



Addressing the Predicaments of Un-vaccinated Children in Benue State: The Roles of Government & UNICEF

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ABSTRACT

Vaccines are one of the most cost-effective means of preventing illness and death, particularly in children. Yet, more than 22 million babies born worldwide each year go unvaccinated, leaving them at risk of contracting, and potentially dying from, vaccine-preventable diseases like measles. Statistics do not tell lies. This is because the recent disclosure by the United Nations Children's Fund (UNICEF) confirms that up to 4.3 million children in Nigeria are left out on vaccinations every year. This is not only alarming but scandalous. It is rather unfortunate that Nigerians, particularly rural population are not taking advantage of routine immunisation and vaccination of children. Nigeria is said to have the most unimmunised population for measles vaccine first dose with 3.3 million children as compared to India with 2.9 children. Children who are not vaccinated are at the greatest risk of contracting diseases such as measles, whooping cough, and tetanus which may be fatal and often lead to long-term debilitating effects on survivors. Using Benue state as a Case, the huge humanitarian crisis has led to the creation of eight Internally Displaced Persons, IDPs camps in eight locations across the state. The camps, located at Agan or Abagena in the outskirts of Makurdi, Daudu, Gbajimba, Tse- Ginde in Guma local government area, Anyiin and Ugba in Logo local government area, are overflowing with inmates. Using qualitative data from books, journals and online documents, the findings suggest that violent conflicts in the state, an unreliable and ineffective health care delivery system, a national government that provides insufficient funding to take care of the health problems of the nation, and a citizenry that pay scant attention to health and powerless to hold government accountable The paper, therefore suggested that Governments must urgently tackle the challenges that have been limiting the realisation of full coverage of immunisation of children in the country with the target of achieving 95% coverage. The study concluded by positing that immunising and protecting Nigerian children against vaccine preventable disease is a task that should be encouraged.

Keywords: Immunisation of Children, UNICEF, Mortality and Morbidity, Vaccination of Children, Internally Displaced Persons & Multiple Indicator Cluster Survey.

INTRODUCTION

Since 2012 African leaders having been having nightmares on how to best ensure that African children survive and live productive lives This is because a child who dies before the age of five is robbed of a life and the chance to participate and contribute to their community and country.

Supporting the relevance of child health financing, study from Sachiko Ozawa at the Johns Hopkins Bloomberg School of Public Health estimates that between 2011-2020, the majority of countries in Africa will collectively see a net economic benefit of \$224 billion by investing in immunisation programs. The study also found that for 94 low and middle-income countries around the world, every dollar spent on immunisation programs could return up to sixteen times that amount in economic benefits, taking into account treatment costs and productivity losses(*nigeriannewsdirect.com, 2016*).

To attain this landmark, one puzzle that will continue to face policy makers in the continent in general and Nigeria in particular is should countries like Nigeria invest in healthcare, infrastructure, education or something else entirely? There is a low-cost, proven investment that not only gives children a healthy start at life, but is cost-effective with long-term benefits for prosperity: vaccines. As stated earlier, in 2012, all African nations made a promise to support children's health by joining other World Health Organisation member

countries in setting a goal of universal access to immunisations by 2020 and committing to the Global Vaccine Action Plan. There is much to celebrate in the progress made both before and since. Child deaths in Africa dropped a staggering 55% between 1990 and 2012, largely thanks to vaccines. Since 2000, there has been an 86% reduction in deaths from measles on the continent. In 1996, 250,000 people across Africa were infected with meningitis A; today, the disease is almost eliminated in the region. And finally, in August 2016, the continent reached a huge milestone when it was announced that Africa had gone a full year without a single reported case of wild polio (*nigeriannewsdirect.com, 2016*).

National governments have been central to these successes, while tapping into the resources and skills of partners like Gavi, the Vaccine Alliance, donors and the private sector. Unfortunately, at our current rate of progress, we are not on track to meet the ultimate goal of reaching all children with vaccines. Right now, one in five African children still do not receive the vaccinations they need (WHO, 2012 & GAVI. Penta PIE 2013, Report from GAVI Large Country Task Team on Nigeria; 2013.).

Of the 10 countries around the world with the most unvaccinated children, five are African: the Democratic Republic of the Congo, Ethiopia, Nigeria, South Africa and Uganda. Furthermore, we continue to miss reduction targets for cases of tetanus, measles and rubella – vaccine-preventable diseases that were once thought to be on the verge of elimination. Even the extraordinary success of the meningitis A vaccine could prove short-lived, unless countries commit to making this vaccine a regular part of their immunisation programs (WHO, 2016).

These diseases are preventable and are mostly common among children and have attracted global concern because of its contribution to neonatal and maternal mortality. To combat such childhood diseases, a major strategy deployed was the administration of vaccines (Birhanu, Anteneh, Kibie, & Jejaw, 2016). Vaccines have been one of the biggest success stories of modern medicine. WHO estimates that at least 10 million deaths were prevented between 2010 and 2015 thanks to vaccinations delivered around the world. Many millions more lives were protected from the suffering and disability associated with diseases such as pneumonia, diarrhoea, whooping cough, measles, and polio. Successful immunization programmes also enable national priorities, like education and economic development, to take hold (WHO, 2017).

Despite the availability of vaccines to tackle preventable childhood diseases, they remain endemic in the sub-Saharan region (Antai, 2010). For some experts and scholars and donor agencies, *Vaccine-preventable diseases are the most common cause of childhood mortality, with an estimated three million deaths each year* (Ophori, Tula, Azih, Okojie and Ikpo, 2014).

Child immunization coverage rate continues to be unacceptably low in Nigeria, particularly in the northern states. The results of the 2006 National Immunization Coverage Survey (NICS) revealed a national immunization coverage rate of 18.1 percent, ranging from 29.9 percent in the south-west zone to 6.2 percent in the north-west zone. Equally, there are significant regional variations in the coverage of Bacille Calmette-Guérin (BCG) vaccine coverage, which prevent tuberculosis: from 53.1 percent in the south to 20.5 percent in the north-west (NICS Study Group, 2007). Immunization is one of the most cost effective public health interventions to reduce child mortality (Abdulraheem, Onajole, Jimoh & Oladipo, 2011).

However, in the year 2012, Nigeria replaced the childhood DPT and hepatitis B vaccines with the pentavalent vaccine which contains DPT, hepatitis B, and H-influenza type B vaccines. It is expected that with this introduction, nearly 400,000 cases of *Haemophilus Influenzae* type B would be prevented with about 27,000 lives saved annually in Nigeria (Uzochukwu et al, 2017). In 2013 also, the pneumococcal conjugate vaccine was introduced in the country; however, this is yet to be scaled up to all states of the federation. In February 2015, Nigeria also introduced the inactivated polio vaccine into the nation's routine immunization schedule which is very safe and highly effective in preventing paralytic disease caused by all three types of polioviruses. Plans were made to introduce the Rotavirus vaccine in 2017 (Uzochukwu, Okeke, Envaladu, Mbachu, Okwuosa & Onwujekwe, 2017).

