4.2 Diarrhoeal disease and Pneumonia

Diarrhoeal incidence was calculated for individual study children by estimating the days at risk for a child (potential days of follow up excluding the days the child was not available) as the denominator and the number of diarrhoeal episodes occurring in this child as the numerator and expressed as episodes per child per year.

The household diarrhoea incidence was also estimated. This was done by adding up the days at risk of all children in the households below 5 years of age as the denominator and the total number of diarrhoeal episodes occurring in these children. The number of days for which reliable information on morbidity was not available were deducted both from the numerator and denominator calculations.

By estimating the incidence by the latter method, giving weightage to the same household characteristics several times was avoided which would have occurred when there was more than one under five in a study household and the relationship between diarrhoea incidence and socioeconomic variables was sought.

The household diarrhoea incidence at ages below 5 years are shown in Table 4.2.1. These were also calculated separately for infancy and above one year age periods to highlight age related differences.
Table 4.2.1 Incidence of diarrhoea in under fives

<table>
<thead>
<tr>
<th>Episodes/child/year</th>
<th>Household incidence</th>
<th>Child incidence*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of households</td>
<td>No. of children</td>
</tr>
<tr>
<td></td>
<td>(%)</td>
<td>(%)</td>
</tr>
<tr>
<td>≤ 1</td>
<td>11 (18.3)</td>
<td>33 (30.6)</td>
</tr>
<tr>
<td>&gt;1-4</td>
<td>23 (38.3)</td>
<td>39 (36.1)</td>
</tr>
<tr>
<td>&gt;4-≤7</td>
<td>19 (31.7)</td>
<td>20 (18.5)</td>
</tr>
<tr>
<td>&gt;7</td>
<td>7 (11.7)</td>
<td>16 (14.8)</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>108</td>
</tr>
</tbody>
</table>

* 1 child died 5 days after birth.

Overall, attack rates as great as >4 per child per year were observed in 43.4% households. Eleven households had a low incidence. The indepth study had revealed these to be those where children were not available for long periods or that their mothers were working and the children were left with a relative during the day i.e. those that were possibly cases of under reporting. The others were households with relatively older children i.e. over 30 months old. Even on intensive examination no qualitative differences could be identified between mothers in these households compared to those with relatively higher incidence.

The rates at ages less than 12 months showed that for children aged <12 months 11 (31.4%) households out of the 35 households that had an infant had attack rates >7 per child per year reflecting the high disease burden in infancy.
At ages beyond one year almost an even number of children had attack rates \( \leq 3 \) and \( >3 \). Thirty had attack rates of \( \leq 3 \) and 28 had rates \( >3 \) per child per year. Two households did not have a child aged between 1-5 years.

The overall incidence of diarrhoea in this population was 3.34 episodes per child per year which was similar in males (3.53) and females (3.21). The overall prevalence of diarrhoea which is the average percentage of days a child in this population spent with diarrhoea was 9.7 and was similar in males (10.2) and females (9.2). The age related incidence and prevalence of diarrhoea are shown in Figures 4.2.1 and 4.2.2.

The peak incidence of diarrhoea was in the
6-11 months age group. The prevalence estimates showed a peak in 0-2 months, with another peak in 6-11 months. The peak in 0-2 months could either be due to higher number of mothers wrongly reporting diarrhoea in this age group or higher durations of diarrhoeal episodes. The month wise incidence of diarrhoea showed a bimodal peaking of incidence during summer and winter months (Figure 4.2.3).

Caste class and family environment

Diarrhoea attack rates were related to several household characteristics; these are shown in Table 4.2.2. This was done independently for all households and separately for households with infants because age of children is very strongly correlated with diarrhoea incidence.

Fifty percent of wasted children came from households with attack rates of at least 4. Stunting did not show the same relationship. Within the limitations of small numbers it was observed that Bihari children had a high disease burden. Five out of the seven (71.4%) Bihari children had attack rates of more than 4 episodes per child per year.

Nearly 80% of lower caste and 85% of other castes were in the high morbidity categories (group 2 and 3). High caste households
were observed to be distributed in the lowest and highest morbidity categories which could be due to the small numbers.

Households where women had no education had attack rates of \( \geq 4 \), four times more often.

One of the households with income \( \leq 500 \) was in the low morbidity category. With increasing incomes an increasing number of households came into the lower disease category. The presence of possessions showed the same relationship as that with income but it was more linear.

In those households who owned hand pumps the disease burden was less probably because more water was available to them.

The findings in households with infants were similar to those obtained from all households.
Table 4.2.2 Determinants of diarrhoeal burden: Association of household characteristics with the total household diarrhoeal incidence among the 60 selected households in Tigri 1990-91.

<table>
<thead>
<tr>
<th>Household Characteristic</th>
<th>Diarrhoea burden group</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group I</td>
<td>Group II</td>
<td>Group III</td>
</tr>
<tr>
<td></td>
<td>≤1Epi/Ch/Yr (n=11)</td>
<td>1-&lt;4Epi/Ch/Yr (n=23)</td>
<td>&gt;4Epi/Ch/Yr (n=26)</td>
</tr>
<tr>
<td>Nutritional status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wasted (Yes) (10)</td>
<td>10(20.0)</td>
<td>3(30.0)</td>
<td>5(50.0)</td>
</tr>
<tr>
<td>(No) (50)</td>
<td>9(18.0)</td>
<td>20(40.0)</td>
<td>21(42.0)</td>
</tr>
<tr>
<td>Stunted (Yes) (27)</td>
<td>7(25.9)</td>
<td>11(40.8)</td>
<td>9(33.3)</td>
</tr>
<tr>
<td>(No) (33)</td>
<td>4(12.1)</td>
<td>12(36.4)</td>
<td>17(51.5)</td>
</tr>
<tr>
<td>Cultural group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.P. (30)</td>
<td>7(23.3)</td>
<td>14(46.7)</td>
<td>9(30.0)</td>
</tr>
<tr>
<td>Rajasthan (21)</td>
<td>4(19.1)</td>
<td>7(33.3)</td>
<td>10(47.6)</td>
</tr>
<tr>
<td>Bihar (7)</td>
<td></td>
<td>2(28.6)</td>
<td>5(71.4)</td>
</tr>
<tr>
<td>Others (2)</td>
<td></td>
<td></td>
<td>2(100)</td>
</tr>
<tr>
<td>Caste</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High (6)</td>
<td>2(33.3)</td>
<td></td>
<td>4(66.7)</td>
</tr>
<tr>
<td>Low (10)</td>
<td>2(20.0)</td>
<td>6(60.0)</td>
<td>2(20.0)</td>
</tr>
<tr>
<td>Others (44)</td>
<td>7(15.9)</td>
<td>17(38.6)</td>
<td>20(45.5)</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skilled (11)</td>
<td>4(36.4)</td>
<td>4(36.4)</td>
<td>3(27.2)</td>
</tr>
<tr>
<td>Unskilled (20)</td>
<td>2(10.0)</td>
<td>8(40.0)</td>
<td>10(50.0)</td>
</tr>
<tr>
<td>Business (3)</td>
<td></td>
<td>1(33.3)</td>
<td>2(66.7)</td>
</tr>
<tr>
<td>Self employed (6)</td>
<td>1(16.7)</td>
<td>2(33.3)</td>
<td>3(50.0)</td>
</tr>
<tr>
<td>Service (18)</td>
<td>3(16.7)</td>
<td>7(38.9)</td>
<td>8(44.4)</td>
</tr>
<tr>
<td>Unemployed (1)</td>
<td></td>
<td>1(100.0)</td>
<td></td>
</tr>
<tr>
<td>Dead (1)</td>
<td>1(100.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literacy father*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nil (23)</td>
<td>3(13.1)</td>
<td>9(39.1)</td>
<td>11(47.8)</td>
</tr>
<tr>
<td>&lt;10 (22)</td>
<td>3(13.6)</td>
<td>10(45.5)</td>
<td>9(40.9)</td>
</tr>
<tr>
<td>≥10 (14)</td>
<td>4(28.6)</td>
<td>4(28.6)</td>
<td>6(42.8)</td>
</tr>
<tr>
<td>Literacy mother</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some (7)</td>
<td>2(28.6)</td>
<td>4(57.1)</td>
<td>1(14.3)</td>
</tr>
<tr>
<td>None (53)</td>
<td>9(17.0)</td>
<td>19(35.8)</td>
<td>25(47.2)</td>
</tr>
<tr>
<td>Income of household</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤500 (8)</td>
<td>1(12.5)</td>
<td>4(50.0)</td>
<td>3(37.5)</td>
</tr>
<tr>
<td>501-1000 (28)</td>
<td>2(7.1)</td>
<td>11(39.3)</td>
<td>15(53.6)</td>
</tr>
<tr>
<td>1001-1500 (20)</td>
<td>7(35.0)</td>
<td>7(35.0)</td>
<td>6(30.0)</td>
</tr>
<tr>
<td>&gt;1500 (4)</td>
<td>1(25.0)</td>
<td>1(25.0)</td>
<td>2(50.0)</td>
</tr>
<tr>
<td>Possession of items</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machine (2)</td>
<td></td>
<td>2(100.0)</td>
<td></td>
</tr>
<tr>
<td>Radio (11)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TV (7)</td>
<td>1(14.3)</td>
<td>5(45.5)</td>
<td>6(54.5)</td>
</tr>
<tr>
<td>TV+Radio (12)</td>
<td>3(25.0)</td>
<td>2(28.6)</td>
<td>4(57.1)</td>
</tr>
<tr>
<td>TV+Radio+</td>
<td></td>
<td>5(41.7)</td>
<td>4(33.3)</td>
</tr>
<tr>
<td>Machine (9)</td>
<td>3(33.3)</td>
<td>3(33.3)</td>
<td>3(33.3)</td>
</tr>
<tr>
<td>None (19)</td>
<td>4(21.1)</td>
<td>8(42.1)</td>
<td>7(36.8)</td>
</tr>
<tr>
<td>Hand pump Own (5)</td>
<td>2(40.0)</td>
<td>3(60.0)</td>
<td></td>
</tr>
<tr>
<td>Public (55)</td>
<td>9(16.3)</td>
<td>20(36.4)</td>
<td>26(47.3)</td>
</tr>
</tbody>
</table>

