



Public Health
England

Protecting and improving the nation's health

Weekly national Influenza and COVID-19 surveillance report

Week 23 report (up to week 22 data)
10 June 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 22 (between 31 May and 06 June 2021) and for some indicators daily data up to 08 June 2021.

Surveillance indicators suggest that at a national level COVID-19 activity increased in week 22 of 2021. Laboratory indicators suggest that influenza activity is low. Parainfluenza and rhinovirus detections remain relatively high and there has been a small increase in RSV detections.

Overall case rates increased in week 22. Case rates increased in most age groups, and in all ethnic groups and regions. Overall Pillar 1 and Pillar 2 positivity increased compared to the previous week, most notably in younger age groups and in individuals reporting symptoms.

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 increased slightly in week 22. Deaths with COVID-19 decreased further in week 22. This decrease is likely to reflect the impact of both social and physical distancing measures and the vaccination programme.

COVID-19 vaccine coverage was 54.4% for dose 1 at the end of week 22, reaching over 90% in all cohorts over the age of 65 years and over 80% in all cohorts over 50 years. COVID-19 vaccine coverage was 38.2% for dose 2 at the end of week 22.

The impact of the vaccination programme is particularly notable in the seroprevalence data which indicates that approximately 77.4% of blood donors aged 17 and over have antibodies to SARS-CoV-2 from either infection or vaccination, compared to 15.1% from infection alone. High levels of seropositivity for vaccination or infection continue to be observed in older age groups, as well as increases in those aged 50 to 59, 40 to 49 and 30 to 39, following vaccination rollout.

Through Respiratory Datamart, there were two influenza positive samples detected in week 22. Other indicators for influenza such as hospital admissions and GP influenza-like illness consultation rates remain low.

Contents

Executive summary.....	2
Contents.....	3
Laboratory surveillance.....	5
Confirmed COVID-19 cases (England).....	5
Respiratory DataMart system (England).....	17
Community surveillance.....	19
Acute respiratory infection incidents.....	19
COVID-19 cases by type of residence.....	26
FluSurvey.....	27
Google search queries.....	28
NHS 111.....	29
Primary care surveillance.....	33
RCGP (England).....	33
UK.....	35
GP In Hours, Syndromic Surveillance.....	36
GP Out of Hours, Syndromic Surveillance.....	38
Sentinel swabbing scheme in the UK.....	40
Secondary care surveillance.....	41
SARI Watch.....	41
Hospitalisations, SARI Watch.....	42
ICU/HDU admissions, SARI Watch.....	46
ECMO, SARI Watch.....	50
Emergency Department attendances, Syndromic surveillance.....	51
Mortality surveillance.....	53
Cumulative COVID-19 deaths.....	53
Daily excess all-cause mortality (England).....	58
Microbiological surveillance.....	61
SARS-CoV-2 variants.....	61
Antimicrobial susceptibility.....	61

COVID-19 sero-prevalence surveillance	63
COVID-19 vaccination.....	68
COVID-19 vaccine uptake in England	68
International update	72
Global COVID-19 update.....	72
Global influenza update	74
Other respiratory viruses	76
Related links	78

Laboratory surveillance

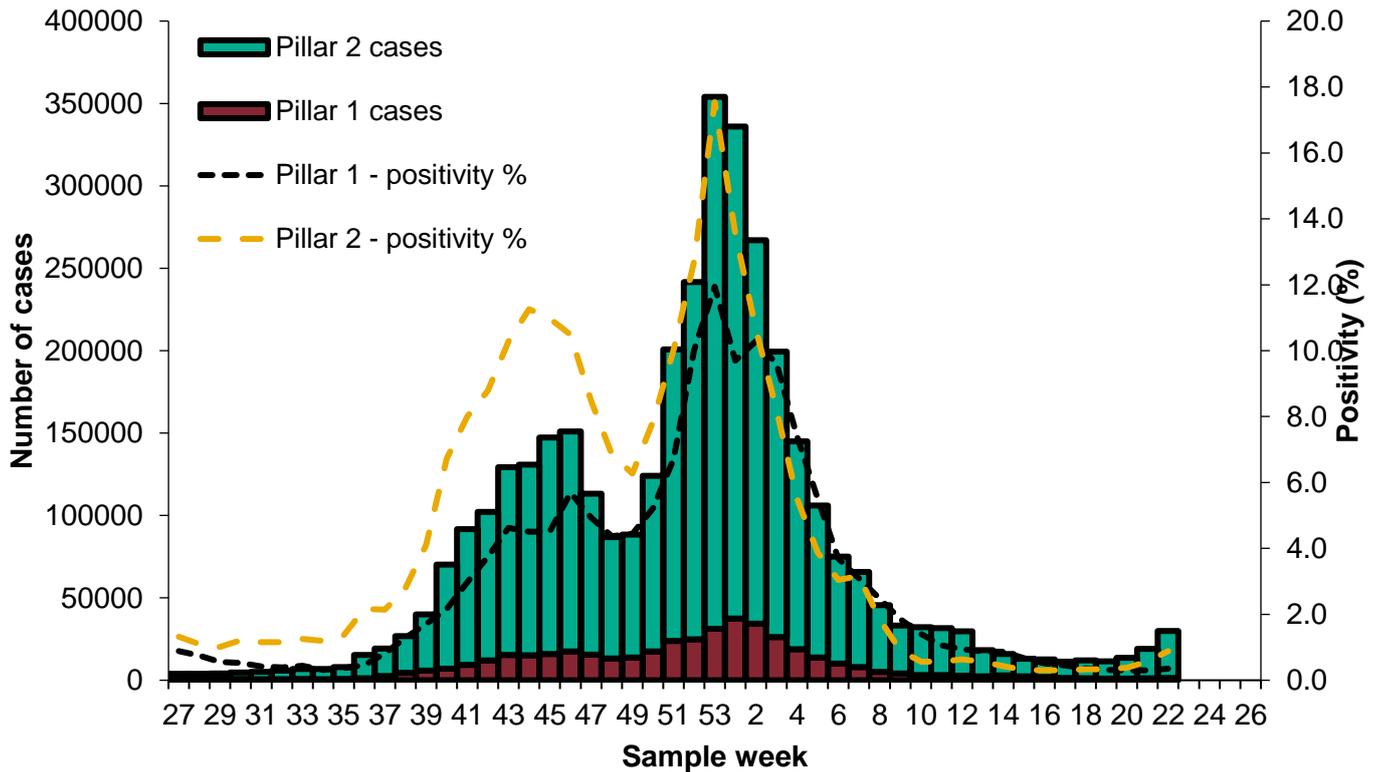
Confirmed COVID-19 cases (England)

As of 09:00 on 08 June 2021, a total of 3,950,123 have been confirmed positive for COVID-19 in England under Pillars 1 and 2.

Overall case rates increased in week 22. Case rates increased in most age groups, and in all ethnic groups and regions. Overall Pillar 1 and Pillar 2 positivity increased compared to the previous week.

Data on variants of concern or under investigation are available [here](#) and [here](#).

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

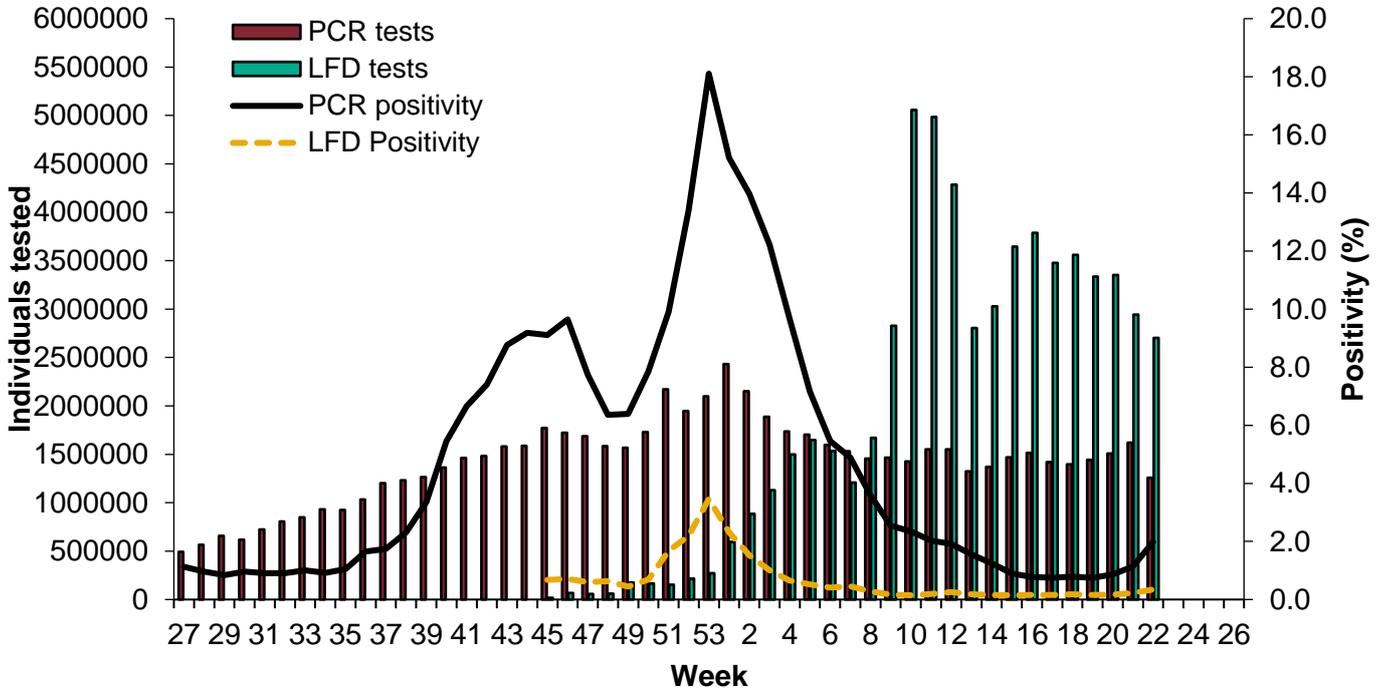


*The data are shown by the week the specimen was taken from the person being tested. This gives the most accurate analysis of this time progression, however, for the most recent week results for more samples are expected therefore this should be interpreted with caution.

* 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. Both PCR and lateral flow device (LFD) testing are included.

*Cases who test positive through a rapid LFD test and subsequently receive a negative PCR test within 3 days of the positive LFD are removed from the overall case counts

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)



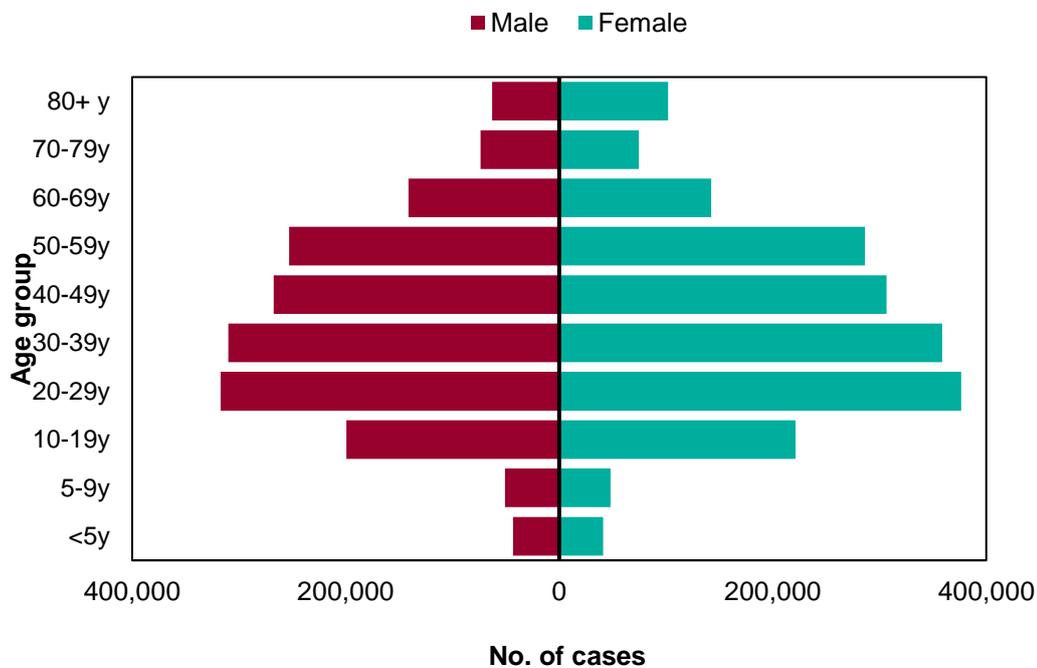
*For Figure 2 positivity is calculated as the number of individuals testing positive using a specific test type during the week, divided by the number of individuals tested using that specific test type during the week.

*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 (a) cumulative number since week 27 (n=3,675,739), and (b) in weeks 21 and 22 (n=48,662)

(a)



(b)

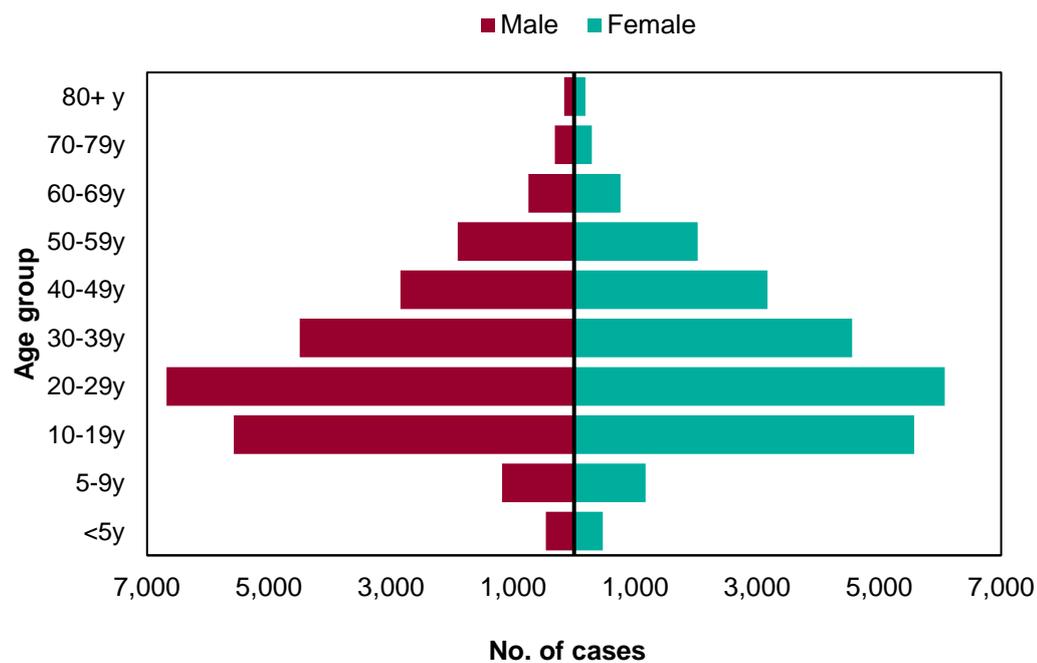


Figure 4: Weekly confirmed COVID-19 case rates per 100,000, tested under Pillar 1 and Pillar 2, by sex

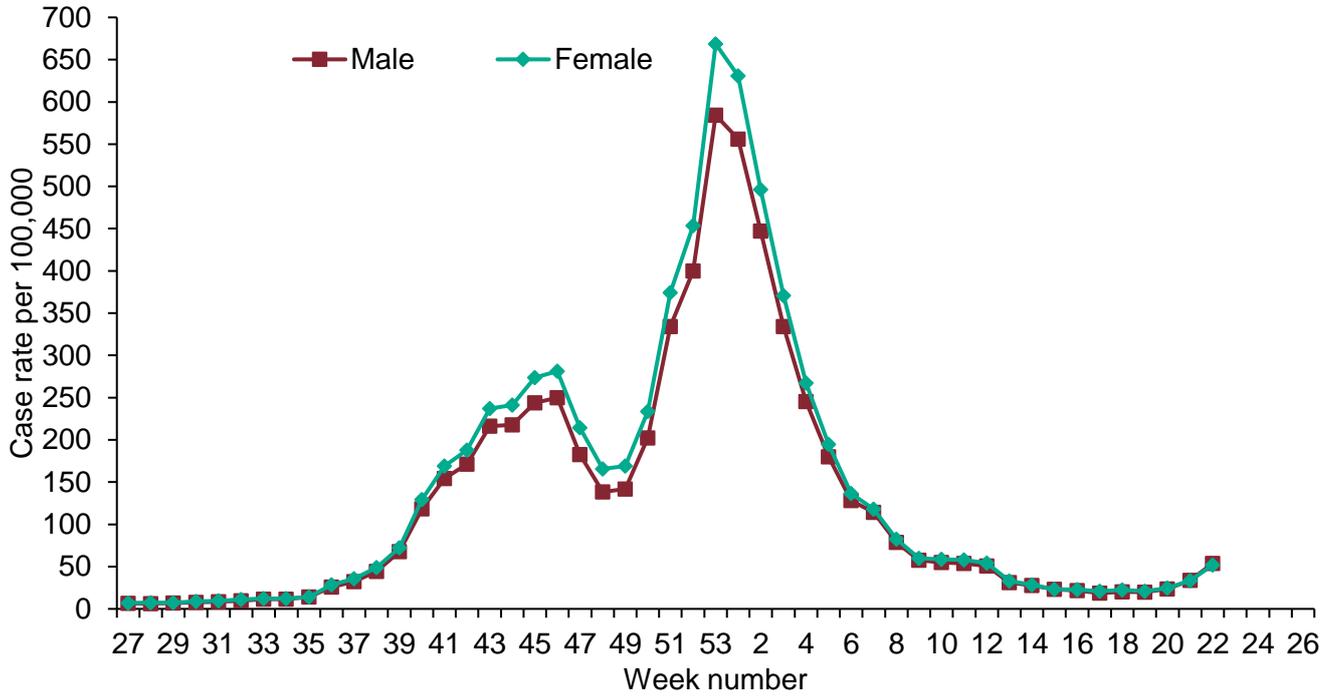


Figure 5: Weekly confirmed COVID-19 case rates per 100,000, tested under Pillar 1 and Pillar 2, by age group

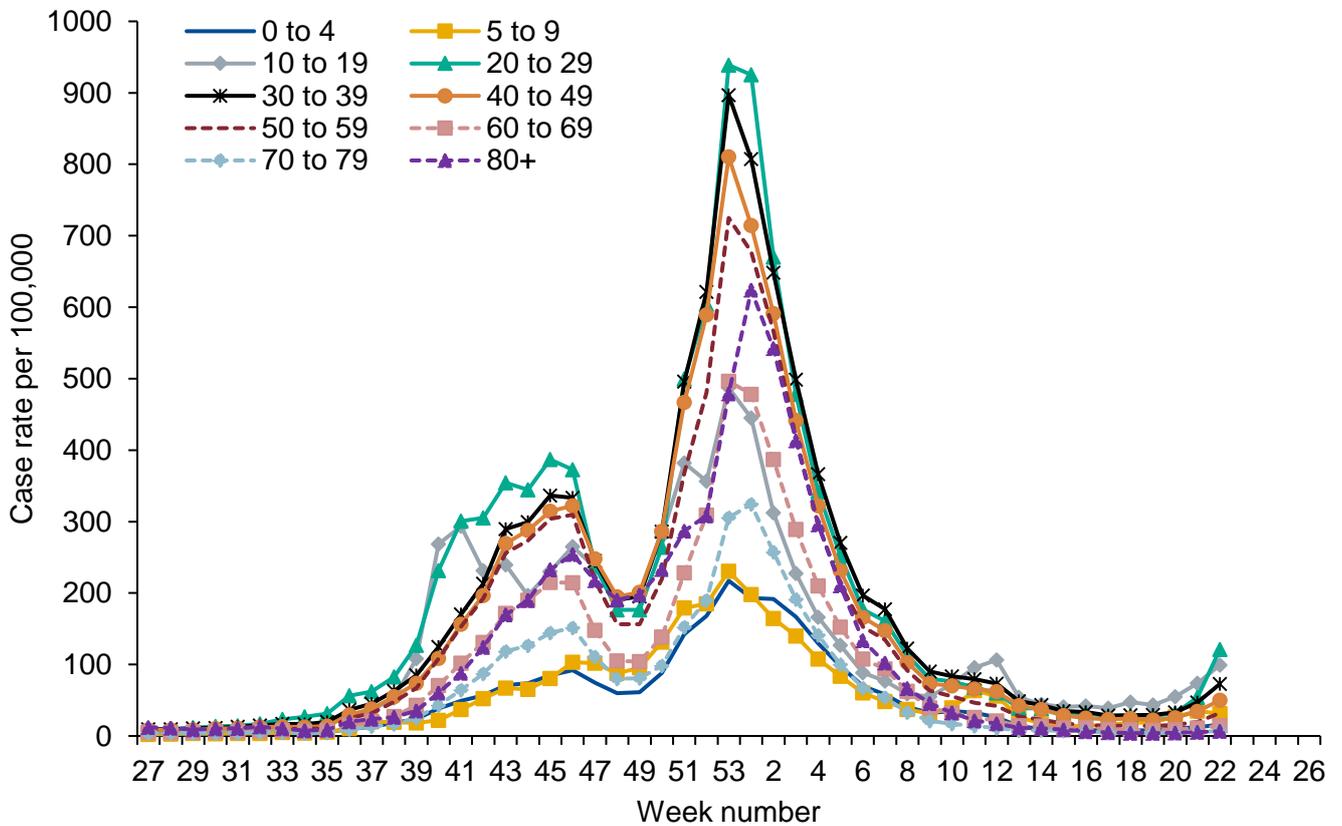
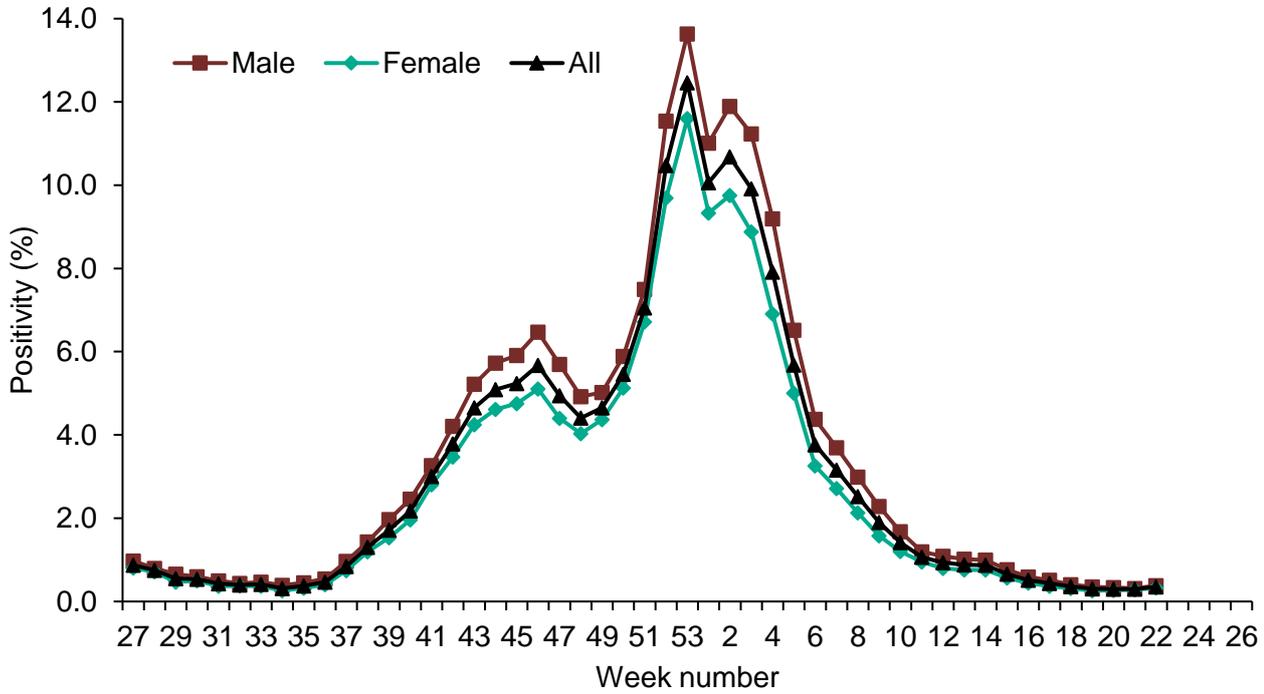


Figure 6: Weekly positivity (%) of confirmed COVID-19 cases tested overall and by sex under (a) Pillar 1 and (b) Pillar 2, (SGSS and Respiratory DataMart)

(a)



(b)

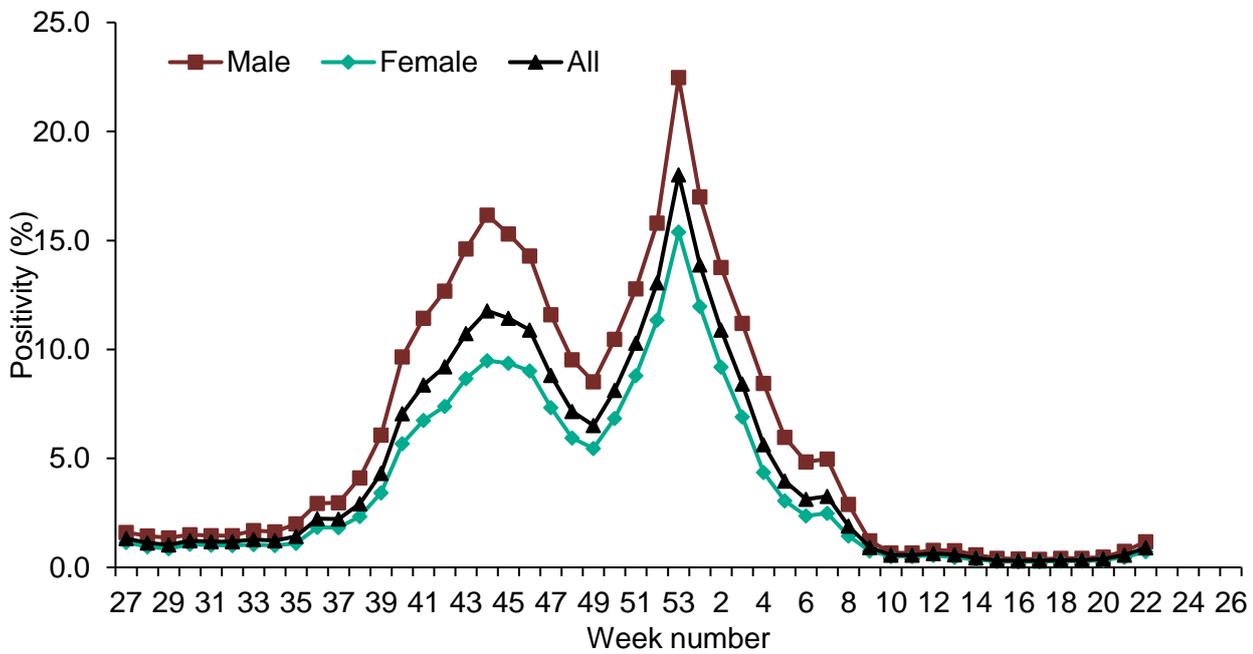
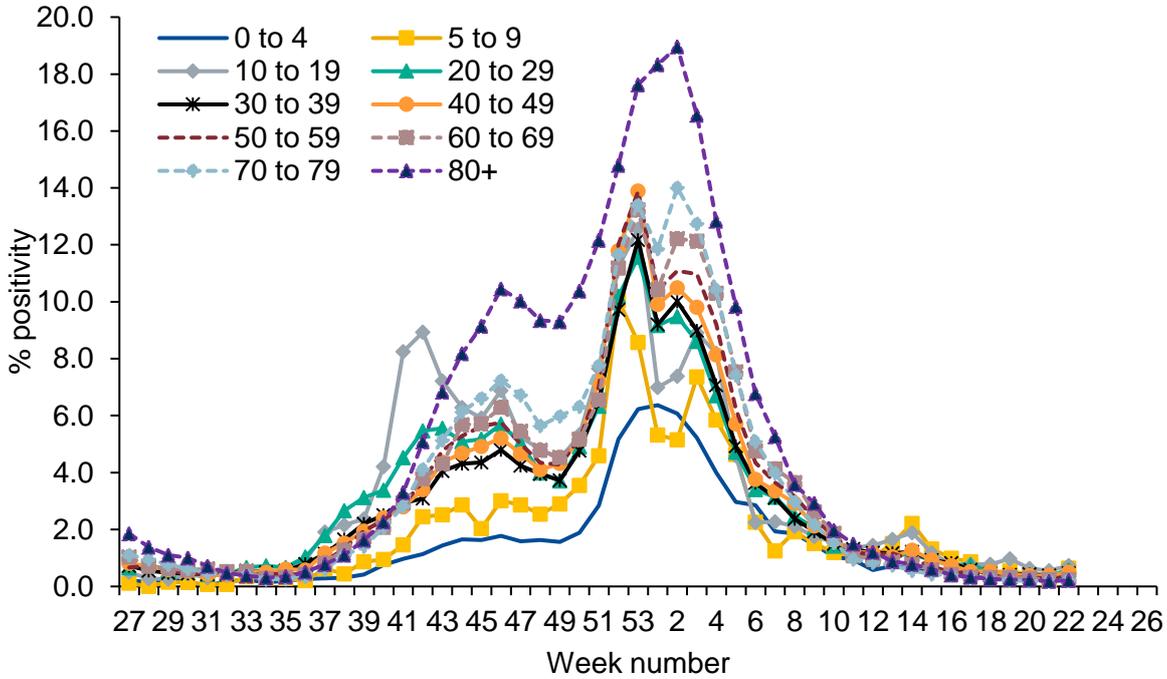
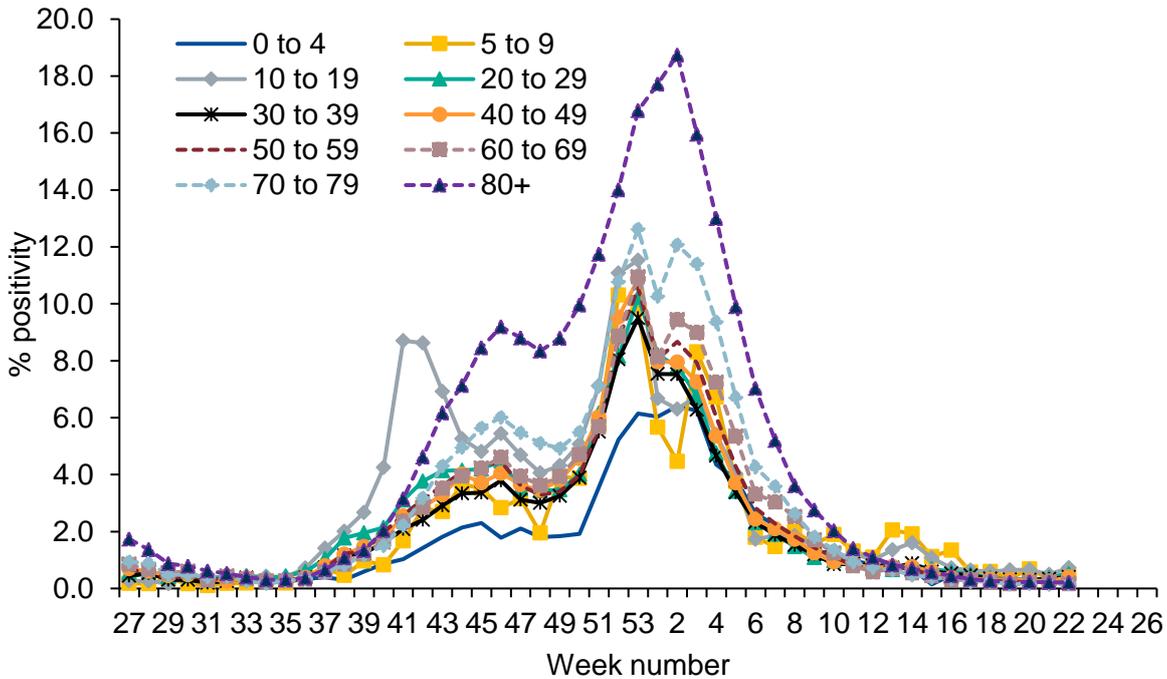


