

Polio Eradication Initiative (PEI) Emergency Plan: A Panacea for Polio Eradication in Nigeria.

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ABSTRACT

BACKGROUND

Nigeria has persistently fallen short of the goal to halt and eradicate the transmission of the poliomyelitis virus. The most recent failure of yet again another major polio eradication program under the Global Polio Emergency Initiative 2010-2012 calls for a review of the Nigerian Polio Eradication Initiative Emergency Plan developed under this scheme and time period. This is to determine whether the deployed strategies were optimum to tackle and surmount the intractable problem of sub-optimal vaccine coverage which has remained a critical bottleneck in the successful eradication of the polio virus in Nigeria. It becomes pertinent therefore, to appraise this latest effort to avoid a recurrence of failure in subsequent polio eradication programs.

METHODS

A review of related and available literature was conducted on the subject matter using the Google search engine, Google Scholar, and PubMed using the key words polio; eradication; Nigeria; and Global Polio Eradication Initiative.

RESULT

Much progress has been made towards achieving the required coverage threshold to completely eradicate polio but the inherent weaknesses and gaps in the Polio Eradication Initiative Emergency Plan plugs eradication efforts back into the vicious cycle of recurrent failure.

CONCLUSION

Successful polio eradication efforts through the

Polio Eradication Initiative Emergency Plan need to target realistic goals. Current efforts and strategies need to be scaled up and sustained to permanently address the persistent issue of sub optimal coverage of polio immunization.

KEY WORDS

Polio, Eradication, Global Polio Emergency Initiative, Emergency Plan

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INTRODUCTION

On December 31, 2012, Nigeria missed yet again the deadline for the Global Polio Emergency Initiative (GPEI) 2010-2012 plan for which the country is a signatory to halt the poliovirus transmission. With Nigeria contributing the highest to the global burden of poliomyelitis behind Pakistan and trailed by Afghanistan¹, the current GPEI stands highly jeopardized if polio is not eradicated from these countries. Nigeria is particularly significant to the global polio eradication efforts because of its unique position as the only African country to persistently circulate and transmit all three serotypes of the polio virus: WPV1, WPV3 and a type 2 circulating vaccine-derived poliovirus (cVDPV)².

Sub-optimal vaccine coverage is the biggest obstacle to successful polio eradication in Nigeria³. Nevertheless, an assemblage of other socio-political factors that have been identified as the precursors of sub-optimal or low immunization coverage, include a very weak healthcare system, lack of political will, the residual effect of rumors about OPV side-

effects, religious beliefs about western or orthodox medicine, and myths surrounding the intended purpose of the vaccines being propagated by political, religious and traditional leaders in some northern states of the country^{2,4,5}.

A spate of eradication efforts initiated since 1997⁶ to halt the virus has produced an interruption of the WPV transmission in many states but with continuous transmission in 12 of the 37 states primarily in the North². Recently, the two-year GPEI 2010-12 plan to interrupt poliovirus transmission adopted by Nigeria under the Polio Eradication Initiative (PEI) Emergency Plan met with a setback in the country at the end of the 2011 plan year due to sub-optimal vaccination coverage³. To combat the situation and place Nigeria on the roadmap to eradication again, in 2012, the country launched a revised and supposedly improved one year PEI Emergency Plan.

At the end of the plan year, the latest polio eradication efforts failed yet again leaving in its trail 121 polio cases⁷.

With the persistent setbacks in major polio eradication programs, it only stands to reason that the country's current polio eradication policy framework designed around the Polio Eradication Initiative (PEI) Emergency Plan be reviewed. The question that begs to be answered is whether the strategies in the new PEI were optimum to tackle and surmount the intractable problem of sub-optimal OPV coverage which has remained a critical bottleneck in the successful eradication of the polio virus in Nigeria. This paper therefore, is an appraisal of the 2012 PEI Emergency Plan and strategies with a view to elucidating major strengths and weaknesses towards achieving the high coverage rates needed to halt the poliovirus transmission. Such an appraisal proffers valuable insight into understanding why polio eradication may not be possible on the current policy trajectory if certain preconditions are not taken into account.

