8.1 INTRODUCTION
Health achievement is a measure of level of development of healthcare facilities in any areal unit because developed healthcare facilities are favourable for good health attainment. Health achievement of Howrah district includes the degree of dependence of people on government’s health institution, immunization of children, use of family planning or welfare methods, status of birth rate, infant mortality, crude death, maternal mortality ratio, number of institutional deliveries, safe drinking water and household latrine facilities. In this chapter an attempt has been made to find out the status of current (2007-08) health achievement of the district.

There are many aspects of healthcare development of the district which do not have reliable data. Hence in this chapter the achievement of district regarding the pressure of population on public health institution, Universal Immunization Programme, Family Welfare Programme, performance of hospitals, ICDS Programme, control of birth rate, reduction of mortality, reduction of infant death, institutional deliveries and Reproductive and Child Health (RCH) will be evaluated on the basis of limited data of recent time.

8.2 DEPENDENCE OF PEOPLE IN GOVERNMENT’S HEALTH INSTITUTION

8.2.1 NUMBER OF PATIENTS TREATED
Generally poor and middle class or poor people in India fully depend on Health Centers, Sub-Centres, BPHCs, Rural Hospitals, SDHs and District Hospitals for their treatment of various diseases. This means usually most of the people of any region of the country actually depend on Government Health Institutions. Number of patients treated in health institution reflects the status of healthcare facilities of such regions.

In this chapter, special emphasis has been placed on the number of patients treated in medical institutions of the district during either 2004 or 2007 the cases may be.
**District Level Scenario**

In 2004, the number of patients treated in government’s health institutions decreased to 2102967 nearly half of 2001. In this year, the percentage of indoor patients increased sharply to 10.92% registering more than 3 times increase while the share of outdoor patients reduced to 89.08%. This is a good indicator of development of healthcare facilities in the district since 2000.

In sub-regional level, with regard to share and number of patients, strong disparity existed among various Police Stations (PS) of the district. In Howrah Municipal Corporation 442534 patients accounting 21.04% of total patients of the district were served, while in Sankrail 65264 people (3.10%) were treated in 2004.

**8.2.2 PHC OUT PATIENT DEPARTMENT ATTENDANCE UP TO 2007**

In this section importance will be given on the level of development of Out Patient Department (OPD) in different Primary Health Centres (PHCs) of the district at present time (2007). OPD is a key indicator of primary healthcare facilities of the rural areas of the district. In previous section it was found that more than 97% of total patient treated in government’s health institution were of outdoor type. This provides ample evidence that outdoor patients are of more importance than the indoor ones in any healthcare system.

1) **Total Patient in OPD**

The study indicates that, in 2007, there was very strong imbalance in number of outdoor patients in different PHCs under different BPHCs/RHs of the district. The maximum number of outdoor patients attended in PHCs was registered under Jagatballavpur Rural Hospital in Jagatballavpur PS, where 180253 patients were treated in OPD of different PHCs comprising 15.23% of the total district outdoor patients.

On the other hand, minimum number of outdoor patients was treated in two PHCs under Kulai BPHC of Panchla PS with only 2.71% of total outdoor patients of the district.

2) **Share of New Patients in OPD**

In Howrah district as whole the outdoor patients in PHCs of different PSs were of two types – New and Old. In 2007, out of total 1183663 outdoor patients 69.37% were new and 30.63% were old. Thus, it is obvious that new attendance in OPD of PHCs was prevalent in
the district and level of dependence of new patients has been increasing. However, there was very high disparity regarding the number of new patients in OPD.

8.3 ACHIEVEMENT OF UNIVERSAL IMMUNIZATION PROGRAMME (UIP): 2007-08

The UIP introduced by the Government of India in 1985-86 recommended that all pregnant mothers should be vaccinated against tetanus by 1990. The Programme was merged with child survival and safe motherhood Programme in 1992-93 and this was again merged with RCH Programme in 1996.

In West Bengal the UIP has been continuing. The UIP has the target of covering at least 85% of all infants against the six vaccine preventable diseases by 1990. This scheme was extended to 100% immunization coverage. The six vaccine preventable diseases are TB (BCG), Diphtheria, Pertusis (Whooping Cough), Tetanus (DTP), Polio and Measles; besides Tetanus Toxoid (TT) for pregnant mothers.

In this study the performance of UIP in the district of Howrah (2007-08) has been evaluated along with its regional disparity at PS level.

8.3.1 TETANUS TOXOID (TT): UIP FOR PREGNANT WOMEN

As per recommendation of the UIP, each pregnant mother should be vaccinated with at least two TT for combating Tetanus during their pregnancy.

8.3.1.1 District Level Scenario

In 2007-08, the number of women receiving TT increased and reached to 81284 persons of which 63.93% were rural and 34.03% were urban. The achievement rate of TT administration was good with 93.54% of ELA (Expected Level of Achievement).

8.3.1.2 Sub-Region Level Scenario

In the year 2007-08, sub-region pattern of TT of pregnant women in different PSs of the district showed very high disparity as indicated from the range of 14.10% in Howrah MC to 1.31% in Bally.
Table-8.1: Status of TT Vaccines in the District of Howrah (2007-08)

<table>
<thead>
<tr>
<th>Share of Police Stations in Receiving TT</th>
<th>Name of the Police Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.5-10.5</td>
<td>Howrah Municipal Corporation, Uluberia</td>
</tr>
<tr>
<td>10.5-5.5</td>
<td>Domjur, Sankrail, Jagatballavpur, Panchla, Bagnan, Lila, Shyampur</td>
</tr>
<tr>
<td>5.5-0.5</td>
<td>Amta, Joypur, Udaynarayanpur, Bally</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the District Health Report (DHR), 2007-08, Office of the CMOH, Howrah

83.2 DPT

DPT is generally received by the children for combating Diphtheria, Pertusis and Tetanus. These vaccines are very important for child immunization.

83.2.1 District Level Scenario

In 2007-08, ELA of DPT vaccines was 78264. In the district, 74566 children received DPT and of this 69.3% were in rural and 20.3% were in urban areas. This shows the success rate of 95.27%. In this year 1573700 children received DTP-3 doses in West Bengal. Howrah district comprised 4.74% of these total children.

83.2.2 Sub-Regional Level Scenario

Table-8.2: Status of DPT Vaccines in the District of Howrah (2007-08)

<table>
<thead>
<tr>
<th>Share of Police Stations in Receiving DPT</th>
<th>Name of the Police Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-12</td>
<td>Howrah Municipal Corporation, Uluberia</td>
</tr>
<tr>
<td>12-6</td>
<td>Bagnan, Shyampur, Domjur, Sankrail</td>
</tr>
<tr>
<td>&lt;6</td>
<td>Udaynarayanpur, Joypur, Amta, Panchla, Jagatballavpur, Lila, Bally</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the DHR, 2007-08, Office of the CMOH, Howrah

In sub-region level of the district, the DPT vaccines were not evenly distributed in the year of 2007-08. Very strong imbalance existed in the PSs of the district as is found in the wide range with 16.16% in Howrah Municipality and 0.59% in Bally.

83.3 Polio

Vaccines of Polio are very essential for combating Poliomyelitis among the children. This is another component of the UIP.
8.3.3.1 District Level Scenario

In 2007-08, the ELA reduced to 78264 indicating the poor achievement of OPV-3 vaccines in the district. In this year, full coverage was not possible in the district and 72100 children were given OPV-3 vaccines. Thus the coverage was 92.12% of the target.

In this year, West Bengal registered administration of 1524566 Polio doses. The share of OPV-3 of the district was 4.73% in the state.

8.3.3.2 Sub-Region Level Scenario

In sub-region level of the district Polio 3rd dose vaccines were very much unevenly distributed as seen in wide range varied from 16.70% in Howrah MC to 0.59% in Bally PS. Based on this range the district can be divided into four categories.

<table>
<thead>
<tr>
<th>Share of Police Stations in Polio Vaccines</th>
<th>Name of the Police Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>High (&gt;12)</td>
<td>Howrah Municipal Corporation, Uluberia</td>
</tr>
<tr>
<td>Moderate (12-8)</td>
<td>Bagman, Shyampur</td>
</tr>
<tr>
<td>Low (8-4)</td>
<td>Domjur, Sankrail, Udaynaryanpur, Joypur, Amta, Panchla, Jagatballavpur, Lilua, Bally</td>
</tr>
<tr>
<td>Very Low (&lt;4)</td>
<td></td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the DHR, 2007-08, Office of the CMOH, Howrah

8.3.4 BCG

BCG vaccines are very much useful for preventing TB of the children. Hence the achievement of BCG vaccines in the district is quite important.

8.3.4.1 District level Scenario

In 2007-08, the ELA reduced to 78264 due to poor coverage of other vaccine in the district. 89265 babies were given BCG vaccines in the district accounting for 114.06% achievement rate of ELA. In regard to BCG vaccines Howrah district exhibited excellent performance. Among the BCG recipients 57.02% were in rural and 42.58% were in urban areas.

In this year, West Bengal registered administration of 1804918 BCG vaccines. The share of BCG vaccines of the district was 4.83% in the state.

