COVID-19 variants identified in the UK – latest updates

Latest update

UKHSA designates 2 new COVID-19 variants

The UK Health Security Agency (UKHSA) has published its latest COVID-19 variant technical briefing. It contains epidemiological data and updated analysis of COVID-19 variants currently circulating in the UK.

A number of Omicron variants are currently circulating in England, many of which have acquired mutations which may produce a degree of immune escape. Omicron sublineages BQ.1 and XBB have been given UKHSA variant designations to facilitate continued studies. Neither have currently been designated as variants of concern.

BQ.1 (V-22OCT-01) is a BA.5 sub-lineage which has been designated on the basis of rapid growth. So far, there have been 717 V-22OCT-01 sequences uploaded from the UK to the international GISAID database.

XBB (V-22OCT-02) is a recombinant lineage derived from 2 previous Omicron sublineages. Currently there are 18 UK samples in GISAID, out of a global total of 1,086; 639 samples have been uploaded from Singapore, and it is thought that XBB may be a factor in the recent spike in cases there.

Neutralisation studies are currently being undertaken at the University of Oxford. Overall, data shows significant reductions in neutralisation against several of the newly emergent variants (BA.2.75.2, BA.2.3.20 and BJ.1), compared to BA.2, BA.4 and the dominant BA.5. This suggests that, as immunity begins to wane, these newly emerging BA.2 variants may fuel future waves of SARS-CoV-2 infection.

Dr Meera Chand, Director of Clinical and Emerging Infection at UKHSA, said:

> It is not unexpected to see new variants of SARS-CoV-2 emerge. Neither BQ.1 nor XBB have been designated as variants of concern and UKHSA is monitoring the situation closely, as always.
>
> Vaccination remains our best defence against future COVID-19 waves, so it is still as important as ever that people come take up all the doses for which they are eligible as soon as possible.

Previous

Friday 22 July 2022

BA.5 now dominant in the UK according to UKHSA variant technical briefing

The latest UK Health Security Agency (UKHSA) COVID-19 variant technical briefing, published today, includes updated epidemiological analysis which indicates that Omicron BA.5 has, as expected, become the dominant SARS-CoV-2 variant in the UK.

An estimated 78.7% of confirmed cases in England are BA.5 which was first identified in April and was designated as a Variant of Concern on 18 May.

UKHSA's latest National flu and COVID-19 surveillance report indicates that the increase in COVID-19 case rates and hospitalisations continues to show signs of slowing. However, UKHSA scientists say there is no room to be complacent. People aged 75 and over remain at particular risk of severe disease if they are not up to date with their vaccinations.

Omicron BA.2.75, the variant derived from the BA.2 lineage which was identified internationally earlier this month, has now been categorised as a separate variant and given the designation V-22JUL-01.

This designation means that data relating to BA.2.75 will now be reported separately from other BA.2 cases. There are small numbers of cases in the UK and this designation is intended to allow investigation into the specific properties of this variant.

As of 18 July 2022, there were 24 cases of BA.2.75 in the UK. Of these, 20 were in England, 3 in Scotland and 1 in Wales.

Dr Meera Chand, UKHSA Director of Clinical an Emerging Infection, said:

> We continue to monitor the emergence of new variants and give them variant designations if they are sufficiently distinct to warrant separate epidemiological and laboratory assessment.
>
> It is not unexpected to see new lineages and continued investigation is a normal part of the surveillance of an infectious disease.
>
> It is important that everyone ensures that they are up to date with vaccinations offered as they remain our best form of defence against severe illness.

Friday 24 June 2022

UKHSA issues COVID-19 vaccination reminder as Omicron BA.4 and BA.5 become dominant in the UK, driving increase in infections

The UK Health Security Agency (UKHSA) is reminding people to ensure their

COVID-19 vaccinations are up to date and to continue following COVID-safe behaviours, as latest technical data indicates BA.4 and BA.5 have become dominant in the UK and are driving the recent increase in infections.

The UKHSA's COVID-19 variant technical briefing 43, published today, includes epidemiological analysis that shows that Omicron BA.4 and BA.5 now make up more than half of new COVID-19 cases in England, accounting for approximately 22% and 39% of cases, respectively.

Omicron BA.4 and Omicron BA.5 were designated as variants of concern on 18 May on the basis of an apparent growth advantage over the previously-dominant Omicron BA.2 variant.

UKHSA's latest analysis suggests that Omicron BA.5 is growing 35.1% faster than Omicron BA.2, while Omicron BA.4 is growing approximately 19.1% faster. This suggests that BA.5 is likely to become the dominant COVID-19 variant in the UK.

The increasing prevalence of Omicron BA.4 and BA.5 is likely to be a factor in the recent increase in cases seen in the UK and elsewhere, though there is currently no evidence that Omicron BA.4 and BA.5 cause more severe illness than previous variants.

So far, vaccination means that the rise in cases is not translating to a rise in severe illness and deaths. UKHSA scientists are urging anyone who has not had all the vaccines they are eligible for to make sure that they get them as soon as possible.

COVID-19 has not gone away, so it is also vitally important that people continue to follow the guidance. Stay at home if you have any respiratory symptoms or a fever and limit contact with others until you are feeling better, particularly if they are likely to be at greater risk if they contract COVID-19.

Professor Susan Hopkins, Chief Medical Advisor at UKHSA said:

> It is clear that the increasing prevalence of Omicron BA.4 and BA.5 are significantly increasing the case numbers we have observed in recent weeks. We have seen a rise in hospital admissions in line with community infections but vaccinations are continuing to keep ICU admissions and deaths at low levels.
>
> As prevalence increases, it's more important than ever that we all remain alert, take precautions, and ensure that we're up to date with COVID-19 vaccinations, which remain our best form of defence against the virus. It's not too late to catch up if you've missed boosters, or even first doses so please take your recommended vaccines.
>
> Our data also show that 17.5 per cent of people aged 75 years and over have not had a vaccine within the past six months, putting them more at risk of severe disease. We urge these people in

particular to get up-to-date.

If you have any symptoms of a respiratory infection, and a high temperature or feel unwell, try to stay at home or away from others – especially those who are elderly or vulnerable. Face coverings in crowded indoor spaces and hand washing will help to reduce transmission of infection and are especially important if you have any respiratory symptoms.

UKHSA encourage everyone to continue to follow the most up-to date guidance.

As we learn to live safely with COVID-19, there are actions we can all take to help reduce the risk of catching COVID-19 and passing it on to others.

The risk of catching or passing on COVID-19 is greatest when someone who is infected is physically close to, or sharing an enclosed or poorly ventilated space with, other people.

You will not always know whether someone you come into contact with is at higher risk of becoming seriously ill from respiratory infections, including COVID-19. They could be strangers (for example people you sit next to on public transport) or people you may have regular contact with (for example friends and work colleagues).

There are simple things you can do in your daily life that will help reduce the spread of COVID-19 and other respiratory infections and protect those at highest risk. Things you can choose to do are:

- get vaccinated
- let fresh air in if meeting others indoors
- practise good hygiene:
    - wash your hands
    - cover your coughs and sneezes
    - clean your surroundings frequently
- wear a face covering or a face mask, particularly if you are in crowded and enclosed spaces

Friday 6 May 2022

Omicron BA.4 and BA.5 designated as variant of concern by UKHSA

The UK Health Security Agency (UKHSA) has elevated the classification of the COVID-19 variants Omicron BA.4 and Omicron BA.5 to variants of concern (VOCs) on the basis of observed growth.

As of 17 May, 115 cases of BA.4 and 80 cases of BA.5 have been confirmed in England and the latest UKHSA variant technical briefing has been published today.

