

Maternal And Child Health Prospects In Nigeria

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Abstract

Background: The infant and maternal health prospects in Nigeria are predicated by the endemic tropical diseases and adverse environmental health exposures. Improvement of perinatal and maternal health can only be achieved, if family planning, prenatal care, prevention, selection of high risk pregnancies go in parallel with sound governmental public health planning and policy.

Methods: Extensive review of literature reports and data from different healthcare systems at local, state and national levels in Nigeria were carried out.

Results: Nigeria's population is increasing, which will certainly impact on health and development. Consequently, infants and maternal health prospects are still a controversial issue due to factors such as ignorance, apathy, poverty, lack of commitment, illiteracy and corruption. Asphyxia, immaturity, and macerated stillbirth, multiple pregnancies, low birth weight babies, fungal, parasitic and viral infections remain common causes perinatal death. However, local, State and Federal Governments are making efforts to improve public health through ministerial regulatory mechanisms.

Conclusions: The infant and maternal health prospects in Nigeria have been reviewed. In the light of rapid population growth, decline in oil revenue and increased risks of adverse environmental health exposures the maternal and child health prospects could be a serious national public health problem. It is concluded that serious and objective health planning action is called for. It is envisaged that a concrete and practical public health maternal and child health policy could bring significant improvement in the health of Nigerian mothers and children.

INTRODUCTION

Nigeria is one of the world's leading producers of oil, one of the few industrialized African countries and due to a high birthrate a rapidly growing population. About 122 million people live today in Nigeria (most populous in Africa). A majority of Nigeria's population live in rural villages. Obviously, as an oil rich nation with a tremendous capacity to sustain population growth and a growing economy, one of the major health challenges facing Nigeria today is the capacity to sustain the increasing infant and maternal health. Nigeria's birthrate peaked during the oil boom years and is now tapering off in direct proportion to the nation's debt-related responsibility. Although, each year, Nigerian women obtain approximately 610,000 abortions (a rate of 25 abortions per 1,000 women aged 15–44 years), the rate is much lower in the poor, rural regions of northern Nigeria than in the more economically developed southern regions (1). Although highly restricted, abortions take place in large

numbers in Nigeria, under both safe and unsafe conditions. Policies to improve access to contraceptive services would reduce unplanned pregnancy and abortion, which together with a greater access to safe abortion would help preserve the health and lives of Nigerian women (1,2).

The main aim of this paper was to evaluate the infant and maternal health prospects in Nigeria with consideration to factors that promote risks such as endemic disease infections and environmental exposures.

MATERNAL AND CHILD HEALTH

Nigeria has a public health care system that includes federal, state and community hospitals, clinics and health centers. In addition, a large component of health care is provided in private fee-for-service centers usually with some beds, which are often referred to as clinics or hospitals. Therefore, no clear distinction exists in the private sector between physician practices, clinics and hospitals (1).

The World Health Organization (WHO)⁽²⁾ characterized good health as an individual's state of complete physical, mental and social well-being, and not merely the absence of diseases or disability. Good health is an individual's priceless asset and it is a function of the environment.

Environmental Protection Agency Decree of 1988 included water, air, land and all plants, human beings and animals living therein with the inter-relationship, which exist among these or any of them. To put it simply and more succinctly, anything, which is not part of our body cells and tissues, is a part of our environment. An intrinsic property of the environment is its continuously changing nature, which constantly place demands on the health of the individuals. This circumstance makes the caption of this discourse an auspicious and interesting topic, as a matter of fact ⁽³⁾. The health care system in many developing countries is less efficient compared with that in the industrialized world. The improvement of perinatal and maternal health in the developing world can only be achieved if family planning, prenatal care and selection of high risk pregnancies works in parallel with a sound organization implemented and supported by the government ⁽⁴⁾. It was considered that medical advances in the care of pregnant women and neonates will increase survival rates of the low birth weight (LBW) infants and in the future, when the perinatal mortality rates will approach a minimum constant, there will be a minimal fetal death rate ⁽⁵⁾.

