Innovations to be tested on pioneering autonomous submarine

Tech start-ups, innovators and academics are being offered the chance to showcase and test their novel sensor and payload technology on the Royal Navy's first extra large autonomous test submarine.

The project offers a unique opportunity to undertake at-sea testing and trials of industry and academia innovative prototype technology on the pioneering Extra Large Uncrewed Underwater Vehicle (XLUUV) developed by MSubs Ltd through the first stage of the Developing the Royal Navy's Autonomous Underwater Capability programme with the Defence and Security Accelerator (DASA) and the Defence Science and Technology Laboratory (Dstl).

MOD will supply and support the XLUUV to allow for technology to be fitted and integrated, trials to be planned and carried out, and equipment removal. In addition, up to £20k will be made available to innovators who are selected for this opportunity to cover travel and subsistence costs.

The XLUUV will be made available to test on-board systems, sensors and payloads required to support a range of scenarios to help develop the Royal Navy's understanding of the utility and operational boundaries of uncrewed underwater vehicle systems.

Full scope and examples of sensor and enabling capabilities we are interested in can be found in the competition document.

The testing is not intended at this point to lead to a procurement of sensors or payloads.

The main aim of this activity is to help the Royal Navy shape future requirements and design future capabilities and concepts of operation whilst providing innovators in industry and academia the opportunity to develop and test technology aligned to this future capability.

We are seeking novel solutions which might be prototypes (above Technical Readiness Level (TRL) 4) or commercial off-the-shelf (COTS) products adapted for novel use, which can be integrated with the XLUUV.

Those wishing to take part need to submit an initial one-page pitch via the DASA online submission service by midday on 8 March.

A panel of experts from the Royal Navy, Dstl and MSubs will review the pitches. Organisations will then be invited to submit a full proposal before 13 April 2021 at midday (BST).

A series of pre-bookable one-to-one sessions with the project team are available on March 2 and March 16.

Register here for 2 March 2021 (closing date Friday 26 Feb at 6pm).

Register here for 16 March 2021 (closing date Friday 12 March at 6pm)

MSubs Ltd, a Plymouth-based small and medium sized business, was previously awarded £1m to develop the test submarine.

UK Foreign Secretary condemns politically motivated charges against Aung San Suu Kyi

Press release

The UK has condemned the charges against Aung San Suu Kyi in a court hearing in Myanmar today and calls for her immediate release.

Foreign Secretary Dominic Raab said:

> The charges against Aung San Suu Kyi are politically motivated, and the latest example of the Myanmar military undermining democratically elected politicians. Aung San Suu Kyi and all other elected politicians arbitrarily held must be released immediately.
>
> The UK and likeminded nations will not ignore these violations. We will ensure those responsible are held to account.

Published 16 February 2021

New technology to help identify those at high risk from COVID-19

- New predictive risk model to help clinicians identify adults with multiple risk factors that make them more vulnerable to COVID-19
- Over 800,000 adults will now be prioritised to receive a vaccine as part of the current vaccination cohorts
- Research is developed by subgroup of NERVTAG, led by the University of Oxford and funded by the National Institute for Health Research (NIHR)

New technology has been introduced in England to help clinicians identify, for the first time, a new group of people who may be at high risk from COVID-19. Over 800,000 adults will now be prioritised to receive a vaccine as part of the current vaccination cohorts.

The technology analyses a combination of risk factors based on medical records, to assess whether somebody may be more vulnerable than was previously understood, helping clinicians provide vaccination more quickly to them and ensuring patients can benefit from additional advice and support.

This assessment is made possible today for the first time thanks to new technology and emerging evidence about the impact of COVID-19 on different groups and who could be most vulnerable – which means further steps can be taken to protect those most at risk.

The research, commissioned by England's Chief Medical Officer Chris Whitty and funded by the National Institute of Health Research, found there are several health and personal factors, such as age, ethnicity and body mass index (BMI), as well as certain medical conditions and treatments, which, when combined, could mean someone is at a higher risk from COVID-19.

The University of Oxford turned their research into a risk-prediction model called QCovid®, which has been independently validated by the Office for National Statistics (ONS) and is thought to be the only COVID-19 risk prediction model in the world to meet the highest standards of evidence and assurance.

NHS Digital used the University of Oxford's model to develop a population risk assessment. The risk assessment uses the model to predict on a population basis whether adults with a combination of risk factors may be at more serious risk from COVID-19, enabling them to be flagged to clinicians for priority access to vaccination, alongside appropriate advice and support. These individuals will be added to the Shielded Patient List on a precautionary basis and to enable rapid vaccination.

The research to develop and validate the model is published in the British Medical Journal along with the underlying model for transparency. Additional code underpinning the QCovid® model will be made available openly by the University of Oxford within a month. As our scientific understanding of the

virus develops, we can update the model.

Up to 1.7 million patients have been identified. Those within this group who are over 70 will have already been invited for vaccination and 820,000 adults between 19 and 69 years will now be prioritised for a vaccination.

The patients identified through the risk assessment will be sent a letter from NHS England in the coming days explaining that their risk factors may help identify them as high clinical risk and that they are included within the support and advice for the clinically extremely vulnerable. They will be invited to receive a COVID-19 vaccine as soon as possible if they have not already had the jab, and will be given advice on precautionary measures, including shielding where this is current advice. Their GPs are also being notified.

Deputy Chief Medical Officer for England Dr Jenny Harries said:

> For the first time, we are able to go even further in protecting the most vulnerable in our communities.
>
> This new model is a tribute to our health and technology researchers. The model's data-driven approach to medical risk assessment will help the NHS identify further individuals who may be at high risk from COVID-19 due to a combination of personal and health factors.
>
> This action ensures those most vulnerable to COVID-19 can benefit from both the protection that vaccines provide, and from enhanced advice, including shielding and support, if they choose it.

Sarah Wilkinson, Chief Executive of NHS Digital said:

> I'm very pleased that NHS Digital has been able to deliver the platform to allow the QCovid® model to be used to identify individuals vulnerable to COVID-19 as a result of combinations of clinical risk factors and personal characteristics.
>
> This extends the work we did last year to develop the Shielded Patients List, which included individuals with one of a number of specific clinical conditions.
>
> It is a privilege to be able to support the Chief Medical Officer and his team in their quest to deliver the most sophisticated COVID-19 risk prediction capability.

The independent validation from the ONS is considered the 'gold standard' in quality assurance. The ONS has shown that the model performs in the 'excellent' range, and accurately identifies patients at highest risk from COVID-19. This shows the model is robust and meets the highest standards of

evidence.

Lead researcher Professor Julia Hippisley-Cox, a general practitioner and Professor of Clinical Epidemiology and General Practice at University of Oxford's Nuffield Department of Primary Care Health Sciences, said:

> The QCovid® model, which has been developed using anonymised data from more than 8 million adults, provides nuanced assessment of risk by taking into account a number of different factors that are cumulatively used to estimate risk, including ethnicity.
>
> The research to develop and validate the model is published in the British Medical Journal along with the underlying model for transparency.
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> This will be updated to take account of new information as the pandemic progresses.
>
> I'm delighted that less than a year after being funded by the NIHR, the model is now being used to help protect people at most risk from COVID-19.

A Royal College of Physicians spokesperson said:

> The adoption of this risk-assessment model by the NHS will play an important role in supporting clinicians and patients with conversations about COVID-19 and enable decisions to be made with a greater understanding of personal risk.
>
> As with all research during the pandemic, we are constantly learning and so can continue to further enhance the model as data becomes available.
>
> We look forward to providing continued feedback and views from clinicians to support its ongoing development.