In Nigeria, routine immunization is provided mostly through the public health system, with the three tiers of government (federal, state and local government) playing specific and sometimes duplicating roles. The federal government sets national health policies, implements national health programs and coordinates, evaluates and monitors these health policies and programs and for procuring vaccines and distributing them to zonal cold stores. Through the National Program on Immunization, a parastatal known as the National Primary Health Care Development Agency (NPHCDA), of Nigeria's Federal Ministry of Health. The NPHCDA's mandate is to develop National Primary Health Care policies, including immunization, and to support states and LGAs in implementing these policies. At the state level, implementation of the immunization program is the responsibility of the State Ministry of Health. The state government is responsible for distributing vaccines to local government central storage facilities and managing state health and other budgets. The state also employs key officials responsible for immunization service provision and coordinates immunization activities within the state. Actual implementation of routine immunization activities is done by primary health care facilities which are managed by the local government (Feilden Batters by Analysts, 2005).

Despite all these strategies' innovations, Nigeria still has one of the lowest routine immunization coverage in the world (Feilden Batters by Analysts, 2005). Consequently, vaccine preventable diseases contribute significantly

to the death of children, especially those <5 years (WHO, 2012). It accounted for approximately 22% of childhood deaths, amounting to over 200,000 deaths per year (WHO, 2014). The proportion of fully immunized children have only increased from 13% in 2003 to 25% in 2013 (NBS, 2013). This represents the proportion of children who have received all the standard antigens: BCG, DPT – 3 doses, Polio – 3 doses, HB – 3 doses, and measles vaccines, before their second birthday. Measles immunization coverage by 12 months increased from 31.4% in 2003 to 49.2% in 2011 and 42% in 2013 (NBS, 2013). This pace of progress is still far from satisfactory, falling below the increase needed to achieve the MDG target of more than 90% by 2015 (Uzochukwu, et.al, 2017).

Nonetheless, Nigeria has made appreciable progress in polio eradication. As at July 1, 2014, the total case count remains four in Nigeria out of a global total of 112 cases compared to 26 cases in same period in 2013, giving an 86% reduction in polio cases in 2014 compared to the same period in 2013 (Polio Global Eradication Initiative, 2014). However, there was a resurgence of polio cases in July 2016 (Atchon, 2016). In an era of a well-developed and cost-effective vaccine against VPDs, it is imperative that we address the continually high death rates from the diseases. A case in point is Nigeria, one of the worst performing countries in reaching universal vaccination for all vaccine-preventable diseases. Universal vaccination is defined as having at least over 90% of children less than one year vaccinated. Nigeria is the most populous country in Africa with a population of 180 million people; about 30 million are children under the age of 5 year. Nigeria is also the wealthiest in Sub-Saharan Africa.

In view of the above, one can posit that Nigeria has one of the most vulnerable population that is under threat as thousands of displaced children living in underserved and under-defended internally displaced persons (IDP) camps in Benue State are battling with hunger, death, immunization challenges and malnutrition. Sickness and ill health have been the lot of many displaced persons, especially women and children. As it stands, a total 175,070 displaced persons across the state are scattered in fourteen (14 IDPs) recognised and the unrecognized camps in three local government areas. Infrastructures in all of the camps are in dire straits, forcing many to sleep in open spaces while children are exposed to danger and mosquito bites. Present within the premises of some of the camps are environmental hazards which have not only left scars on some children but led to the death of others. Moreover, their houses have no doors and mosquito nets. There are no clinics and their children cannot go to school. They have to go to the stream to fetch water, except for the raining season when they collect water in kegs and bowls. Still, one particular question remains unanswered: why does Nigeria continue to report nearly 4.5 million unvaccinated babies against VPDs? It is widely recognized that socio-demographic and psychosocial and ecological factors alone are not enough to explain human behavior or are sufficient to guide the design of effective behavior change interventions (Cohen, Scribner & Farley, 2000 and Bobo, Gale, Thapa & Wassilak, 1993). Against this background, this paper seeks to address the Predicaments of Unvaccinated Children in Benue State using examples of VPDs with a view of exploring the Roles of Government & UNICEF in the process. Whereas hitherto attempts to understanding the situation and proffer workable solutions have focused on social, cultural, and political obstacles; this paper argues that the health challenges posed by VPDs in Nigeria arises largely also a result of an under-utilization of available resources as well as a sustained dependence on foreign sources for vaccine production and supply and ethno-political cum religious crisis in the state. In addition, seemingly vaccinated children come down with VPDs due to lack of proper pre and post-vaccination laboratory evaluation. Ultimately, we propose a framework that takes into consideration the economic as well as the scientific dynamics of the situation as well as a sustained dependence on foreign sources for vaccine production and supply. In addition, seemingly vaccinated children come down with VPDs due to lack of proper pre and post-vaccination laboratory evaluation. Ultimately, we propose a framework that takes into consideration the economic as well as the scientific dynamics of the situation.

Review of Literature on Vaccination

Vaccination remains one of the most effective and economical public health measures for preventing disabilities and deaths. Whereas the widespread approach to the use of vaccines ensures the control of an array of infectious diseases, developing countries continue to grapple with the burdens of Vaccine-Preventable Diseases (VPDs) with their attendant bearing on childhood mortality. Vaccination as a means of enhancing host resistance to infectious diseases remains one of the most effective and economical public health tools for preventing morbidity. It is a biomedical exercise as well as a form of social intervention which has not only ensured the eradication of small pox from the garden of human experience, (Odewumi, 2009, Søborg, Mølbak, & Doherty, 2009) but also continues to save millions of lives on the global plane. Its aesthetic appeal is that once people are exposed to the antigenic part of an infectious agent, their immune system responds in a manner such that they become protected from diseases associated with it. Hence, the logic of vaccination is that every vaccinated person will mount an effective immune response (Poland, Ovsyannikova & Jacobson, 2008). Additionally, vaccines are quite safe in comparison to most pharmaceutical and biological agents (Jacobson, Zabel & Poland, 2003).

Although vaccination brings about the control of an array of infectious diseases, some countries continue to face the burdens posed by a number of vaccine-preventable diseases (VPDs). Roukens and Visser (2008) note that 90% of the annual cases of VPDs occur in sub-Saharan Africa, circulating debilitating conditions such as

measles, meningitis, mumps, poliomyelitis and typhoid fever. According to Adu (2008), Nigeria ranks 15th amongst countries with the highest cases of VPD-associated morbidity and mortality. Section three of the paper will address the factors with emphasis on the role political violence play in the process.

MATERIALS AND METHOD

Scope of the study

The study area, Benue State, lies between latitudes 6°30' and 8°10'N of the Equator and between longitudes 7°50' and 10°E' of the Greenwich Meridian. It is surrounded by six states, namely, Nassarawa to the north, Taraba to the northeast, Cross River and Ebonyi to the south, Enugu to the southwest, and Kogi to the West. There is also a short international boundary between the state and the Republic of Cameroon along Nigeria's southeast border. Benue State is made up of 23 local government areas (LGAs); 14 and 9 of these LGAs correspond with the ethnic territory of the Tiv, Igede and Idoma people, respectively.

Figure 1 & table 3: show the 23 LGAs that make up the state.



With a population figure of more than four million inhabitants (4,253,641), the state is the ninth most populous state in Nigeria. Made up of 2,144,043 males and 2,109,598 females, the state has a sex ratio of 1.02, a literacy rate of 44.7% among the population aged 6 years and above, and a population density of about 130 persons per square kilometer (Federal Republic of Nigeria, 2009; NPC, 2009). There are three major ethnic groups inhabiting the state. The Tiv form about two thirds of the population and are found in 14 of the 23 LGAs. The Idomas and the Igedes occupy the remaining 9 LGAs. Other ethnic groups include the Etulo, who are mainly found in Katsina Ala and Buruku LGAs, the Afia in Ado, the Nyifon in Buruku, and the Jukuns in Makurdi and Guma LGAs. At present, Benue state has 23 LGs; but, it will be difficult to study immunization service delivery in all the LGs in the state because of the security challenges across the state. To make this research easier and more representative, the scope of the study is limited to three LGs of the state. The three are Guma, Logo and Makurdi Local councils. These councils are hosting seven IDPs camps. Among them include: Daudu Camp, Tse-Ginde Camp, Gbajimba Camp, Abagena/Agan Camp, Anyiin Camp, Abeda Camp and Ugba Camp(See table 1 for the IDPs distribution).

