The 'Near Miracle' Revisited

Social Science Perspectives of the Immunization Programme in Bangladesh

Editors

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CHAPTER 5

PERCEPTIONS ABOUT IMMUNIZATION: RESULTS OF THE BHAIRAB STUDY

This chapter reports results from the qualitative investigation in Bhairab. The investigation was carried out among 94 mothers representing various levels of immunization status of the locality and their children. It focused mainly on mothers' perception and knowledge about vaccination and VPDs. It is assumed that an understanding of vaccination in the community is crucial to the sustainability of the immunization programme. The results are organized under dominant themes that came out of the in-depth interviewing. After presenting the mothers' views, in the next chapter we will discuss the quality of the vaccination services as they were observed and discussed in interviews with health care staff.

Knowledge of vaccines

What are vaccinations for?

All mothers, in both urban and rural, areas knew about vaccination. However, the level of knowledge was better among mothers of immunized children than those of non-immunized children. The main sources of knowledge were the mass media, neighbours, relatives, friends and HWs.

In the urban areas most of the mothers of fully immunized children (FIC) reported that they had heard about vaccination from the HWs, doctors, *compounder*, relatives and neighbours. The mothers were told that vaccinations were given to protect children from diseases. Only a few mothers could specify the names of all six VPDs. Mother of a FIC of Rishipatti said that she heard from HWs that injection was given for measles, TB, polio, diphtheria and whooping cough. Another mother of the same area mentioned that she learned from the HW that *tika* was for cough, cold and *gota guti* (scabies), and women's *tika* was for tetanus. Another mother from Kalipur said that she heard from the HW and from her relatives that vaccination was provided to prevent measles. The majority of mothers of the partially immunized children (PIC), heard that *tika* was given for disease protection. They could not name specifically VPDs nor the appropriate vaccines. They received the information from their neighbours and HWs. A mother had learned from a

TV advertisement that the polio vaccine was nutritious for children and that the child would not become crippled if vaccinated. She was also informed that no further injection was required after the child passed five years of age. A mother of a PIC from Ramshankarpur said that she got the message from HWS that *tika* was provided for *basanta* (pox) and *phera* (measles). Another mother from the same area had heard from her neighbour that vaccination was provided during pregnancy to prevent any problems. Mothers of all non-immunized children (NIC), with one exception, reported that they had heard that vaccination was given for protection against the disease. They heard the information from their elders, HWS, mass media and neighbours. Among them only a few could cite the names of vaccines. For example, a mother of a non-immunized child from Bhairabpur, said that vaccination was given for TB, tetanus, polio and whooping cough and that she had heard it from her neighbours. Another mother from this category from Rishipatti, said that she had learnt from TV that *tika* was provided for polio. A mother from Kalipur said that she heard that *tika* was a medicine. She explained that they got the following information from HWS: *'If you give your child medicine, their eyesight will improve.'* The HW probably had indicated the VAC (vitamin A capsule) to the mother.

Also in rural areas, the mothers of fully immunized children (FIC) learned that *tika* was given to the child to prevent diseases. Many of them specified the name of the diseases. For example, the mother of a FIC from Purbakanda said that *tika* was given for *Dhanustankar* (tetanus) and *daira laga* (polio). However, many of the mothers of FIC in the rural areas could not specify the name of all six VPDs. These mothers got the information mainly from their neighbours, HWS and mass media. One mother from Purbakanda told that she had got the information from her school, when she was a student. She said: *'I was in Class VI and I had joined in a rally for tika. We were told that in the same way that an umbrella protects us from the rain, tika will protect our children's lives.' She continued: 'We also learned about the vaccination in school. I can remember six dangerous diseases for which tika is given.'* Another mother of a FIC from Kalikaprashad said that a doctor advised her to give *tika* to her child. The doctor also told her that it was good for the child's health and it would prevent different diseases. Some mothers also reported that they had heard from their elders about *tika* and sometimes they followed their elder sister in taking the TT vaccine. The mothers of PIC heard two kinds of information about vaccination. One, *tika* was for protection against various diseases, and two, after receiving the *tika* the child would get less diseases and even if the child had the diseases, the suffering would be much less. All mothers of non-immunized children (NIC) from Purbakanda and Bashgari said, that they did not get any

upper age limit, but a number of mothers thought that it could be given up to one year. Among the remaining mothers, some mentioned two years, while others mentioned five years. One mother from Atkapara, said that the vaccines could be given from three months to six years of age.

Why vaccines are effective?

Most of the mothers did not have a clear idea about how the vaccines worked in the body. However, some had their own specific views. In the urban areas, most of the mothers of FIC described vaccines as a protector against diseases. They had faith in it, even without understanding how it worked. One mother of a FIC in Bhairabpur said: '*I do not understand how vaccines work in the body, but I believe that if one is vaccinated illness cannot attack him.*' Another mother from Rishipatti said: '*Tika makes the body clean, but I am not sure how it does it.*' The mother of a FIC in Ramshankarpur said: '*Tika works for a whole day and when fever comes at night, I feel that it works.*' Again another mother of this category from Rishipatti mentioned: '*When tika leaves a scar, it means it is working well.*' In the view of a mother of a FIC in Bhairabpur, *tika* worked for five years. Another mother of the same category from Kalipur said: '*From my own experience, I can tell you that it works for twelve to thirteen years. There is another injection for older people and that is provided by the government and is distributed by family planning workers.*'

Shifting now to the rural context, answering the question on how *tika* worked in the body, the mother of a FIC from Atkapara said: '*Tika is like medicine. Tika works the same way the medicine works in the body. The difference is, medicine is given after the disease appears and tika is given before the disease happens.*' She continued: '*I heard that it works for the rest of the life.*' Another mother of a FIC of Purbakanda clarified the matter from a different point of view. She said: '*I do not know how tika works in the body. What I do know is that it makes the body so hot that diseases cannot touch the body. It prevents six diseases.*' Some of the mothers with partially immunized children clarified the idea from a functional point of view: '*After entering into the body it expels all the diseases, but I do not know the process.*' Another mother from Bashgari stated: '*Tika is like an armor for the whole life that works against diseases.*' In a similar fashion, another mother in the same category from Kalikaprashad, told how the vaccine worked after entering the body: '*After the children receive tika the vaccination point swelled and pus flowed from it. Along with the pus all 'dirt and bad things of the body' (sariler maila) come out. So no diseases can attack the baby in the future. If there is no swelling with pus, then one has to understand that the vaccine did not work properly in the body.*' Other mothers of partially immunized children also related the effectiveness of vaccination to

side effects. One mother from Bashgari said: '*Temperature rises after having the vaccination and the arm becomes infected. After a few days it gets better.*'

Nearly all the mothers of non-immunized children recognized vaccination as a treatment that cures diseases. Another mother of a NIC of Atkapara believed that vaccination reduced the intensity of the disease. The remaining mothers did not have any knowledge about it and thought that the doctors might be able to give a better description.

