 55.9% for dose 2. The breakdown by sex showed vaccine uptake in males was 61.5% and 66.2% in females for dose 1. For dose 2 total uptake was 53.1% in males and 58.9% in females. The vaccine uptake rate in adults aged 18 and over was 79.2% (39,227,657/49,521,704) for dose 1 and 70.0% (34,645,413/49,521,704) for dose 2.

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

NATIONAL	Vaccinated with at least 1 dose			Vaccinated with 2 doses		
	People in NIMS cohort	Number vaccinated	% vaccine uptake	People in NIMS cohort	Number vaccinated	% vaccine uptake
Over 80	2,765,212	2,637,069	95.4	2,765,212	2,586,755	93.5
75 to under 80	2,071,456	1,979,240	95.5	2,071,456	1,956,500	94.5
70 to under 75	2,867,740	2,711,803	94.6	2,867,740	2,678,869	93.4
65 to under 70	2,888,940	2,670,139	92.4	2,888,940	2,625,259	90.9
60 to under 65	3,450,863	3,124,041	90.5	3,450,863	3,037,270	88.0
55 to under 60	4,078,996	3,618,268	88.7	4,078,996	3,497,133	85.7
50 to under 55	4,230,057	3,649,245	86.3	4,230,057	3,510,602	83.0
45 to under 50	4,006,220	3,270,952	81.6	4,006,220	3,079,435	76.9
40 to under 45	4,133,560	3,137,499	75.9	4,133,560	2,876,973	69.6
35 to under 40	4,522,476	3,167,004	70.0	4,522,476	2,709,493	59.9
30 to under 35	4,768,623	3,109,627	65.2	4,768,623	2,432,558	51.0
25 to under 30	4,469,919	2,788,448	62.4	4,469,919	1,870,714	41.9
18 to under 25	5,267,642	3,364,322	63.9	5,267,642	1,783,852	33.9
Under 18	12,645,655	521,192	4.1	12,645,655	121,875	1.0
Total*	62,167,359	39,749,338	63.9	62,167,359	34,767,657	55.9

*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 are 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 PHE are for public health surveillance purposes only.