Table 1: Displaced Persons Per Camp at the Seven IDPS Camps in Benue State as at 1st March, 2018

Local Government Area	Men	Women	Pregnant women	Nursing mother	Male children	Female children	Aged	Disabled	Total population
GUMA LGA									
Daudu Camp	5,149	8,024	304	226	6,527	4,344	82	41	24,044
Tse-Ginde Camp	4,476	6,431	532	581	4,468	5,533	241	167	20,928
Gbajimba Camp	5,977	8,649	349	131	2,941	6,452	480	68	24,019
MAKURDI LGA									
Abagena/Agan Camp	6,362	12,041	492	616	8,773	7,810	258	234	34,986
LOGO LGA									
Anyiin Camp	7,030	9,342	582	776	9,845	9,438	1,337	664	35,655
Abeda Camp	2,671	3,419	134	155	1,677	3,688	96	38	12,820
Ugba Camp	6,284	8,765	79	271	5,312	2,623	331	35	22,618
Total									175,070

Source: Benue State Emergency Agency (2018).

According to official figures above obtained from the State Emergency Management Agency, SEMA, of the total children population of 87,262, 47,353 are male while 39,909 are female children. A further breakdown of the figure indicated that the LGEA Primary School camp and the UNHCR Shelter camp, all in Daudu, Guma local government area, houses a total number of 10,871 children. 6,527 are male while 4,344 are female.

The Tse-Ginde camp also in Guma local government area, with a total number of 10,021 children, 4,468 of them are male while 5,553 are female children. At the Gbajimba camp where 9,393 children are currently taking refuge, 2,941 are male while 6,453 are female children. The Abagena or Agan camp, in the outskirts of Makurdi the state capital, of the 16, 583 children taking refuge in the gigantic camp 8, 773 are male while 7, 810 are female.

According to the figures from SEMA, the Anyiin camp in Logo local government area of the state is playing host to 19, 283 children. Of this number 9, 845 are male while 9, 438 are female. At the Abeda camp also in Logo local government area, 6,730 children are currently taking refuge in the camp. Out of this number 1, 677 are male while 3, 688 are female. The camp at the LGEA Primary School Ugba, the Logo local government headquarters houses 7, 569 children. The male children are 5, 312 while the female are 2, 623. Meanwhile as at March 1, the total number of persons displaced as a result of the lingering crisis stood at 175, 070.

The rationale behind the choice of these areas of the study is based on the notion that, as at March 2018, the Benue State Emergency Management Agency (SEMA) registered more than 80,000 children scattered in various camps across the state. These children, who left their homelands with parents and guardians to escape herdsmen attacks, now live in underserved and underfunded IDP camps. Schooling has been interrupted and cases of hunger and malnutrition are rife since food supplies have ceased from the government for some weeks. Findings from Ojo(2018) revealed that the last consignment of food supplied to the seven recognised IDP camps in the state was in May, 2018.

Also, Benue State was not part of the states with unmet vaccination needs in Nigeria as table 2, indicate before 2015.

Table 2: States and Local Councils that have unmet Vaccination needs in Nigeria before 2015.

State Priority LGAs by State	LGAs with Highest Numbers of Unimmunized Children per State or requiring Special Attention
Bauchi	Bauchi, Dambam, Giade, I/Gadua, Katagum, Kirfi, Misau, Ningi, Shira and Toro
Adamawa	Lamurde, Yolanorh, Michika, Madagali, and Shellege
Jigawa	Ringin, Sule Tankarkar, and Kafin-Hausa.
Taraba	Kurmi, Lau, Zing and Yero
Gombe	Balanga, Billiri, Dukku and Funakaye
Plateau	Barkin Ladi, Bokkos, Pankshin, Langtang south, Riyom and Wase
Kano	
Katsina	Mashi, Safana, Kafur, Daura, Katsina, Funtua, Kankara, Batagarawa and Ingawa
Kaduna	Zaria, Soba, Igabi, Kaduna South, Kauru, and Ikara
Niger	Mariga, Lavun and Suleja
Nasarawa	Lafia, Doma, Nasarawa Eggon, Obi LGAs and Karu
Sokoto	Bodinga, Dange Shuni, Gada, Goronyo, Gwadabawa, Illela, Sokoto North, Sokoto South, Tambuwal, Wamako and Wurno
Kebbi	Arewa, Argungu, Bagudo and Maiyama.
Zamfara	Bakura, Birnin Magaji, Bungudu, Gusau, Maradun, Talata Mafara, Tsafe and Zurmi
Borno	Abadam, Marte, Guzamala, Nganzai, Kaga, Kondiga, Magumeri and Mafa
Yobe	Giedam, Gulani, Gujba Machina, Tarmuwa, Jakusko, Fune and Karasuwa

Source: FGN 2015, *Nigerian National Routine Immunization Strategic Plan (2013-2015)* Abuja :Government Printers

The security situation in some parts of Benue State made it impossible to reach certain areas since the intensifications of conflict in the state. Some informants nursed suspicions and as such were economical with the truth regarding facts about the violent conflict and immunization in the state. It is suspected that not knowing the purpose of the research made respondents reluctant to divulge information. Despite these limitations the study made useful discoveries and can hence be regarded as a valuable contribution to research.

METHODOLOGY

This paper employed the archival method of research, drawing from extant literature relevant to its thematic concerns. Data collection for this study was mainly through documentary research, featuring a critical analysis of relevant documents relating to EPI in Nigeria. Major documents such as periodicals, occasional publications, newspapers and magazines, which carry information relevant to the research themes, were carefully read, analyzed and relevant information extracted from them. The most viable sources included documents on PHC and EPI from World Bank (WB) 2009, 2017 & 2018, Federal Office of Statistics (FOS); Benue state Emergency Agency and Ministry of Health Data (MOHD).

Some other relevant textbooks and archival materials were found useful were also consulted. All the data collected were first stored in notebooks and scrutinized before storage into the computer. Data analysis is done using tables and percentage change over the years from the data extracted from the documents consulted.

Furthermore, it frames its theses around the use of local resources and strategies vis-à-vis solving the challenges posed by VPDs in a developing nation context. This is an approach analogous to the concept of regionalization (Storper, 1997), a notion which emphasizes the utilization of resources specific to individual places to meet socio-demographic, health and politico- economic challenges.

Obstacles to Effective Vaccination in Nigeria: The Benue State Example

Since the coming of the United Nations Children's Funds (UNICEF) to Benue State, rural dwellers, especially women and children have had cause to smile again owing to the tremendous interventions of the international organisation in the area of ameliorating the plight of the populace health-wise. Locals who have benefitted from the organization's interventions in the areas of Maternal, Newborn and Child Health (MNCH), immunization, Primary Health Care have continued to give glowing testimonies of how those interventions have positively impacted on their lives.