The government is also extending the current shielding guidance for all those already identified as clinically extremely vulnerable and new patients identified through the QCovid® model until 31 March. Those already on the Shielded Patient List will receive an update letter this week to inform them of the extension.

During this national lockdown, we are advising all clinically extremely vulnerable people to follow shielding guidance.

As soon as an individual is flagged as potentially clinically extremely vulnerable by NHS Digital's COVID-19 population risk assessment, they will be sent a letter outlining how they have been identified, that they are being added to the Shielded Patient List as a precautionary measure, and

highlighting additional guidance to support them.

We will also be issuing letters by email for those who have registered an email address with their GP practice.

For most, they will be have been identified as high risk because they have a combination of underlying health conditions or are undergoing specialist treatment and they may be able to discuss this when they get their vaccination.

As a result of their addition to the high-risk group, patients will receive a letter inviting them for vaccination as soon as possible.

Patients can speak to their GP or specialist clinician if they have questions as to why they have been added to the Shielded Patient List, or if they feel they should no longer be identified as clinically extremely vulnerable. GPs and specialist clinicians will be able to make their own assessment of an individual based on their clinical knowledge and are able to add and remove individuals from the Shielded Patient List.

For now, there will be no changes to the existing list of medical conditions used to identify individuals who may be clinically extremely vulnerable to COVID-19. This list is agreed by the 4 UK Chief Medical Officers on the basis of the latest available evidence.

The research underpinning this work was published in the British Medical Journal on 20 October 2020.

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Confirmed cases of COVID-19 variants identified in UK

Latest update

Public Health England (PHE) has published variant technical briefing 23.

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

Previous

Thursday 2 September

Public Health England (PHE) has published variant technical briefing 22.

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Friday 20 August

Public Health England (PHE) has published variant technical briefing 21.

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

Friday 6 August

Public Health England (PHE) releases weekly updates on the number of confirmed new cases of variants of concern and variants under investigation identified in the UK.

PHE has today published the latest variant technical briefing. It shows that Delta is still overwhelmingly dominant across the UK, accounting for approximately 99% of cases. The briefing includes updated hospitalisation data for Delta, which shows that in the period since the last update on 19

July, 1,467 people were hospitalised with cases of Delta confirmed by sequencing or genotyping. Of these, 808 (55.1%) were unvaccinated, while 512 (34.9%) had received both doses of the vaccine. While vaccines provide high levels of protection, they are not 100% effective and will not stop everyone catching COVID-19. As more of the population gets vaccinated, we will see a higher relative percentage of vaccinated people in hospital.

The Technical Briefing also includes some initial findings which indicate that levels of virus in those who become infected with Delta but have already been vaccinated may be similar to levels found in unvaccinated people. This may have implications for people's infectiousness, whether they have been vaccinated or not. However, this is early exploratory analysis and further targeted studies are needed to confirm whether this is the case.

PHE has also published the risk assessment on VUI-21JUL-01, also known as B.1.621. VUI-21JUL-01 was designated a variant under investigation (VUI) on 21 July, based on apparent spread into multiple countries, as well as importation to the UK and mutations of concern, which include E484K, N501Y and K417N. These mutations have also been detected in other variants under investigation (VUIs) and variants of concern (VOCs). As of 4 August 2021, there were 37 confirmed VUI-21JUL-01 cases in England. Cases have been detected across 6 English regions, with most cases in London. Cases have also been reported in several other countries.

There is preliminary laboratory evidence to suggest that vaccination and previous infection may be less effective at preventing infection with VUI-21JUL-01. However, this data is very limited and more research is required. There is no evidence to suggest that VUI-21JUL-01 is more transmissible than the dominant Delta variant.

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

> The latest hospitalisation figures show once again how important it is that we all come forward to receive both doses of the vaccine as soon as we are able to do so. Vaccination is the best tool we have in keeping ourselves and our loved ones safe from the serious disease risk COVID-19 can pose.
>
> However, we must also remember that the vaccines do not eliminate all risk: it is still possible to become unwell with COVID-19 and infect others. It is still vital that we exercise caution, particularly while cases are high. Remember that meeting outdoors is safer than indoors, isolate if you are told to by NHS Test and Trace, and if you show symptoms stay home and get a PCR test as soon as possible. It is so important that we all continue to play our part.

Friday 23 July

Public Health England (PHE) releases weekly updates on the number of

confirmed new cases of variants of concern and variants under investigation identified in the UK.

PHE's weekly COVID-19 variant cases data shows that numbers of confirmed cases of the Delta (VOC-21APR-02) variant in the UK have risen by 33,716 since last week to a total of 286,765. Of these, 45 are the Delta AY.1 sub lineage. The Delta variant currently accounts for approximately 99% of cases across the UK.

PHE has also published the latest edition of the variant technical briefing. This includes updated hospitalisation data showing that between 21 June and 19 July, 1,788 people were admitted to hospital after testing positive for the delta variant. Of these, 970 (54.3%) were unvaccinated, while 530 (29.6%) had received both doses of the vaccine. In total, 3,692 people have been hospitalised with the Delta variant, of whom 2,152 (58.3%) were unvaccinated and 843 (22.8%) were fully vaccinated.

PHE has also published updated risk assessments for the Delta and Beta variants. The Delta risk assessment has been updated to reflect early signs of increased risk of reinfection with Delta compared to Alpha. Further investigations are being undertaken.

New variant under investigation

A further variant, B.1.621, was designated a variant under investigation (VUI) on 21 July 2021, having previously been designated a signal in monitoring. The new designation was made on the basis of early analysis of its genetic profile as well as its apparent international expansion and subsequent importation to the UK.

Sixteen confirmed cases of B.1.621 have been identified across the country to date, and the majority have been linked to overseas travel. There is currently no evidence of community transmission in the UK.

There is currently no evidence that this variant causes more severe disease or renders the vaccines currently deployed any less effective. PHE is carrying out laboratory testing to better understand the impact of mutations on the behaviour of the virus.

All appropriate public health interventions will be undertaken, including additional contact tracing and targeted testing. Where cases have been identified, additional follow-up of cases, testing of contacts and if required targeted case finding will be deployed to limit its spread.

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

> This most recent hospitalisation data shows once again just how crucial vaccination is in protecting us from severe illness and death. Two doses of vaccine are far more effective against COVID-19 than a single dose, so please make sure that you come forward to get your second dose as soon as you are invited.

> As we emerge from restrictions and vaccine coverage continues to rise, it is important to remember that while the protection provided by vaccination is excellent, it is not total. It is still as important as ever that we continue to exercise caution. Remember that meeting outside is safer than inside, get 2 doses of the vaccine as soon as you can, isolate if you are told to by NHS Test and Trace and if you show symptoms stay home and get a PCR test. COVID-19 has not gone away and we must all continue to play our part.

Friday 16 July

Public Health England (PHE) releases weekly updates on the number of confirmed new cases of variants of concern and variants under investigation identified in the UK.

PHE's weekly COVID-19 variant cases data shows that numbers of the Delta (VOC-21APR-02) variant in the UK have risen by 36,800 since last week to a total of 253,049. This represents a 17% increase. Of these, 45 are the Delta AY.1 sub lineage. The Delta variant currently accounts for approximately 99% of cases that are sequenced across the UK.

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

> Case rates are still high and rising, but it is encouraging that the increase in cases still does not appear to be associated with a similar increase in hospitalisations and deaths. This is testament to the continued success of the vaccination programme in reducing the incidence of severe disease.
>
> The best way to keep yourself and those around you safe is to get both doses of the vaccine as soon as you are eligible. However, while vaccines offer excellent protection, they do not completely eliminate risk. As we approach the end of restrictions, it is as important as ever that we continue to exercise caution. Take your free twice-weekly rapid tests and if you have symptoms, you should book a PCR test immediately and stay at home until you receive your result.