8.3.4.2 Sub-Region Level Scenario

In sub-regional level very strong disparity existed in different PSs of the district with regard to the vaccines of BCG being highest in Howrah MC (18.17%) and lowest in Bally PS where
The district has been divided into four categories of BCG administration on the basis of share of PSs.

**Table-8.4: Status of BCG Vaccines in the District of Howrah (2007-08)**

<table>
<thead>
<tr>
<th>Share of Police Stations In BCG Vaccine</th>
<th>Name of The Police Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>High (&gt;12)</td>
<td>Howrah Municipal Corporation, Uluberia</td>
</tr>
<tr>
<td>Moderate (12-8)</td>
<td>Shyampur</td>
</tr>
<tr>
<td>Low (8-4)</td>
<td>Domjur, Sankrail, Jagatballavpur, Panchla, Bagnan, Sankrail</td>
</tr>
<tr>
<td>Very Low (&lt;4)</td>
<td>Bally</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the DHR, 2007-08, Office of the CMOH, Howrah

**8.3.5 MEASLES**

Vaccines of Measles are very much necessary for the children below 1 year. This is because it creates immunity power within the body of children against Measles.

**8.3.5.1 District Level Scenario**

In 2007-08, 70378 babies which accounted 89.92% of ELA of 78264 were provided vaccines of Measles in the district. Of this 71.03% were in rural areas and 28.97% in urban areas. In this year Howrah district was characterized by very poor performance in this regard.

In this year 1539610 babies were administered measles in West Bengal as whole. The share of the district in the state was 4.57%.

**8.3.5.2 Sub-Region Level Scenario**

In sub-region of the district, vaccines of Measles were distributed very unevenly. The maximum number of vaccines was supplied to Howrah Municipal Corporation where 12788 children received it, accounting to 17.55% of the total vaccines of the district in 2007-08.

**Table-8.5: Status of Measles Vaccines in the District of Howrah (2007-08)**

<table>
<thead>
<tr>
<th>Share of Police Stations Measles Vaccine</th>
<th>Name of Police Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>High (&gt;12)</td>
<td>Howrah Municipal Corporation, Uluberia</td>
</tr>
<tr>
<td>Moderate (12-8)</td>
<td>Shyampur, Bagnan</td>
</tr>
<tr>
<td>Low (8-4)</td>
<td>Domjur, Udaynarayanpur, Joypur, Amta, Panchla, Jagatballavpur, Lilua, Sankrail</td>
</tr>
<tr>
<td>Very Low (&lt;4)</td>
<td>Bally</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the DHR, 2007-08, Office of the CMOH, Howrah.
On the other hand, the minimum number of vaccines was provided in Bally PS where only 410 children received the same accounting only 0.58% of the districts total vaccine. On the basis of share of PSs in the district the district has been divided into four categories.

8.3.6 VITAMIN A DOSE

8.3.6.1 Vitamin A 1st Dose

Generally it is found that well to do families show little interest in receiving Vitamin A 1st Dose, reducing its success rate.

A. District level Scenario

In 2007-08, the situation was marked high performance as 66632 babies were provided with 1st dose of Vitamin A. This constituted 85.14% of ELA of 78264. Still the district is performing at under rate. Of them 78.53% were in rural areas and 21.47% in urban areas. The poor and middle class family received more Vitamin A 1st Doses.

In this year 1518228 children took Vitamin A 1st Dose in the state of West Bengal. The district accounted 4.39% of all doses 1 of the state.

B. Sub-Region Level Scenario

In 2007-08, the receiving of Vitamin A 1st dose varied greatly from PS to PS in the district of Howrah. The maximum number of Vitamin A 1st dose was administered in Howrah MC which shared 16.68% of the total children of the district who received same. On the other hand the, lowest number of children receiving Vitamin A 1st dose were recorded in Bally PS where only 357 children took same sharing 0.54% of the total children in the district.

8.3.6.1 Vitamin A 2nd to 5th Dose

In 2007-08, the district recorded very high number of children receiving Vitamin A 2nd to 5th Dose. This year, in the district as a whole 201963 children received Vitamin A 2nd to 5th Dose contributing 4.46% of 4525054 children receiving the same in West Bengal.

8.3.7 PERFORMANCE OF FOLIFER (MOTHER)

In UIP one vital component is immunization of pregnant mother against Tetanus and Anaemia. For controlling Anaemia, Iron Folic Acid (IFA) is supplied to pregnant mothers. Now the performance of Folifer (FA) in the district has been evaluated.

In 2007-08, the number of mother receiving Folifer was 66555 which accounted for just 4.81% of 1384850 mother of West Bengal.
8.3.8 FULL IMMUNIZATION OF CHILDREN

The babies who have taken all six vaccines – BCG, DPT, Polio, and Measles – are considered fully immunized children. This means they are safe from TB, Diphtheria, Whooping Cough, Tetanus, Polio and Measles. Hence level or percentage of full immunization is a key indicator of any healthcare development of any region.

8.3.8.1 District Level Scenario

In 2007-08, the district showed remarkable progress of UIP by reaching 85.99% coverage. Yet 14% children of the target were not fully immunized. 67299 children constituting 85.99% of ELA of 78624 were fully immunized in this year. This provides ample evidence that Howrah district is still very poor achiever of UIP. Again, 74.46% belonged to rural areas and 25.54% belonged to urban areas. The rural people fully depend on government institutions for receiving all vaccines, thus increasing the number; while in urban areas many people receive vaccines from private doctors which is not registered in the government records and sometimes give wrong impression of lower immunization.

8.3.8.2 Sub-Region Level Scenario

There was a very high disparity among the PSs of the district in regard to number of fully immunized children in the year 2007-08. According to the data of office of the Chief Medical Officer of Health (CMOH) of Howrah, the number of fully immunized children was highest in Howrah MC where 9589 were fully immunized accounting 14.25% of total cases of the district. On the other hand, the number of such children was lowest in Bally PS where only 872 received all vaccines occupying only 1.30% of the district.
Fig-8.2: Achievement of UIP in Different Police Stations of Howrah District: 2007-08

Thus, it is apparent that the number of fully immunized children was not even throughout the district. It highly varied from PS to PS. On the basis of the variation of share of the PS, the district has been divided into three categories.

Table-8.6: Status of Full Immunization of Children in the District of Howrah (2007-08)

<table>
<thead>
<tr>
<th>Share of Police Stations in FIC (%)</th>
<th>Police Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>High (18-12)</td>
<td>Howrah Municipal Corporation, Uluberia, Shyampur</td>
</tr>
<tr>
<td>Moderate (12-6)</td>
<td>Domjur, Sankrail, Lilua, Bally</td>
</tr>
<tr>
<td>Low (&lt;6)</td>
<td>Udaynarayanpur, Joypur, Amta, Panchla, Jagatballavpur, Bally</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the DHR, 2007-08, Office of the CMOH, Howrah

8.4 ACHIEVEMENT OF FAMILY WELFARE PROGRAMMES IN HOWRAH: 2007-08

Family Planning as per the definition of an expert committee (1971) of WHO is “the way of thinking and living that is adopted voluntary upon the basis of knowledge, attitudes and responsible decision by the individuals and couples in order to promote health and welfare of the family group and thus contribute effectively to the social development of a country”. (Park, 2001, P: 328). Family Planning refers to practices that help individuals or couples to
attain certain objectives: (a) to avoid unwanted birth, (b) to bring about wanted births, (c) to regulate the interval between pregnancies, (d) to control the time at which birth occurs in relation to the ages of parents and (e) to determine the number of children in the family.

India launched a nationwide “Family Planning Programme” in 1952. In the different Five Year Plans many Family Planning Infrastructures (PHC, SC, Urban FPC, District and State Bureau) were established. In 1977, the Family Planning had been renamed “Family Welfare”. The expenditure on family welfare increased substantially in the 10th Plan with 27125 crore. For controlling family size, many contraceptive methods are followed in the country. Contraceptive Methods, by definition, are preventive methods to help women avoid pregnancies. They include all temporary and permanent methods or measures to prevent pregnancies resulting from coitus. The most common contraceptive methods used in West Bengal are - Pills, Condoms, Intra Uterine Devices (IUD), Vasectomy, Tubectomy, Rhythm or safe Period, and Withdrawal. Among these methods according to “Health on March” of various years, sterilization is the most common. Among the sterilization methods adopted, Tubectomy i.e. Female Sterilization is the most popular. Male Sterilization was common in the 1980s, and gradually it decreased highly in the 1990s and in it decrease to very low number (only 0.39% in 2001).

Howrah district being one of the relatively developed districts in West Bengal has been showing same trend in the family welfare. In the district Tubectomy and IUD are two common methods as exemplified from the cases treated in family welfare centres in 1998, 2001, and 2004. In the recent year of 2004 other methods (except TT and IUD) have been the most popular in the district, meaning TT & IUD are losing their important as contraceptive methods. The modern methods of family planning adopted by the people of the Howrah district for the year 2007-08 are measured below.

