Public Health England

Protecting and improving the nation's health

Weekly national Influenza and COVID-19 surveillance report

Week 8 report (up to week 7 data)
25 February 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 7 (between 15 and 21 February 2021) and for some indicators daily data up to 23 February 2021.

Surveillance indicators suggest that at a national level COVID-19 activity continued to decrease in week 7 of 2021. There is currently limited testing for other respiratory viruses, however, laboratory indicators suggest that influenza activity is low.

Rollout of the COVID-19 vaccination programme began in week 50. Further national social and physical distancing measures, including school closures, were introduced in week 1.

Overall case rates continued to decrease in week 7. Pillar 2 positivity remained stable in week 7. The case rates continued to decrease in all PHE Centres in week 7. Case rates continued to decrease across all age groups in week 7. By ethnicity, case rates remain highest in other ethnic groups and decreases continue to be seen across all ethnic groups.

From January 2021 a programme of rapid asymptomatic testing was rolled out to students in the secondary school aged cohorts attending these settings during lockdown. We note a drop in the number of tests conducted in these cohorts and an increase in positivity during week 7 which coincides with half term break.

Through Respiratory Datamart, there were no influenza positive samples detected in week 7.

The overall number of acute respiratory infection incidents reported to PHE Health Protection Teams has decreased from 541 in the previous week to 498 in week 7 across all settings in England. In the majority of reported incidents SARS-CoV-2 has been detected. Decreases in incidents were noted in educational settings and workplace settings. Increases in incidents were noted in care home settings. It is important to note that an increasing number of outbreaks are being managed through other routes outside of Health Protection Teams.

The majority of community and syndromic indicators decreased or remained stable during week 7. General practice (GP) influenza-like illness (ILI) consultations remained low in all UK schemes.

The overall COVID-19 confirmed hospital and ICU/HDU admission rate continued to decrease in week 7. The overall influenza confirmed hospital and ICU/HDU admission rates remained low.

The number of deaths among confirmed COVID-19 cases continued to decrease in the most recent week. Overall excess all-cause mortality was observed in week 6.

The most recent overall estimated seroprevalence in England based on blood donor samples was 19.1% using the EuroImmun assay. Vaccination is likely to be making an important

contribution to the overall increase observed since the roll out of the vaccination programme. For the first time this week we also present data using the Roche N and S assays.

On 25 February 2021, routine monthly reports that evaluate influenza vaccinations given between 1 September and 31 January 2021 to healthcare workers, school-aged children and eligible GP patients were published here: https://www.gov.uk/government/collections/vaccine-uptake#seasonal-flu-vaccine-uptake:-figures and include ethnicity data for clinical at-risk cohorts and pregnant women.

Contents

Laboratory surveillance

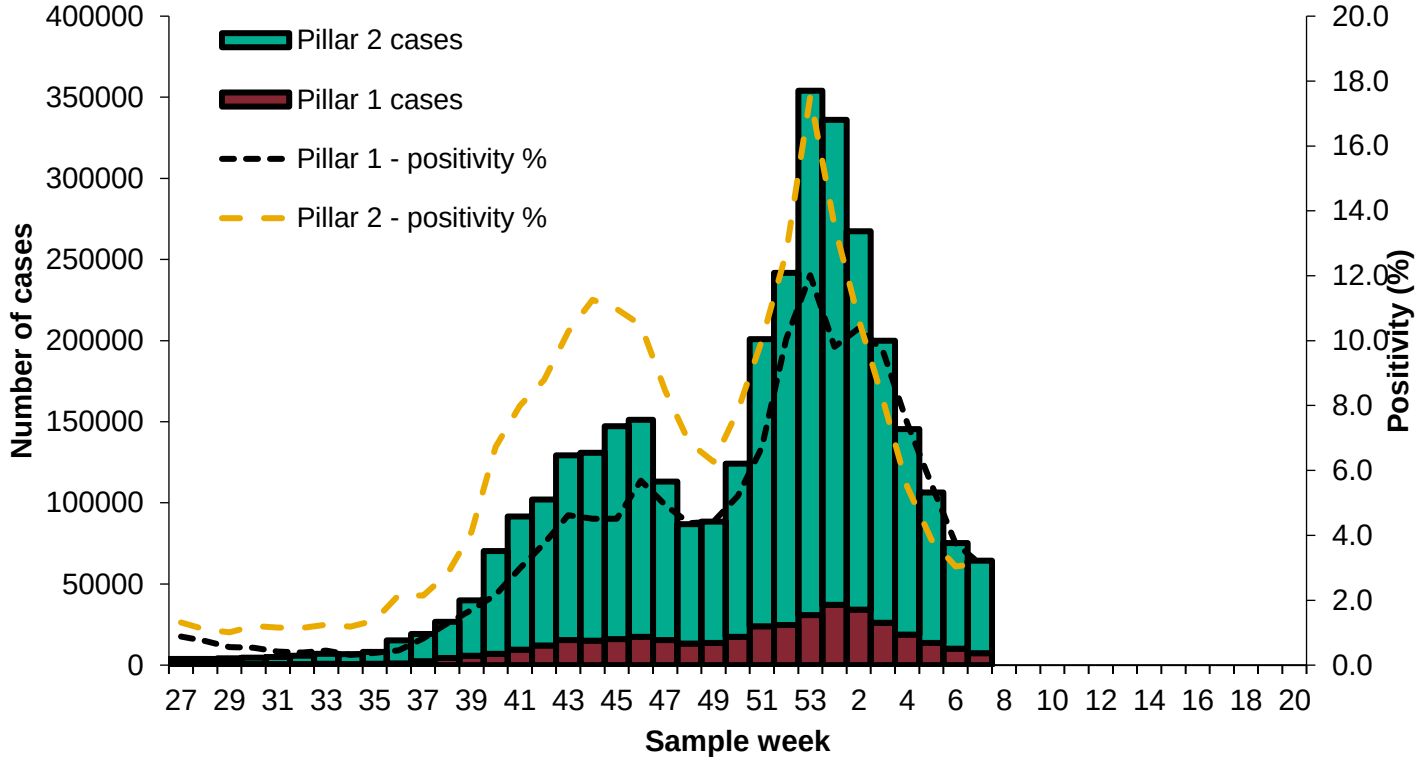
Confirmed COVID-19 cases (England)

As of 09:00 on 23 February 2021, a total of 3,622,085 have been confirmed positive for COVID-19 in England under Pillars 1 and 2.

Overall case numbers and Pillar 1 positivity continued to decrease in week 7. Pillar 2 positivity remained stable in week 7. Decreases were seen in all age groups for case rates in week 7. Decreases were noted in case rates in all PHE Centres.

Data on variants of concern or under investigation are available here. Variant of Concern 202012/01 technical briefings are available here.

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

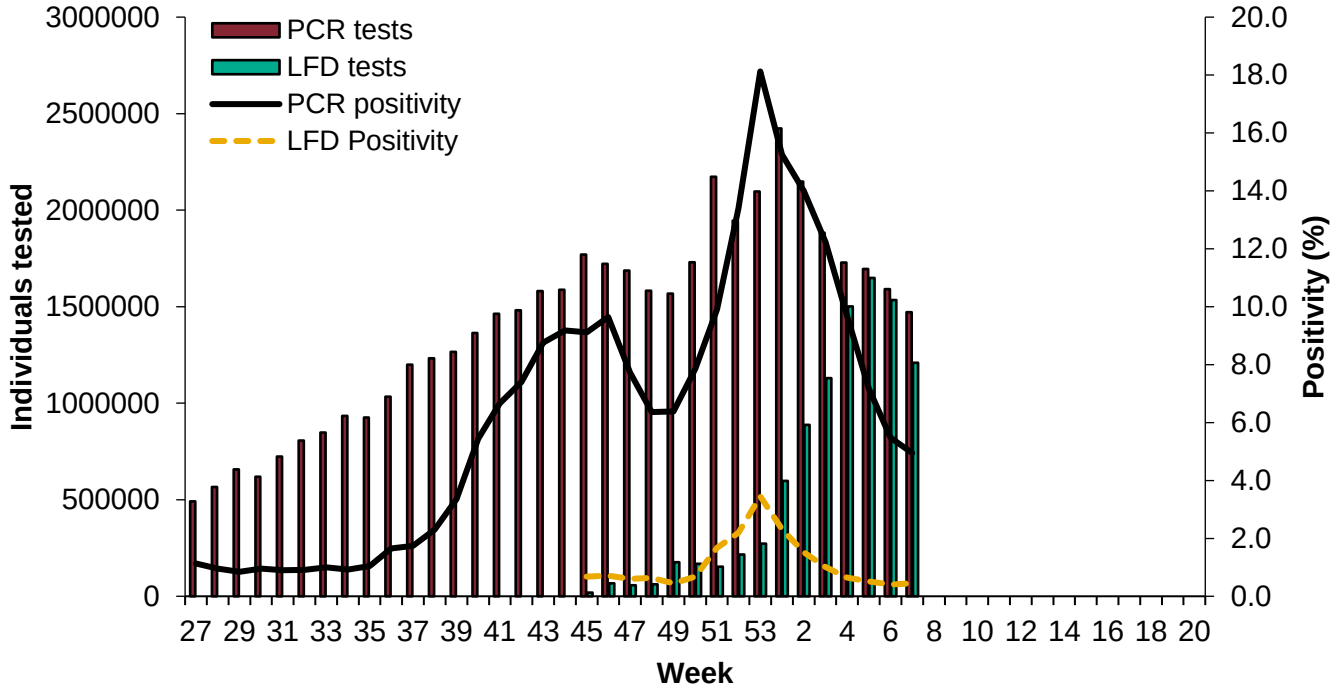


*The data are shown by the week the specimen was taken from the person being tested. This gives the most accurate analysis of this time progression, however, for the most recent week results for more samples are expected therefore this should be interpreted with caution.

* 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 based on PCR and lateral flow device (LFD) testing.

* As of 16 November 2020, the methodology for allocating geographies for cases has been updated to include alternate postcodes where applicable. This change was applied for cases reported from 1 September 2020. Cases reported prior to 1 September 2020 have not be allocated alternate postcode geographies.

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

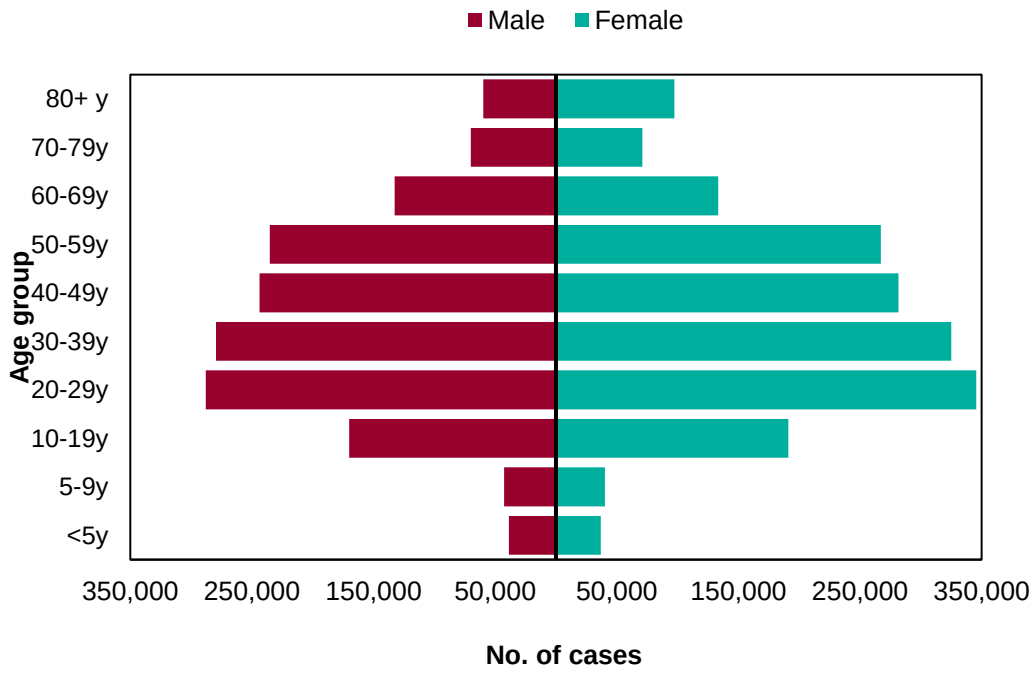


*For Figure 2 positivity is calculated as the number of individuals testing positive using a specific test type during the week, divided by the number of individuals tested using that specific test type during the week.
*Please note that an individual may appear under both PCR and LFD tests if they have been tested using both test types in a given week.

Age and sex

Figure 3: Age/sex pyramids for laboratory confirmed COVID-19 cases tested under Pillars 1 and 2 (a) cumulative number since week 27 (n=3,349,759), and (b) in weeks 6 and 7 (n=138,905)

(a)



(b)

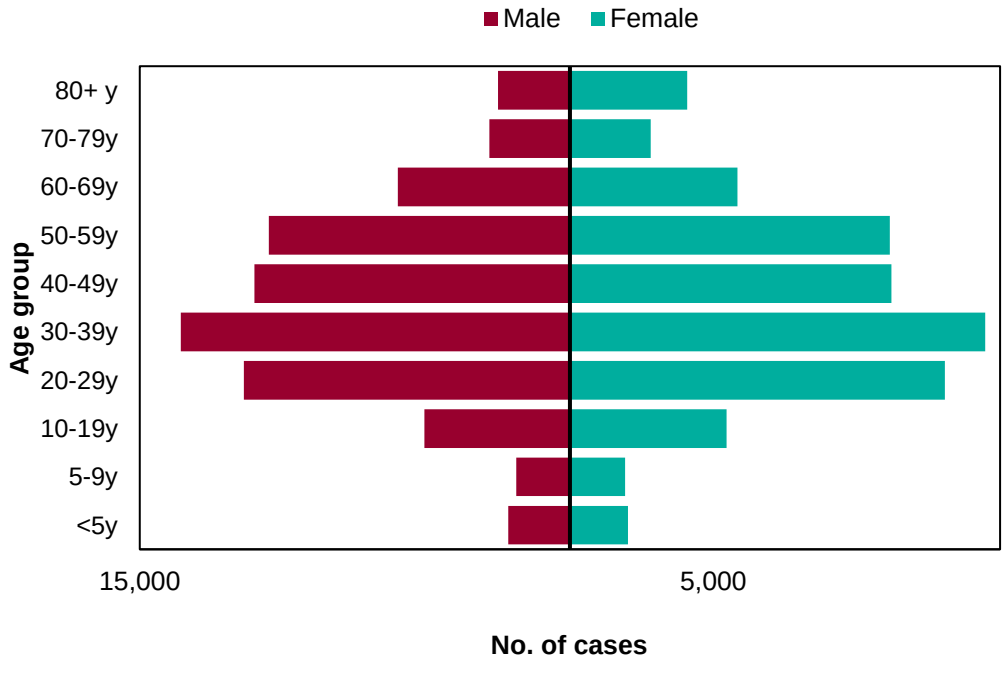


Figure 4: Weekly laboratory confirmed COVID-19 case rates per 100,000, tested under Pillar 1 and Pillar 2, by sex

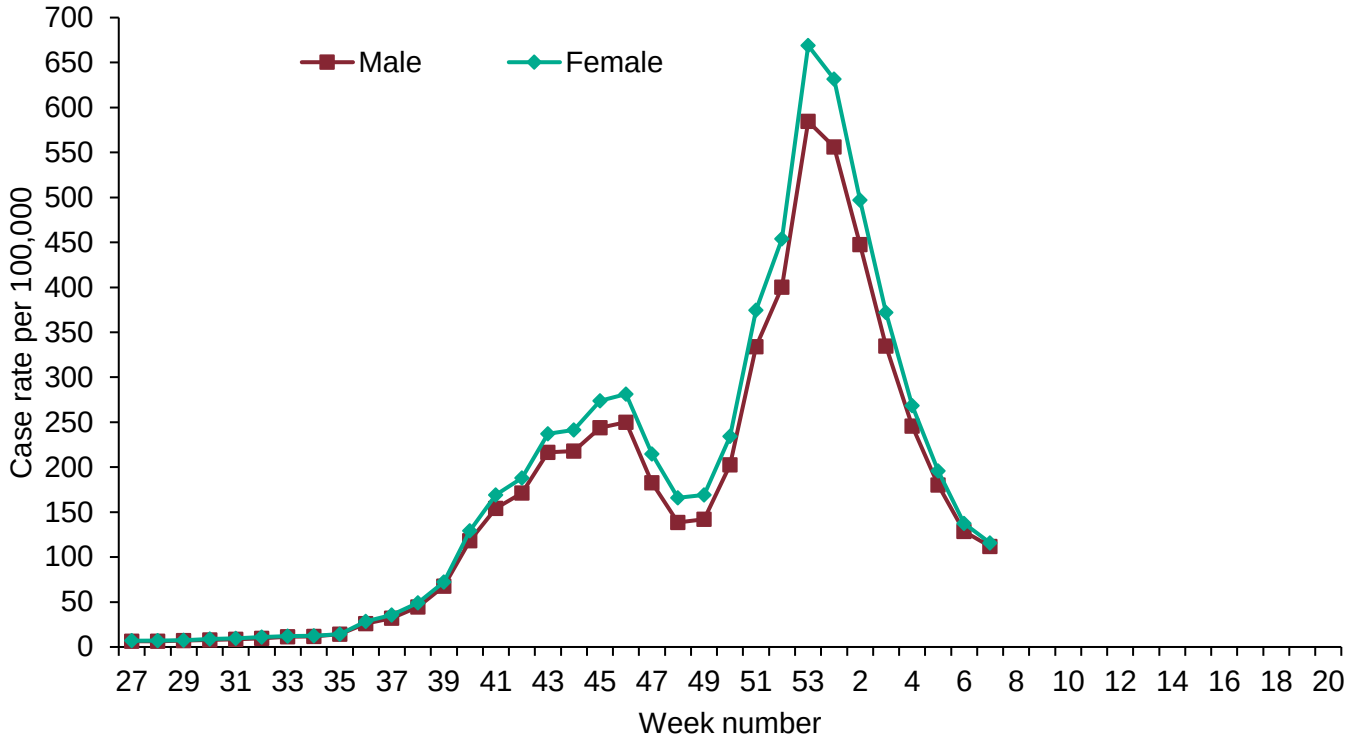


Figure 5: Weekly laboratory confirmed COVID-19 case rates per 100,000, tested under Pillar 1 and Pillar 2, by age group

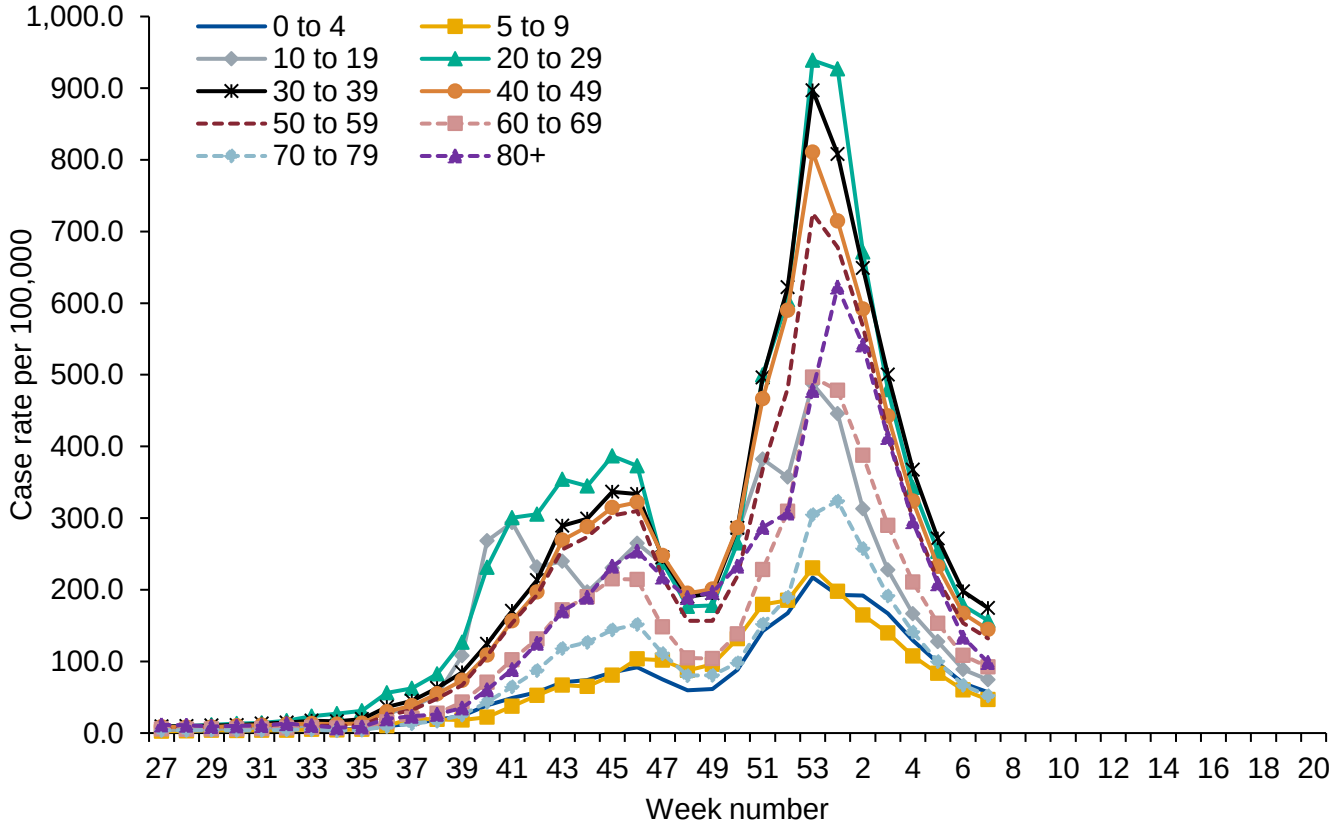
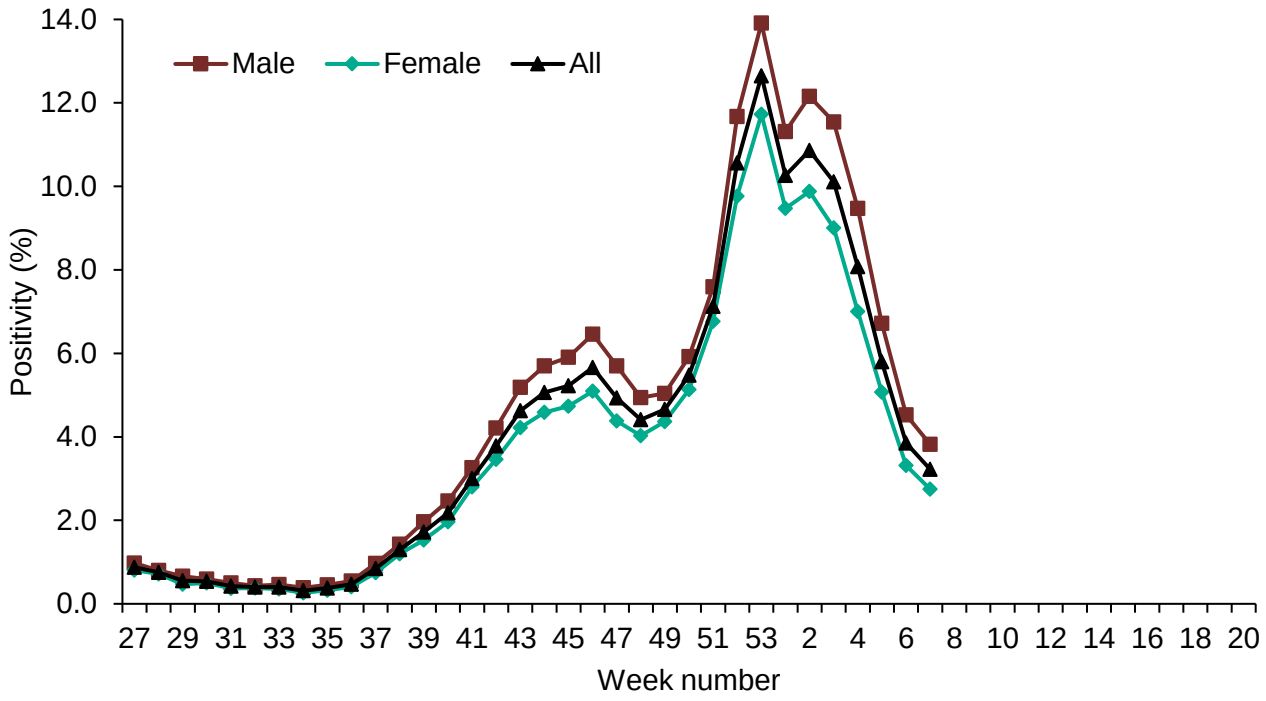


Figure 6: Weekly positivity (%) of laboratory confirmed COVID-19 cases tested overall and by sex under (a) Pillar 1 and (b) Pillar 2, (SGSS and Respiratory DataMart)

(a)



(b)

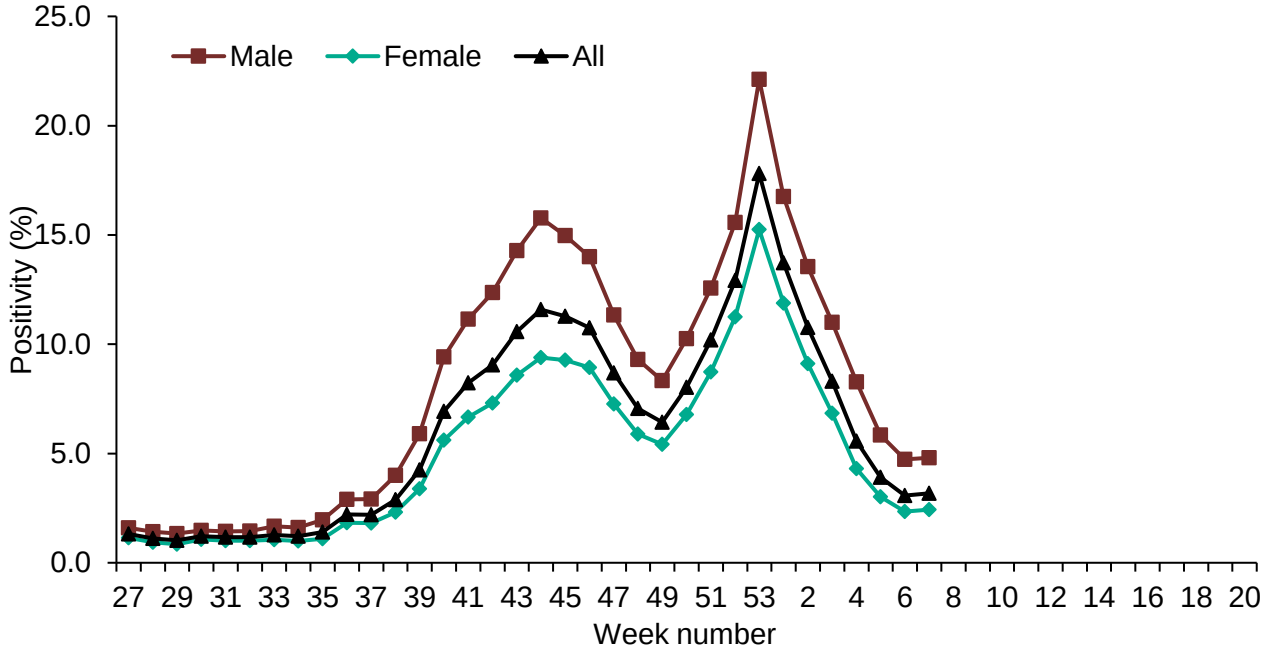
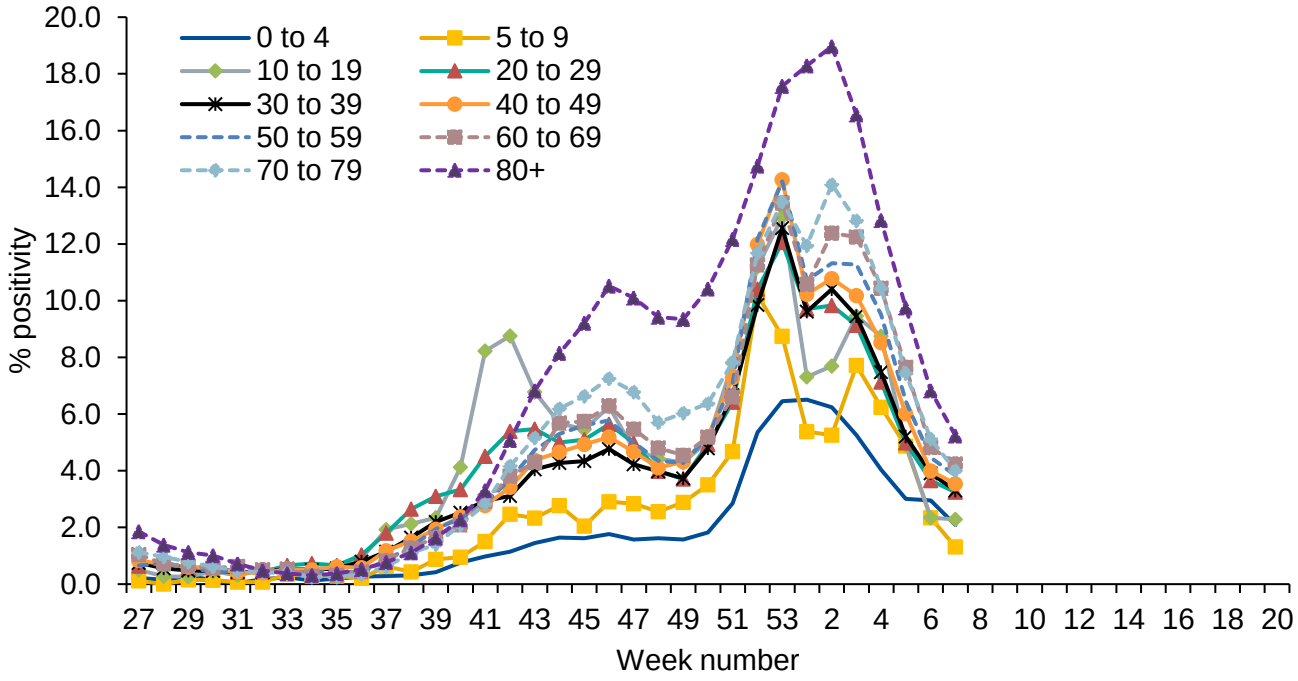
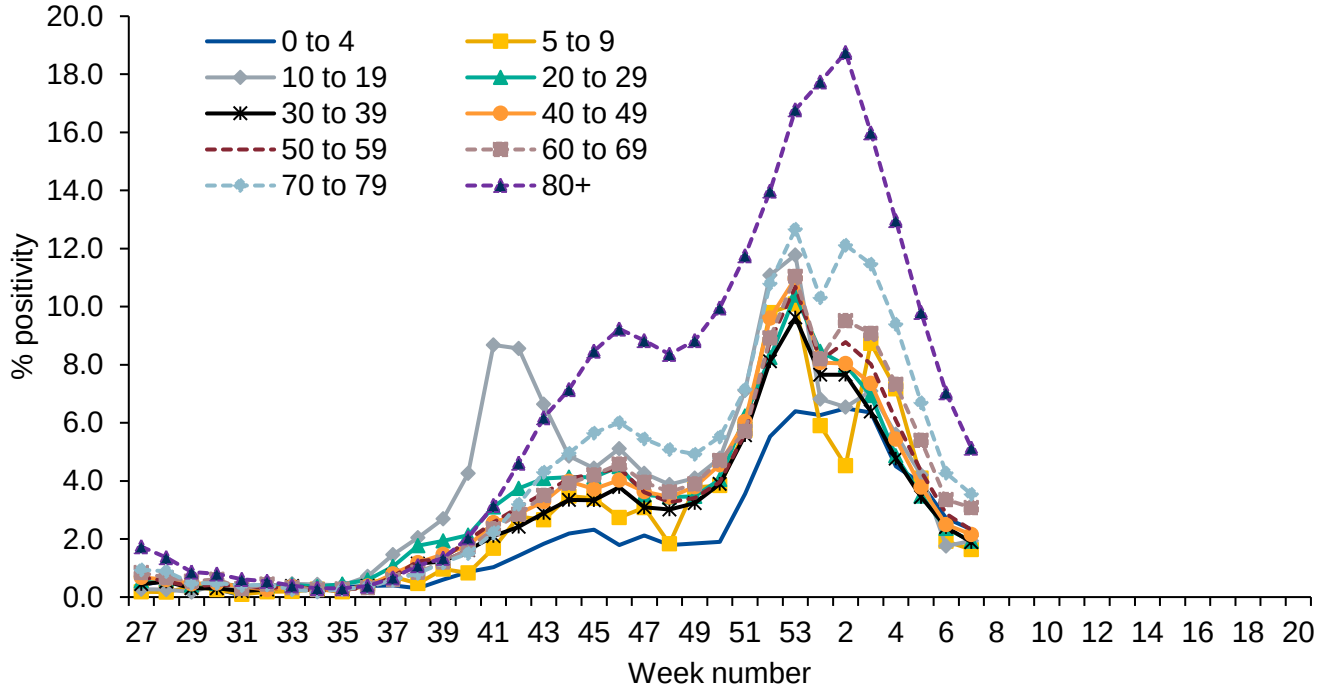


Figure 7: Weekly positivity (%) of laboratory confirmed COVID-19 cases tested under Pillar 1, (a) by male and age group and (b) by female and age group and; under Pillar 2, (c) by male and age group and (d) by female and age group, (SGSS and Respiratory DataMart)

