34th Inaugural Lecture

THAT OUR CHILDREN MAY SURVIVE!

By

Dr. Fidelis Olisamedua NJOKANMA MB BS, FMCPaed, FWACP
Professor of Paediatrics
College of Medicine
Lagos State University

August 07, 2007

Introduction

I must begin by expressing my sincere gratitude to the Vice Chancellor leading the authorities of the Lagos State University for the distinct honour of delivering this inaugural lecture, the 34th in the series and the second from our College of Medicine. I am infinitely grateful to all my teachers who guided and nurtured me in the journey into the field of Medicine, Paediatrics and Neonatology. Permit me to mention a few in the likes of Professor Jonathan Azubuike, Professor James Obi, Professor Jackson Omene and Professor Angela Okolo. I remain forever a child of your brain and a product of your endeavours. Above all, I attribute it all to God Almighty. It is called Grace and He has given me a generous dose of it!!!

I must confess that it was not easy to arrive at a title for this lecture. The difficulty was certainly not for lack of what to say but how to say it within a given timeframe. As a songster put it many years ago

There's just so many things to say,
I don't know where to start.
How can I write on paper what I feel in my heart?
How can I write on paper what I'm feeling deep inside?

In frustration I said to myself "Look, what exactly do you want?" And the answer came in a flash! The summary of my wish is that our children may survive – hence the title of this lecture.

Having decided on the title, the gross anatomy of the lecture was fairly clear. First, it has to be shown that there is a serious threat to the survival of our children. Next, the positive and negative responses to the threats shall be exposed. Then the way forward shall be charted.

The threats to survival of children

It is fairly well known that one out of every five Nigerian children will not live to see their fifth birthday. More than half of that number will succumb before their first birth day (**1**). Indeed, half of the children who die in the first year of life do so within the first month of birth (**2**). The myriad of problems besetting the Nigerian child and posing monumental threats to their survival are not hidden. They have been clearly elucidated and articulated over the past five decades. With the possible exception of HIV/AIDS, the list of major killer diseases I learnt as an undergraduate in the late 1970s is the same one I present to my students nearly thirty years later. It is a shame to note that malaria, malnutrition, respiratory infections, diarrhoeal disease and vaccine-preventable diseases like measles, poliomyelitis and tuberculosis still rank very high among diseases that maim and kill children (**2**).

In order to set the tone, let us examine some statistics regarding the health indices as they affect Nigerian children in comparison with children elsewhere in Africa. The choice of countries for comparison was deliberate. We traditionally regard some of them as rivals and we often look down on some of the others. The major source of these data is the 2006 edition of the UNICEF publication called "State of the World's Children" (1)

Childhood Mortality **(Table I)**

Nigeria is currently ranked the 13th worst country in the world, limping far behind Ghana and South Africa, and struggling with strife-torn countries like Liberia, Sierra Leone, Congo DR, Somalia, Mozambique and Rwanda. In 1970, we had about the same mortality rates as Mauritania but note how much better than us that country has done.

The laudable 'Millennium Development Goals' were carefully crafted to lift the state of health and living standards of the people living in underprivileged countries (3). Targets have been set and milestones identified for the achievement of those targets. We are eight years away from the milestone year 2015. By July 2015, we should have reduced under-five mortality rate to 77 per 1000. Unless something delightfully drastic happens, that date will come and pass, leaving us behind.

Table I:

Mortality Rates in Childhood – the Role of Dishonour

		Under-5 Mortality Rate/1000 Live Births		Infant Mortality Rate/1000 Live Births
Country	***Rank***	***1970***	***2004***	***2004***
Nigeria	13	265	197	120
Ghana	42	186	112	68
South Africa	65	???	67	54
Tunisia	105	201	25	21
Mauritius	131	86	15	14
Congo DR	8	254	205	129
Rwanda	10	209	203	118
Sierra Leone	1	363	283	165
Somalia	6	???	225	133
Liberia	5	263	235	157
Mauritania	33	250	125	78
Mozambique	23	278	152	104
Senegal	29	279	137	79
Ethiopia	20	239	166	110

Every responsible paediatrician is concerned that children die. Sometimes, death is inevitable as may happen in some severe congenital malformations. We do not like it, but at least we can say 'Well, I could not have helped'. When, however, there is senseless loss of lives or when we know that something could have been done to prevent compromise to life and health, we ask 'Why' and we wonder why the correct thing is not being done. Following in the tradition of other Nigerians and Africans (**4–9)**, we did investigate deaths among newborn babies. We demonstrated that five of every 100 babies born in the then OSUTH died in the newborn period (**10**). As outrageous as that was, the mortality of babies born outside, before hospitalization at OSUTH, was eight times as bad, with 40/100 succumbing. We demonstrated that 90% of newborn deaths occurred within the first week of life, with about half of that figure occurring within 24 hours of birth. The message was clear – the babies died of events that occurred during labour or soon after delivery. This points directly at deficiencies of antenatal care and basic tools for resuscitating newborn babies in. Obviously too, there was poor treatment of expectant mothers needing referral to more advanced centres.

As already stated, the mortality rate even for babies born in our hospital was unacceptably high. Close examination traced the poor statistics to the fact that about 25% of mothers in that study never intended to deliver in our hospital. They only presented as emergencies in the face of severe complications. It was therefore not surprising that the babies born under the circumstances defaced the statistics.

The leading cause of death both in babies born at OSUTH and referred babies was severe birth asphyxia. It accounted for more than 90% of deaths in babies born at full gestation who should not ordinarily have experienced severe problems. Further, we documented that the major cause of birth asphyxia in that series was prolonged obstructed labour. Among babies born preterm, complications of prematurity took their toll. It is however instructive that severe birth asphyxia, severe infections and cold stress were also significant contributors to mortality. Again, careful sorting of antenatal mothers, adequate delivery conditions and proper protection and transportation of the babies might have helped survival.

