INTRODUCTION

In line with the enabling Act 12 of 1997, the National Programme on Immunization (NPI) has continued to ensure the provision of potent vaccines to state and local government areas, with the corresponding qualities of needles and syringes in Nigeria (1). Likewise it has also supported the state and local governments with cold chain and logistics, equipment, and human, technical and financial support required for the implementation of the program in Nigeria. While the impact of immunization on reducing childhood morbidity and mortality in Nigeria has been remarkable, it is yet to reach its full potentiality because it is observed that some Muslims, most especially, in the northern part of Nigeria did not allow their children to be immunized. Even, the target of World Health Organization (WHO) of wiping out polio by 2005 failed. This was partly due to the actions of three states: Kano, Kaduna, and Zamfara in the predominantly Muslim northern Nigeria that halted the polio immunization drive for 11 months in 2004 and 2005 (2).

Thus, there was an upsurge in polio infections in northern Nigeria since 2004, which threatened to undermine global efforts to eradicate the crippling disease. According to the NPI, 467 new polio cases had been recorded in the first 6 months of 2006, compared with only 224 cases for the whole of 2005. According to the same NPI, five states in northern Nigeria contributed almost 90% of this figure. Moreover, some 15 out of Nigeria’s 36 states reported new outbreaks of polio in 2006 (3).

ABSTRACT

This study looks into the attitudes of Muslims toward immunization in Nigeria. It also analyzes the reasons for the reluctance to accept immunization by these people of the Islamic faith especially in the northern part of Nigeria. Among the major grievances of Muslims against immunization is that the polio vaccine, according to source, was laced with substances that could render girls infertile, as part of the USA led a plot to depopulate Africa. Furthermore, it was alleged that the oral polio vaccine (OPV) was extracted from the monkey tissue, rendering it forbidden (haram) to Muslims. The method adopted for this research is purely derived from books, journals, documents, monographs, Internets, archives, newspapers, reports as well as the Glorious Qur’an and Ahadith. The study reveals that the OPV is truly extracted from the tissue of monkeys but had been processed and transformed involving various levels of chemical and biological processes. Therefore, this transformation had made it lawful (halal). Likewise, the OPV used in Pakistan, Iran, Afghanistan, Egypt, Sudan, Saudi Arabia, and Indonesia is of the same high quality worldwide and from similar sources. No evidence exists supporting the claim that the vaccine is used to depopulate the Muslim world. The population of Muslim countries that had adopted the OPV to eradicate polio has continued to grow at the same rate as it used to before polio campaigns. The paper, therefore, recommended that Muslims should allow their children to take immunization.

Key Words: Immunization, Morbidity, Mortality, Deformity, Attitudes, Potentiality
Polio vaccinations resumed only after the Nigerian Government conducted international tests to debunk the claims. New vaccines were imported from predominantly Muslim countries of Indonesia because the Muslim clerics said that only supplies from a Muslim country could be trusted.

During the 2005 annual pilgrimage in Saudi Arabia, two cases of polio were recorded before which Saudi Arabia was polio-free since 1995. It, therefore, directed that visitors under 15 years of age from 19 countries be vaccinated against polio on arrival in the country. This is against whether they were previously vaccinated. This vaccination requirement is to stem the potential for contagion, as millions of Muslims converge for the annual pilgrimage exercise (Hajj) and also at other times of the year when much smaller but still sizable numbers go on the Umrah. Beyond the practical dimension, this step confirmed the support of the authorities of Saudi Arabia for polio vaccination. This likely affected the phobia in places like Nigeria and Indonesia and prompted Muslims therein to accept immunization (4). It is, therefore, necessary to examine the Islamic position on immunization that could serve as a special reference for the Muslim community.