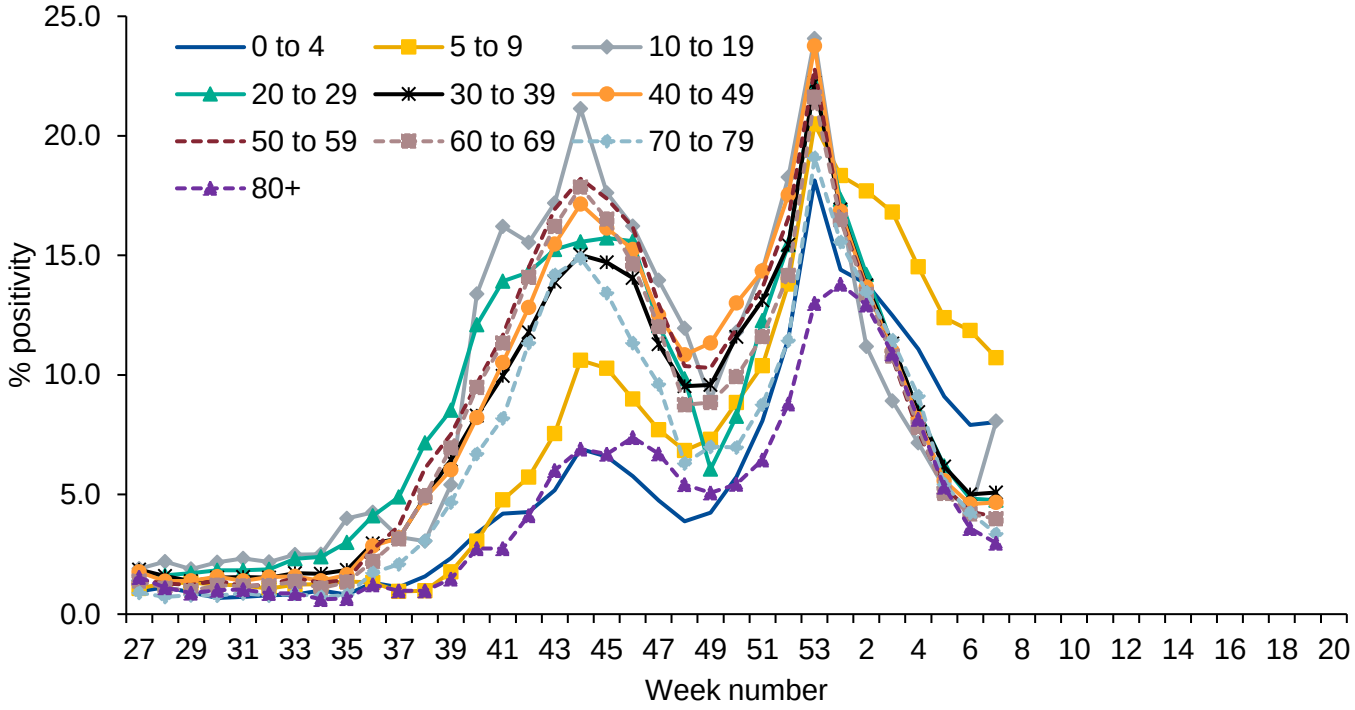
(a) Pillar 1 - Male



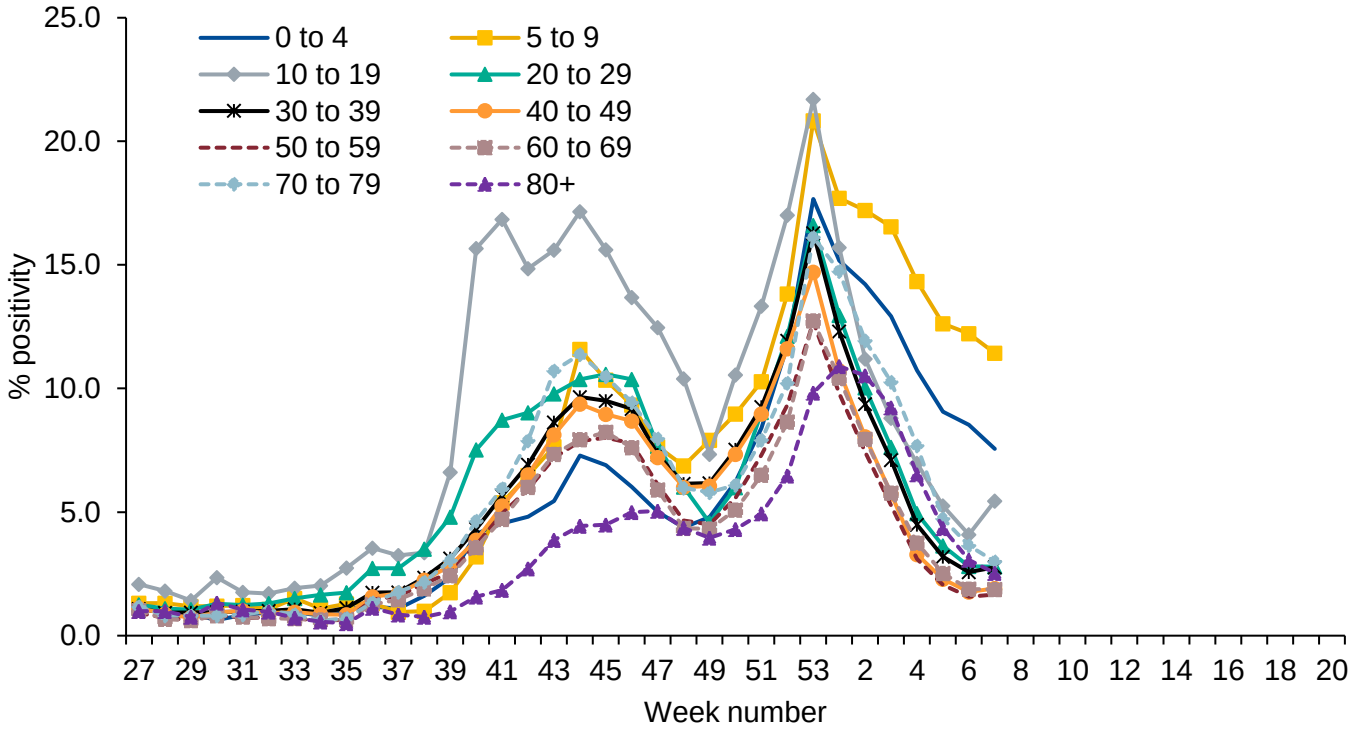
(b) Pillar 1 - Female



(c) Pillar 2 - Male



(d) Pillar 2 - Female



From January 2021 a programme of rapid asymptomatic testing was rolled out to students in the secondary school aged cohorts attending these settings during lockdown. We note a drop in the number of tests conducted in these cohorts and an increase in positivity during week 7 which coincides with half term break.

Geography

Table 1: Cumulative number of cases under Pillars 1 and 2 (n=3,587,374) and cumulative number of cases since week 27 under Pillar 1 and 2 (3,352,397)

PHE Centres	Cumulative Pillar 1 + 2 cases	Cumulative since week 27, Pillar 1 + 2 cases
North East	179,888	164,853
North West	569,794	527,486
Yorkshire and Humber	350,599	321,908
West Midlands	401,360	376,199
East Midlands	301,288	280,638
East of England	387,046	362,917
London	692,316	658,699
South East	496,186	463,485
South West	208,897	196,212

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

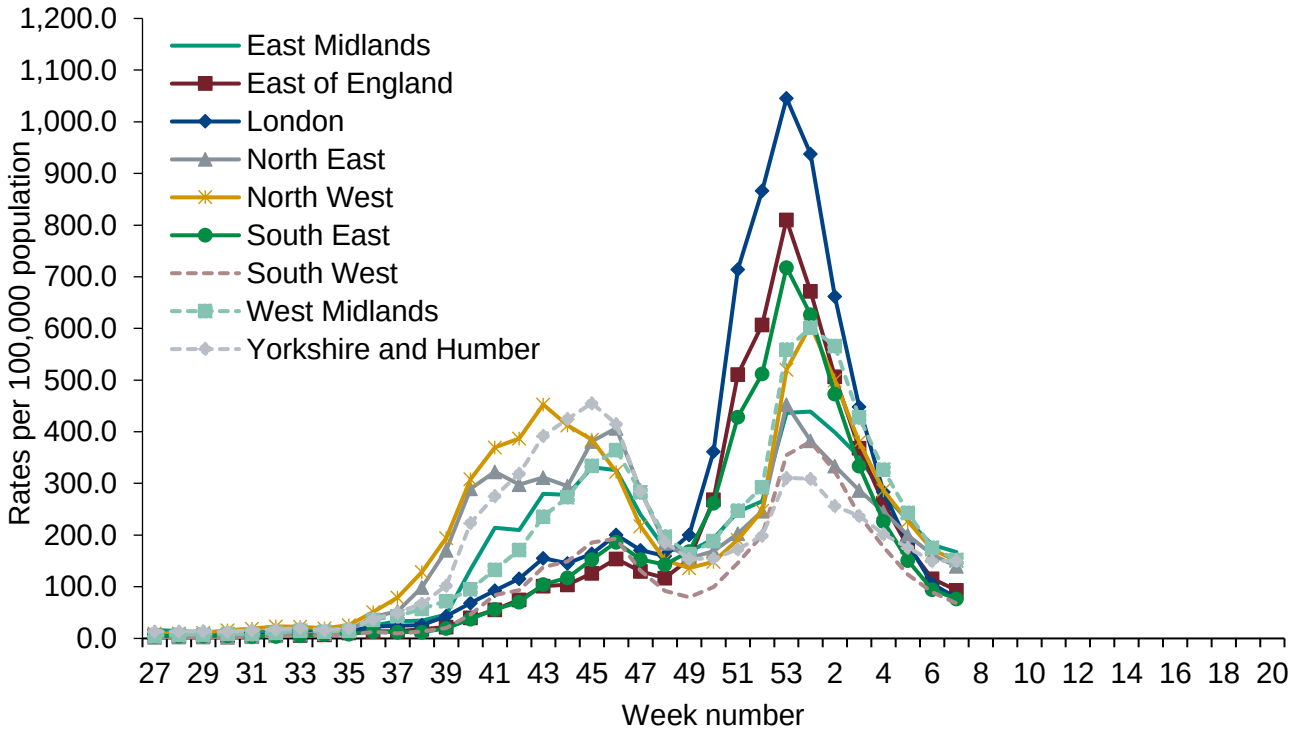
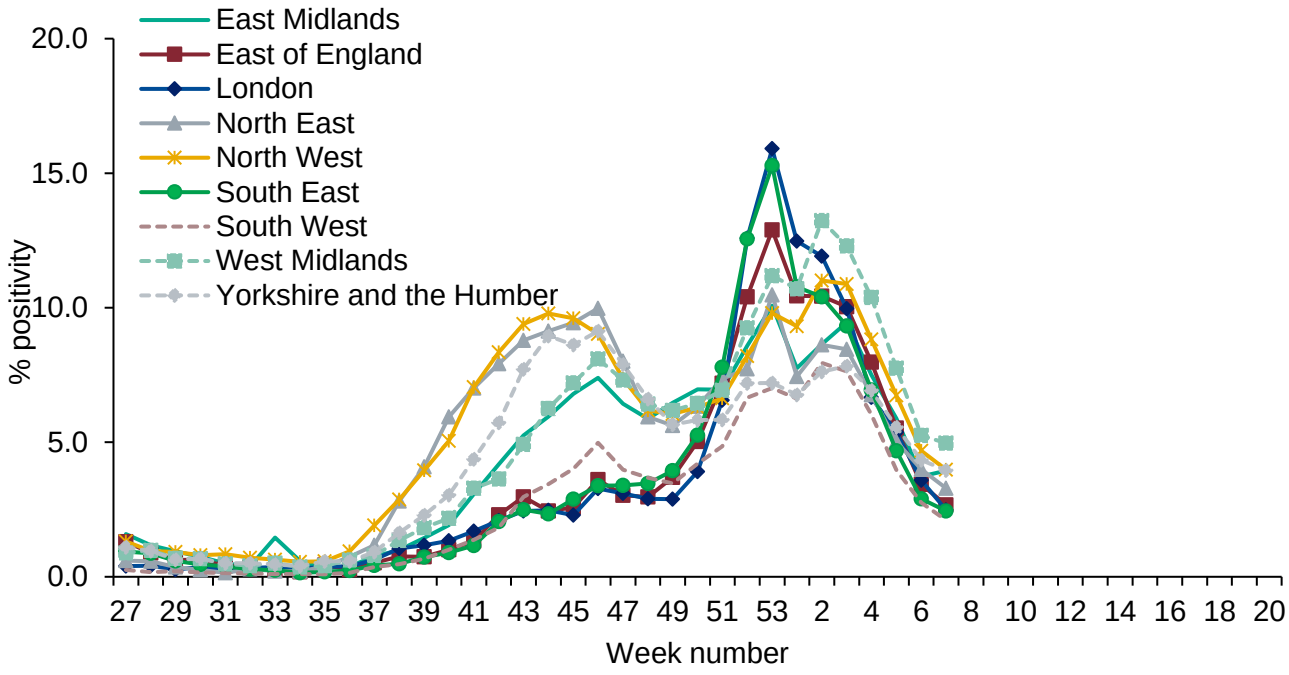


Figure 9: Weekly positivity of laboratory confirmed COVID-19 cases tested under (a) Pillar 1 (%) and (b) Pillar 2 (%), by PHE Centres and sample week, (SGSS and Respiratory DataMart)

(a)



(b)

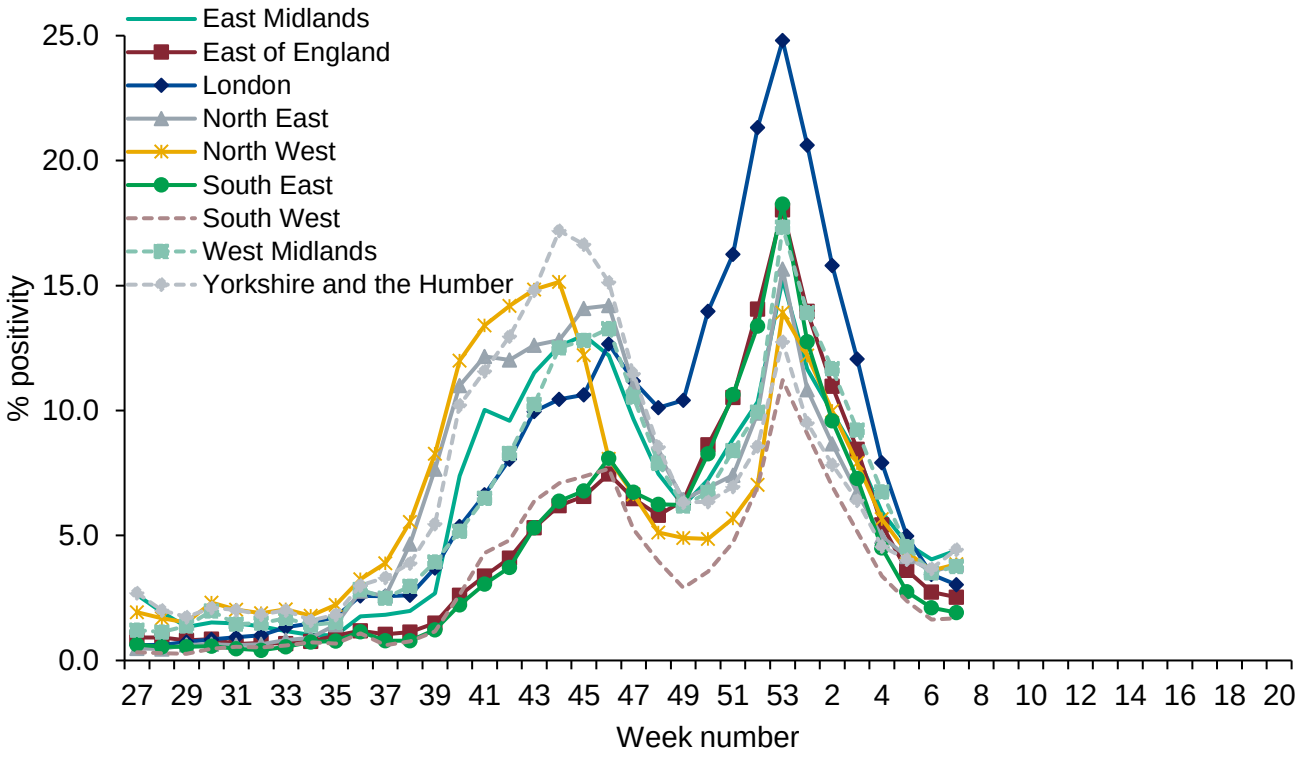
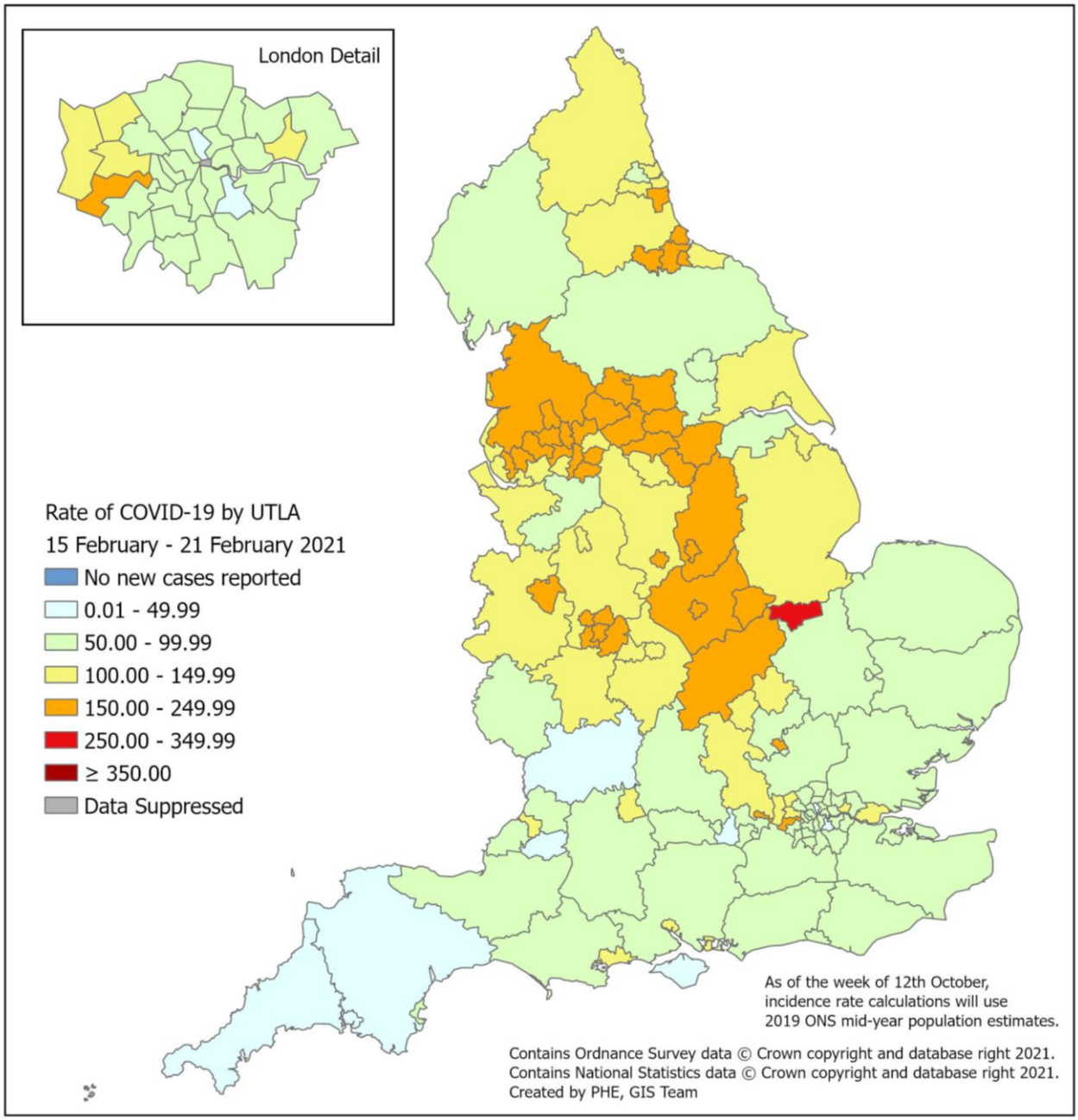
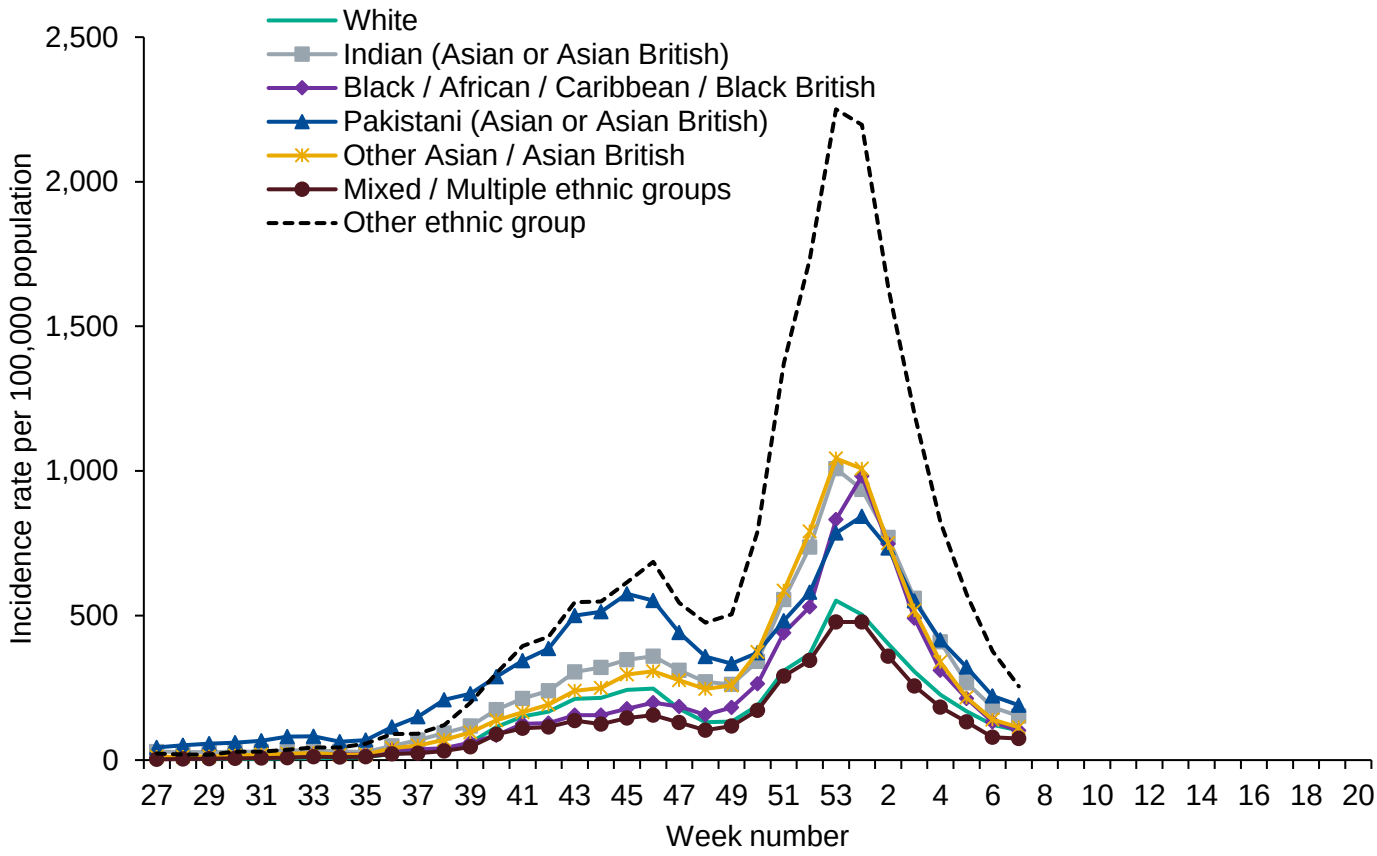


Figure 10: Weekly rate of COVID-19 cases per 100,000 population (Pillar 1 and 2), by upper-tier local authority, England (box shows enlarged map of London area)



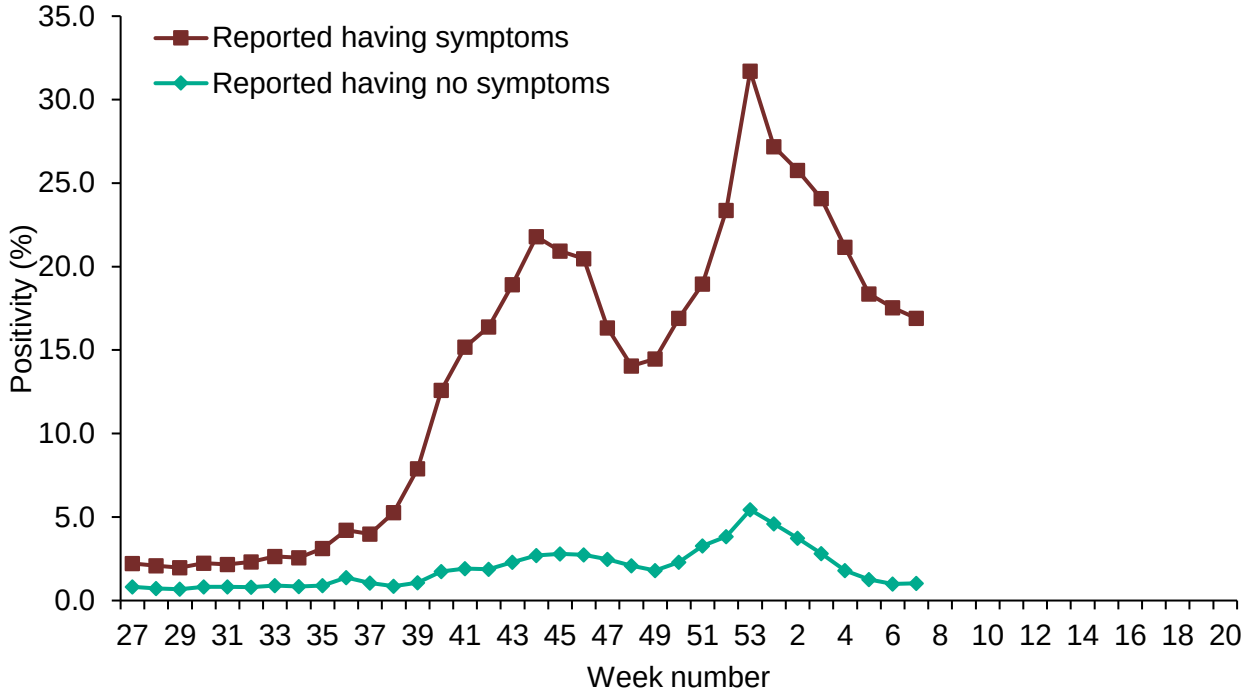
Ethnicity

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



Positivity by symptoms

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



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 7 2021, out of the 107,819 respiratory specimens reported through the Respiratory DataMart System (based on data received from 15 out of 16 laboratories), 3,456 samples were positive for SARS-CoV-2 with an overall positivity of 3.2%. The highest positivity was noted in the 45 to 64 year olds at 3.4% in week 7. The overall influenza positivity remained very low at 0.0% in week 7, with none of 5,445 samples testing positive for flu (Figure 13).

Rhinovirus positivity remained low at 4.7% in week 7. Respiratory syncytial virus (RSV), adenovirus, parainfluenza and human metapneumovirus (hMPV) positivity all remained low at 0.0%, 1.7%, 0.1% and 0.0% respectively in week 7 (Figure 14).

Figure 13: DataMart samples positive for influenza and weekly positivity (%) for influenza and SARS-CoV-2, England

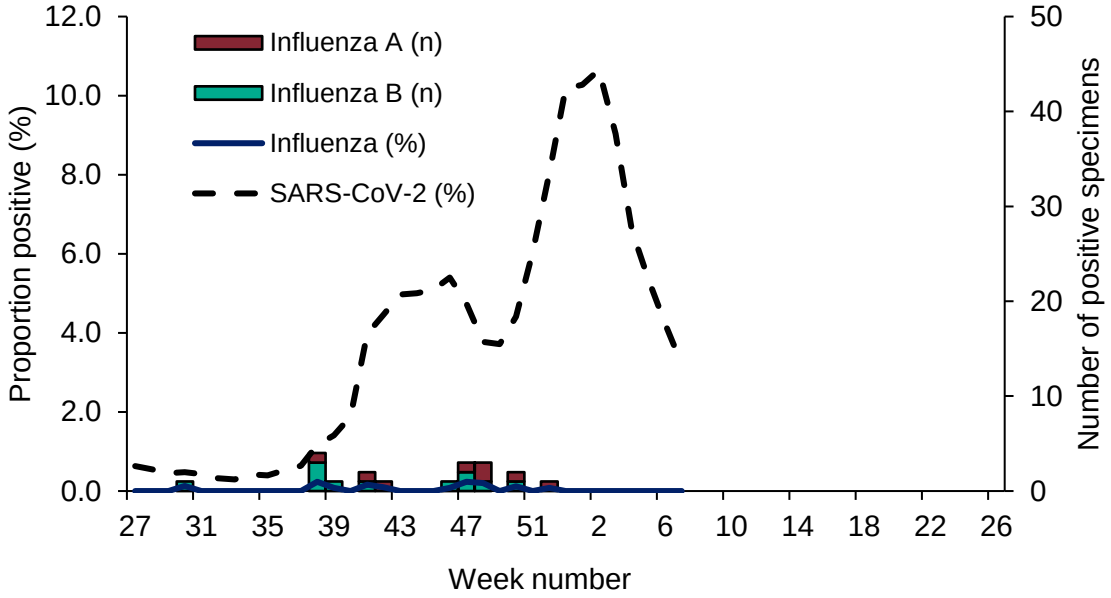


Figure 14: DataMart weekly positivity (%) for other respiratory viruses, England

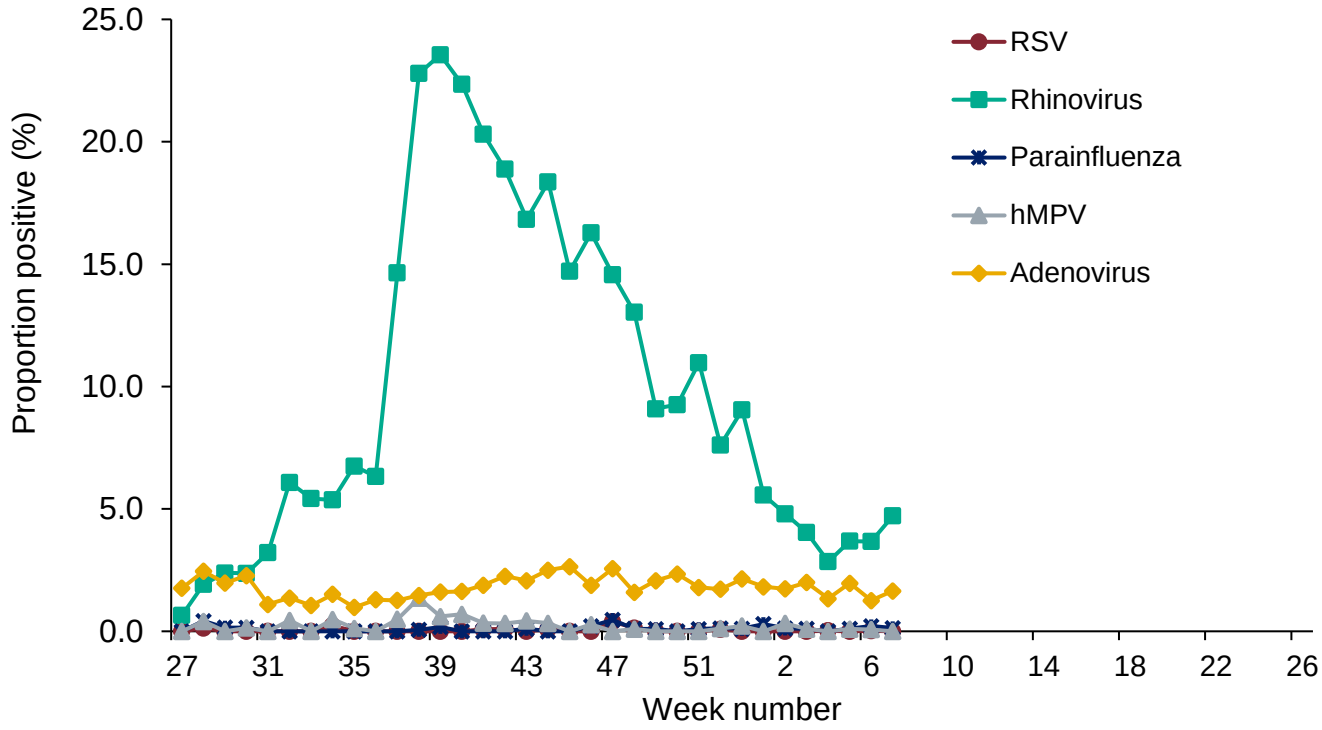
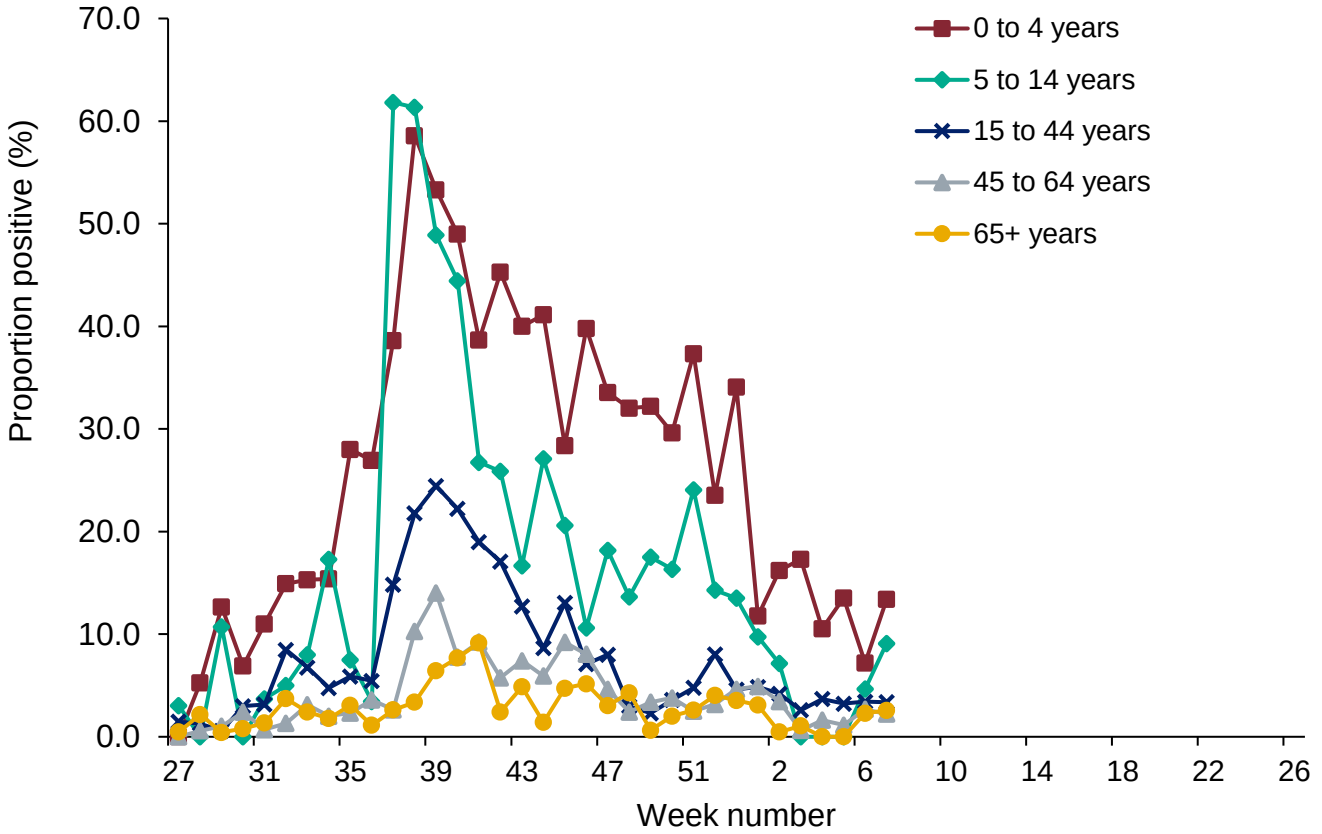


Figure 15: DataMart weekly positivity (%) for rhinovirus by age, England



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 i.e. where two 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 COVID19 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 COVID19 (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.