Interest in the killer called birth asphyxia led us to investigate one of the most dramatic predisposing factors to that condition. Passage of stool (meconium) by the unborn baby into the amniotic fluid carries the risk of meconium getting into and obstructing the airways. We delved into this subject and successfully made the first Nigerian report solely dedicated to meconium staining of the amniotic fluid (**11**). We described the incidence rate in relation to gestational age, identified predisposing factors and outlined the adverse effects on the newborn baby.

Delivery before 30 weeks gestation was almost uniformly associated with a fatal outcome. This is clearly a reflection of poorly developed facilities for intensive care of the high risk newborn. With the correct facilities in place, the challenge presented by babies of gestational age 28 weeks or more should not be insurmountable. Indeed in the most advanced countries, the true challenge is with those born at 22 to 24 weeks. We concluded our submission by calling for a shift in political will toward improving neonatal services, among other suggestions.

The statistics were not any better when we examined perinatal deaths (i.e. stillbirths and deaths in the first week of life). Once again, the mortality rates were very high – 87.5 out of every 1000 pregnancies were stillborn and another 35.5 per 1000 of those born alive were lost in the first week of postnatal life (**12**). The spectre of poorly supervised pregnancies presenting as emergencies in prolonged obstructed labour was in clear evidence. The ugly head of severe birth asphyxia was responsible for three quarters of deaths in those of low birth weight (less than 2500g) and 80% of those of full birth size. We concluded by calling for health education of our populace and regionalization of antenatal and perinatal services.

Having noted that severe infections were uncomfortably prominent among causes of death in newborn babies, we selected two of the most severe forms for study. These were severe blood borne infections (septicaemia) and meningitis. We reported a very high incidence rate of neonatal septicaemia (28 per 1000 live births) and identified Klebsiella species as the most common culprit (**13**). Significantly, we observed that the usual prescription of the antibiotic gentamicin, may no longer be advisable as up to 40% of Gram-negative bacteria were resistant to the drug. We therefore called for a change in antibiotic policy regarding the treatment of newborns with this infection. This call was strengthened when we found an even higher resistance rate of 50% in association with meningitis (**14**). It is gratifying to note that the call for a policy shift was echoed among colleagues and accepted as the norm soon after.

Along the line we had cause to indict the quality of information given to mothers attending orthodox antenatal care. This was highlighted in a 'hybrid' study of two seemingly unrelated diseases – tetanus and severe jaundice (**15**). Although these diseases are distinct, we were able to trace the unseen thread that holds them together. We showed that together, they accounted for nearly 30% of deaths in the newborn period but that was not the worst of it. As many as 35% of the mothers whose babies had tetanus attended orthodox antenatal care with a sizeable number receiving tetanus toxoid vaccine in pregnancy. Of course, we could not vouch for the quality of the vaccine given, but that is another matter altogether. The issue is that nearly half of these mothers practically invited tetanus by the kinds of unwholesome substances used in treating the umbilical stumps of their babies. This was clearly ignorance at work – ignorance that should have been dispelled with proper antenatal advice.

With respect to severe jaundice causing brain damage, it was saddening to note that more than 60% of the mothers attended orthodox antenatal care. Yet 35% of them delayed presentation to hospital until things went out of hand. Possibly the most tragic observation was that some babies were taken to hospital but were deceived into accepting forms of treatment that had very little chance of saving their babies. We summarized that study by calling specifically for an increased content of baby-care information to mothers at antenatal visits.

Malnutrition

Table II shows clearly that nearly 30% of our children are moderately or severely malnourished – even more than the figures from Somalia and Liberia!!!

Table II

Nutritional State of Nigerian Children

Country	Moderate/Severe Underweight Rate/100 under-5s
Nigeria	29
South Africa	15
Ghana	22
Liberia	26
Somalia	26
Sierra Leone	27
Ethiopia	47
Congo DR	31
Rwanda	27

The issue of nutritional status, often reflecting in the birth weight, is important even before the baby is born. The low birth weight rate in Nigeria is very high, as has been shown in several studies. Also, studies have demonstrated that the proportion of babies born small in relation to gestational age is high. We took it a step further and segregated small-for-dates babies into those who suffered acute problems shortly before birth and those whose problems were a bit more longstanding (**16**).

Fully aware that birth weight is of the utmost importance in the determination of survival of the newborn, we documented the pattern of this factor at Havana Specialist Hospital (17) and compared it with reports in some public establishments (18,19). It was immediately obvious that birth weights were remarkably higher at Havana. The observed improvement cut across male and female babies and occurred irrespective of the birth order of the baby. Without doubt, the differences between our results and those of Teaching Hospitals are explainable on socioeconomic grounds. The issue, therefore, is not simply to show that socially privileged people have better health indices. No! It is rather to show what Nigerians living within the Nigerian environment can achieve, given the right circumstances.

Still on the birth weight issue, we accepted the received wisdom that babies tend to weigh more at birth than their older siblings and then we went a step further (20). We attempted to and did establish the conditions precedent for this generally held maxim. The study showed clearly that given the same sex, babies would outweigh their older siblings if the earlier sibling weighed less than 3000g and if there was a birth interval of between the two siblings.

Closely related to birth weight and of equal significance in defining neonatal outcome, is the gestational age at delivery. The nearer to full term a baby is, the higher the chances of survival. We offered prophylactic intervention with cervical cerclage to an experimental group of mothers who had a history of previous preterm delivery and compared the outcome with a control group (21). Our results showed a significant improvement in gestational age at delivery and in birth weight in the experimental group.

We took cognizance of the fact that nutritional status does not end with being born of appropriate size and that there was a renewed effort worldwide to encourage the practice of breastfeeding. However, the recommendation of exclusive breast feeding for the first six months of life generated controversies about the appropriateness of the practice. Was it enough to ensure optimal growth? We delved into this question in collaboration with co-workers from the University of Ibadan and Imperial Medical Centre in Lagos (22). We observed that exclusively breastfed babies had a slightly higher growth velocity than other babies in the first three months of life. We also confirmed that growth deceleration occurred in all babies after three months irrespective of feeding mode but that the degree was more with exclusively breastfed babies. The observed deceleration, however, did not erode the better growth accretion observed in exclusively breastfed babies.