This is even as the Benue State government has commended the United Nations Children Fund (UNICEF) for supporting the five rounds of immunization carried out in 2017 with a total of N112.154 million. Executive Secretary, State Primary Healthcare Board, Dr. Bem Ageda who stated this in a chat with *The Guardian*

correspondent earlier this year explained that the funds was released by UNICEF for logistics support in the 23 local government areas of the state during each rounds of the National Immunisation Days and National Immunisation Plus Days. Ageda who disclosed that the state benefited the sum of N21.252 million for each of the five rounds of immunisation in the state in the year under review said N20 million was for logistics while N1.2 was for social mobilization (Ejembi,2018) . This was why Basavan (2006), posited that emphasis should be placed on preventive medicine principles of which one of the most cost effective health interventions is immunisation which is considered the key to attain the goal of “Health for all” (HFA) which was to be achieved in 2015.

Awosika (2004) is of the view that, immunization remains the most effective tool to reducing child morbidity and mortality, occurring from vaccine preventable diseases, e.g. poliomyelitis, diphtheria, pertussis, tetanus, tuberculosis, measles, hepatitis B and yellow fever. These diseases mentioned above became a great source of concern to all stakeholders i.e. World Health Organization (WHO), and United Nations International Children Emergency Fund-UNICEF. As a matter of imperative, a possible solution to this tragedy was formulated in 1977 when the world health assembly adopted a resolution which stipulated that the main social target of government and UNICEF in collaboration with WHO should be the attainment by all, the world over, by the year 2000, a level of health that will permit them to live a socially and economically productive life.

According to Ojabo (2017) immunisation services were successfully carried out with landmark achievements in Benue state between 20016 and January 2017. According to her, the state participated in the two rounds of NIPDs in February and March, 2016 supported by the state government and conducted In between Round activities (IBR) in High Risk LGAs (Guma, Gwer-West, Agatu) to reduce the high number of unimmunized children from 112,300 to 14,869 as in 2016. Again, another two rounds of IPDs (February and March, 2016) immunizing 2,895,790 covering 122% of under five children. Another five rounds of Outbreak Response (OBR) to Wild Polio Virus (WPV) took place in Sept/Oct/Nov/Dec 2016 and Jan, 2017 immunizing cumulatively 7,706,611 children below five years. Furthermore, the state government equally engaged more Private HFs in RI activities after signing an MOU with 60 private HFs and 2,162 health workers who were trained in 2016 on the new “BASIC GUIDE FOR ROUTINE IMMUNIZATION SERVICE PROVIDERS” for optimal performance of immunization.

These achievements have been reversed occasioned by conflicts in the state. A report by the International Crisis Group (ICG) (2018) stated that clashes between farmers and herdsmen in Nigeria have killed more people than Boko Haram in 2018. According to ICG (2018) at least 1,500 people have been killed in clashes between nomadic herders and sedentary farmers in central states since September last year. More than 1,300 Nigerians died from the farmer-herder conflicts between January and June this year, while the death toll from Boko Haram’s rebellion was about 250. One of the major fallouts of this killings is the number of IDPs and Benue state has a large number of them. Before now, the displaced persons commanded attention, as they attracted visits by prominent individuals and private companies who donated food items. It is now months since they have been camped but the visits have waned. Donor corporations have moved on and the government has withdrawn food supplies, citing lack of funds (Ojo, 2018). Few humanitarian agencies such as Doctors without Borders and the Red Cross are helping to provide clinical services and drugs to treat simple illnesses in some of the camps, but the impact is low because the people have no food to aid the digestion of the drugs. At the Gbajimba camp where Red Cross runs a clinic, 93 children were enrolled for a Community Management of Acute Malnutrition programme in July, out of which two of them later died. According to her,

The most prevalent ailment at the camp during the dry season was diarrhea and cough. When the rain started, people started coming down with malaria. Due to insufficient food intake, some children were not healthy as required... At the Abagena/Agan Camp, which has the second highest population of 34,986 displaced persons, a six-year-old girl fell from the topmost floor of an uncompleted building in the camp. She died on the spot. It was the same fate of death and fatal injury at another camp located in an area known as ‘Heavy Duty’ in North Bank Makurdi. There, the IDPS, numbering about 100 persons, occupy an uncompleted building which was initially designed as a guest house. The building has four uncovered pits covered with dirt. A child died in the pit two months ago while another one, a three-year-old named Emmanuel, survived a fall in the pit with a scar on his face (Ojo, 2018 p. 15).

The huge humanitarian crisis painted above led to the creation of eight Internally Displaced Persons, IDPs, camps in eight locations across the state. The camps, located at Agan or Abagena in the outskirts of Makurdi, Daudu, Gbajimba, Tse- Ginde in Guma local government area, Anyiin and Ugba in Logo local government area, are overflowing with inmates. Two more camps According to figures obtained from the Benue State Emergency Management Agency, SEMA, the camps house about 175,070 IDPs with 60 per cent of the inmates being

children and minors whose education have also been dislocated. This figure is aside the latest addition from Omusu, a community where 26 residents were murdered in cold blood early April by suspected herdsmen. In that unfortunate incident, the entire community was sacked by the attackers who also razed several houses and food barns of the victims who have now found a safe haven at Ojapo in the same local government area.

Apart from the eight IDP camps, the state government has also established two camps in Abande and Imande-Agbatse in Kwande local government area for Cameroonian refugees who had fled the crisis in the southern part of that country to Nigeria. About 10,000 refugees are currently housed in the two new camps. So, in essence, the Benue government is catering for over 180,000 IDPs and refugees arising from the Cameroonian crisis and the incursions of herdsmen into the state. Among those in the temporary shelters are some of the Tiv victims of suspected herdsmen attacks in neighboring Nasarawa State. Speaking on the humanitarian crisis arising from the conflicts, the Executive Secretary of SEMA, Mr Emmanuel Shior, lamented that the burden was overwhelming for the state government. According to him, there is no way any state government can cope with this situation if intervention does not come from the Federal Government, public spirited individuals, the international community and organizations because the state government has been overstretched. 120 births were recorded in the eight camps since January but it has not been easy for government to cope with the humanitarian crisis we have at hand (Duru, 2018).

At the moment, the progress achieved in global immunisation is attributable to the efforts of National Governments, WHO, UNICEF, United Nations-UN, United States Agency for International Development – USAID and United Nations Development Programme (UNDP) including bilateral agencies and Non-governmental organizations (NGOs). These agencies have warned that about 67 per cent of Nigerian young children are at risk of poor development according to a Nurturing Care Framework developed by WHO, UNICEF and partners. With the burden of the humanitarian crisis in Benue, it appears the percentage is set to increase.

According to Basavan (2006), emphasis should be placed on preventive medicine principles of which one of the most cost effective health interventions is immunization which is considered the key to attain the goal of “Health for all” (HFA) which was to be achieved in 2015. In the views of Taylor, Green and Scout (2002), for vaccination to be effective and successful as a strategy, it must be administered to a great number of people as possible and must continue to be used until the disease is eradicated. In Nigeria, successive administrations accorded the health sector priority attention in varying proportions, with the sole aim of bringing qualitative and affordable health care to her citizens. This objective gave way to the Expanded Programme on Immunisation (EPI) which was designed to vaccinate and protect children aged between 0-2 years, against the six killer diseases namely: measles, tetanus, poliomyelitis, whooping cough, tuberculosis and diphtheria. Its goal was Universal Childhood Immunization (UCI) which was aimed at securing health for all by the year 2015, including nursing mothers.

