The Challenges of Childhood Immunization in Nigeria, Benefits and Possible Solutions

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Abstract

The paper critically examined the challenges of childhood immunization in Nigeria, benefits and possible solutions. It was observed that there were many challenges surrounding childhood immunization in Nigerian which were discussed. The roles of national policy on immunization which is the utilization of childhood immunization so as to protect children from various diseases and ensures their overall health and well-being were also discussed. The importance and the needs for childhood immunization in Nigeria were discussed. The paper concluded that healthy growth and development of Nigerian child can be achieved if childhood immunization is effectively executed toward socio-economic development. The paper recommended that government should employ more qualified health personnel, provide funds, infrastructural facilities, as well other human and material resources in order to eliminate these challenges, implement childhood immunization activities successfully, as well as counsel pregnant and nursing mothers about the importance of being immunized for enhancement of their physical, social, mental, emotional, psychological and economic development.

Keywords: Childhood, immunization, National policy, nursing mother.

Introduction

Since the creation of expanded Programme on Immunization (EPI) by World Health Organization (WHO), with United Nation International Children Educational Fund (UNICEF), Gavi, the vaccine Alliance and others in 1974, the implementation of childhood immunization for millions of children globally has been able to reduce the cases of childhood diseases but with series of challenges. It has been recognized that childhood immunization has a crucial role to play in achieving health for all as well as goals and objectives of childhood immunization all over the world (WHO, 2020).It was during this joint activities that a general agreement was made that childhood

immunization should be integrated into "Health for All" in 1977 in which the World Health Assembly decided that World Health Organization and the Social aspect of its Background Government should endeavor that there will be global attainment of Health for all from Haltdan Mahier by the year 2000 in all the various levels of health so as to achieve social, economic and highly productive life (WHO, 2020). The body decided that childhood immunization must commence immediately after delivery of infant by giving polio, tuberculosis and hepatitis B vaccines and continue with other routine immunization throughout 9 years of childhood stage. (UNICEF, 2018).In order to carry out implementation of childhood immunization at early childhood years, there is need for standard structure for effective implementation. This gave birth to what is known today as Expanded Programme on Immunization in 1974.

Expanded Programme on Immunization (EPI)

The expanded programme on immunization is a group of childhood immunization programme designed in 1974 to promote vaccination globally against the six childhood diseases of diphtheria, pertussis, tetanus, poliomyelitis, measles and tuberculosis. It was launched by World Health Organization (WHO) in May, 1974 with the objective and responsibility of vaccinating children, pregnant women and nursing mother worldwide by 1990 (World health Organization, 1988). The implementation of expanded programme on immunization was faced with lack of seriousness on the part of the government and the people, lack of awareness of the scope of the programme and the diseases, lack of programme management, lack of storage of the vaccines and handling, poor monitoring team for the human and material resources and poor coverage level which still persist.

Despite the fact that 5% of children in developing countries in 1974 received the third doze of DPT and poliomyelitis vaccines in their first year of life. There has been a rapid increase in the number of childhood immunization and that more than 50% and over 700,000 measles deaths were prevented by childhood immunization in developing countries in 1987 with prevention of neonatal tetanus deaths and eradication of poliomyelitis, but there is still a missing gap in the successful implementation of EPI childhood immunization (WHO, 2019). In a well-organized health setting, Expanded Programme on Immunization aimed at fostering all round growth and development of children by identifying and addressing their health problems, so as to channel them toward positive personal social, physical, emotional, mental, intellectual and cognitive development. Although, the contributions of childhood immunization and expanded programme on immunization are broad and well recognized locally, nationally and globally. Ngozi, Elijah, Acqueline, Oluwafemi, Adama and Marjolein (2019) observed that there are so many factors affecting the effective expansion and implementation of childhood immunization in Nigeria. This is the reason for the persistence of a wide gap in the provision of human and material resources for adequate and quality health care services of this programme. Literacy, socio-economic status, livestock possessing mothers' knowledge of childhood immunization, target diseases, immunization schedule, lack of training, shortage of health personal are some of the challenges affecting routine immunization coverage for children.

