Vaccine Hesitancy in Nigeria: Contributing Factors – Way Forward

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Abstract

Vaccination coverage and program in Nigeria has continued to suffer setback in spite of various interventions. Vaccine hesitancy defined as a delay in the acceptance or refusal of vaccines despite the availability of vaccination services may be a cause of the poor trend in childhood immunization observed in Nigeria. The reasons why individuals hesitate or choose not to vaccinate vary across cultures and contexts. There is a need to develop context-specific strategies generated from local research to reduce vaccine hesitancy and improve vaccination uptake in the country.

Keywords: Childhood, context-specific, immunization, vaccination, vaccine hesitancy

INTRODUCTION

The Expanded Programme on Immunization aimed at ensuring access to routine vaccines by all children has made remarkable progress across countries in Africa. However, vaccination coverage and program in Nigeria has continued to suffer setback that appears difficult to surmount. The country's vaccination coverage dropped remarkably after an initial gain and a rate as high as 81.5% in the early 1990s when the coverage reached its peak.[1] Since that period of success, the country has only had marginal increases in coverage despite several efforts at improving the uptake of immunization. Nigeria witnessed a gradual and consistent reduction in vaccination coverage after this peak such that by 1996, the coverage for all antigens had dropped to <30%.^[1] By 2003, the coverage had dropped further to 13%; however, a 9% increase from this figure was reported in the 2008 Nigeria Demographic and Health Survey.^[2] Ten years later in 2013, only 25% (just nearly twice), the figure reported in 2003 of children aged <2 years, were fully vaccinated.^[3] These figures are among the lowest in the continent and the West African sub-region and reflect the low level of vaccination coverage in the country. Of the 22.4 million children globally that were unvaccinated before the age of 12 months in 2011, 14% of them lived in Nigeria and remain at risk for vaccine-preventable morbidity and mortality. They also add to the already-existing

Access this article online	
Quick Response Code:	Website: www.njgp.org
	DOI: 10.4103/NJGP.NJGP_28_19

pool of susceptible under-fives, which, at any point in time, may fuel the occurrence and spread of vaccine-preventable disease outbreaks in the country.^[4]

The goal of the National Immunization Programme in Nigeria, which is to eradicate childhood diseases and improve the health of Nigerian children, is threatened by suboptimal uptake of vaccines despite established benefits. The National Immunization Programme, administered by the National Primary Health Care Development Agency, offers vaccines to children in the 1st year of life, at no cost to parents. In spite of the availability and affordability of vaccines, very little progress was made in recent years. Several factors have been adduced for the poor rate of vaccine uptake, for example, shortage of vaccines and immunization supplies, political problems, misperceptions of routine immunization, inadequate cold chain equipment, costs of accessing health-care services, and many more. These factors and others not listed here have been addressed at various times by agencies of government and program with only marginal improvement in vaccination coverage.

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 How to cite this article: Ogundele OA, Ogundele T, Beloved O. Vaccine hesitancy in Nigeria: Contributing factors – way forward. Niger J Gen Pract 2020;18:1-4.