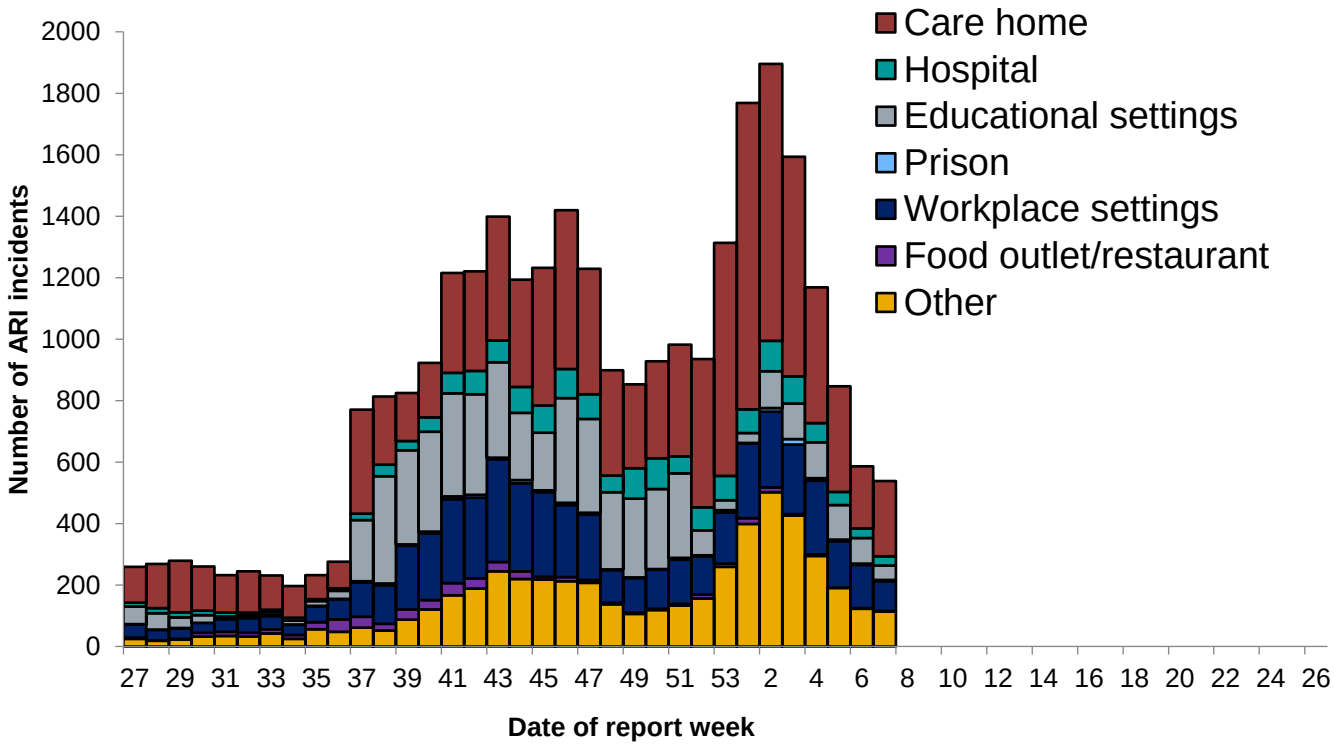
Data caveats:

- 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.
- 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/outbreaks being reported to HPTs in these settings.
- 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.
- In light of the above, comparisons between Regions and settings are not advised as they may be misleading.

538 new ARI incidents have been reported in week 7 in the UK (Figure 16):

- 245 incidents were from care homes where 188 had at least one linked case that tested positive for SARS-CoV-2 where test results were available
- 47 incidents were from educational settings where 44 had at least one linked case that tested positive for SARS-CoV-2
- 30 incidents were from hospitals where 28 had at least one linked case that tested positive for SARS-CoV-2
- 4 incidents were from prisons where 3 had at least one linked case that tested positive for SARS-CoV-2
- 97 incidents were from workplace settings where 68 had at least one linked case that tested positive for SARS-CoV-2
- 1 incidents were from food outlets/restaurants and it had at least one linked case that tested positive for SARS-CoV-2
- 114 incidents were from other settings where 87 had at least one linked case that tested positive for SARS-CoV-2

Figure 16: Number of acute respiratory infection (ARI) incidents by setting, UK



*excludes data from Wales

Figure 17: Number of acute respiratory infection (ARI) incidents by setting, England

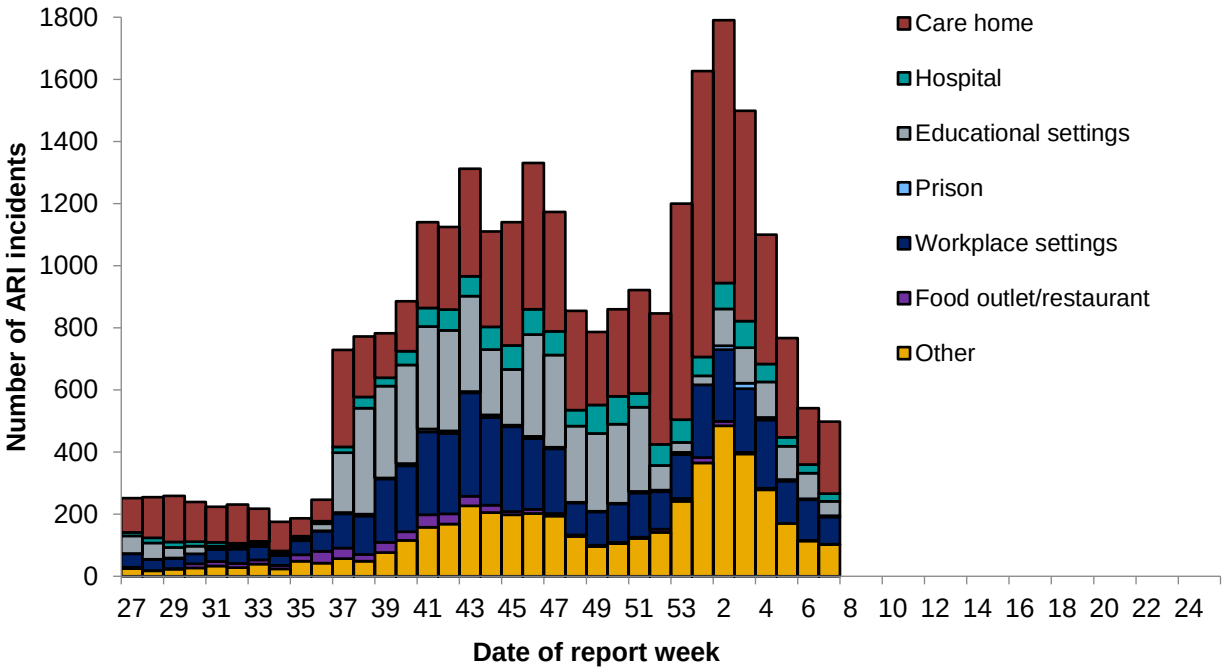


Figure 18: Number of acute respiratory infection (ARI) incidents in care homes by virus type from week 27, England

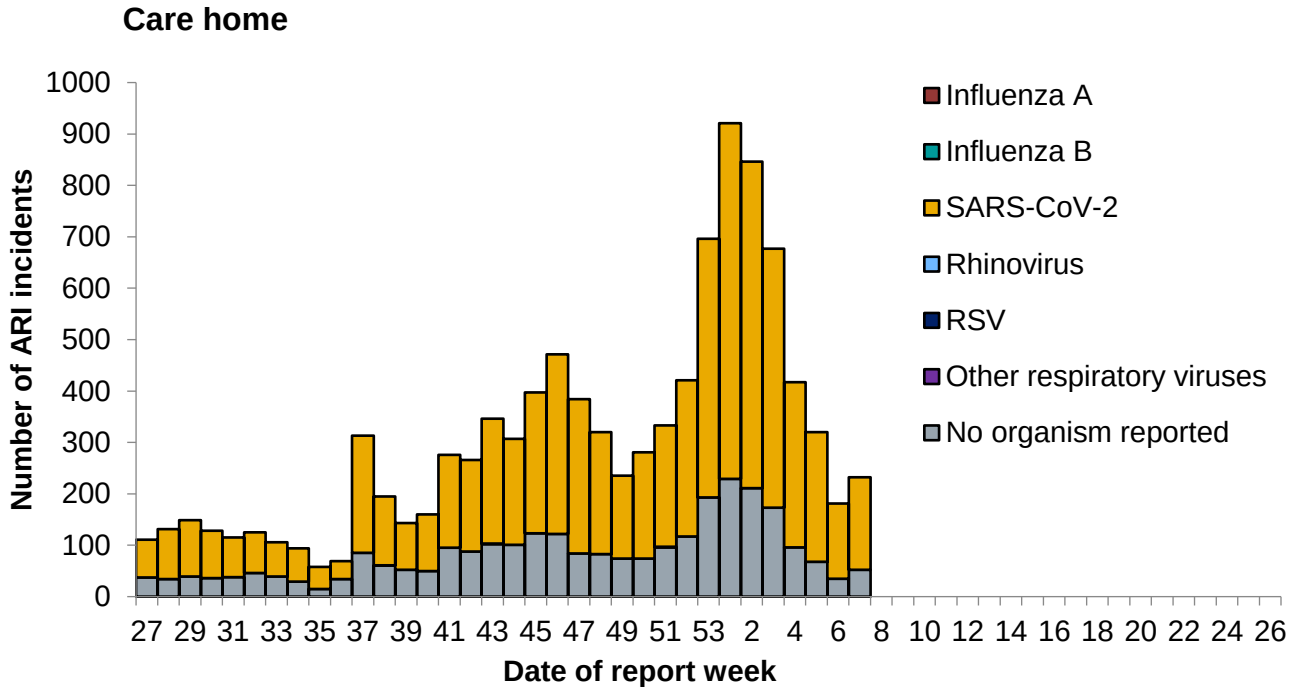


Figure 19: Number of acute respiratory infection (ARI) incidents in hospitals by virus type from week 27, England

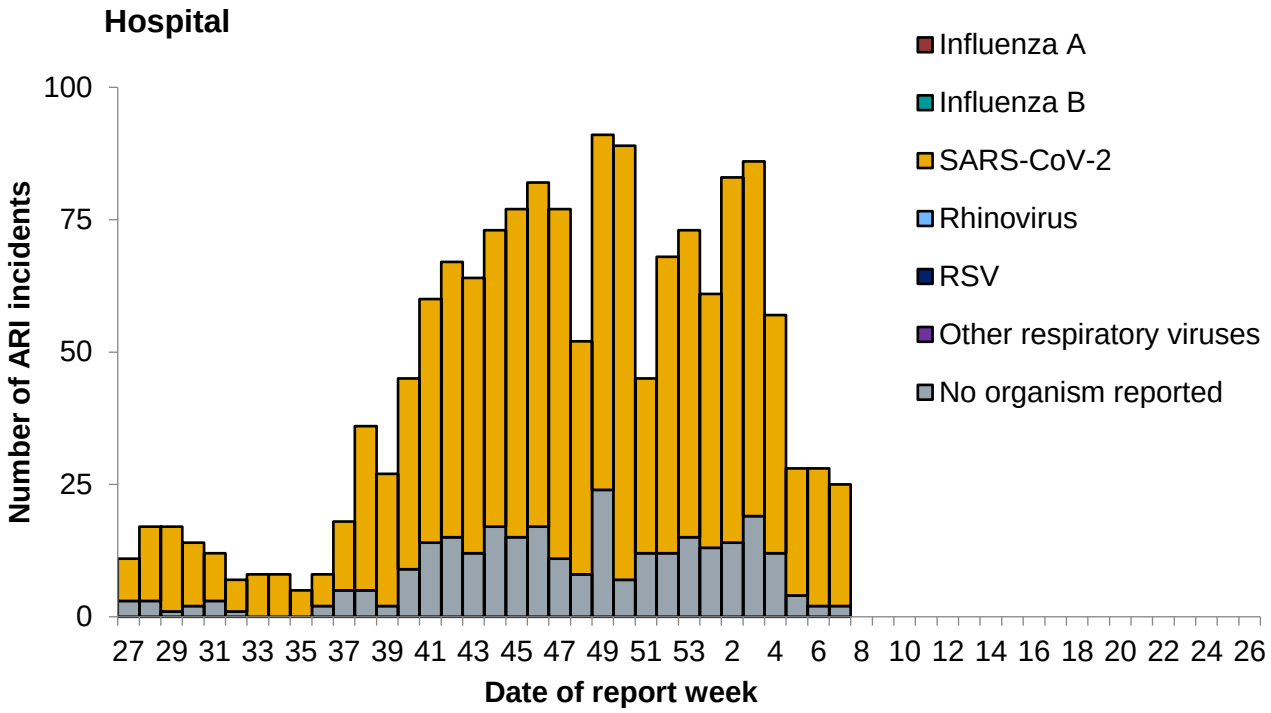


Figure 20: Number of acute respiratory infection (ARI) incidents in educational settings by virus type from week 27, England

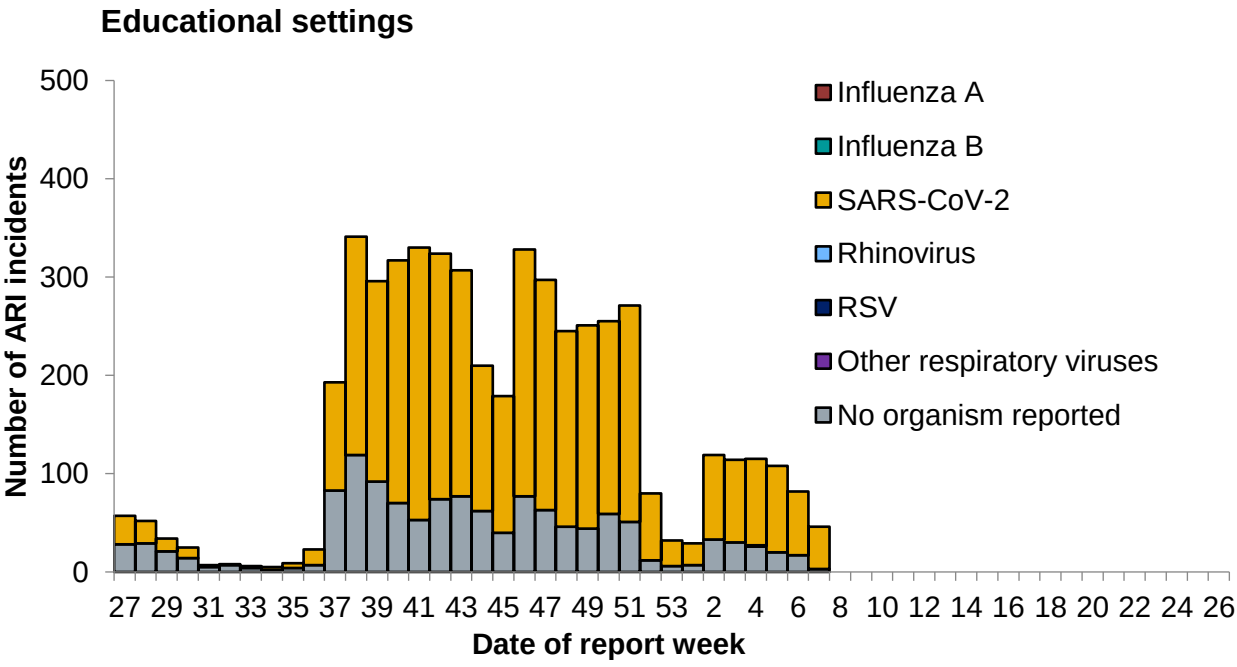


Figure 21: Number of acute respiratory infection (ARI) incidents in prisons by virus type from week 27, England

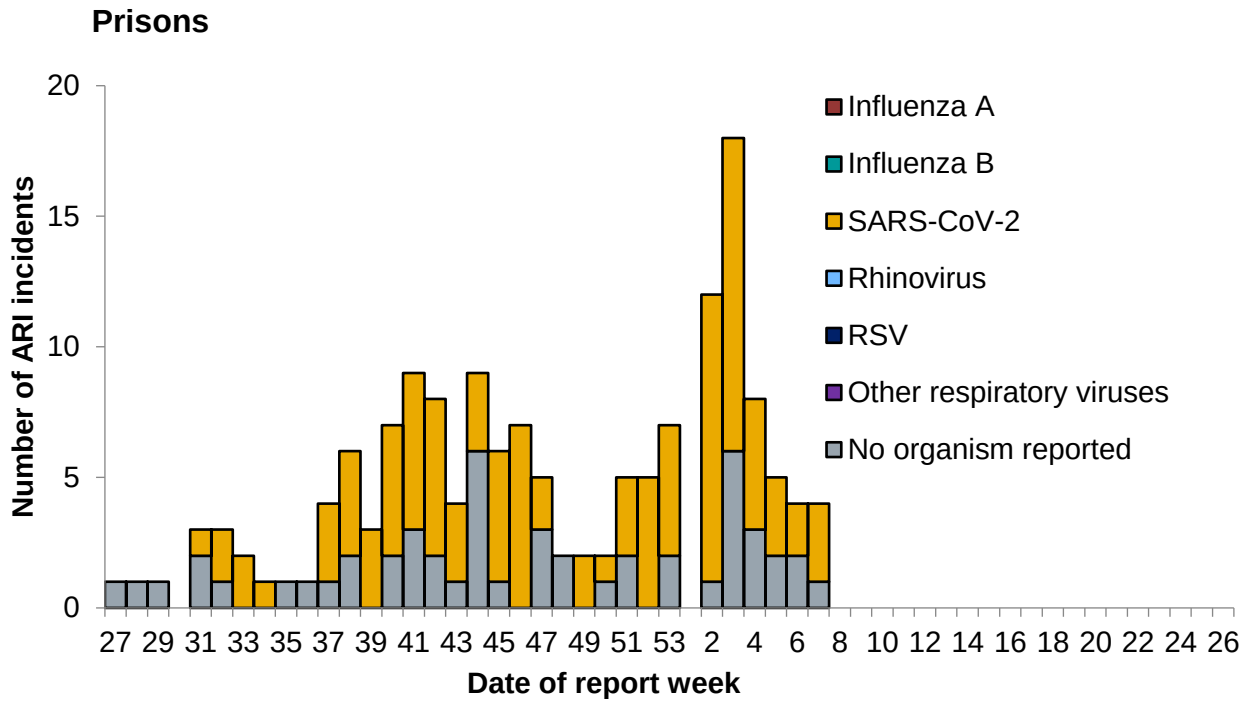


Figure 22: Number of acute respiratory infection (ARI) incidents in workplace settings by virus type from week 27, England

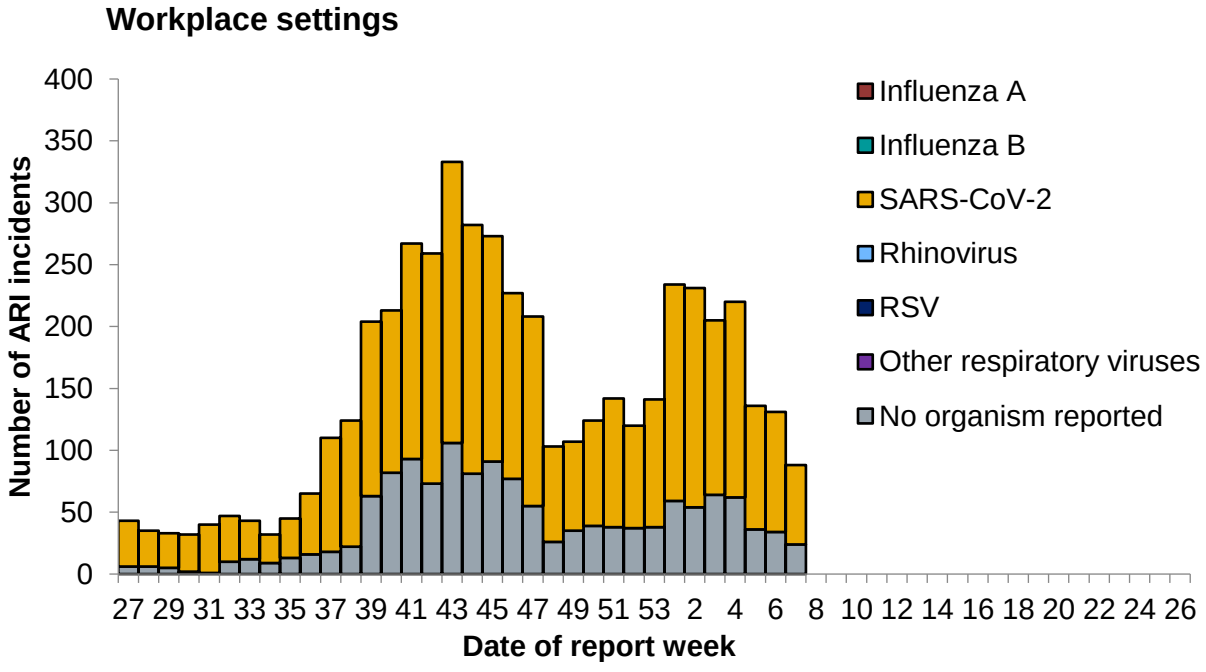


Figure 23: Number of acute respiratory infection (ARI) incidents in food outlet/restaurants settings by virus type from week 27, England

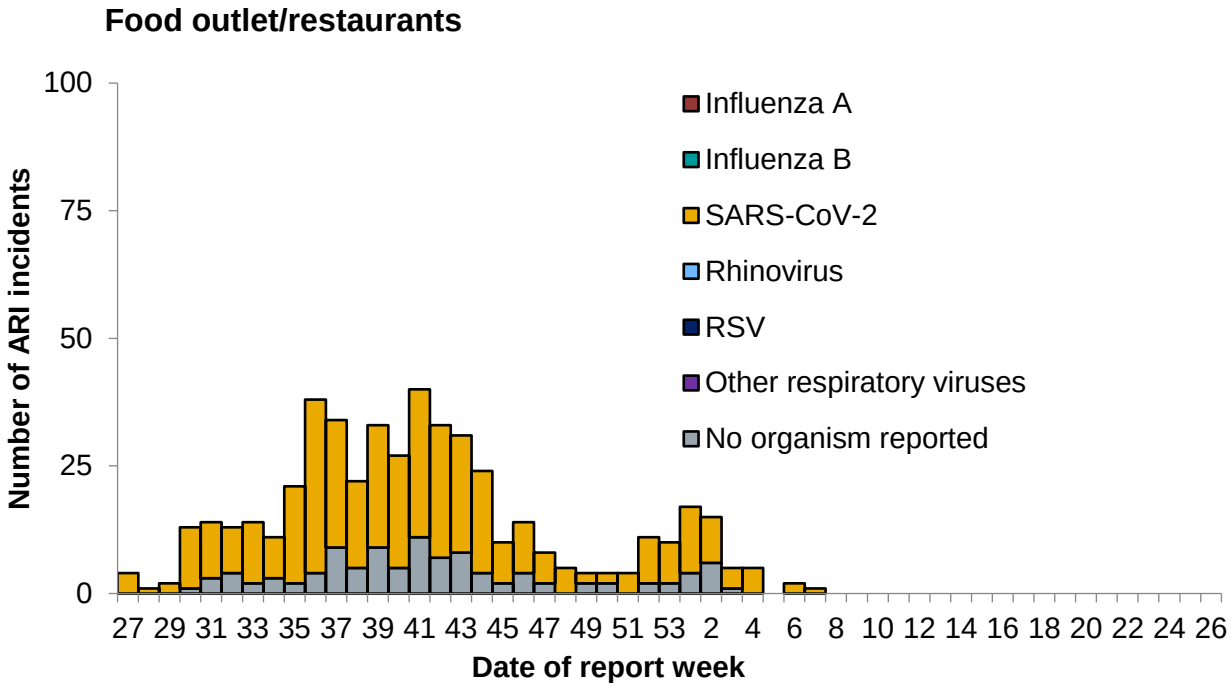


Figure 24: Number of acute respiratory infection (ARI) incidents in other settings by virus type from week 27, England

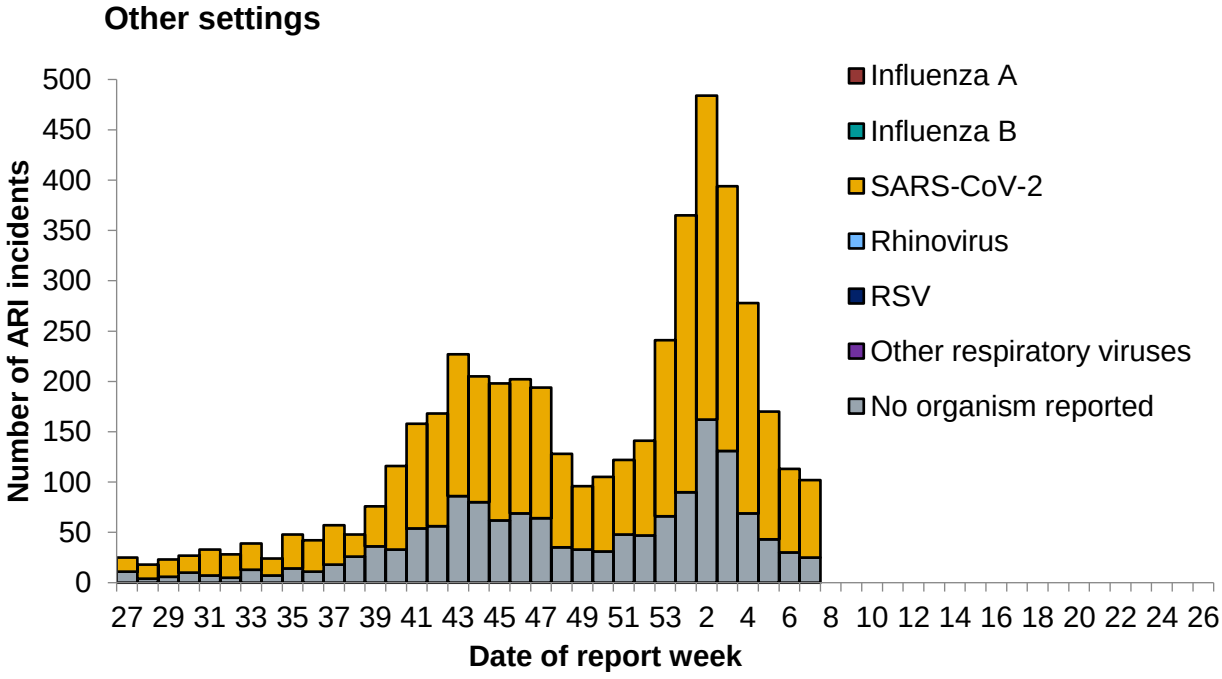


Table 2: Total number of situations/incidents by institution and PHE Centres over the past four weeks with the total number in the last week in brackets

PHE Centres	Care home	Hospital	Educational settings	Prisons	Workplace settings	Food outlet/restaurant settings	Other settings	Total
East of England	108(16)	6(0)	3(0)	4(0)	27(3)	0(0)	80(6)	228(25)
East Midlands	112(38)	22(5)	34(4)	2(0)	83(13)	0(0)	76(15)	329(75)
London	76(14)	43(10)	74(11)	2(0)	12(2)	0(0)	52(5)	259(42)
North East	67(17)	2(0)	0(0)	0(0)	12(1)	1(1)	33(10)	115(29)
North West	76(27)	21(6)	28(2)	3(0)	101(18)	0(0)	81(21)	310(74)
South East	183(16)	18(2)	53(6)	4(1)	40(7)	1(0)	78(6)	377(38)
South West	212(17)	6(1)	24(1)	0(0)	35(4)	3(0)	54(6)	334(29)
West Midlands	211(60)	11(1)	74(10)	4(2)	147(20)	3(0)	143(19)	593(112)
Yorkshire and Humber	105(27)	9(0)	61(12)	2(1)	118(20)	0(0)	66(14)	361(74)
Total	1150(232)	138(25)	351(46)	21(4)	575(88)	8(1)	663(102)	2906(498)

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

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

Type of residence	week02	week03	week04	week05	week06	week07
Residential dwelling (including houses, flats, sheltered accommodation)	90.3	90.3	90.6	90.8	90.9	91.3
Undetermined	3.5	3.6	3.4	3.3	3.5	3.0
Care/Nursing home	4.1	3.9	3.7	3.4	3.0	2.7
Residential institution (including residential education)	0.3	0.3	0.3	0.3	0.3	0.3
Other property classifications	0.6	0.6	0.6	0.6	0.5	0.5
House in multiple occupancy (HMO)	0.6	0.6	0.6	0.5	0.5	0.6
Medical facilities (including hospitals and hospices, and mental health)	0.2	0.2	0.2	0.2	0.2	0.1
Prisons, detention centres, secure units	0.5	0.6	0.8	0.9	1.1	1.5
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

Medical Officers of Schools Association (MOSA) & PHE surveillance scheme

Boarding schools in England within the MOSA network are recruited each season to report various respiratory related illnesses including influenza like illnesses (ILI).
For the 2020 to 21 season, 6 MOSA schools have agreed to participate in the scheme, including a total of 4,138 pupils.

The overall ILI rate (all school years) for week 50 was 0.0 per 1,000 students compared to 1.65 per 1,000 students in the previous week. The overall ILI rate (all staff) for week 50 was 0.0 per 1,000 staff compared to 0.61 per 1,000 staff in the previous week.

The overall laboratory confirmed COVID-19 rate (all school years) for week 50 was 0.0 per 1,000 students compared to 6.04 per 1,000 students in the previous week.

The overall laboratory confirmed COVID-19 (all staff) for week 50 was 0.0 per 1,000 staff compared to 3.65 per 1,000 staff in the previous week.

There is no further update due to national school closures.

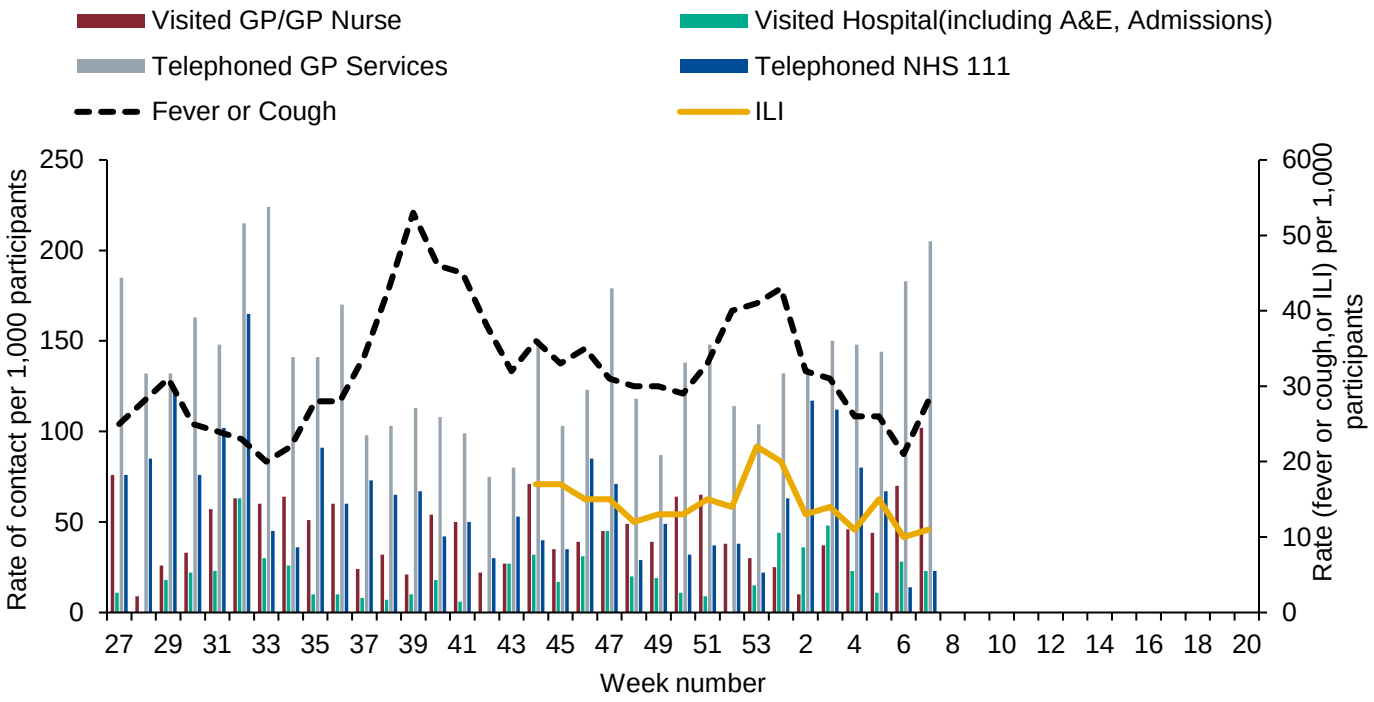
If you are a MOSA school and would like to participate in this scheme, please email mosa@phe.gov.uk for more information.

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 3,151 participants completed the weekly surveillance survey in week 7, of which 88 (2.8%) reported fever or cough and 34 (1.1%) reported influenza like illness (ILI). The most commonly used healthcare services reported by respondents remains telephoning a GP practice (Figure 25).