Friday 9 July

Public Health England (PHE) releases weekly updates on the number of confirmed new cases of variants of concern and variants under investigation identified in the UK.

PHE's weekly COVID-19 variant cases data shows that numbers of the Delta (VOC-21APR-02) variant in the UK have risen by 54,268 since last week to a total of 216,249. This represents a 32% increase. Of these, 44 are the Delta AY.1 sub lineage. The Delta variant currently accounts for approximately 99%

of cases that are sequenced across the UK.

PHE has also published an updated variant technical briefing today. It shows that secondary attack rates (the likelihood of an infection occurring in a given context) amongst household contacts of cases with Delta has continued to fall, and is estimated at 10.3% for exposure events in week commencing 7 June 2021. Despite this continued fall, secondary attack rates for both household and non-household contacts of cases with Delta remain higher than for Alpha.

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

> The data continues to show that the sharp increase in cases that we are seeing is not being followed by a similar increase in hospitalisation and death. This is because 2 doses of the available vaccines offer a high level of protection against the Delta variant. Getting both jabs is the best way to ensure you and the people you love remain safe, so we once again urge everyone to come forward as soon as they are eligible.
>
> As we approach the planned end of restrictions, we must remain cautious and careful. Cases are rising across the country, and whilst the vaccines offer excellent protection, they do not offer 100% protection. Be sensible, and follow 'hands, face, space, fresh air' at all times and make sure to get tested if required.

Friday 2 July

Public Health England (PHE) releases weekly updates on the number of confirmed new cases of variants of concern and variants under investigation identified in the UK.

PHE's weekly COVID-19 variant cases data shows that numbers of the Delta (VOC-21APR-02) variant in the UK have risen by 50,824 since last week to a total of 161,981. This represents a 46% increase. Of these, 42 are the Delta AY.1 sub lineage.

The Delta variant currently accounts for approximately 95% of cases that are sequenced across the UK.

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

> Cases across the UK continue to rise and it is incredibly important that we do not forget to be careful. The best thing we can do to protect ourselves and the people we love is to get the vaccine if eligible, get tested twice a week and practice 'hands, face, space, fresh air' at all times.
>
> Although cases are rising, we are not seeing a proportional rise in the number of people who are being admitted to hospital. The data

> suggest this is testament to the success of the vaccination programme so far and clearly demonstrates the importance of getting both doses of the vaccine. Come forward as soon as you are eligible. It will help us to break the chain of transmission, and it will save lives.

Friday 25 June

Public Health England (PHE) releases weekly updates on the number of confirmed new cases of variants of concern and variants under investigation identified in the UK.

Delta cases continue to rise across the UK

PHE's weekly COVID-19 variant cases data shows that numbers of the Delta (VOC-21APR-02) variant in the UK have risen by 35,204 since last week to a total of 111,157. This represents a 46% increase. Of these, 42 are the Delta AY.1 sub lineage. The Delta variant now accounts for approximately 95% of cases that are sequenced across the UK.

PHE has also published the new edition of the variant technical briefing which continues to show that the vaccines continue to have a crucial effect on hospitalisation and death.

An additional 514 people were admitted to hospital in England with a diagnosis of COVID-19 in the week up to 21 June. Of these, 304 were unvaccinated.

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

> Through the success of our vaccination programme, data suggest we have begun to break the link between cases and hospitalisations. This is hugely encouraging news, but we cannot become complacent. Two doses of vaccine are far more effective against COVID-19 than a single dose, so please make sure that you come forward to get your second dose as soon as you are invited.
>
> Whilst vaccines provide excellent protection, they do not provide total protection, so it is still as important as ever that we continue to exercise caution. Protect yourself and the people around you by working from home where possible, and by practising 'hands, face, space, fresh air' at all times.

New variant under investigation

A further variant, Lambda (C.37) has been designated as a variant under investigation (VUI) on 23 June due to international expansion and several notable mutations including L452Q and F490S. The World Health Organization (WHO) classified Lambda as a Variant of Interest on 14 June.

Six cases of Lambda have been identified across the country to date, all have been linked to overseas travel. The earliest documented sample was reported in Peru and Lambda has been sequenced in 26 countries to date.

There is currently no evidence that this variant causes more severe disease or renders the vaccines currently deployed any less effective. PHE is carrying out laboratory testing to better understand the impact of mutations on the behaviour of the virus.

All appropriate public health interventions will be undertaken, including additional contact tracing and targeted testing. Where cases have been identified, additional follow-up of cases, testing of contacts and if required targeted case finding will be deployed to limit its spread.

Issue affecting data collection

The Wellcome Sanger Institute is currently investigating an operational issue in the pre-sequencing process which caused potential cross-contamination of a number of positive COVID-19 samples and therefore a delay in retrieving sequencing results. However, these samples were PCR tested before they were transferred to the Sanger Institute meaning all citizens will have received their correct test result and positive cases will have already been contacted and asked to isolate.

As a result of this issue, around 12,000 samples have not been included in the total number published today, so this number of confirmed variants to date is likely to be an underestimate.

PHE scientists, together with experts from the Wellcome Sanger Institute, are reviewing this data to establish to what extent genomic information may be recoverable from those that were sequenced.

As well as whole genome sequencing, a new technology called genotype assays is being used in NHS Test and Trace laboratories to rapidly detect COVID-19 mutations that indicate a variant of concern (VOC). This means there is still VOC data available for health protection teams and other public health professionals, giving them the intelligence they need to monitor the spread of variants.

Friday 18 June

Public Health England (PHE) releases weekly updates on the number of confirmed new cases of variants of concern and variants under investigation identified in the UK.

Delta variant cases continue to rise

PHE's weekly COVID-19 variant cases data shows that numbers of the Delta (VOC-21APR-02) variant in the UK have risen by 33,630 since last week to a total of 75,953. The most recent data show 99% of sequenced and genotyped cases across the country are the Delta variant.

Data show an increased risk of hospitalisation with Delta compared to Alpha, although PHE's analysis shows that 2 doses of vaccine gives a high degree of protection against hospitalisation, estimated to be more than 90%.

According to PHE's latest variant technical briefing, as of 14 June, a total of 806 people have been hospitalised with the Delta variant, an increase of 423 since last week. Of these, 527 were unvaccinated, and only 84 of the 806 had received both doses.

PHE now publishes the number of deaths among people who have tested positive for Delta within the past 28 days. The case fatality rate remains low for Delta. However, deaths tend to happen some weeks after infection and the majority of cases were confirmed less than 28 days ago. It is therefore too early to judge the case fatality of Delta compared to Alpha or other variants.

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

> Cases are rising rapidly across the country and the Delta variant is now dominant. The increase is primarily in younger age groups, a large proportion of which were unvaccinated but are now being invited to receive the vaccine. It is encouraging to see that hospitalisations and deaths are not rising at the same rate but we will continue to monitor it closely. The vaccination programme and the care that we are all taking to follow the guidance are continuing to save lives.
>
> Please make sure that you come forward to receive both doses of the vaccine as soon as you are eligible. Don't drop your guard – practise 'hands, face, space, fresh air' at all times.

A breakdown of Delta variant cases by lower-tier local authority is available.

Friday 11 June

Public Health England (PHE) releases weekly updates on the number of confirmed new cases of variants of concern and variants under investigation identified in the UK.

Rapid genotyping test speeds up availability of Delta data as cases continue to rise

Novel genotyping tests are being used to detect the Delta (VOC-21APR-02) variant, giving a result for action within 48 hours. As cases of the variant continue to rise, the tests are helping to rapidly inform public health action.