The beneficial effects of vaccination

Vaccination protects against all diseases

In most cases, mothers thought that the vaccination was good because it protected their children from diseases. Some mothers believed that vaccination ensured good health in general for their children. A mother from urban Bhairabpur said, '*Tika is useful because after vaccination no disease can attack the child.*' Some of the mothers also said, that as *tika* protected the child from diseases, after receiving the tika, the child will remain in good health. For example, one mother of Rishipatti said: '*Vaccination has side effects. It is good for the health of the children. The Svasthya Karmi* (HW) *told me that since we are poor we are not able to buy medicines, so we should take tika from him. Tika was given for cough, cold and tetanus.*' Some mothers had their beliefs influenced by others. One mother of Bhairabpur said: '*I have heard from TV and radio and from the other women living near me that it is good to have the injection.*' The mothers of non-vaccinated children also felt that *tika* was good for a child's health. Some of them made a link between *tika* and illnesses and thought that it would be good for a child, without clarifying why their own children were not vaccinated.

Also in the rural areas mothers, irrespective of the vaccination status of their children, believed that vaccinations were given for the good of the children. The general notion was that '*vaccination is good for the child.*' Poorer mothers' views appeared to have been influenced by the opinion and behaviour of the wealthier people in the society. One mother said: '*We are illiterate. The educated people say that tika is good for the health. I also think it is good because the child will not get ill.*'

The mothers' perception of vaccination as protection against diseases, was explored further. A number of concepts came out in relation to protection. It was noted that the mothers perceived that different vaccines provided protection against different diseases, without being sure about the diseases or the vaccines. In the urban context, most of the mothers with FIC believed that each vaccine had a different purpose and that a specific disease needed a par-

ticular vaccine. They believed that a single *tika* was not enough to provide protection from all diseases. A mother of a FIC from Ramshangkarpur said: '*One tika cannot protect the child from all diseases. I had all the tika given to my child but now she always suffers from a common cold and cough.*' Another mother informed us: '*I have received ATS (Anti Tetanus Serum) injection and I believe it will work against all diseases. My child had three injections and one of them was for Jaksa (TB).*' Among the mothers with PIC, only one mother believed that one particular vaccine was for one disease. In this respect, another mother of the same category said: '*If one (tika) was enough the doctor would push one. So what is the purpose of pushing three different types of vaccines?*' The remaining mothers did not give any opinion because they had never thought about this. One mother from Bhairabpur said: '*How can I tell how many tikas are needed for how many diseases? I went to receive tika by just following others.*'

Mothers of nearly all FIC in rural areas, believed that one *tika* was given for one disease. On this point a mother said: '*All tikas are important. If it was not the case, there would not have been so many vaccines.*' Few mothers mixed up the vaccination that they received during pregnancy with their children's vaccine. Interestingly, one mother of Purbakanda said: '*If one takes three BCG and DPT doses during pregnancy then the diseases will never occur.*'

Most mothers of PIC in rural areas could not remember the names of the diseases for which *tikas* were given, although many of them did say that there were specific *tikas* for specific diseases. Others did not have any idea about this. One mother said: '*I do not have any idea about the number of vaccines. I just follow the instruction of the HW. Three doses were given and those doses were not all given at one time.*' Another mother of this category from Atkapara, said that *tika* was given for asthma and twelve other diseases.

The mothers of NIC in the rural areas did not have much knowledge about it. Nevertheless, one mother of this category said: '*Vaccination is for all the diseases and since my child does not suffer from any disease, why should I give tika to my child?*'

Whether a vaccinated child does still need other modes of prevention

Most mothers of FIC in urban areas mentioned *tika* as the only measure of prevention, but few of them identified other forms of prevention. One mother said: '*We should maintain some discipline. We should not take food from others because food is the main source of the disease.*' A few mothers of PIC considered vaccination to be the sole preventive measure. Accordingly to one mother from Ramshankarpur: '*We take vaccination when the child is in the womb and we also get them vaccinated after delivery. If the vaccination is given to the child in the neonatal stage then the diseases cannot do any major harm to the child.*' Another of

them said: '*Before diseases enter the body tika is given.*' The mothers of this category also pointed out some other measures to prevent the VPDs. However, one mother from Rishipatti stressed the treatment of the diseases is better than prevention. She said: '*We do not do anything, we go to the doctors.*' The mothers of NIC in the urban areas mentioned that injections were taken to keep the child safe from the VPDs. Some of them perceived that the polio drop would protect their children from all diseases. For example, a mother of Bhairabpur said: '*I had an injection while I was pregnant and I also gave the drop (polio) to my child.*' Only one mother of a NIC said that she took *tabiz* (amulet) for preventing these particular illnesses. But many mothers of PIC and NIC believed that it was only God who could save their children from VPDs.

Causes of vaccine preventable diseases

Considerable variation in the views of mothers, about causes of the six VPDs was observed in the study area. While describing the causes of the diseases, the mothers referred to different folk names and identified various symptoms. Sometimes the symptoms of the diseases were manifested in the terminology or were related to the cause.

Measles

Measles was the condition that was almost always known to all urban and rural mothers. It was referred to as *phera, ham, lunti,* and *raksa* in different places, but *phera* was the most commonly cited term. Mothers held similar beliefs about the signs and symptoms of *phera.* In a rural area, the mother of a FIC from Purbakanda said: '*Phera is experienced by almost all children. If children are attacked by the illness, they got a fever and a cough, small rashes as prickly heat appears all over the body and there is a burning sensation inside the body. Primarily, the rash appears in a red colour but turns into black when they become dry.*' Most of the rural mothers considered chicken pox and measles as similar type of illness having identical causes. One rural mother of a PIC explained: '*Temperature of the body rises for fever and spots appear. If the size of the spots is big then we call it painna gota* (chicken pox) *and if they are small like rashes we call it phera* (measles).' Some of the urban mothers residing in Ramshankarpur, also believed in this type of classification. However, the mother of a PIC of Atkapara mentioned *bhaisa phera* (buffalo measles), which occurs when the rashes are dense and grow big in size.