The effectiveness of vaccines is dependent on their successful delivery from factory to lymphocyte (Carstens, 2009). This suggests that the success of vaccines is not strictly a medical matter. Obstacles to effective vaccination may arise at the level of the “factory,” which involves the quality of vaccines or the type of microbial strain used in their preparation. Obstacles may also arise at the level of the “lymphocyte,” which involves the immune status of would-be vaccine recipients as well as whether or not there are inhibitory antibodies in them. Lymphocytes are specialized white blood cells that form the basis of successful vaccination by either producing antibodies (the B class) or by inducing cellular activation (the T class) which destroy the infectious agent (specific to the administered vaccine) upon subsequent exposure (Carstens, 2009). From a sociological viewpoint, obstacles to successful vaccination therefore constitute those factors that impede the quality of the vaccine produced, its supply, its accessibility, its manner of administration as well as to whom it is administered. We now examine four of such obstacles in relation to how they have impeded the success of measles and polio vaccination in Benue state- Nigeria.

Culture

Culture constitutes an intercalation of beliefs, norms, and modes of thought inherent in (and shared) by a group of people. Tangwa (2005) describes culture as congenial tinted spectacles through which people look at reality. Health and disease form a part of the wider human social experiences. Thus, cultural and personal values would affect the recognition of illness, seeking healthcare, acceptance of and attitude towards care givers (Nelson et al, 2007). In short, culture influences health (Kogan, 1974). In the context of vaccination, certain cultural practices however seem to enhance the propagation of VPDs in Nigeria. For instance, the general population is characterized by an attitude of low regard for scientific knowledge (Afolabi 2007; Afolabi 2009b), something which is much worse in the unlettered. Thus, a number of mothers (and fathers, depending on the context of decision-making) still show reluctance in taking vaccination seriously, and do not often consent to their children receiving vaccination.

Religion as an aspect of this culture is captured by Ophori, et.al (2014). According to them, in Nigeria, the greatest challenge to the acceptance of immunization is a religious one especially among the northern Nigerian Muslims. Generally, the Muslim north has the low immunization coverage, the least being 6% (northwest) and the highest being 44.6% (southeast). In Ekiti State (Southwest), for example, the northeast and west of Ekiti,

with a stronger Islamic influence, has low immunization coverage and also poor educational attainment. Christians have 24.2% immunization coverage as compared to only 8.8% for Muslims.

Related to the above is the fact that in the Northern parts of Nigeria, vaccination campaigns are specifically hampered due to a cultural attitude that involves circulating false information (through the use of family and religious networks). These falsehoods range from claiming that vaccines contain anti-fertility drugs and cancerous agents (Jegade, 2007), to saying that vaccines destroy the egg of the female (Renne, 2006), thereby encumbering her reproductive function in later years. It is no surprise therefore that vaccine coverage remains low, thus encouraging the continued spread of VPDs in Northern Nigeria. This has been particularly relevant in the case of polio where there was a vaccination boycott in 2003 which was backed by state governments in Kano, Kaduna, and Zamfara states (Jegade, 2007). In that year, however, the temporary suspension of poliovirus immunization contributed to a national epidemic of poliomyelitis. Besides leaving more than 30% of children unvaccinated (Pallansch & Sandhu, 2006), the 2003 vaccine boycott created a global health crisis (Kaufman & Feldbaum, 2009) that led to the re-infection of at least 20 previously poliovirus-free countries (Jenkins et al, 2008).

Underutilization of Epistemic Resources

Another impediment to the success of vaccine delivery is lack of optimal utilization of some of the available scientific resources. Medical laboratory scientists, for instance, are the group of healthcare providers whose professional responsibilities include the production and evaluation of vaccines. Unfortunately, this area has been almost completely abandoned in their training. Also, while there are a number of post-graduate courses in virology, hardly is there an avenue, such as a research institute³, for the practical demonstration and development of the theory as well as techniques acquired in the course of the training, especially those tailored towards vaccine production and research.

A lawmaker in the Benue State House of Assembly, Dr. Adoga Onah, captured this sentiment when he disclosed that 23 general hospitals in the state are without doctors. Onah, who is the Chairman, House Committee on Health and Human Services revealed this in an interview. He added that the hospitals in the 23 local council areas also lack relevant health workers. The lawmaker urged Governor Samuel Ortom to declare a state of emergency in the health sector, as was done in the payment of salary arrears. He also raised the alarm about the non-availability of medical personnel and necessary vaccines at the Internally Displaced Persons' (IDPs) camps in the state. He expressed concern that the poor situation has placed thousands of children at the risk of vaccine preventable diseases as polio, tuberculosis and measles. He explained: "Just last week alone, I lost about eight persons, including teachers whose names were also removed from the government payroll in my constituency in Oju Local Government Area." (Ejembi, 2018, p.5).

He said these people would not have died from simple ailments, if doctors were available at the hospitals. Onah added that the inability of government to keep to agreements was seriously affecting the healthcare system in the country. He disclosed that the health sectors have not been given the needed attention from the grassroots to the state level. He solicited boosting the sector by offering first line priority to doctors and other health workers, as was done to lecturers of the Benue State University. "Right now, the doctors in the 23 general hospitals in the state are on strike. The bonds' doctors have not been paid for about 8-9 months, while the regular doctors are owed eight months salary arrears. This situation has created general apathy among the health workers (Ejembi, 2018).

As a result of the above, effective transmission of available knowledge on vaccine production and evaluation no longer occurs, or when transmitted there are insufficient avenues for their utilization; a situation that breeds brain drain. The migration of health care personnel to other countries in search of greener pastures has produced a medical brain drain across Nigeria. Were it not so, why would a staggering 2,392 Nigerian doctors be practicing in the United States alone and 1,529 in the UK in 2005? And only recently precisely in 2010 another research showed that the figure has risen to over 5000 doctors in the United States, nurses of course not included. The crux here is that there seems to be no end in view. And unless our government determines and arrests factors responsible for this migration, she cannot hope to stem this tide, which has currently translated to a national emergency (Ejim, 2014 and Eme et. al, 2014).

Political Violence

It is important to note that vaccination coverage varies widely even across districts in Nigeria. The variations could be explained by the unique demographic, sociological, and political factors that affect vaccination coverage. For example, political violence due to the presence of Boko Haram, a militant Islamist group, has negatively affected measles vaccination coverage in the northern region of Nigeria. The measles coverage in northeast region was reported to be about 47.2% in 2006 while in the southeast region coverage was 82.5%. The ongoing violence in the northeast region interferes with the timely delivery of vaccines (Ophori, et.al, 2014).

In 2014, the Tivs in Guma, Gwer, Gwer-West, Makurdi and other towns on the border with Taraba State recorded approximately 458 deaths and attacks on over 350 communities with their inhabitants now living in refugee camps. A Catholic priest in Makurdi and a coordinator for the distribution of relief materials indicated that in the first six months of 2014 there had already been about 175 deaths in 34 villages attacked by invading herdsmen. Additionally, the Christian Tiv in Guma, Gwer-West, Katsina-Ala, Kwande, Logo and Makurdi

LGAs of Benue State were displaced by marauding Hausa-Fulani Muslim herdsmen (Benue state Emergency Management Agency, 2014).