 Received: 11-Oct-19
 Revised: 05-Nov-19

 Accepted: 11-Nov-19
 Published: 10-Jan-20

Downloaded from http://journals.lww.com/njgp by BhDMf5ePHKav1zEoum1tQfN4a+kJLhEZgbsIHo4XMi0hCywCX1AW nYQp/IIQrHD3i3D0OdRyi7TvSFI4Cf3VC4/OAVpDDa8KKGKV0Ymy+78= on 05/28/2024 Vaccination program in Nigeria is possibly threatened by a stronger factor other than these previously addressed factors and perhaps may explain the marginal progress despite several efforts in the past. Vaccination in the country is probably confronted by vaccine hesitancy which is as old as vaccination itself. Vaccine hesitancy is a global problem and can affect any vaccination program. Vaccine refusal in time past has been associated with outbreaks of many diseases in different countries, both developed and developing countries. Outbreaks of pertussis were reported in the United Kingdom and the United States in the past due to vaccine refusal.^[5,6] The polio vaccine refusal in Northern Nigeria in 2003/2004 did not only quintuple polio incidence in Nigeria but also contributed to outbreaks across three continents. The rejection was driven by rumors and distrust which are rudiments of vaccine hesitancy.[7] Vaccine hesitancy refers to delay in the acceptance or refusal of vaccines despite the availability of vaccine services.[8,9] It is complex and context specific, varying across time, place, and vaccine. Vaccine hesitancy is a great threat not only for the hesitant individual but also for the community at large. Delays and refusals of vaccination make communities unable to reach thresholds of vaccine uptake that confer herd immunity in the communities, thus increasing the risk of an outbreak should a vaccine-preventable organism starts circulating in that community.^[10] Vaccine hesitancy in developing country settings may comprise more complex factors than obtainable in the developed countries, hence the need for the solution to also be more context specific. Vaccine hesitancy determinants, as suggested by the World Health Organization and broadened by some authors, are complacency, confidence, convenience, risk calculation, and collective responsibility.^[8,11] Complacency arises when perceived risks for vaccine-preventable diseases are low; therefore, vaccination is not considered a necessary preventive action. Thus, other issues or responsibilities of life are of higher priority at the time than vaccination. As regards confidence, trust in vaccines, delivery system, and policymakers is needed to build the trust and confidence of an individual to accept vaccination. Convenience, implying physical access, availability, affordability, and willingness to pay; geographical access; ability to understand language; and appeal of immunization services are all drivers of vaccine hesitancy. Risk calculation is a situation where an individual vaccination decision is based on utility maximization, in which the decision to vaccinate or not vaccinate will depend on the perception of the risk of infection. If the risk of infection is perceived to be lower than the risk of vaccination, the decision will be against vaccination. Collective responsibility is also a driver of vaccine hesitancy, and it is described as the willingness to protect others, which may influence an individual's decision to subscribe to vaccination. The described model comes from the developed world and may not capture the nature and causes of vaccine hesitancy in the context of Nigeria, specifically and sub-Saharan Africa, due to the context-specific nature of hesitancy. There is a need to understand these context-specific causes, in various cultures and nations, in order to establish hesitancy as a probable cause of poor vaccine uptake and

differentiate it from logistic-related reasons why individuals are not vaccinated. In doing so contextually, tailored programs can be developed and targeted at these causes.

Context-specific factors contributing to vaccine hesitancy in Nigeria

Nigeria is multi-ethnic and multireligious with diverse cultural beliefs and practices across various regions. This complex nature, no doubt, can allow vaccine hesitancy to thrive. Hidden influences such as cultural, social, demographic, and psychosocial factors [Figure 1] contribute to the occurrence of vaccine hesitancy.^[12] These influences will proliferate in our kind of culture and social structure where individuals are strongly influenced by what they think others around them are doing or are expecting them to do. The communal nature of the people encourages the need for acceptance by other members of the community, which, in a way, influences how individuals behave and respond in different circumstances. Hesitancy can thrive in the country because of various religions that see causation as coincidences rather than find answers to what appears like coincidences.^[2] In certain religions, deaths either childhood or adults are seen as coincidences or ascribed to God who is supreme in all even if apparent causation like vaccine-preventable disease can be identified as a probable cause. The thrust for vaccination uptake will undoubtedly be affected because death has an alternative explanation by religion. Evidence abounds in the country that even during much publicized National Immunization Days, parents still get extremely cautious regarding their children getting vaccinated either as a result of past personal experiences, community experiences, rumors, or distrust. There are reports of parents double-checking before their wards are vaccinated either by asking their neighbors with children of the same age, reaching out to more informed people, or in some instances putting a call across to familiar health provider to confirm if their children should receive such vaccinations. The bottom line to such a behavior is a deep-seated fear or distrust for the safety of the vaccine, the health system, or the capacity of the health



Figure 1: Context-specific factors associated with vaccine hesitancy and vaccine uptake

provider to act correctly. This complex interplay of psychosocial and structural influences is a substantial underlying factor for vaccine hesitancy to thrive in our environment. Husband or head of household acceptance or refusal of vaccine, his religion or beliefs, and socioeconomic status either predispose to or prevent vaccine hesitancy. Demographic variability across the six zones or region of the country also contributes to vaccine hesitancy. Experiences vary from region to region despite the poor overall outlook of vaccination uptake across the country. This demographic difference, primarily educational, socioeconomic, and religious levels, impacts immunization uptake. In this instance, it can lead to vaccine hesitancy, either subtlety or overtly. In some regions, there has been an effort to attend to factors thought to militate against vaccine uptake while minimally addressing vaccine hesitancy. However, in certain regions, the onset of insurgency has worsened vaccine hesitancy, and religious leaders are reported as sharing distrust toward vaccination as a Western plot to sterilize people of a particular religion. The influence of religion and the complex interplay with psychosocial factors in this region, for example, increases the occurrence of vaccine hesitancy in the country and might explain the observed trends in immunization coverage as reported from this region of the country.