Most of the mothers in rural areas admitted that they did not know the

batas/alga batas) was responsible for the disease. The mother of a NIC from Purbakanda clarified the situation: '*Children get phera from the touch of evil wind. I heard that in 'hainja bela' (early evening) that type of batas* (wind) *blows. Since it is like normal wind, we cannot differentiate between the evil and the normal winds. If evil wind touches the body of the child he/she would get phera.*' She also said: '*If we can identify the wind, we can also avoid the illness.*' Another mother of a NIC from Bashgari added seasonality to this evil wind concept. She believed that *phera* happened due to evil wind, but the disease occurred more during the month of *Caitra* (Spring).

Certain mothers of FIC and PIC considered the disease contagious. Two mothers, one of a FIC and another of NIC, pointed out that fever was likely to be the cause of measles, because a fever comes first and is followed by measles. The mother of a NIC from Bashgari said: '*Allah has given the illness.*' Yet another from the same category and area had a different reason. She said: '*The body temperature of children affected with measles, is usually higher than normal. If the mother of a child eats fish and meat in a big quantity, the breastmilk becomes thick and heavy. When the baby sucks breast milk, his/her body temperature gets higher and it becomes difficult for the baby to digest the milk. Phera is an outcome of all of these.*'

In urban areas, the mothers of FIC had very little knowledge about the causes of measles. One mother said, '*It happens athka* (suddenly) *to the child.*' Mothers of PIC and NIC also expressed a general ignorance on the causes. Interestingly, one Hindu mother with a PIC thought that non-performance of *Kali puja* (a religious rite) could also be a reason for the disease. On the other hand, the mother of a NIC mentioned the disease as '*mayer doa*' meaning blessings from 'mother,' meaning goddess. Here, she referred to the goddess '*Sitala*' and said: '*Sitala appears on the skin and the patient loses her/his sense. It can appear even during pregnancy.*'

Polio

Polio was well known to the mothers, most probably because of the NID. It was locally known as *daira laga, ardhangga batas, aijangi batas, lula* and *lula batas.* The name polio did not surface in local terminology, but when the mothers were talking about NID they mentioned the polio drop. *Ardhangga batas,* which was most frequently used to refer to polio in both rural and urban areas, was also considered as the cause of the disease. The mothers elaborated that if a type of evil wind comes in contact with a person's body, the part of the body becomes paralyzed. The evil wind was called *ardhangga batas* (paralyzing wind) and because of that the disease polio is known as such [illegible]

thought to be responsible for polio. Regarding *daira laga*, the mothers provided a dual interpretation. The term *daira laga* was probably transformed from the word *dari* (rope). Some mothers mentioned that if attacked by this illness the hands and legs of the child became dryer and thinner every day, like a rope. The mother of a NIC had another explanation: '*We call it daira laga because the child gets this illness if his/her mother crosses rope during pregnancy.*' The other term *lula* means *paralysed* and *lula batas* is the wind that makes a person paralysed.

Regarding the symptoms the mother of a PIC said: '*The hands and legs become lean and thin (hat-pao gulan cikan haye jay), the body loses strength and the affected parts become inactive (acal).*' Other mothers of NIC were not familiar with the signs and symptoms of the illness. The majority of the mothers of FIC of urban areas associated polio with continuous fever. The mothers of neither PIC nor NIC made such an association. They noted the other symptoms of polio by referring to disability, or numbness of hands and legs. Often the mothers of rural areas mixed up the symptoms of polio with paralysis of the adults.

A completely different explanation was given by a mother of a PIC from Kalipur. She said: '*Iodix, a type of vitamin, is the cause of polio disease. If there is "iodix" deficiency in the body the child may get polio.*' This woman was probably referring to the causes of goitre, that results from iodine deficiency.

One woman referred to *ham* (measles) as the cause of polio. She drew a relationship between measles and polio and thought that polio resulted from measles. Another mother said: '*Ardhangga (polio) occurs from jvar (fever). If a child suffers from fever, polio may attack the child at night.*' In course of the conversation she further added: '*These days the illness affects the mothers as well.*'

Tetanus

Tetanus is termed locally as *dhanustankar, thakur dhara/thaura* and *alga dos*. Mothers of all categories from both rural and urban areas, were familiar with the signs of tetanus. Often they linked the disease to women, especially pregnant women. In case of adult women they termed the disease as *dhanustankar*. A rural mother of a FIC described the condition as follows: '*The patient bites her tongue strongly and constantly. Her body changes colour and convulsions frequently occur. The body curves into many directions.*' '*Stuck jaw*' was another symptom that was also mentioned by the mothers of FIC from the rural areas. Neonatal tetanus was found to be termed as *thakur dhara* or *thaura* in both rural and urban areas. One mother of a NIC from urban area stated: '*Thaura occurs in the young child and the child refuses to suck breastmilk at that time. But, dhanustankar is the illness for adults and it occurs to the mothers during delivery.*'

the young child in the confinement room' and the meaning of *thaura* or *thakur dhara* was a condition created by *thakur* (evil entity). A clarification was put forward by the mother of a FIC: '*Dhanustankar and thakur dhara are different kind of illnesses. Dhanustankar develops from cuts and wounds. If a abudda's (child's) mother goes close to the pond or a ditch and is caught by the evil entity, then her child will get thakur dhara. The child becomes red and blue when caught by thaura, but with dhanustankar they do not turn into red and blue. Instead, he/she (child) throws the legs and hands violently about and bites the tongue with the teeth.*'

However, the mother of a non-immunized child from Atkapara thought that both *dhanustangkar* and *thakur dhara* were the same conditions. She said: '*The mothers of olden days could not identify dhanustankar, it was thakur dhara to them. Along with their baby, many mothers used to die in the early days, when they could not identify dhanustankar. Now-a-days it is curable.*'