* 1 father dead
Determinants of diarrhoea incidence

In order to evaluate the determinants of diarrhoea incidence among the 60 households in a multivariate analysis using multiple regression techniques, a multiple regression model was constructed with total incidence of diarrhoea as the dependent variable and total income, literacy of father, caste, members in the household, occupation of father and literacy of mother as the independent variables. The multiple regression technique allows for ascertainment of association of two factors adjusted for other covariates that may be acting as confounders. In this analysis the total income of the family and literacy of mother were the only two factors that were significantly associated with incidence of diarrhoea independent of each other and corrected for other factors. The caste and family size showed a weak association which however was not significant.

Household based attack rates were also obtained for pneumonia using similar methods for numerator and denominator calculations (Table 4.2.3).

<table>
<thead>
<tr>
<th>No of pneumonia episodes/child/year</th>
<th>Households</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>no pneumonia</td>
<td>39</td>
<td>65.0</td>
</tr>
<tr>
<td>&lt;1 episode</td>
<td>10</td>
<td>16.7</td>
</tr>
<tr>
<td>≥1 and &lt;2</td>
<td>9</td>
<td>15.0</td>
</tr>
<tr>
<td>≥2</td>
<td>2</td>
<td>3.3</td>
</tr>
</tbody>
</table>

| Total                              | 60         |         |
The overall incidence of pneumonia in these children was 0.35 episodes/child/year and it was slightly higher in males (0.37%) than in females (0.34%). The overall prevalence of pneumonia which is the average percentage of days a child in this slum spent with pneumonia was 1.12; it was 0.99 for males and 1.26 for females.

In 39 (65%) households no episodes of pneumonia occurred. Twenty one (35%) households had one or more episodes of pneumonia and 10 (16%) and 9 (15%) households had an attack rate of <1 and ≥1–<2 respectively. There were two households with attack rates of ≥2 episodes per child per year.

The incidence and prevalence of pneumonia by age are shown in Figures 4.2.1 and 4.2.2. The peaking of incidence and prevalence occurred in the 3-5 months category. The seasonality of pneumonia (Figure 4.2.3) showed predominantly a winter peak.
4.3 Family Dynamics and the Disease Process - Some Selected Case Reports

Case report 1.

Shashi's father, a BSc from Bihar, was working as an assistant electrician in a private concern in Okhla where his job was to replace worn out machine parts. He said he left Bihar because he could not get a job there as he did not have money to give 'sifarish'. He laughed derisively over his own fate; 'kya soch ke BSc kari thi aur dekho kya kar raha hoon.'

His wife he felt, was a 'gawar' and would remain so forever. He said he had to marry her because in the village one could not question ones fathers' choice no matter how educated one was; he did not get to see her even once before they got married. She kept their house untidy, could not keep the children's clothes clean although he bought six bars of soap every month. The food was never ready on time and Shashi their daughter, always looked dirty although he had bought three sets of clothes for her. He felt that she had not changed an iota since coming to Delhi; atleast she should have imbibed some of the habits of educated people. He requested me to teach her some manners and tell her what the 'bhumika' of an 'aurat' should be. When he was at home he always made tea for me (went and bought a sachet of tea leaves and 1/2 glass milk); he said she should always entertain visitors similarly but she had no sense. She refused to change her feeding habits like start drinking tea (Bihari women in the village did not drink tea)
and begin to eat rotis but she only wanted a mountain of rice all the time; she was not willing to change at all. She never moved out of the house alone, never went to the market herself and was exactly as she was while she was in the village. He did concede however that maybe Bihari men were to be blamed to some extent; most of them preferred their wives to remain this way.

Shashi’s mother 25 year old Sunder devi to an outsider was a simple sweet lady smiling all the time if her husband was not around and very tense when he was. Alone, she said she was not happy with her husband mainly because he did not like her and always complained that ‘anpad mere gale lag gaye hai’. As a result he was always irritated with her for trivial reasons and often hit her. She did not move out of her house because she did not like to do so. Besides, in their ‘jaat’ women did work outside their homes only if their husbands died and they had no one else to look after them. Only then did they move out of their homes to earn money so that they could feed their children.

At present her husband did all the work outside the home; he even kept all the money with him. She did not resent this decision at all as she felt that why should she need any when she never went out anywhere. He bought the vegetables on his way back from work; the clothes she wore were also purchased by him. Her belief was ‘aadmi kamata hai, woh he batayega kya khana banega kya pehnege’.

Their son 5 year old Om Prakash was always neatly dressed in the morning in his school uniform and his identity card pinned to his chest. His father dressed him for school everyday and was very
particular that he studied after coming home. In fact, the father said that he hit the son if he did not study. Om Prakash was enrolled in the only private school in Tigri, the ‘Sunshine Public School’.

Shashi their 15 month old daughter developed loose motions containing blood and mucus in the beginning of January. Sunder devi could not understand why the child had diarrhoea ‘kuch nahin khaya piya aise he lag gaye’. The child was taken to the ESI dispensary in Okhla because the father had a card for the whole family. They all went by cycle and the trip took 4 hours. The doctor prescribed metronidazole oral suspension 1 1/2 tsf three times a day and Shashi recovered after this was given for 3 days. She did not know about ORS and SSS at this stage because the ESI doctor had never advised it. During the illness she stopped giving the child tea because tea was ‘garam’ and it increased the diarrhoea. Shashi loved tea but her mother gave her very small amounts especially during diarrhoea; she herself did not drink tea at all because in Bihar women did not drink tea.