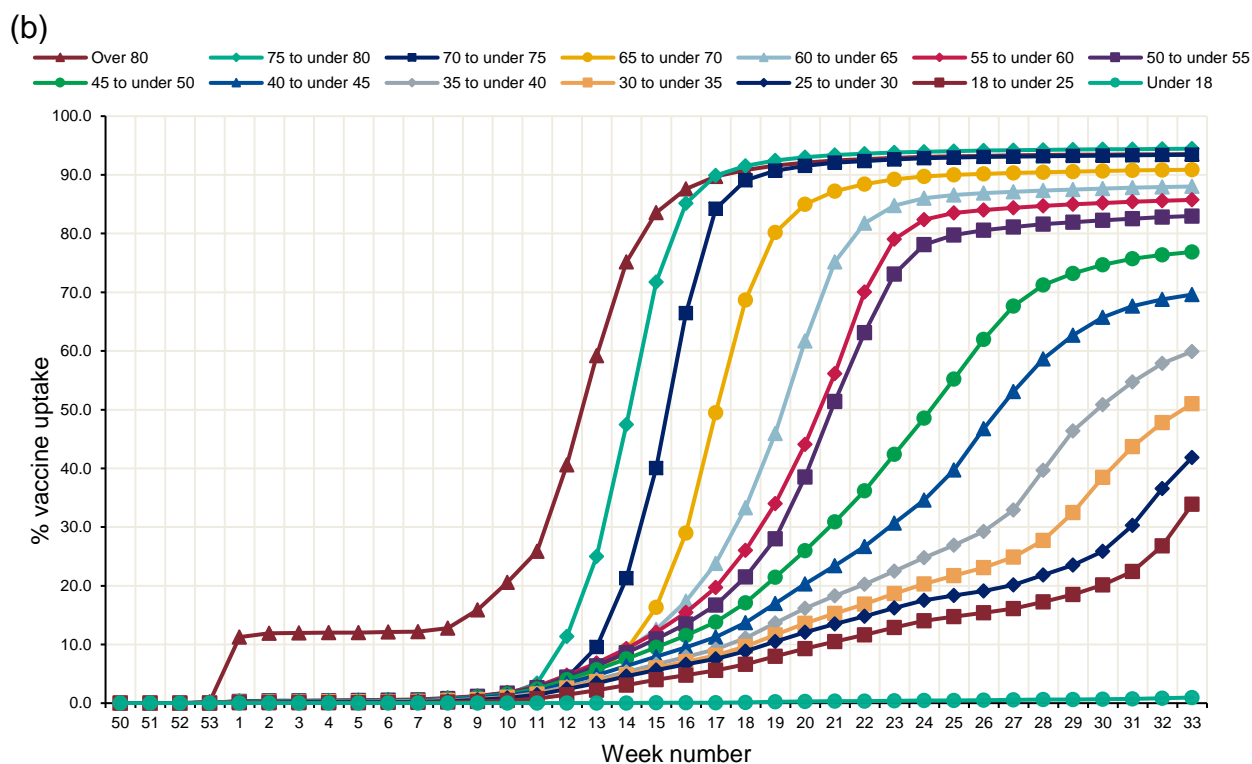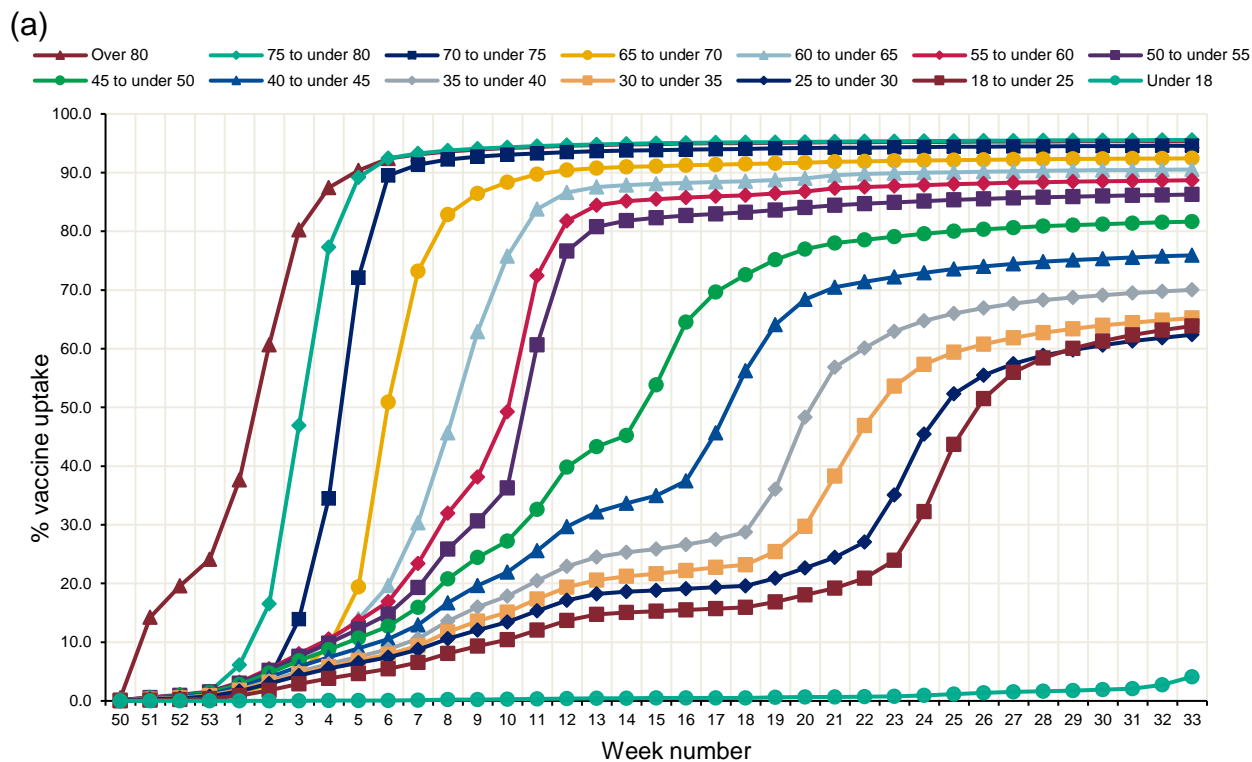**Figure 61: Cumulative weekly COVID-19 vaccine uptake by age in England for (a) Dose 1 and (b) Dose 2**