Alga dos was another term for tetanus in the area. The people called it '*alga dos*' because the young child gets it from *ku dristi* (evil eye). The mother of a PIC from Bhairabpur South cited her own son's example in this regard: '*My son had Ku dristi on the fifth day after birth. He screamed throughout the night and I could not give him breastmilk. He not only had convulsions but also turned into blue, black, yellow and red. He was taken to the village healer and by the grace of Allah his condition improved in two days.*' Some mothers were also familiar with the term 'tetanus' as well. The mother of a PIC explained: '*We call it dhanustankar but the doctors call it tetanus.*' According to a mother, tetanus could happen due to defective cutting of the umbilical cord of the new-born. Failure to receive the TT was also mentioned as a cause of the disease. For example, the mother of a FIC from Rishipatti mentioned that she did not receive the ATS injection during her third pregnancy, and consequently she had tetanus at the time of delivery. The contagious nature of the disease was also mentioned: '*In the case of tetanus we should not touch the sick person. While my mother was dying I was pregnant but I had to nurse her. As a result my child had dhanustankar.*' Another mother of a FIC had another explanation: '*If a mother gives breastmilk to her baby just after birth, then her child may be attacked by dhanustankar.*' Dual causes of the disease were also mentioned by some: '*At the time of delivery the illness may happen. Dhanustankar can also occur if any place of the body is cut.*' A rural mother with a PIC narrated an interesting cause of tetanus. According to her, if a pregnant woman took water standing under a rainbow in the sky, her child would get tetanus and it would bend like a bow. Two other mothers said: '*Allah has given the disease.*'

The mother of a PIC related tetanus to measles and narrated an event that happened to her nephew. According to her, he first had measles and they

sought a lot of treatment for him but he was not cured. He became very weak and one day he lost his sense, his tongue came out and finally he died. So she thought that her nephew got the *dhanustankar* from measles. Another mother explained that when *grahan* (solar and lunar eclipses) takes place and the *hamildar* (pregnant) women did not obey certain rules, then they would get the illness.

Tuberculosis

Although TB was almost universally termed as *jaksa* in both rural and urban areas, one of the respondents thought the two (*jaksa* and TB) were different illnesses. She said: '*With TB, a yellowish phlegm comes out while coughing, but in jaksa blood is present in that yellowish phlegm. Jaksa can never be cured, but TB is curable.*'

The mothers thought that TB affected adults more than children. Many rural mothers identified the condition as: '*Severe and repeated coughing associated with fever, and blood appearing in the phlegm of the cough*' They also mentioned, that the affected person cannot eat in this condition and that his/her body becomes weak. The urban mothers mentioned more or less the same symptoms. According to them, along with severe and repeated coughing, the TB patient had difficulty in breathing and had a watery stomach. Loss of weight was another symptom. However, an urban mother of a PIC distinguished the cough of TB from a normal cough: '*In jaksa the cough sounds jhakkar jhakkar.*' Another mother classified TB into two types according to symptoms: '*There are two types of TB, one is jaksa TB and another cancer TB. Once I had guti* (pimples) *on my shoulder, that is cancer TB. In the case of jaksa TB, one usually has a severe cough associated with spitting blood.*' One mother identified cold and respiratory problems as the cause of TB. Another mother cited the bone fever as the cause of the illness: '*TB can attack anybody but the children suffer less from it. When they become adults they may have TB. TB develops from haddir jvar* (fever of bone). *At the infant stage, the children have a feverish tendency in their bones. Due to carelessness of mothers the baby gets cold from the ground and that causes fever of bone. It is automatically cured with the development of the baby. Sometimes, it remains suppressed in the body and later surfaces as TB.*' Others identified cough, cold and smoking as important causes. One of them said: '*Smoking a lot, makes one susceptible to the illness.*' Two mothers considered this illness synonymous with infections that spread from one person to another. According to them the affected person ought to be kept in a secluded place.

However, it is not easy to discern clear patterns in the views held by the women, though there are clearly some similarities. The mother of a PIC stated

that the disease appeared suddenly, another mother in the same category considered it hereditary. The mother of a PIC made a connection between smoking, tension and heredity with the illness. She reported that she herself had 'cancer TB' because of mental tension and hunger. She went to the hospital and was given pills (*bari*). She took the medicine for sometime and then stopped because she got pregnant. Now, she buys medicine only if she has money. Her husband also got the illness which, in her opinion, was caused by his smoking and hard work all the time. Besides, his brother also had TB that killed him.

Whooping cough

Hukkur kas, tin meyadi kas and *huping kas* were the local terms for whooping cough. Since children with whooping cough sounded *hukkur hukkur* at the time of coughing, the mothers called the illness *hukkur kas* (cough). Again, the mother of a PIC described the condition as *tin* (three) *meyadi* (duration) *kas* (cough), because the cough continued for three months. Some mothers of fully and partially immunized children also called the disease as *huping kas*.

Knowledge of symptoms of whooping cough was not common. One mother of a FIC said: '*I heard that the child in this condition coughs repeatedly and becomes weak.*' Another mother added 'fever' with these symptoms. A mother said that during the illness the cough lasted for a long time and the face became reddish because of the coughing. While talking about the symptoms, the mother of a FIC drew a line between TB and whooping cough. According to her, the child coughed for a long duration in the case of whooping cough, but in TB blood came out while coughing.

Diphtheria

Diphtheria was not a commonly recognized illness among the mothers, but some terms were found in use. The mothers were found to refer to it as *dipthe* and *ghaga*. *Dipthe* was probably the local short-cut for diphtheria. *Gha* is ulcer and the mothers perhaps indicated an ulcerative condition by the term.

No mothers had a clear understanding of diphtheria, which may indicate that they rarely experience it. They often mixed it up with another conditions in which the babies had white layers on the tongue, interfering with drinking. The mothers usually rubbed the tongue with a piece of cloth dipped in honey or mustered oil to remove the layer. *Phaha* was also an illness of the child, which was often described as close to diphtheria in the areas. The women described the symptoms in the following way: '*It happens inside the mouth of abudda (child). The face becomes enlarged and the child cannot eat anything.*' They further said: '*Phaha can be seen on the lips, tongue and even on throat. A white light layer is seen all over the place.*' According to a local HW, the illness

was different from diphtheria but as some symptoms were similar, some mothers termed diphtheria as *phaha*. However, the mother of a FIC said: '*I do not know about the illness. I heard about it from the doctors. I was told the name while the injection was being given.*' None of the mothers of partially or non-immunized children in rural areas were familiar with the disease.

The only cause of the disease mentioned in the urban area was vitamin deficiency. The mother of a FIC in Bhairabpur explained: '*Diphtheria occurs if tika is not given. Because of diphtheria, the child's abdomen becomes larger than the body and this happens due to vitamin deficiency.*' Another mother said: '*I heard that if a mother chews betel leaf and drops lime on the bed, her child will get the illness.*'

Prevention of specific vaccine preventable diseases

Mothers described various preventive measures for VPDs, other than vaccination, that are described for each VPD separately.