Poverty in the Midst of Plenty

It is unbelievable that in a resource-rich country like Nigeria, 70% of the populace live on less than $1 a day. Not even in Ethiopia and Rwanda do you find such sorry statistics. And when the finding was first made public, your erstwhile President was quoted as saying that he knew many families living happily even at that income level!!! With that kind of attitude, do you see us ready to halving the proportion of people living in extreme poverty by 2015 as prescribed by the ubiquitous Millennium Development Goals?

Table III:

Indices of Good Living

Country	Improved Drinking Water Sources – 2002	Adequate Sanitation 2002	% Living on < 1 Dollar a Day
Nigeria	60	38	70
South Africa	87	67	11
Ghana	79	58	45
Liberia	62	26	36
Sierra Leone	57	39	
Congo DR	46	29	
Somalia	29	25	
Ethiopia	22	06	23
Rwanda	73	41	52

Lack of a Basic Planning Framework

It is my conviction that the reason we are unable to surmount most of our national challenges is that we lack basic vital data. How can a nation plan without knowing how many people for whom she plans? A recent headcount put the population of this country at 140 million. That may or may not be our true population. In our enforced cynicism, many Nigerians believe that a lot of political water flows under the bridge before census figures are ***assigned*** to states and local governments.

One factor that might have helped is the basic practice of compulsory registration of births and deaths. Unfortunately, that useful information has all but eluded us because only an estimated 30% of births in Nigeria are registered (1). If we knew how many Nigerians there were ten years ago and if we knew how many were born and how many died in the intervening period, we could at least say, within a reasonable degree of certainty, how many Nigerians there are today. That way we would not have to waste valuable time and resources repeating headcounts very frequently.

And the curses that follow ignorance of birth and death figures do not end with census figures that lack credibility. They extend to a shameful inability to talk of vital statistics with any degree of precision. So, when I tell you that 120 out of every 1000 Nigerians do not live to see their first birthday, I am only talking from estimations and extrapolations – it could be far worse!

Ignorance, Poverty and Disease

It is not difficult to see the vicious cycle relationship enjoyed by the triad of ignorance, poverty and disease. Ignorance of what is good or bad for health is a direct precursor for disease. Disease in turn reduces the ability and capacity to work. Of course, no work, no pay! And so poverty reigns supreme. Poverty perpetuates ignorance and the cycle continues.

It is therefore very easy to blame ignorance and poverty for the poor health indices among our populace. As a result of ignorance, expectant mothers do not utilize antenatal and delivery services and for presenting late in hospital with rather serious complications.

The Unseen Orchestra

Yes, ignorance is a serious adverse factor in the equation of high perinatal or neonatal mortality. But ignorance is only a symptom of something worse. The true origin of ignorance is that somebody did not make education and information available. Witness what has happened to our public schools – from physical dilapidation through poorly trained and even more poorly paid teachers to a near total lack of teaching/learning aids. The only option for the teeming majority of Nigerians who cannot afford the cost of private schools is to forgo education.

The Igbo people have a saying roughly translated as "The bird dancing in the middle of a busy expressway has an orchestra somewhere in the bush." Who is this wild bird performing a macabre dance and who is this unseen orchestra? The figure of a wild bird performing a wild dance flashes through my mind whenever I see the manifestations of ignorance, poverty and ravaging disease. And with my mind's ear, I hear the eerie sound of the unseen orchestra embodied in political and bureaucratic leadership that have failed to rise to the demands of their positions. And so, when my people act from a position of ignorance, or lack of education, I place the blame right where it belongs – a failed leadership.

Failed political leadership is ultimately responsible (or irresponsible) for:

- Ignorance, poverty and inequity in the land
- Poor state of facilities for rendering effective service
- The persistence of daunting problems challenging the rights of our children to survive
- Poor state of training facilities in the teaching and specialist hospitals
- Emigration of top-ranking professionals/teachers in the 1980s and 1990s
- Continued emigration of young professionals.

The Federal Ministry of Health is very much aware of the disgraceful state of affairs and has put together a document entitled "National Integrated Maternal, Newborn and Child Health Strategy" (**2**). In that document, the Ministry admits that 'the coverage and quality of health care services in Nigeria continue to fail women and children'. By its own admission "About 71% of Nigerians have access to Primary Health Care facilities (5km distance); however, many of these are non-functional due to lack of equipment, essential supplies and qualified staff."

In fairness, the totality of that document indicates the handiwork of serious minded technocrats who realize there is a problem and are determined to do something about it. I do not doubt the wisdom of Nigerian technocrats. They have never really been the problem. The problem is with those holding the purse. Do they share the dreams of technocrats and field workers? Can they muster enough political will to do what has to be done?

'POLICY', the USAID project, recounted the many and varied projects and programmes embarked upon or endorsed by the Federal Government of Nigeria and concluded as follows:

> "In spite of these initiatives and programmes, the rate of improvement in child survival indices has been slow and one of the worst in sub-Saharan Africa, principally because of poor planning and funding by the government, limited inter-sectoral approaches, lack of decentralized management capacity, and non-sustainability of donor-funded programmes."

(**23**) I hope the latest initiative of the FMOH does not go the same way.

