

Polio Inoculation Gaps in Nigeria

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This paper examines the barriers to inoculating against polio in Nigeria and the difficulties it presents for the global eradication of polio. Without full population immunity against polio, a polio pandemic remains a real possibility. Poor education and ineffective leadership are two of the main difficulties groups face with immunization efforts in this West African country. Community level approaches and volunteer engagement are just a couple of the possible options to address vaccination difficulties. Establishing governance with organizations committed to international health, including the World Health Organization, the Global Polio Eradication Initiative and Rotary International will help Nigeria meet health goals and overcome this disease.

INTRODUCTION

The role of health in international relations is imperative because of its widespread effects on human beings in the global society. Inoculations have been used around the world to reduce the spread of many diseases and to reduce the threat of global health pandemics. Inoculations have been effective in eradicating diseases in many countries, in turn reducing the spread of disease to smaller areas. In areas where inoculations are not used heavily, however, certain diseases persist that threaten the unvaccinated population and neighboring areas, where disease could spread to again in future generations. The possible spread threatens these “safe” countries and the rest of the world as diseases cross borders in today’s globalized world. The main problems that prevent adequate, global inoculations are populations that refuse inoculations because of missing or incorrect information about the purpose of these vaccines, and insufficient cooperation of community officials. This paper will address education and consequential polio inoculation gaps in Nigeria, the threat they pose to global health, and the possible solutions that organizations could use to close these gaps and alleviate the threat of a polio pandemic.

THE POLIO DISEASE

“Poliomyelitis (polio) is a highly infectious disease caused by a virus. It invades the nervous system, and can cause total paralysis in a matter of hours. It can strike at any age, but affects mainly children under three (over 50% of all cases).”¹ Polio is easily spread because it can be transmitted through contaminated food and water sources as well as direct contact with an infected person. The first vaccine developed was the inactivated polio vaccine (IPV) in 1955, followed by the oral polio vaccine (OPV) in 1961. Currently the OPV is used most often in eradication campaigns since it is cheaper and easier to distribute.² Through the use of vaccines, polio has been eradicated in all but four countries: Nigeria, Afghanistan, Pakistan, and India).³

POLIO IN NIGERIA

Polio in Nigeria is especially problematic because of the international threat it continues to pose until the disease is eradicated. As of 2006, 60% of polio cases in Nigeria were documented in Northern Nigeria, particularly in the states of Jigawa, Kano, and Katsina.⁴ As is the case in Nigeria, “...where

routine vaccination rates are poor, poliovirus infection rates are high.”⁵ In 2009, 387 cases of polio were reported in Nigeria, out of a total 1595 global cases (approximately 24%).⁶

The barriers to vaccination in Nigeria had domestic consequences in the number of polio cases, and for that reason polio threatens the security of other states both regionally and internationally. “Not only is Nigeria struggling to contain its poliomyelitis outbreak, it is now exporting the virus across its porous borders.”⁵ When vaccinations stopped in Kano (northern Nigeria) from April 2003 to July 2004, there was a “...decrease in the OPV acceptance in all northern Nigerian states. The subsequent importation and re-emergence of polio is still haunting the world.”⁷ This “re-emergence” was the spread of the polio virus to neighboring countries, which the World Health Organization (WHO) attributes to Nigeria.⁸ In 2005, a strain endemic to northern Nigeria travelled to “Yemen, Saudi Arabia, and Indonesia (probably by Muslim pilgrims returning from the Hajj or migrant workers),” which paralyzed over 1,500 children.⁹ In 2008 this affected Benin, Burkina Faso, Niger and Chad.⁸

POLIO ON THE GLOBAL LEVEL

The spread of polio is a global concern. “International migration poses the threat of re-emergence and importation in the post-eradication era.”⁷ According to the Advisory Committee on Poliomyelitis Eradication (ACPE), “the continuing transmission of [wild poliovirus (WPV)] in northern Nigeria remains the main threat to eradication in Africa and globally.”³ Polio could easily spread internationally as tourists and professionals visit areas where the disease is present and bring it back to their home countries. Without eradication this spread is inevitable, especially since many countries that eradicated polio years ago no longer vaccinate against it. The population’s immunity to the disease would be low in these areas, making people more susceptible to infection. The root cause of this threat is low inoculation rates in Nigeria.