Polio

The mothers of FIC in the urban areas, except Ramshankarpur, mentioned vaccination as a prevention for polio. One mother from Bhairabpur had a slightly different version: she thought that: '*since polio comes from measles the tika for measles will protect against polio.*' The views held by mothers of Ramshankarpur was distinct from other urban areas. One of these mothers said: '*since crossing a rope is the cause of ardhangga (polio), we just take care and avoid crossing any rope.*' The other mothers believed that as polio happened due to *Kharap Batas* (bad wind) or *Kubatas* (evil wind), one should not go outside in the evening or at midnight. Mothers of FIC in Kalipur said: '*To prevent polio we do not take any food during lunar and solar eclipse and we do not walk or run during the eclipse. We just lay straight during an eclipse.*'

Only mothers of PIC from Bhairabpur, mentioned vaccination as the mode of prevention of polio. The remaining mothers of PIC gave other answers. Some mothers of Ramshankarpur admitted that they did not know anything and that the *Kabiraj* (folk healer) knew about prevention.

Almost all mothers of NIC said that they did not know about the prevention of polio. One mother said: '*No preventive measure is taken against polio. Treatment is given after the disease occurs.*' Only one NIC's mother from Bhairabpur admitted that she heard of vaccine as a prevention for polio.

In the rural areas, only one mother of a FIC from Bashgari mentioned the 'polio drop' as a prevention against polio. The majority of the other mothers

talked about maintaining certain restrictions as pol.. s contracted due to the touch of a type of evil wind. A few mothers mentioned *tabiz* (amulet) as a way of prevention.

The idea of burning rope and maintaining restrictions were also common among the mothers of PIC in rural areas. Nevertheless, a mother said: '*We cannot see the ardhangga batas* (paralyzing wind); *so we can do nothing to protect ourselves from it.*' Another PIC mother in Kalikaprashad had a different opinion. She said: '*Mala and dhela* (a kind of small fish) *and green leafy vegetables should be given to the children to protect from the disease. Because these types of foods will fulfil the vitamin deficiency that causes polio.*' A few mothers had heard about vaccination as a preventive means. One of them said: '*A method of prevention is done by the government, and two days ago children under five years of age were given an injection for it.*'

None of the rural mothers of NIC identified vaccination as a preventive measure for polio. Most of them stressed maintaining restrictions to prevent diseases. One mother said: '*To avoid Kharap Batas* (bad wind) *we do not bring out the baby in the evening. Besides, one should be careful at the time of passing through bamboo grove during mid-day. One also should avoid urinating and defecating at mid-day in an open field or in a bamboo grove.*' The rest of the mothers of NIC had no views on polio prevention.

Measles

In the urban environment, a small number of mothers of FIC mentioned vaccination as a preventive measure against measles. Some mothers were confused about the polio drop and said that this was fed for preventing *phera* (measles). The remaining mothers said that they did not do anything to protect their children against measles.

The mothers of the PIC had different opinions about preventing measles. They said that as measles was a disease to be dealt with by the *Kabiraj*, he knew about its prevention. Some mothers also considered 'injection' during pregnancy as a means to prevent measles. The mother of a PIC from Rishipatti believed that regular worship of goddess *Kali* was a way of protection from the disease. While another mother from the same area said: '*Now-a-days we hear that tika may prevent such a type of disease.*'

It was found in the study, that most of the mothers of non-immunized children did not have any idea about measles prevention. One mother said confidently: '*No measure is available to prevent this disease.*'

The situation was somewhat different in the rural areas. Except in Purbakanda, all of the mothers of FIC in other villages stated that they knew

Purbakanda stated that they did not have any knowledge about the prevention.

Some of the mothers with PIC mentioned other ways of prevention. They said: '*To protect the child from phera (measles) she should not be taken out of the room but be kept inside.*' Some mothers also had different opinions. One mother of Atkapara said: '*Allah can protect us from the disease and the doctor can treat it.*'

The opinion of the mothers of NIC varied. Many of them said that they did not know anything about prevention and one of them specifically said that there was no vaccination for *phera*. Another mother of a NIC said: '*Phera usually comes in the form of outbreak. No effective measure can be taken to prevent the disease.*' One mother of a NIC of Atkapara said: '*Some mothers take amulet (from the kabiraj) for it. They follow certain restrictions to protect their children from measles. If the child is brought out of the house the whole body of the child, except the mouth, should be covered.*'

Tetanus

In the urban areas, most of the mothers of FIC, except those in Ramshankarpur, mentioned *tika* as a preventive measure, but they were confused about the vaccination of pregnant women and children. They talked about the injection that they had had during their pregnancy. Some mothers of FIC also talked about maintaining some particular restrictions to prevent tetanus. A few mentioned *tabiz* (amulet) during pregnancy as a measure of preventing the disease. With respect to the vaccination as an effective means of tetanus prevention, the mother of a FIC from Ramshankarpur had doubts. She said: '*For preventing tetanus they (other women) have injections but even that does not produce a good result.*'

All the mothers of PIC in Bhairabpur spoke of injection for prevention. The mother of a PIC of the same area said: '*I think if pregnant women have an injection during pregnancy, tetanus will not attack the child.*' The mothers in this category from Rishipatti, mentioned two other ways of prevention of *dhanustankar* (tetanus). Some stressed maintaining certain rules to avoid contact with the evil wind. Another talked about observing some restrictions during solar and lunar eclipses.

Among all the mothers of NIC in the urban area, only one mentioned vaccination for preventing tetanus. Some of them identified amulets as a mode of prevention and the remaining mothers spoke of certain restrictions in movement in daily life.