Ways to combat vaccine hesitancy problem in the country

In reducing hesitancy and improving vaccine uptake in the country, there is the need for more context-specific research explicitly aiming to identify factors associated with vaccine hesitancy across the various culture and tribes in the country considering the multi-ethnic and multireligious nature of the country. The drivers for vaccine hesitancy no doubt will likely vary in different parts of the country and therefore, it is evident from the Nigerian context that no single strategy can be used to combat vaccine hesitancy in all the population or region of the country. This thinking has been suggested by previous authors mainly because vaccine hesitancy is a complex problem.^[13,14] In combating hesitancy in the nation, health-care providers and health managers must take the lead. They must be at the forefront of the battle against vaccine hesitancy because they are the first to appreciate and understand the magnitude of the problem. It is their responsibility to ensure that policymakers and the society understand the reasons leading to vaccine hesitancy and how we can appropriately combat this problem. They should leverage their knowledge of the demographic structure, culture, religion, and other context-specific factors as found from research in proposing specific strategies that are tailored toward the various subgroups in the country. The health-care provider must be informed enough on how to counter arguments against vaccines at all levels particularly because of vaccine distrust propagated by religious leaders in some sections of the country and be empowered with the message that the client will understand. There must be deliberate effort targeted at unvaccinated and undervaccinated subpopulation and the hard-to-reach communities affected by the insurgency. There should be community-focused strategies aimed at increasing the knowledge and awareness

about vaccination while directly engaging community leaders and gatekeepers and religious and/or other influential leaders to promote vaccination in the community. Strategies such as social support system to improve convenience and access to vaccination are required. Psychological support by the way of emotional connectedness to the concerns of parents based on understanding that parents are trying to do what they feel is best for their children is also needed to combat the problem of vaccine hesitancy effectively.

CONCLUSION

Vaccine hesitancy has the potential to impact vaccine coverage and without any doubt might be a significant contributing factor to the current trend of childhood immunization in Nigeria. The demographic, cultural, social, and religious structure of the country can, in many ways, contribute to vaccine hesitancy. In order to improve the current level of vaccination uptake and coverage, context-specific factors identified from local research in the various regions as contributing to vaccine hesitancy in the country must be addressed using appropriate strategies, based on the knowledge and understanding of the magnitude of the problem.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

- Babalola S, Olabisi A. Community and Systematic Factors Affecting the Uptake of Immunization in Nigeria: A Quantitative Study in Five States. Nigeria; Abuja: Department of International Development; 2004.
- National Demographic Health Survey. Key Findings. National Demographic Health Survey; 2008. Available from: https://dhsprogram. com/pubs/pdf. [Last accessed on 2019 Aug 26].
- NDHS 2013 National Population Commission, Federal Republic of Nigeria. Final Report on Nigeria Demographic and Health Survey 2013. Rockville, MD, USA: ICF International; 2013.
- NPHCDA. Nigeria National Routine Immunization Strategic Plan (2013-2015) Available from: http://www.nationalplanningcycles. org/sites/default/files/country_docs/Nigeria/ri_strategic_plan_ combined_mahmud_draft_1.pdf. [Last accessed on 2019 Aug 26].
- Wolfe RM, Sharp LK. Anti-vaccinationists past and present. BMJ 2002;325:430-2.
- Dubé E, Vivion M, MacDonald NE. Vaccine hesitancy, vaccine refusal and the anti-vaccine movement: Influence, impact and implications. Expert Rev Vaccines 2015;14:99-117.
- Ghinai I, Willott C, Dadari I, Larson HJ. Listening to the rumours: What the northern Nigeria polio vaccine boycott can tell us ten years on. Glob Public Health 2013;8:1138-50.
- SAGE Working Group on Vaccine Hesitancy Final Report. Available from: http://www.who.int/immunization/sage/meetings/2014/october/. [Last accessed on 2019 Aug 26].
- MacDonald NE; SAGE Working Group on Vaccine Hesitancy. Vaccine hesitancy: Definition, scope and determinants. Vaccine 2015;33:4161-4.
- Fine P, Eames K, Heymann DL. "Herd immunity": A rough guide. Clin Infect Dis 2011;52:911-6.
- Betsch C, Bohm R, Chapman GB. Using behavioral insights to increase vaccination policy effectiveness. Policy Insights Behav Brain Sci 2015;2:61-73.

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- Dubé È, MacDonald NE. Managing the risks of vaccine hesitancy and refusals. Lancet Infect Dis 2016;16:518-9.
- Jarrett C, Wilson R, O'Leary M, Eckersberger E, Larson HJ; SAGE Working Group on Vaccine Hesitancy. Strategies for addressing vaccine

hesitancy - A systematic review. Vaccine 2015;33:4180-90.

 Dubé E, Gagnon D, MacDonald NE; SAGE Working Group on Vaccine Hesitancy. Strategies intended to address vaccine hesitancy: Review of published reviews. Vaccine 2015;33:4191-203.