

## **NEWBORN MORTALITY IN NIGERIA – OUR PRIDE OR SHAME? (from the viewpoint of an Imperial College London academic)**

### **ACCOUNT OF CCEFTHI CORPORATE COLLABORATION FOR THE REDUCTION OF NEONATAL MORTALITY IN NIGERIA UNDER THE CHAIRMANSHIP OF DR PETER ALABI**

Neonatal mortality rate (NNMR) in Nigeria has been among the worst in the world being only second to India [[https://www.youtube.com/watch?v=uC\\_Q7kurU84](https://www.youtube.com/watch?v=uC_Q7kurU84)]. The millennium development goal no.4 [MDG(4)] has come and gone with the sad result that “Nigeria made NO significant progress in the reduction of NNMR all through the 25 years money-guzzling programme in Nigeria” [UNICEF, WHO, World Bank 2015]. This is particularly shameful given that a number of African countries either met the target or made significant progress towards the target. I consider it important to draw the attention of concerned Nigerians – particularly my fellow healthcare professionals – to this situation; as custodians of neonatal health in this country, we may be the first to cover our faces in sadness or shame for this failure. However, in the occasion of Dr Peter Alabi’s end-of-service as the chairman of the Committee of Chief Executives of Federal Tertiary Health Institutions (CCEFTHI) of Nigeria, I considered it a great opportunity to showcase what this organisation had been struggling to do, albeit on individual member capacities, to lower Nigeria’s NNMR. Nigeria did not make any corporate significant progress to meet the MDG(4) target on NNMR; however, few of CCEFTHI member hospitals achieved a lot while many others could not be bothered that 761 babies died every day in Nigeria. In this write up, I wish to enumerate these and at the same time encourage professionals and hospital managements not to hesitate in applying tested and effective solutions used by the few successful hospitals in order to save the teeming population of Nigerian neonates.

#### **CCEFTHI RESOLUTION 2007**

In the history of CCEFTHI, I gathered that members had tried at various times to make conscious efforts to corporately tackle high NNMR in Nigeria. Members shared ideas and sources of any breakthroughs in their efforts during their regular meetings. One of such reports was the application of Recycled Incubator Technology (RIT) introduced by Nigerian-born Professor Hippolite Amadi of the prestigious Imperial College London United Kingdom. Few member hospitals had engaged the services of Professor (then Dr) Amadi as a visiting consultant to collaborate in synthesising possible procedures that could support the RIT techniques in improving the success rate of our neonatal outcomes.

A number of past chief medical directors (CMDs) of Teaching Hospitals and medical directors (MDs) of Federal Medical Centres had often testified that it was usually rare to come across such professionals as Professor Amadi with unquestionable compassion to save the Nigerian neonate. Chief Executives from member hospitals of CCEFTHI would report on how Dr Amadi defied all odds of transport, harsh weather, civil-unrests and all kinds of dangers to maintain many years of unbroken neonatal consultancies at their various hospitals, across the entire landscape of the

country. Professor Amadi was hence invited to one of the CCEFTHI meetings to intimate colleagues on the new applications of RIT during the chairmanship of Professor S A Kuranga of University of Ilorin Teaching Hospital (UITH) Ilorin.

