

Radical Fundamentalism Impeding Successful Policy Interventions: Polio as a Case in Point

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Abstract

The World Health Organization, in 1988, announced polio eradication as their target. Since then efforts to eradicate polio has become one of the world's largest public-private partnerships. The polio eradication policies have since evolved into dynamic programmes with strategies modified and adapted based on national context. While the WHO in partnership with national governments has been successful in making most countries polio-free, three countries continue to pose a challenge: Afghanistan, Pakistan and Nigeria. All three have one common factor -Radical Islamist Terrorism. Using polio as a case in point, this paper isolates and analyses the reasons and extent to which national policies are affected by religious fundamentalism. The paper presents possible refinements to implementation strategy and focuses on adoption of a multi-pronged approach that leverages both local support and usage of communication models to eradicate polio.

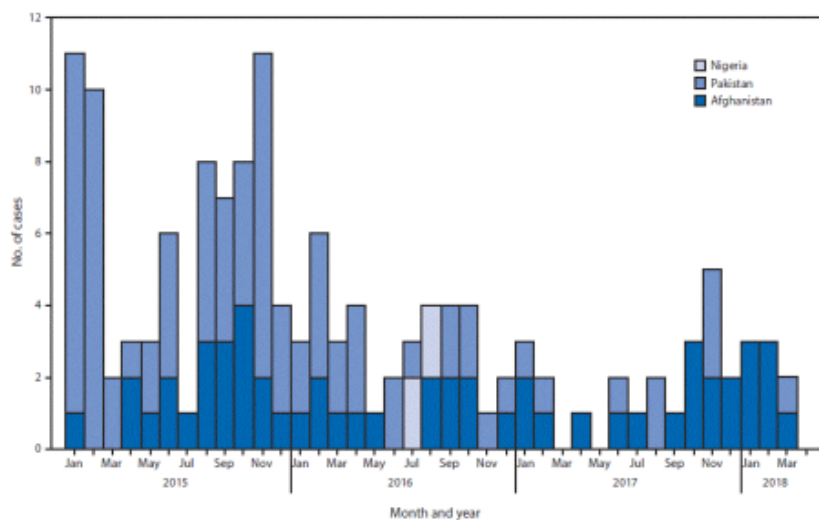
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Introduction

At the turn of the 20th century (following the invention of the steam engine) numerous advancements were made in the sphere of science and technology. Countries started formulating policies to address crucial challenges such as the Great Depression in 1930s. This was also the time that United Nations (UN) emerged as a phoenix from the ashes of the League of Nations and grew into an international organization with more than 190 member nations. The United Nations became a forum to address the international issues with an aim to resolve matters diplomatically. It also became a forum of economic, judicial, and political regulation.

Recognizing the need to address the growing cases of polio in developed and developing nations the World Health Organization (WHO), a specialized agency of the UN was set up in 1948 to address international issues pertaining to health and well-being of international citizens, initiated a campaign to expunge polio. Since the beginning of the programme in 1988, WHO has used polio vaccines to halt the spread of the disease. It has been successful in all nations but three: Afghanistan, Pakistan, and Nigeria.

FIGURE. Number of cases of wild poliovirus, by month of onset – worldwide, January 2015–March 2018*



* Data as of April 24, 2018.

Figure 1-Number of wild poliovirus cases by month of onset (Khan, Datta, Quddus, Vertefeuille, Burns, Jorba&Wassilak, 2018)

Much of current research has focused on how the WHO can implement tactics to ensure that oral poliovirus vaccine (OPV) reaches at the grassroots in these countries. Solutions such as political advocacy (Lahariya, 2007), mass mobilization of resources (Yehualashet, Horton, Mkanda, Vaz, Afolabi, Gashu, Banda, O'Malley & Nsubuga, 2016; Aylward & Linkins, 2005), using and monitoring supplementary immunization activities (Kazi, Murtaza, Khoja, Zaidi, & Ali, 2014), and the placement of fixed posts, special teams and house-to-house activities (Onyeka, Ilika, Ilika, Umeh, Onyibe, Okoye, Diden, & Onubogu, 2014) yet there continues to be low success rates in the polio endemic nations. This paper focuses on one aspect -- how radical Islamic terrorism and religious fundamentalism impedes successful implementation of polio drops and looks at possible solutions that can be implemented across the three nations specifically to address these challenges.