Challenges of childhood immunization in Nigeria

Childhood immunization is an important aspect of public health intervention programmes that is planned towards preventing the spread of infectious diseases and reducing mortality rates among children in Nigeria and globally. It stands an essential component of public health strategies worldwide which plays crucial roles in protecting children from various infectious childhood diseases in Nigeria, as well as many other countries of the world, efforts

have been made to increase childhood immunization coverage rates to ensure the well-being of children and prevent outbreaks of vaccine-preventable childhood diseases. Childhood immunization also protects children from various diseases and ensuring their overall health and well-being. Despite its positive effects, there are many challenges and problems confronting childhood immunization in various states in Nigeria.

One of the major problems confronting effective implementation of childhood immunization is lack of access to vaccines and immunization services in many rural areas of many states in Nigeria, that is, there is low supply of vaccines. Poor access to childhood immunization services in Nigeria, limited access to immunization services is a significant challenge in many states. Remote and marginalized communities face difficulties in reaching healthcare facilities that get their children immunized (Fatiregun & Okoro, 2012). These issues affect the availability and administration of vaccines to target populations, thus hindering the achievement of desired immunization coverage levels. This challenge is exacerbated by inadequate transportation infrastructure, including poor road networks, lack of finance which hinder the timely delivery of vaccines to distant locations (WHO, 2017). Additionally, shortages of vaccines and cold chain (that is vaccines that needed to be kept and preserved in the freezer) equipment further impede access to immunization services (Ahmed et al., 2020).

Another problem confronting the effective implementation of childhood immunization in Nigeria is lower coverage rates, Geographical disparities significantly impact childhood immunization coverage in Nigeria. The research conducted by Ophori & colleagues (2014) evaluated the vaccination coverage in Nigeria and discovered that regional disparities exit in coverage rates, such that Lagos and Enugu had higher coverage rates, while states like Kebbi and Sokoto had lower coverage rates. The Northern region of Nigeria consistently records lower childhood immunization rates compared to the Southern region (WHO, 2017). Weak Healthcare Systems pose challenges to childhood immunization in Nigeria and other countries. Insufficient funding for immunization programs, a shortage of skilled health workers, and inadequate vaccine supply chain management systems contribute to low coverage rates (Ajibola et al., 2020; WHO, 2017). These issues affect the availability and administration of vaccines to target populations, thus hindering the achievement of desired immunization coverage levels.Factors contributing to these disparities include poverty, conflict, low literacy rates, and cultural beliefs, and the quality of immunization services, weak healthcare infrastructure (Ajibola et al., 2020).

Moreover, lack of awareness and knowledge about the significance of childhood immunization among parents and caregiversis another contributing factor to the issue of childhood immunization in Nigeria. Low level of health education and low literacy levels contribute to the lack of awareness about vaccines and their benefits (Ezenwaka &Oboegbulem, 2019). Similar challenges are observed in various countries worldwide, where parents may have misconceptions about immunization or hold religious or cultural beliefs that discourage vaccination (Doherty et al., 2020).Socio-cultural factors and vaccine acceptance influence the acceptance of childhood immunization in Nigeria and globally. These include parental education, religious beliefs, traditional practices, and mistrust in the healthcare system. For instance, certain cultural beliefs in Nigeria might discourage parents from vaccinating their children due to fear of side effects or superstitions surrounding vaccines (Ophori et al., 2014). Sensitization campaigns that address such socio-cultural factors and increase vaccine acceptance are crucial for improving immunization rates.

Moreover, vaccine hesitancy has emerged as a significant challenge in both Nigeria, vaccine hesitancy refers to the reluctance or refusal to vaccinate despite the availability of vaccines (Mnookin, 2020). Vaccine hesitancy refers to the doubts, concerns, or lack of trust in vaccines and vaccination programmes. It is a national and global challenge which affects childhood immunization rates in many countries, including Nigeria. In Nigeria, factors contributing to vaccine hesitancy include fears about vaccine safety, mistrust in the healthcare system and health care providers, and misinformation that spread through social media platforms (Stoller &Butler, 2020). Globally, vaccine hesitancy has been observed in several countries, leading to outbreaks of vaccine-preventable diseases (MacDonald & Butler, 2020). According to recent studies by Ajibola et al., (2020); World Health Organization (2019), vaccine hesitancy in Nigeria is fueled by misinformation, religious beliefs, cultural misconceptions, and inadequate communication strategies. This challenge reduces overall childhood immunization coverage and leaves children vulnerable to preventable diseases.