Data from these tests is available for the first time this week, as PHE figures shows that cases have risen by 29,892 to 42,323.

The data indicates that over 90% of new COVID-19 cases in the UK are now the Delta variant, which continues to show a significantly higher rate of growth compared to the Alpha variant.

Positive tests identified through genotyping are subsequently confirmed through whole genome sequencing and recent data have shown them to be extremely accurate in indicating a positive variant result. This allows earlier detection of trends and improved public health response. These results have been available to Health Protection Teams for several weeks and are already being used to develop local and national activities. Most recently, the tests allowed for the early identification of rising cases in areas including Greater Manchester and Lancashire, triggering a support package to control the variant in these areas.

New research from PHE suggests that the Delta variant is associated with an approximately 60% increased risk of household transmission compared to the Alpha variant. Growth rates for Delta cases are high across the regions, with regional estimates for doubling time ranging from 4.5 days to 11.5 days

With this variant now accounting for the overwhelming majority of new cases in the UK, it is encouraging to see that the increase in cases is not yet accompanied by a similarly large increase in hospitalisations. PHE will continue to monitor closely over the next few weeks, but the data currently suggest that the vaccination programme continues to mitigate the impact of this variant in populations who have high 2 dose vaccine coverage.

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

> With numbers of Delta variant cases on the rise across the country, vaccination is our best defence. If you are eligible, we urge you to come forward and be vaccinated. Remember that 2 doses provide significantly more protection than a single dose.
>
> However, while vaccination reduces the risk of severe disease, it does not eliminate it. With data showing that Delta is significantly more transmissible than Alpha, it is just as important as ever to follow public health advice, which has not changed. Get vaccinated, work from home where you can and remember ‘hands, face, space, fresh air’ at all times. These measures work, and they save lives.

Thursday 3 June

Public Health England (PHE) releases weekly updates on the number of confirmed new cases of variants of concern and variants under investigation identified in the UK.

Delta (VOC-21APR-02) variant now dominant in the UK

PHE’s weekly coronavirus (COVID-19) variant cases data shows that cases of

the Delta (VOC-21APR-02) variant in the UK have risen by 5,472 since last week to 12,431.

Although there is some regional variation, PHE experts now believe that Delta (VOC-21APR-02) has overtaken Alpha (VOC-20DEC-01) as the dominant SARS-CoV-2 variant in the UK.

Early evidence suggests there may be an increased risk of hospitalisation for Delta (VOC-21APR-02) compared to Alpha (VOC-20DEC-02) although more data is needed for us to have more confidence in that finding. This week, 278 people with the Delta (VOC-21APR-02) variant attended A&E, resulting in 94 people being admitted to hospital overnight. Last week, 201 people attended A&E, with 43 admissions. Once again, the majority of these had not been vaccinated.

The most affected areas remain Bolton, where cases have risen by 795 to 2149, and Blackburn with Darwen which has seen 368 new cases, bringing it to 724 in total. There are encouraging signs that the transmission rate in Bolton has begun to fall and that the actions taken by residents and local authority teams have been successful in reducing spread.

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

> With this variant now dominant across the UK, it remains vital that we all continue to exercise as much caution as possible. The way to tackle variants is to tackle the transmission of COVID-19 as a whole. Work from home where you can, and practise ‘hands, face, space, fresh air’ at all times.
>
> If you are eligible and have not already done so, please come forward to be vaccinated and make sure you get your second jab. It will save lives.

In Bolton, local teams have gone door to door in targeted areas on consecutive weekends to distribute test kits, share vital safety messages and encourage people to get the vaccine at a local drop-in centre. Take up of both testing and the vaccine has been positive.

Blackburn with Darwen has also seen local teams making door-to-door visits, and over 10,000 additional PCR tests have been given out. Mobile testing units have been deployed to the area and wastewater sampling continues, in order to track the spread of the variant.

PHE has also published a breakdown of outbreaks and clusters of variants in schools and other settings.

Outbreaks and clusters in primary and secondary schools are at low levels but we have seen a slight increase over recent weeks, in line with higher levels of the Delta (VOC-21APR-02) variant circulating in the community.

The latest PHE data suggest that there have been 97 confirmed COVID-19

outbreaks in primary and secondary schools that have had at least one variant case linked to them over the most recent 4-week period. This represents around 1 in 250 schools.

PHE's health protection teams continue to work with local authorities and schools to carry out surveillance of COVID-19 cases in schools to understand and reduce transmission in these settings.

PHE experts continue to urge everybody to remain cautious as the country approaches the next stage of the roadmap. Variant cases are on the increase in several areas and it is absolutely crucial that everyone plays their part in preventing their spread.

Thursday 27 May

Public Health England (PHE) releases weekly updates on the number of confirmed new cases of variants of concern and variants under investigation identified in the UK.

The dominant variant continues to be VOC-20DEC-01 (B.1.1.7) and PHE will continue to monitor all variants closely. The best way to stop the spread of the virus is to remember: hands, face, space and follow the restrictions in place.

Public health leaders urge caution in areas of high variant prevalence

PHE's latest weekly variant cases data shows that cases of VOC-21APR-02 have risen by 3,535 to 6,959 since last week.

The most affected areas continue to be Bolton, Bedford and Blackburn with Darwen, which have seen 1,354, 366 and 361 confirmed cases, respectively. There are small numbers of cases of VOC-21APR-02 in most parts of the country. PHE have published a full breakdown of VOC-21APR-02 cases by lower-tier local authority.

In some affected areas, hospitalisations are rising. Hospital attendances and admissions are predominantly in unvaccinated individuals, highlighting how crucial it is that people in these areas come forward to receive vaccination. Nationwide, up to 25 May, 201 people who were confirmed to have VOC-21APR-02 attended A&E, resulting in 43 admissions. These numbers will be updated with new sequencing results on a weekly basis.

Evidence shows that VOC-21APR-02 is likely to be more transmissible than the dominant B.1.1.7 'Kent' variant. Cases of VOC-21APR-02 have continued to grow faster than B.1.1.7 but an increase in overall cases of coronavirus (COVID-19) infections has only been seen in a small number of areas. PHE experts are monitoring the situation closely to establish how much more transmissible VOC-21APR-02 may be. It is crucial that everybody, particularly in the most affected areas, take particular care to remain responsible and vigilant.

A PHE study showed that 2 doses of vaccine offers high levels of protection against symptomatic disease from VOC-21APR-02. We expect the vaccines to be effective at preventing hospitalisation and death, so it is vital to get both doses to gain maximum protection against all existing and emerging variants.

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

> With cases of the variant first identified in India continuing to rise in some areas, we are urging people to be very cautious and follow the guidance on hygiene, face coverings, social distancing and meeting outdoors. We now know that getting both vaccine doses gives a high degree of protection against this variant and we urge everyone to have the vaccine when the NHS invites you.
>
> Please follow the public health advice and make sure that you remain careful, work from home if you can, meet people outside where possible and remember 'hands, face, space, fresh air' at all times. This is the best way to protect yourself and your loved ones from this variant.

In London, PHE is working across the health system and with borough council leaders in parts of the city where cases have been identified. A targeted approach is being used throughout the city, including Hounslow and other parts of west London, where dispersed clusters have been detected. This includes whole genome sequencing, PCR testing, settings-based testing, enhanced contact tracing, self-isolation support, and enhanced vaccine deployment to ensure that second doses for priority groups are brought forward and that maximum uptake is achieved for first doses.