(a)

(b)

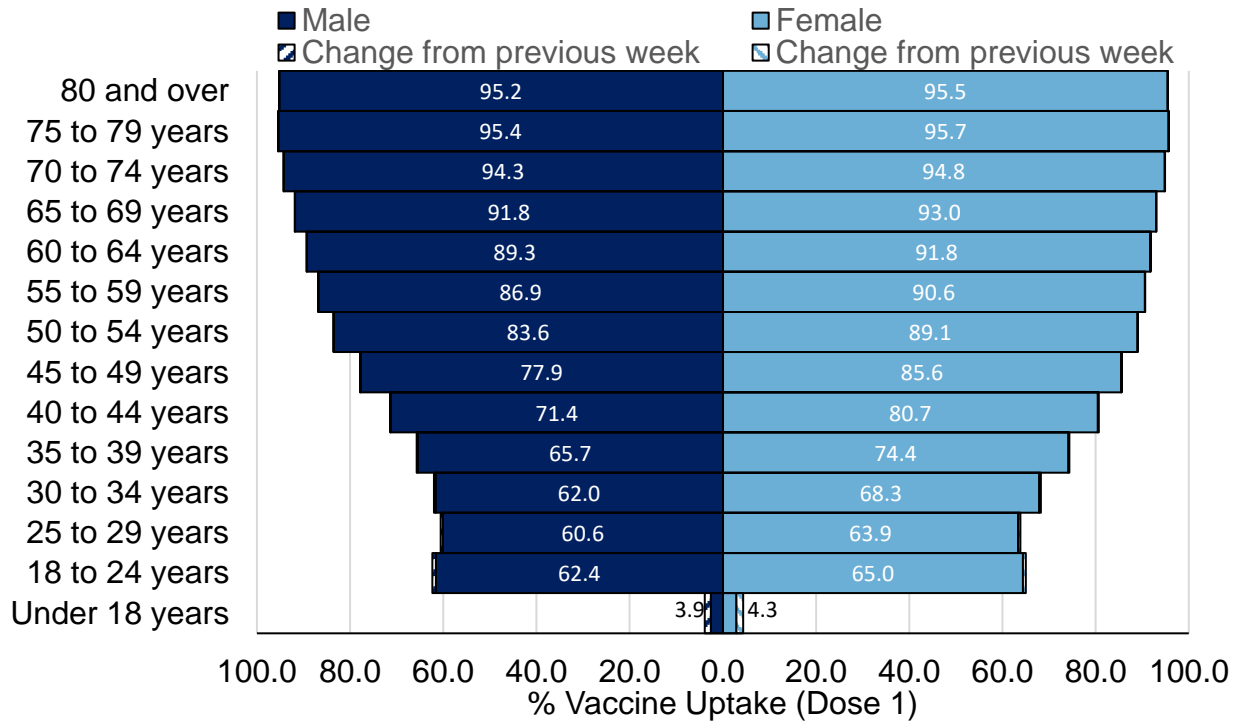**Figure 62: Age-Sex pyramid for COVID-19 vaccine uptake by age in England for Dose 1**