### The Meaning and Concept of Immunization

Eminent scholars have attempted to explain the meaning of immunization. For instance, the Oxford Dictionary (5) defines it as "to be free or be secured from smallpox as a result of vaccination. It also defines immunization as the most effective tool to reducing the childhood morbidity and mortality occurring from vaccine preventable disease" (6). Also, Baillier's Nursery Dictionary (7) defines it as "the act of creating immunity by artificial means. Therefore, immunization is any such vaccines for the prevention of ailment. Immunization is the most effective tool to reduce the childhood morbidity and mortality occurring from vaccine preventable diseases such as tuberculosis, poliomyelitis, diphtheria, whooping cough, tetanus, neonatal tetanus, measles, yellow fever, and hepatitis band. It can equally be regarded as a preventive medicine because the objective of the preventive medicine is to prolong life and to reduce disability" (8).

The Holy Quran has used this concept in many situations to refer to taking preventive action against entering hell fire and punishment (Q2:201, 3:16, 3:191, 40:4), prevention against bad acts (Q 46:9 and 40:45), prevention against injury or harm (Q 16:81), etc. Prevention is, therefore, the one of the fixed laws of Allah in the universe. Its application to medicine is, therefore, most obvious.

### The Issues Call for Assessment

According to some Islamic scholars, there are several issues that should be considered in relation to immunization. They argued that the issue transcends the mere physical effects of immunization. For instance, one needs to peruse the entire creation of Allah and its perfection, His provisions, sustenance on mankind, and pertaining to mans existence.

**i. Creation of Allah:** There is no fault in Allah's creation and that Allah gave man the purest and best nature. Perfection and balance are evident in man's physical, mental, and spiritual composition (Quran 82:6-8). They claimed further that while focusing on the physical aspect of man, one needs only to study the systems of the body to comprehend the significance of these verses and the wonder of Allah's creation. The human body is composed of a number of specialized systems: the digestive system, the respiratory system, the nervous system, the muscular system, the blood circulation system, the skeleton, the skin, the senses, the immune system, and so forth. Each one of these systems is miraculous in nature and more amazing than any scientific advancement that man can achieve. Therefore, the assumption behind immunization is that the body is not perfect enough to withstand infectious diseases, implying that somehow Allah did not complete his job or carry it out well enough, that the immune system is faulty and needs correction, that a young baby, as little as 1 or 2 months old, is somehow flawed, incomplete, and in need of human intervention to survive (9).

**ii. Provisions of Allah:** Allah not only created men in the finest form, but He also gave man the tools to maintain this form to assist him in its self-actualization. Men are warned that their body and health are gifts from Allah and that they will be held accountable on the Day of Judgment for them. The Prophet (SAW) informed, Every servant of Allah will remain standing before Allah on the day of Judgment until he has answered five questions about five things: how he spent his life, how much he acted upon his knowledge, how he acquired his wealth and how he spent it, and how he used his health and his body (10). The Prophet (SAW) also said, There are two blessings which many people lose: (They are) health and free time for doing well (11). Therefore, it is incumbent upon a Muslim to take care of his body to the best of his ability and to follow what Allah has ordained in this regard. The provisions of Allah are many. A mother is instructed to nurse her child from the moment of birth. Allah says, Mothers shall nurse their children two
complete years for whoever wishes to complete the nursing (period). (Quran 2:233). Breast milk has been found to be the most beneficial substance for a baby and contains much more nutrients than any artificial products. It also provides antibodies, strengthens the immune system, and protects the child from many diseases. This is a wondrous gift that gives an already healthy baby an even healthier start in life. Muslims are instructed to eat from the good and lawful food of the earth. (Quran 5:4 and 2:168) (12).

Also, the use of honey, black seed, dates, olive oil, etc., is encouraged to prevent illness and provide cure when the need arises. The type of food intake can affect the body systems, oftentimes in very insidious ways. Other provisions that Allah has given men include the command to avoid alcohol and indiscriminate drugs, which can lead to serious consequences (health-related and others). Adultery and fornication are forbidden. They often cause various types of sexually transmitted diseases (13). Pork and pork products, which may lead to various illnesses, are also not allowed.