In the case of tetanus, vaccination as a preventive measure was found to be very familiar to the rural mothers of FIC. The majority of them referred to vac-

cination that was taken during pregnancy. One mother of a FIC from Bashgari said: '*If someone has a government injection during pregnancy, then tetanus will not occur, but I have not heard of any such injection for children.*' Another mother described other ways of prevention. She said: '*Sometimes people receive tabiz from kabiraj and hang it around the neck of a new-born baby. Sometimes the mothers mark one side of the new-born's forehead with black carbon collected from the bottom of the cooking pot, so that the thakur cannot throw an evil eye on the child.*' The mothers of PIC also knew about the *tika* for adults, but not for their children. A mother in Kalikaprashad had a different view. She said: '*To avoid tetanus, some restrictions must be observed in the confinement room. First of all, the room must be kept clean with doors and windows closed. The door is allowed to be opened as less frequently as possible. The restrictions have to be maintained for at least twenty-five days after birth. For twenty to twenty-five days the thakur always looks for an opportunity to grab the baby. After that period, the baby matures and the thakur goes away.*'

The mothers of NIC in rural areas, did not appear to know much about vaccination of children as a means to prevent tetanus. Yet one mother of this category from Atkapara said: '*If one gets ATS injections after getting a cut on the body, he will not be attacked by tetanus.*' Some mothers of NIC also mentioned about restrictions in the confinement room to prevent the new-born from getting tetanus. They said that otherwise, the *thakur* would enter into the confinement room in the guise of a human. According to them, up to a certain period there ought to be fire in a mud pot in the confinement room. Those who wish to enter into the room could do so by making himself/herself warm. By that process, the *thakur* could be kept away. Through this method, the new-born could be protected from tetanus.

Tuberculosis

The mothers of FIC in the urban areas, mentioned several measures for preventing TB. One of them said: '*TB is a kind of choya laga (contagious). If anybody steps over spittle and coughs then s/he will contract TB. TB may also occur if someone eats a meal with a patient from the same plate. It may also be contracted if one sits face to face with a TB patient, as the disease spreads with breathing. So, one should be aware of these ways to prevent TB.*' Another FIC mother said: '*Now-a-days there is tika to prevent the disease.*' The mothers talked about vaccination in general, but it appeared that perhaps many of them did not know about difference between vaccines. One mother from Kalipur said: '*I received ATS injection that will protect me from jaksa (TB).*'

The mothers of PIC from the urban areas also referred to different ways of TB prevention. One mother of Bhairabpur said: '*The patient's plates and glasses*

should be isolated. Besides, we should not eat that type of food which does not suit us. For example, we should not eat cold food.' A mother from Ramshankarpur said: '*Warm water should be used to take a bath to protect against the disease.*' A few mothers of PIC also mentioned the vaccine, but they could not specifically identify it. For example, a mother from Ramshankarpur said: '*The doctor told us that if we have an injection the child will not have jaksa rog. So if the mothers have an injection the child will not get dhanustankar (tetanus) and jaksa rog.*' Some of the remaining mothers said that they did not know about prevention, but they thought that smoking should be avoided.

Mother of a NIC of Ramshankarpur drew a link between TB and cleanliness: '*We should take a bath early in the morning. The mother should wash herself when she finishes her breakfast, so that the child will not get a cold.*'

In the rural environment, the mothers of FIC mentioned the vaccination and observation of certain restrictions for TB prevention. The mothers of PIC mentioned some measures for the prevention of TB: vaccination, observance of restrictions and food taboos. The following words came from a mother in Atkapara: '*Because of smoking Jaksa* (TB) *attacks. A doctor in Manikdi advised me not to smoke.*' Another mother from Kalikaprashad mentioned about TB's link with malnutrition. She said: '*Doctor says those who eat eggs regularly do not get TB, but I think a person who takes eggs daily can also get TB.*' Another mother from the same area expressed a different opinion. She thought that TB spread if the people allowed their children to roll in the mud and spit. According to them, they should keep their place clean and tidy and always cover food so that the flies cannot contaminate it.

Nearly all mothers of NIC were unaware of the modern ways of TB prevention. Only one mother in this category from Kalikaprashad, mentioned that there was a vaccine to prevent the disease. She connected the disease with asthma and said: '*The hadani (asthma) matures during the course of time and transforms into TB.*' She added: '*At infancy, asthma may be suppressed for a while because of medicine, but it cannot be completely healed. I have been told that if an injection is given, then TB can be prevented.*'

Whooping cough

For the prevention of whooping cough, the mothers of FIC in urban areas advised vaccination and observance of certain restrictions. They said that the baby's mother should be careful of cold and she should not get in touch with cold water. However, a mother of a PIC from Ramshankarpur said that there were medicines and injections for preventing the illness. The level of knowledge among the mothers of NIC, about the prevention of whooping cough was low. None of the mothers of such children had a clear picture of the situ-

ation, except one. The latter suggested that the mothers should not allow their children to move on the ground and avoid contact with water.

Diphtheria

In urban areas, most of the mothers of FIC mentioned *tika* as a preventive measure for diphtheria. However, one mother from Ramshankarpur thought that the illness could occur without any notice and it was from God. The mothers of PIC did not say much about prevention. One mother from Bhairabpur believed that there was no measure available to prevent the illness. However, another mother of this category described a different way of prevention. She said that the illness could be prevented by putting the blood from the umbilical cord into the mouth of the baby. She also mentioned that both of her children were given this particular blood. The mothers of NIC were not very knowledgeable about the prevention of the illness. Only one mother from Bhairabpur said that she had been told that five illnesses including diphtheria could be protected by vaccination.

Mothers in the rural areas admitted that they did not have much knowledge about the prevention of diphtheria.

The severity of vaccine preventable diseases

The urban mothers said that TB creates the most serious condition among all VPDs. They clarified that in this condition the affected person coughed a lot and blood was coughed up, then the doctor must be consulted for treatment. According to them, the illness was very hard to cure and ultimately the patient could die. After TB, they pointed out polio as another severe condition for children. They also saw the disease as non-curable and life threatening. Measles was another disease that was dreaded. Several mothers considered tetanus as life threatening.

Most of the mothers in the rural areas considered all of the six VPDs as severe, in the sense that all could be life threatening for children. Some mothers ranked only polio and TB in this category. One mother from Kalikaprashad labeled whooping cough as dangerous in the sense that: '*The child suffers from extreme coughing fits, has breathing difficulty and may die.*'

Many mothers in both urban and rural areas of all categories, also considered diarrhoea and asthma as vaccine preventable. Their point for *hadani* (asthma) was that it was very hard to cure, and caused trouble to the child and it might eventually turn into TB. On the subject of diarrhoea, one mother

said: '*The child becomes rapidly weak and her health deteriorates. The disease could be life threatening if proper treatment is not provided in time.*'

