

BELIEFS AND PRACTICES INFLUENCING POLIO VACCINATION COVERAGE IN CAMERON SINCE THE ADVENT OF COVID-19 VACCINE

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ABSTRACT

Since the outbreak of the COVID-19 pandemic, there has been a lot of controversy over the different types of vaccines produced by different pharmaceutical companies worldwide and this has made many people indifferent about their effectiveness in solving the health challenges created by the pandemic. This paper seeks to portray how other vaccination campaigns especially those administered to children have been affected by the emergence of the COVID-19 vaccine in Cameroon. This study is based on the recent poliomyelitis outbreak in Kousseri in 2021, According to Mbu (2014), Cameroon has been polio-free for three consecutive years (2010-2012). In 2013, four wild polioviruses type 1 were detected in Cameroon linked to the WPV1 last detected in Chad in 2011. Also in 2014, three cases were detected (cVDPV) type 2 cases linked to circulation in Chad. In 2014, the government of Cameroon recognized that the polio epidemic was a global health issue, in this light, there was a need to free Cameroonians from this pandemic with the objective to make the polio curve bent downward by July 2014, keeping the number of unvaccinated children to less than 5%. Since the advent of Covid-19, people's perceptions and practices toward vaccination have been affected especially the poliomyelitis vaccine. In order to have a clear understanding of this aspect, qualitative research was carried out. Data was gotten from the respondent with the help of different techniques such as interviews and observation. Purposeful sampling was done to get participants for the study. Data collected on the field was analyzed and interpreted. Cameroon's objective to free polio outbreak has not been attained with the recent outbreak in 2021, coupled with the Covid-19 outburst and the institution of the COVID-19 vaccine, the majority of people have been hesitant toward this vaccine and have doubted the authenticity of other vaccination campaigns like that of poliomyelitis.

Keywords: Poliomyelitis, Covid-19, Vaccination, Hesitance, Influence

INTRODUCTION

Poliomyelitis has been a serious public health challenge between children of 0-5 years of age, with recurrent outbreaks in different countries worldwide. The collaborative efforts of the Global Polio Eradication Initiative, Centre for Disease Control and Prevention and World Health Organisation with other parties successfully eradicated poliovirus using surveillance, awareness campaigns and massive immunization in most parts of the world (Shafique et al 2021). Since January 2020-June 2021, there were 38 Vaccine Derive Poliovirus (cVDPV2) emergences in active transmission in 34 countries, of which 28 of these countries are in Africa. It was also reported that 15 of the 26 emergences in active transmission in African countries were detected, either in patients with Acute Flaccid Paralysis (AFP) or through

environmental surveillance, outside of the country of first isolation of genetically linked virus (Alleman et al 2021).

Like other countries, Cameroon has been struggling to eradicate this virus from its health system by using the above mentioned methods. That is why for three consecutive years, the country had been free from poliomyelitis that is since 2010- 2012. In 2013, four wild polio viruses type 1 (WPV₁) were detected in Cameroon linked to WPV₁ last detected in Chad in 2011 (Mbu, 2014). In 2014, three cases were detected (cVDPV₂) and were linked to circulation in Chad. This continues outbreak made the government of Cameroon to recognise that, polio epidemic was a global health challenge and in this light, they have been putting in effort to free infants from this epidemic, with the objective to make the polio curve bent downward by July 2014, and keeping the number of unvaccinated children to less than 5% (Mbu, 2014).

Ever since the first detection of the cVDPV 2 in 2018 in Nigeria, this genetically linked virus has been circulating in 17 West and Central African countries and during the reporting period, circulation was documented in 16 countries excluding Cameroon (Alleman et al 2021). This implies that poliomyelitis had actually been eradicated from Cameroon. This statement failed to be sustained due to the detection of two cases of (cVDPV type 2 in October 2021 in two different health districts in Nigeria. The third case was found in the Fotokol health district in Extreme North with the same genetic strain like those discovered in Nigeria and also in the same month of October. Another case was detected in the kousseri health district in November 2021 (Expanded Programme on immunization 2022). All these detections were done during the second phase of the COVID-19 outbreak. Despite all the efforts put in place by the government of Cameroon in combination with some international partners to fight this epidemic, Poliomyelitis is still being detected in some parts of the country. That is why the government has taken upon itself to carry out routine vaccination of children between the ages of 0-5 years.