Figure 25: Rate of contact with different healthcare services among FluSurvey participants reporting fever or cough symptoms, England



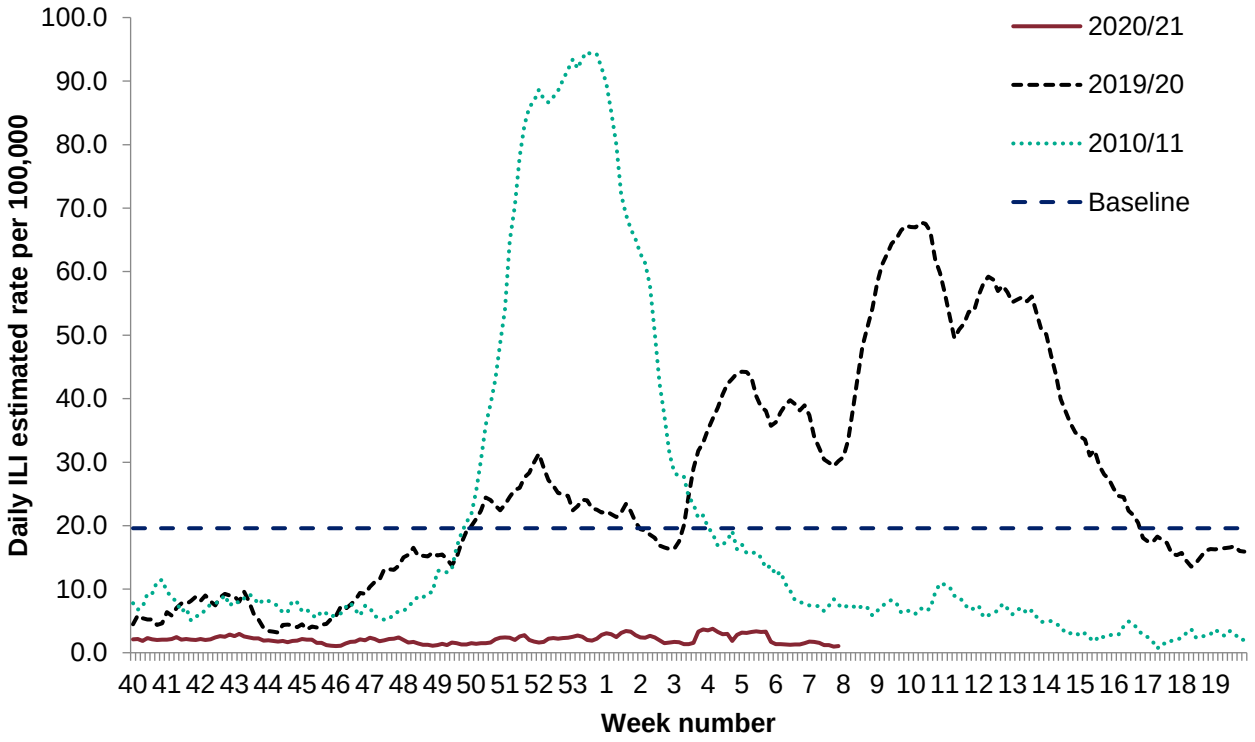
FluDetector

FluDetector is a web-based model which assesses internet-based search queries for influenza-like illness (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 six days before it).

For week 7, the daily ILI rate remained low and below the baseline threshold of 19.6 per 100,000 for the 2020 to 2021 season (Figure 26).

Figure 26: Daily estimated ILI Google search query rates per 100,000 population, England

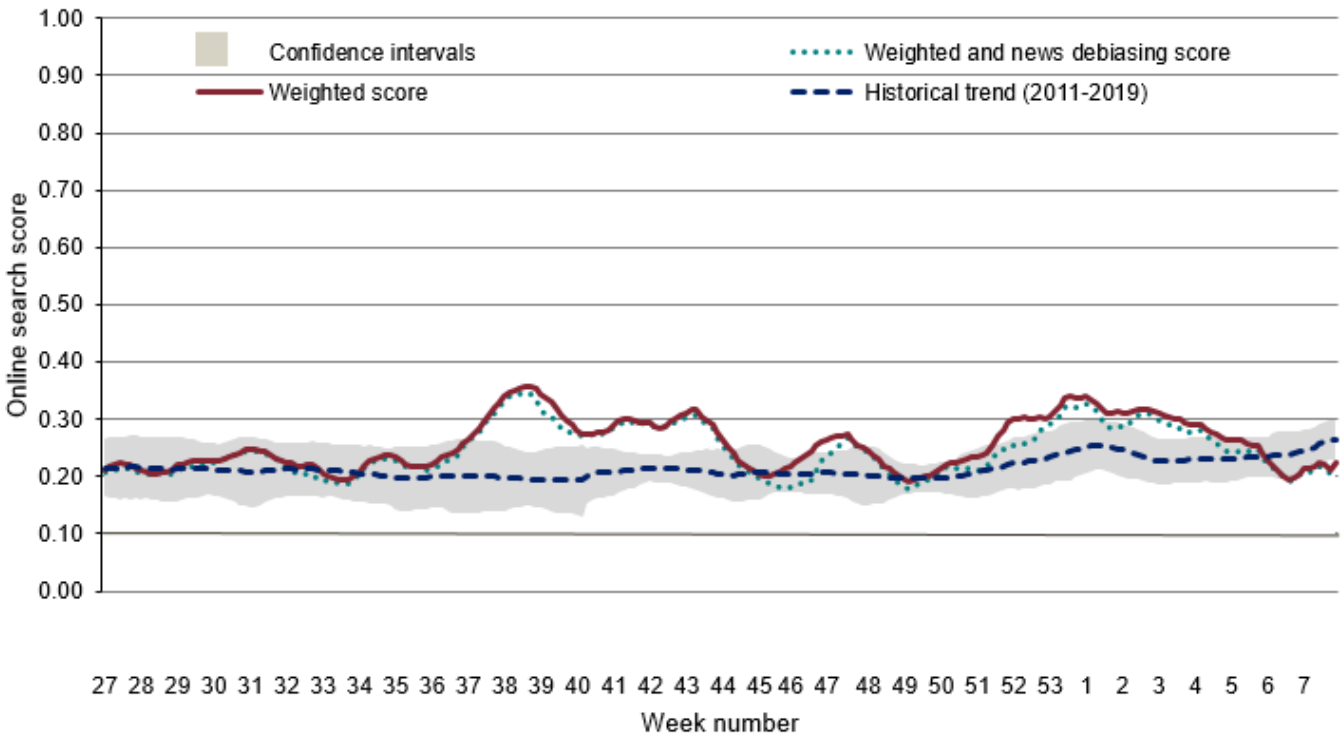


Google search queries

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" (e.g. "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: https://www.nature.com/articles/s41746-021-00384-w

During week 6, the overall and media-debiasing weighted Google search scores remained stable (Figure 27).

Figure 27: Normalised Google search score for COVID-19 symptoms, with weighted score for media-debiasing and historical trend, England



NHS 111

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.

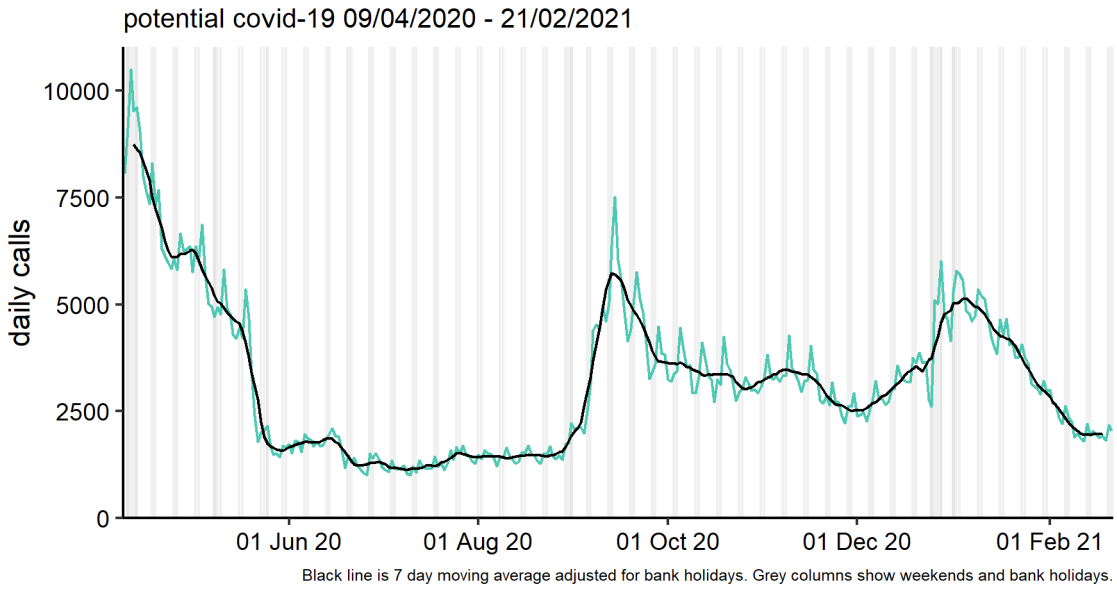
Up to 14 February NHS 111 calls and online assessments for cold/flu remained stable. Calls and online assessments for potential COVID-19 remained stable. Calls for loss of taste or smell decreased while online assessments remained stable (Figure 28 and 29).

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

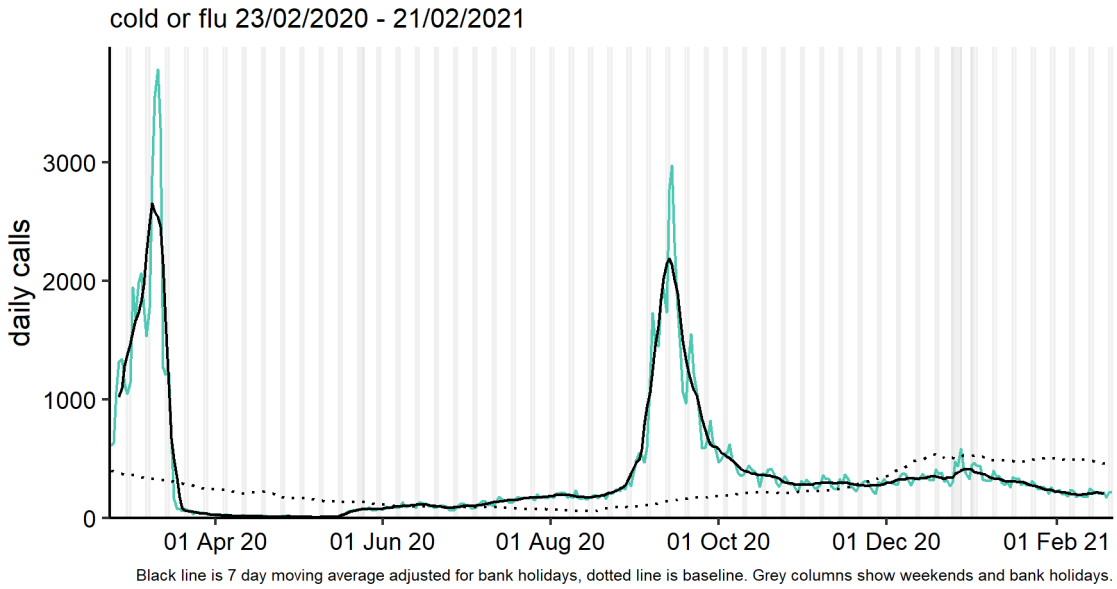
Further information about these caveats is available from the PHE Remote Health Advice Syndromic Surveillance bulletin.

Figure 28: NHS 111 telephony indicators (and 7-day moving average) for (a) daily potential COVID-19 calls, (b) daily cold/flu calls and (c) daily loss of taste or smell calls, as a percentage of total calls for all ages, England

(a)



(b)


cold or flu 23/02/2020 - 21/02/2021
daily calls
3000
2000
1000
0
01 Apr 20
01 Jun 20
01 Aug 20
01 Oct 20
01 Dec 20
01 Feb 21
Black line is 7 day moving average adjusted for bank holidays, dotted line is baseline. Grey columns show weekends and bank holidays.

(c)

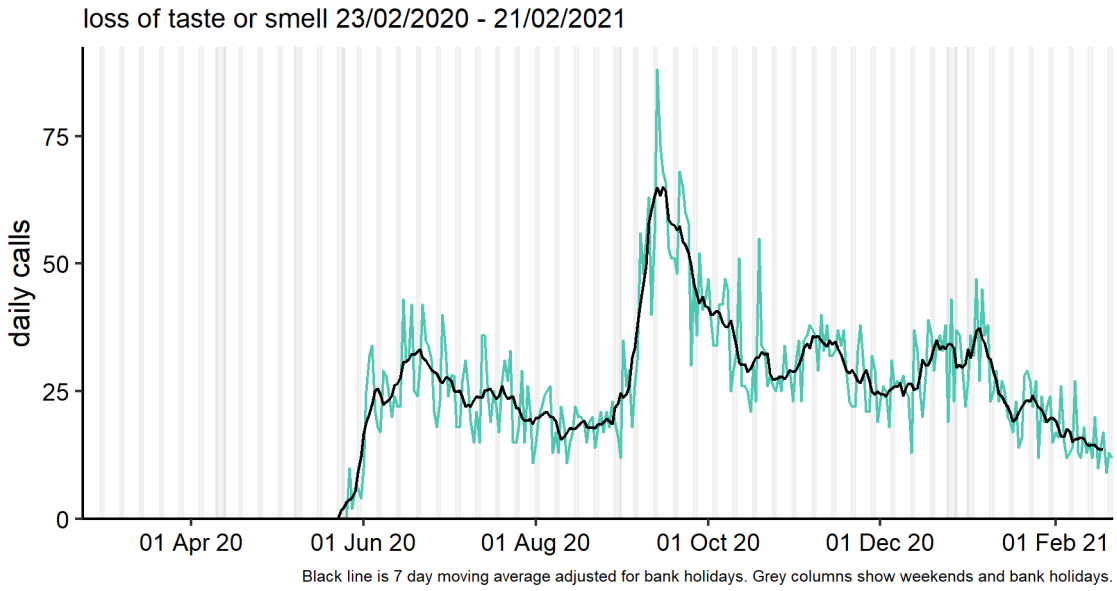
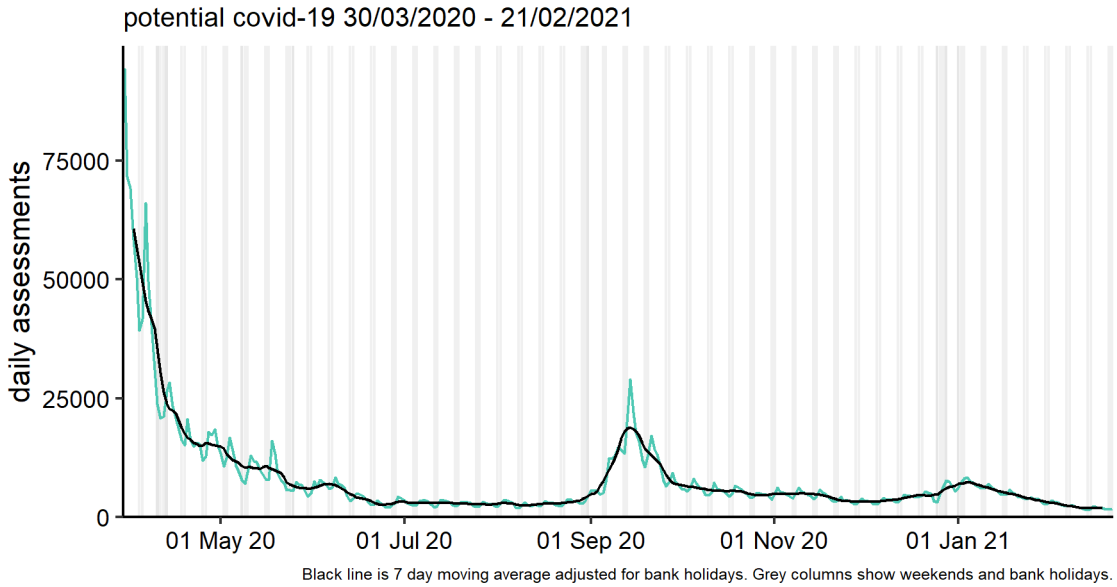
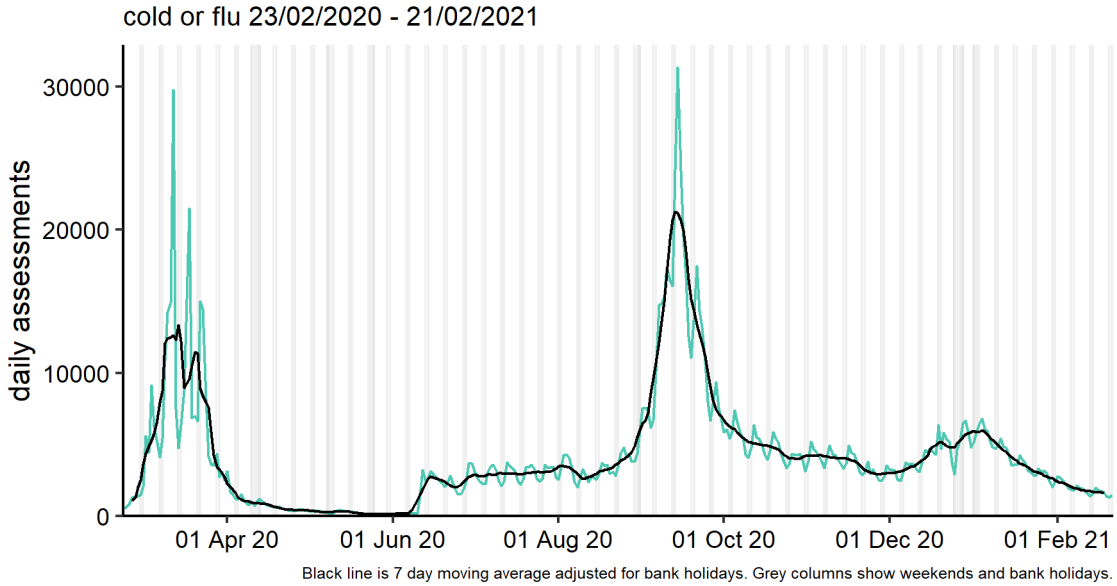

loss of taste or smell 23/02/2020 - 21/02/2021
daily calls
75
50
25
0
01 Apr 20
01 Jun 20
01 Aug 20
01 Oct 20
01 Dec 20
01 Feb 21
Black line is 7 day moving average adjusted for bank holidays. Grey columns show weekends and bank holidays.

Figure 29: NHS 111 completed online assessments (and 7-day moving average) for (a) daily potential COVID-19 online assessments, (b) daily cold/flu online assessments and (c) daily loss of taste or smell online assessments, as the number of completed online assessments for all ages, England

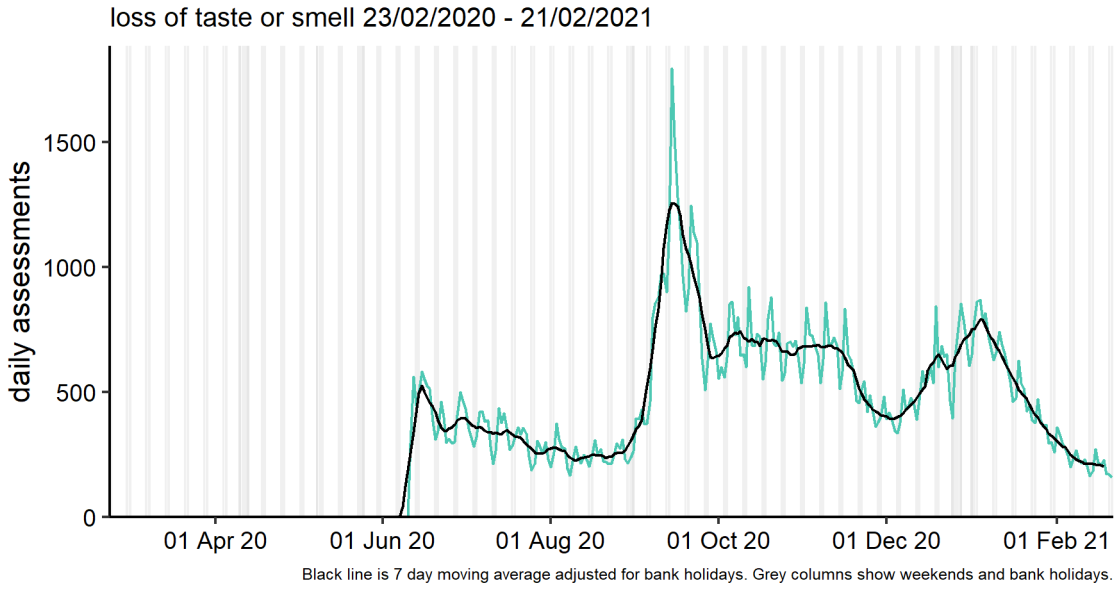
(a)



(b)



(c)


loss of taste or smell 23/02/2020 - 21/02/2021
daily assessments
1500
1000
500
0
01 Apr 20
01 Jun 20
01 Aug 20
01 Oct 20
01 Dec 20
01 Feb 21
Black line is 7 day moving average adjusted for bank holidays. Grey columns show weekends and bank holidays.

Primary care surveillance

RCGP (England)

The weekly ILI consultation rate through the RCGP surveillance was 0.9 per 100,000 registered population in participating GP practices in week 7 compared to the 0.6 per 100,000 in the previous week. This is below the baseline threshold (12.2 per 100,000) (Figure 30). By age group, the highest rates were seen in the 1 to 4, 45 to 64 and 65 to 74 year olds (all 1.1 per 100,000). The Lower Respiratory Tract Infections (LRTI) consultation rate was at 14.8 per 100,000 in week 7, which is similar to the rate of 16.5 per 100,000 from the previous week. The COVID-19-like indicator consultation rate was at 56.8 per 100,000 in week 7 compared to a rate of 73.2 per 100,000 in the previous week (Figure 31).

Figure 30: RCGP ILI consultation rates, all ages, England

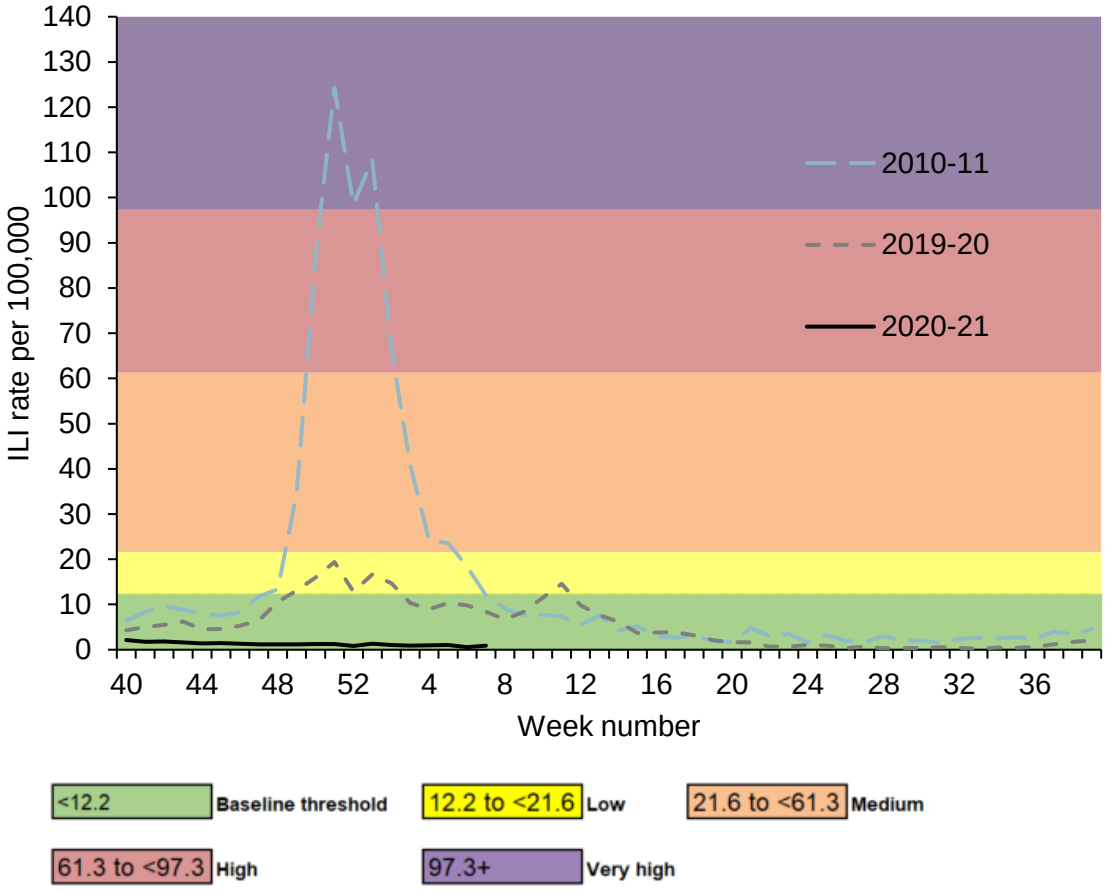
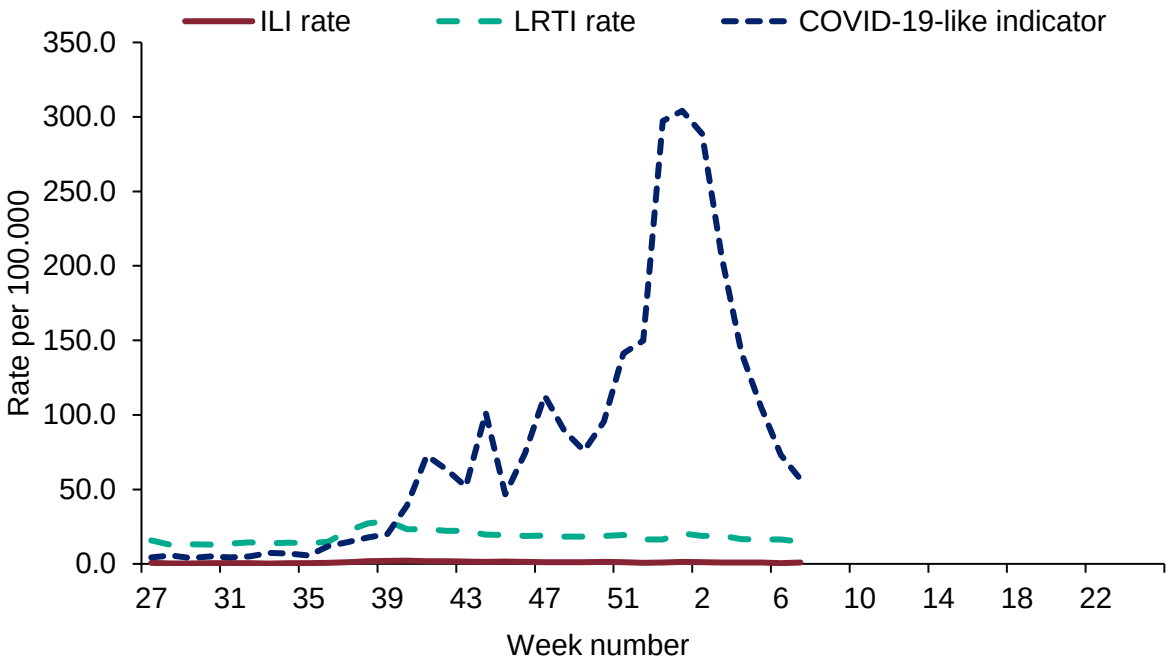


Figure 31: RCGP ILI, LRTI and COVID-19-like indicator consultation rates, England



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 45 to 64 year olds in Scotland (0.8 per 100,000), the 65 to 74 year olds in Wales (2.2 per 100,000) and the 75 plus year olds in Northern Ireland (2.4 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	53	1	2	3	4	5	6	7	8	9
England (RCGP)	2.1	1.7	1.8	1.6	1.4	1.5	1.3	1.2	1.2	1.2	1.3	1.2	0.7	0.9	1.3	1.1	0.9	1.0	1.0	0.6	0.9		
Wales	1.0	1.0	1.0	0.8	0.5	0.5	0.5	0.5	0.5	1.6	1.3	1.0	0.8	0.0	0.5	1.0	0.8	0.7	0.5	0.3	0.8		
Scotland	0.5	0.7	0.5	0.5	0.7	0.8	0.9	0.7	0.6	0.4	0.6	0.4	0.2	0.4	0.5	0.6	0.5	0.4	0.5	0.4	0.5		
Northern Ireland	1.3	1.5	2.2	1.4	1.6	1.8	1.8	1.9	1.7	1.2	1.5	1.7	0.7	2.2	3.4	2.4	2.1	1.0	1.6	0.8	0.8		

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 2009/10), in a standardised approach across Europe. For MEM threshold values for each country, please visit: https://www.gov.uk/guidance/sources-of-uk-flu-data-influenza-surveillance-in-the-uk#clinical-surveillance-through-primary-care

GP In Hours, Syndromic Surveillance

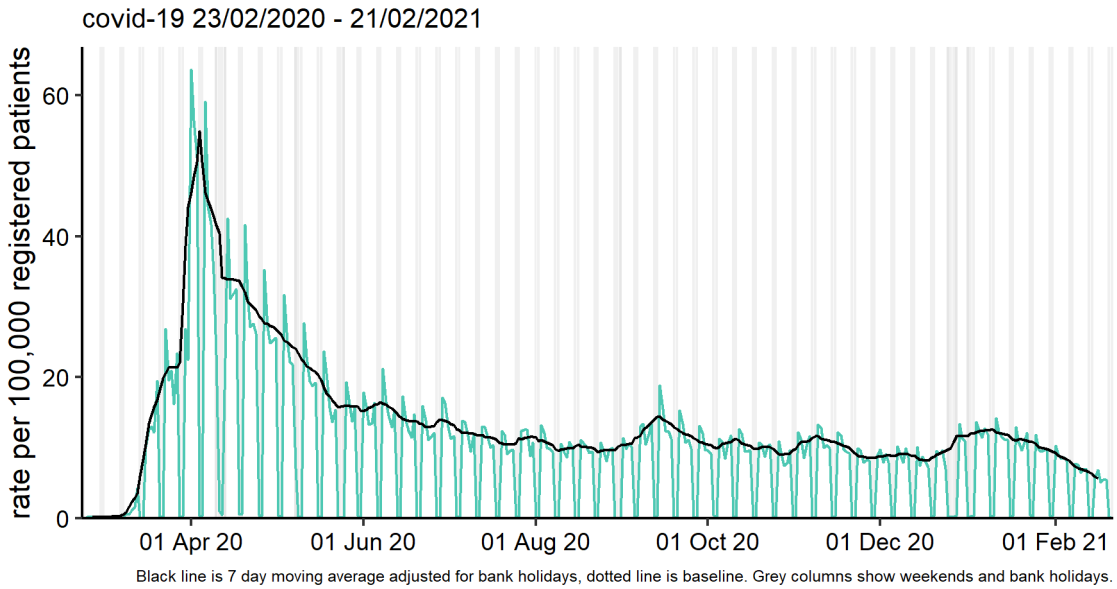
The GP In Hours (GPIH) syndromic surveillance system monitors the number of GP visits during regular hours of known clinical indicators.

Up to 21 February GP in-hours consultations for influenza-like-illness and for COVID-19 remained decreased (Figure 32b).

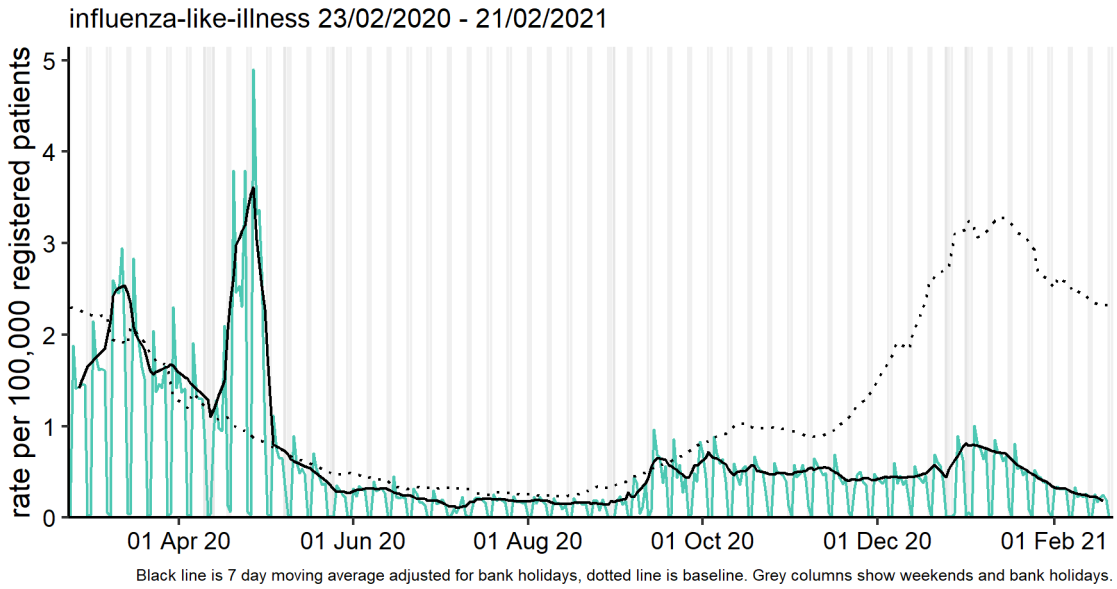
Please note GP data should be interpreted with caution due to changes in advice regarding accessing GP surgeries due to COVID-19. Further information about these caveats is available from the PHE GP In Hours Syndromic Surveillance bulletin.

Figure 32: GPIH clinical indicators for (a) potential COVID-19 GP consultations and (b) influenza-like illness GP consultations, England

(a)



(b)


influenza-like-illness 23/02/2020 - 21/02/2021
rate per 100,000 registered patients
0
1
2
3
4
5
01 Apr 20
01 Jun 20
01 Aug 20
01 Oct 20
01 Dec 20
01 Feb 21
Black line is 7 day moving average adjusted for bank holidays, dotted line is baseline. Grey columns show weekends and bank holidays.

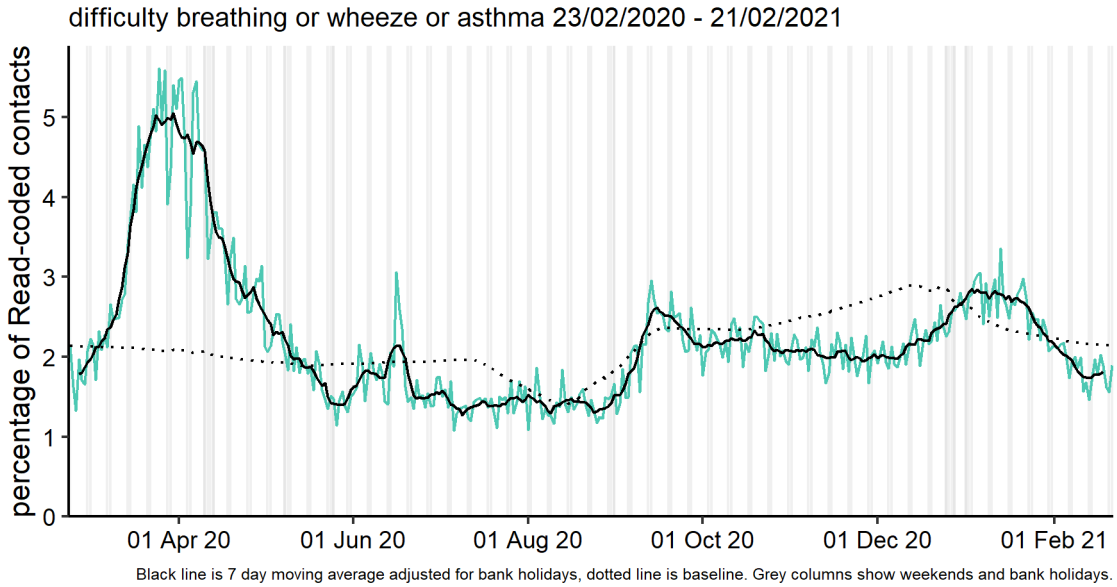
GP Out of Hours, Syndromic Surveillance

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 cover around 70% of England's out of hour activity.