In Bolton, the army working with RE:SILIENT visited over 4,000 houses, delivering over 1,500 test kits. This was in addition to the national surge team efforts, which saw over 9,000 properties visited and over 3,000 kits given out

In Blackburn with Darwen, enhanced vaccine uptake support has resulted in over 82% of registered patients in cohorts 1 to 10 receiving their first dose.

NHS Test and Trace have supplied more than 400,000 additional PCR test kits to the most affected areas to make sure that everyone who needs a test can get one.

In addition, over 190 existing test sites have been reassigned to provide PCR test kits in areas where VOC-21APR-02 prevalence is high. This means tests can be sequenced faster, so VOC-21APR-02 cases are found sooner.

Over 300 Mobile Testing Units (MTUs) have been deployed to provide PCR test kits for those without symptoms in high-prevalence areas, including to more than 35 schools so students, parents and staff can get a PCR test as quickly as possible.

National marketing support is in place to make sure that local communities are kept well informed about the situation in their area, how and where to get a test, and about any public health interventions, such as surge testing.

New Vvariant under investigation

A further variant, VUI-21MAY-02 (C.36.3), has been designated as a variant under investigation (VUI) on 24 May on the basis of the mutation profile and increased importation from a widening international area.

There have been 109 cases of VUI-21MAY-02 dispersed across the country to date. The C.36.3 variant was first detected in Thailand, in cases who had travelled from Egypt.

There is currently no evidence that this variant causes more severe disease or renders the vaccines currently deployed any less effective. PHE is carrying out laboratory testing to better understand the impact of the mutations on the behaviour of the virus.

All appropriate public health interventions will be undertaken, including additional contact tracing and targeted testing. Where cases have been identified, additional follow-up of cases, testing of contacts and if required targeted case finding will limit its spread.

More information will be available in variant technical briefing 13, which Public Health England will publish on Thursday 27 May.

Thursday 20 May

Further rise in VOC-21APR-02 detected and new VUI designated

Public Health England's (PHE) latest weekly variant cases data shows that cases of VOC-21APR-02 have risen by 2,111 to 3,424 since last week.

Cases are still predominantly affecting the North West of England – particularly Bolton – and London, but we are seeing clusters of cases across the country.

There is evidence that VOC-21APR-02 is growing rapidly and may be more transmissible than VOC-20DEC-01, the 'Kent variant' that is currently dominant in the UK. Experts at PHE are monitoring the situation closely.

In London, PHE is working in close partnership across the health system and with borough council leaders in parts of the city where cases have been identified. A targeted approach is being used throughout the city to target London's many small dispersed clusters. This includes whole genome sequencing, polymerase chain reaction (PCR) testing, settings-based testing, enhanced contact tracing, self-isolation support, and enhanced vaccine deployment to ensure that second doses for priority groups are brought forward and that maximum uptake is achieved for first doses.

In Bolton, more than 33,000 test kits have been given out as part of the surge testing programme, not including tests taken by residents visiting

Mobile Testing Units (MTU). Health officials visited more than 9,000 properties during door-to-door visits over the weekend, giving out over 3,400 test kits.

In Blackburn with Darwen and Sefton, targeted local testing is underway in response to the rise in VOC-21APR-02, including mobile and drive-through test centres being set up and pop-up tests sites in specific communities. New vaccination centres have opened to boost the delivery of vaccines and additional supply of first doses has been secured.

In total, more than 180,000 additional PCR test kits have been deployed to affected areas to make sure everyone who needs a test can get one, and over 170 existing test sites in those areas have been switched to provide PCR test kits – this means tests can be sequenced faster so variant cases are found sooner.

Over 150 MTUs have been deployed to provide PCR test kits for those without symptoms in the most affected areas.

NHS Test and Trace has activated marketing to let some local communities know if surge testing is happening in their area and to explain how, when and where to get their tests, and enhanced contact tracing is in place for all positive cases and their contacts in areas affected by VOC-21APR-02 to help identify and break any potential chains of transmission. All confirmed cases have been told to self-isolate and their contacts are being identified.

So far, more than 20,000 positive samples from the most affected areas have been analysed using the new genotype assay method. In parallel, the majority of positive samples undergo genome sequencing for definitive confirmation of the variant cases.

Wastewater monitoring has been increased in affected areas to help identify early warning signals of where variants may be present. Wastewater monitoring can detect the presence of variants in areas where it has not yet been detected through clinical testing. This allows us to notify local decision makers at an early stage so they can take early action to contain the spread of the virus. Where an outbreak has already been detected, wastewater monitoring can provide additional insights into its geographical spread.

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

> We are very grateful to those who have turned out in their thousands in Bolton to be vaccinated. As per advice from the Joint Committee on Vaccines and Immunisation (JCVI), we particularly urge anyone who is yet to have their second dose to make sure they come forward and take up the offer as soon as it is due.
>
> This is vitally important in the light of our current assessment that VOC-21APR-02 has grown rapidly in England and may be highly transmissible. PHE will continue to monitor all variants closely, paying particular attention to the impact on hospitalisations and deaths which will help us to understand the protective effects of

the vaccine.

The best way to halt the spread of any variant is to test regularly using lateral flow tests or using PCR if you have symptoms, and to isolate if you or someone in your household tests positive or if you have returned from an amber or red list country. You should continue to work from home where possible and remember that the virus is harder to spread outside.

There is currently no evidence to suggest the vaccines will be less effective in protecting people against severe illness and hospitalisation from VOC-21APR-02. It is highly likely that the vaccines offer significant protection against severe disease, hospitalisation and death, which is why it's vital to get both vaccine doses as soon as you are offered them. Further work is being rapidly carried out to understand more about the protection the vaccines offer, including impact on transmission.

Everyone in the country, and especially those in areas where a Variant of Concern is present in high rates, should take up the offer of twice-weekly testing.

Although some restrictions have eased, PHE continues to urge caution. Follow the public health advice, get your vaccine when offered it, and practise 'hands, face, space, fresh air'.

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

> As cases of VOC-21APR-02 continue to rise, it is absolutely vital that people living in areas where prevalence is high come forward to get the vaccine. It is the best defence we have against the spread of this disease.
>
> As we start to get back to normal life, it is very important that we do not become complacent. All of us need to remain responsible and vigilant. Get tested regularly, get the vaccine when offered it, and practise 'hands, face, space, fresh air'. It will save lives.

New variant under investigation

A further variant, VUI-21MAY-01, has been designated as a variant under investigation (VUI) by PHE.

The variant is from a lineage which was designated a signal in monitoring on 6 May 2021 based on an unusual mutation profile. PHE has been monitoring the variant since April.

There have been 49 cases of VUI-21MAY-01 across the country to date, mainly concentrated in Yorkshire and the Humber.

There is currently no evidence that this variant causes more severe disease

or renders the vaccines currently deployed any less effective. PHE is carrying out increased laboratory testing to better understand the impact of the mutations on the behaviour of the virus.

All appropriate public health interventions are being undertaken, including additional contact tracing and targeted testing. Where cases have been identified, additional follow-up of cases, testing of contacts and targeted case finding will limit the spread of variants.

If you have symptoms of COVID-19 you should seek a PCR test as soon as possible. If you are tested positive then you and your household must stay at home and not leave the house for any reason for 10 days.

More information will be available in variant technical briefing 12, which Public Health England will publish on Friday 21 May.

Thursday 13 May

Public Health England (PHE) releases weekly updates on the number of confirmed new cases of variants of concern and variants under investigation identified in the UK.

The dominant variant continues to be VOC-20DEC-01 (B.1.1.7) and PHE will continue to monitor all variants closely. The best way to stop the spread of the virus is to remember: hands, face, space and follow the restrictions in place.