Age group	Male	Female
80 and over	95.2	95.5
75 to 79 years	95.4	95.7
70 to 74 years	94.3	94.8
65 to 69 years	91.8	93.0
60 to 64 years	89.3	91.8
55 to 59 years	86.9	90.6
50 to 54 years	83.6	89.1
45 to 49 years	77.9	85.6
40 to 44 years	71.4	80.7
35 to 39 years	65.7	74.4
30 to 34 years	62.0	68.3
25 to 29 years	60.6	63.9
18 to 24 years	62.4	65.0
Under 18 years	3.9	4.3

% Vaccine Uptake (Dose 1)

Figure 63: Age-Sex pyramid for COVID-19 vaccine uptake by age in England for Dose 2

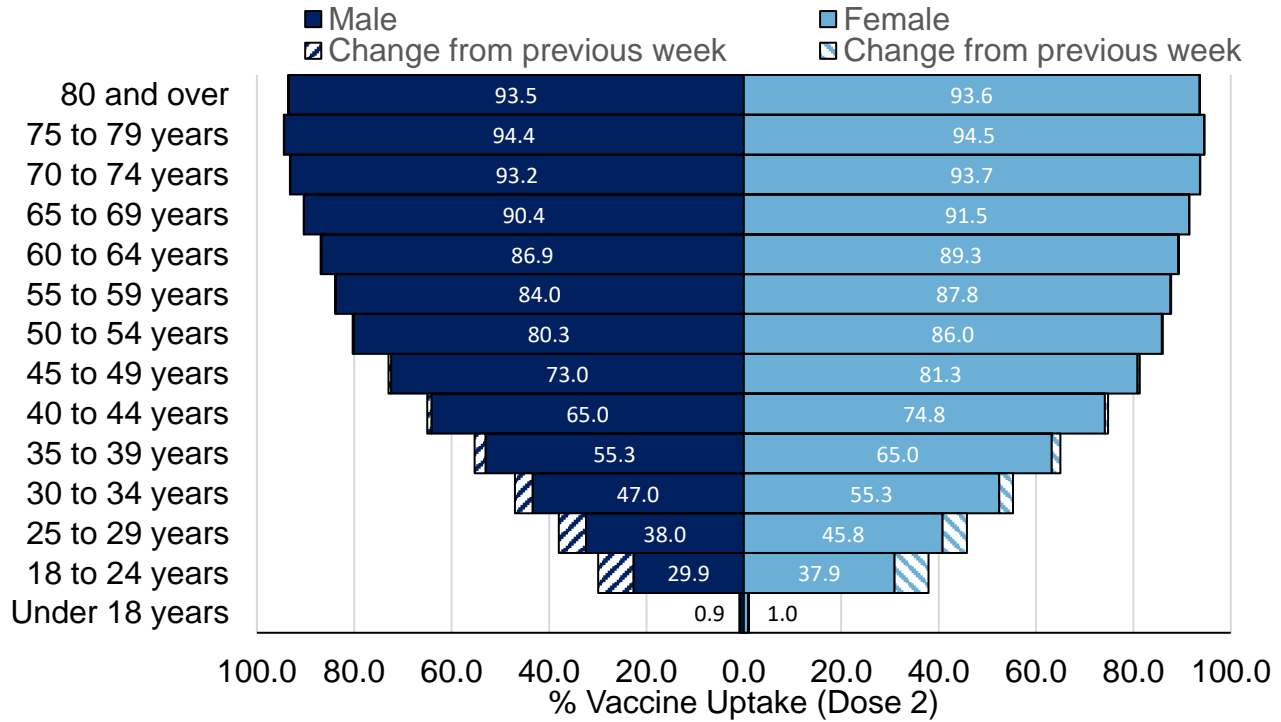| Age group	Male	Female
80 and over	93.5	93.6
75 to 79 years	94.4	94.5
70 to 74 years	93.2	93.7
65 to 69 years	90.4	91.5
60 to 64 years	86.9	89.3
55 to 59 years	84.0	87.8
50 to 54 years	80.3	86.0
45 to 49 years	73.0	81.3
40 to 44 years	65.0	74.8
35 to 39 years	55.3	65.0
30 to 34 years	47.0	55.3
25 to 29 years	38.0	45.8
18 to 24 years	29.9	37.9
Under 18 years	0.9	1.0