Figure 7: Weekly positivity (%) of confirmed COVID-19 cases tested under Pillar 1, (a) by male and age group and (b) by female and age group and; under Pillar 2, (c) by male and age group and (d) by female and age group, (SGSS and Respiratory DataMart)

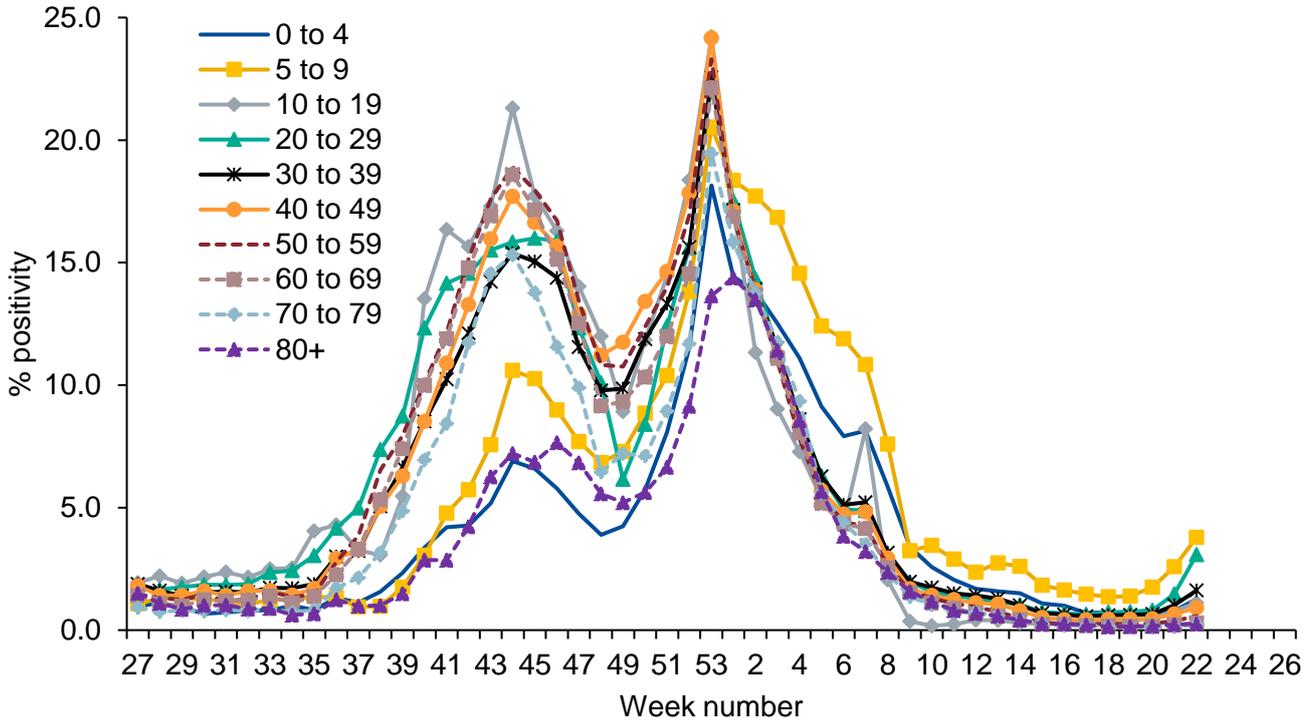
(a) Pillar 1 - Male



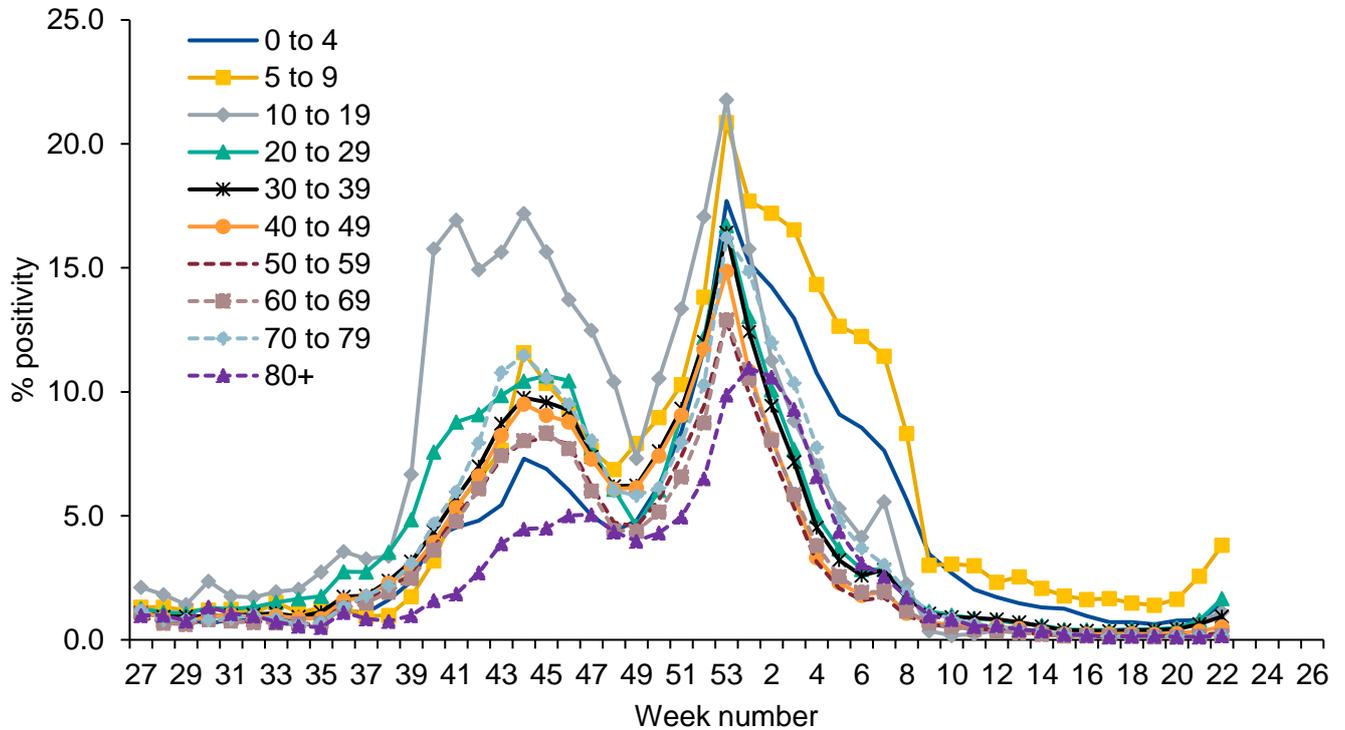
(b) Pillar 1 - Female



(c) Pillar 2 - Male



(d) Pillar 2 - Female



Geography

Table 1: Cumulative number of cases under Pillars 1 and 2 (n=3,912,647) and cumulative number of cases since week 27 under Pillar 1 and 2 (3,677,838)

PHE Centres	Cumulative Pillar 1 + 2 cases	Cumulative since week 27, Pillar 1 + 2 cases
North East	196,811	181,810
North West	634,804	592,557
Yorkshire and Humber	406,128	377,451
West Midlands	436,611	411,465
East Midlands	335,666	315,024
East of England	416,095	391,967
London	733,319	699,717
South East	528,632	495,944
South West	224,581	211,903

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

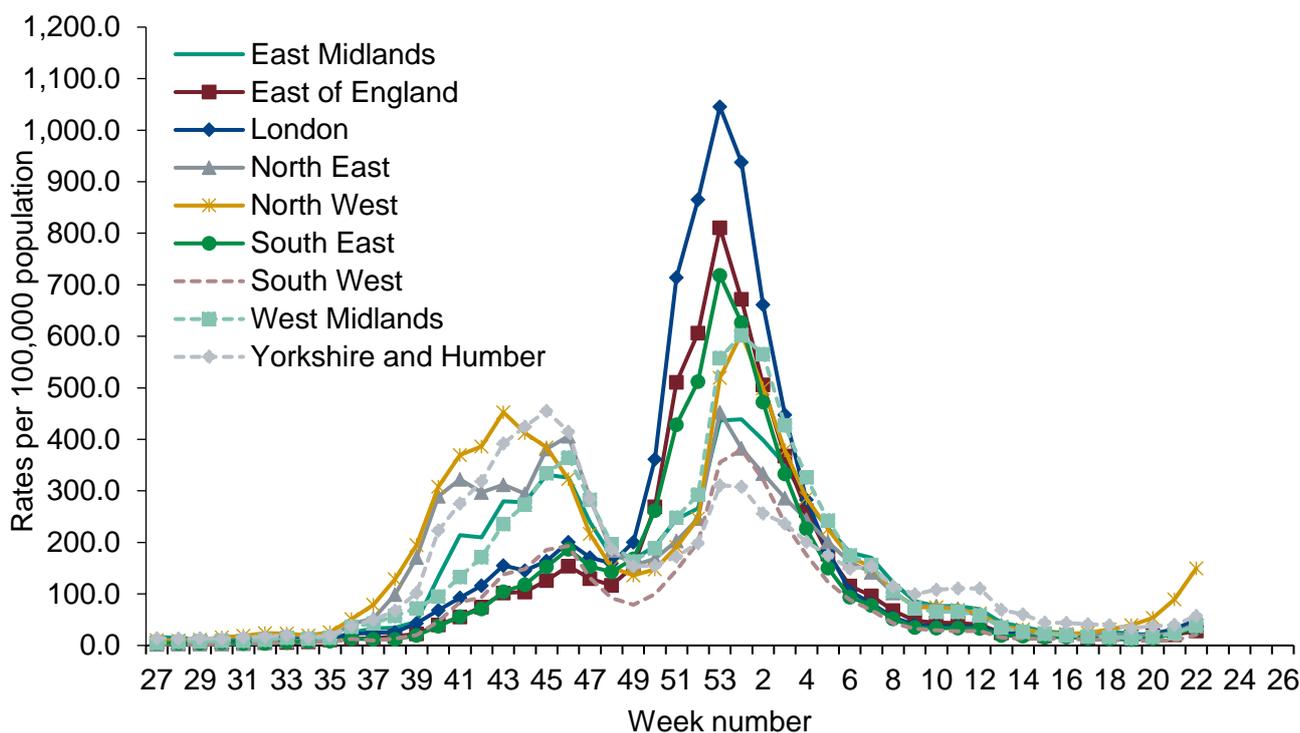


Figure 9: Weekly positivity of confirmed COVID-19 cases tested under (a) Pillar 1 (%) and (b) Pillar 2 (%), by PHE Centres and sample week, (SGSS and Respiratory DataMart)

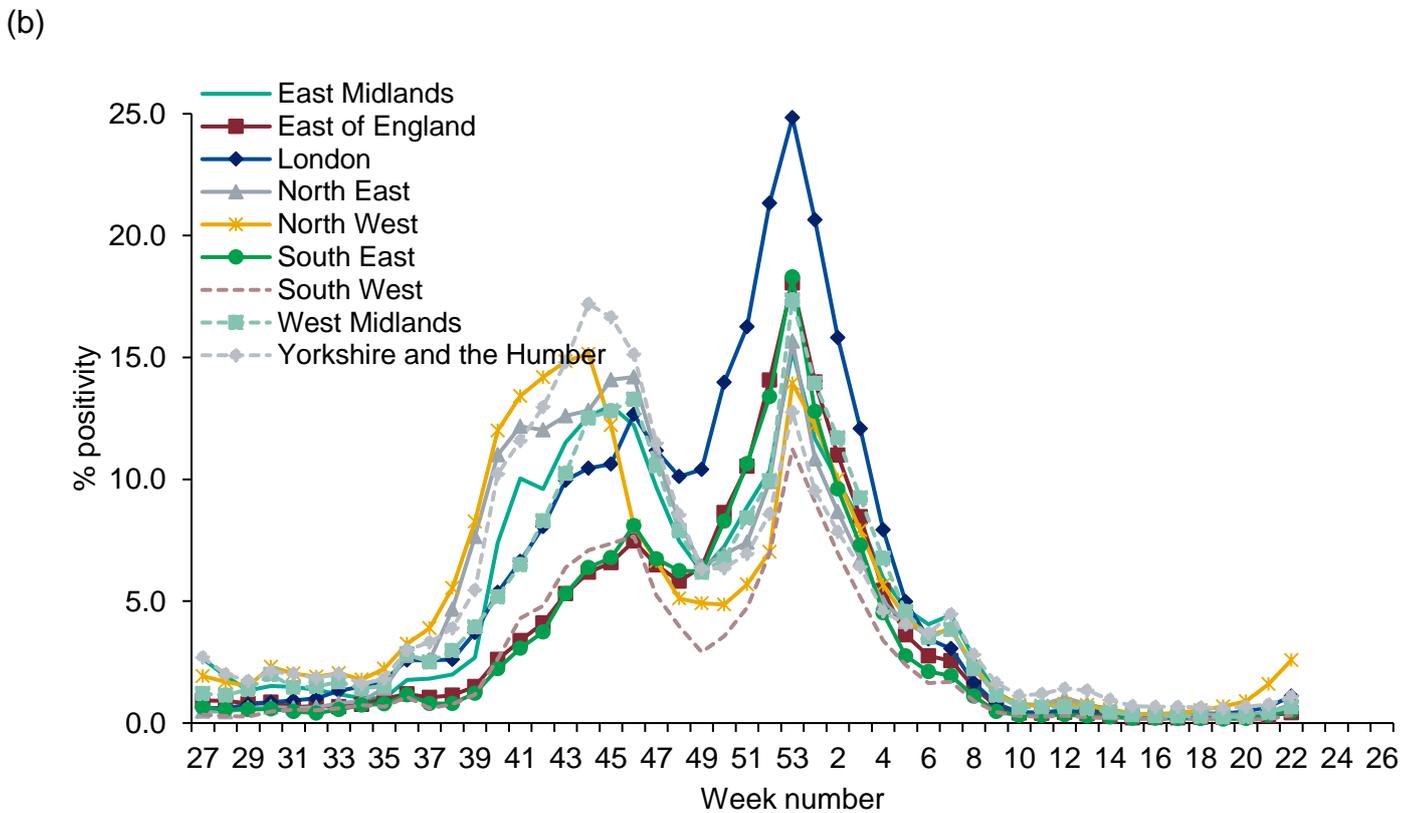
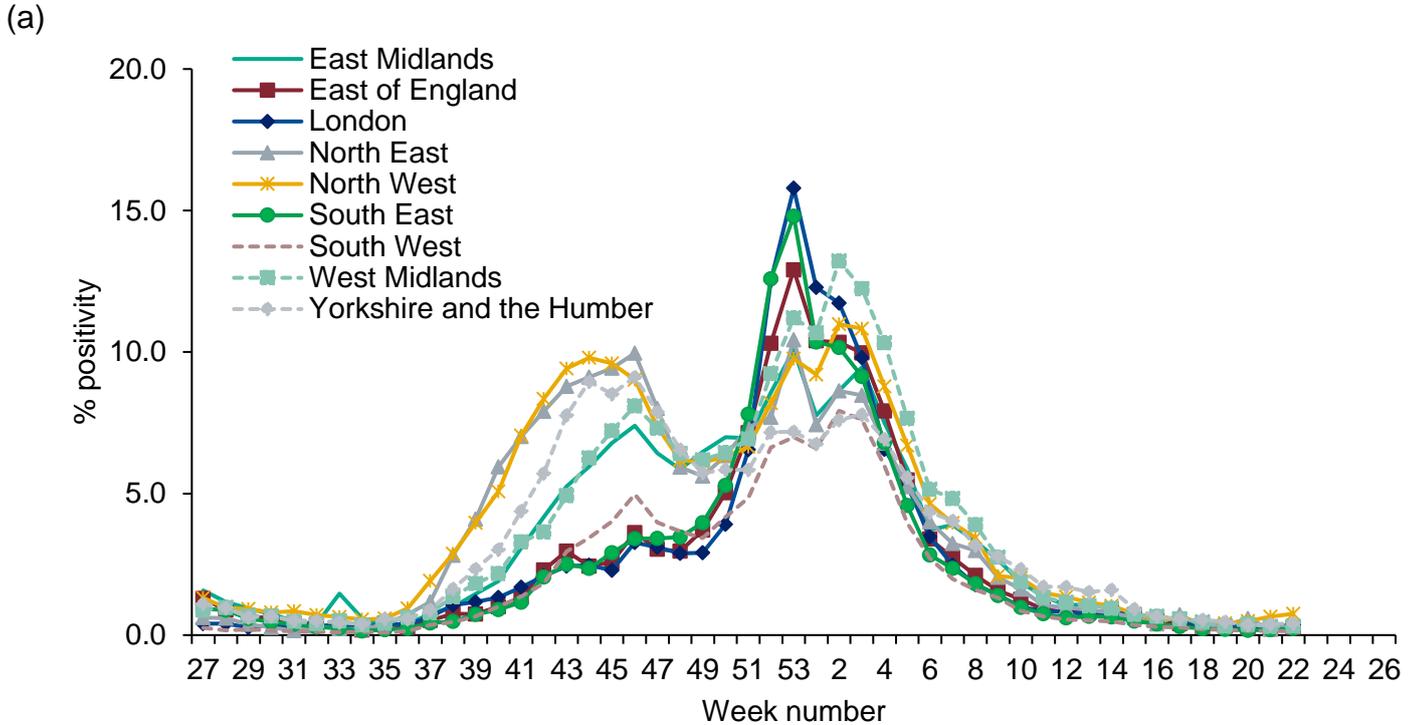
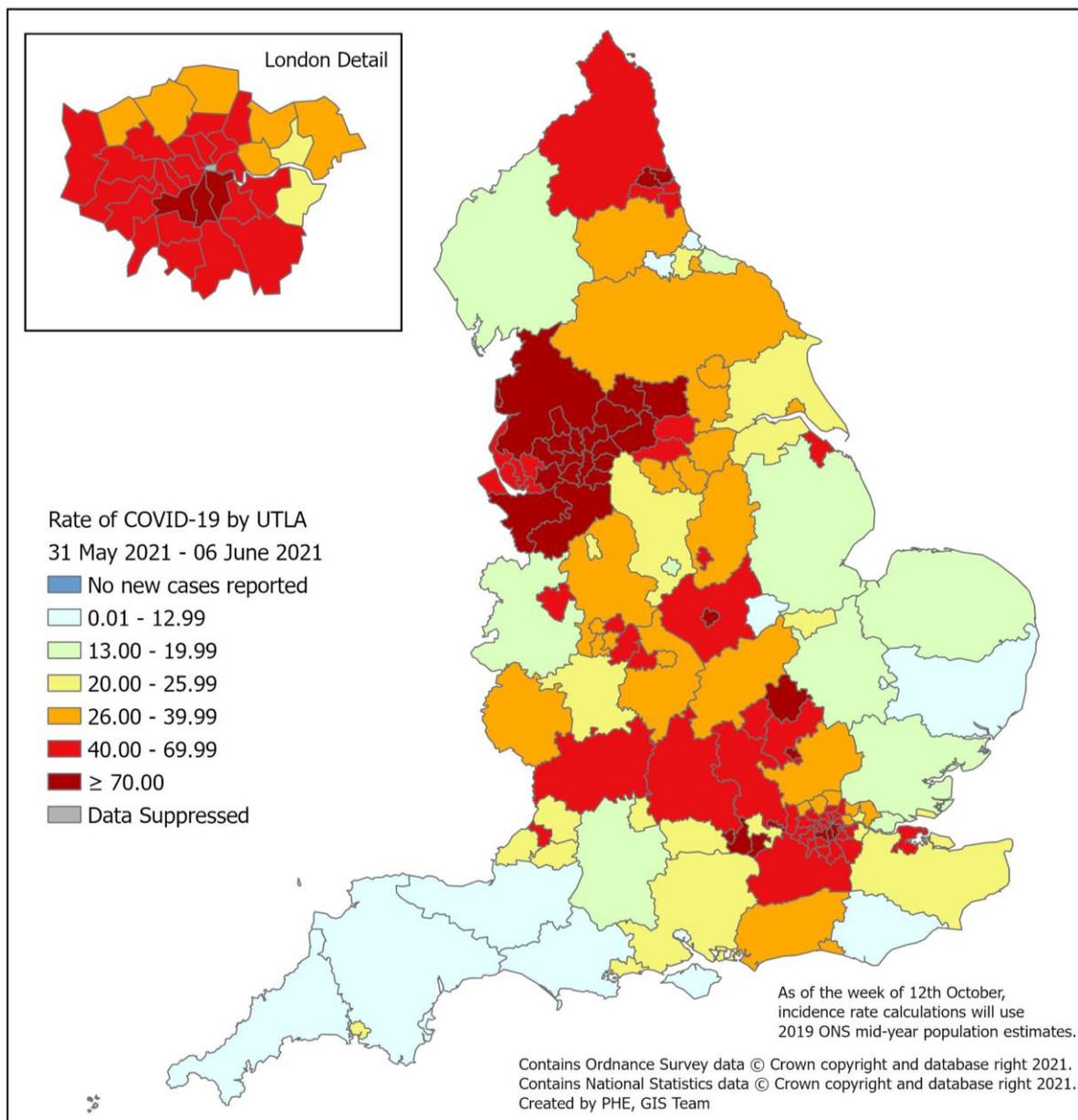
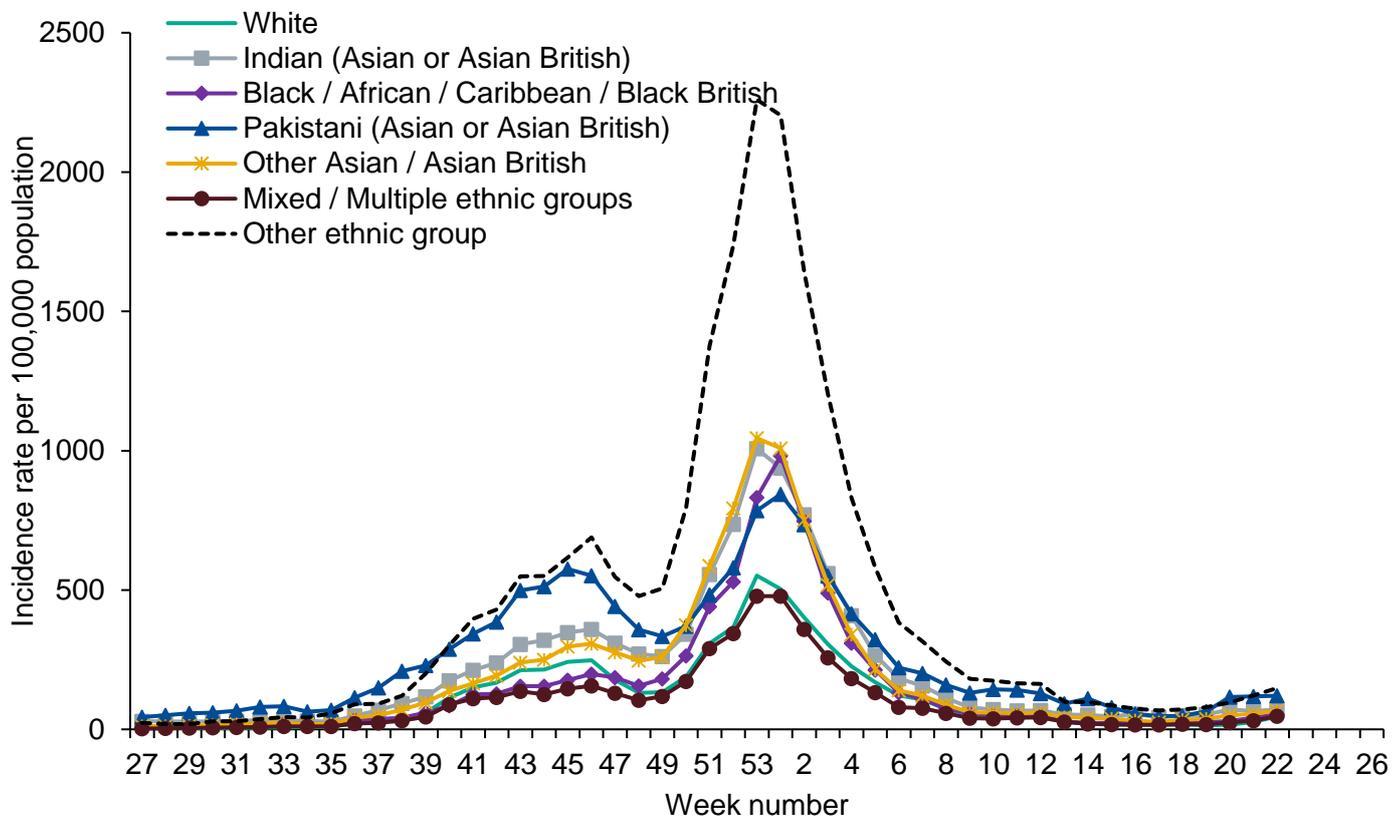


Figure 10: Weekly rate of COVID-19 cases per 100,000 population (Pillar 1 and 2), by upper-tier local authority, England (box shows enlarged map of London area)



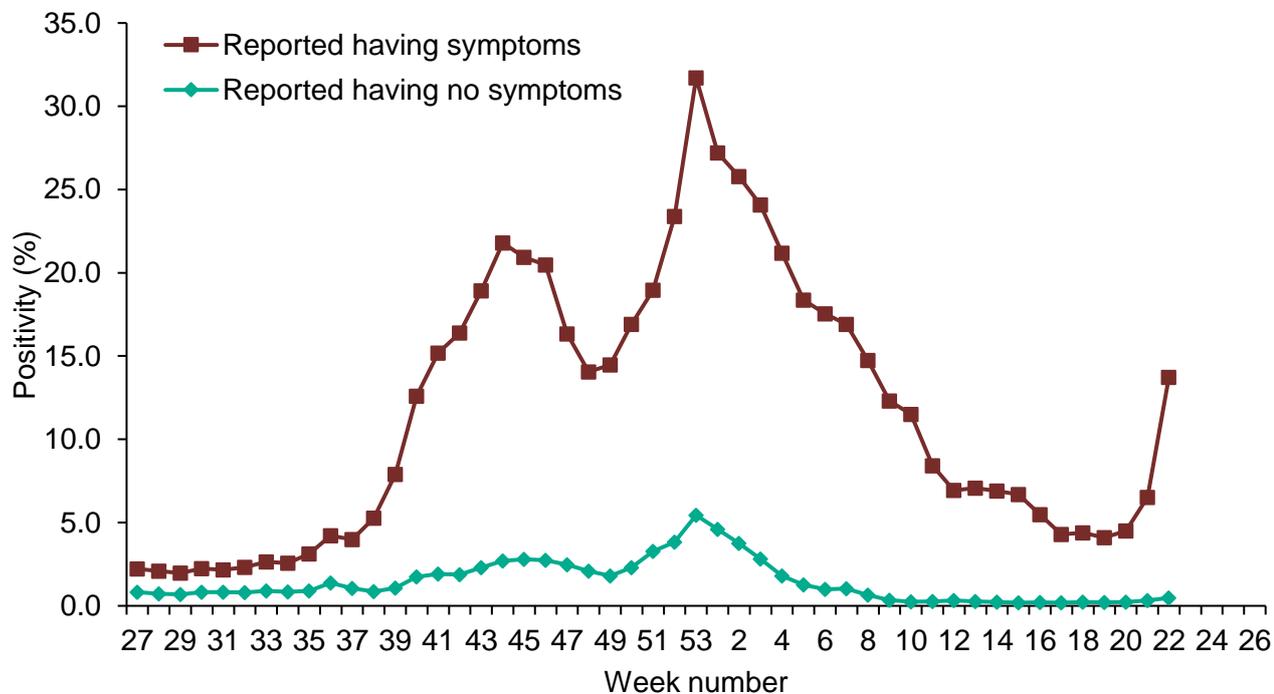
Ethnicity

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



Positivity by symptoms

Figure 12: Weekly positivity of 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 22 2021, based on data received from 12 out of 16 laboratories there was an overall positivity of 0.4% for SARS-CoV-2. The highest positivity was noted in the Under 5-year olds at 0.7% in week 22. The overall influenza positivity remained very low at 0.1% in week 22, with 2 of the 1,984 samples testing positive. These were both Influenza A(not subtyped).

Rhinovirus positivity remained stable at 8.0% in week 21 and week 22. Parainfluenza positivity decreased from 10.2% in week 21 to 8.0% in week 22. Respiratory syncytial virus (RSV), adenovirus and human metapneumovirus (hMPV) positivity all remained low at 2.0%, 2.1% and 1.8% respectively in week 22 (Figure 14).