Shashi had 8 episodes during the one year follow up. During the next episode she took the child to the ‘corporation’ van because the father did not take the child to the ESI dispensary. ‘Pata nahin kyon, gussey mein rehte hain to kuch nahin karte ghar mein’. At the van the lady refused to give medicine. She said that they would only do so if the women underwent an operation for sterilization. Her neighbour who had also gone to fetch medicine for her child fought with them and came back but Shashi’s mother
said she lied to them as she was 'majboor'. She requested them to give the medicine and said that she would get operated the following Saturday. She said she would never go to the van again; the medicine was good but the 'doctorni' was 'harami'.

They gave the child furoxone and an ORS packet. The child’s diarrhoea ceased with the furoxone. Sunder devi prepared the ORS, gave it to the child once but then stopped because Shashi’s father on seeing the packet said it had crossed the date of expiry and threw it away in a rage. The child’s vomiting and fever continued. One day when the child had vomited several times the neighbours felt that ‘is ko kisi ki nazar lag gayi hai’. They advised Shashi’s father to take her to the ‘maulvi’ in the masjid in Tigri. He tied a ‘taveez’ to the child’s arm, said it had ‘jadi booti’ in it and also gave ‘Mamta baby tonic’ to Shashi. He asked the parents not to give the child any other medicine and charged Rs 100. Shashi’s vomiting ceased 4 days later.

Subsequently, Shashi had 6 more episodes; she was not taken for treatment in 5 because she did not have money to go to a private doctor (Shashi’s father did not leave money at home) and the van staff were still forcing women to undergo sterilization. She did not say anything to Shashi’s father as he was in a bad mood for several months, used to keep hitting her and his son, the latter for not studying hard and her for trivial reasons. She said ‘us se to baat karna bekar hai, kuch bolo to marta hai’.

During the child’s seventh episode the father said he would take them to a doctor but the mother refused to go this time. She
told me that she was also capable of getting angry; whatever he said she had to listen immediately but he never listened her so this time she refused to go on the pretext that she had a lot of work to do at home.

During the next episode when the stools were very watery and contained blood the parents got worried and Shashi’s mother forgot her anger and decided to go the ESI dispensary. They gave the child Furazolidone 1 tsf thrice a day and the child recovered after only 2 doses of the medicine after which the drug was discontinued.

The changes in Shashi’s nutritional status during the follow up period are shown in Figure 4.3.1.

On this visit to the dispensary Sunder devi also underwent a checkup as she had been having abdominal pain for the past few days. The doctors told her that her Copper T had become ‘teda’ and so removed it. She could come a few days later to get another one inserted. Subsequently, Shashi’s mother remained very tense. She said she did not want more children. If her husband got so angry when they had just two she wondered what would happen if they had more.

Two months later she had severe abdominal pain. She asked her husband to get her some medicine as she was pregnant. He bought a
pain killer for her and two days later she had a lot pain accompanied by bleeding this time. She said she had aborted but did not go for a checkup after that. She said she was disillusioned by her neighbours. She now felt that their friendliness was 'upari' because when she was screaming in agony no one came to help her.

Case report 2.

Pushpa aged 2 years and Mamta aged 3 months lived with their parents and elder brother aged 12 yrs. The family originally belonged to UP but have been in Delhi now for over 10 years. Both the parents had not received any education. Their father worked as a labourer filling trucks with bricks. He left his home early in the morning at 5 am. His wife woke up at 3 am to make tea, sabzi and rotis for him.

On the days when they heard that kerosene oil might be available Chandawati went to the fair price shop even before making the tea ie at 3 am and kept her jerry can in line. She asked someone living nearby to look after it and returned home to cook and do the other household chores. In between, she made repeated trips to the fair price shop to see if her turn had come. The whole process of obtaining 5 litres of kerosene oil took up to 6-8 hours because there were hundreds in the line. Whenever one saw her she was working; washing clothes, utensils, massaging Mamta and or trying to pacify Pushpa who clung to her the whole day. She said life was very difficult for her because her husband had long working hours and she had to do all the household chores alone.
including the shopping, taking children to the doctor, fetching ration etc. However, her husband took all the decisions 'wahi ghar mein sabse bada hai, us ka kehna sab log maante hain'.

Earlier, the family sought treatment for all illnesses from Dr. Gill but have changed over to the 'Bengali' doctor recently ever since her neighbour advised her to do so.

Two year old Pushpa developed diarrhoea one morning. She passed 8-9 watery stools not containing mucus or blood. There was no fever or vomiting. According to the mother 'Pushpa ko thand se lag jati hain phir ek minute ka dam nahin, tatti band he nahin hoti'. Whenever the child had diarrhoea (and she had it very frequently) the mother took her to the Bengali doctor, 'ek ad goli deta hai, theek to jati hai'. She went to this doctor because her neighbour advised her to do so as he belonged to the same district near Calcutta as the neighbour. Also 'uske saath udhar chalta hai; nagad ke hote hain to de aati hoon nahin to udhar kar lete hain'.

Throughout this episode she took the child to him thrice. The first time he gave the child crushed yellow tablets in three purias. She only gave the child one puria; when there was no relief she went to him again. He then advised her 'Klassak dry suspension which cost Rs. 22 from the chemist shop (contained Loperamide, an anti motility agent and Streptomycin). Three drops were to be given to the child at 7am, 12 noon and at 6 pm. The child recovered after this was given for 3 days. She stopped giving the medicine after that and saved the remaining for another episode. The episode lasted for 5 weeks.
During another episode when Pushpa’s diarrhoea had not ceased after two days she gave Pushpa one teaspoonful each of Wintomylon syrup and yellowish white liquid which were lying at home and had been prescribed to Mamta by Dr. Gill during a previous episode.

When I visited the child during the episode Chandawati complained that Pushpa was always ill since she was born so they only sought treatment when they perceived the illness to be very severe. She said ‘is bacche mein bahut paise lagte hain’. Her neighbours who were sitting outside with her in the sun also felt that it would probably be better if the child died because she troubled her mother so much; always had some illness or the other, usually diarrhoea, often with blood and was very irritable most of the time. She knew she should take Pushpa to a big hospital but how could she leave her home and especially little Mamta for so long. Also, one required money to go to a hospital whereas here, if she had no money she took treatment from the doctor and paid later when money was available.

Chandawati knew about the ORS packet. The Bengali doctor advised it for an episode in summer, ‘phaida hua , tatti kam jati thi’. She knew how to prepare SSS but did not make it during this episode because it was to be given only in summer. She was taught its preparation by the Bengali doctor. He told her ‘ jab garmee adhik pade ye bana kar pilana’. However, during one episode in summer when Pushpa was taken to the Bengali doctor he told the mother not to give any ‘ghol’ because something was wrong with the child’s liver. Pushpa was very fond of lassi which was sold in the
slum. Her mother bought a kilo for her costing Rs. 2 every 2-3 days and Pushpa consumed it over these days. She bought it whenever the child pestered her too much for it; the child could consume more but she did not have the money to buy so much. During diarrhoeal episodes especially those where the child ate less she bought the lassi every 2-3 days; the child consumed 150-200 ml everyday. She drank 1-2 glasses of water or less during the episode 'thand main kaun pani peeta hai'.

The changes in Pushpa's nutritional status during the follow up period are shown in Figure 4.3.2.

During the prolonged episode described above Pushpa ate her usual diet during the episode which was one cup of tea and 2 slices of bread in the morning. In the afternoon she ate half katori of khichri to which potatoes, cauliflower and peas were added while cooking. In the evening the child had a cup of tea. At night the mother cooked rice and dal but Pushpa was usually asleep by the time the food was ready and if she was woken up she cried so much that Chandawati said she did not try to do so. During another episode the mother also made saboot dana for Pushpa (boiled and mixed with milk and sugar) as Dr. Gill had asked her to make and because Pushpa was weak but the child did not consume it.
Mamta started passing watery motions 20-30 a day not containing mucus or blood one morning in the month of February. The child did not have vomiting or fever but the mother was worried because 'iske tattiyan ek minute ke liye bhi band nahin ho rahi hai; ek minute kya ek second ke liye bhi band nahin hoti hai. Jabhi kapre badlo tabhi gande kar deti hai; uski vajah se kuch ghar ka kam nahin ho pa raha'. She did not know why the child had this diarrhoea.