% Vaccine Uptake (Dose 2)

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Figure 64: Cumulative weekly COVID-19 vaccine uptake by ethnicity in England in those aged 50 and over
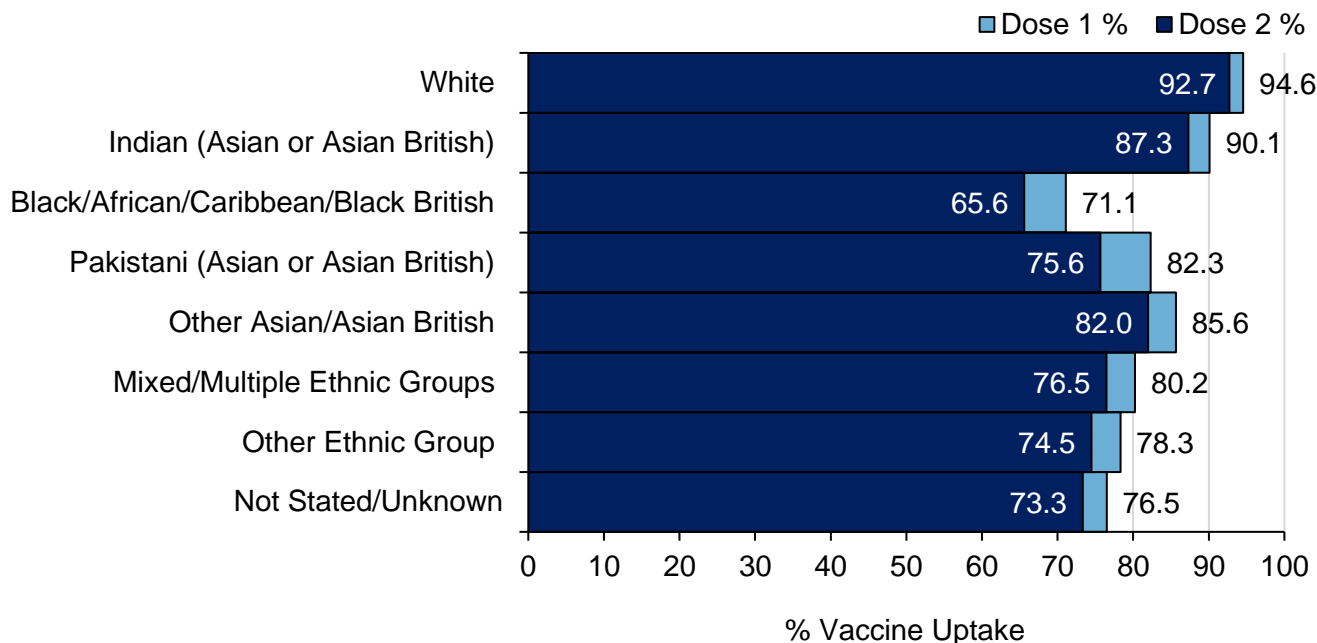
From the 6 January 2021 (week 1 2021), the JCVI advises initially prioritising delivery of the first vaccine dose to maximise the public health impact in the short term and reduce the number of preventable deaths from COVID-19. The statement can be accessed here

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 24 August 2021, a total of 212,350,200 cases of COVID-19 infection have been reported worldwide, including 4,439,940 COVID-19 related deaths.