The harmful side effects of vaccination

Many mothers of both rural and urban areas reported on the side effects of vaccination, such as fever, swelling, and pain. Yet, most of the mothers did not complain about these side effects. On the contrary, they said that all these side effects healed automatically. The HW explained the so-called side effects to the mothers and said that those were the indications of *tika* working on the body. Some mothers were unhappy with such side effects, which caused their children to suffer and medication was needed to cure them. It was found that due to this suffering, some mothers of PIC did not continue to vaccinate their children. A rural mother told how she went to have her child vaccinated, because she had heard that vaccination prevents diseases, but after vaccination the opposite had happened. The child had fever and terrible pain. Another mother of a PIC from Purbakanda said: '*My child got a high fever and his leg became swollen. It remained in that state for many days. The child cried loudly and did not allow anybody to touch the leg. My husband yelled at me and said that if the child still gets the disease, then what is the use of receiving tika?*' Some mothers with NIC were also unwilling to get their children vaccinated because they thought vaccination would harm their children. For example, the mother of a NIC in Kalipur said: '*My eldest child got a fever after vaccination, so I did not give a tika to my youngest child.*'

In the urban areas the mother of a NIC from Ramshankarpur refused to give a vaccination to her child. She stated: '*My child will die because of the vaccination, because I heard one gets bara jvar (high temperature) after getting vaccinated. My child has amasa (dysentery) as well.*' In Kalikaprashad the mother of a NIC had seen the child of her neighbour die, after receiving a vaccination. So she was not ready to receive *tika* for her own child. She narrated the story: '*After receiving an injection the healthy child of Dhanu Mia died. The injection was given in the thigh and the baby was in pain. Later, an abscess appeared there. Eventually the thigh became 'rotten.' After a month the child died.*' Another child was only in pain and had pus on the thigh after vaccination. The mother of that child was not willing to get her youngest child vaccinated. The members of the village organization, of which she was a member, tried to convince her to get the other child vaccinated, but she was not comfortable with this idea.

However, in the case of FIC it seemed that although some mothers were troubled by the side effects, they still continued the vaccination of their children. Such a mother from Kalipur narrated her experience regarding side-effects: '*My child got a vaccination in the thigh. Adverse reactions began after three days, with a severe fever and the baby suffered a lot. I discussed this with a compounder* (a local unqualified medical practitioner) *and bought a syrup for my baby at his advice. Afterwards, the child gradually got better.*' In spite of this incident she continued to vaccinate her child. Again another mother of a FIC from Purbakanda gave a statement on this issue and said: '*Fever that occurs after vaccination does not require any medicine. It stops eventually. Some people do not know and rush to the doctors. Some babies have swollen thighs after vaccination. The place of injection becomes red and swollen. It can happen due to an unclean needle or if the baby rolls on the mud after getting injected.*' She added: '*I take good care of my baby and always carry my child on my lap.*'

One urban FIC mother told how after receiving the second dose of DPT, the injected place became infected. Fibrosis and nodules formed in the injected place. Due to this, the whole leg was swollen and the baby suffered for almost three months. When it became severe, the mother contacted the Utsharga people, who gave her some medicine. When the baby did not improve, the mother took her to the THC where the doctor operated on the infected place. For this the parents spent Tk. 500. In spite of these complications, the mother did not stop the remaining vaccinations and completed the full course.

There were other important and interesting examples. The mother of a FIC from Atkapara said that she had heard from people that being injected was harmful for the child. The baby might become sterile in the future and would not be able to produce offspring. Still, she vaccinated her child because her mother-in-law advised her to do so. Another mother of a PIC from the same area, reported that she was initially afraid of injections, as a baby of the same locality had his leg amputated as a result of receiving the *tika*. She consulted doctors and people in the area who convinced her that *tika* was not at all harmful. Her husband also said that those who gave the injection were all 'qualified doctors' and they could not do something which would paralyse the child.

Reasons for partial or non-acceptance of vaccinations

Reasons for not completing all doses of vaccination

In the rural areas, the occurrence of side effects is a major reason for most of the mothers of PIC not to complete the vaccination schedule. A mother of

Bashgari went to vaccinate her child because she heard that vaccination prevented the diseases. According to her, after receiving vaccination, the opposite happened. The child got a fever and was in terrible pain. Her husband also became very angry. As a result she did not take her child for the next doses. Another mother from Purbakanda said: '*After receiving the vaccine the child suffered from fever and cried, so it was impossible for me to do the household work.*' In the words of another mother: '*When the child began to began to interfere with my household chores, after receiving the vaccine, I stopped vaccinating her. Besides, I also got nervous and frightened when I saw the child being vaccinated with the needle. So I did not go to the centre anymore. The child's father also said that if vaccination creates trouble then what is the point of getting vaccinated?*' A number of mothers in the urban areas also mentioned side effects as a reason for discontinuing the vaccination.

Accessibility of the rural vaccination sites was another reason why the mothers could not continue vaccination of their children. One mother from Bashgari said: '*I went to my father's house and I did not know where the centre was, so I could not continue.*' Another mother from Atkapara said: '*I was not informed about the centre. Usually I went with the other women in the neighbourhood, but last time they went without informing me.*' Also, in the urban areas the mothers could not always comply with the vaccination schedule because of the lack of accessibility to services. It was mentioned that sometimes the vaccination place was located far away from the mothers' home, so that they had to spend money beyond their means to get there. Some mothers kept on waiting for the HWs to come, and sometimes, the mothers were not present in the house when the HW visited. A mother from Ramshankarpur reported that she could not continue because there was not a supply of vaccine in the centre. A mother of Kalipur reported that since she had lost her card, she had to stop going to the vaccination centre.

Reasons for not immunizing a child

In the urban setting, it was noted that the mothers of NIC in Bhairabpur did not vaccinate their children, purely out of negligence. On the other hand, due to the lack of access to services, the mothers of Ramshankarpur did not vaccinate their children. They mentioned that they had to cross a river to go to the vaccination centre. The mothers were worried that their children might drown while crossing the river, so they avoided to go to the vaccination centre. Still, the mothers reported that during the rainy season it became easier to cross the river by boat. Mothers of the other urban areas, e.g. from Rishipatti and Kalipur also mentioned inaccessibility to services.

Often mothers were not well informed about the vaccination schedule of the centre and at times went on the wrong day. For example, a mother in Rishipatti grumbled: '*I went four times to receive an injection but was not successful.*' She went first to the Thana Health Complex but they said that they did not provide a vaccination; they just worked for family planning and with pregnant women. She then went to *Matrisadan* and there she was told that they gave vaccinations on Thursdays. When she went again on a Thursday, they told her that they were finished for the day and that she had to come the next Thursday. She did not go to that centre again. Instead, she went to the nearest office. They told her to come on Monday. She became tired and angry. She also said that her husband did not like this whole episode, as she had been so many times, but returned empty handed and for this purpose her husband spent a lot on rickshaw fare. It should be mentioned here that because of cultural reasons, women do not travel long distances on their own.