The meaning of these in relation to immunizations according to them is that immunization is really unnecessary. For one who follows the commands of Allah, the chances of having long-term health will be increased. Even if a disease is contacted, the person with a strong immune system will likely be able to combat it. This in turn, will strengthen the immune system more and give life-long immunity against that particular disease (14).

iii. Will of Allah: Similarly, one often forgets that whatever befalls man is to the will and power of Allah. And there is not a thing, but the supplies for it are with Us, and We do not send it down but in a known measure. (15:21). Therefore, if a child is to experience an illness, this is from the decree of Allah; if he is to be cured from it, this is also from the decree of Allah. To rely upon humans to somehow prevent or cure the child without trusting in Allah is a sign of weakness of faith. Whatever good or bad that happens to man he should say Alhamdulillah because it is from Allah who has decreed it for some reason (either as a test or as punishment). Allah says, (Quran 64:11) : Men should rely upon Allah and ask Him to assist them in their times of need. The use of supplication to Allah is much more powerful than any medicine that is available because Allah is the only One Who can send the cure (15).

iv. The Polio Vaccine Contained Impurities: They alleged that the polio vaccine was laced with substances that could render girls infertile as a plot of the USA to depopulate Africa. They further claimed that the polio vaccine contained impurities that could cause infertility in women and even infect those immunized with HIV virus and cancer. They presented the vaccination campaign as a Western Christian plot to try and reduce the Muslim population in Nigeria. For instance, on February 26, 2004, Ibrahim Shekarau, Governor of Kano State, one of the three Nigerian northerner states refused the polio vaccine in his State, saying that it is lesser of two evils, to sacrifice two, three, four, five, even ten children (to polio) than allow hundreds of thousands or possibly millions of girl-children likely to be rendered infertile (16).

v. The Oral Polio Vaccine (OPV) Was Made from Monkey Tissue: Another issue raised by some Muslims in Nigeria is that the oral polio vaccine (OPV) was made from monkey tissue, and this renders it forbidden (haram) to Muslims. The Prophet (SAW) said: Verily, Allah is pure and He loves purity ... Allah has never put the cure of my Ummah (followers) in substances that have been made lawful (haram) for them (17).

The Muslim Scholars View on Immunization
For clarification on Islamic position on immunization from the great Islamic scholars, the European Union Partnership to Reinforce Immunization Efficiency (EUPRIME) Project, as part of its support to NPI to strengthen immunization utilization and coverage, sponsored some traditional and Islamic religious leaders in Nigeria on a study tour to Egypt to understudy the role of traditional and religious leaders in routine immunization system and share experiences with other Islamic scholars and leaders in Egypt. The study tour was coordinated by the Health Reform Foundation of Nigeria (HERFON) in December 2006. The team comprised traditional and religious leaders from different parts of northern Nigeria, including Kano, Katsina, Kebbi, Zamfara, Gombe, and Bauchi States. They were accompanied by representatives of the Jamaatul Nasril Islam (JNI), the NPI and physicians, medical scientists, and epidemiologists from NPI partner organizations. The aim of the tour was to strengthen the understanding and capacity of the participants regarding immunization services and build a critical mass of change agents as champions for immunization in Nigeria in the context of both routine immunization and the polio eradication initiative. The team visited a range of institutions and met officials as follows:

1. Al Azhar University's International Islamic Centre for Religion This is a world-renowned center for Islamic scholarship and
one of the oldest universities in the world. The team met with Islamic scholars and professors in the medical profession and health including Sheikhs, obstetricians and gynecologists, pediatricians, and public health experts. A presentation on Children Immunization, the current situation in the Muslim world and Islamic perspectives was made.

The team discussed the current situation of immunization globally and in the Muslim world. According to the scholars, the average coverage in Muslim countries is currently 68%. This is lesser than the average in developing countries, which is 73%, and world coverage, which is 75%. There are 19 countries in the Muslim world where the coverage is below average including Niger, Nigeria, Gabon, Sudan, and Somalia. These countries have the poorest level of vaccination worldwide. They are in the need of intensive efforts to promote and maintain the coverage level. The scholars also explained the purpose of immunization and its position in Islam and dispelled some of the common misconceptions regarding immunization in their presentations as follows:

a. The teachings of Islamic Shariah to preserve five major components in any perfect human society. The five components are interrelated as any imbalance in one leads to the imbalance of the whole community. These components are as follows: preservation of religion, self, race, intellect, and money. The teachings of Islam focused on maintenance of these five milestones to ensure perfection. The preservation of the self is one of the five requirements that Shariah seeks to preserve and maintain.