The LGAs most badly affected were Guma, Gwer-West, Logo and Makurdi. In Makurdi LGA alone, there were ten different camps for internally displaced persons in 2016. They included the uncompleted Aper Aku Housing Estate North-Bank, St. Mary's Primary School Daudu, Roman Catholic Mission Primary School North-Bank, Army Children Primary School North-Bank, Makurdi LGEA Primary School North-Bank, Makurdi LGEA Primary School Ahwa, Makurdi LGEA Primary School Agan, Makurdi LGEA Primary School Low-Cost, Makurdi LGEA Primary School Tyodugh and Makurdi LGEA Primary School Wurukum. At Makurdi LGEA Primary School Wurukum, available records for the years 2014-2016 show that there were 542 family households, with a population of 4804 persons sharing 12 blocks of classrooms, meant to accommodate at most 50 pupils per class (Adamu and Alupsen, 2017). This means there is a huge population living within the confined space of the primary school premises. As a result, some of the deaths (particularly of vulnerable women, children and the elderly) go unreported and unrecorded. The deaths are indirectly a result of the violence since the displacement itself has been caused by the conflict. However, the direct cause of death could also be linked to malnutrition, unhealthy environment and lack of health facilities. One of those affected, who lost his only son, is sure that his child would not have died of pneumonia if they had been at home (Adamu and Alupsen, 2017).

Although the prevailing political conflicts and socio-cultural beliefs affect all vaccinations, the measles vaccination arguably stands to be at greatest risk of being missed because of its timing in the schedule. According to the standard schedule, measles vaccination is given to children at the age of 9 months. Children are much more likely to be near a medical facility at the time of birth than 9 months after birth. Therefore, it is more likely to be missed than the newborn vaccinations in the context of violent conflict and displacement. Table 3 captures the 23 LGAs of Benue State, listing their ethnic composition and administrative headquarters.

Table 3: The 23 LGAs of Benue State, Listing their Ethnic Composition and Administrative Headquarters

S/N	Name of LGA	Main ethnic group	Headquarters	Attacked/Not attacked by Fulani
1	Ado	Idoma, Akweya	Igumale	attacked
2	Agatu	Agutu, Idoma	Ogbagaji	attacked
3	Apa	Idoma, Abakpa	Ugbokolo	Not attacked
4	Buruku	Tiv	Buruku	attacked
5	Gboko	Tiv	Gboko	attacked
6	Guma	Tiv, Jukun	Gbajimba	attacked
7	Gwer-East	Tiv	Aliade	attacked
8	Gwer-West	Tiv	Naka	attacked
9	Katsina-Ala	Tiv, Hausa, Etulo	Katsina-Ala	attacked
10	Konshisha	Tiv	Tse-Agberagba	Not attacked
11	Kwande	Tiv, Nyifon	Adikpo	attacked
12	Logo	Tiv	Ugba	attacked
13	Makurdi	Tiv, Hausa	Makurdi	attacked
14	Obi	Igede	Obarike-Ito	Not attacked
15	Ogbadibo	Idoma	Otukpa	Not attacked
16	Ohimini	Idoma, Abakpa	Idekpa	Not attacked
17	Oju	Igede	Oju	Not attacked
18	Otukpo	Idoma	Utukpo	attacked
19	Tarka	Tiv	Wannune	attacked
20	Ukpokwu	Idoma	Okpoga	Not Attacked
21	Ukum	Tiv	Sankera	attacked
22	Ushongo	Tiv	Lessel	Not attacked
23	Vandeikya	Tiv	Vandeikya	Not attacked

Source: Adamu, A. and Alupsen, B. 2017, *Nigeria: Benue State under the shadow of "herdsmen terrorism" (2014 – 2016)*, Abuja: Africa Conflict and Security Analysis Network (ACSAN).

The farming people of Agatu, Guma, Ukum, Tarka, Logo, Gwer-East and west among other local government areas of Benue state are in wailing. Why? Fulani herdsmen terrorised their villages for weeks, maiming and killing many of them in addition to destroying their property worth millions of naira. The clashes between the two parties have been a recurring decimal since the herders first stepped on their soil many years ago. This has led to the displacement of many people with a large population being rendered homeless. Beside the killings and the destruction of homes and farmlands, women and young girls have been raped in 14 Local Government Areas

(LGAs): Agatu, Gwer East, Gwer West, Makurdi, Guma, Tarka, Buruku, Katsina Ala, Logo, Ukum, Kwande, Oju, Obi and Konshisha. This implies that 14 out of 23 LGAs in Benue State as shown in the table 3 were affected by the conflict. The economic implications of this issue cannot be quantified; what with the loss of lives and property. The refugee situation created is a major drain on the country's resources because the insurgency battle and the attendant internally displaced persons' situation is still burdening on the government and a further crisis will further be a drain on the nation. Also, it has, in many of such attacked places, resulted in an increase in the prices of foodstuff. Benue is known as the Food Basket of the Nation and that explains the strategic importance of the state in the nation's food chain. Hence, any crisis there can trigger an increase in the prices of foodstuff across the country. Among the health implications of the displacement is the high rate of unvaccinated children. For instance Ojabo(2017) identified Guma, Gwer-west and Agatu as high risk areas that have the highest number of unimmunized children by March, 2016.

Substandard Vaccine Science

Vaccination success has also been affected by what we here refer to as the practice of substandard vaccine science in the context of vaccination. For safety reasons, as well as for ensuring optimal vaccine efficacy, it is critical that recipients of vaccines be evaluated prior to receiving vaccines. Administering the polio vaccine to a child with myasthenia gravis may lead to vaccine acquired polio. Thus, these exclusion criteria serve the dual purpose of safeguarding would-be vaccines as well as ensuring that vaccines are given to those in whom protection can be achieved. In other words, there are scientific exclusion and inclusion criteria that ensure successful vaccination. For example, potential vaccine recipients with conditions such as myasthenia gravis and thymomas⁴ (Roukens & Visser, 2008) are to be excluded. Nevertheless, little or no pre-laboratory screening currently takes place (Agbonlahor, 2004).

For measles, another exclusion criterion is the presence of circulating haemagglutination inhibition antibody in would-be vaccine receivers (Baba, Omede, Omotara & Ambe, 2007). The implication of not carrying out pre-vaccination laboratory screening is that a sizeable number of children who should normally be excluded from vaccination are vaccinated but remain at risk for VPDs because their immune system fail to produce protecting levels of antibody to the infectious agents. Since most of these "vaccinated" children eventually become afflicted by the disease which vaccination should help prevent, the socio-cultural aftermath is that people who happen to know, or those who are told of these incidences of vaccine failure, are left doubtful of the efficacy of vaccination campaigns and programs. Indeed, events of vaccine failure negatively shape the willingness of parents to vaccinate their children (Jagessar, Lazarus, Laurent, Matic & Emiroglu, 2008). Post-vaccination testing of vaccine recipients is also essential. Presently, this process takes place in just one laboratory in Ibadan, Southwest Nigeria. Dutta (2008) however observes that an efficient laboratory network is essential for rapid and reliable analysis of stool samples, thus a single laboratory being saddled with this task is clearly not an efficient enough way of practicing scientifically sound vaccination.

Inadequate Cold Chain Equipment and Shortage of Vaccines and Immunization Supplies

Related to the above is the challenge of inadequate cold chain equipment. According to Yahaya (2007), over the years Nigeria has received huge quantities of cold chain equipment. Despite this support, much of the cold chain appears to be beyond repair. This is partly due to the focus on polio eradication, which uses freezers. In one zonal store, only one of the three cold rooms was working, with only a single compressor operational. Substantial numbers of solar refrigerators have been bought in the last few years; although, a useful addition these are expensive (\$5,000 each) and prone to breakdowns. At the state level, the cold stores are poorly equipped and badly managed. More than half of the refrigeration equipment is either broken or worn out. In the eight states visited, 47% of the installed solar fridges were broken and \$205,000 worth of solar equipment remained uninstalled.