Whilst Omicron BA.4 and BA.5 are in the early stages of growth in the UK, analysis of the available data suggests that they are likely to have a growth advantage over the currently-dominant Omicron BA.2 variant.

There can be several reasons for growth advantage, but in the case of BA.4 and BA.5, laboratory data suggests a degree of immune escape which is likely to contribute.

Dr Meera Chand, Director of Clinical and Emerging Infections at UKHSA, said:

> The reclassification of these variants as variants of concern reflects emerging evidence on the growth of BA.4 and BA.5 internationally and in the UK. Whilst the impact of these variants is uncertain, the variant classification system aims to identify potential risk as early as possible.
>
> UKHSA is undertaking further detailed studies. Data and analysis will be released in due course through our regular surveillance reporting.

Friday 6 May 2022

The UK Health Security Agency (UKHSA) has released variant technical briefing 41.

This edition includes an update on the current circulating lineages, including several cases of Omicron BA.4 and BA.5 which have been detected in the UK.

UKHSA has also released a variant risk assessment for Omicron BA.4 and BA.5, summarising the emerging epidemiology and laboratory evidence.

As of 2 May 2022, 21 confirmed cases of Omicron BA.4 and 19 confirmed cases of Omicron BA.5 have been detected in England.

Dr Meera Chand, Director of Clinical and Emerging Infections at UKHSA, said:

> UKHSA continues to monitor and study variants of SARS-CoV-2 closely and is working with academic partners to rapidly assess the significance of the lineages BA.4 and BA.5.
>
> Our continued genomic surveillance allows us to further investigate variants that are growing within the UK.

Friday 25 March 2022

UKHSA releases updated analysis into recombinant COVID-19 variants in the UK

UKHSA's most recent variant technical briefing includes examination of a number of recombinant variants which have been identified in the UK, as well as updated epidemiological and genomic analysis of Omicron BA.2.

A recombinant variant occurs when an individual becomes infected with 2 or more variants at the same time, resulting in a mixing of their genetic material within the patient's body. This is not an unusual occurrence and several recombinant SARS-CoV-2 variants have been identified over the course of the pandemic.

As with any other coronavirus (COVID-19) variant, the vast majority do not confer any advantage to the virus and die out relatively quickly.

UKHSA's new analysis examines 3 recombinants, known as XF, XE, and XD. Of these, XD and XF are recombinants of Delta and Omicron BA.1, while XE is a recombinant of Omicron BA.1 and BA.2.

In the UK, 38 cases of XF have been identified, though none have been seen since mid February. There is currently no evidence of community transmission within the UK.

XD has not been identified in the UK to date, though 49 cases have been reported to global databases, the majority of these are in France.

A total 637 cases of XE – a recombinant of Omicron BA.1 and BA.2 – have been confirmed in the UK so far. The earliest of these has a specimen date of 19 January 2022. There is currently insufficient evidence to draw conclusions about growth advantage or other properties of this variant. We continue to monitor all recombinants closely, routinely through our world-leading genomic surveillance and sequencing capability.

Professor Susan Hopkins, Chief Medical Advisor, UKHSA said:

> Recombinant variants are not an unusual occurrence, particularly when there are several variants in circulation, and several have been identified over the course of the pandemic to date. As with other kinds of variant, most will die off relatively quickly.
>
> This particular recombinant, XE, has shown a variable growth rate and we cannot yet confirm whether it has a true growth advantage. So far there is not enough evidence to draw conclusions about transmissibility, severity or vaccine effectiveness.
>
> UKHSA will continue to monitor the situation closely as a matter of routine, as we do all data relating to SARS-CoV-2 variants both in the UK and internationally.

The variant technical briefing also includes updated analysis on Omicron BA.2, currently the dominant variant in the UK.

BA.2 is estimated to account for approximately 93.7% of cases in England, with the highest prevalence in the South East (96.4%) and the lowest in the East Midlands (91.1%). Data for Scotland, Wales and Northern Ireland is not included in the UKHSA Technical Briefing.

BA.2 continues to demonstrate a substantial growth advantage. Since the middle of February, this growth rate has settled at approximately 75% higher than other circulating Omicron lineages in England.

Ongoing analysis by UKHSA has found no evidence that infection with Omicron BA.2 results in a greater risk of hospitalisation, compared to Omicron BA.1.

UKHSA has also this week published further vaccine effectiveness data against hospitalisation following a booster dose. For the first time, this data includes analysis on vaccine effectiveness 15+ weeks after the booster dose.

This data shows that protection against severe illness from COVID-19 remains at over 90% in those aged 65 and over up to 14 weeks after a booster dose. While there is a suggestion that this wanes slightly after 15 weeks, protection in this age group remains high at over 85%.

This paper can be found as a pre-print, and the data is referred to in the latest vaccine surveillance report.

Change to variant classifications

UKHSA is updating its variant classification system to give a clearer indication of which variants have significant changes compared to the current dominant variant.

Under the new system, the variant of concern (VOC) label will be assigned to variants which are currently emerging or circulating, and which the following characteristics can be confirmed or predicted:

1. A detrimental change in biological properties (changes in transmissibility, severity or immune evasion) compared to the current dominant variant.

2. A growth rate potentially compatible with the eventual replacement of the current dominant variant.

There will be no other categorisation of variants, including no variant under investigation (VUI) category. Previous variants of concern which no longer meet the criteria will be redesignated.

UKHSA will continue to designate new variants, and these will receive a variant number (in the format V-date-number). We will continue to closely analyse all available biological, epidemiological and genomic evidence for any SARS-CoV-2 variant in the UK or internationally.

These changes will take effect as of 1 April 2022 and will be reflected in full in future technical briefings.

Friday 25 February 2022

The UK Health Security Agency (UKHSA) has published variant technical briefing 37.

Friday 28 January 2022

UKHSA publishes variant analyses of Omicron sub-lineage BA.2

The UK Health Security Agency (UKHSA) has published analyses of Omicron sub-lineage BA.2. Data by variant related to intensive care unit admissions is presented and an analysis into the effect of the recent surge of Omicron cases in care homes is also available in the latest technical briefing.

Omicron sub-lineage BA.2 (VUI-22JAN-01)

As of 24 January 2022, 1,072 genomically confirmed cases of BA.2 have been identified in England and all assessments remain preliminary whilst case numbers are relatively low.

BA.2 has an increased growth rate compared to BA.1 in all regions of England where there are enough cases to assess it. While growth rates can be overestimated in early analyses of a new variant, the apparent growth advantage is currently substantial.

Analysis from routine contact tracing data indicates that transmission is likely to be higher among contacts of BA.2 cases in households (13.4%) than those for contacts of other Omicron cases (10.3%) in the period 27 December 2021 to 11 January 2022. These early findings should be interpreted with caution as transmission data and dynamics can fluctuate, meaning that early findings can change quickly when new variants are identified.

A preliminary assessment did not find evidence of a difference in vaccine effectiveness against symptomatic disease for BA.2 compared to BA.1. After 2 doses, vaccine effectiveness was 9% and 13% respectively for BA.1 and BA.2, after 25+ weeks. This increased to 63% for BA.1 and 70% for BA.2 at 2 weeks following a third vaccine.

There is currently no data on the severity of BA.2. UKHSA will continue to carry out laboratory and epidemiological investigations to better understand the characteristics of this variant.