The situation in Pakistan

The polio eradication program in Pakistan was on the right track till 2007 and the country was close to being completely free from polio. The number of cases dropped from 2,980 steadily. However, the drone strikes in Federal Administered Tribal Areas (FATA) and the American War on Terror heavily impacted the success of the program. This resulted in Pakistan having the highest number of polio cases (198) amongst the polio-endemic nations in 2011 (Chang, Chavez, Hameed, Lamb & Mixon, 2012).

The Tehreek-e-Taliban Pakistan (TTP) and other militant groups have actively worked against the immunization program. The militants distributed pamphlets in FATA and Khyber Pakhtunkhwa (KP) against polio which said that polio vaccines are a conspiracy of Americans against Muslims. The militants also spread rumours that the vaccines contained monkey faeces and pig fat (Rehman, Shair, Yaqoob & Zulfiqar, 2017). This has resulted in a mass insecurity amongst the people living in regions controlled by militants.

Another major reason that the polio campaign is failing in Pakistan is due to the tactics used by the American forces to locate Osama bin Laden. The clandestine operation to locate the most wanted man in America consisted of agents posing as vaccine officials. These agents collected the DNA of bin Laden's children to verify if he is in Abbottabad. The success of the operation has created a fear amongst militant groups which has resulted in the capture and assault of vaccination teams. Vaccination officials such as Abdul Ghani, head of the polio program in Bejaur have been assassinated (Rouhana, 2013). The militant groups such as TTP have also issued fatwas against polio vaccine and their polio war has put 241,000 children in danger (Shah, Saad, Khattak, Rizwan, Haidari & Idrees, 2016).

The situation in Afghanistan

Throughout 2004, reports from WHO indicated that the number of polio cases were on the decline (Chang, 2012). The polio programme in Afghanistan was hailed as effective in 2010 due to a steady decline in number of Wild Polio Virus cases. However, at the end of 2011 the Afghan Ministry of Health reported 76 new cases of polio. Many of the new cases were in regions where polio was undetected and were thought to be "safe zones". The increase of polio cases according to Chang et al. (2012), was linked to the increase in polio cases across Pakistan as officials considered the two countries to be in the same epidemiological area.

A study conducted by Norris, Hachey, Curtis and Bourdeaux (2016) found that there is a strong relationship between violence and reducing rates of polio vaccinations. Norris et al. argued that the increasing number of polio cases between 2001 and 2011 are not a result of vaccine efficacy but reduced area of vaccine coverage.

Two factors contribute to the low rate of vaccine coverage in Afghanistan. First, vaccination teams are directly targeted by militant groups. Public health directors of Kunduz province have been murdered and there have been multiple attacks on UN compounds in Gardez and Kandahar (Norris et al., 2016). To counter these attacks, the International Committee of Red Cross persuaded Mullah Omar, the spiritual leader of Taliban, to provide a signed letter to be carried by vaccination teams that would guarantee safe passage through Taliban controlled areas (Trofimov, 2010). However, Mullah Omar does not represent all anti-government elements which meant that other groups have to be addressed through negotiations.

A second reason for low vaccine coverage is the distrust in government and international organizations that run vaccine drives. The polio virus has been resilient in southern parts of Helmand and Kandahar and in northern Uruzgan. All of these three regions are conflict areas with two of them – Helmand and Kandahar – sharing the border with Pakistan. These regions which are affected by the West's War on Terror perceive vaccines to be a method to make Muslim women infertile. Furthermore, the CIA's use of fake hepatitis B vaccination drive to locate Osama bin Laden has resulted in the Taliban being wary of polio drives. Finally, this instability coupled with government oversight and accountability has allowed polio to percolate throughout the society (Chang et al., 2012).

The situation in Nigeria

Nigeria's fight against polio has not directly been impeded by the War on Terror. However, it has become a victim of the culture of war. The implication of this has been unambiguous – northern Nigeria has historically been colonized by Islamic Jihadists. These radical organizations view the War on Terror as a war against Islam ergo they feel they will be a direct target of America. This has created an aura of war-induced insecurity which has lent credibility to rumours created and spread by war.