Literature reports showed that late neonatal deaths are most of the time attributed to perinatally related events and the increase in the survival of infants at 24-27 week gestation depends on the effectiveness of perinatal and maternal care ⁽⁶⁾. Despite high per capita health care expenditure, the United States has crude infant survival rates that are lower than similarly developed nations. Although differences in vital recording and socioeconomic risks have been studied, a systematic, cross-national comparison of perinatal health care systems is lacking ^(6,7,8,9). When Nigeria is compared with the other western countries such as United States, the United States has significantly less neonatal intensive care resources per capita, without having consistently better birth weight-specific mortality ^(4,5,6). Improving the quality of medical care focusing mainly on process issues will help to lower avoidable child maternal mortality rates ⁽⁴⁾. Kuti et al ⁽⁸⁾ reported a study of a 5-year retrospective analysis of perinatal mortality carried out at Wesley Guild Hospital, Ilesa Nigeria between January 1996 and December 2000, which showed that the perinatal mortality rate during the

study period was 77.03 per 1,000 total births. There was a steady increase in rate over the study period. The most common cause of perinatal death was asphyxia (55.2%), immaturity (23.1%), and macerated stillbirth (18.3%). The high incidence of unbooked patients, multiple pregnancies and low birth weight babies were the main reasons for the high perinatal mortality rates in the Nigerian environment. Education of the public on danger signs of prolonged labour and regular retraining of health personnel on intrapartum care in addition to upgrading neonatal facilities were important measures necessary to reduce the currently high perinatal mortality rate in Nigeria ⁽⁸⁾. The very preterm birth was more often than not a result of a complicated pregnancy. The infant was often sick before birth, and for its survival highly dependent on the highest level of perinatal care ⁽⁸⁾. In Nigeria professional midwives are trained in interpersonal communication and lifesaving obstetric skills, which together with modern referral hospitals refurbished and equipped have reduced maternal and perinatal mortality in Nigeria ⁽⁹⁾.

Global perinatal mortality figures showed that of the 132 million births per year, there were between 6 and 7 million perinatal deaths. While 90% of these births were in less developed countries, perinatal deaths took 98% of the global share. These statistics showed on average the rates as they were in England during the 1930s. The most common recorded medical causes of perinatal deaths were also similar in the less developed countries, and the common denominators were early childbearing, poor maternal health and above all, the lack of appropriate and quality services. Although life-saving practices for most infants have been known for decades, currently a third of mothers still have no access to services during pregnancy and almost half do not have access to services for childbirth. There are enormous variations both among and within countries. It takes innovation to find the best fit between the needs of women, infants and resources. A health worker with excellent knowledge and skills is the key resource and the best investment. The cost is moderate, and the investment pays a high dividend in improved health of both the mother and her baby, and better health for the next generation at lower cost ⁽¹⁰⁾. Quality of perinatal care available in the area of residence, as measured by the presence of consultant obstetricians and a paediatric consultant unit has shown to be significantly related to a reduction in deaths from intrapartum asphyxia, but it appeared not to be related to antepartum fetal deaths ⁽¹¹⁾.

Up to the early part of the 20th century, infectious diseases were the primary health menace to mankind. Pneumonia, influenza, tuberculosis and malaria were the main causes of mortality, while measles, dysentery, cholera and other intestinal infection continually and regularly preyed on the population and still do in many parts of the world. In the present era of improved control of the environment, proper management of human waste, improved personal hygiene, medical facilities and dispensation including vaccination, there has been substantial reduction in the incidence and effect of these diseases. Although life expectancy has increased considerably, changing conditions are replacing the old health problems with more disability and chronic illness, where treatment and management prove very expensive to undertake (¹²). Infancy is a delicate stage of life and the individual is prone to a lot of disease conditions, because of immature tissues, organs and cells and also because of the behavioral patterns of these mentally immature beings. The formative stage of life is also a period of adaptation for the new creature that battles to survive the onslaught of most environmental factors. The age bracket of infancy falls between the first to the sixth year of life (¹³). Pregnancy and the period of lactation of the newborn by mothers is another difficult period for most women in their lifetime. The mother's body goes through a lot of psychological, anatomical and psychological metamorphosis that need to be handled properly in order to reduce the morbidity, mortality rates of most maternal health problems (¹⁴).

In Nigeria, infants and maternal health prospects is a controversial issue, because of the *laissez-faires* attitude of government and the general populace. This negative side stems from factors such as ignorance, apathy, poverty, lack of commitment, illiteracy and corruption. Therefore this review is aimed at examining the history, expectations and the solutions that may be recommended towards improving the health of mothers and their children. This is essential to the progress of developing countries like Nigeria.

HISTORICAL PERSPECTIVES

In considering the health of mothers and their new born in Nigeria, it is important to mention here that racial differences play a significant role towards immunity to disease conditions. For instance West Africans and their descendants, African-Americans, are resistant to vivax malaria and to hookworm in the case of the malaria, because their red cells lack the Duffy antigen that acts as the receptor by which the vivax parasite gains entrance to the cell.