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

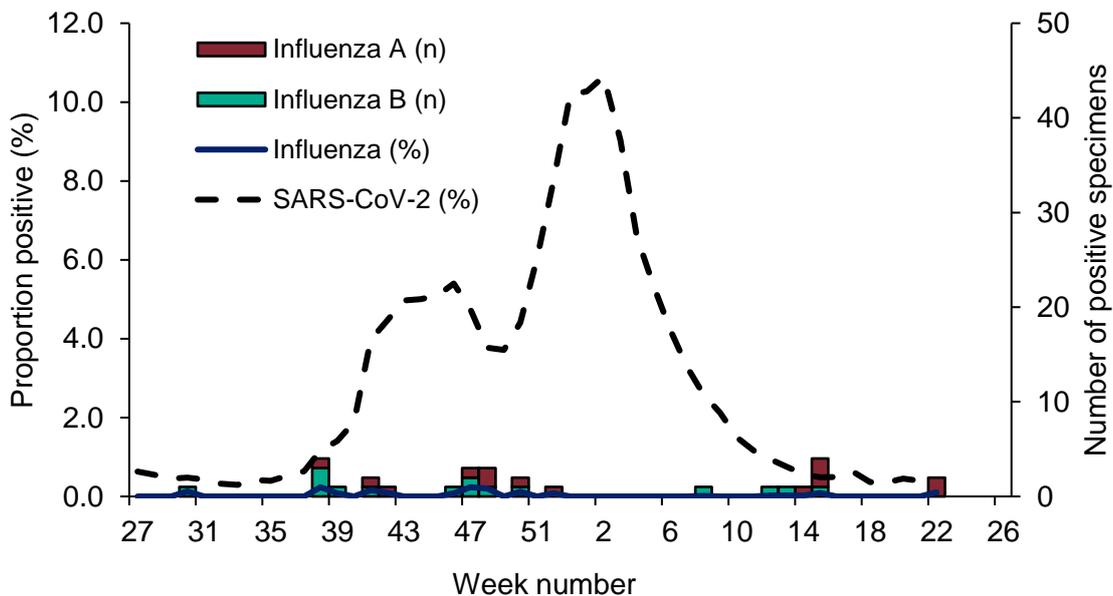


Figure 14: DataMart weekly positivity (%) for other respiratory viruses, England

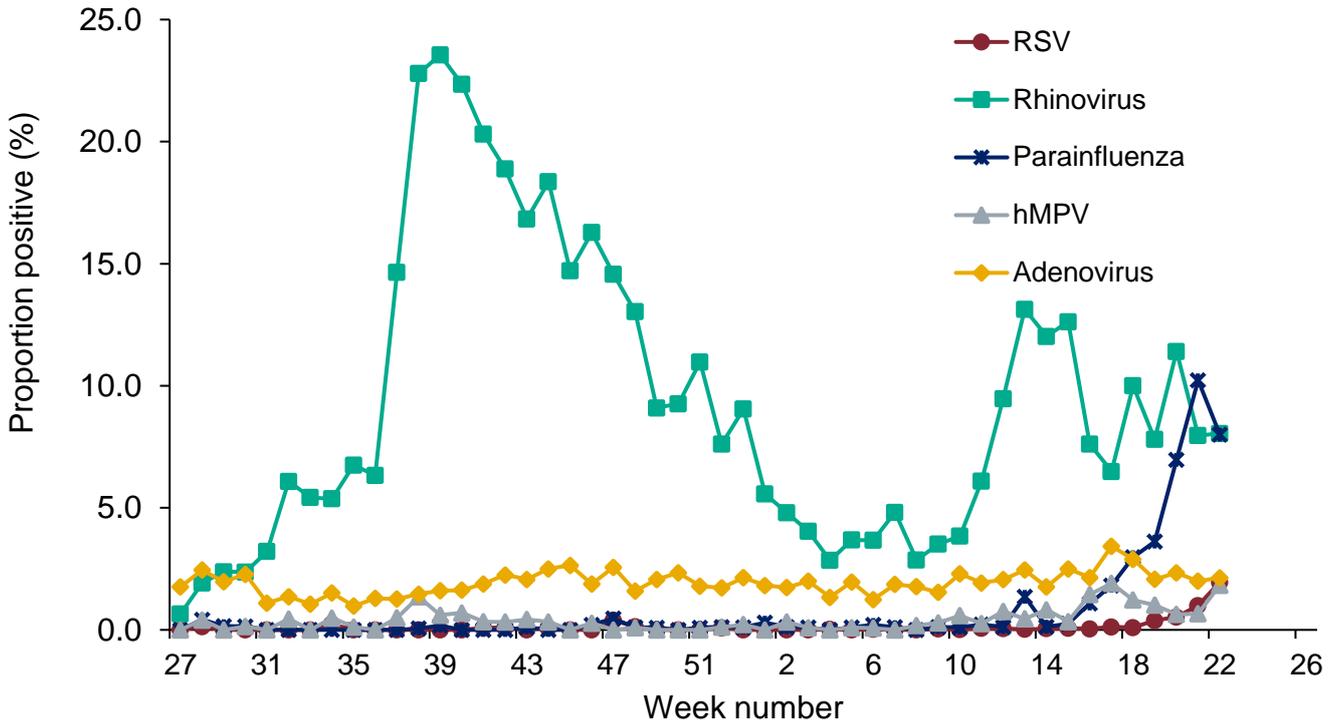
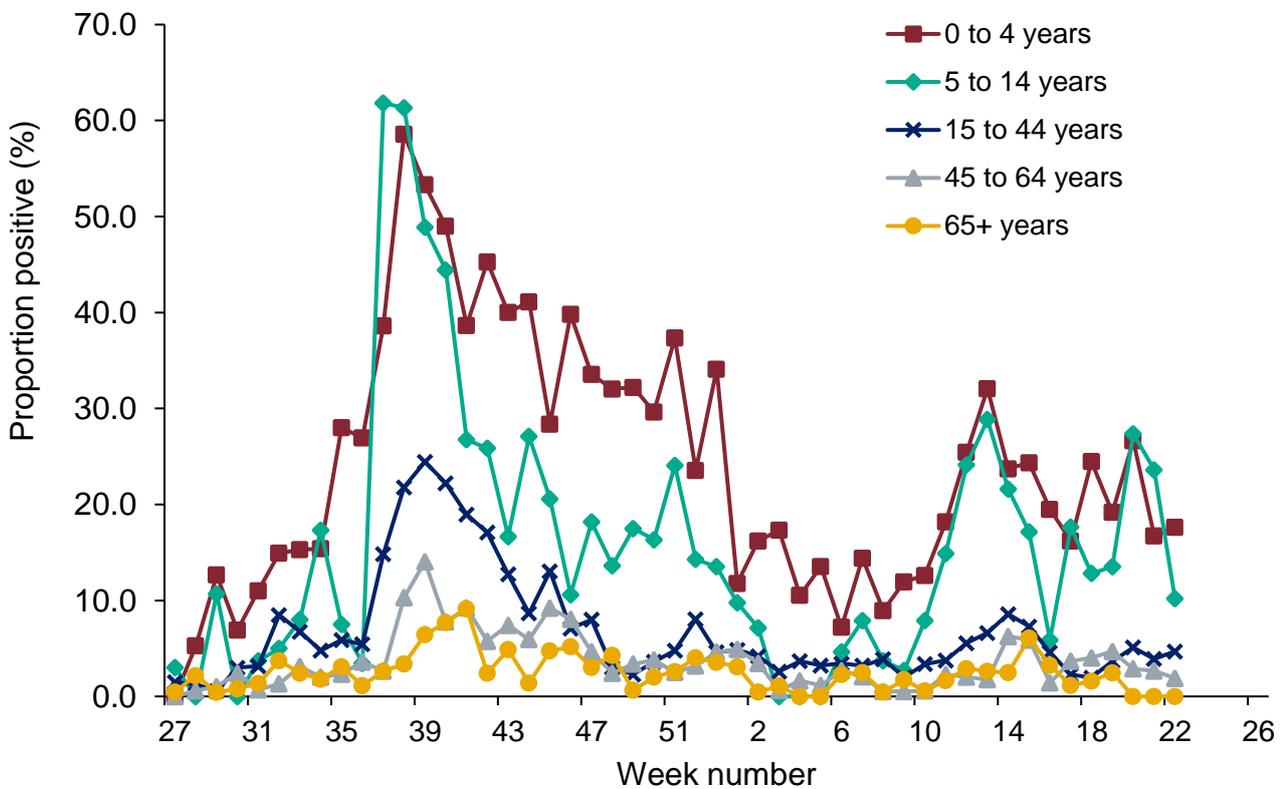


Figure 15: DataMart weekly positivity (%) for rhinovirus by age, England



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 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.

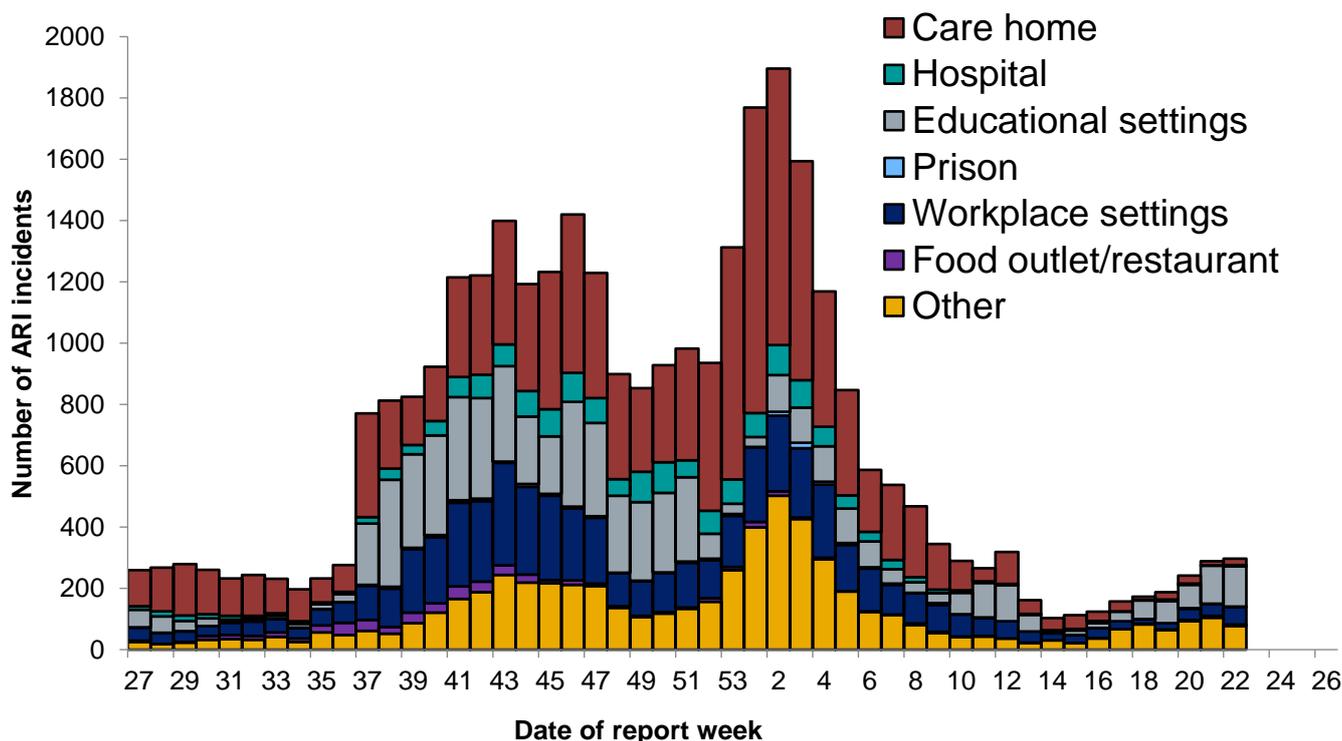
Data caveats:

- 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.

297 new ARI incidents have been reported in week 22 in the UK (Figure 16):

- 21 incidents were from care homes where 16 had at least one linked case that tested positive for SARS-CoV-2 where test results were available
- 131 incidents were from educational settings where 96 had at least one linked case that tested positive for SARS-CoV-2
- 4 incidents were from hospitals, where 3 had at least one linked case that tested positive for SARS-CoV-2
- 2 incidents were from prisons, with both testing positive for SARS-CoV-2
- 57 incidents were from workplace settings where 42 had at least one linked case that tested positive for SARS-CoV-2
- 5 incidents were from food outlets/restaurants where 3 had at least one linked case testing positive for SARS-CoV-2
- 77 incidents were from other settings where 64 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

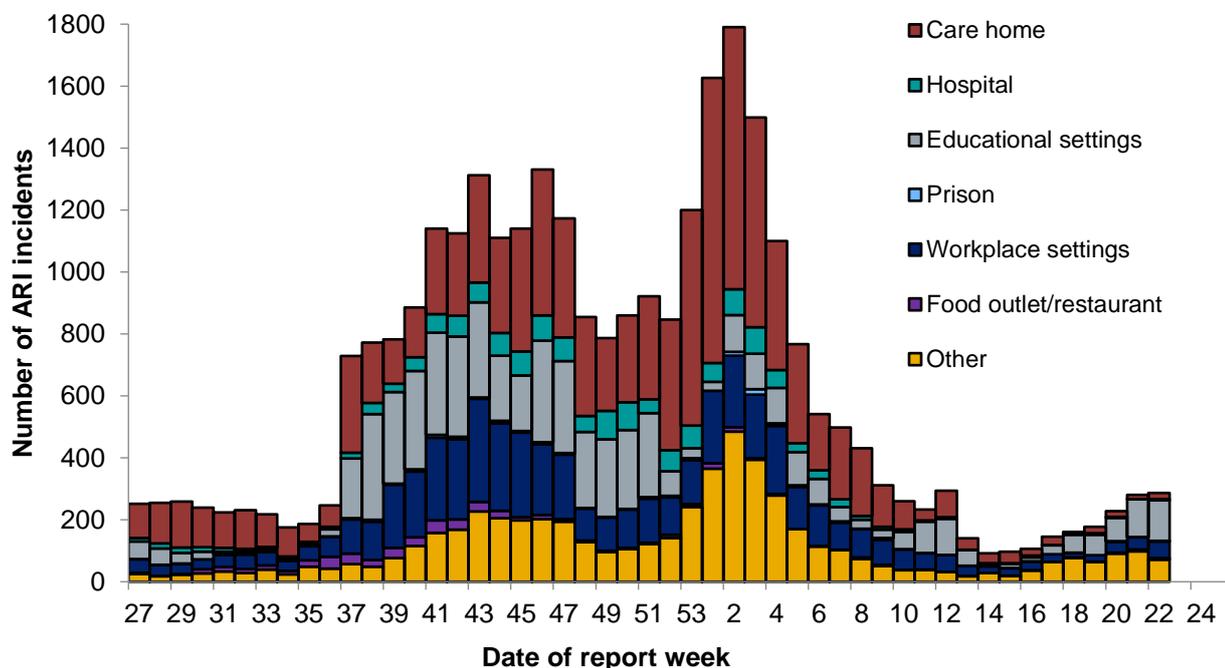


Figure 18: Number of acute respiratory infection (ARI) incidents in care homes by virus type from week 27, England

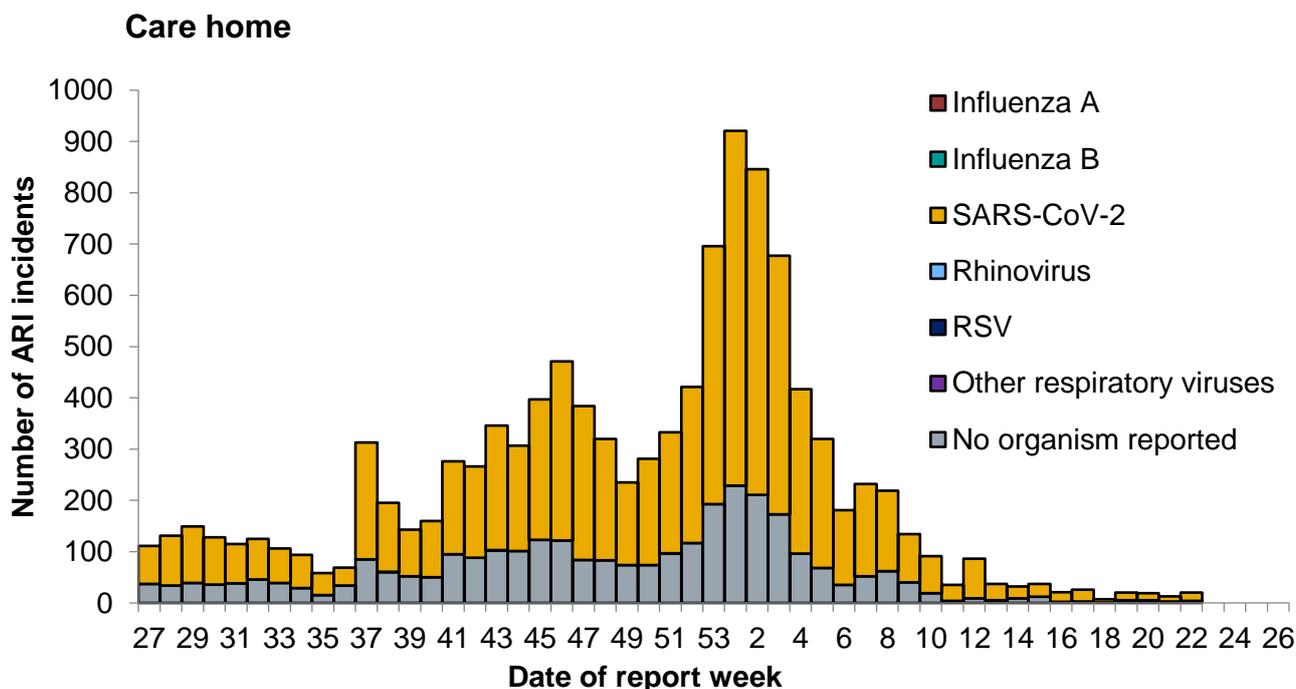


Figure 19: Number of acute respiratory infection (ARI) incidents in hospitals by virus type from week 27, England

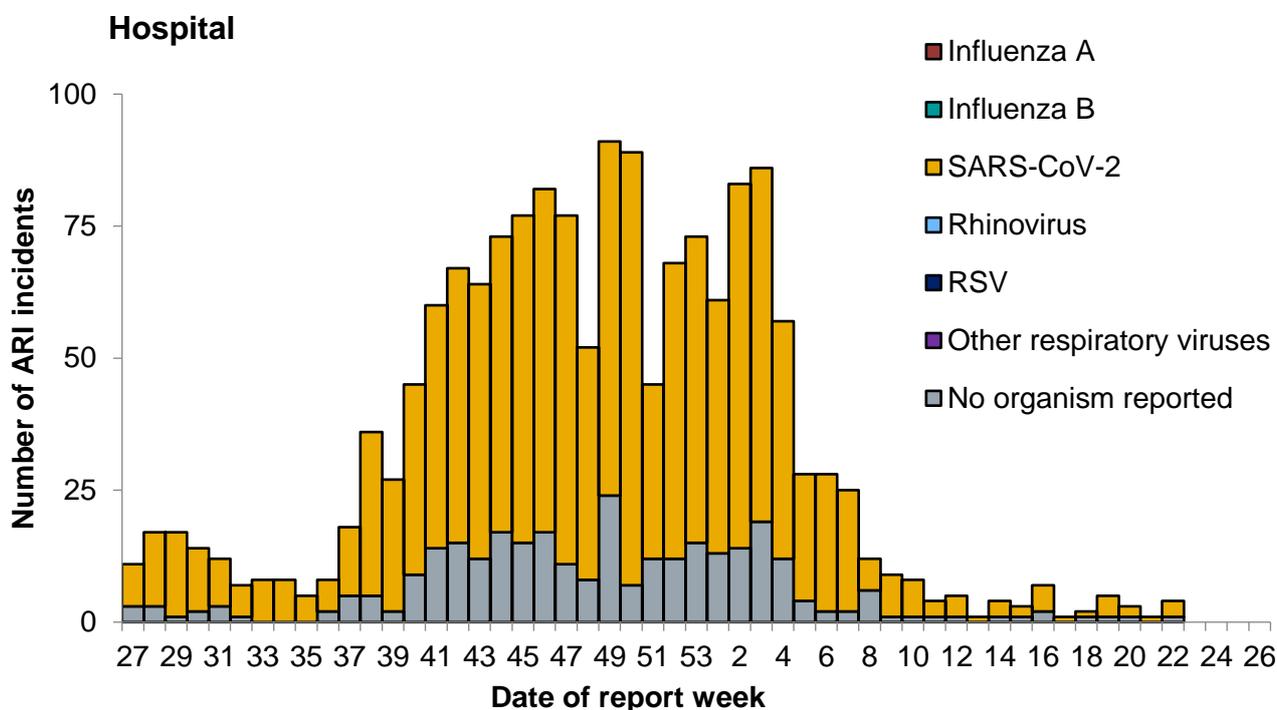


Figure 20: Number of acute respiratory infection (ARI) incidents in educational settings by virus type from week 27, England

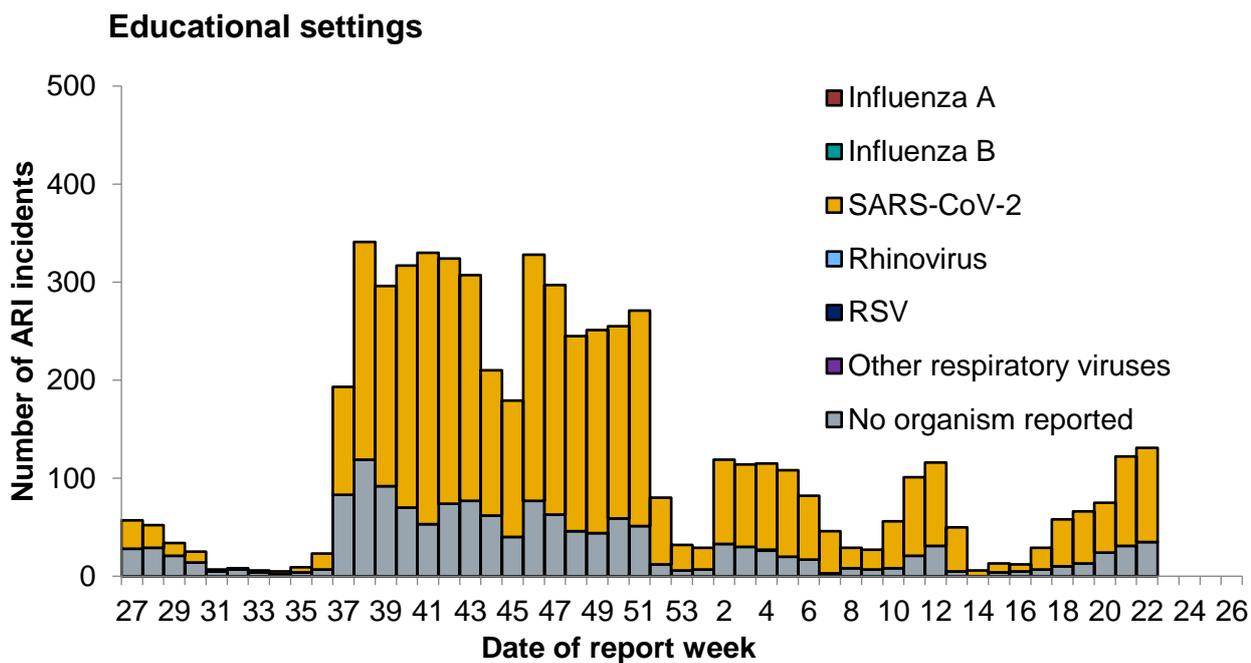


Figure 21: Number of acute respiratory infection (ARI) incidents in prisons by virus type from week 27, England

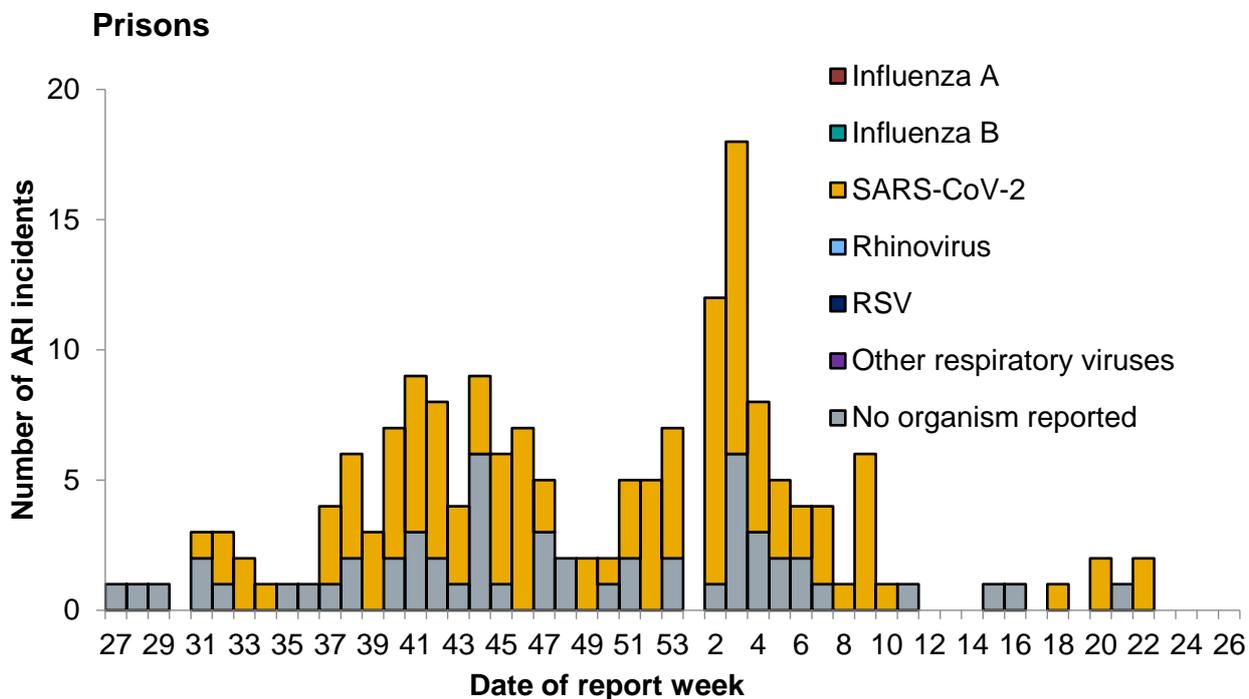


Figure 22: Number of acute respiratory infection (ARI) incidents in workplace settings by virus type from week 27, England

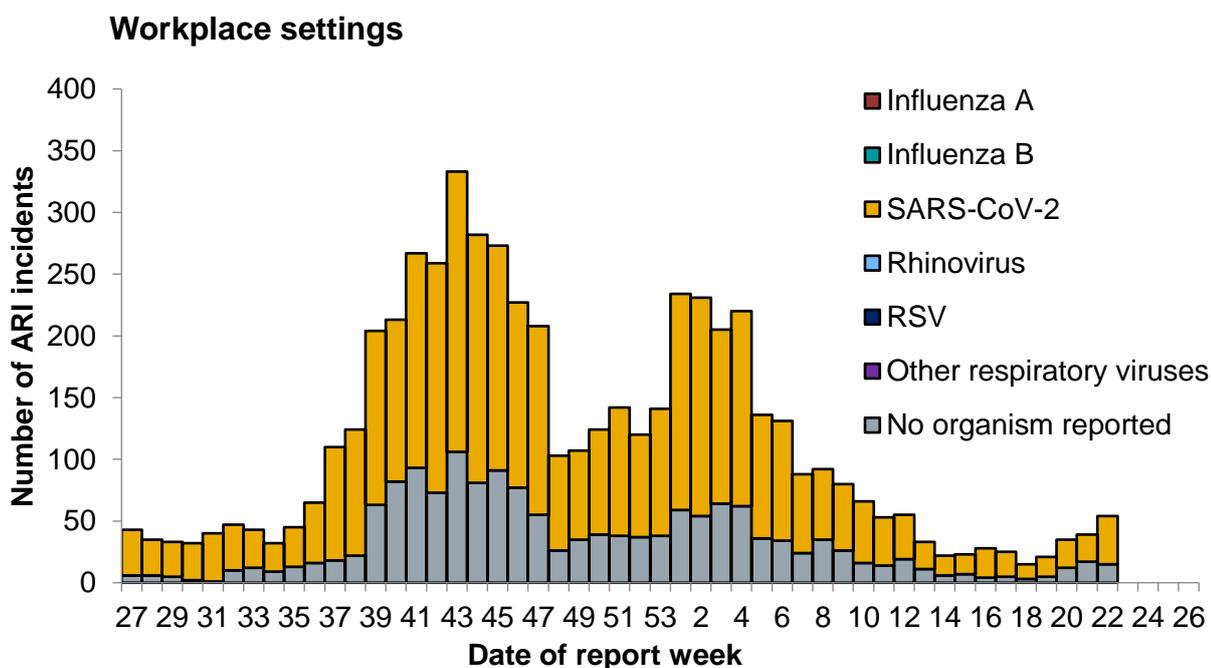


Figure 23: Number of acute respiratory infection (ARI) incidents in food outlet/restaurants settings by virus type from week 27, England

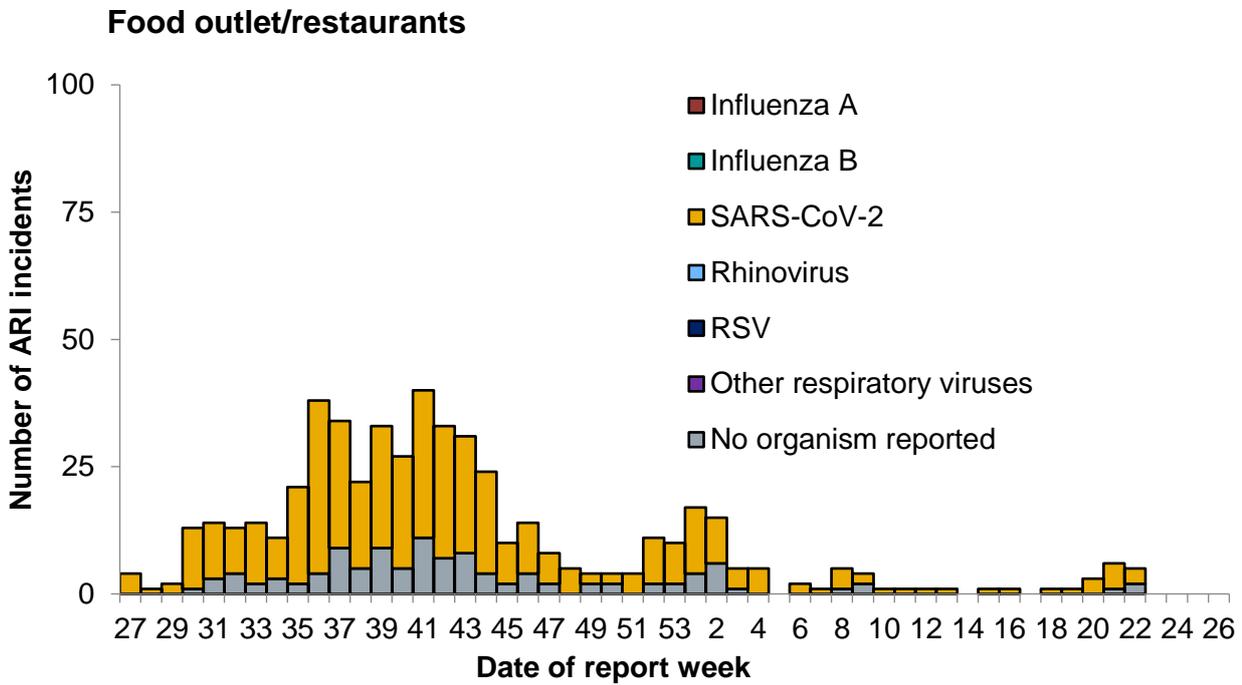


Figure 24: Number of acute respiratory infection (ARI) incidents in other settings by virus type from week 27, England

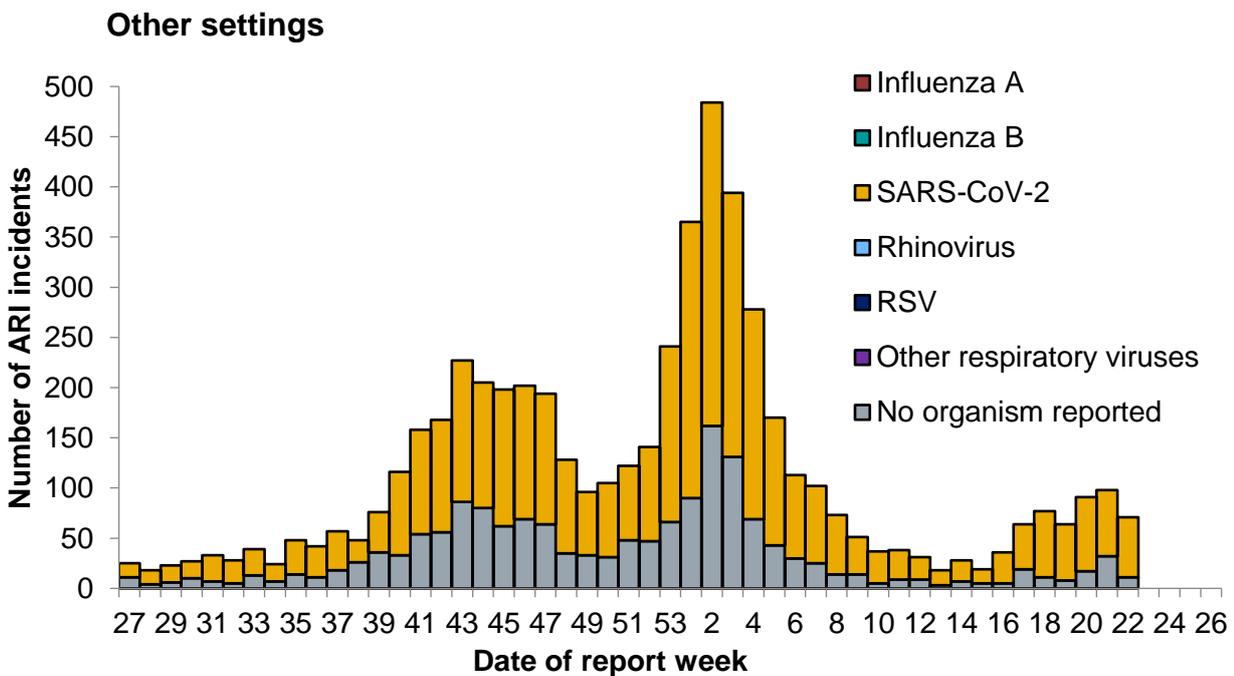


Table 2: Total number of situations/incidents by institution and PHE Centres over the past four weeks with the total number in the last week in brackets

PHE Centres	Care home	Hospital	Educational settings	Prisons	Workplace settings	Food outlet/restaurant settings	Other settings	Total
East of England	5(0)	1(0)	16(3)	0(0)	7(1)	1(0)	19(5)	49(9)
East Midlands	7(3)	0(0)	28(5)	2(0)	12(5)	1(0)	14(1)	64(14)
London	7(2)	2(1)	71(15)	0(0)	12(8)	2(1)	47(9)	141(36)
North East	4(2)	0(0)	3(1)	0(0)	3(0)	0(0)	12(0)	22(3)
North West	10(3)	2(1)	84(31)	0(0)	62(21)	7(2)	31(8)	196(66)
South East	9(2)	4(0)	81(44)	1(0)	10(1)	1(0)	106(25)	212(72)
South West	11(3)	1(1)	17(4)	0(0)	8(3)	1(1)	43(16)	81(28)
West Midlands	12(3)	3(1)	68(23)	1(1)	20(11)	2(1)	15(3)	121(43)
Yorkshire and Humber	7(2)	0(0)	26(5)	1(1)	15(4)	0(0)	37(4)	86(16)
Total	72(20)	13(4)	394(131)	5(2)	149(54)	15(5)	324(71)	972(287)