The first major issue is that there is very limited access to basic healthcare. Nigerian vaccination teams have to resort to door-to-door technique that would protect them from incapacitating diseases such as polio. However, due to intervention from clerics, vaccines have been seen as a foreign concept meant to restrict Islamic family sizes or spread AIDS. (Jegede, 2007; Rouhana, 2013; McKenzie, 2004). This has also prompted northern Nigerian states to ban door-to-door vaccination until they are convinced that polio vaccines do not contain harmful substances. According to the Washington Post, a spokesperson for the governor of Kano was quoted saying:

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 (McKenzie, 2004)

With the ban of the polio vaccine in 2000s, the number of cases drastically rose. According to Kapp (2003), "a halt to immunisation programmes and a resulting surge in polio cases in northern Nigeria is threatening the entire global polio eradication campaign, jeopardising 15 years of work, US\$3 billion of investment on vaccines and surveillance, and the efforts of 10-20 million volunteers". It was in the same year that the number of polio cases rose over 200 cases which meant that Nigeria hosted around 50% of the world's polio cases due to the ban on polio vaccination (Kapp, 2003).

Another important factor to consider is that southern Nigeria was colonized by the British. According to Jegede (2007), the government has been focusing on the activities in southern Nigeria. In the 1980s, the Nigerian government established a population control law that restricted the number of children a woman can

have to four. Jegede believed that this shift in focus is due to the Nigerian government complying with the command of the West. This, coupled with the fear of polio vaccines resulted in Nigerians losing trust in their healthcare system. Despite efforts being taken by the Nigerian government to allay the rumours, the distrust reached such extents that most northern Nigerians believed that it was safer to allow polio to spread than accept any vaccine endorsed by WHO (Rouhana, 2013). According to the governor of the Kano state, one of the many states boycotting the vaccines:

It is a lesser of two evils to sacrifice two, three, four, five, even 10 children [to polio] than allow hundreds of thousands or possibly millions of girl-children likely to be rendered infertile (BBC News, 2004).

Through its shared Islamic faith with other Middle Eastern and North African nations being targeted by Western nations under the pretext of War on Terror, an environment was created that fostered distrust and uncertainty towards Western medicine. At the same time, it is essential to remember that the culture of war observed in northern Nigeria has directly endangered the vaccination campaigns and possibly resulted in endurance of the virus for years to come.

Common Factors that hamper successful polio campaigns

In the last few years, Islamist insurgency has taken a special interest against polio elimination programmes. In 2012, Hafiz Gul Bahadur, a Pakistan Taliban commander, proclaimed that polio vaccination drives funded by United States and her allies would be banned until the Central Intelligence Agency stopped its drone strikes in North Waziristan (Walsh, 2012). Another reason for the ban is to ensure the safety of the militant leaders. Leaflets were distributed by the Taliban stating that "On one hand US military is killing innocent women, children and old people in drone attacks and on the other hand, they are spending millions on vaccination campaign" (Ebrahim, 2012). The fear stems from CIA's use of fake hepatitis B campaign in Abbotabad for the assassination of Osama Bin Laden. This has resulted in Islamist organizations such as the Pakistan Taliban believing that polio campaigns are a front to gather information regarding the location of militants by the American agencies. While this paper does not place the War on Terror as the sole reason for the persistence of the disease, it has played a crucial role by inadvertently creating a sense of distrust and insecurity towards any Western medicine (in this case, polio drops).

The distrust discussed in the previous paragraph is directly related to the next major conception namely, the misconception of people regarding polio vaccines. Misgivings regarding polio vaccines has polarized religious people into pro-vaccine and anti-vaccine. A majority of the anti-vaccine community has a misconception that polio causes infertility (in the case of Nigeria, rumours also included vaccines causing AIDS and carcinogens (Jegede, 2007)). This rumour, endorsed by conservative and illiterate *Mullah*, has resulted in over 40,000 parents refusing to let their children take the vaccine in every polio campaign in FATA and KP (Shah, 2016). People believe that the vaccines contain monkey faecal

matter and pig fat which is considered *haram* in Islam. Furthermore, religious leaders have declared polio drops as *halal* under Sharia law (The Express Tribune, 2010) and had announced in 2007 that the polio vaccination drive is an infidel campaign through which the West wants to restrict the Muslim population (Manchanda, 2015; Lorenz & Khalid, 2012).