b. The different provisions of Shariah on praise strength and beauty, call for use of medication, and discovery of appropriate remedies. It is forbidden for man to do harm to his or others body. This is emphasized in the Holy Qur'an: Pursue not the path of perdition. Also, Prophet Mohammed (Peace be upon him) said: An able-bodied believer is closer to Allah than a poorly built one 18. The Prophet further expounds: Be keen on what is of benefit and seek the support of Allah. Likewise, one of the Hadiths (traditions) of the Prophet that constitutes a fundamental rule on which the Islamic jurisprudence is built is Harm not yourself or others (19) that is, according to Shariah, one has to avoid all that may cause harm to oneself or others. The Prophet further states: Allah is Gracious and loves grace and beauty. It is known that health is a kind of grace. Good health and sound health care are the end product of good nutrition.

c. In the field of preservation of human life, the different teachings of Shariah urge us to seek treatment and exert all possible efforts to realize this goal. This is understood from the Prophets words: O subjects, seek treatment. Allah has created a cure for each malady20. A cure known for some is unknown for others. Scientific experiments and medical research prove the validity of the Hadith. From time to time, man discovers treatment for a certain disease. It is believed that vaccination against diseases serves the purposes of Shariah as regards preservation of the self. It is a means to protect the body against disease. In essence, it serves human life and defends it against exposure to any risk. This gives rise to the importance of vaccination from Shariah perspective. Anything that helps to avoid harm is acceptable to Shariah based on the rule of harm avoidance addressed in the hadith: Harm not yourself or others 21. If harm is forbidden in Shariah and by reason, man has to avoid this harm and close all the outlets that may lead to it, one of the means to maintain human body and life is vaccination that is currently advocated by medical bodies.

2. Office of the Grand Sheikh of Al Azhar University, Cairo, Egypt

The Grand Sheikh of Al Azhar and his deputy also discussed the Islamic perspective on immunization and further affirmed what the Islamic and medical scholars discussed above. Specifically, the following points were observed: In Islam, prevention is better than cure. Due to the high coverage of immunization, no more wild polio cases are observed and children are saved from the paralyzing effects of polio in Egypt. He affirmed that, girls immunized over a decade ago are now married having children, indicating that the rumor that the OPV could cause infertility among girls is baseless. They concluded that in Islam, immunization is allowed (halal) as long as the vaccine is potent and safe.

3. Grand Mufti of Al Azhar University, Cairo, Egypt

The key highlights of the meeting with the Grand Mufti of Al Azhar University were as follows:

In 1992, immunization was presented as an issue to the Islamic Council in Cairo. The council studied and deliberated on the topic and issued a decree that immunization is necessary. Therefore, Muslims must accept immunization and reject those who proselytize on it. Also, in 2005, immunization was presented to the council again and the councils response
was the same as in 1992, that is, it is acceptable and necessary. They established that immunization is in line with Islamic decree to go and reproduce as it protects the lives of children. It is not enough to have children; their lives must be protected and the use of vaccines protects these lives and enables them to survive. He also responded to identified issues affecting immunization uptake in Nigeria as follows:

(i) That the OPV is made from monkey tissue and thus not lawful (halal) for Muslims: It is believed that the tissue goes through a process of transformation and is thus no longer a monkey tissue. This transformation makes it lawful (halal). The analogy is that of wine to vinegar and that the Holy Prophet (SAW) stated that vinegar is a good food. The chemical component of the monkey tissue in the OPV gets transformed and this makes it pure, just as transformation of wine into vinegar makes it pure.

(ii) On American agenda to depopulate the Muslim world: He sparred as an imagination (a heresy) and as Sahih Muslim said, its enough for someone to be a liar if he repeats everything he hears (22).

