Cameroon Townhall for Healthcare Professionals

Meeting Minutes, August 13, 2022

Host: Cameroon Townhall for Healthcare Professionals

Date: August 13, 2022

Chair: Dr. Munoh Kenne Foma

Co-Moderators: Dr. Bryan Tegomoh

Guest Speaker: Dr. Raymond Ndikontar Kwinji, MD, anaesthesiologist and intensivist; fellowship in paediatric anaesthesia, University of Cape Town (Red Cross War Memorial Children's Hospital), Lecturer, Faculty of Medicine and Biomedical Sciences, University of Yaounde I; consultant anaesthesiologist at a mother and child hospital in Yaounde and at the Magrabi ICO Cameroon Eye Institute

Distinguished Guests: Dr. Edwin Aroke, President, Association of Cameroonian Nurse Anesthetists in the Americas (ACNA), Prof. Mathias Fobi, bariatric surgeon, United States, Dr. Leonard Ngarka, consultant neurologist, Yaounde Central Hospital, and lecturer, Faculty of Medicine and Biomedical Sciences, Dr. Tim Fabrice Tientcheu, general surgeon, Yaounde Central Hospital, ASCOVIME volunteer and Royal College of Surgeons of England international fellow, Dr. Joshua Tambe, radiologist

Title: The Practice of Anaesthesia in Cameroon: Challenges and Perspectives

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Agenda Items:

1. Welcome by the lead moderator and the Chair
2. Global health update by Dr. Munoh Kenne Foma (monkeypox, COVID-19, polio)
3. Introduction of the speaker by Dr. Bryan Tegomoh
4. Presentation by Dr. Raymond Ndikontar on 'The Practice of Anaesthesia in Cameroon: Challenges and Perspectives'
5. Discussion and Q&A
6. Remarks by the President of ACNA
7. Closing remarks by the moderators and the Chair, and parking lot

Opening Remarks:

- The lead moderator recalled that the town hall began about three years earlier, shortly after COVID-19 was declared a pandemic, and noted that anaesthesia is

often overlooked even though it is a core member of the surgical team, which has contributed to an acute shortage of the skill.

- The Chair described the town hall as a platform that belongs to its members and aims to bring the diaspora and colleagues in Cameroon closer for education, discussion and partnership.
- The lead moderator reported contact that week with Dr. Edwin Aroke, President of ACNA, which is looking to extend its work on anaesthesia in Cameroon.
- Dr. Foma gave a global health update: monkeypox had been declared a public health emergency by WHO and, about a week later, by the United States; he reported 31,799 cases worldwide that morning, with the United States (over 10,700 cases) ahead of Spain, and 2,187 cases in New York City. He also covered the JYNNEOS vaccine shortage and the move to intradermal dosing, Omicron BA.5, poliovirus detected in New York City sewage, low COVID-19 vaccine uptake in Africa and vaccines expiring in Cameroon.
- Dr. Bryan Tegomoh raised vaccine hesitancy and polio; the lead moderator noted that recent polio detections are increasingly vaccine derived and proposed a future session with Prof. Charles Wiysonge on the subject.

Presentation Points:

Presentation by Dr. Raymond Ndikontar Kwinji: "The Practice of Anaesthesia in Cameroon: Challenges and Perspectives"

1. A very small physician workforce:

Physician anaesthesia training is a four year course offered only at the Faculty of Medicine and Biomedical Sciences in Yaounde, with four to eight trainees a year for over 20 years. Yet Cameroon has only about 70 physician anaesthesiologists for close to 29 to 30 million people, more than 90 percent of them in Yaounde and Douala, because many leave after training. There is no subspecialty training in the country.

2. Nurse anaesthetists carry most of the work:

About 400 nurse anaesthetists, trained in a two year programme at about five schools after the state nursing diploma, cover most procedures, including in rural and many urban areas. Dr. Ndikontar said that even he works exclusively with nurse anaesthetists.

3. What each level of the health pyramid can do:

Subdivisional hospitals (CMA) usually have one general practitioner and no anaesthesia provider, so general anaesthesia to standard is not possible and

ketamine is the main drug. District hospitals may have nurse anaesthetists and rely on spinal anaesthesia, but have no ICU and refer unstable patients. The 10 regional hospitals are better staffed but still struggle: a student study at a regional hospital found only 2 of 125 caesarean sections were done under general anaesthesia. Tertiary centres, about 12, are concentrated in Yaounde and Douala, and new regional reference hospitals in Bafoussam, Garoua and Ebolowa have modern equipment.

4. Equipment against WHO-WFSA standards:

Comparing facilities with the WHO-WFSA international standards for safe anaesthesia and the Optimal Resources for Children's Surgery document, he found that CMAs and district hospitals lack most essential items, including laryngoscopes, appropriately sized airways and capnography, and that even tertiary centres often lack functional continuous waveform capnography. He described laparoscopic surgery being done without CO2 monitoring, no supraglottic airways, and no monitoring of anaesthetic agent concentrations in most centres.

5. Gases, consumables and blood:

There are very few oxygen plants and transport of oxygen is difficult; many centres, including tertiary ones, have no medical air, so patients are ventilated with 100 percent oxygen. Nitrous oxide is available in constant supply in only one centre he knows, and halothane remains the most used volatile agent because it is cheap. Most anaesthesia machines are donated and stop working within six months to a year for lack of maintenance, breathing circuits are washed and reused for years, temperature control and fluid warmers are lacking, and blood components such as platelets, plasma and cryoprecipitate are hard to obtain.