Further rise in VOC-21APR-02 cases detected

The latest PHE data show cases of the Variant of Concern, VOC-21APR-02, first detected in India, have risen from 520 to 1,313 cases this week in the UK. The variant was confirmed as a Variant of Concern on 7 May after a rise in cases and evidence of spread in some areas. PHE is actively monitoring the impact of this variant and its severity and is taking all appropriate public health actions to limit the spread.

Cases and clusters are being rapidly investigated to identify close contacts of those who test positive, encourage testing uptake and to ensure that people self-isolate when required. These measures, implemented by PHE health protection teams, NHS Test and Trace and local authorities, are the most effective way of breaking the chains of transmission. Additional control measures, including targeted case finding, will be implemented where there is evidence of increased spread and investigations are underway in specific settings to investigate clusters and outbreaks.

More than 60,000 additional PCR test kits have been distributed so far as part of ongoing surge testing activity for VOC-APR21-02, with cases and close contacts traced and asked to isolate. To find any new cases of the variant, over 150 existing test sites and 10 schools have distributed test kits, with 133 Mobile Testing Units deployed to provide PCR testing for people without symptoms.

Across the North West, significant work is underway with local councils and partners in specific areas where variant cases have been identified. In Bolton mobile testing units have been deployed and door to door PCR testing has been offered to 22,000 residents. A vaccine bus has been established in the heart of the community to increase vaccine uptake as part of a wider drive.

In London, PHE is working in close partnership across the health system and with borough councils in parts of the city where cases have been identified. PCR testing, whole genome sequencing and enhanced contact tracing are being used throughout the city to target the many small dispersed clusters. Taking this community-led approach has already proved effective in reducing transmission of variants in London to date.

Dr Susan Hopkins, COVID-19 Strategic Response Director at PHE, said:

> Cases of this variant are rising in the community and we are continuously monitoring its spread and severity to ensure we take rapid public health action. We need to act collectively and responsibly to ensure that variants do not impact on the progress we have all made to drive down levels of Covid-19 and the increased freedom that brings. That means you should pay attention to and act on the local health advice in your area. Testing and isolating when required not only limits spread, it helps us to better understand how the variant behaves in the community which is vital to taking effective and proportionate action moving forward.
>
> If you’re asked to take a test please do. The way to limit the spread of all variants is the same. Keep your distance, wash your hands regularly and thoroughly, cover your nose and mouth when inside, keep buildings well ventilated and meet people from other households outside.

PHE is asking the public to continue to:

- work from home where you can
- follow the current guidance on mixing with others
- take up the universal, free offer of twice weekly LFDs tests
- if positive, order a confirmatory PCR test kit and stay at home
- get vaccinated when you are called to do so

The other variants first detected in India, VUI-21APR-01 and VUI-21APR-03 have not been re-designated as VOCs, but this will be kept under constant review.

Following close monitoring, one variant under investigation VUI-21MAR-01, which includes the spike mutations E484K and N501Y, is now considered provisionally extinct in the UK. Designated a variant under investigation on 4 March, the contacts of confirmed cases were traced and followed public health advice to isolate. PHE defines a variant as provisionally extinct after 12 weeks without detection although we continue to monitor to see if

they reappear.

Thursday 7 May

Public Health England (PHE) releases weekly updates on the number of confirmed new cases of variants of concern and variants under investigation identified in the UK.

The dominant variant continues to be VOC-20DEC-01 (B.1.1.7) and PHE will continue to monitor all variants closely. The best way to stop the spread of the virus is to remember: hands, face, space and follow the restrictions in place.

VUI-21APR-02 reclassified as a Variant of Concern (VOC)

Following a rise in cases in the UK and evidence of community transmission, PHE has reclassified VUI-21APR-02 (B.1.617.2, classified as a variant under investigation (VUI) on 28 April) as a Variant of Concern (VOC), now known as VOC-21APR-02.

This is based on evidence which suggests this variant, first detected in India, is at least as transmissible as B.1.1.7 (the Kent variant). The other characteristics of this variant are still being investigated.

There is currently insufficient evidence to indicate that any of the variants recently detected in India cause more severe disease or render the vaccines currently deployed any less effective. PHE is carrying out laboratory testing, in collaboration with academic and international partners to better understand the impact of the mutations on the behaviour of the virus.

Cases of VOC-21APR-02 have increased to 520 from 202 over the last week and almost half the cases are related to travel or contact with a traveller. The cases are spread across the country, however, the majority of the cases are in 2 areas – the North West (predominantly Bolton) and London – and this is where we are seeing the greatest transmission.

PHE health protection teams are working with local authorities, Directors of Public Health (DsPH) and NHS Test and Trace to detect cases and limit onward spread.

Surge and community testing is an effective way of finding and isolating new cases of variants and will be deployed where there is evidence of community transmission. This is in addition to the comprehensive work that is already underway to trace and test all contacts of cases.

Everyone in the affected areas will be asked to get a test, even if they don’t have symptoms. If someone tests positive, they must isolate to stop the spread.

In partnership with local DsPH, additional measures are being implemented across the country where there are clusters, to contain the spread. These include:

- enhanced contact tracing for those testing positive with a VOC to define locations they may have acquired or transmitted infection to focus further testing
- enhanced community and surge testing in areas defined by the local authorities and regional teams
- working closely with communities and community leaders to ensure that individuals have the right support to test and isolate
- increased community engagement, including ensuring that messages are accessible in languages that are used by communities and provided by trusted community representatives

Where clusters of other VOCs are detected, PHE will continue to take all appropriate public heath action to break the chains of transmission.

Understanding how this virus behaves in the community is key to assessing its transmissibility, severity and whether it responds to the vaccines currently in use, all of which help to determine the risk to the public from this variant. While overall rates of COVID-19 remain low, there are actions that everyone can take to reduce spread.

PHE is encouraging the public to continue to:

- work from home where you can
- follow the current guidance on mixing with others
- take up the universal, free offer of twice weekly LFDs tests
- if positive, order a confirmatory PCR test kit and stay at home
- get vaccinated when you are called to do so

Dr Susan Hopkins, COVID-19 Strategic Response Director at PHE, said:

> The way to limit the spread of all variants is the same and although we are all enjoying slightly more freedom, the virus is still with us. Keep your distance, wash your hands regularly and thoroughly, cover your nose and mouth when inside and keep buildings well ventilated and meet people from other households outside. If you are told to get a test, if you have any symptoms at all or have been in contact with someone who has tested positive, please make sure you get tested too.
>
> We are monitoring all of these variants extremely closely and have taken the decision to classify this as a Variant of Concern because the indications are that this VOC-21APR-02 is a more transmissible variant.

The current evidence suggests that the other variants detected in India, VUI-21APR-01 and VUI-21APR-03 are not VOCs, but this will be kept under constant review and investigations are ongoing into the reasons behind the different behaviours of these variants.

Previous

Thursday 29 April

Public Health England (PHE) releases weekly updates on the number of confirmed new cases of variants of concern and variants under investigation identified in the UK.

The dominant variant continues to be VOC-20DEC-01 (B.1.1.7) and PHE will continue to monitor all variants closely. The best way to stop the spread of the virus is to remember: hands, face, space and follow the restrictions in place.

Two VUIs added to B.1.617 group

Two variants have been designated Variants Under Investigation by PHE.

The 2 variants, VUI-21APR-02 and VUI-21APR-03, share the same parent lineage (B.1.617) as VUI-21APR-01, first identified in India. PHE has been monitoring these variants since early April.

VUI-21APR-01 was designated a variant under investigation in April. The variant is from the B.1.617 lineage – a distinct fingerprint of genetic mutations. We have also identified cases of 2 additional variants, which are part of the same lineage and so are genetically similar.