Dr Susan Hopkins, Chief Medical Advisor for UKHSA, said:

> Ongoing variant analysis is an important part of our pandemic response. Thanks to the expertise of scientists at UKHSA and partner organisations, we’re able to respond quickly to new variations of the virus.
>
> We now know that BA.2 has an increased growth rate which can be seen in all regions in England. We have also learnt that BA.2 has a slightly higher secondary attack rate than BA.1 in households.
>
> Although hospitalisations and deaths remain low, cases are still high in some areas and some age groups so it’s important that we continue to act cautiously as restrictions are lifted. Consider wearing a face covering when in crowded places. Take a vaccine to

protect yourself against COVID-19. If you have any symptoms, take a test.

Omicron data

UKHSA has also published analyses related to the original Omicron strain BA.1. Where variant information was available, the majority of intensive care unit (ICU) admissions from 24 November 2021 to 19 January 2022 had Delta infections. Overall numbers of ICU admissions have decreased over time, but where data was available admissions with Omicron have increased from 9% to more than 50% in the most recent week.

Although there was a rapid increase in SARS-CoV-2 infections in care homes during December 2021 in line with case rises in the community, there has not been an associated increase in hospital admissions.

Our findings suggest the current wave of Omicron infections is unlikely to lead to a major surge in severe disease in care home populations with high levels of vaccine coverage and/or natural immunity. There were very limited numbers of BA.2 in this study and no inferences can be made regarding BA.2.

Friday 21 January 2022

Omicron sub-lineage BA.2 designated as a variant under investigation (VUI)

The Omicron variant sub-lineage known as BA.2 has been designated a variant under investigation (VUI-22JAN-01) by the UK Health Security Agency (UKHSA).

Overall, the original Omicron lineage, BA.1, is dominant in the UK and the proportion of BA.2 cases is currently low. The designation was made on the basis of increasing numbers of BA.2 sequences identified both domestically and internationally. There is still uncertainty around the significance of the changes to the viral genome, and further analyses will now be undertaken.

To date, there have been 426 cases of Omicron BA.2 confirmed by Whole Genome Sequencing (WGS), with the earliest dated 6 December 2021.

The areas with the largest number of confirmed cases are London (146) and the South East (97). Data for the devolved administrations will follow in due course.

Early analyses suggest an increased growth rate compared to BA.1, however, growth rates have a low level of certainty early in the emergence of a variant and further analysis is needed.

In total, 40 countries have uploaded 8,040 BA.2 sequences to GISAID since 17 November 2021. At this point it is not possible to determine where the sublineage may have originated. The first sequences were submitted from the Philippines, and most samples have been uploaded from Denmark (6,411). Other countries that have uploaded more than 100 samples are India (530), Sweden

(181), and Singapore (127).

Omicron BA.2 lacks the genetic deletion on the spike protein which produces S-gene target failure (SGTF) in some polymerase chain reaction (PCR) tests, which has been used as a proxy for Omicron cases previously.

Dr Meera Chand, COVID-19 Incident Director at UKHSA, said:

> It is the nature of viruses to evolve and mutate, so it's to be expected that we will continue to see new variants emerge as the pandemic goes on. Our continued genomic surveillance allows us to detect them and assess whether they are significant.
>
> So far, there is insufficient evidence to determine whether BA.2 causes more severe illness than Omicron BA.1, but data is limited and UKHSA continues to investigate.
>
> Case rates remain high throughout the UK and we must remain vigilant and take up vaccinations. We should all continue to test regularly with LFDs and take a PCR test if symptoms develop.

Health and Social Care Secretary, Sajid Javid, said:

> We are learning to live with this virus – and thanks to our world-leading surveillance system we can rapidly detect and carefully monitor any genetic changes to COVID-19.
>
> Our exceptional vaccine rollout means the number of people severely affected by COVID-19 is low, and the UK's innovation and research has discovered life-saving treatments for those most at risk from COVID-19.
>
> As we cautiously return to Plan A, I encourage you to give yourself and your loved ones the best protection possible and Get Boosted Now.

As is routine for any new variants under investigation, UKHSA is carrying out laboratory and epidemiological investigations to better understand the characteristics of this variant. We will continue to monitor this situation closely and recommend appropriate public health measures if needed.

More detail will be available in UKHSA's regular variant technical briefings.

Friday 14 January 2022

UKHSA publishes updated Omicron risk assessment and analysis on vaccine efficacy, sub-lineage and symptoms

The UK Health Security Agency (UKHSA) has published a new variant technical

briefing containing an updated Omicron risk assessment, alongside analysis on vaccine efficacy, sub-lineages and symptoms.

The updated risk assessment includes indicators for infection severity in both adults and children.

There is now high confidence that the Omicron variant causes low severity of disease in adults. However, confidence levels for severity indicators for children are low because further analysis is required to compare the risk of hospitalisation between Omicron and Delta, and to assess the clinical nature of illness in children.

Susan Hopkins, Chief Medical Advisor at UKHSA, said:

> This latest set of analysis once again demonstrates that a booster dose of the vaccine provides you with significant protection against hospitalisation from Omicron. Booster doses also increase the protection against symptomatic and asymptomatic infection which will reduce transmission in the population.
>
> While signs remain encouraging on Omicron's severity compared with Delta, the high levels of community transmission continue and may cause pressures on health services.
>
> We'll be undertaking further analysis to investigate the small rise in the number of children admitted to hospital but currently coronavirus (COVID-19) poses a very low health risk to children and infants. Early data shows that young children who are hospitalised experience mild illness and are discharged after short stays in hospital.
>
> Getting your booster jab remains the most effective way of protecting yourself and others from infection and severe disease. While prevalence remains high, make sure to wear your mask in indoor settings and take a lateral flow test before meeting others. If you develop any symptoms, isolate immediately and get a PCR test.

BA.2 sub-lineage

As of January 10 2022, 53 sequences of the BA.2 sub-lineage of Omicron had been identified in the United Kingdom.

This sub-lineage, which was designated by Pangolin on 6 December 2021, does not have the spike gene deletion at 69-70 that causes S-gene target failure (SGTF), which has previously been used as a proxy to detect cases of Omicron. UKHSA are continuing to monitor data on the BA.2 sub-lineage closely.

Vaccine effectiveness

Vaccine effectiveness (VE) against Omicron has again been updated in this

week’s briefing.

As previously published, data continues to show vaccine effectiveness against hospitalisation for Omicron remains high.

A booster dose was associated with a 74% reduced risk of hospitalisation in the first 2 to 4 weeks after vaccination, with the figure dropping to 66% 10 weeks or more after this dose. When combined with VE against symptomatic disease, the reduced risk of hospitalisation climbed to 92% 2 to 4 weeks after a third dose of the vaccine, down to 83% after 10 weeks or more.

There is further data showing that effectiveness against symptomatic disease is significantly lower compared to the Delta variant, and wanes more quickly.

Analysis shows that protection against symptomatic disease 2 to 4 weeks after a booster dose ranges from around 65% to 75%, dropping to 55% to 65% at 5 to 9 weeks – and 45% to 50% 10 weeks or more following the booster dose.

In the SIREN study, a large cohort of healthcare workers are tested regularly by PCR to detect asymptomatic infection in addition to normal testing practices for symptomatic infection. Updated analysis shows the additional incremental benefit from each vaccine exposure including for boosters, even in those who have had prior infection.

Prior infection is 44% effective at preventing future infection, increasing to 71% with 3 doses of the vaccine.

Symptoms

Technical Briefing 34 contains further analysis on symptom comparison on Omicron and Delta.

Of symptomatic cases, loss of smell and taste was found to be more common in people who tested positive for Delta than those who had Omicron. This matches a recent study led by Oxford University and the Office for National Statistics (ONS), using data from the COVID-19 Infection Survey produced by the latter.

Hospital admissions in children aged 0 to 5

There are indications of a small rise in children admitted to hospital, but these early signals need further investigations before we can draw any conclusions about whether Omicron causes more severe illness in children.