Two days after the diarrhoea started she took the child to the 'Bengali doctor'. He asked the mother to give the child a piece of 'heeng' mixed with warm water or milk and gave a thick creamy syrup and one injection. He charged Rs. 20. According to the mother there was a slight difference after administering the medicine; 'pehle to tatti karti rehte thi ruke bina, abhi to minute minute par karti hai, yehi pharak hai'. After trying the Bengali doctor's medicine for two days and finding it ineffective she went to the doctor near Virat cinema because his treatment was supposed to be better. He gave the child Wintomylon syrup along with a yellow syrup.

Between these two visits she took the child to the masjid thrice 'jhara lagwane' because she said 'agar jyada bimari ho to matlab nazar lag gayi'. The baba in the masjid also gave the child a taveez to wear.

Throughout the child's illness which lasted for 20 days she took her to a new doctor every three to four days; beginning from the Bengali doctor to the doctor in Devli hospital in Devli, to the hospital in Khanpur and also to the Asha dispensary. She said she
waited for a response for two to three days, the response being assessed by a decrease in the frequency of stools. If there was none she would take the child to another doctor. Mamta's father also bought a bottle of 555 mugli ghutti and 10 drops were given to Mamta twice a day because 'is se sehat banti hai'.

One night, at 8 pm the child became very listless and looked as if she were dead. She had passed several watery motions that day. Mamta's mother got very worried. She went to the Bengali doctor who said nothing could be done for the child now as it was too late. She came back home very worried. Her husband had still not returned home from work so her neighbour offered to accompany her to another doctor. She picked up Rs. 50 from her home; her husband always left some money with her and the neighbour took her to Dr. Gill. Dr. Gill felt the child's pulse and said 'pani khatam ho gaya hai; nabaz ruk ruk ke chal rahi hai'. He gave the child an injection; Chandawati said that following the injection 'thoda hosh aaya, bar bar nari dekh raha tha'. Then he gave her some medicine to drink; she showed me the bottle, it was Wintomylon. She came home with the child after 10 pm. She repeated a spoonful of medicine as she had been told to do; at 11 pm, 4 am and 3 pm the following day. The child had not passed urine since the visit to Dr. Gill. She did not pass urine the following day also. Chandawati took the child again to Dr. Gill at 8 pm the following day. He told her that Mamta had no water in her body; when she did only then would she pass urine. The child had also not passed a single loose
stool since her visit to Dr. Gill the previous day. It was only when the child passed urine at 1 am that night that Mamta's mother relaxed; she felt that now her child was alright. Mamta's mother estimated that she spent atleast rupees 200 on treatment for this particular episode.

The doctor near Virat told Chandawati to make SSS at home but she did not give it because of the cold weather. Gill doctor also told her to buy a packet of 'glucose' but she said she told him she did not have the money. He taught her how to make SSS the night she took the child to him. She did prepare it on coming back home but according to her Mamta did not like it at all so she did not give it. She informed Dr. Gill that Mamta was not drinking SSS and he said if she did not then not to give it.

The changes in Mamta's nutritional status during the follow up period are shown in Figure 4.3.3.

Mamta was breast fed. The mother felt that during her illness she did not drink milk properly ie did not take her fill each time. She repeatedly cried for milk; would suck for a minute or so and then give up. Chandawati could hardly do any household work those days because she had to keep feeding her. Dr. Gill advised the mother not to eat 'baasi' food as it would increase the child's diarrhoea.
Case report 3.

Two year old Roma’s mother Geeta hailed from Orissa. She was very pretty and left school without completing the 12th standard. Her father had some land in Orissa but was very poor. She was made to leave school because apart from other school expenses she was required to take a bus everyday and that increased the cost of schooling tremendously. When a suitable match was found from Calcutta and the family did not demand a dowry she was forced to leave school which she enjoyed immensely and married off to a shopkeeper in Delhi.

Gopal had also passed the 12th standard. Geeta was very happy because although her husband was very busy he took good care of her and even sent Rupees 250 to her family for her brother’s education. She had no knowledge about how much he earned or how much they spent on what; all she knew was she got whatever she wanted. Her husband had even procured a gas connection for her; she did not know how much it cost to refill because he got it done on Sundays; the day he went to his shop a little late.

Their home was always clean; there was even a potted plant in their ‘aangan’. Geeta also had a sewing machine and she often stitched Roma’s clothes on it to pass time. She started cooking dinner at 10 pm so that her husband got hot food to eat when he returned at 11 pm.

Roma their only child was very well looked after. She was always clean and wearing sandals or shoes; her mother also taught her from her books everyday. Roma could recognize several alphabets
and numbers from 1 to 10. At the beginning of the study Geeta was very happy as she was expecting another child.

Roma had diarrhoea four times during the year due to 'eating the wrong food, eating food from outside' or because there was too much 'gandagi' in the slum. During early June Roma developed her first episode of diarrhoea during the study period. She passed 7-8 watery stools a day. Her mother did not give her any medication for the first 2-3 days, she never did. "Ek din ka hota hai to mein sambhal leti hoon '. She massaged the child's abdomen with 'jada tel' (oil made from the green fruit of a particular tree) gave her nimboo pani, glucose pani and lassi. She kept a box of glucose at home which she gave mixed in water to Roma whenever child had diarrhoea in summer. Roma was also given nimboo pani every morning during the summer and when she had diarrhoea she was given this during the day also. She said she also kept an electral packet but I never came across one in her home. This was kept because 'sharir se pani nahin sookhta'. She knew this because her brother was a 'doctor' in Calcutta and he had told her.

During the child's illness the intake of 'hot foods' like roti, sabzi, meat and hot milk were stopped as always. Instead, Roma was given chirwa with banana and sugar, lemon sharbat, lassi, khichri, fruit and milk was given cold.

Three days after the diarrhoea began when there was no relief the child was taken to the Bengali doctor one morning. Earlier, the family used to take treatment from the 'Sardar' doctor but with his medicine Roma used to recover in four to five days. Recently,
on the advice of a relative they had started going to the Bengali doctor; his medicines were so effective that she recovered on the first day itself. He prescribed some medicine which Geeta gave to Roma. Two hours after coming back the child had a 'daura'. She clenched her teeth and hands. The parents (the father was home as it was Sunday) went back to the Bengali doctor and told him to give intravenous glucose if it were required; he said it was but he could not administer it as the child was too small; they should take her to a big hospital.

They took the child to Majeethia hospital in a scooter. She was admitted there for 3 days and given two and a half bottles intravenously and several injections (her prescription slip said inj. Gentamicin, syr Domstal, syr Septran, Visyneral and Peditral powder in 1 cup boiled water). In the hospital itself her loose motions decreased. After her return she began passing 1-2 well formed stools a day. When asked whether any 'ghol' or ORS had been prescribed the mother refused. When I saw the child's left over medicines she had been prescribed 'Peditral'. When shown the packet Geeta said this was given twice to the child in the hospital but she was not told the purpose.

For the other episodes no treatment was sought for two and the Bengali doctor was visited in one.

The changes in Roma’s nutritional status during the follow up period are shown in Figure 4.3.4.
For her delivery Geeta had been registered at the Madangir Centre but when the pains came there was insufficient time to go to the centre. A dai delivered the child at home and on the first day Geeta fed him gur and ajwain ghutti as advised by the dai. The 'Bengali' doctor was also called and he gave the child 'janam ka teeka'. On the 11th day the child cried incessantly the whole evening; he did not let his mother cook their dinner. In the middle of the night when Geeta awoke to feed him she found him dead with blood coming out through his nose. They called the 'Bengali doctor' who declared him dead.

For several days Geeta did not eat. She sat despondently and cried whenever I went to see her. Gradually as time passed, she resumed her household duties with the same fervour. Two months after our study ended Geeta had another son.

