Cameroon Townhall for Healthcare Professionals

Meeting Minutes, August 14, 2021

Host: Cameroon Townhall for Healthcare Professionals

Date: August 14, 2021

Chair: Dr. Munoh Kenne Foma

Co-Moderators: Elvis Ndansi (lead moderator), Dr. Christelle Jouego Tagne (French-language co-moderator)

Guest Speaker: Dr. Obadia Mfuh Kenji, PhD, laboratory scientist, Clinical laboratory, Stanford Health Care / Stanford University, California, USA

Distinguished Guests: A critical care physician in the USA, An anaesthesia provider in Buffalo, New York, A virologist from Belgium working in California, invited by Dr. Kenji, A doctor based in Japan, A nurse anaesthetist at Bamenda Regional Hospital, An anaesthesia provider in the USA who raised surgery after vaccination

Title: How Dangerous Is the COVID-19 Delta Variant?

Agenda Items:

1. Welcome and opening remarks by Elvis Ndansi
2. Remarks on how vaccines protect individuals and populations
3. Presentation by Dr. Obadia Mfuh Kenji on the Delta variant
4. Discussion and Q&A, with the Chair answering clinical questions
5. Summary, closing remarks and next meeting

Opening Remarks:

- Elvis Ndansi said the Town Hall had held more than 30 editions and recalled the previous session on cardiac surgery in sub-Saharan Africa. Dr. Bryan Tegomoh, due to co-present, could not join because of an emergency, and another co-moderator was absent.
- The Chair asked to go straight to the variant topic instead of the usual COVID-19 update.
- Elvis Ndansi explained the difference between a vaccine's direct effect on the person vaccinated and its indirect effect on the population through reduced transmission. He noted that a vaccine that prevents severe disease but not

infection could increase asymptomatic spread, and that the first goal of COVID-19 vaccines, preventing severe disease and death, had largely been met.

Presentation Points:

Presentation by Dr. Obadia Mfuh Kenji: "How Dangerous Is the Delta Variant?"

1. How viruses infect and how the body responds:

Dr. Kenji used a lock and key image to explain that a virus must bind a specific receptor to enter a cell, and that mutations let animal viruses such as bat coronaviruses spill over to humans. The body responds with antibodies that neutralise the spike protein and with killer T cells that destroy infected cells.

2. Why variants appear:

The more the virus circulates, the more mutations arise. Mutations in the spike protein can increase spread, reduce the effect of monoclonal antibodies, increase severity, escape some diagnostic tests and reduce immunity from infection or vaccination. This is why vaccination is needed to stop chains of transmission.

3. Delta spreads faster:

Delta is estimated to be 40 to 60 percent more transmissible than Alpha. One study found viral loads about 1,000 times higher than with the original strain, and contacts tested positive sooner. The P681R mutation makes cleavage of the spike more efficient, so about 70 percent of Delta virions are primed for entry compared with about 10 percent of the original strain.

4. Delta may cause more severe disease:

A Canadian study he presented found adjusted increases in risk with Delta of 108 percent for hospitalisation, 234 percent for ICU admission and 132 percent for death compared with non-variant strains, and odds ratios of about 1.4, 1.8 and 1.5 versus Alpha. He cautioned that it was one study with probable rather than confirmed Delta cases.

5. Vaccines still work:

Laboratory studies showed reduced neutralisation of Delta by sera from Pfizer and AstraZeneca recipients, but antibodies are only one arm of immunity. In the NEJM real-world study, two doses gave about 88 percent effectiveness against Delta (93 percent against Alpha) for Pfizer, with lower figures for AstraZeneca; a single dose gave much less protection.

6. Breakthrough infections and transmission:

Vaccinated people infected with Delta started with viral loads similar to unvaccinated people, so they can transmit, but their viral load fell faster. In one cohort, pneumonia occurred in 53 percent of unvaccinated versus 21 percent of vaccinated patients, oxygen in 20 versus 2.8 percent, ICU admission in 5.4 percent versus none, and deaths in 1.5 percent versus none.

7. Third doses:

A trial in transplant recipients showed a third mRNA dose raised antibody responses, from about 40 to about 70 percent with antibodies. Dr. Kenji said boosters for the general population would depend on new variants and further data.