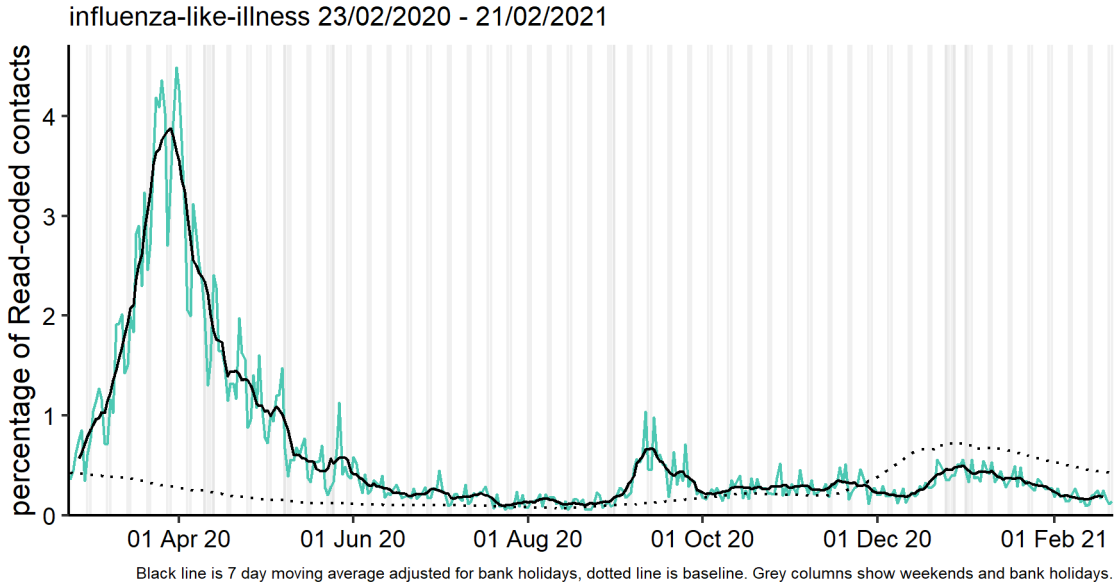
Up to 27 February GP out-of-hours and unscheduled care consultations for acute respiratory infections and influenza-like illness remained stable and difficulty breathing/asthma/wheeze increased slightly (Figure 33).

Figure 33: GPOOH daily contacts (%) for (a) difficulty breathing/wheeze/asthma, (b) influenza-like illness and (c) acute respiratory infections, England

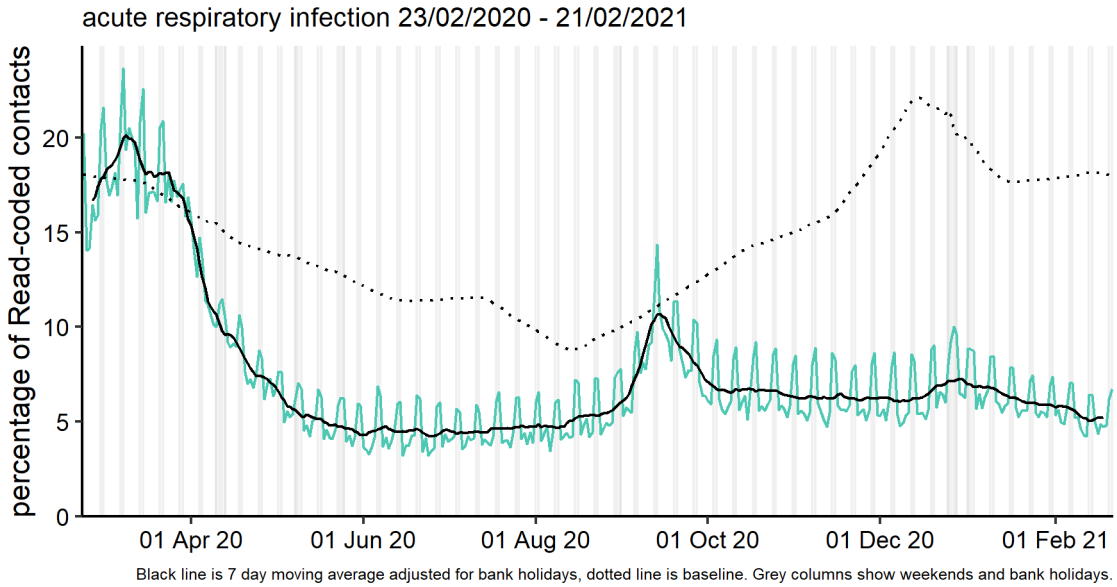
(a)



(b)



(c)

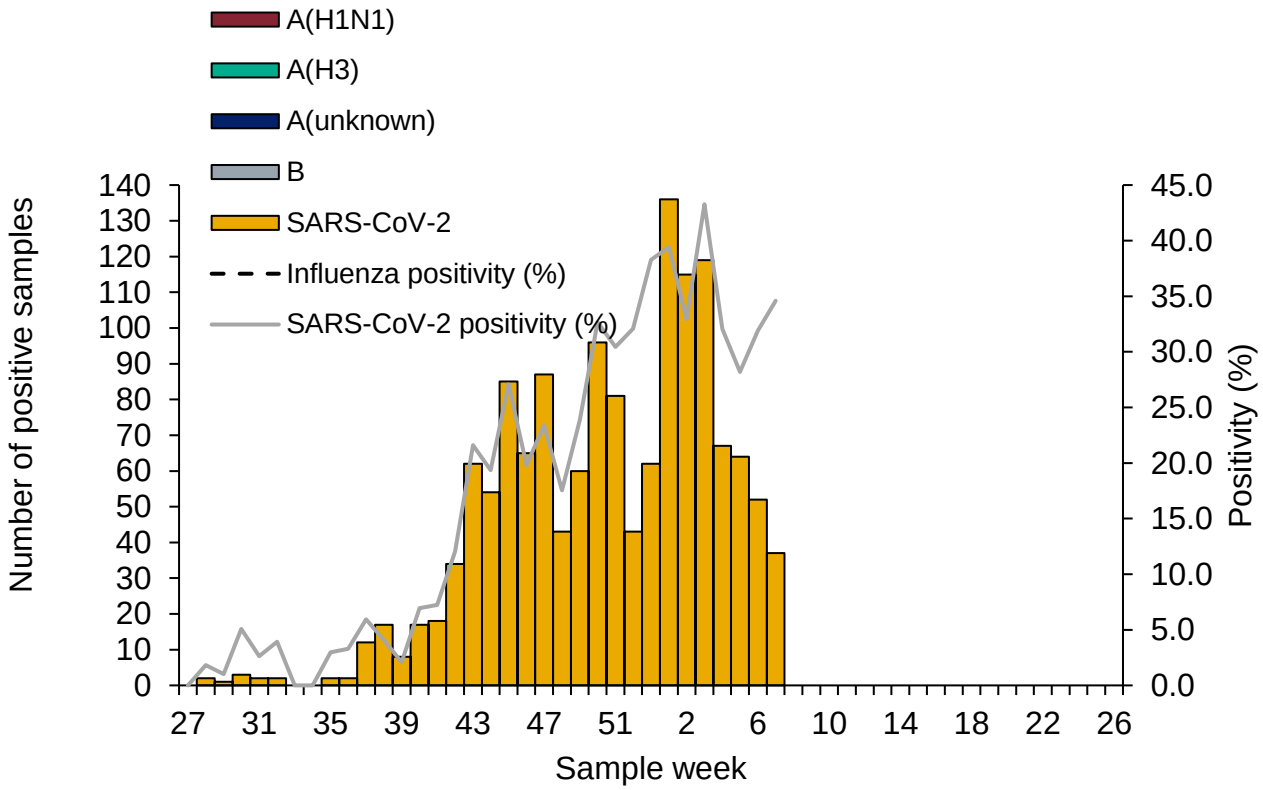

acute respiratory infection 23/02/2020 - 21/02/2021
percentage of Read-coded contacts
0
5
10
15
20
01 Apr 20
01 Jun 20
01 Aug 20
01 Oct 20
01 Dec 20
01 Feb 21
Black line is 7 day moving average adjusted for bank holidays, dotted line is baseline. Grey columns show weekends and bank holidays.

Sentinel swabbing scheme in the UK

In week 7 2021, 37 samples tested positive for SARS-CoV-2 with an overall positivity of 34.6% (37/107) compared to 31.9% (52/163) in the previous week, through the UK GP sentinel swabbing schemes (Figure 34).

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

Figure 34: 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 34 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/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 and influenza 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.

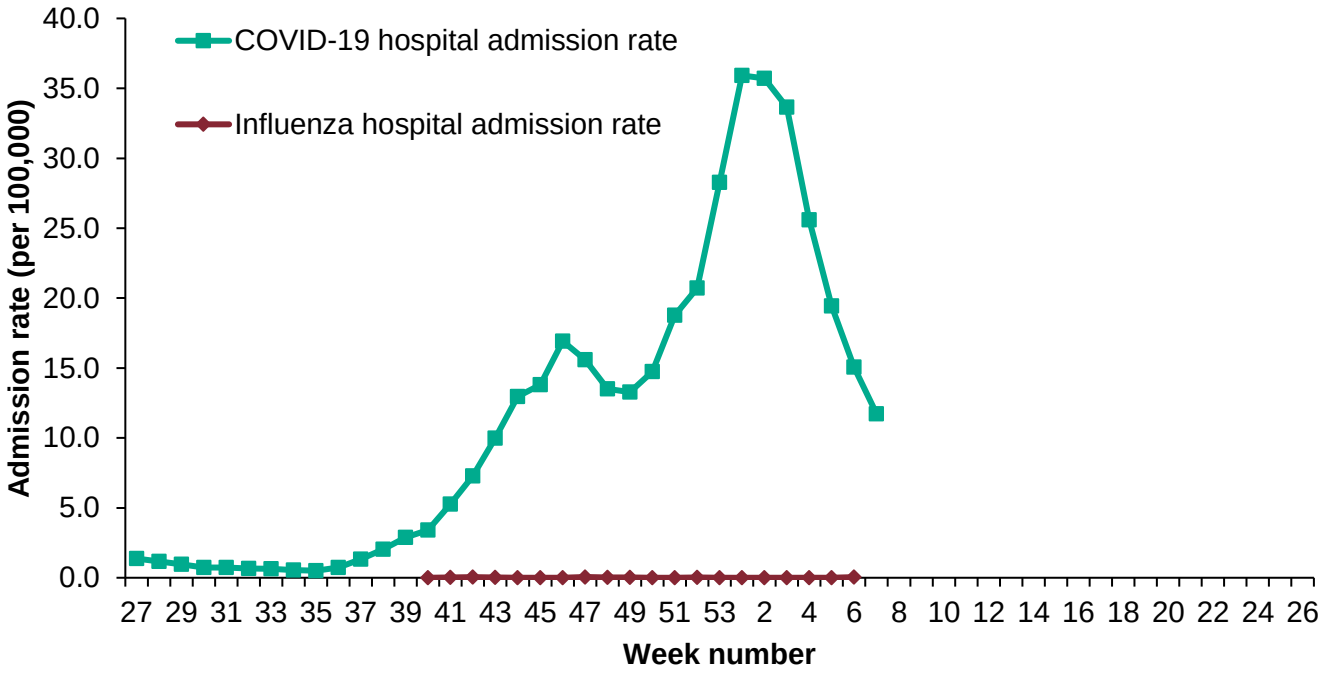
Hospitalisations, SARI Watch

In week 7, the weekly hospital admission rate for COVID-19 continued to decrease. There was no new hospital admissions for influenza in week 7.

The hospitalisation rate for COVID-19 was at 11.73 per 100,000 in week 7 compared to 15.07 per 100,000 in the previous week.

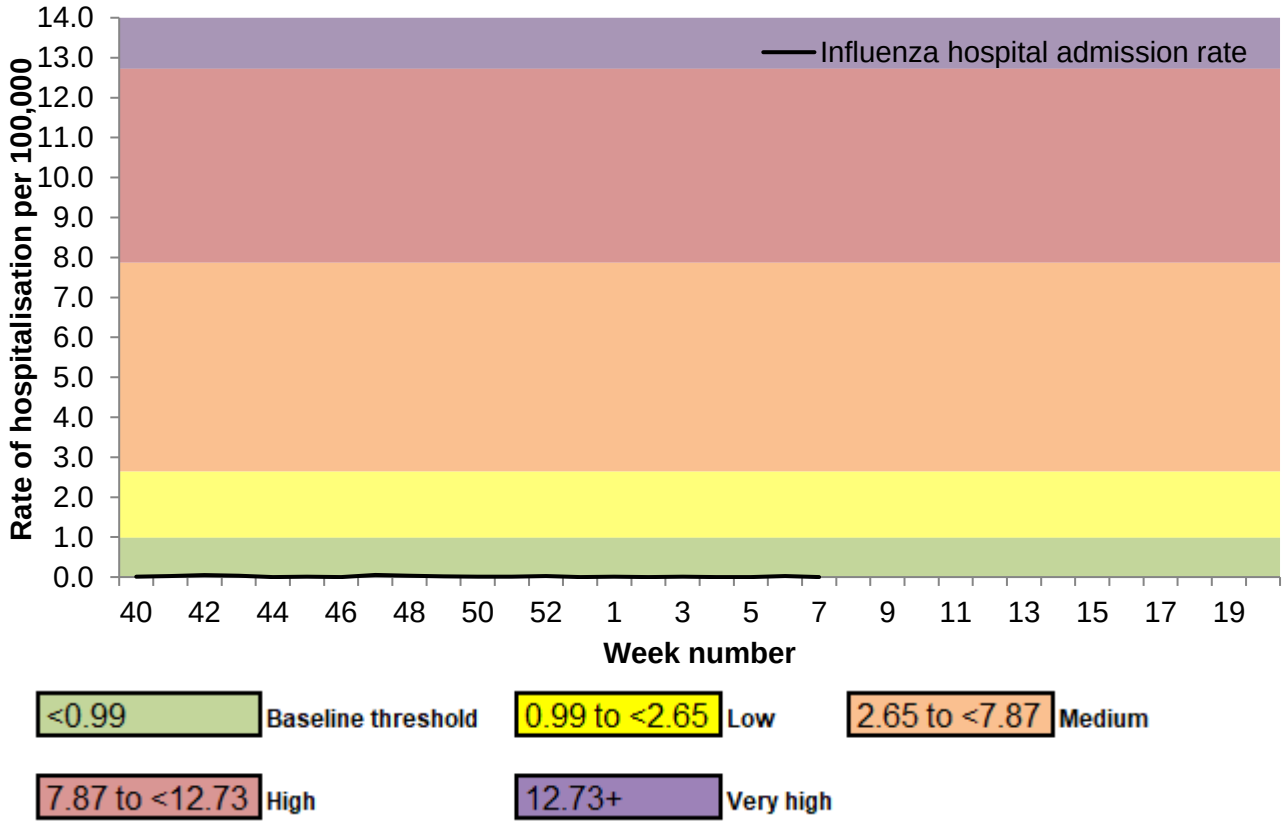
By PHE centre, the highest hospital admission rate for COVID-19 was observed in the West Midlands. By age groups, the highest hospital admission rate for confirmed COVID-19 was in the 85+ year olds.

Figure 35: 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 28 sentinel NHS trusts for week 7
* COVID-19 hospital admission rate based on 117 NHS trusts for week 7
* SARI Watch data are provisional.

Figure 36: Weekly overall influenza hospital admission rates per 100,000 trust catchment population with MEM thresholds, SARI Watch, England



* the MEM thresholds used are those from the 2019/20 season due to the pandemic

Figure 37: Weekly influenza hospital admissions by influenza type, SARI Watch, England

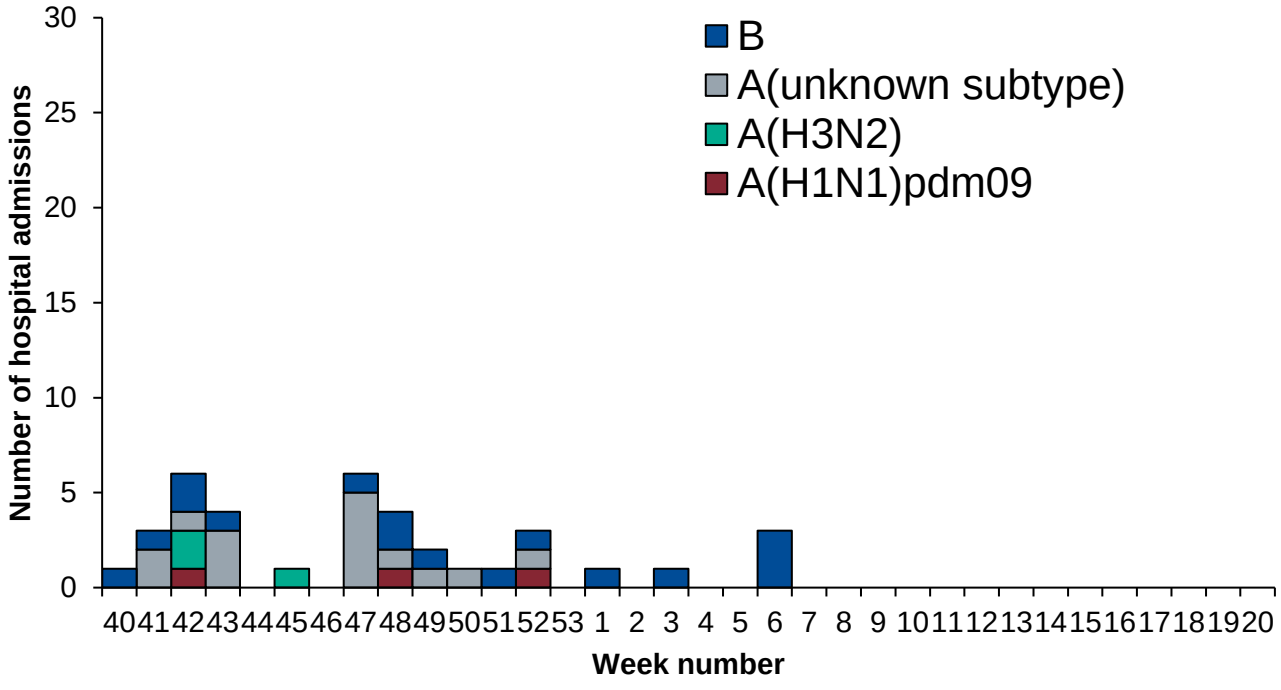
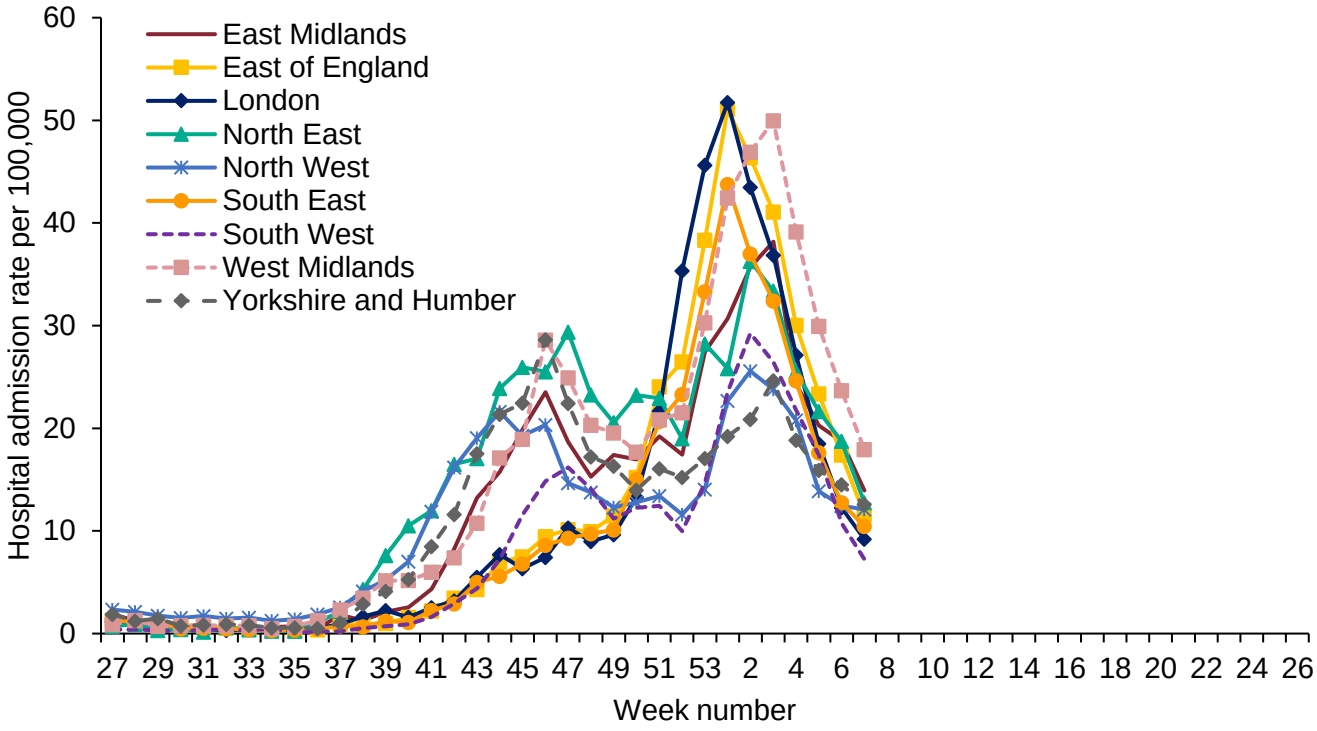


Figure 38: Weekly hospital admission rate by PHE Centre for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch

(a)



(b)

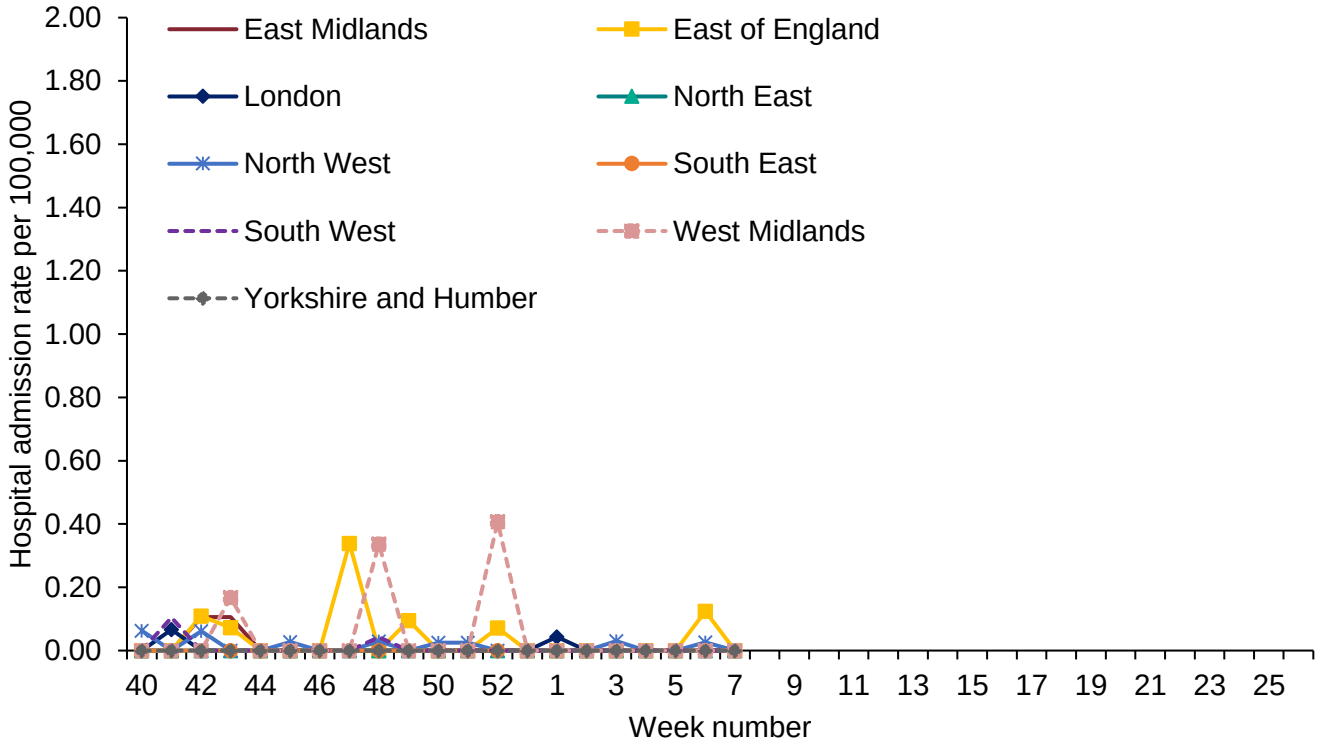
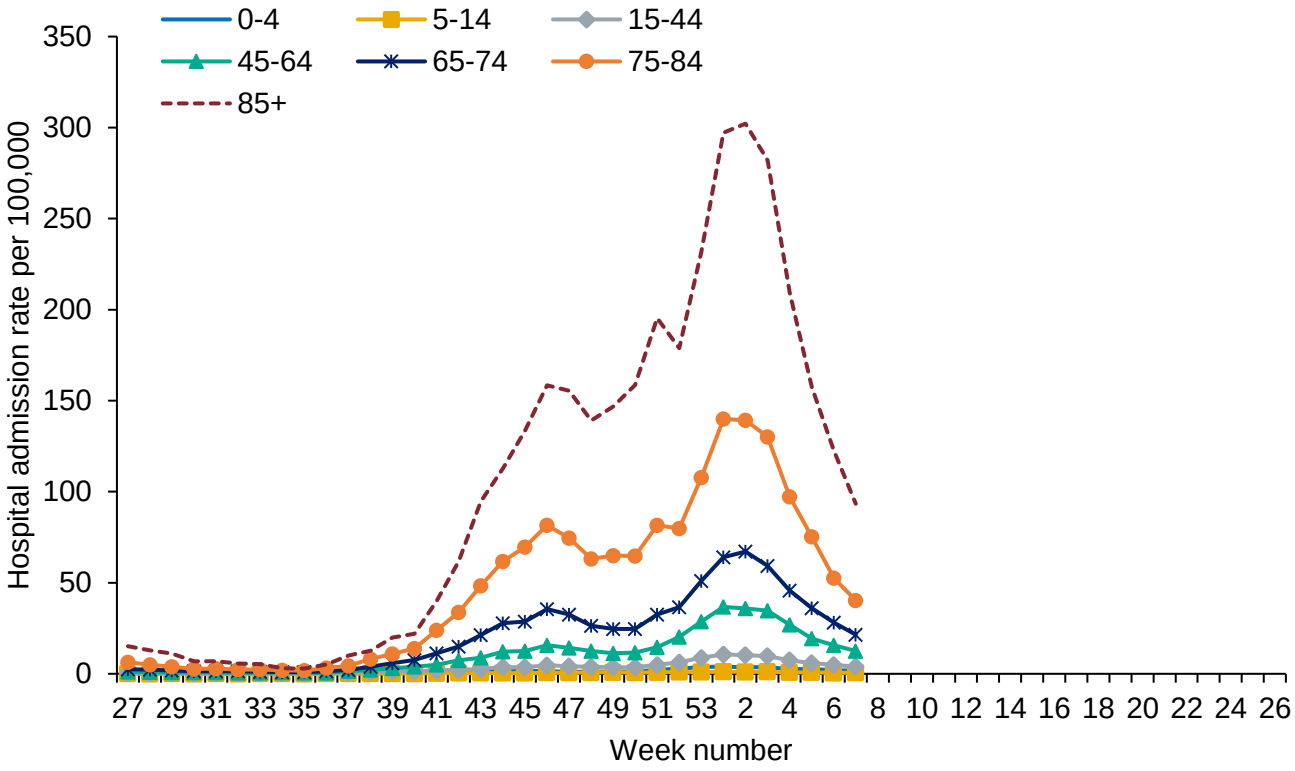
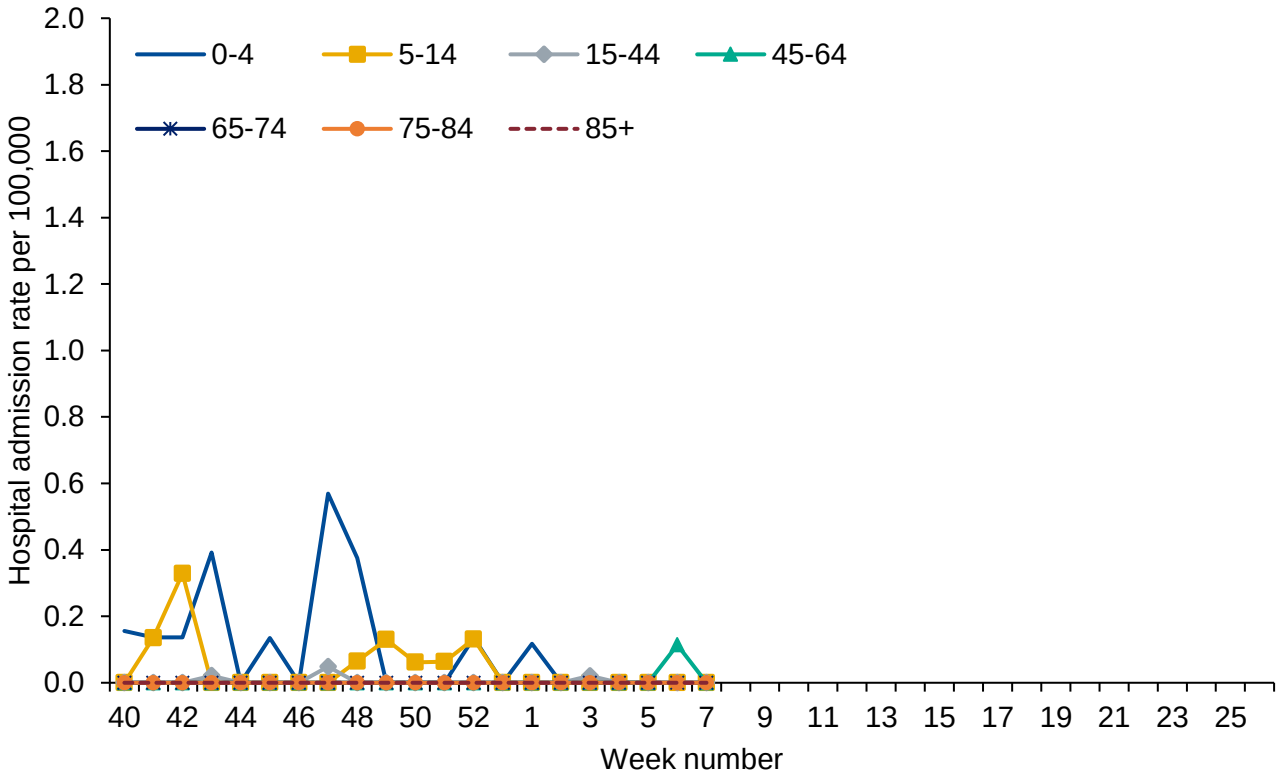


Figure 39: Weekly hospital admission rate by age group for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch

(a)



(b)



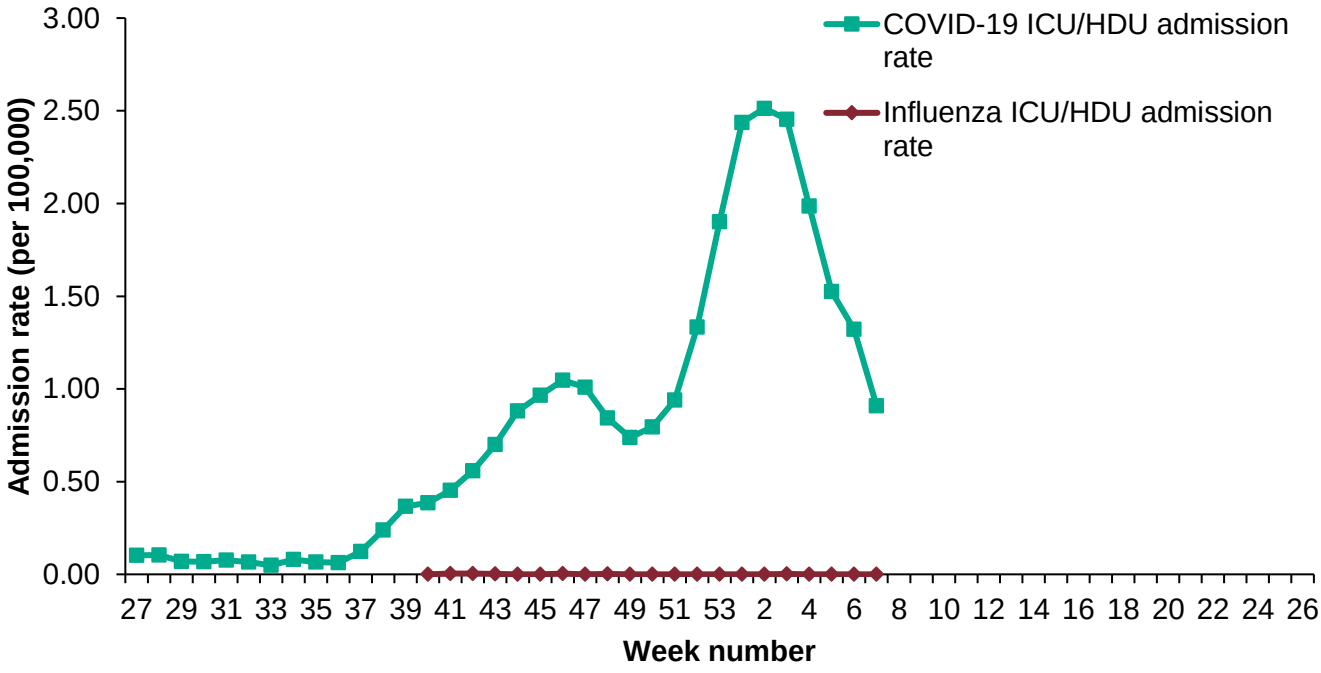
ICU/HDU admissions, SARI Watch

In week 7, the weekly ICU/HDU admission rates for COVID-19 decreased. There was no new ICU/HDU admissions for influenza in week 7.