4. The Ministry of Health and Population, Egypt

The team also met with the senior officers of Ministry of Health at the Ministry, led by the Under-Secretary for Preventive Services, the Directors for EPI, and Surveillance. They discussed the immunization system in Egypt including the strategies for social mobilization. From their discussion, the following points were highlighted: They testified that Egypt procures its OPV through UNICEF from Belgium and France. Numerous studies have been conducted in Egypt and that the safety and potency of the vaccines were confirmed. The Egyptian regulatory body on drugs certified the vaccines as safe, potent, and free from contamination. Also, they were told that Egypt had also experienced some misconceptions on the OPV and noncompliance from Christians in Alexandria who claimed that the OPV was used to harm Christian children. This was dispelled when it became clear that children, both Muslims and Christians, were given the OPV from the same vial. According to the ministry officials, a woman presented two children for immunization and gave their names as George (presumably Christian and Muhammad, presumably Muslim) and observed that both children were given the OPV from the same vial. She went back to the church and informed them about this and this message was used to dispel the rumors and people thereafter accepted the OPV.

They added that Muslims should consider the acceptability of vaccines made in the Western countries who are non-Muslims. According to them, at present, there is no capacity in the Muslim countries to produce vaccines in adequate quantities for mass campaigns. For instance, Indonesia produces mainly at substance level, that is, for routine immunization. Likewise, Egypt had procured routine antigens from Indonesia in the past but stopped when community surveys showed that the antigens were not giving the desired immunity because of poor heat stability. Although Egypt manufactures vaccines (recomposition), the company is not certified by WHO and so they still use vaccines procured from Belgium and France through UNICEF. Even, most Muslim countries including Saudi Arabia and Egypt use these vaccines.

On the issue of Western policy to reduce the population of Muslim countries through the OPV vaccine, the team disagreed and stated that the population of Muslim countries has been increasing, and will continue to increase. For example, the population of Egypt increased by 2 million every year despite very high immunization coverage. The annual population growth rate of Nigeria is still around 3%. Why focus on polio when other diseases like malaria and TB are killing children every year? There is a vaccine for polio that is easy to administer and safe. At present, no vaccines exist for malaria, and the available interventions are on mosquito control and environmental sanitation. Moreover, polio gives the conditions for eradication, as it has no reservoir outside the human body.

5. Youth Association for Population and Development (YAPD)

The Youth Association for Population and Development (YAPD) is a local nongovernmental organization (NGO) the with head office in Cairo and activities in 27 governorates of Egypt. The thrust of this youth organization is building a network of Egyptian Volunteer Movement that will support social development initiatives, addressing unemployment and empowering youth through training and capacity building. Other objectives include provision of information, education, and counseling for youth on health issues including polio. The organization supports polio eradication campaigns in the country as volunteers who carry out community mobilization for campaigns through interpersonal communication during house-to-house visits and also acts as vaccinators during implementation. In all so far, YAPD has contributed over 1 million volunteer to polio eradication in Egypt. Other youth
organizations including boys scouts and university students volunteer during the supplemental immunization campaigns for polio were also observed.


The Nigerian team met with the UNICEF Representative, Deputy Representative, Project Officer (Health), and Assistant Project Officer (EPI). The discussions focused on UNICEFs role in vaccine procurement in Egypt and communication strategies (social mobilization) under its chairmanship. On vaccine procurement and safety, it was reported that through its supply division in Copenhagen, UNICEF supports vaccine forecasting globally. On the basis of global needs, UNICEF makes requisition on behalf of the countries for bulk production for all. Requests and production by the WHO-certified manufacturers are not country based; therefore, there is no way to determine which package goes to a particular country. Countries request to UNICEF for vaccines procurement is provided to them from the bulk stored for all countries worldwide. UNICEF does not produce vaccines but uses bulk procurement and pools funds to get vaccines at competitive rates. Once the package is to be distributed to any country, the relevant (drug) regulatory bodies certify and ensure that the vaccines are safe and potent. This is what is obtained in all countries that UNICEF supports with vaccine procurement. UNICEF is not influenced by politics, and it always maintains its core values in ensuring the best interests of children and women.