8. Conclusion:

Higher transmission, possible higher severity and partial immune escape make Delta especially dangerous, but vaccines remain highly effective against symptomatic and severe disease, so people should get vaccinated, wear masks and follow public health measures.

Discussions and Q&A Session:

- **Can mutations be blamed on any cause? (Elvis Ndansi)** Dr. Kenji said mutation is natural during replication, with selective pressure on the spike protein. SARS-CoV-2 mutates more slowly than influenza; what matters is where mutations occur and what they do.
- **Will we need a fourth or fifth dose? (Dr. Christelle Jouego Tagne)** Dr. Kenji said a third dose was recommended for immunocompromised people; for others it would depend on future variants, and high vaccination coverage could prevent new variants.
- **What causes vaccine-related clotting, is immunity waning, and what are neutralising antibodies? (a participant)** The Chair said vaccine-induced thrombosis with thrombocytopenia is rare, resembles heparin-induced thrombocytopenia with antibodies against platelet factor 4, is seen mainly with adenovirus vaccines, and is treated with non-heparin anticoagulants such as argatroban. COVID-19 itself carries a much higher clot risk, and oral contraceptives also carry a higher risk than the vaccines. Dr. Kenji said neutralisation falls for new variants, which may justify boosters, and that laboratory studies use pseudovirus assays with whole serum.
- **Comment from a critical care physician in the USA** She described two young unvaccinated COVID-19 patients with a heart attack and a massive pulmonary embolism, and an 82-year-old vaccinated woman with severe heart failure who was extubated within 24 hours and went home within five days.

- **Do vaccines cause mutations, and do breakthrough rates differ by vaccine? (an anaesthesia provider in Buffalo)** Dr. Kenji said vaccines do not drive mutation; it comes from replication errors, as seen in unvaccinated people and bats. Breakthroughs are more frequent with adenovirus-vector vaccines than mRNA vaccines, but all reduce severe disease.
- **What is the role of T cells? (a virologist from Belgium)** Dr. Kenji said T cells matter: some infected people with no antibodies showed strong interferon gamma responses. The Chair shared a study of T cell responses to mRNA doses.
- **Why has Cameroon seen fewer deaths than the West?** Dr. Kenji cited Cameroon's young population, limited testing, and possible cross-reactivity with seasonal coronaviruses found in pre-pandemic Cameroonian samples from 2005. The Chair added population movement, flight connections and mask use, and warned that Africa is not special and could become the next India.
- **Do vaccine antibodies block natural immunity? (a doctor based in Japan)** Dr. Kenji said vaccine responses are polyclonal, not monoclonal, which is why vaccines still work against variants. Both speakers said scientists must communicate better; Dr. Kenji recalled that after a four-hour talk to scientists in Cameroon only one said they would get vaccinated.
- **Should elective surgery be delayed after vaccination? (an anaesthesia provider)** The Chair said the American Society of Hematology has no such recommendation; patients should be assessed for their own clotting risk, and he had not seen such cases in a large New York haematology practice.
- **Is a sulfonamide allergy a contraindication? (a nurse anaesthetist in Bamenda)** The Chair said he knew of no sulfonamide-derived component in the vaccines and that Johnson & Johnson was a good single-dose choice. A participant with multiple allergies, including to sulfa drugs, said she had received two AstraZeneca doses without problems.
- **Delta-specific vaccines, Novavax and mixing vaccines (a participant, via Dr. Christelle Jouego Tagne)** Dr. Kenji preferred vaccines that induce broadly neutralising antibodies over variant-specific ones. The Chair said Novavax was promising but delayed by production problems, and that UK data suggested AstraZeneca followed by an mRNA vaccine gives a strong response.

Call to Action and Closing:

- Elvis Ndansi summarised the main findings and urged members to keep wearing masks, washing hands and encouraging relatives in Cameroon to get vaccinated.
- He said about 40 participants attended and that past sessions were being posted on the Town Hall's YouTube channel, website and Facebook page.

- The next session was announced for two weeks later.

Next Meeting

In two weeks (August 28, 2021, inferred).

Recording: https://www.youtube.com/watch?v=6K7IYWPruLg

Submitted by: Co-Moderators, Cameroon Townhall for Healthcare Professionals