Case report 4.

Tejram was a 'rajgir' and came from district Dosa in Rajasthan. His wife Kamla came to live with him in 1982 after they got married. Both had never been to school. Kamla delivered her first child after 10 years; she was treated by several private practitioners and finally conceived after the treatment given by 'lad~ doctor Susheela' practicing on the main road to Tigri. Narinder was born at home. A dai conducted the delivery. Dr. Susheela was called later so that she could give the mother and child an injection.

Narinder developed diarrhoea 15 days after birth. Kamla said
that he passed normal stools ie two to three a day, yellow in
colour and formed for 10-15 days after birth. Thereafter, he began
passing 5-6 stools 'pani pani se, phate phate se, kabhi peeley,
kabhi hare'. She did not know why the child was having diarrhoea
'kya pata kyon lage hain, sardi se lage hote to davai se theek ho
jaate'. She said the child passed a stool after every feed.

Three days after the diarrhoea began Narinder’s mother took
him to Dr. Gill. She took him there because her neighbours also took
their children to him. He was supposed to be very 'good' and since
Narinder was her first child and she had no idea whom to get
children treated from, they advised her to do the same. He gave the
child a pink syrup; a little less than half teaspoonful to be
administered thrice a day for three days and charged Rs 8 for it.
She gave this syrup to Narinder for two days but took him again to
Dr. Gill the third day because she felt that the syrup had no
effect. He gave her the same syrup again and charged Rs 10.

Three days later when the child had not improved she took him
to 'lady doctor Susheela' who she visited for her own illnesses.
She gave the child a white syrup along with 6 purias containing
crushed yellow tablets; one puria and one teaspoonful of syrup to
be given thrice a day. Dr. Susheela charged Rs. 15 for the
medicine.

Five days later when the diarrhoea was still continuing she
took the child to the Bengali doctor opposite the masjid because a
neighbour advised her to do so; she even escorted them. He
prescribed a yellow syrup and asked her to give a teaspoonful to
the child every three hourly. The doctor told her that the child would recover after one dose itself but even administration of several doses did not cure him. She made three visits to the Bengali doctor but the child was not cured. For over a month she remained very tense and worried about the child. On asking her why what worried her about the illness she said ‘agar jyada karega to hoshiyar nahin hoga, sharir bhi kamzor hota ja raha hai, rota rehta hai’. She felt Narinder should pass 1 or 2 formed or ‘bandhe’ stools in 24 hours.

A month and a half after the diarrhoea began Narinder’s mother decided that she would stop going to the doctor because ‘tatti to theek hoti nahin, phir bar bar davai dene se nuksan kar sakte hai. Koi phaida to hai nahin, davai do, to bhi vaise tattiyan karta hai, yadi na do to bhi aise he tattiyan karta hai to kya phaida davai dene se.’ Subsequently, she left for her village to attend a wedding and on her return said me that three days after reaching there the child recovered on his own.

The child continued to be breast fed during the illness. He was not being given water. She gave him Dabur janam ghutti 3 drops daily because it was sweet like honey and was ‘acche’ for him. She said she tried giving him tea also. The day she gave him tea he did not drink milk she stopped giving the tea. One day, when Narinder’s ‘mama’ had come to visit his sister she told him that Narinder cried too much. Both of them felt that ‘bhukha rota hai aur upar ka doodh laga dete hai’. She told me that ‘dairy ka doodh bhari hai, pachta nahin aur bhai ke baccho ko dibba lagaya tha’ so
she asked her husband to buy a 'dibba' from Khanpur as formula milk was 'halka'. Narinder's father bought a tin of Amul Spray from the chemist. The mother started Narinder on 100 ml of milk twice a day; early in the morning and at night before he slept. She took 100 ml of water in a cup and added 1/2 tsf powder to the water and fed it to the child in a bottle. She had fixed a nipple to an empty ghutti bottle and used it as a feeding bottle. There was no change in the child's appetite during diarrhoea.

Kamla knew how to prepare SSS but she said that Dr. Susheela advised glucose powder (which was sold in a green box) in water when one had diarrhoea. She had seen the preparation of SSS on the TV; and said 'us se dast ruk jate hain'. When I asked her why she did not make it for the child she kept saying that she never made it for herself nor for the child. When I persistently asked her the reason for not using it she looked confused but repeated the same; that she did not prepare it; 'vaise he'. She gave the child 2-3 drops water with her fore finger 3 times a day; started it a few days after birth.

During the year, Narinder had 6 more episodes. For the very short ones lasting 2-3 days no treatment was taken, for the others treatment was taken from the Bengali doctor to which the child responded.

The changes in Narinder's nutritional status during the follow up period are shown in Figure 4.3.5.
Case report 5.

Thirty year old Jabbar and 25 year old Sajan were from Bihar and lived with their five children Salma, Iqbal, Pappu, Raja and Rani. Both had never been to school.

Jabbar had changed several jobs in the past. He had worked as a tailor in different places, then in a leather factory but during the one year study period continued to work as a tailor in an export factory.

Sajan wanted to stop having children now, wanted to get sterilized but her husband said 'kuch ho jayega' so she got a copper T inserted from the Govindpuri dispensary. She said if ones income was not good then one could not look after children properly and so it was better not to have too many children. 'Bacchay accha khayen, accha pehne to accha lagta hai'. After getting the Copper T inserted she developed a lot of bleeding so the doctor removed it and gave her oral contraceptives. The 'doctor' in their dispensary also told her she had a 'gaanth' in her uterus and she would need to get operated if it had to be removed. Sajan however, had decided against the surgery because one she was scared and secondly they did not have money.

Over the year the couple had massive fights intermittently. Sajan said that her husband wanted to throw her out of the house because he did not like her 'acche nahin lagti'. The mother felt that he had this 'raub' because of his naukri. She wished she had an income of her own. She would have then shown him what 'tadi' was. She said she lived only for her children. He wanted to kill
her; maybe he would one day. She felt ‘aadmi ki jaat he aisi hoti hai; auraton ke kadar karna nahin jaante’; they thought a woman was their ‘pairon ki jooti’.

One day she was so angry that she said she would go to the ‘thana’ and lodge a complaint against him. He did not give them good food to eat; the only thing he did was beat them. ‘Baat he gaaliyon se karta hai’. When he returned home he covered his face with a sheet and fell off to sleep. He did not talk to her or with his children, did not care about his home ‘us se to bas apni shaan ki parwah hai’.

During the year her mother in law also came for a visit. Witnessing the couples fights she told Sajan to accompany her to the village with the children but Sajan was adamant. She said she would not as there her mother and sister in law would keep hitting her on some pretext or the other. Besides, her husband had been living with another woman in the past and he might do the same again. Sajan had confronted this woman who said Jabbar came to her because ‘tum aadmi se hisaab maangti ho’. Sajan felt his parents had got her married to him ‘maa baap ki marzee se shadi ke hai, prem vrem karke to ghar se nahin bhage. Das logon ke saamne haath pakda tha to nahin chodenge’. She felt it was a wife’s duty to ask for ‘hisaab’ and that was the reason why she did it.

Throughout the year they had frequent quarrels but their relationship improved in the last few months. The reason was the renovation of their jhuggi. Raja Rani’s mother started remaining happy as her new jhuggi was nearing completion. She said she hated
the old one because it was so dirty; she used to keep pestering her husband to build a decent room. He used to get irritated with her but now seeing their home he was happy too.

They did not have any money for the construction. Then she had an idea; she told him to use the Rs. 100 per month they had been saving in the bank for their daughter’s wedding for the construction and make a little room for a tenant and rent it out for Rs. 150-200 per month. The money could then be accumulated again.

They had now built three small rooms. One for themselves, one for a tenant and a little shop in front where her husband could sit and stitch clothes. Instead of working in a factory, he was now thinking of sitting at home and taking orders.

Her neighbours being jealous of their large house reported to the police that they had built a ‘kamra’. The police came and demanded Rs. 100 but they managed to send him off with Rs. 50. The construction had cost them Rs. 10,000.