8.4.1 STERILIZATION

The number of sterilization increased in Howrah district from the previous year and 6568 persons adopted this method. Vasectomy increased phenomenally in the district with 615 cases (9.34%). The achievement rate of the sterilization in the district for this year (2007-08) was 48.70% of ELA (13465) i.e. nearly 100% increase but still Sterilization was quite low in the district.
In West Bengal the number of sterilization increased by more than 100% during the same period.

8.4.1.1 Vasectomy

(A) District level Scenario
Vasectomy got its popularity back as 615 male persons went through sterilization. This is a very good attitude of the people in the district.

(B) Sub-Region Level Scenario
Vasectomy regained its popularity in the different police stations (PS) of the district. The number of Vasectomy varied greatly from PS to PS showing phenomenal disparity (Table-8.7).

<table>
<thead>
<tr>
<th>Share of Sterilization (%)</th>
<th>Police Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Shyampur, Lilua</td>
</tr>
<tr>
<td>&gt;10</td>
<td>Domjur</td>
</tr>
<tr>
<td>10-5</td>
<td>Joypur, Amta,</td>
</tr>
<tr>
<td></td>
<td>Panchla, Bagnan,</td>
</tr>
<tr>
<td></td>
<td>Howrah Municipal</td>
</tr>
<tr>
<td></td>
<td>Corporation</td>
</tr>
<tr>
<td>&lt;5</td>
<td>Bally, Sankrail,</td>
</tr>
<tr>
<td></td>
<td>Jagatballavpur,</td>
</tr>
<tr>
<td></td>
<td>Udaynarayanpur,</td>
</tr>
<tr>
<td></td>
<td>Bawria</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the District Health Report, 2007-08, Office of the CMOH, Howrah

8.4.1.2 Tubectomy

(A) District Level Scenario
The contraceptive method Tubectomy lost its importance in the district. In this year (2007-80) 4651 females adopted Tubectomy.

(B) Sub-Region Level Scenario
The number of Tubectomy reduced significantly in all of the police stations of the district except Uluberia PS where the figure increased slightly.

<table>
<thead>
<tr>
<th>Share of TT (%)</th>
<th>Police Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;24</td>
<td>Uluberia</td>
</tr>
<tr>
<td>24-18</td>
<td>Howrah Municipal Corporation</td>
</tr>
<tr>
<td>18-12</td>
<td>-</td>
</tr>
<tr>
<td>12-6</td>
<td>Bagnan, Udaynarayanpur</td>
</tr>
<tr>
<td>&lt;6</td>
<td>Bally, Lilua, Domjur, Sankrail, Jagatballavpur, Panchla, Amta, Joypur, Shyampur</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the District Health Report, 2007-08, Office of the CMOH, Howrah
In this year, the maximum number of Tubectomy was recorded in Uluberia PS where 1178 female persons went through Tubectomy with share of 25.33% of all cases of the district. On the other hand in Sankrail PS no cases of Tubectomy were registered. Thus the sub-regional level disparity was quite strong.

8.4.2 LAP

8.4.2.1 District Level Scenario

LAP is another form of sterilization like Vasectomy and Tubectomy. No record of LAP was available for previous years. In 2007-08 1302 persons adopted LAP for family planning in the district.

8.4.2.2 Sub-Region Level Scenario

The numbers of LAP were very much uneven in the police stations. In Howrah MC 931 cases of LAP were recorded with a share of 71.50% of the total cases of the district. It was followed by Udaynarayanpur where 84 (6.45%) female took LAP. On the other hand 6 police stations showed no cases of LAP.

<table>
<thead>
<tr>
<th>Share of Police Stations Using LAP (%)</th>
<th>&gt;7</th>
<th>7-3</th>
<th>&lt;3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police Stations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Howrah Municipal Corporation (71.81%)</td>
<td>Panchla, Domjur, Udaynarayanpur</td>
<td>Lilua, Shyampur, Bagnan, Bally, Sankrail, Jagatballavpur Uluberia, Amta, Jyopur, Bawria</td>
<td></td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the District Health Report, 2007-08, Office of the CMOH, Howrah

8.4.3 INTRA UTERINE DEVICE (IUD)

8.4.3.1 District Level Scenario

4005 female persons used Cu T, which is a form of IUD in the district. This consisted 4.48% of all IUD users of West Bengal. The achievement rate regarding the use of IUD had gone up to 98.38% indicating the increasing trend of using Cu T (IUD) in the district.

8.4.3.2 Sub-Region Level Scenario

The sub-region pattern of Cu T shows that it was popular in all of the police stations of the district, but very unevenly distributed (Table 8.10).
Table-8.10: Status of IUD in the District of Howrah (2007-08)

<table>
<thead>
<tr>
<th>Share of Police Stations in IUD Use (%)</th>
<th>Police Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-11</td>
<td>Howrah Municipal Corporation, Lilua</td>
</tr>
<tr>
<td>11-6</td>
<td>Bally, Panchla, Amta, Bagnan, Shyampur, Uluberia</td>
</tr>
<tr>
<td>&lt;6</td>
<td>Domjur, Sankrail, Jagatballavpur, Udaynarayanpur, Joypur</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the District Health Report, 2007-08, Office of the CMOH, Howrah

The highest number of Cu T adoption was recorded in Howrah MC with 532 females using Cu T accounting 13.28% of all cases of the district, whereas the lowest number of Cu T was registered in Udaynarayanpur with only 76 females used the same.

8.4.4 USE OF ORAL PILL (OP) and ORAL PILL CYCLES

8.4.4.1 District Level Scenario

The number of OP users increased slightly and reached 56404 in the district as whole. In the state of West Bengal 671064 females used OP in this year (2007-08). The share of the district was slightly reduced to 8.40% compared to the previous year.

In this year ELA was 786522 and success rate was 93.23%, though the OP cycles were 733258. However, in the district the trend of Use of Oral Pill was high since 2004-05.

8.4.4.2: Sub-Regional Level Scenario

Use of Oral Pill in sub-region level was very much uneven. The maximum number of Oral Pill was used in Shyampur PS where 181173 OP were used in cycle comprising 24.71% of the district total. The minimum number of OP was used in Bally PS where only 2905 were used.

Table- 8.11 Status of the Use of Oral Pills in the District of Howrah (2007-08)

<table>
<thead>
<tr>
<th>Share of Police Stations in Oral Pill Use (%)</th>
<th>Police Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-15</td>
<td>Shyampur</td>
</tr>
<tr>
<td>15-5</td>
<td>Lilua, Jagatballavpur Howrah Municipal Corporation Domjur Uluberia, Sankrail, Panchla, Bagnan</td>
</tr>
<tr>
<td>&lt;5</td>
<td>Joypur, Amta, Udaynarayanpur, Bally, Bawria</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the District Health Report, 2007-08, Office of the CMOH, Howrah
8.4.5 Use of Condom (NIRODH)

8.4.5.1 District level Scenario

In 2007-08, the ELA was 3456294 in the district and 357310 pieces of Nirodh were distributed throughout the district indicating 103.44% achievement rate. Thus it is clear that Howrah district is performing better in adopting the family control STD control measures.

8.4.5.2 Sub-Regional Level Scenario

The use of Nirodh was very uneven among the police stations. Uluberia PS registered the maximum number of use of Nirodh figuring 519074 pieces accounting 14.52% of total number of use of Nirodh.

Table-8.12: Status of Use of Nirodh in the District Of Howrah (2007-08)

<table>
<thead>
<tr>
<th>Share of Police Stations In Using Nirodh (%)</th>
<th>Police Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-10</td>
<td>Uluberia, Shyampur, Howrah Municipal Corporation</td>
</tr>
<tr>
<td>10-5</td>
<td>Domjur, Sankrail, Jagatballavpur, Panchla, Bagnan</td>
</tr>
<tr>
<td>&lt;5</td>
<td>Udaynarayanpur, Joypur, Arta, Bagnan, Bawria</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the District Health Report, 2007-08, Office of the CMOH, Howrah

8.4.6 MEDICAL TERMINATION OF PREGNANCY (MTP)

MTP became highly prevalent in the district as a method of family planning because 4420 pregnant adopted MTP. Besides, 44 pregnant used MTP Lig and only 19 female adopted MTP W Cu T for controlling birth in the district for the year 2007-08.

8.4.6.1 District Level Scenario

The number of MTP increased phenomenally in Howrah district compared to the state of West Bengal. In the district, 4379 MTP was carried out accounting 9.37% of total state figure of 46753.

8.4.6.2 Sub-Regional Level Scenario

Except Sankrail PS all other the police stations of the district have some cases of MTP. Very strong disparity existed among the police stations in regard to the MTP. The maximum cases of MTP were recorded in Bally PS with 230 cases. On the other hand, the minimum number of MTP was found in Udaynarayanpur with only 7 cases.
Table-8.13 Status of MTP in the District of Howrah (2007-08)

<table>
<thead>
<tr>
<th>Number of Cases</th>
<th>240-160</th>
<th>160-80</th>
<th>&lt;80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police Stations</td>
<td>Bally</td>
<td>Howrah</td>
<td>Domjur, Uluberia, Sankrail, Jagatballavpur, Panchla, Bagnan, Udaynarayanpur, Joypur, Shyampur</td>
</tr>
<tr>
<td></td>
<td>Amta</td>
<td>Municipal Corporation, Lilua</td>
<td></td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the District Health Report, 2007-08, Office of the CMOH, Howrah

8.4.7 MTP w Lig
MTP w Lig were adopted only in 2 police stations, namely Panchla and Howrah MC of the district under Government Health Institution. Only 26 cases of MTP w Lig were carried out in Howrah district of which 22 in Howrah MC and 4 in Panchla. It was popular mainly in urban areas.