What Major Possibilities for Polio Eradication did the PEI Emergency Plan Offer? *The emergency nature of the PEI*

At first glance, the PEI Emergency Plan holds great promise for the eradication of polio particularly in the high risk areas of the north. The emergency nature of the plan signals an increased political will and a 'big shift' in tackling the virus²⁰ which should ultimately culminate in a huge decline if not total eradication of all polio cases given that all other prerequisites are met. India's polio eradication success was primarily premised on large scale political commitment on the part of the government¹⁴. Similarly, the short-term nature of the plan possesses great potential in producing result oriented outcomes since the targets are short-term and by implication, doable with minimal cost. These short-term or quick impact intervention health models have been proven overtime to produce a high level of coverage because they are relatively easy to implement, of short time span and not as labor intensive¹⁵. More importantly, they usually garner the financial support of donor agencies.

Surveillance

India remains a pragmatic model of polio eradication for Nigeria. A profound element of its eradication program was the mounting of an effective surveillance system. India's National Polio Surveillance Project provided strict monitoring for acute flaccid paralysis patients and actual data for polio cases^{13,16}. Likewise, early successes of polio eradication in Latin America in the 1980s, for example Brazil also reveals intensified surveillance as an important element in starkly reducing the high burden of polio cases to its lowest level ever recorded in the country's history⁵. An important element of the 2012 Nigerian PEI plan includes surveillance mounted in all states, and routine oral polio vaccine (OPV)3 coverage, increased and implemented in the highest risk local government areas³. This core strategy is essential to detect any poliovirus serotype in key endemic areas and to inform supplementary immunization activities (SIA) to stem pockets of outbreaks or retransmission activities². Sustained and intensified

surveillance strategies will ultimately achieve polio eradication.

Partnership and intersectoral collaboration

Efficacy and sustainability of polio eradication efforts overtime are also underscored by establishing strong partnerships and fostering intersectoral collaborations, another element present in the 2012 plan. A synthesis of global wide polio eradication successful efforts between 1988 and 2000 across 125 countries spanning Asia and Africa identified as a core strategy, strong partnerships and interagency cooperation⁵. At the national level, expanding partnerships and inter-sectoral collaboration would facilitate an integrated approach especially if such collaborations are mainstreamed into the health sector in the areas of routine immunization and vaccination of children and adults.

Why Polio Eradication May Not Be Possible in Nigeria under the PEI Emergency Plan

Unrealistic goals

Although the PEI was designed as a short-term plan, its objectives seem grandiose and even unrealistic to achieve within the stipulated time frame. A detailed evaluation of the emergency plan shows that it is actually a medium to long term plan requiring a longer time period for implementation. Firstly, it is unrealistic to set a one year end polio target with yet to be addressed situations of insecurity and resistance in some high risk areas. Secondly, a major eradication objective of the plan is to improve routine OPV3 coverage in the highest risk areas to at least 50% by the end of 2012³. While this goal may seem modest at least, it is an unrealistic goal for polio eradication. A major process indicator for achieving high population immunity levels from high coverage and SIA by the GPEI is to achieve >90% coverage of children with more than 3 doses of OPV in all states². This is the goal for which eradication of polio can be deemed to be underway. The Nigerian PEI coverage goal falls short by 40%. Failure to meet the 2012 target should call for a rethink

of current polio strategies and turn to a much longer-term approach as needed¹⁹.

Insecurity issues

The PEI Emergency Plan do lack and do not provide clear security strategies especially for frontline health workers in the north who overtime have fallen prey to religious extremists in the high risk areas of the north. As at 2013, there is still religious resistance to polio vaccine. A recent example is the killing of 8 female polio health workers⁸. India's solution was a successful mass immunization coverage which began in 1994 engineered by consistent strong political will with coordinated international effort⁹ but massive immunization cannot occur without addressing issues of security or scaling up efforts to protect frontline health polio workers.