Early data shows that young children who are hospitalised experience mild illness and are discharged after short stays in hospital. Data continues to show COVID-19 poses a very low health risk to children and infants.

However, any stay in hospital for a child is too long if you’re a parent and it’s important we all take precautions to avoid the spread of infection.

Follow the latest self-isolation rules if you develop symptoms – wear a mask where required to do so, take regular LFD tests and observe good hand

hygiene.

We continue to urge everyone who is eligible to get a COVID-19 vaccine and booster.

Health and Social Care Secretary Sajid Javid said:

> This data is yet more evidence that vaccines remain our best line of defence against COVID-19.
>
> Booster jabs are protecting people against infection and severe disease – so I urge you to play your part in our national mission and get boosted now.

Friday 31 December 2021

UKHSA publishes updated Omicron hospitalisation and vaccine efficacy analysis

The UK Health Security Agency (UKHSA) has published a new variant technical briefing containing updated analysis on Omicron hospitalisation risk and vaccine efficacy against symptomatic disease and hospitalisation.

Protection against hospitalisation from vaccines is good against the Omicron variant. One dose of any vaccine was associated with a 35% reduced risk of hospitalisation among symptomatic cases with the Omicron variant, 2 doses with a 67% reduction up to 24 weeks after the second dose and a 51% reduced risk 25 or more weeks after the second dose. A third dose was associated with a 68% (95% confidence interval 52 to 82%) reduced risk of hospitalisation when compared to similar unvaccinated individuals. When the reduced risk of hospitalisation was combined with vaccine effectiveness against symptomatic disease, the vaccine effectiveness against hospitalisation was estimated as 52% after one dose, 72% 2 to 24 weeks after dose 2, 52% 25+ weeks after dose 2 and 88% 2 weeks after a booster dose.

As set out last week, the effectiveness of all vaccines against symptomatic infection continues to be lower in all periods against Omicron compared to Delta. The latest data confirmed that among those who had received 2 doses of AstraZeneca, there was no effect against Omicron from 20 weeks after the second dose. Among those who had received 2 doses of Pfizer or Moderna, effectiveness dropped from around 65 to 70% down to around 10% by 20 weeks after the second dose. Two to 4 weeks after a booster dose, vaccine effectiveness ranged from around 65 to 75%, dropping to 55 to 70% at 5 to 9 weeks and 40 to 50% from 10+ weeks after the booster.

Working alongside Cambridge University MRC Biostatistics unit, UKHSA analysed 528,176 Omicron cases and 573,012 Delta cases between 22 November and 26 December to assess the risk of hospitalisation in England after testing positive for Omicron. This analysis found that the risk of presentation to emergency care or hospital admission with Omicron (testing for symptomatic or

asymptomatic infection) was approximately half of that for Delta, while the risk of hospital admission alone with Omicron was approximately one-third of that for Delta. In this analysis, the risk of hospitalisation is lower for Omicron cases with symptomatic or asymptomatic infection after 2 and 3 doses of vaccine, with an 81% (95% confidence interval 77 to 85%) reduction in the risk of hospitalisation after 3 doses compared to unvaccinated Omicron cases.

This analysis is not an assessment of hospital severity, which will take further time to assess.

Health and Social Care Secretary Sajid Javid said:

> This is more promising data which reinforces just how important vaccines are. They save lives and prevent serious illness. This analysis shows you are up to 8 times more likely to end up in hospital as a result of COVID-19 if you are unvaccinated.
>
> It is never too late to come forward for your first dose and it's vital that everyone comes forward to get boosted now as we head into the new year.

Susan Hopkins, Chief Medical Adviser at UKHSA, said:

> The latest set of analysis is in keeping with the encouraging signs we have already seen.
>
> However, it remains too early to draw any definitive conclusions on hospital severity, and the increased transmissibility of Omicron and the rising cases in the over 60s population in England means it remains highly likely that there will be significant pressure on the NHS in coming weeks.
>
> The data once again shows that coming forward for your jab, particularly your third dose, is the best way of protecting yourself and others against infection and severe disease.

Thursday 23 December

UKHSA publishes updated Omicron hospitalisation and vaccine efficacy analysis

The UK Health Security Agency (UKHSA) has published the latest variant technical briefing. It contains updated analysis on Omicron hospitalisation risk, vaccine efficacy against symptomatic disease from Omicron, and the COVID-19 reinfection rate.

As of 20 December, 132 individuals with confirmed Omicron have been admitted to or transferred from emergency departments. Over 40% of hospital admissions were in London. Of those patients admitted to hospital, 17 had received a booster vaccine, 74 people had 2 doses and 27 people were not vaccinated. The

vaccination status was unknown for 6 people, while 8 had received a single dose. Fourteen people are reported to have died within 28 days of an Omicron diagnosis, ranging in age from 52 to 96 years old.

UKHSA analysis shows that the risk of hospital admission for an identified case with Omicron is reduced compared to a case of Delta. This analysis excludes individuals with confirmed previous COVID-19 infection. An individual with Omicron is estimated to be between 31 and 45% less likely to attend A&E compared to Delta, and 50 to 70% less likely to be admitted to hospital. This analysis is preliminary and highly uncertain because of the small numbers of Omicron cases currently in hospital, inability to effectively measure all previous infections and the limited spread of Omicron into older age groups. This is consistent with analysis published yesterday by Imperial College London and the University of Edinburgh.

The population rate of people becoming infected with Omicron after having previously contracted COVID-19 has increased sharply. Of those with Omicron, 9.5% have had COVID-19 before, which is likely to be a substantial underestimate of the proportion of reinfections, as many prior infections will have been asymptomatic and not picked up by the analysis.

Vaccine efficacy analysis continues to show lower effectiveness for symptomatic Omicron disease. There is evidence that protection against symptomatic disease wanes after the second dose of vaccine, and then improves after the booster. But the latest data suggests this extra protection starts to wane more rapidly, being about 15 to 25% lower from 10 weeks after the booster dose. There are insufficient severe cases of Omicron as yet to analyse vaccine effectiveness against hospitalisation, but this is more likely to be sustained, particularly after a booster.

Omicron continues to grow faster than Delta, with an increased risk of transmission, particularly in contacts outside of the household. Therefore, although early suggestions are that individuals may be less likely to require hospitalisation, many more people are likely to become infected. Even if a smaller proportion of these individuals require hospitalisation, these are still large numbers of people requiring hospital care and pressures on the NHS will increase. It is therefore vital that people continue to exercise caution in order to limit the transmission of the virus.

Dr Jenny Harries, UKHSA Chief Executive, said:

> Our latest analysis shows an encouraging early signal that people who contract the Omicron variant may be at a relatively lower risk of hospitalisation than those who contract other variants. However, it should be noted both that this is early data and more research is required to confirm these findings.
>
> Cases are currently very high in the UK, and even a relatively low proportion requiring hospitalisation could result in a significant number of people becoming seriously ill. The best way that you can protect yourself is to come forward for your first 2 doses of

> vaccine, or your booster jab and do everything you can to stop onward transmission of the infection.

Health and Social Care Secretary Sajid Javid said:

> This new UKHSA data on Omicron is promising – while 2 doses of the vaccine aren't enough, we know boosters offer significant protection against the variant and early evidence suggests this strain may be less severe than Delta.
>
> However, cases of the variant continue to rise at an extraordinary rate – already surpassing the record daily number in the pandemic. Hospital admissions are increasing, and we cannot risk the NHS being overwhelmed.
>
> This is early-stage analysis and we continue to monitor the data hour by hour. It is still too early to determine next steps, so please stay cautious this Christmas and get your booster as soon as possible to protect yourself and your loved ones.