Failed Leadership and Childhood Vaccinations

Considering the prominent position of vaccine-preventable diseases in the list of childhood killers in Nigeria, it is attractive to examine the role of failed leadership in the matter. In the 1980s, we were beneficiaries of the 'Expanded Programme on Immunization'. This programme was donor-driven and by the standards of subsequent events, very successful. Vaccine coverage rates went as high as 80%. However, the moment of truth came when our foreign benefactors withdrew and we were left to fund and run the programme ourselves. The name changed to 'National Programme on Immunization' and vaccine coverage plummeted to below 30%. Now, we ask ourselves some searching questions: What was the difference between EPI and NPI? Why was the one so successful and the other such a disgrace? Had the practitioners in the field changed – NO! Did the network for the distribution of vaccines change. In effect, did the technocrats planning vaccination exercises change? – Again, NO! The only identifiable changes were in the area of political will to procure and distribute vaccines. Failed leadership – pure and simple!

Table V should be an eyesore to any Nigerian. The Government sponsors 100% of vaccination activities in public institutions – that is commendable! Among the comparison countries, only South Africa can boast of doing the same. However, in spite of that, even Somalia has better vaccine coverage figures than Nigeria. In the words of a group called POLICY, a five-year project funded by the U.S. Agency for International Development, "***Nigeria remains one of the largest reservoirs of wild polio viruses, attracting the attention of the world in the effort to eradicate polio globally by 2002 and certify the world polio-free by 2005"*** **(23)**. What exactly is the problem? Why are the vaccines not reaching the people for whom they are intended?

Table V:

Vaccination Coverage Rates

Country	% Sponsorship of Vaccination	BCG Coverage %	DPT-3 Coverage %	Measles Coverage %
Nigeria	100	48	25	35
South Africa	100	97	93	81
Ghana	62	92	80	83
Liberia	0	60	31	42
Sierra Leone	0	83	61	64
Congo DR	17	78	64	64
Somalia	0	50	30	40
Ethiopia	18	82	80	71
Rwanda	50	86	89	84

Organized Private Sector Experience

I am compelled to bring in some of my experience in the organized private sector. It is all the more important that I do so because it highlights the role leadership can and does play in success or failure. Prior to joining the services of Havana Specialist Hospital, I had a rather limited and erroneous view that private hospitals were all about cutting corners to make maximum profit. I was rudely but gladly disappointed at Havana. The system worked; facilities were in place; there was remarkable emphasis on quality and competence; there was a true quest for excellence. And of course, ***there was careful monitoring of income and expenditure*** without which Havana would have long ceased to exist. Two things became immediately obvious to me within.

a. The public sector stands to gain from imbibing the spirit and discipline that drive private enterprise.
b. There was plenty of good work going on unbeknown to the medical community.

There was nothing I could immediately do about infusing the private sector spirit into the public sector. However, my return to the Ivory Tower of the Lagos State University and its affiliate teaching hospital in 2004 opened a window. In my own little way, I try to bring my experiences in the private sector to bear in teaching medical students and resident doctors. The practical approach to issues, the need to be innovative and the blatant refusal to accept mediocrity are some of the virtues I would like to think I am imparting on the up-and coming-generation. I am convinced that a rounded training of young medical personnel would consist of exposure to the secrets of decent private practice.

With respect to sharing information, I lost very little time reporting cases, initiating and collaborating in research work. The arrival of a very worthy younger colleague, **Dr. Oliver Ezechi** was a big boost to research at Havana. Oliver was a medical student in my tutorial group when I was a Senior Registrar at the University of Benin Teaching Hospital. It is definitely true that the young must grow. At the time he joined Havana, Oliver had certainly grown into an excellent obstetrician and a focused researcher of enviable quality. It is no wonder today that he is a Senior Research Fellow at the Nigerian Institute of Medical Research.

Between Oliver and I, about thirty (30) scientific publications in the field of perinatology, neonatology and obstetrics emerged from the stables of Havana. The degree of inter-departmental collaboration between Paediatrics and Obstetrics further strengthened my faith in a multi-disciplinary approach to research. Each researcher brought his perspective and strengths into the team but the major aim remained the well-being of mother and child. Take, for example, our study on the use of the drug *'misoprostol'* for the induction of labour. At the time it was a relatively new practice, particularly in the African region, we reported our experience with the 339 women with live fetuses and intact membranes.

To our knowledge, that study represented the first of its kind in Nigeria (24). It was the second published report from West Africa but booked a pride of place in the clarity of patient selection and largest pool of subjects. Our report charted the course for dosage schedules and described complications in mothers and babies, thus constituting a guide for practitioners in perinatal medicine.

A brief comparison of experiences in neonatal mortality between Havana and the public sector is painfully instructive. In 2002, we reported an early neonatal mortality rate of 14.4 per 1000 live births following Caesarean section and 6.1 per 1000 live vaginal deliveries from Havana (25). We 'apologized' stating that nearly 90% of deaths occurred in emergency cases, nearly half of whom were not booked at Havana. However there would appear to be no reason for the apology, considering a mortality figure of 45.3/1000 which we reported from the Ogun State University Teaching Hospital, Sagamu (now Olabisi Onabanjo University Teaching Hospital) (10), or the national figure of 60/1000; the comparison is doubtless very embarrassing. I have been told that the comparison is unfair, because only privileged people go to Havana, whilst down-trodden Nigerians use public hospitals. That may be true but it is too simplistic an approach. It misses the point that with inept management the Havana results would be just as bad as obtains in the public sector. The reverse is also true – with the right management, political will and facilities, the public sector would perform just as well as Havana. The private sector is run by Nigerians. So, if enviable results can be obtained in that sector, why should it not happen everywhere else so that our children might survive?

Is the Provision of Free Health Care the Answer?

A great majority of our people are very poor and can scarcely afford the high cost of medical services. It is therefore very laudable to offer free health services to the people. It must however be borne in mind that health services cannot be truly free. Somebody has to pay and health care does not come cheap – I learnt that at Havana. A government that decides to provide free health services must first work out the true costs and commit the necessary funds to the goal. The problem often arises from under-funding because someone has either not worked out the total cost of ***'free health'*** or has not had the political will to deploy the necessary funds.