Like COVID-19, poliomyelitis is a disease of hygienic concern. The spread of the disease is through fecal oral route and is rapid in areas with poor sanitation, however, the reasons for it being highly communicable is due to the spreading of the virus in feces (Mehndiratta et al, 2014). Similar to covid-19, majority of patients are asymptomatic, during this time, the virus sheds in the stool of humans and can be isolated from throat swabs also, but stool samples of the infected persons are the primary sample sources (Mehndiratta et al). According to Jonathan et al 2022, Poliomyelitis can present in stages, such as the acute stage, recovery stage, and residual-paralysis stage. The acute stage is mainly comprised of features, such as fever, neck stiffness, profound muscular weakness, paralyses, and autonomic dysfunction. In the convalescent or recovery stage, the acute features disappear, and the recovery of paralyzed muscles begins. This stage can last up to two years. In the last stage, the patient is left with residual paralysis, imbalance of muscle power, and poor posture.

Vaccinations campaigns have always been routinely organized by the state to redress the problem of poliomyelitis especially in children but since the outbreak of COVID-19, and the institution of COVID-19 vaccine, many families have been very skeptical about its authenticity and have refused to vaccinate their children during national vaccination campaigns. In this light, we will wish to understand how the institution of the COVID-19 vaccine has influenced poliomyelitis vaccination campaign coverage in Cameroon? How has the perception of COVID-19 vaccine affected people's belief about the virus? What measures have been put in place by the government to see that children are vaccinated irrespective of the hesitance expressed by parents and care givers?

METHODOLOGY

Study design

This study depended on a qualitative research design and focused on ethnographic approach with high lights on interviews and observations as the main techniques for data collection.

Population for the study

The populations for the study were parents of children less than five years of age, nursery and primary school instructors, vaccination campaign team and medical practitioners involved in the vaccination of children.

Population size and sample

The study was carried out in the Biyem-Assi District area particularly at the Bisquiteriy health area. The populations considered for the study were children of less than five years of age, their parents and caregiver, 6 health workers were stationed at the different health post and two were send out for door to door administration of the polio vaccine. A snowball sampling was done, were a team was sent to the field to identify household with children of less than five years and also to indicate the number of children per house on the gate or at the door post, they identified other households by asking parents to indicate other houses with children of less than five years of age. In the second phase that started on the 3rd of July 2022, a Global positioning system method was used to localize the areas that had not been covered by the vaccination team on the field.

Data sources

Different types of data were collected for this study. Firstly, secondary data was gotten from books and journal articles while primary data was collected from parents, nursery and primary school instructors and medical personnel

Data collection techniques

In-depth interview

In-depth interviews were carried out with the chief of post at the health center and with the health workers who administered the polio vaccine on the field. Also, parents were interviewed to get their opinion on the ongoing vaccination campaign against polio in the advent of the COVID-19 vaccine.

Observation

This technique helped us to get information on the manner parents behaved toward the health workers who moved from door to door administering the vaccine and how the health workers were able to convince parents of the importance and safety of the polio vaccine administered to their children.

Data analysis

A thematic data analysis was used. Data gotten through verbal communication and observation were coded into various categories and summarised under themes and sub-themes. Direct quotes were also used and the respondents were given pseudonyms to protect their identity.

Theoretical approach

The theoretical approach for this study is Ethno medicine. This approach enabled us to understand people's attitude towards polio and how health care seeking processes are influenced by other social and cultural factors.

RESULTS

PERCEPTION OF POLIOMYELITIS OUTBREAKS

Continuation of outbreaks requires improvements in the timeliness and quality of outbreak response so that any ongoing transmission in mOPV2 response zones is stopped (WHO, 2020). However it is believed that the sharp increase in cVDPV2 outbreaks is possibly as a result of population movement of recently vaccinated children into areas with low population immunity or wayward use of mOPV2 outside of response zones (WHO, 2020). This is mostly equated to the movement of infected children from Nigeria and Tchad to Cameroon.