While the War on Terror has been one of the primary reasons for the failure of polio campaigns in Pakistan and Afghanistan, the reasons for boycott of polio drops is based on political tussle between Islamic states and the Western powers as well as trust in tradition. The 2001 invasion of Afghanistan fuelled the perception that a religious crusade by Christians (Western nations) was being carried out against Islam. According to Kimmel (2004), creating a “common enemy” through rumours acts as a defence mechanism where community values are threatened. Hence, a threatened community (Muslims in Nigeria) eventually came together and united against a common enemy namely, Western medical intervention (polio drops). Additionally, local perceptions of polio were in direct conflict with the biomedical model of illness put forth by GPEI. Locals believe that polio is caused by *Shan-Inna*, a powerful female spirit and rituals by traditional healers seemed as the ‘best’ solution to locals when compared with polio drops (Ghinai, Willott, Dadari& Larson, 2013).

Another major challenge, and arguably the biggest, is the insecurity of the vaccinators. Vaccination teams are being murdered publicly and several instances of kidnapping, beating and violating polio vaccinators have been documented in Pakistan and Nigeria (McNeil, 2013; Warraich, 2009; Boone, 2014; Khan, 2017). This has created a sense of fear and hesitance amongst health officials and vaccinators because it potentially puts their life at risk.

The product of the above reasons has become obvious: when Nigeria banned polio vaccination drives in 2003, the number of cases of polio re-emerged in Central and Western Nigeria and eventually led to an overall increase in number of cases across the nation (Samuel, 2004; Rouhana, 2013). Similarly, the fake health drive to locate Osama bin Laden in Abbottabad was directly linked to the increase of polio cases in Pakistan and Afghanistan. While the end result of the CIA operation was praise-worthy, the method used led to distrust towards door-to-door vaccine volunteers and doctors.

Suggested Implementation Strategies

The World Health Organization has been using several methods to ensure that no children are missed during the drives. While this has been effective to a certain extent, the issue of rise in polio cases in the countries still persists.

WHO is working on community dialogues that involve clerics, scholars, and local doctors (Chang et al., 2012). Education with regards to the benefits and safety of polio vaccines need to be carried out through workshops. These workshops should also include local leaders, doctors, and scholars to remove the misconception around polio vaccines. The vaccine teams can use local female health workers to carry out vaccine drives. According to Shah (2016), communities such as the Pashtun community are less hostile towards female

health workers and the workers are seen as reliable people to overcome the fear of polio vaccines.

With the current strategies of the WHO, the following methods can also be considered to ensure that OPV reaches to children at the grassroots level. The first method would involve the formation of a team including locals. Similar to the special teams discussed by Onyeka et al. (2014), these teams would consist of a vaccinator, a community mobilizer or a local, and a recorder. These teams would be dispersed throughout the regions and would be responsible for vaccination and maintaining a record. The record would then be shared with a government department in charge of the vaccination. This sharing of information would be based on the 'Hub and Spoke' model¹.

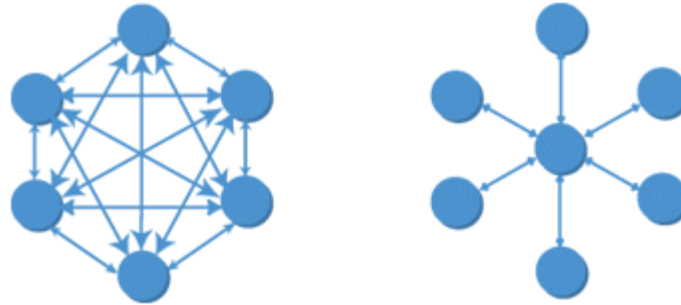


Image depicting Point to Point model and Hub and Spoke model (McDermott, 2017)

From the above image, it is apparent that the Hub and Spoke model, unlike the point to point system, is better organized. The model also involves fewer routes for the transmission of information. This can be proved mathematically. Let the number of nodes to be connected be denoted as 'n'. So, the number of routes required by the Hub and Spoke model is:

$$n - 1$$

However, in the case of the point-to-point system, the formula would be:

$$\frac{n(n - 1)}{2}$$

For instance, if the number of nodes are 7, then the number of routes required by the Hub and Spoke model would be 6 when compared to 21 routes for the point to point system.