The question would therefore necessarily arise as to whether the Nigerian government **can** embark on the project of providing free health services. My answer is conditional. If we can do away with corruption in high places, curb barefaced stealing of national wealth and control inflated contracts, Nigeria can save enough money to pay for the health services of her people.

The next question is **Should** Nigeria provide free health services for the population? I believe that there should be some degree of collaboration with the populace for whom the services are meant. My experience is that services ostensibly provided free by government are often under-valued and often abused. It is my view that some degree of participation in a health project or facility would increase the level of commitment of beneficiaries. And if the beneficiaries have a stake in its success or failure, chances of close supervision and support are likely to be higher. Indeed, the principle of participatory 'ownership' is at the very heart of the Primary Health Care concept. The very definition of Primary Health Care includes the words "with the full participation of the community at a cost the community can afford".

Whither the Paediatricians?

One may ask: What is the role of child health practitioners in all this? Why have they not used their training to stem the beleaguering tide of infant and child mortality? Please pardon me to submit that over the past five decades, child health practitioners have made supreme effort in four major directions.

In the first direction, a deluge of basic and primary research has gone into identifying, describing and exposing threats to child survival. In doing so, we have tried to proffer short term and long term solutions. Unfortunately, as Scott-Emuakpor, a Michigan-based Professor of Paediatrics put it, "*various aspects of our society's health have been on the decline over the years. All of the gains we have achieved through biomedical research have been left to decay in the midst of legendary ineptitude on the part of our leadership. Research findings that will benefit the people must be incorporated into health policies. This is the responsibility of government.*" (**26**)

It is my submission at this juncture, that it is time to lift the stakes a bit and go a little more molecular and a little more interventional in research. I am also firmly convinced that multidisciplinary and multi-centre collaboration is the correct direction in which to direct research work.

Collaboration can be on the basis of grounds that are common to different departments within the same institution. It can also entail working with colleagues in other institutions irrespective of their departments. Research work emerging from such collaboration tends to be more authoritative, more informative and definitely more national or regional in outlook. The world is moving ahead and we must at least shuffle along. However, qualitative research calls for the deployment of funds and material. How well political and bureaucratic leadership has done and is doing in this regard is open to serious question.

.

The second and most obvious intervention of child health physicians is in the area of rendering services to ill and needy children. All over this country, in private and public sectors, paediatricians make undoubtedly supreme effort in the service of children. I salute them all! It must be pointed out, however, that paediatricians in many settings have literally been making bricks without straw. Basic work tools and operative ancillary support have all but disappeared in many settings.

Thirdly, child health physicians have shown unrivalled dedication to the training of younger colleagues in the specialty. Our founding fathers and (hopefully) we, the contemporary inheritors, have been very passionate over the issue of succession. The leaderships of the Faculties of Paediatrics of both the National Postgraduate Medical College of Nigeria and the West African College of Physicians have always insisted on rigorous training for one single purpose – to train child health physicians of the highest quality. It is sad, however, that many aspects of training calling for hands-on experience are grossly deficient. Trainers are limited to telling rather than showing trainees how things are done. It used to be possible many long years ago for the trainee to be exposed to practice in a developed centre in the course of his/her training. Unfortunately, the practice was sacrificed without any visible alternative provisions. If the leadership had the simple foresight and will to elevate some of our institutions to true centres of excellence, the void might not have been the yawning abyss we see today.

Fourthly, over the years, child health physicians have tried to play advocate for children. As individuals and groups (particularly the Paediatric Association of Nigeria), we have tried to be the voices of children, crying and appealing to whoever cared to listen, for help. It is unfortunate however, that those to whom we have cried the most have been the least attentive. Does someone know a better way of reaching policy makers with the need to move child health matters to the front burners? Does someone know how to get them to partner with non-profit making organizations like the **Paediatric Association of Nigeria** and the National Postgraduate Medical College of Nigeria in the interest of our children?

It is pertinent to put on record the leading role assumed by the **Faculty of Paediatrics**, **National Postgraduate Medical College of Nigeria** in calling attention to the challenges to the survival of the Nigerian child. On each Faculty day, traditionally observed yearly, an eminent Faculty Fellow is elected to deliver a lecture on a contemporary child health issue. From one year to another, one scholar after another has shared knowledge and experience as well as played advocate for the voiceless Nigerian children.

It is pertinent to note all of the lecturers performed their assignments at great personal costs. Some of them came from abroad to deliver the lectures. Yet they gladly bore the costs of transportation to and from Nigeria as well as taking care of their accommodation. The sacrifice of Faculty lecturers resident in Nigeria is no less significant. All but one of them were resident outside Lagos at the time of the call to give the Faculty lecture. They too, bore their costs of transportation and accommodation. The table below shows the titles and Faculty lecturers in the past one decade:

YEAR	LECTURE TITLE	FACULTY LECTURER
1997	Celebrations around the Nigerian Child (**27**)	Professor J.C. Azubuike
1999	HIV Infections in Africa : Progress Made and Ethical Controversies in Perinatal Research (**28**)	Professor J.A. Omene
2000	Paediatric Nutrition and International Child Health (**29**)	Professor A.O.K. Johnson
2001	A Reflection on Four Decades of Paediatrics and Child Health in Nigeria (**30**)	Professor T.C. Okeahialam
2003	The Ethos of Child Survival in a Changing World (**31**)	Professor A.O. Grange
2004	The Polio Imbroglio and Other Child Health Issues (**32**)	Professor J.B. Familusi
2005	Quality of Care for the Nigerian Child: Reviews, Reflections and Reappraisal (**33**)	Professor A.A. Okolo
2006	Hepatitis Viruses and Hepatocellular Carcinoma in Children: Facts, Myths and Proposal for Control of Hepatocellular Carcinoma in Adults(**34**)	Professor A.M. Yakubu

The lecture titles differed as did the emphasis, but one central theme remained. The love and concern for the Nigerian child were palpable. Each lecturer identified challenges and posited the way forward. I salute them all. Nigerian children are grateful!

