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Frequently Asked Questions
New Variant of SARS-CoV-2 in South Africa

Background

Q What is the new SARS-CoV-2 variant?

A This new variant of the virus was discovered through routine genomic surveillance of SARS-CoV-2 performed by a network of laboratories around the country (Network for Genomic Surveillance South Africa, NGS-SA). The new variant has been identified in almost 200 samples collected from over 50 different health facilities in Eastern Cape, Western Cape and KwaZulu-Natal. The new variant is different from the others that were circulating in South Africa because it has multiple mutations (changes) in the spike protein – this is the very important part of the virus that binds to the receptor on the cells inside our body and that is also the main target for many of the antibodies produced during infection or after vaccination. Work is being done to understand what effect these mutations have on the behaviour of the virus and our body's response to it - particularly whether it makes the virus spread more easily, whether it might lead to more severe COVID-19, and whether the virus can evade our immune response.

Q What is the geographical distribution of this mutation?

A The variant was first identified in Nelson Mandela Bay but has rapidly spread through the rest of the Eastern Cape and to the Western Cape and KwaZulu-Natal provinces. Testing in other provinces is being undertaken to understand the extent of geographical spread but it is likely that this variant has spread to other provinces too.

Q Is the new variant associated with an increase in the severity of the disease?

A At this stage, there is no clear evidence of the new variant being associated with more severe disease or worse outcomes but clinicians are undertaking more studies to establish if this new variant does change the course of the disease.

Q Is this the same or different to the London variant?

A It is definitely not the same variant, but there are similarities as they both share the same change in the spike protein at the 501 position. What it does tell us is that if we do not control the spread of the virus then it is likely to evolve in similar ways in different parts of the world.

Q The new variant of infection leads is associated with a higher viral load. Does this mean a higher rate of transmission?

A We do not know for sure that it is associated with a higher viral load, but some of our findings suggest that might be the case. We need to gather more information to help us understand this. Overall there is some evidence that this new variant might be being transmitted more readily than other variants, although the mechanism of this remains to be fully worked out.

Q Will this new variant cause the second wave to be different from the first wave?

A The role of the variant in the second wave is being examined. The second wave is the same as the first in many respects. The cause of COVID-19 remains the same – SARS-CoV-2. The virus still affects the same cells of the body, and causes people to be ill in the same way. This second wave may be different in some ways – it may be that people who had the virus before it changed can now be infected with SARS-CoV-2 for a second time. It may be that the virus spreads more easily, or causes slightly more severe infection. These are all questions that the clinical doctors and scientists will be asking and watching out for.

Q Did these changes in the virus happen because of Matric Rage?

A No, the changes in the virus were already detected well before Matric Rage. However, it is likely that Matric Rage helped to spread the new variant of the virus.

Q Where did this new variant come from?

A SARS-CoV-2, like all other viruses, mutates as a natural process. The new variant will have evolved naturally.

Q How long until there is more information on this mutation?

A Several people are working around the clock to learn more about this and to understand the significance of the finding. We will release more information when available. It is also important to make clear this is a global effort and we will be working with scientists around the world to understand the significance of this finding.

Clinical Information

Q Will the new variant cause different symptoms?

A There is no reason to think the types of symptoms you get will be different. Patients will in all likelihood present with the same spectrum of symptoms as before. Whether the overall severity will be different, remains to be seen.

Q If we become infected do we need to know whether or not it's the original virus or the new virus? Does the new virus need different clinical management compared to the original virus?

A The clinical management remains exactly the same – that is oxygen therapy when people need it, steroids (like dexamethasone) for people with more severe disease, and blood-thinning medication to prevent blood clots, a common complication of COVID-19. It is important to note that the main therapy that has been proven to reduce mortality is dexamethasone and that targets the overactive immune response to the virus, not the virus itself.

Q Can you get re-infected with the new variant if you have already had COVID-19 from one of the older variants?

A People who have recovered from SARS-CoV-2 infection are usually protected from being infected a second time (called re-infection). This is because they develop neutralizing antibodies that remain in their blood for at least 5-6 months, maybe longer. These antibodies bind to specific parts of the spike protein that have mutated in the new variant (K417N and E484K mentioned above). We now show that these mutations have allowed the virus to become resistant to antibody neutralization.