8.4.8 MTP w Cu T
MTP w Cu T was carried out in only two police stations like Howrah MC and Lilua where 2 and 15 cases were registered respectively.

8.4.9 USE OF CONVENTIONAL CONTRACEPTIVES (CC)
In 2007-08, the number of CC users increased considerably in the district of Howrah as well as in the state of West Bengal. In the district 49657 persons adopted CC for controlling family size constituting 6.59% of all 753479 CC users of the state.

8.4.10 POSITION OF DIFFERENT FAMILY PLANNING METHODS IN TOTAL FAMILY WELFARE PROGRAMME
In the year 2007-08, the number of users of contraceptives was 121013. Of them, mostly adopted Oral Pill (46.61%). This was followed by Conventional Contraceptives (CC) that was used by 41.03% eligible persons. 5.43% persons adopted Sterilization as the family planning method. In this year, MTP (3.62%) superseded IUD (3.30%) use in the district.

8.5 VITAL STATISTICS OF THE DISTRICT
Vital Statistics include Crude Birth Rate (CBR), Crude Death Rate (CDR), Infant Mortality Rate (IMR), Child Mortality Rate (CMR) and Maternal Mortality Rate (MMR) etc. All of these reflect the morbidity pattern and status of healthcare facilities of any region. Higher
death rate of infant, child, mother and any person indicate poor status of healthcare facilities. Hence, these parameters have taken into account for the present study of Vital Statistics. It also indicates the trend of expectation of life in a society and provides knowledge about the relationship existing between various factors responsible for incidence of diseases. It is to be noted here that police station level data on vital statistics especially of previous data are not available no historical change of such statistics can not be done for the district of Howrah. Thus, an attempt has been made to study the situation for the district as a whole.

8.5.1 BIRTH RATES (BR)

Birth Rate is defined as “the number of live birth per 1000 estimated mid-year population in a given year”. This is simple indicator of fertility as well as an index of general health of people of any population.

The data of Estimated Birth Rate of Howrah district are available, except Howrah MC, Bally Municipality and Uluberia Municipality for the period 2005-06.

8.5.1.1 District Level Scenario

In 2005-06, the estimated Birth Rate was 19.44 in the district of Howrah as a whole, excluding three urban areas as mentioned earlier. This is a much better situation of healthcare facilities in comparison with the national birth rate of 25.00 in 2002. This is a very favourable index, as Howrah district has achieved the target of 23.00 in the Ninth Plan and 21.00 in the National Population Policy, 2000. This lower birth rate clearly indicates the people of Howrah district have adopted family planning methods very well.

8.5.1.2 Sub-Region Level Scenario

Out of 11 police stations (PS) (as data were not available for the two PSs) of the district of Howrah, six PSs were above the district rate. Bagnan, Joypur, Shyampur, Uluberia, Panchla and Jagatballavpur had slightly higher BR than the district BR but no PS crossed the national birth rate of 25.00. However, Uluberia (excluding Uluberia Municipality) and Panchla had slightly above BR compared to the national target of 21.00 of National Population Policy, 2000.

On the other hand, five PSs like Lilua (including Bally NM) Sankrail, Domjur, Udaynarayanpur, and Amta exhibited slightly better birth rate, lower than the district rate of 19.44. There was, however, great disparity of estimated birthrate in different PSs of the
On the basis of this wide range of birth rates, the district can be divided into three zones.

[1] **Zone of High Birth Rate (24-21):** Only two PSs like Uluberia (excluding Uluberia M) and Panchla were included in this category with their birth rates 22.41 and 21.68 respectively. These two PSs were lagging far behind in adopting family planning methods.

[2] **Zone of Moderate Birth Rate (21-18):** Most of the PSs of the district were included in the zone of Moderate birth rate. Seven PSs like Jagatballavpur, Shyampur, Bagnan, Joypur, Domjur, Amta and Sankrail could be regarded as zone of moderate birth rate. Family Welfare Programmes are running moderately in these PSs.

[3] **Zone of Low Birth Rate (18-15):** Only two PSs i.e. Lilua (including Bally NM) and Udaynarayanpur exhibited low birth rate in the district. Lilua had the lowest birth rate in the district with 15.14, which was a good indicator of development of healthcare in the district. Udaynarayanpur having birth rate of 17.60 was at a good position to improve the quality of life the people there.

No separate data is available for rural and urban areas to know rural-urban differences of crude birth rate in the district.

**Table- 8.14: Estimated Birth Rate in the Different Police Stations of Howrah District: 2007-08**

<table>
<thead>
<tr>
<th>Birth Rate (%)</th>
<th>Police Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>24-21</td>
<td>Uluberia (Excluding Urban Area), Panchla</td>
</tr>
<tr>
<td>21-18</td>
<td>Jagatballavpur Shyampur Bagnan Joypur Domjur Amta Sankrail</td>
</tr>
<tr>
<td>18-15</td>
<td>Lilua (Excluding Bally NM) Udaynarayanpur</td>
</tr>
</tbody>
</table>

Source: Prepared By the Researcher Based On Health on March, 2005 - 06
N.B: Howrah Municipal Corporation and Bawria Are Excluded For Non Availability of Data

**8.5.2 CRUDE DEATH RATES**

The study of death rate is of much importance for determining the factors of socio-economic well being. Death rate is defined as the number of death per 1000 population in a given year. Higher Death Rate in any society reflects the poor status of health and higher morbidity of the people.
8.5.2.1 Status of Death in the District

No data is available about the status of mortality of people in the district of Howrah before 1975. Therefore, this study includes the post-1975 scenario only.

[A] 1975

1. Sex Wise Disparity

3619 persons were died in the district in 1975 due to various factors like diseases, accidents, suicides and homicides. Out of 3619 deaths of the district, 2106 were male persons accounting 58.19% and 1513 were female that accounted 41.81% of total death.

2. Religion Wise Disparities

(a) Hindu

According to the census of 1961 the share of Hindu populations in respect with the total population in Howrah district was 85.31% while the same was 16.36% for Muslim population. The share of Hindu populations reduced to 79.50% as well as that of Muslim increased to 20.17% in 1981. From this data it may be inferred that the estimated share of Hindu population was 81.24% and that of Muslim population was 19.03% in 1975.

In this year, out of the total death (3619) of the district 86.38% death occurred from the Hindu population while 11.47% death took place from Muslim community. Thus, it is clear that the share of death was distinctly higher among the Hindus than the Muslims in the district. The rest 3% death of the district was included in the other religious group.

Among the Hindu death of 3126 population, 1846 was male constituting 59.05% while 1280 was female accounting 41%. Thus, in Hindu group, males were more vulnerable to death in comparison with female.

(b) Muslim

In Muslim community 415 deaths were recorded in the district. Of this, 260 deaths occurred included in male population that accounted for 62.65% of total Muslim death while 155 female constituting 37.35% were died this year. This reflected the fact that male-female death was marked with very strong disparity in this community.

(c) Others

No death was recorded from the Christian community in the district in 1975.

In other religious group 78 people died but all of them were female. No male death was recorded in the district from the other religious communities.
1979

1. Sex Wise Death
In this year, the number of death in the district of Howrah reduced to some extent in comparison with the year of 1975. In this year 1687 persons died in the district as whole due to diseases, suicide, homicide and various types of accidents. Of the total deaths male surpassed female death because 57.44% deaths went to male and 42.56% went to female.

2. Religion Wise Death
(a) Hindu
In Hindu community, 1025 persons died accounting 60.67% of total death while 39.18% death was registered from Muslim community. One person died from other community only. From Hindu group, 1025 persons died in the district in this year. Of these deaths 617 were male, that comprised 60.19% of total Hindu deaths while female constituted 39.81% deaths with the total of 408 persons.

(b) Muslim
From Muslim group 661 persons died in the district. But in this community male - female death was more or less equal as indicated from 351 male deaths constituting 53.10% and 310 female deaths comprising 46.90%.

No Christian death was recorded. In fact, in the district from other religious group only one male died.

8.5.3 INFANT DEATHS

8.5.3.1 Number of Infant Mortality
No data of the status of infant death was found before 1975.

[A] 1975
1. Rural - Urban Disparity
In this year, 235 infant deaths were registered in the district. There was some difference in number of infant death in rural and urban areas. The number of death was higher in rural areas than that of urban areas. 57.02% of total infant death in the district was found in rural areas where 134 infant lost their lives while 101 infant constituting 43% died in urban areas.
2. Sex Wise Disparity
In Howrah district male infant death was higher than female infant as indicated from figure 125 (53.19%) and 110 (47.81%) respectively.