Ten management and technical staff of WHO Egypt Country Office and the Regional Office met with the team. They made a presentation on concept and application of disease eradication from smallpox eradication to the current efforts to eradicate polio. It detailed out the reasons and benefits for eradicating polio as well as the consequences of failure in some of the countries where the wild polio virus (WPV) is still endemic, including Nigeria. The presentation gave an update on the current situation of wild polio virus transmission. They also shared experiences from other Muslim countries in the region, the challenges faced, and how these were addressed. These countries included Egypt, Pakistan, Afghanistan, and India (specifically northern India). The various judgment (Fatwas) passed by Muslim leaders in the Muslim countries on polio eradication were shared with the team.

They elaborated that annually 500,000 cases of death or paralysis were recorded from polio, with attendant physical sufferings, dependency, and loss of productivity. But at the time of adoption of polio eradication initiative targets (1988), there were far less than 500,000 polio cases every year and 125 countries were recorded to be endemic for polio. In (2006), the cases of polio endemics countries decreased to 2000 a year (i.e., decreased by 99%). As on date, only 4 polio endemic countries (Nigeria, India, Pakistan, and Afghanistan) and 9 re-infected countries required urgent attention.

Also, during the last 18 years (since 1988), more than 5 million children were saved from paralysis using more than 10 billion doses of the OPV to vaccinate more than 1 billion children. No serious side effects were recorded in all this period. The disease is now endemic in Muslim countries and in India where the states affected are those with vast Muslim population. Therefore, the genuine interest of those speaking about safety of the vaccine for the health of the children of their countries is acknowledged. They should, however, follow the directives of the Holy Qur’an: so ask those who have knowledge and fearful of Allah if you know not. WHO/EMRO officials, in addition to being of high technical competence, are well known for their trustworthiness and knowledge of religious rulings. The Organization of Islamic Conference having been convinced of the safety and quality of the OPV adopted many resolutions calling on its member states to strengthen their eradication efforts through using the OPV. The OPV procured by UN agencies, in particular UNICEF, meets the specifications set by the International Expert Committee on Biological Standardization (ECBS) with respect to purity and content. These specifications make it impossible for the OPV to contain any other undeclared biologically active substances such as viruses, hormones, or other materials. No antifertility agent, including estrogen and progesterone, is added to any step of the manufacturing process of the OPV. No such agent is present in the final product. In addition, WHO verifies that manufacturers of the OPV used in the Global polio eradication initiative meet international ECBS specifications.

Finally, Dr Yusuf Al Qaradawi, Chairman, European Council for Fatwa and Research, Member of High Assembly of the World Muslim League, together with a number of scholars from Pakistan, Syria, Lebanon, Iran, Egypt, Qatar, Oman, Mauritania,
Kuwait, United Arab Emirates, Bahrain, and many others sent a letter to the WHO/RD reaffirming religious ruling of the necessity to vaccinate children against polio to prevent their death or incapacitation.

**An Assessment of Immunization in the Light of the Holy Qur'an and Hadith**

Immunization is any such vaccines for the prevention of ailments. It can equally be regarded as preventive medicine, because the objective of preventive medicine is to prolong life and to reduce disability. The Holy Quran has used this concept in many situations to refer to taking a preventive action against entering hell fire and punishment (Q 2:201, 3:16, 3:191, 40:4) prevention against bad acts (Q 46:9 and 40:45), prevention against injury or harm (Q 16:81), and so on. Prevention is, therefore, one of the fixed laws of Allah in the universe. Its application to medicine, therefore, raises no conflict.

The concept of prevention does not involve claiming to know the future or the unseen or even trying to reverse predestination (Qadr). The human beings using limited human knowledge attempt to extrapolate from the present situation and anticipate certain disease condition for which preventive measures could be taken, because it is only Allah who knows for sure whether a disease would occur or not. Furthermore, the concept of prevention can be understood from the following three perspectives:

1. **Primary prevention:** this aims at making sure that the disease does not occur at all.

2. **Secondary prevention:** this aims at limiting the impact of the disease once it has occurred; this is usually by attempting to discover the disease early and initiating necessary treatment.