The blood samples from half the people we tested showed that all neutralizing activity was lost. This suggests that they may no longer be protected from re-infection. In the other half, the levels of antibodies were reduced and so the risk of re-infection is not known. It is therefore important that people who have previously had COVID-19 continue to adhere to public health measures. Protecting ourselves through masks, regular washing or sanitising of hands, cleaning of surfaces, and social distancing remain the best defense against all SARS-CoV-2 viruses, including the new lineage.

Testing

Q Will the PCR tests be able to detect the new variant?

A The current PCR tests employed by South African testing laboratories will detect the mutated SARS-CoV-2 lineage. The mutated lineage from the Eastern Cape province has been detected in over 150 samples using South Africa's current repertoire of real-time PCR tests. In addition, each test typically detects at least two or three different gene targets to act as a backup in the case of a mutation arising in one.

Q Will the antibody test be able to detect it?

A Antibody tests detect response to the virus, not the virus itself. It is likely that the antibody test will perform in same way. Note antibody tests are not used for diagnosis of patient with suspected COVID-19 infection.

Contact Tracing, Isolation and Quarantine

Q Is there any change in contact tracing?

A No – contact tracing remains the same.

Q Is there any change in the isolation or quarantine periods with infections form this new variant?

A No - isolation and quarantine remain at 10 days.

- People who have been exposed to the virus should quarantine for 10 days.
- People who are ill with COVID-19 should remain in isolation for 10 days.

Prevention (Non-Pharmaceutical Interventions)

Q Do these changes in the virus change the way the virus is spread from person to person?

A No, they do not. The virus still has the same proteins and the same way of entering the body and causing illness. The virus will still be spread by droplets and by contact with surfaces where the virus has been.

Q What do these changes in the virus mean for prevention measures like social distancing, mask wearing and sanitising?

A Prevention measures like social distancing, mask wearing, handwashing and sanitising still remain the best ways of preventing infection. There is no change to these messages and to the actions that we need to take. Rather than relaxing our guard, we need to do all we can to prevent transmission.

The Health System

Q How has the health system prepared for the resurgence?

A The National Department of Health has issued an advisory to all provinces to scale up the treatment facilities in a stepwise manner to meet the progressive demand for hospitalisation during the second-wave resurgence. This includes increasing the proportion of beds available to patients presenting with symptoms for investigation or admission. In addition, the bed occupancy status in each district (both private and public) will be closely monitored using the DATCOV system managed by the National Institute for Communicable Diseases (NICD). The scaling up of infrastructure to deliver oxygen is a focus of the Department of Public Works and Department of Health, aimed at providing liquid oxygen and reticulation at district hospitals throughout the remote districts of South Africa. The Department of Health is working closely with the providers of oxygen to monitor the consumption and resupply in all provinces. Medicine distribution and availability is continuously monitored by each provincial pharmacy division. The availability and provision of personal protective equipment (PPE) to healthcare workers is monitored in each province and by the National Department of Health. In various provinces new and additional positions for healthcare workers have been advertised, applications should be directed to the Provincial Department of Health.

Q What steps are the private and public hospitals taking to increase the available COVID-19 treatment bed numbers?

A In accordance with the resurgence guidelines, each province has been requested to increase the proportion of hospital beds for COVID-19 admissions. In the first instance this is undertaken by dedicated beds and wards, then increasing the proportion of beds available to COVID-19 in each hospital, followed by a reduction in elective procedures. At the peak, the proportion of hospital beds available to COVID-19 may rise to 85% of all hospital beds in the district. Oxygen therapy is a key element of COVID-19 treatment, and all high-care and Intensive Care Unit (ICU) beds may be occupied. A reserve capacity for non-COVID admissions is maintained, focused on maternal-child health and deliveries and emergency care. Only when the patient numbers are expected to exceed the available hospital bed capacity are the field hospitals activated. In addition, each province is requested to plan step-down and isolation facilities to support the patients who cannot isolate at home.

Q Is the country prepared for the increased demand for staff, equipment, oxygen and treatment?

A The health system is under significant pressure due to the sustained COVID-19 response, potential infection and re-infection of healthcare workers, and loss of staff from the system. Although equipment has been made available, the supply of oxygen is under pressure. Many hospitals still require bulk liquid oxygen installations to facilitate the use of continuous positive airway pressure (CPAP) and high-flow nasal cannula (HFNC) oxygen to treat moderate to severe COVID-19. The Emergency Medicine Services are under significant pressure. In addition, the Ministerial Advisory Committee on COVID-19's advice is to reduce the number of patient transfers between towns and cities to avoid transporting severely ill patients, as transport is associated with poor outcomes.