BARRIERS TO INOCULATION

The noncompliance of local leaders challenges inoculation efforts. In 2003, boycotts erupted in northern Nigeria, particularly Kano, against inoculating children with the polio

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vaccination. Local political and religious leaders urged parents to not vaccinate their children, and immunization campaigns ceased. “These leaders argued that the vaccine could be contaminated with anti-fertility agents (estradiol hormone), HIV, and cancerous agents.”⁹ Leaders believed that Western countries were targeting the Muslim world. A representative for the governor of Kano stated that, “Since September 11, the Muslim world is beginning to be suspicious of any move from the Western world...Our people have become really concerned about polio vaccine.”⁹ Margaret Cheng argues that the boycotts of inoculations were “fuelled by general resentment of the south and its political dominance of the country.”⁵ Power struggles between the north and the south explain her theory.

Although the federal government of Nigeria sets the national health policy, immunization campaigns are at the discretion of individual states, which allowed Kano to halt vaccinations in 2003.⁹ Discrepancies between northern and southern Nigeria are due in part to political changes to which the country is still adapting; in 1999, power shifted from “a northern-led military regime to a southern-led democracy.”⁹ Northern states boycotted polio vaccinations, believing that the democratic southern government was executing Western goals. Additionally, northern and southern Nigeria have “different attitudes to modern medicine,” partly because of their very different colonial backgrounds: Islamic Jihadists colonized northern Nigeria; the British colonized southern Nigeria.⁹ Southern Nigeria is more accepting of modern medicine, since British colonialists used more advanced medicine than Islamic Jihadist colonists in the north, who followed more traditional approaches to medicine.⁹

A great deal of opposition to vaccines came from common Nigerian citizens as well. In a country where medical treatment is hard to come by, and expensive when it can be found, free vaccinations appear to be a threat, rather than a miracle. According to a report for the *Baltimore Sun*:

The aggressive door-to-door mass immunizations that have slashed polio infections around the world raise suspicions. From a Nigerian's perspective, to be offered free medicine is about as unusual as a stranger's going door to door in America and handing over \$100 bills. It does not make any sense in a country where people struggle to obtain the most basic medicines and treatment at local clinics.⁹

Citizens also had similar concerns that immunizations caused infertility, but for different reasons. A population policy of President Babangida in the 1980's restricted women to having four children. Nigerians “connected this population control campaign with immunization, believing that vaccination was one way the government might be reducing the population.”⁹ These perceived threats caused parents to keep their children from being vaccinated.

Northern Nigerians are also skeptical of modern medicine because of bad past experiences. In 1996, Pfizer “sent a team to Kano during the epidemic of meningococcal meningitis.”⁹ Pfizer used that opportunity to set up a trial for new antibiotics; 100 children received the standard antibiotics used to treat meningitis, and 100 children were given the trial drug. Five children who received the new drug died. Claims were

made that Pfizer did not have permission to test the new drug, and that children who were not responding to the new drug were not switched to the standard treatment. There was little accountability for Pfizer's actions; US courts ruled that Nigerian families would have to file suits against Pfizer in Nigerian courts. Consequently, many Nigerians developed distrust for “Western interventions” and group vaccines in the same category as the Pfizer drug trials.⁹

Further, Nigerians view polio as less threatening than other diseases which are more visible and claim more lives. The “poliomyelitis vaccination is a long way down on the list of their needs,”⁵ compared to problems like measles, diarrhea and malnutrition, which claim billions of lives a year. “When the poliomyelitis vaccinators came [during the last measles outbreak] they said ‘go away’ we will only bring our children out if you bring measles vaccination,” explained Abdulsalam Nasidi, the Director of Public Health in Nigeria.⁵ People have little faith in the country's health system because of its inability to protect their children from common diseases. “[Parents] refuse to have their children vaccinated...because it is their only means of protest against a health system they feel is failing them.”⁵ Public health and vaccination efforts in the past have fallen short. In 2006 Nigeria introduced Immunization Plus Days (IPD) in which poliomyelitis and other vaccines were given to children, and insecticide-treated bed nets and soaps were distributed to parents. At first it seemed successful, since the number of polio cases declined over a year; it quickly turned around. “Poor planning, under budgeting, and procurement problems”⁵ caused the campaign to fall through on promises, and Nigeria regressed back to its 2006 level of progress against polio. For Nigeria to eradicate polio and alleviate the risk of a global polio pandemic, it is important that the Nigerian government, Nigerian citizens and international organizations take steps to cooperate to make this happen.