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 22, 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	Week 17	Week 18	Week 19	Week 20	Week 21	Week 22
Residential dwelling (including houses, flats, sheltered accommodation)	92.0	92.8	93.3	93.7	93.8	92.8
Undetermined	3.9	3.2	3.3	2.9	3.0	3.2
Care/Nursing home	0.6	0.6	0.4	0.4	0.4	0.4
Residential institution (including residential education)	0.5	0.5	0.6	0.6	0.4	0.6
Other property classifications	1.2	1.2	0.9	0.9	0.7	0.7
House in multiple occupancy (HMO)	0.7	0.7	0.6	0.6	0.6	0.8
Medical facilities (including hospitals and hospices, and mental health)	0.7	0.8	0.7	0.8	1.1	1.5
Prisons, detention centres, secure units	0.3	0.3	0.1	0.1	0.0	0.0
Overseas address	0.0	0.0	0.0	0.0	0.0	0.0
No fixed abode	0.0	0.0	0.0	0.0	0.0	0.0

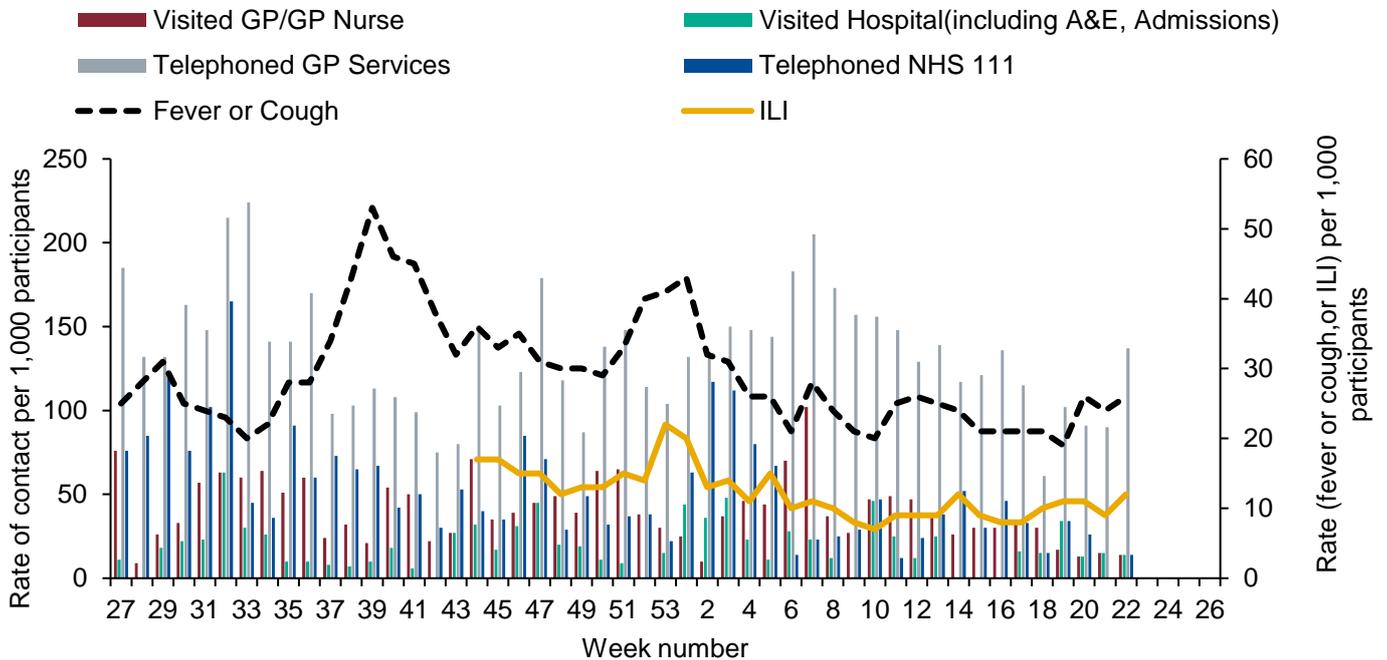
FluSurvey

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

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 2,864 participants completed the weekly surveillance survey in week 22, of which 73 (2.6%) reported fever or cough and 34 (1.2%) 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

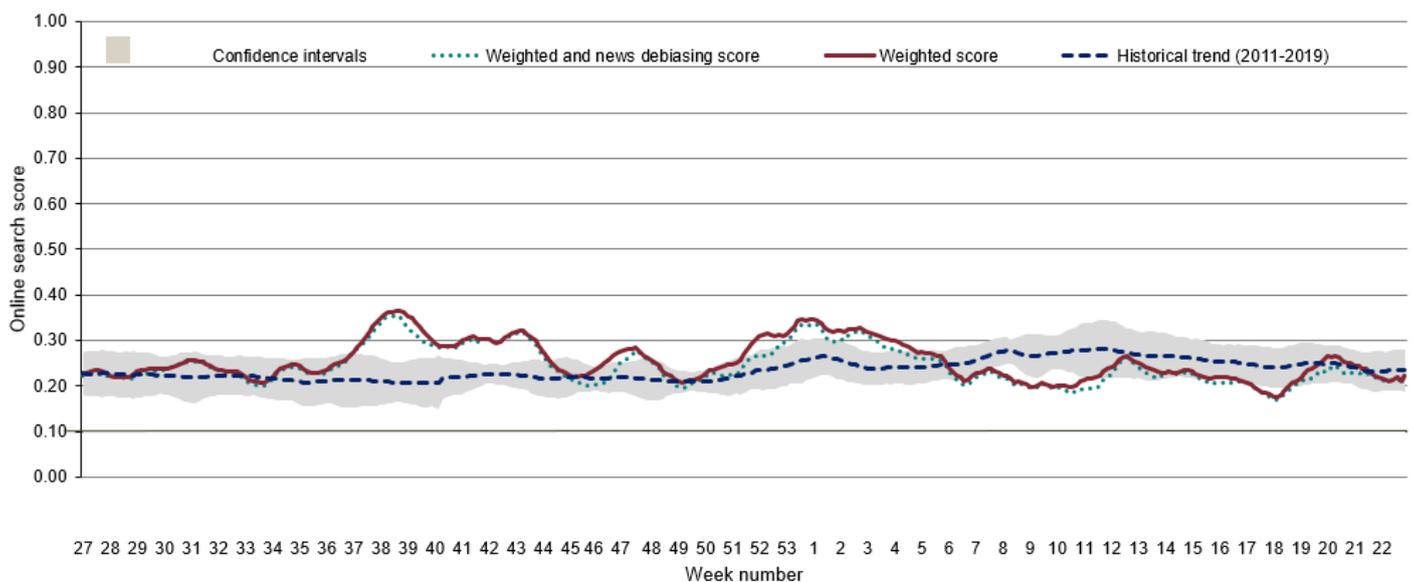


Google search queries

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](#).

During week 22, the overall and media-debiasing weighted Google search scores remained stable (Figure 26).

Figure 26: 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 06 June, NHS 111 calls for cold/flu decreased, while calls for potential COVID-19 remained stable and calls for loss of taste or smell increased. Online assessments for cold/flu, potential COVID-19 and loss of taste or smell remained stable (Figure 27 and 28).

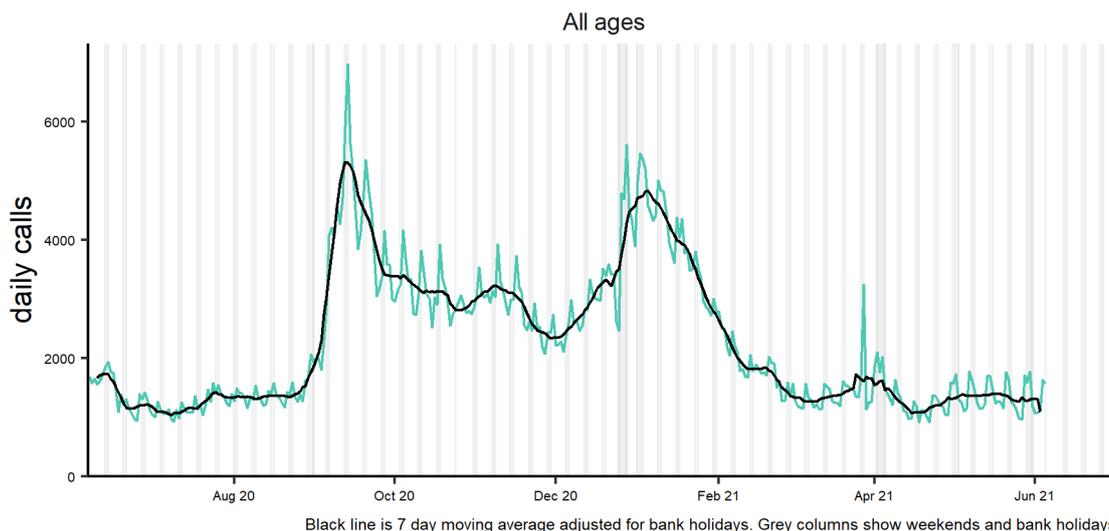
Please note that NHS 111 callers (from 11 May 2020) and NHS 111 online users (from 11 June 2020), who are assessed as having probable COVID-19 symptoms are now triaged using symptom specific pathways e.g. cold/flu, which are included in routine syndromic indicators.

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

Figure 27: 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

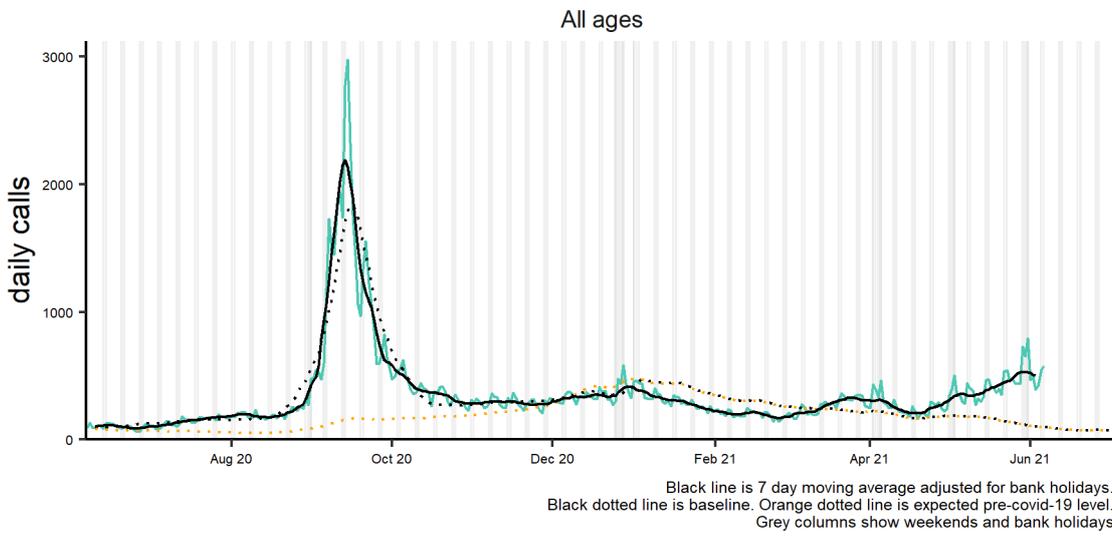
(a)

Potential covid-19 07/06/2020 - 06/06/2021



(b)

Cold or flu 07/06/2020 - 06/06/2021



(c)

Loss of taste or smell 07/06/2020 - 06/06/2021

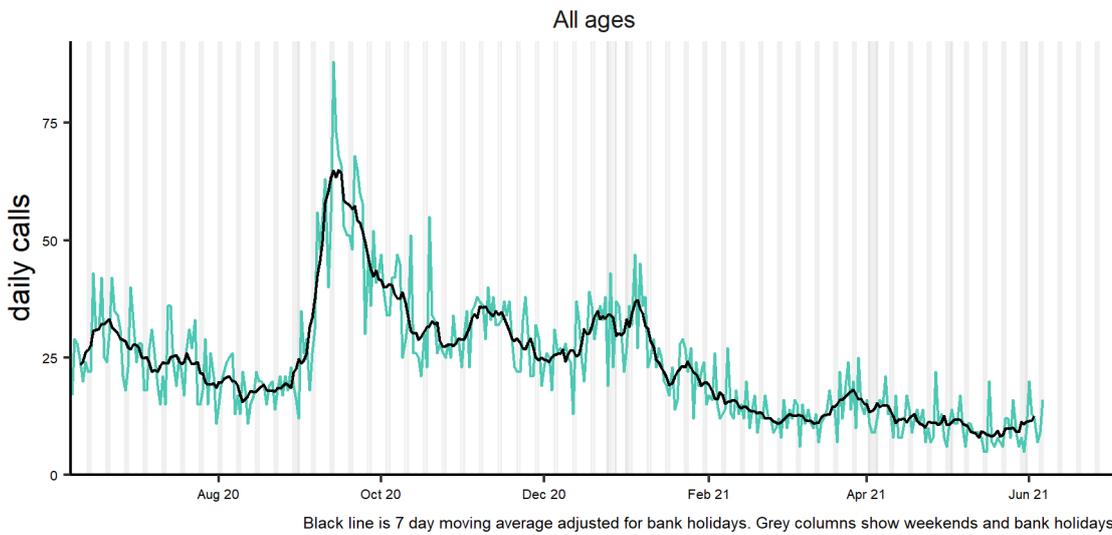
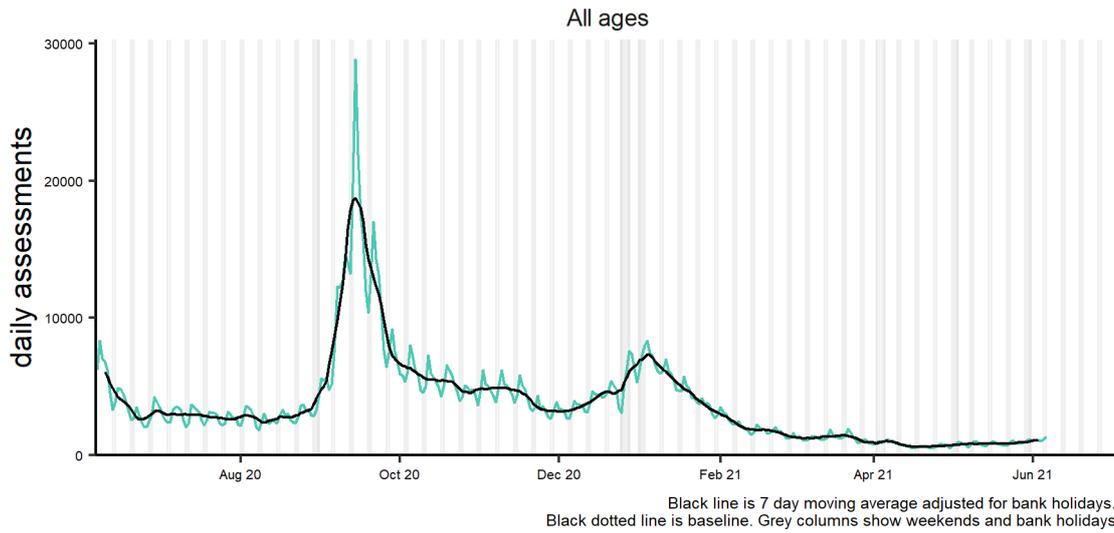


Figure 28: NHS 111 completed online assessments (and 7-day moving average) for (a) daily potential COVID-19 online assessments, (b) daily cold/flu online assessments and (c) daily loss of taste or smell online assessments, as the number of completed online assessments for all ages, England

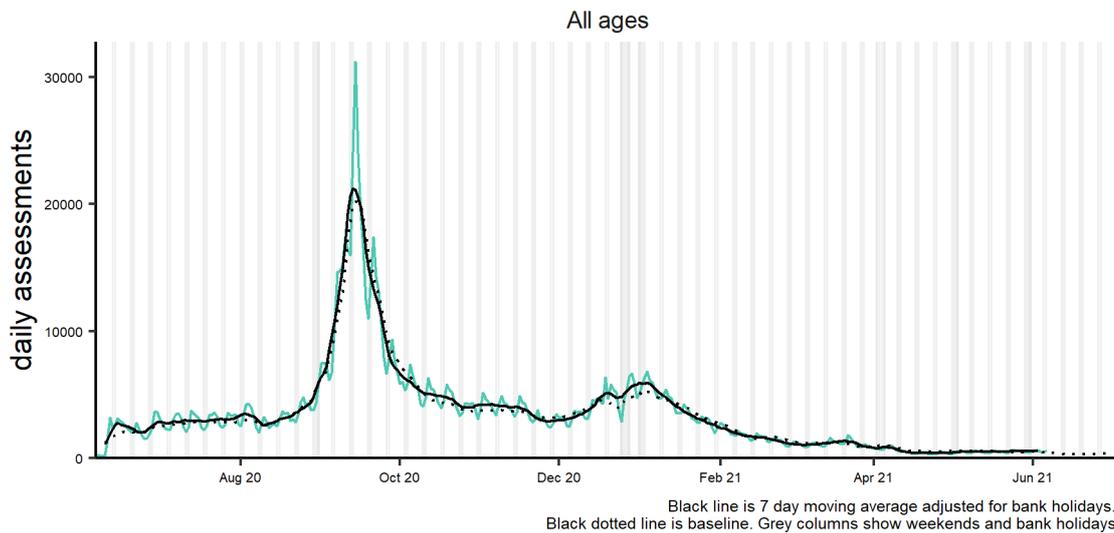
(a)

Potential covid-19 07/06/2020 - 06/06/2021



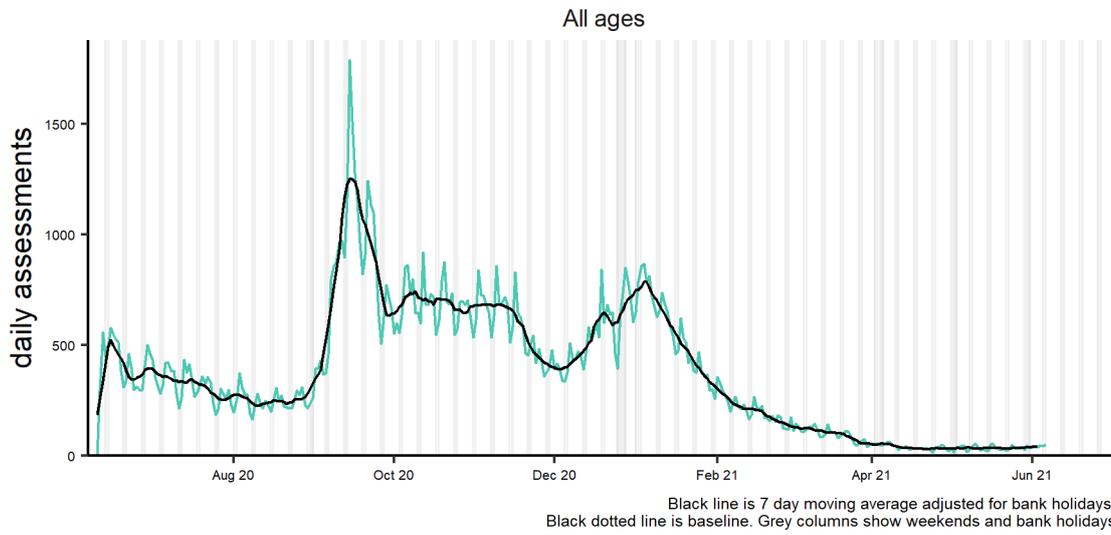
(b)

Cold or flu 07/06/2020 - 06/06/2021



(c)

Loss of taste or smell 07/06/2020 - 06/06/2021



Primary care surveillance

RCGP (England)

The weekly ILI consultation rate through the RCGP surveillance was 0.5 per 100,000 registered population in participating GP practices in week 22 compared to 0.7 per 100,000 in the previous week. This is below the baseline threshold (12.2 per 100,000) (Figure 29). By age group, the highest rates were seen in the 1 to 4-year olds (1.0 per 100,000). The Lower Respiratory Tract Infections (LRTI) consultation rate was at 28.9 per 100,000 in week 22, compared to the rate of 29.4 per 100,000 in the previous week. The COVID-19-like indicator consultation rate was at 35.7 per 100,000 in week 22 compared to a rate of 3.4 per 100,000 in the previous week (Figure 30).

Figure 29: RCGP ILI consultation rates, all ages, England

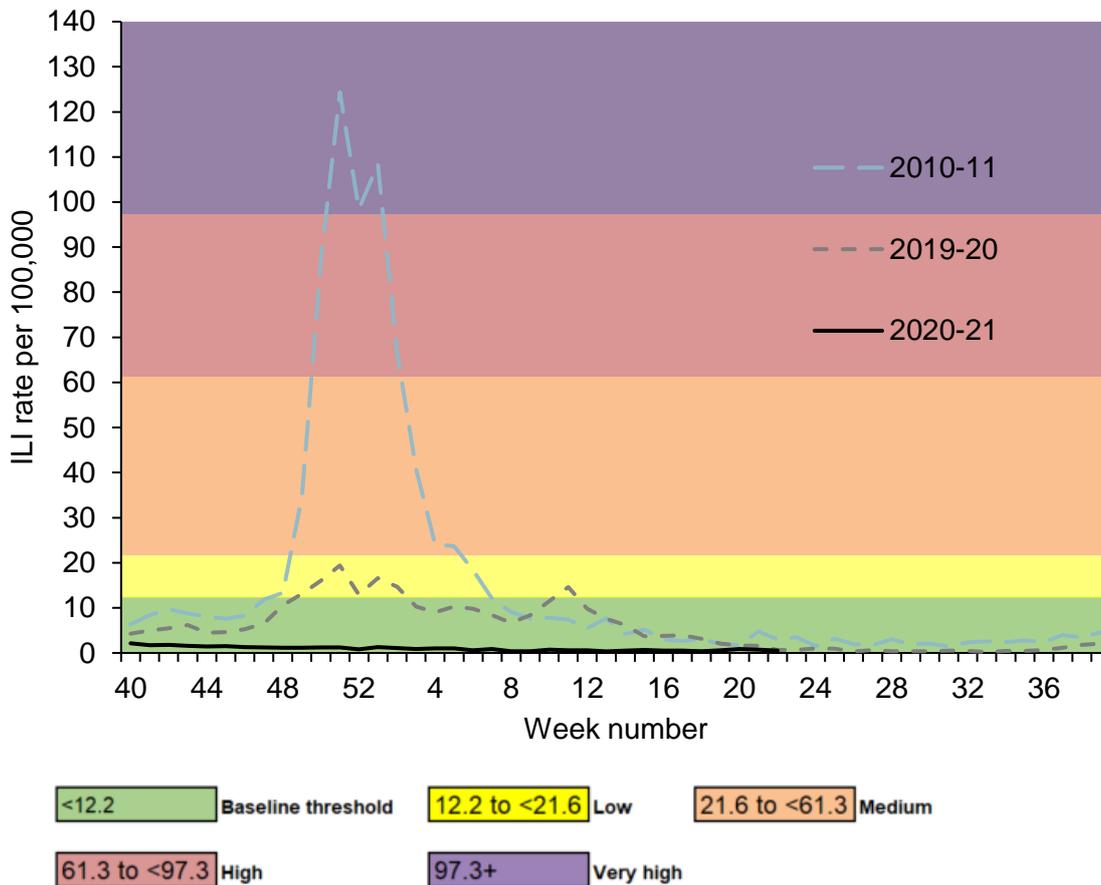
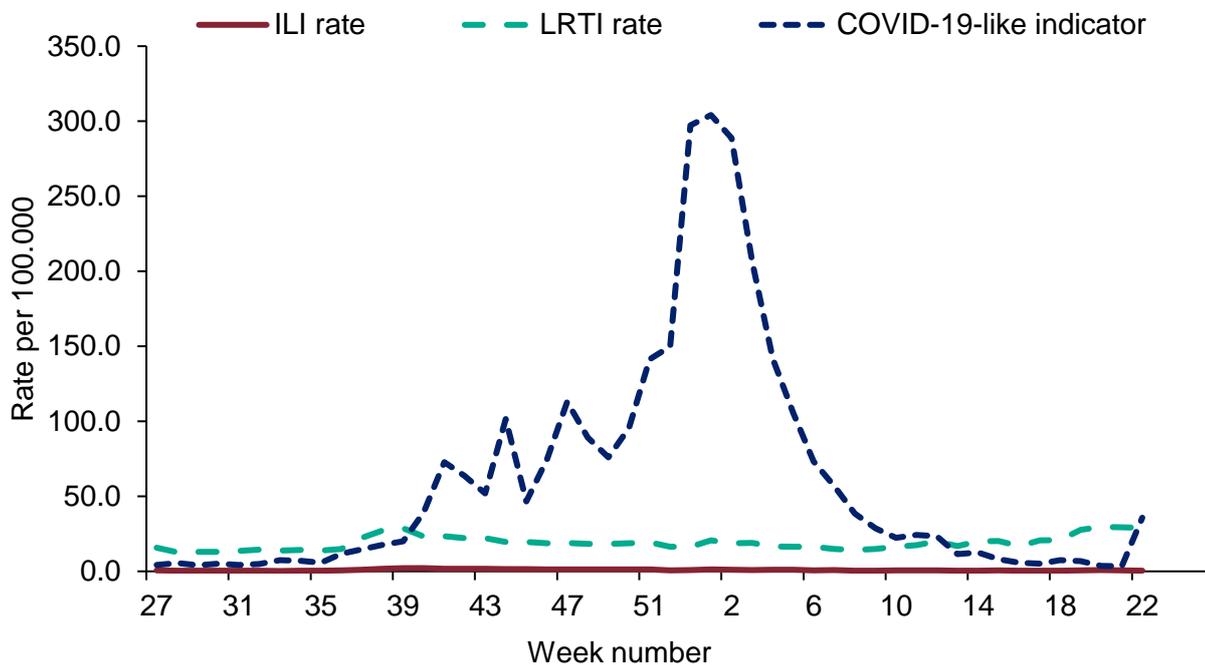


Figure 30: RCGP ILI, LRTI and COVID-19-like indicator consultation rates, England



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 Scotland (0.5 per 100,000), the 15 to 44-year olds in Wales (1.4 per 100,000) and the 65 to 74-year olds in Northern Ireland (1.4 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																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
England (RCGP)	1.3	1.1	0.9	1.0	1.0	0.6	0.9	0.4	0.4	0.7	0.6	0.6	0.3	0.5	0.6	0.5	0.5	0.4	0.6	0.9	0.7	0.5
Wales	0.5	1.0	0.8	0.7	0.5	0.3	0.8	0.3	1.0	0.5	0.0	1.0	0.5	0.5	0.5	0.0	0.0	0.3	0.8	0.5	0.0	0.5
Scotland	0.5	0.6	0.5	0.4	0.5	0.4	0.5	0.5	0.3	0.2	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.3	0.2	0.2	0.4
Northern Ireland	3.4	2.4	2.1	1.0	1.6	0.8	0.8	1.1	0.8	0.7	0.6	0.6	0.4	0.3	0.8	0.4	0.7	0.1	0.5	0.5	0.4	0.4

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>

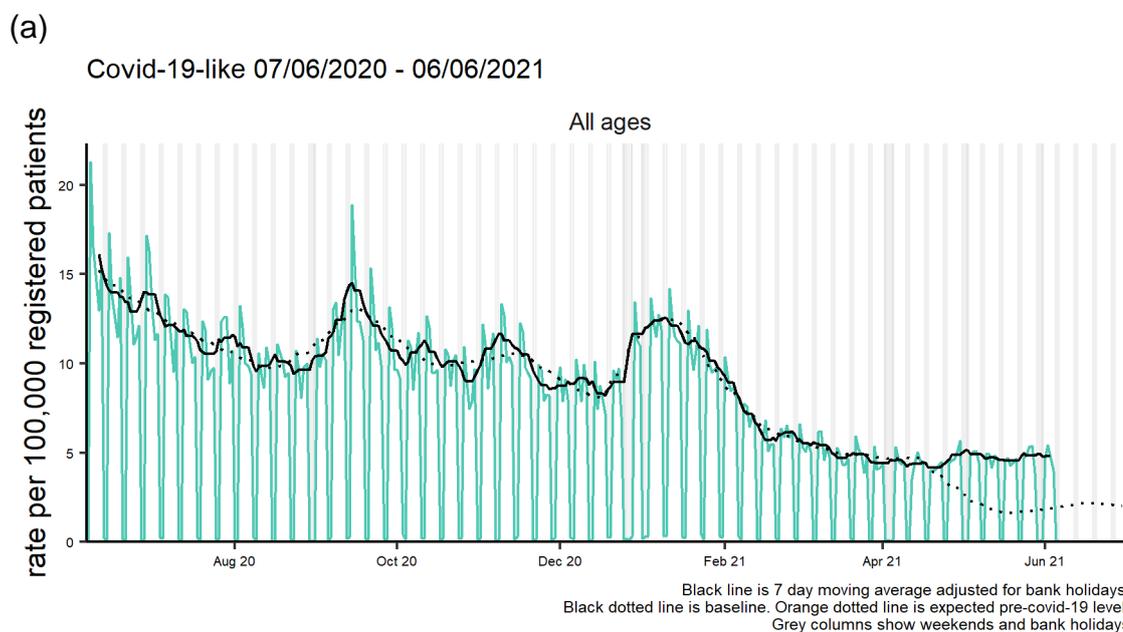
GP In Hours, Syndromic Surveillance

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

Up to 06 June GP in-hours consultations for potential COVID-19 remained stable, while consultations for influenza-like illness remained similar to baseline levels (Figure 31).

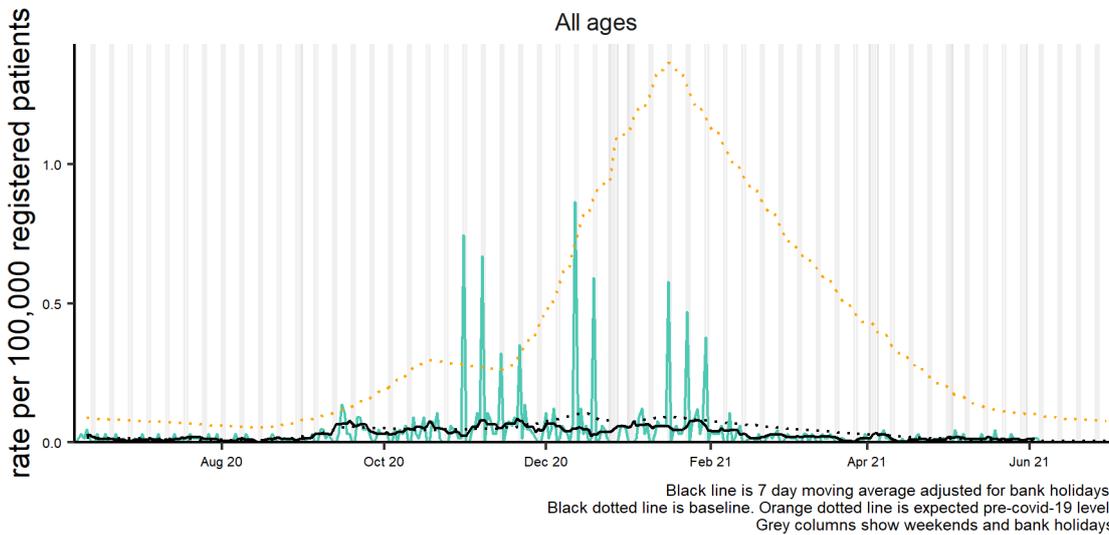
Further information about caveats is available from the [PHE GP In Hours Syndromic Surveillance bulletin](#).