Q Has the increase rate of infection led to a hospitals shifting resources from the routine health care and planned admissions to providing support for COVID-19?

A Yes, both private and public hospitals are under significant pressure from the resurgence in the last four weeks. Reports from multiple private hospitals in the four most affected provinces (Eastern Cape, Western Cape, KwaZulu-Natal and Gauteng provinces) is that elective procedures are no longer possible. Numerous key hospitals have dedicated the High-Care and Intensive Care Units to COVID-19.

Vaccines

Q Will the new variant have an impact on the effectiveness of vaccines? (1)

A It is not currently known whether or not this mutation will impact on the effectiveness of vaccines. More research is needed to see whether or not this is the case, and in the event that the mutation significantly reduces vaccine efficacy further vaccine development will be required.

Q Does the delay in payment to the COVAX facility mean that we will not get COVAX vaccines or that we will get them after many other countries?

A The National Department of Health and the Treasury are currently concluding agreements with the COVAX Facility. The Department of Health anticipates that we will get a small quantity of vaccine through the COVAX Facility in the second quarter of 2021. In addition, we anticipate that over the next few months additional vaccines will be found to be safe and efficacious, and this is likely to increase the numbers and types of vaccines available through the COVAX Facility.

Q Is the National Department of Health talking to vaccine developers to secure other doses of vaccine?

A Yes, the National Department of Health is in discussion with other companies who are at the forefront of clinical trials to explore whether their vaccine is suitable for a South African setting, and if there is a possibility of vaccine supply at an affordable price.

Q Is the South African Health Products Regulatory Authority (SAHPRA) reviewing any vaccine application?

A Yes. The first application to SAHPRA for a COVID-19 vaccine is from Johnson & Johnson and has been submitted as a rolling review. This means that the company will sequentially submit data to SAHPRA as it becomes available. In addition, other vaccine developers have been in discussion with SAHPRA. All COVID-19 related applications are being fast tracked and SAHPRA has established a specialist COVID-19 Vaccine Committee to rapidly review all COVID-19 vaccine applications. SAHPRA is also working with other regulatory authorities in the African region and globally, as well as, with the World Health Organisation (WHO), to harmonise and accelerate the regulatory review of vaccines.

Travel and Borders

Q Will this affect international travel requirements?

A The amendments to the regulations of the Disaster Management Act that were published on 03 December 2020, Gazette 43954 will remain in effect. This includes needing proof of a negative PCR test within 72 hours of the result to be presented on entry into South Africa, screening on arrival and adhering to all non-pharmaceutical intervention (NPI) requirements during travel. These requirements apply to people travelling into South Africa through any of the ports of entry. The regulations for travel to other countries are determined by those countries and the public should check what these are if they are planning international travel.

Q Should South Africa close its international borders?

A Given the information we currently have on this virus we do not think it is necessary to be considering closing international borders.

Q Will interprovincial travel be banned?

A There are no restrictions on interprovincial travel and the current regulations will continue to apply. These include requirements to adhere to the regulations relating to wearing of masks, sanitising and keeping windows at least 5cm open. Taxis travelling distances great than 200km are only allowed to be at 70% capacity.

Q What about local travel – will there be any changes?

A People travelling on public transport are urged to comply with the current regulations of wearing a mask and sanitising their hands on entering any public transport. The regulations will continue to apply *i.e.* local travel may be at 100% capacity, windows should remain open, all passengers and the driver should be wearing masks and sanitising their hands before and after travel.

Q Are there any further restrictions in movement or changes to regulations planned?

A At this stage there are no further restrictions in movement or changes to regulations per Gazette 43954 of 3 December of the Amendment of Directions issued in terms of *Regulation 4(1)(a) of the regulations made under Section 27(2) of the Disaster Management Act, 2002 (Act no 57 of 2002): Measures to address, prevent and combat the spread of COVID-19*. However this may change depending on new information that becomes available on the spread or behaviour of this new viral lineage.

Q Will beaches remain closed?

A At this stage none of the regulations will change.

Q Are there any further restrictions in movement in South Africa planned?

A At this stage there are no further restrictions in movement planned, however this may change depending on new information as it becomes available on this new viral lineage.

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