Under the NPI's the first mandate is to "support the states and local governments in their immunization programmes by supplying vaccines, needles and syringes, cold chain equipment and other things and logistics as may be required for those programmes". However, the supply of vaccines has always been problematic for Nigeria, primarily because funds were not sufficient and were not released on time. For example in 2001 the whole amount was approved but only 61% was released, the late release of funds (April 2001) meant that vaccine had to be bought on the spot market at inflated prices. In 2002 no funds were released and by March 2003 the funding cycle had only reached the stage of getting the budget approved. NPI did not supply any syringes for Rubella infection in 2005 and the only safety boxes that have been supplied are the limited quantities given by donors for SIAs. Following an assessment in 2003, it was decided that UNICEF would supply vaccines in future. In the last quarter of 2003, UNICEF began supplying vaccines through a procurement services agreement, and this arrangement continues to date. However, it has not solved the problem of vaccine shortages. For example, cerebrospinal meningitis (CSM) vaccine was not supplied in time to allow CSM immunization to take place before the cerebro-spinal meningitis season, and some states had to buy their own stocks of CSM using state funds. Measles vaccine also arrived too late to limit the effects of a measles outbreak in the north, and an insufficient quantity of measles vaccine was supplied to Abia (FBA, 2005).

Reliance on External Aid & High Cost of Vaccine

Reliance on foreign bodies such as UNICEF and GAVI by the Government of Nigeria for its procurement and supply of vaccines tends to impress upon the mind the false notion that the menace of VPDs is the concern of these bodies and corporations. Thus, this somehow severs a sense of responsibility on the part of the Government. That attitude however weakens the Nigerian scientific community in terms of directly or indirectly limiting the kinds of relevant vaccine research they can carry out. One rather bitter pill about depending on foreign vaccine aid is that these agencies often feel reticent to give the same level of support when there is no crises situation (Tomori, 2004). Coming from a former WHO Regional Virologist, this view deserves some level of attention. In addition, dependence on foreign supply means that vaccine receivers may only get partially protected or do not get protected at all if the local etiologic agent differs considerably from commonly circulating infectious agents. It also ignores the genetically encoded tendency for the vaccine recipients at the receiving end to react to some of the substances (for example, thiomorsal, neomycin, and gelatin) used in constituting vaccines.

According to Elder (2016), Vaccines Policy Advisor, Médecins Sans Frontières Access Campaign, vaccines are one of the most cost-effective means of preventing illness and death, particularly in children. Yet, more than 22 million babies born worldwide each year—four times the number of births in Europe—go unvaccinated, leaving them at risk of contracting, and potentially dying from, vaccine-preventable diseases like measles.

Many of these 22 million babies will be born in Africa. In Nigeria, vaccination coverage rates were most recently marked at 41%, meaning only four children in every ten are receiving the full three doses of the diphtheria-tetanus-pertussis vaccine, which is used as a standard reference to assume a child is fully immunized. In 2011, Nigeria reached 45% of its children with vaccination services. Nigeria ranks second in the unenviable top ten of countries with the most unvaccinated children. Four more African countries make the list: Ethiopia, the Democratic Republic of the Congo, South Africa and Uganda. Taken together, the ten account for more than 70% of the world's unimmunised children. Low coverage rates are indicative of a multitude of issues, including weak health systems and bulky or cold-chain-dependent vaccines that are hard to deliver in remote settings. But it is the high cost of vaccines that keeps many African health ministers in a sweat.

According to her, the cost of the Expanded Programme on Immunisation, the basic package of vaccines that the UN recommends that all children receive. Since 2001, when vaccinating a child with this package of vaccines was just US\$1.38, the cost has blown sky high—by 2,700%—to nearly \$39 per child today. And \$39 is the best possible price, the one paid by the poorest countries that are eligible for support from the GAVI Alliance. GAVI which was founded in 2000 to expand the reach of vaccination to children in developing countries who would otherwise miss out on the newest vaccines, such as pneumococcal conjugate vaccine (PCV), which protects against pneumonia and other infections. Pneumonia is among the leading causes of death for African children under 5 years of age. If a country's per-capita annual income is under a certain threshold, it is eligible for the lower prices GAVI negotiates with companies and the heavy subsidies it offers. But how can a local initiative help address the unmet vaccination needs in Nigeria?

RECOMMENDATIONS

The Roles of Government & UNICEF

There is need for increased focus on disease surveillance as “information for action” stakeholders by which helps direct immunization activities to areas of greatest need and is a prerequisite to achieving the specific disease control targets. This thesis supports Batters by and Gruner (2003) and Euronet (2005) views on priority activities to raise immunization coverage such as improving the management of health services, making health care services more accessible, informing and motivating the public, immunizing at every opportunity, reducing drop-out rates and using specific immunization activities. For instance, the role of parents especially mothers, to the success of NPI has been stressed by FGN/UNICEF (1984). This document stressed that every Nigerian parent needs to understand the value of immunization and importance of vaccinating children before they fall ill of any disease preventable with immunization, and that every mother needs to understand why she must take her child to the clinic, not just once, but repeatedly to complete all the required doses, because it is only then that the child is fully protected. They advocate for the need to convince, educate and motivate mothers, to take advantage of the programme.

Related to the above, governments at all should make effort to popularise the Africa Vaccination Week (AVW) which is an annual event held in April throughout the African continent, in synchronisation with other WHO regions and the World Immunisation Week (WIW). The goal of the AVW is to strengthen immunisation programmes in countries of the African region by increasing awareness of the importance of protecting every person (in particular, every child and woman) from vaccine-preventable diseases.

In the views of Babalola and Adewuyi (2005), the legal mandate of NPI as stated in Decree 12 of 1997 is to support states and local governments in their immunization programmes by supplying them with vaccines, needles, syringes, cold chain equipment and other logistics as may be required for the programme. We want to reverse the destructive trend of low vaccination coverage in Nigeria in Nigeria in general and Benue state in particular. We want to ensure that no child is left behind in the vaccination drive. We want to ensure that the

number of zero dose vaccination for any vaccine is zero. We want to keep immunisation high on our national agenda through advocacy and partnerships. We also want to promote the delivery of other high impact lifesaving interventions. The overarching objective for this thesis is to work for “vaccinated and healthy communities,” leaving nobody behind or unvaccinated.

With all the efforts of donor agencies in providing funds for the programme, Creese and Henderson (2001) are of the opinion that substantial increase in funds is required to provide immunization services, in spite of the systematic under-estimation of the benefits of immunization and that there is in general evidence of positive and often very high returns for such investment. Obioha, Ajala and Matobo (2006) observe that budgetary allocation to the health ministry has been low over the years in Nigeria which is an indication of lack of political will and the negative perception of some people, who harbor the belief that immunization is a deliberate strategy for population control. This perception makes this study imperative.

The other issue is the attitude of the society to issues of health in general and immunisation in particular. Since routine immunisation started in Nigeria, it has not yet attained the routine status. Executive Secretary, Benue State Primary Healthcare Board, Dr. Bem Ageda in a chat with *The Guardian* correspondent disclosed that the state benefited the sum of N21.252 million for each of the five rounds of immunization in the state in 2017 positing that N20 million was for logistics while N1.2 was for social mobilisation. He went on to add that the state has had a total of about N112.154 million support by UNICEF in the outgoing year. That is a tremendous support and we appreciate that level of support (Ejembi, 2018).