In July 2007, after reports of various trial successes, at the 58<sup>th</sup> general meeting held at UBTH Benin-city, the CCEFTHI moved a motion of confidence on the contributions of Prof Amadi towards national development on healthcare. In the resolution, member hospitals of CCEFTHI were individually encouraged to collaborate with Professor Amadi's research efforts in developing affordable procedures and low-cost technologies that could address the problems of high facility-based neonatal mortality rate in our Special-care baby units (SCBUs). Following this resolution, many tertiary hospitals across the country, including University of Abuja Teaching Hospital (UATH) where Dr Peter Alabi also served as the Chief Medical Director, engaged with Professor Amadi and his team as they tried and tested many ideas and innovations in our hospitals. The various participating hospitals formally engaged him as visiting consultant to their institutions. This position enabled him to monitor the progress of his installed systems and jointly, he measured outcomes with our local paediatricians. Prior to this, most of the Nigerian hospitals could not sustain a consistent availability of up to three functional incubators to manage the teeming population of neonatal admissions – leading to the reported very high early death of neonates including extremely-preterm neonates, which rarely survived. UATH Gwagwalada-Abuja for example – just like the majority of the participated hospitals – have consistently operated with over 10 functional incubators for as many years as Professor Amadi's RIT program has been applied. He also introduced other procedures and applications such as (1) Apnoea monitoring systems – incubator interfacing with his BM02 sensors (2) six-monthly preventive maintenance and auditing of incubator functionality (3) concerted training and retraining of the Special-Care-Baby-Unit (SCBU) staff (inclusive of doctors and nurses) on various ingenious neonatal incubator techniques being researched on (4) Double-wall upgrading of SCBU buildings for minimisation of morbidity due to evening-fever syndrome (EFS) (5) Application of his specialised Power-banking systems (PBS) that has brought about a new era of uninterrupted incubation during care, minimising the ugly consequences of incubator power outages, (6) Clinical thermal control procedures such as the Handy-approach and ISA techniques etc.

The practical knowledge and experience of the benefits of these applications made Dr Peter Alabi to follow the footsteps of his CCEFTHI predecessors, encouraging his colleagues to positively alter their neonatal indices of outcome by initiating the collaborations in the various hospitals. The CMD of the Lagos University Teaching Hospital (LUTH) reported – in December 2013 CCEFTHI meeting – that LUTH had been able to apply some of these techniques to reach incubator capacity of 46 functional systems (38 incubators and 8 resuscitaires) from a very poor condition of non-availability of any functional incubator as at January 2007. Professor Akin Osibogun's experience was slightly similar to that of Dr Peter Alabi who inherited only one marginally functional incubator at assumption of office as the CMD of UATH in 2008. However, UATH's SCBU presently has well-maintained and fully functional 14 incubators and 6 resuscitaires (i.e. 20 Nos thermoneutral systems from only one that was inherited in 2008). The story is also similar at UBTH Benin-city with 34

systems at the present (26 incubators and 8 resuscitaires), just to mention this few. Professor Amadi has implemented up to eight different innovative frugal ideas at the participating hospitals, each contributing towards continuous reduction of centre-based neonatal mortality rates. Some of these have been reported in a number of Medical Journal publications for which some CCEFTHI members had been co-authors. As chairman of CCEFTHI, Dr Alabi found this collaboration as a project CCEFTHI could proudly own and happily showcase its great successes of output. As individual members of the collaboration, chief executives supported each other in assisting the often large contingencies of Professor Amadi with vehicular transfers from one hospital to the other during his tour months. This they had done as a family of concerned Chief Executives who remembered our poor neonates.

On the 3<sup>rd</sup> of December 2013, Dr Alabi recalled chairing the general assembly of the CCEFTHI in Abuja when the progress of this joint collaboration was reviewed. The Committee invited Professor Amadi to provide them with a corporate evaluation of how the collaboration had progressed over the 7 years since the Benin-city resolutions. In addition to Prof Amadi's presentation, up to ten CMDs and medical directors (MDs) of the participating hospitals had the opportunity to present their own reports. Each CMD's report was almost similar to the other in terms of high achievements of the various aspects of the program their hospitals adopted. Many improvements of neonatal outcome indices were reported by participating member hospitals. At UATH, for example, neonatal mortality rate had dropped to 89/1000 presentations of live neonates based on their 2014 analyses of incubator-dependent neonates as compared to their 2009 assessments that put this at 664/1000 neonates. Other member hospitals that reported their proud outcomes included FMC Owerri (Dr A Uwakwem), FMC Nguru (Dr MB Kawuwa), FMC Lokoja (Dr D Elehin), UBTH (Professor M Ibadin), LUTH (Professor A Osibogun), FMC Katsina (Dr Umar Abdulmajid) etc.