3. Religion Wise Disparity
Out of 235 infant deaths, 206 belongs to Hindu community constituting 87.66% of total infant deaths and 29 belonged to Muslim community accounting 12.34% of total infant deaths.

(a) Hindu
Among the deaths of Hindu community the rural- urban imbalance of infant death was low as indicated from 100 infant deaths (48.54%) in urban areas and 106 (51.46%) in rural areas. The share of urban population was nearly 45.12% and that of rural areas was 54.88%. Thus, it is seen that the share of infants deaths in urban areas was slightly higher than that of rural areas. Besides, male-female infant death in Hindu community was more or less same because 105 female and 101 female deaths were recorded in this year. Among the infant death of Hindu population the rural death was 106 of which female infant death was 55 constituting 51.89% of all rural infant deaths and male infant death was 51 constituting 48.11% deaths reflecting very low male-female death disparity. Out of 101 female infant deaths, 55 died from rural areas (54.46%) and 46 from urban areas (45.54%). Out of 105 male infant deaths 54 (51.43%) were from urban areas and 51 from rural areas (48.57%).

(b) Muslim
In Muslim community very strong disparity was existing in regard with infant death between rural and urban areas. Almost all infant deaths i.e. 28 comprising 96.55% of all infant death were occurred in rural areas of the district and only 1 death was occurred in urban areas. Again stark disparity was existed in regard with sex wise infant death. Male infant death was very much higher than the female. 20 male infant accounting 68.97% while 9 (33.03%) female died in this year. In rural areas of the district, in Muslim community, much imbalance between female and male infant death existed. Male infant death of 20 constituting 71.43% was quite higher than 8 female death of this community.
In urban areas only one female was died and no male death was recorded in this year. Out of 9 female infant deaths, eight died from rural areas and one died from urban areas. Out of 20 male infant death cent percent died in rural areas. No male was died in urban areas.

[B] 1979

1. Rural - Urban Disparity
In this year, number of infant deaths increased in the district in comparison to previous year of 1975. In this year 320 infants died in the district with very high rural-urban disparity. Most of the infant deaths took place in the urban areas registering 305 of such deaths constituting 95.31% of all infant deaths while only 15 deaths accounting 03.69% were registered in rural areas of the district.

2. Sex Wise Disparity
There was low disparity between male and female infant deaths, though male death of 168 (52.51%) being higher than that of 152 (47.5%) female infant deaths in the district.

3 Religion Wise Disparities
(a) Hindu
Among the Hindu community 161 lost their lives. Of these 161 deaths, 151 infants died in urban areas while only 10 cases of infant death were recorded in rural areas. On the other hand, out of 10 rural infant deaths, 6 were males and 4 were females.
In this Hindu population, out of 151 infant deaths in urban areas, 77 (50.99%) were male and 74 (49.01%) were female indicating very low sex wise differentiation of infant deaths in the urban areas of the district. On the other hand, out of 10 rural infant deaths, 6 were males and 4 were females showing very low disparity.
Among the Hindu female infant death, very strong disparity was continuing between rural and urban areas. 74 female infant constituting 94.87% died in urban areas while 5.13% died in rural areas.
Among the Hindu Male infant death, high disparity existed between rural and urban areas. 77 infant (92.77%) died in urban areas while 6 (7.23%) infant died in rural areas.
(b) Muslim Community

In this community 159 infant had lost their lives but most of them confined to urban areas where 154 lives had to succumb constituting 96.86% of all infant deaths. Only 5 infants (3.14%) died in rural areas.

Out of 159 infant deaths, male death surpassed female deaths. 53.46% of total infant deaths from Muslim community belonged to male and 46.54% of them belong to female.

In urban areas, 154 infants died in this year in the district from Muslim community. Male infant deaths surpassed female deaths to some extent. 83 male, constituting 53.09% and 71 (46.16%) female infant died throughout the district this year reflecting sex wise discrimination of infant deaths. On the other hand, only 5 infant died in rural areas. Of these 5 deaths, 2 were male and 3 were female.

In case of female infant deaths very strong rural-urban disparity was prevailing in the Muslim community of the district. Most of the female deaths occurred in urban areas where the figure was 71 (95.95%), and only 3 (4.05%) of them died in the rural areas.

In case of male infant deaths extreme imbalance prevailed between rural and urban areas. Almost all of the male infant deaths were registered in the urban areas, where 83 (97.65%) boys died this year. On the other hand only 2 boys (2.35%) died in the rural areas.

8.5.3.2 Infant Mortality Rate (IMR): 2007-08

This section covers the present status of infant death in the district of Howrah with reference to the aims of National Population Policy (NPP), 2000. The NPP (2000) aimed at reducing the Infant Mortality Rate (IMR) to below 30/1000 live births within 2010.

IMR is the ratio of death under 1 year of age in a given year to the total number of live births in the same year, usually expressed as a rate per 1000 live births. It is one of the most universally accepted indicators of health status not only of infant, but also of the whole population and of the socio-economic conditions under which they live. This is a sensitive indicator of availability, utilization and effectiveness of healthcare, particularly perinatal care.

(A) IMR in Rural Howrah

In the rural areas of the district as whole the IMR was 13.68, which was far below the national target of 30. In the year 2007-08, 721 infants died in the rural parts of the district as whole. The expected IMR of the rural areas of the district was 34, but the actual IMR of
rural areas in the district was 13.68 meaning very high level of healthcare in the district especially for the children.

In 11 rural police stations (PSs) the IMR varied greatly. Rural IMR was the highest in Lilua PS registering an IMR of 20.12 and was the lowest in Udaynaryanpur PS with only 6.33.

On the basis of this imbalance the district has been divided into four zones. These are as follows-

(1) **Zone of High Rural IMR (22-18)** - Lilua and Shyampur PSs registered high IMR in the rural parts. Shyampur is fully rural and remote in nature, which may be the prime factor for the high IMR till now. This high IMR is the indication of poor healthcare facilities in these two PSs.

(2) **Zone of Moderate Rural IMR (18-14)** - Two PSs like Domjur and Jagstaballavpur registered moderate rural IMR in this year indicating moderate level of healthcare facilities.

(3) **Zone of Low Rural IMR (14-10)** - Five PSs of the district registered low rural IMR. Amta, Bagnan, Panchla, Sankrail and Uluberia constituted this zone of low IMR. This is an indication of well development of healthcare facilities, especially perinatal care.

(4) **Zone of Very Low Rural IMR (10-6)** - Two PSs such as Joypur and Udaynaryanpur were marked with very low IMR in rural parts. Though both areas were located in remote areas, improvement of BPHCs and Rural Hospitals in these areas has facilitated the IMR remaining very low.

In urban areas of the district IMR was registered in different Hospitals. IMR in different hospitals were very much uneven being highest in Uluberia SD Hospital, where the rate was 116 which was far more than the national target of 30. The IMR was lowest in Belur SG Hospital where the rate was 0.0 for the reference year of 2007-08.

The second highest IMR of 38.1 was registered in TJ Hospital followed by Gabberia SG Hospital where IMR was 35.29. These were followed by Howrah District Hospital (16.80) which was quite low. Well developed infrastructure helped lowering IMR in Howrah District Hospital. In South Howrah SG Hospital IMR was only 3.70.

**B) IMR in Howrah District as a Whole**

In the year, 2007-08, in the district of Howrah as whole the IMR was 16.0 which reflects quite better situation of the children in comparision to the national target of 30. Due to increase of PHC, SC and RH in the rural areas of the district IMR reduced considerably.
IMR was very much uneven in different PSs. The highest IMR was found in Uluberia PS (24.45) while the lowest IMR was registered in Udaynarayanpur PS (6.33). Based on this wide range the district can be divided into four geographic areas.

(1) **Areas of High IMR (>20)** - Lilua and Uluberia PSs were included in this category.

(2) **Areas of Moderate IMR (20-15)** - Four PSs namely Shyampur, Domjur, Panchla and Howrah MC together formed this zone of moderate IMR.

(3) **Areas of Low IMR (15-10)** - Amta, Bagnan, Jagatballavpur and Sankrail PSs were characterized by low IMR indicating high development of healthcare facilities.

(4) **Areas of Very Low IMR (<10)** - Joypur and Udaynarayanpur PSs came in this category.

In this year five PSs have higher IMR than that of the district average of IMR of 16. These five PSs are Lilua, Domjur, Shyampur, Uluberia and Howrah MC showing comparatively poorer perinatal care there. This provides evidence that the IMR of the district was lower than the half of expected IMR of 34. This also shows that all of the PSs of the district have IMR of nearly half of their respective IMR. Thus, it may be inferred that Primary Healthcare Facilities of the district is good enough as it fulfilled the national target of IMR of 30.

**8.5.4 MATERNAL DEATH: 2007-08**

In spite of growing concern about the reproductive health information on levels, trends and differentials, maternal mortality prevails in most of the developing countries. Maternal Mortality Ratio (MMR) is the number of annual death of women from any cause related to pregnancy and child birth per 100,000 live births. MMR reflects the status of maternal healthcare of any region. Higher MMR is related to unsafe home delivery and lack of full Ante Natal Care (ANC) and poor economic condition. Thus MMR is considered a good indicator for any healthcare study.