Carriers of hemoglobin as Sickle-cell trait and glucose 6 – phosphate dehydrogenate deficiency (G6PD) display a relative resistance to severe forms of *P. falciparum* such as cerebral malaria (^{15,16}). In hyperendemic areas, a child is protected from malaria in utero and for a time after birth by maternal antibodies. Thereafter attacks of malaria are frequent up to the age of five after which they decline gradually until puberty. >From data gathered from the Federal Ministry of Health in 1996 malaria was the highest cause of death all over Nigeria, but especially in the north (^{17,18}).

One of the nightmares of most nursing mothers in the past was measles infection, which presented clinically with symptoms such as rash and fever simulating the symptoms of malaria except for the skin spots. This one disease condition has caused a lot of disability to children in Nigeria in past decades (¹⁸). Polio has also been a major issue in Nigeria, because of the number of disabilities and deaths that it has caused. Many children who survived are now beggars, handicapped, crippled and devastated by the effect of poliomyelitis. Diphtheria is another disease with a high mortality rate in Nigeria (¹⁹).

Tetanus was and is still a major cause of death in most mothers and infants, who are exposed to the bacteria during childbirth or wound injury. The organism which is the causative agent of this disease is known as *Clostridium tetani*, a saprogenic bacteria that causes lockjaw and seizures in patients with a very high mortality rate. The disease is one of the major reasons early vaccination was introduced in Nigeria (²⁰).

Maternal morbidity and mortality has been caused by septic abortion, threatened abortion, puerperal fever especially if streptococci enter the uterus after delivery thereby causing endometritis. Malaria, anemia, measles, tuberculosis, gonorrhea, chlamydial infection, worm infestations, syphilis, meningitis and recent HIV-AIDS have been challenging issues in maternal health (²¹).

For most infants streptococcal sore throat occurred as a subacute nasopharyngitis with a thin serous discharge with little fever, but with a tendency to extend to the middle ear, the mastoid and the meninges. This infection has caused high morbidity rates in Nigerian children (²²). In Nigeria also many cases of subacute endocarditis often involved abnormal valves (congenital deformities and rheumatic or atherosclerotic lesions). Other disease conditions found in childhood include scarlet fever, acute glomerulonephritis,

rheumatic fever and pneumonia (₂₃).

Urinary tract infections congenitally have also affected the life expectancy of children in Nigeria (₂₄). Records have also shown various cases of cholera, meningococcal pneumonia, tuberculosis, leprosy, hemolytic disease of the newborn, tumors, systemic lupus erythematosus hyperthyroidism, hemolytic anemias, thrombocytopenias, allergic encephalitis, chronic thyroiditis and various types of autoimmune diseases (₂₅).

FUNGAL INFECTIONS

Fungal infectious like tinea corporis (ring worm, tinea pedis (athlete's foot), tinea curis (jock, itch), tinea capitis, tinea barbas, tinea unguium (onychomycosis, dermatophylid), subcutaneous and systemic mycosis, opportunistic mycosis and candidiasis is also on record as part of the health problems that have affected both infants and mothers. Vesico-vaginal fistulae (VVF) are destroying many women in Nigeria (about 1.5%) especially in modern Nigeria (₂₆).

PARASITIC INFECTIONS

Parasitic infection have not been less merciful on infants, including Giardiasis, Trichomoniasis, leishshamiasis, amoebiasis, toxoplasmosis, ascariasis, angiostrongyliasis, cysticercosis, drancotiasis, schistosomiasis tapeworm infestations, trichinosis, trichuriasis, trichostrongyliasis, onchocerciasis, loiasis and hookworm infestations, paragonimiasis and filanasis has been of serious concern in some northern and eastern part of Nigeria (₂₇).

VIRAL INFECTIONS

Viral infections have even worsened the already improved childcare programmes in Nigeria. Some of these viral infections include chickenpox, yellow fever, rabies, herpes simplex, meningoencephalitis of mumps, parainfluenza, respiratory syncytial virus pneumonia and bronchiolitis adenovirus, common cold (caused by many viruses), adenovirus conjunctivitis, rubella virus and papilloma viruses have also contributed minimally to the problems of infants and mothers (₂₈).

Summarily the figures obtained from various data collected for these groups showed that parasitic infectious caused 40% mortality and 40% morbidity rates, bacterial infectious caused 20% mortality and 30% morbidity rates, fungal infections caused about 10% mortality and 10% morbidity rates, while viral infections caused about 25% mortality and 20% morbidity rates (₂₉). HIV-AIDS have also resulted in

both disability, morbidity and mortality (₃₀).