While closely related, their genetic profiles are different and have been designated as separate Variants Under Investigation so that we can track them properly and take fast public health action as needed.

VUI-21APR-02 does not have the mutation E484Q while VUI-21APR-03 shares the L452R and E484Q mutations found in VUI-21-APR-01.

There is currently no evidence that these variants cause more severe disease or render the vaccines currently deployed any less effective. PHE is carrying out increased laboratory testing, in collaboration with international partners to better understand the impact of the mutations on the behaviour of the virus and to ensure all appropriate public health interventions are taken.

Identified case numbers remain low and are geographically dispersed in England. Where cases have been identified, additional follow up of cases, testing of contacts and targeted case finding will be used to limit the spread of these variants.

PHE has identified:

- 172 cases of VUI-21APR-01
- 202 cases of VUI-21APR-02
- 5 cases of VUI-21APR-03

All appropriate public health interventions will be undertaken, including

additional contact tracing and targeted testing.

Thursday 15 April

New variant under investigation (VUI) designated

A new variant has been designated a variant under investigation (VUI) by PHE.

The variant, first detected in India, includes a number of mutations including E484Q, L452R, and P681R.

PHE has identified 77 cases of this variant in the UK and all appropriate public health interventions will be undertaken, including enhanced contact tracing.

This variant has been designated VUI-21APR-01. PHE and international partners continue to monitor the situation closely.

Tuesday 16 March

Two additional cases of Variant of Concern VOC-21JAN-02 (P.1) found in England

Two more cases of the Variant of Concern VOC-21JAN-02 (P.1) have been identified in England – one in the West Midlands and one in Haringey, London.

Both cases are linked with international travel to Brazil. The case in the West Midlands was identified following their arrival at Birmingham Airport, where they were tested and quarantined as part of the managed hotel quarantine process.

The London case was picked up through surge testing. Surge testing will be stepped up in the affected area, and contact tracing teams have undertaken a comprehensive investigation to identify any further contacts.

The latest cases bring the total number of P.1 variant cases in the UK to 12 – 9 in England and 3 in Scotland, all of which have links to travel or to a previously confirmed case that has travelled to Brazil.

New variant under investigation (VUI) designated

A new variant has been designated a variant under investigation (VUI) by Public Health England (PHE).

On 9 March, PHE noted a report of 33 cases of a new variant reported by the Philippines. The variant includes a number of notable mutations including E484K and N501Y, which are found in several other variants of concern.

PHE has identified 2 cases of this variant in England. One of the cases is linked with international travel and the other is currently under investigation. All appropriate public health interventions are being undertaken.

This variant has been designated VUI-21MAR-02 (P.3). PHE and international partners continue to monitor the situation closely.

Saturday 13 March

Four more cases of Variant of Concern VOC-202101/02 (P.1) found in England

Four more cases of the Variant of Concern VOC-202101/02, also known as P.1, have been identified in England – 3 in South Gloucestershire and one in Bradford, West Yorkshire.

The cases in South Gloucestershire are all close or household contacts of the 2 existing P.1 cases in the area. They were offered testing in response to the initial cases.

Specialist contact tracing teams have undertaken a comprehensive investigation to identify any further contacts and additional testing has been in place since the initial cases were identified.

The individual in Bradford tested positive for coronavirus (COVID-19) in late February after travelling back from Brazil via Paris on 14 February 2021. Subsequent genomic sequencing confirmed the case as the P.1 variant. Contact tracing teams have followed up close contacts of the individual and advised them to isolate and get a test.

The latest cases bring the total number of P.1 variant cases in the UK to 10 – 7 in England and 3 in Scotland, all of which have links to travel or to a previously confirmed case that has travelled to Brazil.

New variant under investigation (VUI) designated in UK

A new variant identified in the UK has been designated a variant under investigation (VUI) by PHE.

VUI-202103/01 (lineage B.1.324.1) was designated a VUI on 4 March after 2 cases were found in the South East of England in individuals who had recently travelled to Antigua. Despite the travel history of these cases there is no scientific evidence to determine where this variant first emerged.

The variant contains the spike mutations E484K and N501Y, both usually associated with variants of concern (VOC), however it does not feature specific deletions that would lead to a designation as a VOC.

Contact tracing teams have completed thorough investigations to identify and follow up any close contacts and no additional cases have been found to date.

Friday 5 March

Contact tracers successfully identify sixth case of P.1 Variant

of Concern

PHE and NHS Test and Trace teams have successfully located the third individual in England who tested positive for the P.1 Variant of Concern that originated in Manaus, Brazil.

Tracing teams narrowed their search to a small number of households in Croydon, South London, when an individual from the borough made themselves known by responding to calls made by specialist contact tracers.

NHS Test and Trace were then able to match the barcode from the individual's testing pack to the variant test result.

PHE is now carrying out enhanced contact tracing with the individual and other members of their household. The case had been in contact with an individual who travelled from Brazil in early February.

Although investigations are ongoing, current early indications are that all members of the household isolated for the correct amount of time after the traveller returned and after the case developed symptoms.

Doctor Fu-Meng Khaw, Strategic Response Director for PHE and Deputy Chief Medical Adviser for Test and Trace, said:

> The identification of this individual is the result of an enormous collaborative effort between specialist teams at NHS Test and Trace and Public Health England.
>
> Staff have been working around the clock to pursue every line of investigation and this is a fantastic result that enables us to fully investigate the circumstances around the case and reduce the risk of onward transmission.
>
> As an additional precaution, we're working closely with Croydon Council to put in place further testing in the area.
>
> We are continuing to monitor all variants closely and the best way to protect against all COVID-19 infections is to remember the basics of Hands, Face, Space.

Thursday 4 March

New variant under investigation designated in the UK

Sixteen cases of a new variant, VUI-202102/04 (lineage B.1.1.318), have been identified in the UK. The variant has been designated a variant under investigation (VUI) by Public Health England (PHE).

Cases of this variant, understood to have originated in the UK, were first identified on 15 February through genomic horizon scanning. All individuals who tested positive and their contacts have been traced and advised to

isolate.

Following assessments, the variant was designated a VUI on 24 February. It contains the E484K mutation, which is also found in 2 existing VUIs present in the UK, but does not feature the N501Y mutation, present in all variants of concern (VOCs).

The addition of this variant as a VUI means there are now a total of 4 VUIs and 4 VOCs currently being tracked in the UK.

Cases with no travel links

As of 3 March:

- a total of 59 cases of the variant VOC-202012/02, first detected in South Africa, have been found in England where no travel links could be established
- a total of 26 cases of the variant VUI-202101/01, the P2 variant first detected in Brazil, have been found in England where no travel links could be established

Previous

Tuesday 28 February

Cases of Variant of Concern first detected in Manaus identified in the UK

Up to 6 cases of the Variant of Concern first identified in Manaus, Brazil (P.1) have been detected in the UK. Public Health England (PHE) has identified 3 of these cases of the Variant of Concern in England.

Two of the cases in England are from one household in South Gloucestershire with a history of travel to Brazil and there is a third, currently unlinked case.

The cases in South Gloucestershire were rapidly followed up by the PHE Health Protection Team – cases and their contacts have been identified and retested. One case that had travelled to Brazil has been isolating at home with their household since returning to the UK.

PHE and NHS Test and Trace are following up with all passengers on Swiss Air flight LX318 travelling from Sao Paulo via Zurich and landing in London Heathrow on 10 February, to provide public health advice and test them and their households. Anyone who returned to the UK at that time should have gone home immediately from the airport and isolated for 10 days.

If you were a passenger on the flight and have not been contacted, please call 01174 503 174 to arrange a test for you and your household contacts.