However, to effectively perform this function of which immunization is but an important component, the government of Nigeria through the NPHCDA procures and distributes potent vaccines to all states and LGAs annually that covers the population of their infants. The Routine Immunization strategic framework which is a document that elaborates on the routine immunization component of Comprehensive EPI Multi-year Plan for 2011-2015 (cMYP) which is aligned to the National Strategic Health development Plan should be revised, shortcomings identified and challenges addressed in order to correct the lapses by policy makers. The document should build on the outcome of the Retreat for Developing Strategic Framework for Routine Immunization held in Lafia, in Nasarawa State, between 14-16 February 2013. The document took into consideration the National Immunization Policy and “Saving of One Million Lives (SOML) Initiative” and other various directives and recommendations emanated from high level forums and meetings debated on the recent setbacks and the challenges facing the implementation of RI in the country.

Therefore what this strategic plan hopes to achieve within the period left of the present country multi-year plan which ends in 2015, is to lay out clearly the road map towards attaining the ideals of optimal routine vaccination of all children in accordance with all global and regional goals. The national target of 80% has been elusive for some time now. Huge numbers of un-immunized children have accumulated posing a threat to the health of the majority with outbreak of diseases especially those of epidemic potential. Children require additional protection against pneumonia and diarrhea which are killing them. More lives need to be saved to ensure that the sustainable development goals are achieved by 2030. Considerable investments are required for the expansion of cold chain, logistics and surveillance network for measles and childhood bacterial meningitis. Demand must also be created on a sustainable basis that will lead to permanent uptake of services by the communities.

Again, there is a need for meaningful programmatic progress to be monitored by the integration of services amongst parallel programs and appropriate synergies and coordination mechanisms built among stakeholders. There is need for investment in clinics, health workers, and healthcare delivery systems creates jobs and puts in place a basic infrastructure that can help save even more lives through the daily delivery of healthcare, and builds longer-term resilience to deal with crises. Strong primary healthcare systems are critical to our long-term development. The Benue State House Committee on health captures this sentiment when he disclosed that the health sectors in the state have not been given the needed attention from the grassroots to the state level.

He, therefore solicited boosting the sector by offering first line priority to doctors and other health workers, as was done to lecturers of the Benue State University. This situation has created general apathy among the health workers. The lawmaker disclosed that the assembly allocated 15 per cent to the health sector in 2018 budget, as against the usual four per cent. He stressed that the 15 per cent appropriation was still not close to the 50 per cent that the World Health Organisation (WHO) had recommended. The Nigerian Vaccine Wastage Study (2012) which reported that at the LGA level only 59% of health workers knew that a vial should be opened for any eligible infant as stated in the national policy. The same study pointed out that only 12% of facility staff knew that unvaccinated children up to 2 years of age are eligible for routine vaccination. Some areas of this country are inaccessible because of insurgency problems. Sometimes, the vaccines are just not available or the poorly trained health worker performs duty to the best of his or her non-ability. The good worker may not be provided with the basic requirement to enable effective performance, sometimes as a result of corruption in its diverse and various forms. In many of the institutions of public and private enterprise, accountability is disdained, despised, scorned, spurned, disparaged, vilified and hated. In view of this, there is need for capacity building training of health workers across different levels of government.

CONCLUSION

Some limitations of this study have been identified. Firstly, the use of survey year as the time factor in cross-sectional data may be seen as a limiting factor; the years of the surveys are not evenly spaced (i.e. 1990, 1999, 2003 and 2008). Secondly, it is difficult to say that the same households or primary sample units were sampled each year, as is the case in longitudinal studies. It would be interesting to be able to identify those households that were sampled over the years. Although the data may have these limitations, they do provide extensive information that is crucial for assessing the risk factors for full immunization over the years. The journey in immunization so far has been ups and downs from the peaks of the 1990s Universal Childhood Immunization (UCI) epoch to the present era of Global Polio Eradication Initiative. Astonishingly, routine immunization which underpins any meaningful sustainable achievement in disease eradication, elimination or control efforts is paid little attention. The question further accelerates our velocity to achieve the Sustainable Development Goals (SDGs) is also of great concern. Consequently, a careful and purposeful attention to routine immunization seems to be our answer. This study attempted to identify factors influencing non compliance with immunization regimen among nursing mothers in IDP camps in Benue state.

Globally, displaced populations struggle to receive basic health and social services in the northern central state of Benue. For instance, Ojabo (2017) identified Guma, Gwer-west and Agatu as high risk areas that have the highest number of unimmunized children by March, 2016. In contrast, the state of Enugu has 97.8% measles coverage. Although, Benue and Enugu have similar demographics, they vary in their terms of social and ethnic conflicts. Enugu is historically a peaceful state, with few cases of conflict and violence. In contrast, Benue has experienced a multitude of violent conflicts since 1999. Considering that social violence is the most obvious difference between these two regions, we can infer that the poor vaccine coverage is partially related to political stability.

Additionally, socio cultural beliefs may also explain the low vaccination coverage. In the state of Benue, many muslim mothers expressed that they had “no faith in immunization” and expressed “fear of side effects.” Suspicion and apprehension about vaccination is fairly common, particularly among several specific disenfranchised communities including those in the United States. For these communities, the suspicion is best understood in a social and historical context of inequality and mistrust (Rahaji & Ndikom, 2013). We conclude that geographic variations, armed and political conflict, and socio-cultural beliefs coupled with the timing of the measles vaccine as well as the fragile health service infrastructure all affect immunization coverage. This observation is supported by the available evidence showing the disparities in vaccination coverage between different regions, states and local governments of Nigeria. Among the vaccine preventable illnesses, measles causes the greatest mortality in children. Addressing the region-specific barriers to measles vaccine coverage and improving the overall function of the health system should lead to a significant reduction in incidence and mortality in Nigeria. If the combination of factors is properly addressed, Nigeria should be able to reach the goal of a 90% reduction in measles mortality compared with the year 2000 estimates like most of the African region. Additionally, sustaining the decline in measles deaths will call for all districts in Nigeria to be vaccinating at least 90% of children before their first birthday, as well as conducting follow-up supplementary immunization activities every two to four years. Currently, there is no global consensus on global elimination or eradication of measles, but reducing global measles mortality remains the overriding unfinished agenda for global health.

Since the foundations of vaccinology were laid in the 1790s (Barry, 2005), a number of nations have achieved considerable strides in employing vaccination as a tool for fighting VPDs. Despite its human, intellectual, and material resources, Nigeria has not succeeded in the fight against VPDs such as measles and polio. Thus, of the 3.3 million children born yearly (Fed Rep Nig, 2001), a significant portion may well remain potential “biological foddors” for the rampage of these diseases if Nigeria does not rethink the current stance towards vaccine matters. An urgent need exists to re-channel and redirect existing foreign vaccine support for the furtherance of local scientific development in the arena of vaccine production and research. This, we believe, will set the country on a successful path effectively deal with VPDs as well as other vaccine controllable infectious diseases including cervical cancer, HIV/AIDS, and malaria. Otherwise, and from a developmental viewpoint, Nigeria may have no specifically regional technological dynamic (Storper, 1997) in the context of a local structure that can effectively deal with the challenges of VPDs.

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