Subsequently, the couple’s relationship remained good and at the end of the study Sajan was ready to deliver another child.

For all illnesses in the family they visited a dispensary in Govindpuri because her husband being employed in a factory had an ESI card. However, because of the distance she did not take treatment for most of the diarrhoeal episodes in her children saying ‘inko aise he lagte rehte hain’ or that the diarrhoea was due to eating too much of a particular food and would therefore recover on its own once the food was stopped. During one episode
the doctor in the dispensary gave her an ORS packet and told her to use it only if the medicine he prescribed was ineffective. Since it was she did not use it.

She knew about SSS. She made it for two episodes in her children that occurred during summer. During the period when she was busy with other work e.g. during the days their jhuggi was under construction she did not prepare it because she was so preoccupied. During another episode which was prolonged she said, what would SSS do if medicine was not having an effect.

The feeding in their household like other households from Bihar was relatively good. One frequently saw eggs, khichri and vegetables being cooked. During the child's diarrhoea she never deliberately stopped the intake of any foods except top milk because she felt it 'increased the diarrhoea'.

Case report 6.

Three month old Rahul belonged to a Hindu 'Scheduled Caste' family. He lived with his grandparents, parents and 12 year old 'bhua' in the lane which had jhuggis of all the sweepers. His grand father was employed in the CPWD as a sweeper and his grandmother swept several homes in Sadiq Nagar. Their home unlike the others had 2 goats tied inside the aangan.

His father Jagdish aged 22 years and who had never been to school had not been doing any work for the last one year because he said he had recurrent abdominal pain. His mother 15 year old Santosh accompanied her mother in law to clean the households in
Sadiq Nagar. On many days it was his bhua who accompanied his mother so Rahul would be found at home with his grand mother.

His mother kept their jhuggi very clean and had made several designs using bright colours on the outside wall. However, she was very quiet and on the occasions she was seen (which was rarely because she came back from Sadiq Nagar in the late afternoon) she was busy doing the household work. She had hardly any role to play in the family decisions; she did whatever her mother in law asked her to, cooked the vegetables bought by her and ate what was given to her. She never complained; possibly because her mother in law and her daughter made sure she did not sit with me alone for a minute.

Jagdish her husband, unlike her was very vocal. Whenever one visited he would be seen lying on a cot outside the home. He said he had worked in a factory earlier, but used to repeatedly have abdominal pain and so the employer threw him out. Throughout the year he remained unemployed because of his bad health. He said their family was very poor. If they ate one meal a day ‘to doosre ke liye sochna padta hai; khane ke liye paise hain ya nahin’. There were so many people to eat and only ‘ek kamane wala’. He said ‘gareeb logon ka koi jeevan hai; na accha khate hain aur na he accha pehante hain. Bas doosron ko khaete ya kamate dekhte huay he khush ho jaate hain’. One day, there was nothing to eat in their home not even ‘aata’. The doctor had told him ‘acche khurak khao’ he had asked him to eat butter and eggs or he would never be able to get up from the bed. He therefore thought, ‘naseeb he kharab
hain, yeh sab naseeb ka chakkar hai'.

Rahul's dada drank daily spent Rs. 50-60 per day. He entered his home in the evening with a bottle of alcohol. He gave only Rs. 100-150 at home; how could anyone run a home on that amount.

He said that several officials like myself had come here to do a survey. They asked about their 'haal chaal' and then disappeared; no one returned. The government had started so many programmes for poor people but they were not benefitting from any. Loans had been given in the slum but those were also only given to people who had given Rs.500 to 1000 as 'rishwat'; those who were actually the poorest received nothing. Theirs was one of the oldest families living here but they had not benefitted from any programme. He had heard on the TV that a lot had been done for people living in jhuggis but nothing had reached them. He felt that 'jin logon ke paas sab kuch hai wahi log aise choti moti cheezon jon garibon ke liye hoti hai woh tak nahin chordte'.

He had shown himself to several doctors but all of them said that there was no problem with him. He had been even been to the hospital once with an uncle but they had given him a course of drugs and said he had no major disease. During the year he went to the village. There he got himself checked up in a hospital in Pratapgarh and some abdominal surgery was advised. He did get operated and spent Rs. 8000 on the surgery out of which 1000 the family had and 7000 were been taken as loan. The interest rate on this amount was Rs. 10 for a 'sainkra'.

On his return, he said his abdominal pain had ceased but he
was very depressed. He said if they kept paying interest, how would they ever return the loan and on top of that his 'jawan' sister was sitting at home; how would they ever get her married. He said 'Ek to bimari, upar se bhukmari aur upar se ladke ki shadi ka chakkar'. If they did not return this loan quickly then who would give a loan when his sister got married. They had to give a dowry otherwise their own relatives would talk about them. Even if she was made to sit at home ie the marriage was delayed the relatives would say 'jawan ladki ko ghar mein bitha kar rakha hai'.

Even several months after his surgery he continued to keep lying down as he said he felt very weak. Santosh his wife felt that he would never be able to do anything; he would only keep sleeping or playing cards with his friends.

The changes in Rahul's nutritional status during the follow up period are shown in Figure 4.3.6.

During the study period Rahul had two episodes of diarrhoea once 'due to the cold' and the second time when he had chicken pox. For both he was taken to their 'family doctor' Dr. Gill by his dadi. They went to Dr. Gill for all illnesses as he was very good because 'ek he khuarak se theek ho jaate hain. Also, because he 'knew' them and give 'udhar'.

The mother and dadi both knew about ORS an SSS from Dr. Gill
and the TV. During the first episode Rahul was not given ORS or SSS because of the cold weather, during the second one it was not made because he did not drink it.

The child continued to consume what he routinely did i.e. 2 ‘phen’, 2 biscuits, 1/2 chapati, 1 cup milk and 1/2 cup tea during a 24 hour period.

Case report 7.

Sapna’s grand parents have lived in Delhi for the last 30 years. They left their village in district Bharatpur in Rajasthan and came to Delhi because of family quarrels regarding land in their village. Her grandfather started a ‘kabari’ shop which her ‘tau’ ran now.

Since their arrival they had hardly ever visited their village; her grandmother said that this was their home now. They were initially living as tenants in nearby Madangir but moved to this area and ‘juggi daal le’ as the others were doing. After her two sons got married (to 2 sisters from Lajpat Nagar) they set up separate jhuggis in the same lane. Sapna’s grandfather was now dead and her granny lived with her elder son.

At the beginning of the study Sapna’s father Vijay used to drive a three wheeler owned by someone. He then earned Rs 2000 a month after paying off the charges for hiring the scooter. During that period he was always frustrated because he wanted to buy his own three wheeler. A few months later he sat at home for several days after a fight with the ‘maalik’. They then decided that he
should somehow try and buy his own. Sapna’s mother had put in a ‘kameti’ of 20,000 from which she prematurely withdrew Rs 10,000 at a loss. They paid that as a lump sum and Rs.500 had to be paid every month as instalments. The scooter cost Rs. 45,000. Vijay was happy now and earned Rs. 75-100 a day; occasionally even more.

He had passed the 8th standard, was smart and very fond of putting loud music on his music system which had two small speakers. Whenever he was at home, their whole lane reverberated with popular Hindi film songs. Krishna, his wife did all the shopping for the household. Vijay gave her money every morning so she always had some with her. The only things he bought for the household were mutton and fish as ‘us ko inke pehchaan hai’.

Sapna, their only child was very cute. The parents doted on her especially the father. Her mother had strict instructions to immediately take Sapna to a doctor in case of any illness. Krishna her mother said ‘ek he ladki hai, uske papa us kay peechay lage rehte hain’. The father and daughter were inseparable; if the father had to go somewhere for a few days, it was said that Sapna fell ill. However, her mother and granny felt that one daughter was enough as in their caste people demanded a lot of dowry; it was between 1 to 2 lakhs these days. If one wanted an educated boy it was even more even if the boy earned nothing.