RECOMMENDATIONS FOR ERADICATION

To eradicate a disease it is important that a country has basic health services available to all of its citizens. Basic health services establish a framework for campaigns such as the IPD program. When there is accessible medical treatment, more people may pursue regular medical attention, and may voluntarily pursue vaccinations as well. This will also provide more comprehensive vaccinations by inoculating against common diseases, including measles, which parents are more concerned about than polio. Building a reliable health system also helps develop credibility and establishes public trust.

Public trust is essential in promoting public health. Such trust plays an important role in the public's compliance with public health intervention, especially compliance with vaccination programs, which targets mainly healthy people. Where public trust is eroded, rumors can spread and this can lead to rejection of health interventions.⁹

Establishing public trust will also help prevent future boycotts; when the public trusts the health system, they are less likely to be suspicious of motives of public health initiatives. Trust also comes from educating people about the health risks they face. Lahariya notes:

*The persistence of myths about polio, particularly in endemic areas, can result in low participation and poor cooperation...The solution may lie in including information on polio and vaccination in textbooks and curricula of school and colleges to generate awareness and increase people's participation in and ownership of the program.*⁷

Educating the population will inform people of the real health threats that exist, and that vaccinations are intended to protect their children, not sterilize them or infect them with HIV. Education will encourage parents to vaccinate their children against polio and participate in local campaign efforts. Local efforts will help facilitate governance between Nigeria and international organizations.

Confidence in community groups and local governments will be helpful in working towards eradication as well. Local governments are vital because they are closely tied to communities, and community based initiatives aid vaccination campaigns. In the past, "...poor community participation and insufficient ownership" slowed campaign progress in Nigeria.⁷ Further, "...social mobilization can be considered as important as political mobilization and both need immediate reinforcement."⁷ Volunteers are necessary to support local government campaigns and increase social mobilization. "...Volunteers know the community, its practices and beliefs, the terrain and the language of the area in which they work, facilitating the job of administering the vaccine with a high coverage."⁷ In other countries, eradication campaigns have been successful because of "the efforts of hundreds of thousands of people from different walks of life."⁷ According to the WHO, local efforts are crucial in vaccine campaigns. "Nigeria will continue to pose a high risk to international health until the new top political commitment is translated into field-level improvements in campaign quality."³

Local and state governments also require support from the international community. "Eradication should be an internationally coordinated effort" to guarantee the highest rate of efficiency.⁷ In the case of polio, "...many countries started programs in their territory a long time after a large part of the world was polio free. Had efforts been internationally coordinated and synchronous, the situation could have been different."⁷ International efforts would have provided equality for all countries by ensuring that each country was taking the same steps at the same time, and that financial support would be available to help countries eradicate polio. International efforts would also ensure accountability; one of the current problems in Nigerian campaigns is the misallocation of program funds: insufficient funds are allocated to projects, and funds are used improperly.⁵ As of 2007, the cost for global eradication was \$4.5 billion USD, and an additional \$575 million USD was needed to meet program needs. Coordinated international efforts would ensure that funds are used appropriately and that every country receives sufficient funds and would not have to rely solely on state resources. International support would also require better data collection, which Nigeria lacks. The UN or the WHO would be able

to help with census figures, tracking addresses and tracking which children still need to be vaccinated.⁵

To secure effective governance with international organizations, it is important that Nigeria cooperates domestically so that it can establish united national goals. It is crucial that northern and southern Nigeria reach an agreement on opinions of modern medicine so that one part of the country is not doing work that will counteract actions another part of the country is taking. This lack of communication was a problem previously, when ineffective vaccination campaigns in the north disrupted successful vaccination campaigns in the south. When the entire country is cooperating, Nigeria can establish effective governance by using local efforts to implement international goals. As Nigeria increases its effort, international organizations will take the country seriously and will be more willing to cooperate.