Though poliomyelitis is an infectious disease, the numbers of infected children are not usually as many as the cases of other infectious diseases like malaria, typhoid and respiratory tract infections. This has always influenced perceptions about its existence and attitude toward prevention. During interview with some parents, they said that, since the outbreak of poliomyelitis is usually detected in the North and far North regions of Cameroon, with just one or two cases found, they believe the virus cannot meet them because of distance and because of the limited number of infected cases. Such beliefs go a long way to stop parents from preventing their children during moments of outbreak, thinking that they are not part of the narrative.

“Since I started hearing about polio, I have never seen a child suffering from it except on television, I really wonder whether the disease actually exist” (female, 10 am, 2022, Yaounde).

When people live with this type of notions, they will not actually put any effort to support the government in its effort to eradicate the disease.

COMPONENT OF POLIO VACCINE AND ADMINISTRATION

In order to eradicate polio in Cameroon, a circulating vaccine-derived poliovirus (cVDPV) VDPV demonstrating person-to-person transmission in the community, based on evidence from human and/or environmental detections of related viruses was produced (WHO, 2020). Also, Mebendazole and Vitamine A were also provided. Vitamin A and polio oral was administered to children between 5 months to 5 years old while Mebendazole was administered to children of nine months and above for deworming. Children eligible for deworming were given one tablet of Mebendazole to chew while one dose of vitamin A and two drops of polio oral vaccine was administered to the children through their mouths. Not any of these drugs were given through injections even though polio vaccines do exist in injectable forms. The vaccination team used this to convince some parents, by insisting that COVID-19 vaccines were not in tablet form and were not taken orally they were injected in the body. With this, some parents became convinced and accepted that the vaccine should be administered to their children. Actually, the polio vaccination campaign was to fight the type 2 polio virus while the routine vaccination given at the hospital is to fight the type 1 polio virus. Children who received the vaccine were identified with a mark on their small finger. This was to prevent repetition and a number was written on their door to show that their homes have been visited. In the second phase, telephones were used to localise children that had not been vaccinated. This was to enable the team to reach as many children as possible.

THE EFFECT OF SURVEILLANCE DISRUPTION ON FOLLOW UP OF POLIO

According to Zomahoun et al 2021, Precautions taken to mitigate the spread of COVID-19 might have affected the ability of surveillance officers to conduct routine surveillance activities, which would have had an impact on the number of AFP cases reported. When WHO declared a global pandemic on 11 March 2020, the Global Polio Eradication Initiative (GPEI) was already facing significant challenges to polio eradication due to outbreaks of circulating vaccine-derived poliovirus type 2 (cVDPV2) in multiple countries and endemic wild poliovirus type 1 transmission (WPV1)(Chad et al, 2020). Actually, the overwhelming threats to the global health security generated by COVID-19, redirected the programme's significant human resources and other assets to tackle the pandemic and suspended house-to-house supplementary immunization activities (SIAs) (Burkholder et al, 2021). The interruption of these eradication-focused activities coupled with disruptions to delivery of essential immunization services allowed poliovirus transmission in established outbreaks to persist and created the potential for spread to new areas (Burkholder et al, 2021).

PARENTS APPROACH TO POLIO VACCINE

COVID-19 outbreak really had a serious impact on parents approach to polio vaccine. Decisions whether to consume health services or not are usually taken by the head of the family. In homes where the head of the household were women, it was easy for them to accept the vaccine against polio meanwhile in houses with male head of house acceptance to take the vaccine depended on them. Most women who refused to take the vaccine said their husbands told them not to accept it. To make the long story short, they said they will take the vaccine at the hospital or health Centre during their normal routine. These women did not know that the polio vaccine that was administered during the campaign was to prevent the type polio virus.

In most cases where the parents showed any signs of refusal, the vaccination team had to convince them before they could allow their children receive the oral vaccine against polio, vitamin A and Mebendazol. They did this by telling them that it was not the vaccine against COVID-19. They thought the government was using the polio campaign as a pretext to vaccinate children against COVID-19. Some parents became hesitant thinking that they wanted to use the campaign in order to inject their children with COVID-19.