The objective of NPP (2000) was to bring down the MMR to below 100 per 100000 live births within 2010. The figure was 544 during 1992 - 93 (Human Development Profile Survey, 1994). In this section MMR of the district during the year 2007-08 has been discussed.
8.5.4.1 MMR in Rural Areas

In the rural areas of the district of Howrah MMR as whole was 111.79, which was higher than the expected MMR of 103 in rural Howrah for this year. It was also higher than that of 100 in national target to reach within 2010.

There was a strong imbalance among different rural PSs of the district with regard to MMR which was the highest in Sankrail PS (142.48) and was the lowest in Udaynarayanpur (0.00).

Based on this very wide range of MMR the district has been classified into five zones.

1. Zones of Very High MMR (>130) - Domjur, Shyampur and Sankrail PSs of the district were marked with very high MMR in this year indicating very poor maternal health services.

2. Zones of High MMR (130-115) - Uluberia, Panchla and Lilua PSs were characterized by high MMR indicating poor maternal care.

3. Zones of Moderate MMR (115-100) - Joypur and Jagatballavpur had moderate rate of MMR.

4. Zones of Low MMR (100-85) - Amta and Bagnan PSs registered low MMR this year reflecting well development of healthcare facilities.

5. Zones of No MMR - This is very good that Udaynarayanpur PS did not register any maternal death for the year 2007-08.

In Amta, Jagatballavpur and Joypur expected MMR and reported MMR were the same.

In Bagnan and Udaynarayanpur expected MMR was higher than the reported MMR indicating better performance in these two PSs.

The reported MMR superseded expected MMR in Lilua, Domjur, Panchla, Sankrail, Shyampur and Uluberia indicating that in these PSs maternal healthcare facilities are poorer in the rural areas.

8.5.4.2 MMR in Howrah District as whole

In the year 2007-08, in the district as whole, MMR was 93.60, which was below the national target of 100 as well as far below the expected level of MMR of Howrah district. The MMR was within limit in Howrah and reflected the better healthcare facilities of the district, especially in maternal healthcare.

MMR is very unevenly distributed from 142.48 in Sankrail PS to 0.00 in Howrah MC. Thus, this is obvious that very strong disparity was prevailing in different PSs of the district with regard to MMR.
Based on this wide range of MMR the district can be divided into five zones.

1] Areas of Very High MMR (>130): Domjur, Shyampur and Sankrail PSs of the district were marked with very high MMR indicating very poor maternal health services.

2] Areas of High MMR (130-115): Lilua PS is characterized by high MMR indicating poor maternal care.

3] Areas of Moderate MMR (115-100): Joypur, Panchla, Jagatballavpur and Uluberia had moderate rate of MMR. This indicates that these four PSs are equipped with moderate level of maternal healthcare facilities.

4] Areas of Low MMR (100-85): Amta and Bagnan PSs registered low MMR reflecting well development of healthcare facilities, especially maternal healthcare facilities.

5] Areas of No MMR: This is very good that again Udaynarayanpur PS did not register any maternal death. According to Hospital records of the Howrah Municipality, there was no MMR in Howrah MC. No data from private nursing home was included in this regard.

In five PSs of the district such as Amta, Joypur, Jagatballavpur, Panchla and Uluberia, MMR was same as the expected MMR indicating that maternal healthcare facilities in these PSs were up to the requirements of the mothers.

In three PSs of the district namely Howrah MC, Udaynarayanpur and Bagnan exhibited lower MMR than expected MMR indicating that maternal healthcare facilities were better than the required standard.

In four PSs of the district such as Domjur, Lilua, Sankrail and Shyampur, the reported MMR was quite higher than the expected MMR reflecting the poor maternal healthcare services there.

8.5.4.3 Factors Controlling IMR and MMR

'Healthcare Facilities' played positive role for the increase of infant mortality rate and maternal mortality rate indicating that utilization rate of health services were high which in turn led to the increase of these rate, though it was thought that healthcare development must contribute to the reduction of same.

Similarly "High Urbanization" contributed to the increase of IMR and MMR in the district as high correlation was found between these two variables. It is also against the popular parlance that urbanization helps the reduction of MMR and IMR.
High Population Density' also was responsible for the slight increase of IMR and MMR in the district as seen from the low value of correlation coefficient.

Only 'Literacy Rate' was favourable for the reduction of IMR in the district as there was negative relation between them. This means higher literacy rate increase the awareness of the people of the district about the health of the children and thereby contributed the reduction of the infant mortality rate in the district of Howrah. On the other hand, it seems literacy rate contribute to the increases of MMR in the district, which is unexpected. However, the co-efficient is very low. This may be due to the influence of some other factors that negates the role of literacy on MMR.

**Table-8.15 Correlation of Infant Mortality Rate and Maternal Mortality Ratio with Healthcare Facilities, Literacy, Urbanization and Population Density: 2007-08**

<table>
<thead>
<tr>
<th>Variables</th>
<th>HCF</th>
<th>Literacy</th>
<th>Urbanization</th>
<th>Population Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMR</td>
<td>0.400</td>
<td>0.033</td>
<td>0.417</td>
<td>0.124</td>
</tr>
<tr>
<td>MMR</td>
<td>0.249</td>
<td>0.100</td>
<td>0.490</td>
<td>0.163</td>
</tr>
</tbody>
</table>


8.6 INSTITUTIONAL DELIVERY IN HOWRAH DISTRICT: 2006

For the safe delivery and promotion for mother and children health, institutional delivery is essential. This delivery is carried out on different health units of the district such as Hospitals, BPHC and PHCs.

In 2006, there was great diversity in regard to the institutional deliveries among different health units of the district. The highest number of delivery was carried out in Howrah District Hospital in Howrah MC which registered 7340 cases of deliveries constituting 23.25% of total deliveries in the district. Howrah District Hospital is well equipped with maternity ward for the Maternal and Child Health (MCH).

It was followed by Uluberia Sub-Divisional Hospital (USDH) where 7208 deliveries were carried out accounting 22.83% of total cases of the district. USDH is provided with very improved maternity ward which draws the pregnant from different parts of Uluberia and Howrah Sadar thereby increasing the share of delivery.

The 3rd ranking health unit is Udaynarayanpur SG Hospital (USGH) which provided sufficiently good condition for the delivery of 2552 pregnant women occupying a share of 8.08% of all deliveries in the district. Due to its location at the remote northern part of the
district and lack of other hospitals within a vast area USGH acts as pull factor for the pregnant.

On the other hand, there was no registration of delivery case in Joypur BPHC in Joypur PS in 2006 indicating very poor development of maternity ward there.

Based on the wide variations of delivery in 2006, the Health Centres (DH, SDH, RH, BPHC, and PHC) have been divided into five categories.

(1) Health Centres with Very High Pressure of Delivery (>3200 Deliveries per annum) – The burden of delivery was very high in Howrah District Hospital in Howrah City (7340 cases) and Uluberia SDH (7208 Cases) because of their urban and nodal locations. From different parts of the Howrah MC and surrounding PSs like Sankrail, Lilua, Bally etc. people attend Howrah District Hospitals for the delivery. Similarly, people of Uluberia, Bagnan, Amta, Panchla, and Shyampur prefer USDH for the purpose. This is why these two hospitals experienced very high load in their maternity wards. Only 8.70% of total Health Centres (HC) of the district performed very well in this regard.

(2) Health Centres with High Pressure of Delivery (3200-2400 Deliveries per annum) - Only Udaynarayanpur SG Hospital of Udaynarayanpur PS was characterized by high load on the maternity ward. In this hospital 2552 deliveries were performed successfully, accounting 8.08% of total deliveries of the district. Due to location at the remote northern part of the district and lack of other hospitals within the vicinity USGH acts as a pull factor for the pregnant. Only 4.35% of the HCs of the district fall in this category.

(3) Health Centres with Moderate Pressure of Delivery (2400-1600 Deliveries per annum) - Out of 23 HCs active in the delivery services, only five of them accounting 21.74% of all such Centres, have moderate pressure of delivery case. TLJ SG Hospital (1951 delivery case), Bagnan RH (2037), Gabberia SGH (1629), Domjur RH (1612) and Jagatballavpur RH (1596) experienced moderate level of load of delivery cases. Semi-urban location and development of Pucca (made of pitch) road favoured these health centers to perform more delivery services.

(4) Health Centres with Low Pressure of Delivery (1600-800 Deliveries per annum) - Only four HCs were included in this category accounting 17.39% of all HCs of the district. Amta BPHC (904 delivery cases), Jhumjhumi BPHC (877), BB Dhar RH (865), South Howrah SGH (801) were marked with low burden of delivery services. Barring South
Howrah SGH, the rest three hospitals are located in rural areas, and many of the people prefer bigger hospitals for the same.