6. Specialty and paediatric gaps:

Obstetric anaesthesia is managed with reasonable safety nationwide, gynaecological endoscopy and regional techniques are widely used, and neurosurgery is growing but limited by ICU capacity. Cardiothoracic surgery is not routine in any state hospital and is done mainly through missions, there is no paediatric cardiac surgery outside missions, and two adult kidney transplants had been done that year. Neonatal surgery is the weakest link, with poor outcomes linked to late referral, inadequate equipment and expertise, and patients paying for their own care.

7. Outreach programmes do much of the work:

He said surgical outreach groups of volunteer students, general practitioners, surgeons and anaesthetists deliver a large share of surgery and anaesthesia in

enclaved areas, some visiting two to three areas every weekend with 40 to 50 cases per session for years. Activity in the North West and South West has been limited by the crisis.

Discussions and Q&A Session:

- **A nurse anaesthetist in Pennsylvania said supplies routinely thrown away in the US could help colleagues in Cameroon and asked for the speaker's contact.** The moderators shared Dr. Ndikontar's email in the chat.
- **Dr. Munoh Kenne Foma asked how COVID-19 affected anaesthesia practice, whether regional hospitals can intubate, and how accessible blood components are.** Dr. Ndikontar said a national blood transfusion body was created four to five years earlier and recently upgraded, but regional hospitals lack the centrifuges to separate components and voluntary donation is rare. During COVID-19, airway supplies ran short worldwide and patients sometimes had to buy their own spinal needles and tracheal tubes. He said the oxygen plants announced during the pandemic had not yet had a real impact and oxygen shortages are still common, even in Yaounde.
- **Dr. Foma asked whether the anaesthesiologists sent to France for cardiac anaesthesia training returned.** Dr. Ndikontar said they had not yet returned, and that exchange programmes lacked a plan for reintegration into a system without universal health insurance or equipment; the programmes need to be redesigned.
- **A participant asked whether more doctors should be admitted to anaesthesia residency, and about anaesthetists controlling anaesthetic drugs and setting prices for surgeons and patients.** He said the problem lies in a system that makes patients responsible for buying their own drugs and supplies, leaving them vulnerable, for example women sent to buy spinal kits before a caesarean section. He favoured a centralised supply as in mission hospitals, where patients receive care and pay one bill. On training, he said expanding numbers must come with investment in training infrastructure, and that anaesthesia should be made a priority because ICU, emergency, obstetric, paediatric and surgical services all depend on it.
- **Another participant raised the poor distribution of anaesthesia providers and standards for resource limited settings.** Dr. Ndikontar called for Cameroon to set its own standards for resource constrained settings rather than copy textbooks, for example ketamine anaesthesia where intubation is not safe, and said low pay drives anaesthetists abroad or away from underserved areas.
- **Dr. Leonard Ngarka asked whether COVID-19 helped equip ICUs and whether that equipment still works.** Dr. Ndikontar said COVID-19 exposed the system and that much of the new equipment came as donations, which is not a durable solution;

his own unit went from two or three ventilators to about five. The Chair added that some donated ventilators sit unused because staff were not trained to use them.

- **A student nurse anaesthetist asked whether nurse anaesthetists in rural areas should be trained in nerve blocks and central lines.** He said these procedures carry significant complications and should remain with appropriately trained specialists for now, with careful training.
- **Dr. Tim Fabrice Tientcheu asked how to harness the nurse anaesthetist workforce while physician numbers grow.** He noted that collaboration between nurse and physician anaesthetists in Cameroon works better than in several West African countries. Dr. Ndikontar proposed a national anaesthesia association bringing all practitioners together, continuing education after the two year course, and subspecialty training for nurse anaesthetists in paediatrics, orthopaedics and obstetrics, following local guidelines.
- **Prof. Mathias Fobi recalled giving his own spinal and regional anaesthesia in Cameroon in 1973 and asked how to retain trained staff when salaries abroad are many times higher.** The Chair asked Dr. Ndikontar for solutions. He named universal health insurance as the first policy change, so patients do not pay out of pocket in emergencies, and a dedicated anaesthesia, intensive care and emergency medicine rotation for medical students. The Chair added that students had sometimes been kept out of theatres and ICUs and urged a mentoring culture.
- **The nurse anaesthetist from Pennsylvania asked where donated supplies are most needed and why halothane is still used.** Dr. Ndikontar said its toxicity is well known and its use reflects logistics and supply chains. He suggested a needs assessment and that an association in Cameroon partner with diaspora anaesthesia groups.
- **Dr. Joshua Tambe and a district medical officer and training coordinator commented.** Dr. Tambe called for local guidelines and institutions that regulate practice. The district medical officer said Cameroon trains far more paramedical staff than doctors, that specialists are often unwilling to teach in professional schools, and that teaching outreach, like a visiting Chilean anaesthetist training student nurse anaesthetists at the Magrabi institute, should be multiplied.

Call to Action and Closing:

- Dr. Edwin Aroke, President of ACNA, described the association's Cameroon Conference of Nurse Anesthetists at the University of Buea the previous year, with hands-on airway, cardiovascular and pre-operative assessment training, and a further conference planned for December covering airway and regional techniques with ultrasound. He invited physician partners.

- Bryan looked forward to links between ACNA and anaesthesia colleagues in Cameroon.
- The Chair said more than 60 participants were engaged live and almost 100 logged in, and thanked Dr. Aroke, the speaker and the moderators.
- The session closed with a 30 minute parking lot.

Recording: https://www.youtube.com/watch?v=FogKs0PIGNY

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