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

Figure 65: Global map of cumulative COVID-19 cases
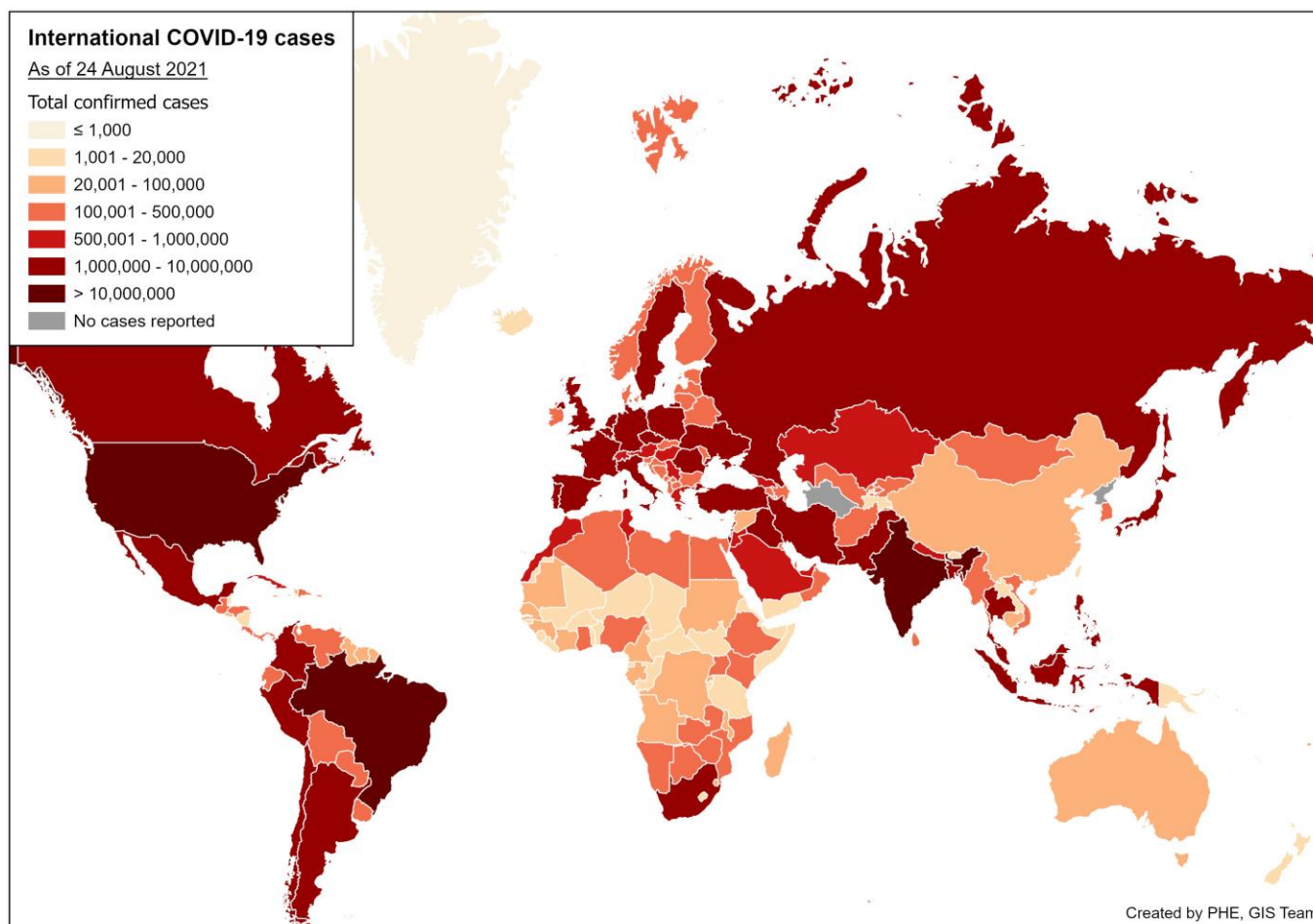