The ICU/HDU rate for COVID-19 was at 0.91 per 100,000 in week 7 (based on data reported from 115 NHS Trusts) compared to at 1.32 per 100,000 in the previous week.

By PHE Centre, the highest ICU/HDU admission rates for COVID-19 were observed in London. By age groups, the highest ICU/HDU admission rates for COVID-19 were observed in the 65 to 74 year olds.

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



* influenza ICU/HDU admission rate is reported from week 40 2020 onwards
* influenza ICU/HDU admission rate based on 101 NHS trusts for week 6
* COVID-19 ICU/HDU admission rate based on 115 NHS trusts for week 6
* SARI Watch data are provisional.

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

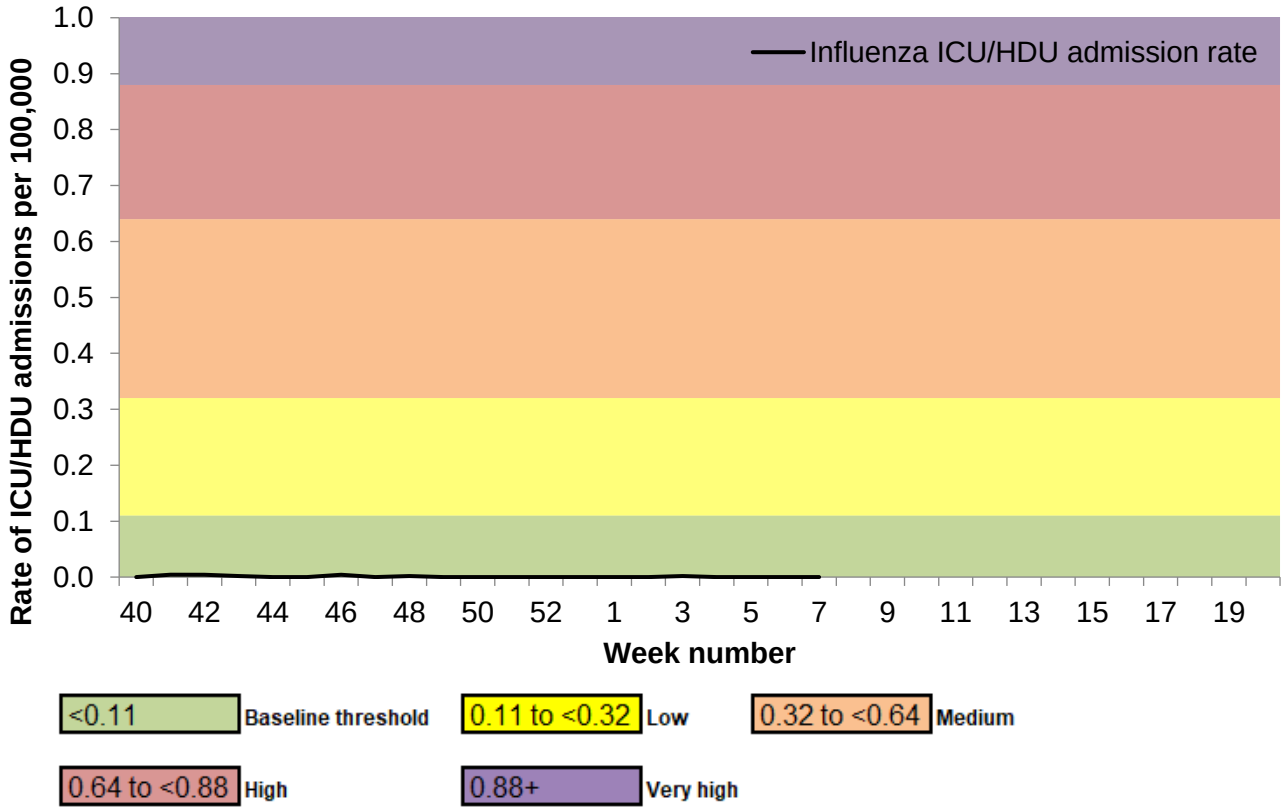


Figure 42: Weekly influenza ICU/HDU admissions by influenza type, SARI Watch, England

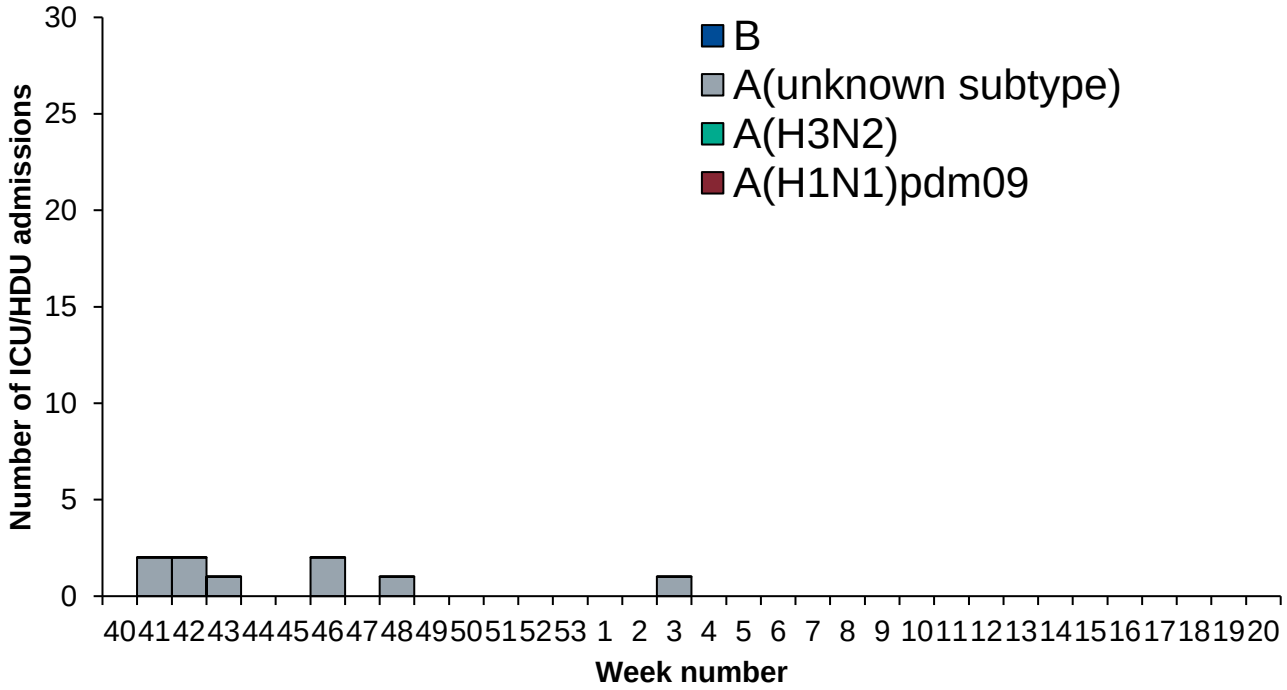
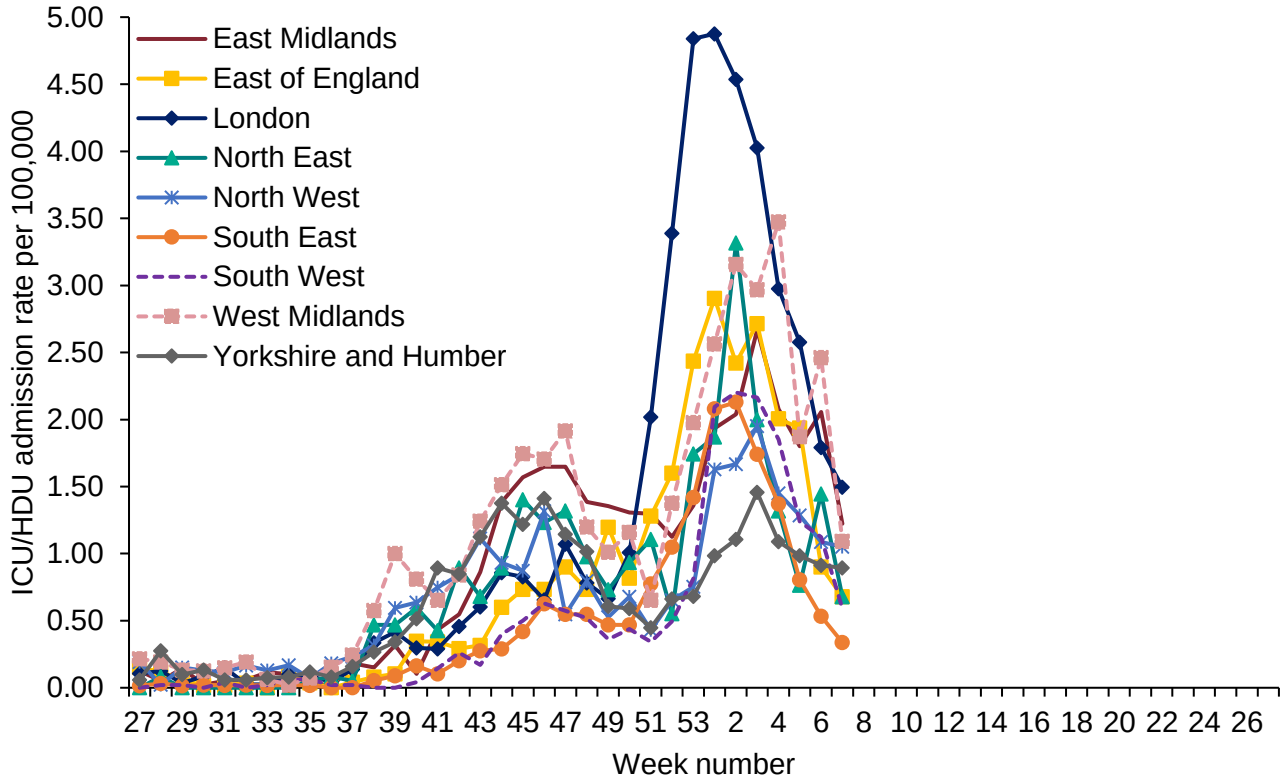


Figure 43: Weekly ICU/HDU admission rate by PHE Centre for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch

(a)



(b)

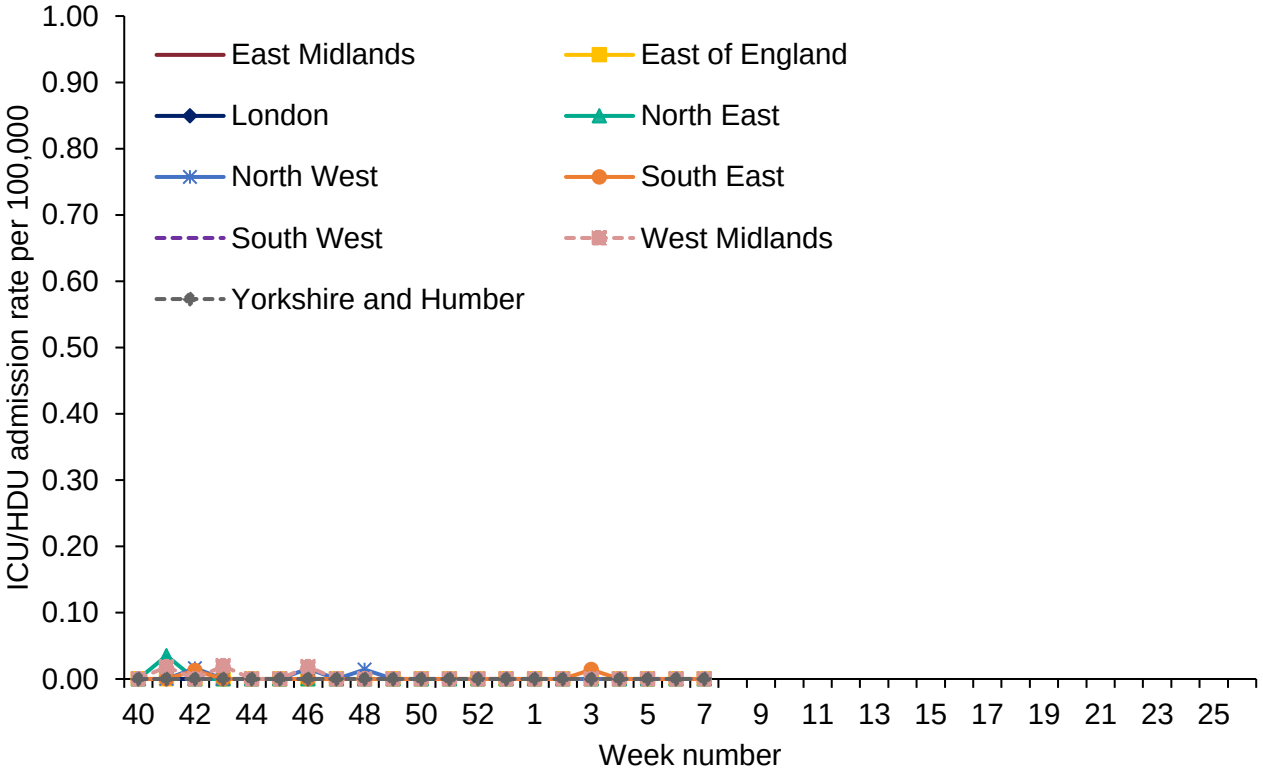
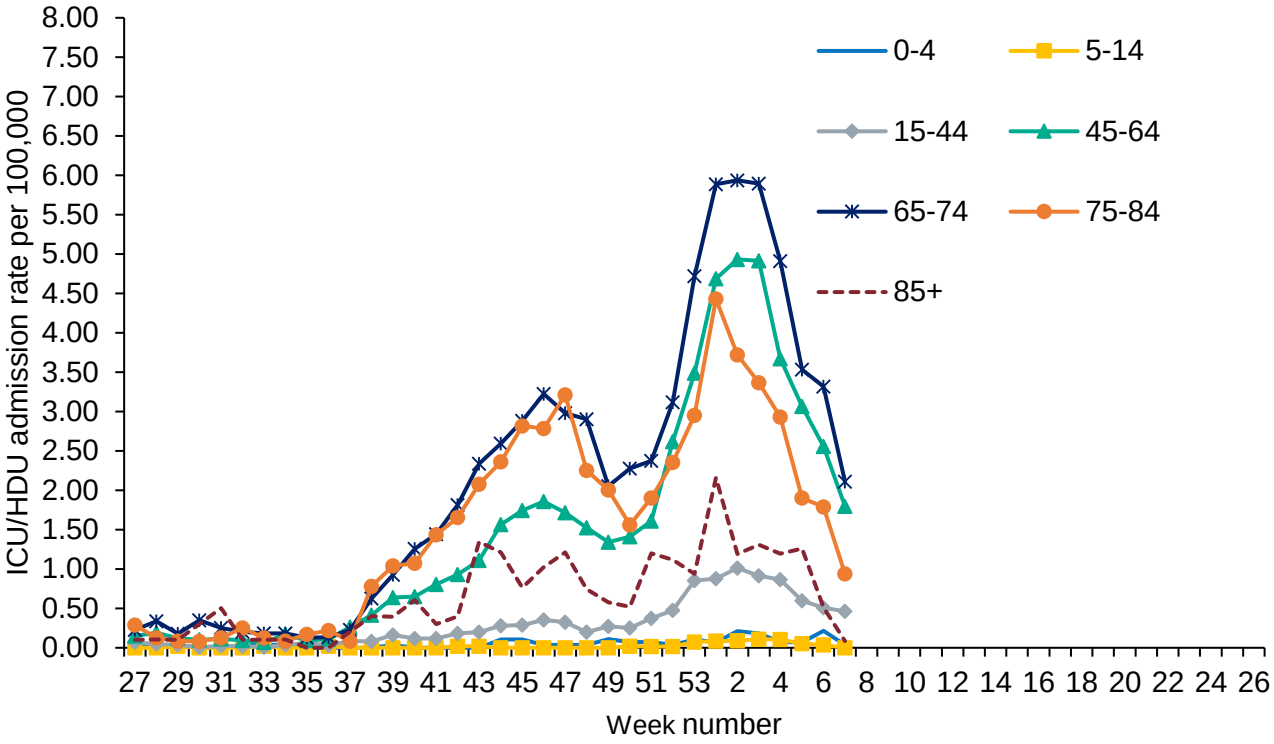
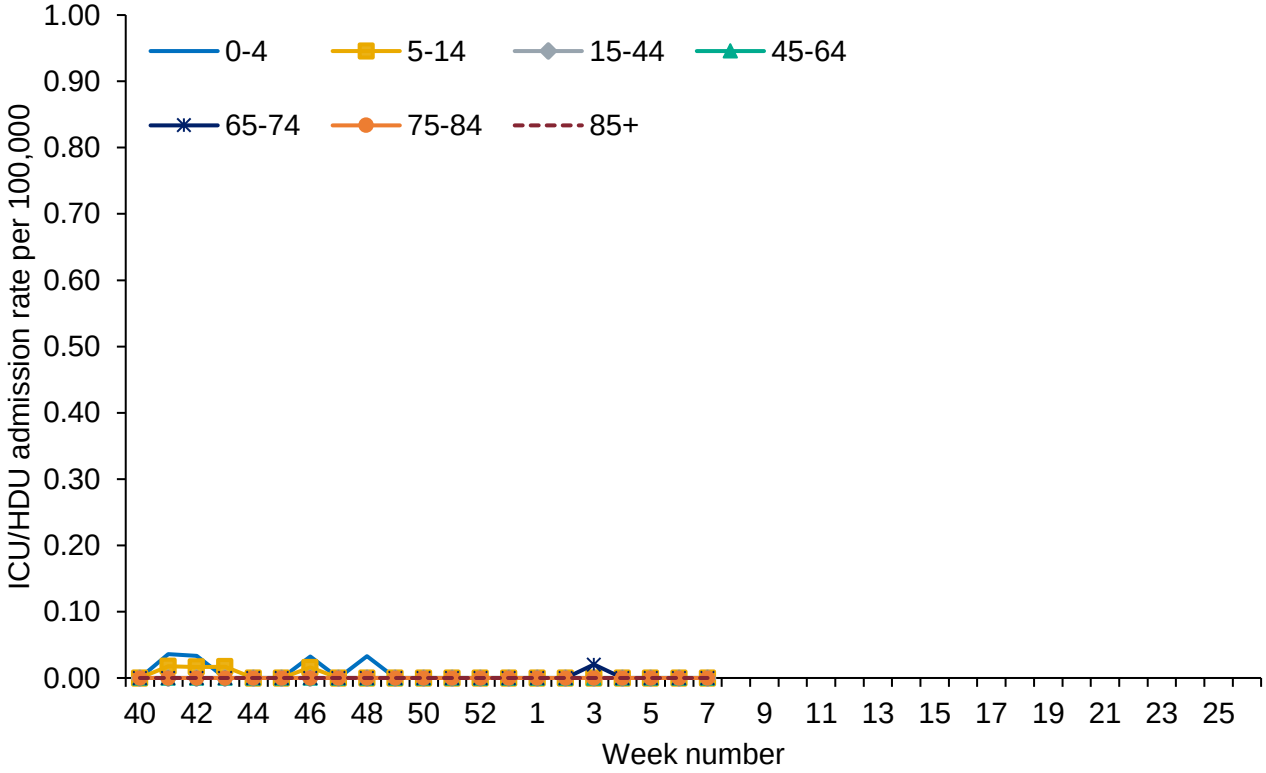


Figure 44: Weekly ICU/HDU admission rate by age group for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch

(a)



(b)

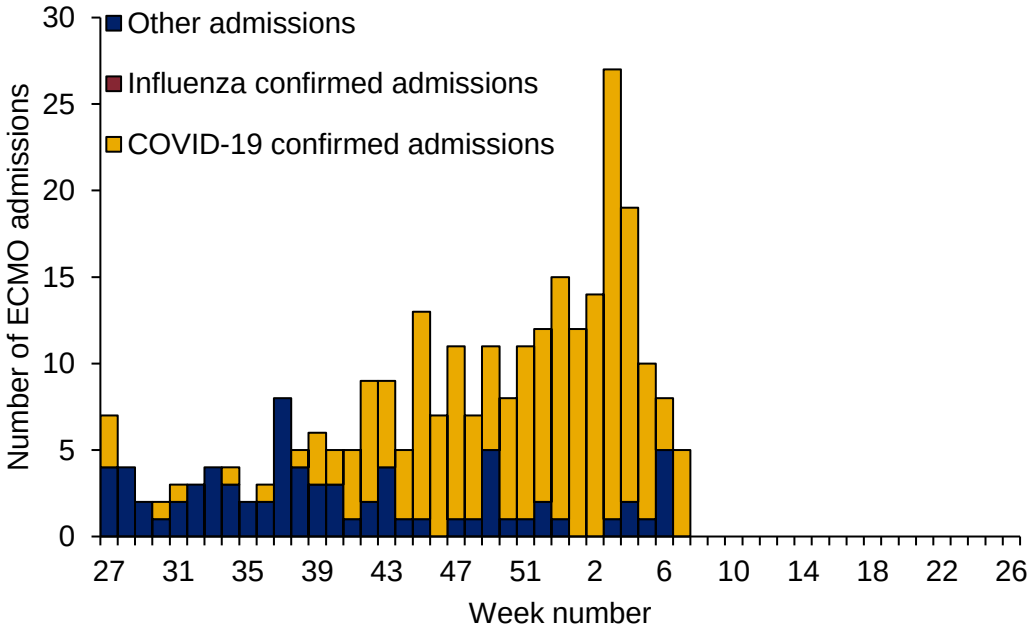


ECMO, SARI Watch

From week 27 2020, a total of 201 laboratory confirmed COVID-19 admissions have been reported from the 6 Severe Respiratory Failure (SRF) centres in the UK.

There were 5 new laboratory confirmed COVID-19 admissions reported in week 7 (Figure 45).

Figure 45: Laboratory confirmed ECMO admissions (COVID-19, influenza and non-COVID-19 confirmed) to Severe Respiratory Failure centres in the UK



Emergency Department attendances, Syndromic surveillance

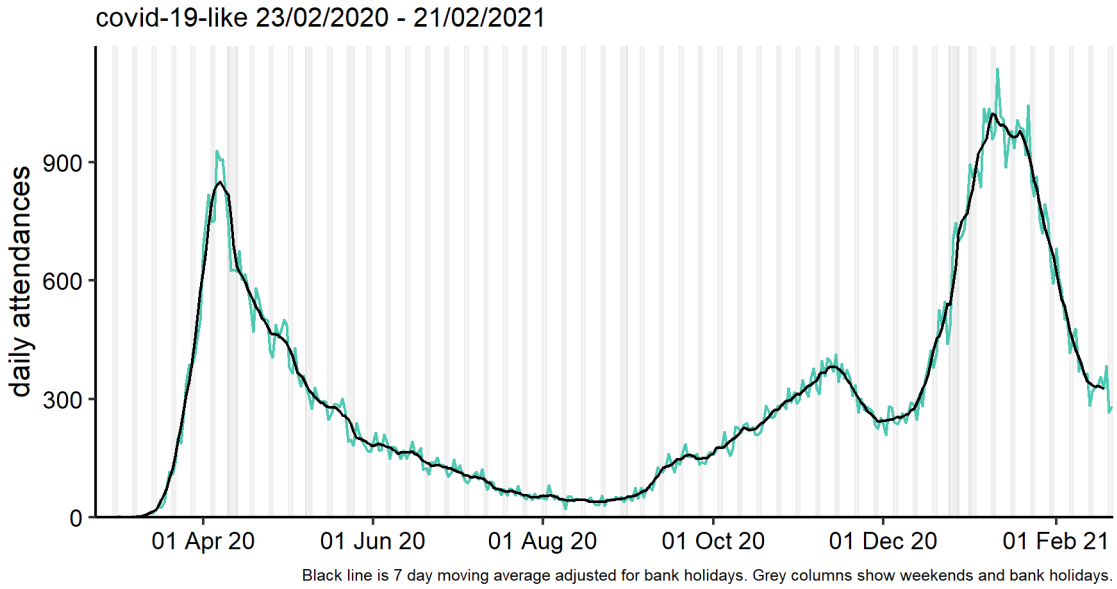
The Emergency Department Syndromic Surveillance System (EDSSS) monitors the daily visits in a network of emergency departments across England.

Up to 21 February 2021, the daily number of ED attendances for all ages as reported by 121 EDs, for COVID-19-like decreased slightly and acute respiratory infection remained stable (Figure 46).

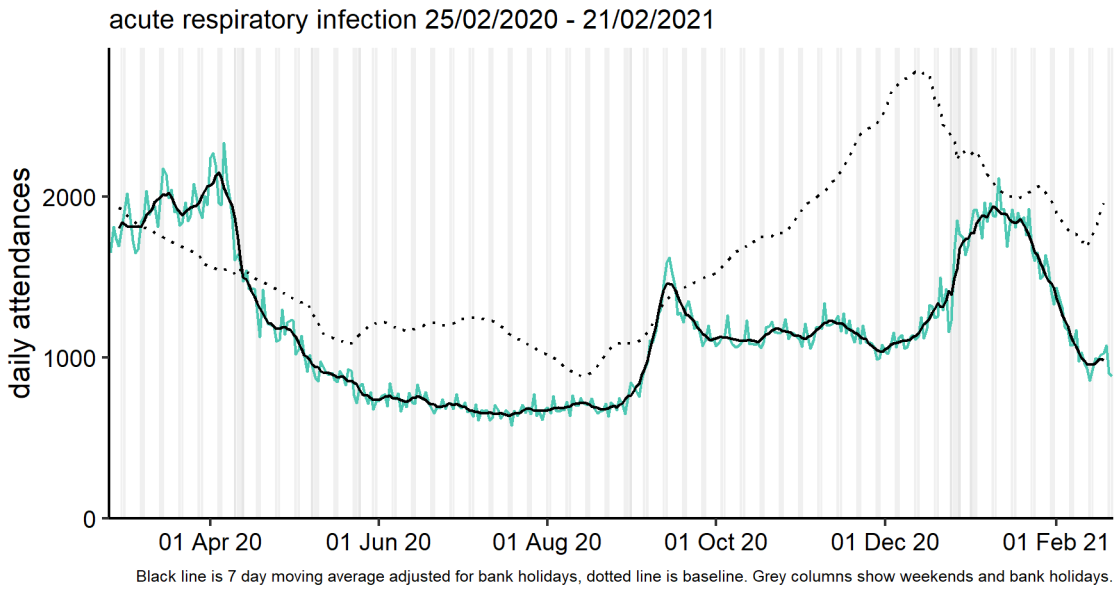
Please note: the COVID-19-like ED indicator is an underestimation of the number of COVID-19 attendances as it only includes attendances with a COVID-19-like diagnosis as their primary diagnosis. The EDSSS COVID-19-like indicator should therefore be used to monitor trends in ED attendances and not to estimate actual numbers of COVID-19 ED attendances. Further information about these caveats is available from the PHE Emergency Department Syndromic Surveillance bulletin.

Figure 46: Daily ED attendances for (a) COVID-19-like and (b) acute respiratory infections, all ages, England

(a)



(b)


acute respiratory infection 25/02/2020 - 21/02/2021
daily attendances
2000
1000
0
01 Apr 20
01 Jun 20
01 Aug 20
01 Oct 20
01 Dec 20
01 Feb 21
Black line is 7 day moving average adjusted for bank holidays, dotted line is baseline. Grey columns show weekends and bank holidays.

Mortality surveillance

Cumulative COVID-19 deaths

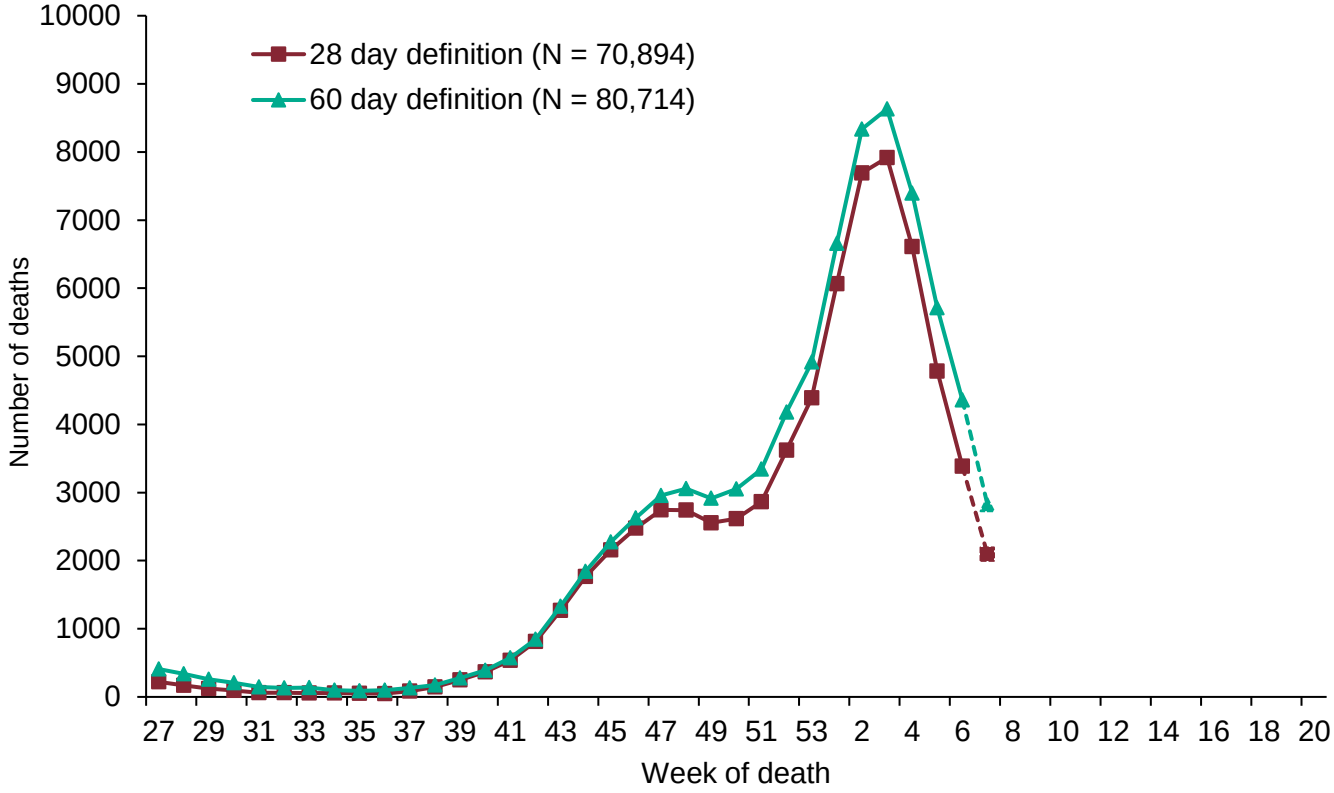
Changes to the definitions of COVID-19 related deaths in England are described in more detail in an accompanying PHE technical summary.

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 47 represents these differences by definition.