Other reasons mentioned by the urban mothers included fear of side effects and a negative attitude from the husband. A mother of Kalipur gave yet another reason: '*I do not understand the need for vaccination, so I did not give tika to my child.*'

The mothers in the rural areas also mentioned a variety of reasons for not vaccinating their children. Some mothers mixed up the notion of vaccination for protection with the treatment of diseases with medicine and, therefore, they refused to go for vaccination. For example, a mother from Purbakanda said: '*My child does not suffer from any diseases, so I do not feel the need to get tika for him.*' Some mothers expressed their anguish that despite vaccination certain children suffered from diseases and died. One mother of Bashgari said: '*I heard that if tika was provided the child would not get the disease, but I know of a child that did not survive after receiving a vaccination.*' She also said that if Allah did not give you life, then there was no other way you could survive. From the same point of fatalism, another mother from Kalikaprashad said regardless of the vaccination state of the child, they would still be infected by the disease. She mentioned that her neighbour's child had died, in spite of receiving the vaccination. So in her opinion, only God could protect them from illness.

Some mothers were found to be afraid of vaccinating their children because of the possibility of side effects: '*I was told that vaccination was not a good thing, because it caused fever to the child.*' It was also noted, that the mothers of NIC had little knowledge about the vaccination schedule. So, sometimes a child already over the recommended age limit was taken for vaccination. For instance, in Purbakanda a mother went to her parental home and the vaccine centre was far away from there. When she came back, the child was already

older than one year and the vaccinator would not vaccinate the child. It should be noted that the mothers of young children frequently visit there parental home, which is mostly located in other villages. The mothers also mentioned their household workload. A mother from Purbakanda said that she had a lot of work to do in her house, so she could not manage to visit the centre. Another mother emphasized that her child was very young and she was alone in the house. Nobody was there to help her. So she could not have her child vaccinated.

Many of the mothers in rural areas also reported that they were not informed about the routine vaccination centre in the village. Sometimes, they did not get a message about the arrival of the vaccinators. The mothers from Atkapara complained that the vaccinators did not come to their village. They sometimes came to a nearby village and sent messages to them. All this has to be put into context as women in most rural areas of Bangladesh have limited mobility. The mothers further complained that the HWs visited suddenly and that some mothers could take advantage of it, but others could not, especially those who had to travel great distances. There were a few cases of missed opportunities. Some mothers said that they went to the site, but nobody was there. In this case a mother from Kalikaprashad said that the HWs came and only stayed for a while.

Family or village feuds were also mentioned as reasons for not taking the child to a vaccination session. A mother from Atkapara said: '*We do not go to that house where the vaccination session is held. We have a family conflict. My husband told me not to go there for anything.*'

Satisfaction with the technical competence of the vaccinators, was another important factor. Some mothers' opinion of the technical competence of the vaccinators, was quite explicit. Mothers of FIC from rural areas were generally pleased with the technical competence of the vaccinators. One mother emphasized that they had to be competent, because they had their job. Almost all mothers of PIC had no complaints regarding the technical competence of vaccinators. However, lack of faith in the training of vaccinators was apparent, when a mother was interviewed after a vaccination session. She said: '*Although they were giving tika in the right way, I think they were not well trained. An old man came along and showed them how to do it.*'

Gender is also important. Apart from the influence of restricted mobility for women in some areas, it is clear that some mothers would prefer a female vaccinator. In such case the mothers would feel more at ease to direct questions at the vaccinators: '*In this regard, a female is suitable for female clients and a male is suitable for male clients.*' Another mother further elaborated on the

do not have any choice.' However, another mother showed an indifferent attitude in this regard: '*We went for vaccination and when it was done we came back, the gender of the vaccinators had no influence on the act.*'

However, nearly all mothers of non-immunized children in the rural areas, stated that they would have been more comfortable with female vaccinators. In respect to female preference, the mother of a non-immunized child from Kalikaprashad stated, '*Women are more caring, they cannot hurt the child.*' Whereas, a woman from Ramshankarpur said: '*It is better if a man does it, because the women push the needle very hard.*' The mother of a FIC of Kalikaprashad distinguished the difference between male and female vaccinators in the way they actually give vaccination. She said: '*Males push the needle in a straight direction, while a female sets injects in a downward position. Males push all of a sudden and that is much more frightening.*'

In urban areas a slightly different picture emerged. Most mothers of FIC and PIC said that the vaccinators did their work properly and that they had no complaints. However, one mother of a FIC was, grumbled: '*I did not like the way the vaccinator gave the injection. He made my child stand and gave him an injection that caused a great deal of pain. I was also frightened.*' Whereas, a mother who was interviewed just after a session said: '*The vaccinator held the needle strongly and that was painful for my child, but this was the only possible way to vaccinate.*'

Another mother narrated the following story: '*My child had problems after receiving the tika, because of the vaccinator's mistake. When the vaccinator vaccinated the child, the place began to bleed. I was scared, as the blood spread out all over my sari. I asked the vaccinator for an explanation. He agreed that he had made a mistake and that the injection had gone into the vein. He also told me that they had injected so many babies, but such a thing had hardly ever happened in the past. I was unlucky that it had happened to my child. They assured me that it would heal, but my child suffered a lot. A big abscess appeared in that place; it was totally red and soft. Then I took a hot needle and drained out the pus from the wound. The child also had a fever. Finally, I took her to the Utsharga (NGO) clinic for treatment.*'

Use of appropriate instruments at the time of vaccination, was also considered by mothers as a means of measuring the technical competence of the vaccinators. The mother of a FIC said: '*I went to the Sheba office* (an NGO clinic) *for receiving a first dose of the vaccination for my child, but I saw that the vaccinators used old needles. Then I decided that instead of going to Sheba I would go to Matrisadan for the second dose.*'

Sometimes, the information on side effects or contraindications, provided by the vaccinators during immunization sessions, were not understood by the

vaccinators often informed the mothers after they (vaccinators) had reached the vaccination site. The vaccinators did not inform the mothers in advance about contraindications. If any child came with these conditions, the vaccinators sent them back. Most of the time they did not explain the situation to the mothers, which left some of them disappointed.