Friday 17 December

The UK Health Security Agency (UKHSA) has published the latest Variant Technical Briefing.

UKHSA has performed an initial laboratory evaluation of the current lateral flow devices (LFDs) for COVID-19 in current use in the UK. Initial data suggests that LFDs are as likely to detect Omicron as other variants including Delta, which has been the dominant variant in the UK from May to December 2021.

Of 5,153 individuals identified with an Omicron infection between 1 November and 11 December 2021, 305 were linked to a previous confirmed infection and had an interval from the previous positive test of 90 days or more. The data so far suggests an increase in overall reinfection rates, alongside an increase in first infections.

Dr Jenny Harries, UKHSA Chief Executive, said:

> Our data shows that LFD tests are similarly able to detect COVID-19 in individuals who have been exposed to Omicron as in those exposed to previous variants. This is very encouraging. As we all work to limit the high levels of transmission of this variant over the Christmas period, we are urging people to test regularly, particularly before attending social gatherings.
>
> As always, the booster vaccine remains the best protection against infection. Please come forward to receive your booster as soon as possible.

Monday 13 December

The UK Health Security Agency (UKHSA) can confirm that 10 people have been hospitalised with the Omicron variant in England; the individuals were diagnosed on or before admission. These people are spread around the country and are a mix of age ranges between 18 to 85 years – the majority had received 2 doses of vaccination.

One individual diagnosed in hospital has sadly died.

Dr Susan Hopkins, Chief Medical Adviser at UKHSA, said:

> Hospitalisations always lag a few weeks behind infections, therefore it isn't surprising that we have started to see people being admitted to hospital with the Omicron variant.
>
> Our data shows that getting the booster vaccine is more effective against this variant than 2 doses alone. Everyone over 18 is now able to walk into a vaccine centre, so do not hesitate to get yours.

Friday 10 December

The latest variant technical briefing suggests that Omicron continues to grow rapidly in all regions of England as measured by confirmed cases and S gene target failure (SGTF). None of the cases to date is known to have been hospitalised or died.

Studies of contacts show that Omicron is transmitting more effectively than Delta. The UK Health Security Agency (UKHSA) estimates that if Omicron continues to grow at the present rate, the variant will become the dominant strain, accounting for more than 50% of all COVID-19 infections in the UK by mid-December. It is projected that if current trends continue unchanged, the UK will exceed one million infections a day by the end of this month.

The technical briefing also includes early analysis of vaccine effectiveness against the Omicron variant compared to Delta.

The analysis looked at 581 people with confirmed Omicron. It showed that the AstraZeneca and Pfizer-BioNTech vaccines provided much lower levels of protection against symptomatic infection compared to the protection that they provide against Delta. However, the preliminary data showed effectiveness against the new variant appears to increase considerably in the early period after a booster dose, providing around 70% to 75% protection against symptomatic infection.

The analysis included very small numbers of cases as only a few people in the UK currently have this variant, meaning this data should be interpreted with caution until more cases have been studied. Due to the early nature of the findings, all estimates are subject to significant uncertainty and are subject to change. The early observations for 2 doses of AstraZeneca are

particularly likely to be unreliable as they are based on small numbers and are likely to reflect an older population and a population with more co-morbidities than those given the Pfizer vaccine.

There are differences in the populations that have received different vaccines. AstraZeneca was the main vaccine used early in the programme in care homes and among those in clinical risk groups. These groups have been prioritised for booster doses since the start of the rollout in September to increase their protection. The percentage of people to have received a booster dose will also already be higher in older age groups and those with underlying health conditions due to prioritisation of the rollout so far.

Vaccine effectiveness against severe disease from Omicron is not yet known but is expected to be significantly higher than protection against symptomatic disease. Data on this won't be available for several weeks.

It is vital that everyone over the age of 40 who is eligible for a booster jab comes forward as soon as possible to get increased protection against this new variant. Those aged 18 to 39 should wait to be called.

Dr Mary Ramsay, Head of Immunisation at UKHSA, said:

> These early estimates should be treated with caution but they indicate that a few months after the second jab, there is a greater risk of catching the Omicron variant compared to Delta strain.
>
> The data suggests this risk is significantly reduced following a booster vaccine, so I urge everyone to take up their booster when eligible. We expect the vaccines to show higher protection against the serious complications of COVID-19, so if you haven't yet had your first 2 doses please book an appointment straight away.
>
> Working from home where possible, consistently wearing masks in crowded or enclosed spaces, washing your hands regularly and isolating and getting tested if you feel unwell are also vitally important in reducing the impact of COVID-19 this winter.

UKHSA has also published a breakdown of confirmed Omicron cases and SGTF cases by local authority. The most affected local authorities are West Northamptonshire, where there are 49 confirmed cases and 68 SGTF, and Manchester, where there are 7 confirmed cases and 61 SGTF.

Evidence continues to show that Omicron is transmitting more rapidly than the dominant Delta variant. Studies of households and contacts have found that there is a higher risk of transmission to contacts from an Omicron case, when compared to Delta.

Dr Jenny Harries, UKHSA Chief Executive, said:

> Once again, we urge everyone who is able to get a booster jab to

> come forward and do so. It is the best defence we have against this highly transmissible new variant.
>
> It is also absolutely critical that we all do what we can to reduce transmission in the community so that we have time to administer as many booster doses as possible. Please make sure you follow all the available guidance. Work from home if you are able to, wear a mask indoors around other people, and ventilate indoor spaces well.

Sajid Javid, Secretary of State for Health and Social Care, said:

> Today's new data shows how important booster jabs are to protect us against this variant.
>
> They are our best defence and we have turbocharged our rollout programme inviting 7 million more people over the age of 40 to get their booster jab so even more people get protection from this disease. I urge you to come forward as soon as you're eligible to help keep yourself and your loved ones safe.

Wednesday 8 December

UKHSA publishes update on Omicron risk assessment, S gene target failure and local case numbers

The assessment suggests that Omicron is displaying a significant growth advantage over Delta, meaning that it is likely to outcompete Delta in the UK and become the dominant variant.

This assessment is based on analysis of UK data showing increased household transmission risk, increased secondary attack rates (such as the chance of each case infecting another individual) and increased growth rates compared to Delta.

If the growth rate and doubling time continue at the rate we have seen in the last 2 weeks, we expect to see at least 50% of coronavirus (COVID-19) cases to be caused by Omicron variant in the next 2 to 4 weeks.

The risk assessment also suggests that Omicron displays a reduction in protection offered by having had a previous infection or vaccination. Whilst there are insufficient data to quantify either vaccine effectiveness or risk of reinfection in the UK exactly, the observed growth, case distribution and early analyses in both South Africa and the UK are consistent with some loss of immune protection against infection. New studies are being undertaken to assess this further.

There is insufficient data to make any assessment of protection against severe disease, or to assess the severity of illness caused by Omicron. Further studies are underway in the UK and abroad.

In addition, UKHSA has published data which shows the detection of cases exhibiting S-gene target failure (SGTF) in recent weeks across the country. Approximately half of PCR tests in the UK are able to detect SGTF.

SGTF is a useful indicator of the presence of Omicron, because as a rule Delta cases have the S-gene and Omicron cases do not. However, it is not confirmatory as there are a number of other reasons that a sample might exhibit SGTF. For example, there are still a small number of cases of other variants, such as Alpha, in the UK which would also result in S-gene dropout or there is a lower amount of virus present in the sample where S-gene dropout cannot be confirmed.

Positive tests with sufficient virus detected from people arriving in the UK are sent for confirmation through Whole Genome Sequencing, regardless of the presence or absence of SGTF.