Figure 31: GPIH clinical indicators for (a) potential COVID-19 GP consultations and (b) influenza-like illness GP consultations, England



(b)

Influenza-like illness 07/06/2020 - 06/06/2021



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

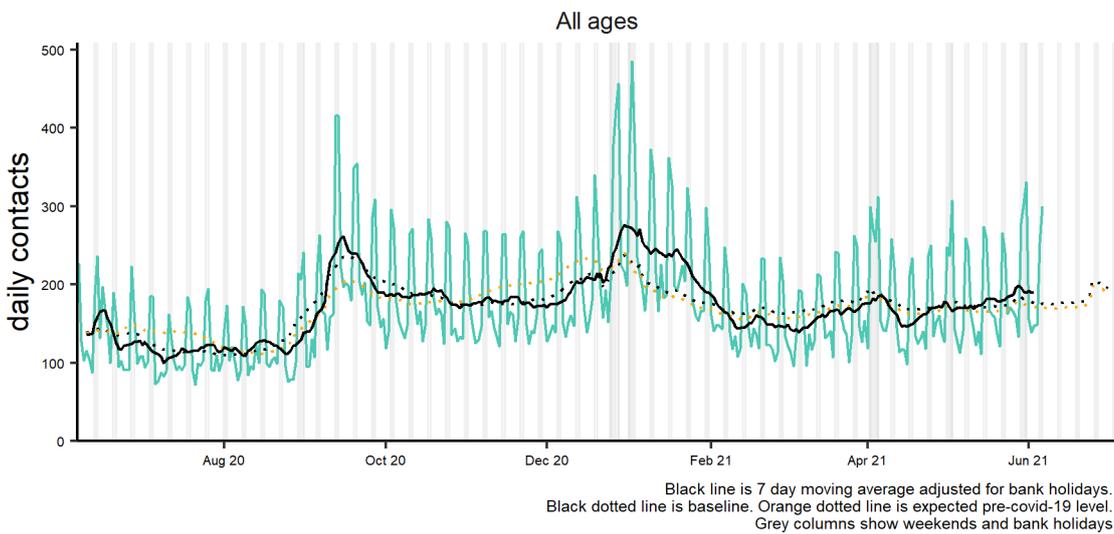
The GP Out of Hours (GPOOH) syndromic surveillance system monitors the numbers of daily unscheduled visits and calls to GPs during evenings, overnight, on weekends and on public holidays. This system covers around 55% of England's out of hour activity.

Up to 06 June, GP out-of-hours and unscheduled care consultations for influenza-like illness, acute respiratory infections and difficulty breathing/asthma/wheeze remained stable (Figure 32).

Figure 32: GPOOH daily contacts (%) for (a) difficulty breathing/wheeze/asthma, (b) influenza-like illness and (c) acute respiratory infections, England

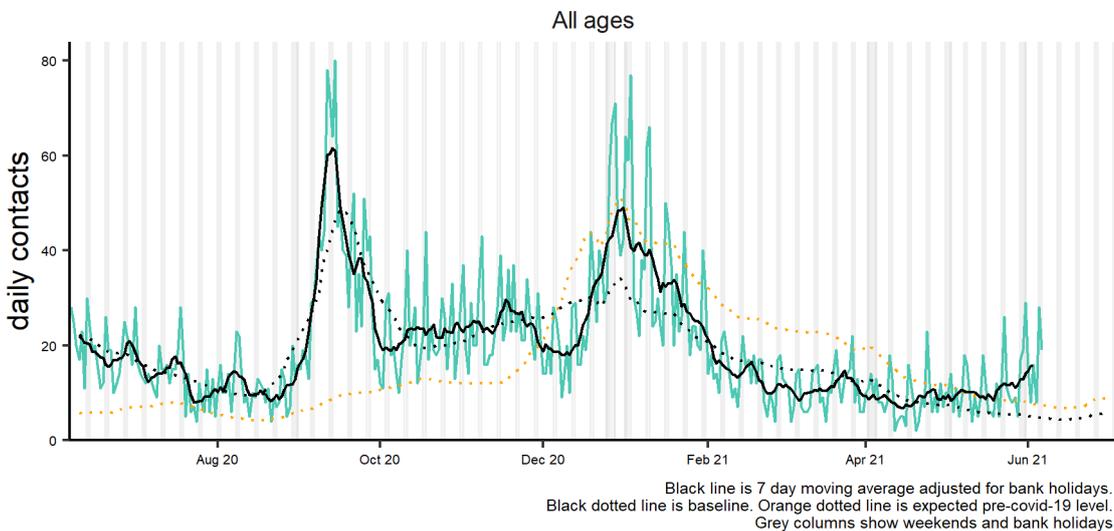
(a)

Difficulty breathing, wheeze or asthma 07/06/2020 - 06/06/2021



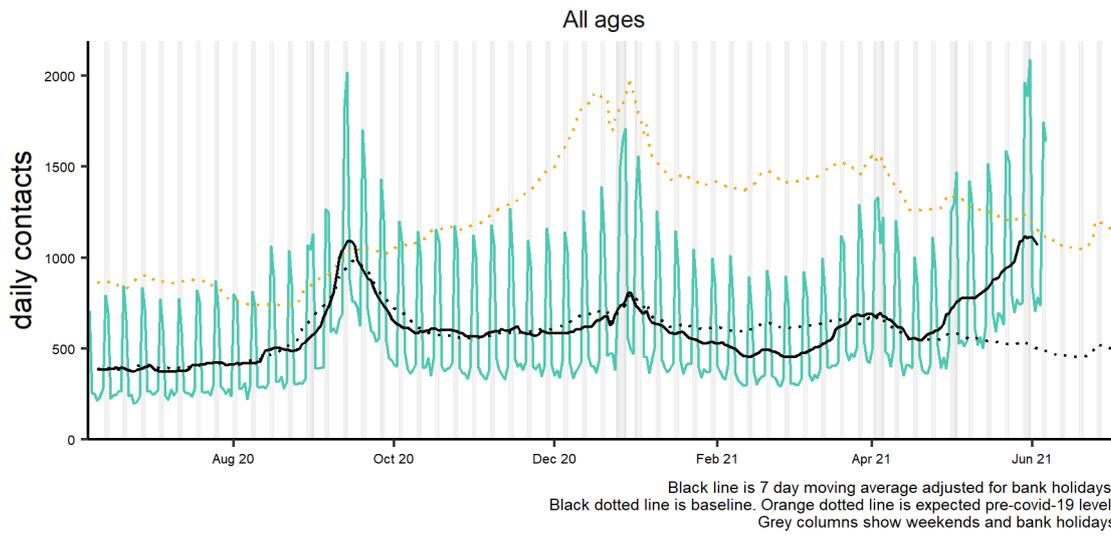
(b)

Influenza-like illness 07/06/2020 - 06/06/2021



(c)

Acute respiratory infection 07/06/2020 - 06/06/2021

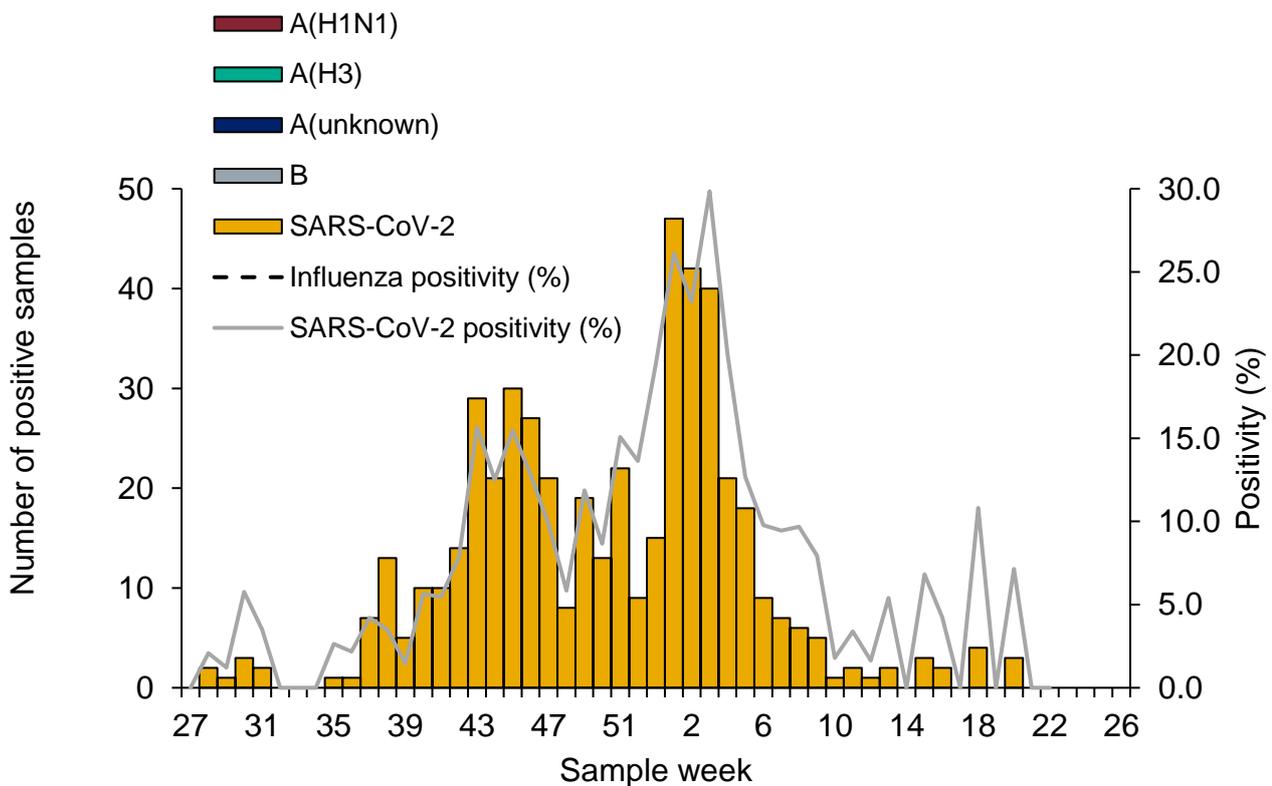


Sentinel swabbing scheme in the UK

In week 22 2021, no samples tested positive for SARS-CoV-2 with an overall positivity of 0.0% (0/29) compared to 0.0% (0/41) in the previous week, through the UK GP sentinel swabbing schemes (Figure 33).

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

Figure 33: 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.

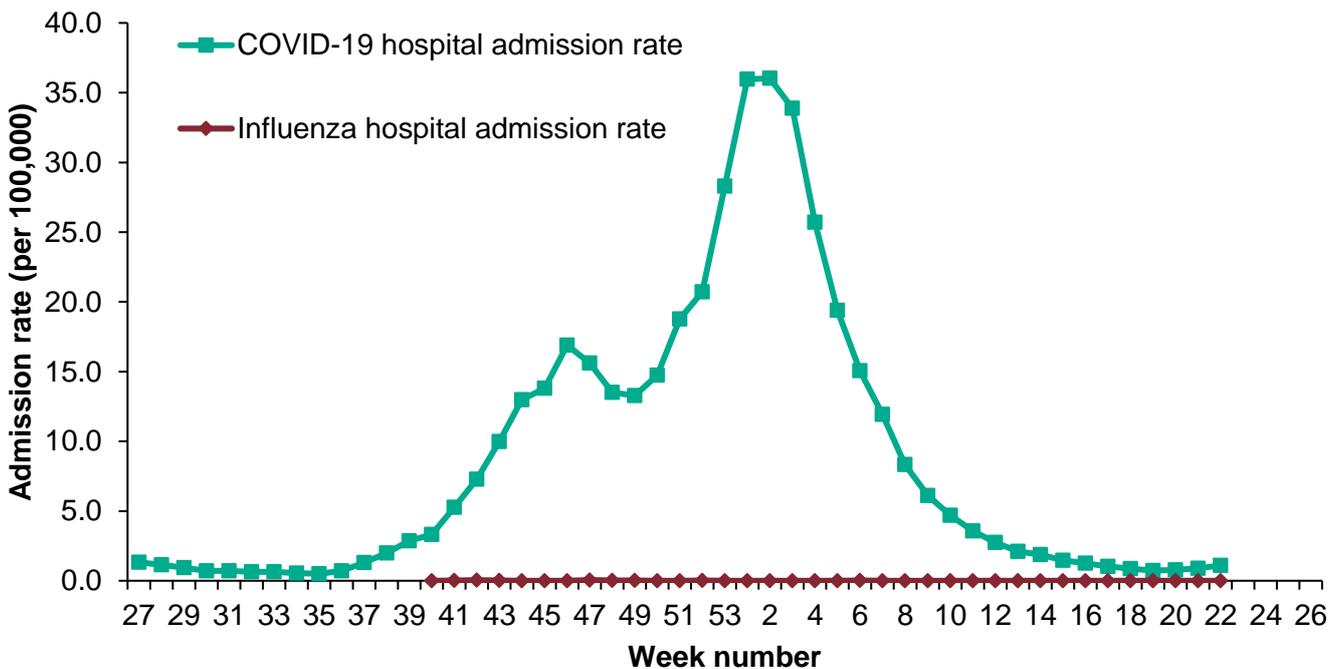
Hospitalisations, SARI Watch

In week 22, the overall weekly hospital admission rate for COVID-19 increased slightly. There were no new hospital admissions for influenza in week 22.

The hospitalisation rate for COVID-19 was at 1.09 per 100,000 in week 22 compared to 0.90 per 100,000 in the previous week.

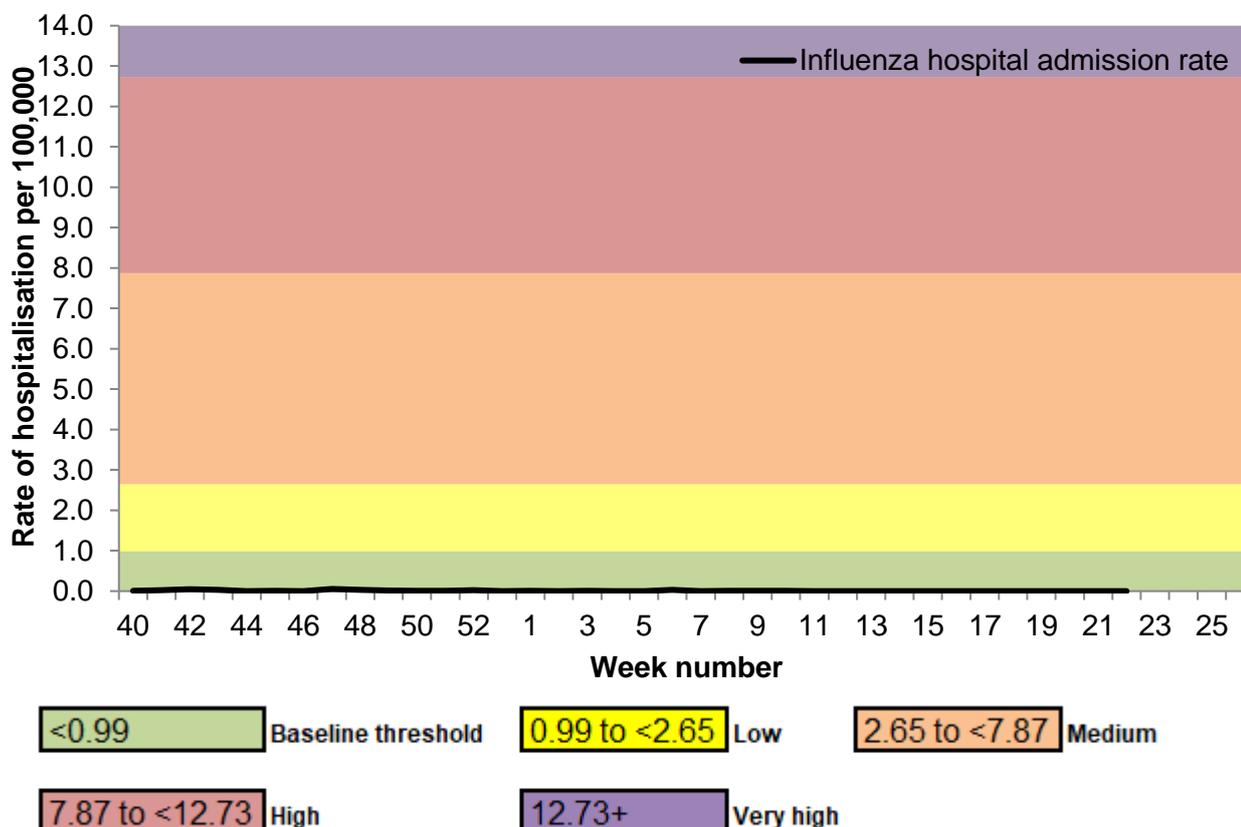
By PHE centre, the highest hospital admission rate for COVID-19 was observed in the North West. By age groups, the highest hospital admission rate for confirmed COVID-19 was in the 85+ year olds.

Figure 34: 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 22
- * COVID-19 hospital admission rate based on 107 NHS trusts for week 22
- * SARI Watch data are provisional.

Figure 35: 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 36: Weekly influenza hospital admissions by influenza type, SARI Watch, England

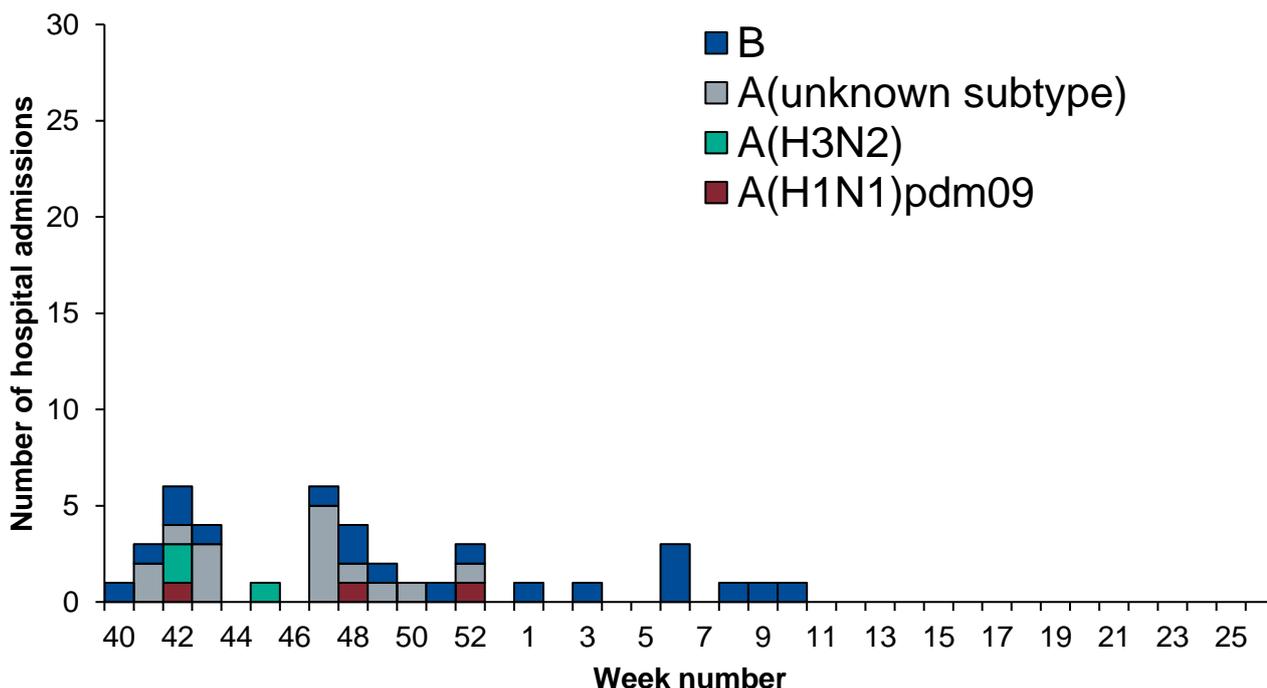


Figure 37: Weekly hospital admission rate by PHE Centre for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch

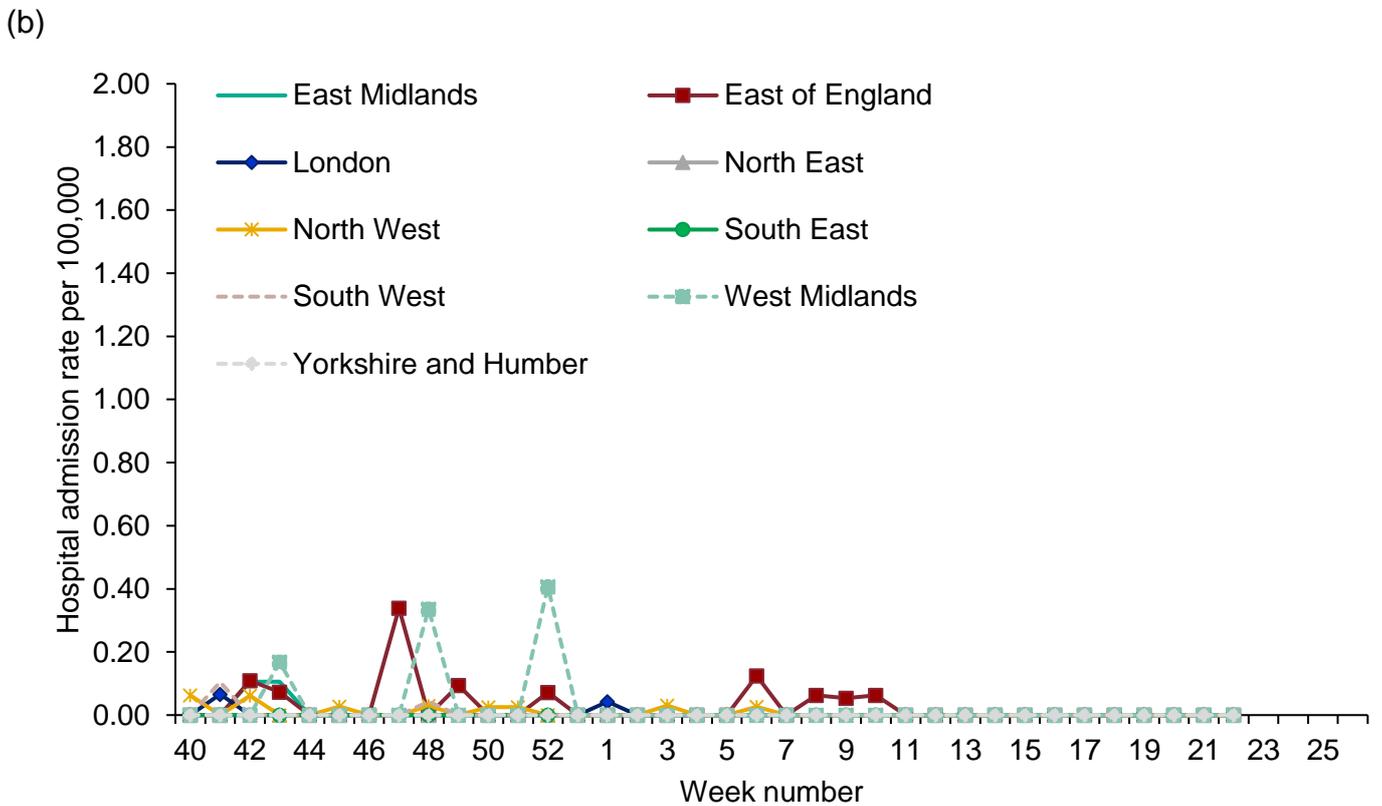
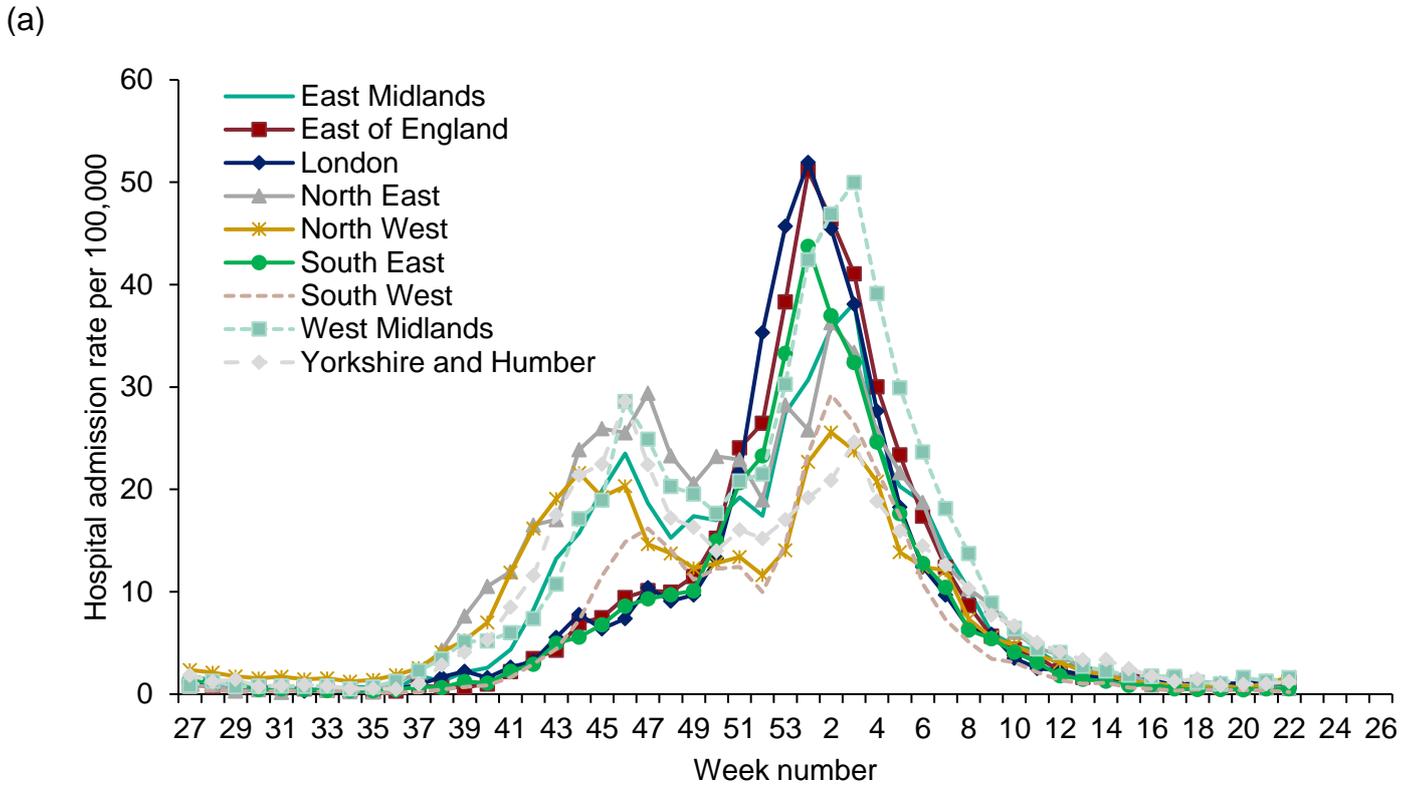
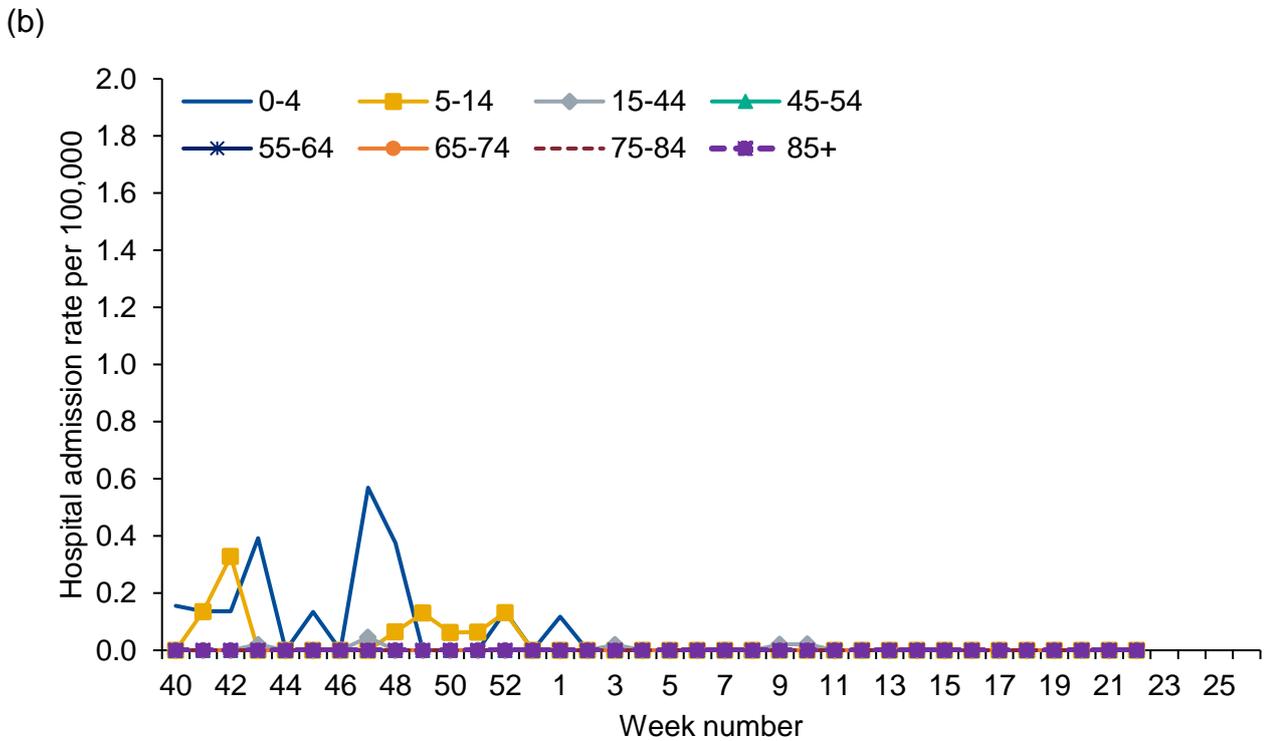
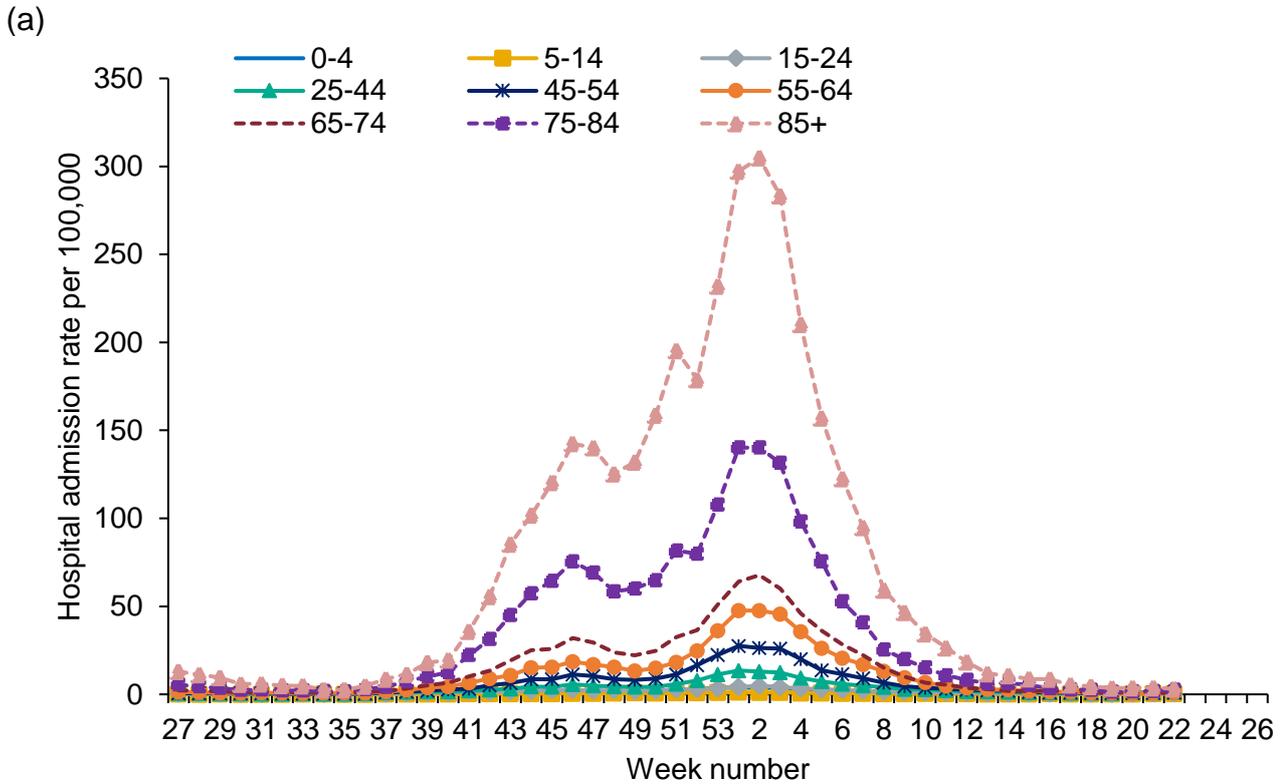


Figure 38: Weekly hospital admission rate by age group for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch



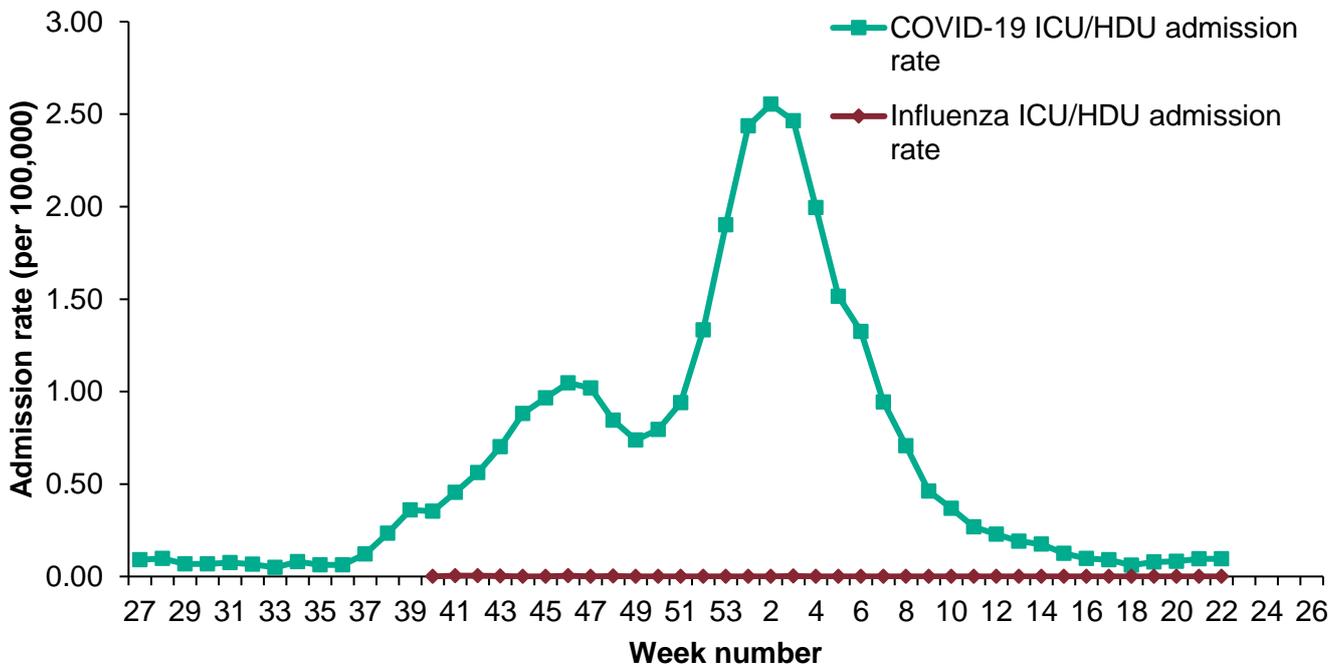
ICU/HDU admissions, SARI Watch

In week 22, the overall weekly ICU/HDU admission rates for COVID-19 remained stable. There were no new ICU/HDU admissions for influenza in week 22.

