



STATEMENT

Nigeria Centre For Disease Control (NCDC)

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19th February, 2021 | STATEMENT ON VARIANTS OF SARS-COV-2 IN NIGERIA

Given recent press reports on new variants of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in Nigeria, the Nigeria Centre for Disease Control is making the following clarifications.

All viruses naturally mutate over time, including SARS-CoV-2, the virus that causes coronavirus disease 2019 (COVID-19). Since SARS-CoV-2 was first identified, thousands of mutations have arisen and will continue to do so, allowing new strain lineages of the virus to evolve.

The vast majority of mutations will have little impact. But every once in a while, a virus mutates in a way that helps it survive and reproduce better than its progenitors. Viruses carrying these mutations can then increase in frequency due to natural selection. When mutant viruses have some advantage, they are referred to as “variants of concern”.

Advantage to the virus conferred by these mutations, which lead to the classification of “new variants” into “variants of concern”, can manifest in the following ways:

- a. *faster or more efficient transmission*
- b. *increase risk of severe disease or death*
- c. *escape immunity from past infection*
- d. *escape immunity from vaccination, or*
- e. *evade detection by existing tests*

Scientists use a process called genomic surveillance to monitor how viruses change, including SARS-CoV-2. Genomic surveillance requires the viral genetic code of viruses to be sequenced. Scientists also study how these changes affect the characteristics of the virus and use this information to predict how new variants might impact health.

In December 2020, the world’s attention was drawn to a new variant, **B 1.1.7**, first discovered in the UK that was shown to be more transmissible. This B 1.1.7 variant is now the dominant SARS-CoV-2 variant circulating in the UK and has been documented in most countries that are implementing genomic surveillance. Other variants of concern identified in different parts of the world include the **B 1.351** first identified in South Africa, where it is now dominant and the **P.1** which was first identified in four travellers from Brazil.

SARS-CoV-2 variants of concern have emerged independently across the world, and this is likely to continue. Because only a fraction of viruses from people with COVID-19 can be sequenced, by the time a variant is detected, it is highly likely to be widespread. New variants are especially likely to be undetected when sequencing capacity is very low, as it is in most parts of the world. Indeed the countries initially reporting variants of concern are those with greater genomic surveillance capacity. More variants are

likely to emerge, especially in areas of high transmission, and selected by vaccination, particularly if coverage remains suboptimal over time.

IMPORTANCE OF GENOMIC SURVEILLANCE FOR PUBLIC HEALTH IN NIGERIA

It is critically important for Nigeria to develop its capacity for genomic surveillance to support the public health response. Routine analysis of the genomic sequence data will enable the Nigeria Centre for Disease Control (NCDC) and its public health partners to identify variant viruses for further characterisation and investigate transmission, severity, immune escape and other facets that can dictate the impact and trajectory of the pandemic.

There are three institutions with sequencing capacity for SARS-CoV-2 in Nigeria. These are NCDC, the Nigeria Institute for Medical Research (NIMR) and the Africa Centre for Excellence in Genomics (ACEGID). ACEGID has the most advanced capacity and is also a reference laboratory for the joint World Health Organization (WHO) and Africa Centres for Disease Control COVID-19 Genome Sequencing Laboratory Network.

Collaboration among these three institutions led to the first SARS-CoV-2 virus sequences reported from Africa. The University of Ibadan in collaboration with the Northwestern University in the USA has also conducted some sequencing in Nigeria. So far, about 400 sequences from Nigeria have been deposited in global databases including GISAID, mostly by ACEGID.

CIRCULATING VARIANTS IN NIGERIA

As at February 14 2021, there are about 55 different lineages of SARS-CoV-2 known to be circulating in Nigeria and they are changing rapidly. The diversity of SARS-CoV-2 strains indicate multiple introductions of the virus into Nigeria from different parts of the world and adds to evidence of community transmission in different states of Nigeria.

The B.1.1.7 Variant of Concern

A total of 29 cases with the B.1.1.7 variant strain, which was first described in the UK and shown to be linked to increase in transmissibility, have so far been detected in Nigeria. These strains were detected from cases in Lagos, FCT, Osun, Oyo, and Kwara and Edo States. All samples with the B.1.1.7 variant strain were collected from patients between November and January 2021.

New B.1.525 variant

On the 11th of February, some recent SARS-CoV-2 genomes were seen to have distinct mutations and characterised as a new variant **B.1.525**. As at the 17th of February, these have been reported from United Kingdom (44), Denmark (35), Nigeria (30), United States of America (12), Canada (5), France (5), Ghana (4), Australia (2), Jordan (2), Singapore (1), Finland (1), Belgium (1) and Spain (1).

The first detected B.1.525 case in Nigeria was in a sample collected on the 23rd of November from a patient in Lagos State. So far, this has been detected among cases in five states in Nigeria. B.1.525 cases have also been reported in other countries in travelers from Nigeria. Currently there is no evidence to indicate that

in Nigeria. Therefore B.1.525 is a new strain, but not yet a variant of concern and further analysis is ongoing.

NEXT STEPS

1. In the short term, a random selection of viruses will be collected and sent to ACEGID for sequencing weekly. This will be coordinated by the NCDC National Reference Laboratory.
2. An **Implementation Group for SARS-CoV-2 Sequencing in Nigeria** has been constituted to pull together a coordinated response to drive genomic surveillance for SARS-CoV-2 in Nigeria. The objectives of this group is to:
 - a. Ensure a coordinated response to identify variants of concern in Nigeria
 - b. Provide a platform for sharing of specimens and access to sequence information
 - c. Agree and standardise practice for the analysis of genomic data
 - d. Provide a platform to study the impact of variants of concern on transmission, disease severity, vaccines, therapeutics and diagnostics
 - e. Ensure strong communications to maintain public confidence
 - f. Inform national COVID19 response strategies
 - g. Provide advice on the establishment of genomic surveillance for pathogens of interest in Nigeria
3. A concerted effort will be made in building up genomic surveillance in Nigeria.

PUBLIC HEALTH GUIDANCE

One way to prevent viruses from mutating is to prevent their transmission. This means that we must continue to #TakeResponsibility as members of the public. The public health measures to control this virus is the same, irrespective the variant. Please continue to avoid close contact with others, wash your hands regularly using soap and running water, wear a mask properly, keep a distance of at least two metres from others.

About the NCDC

The Nigeria Centre for Disease Control is the country's national public health institute, with the mandate to lead the preparedness, detection and response to public health emergencies. The Bill for an Act to establish NCDC was signed into law in November 2018, by President Muhammadu Buhari. The mission for the NCDC (2017-2021) is 'To protect the health of Nigerians through evidence-based prevention, integrated disease surveillance and response activities, using a One Health approach, guided by research and led by a skilled workforce'.

Contact

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