As part of UKHSA's routine genomic surveillance, approximately 15 to 20% of all positive PCR tests are also sent for sequencing.

Until the week beginning 23 November 2021, the weekly count of cases with SGTF was routinely less than 150, making up less than 0.1% of all cases. Analyses of sequenced SGTF samples has indicated that until mid-November, more than 99% of these were Delta cases.

In the most recent week of data (specimen dates from 30 November 2021 reported as of 6 December), the number of cases with SGTF has increased to 705. The majority of these cases are located in London and the South East.

Trends in SGTF over and time are however affected by the coverage of laboratories contributing to this surveillance data.

UKHSA Chief Medical Advisor, Dr Susan Hopkins said:

> It is increasingly evident that Omicron is highly infectious and there is emerging laboratory and early clinical evidence to suggest that both vaccine-acquired and naturally acquired immunity against infection is reduced for this variant. It is therefore absolutely critical that we all do everything that we can to help break the chains of transmission and slow the spread of this new variant.
>
> Vaccination is critical to help us bolster our defences against becoming severely ill from this new variant – please get your first, second, third or booster jab without delay. Please also make sure to follow all Government guidance to reduce the spread of infection.
>
> It remains vital that anyone with COVID-19 symptoms isolates and gets a PCR test immediately.

Saturday 4 December

The latest number of COVID-19 cases with mutations consistent with B.1.1.529 in England are published on UKHSA's social media channels.

Further information is also available in the latest variant technical briefing.

UKHSA is gathering scientific information as quickly as possible in order to inform the right balance of interventions to prevent transmission and protect lives. This includes analysing live samples of the new variant in our laboratories to investigate properties such as response to current vaccines.

Where individuals are suspected or confirmed to have the Omicron variant as the result of testing, their close contacts will be contacted by NHS Test and Trace, required to self-isolate and asked to take a PCR test, regardless of whether they have been vaccinated.

Anyone who is contacted because of a link to a probable or possible Omicron case will be asked to take a PCR test, even if they have received a positive COVID-19 PCR test within the last 90 days.

Dr Jenny Harries, Chief Executive of UKHSA, said:

> We are continuing our efforts to understand the effect of this variant on transmissibility, severe disease, mortality, antibody response and vaccine efficacy.
>
> Vaccination is critical to help us bolster our defences against this new variant – please get your first, second, third or booster jab without delay.
>
> A booster dose for everyone over 18 years is now recommended and will be available at a minimum of 3 months from your last primary course jab. Please take up this offer as soon as you are eligible to protect yourself, your families and your communities.
>
> Please make sure to wear a mask in line with government guidance, including on public transport and in shops, to help break the chains of transmission and slow the spread of this new variant.
>
> It's critical that anyone with COVID-19 symptoms isolates and gets a PCR test immediately.

Friday 3 December

A further 75 cases of Omicron variant confirmed

The UK Health Security Agency (UKHSA) has identified 75 further cases of COVID-19 with mutations consistent with B.1.1.529 in England, in addition to the previous 29 confirmed cases of the SARS-CoV-2 variant known as B.1.1.529.

The total number of confirmed cases in England is now 104.

The individuals who have tested positive and their contacts have been asked to self-isolate. Work is underway to identify any links to travel. We have now identified cases in the East Midlands, East of England, London, North East, North West, South East, South West and West Midlands. UKHSA is carrying out targeted testing at locations where the positive cases were likely to be infectious.

1 case has been identified in Wales. A further 16 cases have been identified in Scotland, bringing the total in Scotland to 29. There are no confirmed cases in Northern Ireland.

Dr Jenny Harries, Chief Executive of UKHSA, said:

> Increased case detection through focused contact tracing has led to more cases of the Omicron variant being identified and confirmed, as we have seen in other countries globally.
>
> We are continuing to monitor the data closely. Teams nationally and locally are working at pace to identify and trace all close contacts of every Omicron case. It is critical that anyone with COVID-19 symptoms isolates and gets a PCR test immediately.
>
> We have started to see cases where there are no links to travel, suggesting that we have a small amount of community transmission. That’s why it’s so important that everybody, everywhere, takes simple steps to protect themselves from infection. Please wear face coverings in line with government guidance, let in fresh air when mixing indoors and wash your hands regularly.
>
> Vaccination is critical to help us bolster our defences against this new variant so please get your first, second, third or booster jab as soon as you are eligible to protect yourself, your families and your communities.

Where individuals are identified as being a possible or probable case of Omicron, their close contacts will be contacted and advised they are required to isolate for 10 days, regardless of whether they have been vaccinated or received a negative COVID-19 test result. Everybody who is contacted or has symptoms should take a PCR test as soon as possible, even if they have received a positive COVID-19 PCR test within the last 90 days.

UKHSA is acting to get scientific information available as quickly as possible in order to inform the right balance of interventions to prevent transmission and protect lives. This will include analysing live samples of the new variant in our laboratories to investigate properties including its response to current vaccines.

As viruses mutate often and at random, it is not unusual for small numbers of cases to arise featuring new sets of mutations. Any variants showing evidence

of spread are rapidly assessed.

Friday 3 December

The UK Health Security Agency (UKHSA) has published a new variant technical briefing describing ongoing work on the Omicron variant. It includes a complete list of studies planned and already under way into the emerging variant. A new risk assessment for Omicron VOC-21NOV-01 (B.1.1.529) has also been published and is available here.

Delta remains the predominant variant in England, accounting for over 99% of all COVID-19 cases. As of 30 November 2021, there are 22 confirmed cases of Omicron (B.1.1.529), identified through sequencing or genotyping in England. None of these cases are known to have been hospitalised or died. More recent data on Omicron cases is published regularly here.

Available data are limited at this early stage, but it remains likely that the cases identified so far are a result of a number of separate introductions into the country.

Omicron has a deletion at position 69/70 of the spike protein which allows it to be tracked through S gene target failure (SGTF) in some PCR tests. Currently, approximately half of all tests conducted in the UK are able to detect SGTF. SGTF is not a 100% accurate test for Omicron and results are regularly evaluated against sequencing to ensure they are interpreted correctly. However, increases in SGTF can give a useful early indication of variant spread.

The proportion of test results displaying SGTF has been very low in recent months but an increase has been observed in the past week. This is still a very small number of cases but is being investigated carefully to understand whether it is related to travel, any other variant or whether there is evidence of spread of Omicron beginning in the community.

UKHSA Chief Executive, Jenny Harries said:

> I want to thank everyone who has been working globally and locally to help us act incredibly quickly in response to the Omicron variant. Thanks to very high levels of vaccine coverage we already have a robust wall of defence against COVID-19 as new variants emerge. We are working as fast as possible to gather more evidence about any impact the new variant may have on severity of disease or vaccine effectiveness. Until we have this evidence, we must exercise the highest level of caution in drawing conclusions about any significant risks to people's health.
>
> The most important thing everyone can do now is to get any vaccine dose that you are eligible for – it is by far the most effective action you can take to protect yourself, your families and your communities. It is also vital to continue with all the other precautions we have become used to throughout the pandemic – keep

indoor areas well ventilated, wear a face covering in enclosed spaces, and take a rapid lateral flow (or LFD) test before a situation where you may be at high risk of catching or passing on the virus.

Previous

Thursday 2 December

A further 7 cases of Omicron variant confirmed

The UK Health Security Agency (UKHSA) has identified 7 further cases of COVID-19 with mutations consistent with B.1.1.529 in England, in addition to the previous 22 confirmed cases of the SARS-CoV-2 variant known as B.1.1.529. The total number of confirmed cases in England is now 29.