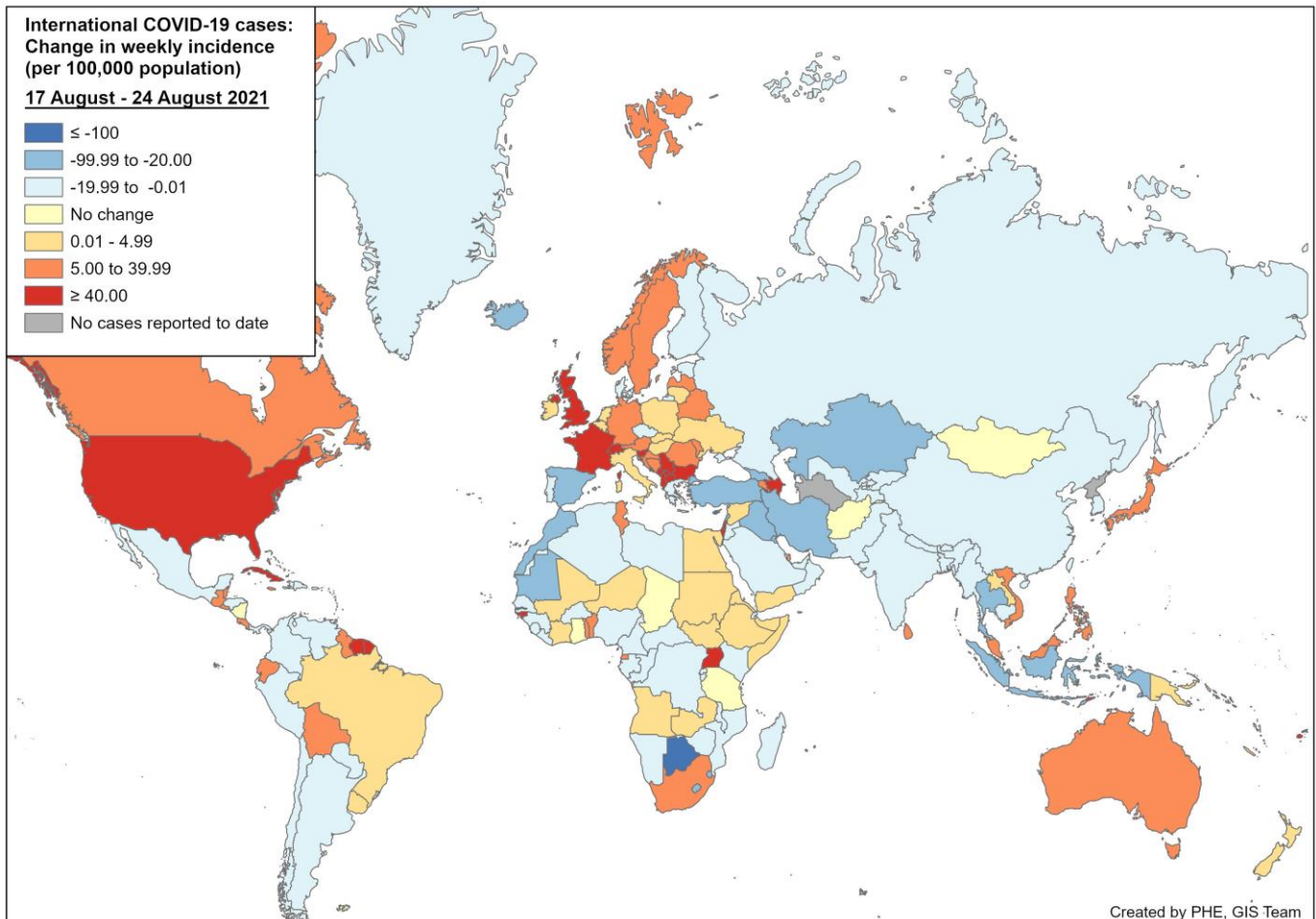
Figure 66: Global map of change in weekly COVID-19 case incidence rate per 100,000 population compared to the previous week