Large polio outbreaks can reoccur where there are gaps in coverage as evidenced by the April 2010 outbreak in Tajikistan² where international conflict was a major hindrance to high vaccine coverage⁴. Religious opposition to vaccines has been identified as a major hindrance to polio eradication in Pakistan, leading to transmission of new cases in previously identified polio free areas¹⁰. Pakistan still recorded indigenous transmission of the poliovirus even with a community resistance rate of as low as 0.3% in 2007¹¹. The persistent insecurity and continued resistance to OPV in some parts of northern Nigeria underscores the fact that any gap in geographic coverage would potentially produce outbreaks.

Lack of an integrated approach

Growing antagonism towards polio also stems from the prioritization of polio over other high burden diseases like malaria yet so much attention on polio⁷. Empirical evidence from a case study of polio resistance in Zaria, northern Nigeria revealed great concerns and mistrust among respondents about the huge focus on polio eradication when other diseases like malaria and measles are considered more harmful¹². This speaks to a gap in the overall

nature of 2012 PEI plan which is rather vertical and not integrated with other health interventions. With soon to decline donor or international aids targeted at polio eradication^{4,13}, it becomes even more pertinent to have an integrated approach to polio eradication to justify its high economic cost. Taking into consideration other strategies like safe water, improved sanitation, improving nutrition and health systems (primary health centers) would strengthen routine immunization and help to deliver the required level of coverage necessary for eradication¹⁶.

RECOMMENDATIONS

Much progress has been made in Nigeria particularly in recent times in achieving the required coverage threshold to completely eradicate polio³. This is especially due to the increasing engagement of state politicians and traditional leaders³ in polio eradication efforts. Nevertheless, there needs to be scaled up and sustained efforts to address the persistent issue of suboptimal coverage of polio immunization. A major step to achieving this would be to address some critical elements in the current polio eradication plan.

Firstly, quick or short term interventions although may have great potential in achieving high success rates due to its cost effectiveness with goals that can be immediately implemented, they need to be complemented with mid and long-term sustainable goals. While Nigeria may adopt the quick impact model and critical elements of the GPEI in order to leverage on their potential advantages, it must develop an eradication plan tailored to suit its unique socio-political context.

Secondly, whether quick impact initiatives or not, plans for disease eradication need to be holistic and integrated into the existing health care system rather than vertically to achieve maximum efficacy in vaccine coverage, especially in high risk areas. It is also imperative to move beyond the “polio only” agenda, and to integrate polio vaccination into the routine health and immunization program

of other priority diseases¹⁷.

Thirdly, the PEI plan should prioritize security measures in the north and intensify efforts to address the remnant of political and religious resistance to enable total coverage and SIAs to halt the poliovirus.

And finally, as with India and other successful polio eradicated countries, massive political will sustained over time and scale up of government efforts are always crucial elements of any effective health intervention.

CONCLUSION

The 2012 PEI Emergency Plan does provide a strong grounding for eradication but the inherent weaknesses and gaps plugs eradication efforts back into the vicious cycle of recurrent failure evidenced from past and latest records. Although the GPEI has declared polio a global health emergency, Nigeria cannot achieve the needed immunization coverage required for eradication by necessarily framing an emergency plan without the requisite ground work that the plan needs to thrive on. An emergency plan does not necessarily have to be a one year plan considering vital preconditions necessary to accommodate such a humongous task like health systems strengthening.

The next steps for the country is a review and re-evaluation of its failed polio efforts, and the development of concerted efforts to redesign the Emergency Plan to medium or long term goals that provide a realistic time period in tackling the major issues that undermine full coverage. Nigeria is on the right track with the goals and strategies of the PEI but for it to attain eradication, “in many ways it[sic] need[s] to do more of the same but smarter and more efficiently”¹⁸.

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