Figure 47: Number of deaths since week 27 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 48: Age/sex pyramid of laboratory confirmed COVID-19 deaths, since week 27

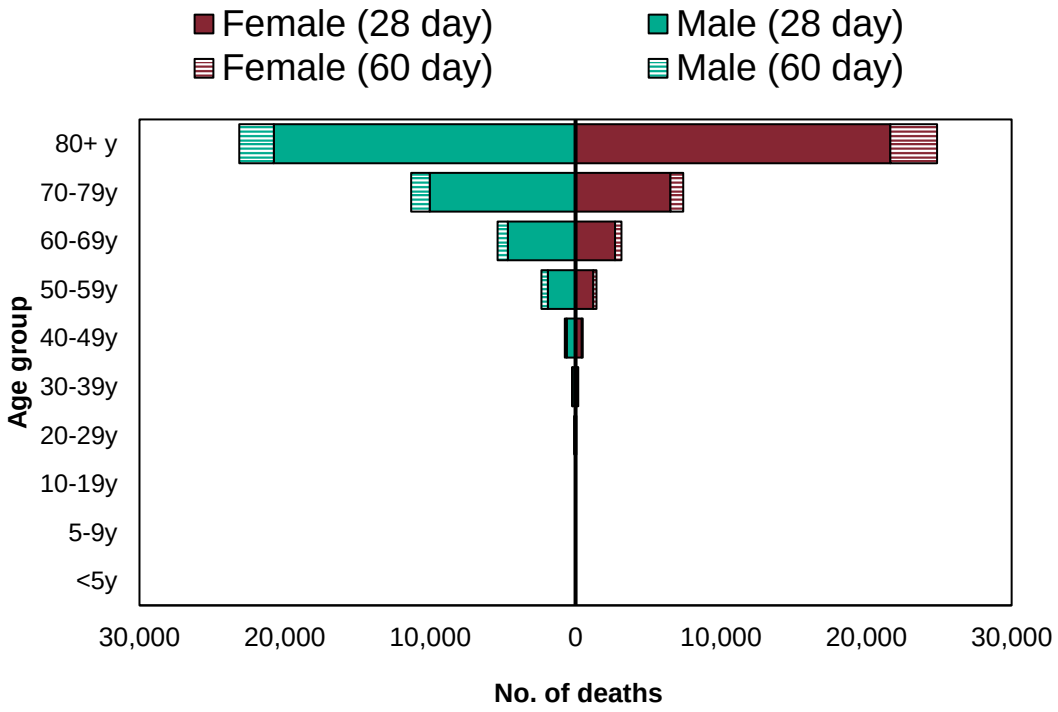


Table 5: Ethnic group (%) of COVID-19 deaths and time since laboratory confirmation of COVID-19, England

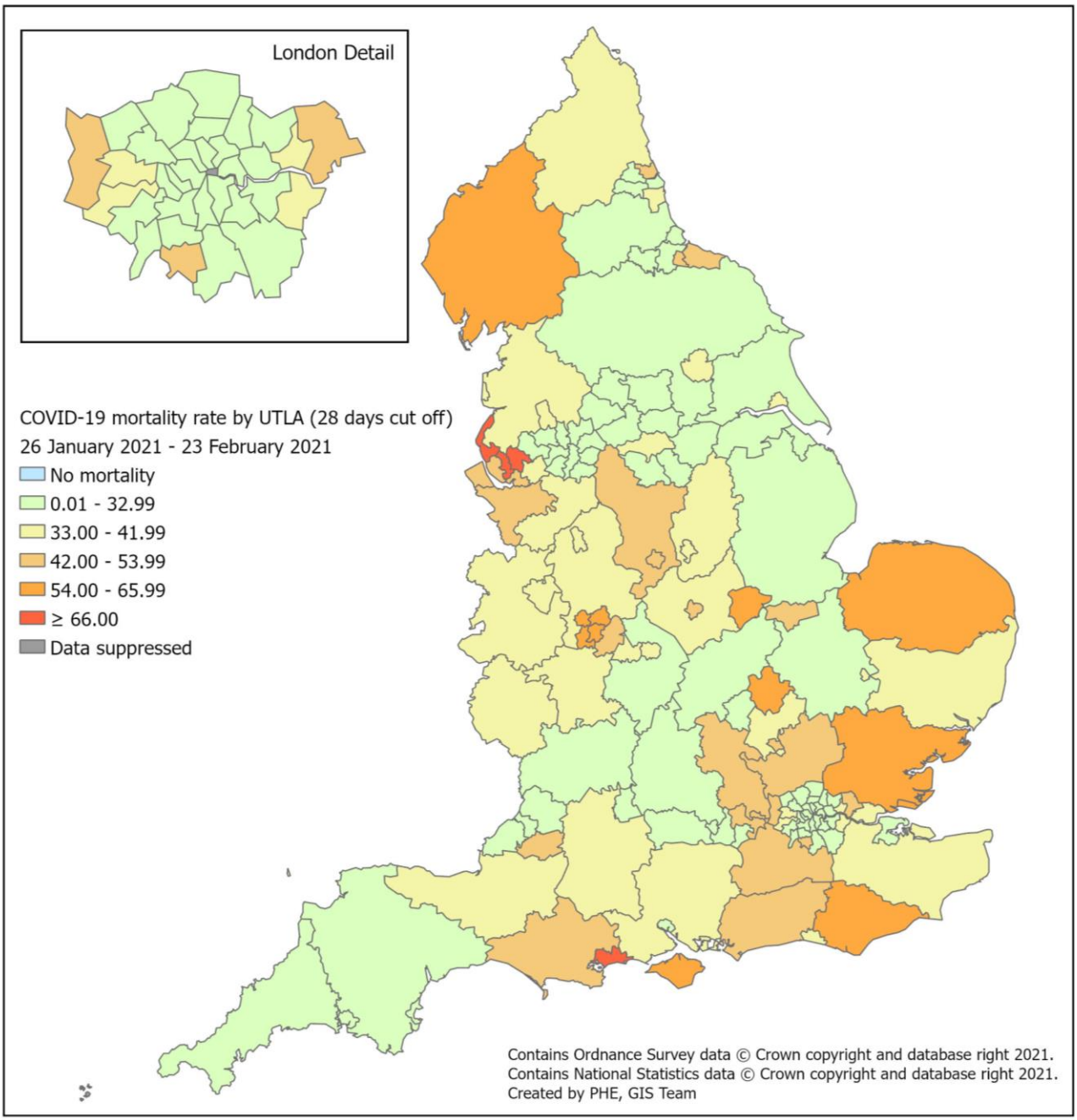
Ethnicity	28 day definition	60 day definition
White	88.5	88.6
Asian / Asian British	6.9	6.8
Black / African / Caribbean / Black British	2.5	2.5
Mixed / Multiple ethnic groups	0.5	0.5
Other ethnic group	1.6	1.6

Table 6: Cumulative number of COVID-19 deaths since week 27 and time since laboratory confirmation of COVID-19 by PHE Centres

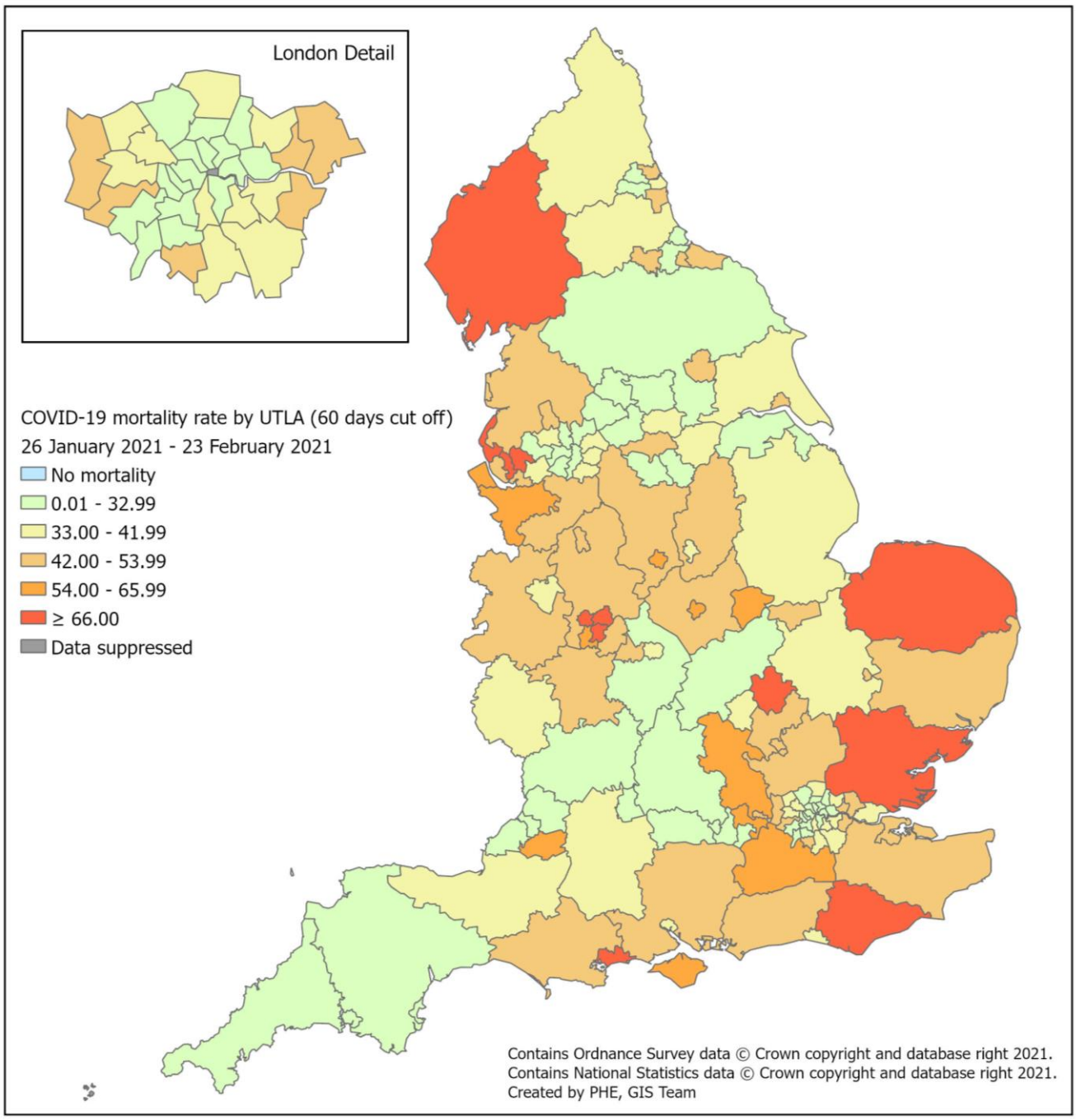
PHE Centres	28 day definition	60 day definition
North East	3,627	4,164
North West	11,075	12,785
Yorkshire & Humber	6,779	7,851
West Midlands	8,322	9,500
East Midlands	6,629	7,557
East of England	9,150	10,298
London	8,874	10,131
South East	11,414	12,905
South West	4,626	5,153

Figure 49: Cumulative mortality rate of COVID-19 cases per 100,000 population tested under Pillars 1 and 2 for the past four weeks by (a) 28 day definition and (b) 60 day definition

(a)



(b)


London Detail
COVID-19 mortality rate by UTLA (60 days cut off)
26 January 2021 - 23 February 2021
No mortality
0.01 - 32.99
33.00 - 41.99
42.00 - 53.99
54.00 - 65.99
≥ 66.00
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 1 January to 17 February 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 +/- 7 days with an extrapolated time trend, and with 2 and 3 standard deviation (SD) limits shown (Figure 50).

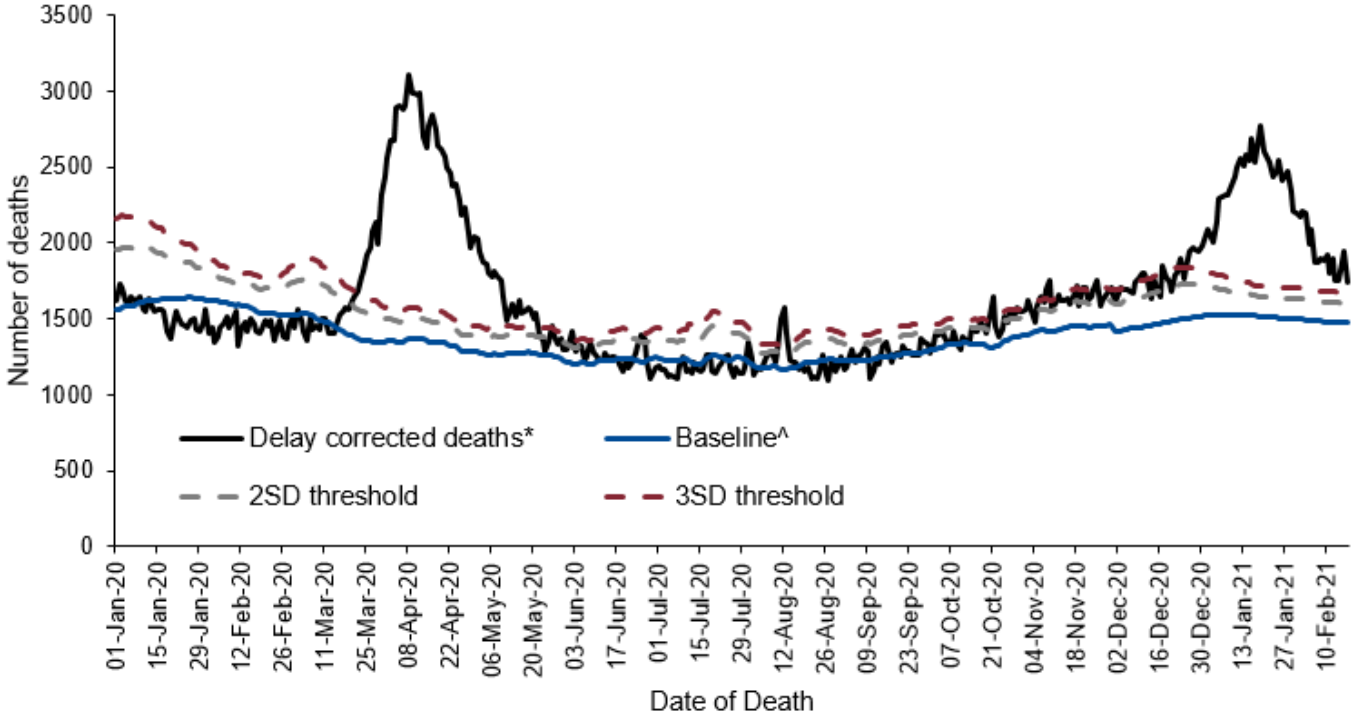
Weeks in which at least 2 days exceeded the 3SD threshold are shown in Table 7 and the daily difference from the baseline by age and region is given in Figure 50.

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 weeks model supersedes models presented in previous week.

Significant excess all-cause mortality was observed in week 6 overall, by age group in the 45 to 64, 65 to 74, 75 to 74 and 85 plus year olds; and sub-nationally in the East Midlands, London, North West, South West, and West Midlands. The excess noted in week 33 coincides with a heat wave (Figure 50, 51 and Table 7).

Figure 50: Daily excess all-cause deaths in all ages, England, 1 January 2020 to 17 February 2021



^ based on same day in previous 5 years +/- 1 week with a linear trend projected or for December to February past 3 low flu years +/-2 weeks, no trend.
* 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)

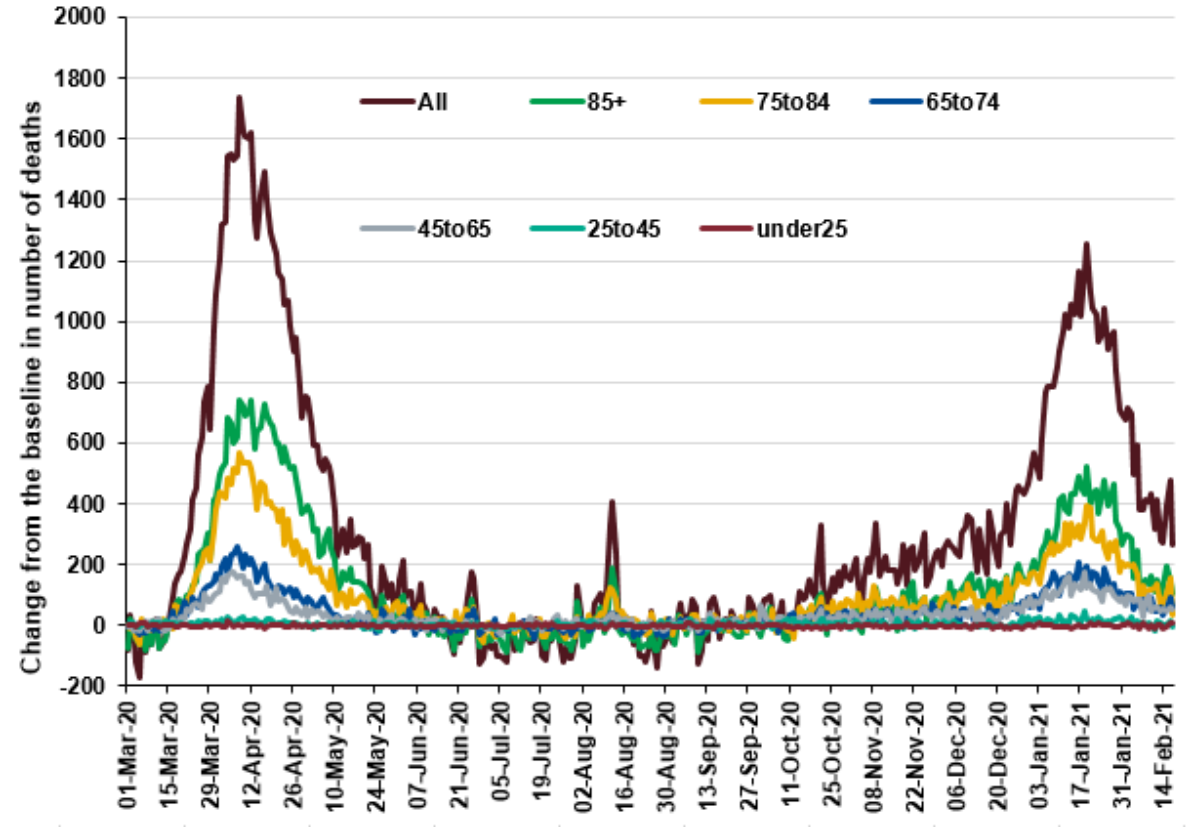
Age Group	Excess detected in week 6 2021?	Weeks in excess since week 10 2020
All	✓	13 to 21, 33, 43, 45 to 50, 52 to 06
under 25	x	None
25 to 44	x	14 to 16, 53, 02 to 04
45 to 64	✓	12 to 19, 44 to 46, 48 to 49, 52 to 06
65 to 74	✓	13 to 19, 52 to 06
75 to 84	✓	13 to 21, 33, 52 to 06
85+	✓	13 to 21, 33, 53 to 06

(b)

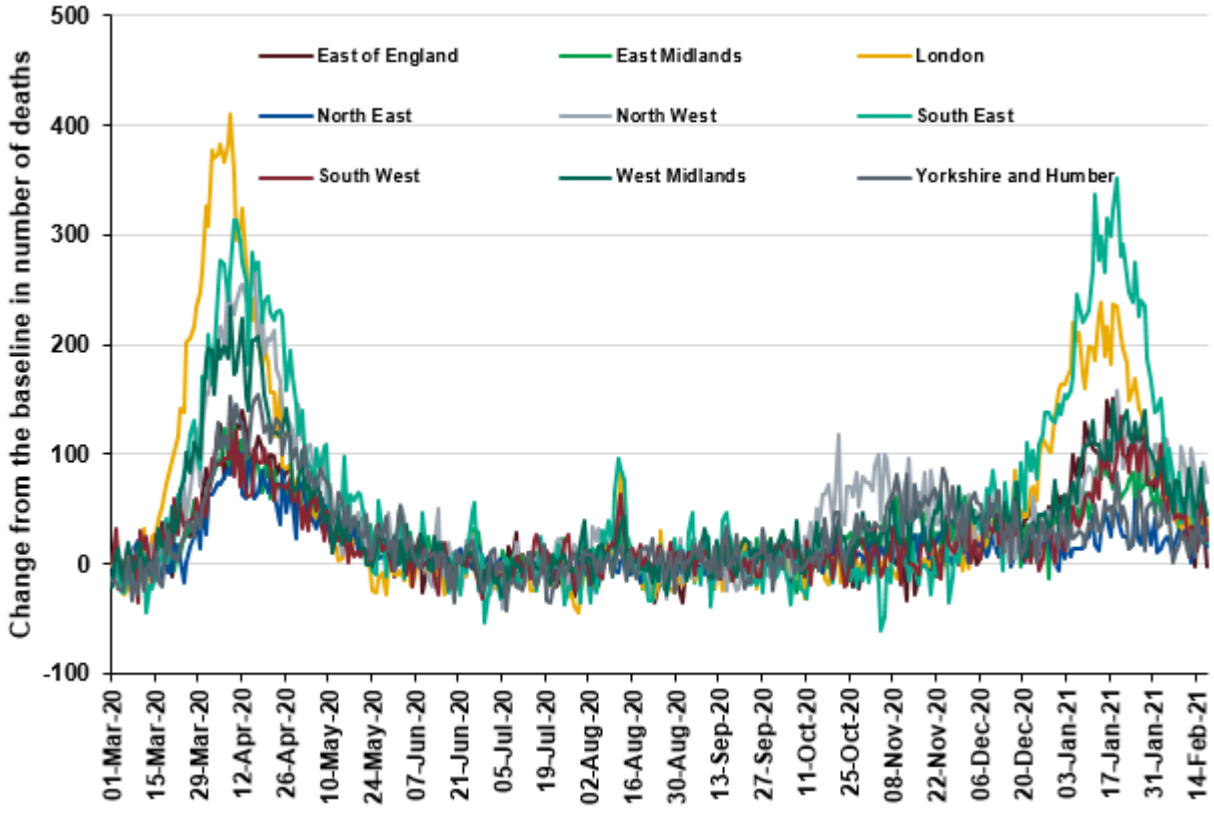
PHE Centres	Excess detected in week 6 2021?	Weeks in excess since week 10 2020
East of England	x	14 to 19, 52 to 05
East Midlands	✓	13 to 19, 48, 01 to 06
London	✓	12 to 19, 33, 51 to 06
North East	x	14 to 21, 02 to 04
North West	✓	13 to 19, 33, 42 to 47, 01 to 06
South East	x	13 to 21, 33, 50 to 05
South West	✓	13 to 19, 33, 01 to 06
West Midlands	✓	13 to 20, 45 to 48, 53 to 06
Yorkshire and Humber	x	14 to 21, 23, 43 to 50, 02 to 05

Figure 51: Daily excess all-cause deaths by (a) age group and (b) PHE centres, England, 1 March 2020 to 17 February 2021

(a)



(b)



Microbiological surveillance

Virus characterisation

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

In week 7, no influenza viruses were characterised by PHE Respiratory Virus Unit (RVU).

Antiviral susceptibility

Influenza positive samples are screened for mutations in the virus neuraminidase gene known to confer oseltamivir and/or zanamivir resistance. Additionally, testing of influenza A(H1N1)pdm09, A(H3N2), and influenza B virus isolates for neuraminidase inhibitor susceptibility (oseltamivir and zanamivir) is performed at PHE-RVU using a functional assay. The data summarized below combine the results of both testing methods. The samples tested are routinely obtained for surveillance purposes, but diagnostic testing of patients suspected to be infected with neuraminidase inhibitor-resistant virus is also performed.

In week 7, no influenza viruses were tested for antiviral susceptibility.

Antimicrobial susceptibility

Table 8 shows in the 12 weeks up to week 7 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	757	83
	Macrolides	836	73
	Tetracycline	809	73
H. influenzae	Amoxicillin/ampicillin	3,798	57
	Co-amoxiclav	4,149	70
	Macrolides	989	12
	Tetracycline	4,146	98
S. aureus	Methicillin	4,668	91
	Macrolides	5,174	69
MRSA	Clindamycin	344	50
	Tetracycline	385	73
MSSA	Clindamycin	3,292	76
	Tetracycline	4,058	93

* Macrolides = erythromycin, azithromycin and clarithromycin

Data source: PHE's SGSS CDR module. Please note that this is different to the data source used during the 2019/20 influenza season when the SGSS AMR module was used, and so the results are not directly comparable.
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 17 2020 and week 6 2021 are summarised. This programme has previously involved testing approximately 1000 donor samples from two 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 8th 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 collected between week 17 2020 and week 6 2021. This is the first week reporting seropositivity from Roche nucleoprotein (N) and Roche spike (S) assays as well as from the EuroImmun assay which has been reported for all previous weeks. The spike (Roche S and EuroImmun) assays are expected to detect both post-infection antibodies and vaccine-induced antibodies, while nucleoprotein (Roche N) assays only detect post-infection antibodies. This report presents EuroImmun, Roche N and Roche S seropositivity estimates on the same set of samples, where results are available, using a 4-week rolling prevalence for national and 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 using the EuroImmun assay among blood donors aged 17 years and older in England was 19.1% (95% CI 18.0% - 20.3%) for the period 18th January – 14th February (week 3 - week 6 2021). Estimates are based on 7201 samples, of which 1273 were positive. This compares with 10.2% (95% CI 9.3% - 11.2%) for the period of 21st December 2020 – 17th January 2021 (weeks 52 2020 - 2 2021).

Overall population weighted (by age group, sex and NHS region) antibody prevalence among blood donors aged 17 years and older in England was 22.6% (95% CI 21.4% - 23.8%) using the Roche S assay and 13.7% (95% CI 12.8% - 14.6%) using the Roche N assay for the period 18th January – 14th February (week 3 - week 6 2021). 1412/6644 samples were Roche S positive and 869/6622 were Roche N positive. This compares with 13.6% (95% CI 12.6% - 14.7%) Roche S seropositivity and 11.6% (95% CI 10.7% - 12.6%) Roche N seropositivity for the period of 21th December 2020 – 17th January 2021 (weeks 52 2020 - 2 2021).

Seropositivity (weighted by region, age group and sex) varies over time. Figure 52 shows the overall 4-weekly rolling proportion seropositive over time for the EuroImmun,

Roche S and Roche N assays. Seropositivity estimates are plotted weekly using the mid-point of a rolling 4-weekly period.

Changes in seropositivity for the EuroImmun and Roche S assays will reflect the effect of increases due to a combination of recent transmission and vaccination. EuroImmun seropositivity is also affected by decreases due to antibody waning. Seropositivity is consistently between 2-5% higher on the Roche S assay than with the EuroImmun. The Roche S, which only became available for evaluation in September 2020, has a higher sensitivity and specificity than the EuroImmun and will therefore be used for future reports. Changes in seropositivity for the Roche N assay will reflect the net effect of increase from recent transmission and possibly minor antibody waning only. Increases in seropositivity of these assays will reflect transmission or vaccination occurring at least two to three weeks previously given the time taken to generate an antibody response.

Regional prevalence over time

Seropositivity (weighted by age group and sex) in the EuroImmun assay varies across the country and over time. Figure 53 and Figure 54 show the overall 4-weekly rolling proportion seropositive in each region over time from the EuroImmun and Roche N respectively. Seropositivity estimates are plotted weekly using the mid-point of a rolling 4-weekly period.

In London, using the EuroImmun assay, the 4-weekly rolling seropositivity increased from 11.8% (week 16-19) to 13.7% (weeks 20-23). From week 24 seropositivity declined and plateaued with estimates at 7.8% in weeks 30-33. Contributory factors to fluctuations observed are likely to include variability in the precise locations of sampling within London and changes in exposure of donors. Recently there has been a large rise in seropositivity to 24.9% (95% CI 21.6% - 28.6%) in weeks 3-6 2021, an increase from 15.7% (95% CI 13.1% - 18.7%) in weeks 52 2020 - 02 2021. This compares with 33.4% (95% CI 29.6% - 37.5%) on the Roche S in London for weeks 3-6 2021.

Data from the North West show that seropositivity increased from 10.0% (95% CI 7.9% - 12.5%) in weeks 52 2020 - 02 2021 to 20.8% (95% CI 18.0% - 23.9%) in weeks 3-6 2021 on the EuroImmun assay. Seropositivity on the Roche S for the North West for weeks 3-6 2021 was higher than the EuroImmun at 24.3% (95% CI 21.2% - 27.6%).

In the East of England seropositivity increased from 8.8% (95% CI 6.9% - 11.2%) in weeks 52 2020 - 02 2021 to 15.1% (95% CI 12.5% - 18.2%) in weeks 3-6 2021 on the EuroImmun. This compares to 18.6% (95% CI 15.6% - 22.1%) on the Roche S for weeks 3 - 6 2021.

Seropositivity using the EuroImmun assay increased in the South East region from 7.8% (95% CI 5.6% - 10.8%) for weeks 52 2020 - 02 2021 to 17.3% (95% CI 14.8% - 20.0%) in weeks 3-6 2021. Seropositivity in weeks 3-6 was higher on the Roche S at 20.3% (95% CI 17.7% - 23.1%).

In the South West region, seropositivity on the EuroImmun assay increased from 5.7% (95% CI 4.1% - 7.8%) in weeks 52 2020 - 02 2021 to 15.8% (95% CI 13.3% - 18.6%) in weeks 3-6 2021. Seropositivity on the Roche S was 17.7% (95% CI 15.2% - 20.5%) in weeks 3-6 2021.

Seropositivity in the North East and Yorkshire NHS region increased from 10.9% (95% CI 8.9% - 13.3%) in week 52 2020 - 02 2021 to 20.8% (95% CI 18.1% - 23.9%) in week 3-6 2021 with the EuroImmun assay. Roche S seropositivity in weeks 3-6 was 21.6% (95% CI 18.5% - 25.0%) in comparison.

Data from the Midlands on the EuroImmun show the proportion seropositive has increased from 10.7% (95% CI 8.2% - 13.7%) in weeks 52 2020 - 02 2021 to 17.6% (95% CI 15.1% - 20.4%) in week 3-6 2021. Roche S seropositivity for weeks 3-6 2020 was 20.3% (95% CI 17.6% - 23.2%).

The recent increases observed across all regions are likely to reflect transmission and vaccination occurring 2-3 weeks before sampling.

Seropositivity using the Roche N assay which detects infection only, also varies by region (Figure 3) although increases in seropositivity in the most recent weeks are considerably smaller than those seen with the spike assays.

Prevalence by age group

In the NHSBT collection, donors aged 70-84 years were only included from week 26 onward as this age group, who were advised to not to donate during the first national lockdown, have been able to return to donor clinics since then. 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 EuroImmun assay, (Figure 55) the highest seropositivity has consistently been observed in those aged 17-29; prevalence has increased in recent weeks from 14.2% (95% CI 11.8% - 17.0%) in weeks 52 2020 - 02 2021 to 23.3% (95% CI 20.9% - 26.0%) in weeks 3-6 2021. Seropositivity has increased in recent weeks across all age groups, but most notably in 70-84 years olds, rising from 7.5% (95% CI 4.7% - 11.7%) in weeks 52 2020 - 02 2021 to 21.2% (95% CI 16.6% - 26.5%) in weeks 3-6 2021.

Similar trends in seropositivity by age group are seen in the Roche S assay (Figure 56). In 17-29 year olds, Roche S seropositivity has also increased in recent weeks from 19.1% (95% CI 16.4% - 22.1%) in weeks 52 2020 - 02 2021 to 29.0% (95% CI 26.2% - 31.9%) in weeks 03-06 2021. A more modest rise from 15.2% (95% CI 12.8% - 18.0%) in weeks 52 2020 – 02 2021 to 20.4% (95% CI 17.9% - 23.1%) in weeks 03-06 2021 was observed using the Roche N assay in this age group.

Vaccination is likely to be making an important contribution to the overall increases observed 70-84 year olds, since the roll out of the vaccination programme. Seropositivity in from the Roche S in those aged 70-84 years old has increased from 8.4% (95% CI 5.5% - 12.7%) in weeks 52 2020 - 02 2021 to 21.2% (95% CI 16.4% - 26.8%) in weeks 03-06 2021. However, in Roche N assay, seropositivity has remained stable in this age group, at 6.5% (95% CI 3.9% - 10.7%) in weeks in weeks 52 2020 - 02 2021 compared to 5.7% (95% CI 3.7% - 8.9%) in the most recent weeks of 03-06 2021.

Figure 52: Overall 4-weekly rolling SARS-CoV-2 antibody seroprevalence (% seropositive) in blood donors

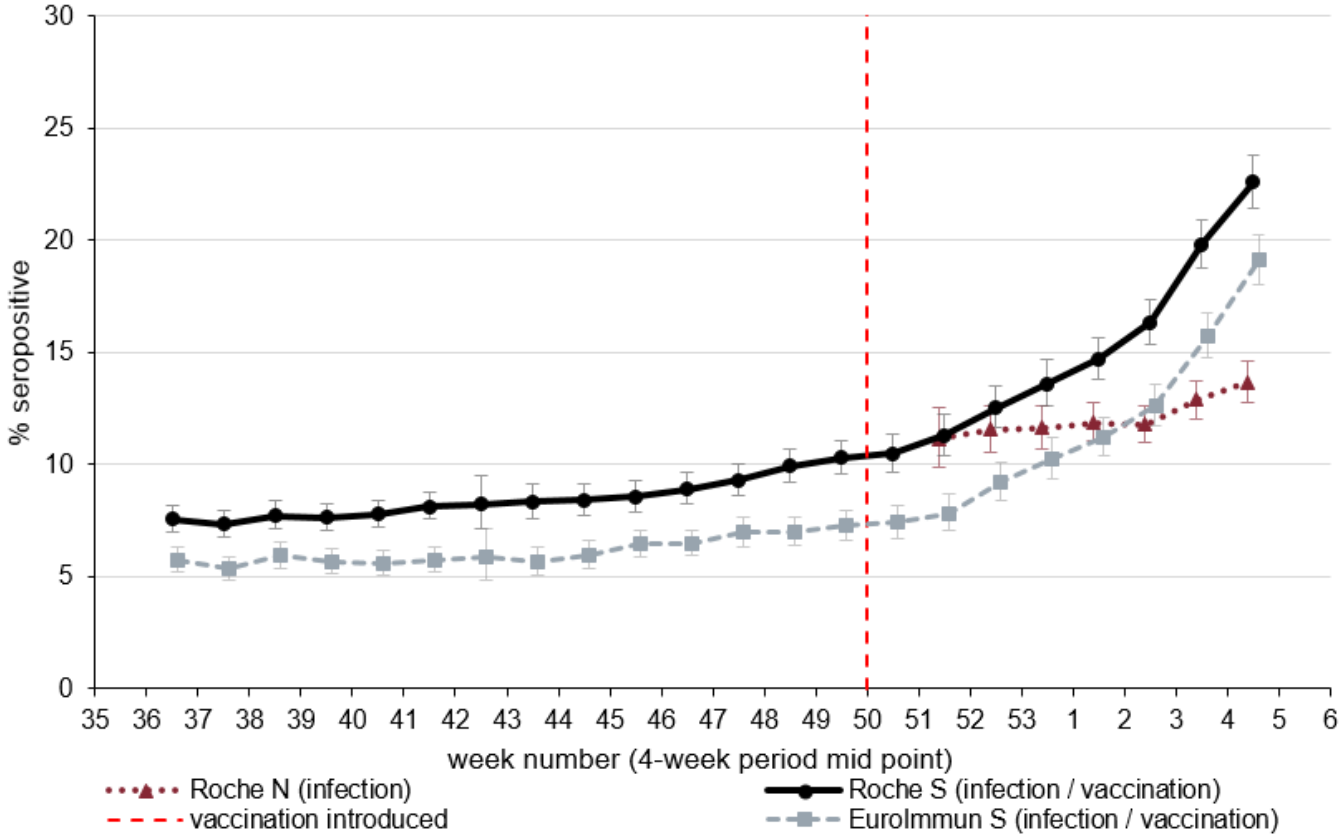


Figure 53: 4-weekly rolling SARS-CoV-2 antibody seroprevalence (% seropositive) in blood donors by region, using Euroimmun test; error bars show 95% confidence intervals

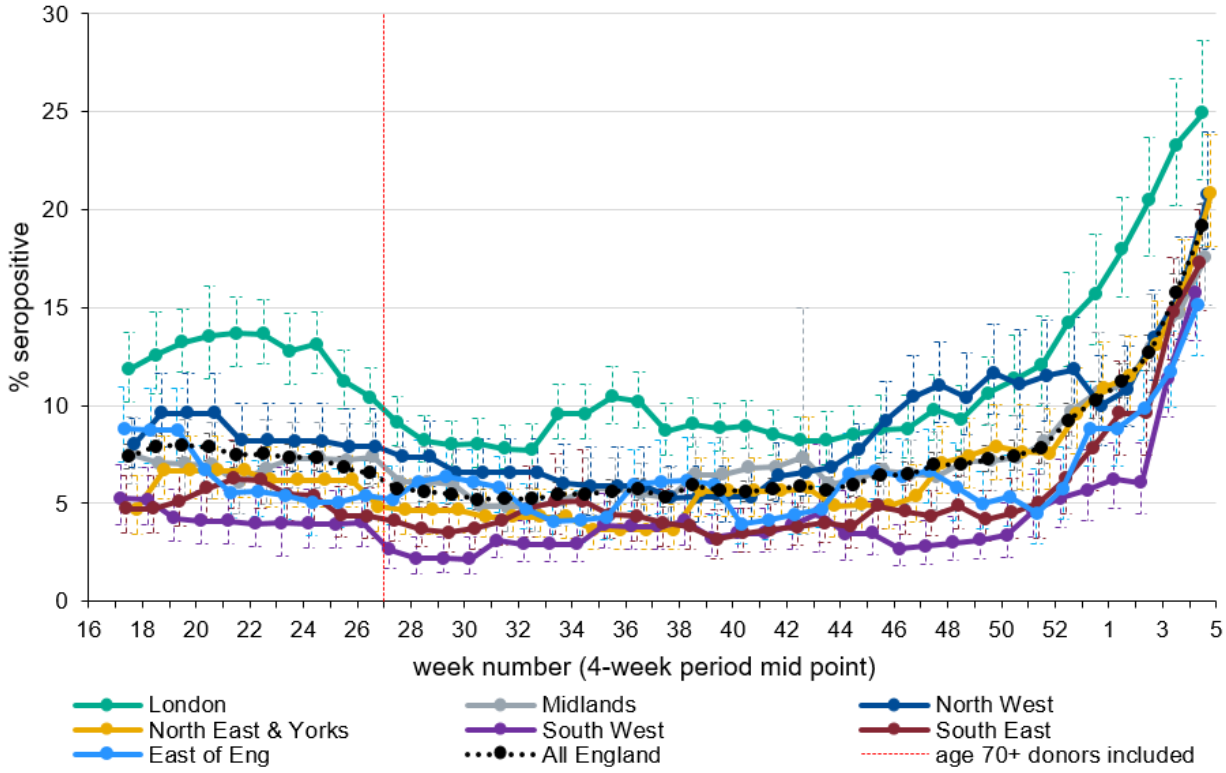


Figure 54: 4-weekly rolling SARS-CoV-2 antibody seroprevalence (% seropositive) in blood donors by region, using Roche N test; error bars show 95% confidence intervals