An additional benefit of this model is that it allows the formation of a gateway to send 'customized' information with regards to a particular team or a particular target region. This type of organized communication would also ensure a smoother process of disseminating data. This dissemination can be in the form of number of vaccines required, number of children the special teams have

targeted, understanding the demographic structure of the region to ensure maximum efficiency while delivering the vaccine as well as potential areas that harbour wild poliovirus.

Another aspect of the Hub and Spoke model is that it helps smoothening the hierarchy. The number of “spokes” team would determine the number of “hubs” needed. These “hubs” would then be interconnected to each other so that communication and coordination between different regions is carried out effectively. Furthermore, the “spokes” would have to report to their respective “hub”. By doing so, the probability of miscommunication and complications arising due to oversight can be reduced.

The implementation on Hub and Spoke model requires not only lesser resources but leverages strongly upon more effective communication channels, closely knit on-ground implementation, better tracking of impending risks and better agility and adaptability.

These benefits, when combined, provide an arena for the improvement of accountability between vaccine teams and government agencies. It also reduces the chances of oversight because these teams are localized and the mobility in terms of reaching the target audience is greater when compared to any other method. A final aspect of this model is that the number of “hubs” are restricted so the handling of information becomes streamlined and this communication paradigm also ensures that reporting of the nodes happen efficiently.

Though this model has been traditionally used in aviation, the model has been increasingly used in projects across industries. Two notable examples include the use of Hub and Spoke model to treat Opioid addiction in USA and the VKC-VRC project of M.S. Swaminathan Research Foundation (Brooklyn & Sigmon, 2017; Swindell, 2006). The success rates of these projects could be a good motivator for implementation in the case of polio vaccinations.

While the WHO is using conventional strategies such as political advocacy and awareness campaigns, it is essential to use unconventional tactics that have the potential to eradicate polio. One such tactic is the “hit and run” method used in military strategy. The military tactic involves attacking the enemy targets to maximize damage and immediately run away. It has been heavily used in guerrilla warfare by rebels across the world and has proven to be efficacious. When modified to the polio eradication campaign, the hit and run technique would involve setting up check points outside the regions controlled by militants and religious fundamentalists. The teams would then immunize children entering and exiting these areas (Sowards, 2015). This tactic in particular has been successful in Nigeria and, if implemented properly, would help reduce polio cases across the three endemic nations.

Conclusion

It is evident that radical fundamentalism plays a role in deterring the successful implementation of policies. The influence is so strong that even if the War on

Terror is declared to be over, the distrust amongst the communities in the region would persist ergo the distrust would take years to wean from the society. Political advocacy cannot be the only solution in such cases. It is imperative to understand that ethnicity and religion also plays an important role for the success of the program. Using Muslim volunteers in the region instead of another religion would help ease any potential tension and disharmony. New techniques need to be developed and must be feasible to implement in regions where polio continues to persist.

This paper has solely focused on endemic nations. However, the trend seems to be similar across nations - countries with violence and conflict are more prone to the spread of contagious diseases. Cases of polio have been reported across Syria due to the nation being ravaged by war between rebel forces and pro-Assad forces (Gladstone, 2017).

The arguments posed in this paper have solely focused on the role of terrorism in impeding successful policy implementation. While this aspect forms a major part of the problem, other issues such as government oversight and role of military forces have not been explored in detail. Since the research design has focused on secondary evidence, there is no on-field research due to logistical difficulties. Furthermore, the study is only applicable to nations plagued by the War on Terror. It does not factor regions which could be affected due to a civil uprising or governments that abuse power or have a weak health care system.

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