For all illnesses the family preferred to visit a private doctor. Krishna did not like to visit the government dispensary. She said, ‘kaun lambi line mein khara ho aur us se aaram bhi nahin aata’. There were no long queues in the private clinics; ‘phataphat paise diye, bacche ko dikhaya aur ghar aa gaye’.
Sapna developed watery diarrhoea one Saturday morning. Her mother immediately took her to Gupta doctor in the DDA flats because 'us ki davai lagti hai'. He gave Sapna one injection and some purias. She gave Sapna only 1 puria, firstly because Sapna did not like oral medication and secondly the mother felt that her diarrhoea increased after it was given. She took Sapna to him again the next day and asked for an injection as it would have a faster effect. He gave her one and Sapna was better the following day.

Krishna knew about the ORS packet but she said 'aadhi goli mein theek ho jati hai uska koi phaida nahin hota'. Her mother in law who was listening said 'hum yeh chonchale bazi nahin karte'.

During another episode of watery diarrhoea the mother said, 'jab davai ley aate hain to ghol kyon pilaye. Ghol to tab banaye agar dava nahin karen, hum to turrant davai de dete hain'. She knew about the SSS from the TV. She said on the TV they said that if the child had any illness he should be taken to a hospital. During diarrhoea 'baccha sukh jata hai, pani kam ho jata hai, kuch garam pani cheeni ka bhi batate hai'. She however never made it because Sapna did not consume sweets so she would never consume the sweet mixture. The doctor she visited had never advised SSS or ORS.

The changes in Sapna's nutritional status during the follow up period are shown in Figure 4.3.7.

Towards the middle of the study Krishna developed
severe headaches. She said these were because she was pregnant. She would get a headache; would vomit and the pain would cease.

In the beginning of July, one night her labour pains began. By the morning they had stopped. Vijay was sent to call the 'Bengali doctor' as his mother felt that 'dard shuru hone ke baad ruk jaye, to darne ki baat hoti hai'. The doctor administered an injection; the pains returned and two hours later Satish was delivered by a dai at home.

For two days he was fed gur water with a cotton swab and the 'ganda' breast milk was expressed and discarded as advised by the dai. Breast feeding commenced the third day.

Case report 8.

Twenty year old Pappu and Rashida his wife, a few months older than him, lived with their three children Riyazuddin, Sirajuddin and Ikramuddin in an enclosure which had three jhuggies. The family lived in one; the other two belonged to Pappu's parents and his elder brother and his family. Both had never been to school.

Pappu's parents were Muslims belonging to the 'Sayed' caste had been living here since 1976. His father was a zamindar in village Gangapur in the district Sawai Madhopur in Rajasthan. Two of the thekedaars employed by him cheated them of all their money so the family had to sell 5 kg of silver and come to Delhi. His father was very old now, his mother (Rashida's mother in law) earned a little money by getting entangled wool from the wool factory in Tigri and making balls with it. She cooked separately
but on many occasions when I visited Ikram's home she would prepare tea for me in hers. Pappu now worked in a small factory in Karolbagh which made sandals for export; he said he was an expert at making sandal heels.

Ikramuddin who was one year old at the beginning of the study weighed 6 kilos and always had diarrhoea. His mother Rashida was unable to understand why this child of hers, unlike her other sons had diarrhoea so frequently; ‘pata nahin kyon hai, iske kuch baat he samaj mein nahin aa rahi; ek baar do bottle bhi charwahi, tandarusti aa gayi par tatti nahin ruki’.

Her other children when ill were taken to Dr. Gill and ‘unko davai lagte hai’ but the youngest one ie Ikram did not respond to the medicine given by this doctor.

On the first visit to the household Ikram had diarrhoea where he was passing ‘dhage dhage, hare hare, peelay peelay dast’. He was then being treated by Dr. Khan who had advised a syrup for vomiting, one for the fever and an anti diarrhoeal. The following month Ikram had another episode. This time, his mother heeded the advice of a lady who lived nearby. Last year her child had a similar problem and was cured by a doctor who practiced near Virat cinema; she did not know his name but he was supposed to be very competent. Throughout the year Ikram had several episodes; he was taken to the same doctor because when he continued to eat his medicine his diarrhoea became a little better. A trip to this doctor involved a walk of 45 minutes either side and the wait at the clinic could be for over an hour. The visit cost a minimum of
Rupees 12.

During the year Rashida went to this doctor for months at a stretch. She would leave her home at 9.30 am and return only at 12 noon. She discontinued her visits to the doctor only when he asked her to stop because she was afraid that if she stopped on her own when she felt Ikram was a little better, the severe diarrhoea might recur. However, she did wonder aloud at intervals whether the doctor would ever really ask her to stop in a hurry, because her not going would mean 'uske paise band ho jayenge'. She felt this way because at each visit when she asked the doctor whether she should stop her visits he kept quiet; she thought this was so because he was worried that his fees would stop.

During the one year Ikram was taken to various doctors, one in Hamdard hospital, the Bengali doctor, Gill doctor and also during a trip to their village made for a wedding, to the village doctor.

A few months back during an episode of diarrhoea the child went limp and cold one evening. It was 8 pm and the mother and grandmother ran to Gill doctor who asked them to take the child to a hospital as 'sharir mein pani khatam ho gaya hai'. They took the child to a nursing home in Devli (Singh nursing home) where he was admitted overnight. Two bottles of intravenous fluids were given to him during the night and after paying Rs.500 as hospital charges they came home the following morning.
The changes in Ikram's nutritional status during the follow up period are shown in Figure 4.3.8.

Rashida felt that the reason why Ikram was always ill was 'pet mein kharabi hai, liver kharab hai'. She was convinced that the child needed an Xray to diagnose what the exact problem was. She also knew that she should take Ikram to a big hospital for a check up but she did not like big hospitals because 'wahan gareebon ke sunai nahin hoti'; only the rich got treated there.

Also, she vividly remembered the day on which her devar who was working as a halwai in this slum spilt hot oil on himself accidentally; he was taken to Safdarjung hospital where the doctors gave him an injection (according to the family the injection contained 'jehar') immediately after which, he passed away.

Rashida was advised an ORS packet by Dr. Bhatnagar but she did not give it because she had used it in an earlier episode; 'mol ka aata hai aur Ikram peeta bhi nahin.' She made SSS at home; she knew how to make it because Dr. Gill and Dr. Khan had taught her when she had gone to them. She took 1 tiffin of boiled water; she used a tiffin because the doctor had emphasized that she should use a clean container to make the SSS and their tiffin was made of steel while her other utensils were made of copper. She added 1tsf of
sugar to the water and 1 three finger pinch of salt to it. On most mornings she made this and Ikram was given small amounts with a spoon during the day. She threw away the remaining amount in the evening. She said on some days when Ikram passed several watery stools he was able to finish the tiffin by the evening. However, during the days she visited Dr. Bhatnagar it was not being made as she was spending the whole morning going there. On the days he passed a large number of stools his appetite was markedly reduced; he did not even drink water so she specially prepared SSS for him which he liked.

During her visits to Dr. Atul Bhatnagar she was asked to stop Ikram’s intake of artificial milk (which he did not consume in any case) and breast milk as the doctor felt ‘doodh se kharabi hai.’ Instead, Rashida was asked to feed the child khichri, roti and sabzi. The mother said ‘jabardasti se khilati hoon’ but she said she had not stopped breast feeding; she would only stop if the child started eating something.

Ikram was very fond of tea and could drink it the whole day. The doctor had advised her to buy powder milk. She did buy a ‘dibba’ from the chemist but Ikram did not like the taste so his brothers consumed the dry powder.

During the episode the child consumed 1 to 1 1/2 cups tea in the morning, 2-3 tsf of khichri at noon (moong dal and rice) and tea again in the evening. His mother said that the child’s appetite reduced markedly whenever he had diarrhoea.

Rashida said she really put in a lot of effort to bring up
this child of hers; whenever she had money she even gave Ikram one almond a day.

