

## REASONS OF REFUSING POLIO VACCINATION AMONG PARENTS OF UNDER-5 YEARS CHILDREN IN DISTRICT MULTAN, PAKISTAN

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### ABSTRACT

**Background and Objective:** Polio is still endemic in Pakistan and Afghanistan. In Pakistan, transmission of polio virus is high due to poor political environment and internal security threats especially in war against terrorism in Swat and FATA. Meanwhile, some groups tried to create misconception about polio vaccine. The objective of the study was to describe the reasons underpinning the refusals to polio vaccine in District Multan.

**Methods:-** This descriptive, cross sectional study was conducted in a District Multan. A closed ended pre-tested questionnaire in Urdu language was used to collect data from 34 parents of under five year children, who refused polio vaccination during polio campaign.

**Results:-** Out of 34 polio vaccine refusal parents, 15 did not respond or either locked the doors as researcher tried to interview them. About 29% refusing parents mentioned religious reasons, about 42% have apprehensions on polio vaccine contents. One third reported that it was a western world conspiracy against mullims. 45% states that government vaccine supply is of poor quality, as the main factor for refusal.

**Conclusion:** Majority of refusing parents were uncomfortable in responding to the survey or either they were never counseled for Polio and now they are habitual refusals or may be perception about polio vaccine is negative. In District Multan, religious reasons and misconception that vaccine causes sterility in male children were main reasons of polio vaccine refusal. Efforts will be required in changing the perception of parents.

**Key words:** Polio, Refusals, Vaccine, Multan, Misconception, sterility.

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Polio is caused by a virus called the enterovirus. In the early 20<sup>th</sup> century, polio was one of the most feared diseases in the developed countries, disabling thousands of children every year. Shortly after the producing of effective vaccines in between

the 1950 -60s, the polio was brought under control and practically eliminated as a public health problem in these countries.<sup>1</sup> It took a bit longer for polio to be recognized as a major problem in third world nations. World Health Organization, (2013) Lameness Surveys (1970) revealed that the disease can be prevalent from the developing countries.<sup>2</sup> Consequently, in the 1970s routine immunization was introduced in all parts of the world as part of National Immunization Programs, which helped to control the disease in many developing countries.<sup>3</sup> In 1988, when the Global Polio Eradication Initiative started, polio disabled thousands of children around the world. Afterwards, approximately 2.5 billion children were immunized against polio in collaboration with international donors and more than 20 million

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volunteers supported to the polio initiative. The number of polio cases have decreased by more than 99% since 1988, from an estimated 350 000 cases then, to 650 cases reported in 2011.<sup>3</sup>

In 1978, Pakistan “Expanded Program on Immunization” was launched, with aim of protecting the children against childhood diseases and to reduce mortality and morbidity resulting from diseases by immunizing children of the age of 0-15 months and also the pregnant women.<sup>4</sup>

Polio vaccines are of two types OPV (Sabin) and IPV (Salk), for mass polio campaigns OPV (live attenuated vaccine) is a vaccine of choice and many countries had eradicated polio by using OPV due to its convenience and cheap cost effectiveness as compare to IPV (killed vaccine) but it is regrettable that Pakistan is losing its war against polio. A series of stories in the print media in recent times about the polio became disaster and have shown criminal ignorance of our health sector. Pakistan launched itself on the long road to eradicate polio in 1994, showed remarkable success. Set up effective surveillance cell and conducted National Immunization Days. The number of polio cases in the country fell from 1,155 in 1997 to only 28 in 2005. Then the crisis came due to the war on terror in the tribal areas.<sup>5,6</sup> Many areas became inaccessible to vaccination teams and the migration of population from war-torn areas became a common phenomenon. Polio made a comeback in year 2011. The Geneva-based Global Polio Eradication Initiative (GPEI) reported highest cases of polio in Pakistan around the world for the second consecutive year i.e. 198 cases.<sup>7</sup>

In year 2010, the number of polio cases in Pakistan was 144. Resultantly, Pakistan has now been considered a polio danger zone. We thus have an enormous share in the total number of identified cases around the world i.e. 647. The international community shows its great interest in Pakistan’s polio policy today because of the fact that one case here means a child anywhere around the world remains vulnerable. This argument has been justified by our recent success in exporting the virus to China which recorded 18 cases of polio with the

strain of the virus being traced to Pakistan.<sup>1,2</sup> World Health Organization (2013) reported that in 2012, only three countries Afghanistan, Nigeria and Pakistan remained where polio virus still existed. As long as one child remains infected, children around the world are at risk of potential polio disease. If polio is not eradicated from these last three remaining countries, it could result in as many as 200 000 new cases every year, within 10 years, all over the world.

Refusals for Polio vaccine also emerges in 2011 as a major problem when few religious members and terrorist organization had launched a campaign against polio vaccines by distributing pamphlets and leaflets that polio vaccine is prohibited in Islam as well as it is a conspiracy of USA and Israel against Muslims. These religious and hardliner groups were well established in KPK and FATA this resulted in increased refusals from community as well as new threat emerged in country for polio workers who were being attacked by terrorist and were targeted more than 10 polio workers were killed in year 2012 in Pakistan and many more injured in same year.<sup>1</sup>