The individuals who have tested positive and their contacts are all isolating. Work is underway to identify any links to travel. We have now identified cases in the East Midlands, East of England, London, South East and North West. UKHSA is carrying out targeted testing at locations where the positive cases were likely to be infectious.

A further 3 cases have been identified in Scotland, bringing the total to 13.

Dr Jenny Harries, Chief Executive of UKHSA, said:

“We are continuing our efforts to understand the effect of this variant on transmissibility, severe disease, mortality, antibody response and vaccine efficacy.

“Vaccination is critical to help us bolster our defences against this new variant – please get your first, second, third or booster jab without delay.

“A booster dose for everyone over 18 years is now recommended and will be available at a minimum of 3 months from your last primary course jab. Please take up this offer as soon as you are eligible to protect yourself, your families and your communities.

“Please make sure to wear a mask in line with government guidance, including on public transport and in shops, to help break the chains of transmission and slow the spread of this new variant.

“It is very likely that we will find more cases over the coming days as we are seeing in other countries globally and as we increase case detection through focused contact tracing. That’s why it’s critical that anyone with COVID-19 symptoms isolates and gets a PCR test immediately.”

Where individuals are identified as being a possible or probable case, their close contacts will be contacted and advised to isolate for 10 days and to take a test. Everybody who is contacted or has symptoms should take a PCR test as soon as possible, even if they have received a positive COVID-19 PCR

test within the last 90 days.

UKHSA is acting to get scientific information available as quickly as possible in order to inform the right balance of interventions to prevent transmission and protect lives. This will include analysing live samples of the new variant in our laboratories to investigate properties such as response to current vaccines.

As viruses mutate often and at random, it is not unusual for small numbers of cases to arise featuring new sets of mutations. Any variants showing evidence of spread are rapidly assessed.

The breakdown of cases by local authority is:

- Barnet: 2
- Bexley: 1
- Brentwood: 1
- Buckinghamshire: 2
- Camden: 2
- Chiltern: 1
- Haringey: 1
- Lambeth: 1
- Lancaster: 1
- Lewisham: 2
- Liverpool: 1
- Newham: 1
- North Norfolk: 1
- Nottingham: 1
- Oxfordshire: 1
- South Cambridgeshire: 1
- South Northamptonshire: 2
- Spelthorne: 1
- Sutton: 1
- Three Rivers: 1
- Wandsworth: 1
- Westminster: 3

Wednesday 1 December

A further 9 cases of Omicron variant confirmed

The UK Health Security Agency (UKHSA) has identified 9 further cases of coronavirus (COVID-19) with mutations consistent with B.1.1.529 in England, in addition to the previous 13 confirmed cases of the SARS-CoV-2 variant known as B.1.1.529. The total number of confirmed cases in England is now 22.

The individuals that have tested positive and their contacts are all isolating. Work is underway to identify any links to travel to Southern Africa. We have now identified cases in the East Midlands, East of England, London, South East and North West. UKHSA is carrying out targeted testing at locations where the positive cases were likely to be infectious.

A further case has been identified in Scotland, bringing the total to 10.

Dr Jenny Harries, Chief Executive of UKHSA, said:

> We are continuing our efforts to understand the effect of this variant on transmissibility, severe disease, mortality, antibody response and vaccine efficacy.
>
> Vaccination is critical to help us bolster our defences against this new variant – please get your first, second, third or booster jab without delay.
>
> Following the change in JCVI advice earlier this week, a booster dose for everyone over 18 years is now recommended and will be available at a minimum of 3 months from your last primary course jab. Please take up this offer as soon as you are eligible to protect yourself, your families and your communities.
>
> Please make sure to wear a mask in line with government guidance, including on public transport and in shops, to help break the chains of transmission and slow the spread of this new variant.
>
> It is very likely that we will find more cases over the coming days as we are seeing in other countries globally and as we increase case detection through focused contact tracing. That's why it's critical that anyone with COVID-19 symptoms isolates and gets a PCR test immediately.

UKHSA has updated its stay at home guidance and non-household contacts guidance to reflect changes to self-isolation requirements for contacts of people who have been identified as a suspected or confirmed case of the Omicron variant of COVID-19.

UKHSA is acting to get scientific information available as quickly as possible in order to inform the right balance of interventions to prevent transmission and protect lives. This will include analysing live samples of the new variant in our laboratories to investigate properties such as response to current vaccines.

As viruses mutate often and at random, it is not unusual for small numbers of cases to arise featuring new sets of mutations. Any variants showing evidence of spread are rapidly assessed.

The breakdown of cases by local authority is:

- Barnet: 2
- Bexley: 1
- Brentwood: 1
- Buckinghamshire: 1
- Camden: 2
- Haringey: 1

- Lancaster: 1
- Lewisham: 2
- Liverpool: 1
- Newham: 1
- North Norfolk: 1
- Nottingham: 1
- South Cambridgeshire: 1
- Sutton: 1
- Three Rivers: 1
- Wandsworth: 1
- Westminster: 3

Tuesday 30 November 2021

Further 8 cases of Omicron variant confirmed

The UK Health Security Agency (UKHSA) has identified 8 further cases of COVID-19 with mutations consistent with B.1.1.529 in England, in addition to the previous 5 confirmed cases of the SARS-CoV-2 variant known as B.1.1.529. The total number of confirmed cases in England is now 13.

The individuals that have tested positive and their contacts are all isolating. Work is underway to identify any links to travel to Southern Africa. We have now identified cases in the East Midlands, East of England, London and North West. UKHSA is carrying out targeted testing at locations where the positive cases were likely to be infectious.

Nine cases have also been identified in Scotland, with 5 cases in the Lanarkshire area and 4 in the Greater Glasgow and Clyde area.

Dr Jenny Harries, Chief Executive of UKHSA, said:

> We are continuing our efforts to understand the effect of this variant on transmissibility, severe disease, mortality, antibody response and vaccine efficacy.
>
> Vaccination is critical to help us bolster our defences against this new variant – please get your first, second, third or booster jab without delay.
>
> Following the change in Joint Committee on Vaccination and Immunisation (JCVI) advice yesterday, a booster dose for everyone over 18 years is now recommended at a minimum of 3 months from your last primary course jab. Please take up this offer as soon as you are invited to protect yourself, your families and your communities.
>
> Please make sure to wear a mask in line with government guidance, including on public transport and in shops, to help break the chains of transmission and slow the spread of this new variant.
>
> It’s very likely that we will find more cases over the coming days

> as we are seeing in other countries globally and as we increase case detection through focused contact tracing. That's why it's critical that anyone with COVID-19 symptoms isolates and gets a PCR test immediately.

UKHSA is acting to get scientific information available as quickly as possible in order to inform the right balance of interventions to prevent transmission and protect lives. This will include analysing live samples of the new variant in our laboratories to investigate properties such as response to current vaccines.

As viruses mutate often and at random, it is not unusual for small numbers of cases to arise featuring new sets of mutations. Any variants showing evidence of spread are rapidly assessed.

Background

The breakdown of cases by local authority is:

- Barnet: 2
- Brentwood: 1
- Camden: 2
- Haringey: 1
- Liverpool: 1
- North Norfolk: 1
- Nottingham: 1
- Sutton: 1
- Wandsworth: 1
- Westminster: 2

Monday 29 November 2021

A further 2 cases of Omicron variant confirmed

The UK Health Security Agency (UKHSA) has identified 2 further cases of COVID-19 with mutations consistent with B.1.1.529 in England, in addition to the previous 3 confirmed cases of the SARS-CoV-2 variant known as B.1.1.529 on 27 and 28 November. The total number of confirmed cases in England is now 5.