The ICU/HDU rate for COVID-19 was at 0.10 per 100,000 in week 22 compared to 0.10 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 75 to 84-year olds.

Figure 39: 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 88 NHS trusts for week 22
- * COVID-19 ICU/HDU admission rate based on 101 NHS trusts for week 22
- * SARI Watch data are provisional.

Figure 40: Weekly overall influenza ICU/HDU admission rates per 100,000 trust catchment population with MEM thresholds, SARI Watch, England

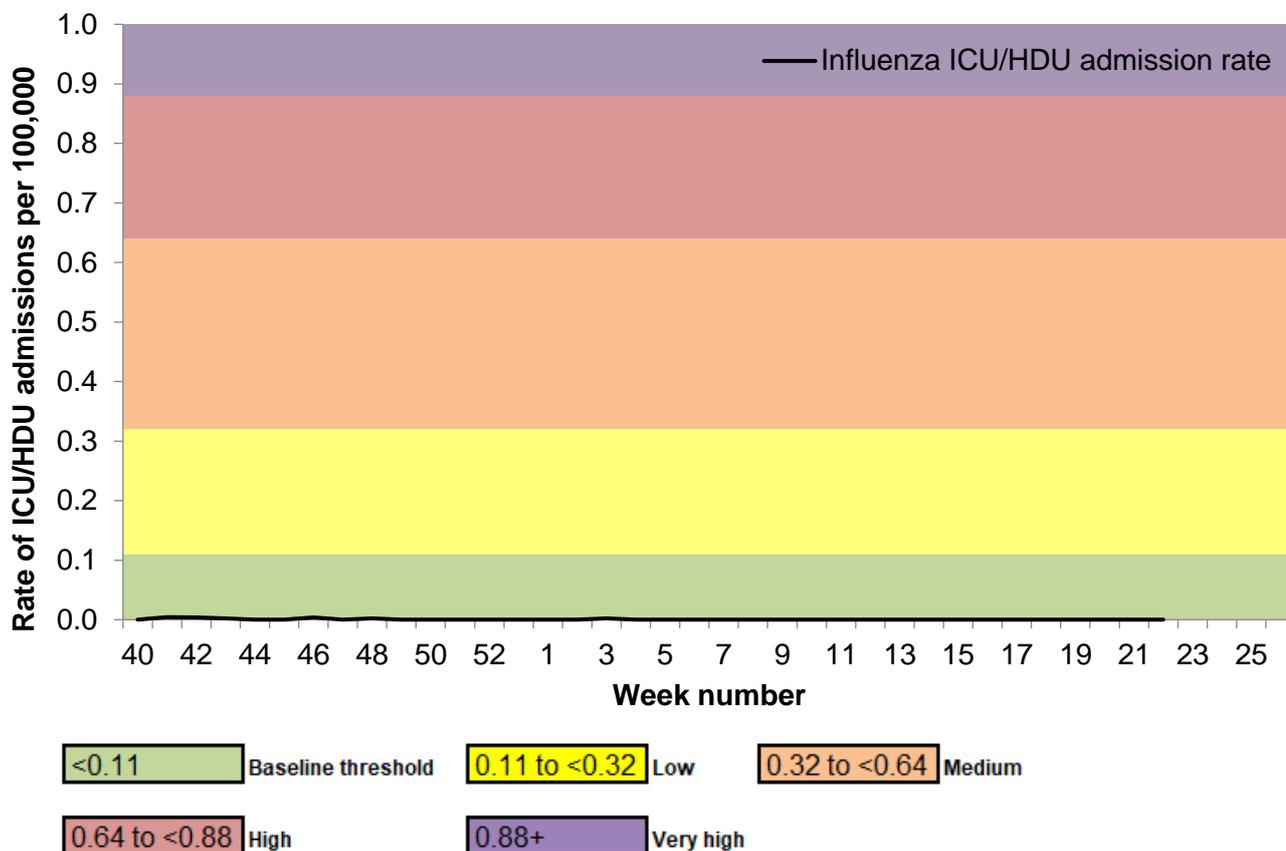


Figure 41: Weekly influenza ICU/HDU admissions by influenza type, SARI Watch, England

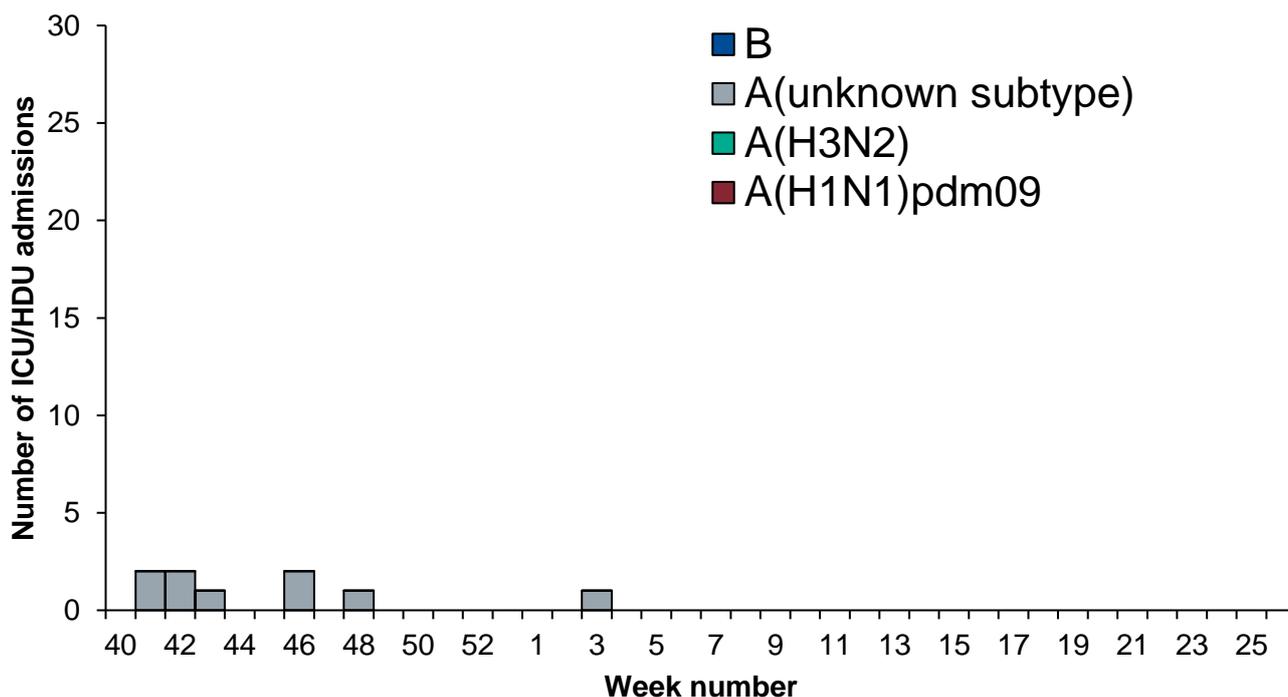


Figure 42: Weekly ICU/HDU admission rate by PHE Centre for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch

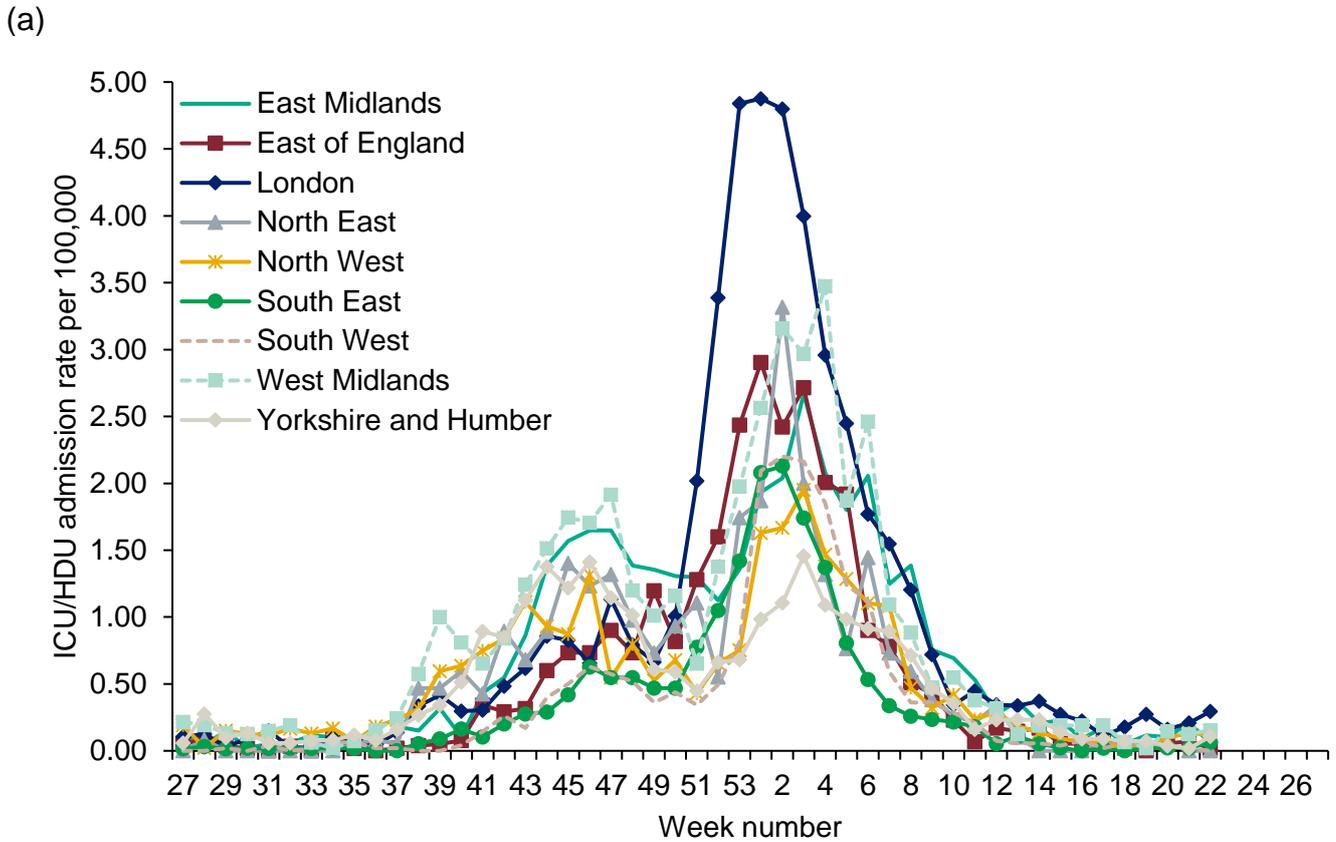
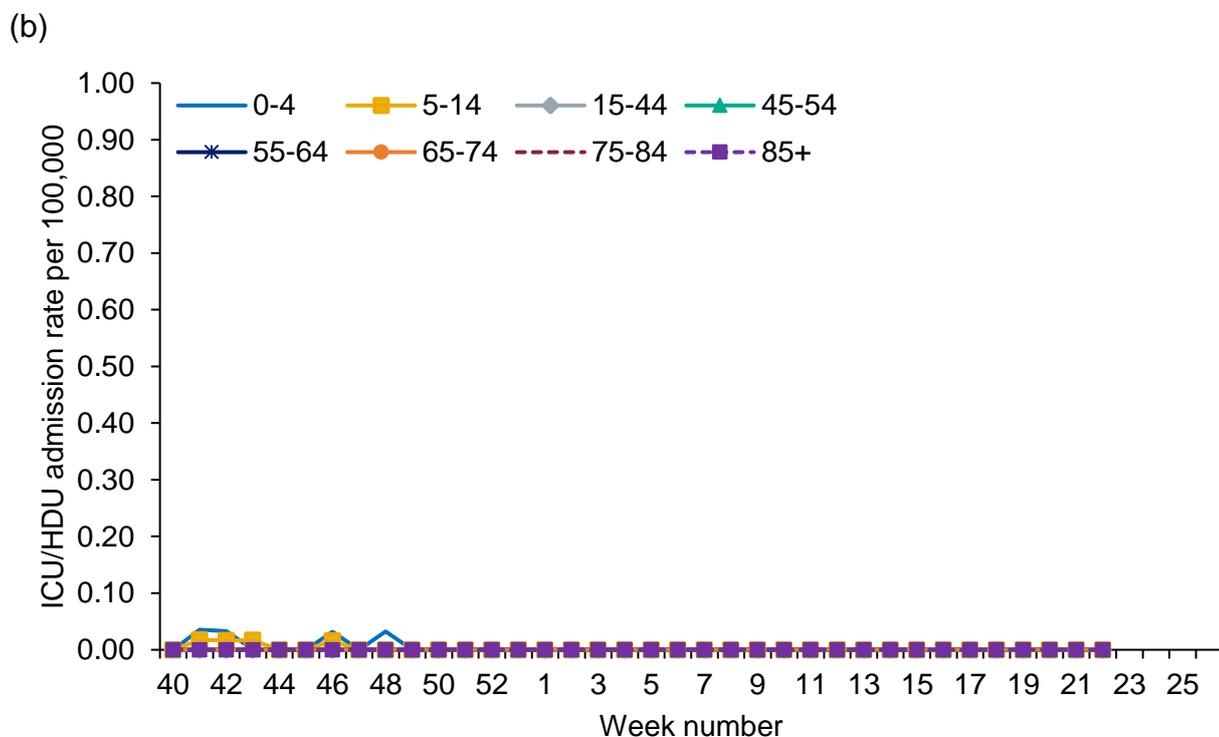
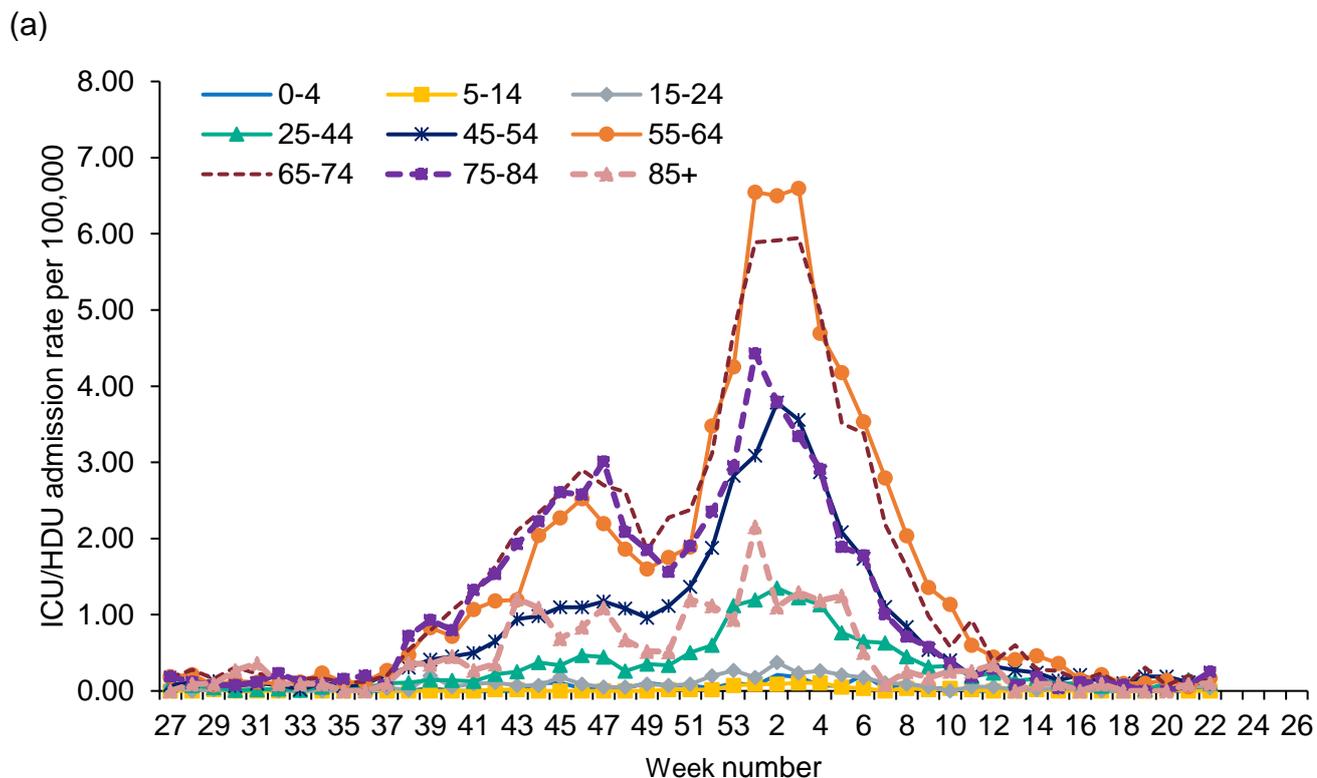


Figure 43: Weekly ICU/HDU admission rate by age group for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch

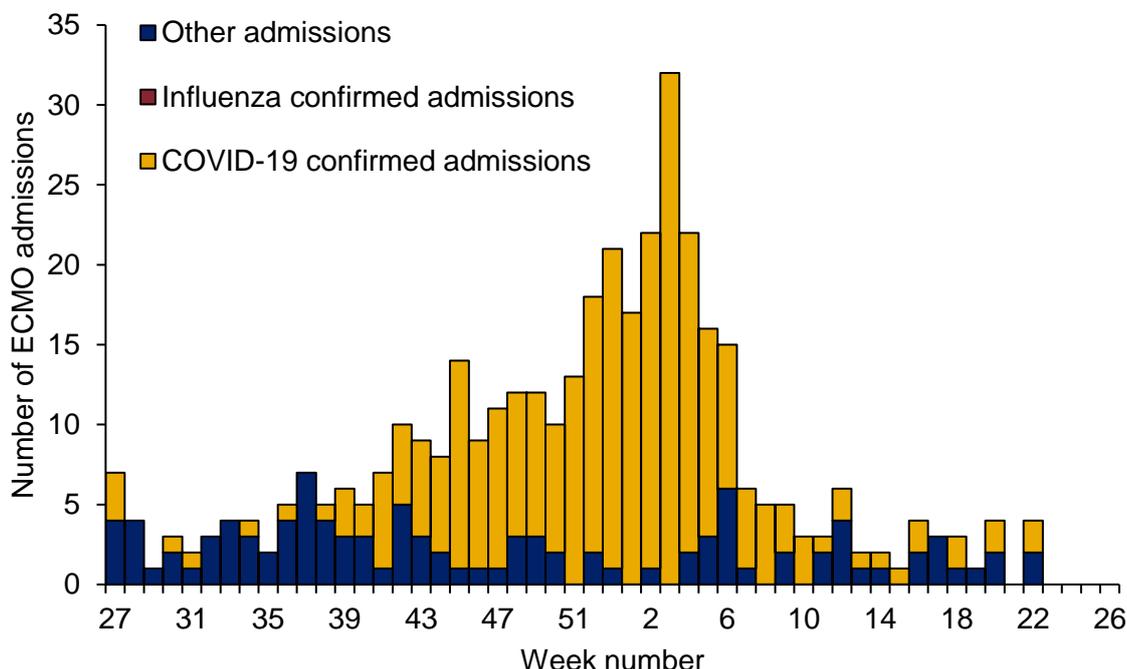


ECMO, SARI Watch

From week 27 2020, a total of 284 laboratory confirmed COVID-19 admissions have been reported from the 6 Severe Respiratory Failure (SRF) centres in the UK.

There were 2 new laboratory confirmed COVID-19 admissions reported in week 22 (Figure 44).

Figure 44: 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.

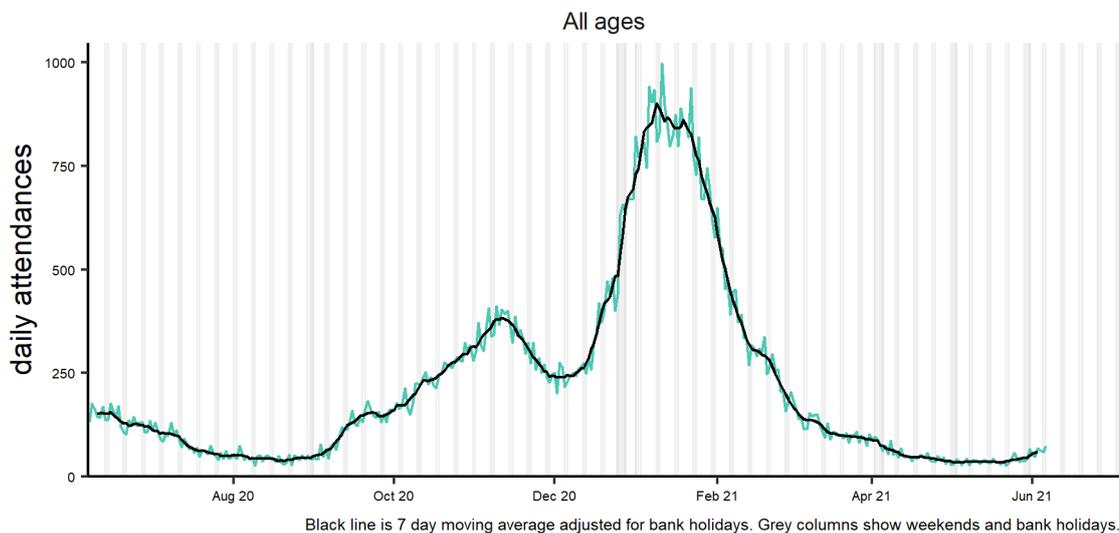
Up to 06 June 2021, the daily number of ED attendances for all ages as reported by 126 EDs for COVID-19-like infection increased slightly, while attendances for acute respiratory infections remained stable (Figure 45).

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

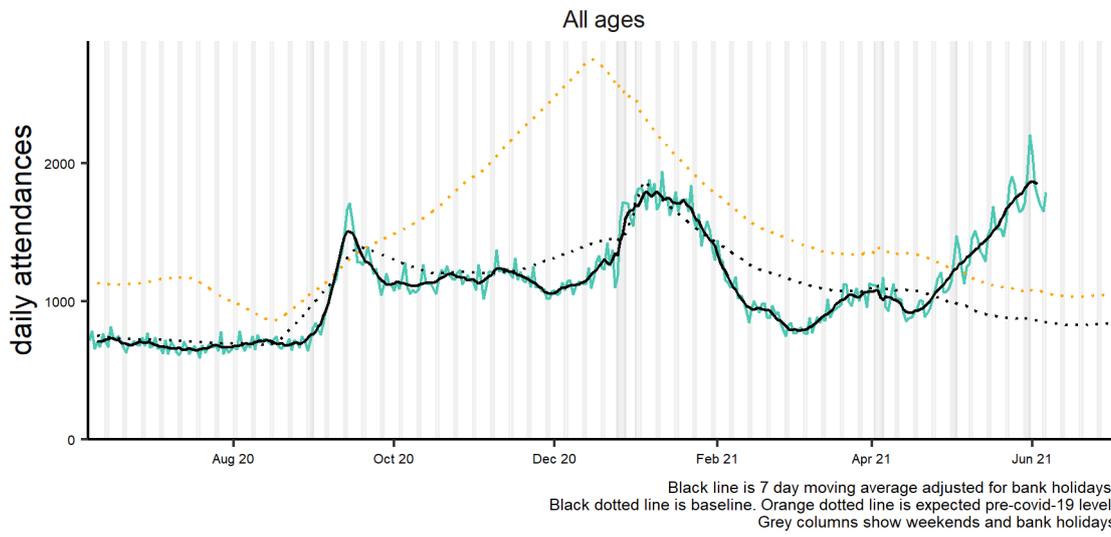
(a)

Covid-19-like 07/06/2020 - 06/06/2021



(b)

Acute respiratory infection 07/06/2020 - 06/06/2021



Mortality surveillance

Cumulative COVID-19 deaths

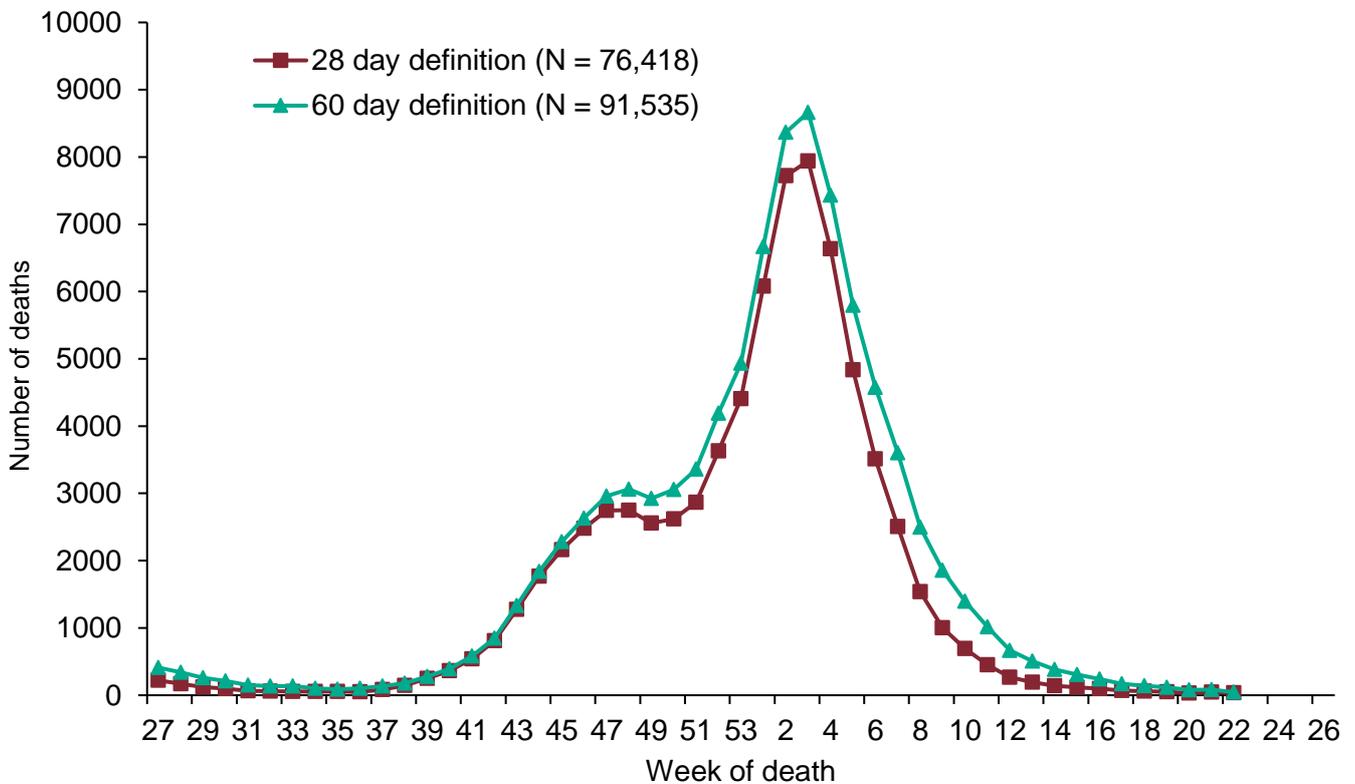
Changes to the definitions of COVID-19 related deaths in England are described in more detail in an accompanying PHE technical summary.

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 46 represents these differences by definition.