Although the risk to the wider community is considered low, as a precaution, PHE, working in collaboration with South Gloucestershire Council and NHS Test

and Trace, is taking swift and decisive action to deploy surge asymptomatic testing as well as increasing sequencing of positive samples from the area. Residents of South Gloucestershire should visit the council's website for more information on testing. The most important actions are identifying cases and their contacts and supporting these individuals to isolate effectively.

Further investigation is underway regarding the third case in England. The individual did not complete their test registration card so follow-up details are not available. We are therefore asking for anyone who undertook a test on 12 or 13 February and hasn't received their result or has an uncompleted test registration card, to call 119 in England or 0300 303 2713 in Scotland for assistance as soon as possible.

The P.1 variant has been designated 'of concern' as it shares some important mutations with the variant first identified in South Africa (B.1.351), such as E484K and N501Y. It is possible that this variant may respond less well to current vaccines, but more work is needed to understand this.

Dr Susan Hopkins, PHE strategic response director for COVID-19 and NHS Test and Trace Medical Advisor, said:

> We have identified these cases thanks to the UK's advanced sequencing capabilities which means we are finding more variants and mutations than many other countries and are therefore able to take action quickly.
>
> The important thing to remember is that COVID-19, no matter what variant it is, spreads in the same way. That means the measures to stop it spreading do not change. Stay at home and if you do need to go out for essential reasons, cover your nose and mouth, wash your hands thoroughly and keep your distance.

We ask that individuals come forward for testing through the symptomatic and asymptomatic test sites across the countries in order to continue to drive down cases in the community.

Background

Three cases of the variant have also been identified in Scotland but these are not linked to these 3 cases in England.

Tuesday 16 February

Public Health England (PHE) has identified 38 cases of COVID-19 which genomic sequencing has shown to feature a specific set of mutations which are currently being referred to as lineage B.1.525. The set of mutations includes the E484K spike protein mutation, which is present on a number of other variants of concern and variants under investigation.

This variant has been designated a variant under investigation (VUI) and will be referred to as VUI202102/03.

The variant has been detected in other countries, including Nigeria, Denmark and Canada.

Cases are geographically dispersed across England. Enhanced contact tracing and genomic sequencing is underway to monitor the situation as it develops.

Professor Yvonne Doyle, Medical Director at PHE, said:

> PHE is monitoring data about emerging variants very closely and where necessary public health interventions are being undertaken, such as extra testing and enhanced contact tracing.
>
> There is currently no evidence that this set of mutations causes more severe illness or increased transmissibility.
>
> The best way to stop the spread of the virus is to follow the public health advice: wash your hands, wear a face covering and keep your distance from others. While in lockdown, it is important that people stay at home, where possible.

Regular updates of confirmed variant cases will be provided on this page.

Friday 15 January

As of Thursday 14 January 2021, 35 genomically confirmed and 12 genomically probable cases of the SARS-CoV-2 variant which originated in South Africa (called VOC202012/02 in the UK, also named B1.351 and 501Y.V2 internationally) have been identified in the UK.

Two variants of interest have also been identified in Brazil. The first variant is variant under investigation (VUI) 202101/01 – this variant has a small number of mutations. The spread and significance of this variant remains under investigation. In partnership with COG-UK, 8 genomically confirmed cases of this variant have now been identified in the UK. All necessary public health action is being taken to follow-up the cases.

The second variant has been designated a Variant of Concern by NERVTAG, now termed VOC202101/02, and this variant has more mutations. We have NOT detected this second Brazil originated strain in the UK– this has been detected in Manaus and travellers arriving in Japan.

Laboratory work has begun on the VOC 202012/02 in the UK and is routinely undertaken on all variants under investigation or of concern once samples are available.

Dr Susan Hopkins, COVID Strategic Response Director at Public Health England, said:

> We are continuing efforts to understand the effect of the variants on transmissibility, severe disease, mortality, antibody response

> and vaccine efficacy.
>
> For now, our advice remains the same following detection of a Brazilian variant in the UK, even though this is not the variant detected in Manaus with more mutations: the best way to stop the spread of the virus is to wash your hands, wear a face covering and keep your distance from others. Whilst in lockdown, it is important that we also stay at home unless it is absolutely essential to go out.

Through COG-UK, the UK is a global leader in SARS-CoV-2 genomics, providing around 48% of the genomic data supplied to GISAID, the scientific initiative which allows global, real-time surveillance of the COVID-19 pandemic.

WGS is vital to the global response to the pandemic, allowing us to monitor and understand the evolution of new COVID-19 variants and respond with timely public health interventions.

In addition to the travel ban imposed on South Africa on 23 December 2020, the Department for Transport (DfT) has announced new restrictions for everyone arriving into the country from Namibia, Zimbabwe, Botswana, Eswatini, Zambia, Malawi, Lesotho, Mozambique, Angola, Mauritius and Seychelles.

The restrictions follow new data on the steep rise in incidence of the B1.351 variant, which has vastly increased the risk of community transmission between these 9 southern African countries, as well as the Seychelles and Mauritius which have strong travel links with South Africa.

From 15 January 2021, the DfT has also imposed a subsequent travel ban to the UK from several South American countries and countries with strong travel links to Brazil. Passengers who have been in or transited through Argentina, Brazil, Bolivia, Chile, Cape Verde, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Panama, Portugal (including Madeira and the Azores), Peru, Suriname, Uruguay and Venezuela in the last 10 days will no longer be granted access to the UK.

British and Irish Nationals (and or third country nationals with residence rights in the UK) who have travelled from or transited through these countries must self-isolate for 10 days, as must members of their household. Contact tracing and testing of close contacts of confirmed cases will be used to identify and manage potential transmission. The decision to impose these restrictions has been taken to prevent the spread of the variant of coronavirus, known as VOC202101/02, into the UK.

The Isolation Assurance Service (IAS) will be contacting all returnees from all southern African countries, Mauritius and Seychelles to reinforce the advice to self-isolate, to encourage testing even if asymptomatic and to inform anyone treating/testing them of their recent travel.

Wednesday 23 December

The 2 cases were identified in the UK on 22 December 2020 and both have been in contact with someone who has travelled from South Africa. PHE's Health Protection Teams have followed up with both cases and contact tracing is underway.

The new variant named B1.351 (also referred to as 501Y.V2) was first detected in Nelson Mandela Bay, South Africa, in samples at the beginning of October. Molecular dating suggests that it could have been in circulation from the end of August.

The rapid spread of the variant in South Africa could be an indication of increased transmissibility but this is not yet confirmed. PHE is investigating this variant and will share its findings in due course. There is currently no evidence to suggest that the variant has any impact on disease severity, antibody response or vaccine efficacy. Epidemiological and virological investigations are also ongoing in South Africa.

It is not uncommon for viruses to undergo mutations; seasonal influenza mutates every year. More than 4,000 variants of SARS-CoV-2 have been identified in the UK and variants have been observed in many other countries.

Dr Susan Hopkins, Chief Medical Adviser on COVID-19 to PHE & Test and Trace, said:

> We are investigating this new variant of SARS-CoV-2 which originated in South Africa. Viruses often evolve and this is not unusual. We are carrying out work as a priority to understand the potential risk this variant may cause. It is important to say that there is currently no evidence that this variant causes more severe illness, or that the regulated vaccine would not protect against it.
>
> The best way to stop infection is to stick to the rules – wash our hands, wear a face covering and keep our distance from others.

The recommended control measures to limit the spread of the new variant continue to be testing, following the existing public health guidance and abiding by the restrictions, including 'Hands, Face, Space' and limiting your number of contacts. DfT have announced new restrictions for everyone arriving in the country from South Africa.