The **West African Health Organization** (WAHO) also deserves favourable mention. In a fresh attempt to focus attention on the disgraceful scourge of high perinatal, neonatal and maternal mortality, that august body in 2006 inaugurated a Steering Committee made up of practitioners in the field of obstetrics and perinatology. I am privileged to be a member of that committee which has member from some other WAHO member countries. We have been working tirelessly to assist WAHO and national governments develop workable strategies for the reduction of maternal and neonatal morbidity and mortality. We have developed indices that should help the regional body and various national governments effectively monitor success or lack of it. In all our deliberations, I often found myself muttering, “If only, if only, if only someone back home would listen!”

An Identified Focus

Clearly, one lecture is not enough to fully expound all the challenges to the survival of the Nigerian child. I will therefore at this point cone down on a particularly worrying point. I do not understand the Chinese language but those who do assure me that there is a saying in that language to the effect that the journey of a thousand miles begins with the first step. ***The first step in a child's life consists of taking and sustaining the first breath.*** I would like to devote a solemn section of my lecture to this first step.

As soon as a baby is separated from the mother at childbirth, people around want to hear the baby cry. They may not all understand the physiology of the event but know it is a sign that the baby is, at least, alive. Therefore, anxiety and, sometimes, panic follow if this landmark event does not occur. A sigh of relief is often heaved when the baby eventually cries, no matter how late, no matter how weakly. However, that sigh of relief is often misplaced.

The science of physiology teaches us that the **TIMING** of the first breath is of the utmost importance and that compromised oxygen supply in the first five minutes of life portends great danger to the newborn baby. The term paediatricians use to describe a situation in which a newborn baby fails to initiate or sustain spontaneous respiration is ***birth asphyxia.*** There are many conditions that could predispose to or actually cause birth asphyxia. The leading factors in Nigeria include prolonged and/or obstructed labour, antepartum haemorrhage, formation of knots in the umbilical cord and obstruction to the airway from meconium or blood. Many of these factors can be predicted and, if not preventable, can be managed successfully, given the right conditions. However, anticipation depends on competent evaluation of the expectant mother in the antenatal clinic or in labour. Plans can then be made to deliver the baby in a centre with personnel and facilities to ensure intact survival.

Every system in the human body needs oxygen to function properly. The corollary is that all body systems suffer in conditions of poor oxygen supply. However, the most dramatic and most profound effects of oxygen lack are felt by the brain. This is because human intelligence resides in the brain and the highest functions of man are coordinated there. Thus, a myriad of irreversible, long term neurological problems and challenges await babies who fail to die as a result of severe and prolonged denial of oxygen to the brain at delivery. It is therefore understandable why child health physicians are very passionate about this subject.

More than ninety per cent (90%) of babies do not need help establishing the first breath at delivery. All they ask of the attendant is to clean them up and provide access to some warmth. The other ten per cent (10%) are those who will need the help of the birth attendant to take that landmark first step into life, health and survival. And therein lies the problem.

The baby needs help. We call it neonatal resuscitation. This help must come from someone trained to provide it, working with simple and basic tools. And there lies a further problem! Less than sixty per cent (60%) of deliveries in this country are attended by trained personnel (1). The position is that most mothers do not have the benefit of antenatal care or competently supervised delivery. Many patronize unorthodox centres like churches and traditional birth attendants. Worse, all too often public and private maternity homes are poorly staffed, and even more poorly equipped to provide the necessary help. In fact, the duration of lack is sometimes so prolonged that the practitioners lose skill and competence in using the tools even if they were supplied. This raises the question of retraining and continuing education, but that is another matter altogether.

The whole point is that the continuing scourge of birth asphyxia clearly exposes the monster in failed leadership. There is no clear direction or legislation for expectant mothers to be delivered in proper places. Even those who do so are not guaranteed the minimum of standards, because Government has either not provided, or has not had the fibre to insist that practitioners in the private sector comply with prescribed minimum requirements. Indeed, in my earlier days, I often found myself recommending improved health education to encourage expectant mothers utilize orthodox services. There was often a proviso that those centres should be able to provide competent services.

So, what do we see when a newborn baby becomes asphyxiated? The typical picture is that relations are advised to dash off with the baby to the nearest centre where help can be obtained. By that time of course, it would already be too late. The consequences of asphyxia are protean and often permanent. It may result in instant death of the baby or in variable degrees of diminution in the quality of life. Many people believe that death is the worst thing that could happen to a baby who fails to establish respiration in those first crucial minutes after birth. They are wrong! In fact, death might even be a blessing compared to some of the consequences awaiting those who live!

Prolonged denial of much-needed oxygen to the brain and other organs would leave such a permanent mark that even if the baby were to be taken to the most sophisticated of centres, the best that can be done would be to grapple with complications in the hope of limiting the extent of damage. Should the baby live, long term problems of mental retardation, cerebral palsy, convulsive disorders and learning difficulties of various shades of severity are almost guaranteed. Is it too much to expect a responsible leadership that would set up, staff, equip and maintain maternity homes close to the communities so that our children might survive?

It is most embarrassing that the leading predisposing factors to birth asphyxia and major causes of birth asphyxia can easily be predicted or and/or prevented in any self-respecting primary care maternity centre. The requisite equipment for functionality are inexpensive and generally durable. Consumables are, of course, required but then again, they are relatively inexpensive. Of course, trained midwives with the opportunity to update their knowledge and practice will cap the picture.

It is my submission that a token fee should be charged not only to assist in the maintenance of the services but also to give the beneficiaries a sense of belonging and participation. It is part of the psychology of the private sector. Have you ever wondered why the highest charging private sector establishments thrive and flourish?