Figure 46: 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 47: Age/sex pyramid of laboratory confirmed COVID-19 deaths, since week 27

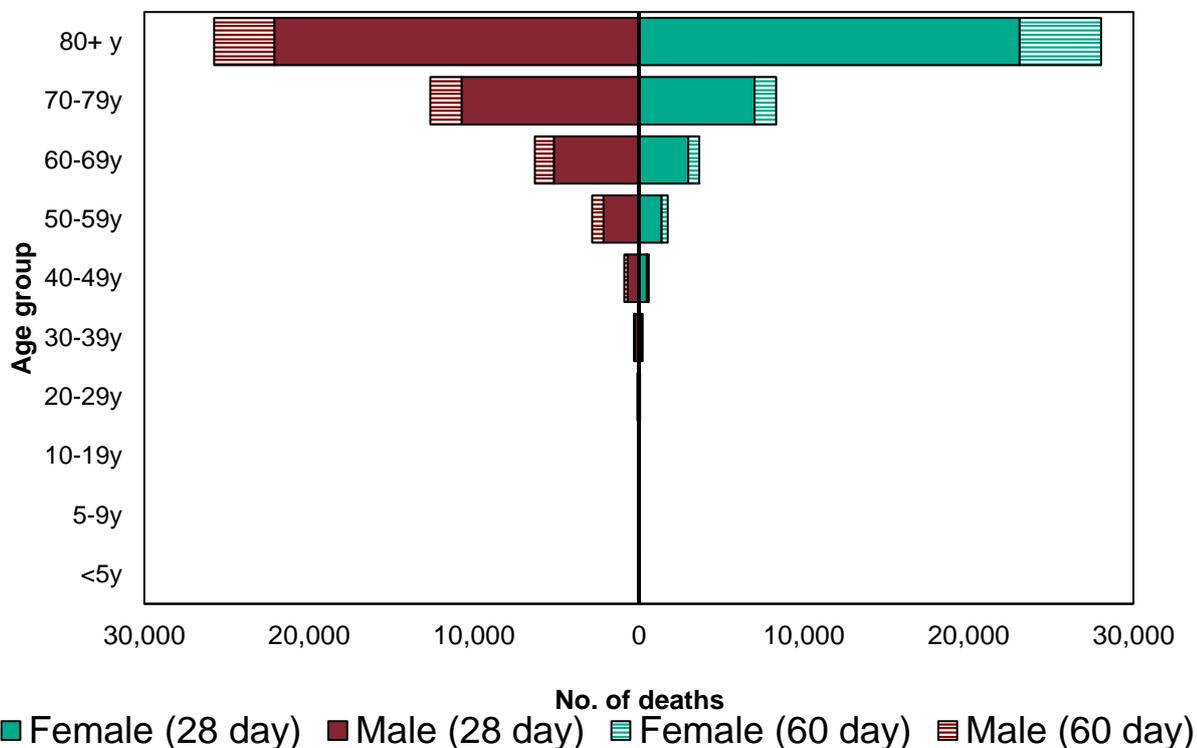


Table 5: Ethnic group (%) of COVID-19 deaths and time since laboratory confirmation of COVID-19, England

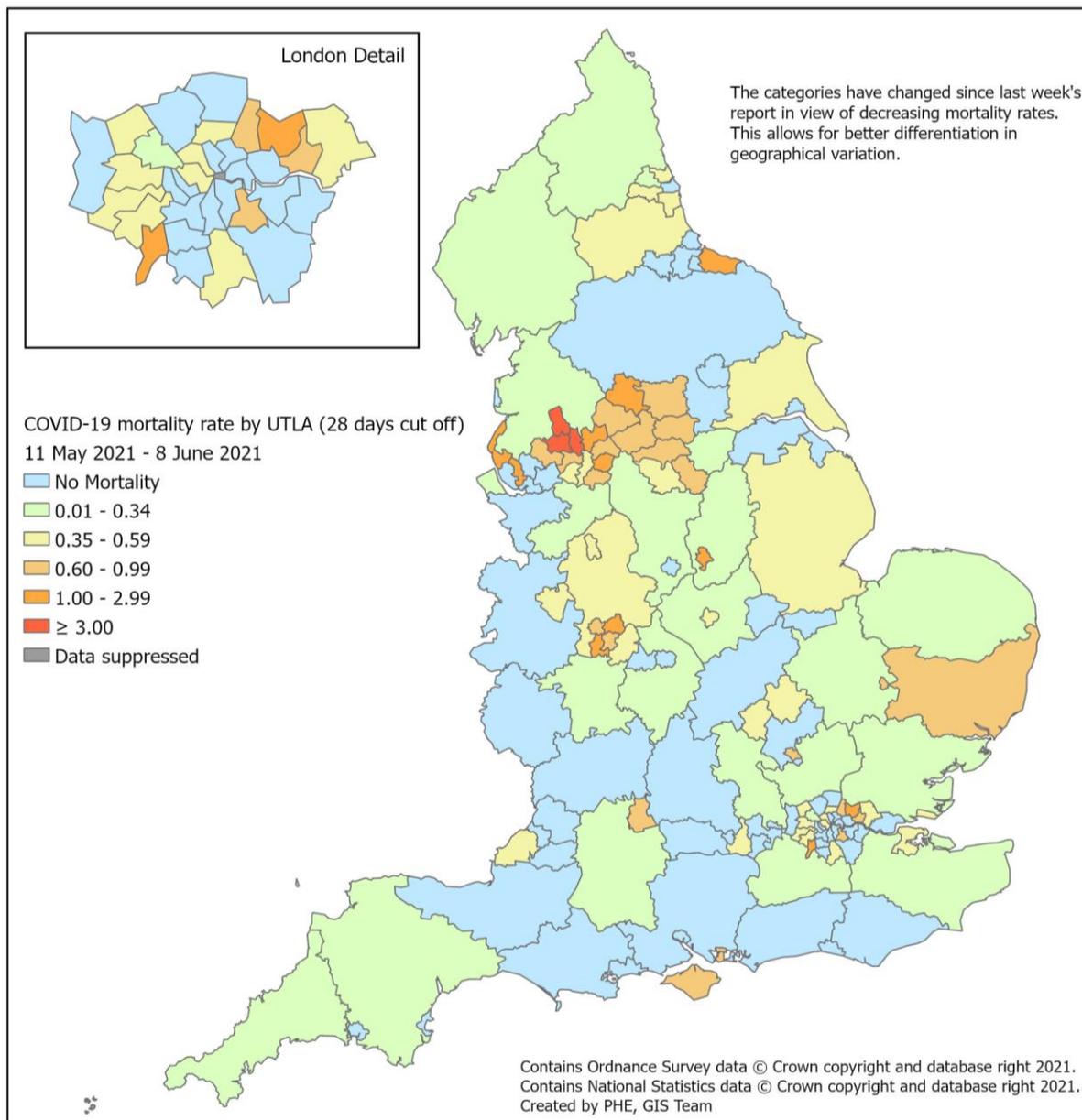
Ethnicity	28 day definition	60 day definition
White	88.5	88.6
Asian / Asian British	6.9	6.8
Black / African / Caribbean / Black British	2.5	2.5
Mixed / Multiple ethnic groups	0.5	0.5
Other ethnic group	1.6	1.6

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

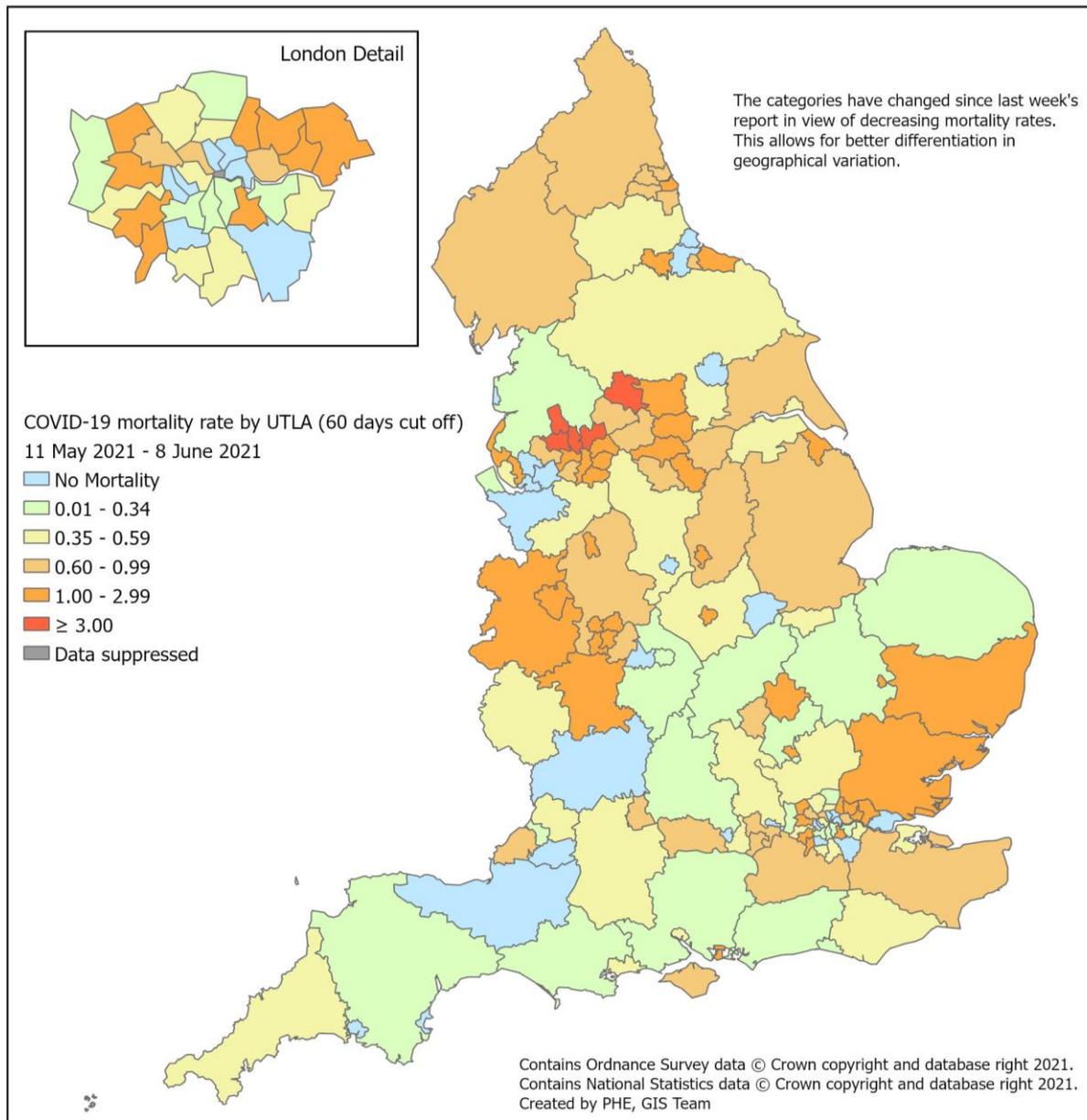
PHE Centres	28 day definition	60 day definition
North East	3,861	4,639
North West	11,983	14,403
Yorkshire and Humber	7,511	9,012
West Midlands	9,040	10,907
East Midlands	7,285	8,717
East of England	9,781	11,659
London	9,390	11,356
South East	12,176	14,561
South West	4,958	5,822

Figure 48: 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)



Daily excess all-cause mortality (England)

Deaths occurring from 01 January 2020 to 02 June 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 49).

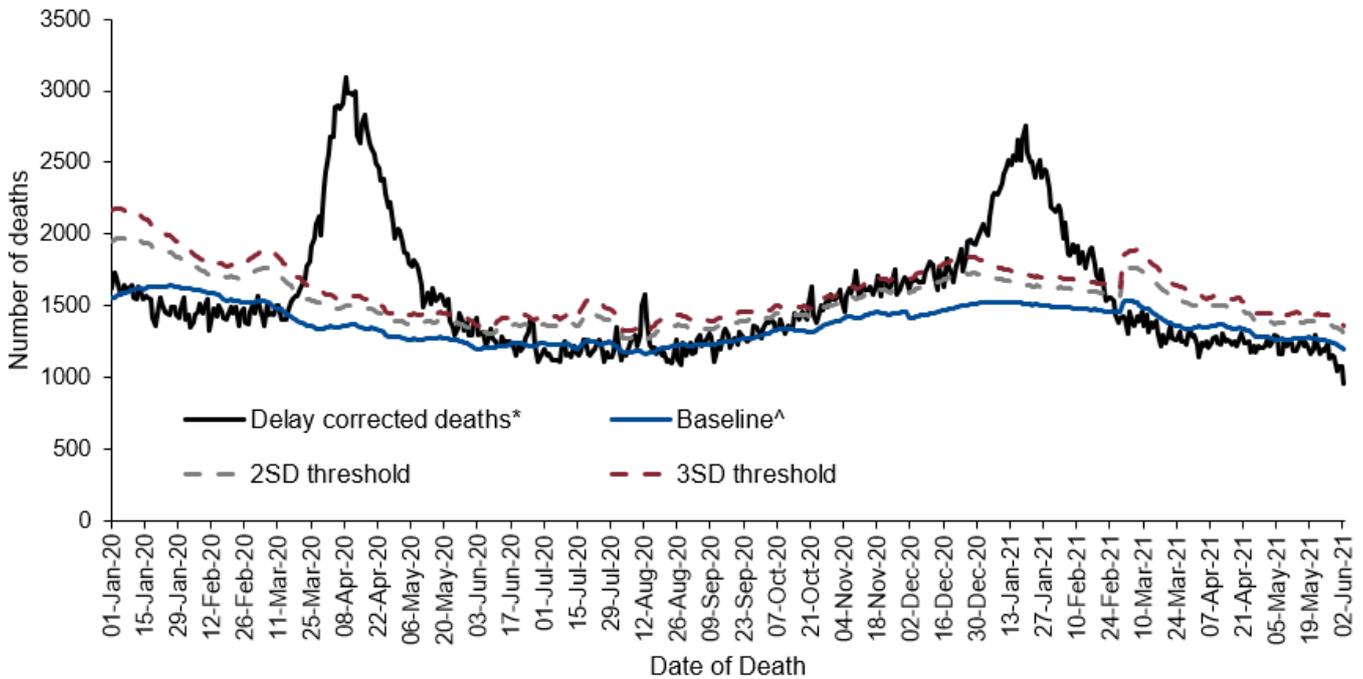
Weeks in which at least 2 days exceeded the 3SD threshold are shown in Table 7 and the daily difference from the baseline by age and region is given in Figure 49.

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.

No significant excess all-cause mortality was observed in week 21 overall, by age or sub-nationally. The excess noted in week 33 coincides with a heat wave (Figure 49, 50 and Table 7).

Figure 49: Daily excess all-cause deaths in all ages, England, 01 January 2020 to 02 June 2021



^Baseline calculation:

January to November 2020: same day in previous 5 years +/- 1 week with a linear trend.

December 2020 to February 2021: past 3 low flu years +/- 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

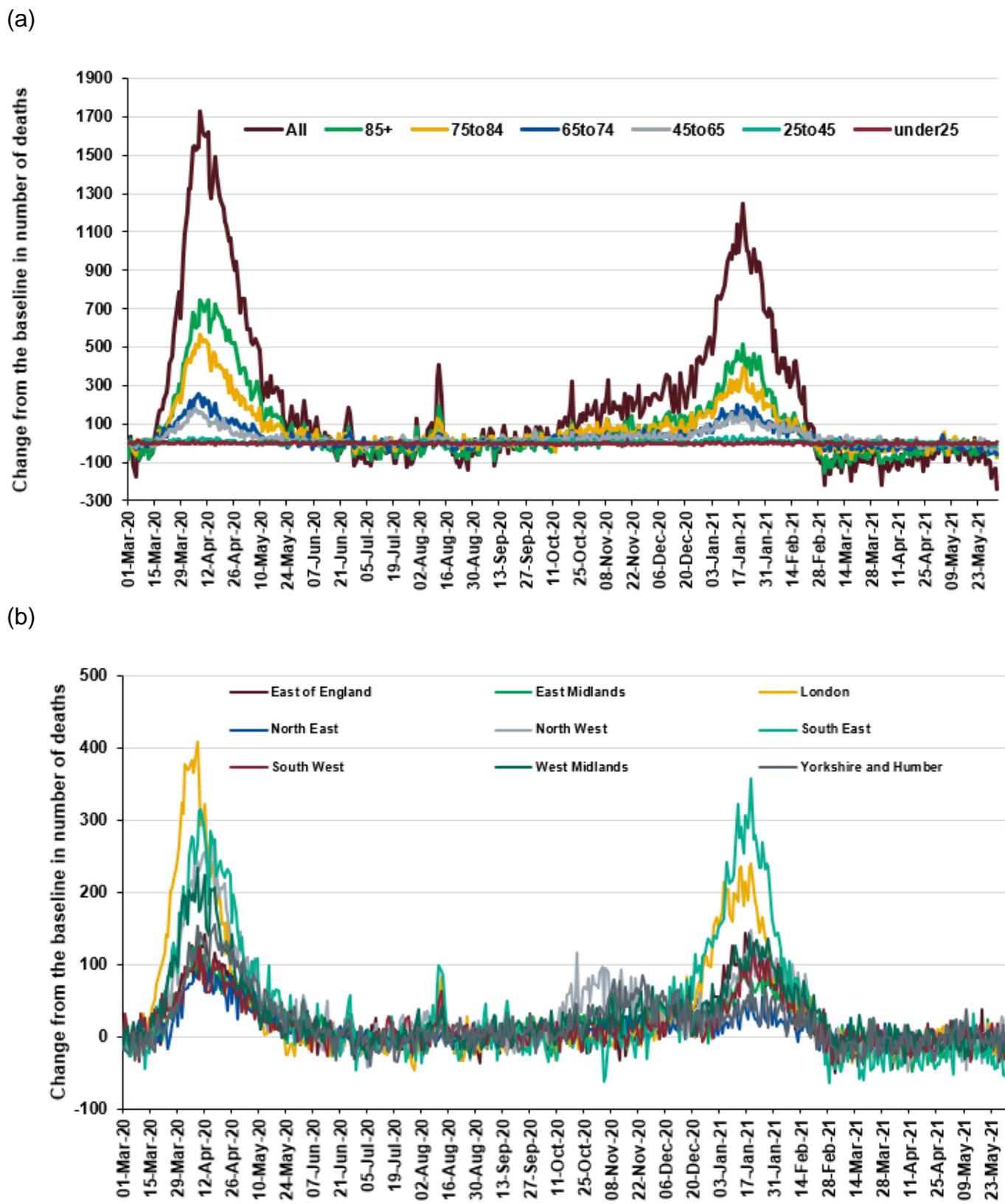
(a)

Age Group	Excess detected in week 21 2021?	Weeks in excess from week 10 to 53 2020	Weeks in excess from week 01 to 21 2021
All	x	13 to 21, 33, 43, 45, 47, 50, 52 to 53	01 to 07
under 25	x	None	None
25 to 44	x	14 to 16	03 to 04, 14
45 to 64	x	12 to 19, 44, 49 to 50, 52 to 53	01 to 08
65 to 74	x	13 to 19, 48, 52 to 53	01 to 07
75 to 84	x	13 to 21, 33, 45, 52 to 53	01 to 07
85+	x	13 to 21, 33, 53	01 to 07

(b)

PHE Centres	Excess detected in week 21 2021?	Weeks in excess from week 10 to 53 2020	Weeks in excess from week 01 to 21 2021
East of England	x	14 to 19, 52 to 53	01 to 07
East Midlands	x	13 to 19, 48	01 to 07
London	x	12 to 19, 33, 51 to 53	01 to 07
North East	x	14 to 21	02 to 04
North West	x	13 to 19, 33, 42 to 47	01 to 07
South East	x	13 to 21, 33, 50 to 53	01 to 07
South West	x	13 to 19, 33	01 to 07
West Midlands	x	13 to 20, 45, 48, 53	01 to 07
Yorkshire and Humber	x	14 to 21, 23, 43 to 50	02 to 05

Figure 50: Daily excess all-cause deaths by (a) age group and (b) PHE centres, England, 01 March 2020 to 02 June 2021



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 22 2021, the proportion of all lower respiratory tract isolates of *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Staphylococcus aureus*, MRSA and MSSA tested and susceptible to antibiotics. These organisms are the key causes of community-acquired pneumonia (CAP) and the choice of antibiotics reflects the British Thoracic Society empirical guidelines for management of CAP in adults.

Table 8: Antimicrobial susceptibility surveillance in lower respiratory tract

Organism	Antibiotic	Specimens tested	
		(N)	Specimens susceptible (%)
<i>S. pneumoniae</i>	Penicillin	1,208	85
	Macrolides	1,341	79
	Tetracycline	1,325	82
<i>H. influenzae</i>	Amoxicillin/ampicillin	4,782	59
	Co-amoxiclav	5,139	66
	Macrolides	1,484	8
	Tetracycline	5,182	98
<i>S. aureus</i>	Methicillin	4,921	93
	Macrolides	5,594	72
MRSA	Clindamycin	233	48
	Tetracycline	297	77
MSSA	Clindamycin	3,493	78
	Tetracycline	4,340	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 2020/21 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 2019/20 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 21 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 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/vaccination occurring at least two to three weeks previously given the time taken to generate a COVID-19 antibody response. Donors have been asked to defer donations for 7 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 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 15.1% (95% CI 14.2% - 16.0%) using the Roche N assay and 77.4% (95% CI 76.5% - 78.3%) using the Roche S assay for the period 3 May – 30 May (weeks 18-21 2021). 1157/7639 were Roche N positive and 6037/7601 samples were Roche S positive. This compares with 16.5% (95% CI 15.6% - 17.5%) Roche N seropositivity and 70.0% (95% CI 69.0% - 70.9%) Roche S seropositivity for the period of 8 April 2021 – 2 May 2021 (weeks 14-17 2021).

Seropositivity (weighted by region, age group and sex) varies over time. Figure 51 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 52). Seropositivity estimates are plotted weekly using the mid-point of a rolling 4-weekly period.

In London, the 4-weekly rolling seropositivity decreased from 24.5% (95% CI 21.9% - 27.4%) in weeks 14-17 2021 to 22.0% (95% CI 18.9% - 25.3%) in weeks 18-21 2021.

Data from the North West show that seropositivity has increased from 16.3% (95% CI 13.6% - 19.4%) in weeks 14-17 2021 to 18.6% (95% CI 16.4% - 21.0%) in weeks 18-21 2021.

In the East of England seropositivity increased from 12.8% (95% CI 10.7% - 15.3%) in weeks 14-17 2021 to 15.5% (95% CI 13.1% - 18.2%) in weeks 18-21 2021.

Seropositivity has decreased in the South East region from 14.0% (95% CI 11.7% - 16.7%) in weeks 14-17 2021 to 9.3% (95% CI 7.8% - 11.2%) in weeks 18-21 2021.

In the South West region, seropositivity has remained stable at 9.0% (95% CI 7.3% - 11.1%) in weeks 14-17 2021 and 8.9% (95% CI 7.2% - 10.9%) in weeks 18-21 2021.

Seropositivity in the North East and Yorkshire region showed a modest increase from 15.5% (95% CI 13.5% - 17.8%) in weeks 14-17 2021 to 16.0% (95% CI 13.8% - 18.6%) in weeks 18-21 2021.

Data from the Midlands show the proportion seropositive decreased from 18.9% (95% CI 16.5% - 21.5%) in weeks 14-17 2021 to 14.2% (95% CI 12.2% - 16.5%) in weeks 18-21 2021.

The fluctuations observed across some regions based on testing using the Roche N assay are likely to reflect ongoing transmission occurring 2-3 weeks before sampling or variation in precise locations of sampling within a region. This is particularly evident in the South East region where seropositivity initially increased then decreased as fewer samples were received from hotspot areas in more recent weeks.

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 53) 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. Prevalence in individuals aged 17-29 has decreased in recent weeks from 24.5% (95% CI 21.8% - 27.4%) in weeks 14-17 2021 to 19.7% (95% CI 17.4% - 22.2%) in weeks 18-21 2021.

Roche N seropositivity has continued to plateau across most age groups and this was first observed in the 70-84 age group. The earlier plateauing of Roche N seropositivity in the older age groups likely reflects the additional role vaccination is having in reducing viral infection ahead of reduction seen from national restrictions alone in younger age groups.

The increase in vaccination especially in the older age groups is seen by the sharp increase in seropositivity using the Roche S assay (Figure 53). Whilst prevalence in those aged 17-29 has remained stagnant at 45.4% (95% CI 42.2% - 48.5%) in weeks 14-17 2021 compared to 46.8% (95% CI 43.9% - 49.8%) in weeks 18-21 2021, this compares with larger increases in older age groups.

Roche S seropositivity increased earliest in those aged 70-84 and since week 13 plateaued, reaching 98.9% (95% CI 97.1% - 99.6%) in weeks 18-21 2021. Seropositivity in those aged 60-69 has also plateaued since week 16 reaching 98.4% (95% CI 97.4% - 99.0%) in weeks 18-21 2021. An increase in Roche S seropositivity has been observed in those aged 50-59 increasing from 94.4% (95% CI 93.2% - 95.3.0%) in weeks 14-17 2021 to 98.2% (95% CI 97.4% - 98.7%) in weeks 18-21 2021. A notable increase is also seen in the 40-49-year olds from 56.8% (95% CI 54.2% - 59.4%) in weeks 14-17 to 85.7% (95% CI 83.8%-87.4%) in weeks 18-21. A small increase has now been observed in the 30-39-year olds increasing from 42.0% (95% CI 39.4% - 44.6%) in weeks 14-17 to 51.8% (95% CI 49.2%- 54.4%) in weeks 18-21.

Vaccination is making an important contribution to the overall Roche S increases observed since the roll out of the vaccination programme, particularly individuals aged 50 years and above who have been prioritised for vaccination as part of the phase 1 programme and more recently in those aged 40-49 and 30-39 as part of phase 2 of the vaccination programme. The plateauing of seropositivity, using the Roche N assay, in these groups is likely to reflect vaccine impact. Rises in Roche S above Roche N seropositivity in younger age groups suggest that health and social care workers are likely to be over-represented among donors.

Figure 51: Overall 4-weekly rolling SARS-CoV-2 antibody seroprevalence (% seropositive) in blood donors

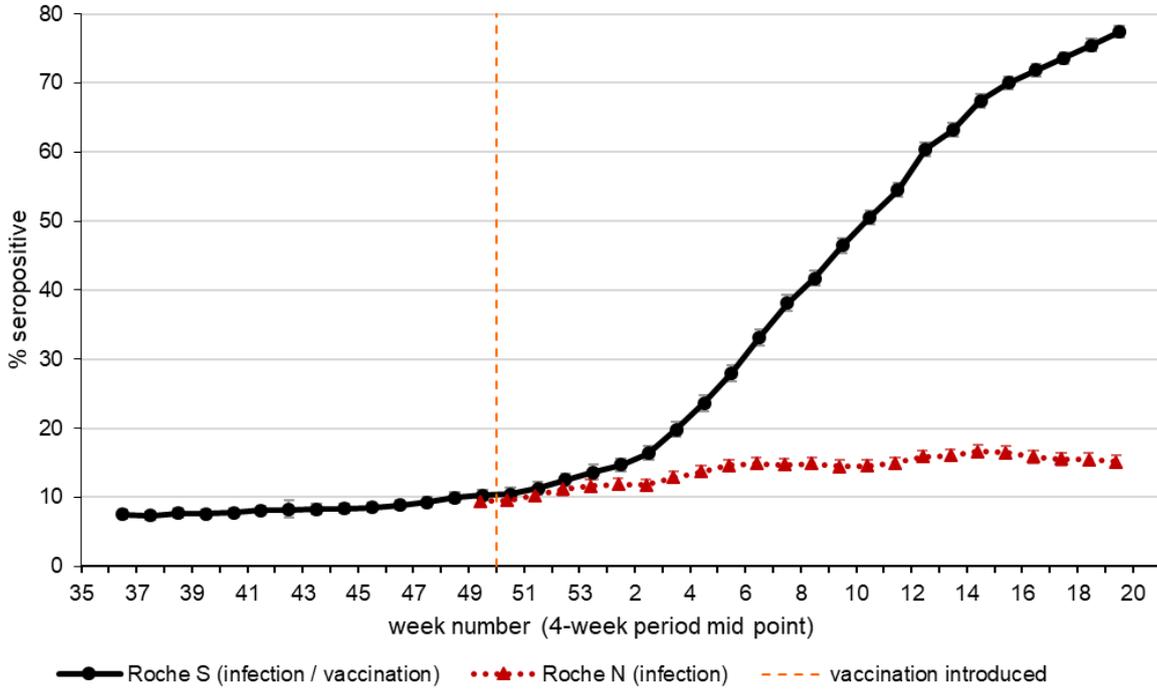


Figure 52: 4-weekly rolling SARS-CoV-2 antibody seroprevalence (% seropositive) in blood donors by region, using Roche N test; error bars show 95% confidence intervals