In addition, weak healthcare systems contribute to the challenges of childhood immunization in Nigeria and globally. In many states in Nigeria, health care in the area of human and material resources are not sufficient to provide childhood immunization services (Motayo et al., 2020). Similarly, some countries globally have limited capacity in terms of trained health workers and functioning health systems, which hinder effective immunization coverage (Giles-Vernick & Johnston, 2018).Other challenges confronting childhood immunization in Nigeria are maternal education and literacy, lack of access to health facilities, poor socio-economic status, fears and misconceptions about vaccinations, vaccine availability, place of birth, individual factors, community factors, health system factors, combined injections, pains, ages of the children are too young, rigid vaccination schedule, absence of delivery services, shortage of health personnel, lack of availability of vaccines, indirect payment for vaccines, poverty, conflict or war, poor access to health care service, mistrust, socio-political challenges. (Malachi and Gabrielli, 2022).

Lastly, economic challenges are significant obstacles to childhood immunization. In Nigeria, poverty contributes to low childhood immunization rates, as some parents cannot afford the cost of vaccines or transportation to health facilities (Olorunsaya et al., 2018).

National policy on childhood immunization

In Nigeria, the National policy on childhood immunization is driven by the National Primary Health Care Development Agency (2018). The aims of the policy is to provide a framework for the delivery of childhood immunization services nationwide, such that all children will have equal access to vaccines that will protect them from vaccine-preventable infectious childhood diseases. This policy is aligned with international guidelines and recommendations, such as those set by the World Health Organization (WHO).According to the NPHCDA (2018), the National policy on childhood immunization in Nigeria emphasizes the provision of routine immunization services through fixed and outreach strategies. It promotes the use of the national immunization schedule, which outlines the recommended vaccines and respective ages for administration. The policy highlights the importance of continuous monitoring and evaluation of immunization programs to identify gaps and areas for improvement.

National Primary Health Care Development Agency (2018) reported that globally, the foundation of childhood immunization policy is built upon evidence-based research, which vividly describes the safety and effectiveness of vaccines. The World Health Organization, in collaboration with United Nations International Children Educational Fund as well as other international organizations and expert committees on health and wellness provides guidelines and recommendations on

immunization programmes that serve as the basis for national policies worldwide. For instance, the World Health Organisation's Strategic Advisory Group of Experts on Immunization (SAGE) provides policy advice on immunization to guide national decision-making. These recommendations are informed by rigorous scientific data and studies, and they cover various aspects of immunization, including vaccine selection, dosage, administration schedules, and vaccination strategies. In summary, the foundation of the National policy on childhood immunization in Nigeria and globally is rooted in the recognition of the critical role of immunization in protecting children from vaccine-preventable diseases. These policies are driven by national health agencies, such as the NPHCDA in Nigeria, and are aligned with international guidelines and recommendations provided by organizations like the WHO. The policies emphasize the importance of routine immunization services, continuous monitoring and evaluation, and evidence-based decision-making to ensure high vaccination coverage rates and optimal child health outcomes.

Age	Vaccine	Dosage	Part of the body
At birth	BCG & HBV OPV 0 Pental 1	0.05 2 to 3 drops	Intral muscular oral
6 weeks	PCV1, OPV 1 Pental 2 Pental 3	0.5ml 0.5ml	Intra muscular oral
10 weeks	PCV 2 OPV 2 DPT 3	0.5ml	Intra muscular oral
14weeks	OPV 3	0.5ml, 2 – 3 days	Oral
6 months	Vitamin A	3 drops	Oral
9 months	Measles 1 Yellow fever	3 drops 0.5ml	Oral Oral subcutaneous
12months	Vitamin A	0.5ml	Intra –muscular
18 month	Vitamin A	0.5ml	Intra - muscular
18 month	Measles 2	0.5ml	Intra - muscular

(Emma, Aloysius & Francisca, 2019) Adapted from Akinyele LGA Health Centre Immunization Chart and Record (2023)