In doing this, we should also do away with the mentality that primary health care implies practice in some dingy setting. The environment must be spick, span and inviting. The general feeling that we, Nigerians have a poor maintenance culture should also be killed. For goodness sake, the private sector both in the health industry and other sections of the polity thrive because there is a good maintenance culture. And these concerns are run by Nigerians. Therefore, Nigerians have a good maintenance culture. The erroneous impression is created by the fact that, in the main, public property is not treated with due respect. If the people are made to feel some ownership of these maternity centres and if their roles in such ownership are clearly defined, my prediction is that the outcome will be delightful. Indeed the central philosophy of PHC embodies community participation and ownership.

The Government can afford to do this and we should demand it! I submit that all tiers of government can and should be part of the picture, from local governments to the Federal Government. Among the three tiers of government some duty-sharing formula (as distinct from money-sharing) should be worked out to ensure that each political ward gets one functional maternity centre. With all due sense of responsibility, I posit that the staggering monthly allocation to local governments is not matched by an outflow of services and amenities. The politics of what really happens to these funds will be settled when the people turn the militant torchlight towards their own kith and kin who meet once a month to divert funds meant for community service. Believe me, that day will come.

The next stage is to discuss the fate of people whose maternity and neonatal needs cannot be met at the primary care level. Every pyramid health organization structure thrives on a good referral system. It is of great importance to establish primary health centres but it is also of utmost importance to prepare for the certain eventuality of some cases that would need more specialized care. It follows that State General Hospitals (functioning in a secondary capacity) should be well positioned geographically and developmentally to face the challenges. It should be considered a disgrace and the result of the highest level of irresponsibility for any Nigerian Local Government Area to be without a standard, State-owned, Secondary Health Care Centre in the year 2007. With the University Teaching Hospitals and Federal Medical Centres acting as the apex tier of the health care delivery system, the pyramid should be complete.

I dream of the day my Local Government Chairman, my representative in the State House of Assembly, my representative in the Federal House of Representatives and my Senator will sit together, irrespective of party inclinations and deliberate fruitfully on the needs of the people they represent. My mouth waters at the possibilities that will flow from judicious and conscientious deployment of funds meant for constituency care. I revel in the utopia of people–oriented legislations that will proceed if and when that happens.

Before then, the babies will continue to look forward to silent workers like **Dr. Elizabeth Disu**, a colleague and friend. In her quiet way, she has adopted an enviable tactic in waging a war against birth asphyxia. Twice a year, she brings together doctors and midwives from all over Lagos State and retrains them in the art and practice of newborn resuscitation. One can only hope that beneficiaries of this training will put their learning to the best use upon return to their various centres. I salute her and wish more of our colleagues could take up similar ventures.

Better still, the various Local Government and State Government authorities could pick up the challenge and propagate this form of training. They will do well too by backing the training exercise with equipping the maternity centres in their purview. This will at least make up for the blunders of a Commissioner of Health in an unnamed State whose pathetic stance is narrated below. I shall cite profusely from the H.O. Thomas Memorial Lecture delivered by A.B. Scott Emuakpor in 2005 at the University of Ibadan (**26**):

*'In a Guardian newspaper article published online May 5, 2005 (**35**), it was announced that one of our State governments is trying to expand the training program for traditional birth attendants (TBA). The training is to be carried out by the State Traditional Medicine Board. The reason given by the Commissioner of Health, who is a medical doctor, is that MMR in the State is 3,499 per 100,000. The State's Health Chief stated, "We believe that incorporating traditional care providers in our health system will go a long way in reducing the high maternal deaths." Continuing, he said, "whether we like it or not, 40-50% of our people still patronize TBA-s. I just want to appeal to our colleagues in the orthodox sector to try and brace up to that challenge, so that at the end of the day, there is no point holding up to the orthodox system to the detriment of the populace. The end must justify the means. The end is to ensure that the citizenship is kept alive and well.*

This call by the Chief Health Officer of the State is as irresponsible as it is ludicrous. It ignores completely the well-researched information as to the leading causes of high maternal mortality. It also paints an insulting picture of our people that, given a choice between orthodox healthcare and traditional healthcare, about half of them will reject orthodox healthcare. What is even more disturbing and disingenuous is this constant call on physicians to accept and assimilate traditional healthcare practices into orthodox doctoring. The leadership can not hide its ineptitude and woeful failure behind these asinine calls and statements designed to win, at least in their minds, cheap popularity.'

Even a cursory glance at Table III drives the point home that in South Africa, more than 80% of deliveries are supervised by skilled personnel while our figures compare more with Rwanda. Certainly, Nigerians deserve better!

Table III:

Quality of obstetric assistance at delivery (ref 1)

Country	Skilled Assistance %
Nigeria	35
South Africa	84
Ghana	47
Liberia	51
Sierra Leone	42
Somalia	25
Ethiopia	6
Congo DR	61
Rwanda	31

What next?

Many years ago, I prided myself in the philosophy summarized as “Do not stop until you have done your best. Do not call it your best until you have succeeded.” A great deal has been done but a great deal more needs to be done before we can claim success. In order for our children to survive, our people need information – basic health education that will inculcate proper health practices and dispel unwholesome ones. It occurs to me to make an effort to work within the community. The possibilities that may arise from such direct contact and interaction might open doors and water grounds. Maybe some sort of mustard seed could be sown that would blossom full-scale someday. Who knows?

References

1. UNICEF. State of the world's children 2006.

2. Federal Ministry of Health. National integrated Maternal, Newborn and Child Health Strategy 2007

3. United Nations. Millennium Development Goals http://www.un.org/millenniumgoals

4. Meme JS. A prospective study of neonatal deaths in Nairobi, Kenya. East African Medical Journal 1977; 55: 262 – 267.

5. Omene JA, Diejomaoh FME. Factors influencing perinatal mortality in a Nigerian community. East African Medical Journal 1977; 54: 202 – 206.

6. Okolo AA, Omene JA. Trends in neonatal mortality in Benin-City. International Journal of Gynecology and Obstetrics 1985; 23: 191 – 195.