Speaking with some workers in one of the health centers in Yaounde, they exposed that most parents who refused to take the polio vaccine during the door to door campaign did not also accept that the vaccine should be administered to their children when they were brought for routine checkup. In other cases we found out that, some parents avoided the vaccination by saying their children were suffering from fever, since the vaccine was not to be administered on sick children. Since the target was to vaccinate as many children as possible so as to limit the spread, parents were informed about it through the school authorities. Some schools refused their pupil from taking the vaccine saying the vaccination team should meet the children at their various homes.

Normally during vaccination campaigns, schools usually send notes to inform parents about it. Some schools did not send any notification letters to parents and stop the vaccination team from getting into their premises. Also, parents who did not want their children to be vaccinated in school, informed the school authorities especially in schools that accepted the vaccination team to vaccinate children in school. Parents' attitude change toward polio vaccine has been greatly influenced by the COVID-19 vaccine. Since many people have been hesitant to take the COVID-19 vaccine, they thought that it was a strategy to vaccinate children under the alleged reason of polio, since the COVID-19 vaccines were available in great quantity.

*“I saw a woman who has never given any vaccine to her children and was not even ready to give. She said her religious belief does not permit her to Vaccinate her children, so even the polio vaccine was not given to her children”
(Female, 3pm, hospital staff, 2022, Yaounde)*

From the above quotes, we realize that people have different approach toward health services depending on their belief systems. Holding to her religious beliefs, enables her to look for solution to her health problem within that sphere.

The last phase of the campaign was from the 2-4 of December 2022. Though it was limited only to deworming the children with Albendazol/Mebendazole tablets and the administration of vitamin A supplements, parents were still not comfortable with that. This was affected by the nationwide COVID-19 vaccination campaign which took off on the 18-27 of November 2022. They thought that it was a strategy from the state to provide their children with COVID-19 related drugs. Though there was no polio vaccine involved, parents still showed lack of worm attitude toward this campaign.

STRATEGIES PUT FORTH BY HEALTH WORKERS TO VACCINATE CHILDREN

During the door to door campaign, parents who became hesitant to the vaccine were targeted at the hospital. They administered the vaccine to these children like the normal routine vaccine. Some parents claimed that the vaccination team did not visit their homes. This could be true because during field work, we realized that no signs were put in some homes to indicate that they had children eligible for vaccination, meanwhile those homes had children. Also, maybe those in charge of identifying the children did not meet anyone at home when they were identifying other homes and the homes were not taken in to account.

During the vaccination campaign, we noticed that some homes were indicated not to have children but when we knocked and asked whether there were children in, they accepted and also accept that they should be vaccinated. Encouraging parents and telling them the importance of the vaccine to their children was one of the ways we used to enable parents accept the vaccine. Another important strategy to enable massive vaccination uptake was to target pupils of school going age in their various schools. In collaboration with the Ministry of Basic Education, health personels were dispatched to different schools to administer the drugs. Coping strategies are very important especially in situations where one cannot consume health services except with the authorization of a second or third party. Like the case of children whose parents must accept that their children should take the vaccine.

CONCLUSION

Cameroon’s objective to free children from polio outbreak has not been attained with the recent outbreak in 2021, coupled with the Covid-19 outburst and the institution of the COVID-19 vaccine. Though some parents use to be hesitant in accepting the polio vaccine for their children, the situation has become worst since after the outbreak of the COVID-19 and the arrival of the vaccine to curb its spread in Cameroon. The authenticity of the vaccine has been much doubted by many people to the extent that it has affected the routine poliomyelitis vaccination campaign which is carried out nationwide. Even though most parents have not put in much efforts to see to it that the wild polio type two be eradicated by vaccinating their children, the State has not relented its determinations to eradicate this virus and to keep children safe from its effects. From an ethno medical approach, systems of medical care are affected by how people perceive health and well-being and what they practice to stay healthy. However, deviant behaviour will set in when people are made to think that their beliefs and practices relating to health are influenced by other health system.

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