Need for childhood immunization

Childhood immunization is important to the present, future and all round health of children because of the adequate growth and development in early childhood which are key factors that are responsible for cognitive, mental social, emotional, psychological, language, as well as socio-economic development (WHO, 2021). Immunity Me, (2022), stated that childhood immunization is important because it helps to boost the immune system, antibodies, prevents and protects children from all the six childhood killer diseases. For this reason, childhood immunization must begin immediately after birth and delivery of a baby because the baby

starts to fight germs and disease from birth, and children who survived the risks and dangers of these diseases through immunization activities tend to contribute to the socio-economic values and development of the nation, community and the world at large, children are regarded as the productive leaders of tomorrow if adequately cared for through routine implementation of childhood immunization. It also serves as an opportunity and advantage to avoid high medical treatment costs and loss of wages from taking care of sick children and those children whose lives and health are saved through implementation of immunization contribute to the economy, bring social values to the community. It also helps to yield broad benefits of improved cognitive development, educational attainment and labour productivity for the nation at large.

Obinna, Vibha, Adebowale & Simon, (2017) stated that childhood immunization is the world's most successful and cost-effective public health intervention programme which prevents over 2.3million deaths annually. This is explaining to us that childhood immunization as an intervention programme which usually produce good results without costing a lot of money, which means that cost per case of childhood disease prevented or cost per death averted, and that a more effective immunization intervention is less costly, the greatest socio-economic development is gained for a comparatively low cost and greatest return is generated in exchange for the amount invested.

Other factors that are highly relevant to the need of childhood immunization for socio-economic development are geographical location, educational status, employment, maternal age, literacy, wealth index, marital status, occupation, cultural beliefs and values which may positively or negatively influence the need for childhood immunization for socio-economic development. According to World Health Organization, (2021), childhood immunization helps to offer protection to children from six childhood diseases as well as connecting children and families with health systems and services through a medium and avenue which tends to deliver qualitative basic health care services which serves as a foundation for primary health care as an entry point for Universal Health Coverage. It is a means through which old age diseases are been eradicated using well developed vaccines. It helps to protect children throughout life, most especially from birth to childhood stage, adolescence and old age, curbing the risks terminal diseases and spread of infectious diseases (such as measles, polio, pneumonia, tetanus, cancer, arthritis, hypertension and so on) which are life threatening. It helps to reduce child morbidity and mortality, most especially from year 2000 to 2011 as stated by UNICEF (2018) measles vaccinations averted over 23million deaths between 2000 and 2018.

Conclusion

In conclusion, childhood immunization faces several challenges in Nigeria and globally. Vaccine hesitancy, poor access to immunization services, weak health systems, socio-cultural factors, and geographical disparities all contribute to suboptimal childhood immunization coverage rates. Addressing these challenges requires a multi-faceted approach, including effective communication strategies, improved healthcare infrastructure, increased funding, targeted interventions, and community engagement to enhance vaccine acceptance and distribution.

Recommendations

The challenges should be tackled with a multi-faceted approach including effective communication strategies, improved healthcare infrastructure, increased funding, good road network, increase positive awareness targeted towards interventions which will help to correct negative cultural beliefs, attitudes, norms among various community members thereby improving and increasing acceptance, and engagement which will enhance childhood vaccination.

Childhood immunization should be effectively executed as well as implemented locally, nationally and globally in such a way that it will devoid of the challenges so that many healthy and strong children would be saved from infectious childhood diseases, disabilities, waste of social and economic resources and sudden death in order to be able to reform the economy for high social and economic productivity. Government should employ more qualified, hardworking and healthy personnel to implement childhood immunization activities, as well as counsel pregnant women and nursing mothers about the importance of immunizing their children for the enhancement of their growth and development. Addressing these issues through targeted interventions and tailored childhood immunization strategies should be utilized to reduce geographical disparities and increase immunization coverage in all the state in Nigeria. The national policy on childhood immunization, expanded programme on immunization, National Primary Health Care Development Agency, international agencies, government and non-government agencies should work together so as to address these challenges in order to find quick and possible solutions to them to enhance successful delivery and implementation of childhood immunization in Nigeria.

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