**Case report 9.**

Sohanlal aged 30 years and Tara 27 years belonged to district Dosa, in Rajasthan. They lived with their three sons and daughter Santoshi. They left their village 15 years back 'kamane khane ke liye'; were initially in Kotla, then in Sadiq Nagar and moved to Tigri 10 years back.

Sohanlal was a 'mistri'; he white washed houses and was attached to a contractor. He earned Rs. 500-700 a month. He often brought left over white wash from his work place so their jhuggi always looked freshly painted and clean. On one occasion, he even brought some cement and gravel home after which Tara made the area outside the entrance of the jhuggi 'pukka'.

Tara worked very hard and efficiently. Her home was always clean, so were her children. Whenever one saw her she was either doing some household work or cleaning the jhuggi or had gone to buy supplies. Even when I saw her for the first time when she was pregnant (before Santoshi was born) she was physically very active. She would be sitting on the roof of her jhuggi making 'upalas' to be used in their 'chulha'. She said she spent a minimum of 2-3 hours a day cleaning the jhuggi because she disliked a dirty home.

Tara said she would like to stop having children now; especially after her desperately wanted daughter was born. She was willing to get operated but her husband did not allow her to
because he felt 'kaam kaun karega'. She woke up early, made tea and chapatis. Her husband ate these and left for work. They all ate the previous night’s vegetable for breakfast and lunch. After he left, Tara cleaned their home, washed clothes, bathed the children and at noon sent them off to school. After lunch she would sit with Santoshi or with the other women outside her home and gossip for a little while.

Her husband gave her all the money he brought home. She did all the buying for the home. She went to the childrens’ school, to the relatives homes whenever required because ‘agar aadmi ghar ki jhanjhaton mein padega to bahar kaam kaise karega’. Besides, if he took a day off ‘paise kat tey hain’ and so they avoided his taking a day off.

Tara avoided working outside the home but twice during the year she started going to Sainik farms to do ‘beldari’. She then earned Rs 30 per day. She worked for 6 days, the thekedar paid her for 3 and said he would pay the remaining later. She started work because her husband had not received his wages for the last 2 months (Rs.50-60 per day) and they were having a tough time. Her husband hated to see her work, told her not to; her neighbours also talked about her but she said she had no choice; she could not sit at home and watch if she had no money to feed her children.

Tara said that so much money came into their house but she did not know where it all went. The reason for this sad state of affairs was that they had not been to their village to worship their ‘devtas’. These devtas were actually her two dead sons.
(according to her when children died some of them became 'devtas'). When asked whether they worshipped their statues or pictures and she said that they were in the form of two pure gold 'tukris' and were lying in her mother in laws place in the village. The ritual included a trip to the village, a consultation with the person 'jisko devta aate hain' and then carrying out whatever he suggested. He usually advised the parents to bathe the 'tukris' in Haridwar. For Tara’s family it meant that they came back to Delhi and then went to Haridwar. They would then have to return to their village via Delhi again and invite everyone for a meal.

Tara always kept Dependal M at home because one never knew when one of the children might get diarrhoea. She said 10 tabs were available at the chemist for Rs.5.50. She knew about the drug from a chemist who had advised it for her diarrhoea a year back. She had found it so effective that she always kept a few tablets at home. She gave the tablet to her children according to their age; a whole tablet to the older son who was aged 9 yrs; half a tablet to the younger one and 1/4 tablet to the youngest. She waited for 2-3 days; if the child did not recover then she went to Dr. Gill who charged Rs. 8. She tried his medicine for 2-3 days. If there was still no relief she visited the 'Taxiwala doctor' in Khanpur who charged Rs. 40 per consultation.

Santoshi started passing 4-5 watery stools in 24 hours at the age of two weeks. The mother felt that the child had diarrhoea 'sardi ke vajah se'. Tara took the child to Dr. Gill on the following day as she had been instructed by her husband to take the
children to a doctor 'as soon as' they fell ill. Dr. Gill gave her a syrup which had no effect and charged Rs. 8; she went to him again the next day and he gave another syrup which also had no effect Rs. 8. She then took Santoshi to the 'Taxi wala' doctor in Khanpur who charged Rs. 40 per consultation. Her husband occasionally got treated by the same doctor and he had told the mother that the doctor was good. He gave Santoshi a syrup but it did not help the child. She then consulted the dai who had delivered Santoshi and was advised to go a doctor near Virat cinema who charged less and yet gave good medicine. He prescribed Septran for the child (it cost her Rs. 8.50 his consultation charges were Rs. 3) and asked the mother to give 1tsf twice a day to the child till she recovered. He also advised Otrivin nasal drops (cost Rs. 8.17) as the child had noisy breathing. According to the mother Santoshi recovered with this medicine.

The changes in Santoshi's nutritional status during the follow up period are shown in Figure 4.3.9.

Santoshi's mother knew about ORS and SSS but she did not give them as the child was too small; 'vaise bhi naak band hai, pani ya koi ghol peene se aur thand lag jayegi'.

The child was breast fed. The mother started giving her janam ghutti after birth but only gave it for 3-4 days because it caused
loose motions and also Santoshi 'upar ankhen kar leti hai jaise thand lag rahi hai'. Santoshi was given tea containing adarak (1/2 cup) twice a day. This was given because the mother felt that the child cried excessively because she was hungry and also consumption of adarak tea was good in winter. During diarrhoea the child was given a little mashed boiled egg yolk with 1 tsf breast milk every morning as it was good for children in winter.

This she did while they were in Delhi. During the follow up period the family went to their village 'devta poojne' during the month of June. There two year old Tarun developed diarrhoea. As the doctor lived far away they decided to try home remedies first like everyone in their village did. Also, she said her mother in law had knowledge of all these things so while in the village she did whatever she advised her to do. Mint leaves were soaked in water and then ground to a paste. The juice was then strained in a piece of cloth. The paste was applied all over the body and sugar was added to the juice which was then rubbed over the child’s head and given to him to drink. As the child did not recover with this then the same was done with onion. Ground ‘sonth’ was also given to the child with sugar. As all these cooled the system Tarun’s diarrhoea ceased.

The changes in Tarun’s nutritional status during the follow up period are shown in Figure 4.3.10.
Santoshi also developed 'hare hare' stools while in the village. Her mother in law told her to keep the stool in a container and took her to a distant 'aankhre' tree from which 'safed doodh nikalta hai'. The stool was kept under the tree and a 'mantra' chanted which meant 'hari hari tatti ley jao, sahi wali wapas le aao'. This was done for two days and Santoshi recovered on the third day.

Tara’s children had several episodes over the year. Tarun had 8 and Santoshi 7. She took them for treatment in those where the stool frequency was very high, the child stopped feeding or became 'sust'. She did not take them for treatment in all because 'khana khilayen, kapre pehnayen ya davai dilwayen'.

Tara knew about ORS. She said she knew it prevented dehydration but how would her children ever develop dehydration; 'ham aisa kaam hi nahin karte, doctor ke paas jaldi le jaate hain'. During another episode which occurred during summer she said, 'us ki yaad he nahin aati, bahut jyada tatti karne se yaad bhi aa jata'.

She also knew the preparation of SSS and knows it had the same role, but she said; 'seedhi davai dene se matlab rakhte hain; pata nahin us se theek hota hain ya nahin, ise liye davai de dete hain'.

A year back their eldest son Manoj developed fits. They took him to Batra hospital where the charges turned out to be Rs. 800 for 11 days admission and Rs. 1170 for an 'xray'. there the doctors said his complete treatment would cost between 40-50 thousand and take about 9 months. Meanwhile, Sohanlal met a lady whose house he had built. She said she worked in the Arya Samaj at
Vasant Vihar and would get Manoj treated free of cost. Initially, he was given Streptomycin injections and now Manoj was on drugs for the last several months. He had not had a convulsion since then.

These are only illustrative case reports. The trends emerging out of the 60 case reports on diarrhoea along with those from a random sample of 200 households are presented in the following sections.