By working to meet the goals of external organizations, Nigeria will secure effective governance along the way. Organizations such as the WHO, the GPEI and Rotary International will see the continued value in aiding in eradication campaigns in Nigeria; when the country is accepting of the vaccines, international organizations will have an easier time with public compliance, and international cooperation between the organizations and Nigeria will secure governance among them. The GPEI, for example, could establish governance with Nigeria by promoting polio eradication goals. The goal of the GPEI is to "interrupt transmission" in the four polio endemic countries, including Nigeria.³ Nigeria must do this by achieving "consistent immunization of all children during [supplementary immunization activities]."³ The objectives of the GPEI are carried out by other organizations, primarily the WHO and Rotary International.

Governance can be established with the WHO when Nigeria takes steps to achieve the WHO recommended goals in poliomyelitis vaccination campaigns by consistently vaccinating all children during campaigns and "by addressing: the quality of campaigns (that is, the effectiveness of service delivery); the attitude and practice of the population in accepting or seeking out the service; [and] the ability of the service to gain access to all targeted populations, which is compromised in areas of uncertain security."³ Another necessary goal is that routine immunization should be used to maintain "high population immunity...in polio-free areas."³

Further, Rotary International and Nigeria can establish governance by using local and international Rotarian volunteers from the PolioPlus program to distribute vaccines to Nigerian communities and to vaccinate children directly. According to the WHO, "Rotary is the volunteer arm of the global partnership dedicated to ending this crippling disease."¹⁰ Rotary goals that Nigerians can work toward to secure eradication are to immunize infants with OPV, use National Immunization Days (NID), monitor for cases of acute flaccid paralysis (which indicates polio infection) and investigate them immediately, and go door-to-door to ensure that all children are vaccinated.¹¹

“Public trust is essential in promoting public health.”

CONCLUSION

It is important to maintain vaccination efforts in polio-free areas to keep immunity high. Once polio is eradicated in Nigeria, it must maintain population immunity by continuing to use the OPV for three years and the IPV for seven to eight years after that to guarantee continued eradication. True eradication takes approximately 10 years after the last polio case is documented to ensure that it is really gone.

Global polio eradication cannot occur until every country has been polio-free for 10 years. Until such time, as long as one country continues to report polio cases, the threat of a polio pandemic exists. Through global governance, however, this global health threat can be eliminated. The World Health Organization and Rotary International, through coordination with the Global Polio Eradication Initiative can establish effective governance with Nigeria by demonstrating coordinated efforts to achieve common goals. Nigeria can further contribute to governance through community programs and support from local governments. Comprehensive vaccination initiatives, paradigm shifts that accept vaccinations and continued vaccination campaigns to maintain high population immunity will push Nigeria to polio eradication, contain the spread of the disease, and alleviate this global health threat.

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NEWS AND VIEWS

Psychedelics Offering a Cure?

Like many Americans, Dr. Clark Martin, a clinical psychologist, suffered from depression. Dr. Martin fell into depression after chemotherapy for kidney cancer, and none of the traditional methods were helping him recover until, at the age of 65, he had his first psychedelic experience as part of an experiment at Johns Hopkins University, involving psilocybin, an ingredient in certain mushrooms. He claims this six-hour experience helped him overcome depression and entirely transformed his personal relationships. Similar studies using psychedelics have yielded encouraging results, but review boards have set up strict guidelines to avoid there being an exaggerated perception about the drugs' risks and benefits. However, despite positive results from multiple studies, there is still limited public money granted for psychedelic research, although nonprofit groups like the Hefter Research Institute have supported research efforts.

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A Decline in Death from Childbirth

Lower pregnancy rates, higher income (which correlates to better nutrition and healthcare), better education, and an increased prevalence of hospitals staffed with skilled workers have led to a worldwide decrease in maternal mortality rates. Improvements made in India and China stand out as major contributors to this development. In other regions, AIDS is a dominant factor in maternal mortality rates. These findings contradict the dominant view that maternal mortality rates cannot be combated. However, many advocates of women's health resisted the publishing of this data, fearing that the news would reduce public support for their cause. This opinion was contested by other medical professionals. Experts noted that public knowledge of this information demonstrates that public support and donation is having a positive effect.

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