3. **Tertiary prevention:** this aims at promoting good health and is part of preventive medicine because they put the body in the best possible status to be able to fight and overcome any disease that occurs. Examples of such activities are physical exercises, diet, remembrance of Allah, rest and recreation, happy marriage, and good family life. In addition, though the holy Quran and Hadith are not books of medicine or of the health science, they contain hints and guidelines on health and diseases. For instance, the Prophet has set an example to humanity. So his tradition in matters of health and personal hygiene are also guide for his followers.

Thus, immunization, good sanitation, and disinfections are all acceptable measures for protecting health. Furthermore, the body system of young children can be compared, in some degree, to a mechanical and electronic part, but life does not come to it till electrical current is passed through. Similarly, in the component of children are the anatomic parts and fluids as well as the spirit (the soul). As regard the care of a machine, it requires to keep it clean, give some rest, pass electricity of proper voltage, and use carefully with wisdom, so is the requirement for the system.
of young children as a whole. Finally, the Prophet warns that do not destroy your children in a concealed way (30). Therefore, do not deny your children to take immunization in order not to destroy them in a concealed way, as Prophet of Islam admonished.

OBSERVATIONS

Based on the above, the following conclusions could be deduced:

1. Immunization as a preventive mechanism is Halal (lawful) and necessary in Islam. Immunization is Halal in Islam based on the teachings of the Quran and the Hadith. One of the hadiths (traditions) of the Prophet that constitutes a fundamental rule on which the Islamic jurisprudence is built is Harm not yourself or others 31 that is, according to Shariah, one has to avoid all that may cause harm to oneself or others.

2. The oral polio vaccine is safe. The OPV used in Pakistan, Iran, Afghanistan, Egypt, Sudan, Saudi Arabia, and Indonesia is of the same high quality world-wide. It is the same that was used in the USA, UK, France, Turkey, and others. No evidence supporting the claim that it is a plot to depopulate countries of the Muslim world has been reported. The issue of American and the Western world policy to depopulate Muslim countries through the OPV is a propaganda that could not be substantiated by any facts even from any of the Muslim countries who have since adopted the OPV.

3. All vaccines are certified by the WHO before procurement by UNICEF. The process of certification is standardized across manufacturers and the country of use. UNICEF supports the procurement of vaccines in forecasting and pooling of resources to procure these vaccines at competitive rates. Vaccines are produced based on global needs, and no specific batches are produced for any particular country. UNICEF is not influenced by politics and always kept to its mandate and core commitment for the best interests of children. Each country has regulatory bodies, such as Nigeria's National Agency for Food and Drug Administration and Control (NAFDAC) certifies the safety, potency, and lack of contamination of the vaccines.

4. Current intensive efforts to eradicate polio are due to the feasibility of it being eradicated as agreed and endorsed by all countries of the world, including Muslim countries (and Nigeria). Polio causes paralysis and deaths, the virus does not have a reservoir outside humans, and a safe vaccine to prevent it is readily available.

RECOMMENDATIONS

1. Full briefing of the Muslims in Nigeria on the findings of the study tour to Egypt Country because of its crucial role in promoting immunization, child survival activities, and acceptance of the immunization vaccine in Nigeria.

2. To specifically communicate the findings of the study tour to all the Chief Imams and Muslim leaders in Nigeria.

3. All the Chief Imams and Muslim leaders in Nigeria should be encouraged to discuss these issues during every Friday Khutbah, while conducting naming, wedding, and other ceremonies. Furthermore, the issue should be raised and discussed during the general meeting and any available opportunities.

4. Documents (evidence) from the study tour should be reproduced and distributed widely.

5. The participation of traditional and religious leaders in immunization activities in Nigeria should be strengthened at all stages of polio eradication and immunization service programming (including program communication) to ensure their full ownership and commitment. Other members of the civil society including NGOs and community-based organizations should also be actively coordinated in these efforts.

6. The traditional and religious leaders should articulate their own communication program to effectively mobilize their communities to utilize immunization services.

7. A mechanism for monitoring and responding to rumors should be effectively established.

8. NAFDAC's certification of vaccines coming to Nigeria is commendable and should continue.

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