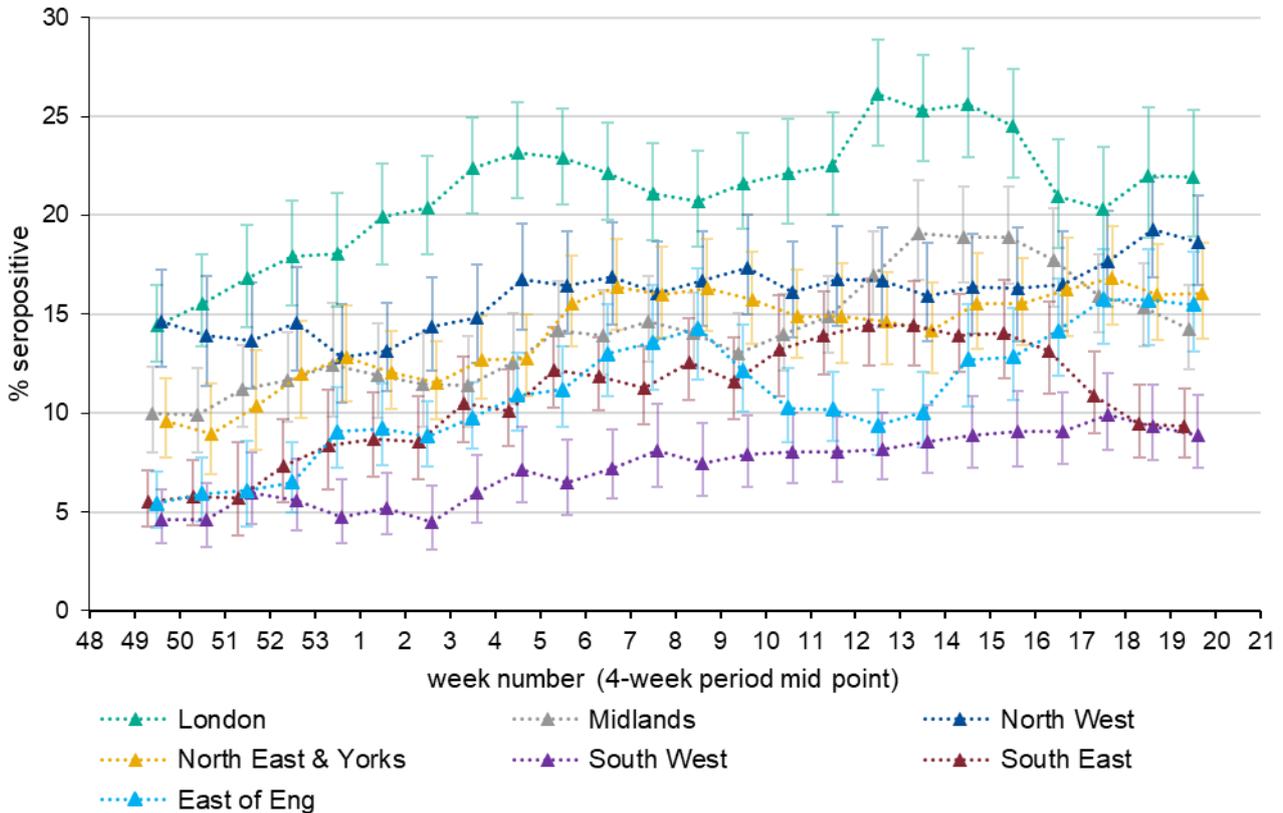
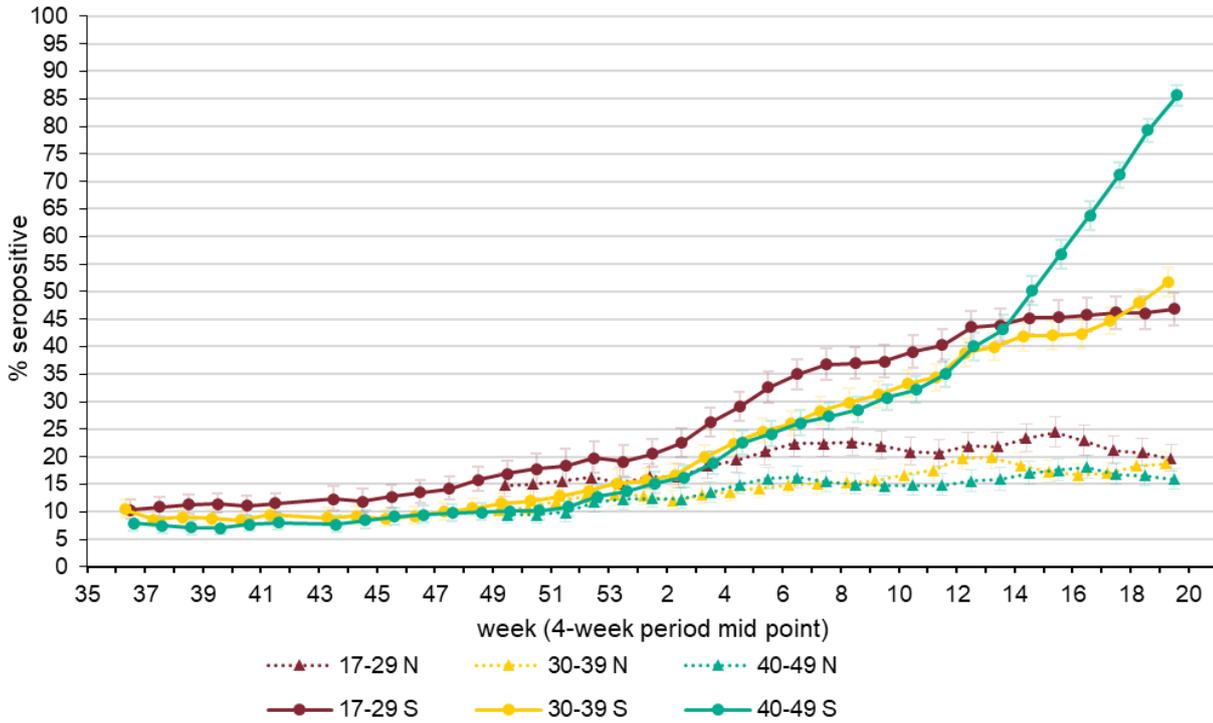
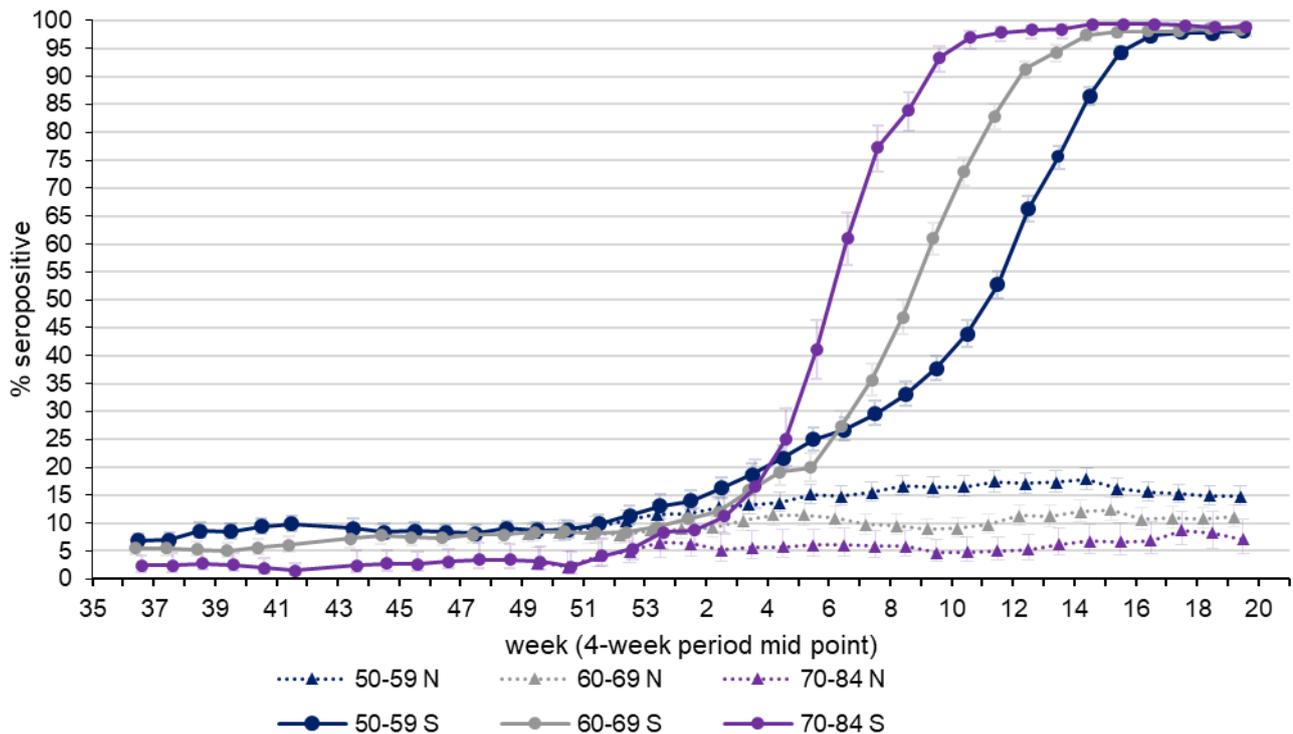


Figure 53: Population weighted 4-weekly rolling SARS-CoV-2 antibody seroprevalence (% seropositive) in blood donors from the Roche S and Roche N assays by a) age groups 17-29, 30-39 and 40-49, b) age group 50-59, 60-69 70-84

(a)



(b)



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 22 2021 (week ending 6 June 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 54.4% and 38.2% for dose 2. The breakdown by sex showed vaccine uptake in males was 51.4% and 57.4% in females for dose 1. For dose 2 total uptake was 34.3% in males and 42.1% in females. The vaccine uptake rate in adults aged 18 and over was 68% (33,531,191/49,284,633) for dose 1 and 43.8% (23,551,746/49,284,633) for dose 2.

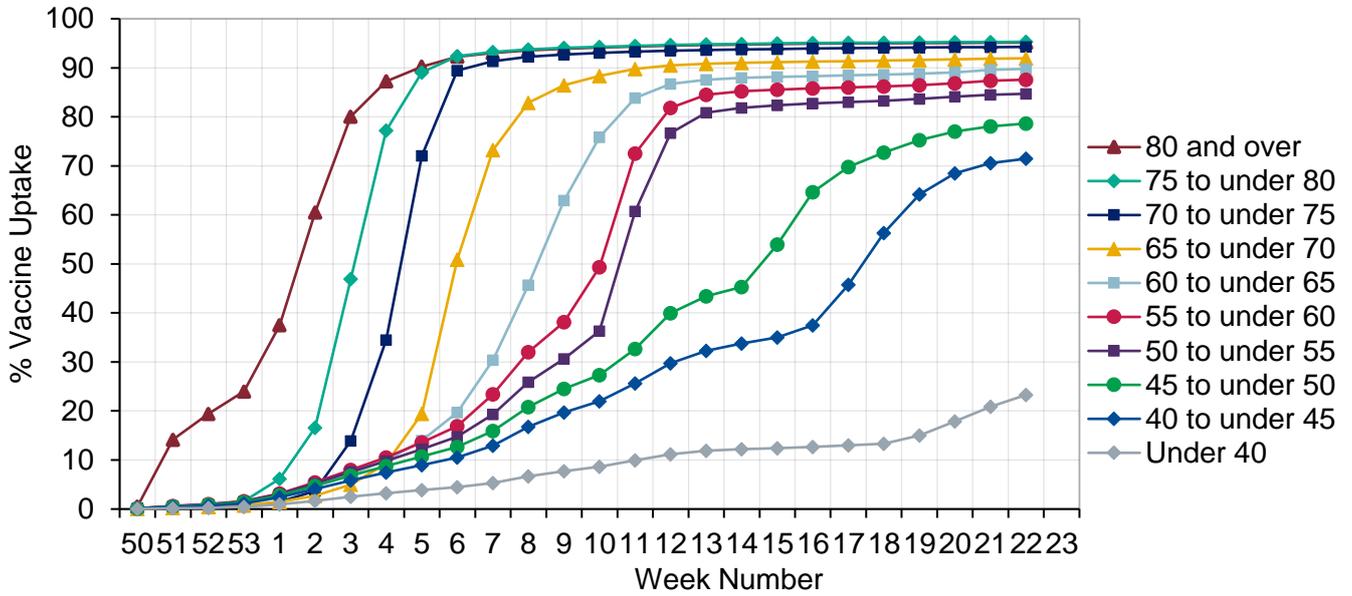
Table 9: Provisional cumulative COVID-19 vaccine uptake by age in England

Age group	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
80 years and over	2,817,262	2,680,412	95.1	2,817,262	2,603,200	92.4
75 to under 80 years	2,083,225	1,985,409	95.3	2,083,225	1,946,176	93.4
70 to under 75 years	2,875,461	2,710,746	94.3	2,875,461	2,651,904	92.2
65 to under 70 years	2,890,795	2,657,675	91.9	2,890,795	2,552,168	88.3
60 to under 65 years	3,448,607	3,096,684	89.8	3,448,607	2,812,924	81.6
55 to under 60 years	4,072,451	3,566,787	87.6	4,072,451	2,843,012	69.8
50 to under 55 years	4,218,482	3,573,292	84.7	4,218,482	2,651,419	62.9
45 to under 50 years	3,988,120	3,136,063	78.6	3,988,120	1,436,759	36.0
40 to under 45 years	4,109,651	2,936,908	71.5	4,109,651	1,093,041	26.6
Under 40 years	31,253,454	7,278,321	23.3	31,253,454	3,006,614	9.6
Total	61,757,508	33,622,706	54.4	61,757,508	23,597,409	38.2

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

(a)



(b)

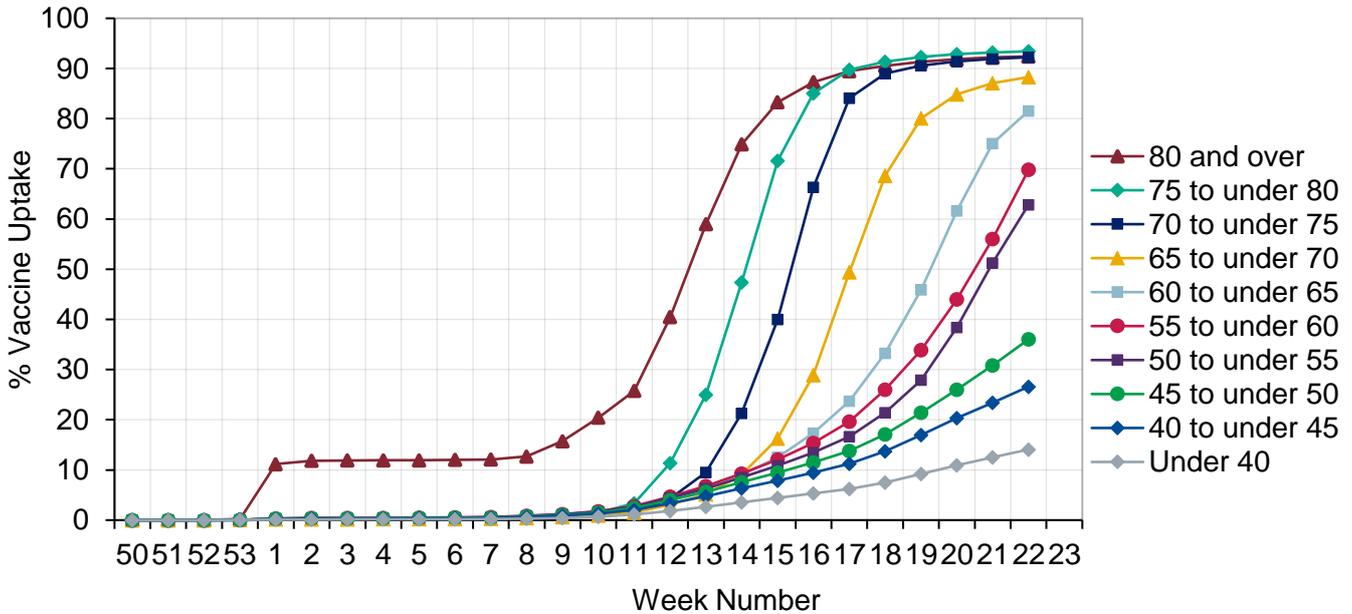


Figure 55: Age/Sex pyramid for COVID-19 vaccine uptake by age in England for Dose 1

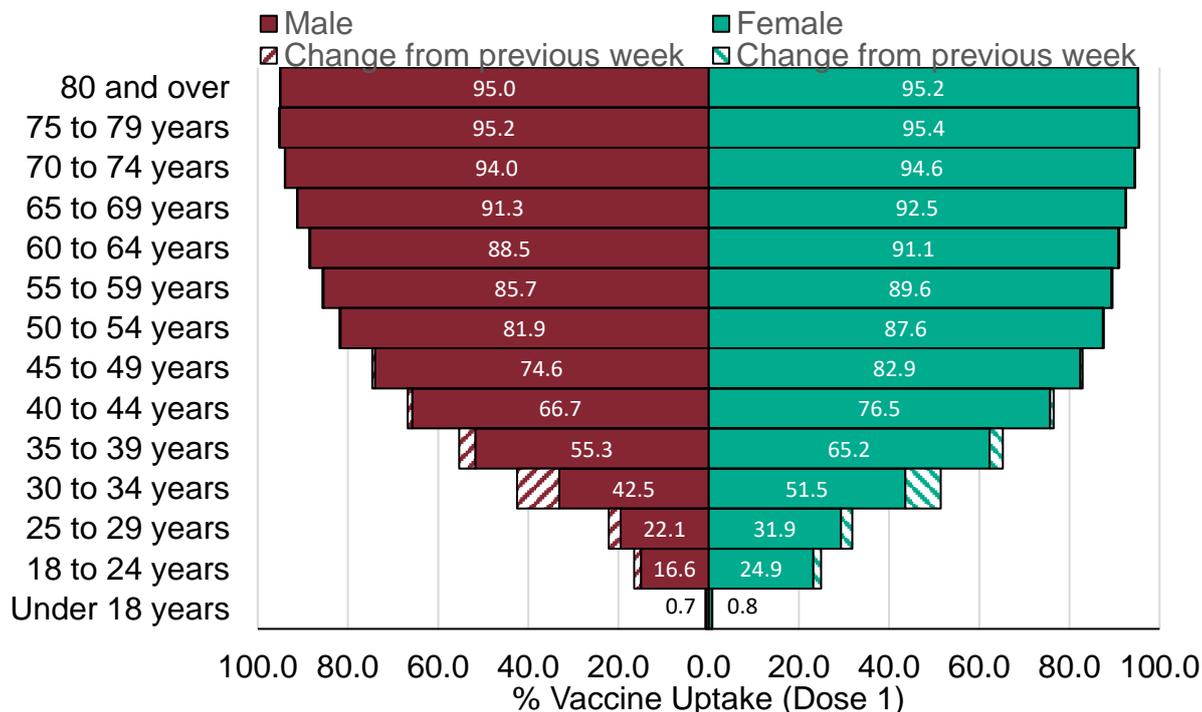


Figure 56: Age/Sex pyramid for COVID-19 vaccine uptake by age in England for Dose 2

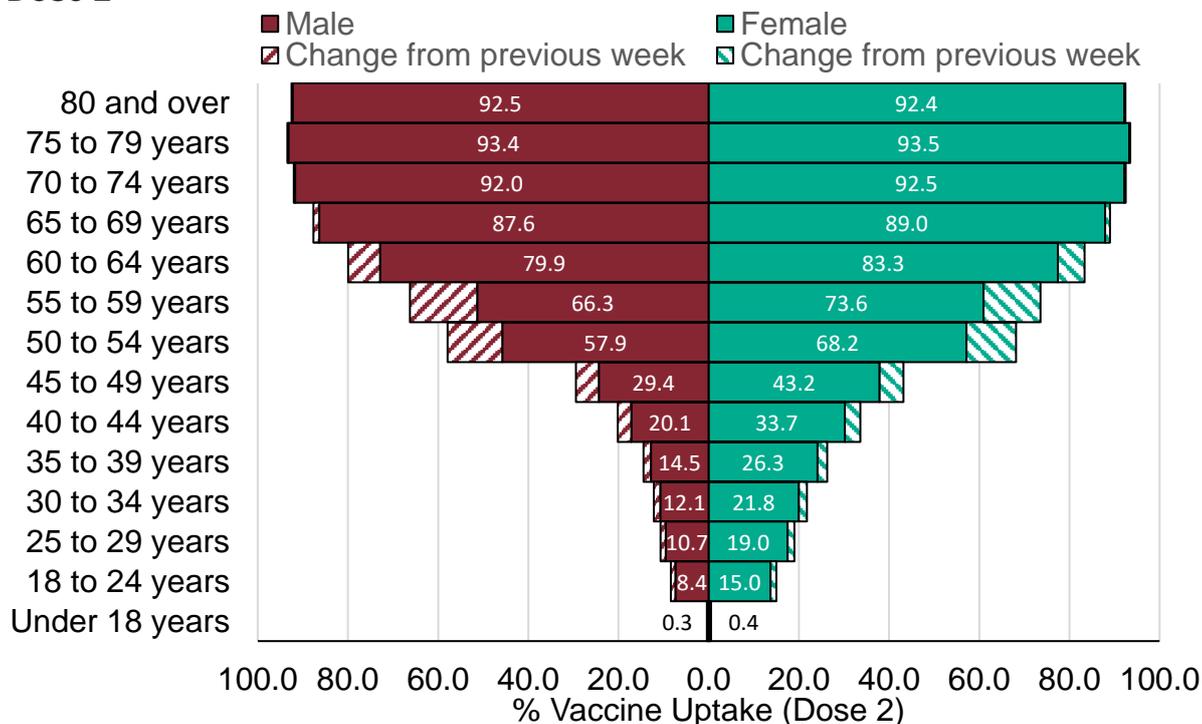
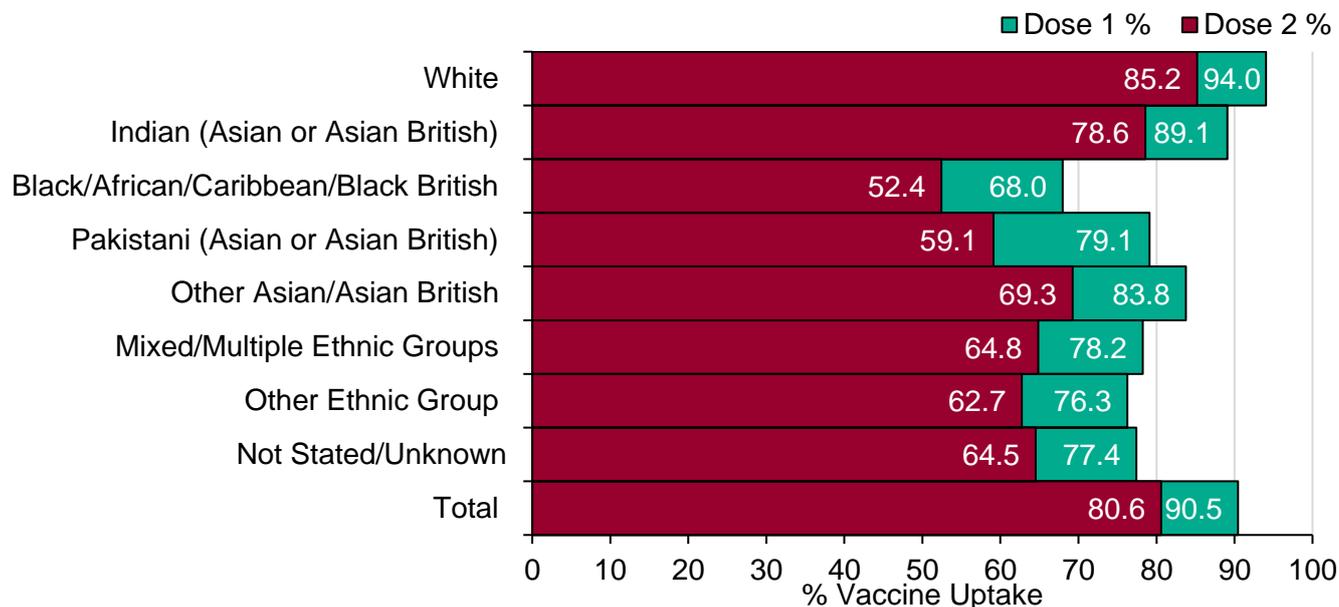


Figure 57: Cumulative weekly COVID-19 vaccine uptake by ethnicity in England in those aged 50 and over



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 [here](#)

For COVID-19 management information on the number of COVID-19 vaccinations provided by the NHS in England, please see [here](#)

International update

Global COVID-19 update

Globally, up to 08 June 2021, 173,435,567 cases of COVID-19 infection have been reported worldwide, including 3,739,140 COVID-19 related deaths.

For further information on the global COVID-19 situation please see the [WHO COVID-19 situation reports](#).

Figure 58: Global map of cumulative COVID-19 cases

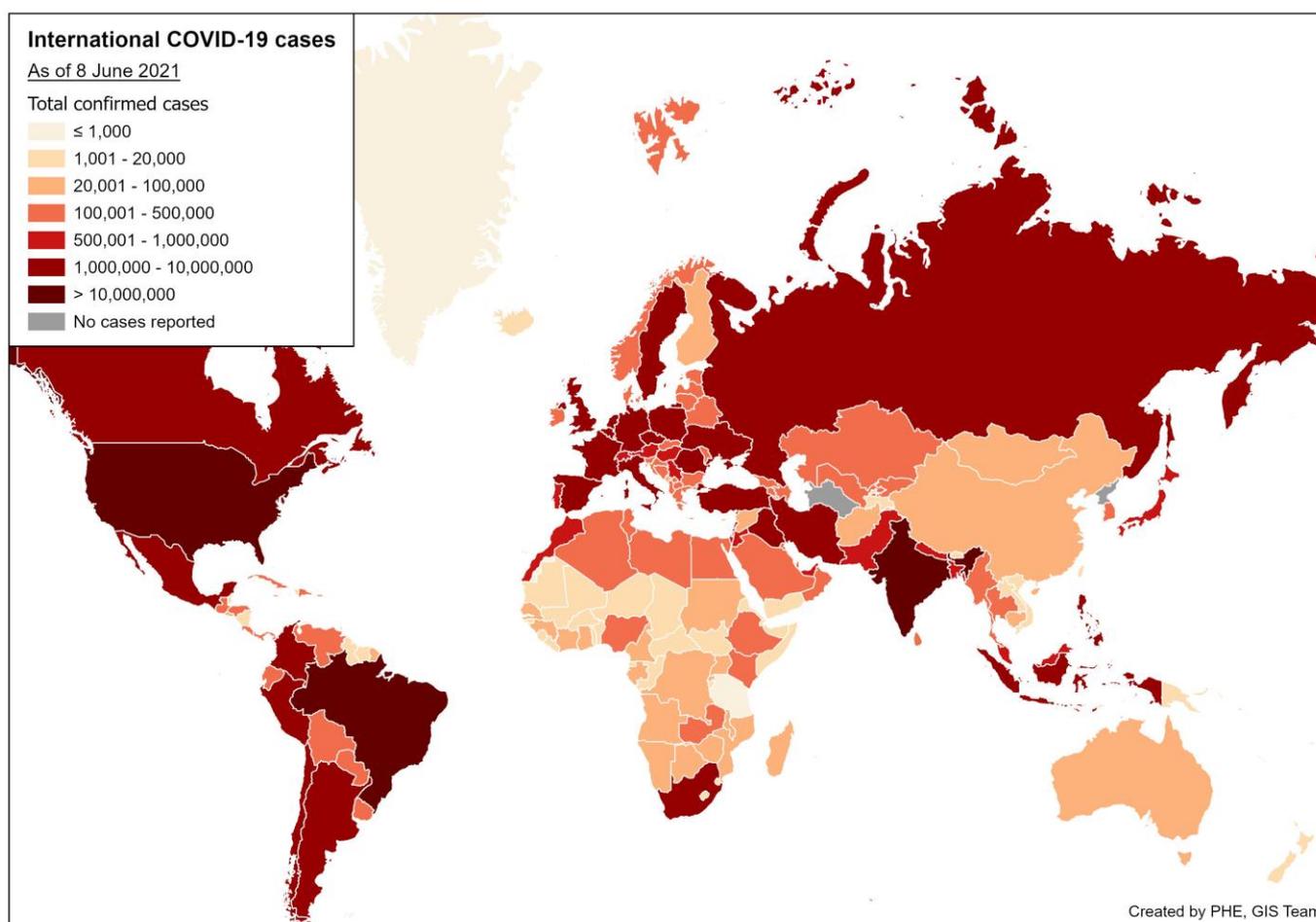
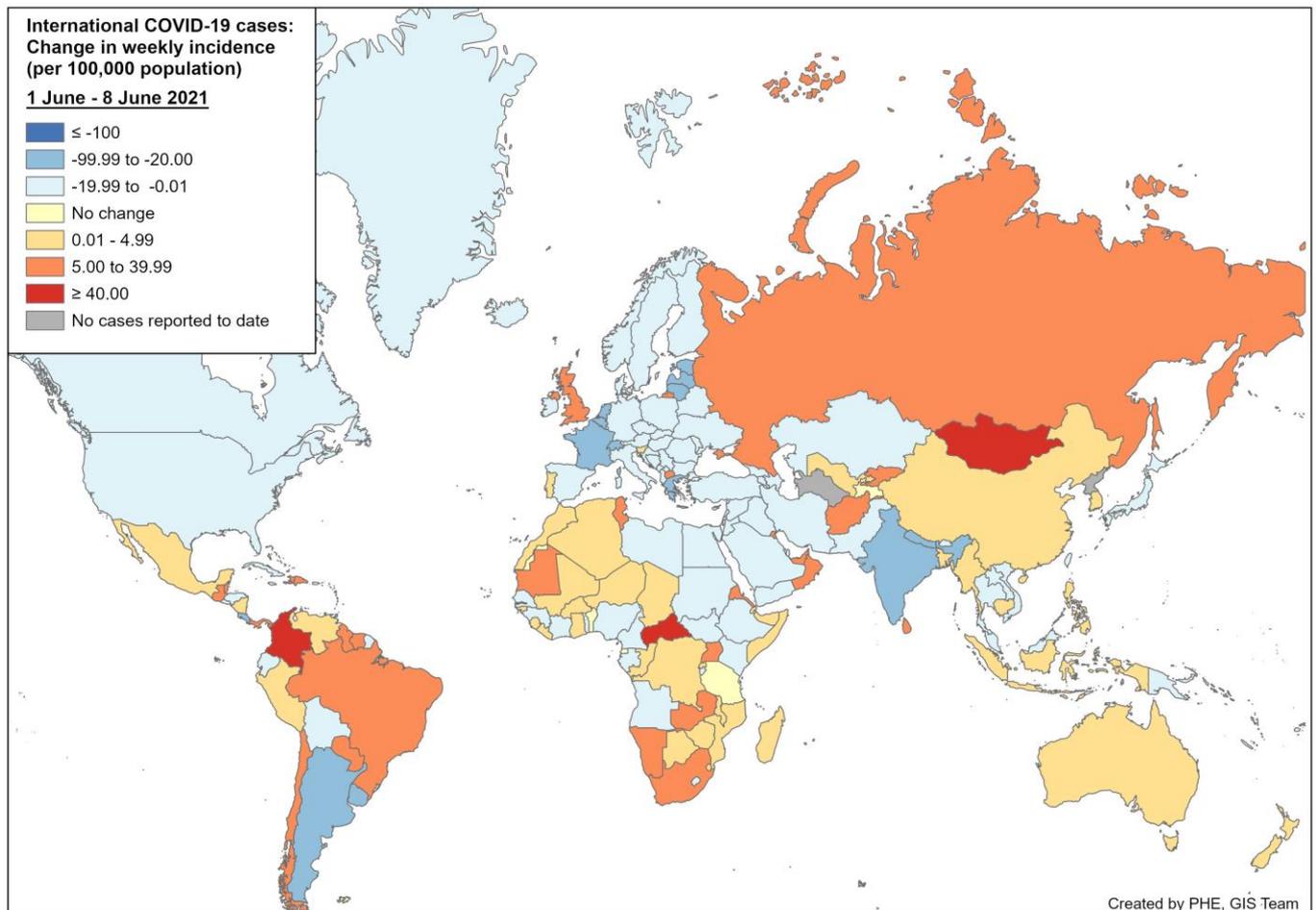


Figure 59: Global map of change in weekly COVID-19 case incidence rate per 100,000 population compared to the previous week



Global influenza update

Updated on 7 June 2021 (based on data up to 23 May 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 level. Worldwide, influenza B detections accounted for the majority of the very low numbers of detections reported.

In the Caribbean and Central American countries, no influenza was reported across reporting countries.

In the tropical countries of South America, no influenza detections were reported for this period.

In Western Africa, few detections of influenza A(H1N1)pdm09 and A(H3N2) were reported in Côte d'Ivoire and influenza A(H1N1)pdm09 in Ghana.

In Middle Africa, few detections of influenza A(H1N1)pdm09 and A(H3N2) were reported in Cameroon in recent weeks.

In Eastern Africa, no detections of influenza viruses were reported across reporting countries.

In Southern Asia, detections of predominately influenza A(H3N2) viruses continued to be reported in India.

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

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, despite testing at usual or increased levels.

In Europe, influenza activity remained 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, increased detections of influenza A(H3N2) and B were reported in Egypt in recent weeks.

In Western Asia, influenza and ILI activity remained low overall. Qatar reported continued detections of influenza B viruses.

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

In East Asia, influenza illness indicators and influenza activity remained low. Increased detections of influenza B-Victoria lineage virus were reported from northern and southern China though these detections are remaining low compared to previous years.

The WHO GISRS laboratories tested more than 284780 specimens during that time period. A total of 764 specimens were positive for influenza viruses, of which 69 (9%) were typed as influenza A and 695 (91%) as influenza B. Of the sub-typed influenza A viruses, 11 (55%) were influenza A(H1N1)pdm09 and 9 (45%) were influenza A(H3N2). The lineage for 646 influenza B viruses was determined: 4 (0.6%) belonged to the B-Yamagata lineage and 642 (99.4%) to the B-Victoria lineage.

Influenza in Europe

Updated on 01 June 2021 ([Joint ECDC-WHO Europe Influenza weekly update](#))

For week 20 2021, influenza activity remained at inter-seasonal levels throughout Europe.

For week 20 2021, of 444 sentinel specimens tested for influenza viruses, none were positive. Since the start of the season, of 43,474 sentinel-source specimens tested for influenza viruses, 46 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 21 May 2021 ([WHO website](#))

Since the previous update on 15 April 2021, one case of human infection with avian influenza A(H9N2) virus, three human cases of infection with influenza A(H1N1) variant viruses, and one human case of infection with an influenza A(H1N2) variant virus 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.⁵ Overall, the risk assessments have not changed.

Influenza A(H9N2) viruses:

Since the last risk assessment on 15 April 2021, one human case of infection with an influenza A(H9N2) virus was reported from China on 25 April 2021. Influenza A(H9N2) was detected in 30-year-old woman from Guangdong province, who had illness onset on 20 April 2021, as part of routine influenza-like illness (ILI) surveillance. Avian influenza A(H9N2) viruses are enzootic in poultry in Asia and increasingly reported in poultry in Africa.

Middle East respiratory syndrome coronavirus (MERS-CoV)

Latest update on 20 April 2021 ([WHO website](#))

Up to 20 April 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.

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 1 January 2021 and 11 March 2021, the National IHR Focal Point of Saudi Arabia reported seven additional cases of Middle East respiratory syndrome (MERS-CoV) infection, including three associated deaths ([WHO website](#)).

From 2012 through 11 March 2021, a total of 2,574 laboratory-confirmed cases of MERS-CoV and 886 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.

Public Health England
Wellington House
133-155 Waterloo Road
London SE1 8UG
Tel: 020 7654 8000

www.gov.uk/phe

Twitter: [@PHE_uk](https://twitter.com/PHE_uk)

www.facebook.com/PublicHealthEngland

© Crown copyright 2020

Prepared by: The Immunisation and Countermeasures Division, National Infection Service
For queries relating to this document, please contact: respscidsc@phe.gov.uk

OGL

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v3.0. To view this licence, visit [OGL](https://www.ogil.gov.uk). Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.



PHE supports the UN Sustainable
Development Goals