Global influenza update

Updated on 16 August 2021 (based on data up to 01 August 2021) (WHO website).

In the temperate zones of the northern hemisphere, influenza activity remained below baseline overall. In the temperate zone of the southern hemisphere, influenza activity was reported at inter-seasonal levels. Worldwide, influenza B detections accounted for the majority of the low numbers of detections reported.

In the Caribbean and Central American countries, sporadic influenza B detections were reported from Mexico.

In tropical South America, one influenza A detection was reported from Peru.

In Western Africa, influenza A(H1N1)pdm09 virus detections were reported in Ghana.

In Middle Africa, no detections were reported.

In Eastern Africa, predominantly influenza B detections were reported from Kenya and Madagascar, followed by few influenza A(H3N2) detections from Kenya.

In Southern Asia, influenza detections of predominantly A(H3N2) virus increased in India and Nepal. In addition, a few influenza A(H1N1)pdm09 virus detections were reported from India and a few influenza B/Victoria lineage detections were reported from Bangladesh and Nepal.

In South East Asia, one detection of influenza A(H3N2) virus was reported from the Philippines.

In the countries of North America, influenza activity indicators, including the percent of tests positive for influenza and influenza like illness (ILI) activity, were at very low levels.

In Europe, influenza activity remained at inter-seasonal levels with sporadic detections of influenza A and B viruses reported in some countries.

In Central Asia, no influenza detections were reported across reporting countries.

In Northern Africa, no reports were received for this reporting period.

In Western Asia, influenza and ILI activity remained low overall. Qatar reported a few detections of influenza A(H3N2) following a period of B detections.

In East Asia, influenza illness indicators and influenza activity remained low.

The WHO GISRS laboratories tested more than 186,515 specimens during the period 19 July to 01 August 2021. A total of 894 specimens were positive for influenza viruses, of which 383 (42.8%) were typed as influenza A and 511 (57.2%) as influenza B. Of the sub-typed influenza A viruses, 51 (14.2%) were influenza A(H1N1)pdm09 and 307 (85.8%) were influenza A(H3N2). Of the characterized B viruses, 2 (0.4%) belonged to the B-Yamagata lineage and 456 (99.6%) to the B-Victoria lineage.

Influenza in Europe

Updated on 26 August 2021 (Joint ECDC-WHO Europe Influenza weekly update)

For weeks 29 to 32 of 2021, influenza activity remained at inter-seasonal levels throughout Europe.

For week 32 2021, of 271 sentinel specimens tested for influenza viruses, none were positive. Since the start of the 2020 to 2021 season, of 48,181 sentinel-source specimens tested for influenza viruses, 47 were positive.

Influenza in the Northern Hemisphere

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 update on 08 August 2021 (WHO website).

Since the previous update on 22 June 2021, one human case of infection with an avian influenza A(H5N1) virus and six human cases of infection with avian influenza A(H5N6) viruses were reported officially.

Influenza A(H5) viruses:
According to reports received by the World Organisation for Animal Health (OIE), various influenza A(H5) subtypes continue to be detected in birds in Africa, Europe and Asia.

Influenza A(H7N9) viruses:
There have been no publicly available reports from animal health authorities in China or other countries on influenza A(H7N9) virus detections in animals in recent months. Overall, the risk assessments have not changed.

Middle East respiratory syndrome coronavirus (MERS-CoV)

Latest update on 17 August 2021 (WHO website).

Up to 17 August 2021, a total of 5 cases of Middle East respiratory syndrome coronavirus, MERS-CoV, (three 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 four additional cases of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) infection, including one associated death. (WHO website).

From 2012 through 31 July 2021, a total of 2,578 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 can be found here, where it is highlighted 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

PHE monitoring of the effectiveness of COVID-19 vaccination

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

PHE has delegated authority, on behalf of the Secretary of State, to process Patient Confidential Data under Regulation 3 The Health Service (Control of Patient Information) Regulations 2002
Regulation 3 makes provision for the processing of patient information for the recognition, control and prevention of communicable disease and other risks to public health.

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-leading science, research, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

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PHE supports the UN Sustainable Development Goals

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