In 2013, World Health Organization imposed travelling restrictions to Pakistan due to continuous danger of spreading of Polio Virus in Polio free countries, afterwards all passengers moving abroad will have to vaccinate and get Polio Certification before boarding to any other country across the globe. In year 2015, till now 51 Polio Cases have been reported 22 Cases are only from Karachi, Sindh due to constant migration of Pakhtoon communities in Karachi. On the other side much of improvement in KPK and FATA due to security and political stability in the country after the launch of Army Operation Zarb e Azab. WHO and Health and Regulation Ministry has now decided to launch Injectable Polio Vaccine (IPV). During a Polio Campaigns in Pakistan in order to effectively stop the disease transmission by building strong Immunization in Children under 5 years of age.<sup>11</sup> In February year 2015, total refusal children for polio vaccine in Pakistan were reduced to 36,575 which were 47,099 in 2013 as shown by National Emergency Action Plan for Polio Eradication in the year 2013. The Polio eradication

program in Punjab was conducted in much effective way than rest of the provinces in Pakistan. This is shown by the attitude and commitment of Political leadership as well as interest taken by bureaucracy in Punjab. Similarly according to NEAP, refusals must be vaccinated with the full support of District Police and Administration when required seemed to be fruitful which resulted in gradual very much decrease in refusal

## METHODS

A cross-sectional Descriptive Study was conducted at District Multan which is a historic and largest city of the Southern Punjab of Pakistan. The study objective was to identify the major reasons behind refusals to polio vaccine among the parents. The study time was one week after Polio National Immunization Days (NIDs), 14 to 16 September, 2015 in District Multan. All parents having children less than 5 years of age group and who have refused the polio vaccine during the Polio campaign were included in this study. The data collected through designed closed ended pre tested questionnaire. Data analyzed with statistical percentages in each group of variables i.e reasons for polio vaccine and then compared with each other to understand the reasons regarding refusal to polio vaccination by parents.

## RESULTS

Target Polio Population of District Multan is 7,96,472 under 5 years of children, only 34 polio vaccine refusal parents were reported and included in the study group; questionnaire responses from 15 remained non participatory. 29% refusals mentioned that it is religious reasons that they don't want to vaccinate their children against polio. 39% did not respond to the questionnaire. 42% have apprehensions on polio vaccine contents & they think it may cause sterility in their children. 34% thinks its conspiracy of Western world to vaccinate against Polio. 45% states government vaccine supply is of poor quality and 34% reported that repeated campaigns made them refuse.

**Table 1:** Results of different responses from refusing parents of age under 5 children's

Responses	Yes	No	%Yes
Religious refusal	11	27	29%
Spiritual leaders prohibited vaccine	9	29	24%
Apprehensions on contents of vaccines	16	22	42%
Vaccine causes sterility	16	22	42%
Vaccine is western conspiracy	13	25	34%
Poor quality government vaccine	17	21	45%
Resisted due to repeated polio campaigns	13	25	34%
Non responded	15	23	39%

\* only 19 out of 34 refusal parents responded to the questionnaire (non-response=44%)

## DISCUSSION

The assessment of reasons for polio refusal showed that parents refused for polio vaccine of their under 5 years children mainly because of a low risk perception of the disease (lack of awareness and education about polio or gives no importance to polio as a disease) but most important cause identified was a religious beliefs, and distrust of government policies and government vaccines, in part because perceived health and social priorities were not being addressed. Respondents frequently believed that the vaccine was unnecessary, contains contents which are not suitable for male children. Religious belief was an important drive as individually and socially as how people understand health and disease. This religious perception about OPV by some participants may be related to the erroneous teachings by certain religious sects in Pakistan, Under religious beliefs following misconceptions were aroused in public by printing a materials against polio vaccine and declaring it a conspiracy of Western world against Muslims also creating doubts in mind of people about the contents of polio vaccine not halal or cause sterility in male children, which led to increase number of refusals especially in 2011 (168).

The results of our study agree with a findings of a similar study conducted in Northern Nigeria in Oct 2012 after a polio campaign to check the responses of households for refusal to OPV.<sup>7,9,10</sup> It shows clearly that just like in other articles as mentioned earlier majority of refusals of polio vaccine were from Muslim

countries Nigeria, Afghanistan and Pakistan had mainly one thing in common (the religious reasons) that prohibit parents to vaccinate their children against polio. Further-more in District Multan the majority of refusals claims that polio vaccine contains fertility control contents and its harmful for their male children, therefore 32 male children were found refusals for polio vaccine as compared to only 6 female children.

### CONCLUSIONS AND SUGGESTIONS

It has been therefore concluded that besides the other refusals only one main reason for polio vaccine refusal which is creating misconceptions in the mind of people is religious beliefs. These religious beliefs are not easily changed or modified by society since it is considered as a taboo in our conservative society. Now basic role of our Ulema and Spiritual leaders to rectify all these religious misconceptions in the community through all types of media as well to start campaign against those who resist vaccination and communicate wrong and incorrect and false aspects of Islam towards immunization and Polio. It is the responsibility of all educated scholars, teachers and doctors to create awareness on vaccination for polio.

In Pakistan, only multi dimension and integrated approach towards this public health issue and only way to eradicate polio from the country is to reduce misconceptions regarding polio vaccines. Following are necessary to mention here:

1. Dedicated Political will is mandatory.
2. Advocacy of immunization and Polio Prog-rams through community influencers like teachers, political figures, landlord or imam masjid at Union Council level.
3. Spiritual leaders in Pakistan need to stress for Polio Vaccination through Friday prayer gatherings and can change the misconception of people about immunization.
4. Islamic Majlis e Ulema can play vital role in polio education through media
5. It's a role of education department to add as a

part of syllabus a chapter on immunization and Polio so that these religious and other misconceptions can be reduced.

6. Its role of local governments to run schemes of publicity for Polio awareness pamphlets and leaflets across the road side. Also on local TV channels and Radio programs for educating people regarding misconceptions.
7. Taking strict legal actions against chronic refusals through Police or local administration is effective way to deal this problem in the country; strict laws can be approved in parliament with approval from Senate and implemented in the country.

**Conflicts of interest**

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**The art of medicine consists of  
amusing the patient while  
nature cures the disease**

– Voltaire