PROGRESS: PROGRAM ON IMMUNIZATIONS

The World Health Organization and the Nigerian government have made progress with the introduction of the expanded program on immunization (EPI) as it is formerly known, but now known as National Program on Immunizations (NPI) with the sole focus of immunizing all infants and mothers in Nigeria (₃₁). The various types of vaccines that are currently in use are live attenuated type with the following as examples: measles, polio, rubella, yellow fever, small pox, anthrax, BCG for tuberculosis. Killed vaccines are also in constant usage within Nigeria and these include polio, influenza (pertussis, TB, cholera). Also toxoids and microbial submits are now currently used often in Nigeria. These include diphtheria, tetanus, capsular polysaccharides of pneumococci, meningococci and hemophilus influenzae and the surface antigen of hepatitis B virus (₃₂).

In Nigeria two months old babies are administered the DPT (Diphtheria, Pertussis and Tetanus), trivalent (I,II,III) oral live poliomyelitis virus vaccines. This is repeated every two months until the age of 58 months, when measles vaccines are normally administered. Again BCG vaccines are administered from the time of birth to about three months. This gives immunity against tuberculosis for the next ten years before any other can be administered. This reduces and eradicate military TB and TB meningitis. DPT vaccines are always safe and give protection for between 3-10 years while the oral polio (Sabin) give protection for about 3-10 years, but unsafe in cases of agammaglobulinaemia (₃₃).

In the year 2004, progress was stopped, when several states refused for their children to be immunized. Consequently the wild strain of the polio virus was detected and Kano served as the focal point for the spread of the virus to Niger, Chad and other neighboring West Africa countries. It seems that the controversy has been solved, but the aftermath and consequences of that singular action continue to linger, unless action is taken towards mass immunization in these focal areas (_{34,35}).

Some policies by government such as the National Health Insurance scheme has also contributed a lot to the prospect of infant and maternal health in Nigeria. The scheme, if well managed, can increase the health status of all Nigerians to about 80% improvement as the vision of the Health for all Nigerian by the year 2010 draws nearer. Contributions from citizens by way of regular payment to the scheme and

financial property, provision of adequate and essential drugs by Health centers for these program are important towards the success of this program (36). Another laudable health policy by the Nigerian government was the establishment of primary Health Care Centers (PHC) in villages and communities. This has helped to bring health nearer to the people, but again provision of experts and manpower is dragging the wheel of progress of this palatable program. Government should provide more funds to the centers. The annual national budget for health related matters is still below the WHO standards and requirements (5,37).

PROJECTIONS AND RECOMMENDATIONS

Nigeria population will soon hit the 200 million mark, which certainly will impact health and developmental. Government policy has been to advise the population to have no more than four children, but this policy is not adhered to by most Nigerians. Teenage pregnancy is on the increase with many children living in single parent families (6,38). Poverty, social insecurity, low level of education have also resulted in an increase of child abuse, neglect and exploitation as a major public health problem.

We believe that both international, local non-for-profit agencies and government agencies from the education, welfare and health areas should pool resources together for a comprehensive maternal and child health policy with practical steps for a long-term plan in Nigeria. Such a plan must then be presented to policy makers and international bodies in order to find the resources to put the plan into action.

As part of implementation the use of the media, both electronic and print, radio and television advertisements and announcement must be used in order to reach the public with relevant information to improve health and focus on prevention (5,6,39).

We also recommend free maternal and child health programs for the whole population in order to achieve less maternal and child mortality.

Another important aspect is the environment. Pathogens and environment interact, so if the environment is a conducive pathway for pathogens to survive, then the host is predisposed and susceptible to various disease conditions. The sanitation condition of most urban area (cities and towns), sub-urban and rural (villages, communities) areas is very poor. Government agencies involved with planning, building and infrastructure are therefore additional partners

in such a public health plan that should also provide good drainages, roads, safe water and other accessories that are required for a clean and habitable environment. This will definitely reduce most tropical diseases that have been associated with the Nigerian nation for a very long time, thereby giving hope to the future generations.

Government policies should also cover aspects such as pollution and good manufacturing practices that will make the environment safe. Health policies on the production of standard and original drugs, foods and other consumables should be strictly pursued with the commitment already shown by National Agency for Food and Drugs Administration Control (NAFDAC).

CONCLUSIONS

Infant and maternal health prospects in Nigeria have been reviewed. In the light of rapid population growth, decline in oil revenue and increased risks of adverse environmental health exposures the maternal and child health prospects could be a serious national public health problem. We therefore believe that a serious and objective health planning action should be called for in order to prevent any health catastrophe. This paper has reviewed two aspects: 1) Retrospective evaluation of the health situation of mothers and infants and 2) made suggestions as to the best way forward for effective prevention and management outcomes. It is envisaged that a concrete and practical public health maternal and child health policy could bring significant improvement in the health of Nigerian mothers and children.

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