(5) Health Centres with Very Low Pressure of Delivery (<800 Deliveries per annum) - Most of the Health Centres of the district, i.e. 47.82% of all canters of the district, had very low workload of delivery services. 11 HCs such as Belur SGH, Fort Gloster SGH in Bawria PS, Brindabanpur and Chandipur, Manikpur BPHC of Uluberia PS, Debiapur BPHC of Udaynayaranpur PS, Hazi ST Mullick BPHC in Sankrail PS, Jagadishpur BPHC in Lilua, Kamalpur BPHC of Shyampur PS, Kulai BPHC of Panchla PS, Mugkalyan BPHC of Bagnao PS and Joypur BPHC of Joypur PS are included in this category, where no delivery was carried out at all in 2008. Except Belur SGH and Fort SGH all other HCs are located in rural areas.

8.7: LIVING CONDITION: ENVIRONMENTAL SANITATION

People should always live in hygienic living conditions to attain a good healthy body and mind. Living conditions thus draw attention of researchers who are engaged in healthcare studies. Living conditions of people of any area exhibits social, cultural and economic status which is the key factors to lower morbidity rate and improve health status of the general public. Keeping this in consideration, living condition has been regarded as an important health indicator in the study. The fundamental and principal elements of living conditions are—1) Environmental Sanitation, 2) Nutrition, 3) Food Habits, and 4) Pollutions.

Environmental Sanitation provides a structural frame for healthful living of a community. Improper sanitary conditions and unhealthy habits cause pollution of homes, streets and wells from which the people acquire diseases by direct contact and as a result of indirect contamination of food by flies and dust. The basic elements of environmental sanitation which require special attention for promotion of community health are discussed below.

8.7.1 SUPPLY OF SAFE DRINKING WATER

Water is popularly known as “life” meaning that it is the fundamental need of the life of man. Water directly controls the level of health as well as working capacity of people. It has been estimated that 73 million man-days are lost every year as a consequence of water borne diseases in the country (Shrivastav, 1985: P- 257).
Historically man's concern about water quality centered mainly on the prevention and eradication of Water Borne Microbial Diseases such as Typhoid, Cholera, Amoebic Dysentery and other Protozoan and Helminthic Infections. Attention has been turned recently to certain diseases caused by chemicals present in water. It is, therefore, necessary to understand the significance of water not only in relation to its vital role in man's fluid metabolism, but also as an important factor of complex interrelationship, nutrition, environment and diseases (Agnihotri, 1995: P-129-130).

In this context, Supply of Safe Drinking Water to the people is very much crucial in health study. This researcher has made an attempt to find out developmental aspects of supply of Safe Drinking Water (SDF) since the Independence of India in different police stations of the district of Howrah. In this study, access to Safe Drinking Water has got special attention. If a household has access to drinking water supplied through Pipe or Tap or a Hand Pump/Tube Well situated within the premises or outside the premises it is considered that the household has Access to Safe Drinking Water (ASDF).

To assess the performance of the district as well as police stations (PSs) with respect to provisioning and access to safe drinking water, five parameters have been taken into account. These are as follows:

1) Percentage of villages having 'Safe Drinking Water' (SDW)
2) Percentage of villages having 'Tap Water Facilities' (TWF)
3) Number of population served per 'Spot Source'
4) 'Other Sources' of water
5) Present status of 'Coverage'

8.7.1.1 Percentage of villages having SDW

The first and foremost thing to measure the status of supply of SDW in the district, the coverage of village by any one source like TW, Tank, Well, HP and Tap is of paramount importance. The Census year 2001 have been taken as the reference year for the availability of reliable data.

During 1990s water supply in the district was developed extensively. In 2001, each village of different PSs of the district were covered with supply of SDW through any or more of TW, Well and Tap. The importance of TW as only source of drinking water has gone down. In Lilua, Jugatballavpur, Uluberia, Amta and Udaynarayanpur, 100% villages have a TW facility
which is a great development. The percentage of TW was the lowest in Domjur, where only 35.89% villages have TW. In Bagnan only 85% villages have TW. In Sankrail, only 80.95% villages have TW system for drinking water supply. This indicates that ‘other sources’ have been getting much importance in Howrah district.

8.7.1.2 Percentage of villages having Tap Water Facilities (TWF)

Tap Water is a modern source of SDW which is or was popular in urban areas mainly. After 1990s, West Bengal Government had been attempting to provide SDW to the rural people through pipe line. Thus, some steps have also been taken in Howrah district for providing Pipe or Tap Water to the villagers in a pre-fixed time every day popularly known as “Time Well”.

Data for the Tap Water Facilities (TWF) in 1951 and 1961 was not available, but in 1971 no Tap Water or Pipe Water System was installed in entire rural Howrah. Hence, it may be said that up to 1971 no TWFs were available in the rural areas of the district.

Howrah Zilla Parishad had taken some steps, and in 2001, stand posts of piped water have been erected in different parts of rural areas. There is no PS where Tap Water System did not reach in 2001.

According to District Census of Howrah, (2001) all PSs of the district except newly created Joypur PS were provided with Tap Water. The highest percentage of coverage with Tap Water was found in Lilua PS where 66.67% village had the same, whereas Joypur had no Tap Water facility, exhibiting very high disparity in this regard. Considering this variation the district has been divided into five zones of TWFs. These are as follows-
1) **Zones of High TWFs (>60% coverage):** Only Lilua PS of the district was characterized by high coverage in rural areas of the district.

2) **Zones of Moderate TWFs (60-40% coverage):** Domjur and Bagnan PS had moderate level of coverage of rural areas.

3) **Zones of Low TWFs (40-20% coverage):** Sankrail, Jagat Ballavpur, Shyampur, Udaynarayanpur, Panchla and Amta were included in this category.

4) **Zones of Very Low TWFs (<20% coverage):** Only Uluberia PS was marked with very low coverage of TWFs in the district.

5) **Zones of No Coverage with TWFs:** In Joypur PS still no village was provided with tap water. This is definitely unfavourable for the public health of Joypur PS.

8.7.1.3 **Status of Spot Source in Howrah District: 2005-06**

Spot Source (SS) i.e. Tube Well is the principal source of SDW in different PSs of district in 2005-06. In this year, out of 9499 SS of the district, 7292 (76.77%) were running or active for providing water to the people. Contrarily, this also means that 23.23% sources were actually not fit for supplying water to the district.

1 **District Level Scenario of Spot Source (SS)**

In Howrah district as whole each spot source was found to serving water for 425 persons, on the average which was far below than standard norm of 250. This means that TW could not serve all people of the district properly or other means have been getting more importance in the district.

2 **Sub-Regional Level Scenario**

Sub-region pattern of spot source serving population exhibited very high disparity which varied from 2190 persons/SS in Lilua to only 213 persons/SS in Udaynarayanpur where Tube Well was the only source of water.

In the year of 2005-06, only two PSs of the district such as Udaynarayanpur and Joypur had fulfilled the norm of 250 persons served /SS and the rest of the PSs were far away from standard norm.

On the basis of this wide range of imbalance of population per spot source (persons/SS), the district can be divided into five categories.
1) Very High Developed Areas (<250): Joypur and Udaynarayanpur were marked with this very high status in the district. These two PSs are fully rural in nature, and the only source of drinking water was TW. The total numbers of their TW were 880 and 811 respectively. This led to increase of number of TW in these two PSs.

2) Highly Developed Areas (250-400): Amta and Jagat Ballavpur were characterized by low population per spot source indicating high development in respect to TW water. These two PSs are mainly rural in nature.

3) Moderately Developed Areas (400-550): Bagnan, Sankrail and Domjur exhibited moderate level of development with regard to TW water supply in this year. In these three PSs ‘other sources’ especially Pipe line is providing drinking water. Thus, TW is smaller in number in these PSs. This is the main cause of their moderate TW development.

4) Poorly Developed Areas (550-700): Panchla and Shyampur were poor in TW, as there was high pressure on each spot source. Shyampur PS was fully rural in nature. People mainly depend on TW for the drinking water in Shyampur. Hence, the number of population per spot source was high. In Panchla the same reason leads to increase pressure on every spot source. This is not good, and need more water supplies by any source.
5) Very Poorly Developed Areas (>700): In Uluberia and Lilua (with some parts of Bally) the supply of water through TW was alarmingly poor. In these PSs high urbanization lowered the number of TW and raised the status of Pipe Line Water. Hence, the population served per spot source was higher in these two PSs. This scarcity of water is met through other sources like tap, hand pump etc.

8.7.1.4: ‘Other Sources’ of Water
After the Independence in Howrah district the main sources of drinking were TW, Tank, and Tap up to 1991. No other source provided safe drinking water to the general public of the district.
In 2001, the scenario has been changed. Along with the Tap Water, Hand Pump has taken a great responsibility to provide SDW to different police stations of the district. In Howrah district, 75 villages accounting 10.31% of all have installed Hand Pump for lifting ground water for drinking purpose. This is another significant development regarding water supply in the district.