7. Dawodu AH, Effiong CE. Neonatal mortality: The effects of selective pediatric interventions. Pediatrics 1985; 75: 51 – 57.

8. Fagbule D, Joiner KT. Pattern of childhood mortality at the University of Ilorin Teaching Hospital. Nigerian Journal of Paediatrics 1987; 14: 1 – 5.

9. Kishan J, Soni AL, Elkouzi AY, Nir NA. Perinatla mortality and neonatal survival in Libya. Journal of Tropical Paediatrics 1988; 34: 32 – 33.

10. **Njokanma OF** and Olanrewaju DM. A Study Of Neonatal Deaths At The Ogun State University Teaching Hospital, Sagamu, Nigeria. Journal Of Tropical Medicine And Hygiene 1995; 98: 155 – 160

11. David AN, **Njokanma OF**, Iroha E. Incidence and factors associated with meconium staining of the amniotic fluid in a Nigerian University Teaching Hospital. Journal of Obstetrics and Gynaecology 2006; 26: 518 – 520

12. **Njokanma OF**, Sule-Odu AO and Akesode FA. Perinatal Mortality At The Ogun State University Teaching Hospital Sagamu, Nigeria. Journal Of Tropical Paediatrics 1994; 40: 78 – 81.

13. **Njokanma OF**, Olanrewaju DM and Akesode FA. Antibiotic Resistance Among Bacterial Isolates In Neonatal Septicaemia. Nigerian Journal Of Paediatrics 1994; 21: 47 – 51

14. **Njokanma OF**, Olanrewaju DM and Olowu AO. Pyogenic Meningitis In Nigerian Neonates. Nigerian Medical Journal 1994; 27: 38 – 41

15. **Njokanma OF** and Olowu AO. Neonatal Tetanus And Kernicterus: Need For Greater Emphasis On Antenatal Education. Orient Journal Of Medicine 2000; 12: 39 – 42

16. **Njokanma OF** and Sule-Odu AO. Intrauterine Growth Retardation In Nigerian Neonates. Tropical Journal Of Obstetrics And Gynaecology 1998; 15: 25 – 29.

17. Okoro T, **Njokanma F**, Goswami K. The effects of sex, parity and maternal age on birth weights in a specialist hospital setting in Nigeria. Journal of Obstetrics and Gynaecology 2004; 24: 657 – 661

18. Oni GA. Effects of maternal age, education and parity on birth weight in a Nigerian community: Comparison of results from bivariate and multivariate analysis. Journal of Tropical Paediatrics 1986; 32: 295 – 300.

19. Bello AB. Birth weight and its correlates in 4510 pregnancies in Ilorin. Nigerian Medical Practitioner 1980; 15: 77 – 80.

20. **Njokanma OF**, Egri-Okwaji MTC, Nwokoro CA, Okeke GCE. The effects of birth interval on the birthweights of consecutive, same-sex term siblings. National Postgraduate Medical Journal 2006; 13: 10 – 14

21. Ezechi OC, Kalu BKE, **Njokanma FO,** Nwokoro CA, Ndububa VI, Okeke GCE. Cervical cerclage for the prevention of preterm delivery: a randomised comparative study. Journal of Obstetrics and Gynecology of India 2004; 54: 541 – 542

22. Ejianya KC, Cole Hotonou A, **Njokanma OF**, Okpuno G. Feeding practices and weight gain in the first six months of life. Nigerian Journal of Paediatrics 2003; 30: 18 – 23

23. POLICY Project/Nigeria. Child Survival in Nigeria: Situation, Response and Prospects October 2002.

24. Ezechi OC, Kalu BKE, **Njokanma FO**, Nwokoro CA, Okeke GCE. Vaginal misoprostol induction of labour: a Nigerian hospital experience. Journal of Obstetrics and Gynaecology 2004; 24: 239 – 242

25. **Njokanma OF**, Egri-Okwaji MTC, Nwokoro CA, Orebamjo T and Okeke GCE. Birth Asphyxia, Perinatal and Maternal Mortality Associated With Caesarean Section. Tropical Journal of Obstetrics and Gynaecology 2002; 19: 25-29

26. Scott-Emuakpor AB. Biomedical research and our ethical responsibilities. 13th HO Thomas Lecture of the Bassir-Thomas Foundation. Ibadan August 31, 2005.

27. Azubuike JC. Celebrations around the Nigerian Child. Faculty Lecture. Faculty of Paediatrics, National Postgraduate Medical College of Nigeria. Lagos 1997.

28. Omene JA. HIV Infections In Africa : Progress Made And Ethical Controversies In Perinatal Research. Faculty of Paediatrics, National Postgraduate Medical College of Nigeria. Lagos 1999.

29. Johnson AOK. Paediatric Nutrition and International Child Health. Faculty of Paediatrics, National Postgraduate Medical College of Nigeria. Lagos 2000.

30. Okeahialam TC. Four decades of Paediatrics and Child Health in Nigeria. Faculty Lecture. Faculty of Paediatrics, National Postgraduate Medical College of Nigeria. Lagos 2001.

31. Grange AA. The Ethos of Child Survival in a changing world. Faculty Lecture. Faculty of Paediatrics, National Postgraduate Medical College of Nigeria. Lagos 2003

32. Familusi JB. The Polio imbroglio and other Child Health Issues. Faculty Lecture. Faculty of Paediatrics, National Postgraduate Medical College of Nigeria. Lagos 2004.

33. Okolo AA. Quality of care for the Nigerian child: reviews, reflections and reappraisal Faculty Lecture. Faculty of Paediatrics, National Postgraduate Medical College of Nigeria. Lagos 2005.

34. Yakubu AM. Hepatitis viruses and hepatocellular carcinoma in children: facts, myths and proposal for control of hepatocellular carcinoma in adults. Faculty of Paediatrics, National Postgraduate Medical College of Nigeria. Lagos 2006.

35. On-Line Guardian Newspaper publication, May 2, 2005.