The individuals that have tested positive are not connected to each other and are not linked to the previously confirmed cases. Both have links to travel to Southern Africa. One case is located in Camden, London, and one case is located in Wandsworth, London. The individuals and their households have been told to self-isolate. UKHSA is carrying out targeted testing at locations where the positive cases were likely to be infectious.

Six cases of the SARS-CoV-2 variant known as B.1.1.529 have also been identified in Scotland, with 4 cases in the Lanarkshire area and 2 in the Greater Glasgow and Clyde area.

Dr Jenny Harries, Chief Executive of UKHSA, said:

> We are continuing our efforts to understand the effect of this variant on transmissibility, severe disease, mortality, antibody response and vaccine efficacy.
>
> Vaccination is critical to help us bolster our defences against this new variant – please get your first, second or booster jab without delay.
>
> The guidance on vaccination is changing to help all of us bolster our defences in the face of this new variant. Everyone should complete a primary course as soon as possible – for most this will be a first and second dose. For some more vulnerable a third dose is available.
>
> Following the change in JCVI advice today, a booster dose for everyone over 18 years is now recommended and will be available at a minimum of 3 months from your last primary course jab. Please take up this offer as soon as you are eligible to protect yourself, your families and your communities.
>
> It is very likely that we will find more cases over the coming days as we are seeing in other countries globally and as we increase case detection through focused contact tracing. That's why it's critical that anyone with COVID-19 symptoms isolates and gets a PCR test immediately.
>
> UKHSA is acting to get scientific information available as quickly as possible in order to inform the right balance of interventions to prevent transmission and protect lives. This will include analysing live samples of the new variant in our laboratories to investigate properties such as response to current vaccines.

As viruses mutate often and at random, it is not unusual for small numbers of cases to arise featuring new sets of mutations. Any variants showing evidence of spread are rapidly assessed.

Sunday 28 November 2021

A further case of Omicron variant confirmed

Following the first 2 confirmed cases of the SARS-CoV-2 variant known as B.1.1.529 on 27 November, the UK Health Security Agency (UKHSA) has identified one further case of COVID-19 with mutations consistent with B.1.1.529 in the UK.

The individual tested positive after travel to the UK and is linked to travel to Southern Africa. The individual is no longer in the UK, but UKHSA is carrying out targeted testing at locations where the positive case visited when they were likely to have been infectious. While in the UK, the individual was in Westminster, London.

Dr Jenny Harries, Chief Executive of UKHSA, said:

> Our advanced sequencing capabilities enable us to find variants and take rapid action to limit onward spread. It is very likely that we will find more cases over the coming days as we are seeing in other countries globally and as we increase case detection through focussed contact tracing.
>
> We are continuing our efforts to understand the effect of this variant on transmissibility, severe disease, mortality, antibody response and vaccine efficacy.
>
> It’s critical that anyone with COVID-19 symptoms isolates and gets a PCR test immediately.
>
> Vaccination is critical to help us bolster our defences against this new variant – please get your first, second or booster jab without delay. Wear a mask in crowded places, including public transport and shops, to ensure we all help break the chains of transmission and slow the spread of this new variant.

UKHSA designated variant B.1.1.529 as a variant under investigation (VUI) on Thursday 25 November. It was designated a variant of concern (VOC) on Saturday 27 November.

The B.1.1.529 variant includes a large number of spike protein mutations as well as mutations in other parts of the viral genome. These are potentially biologically significant mutations which may change the behaviour of the virus with regards to vaccines, treatments and transmissibility.

UKHSA, in partnership with scientific bodies across the globe, is constantly monitoring the status of SARS-CoV-2 variants as they emerge and develop worldwide. We are particularly grateful to health protection specialists and the government of South Africa for early sharing of local information on the omicron variant in an exemplary way to support global health security.

UKHSA is acting to get scientific information available as quickly as possible in order to inform the right balance of interventions to prevent transmission and protect lives. This will include analysing live samples of the new variant in our laboratories to investigate properties such as response to current vaccines.

As viruses mutate often and at random, it is not unusual for small numbers of cases to arise featuring new sets of mutations. Any variants showing evidence of spread are rapidly assessed.

Friday 26 November 2021

The UK Health Security Agency (UKHSA) has announced the emerging SARS-CoV-2 variant known as B.1.1.529 as a variant under investigation (VUI).

The first genomes of this variant were uploaded to the international GISAID database on 22 November. Genomes have now been uploaded from South Africa, Botswana and Hong Kong but the extent of spread is not yet determined. No

cases have been identified in the UK.

B.1.1.529 has a large number of mutations in the gene coding for the spike protein, and also in other parts of the viral genome. These are potentially biologically significant mutations which may change the behaviour of the virus with regards to immune escape, transmissibility or susceptibility to treatments, but this has not been proven. More investigation is required to fully determine the extent of these mutations' impact.

UKHSA is monitoring the situation closely, in partnership with scientific and public health organisations across the world.

UKHSA's most recent variant technical briefing can be found on GOV.UK.

Friday 22 October 2021

Delta sub-lineage AY.4.2 designated as a variant under investigation by UK Health Security Agency

The Delta variant sub-lineage known as Delta AY.4.2 was designated a variant under investigation (VUI) by the UK Health Security Agency (UKHSA) on 20 October 2021 and has been given the official name VUI-21OCT-01.

The designation was made on the basis that this sub-lineage has become increasingly common in the UK in recent months, and there is some early evidence that it may have an increased growth rate in the UK compared to Delta. More evidence is needed to know whether this is due to changes in the virus' behaviour or to epidemiological conditions.

The genome of VUI-21OCT-01 does not have many mutations compared to Delta. However, a small change may be enough to cause a difference in the virus properties in some circumstances. UKHSA is monitoring this closely.

The original Delta variant remains overwhelmingly dominant in the UK, making up approximately 99.8% of all cases. As of 20 October, there were 15,120 cases of VUI-21OCT-01 confirmed by whole genome sequences in England since it was first detected in July. In the last week, VUI-21OCT-01 accounted for approximately 6% of all Delta cases. Cases have been confirmed through whole genome sequencing in all 9 regions of England.

While evidence is still emerging, so far it does not appear this variant causes more severe disease or renders the vaccines currently deployed any less effective. As is routine for any new variants under investigation, UKHSA is carrying out laboratory and epidemiological investigations to better understand the properties of this variant.

Dr Jenny Harries, Chief Executive of the UK Health Security Agency, said:

> Viruses mutate often and at random, and it is not unexpected that new variants will continue to arise as the pandemic goes on, particularly while the case rate remains high. It is testament to the diligence and scientific expertise of my colleagues at UKHSA,

> and the genomic sequencing capacity developed through the pandemic, that this new variant has been identified and analysed so quickly. However, it should serve as objective evidence that this pandemic is not over.
>
> The public health advice is the same for all current variants. Get vaccinated and, for those eligible, come forward for your third or booster dose as appropriate as soon as you are called. Continue to exercise caution. Wear a mask in crowded spaces and, when meeting people indoors, open windows and doors to ventilate the room. If you have symptoms take a PCR test and isolate at home until you receive a negative result.

UKHSA continues to examine all available data relating to SARS-CoV-2 variants in the UK and abroad. We constantly assess the genetic diversity within the known variants of concern (VOCs) to inform our ongoing public health response to the pandemic. New sub-lineages within Delta continue to be identified. This is to be expected and UKHSA is monitoring the situation closely.

Friday 1 October 2021

UK Health Security Agency (UKHSA) has published variant technical briefing 24.

UKHSA releases weekly updates on the number of confirmed new cases of variants of concern and variants under investigation identified in the UK.

Previous updates were published by Public Health England