8.7.1.5 Status of Water Supply Coverage at present (1.4.2007)
In the year of 2007 (April) there were 1801 inhabited habitations in the district of Howrah. Of this, only 19, occupying 1.05% of all habitations of the district, were ‘not covered’ with water facilities indicating quite satisfactory performance in providing SDW in the district.
726 habitations (40.31%) of the district was ‘partially covered’ with the water facilities. This was higher than corresponding state level figure of only 13.95%.
Out of these habitations, 1056 accounting 58.63% of all were “fully covered” through Pipe Line, TW facilities. But, the district has been lagging far behind the state level achievement of 80.09% ‘fully coverage’ during the same period. Thus, coverage of the habitations with SDF was not good enough with comparison to the state level coverage.
In 2007, Water Supply Scheme covered 17,15,000 populations in Howrah district which occupied only 3.39% of the total coverage of 5,05,54,000 populations in West Bengal indicating poorer performance of the district in this regard.
8.7.2: HOUSE HOLDS WITH LATRINE FACILITIES AND TOTAL SANITATION CAMPAGIN (TSC) & NIRMAL BHARAT ABHIYAN (NBA)

8.7.2.1 India

Access to sanitation facilities (Provision for Latrine) is an important factor which governs the quality of life of the people. Rural sanitation came into focus in the Government of India in the World Water Decade of 1980s. The Central Rural Sanitation Programme was started in 1986 to provide sanitation facilities in rural areas. It was a supply driven, highly subsidy and infrastructure oriented programme. As a result of these deficiencies and low financial allocations, the CRSP had little impact on the gargantuan problem.

The all India picture in this respect is not at all encouraging since the estimates of the NSS 54th Round Survey (1998) on Drinking Water, Sanitation and Hygiene, shows that more than 80% of the rural and more than 25% of urban households do not have access to proper sanitation (latrine facility). However, the access has improved over the years from 11.2% to 17.5% in rural areas and 68.2% to 74.5% in urban areas during 1988 to 1998.

(A) TSC

The experience of community-driven, awareness generating campaign based programmes in some states and the results of evaluation of CRSP, led to the formulation of the Total Sanitation Campaign (TSC) approach in 1999. TSC has identified total 58 districts from 9 states in LWE category.

The main objectives of the TSC are as under:
(1) Bring about an improvement in the general quality of life in the rural areas. (2) Accelerate sanitation coverage in rural areas. (3) Generate felt demand for sanitation facilities through awareness creation and health education. (4) Cover schools/ Anganwadi in rural areas with sanitation facilities and promote hygiene education and sanitary habits among students. (5) Encourage cost effective and appropriate technologies in sanitation. (6) Eliminate open defecation to minimize risk of contamination of drinking water sources and food. (7) Convert dry latrines to pour flush latrines, and eliminate manual scavenging practice, wherever in existence in rural areas.
(B) NBA

NBA is a comprehensive programme to ensure sanitation facilities in the rural areas with boarder goal to eradicate the practice of open defecation. NBA as part of reform principles was initiated in 1999 when central rural sanitation programme was reconstructed making it demand driven and people centered. It follows a principle of 'low to no subsidy' where a normal subsidy in the form incentive is given to rural poor households for construction of toilets. The key intervention areas are Individual Household Latrines (IHHL), School Sanitation and Hygiene Education (SSHE), community sanitary complex, Anganwadi toilets supported by Rural Sanitary Marts (RSMs) and Production Centres (PCs). The main goal of GOI is to eradicate the practice of open defecation by 2017. To give fillip to this endeavour GOI has launched 'Nirmal Gram Puraskar' to recognize the efforts in terms of cash awards for fully covered PRIs and those individuals and institutions who have contributed significantly in ensuring full sanitation coverage in their area of operation. The project is being implemented in rural areas taking district as a unit of implementation.

8.7.2.2 West Bengal

In West Bengal, the 1998 estimates by the NSSO indicate that 76.4% rural households and 15.2% of urban households do not have access toilet facilities. According to Census of India (West Bengal), 2001, only 26.93% rural households of the state have toilet or latrine facilities. In the district of Howrah situation was somehow better than the state level, as 35.84% households of the district of Howrah have access to toilet facilities which is in better situation.

8.7.2.3 District of Howrah

Since 1993-94, “Intensive Sanitation Programme” has been started in Howrah district along with the other districts of West Bengal. This Programme has changed the scenario and the number of household with latrine facilities started to increase rapidly in the district. Howrah Zilla Parishad through Panchayats has started to provide Latrine Pits/ Pan to poor families, so that they can construct a latrine room to avoid open defecation. Many campaigns have been carried out to make people conscious about bad effect of open latrine or defecations. Many exhibits were shown to increase public awareness about proper sanitation.
After 2006, “Intensive Sanitation Programme” has been renamed as “Total Sanitation Campaign” (TSC) with the objective of achieving cent percent household latrine in the district of Howrah and also emphasis has been placed on Sanitary Complex, Latrine for School (double unit separately for boys and girls) and Latrine for Anganwadi and Rural Sanitary Marts (RSM) and Production Centres (PCs).

In this TSC, Howrah Zilla Parishad had fixed a target and then approved to establish household latrines and tried to assess success rate of the campaign, i.e. achievement.

(A) Household Latrine: Up to May- 2008

1. District Level Scenario

In the district, Howrah Zilla Parishad, through the TSC approved 325198 households to build their own latrine facilities. Targets have been achieved within the month of May, 2008 and extra households have been included in this Programme. Since the inception of TSC a total of 334535 families of the district constructed latrine system within their houses. Thus, it is obvious that the district has registered more than 100% achievement in sanitation campaign up to May, 2008. This is very good for the public health.

Whenever the total households of the district are considered the scenario of achievement of sanitation changed to some extent. Excluding three big Municipalities of Howrah, Bally and Uluberia where latrines in house were common, total households in district was 514287 in 2001. Thus, 65.04% of total families of the district have access to sanitary toilet facilities up to May of 2008.

2. Sub-Regional Level Scenario

From the Table -8.23 it is apparent that the achievement rate of TSC is more than 94% in all the rural police stations. Even four police stations like Shyampur, Domjur, Uluberia and Baghnach achieved more than 100% in respect of TSC.

The picture is quite different so far real household sanitation is concerned. In Sub-Region level, great disparity exists among the police stations of the district in respect of household latrine. Sanitation coverage varied from only 25.28% households in Lilua (including part of Bally) to maximum of 75.50% rural household in Shyampur. It is something astonishing as rural PS Shyampur has better performance in TSC than semi-urban PS of Lilua (with Bally), as in the year of 2008.
Based on this huge imbalance of achievement of household latrine facilities among the PSs, Howrah district has been classified into four zones of development. These zones are as follows:

1) Areas of High Development (85-70% coverage):
Shyampur, Amta and Joypur PSs have constituted this zone of high coverage of rural household latrine facilities.

<table>
<thead>
<tr>
<th>Police Stations</th>
<th>Approved Household</th>
<th>Achieved Household</th>
<th>Achievements Rate (%)</th>
<th>Total Household 2001</th>
<th>% Of Household With Toilet Facilities</th>
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<tr>
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<td>-</td>
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</table>

2) Areas of Moderate Development (70-55% coverage): Most of the PSs of the district were characterized by moderate level of coverage in respect of rural household latrine. Bagnan, Udaynarayanpur, Panchla and Jagatballavpur formed this zone of medium development.

3) Areas of Low Development (55-40% coverage): Three PSs of the district like Sankrail, Domjur and Uluberia registered low improvement in this regard.

4) Areas of Very Low Development (40-25% coverage): Lilua (with some part of Bally) are very poorly developed in term of household latrine facilities which is very much unhygienic and harmful for public health.

3. Sanitary Complexes
In TSC, emphasis has been placed on establishment of Sanitary Complex in different PSs. In Howrah district as whole, 51 Sanitary Complexes have been approved for building, but only 5 such complexes have been established up to the May, 2008. Thus, its achievement rate is very poor in this district. In only 3 PSs of the district Sanitary Complexes have been built till this time. One such complex has been constructed in Uluberia PS; one in Panchla and three complexes have been erected in Domjir PS. No Sanitary Complex has been built in the rest of the PSs of the district till 2008.

8.8: CONCLUSIONS
In Howrah district the achievement of health as in 2007-08 was quite well as a large section of population depends on different health institutions like hospitals, primary health centres, sub-centres, and dispensaries for curative services. In case of universal immunization, the district has shown good progress as nearly 90% of the children received six different vaccines. The district has achieved well in respect of family welfare programme as the achievement rate was more than 93% in use of oral pill, intra uterine device and nirodh (condom), although sterilization was poor. Even more than 4000 pregnant women adopted medical termination of pregnancy to control birth. Current birth rate, infant mortality rate, and maternal mortality ratio in the district are lower than the national rates, though police station wise variation was quite high. In Howrah district institutional delivery was high in different hospitals, block primary health centres, primary health centres, and strong disparity existed among different institutions. In Howrah all the villages are now covered by safe
drinking water through tube well; and recently pipe (tap) water is being provided in 40% of the villages. The district has achieved moderately in total sanitation campaign, because 65.14% of the households are covered with latrine facilities, but still nearly 35% household have practice of open defecation. Thus, it may be concluded that Howrah has now achieved health moderately well.