### COLLABORATION AT PRESENT

Dr Alabi's encouragement ensured that a good number of member hospitals accessed the opportunities provided by this collaboration, especially after the review of 2013. It is also evident that the following member hospitals had at some time or at the present been engaging Professor Amadi's consultancies, including FMCs at Yola, Katsina, Nguru, Owerri, Makurdi, Lokoja; also UNTH, LUTH, UATH, UBTH, AKTH, UPTH etc. However a number of these hospitals remained inconsistent in the collaboration. Hospitals that could not sustain the collaboration for lack of the compelling vision – especially after a change of chief executive officer – have seen their SCBU's NNMR soar like any other hospital in the country. Hospitals that have been consistent in the applications have had to tell very different stories from the rest of the tertiary hospitals in the country as relates to NNMR at their various centres. For example, in the Book of Abstracts (pages 25-50) of the just concluded January 2016 Paediatrics Association of Nigeria 47<sup>th</sup> Annual Conference (PANCONF) in Port Harcourt, six studies on SCBU mortality, morbidity and outcome were published from few different hospitals – Four applied conventional techniques in neonatal management while the remaining two managed neonates based on the CCEFTHI collaborations. These studies were independently articulated and executed by the

hospitals without prior consultations with each other. It was absolutely coincidental that such volume of independent data across the landscape of the country appeared at the same sitting of PANCONF. It offered an excellent basis for comparative assessment of neonatal outcomes from centres across the country. Although these studies focused on various aspects of neonatal outcome on mortality, it however highlighted comparatively, the huge impact of this CCEFTHI project at the collaborating hospitals. The first four hospitals reported outcomes of NNMR such as 146/1000 neonates (Obikwu et al., page 50 – at UPTH Port Harcourt), 128/1000 (Mbarie et al., page 29 – Stella Obasanjo Specialist hospital, Benin-city), 133/1000 (Animasahun et al., page 27 – LASUTH Lagos), 464/1000 (Garba B. I., page 25 – Yariman Bakura specialist hospital, Gusau); suggesting a corporate average of 218/1000. These reports are typical of the current situation in the country and very similar to 484/1000 reported at UATH Abuja in 2011. However, the remaining 2 publications in the PANCONF-PH Book of Abstract came from two hospitals that have been very consistent in the procedures presented by this collaboration. These were the FMC Owerri that reported an average of only 59/1000 neonates overall (24/1000 for their inborn SCBU) [Emerenini and Ezeofor, page 38 – FMC Owerri] and UATH Abuja that reported less than 5/1000 in their comparative study for extremely LBW neonates (600g – 1200g) [Adesina et al., page 35 – UATH Gwagwalada Abuja]. These combine to give an average of **32/1000**, creating a huge distinction when compared to NNMR of **218/1000** with conventional techniques. Two popular procedures in the content of the collaboration applications were the Handy approach and initial-setpoint-algorithm (ISA), all developed by Professor Amadi at various times. In addition to the excellent outcomes at UATH and FMC-Owerri with the Handy-approach and ISA procedures, FMC Owerri applied these to become the hospital that nursed the tiniest baby ever to survive in a Nigerian hospital – baby “Majesty” as they nicknamed her was born after 26 weeks GA weighing 550g and went home after 83 days of nursing care on the 26<sup>th</sup> April 2015.

Dr Peter Alabi should be proud of what he achieved and particularly the support he received from some members of his CCEFTHI that keyed into this project during his chairmanship. As the rest of the world move on to Sustainable Development Programme (SDP), a fair play for the teeming population of Nigerian neonates would be for Nigerians to remember that the corporate national failure of MDG(4) must be addressed and corrected before jumping onto the global “wagon” of SDP with backlogs of unachieved neonatal MDG(4). It will be great if succeeding chairmen of CCEFTHI consider not abandoning this project until the war against high NNMR has been won in our tertiary hospitals and also victoriously taken to the rural areas of our country. In a 2014 write-up, the Statistician-General of Imo State of Nigeria, Mr M. S. Ikeh, commented “Empirically, improved neonatal outcome indices from FMC Owerri and other hospitals where Professor Amadi’s techniques have been applied prove to us that, if scaled up, these sustainable, simple-to-manage technologies and procedures are what we require to save our neonates”. The question still remains: with such independent verifications of efficacy of these innovative procedures, why has Nigeria allowed our neonates to continue to die?