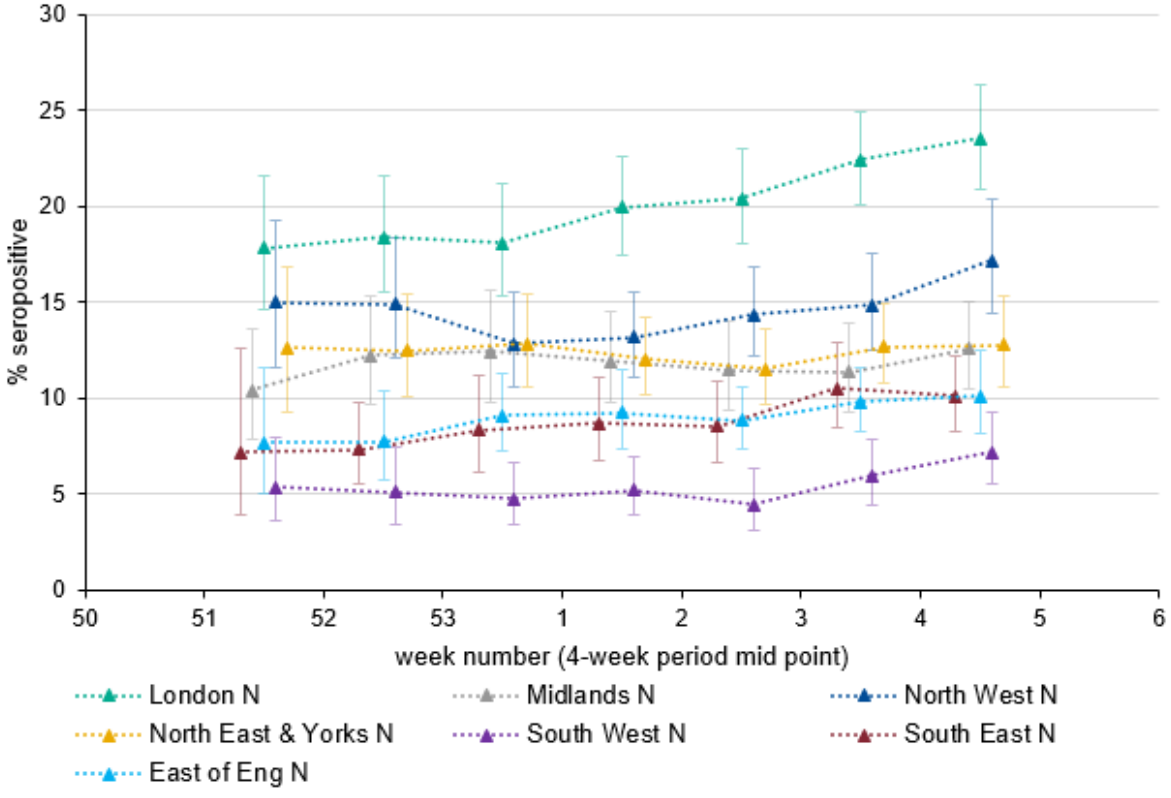


Figure 55: Population weighted 4-weekly rolling SARS-CoV-2 antibody seroprevalence (% seropositive) in blood donors by age group, using Euroimmun test; error bars show 95% confidence intervals

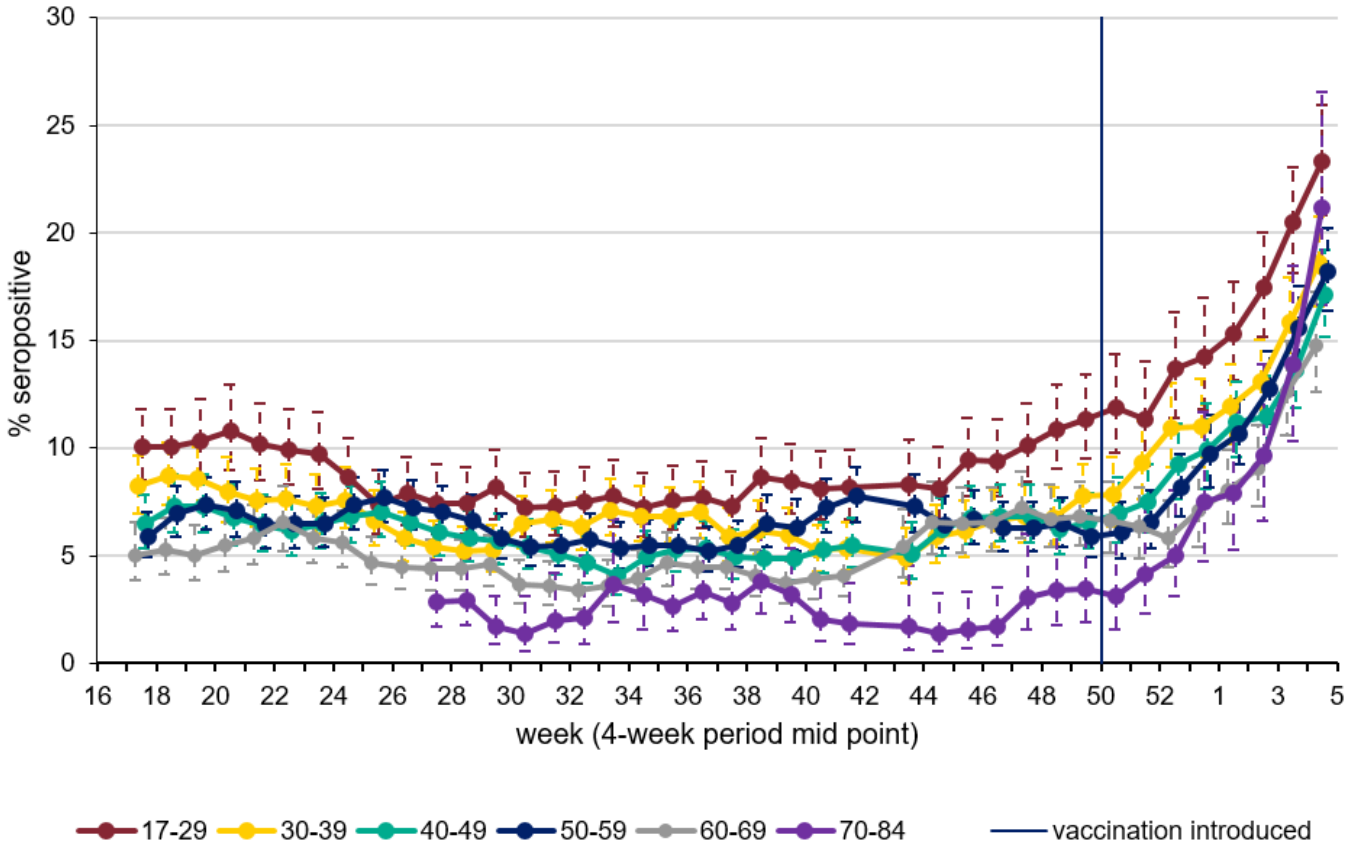
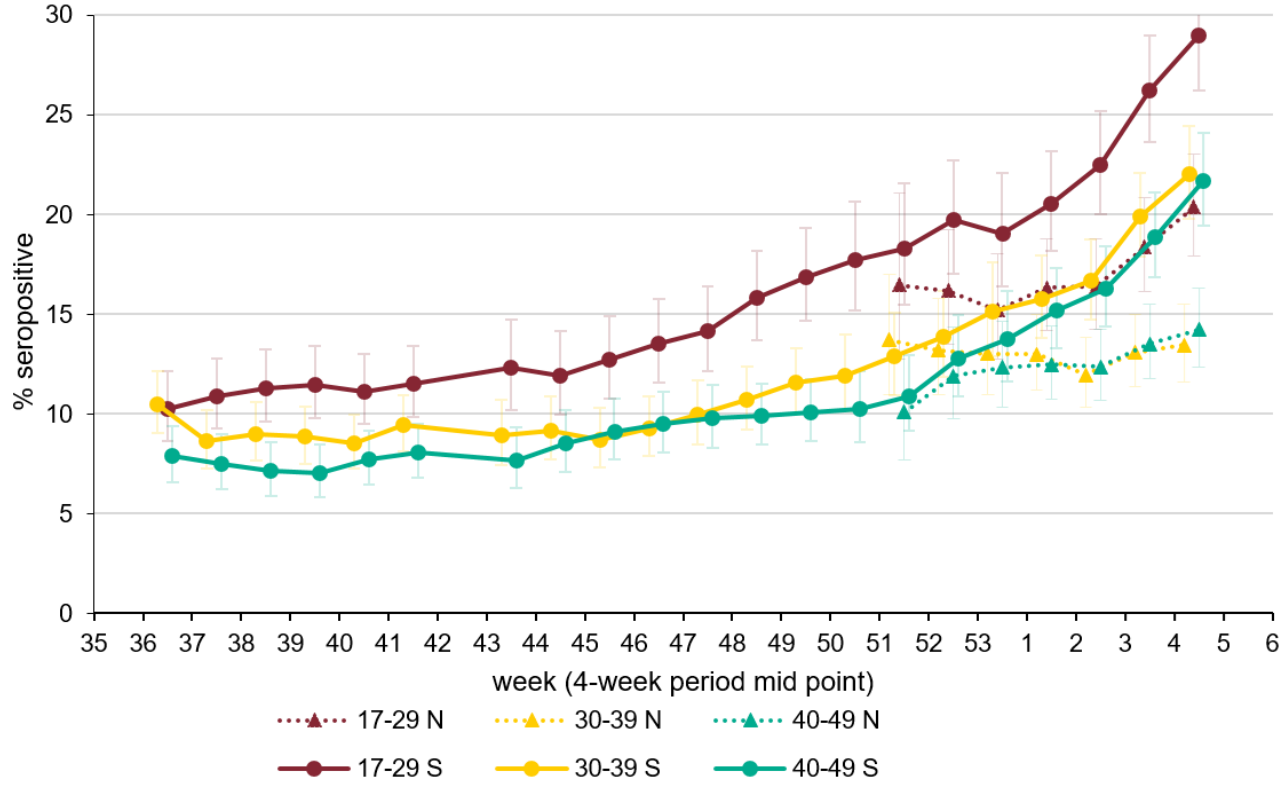
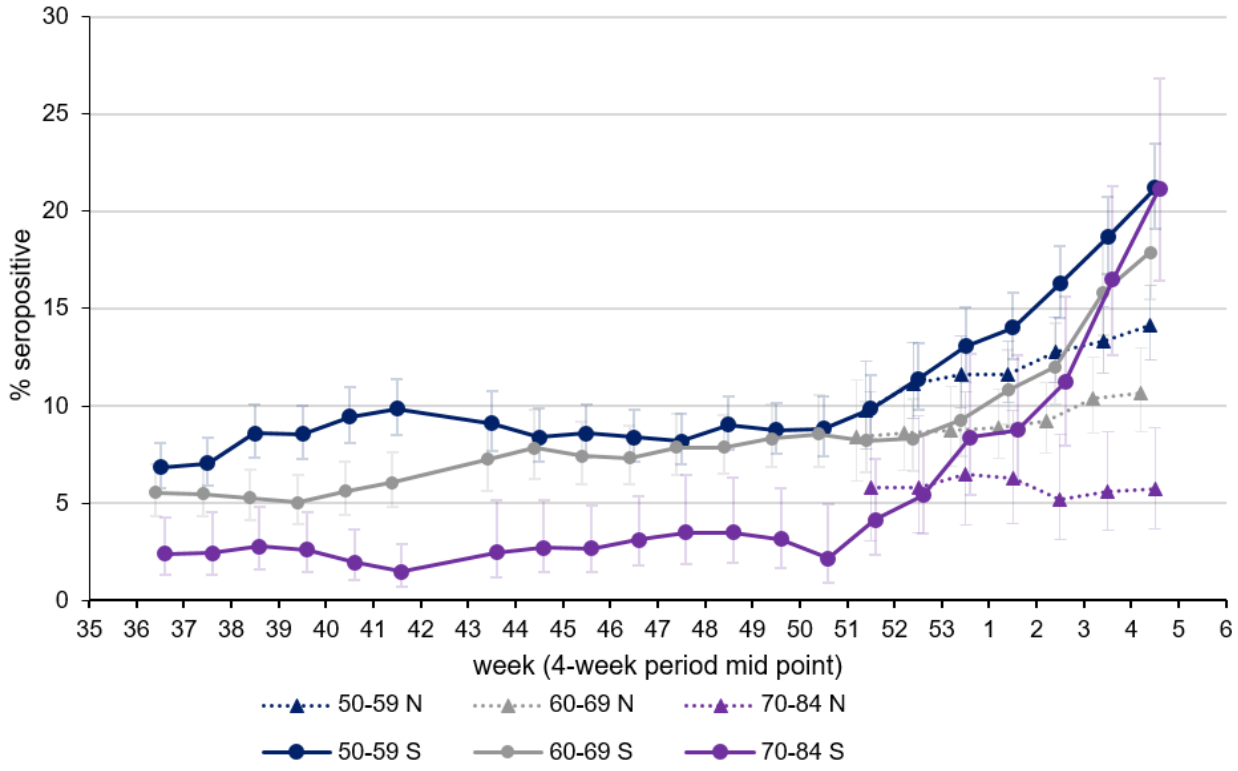


Figure 56: Population weighted 4-weekly rolling SARS-CoV-2 antibody seroprevalence (% seropositive) in blood donors from the Roche S and Roche N assays by a) age groups 17-29, 30-39 and 40-49, b) age group 50-59, 60-69 70-84

a)



b)



Influenza vaccination

Influenza vaccine uptake in GP patients

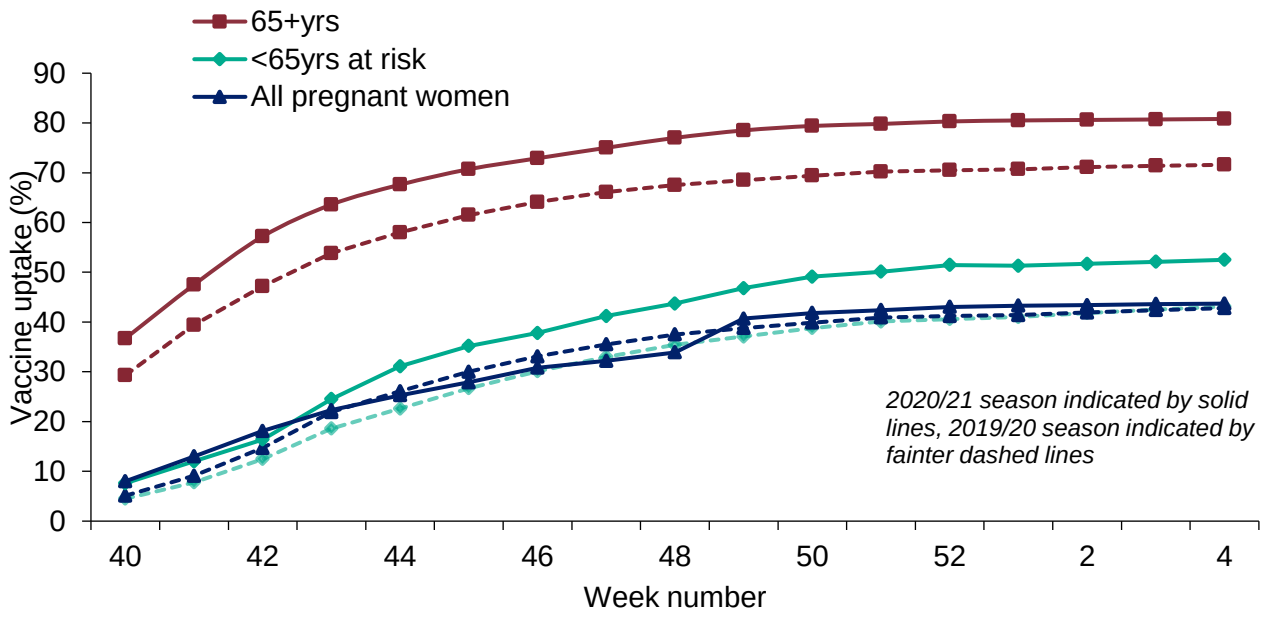
Up to week 4 2021 in 94.7% of GP practices reporting weekly to Immform for the main collection, the provisional proportion of people in England who had received the 2020/21 influenza vaccine in targeted groups was as follows (Figure 54):

- 52.5% in under 65 years in a clinical risk group
- 43.7% in pregnant women
- 80.8% in 65+ year olds
- 34.1% in those aged 50-64 who are not in a clinical risk group

Weekly vaccine coverage data are provisional. Week 4 was the last publication of the weekly data for this season.

There has been an issue with the denominator data submitted for the clinical risk groups by one of the GP system suppliers. This is likely leading to a slight underestimation of coverage for the under 65 at risk cohort this week. This is being investigated and will be corrected as soon as possible

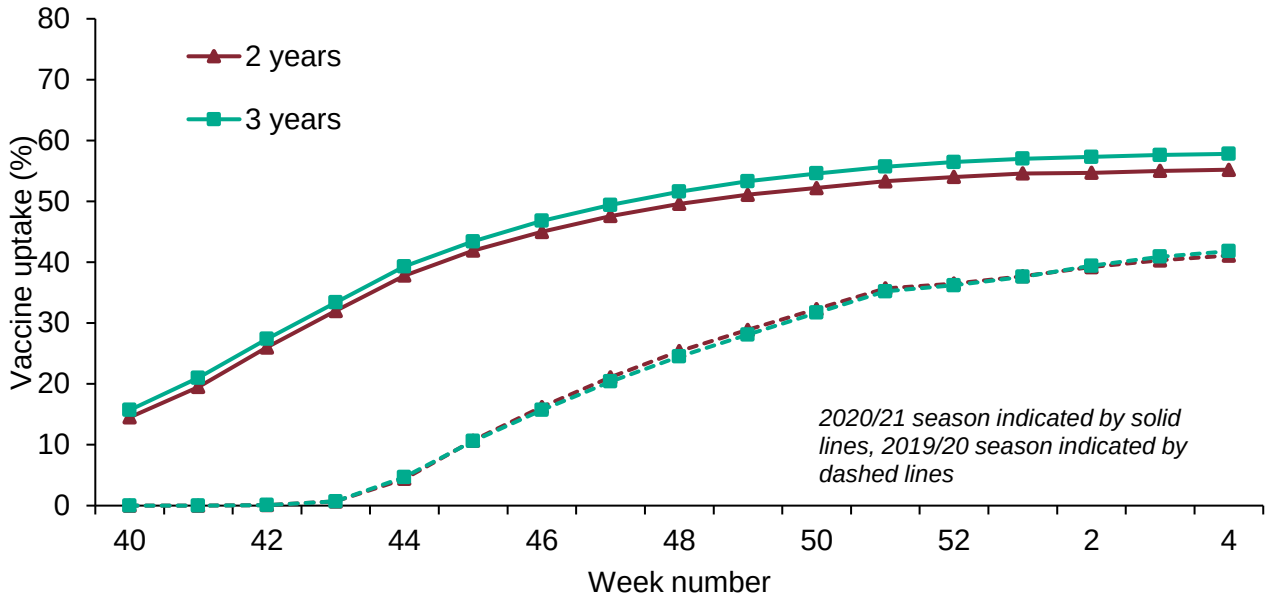
Figure 57: Cumulative weekly influenza vaccine uptake by target group in England



In 2020/21, all 2 and 3 year olds continue to be eligible for influenza vaccination through their GPs. Up to week 4 2021, in 93.6% of GP practices reporting weekly to Immform for the childhood collection, the provisional proportion of children in England who had received the 2020/21 influenza vaccine in targeted groups was as follows (Figure 55):

- 55.2% in 2 year olds
- 57.8% in 3 year olds

Figure 58: Cumulative weekly influenza vaccine uptake in 2 and 3 year olds, in England



On the 25 February 2021 routine monthly reports that evaluate influenza vaccinations given between 1 September and 31 January 2021 to health care workers, school-aged children and eligible GP patients were published here:
https://www.gov.uk/government/statistics/seasonal-flu-vaccine-uptake-in-healthcare-workers-monthly-data-2020-to-2021
https://www.gov.uk/government/statistics/seasonal-flu-vaccine-uptake-in-children-of-school-age-monthly-data-2020-to-2021
https://www.gov.uk/government/statistics/seasonal-flu-vaccine-uptake-in-gp-patients-monthly-data-2020-to-2021

Vaccine coverage data is also presented by different ethnic groups for the clinical at-risk cohorts and pregnant women. The highest vaccine uptake in at risk groups aged 16 to under 65 years was observed among Asian or Asian British Bangladeshi (59.3%), White British ethnic groups, and Asian or Asian British Indian ethnic groups; whereas the lowest uptake was observed in Black or Black British (Caribbean (31.8%) ethnic groups, Black or Black British (Any other Black background) ethnic groups and the Mixed White and Black Caribbean ethnic group. In pregnant women the highest vaccine uptake was observed in the Chinese (50.4%) and White British ethnic groups and the lowest uptake was observed in Black or Black British Caribbean (16.3%), Black or Black British (Any other Black background) and Mixed – White and Black Caribbean ethnic groups.

Influenza vaccine uptake in school age children

Provisional data from the fourth monthly collection of influenza vaccine uptake for children of school years Reception to Year 7 (from a sample of 96.7% of all Local Authorities in England) show the provisional proportion of children in England who received the 2020/21 influenza vaccine via school, pharmacy or GP practice by 31 January 2021 in targeted groups in Table 9.

Table 9: Provisional cumulative influenza vaccine uptake in children in school years Reception to Year 7, up to 31 January 2021 and 2020, England

School Year	% Vaccine uptake (up to 31 January)	
	2020/21	2019/20
Reception (4-5 years)	63.5	64.2
Year 1 (5-6 years)	63.9	63.5
Year 2 (6-7 years)	63.2	62.6
Year 3 (7-8 years)	62.6	60.6
Year 4 (8-9 years)	61.2	59.6
Year 5 (9-10 years)	60.5	57.2
Year 6 (10-11 years)	58.5	55.1
Year 7 (11-12 years)	55.5	-

Influenza vaccine uptake in healthcare workers

Provisional data from the fourth monthly collection of the influenza vaccine uptake by frontline healthcare workers show 76.3% were vaccinated by 31 January 2021 from 96.1% of all organisations, compared to 72.4% vaccinated in the previous season by 31 January 2020. The report provides uptake at national, NHS region, Sustainability and Transformation Partnerships (STP) and Trust-level.

International update

Global COVID-19 update

Globally, up to 23 February 2021, 111,476,711 cases of COVID-19 infection have been reported worldwide, including 2,467,964 COVID-19 related deaths.

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

Figure 59: Global map of cumulative COVID-19 cases

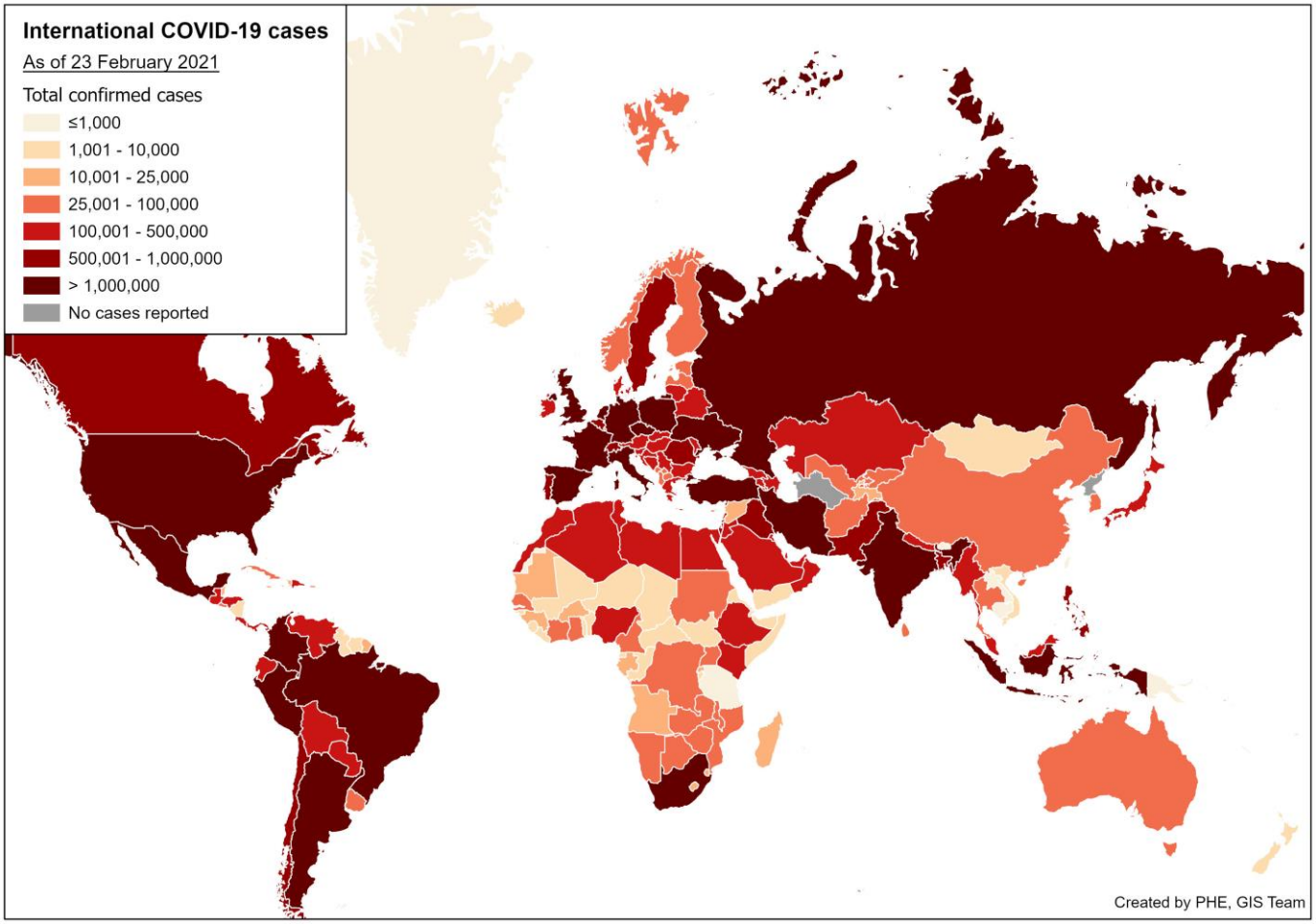
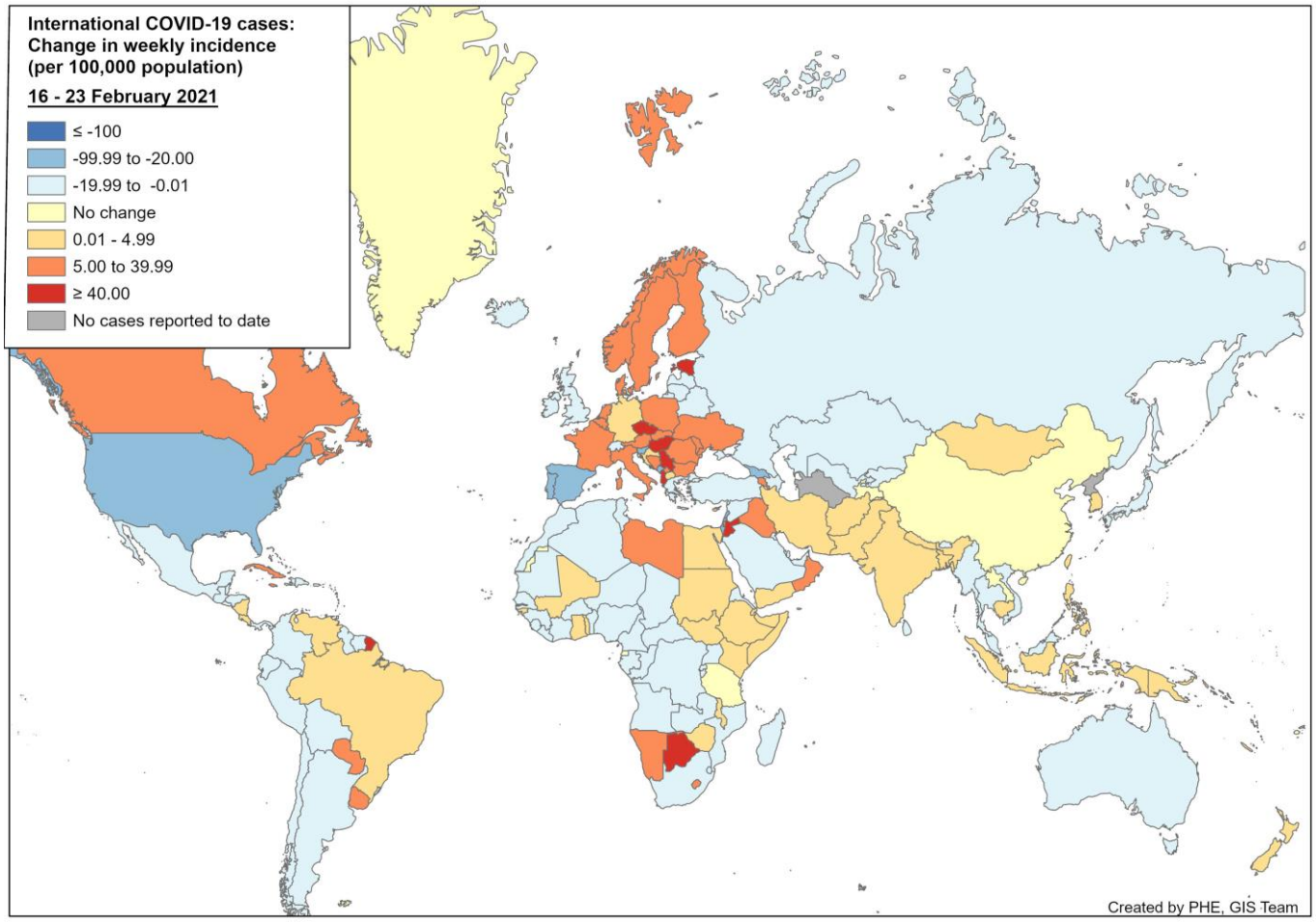


Figure 60: Global map of change in weekly COVID-19 case incidence rate per 100,000 population compared to the previous week



Global influenza update

Updated on 15 February 2021 (based on data up to 31 January 2021) (WHO website)

In the temperate zone of the northern hemisphere, influenza activity remained below baseline, though sporadic detections of influenza A and B viruses were reported in some countries. In the temperate zone of the southern hemisphere, influenza activity was reported at inter-seasonal level. Worldwide, influenza B detections accounted for the majority of the very low numbers of detections reported.

In the countries of North America, influenza activity indicators, including the percent of tests positive for influenza, were at very low levels, despite testing at usual or increased levels.

In Europe, influenza activity was at very low level 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, there were no influenza updates for this reporting period.

In tropical Africa, influenza activity continued to be reported in Western Africa.

In Western Asia, influenza and ILI activity remained low overall.

In Southern Asia, sporadic influenza detections were reported across reporting countries.

In South East Asia, influenza detections were reported in Lao People's Democratic Republic (PDR).

In the Caribbean and Central American countries, no influenza detections were reported. Severe acute respiratory infection (SARI) activity increased in some reporting country

In tropical South America, there were no influenza detections reported in this period.

The WHO GISRS laboratories tested more than 220,860 specimens during that time period. A total of 565 specimens were positive for influenza viruses, of which 107 (18.9%) were typed as influenza A and 458 (81.1%) as influenza B. Of the sub-typed influenza A viruses, 21 (38.2%) were influenza A(H1N1)pdm09 and 34 (61.8%) were influenza A(H3N2). Of the characterized B viruses, 1 (0.3%) belonged to the B-Yamagata lineage and 314 (99.7%) to the B-Victoria lineage.

Influenza in Europe

Updated on 22 February 2021 (Joint ECDC-WHO Europe Influenza weekly update)

For week 6 2021, influenza activity remained at inter-seasonal levels throughout Europe.

Of 36 countries and areas that reported on the intensity of activity indicator, 34 reported baseline levels, 2 (Azerbaijan and Slovakia) reported low intensity for week 6 2021. Of 37countries and areas that reported on geographic spread, 32 reported no activity and 5 (Azerbaijan, Portugal, Slovakia, Ukraine and United Kingdom (England)) reported sporadic spread for week 6 2021.

For week 6 2021, of 1268 sentinel specimens tested for influenza viruses, none were positive for influenza virus. Since the start of the season, of 22,611 sentinel-source specimens that have been tested for influenza viruses, 23 were positive: 16 type A and 7 type B viruses.

No hospitalized laboratory-confirmed influenza case in ICUs was reported for week 6 2021. Since the start of the season, there have been 11 hospitalized laboratory-confirmed influenza cases in ICUs.

There were no new laboratory-confirmed influenza cases in wards outside ICUs reported for week 6 2021.

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 9 December 2020 (WHO website)

Influenza A(H5) viruses:
Between 24 October and 09 December 2020, one new laboratory-confirmed human case of influenza A(H5N1) virus infection was reported to WHO from Lao People's Democratic Republic (PDR) on 31 October 2020.

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.

Influenza A(H9N2) viruses:
Between 24 October and 09 December 2020, one laboratory-confirmed human case of influenza A(H9N2) virus infection was reported from China to WHO on 18 October 2020 and was not included in the previous update.

Middle East respiratory syndrome coronavirus (MERS-CoV)

Latest update on 9 February 2021 (WHO website)

Up to 9 February 2021, a total of five cases of Middle East respiratory syndrome coronavirus, MERS-CoV, (three imported and two linked cases) have been confirmed in the UK through the on-going surveillance since September 2012.

From 1 April to 31 May 2020, the National IHR Focal Point of Saudi Arabia reported 9 new cases of MERS-CoV infection, including five deaths.

From 2012 through 31 December 2020, a total of 2566 laboratory-confirmed cases of MERS-CoV and 882 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

Sources of influenza surveillance data

Sources of COVID-19 surveillance data

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 http://www.legislation.gov.uk/uksi/2002/1438/regulation/3/made. 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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