CHAPTER- 7

HEALTHCARE DEVELOPMENT IN THE DISTRICT OF HOWRAH

7.1 INTRODUCTION

Since the Independence many initiatives have been taken by the Government of India and the provincial governments for providing healthcare facilities. Healthcare development means the development of healthcare facilities or health services in any area. It indicates the progress of health services for the betterment of the public health.

7.2 HEALTHCARE DEVELOPMENT IN HOWRAH DISTRICT: THE PRE-INDEPENDENT PERIOD

Historically, “Any survey of public health and medical facilities available in early time in the district of Howrah as also elsewhere would reveal the existence of two systems of medicine, namely the Ayurvedic and Unani, commonly called the Kavirazi and Hakimi system known in popular parlance as the Hindu and Muslim methods respectively” (Banerjee, 1972: 506).

“Apart from them, many magical rites were performed and oblation offered to folk gods for effecting wishful cure of various diseases. Basanta, Chandi, Sitala, Olai Chandi, remained presiding deities of Small Pox and Cholera and they must be appeased — so at least is the belief of the unsophisticated villagers- to keep clear of these diseases. Jwarsur similarly controlled all kinds of fevers, and Panchu Thakur cured children’s ailment of every description. In the village of Bantul (PS Bagnan), on every Sunday, people used to smear their bodies with turmeric paste, take a bath in a pond and wear another cloth leaving the wet one behind in the hope that the ritual would cure them of maladies” (ibid: 506).

Hospital facility

According to Amiya Bhusan Chatterjee (1967), the first hospital built by the Europeans before 1792-93, was to the south of Mr. Levett’s house in central Howrah city. Its removal to Howrah Ghat in 1828 was followed by the acquisition of its site in 1852 by the railways which deprived the city of a hospital until Howrah General Hospital was established behind the court building in the central part of Howrah city in 1861. It was the only institution to provide the
medical facilities to general public for more than 80 years till the opening of TL Jaiswall Hospital in 1949, Satyabala Debi Infectious Disease Hospital in 1951, and Surajmall Nagarmall Hospital in 1948. The former two are on the Grand Trunk (GT) road in the northern fringe of the city. The latter one is in the Ghusury area of Salkia, which was expanded and renamed as the Hanuman Hospital in July, 1959. The railway’s main two hospitals were located at Bamangachhi and Howrah, while the Bengal Engineering College had its own hospital closed to the dispensary in the Botanic Garden.

The municipal charitable dispensaries were distributed in all the wards except No 7, 8 and 9. Ward 8 possessed a private dispensary. Besides the maternity ward in all of the hospitals (except in Satyabala Debi Hospital), the Municipal Midwives served the public in Salkia, Khurut, Shibpur, and Buxara (Mukherjee, 1992: 78).

O, Malley and Chakrabarty (1909) described the medical facilities then available as follows: “At the beginning of the present century there were seven dispensaries in the district, but one of them, the Singti Duke Charitable Dispensary has since been closed” (Malley and Chakrabarty, 1909: 63). Moreover, in the rural tracts there are four public dispensaries viz.—(1) at Amragori village, the Amragori Hazra Dispensary maintained partly by the District Board and partly from the interest on a fund of Rs. 19000 raised by subscription; it is called Babu Iswar Chandra Hazra Dispensary; (2) at Shyampur village, maintained partly from private subscription, but chiefly by the District Board; (3) at Uluberia village maintained by Government, the local fund and the private subscription; (4) at Amta village maintained by District Board and private subscription. The dispensary at Uluberia and Amragori alone had accommodation for indoor patients, the former having 6 beds for male and the latter had four beds for males and two beds for female patients. All the others treat only out door patients. In 1907 the largest number of patient (6540) was treated at Amragori dispensary, the daily average being 42.40% (ibid: 64).

7.3 INDEGENOUS SYSTEM OF MEDICINE IN HOWRAH

According to O’ Malley and Chakrabarty (1909), the following methods of indigenous medicines and beliefs were popular in Howrah district for the treatment of diseases.
7.3.1 Ayurvedic or Kaviraj or Hindu System

The Ayurveda as Kavirazi System of medicine was very popular in the district during the first decade of the 20th century. An eminent exponent of this system in the district was one Kamal Kantha Baran, a Kaviraj who lived in village Dhasa in Jagatballavpur police station in the last quarter of the 19th century. He could correctly diagnose many diseases simply by feeling the pulse of the patients and could also trace the disease history accurately. He used to cure carbuncle, liver disease, abscess, typhoid, pneumonia, phthisis, tetanus, and many female diseases by Ayurvedic medicines. He had some very distinguished pupils who followed his line of treatment (Bhattacharya, 1925).

The popularity of Ayurvedic system was attested by a committee appointed in August, 1921 by the Government of West Bengal to suggest practical steps for the restoration and development of this method of treatment.

7.3.2 Homoeopathic System

This system was introduced in Howrah town shortly after it was popularized in Calcutta by Rajendralal Dutta and Dr. Mahendralal Sircar, but none of the local practitioners rose to any eminence during the 19th century. In the beginning of the 20th century, however, Dr. Dinabandhu Mukherjee after whom a school, college and a road have been named at Shibpur, built up a wide practice as a very capable homoeopath whose mantle fell on Dr. Gangadhar Mukherjee who started as an amateur and then became a professional in central Howrah during the 1920s and 1930s (Banerjee, 1972: 513).

7.3.3 Unani System

Public health and medical facilities available in the early times in this district as also elsewhere would reveal the existence of Unani systems. It is commonly called as ‘Hakimi’, in popular parlance as the Muslim method of medicine (ibid: 509).

7.3.4 Worship of God and Goddesses

In Howrah district the percentages of higher castes, such as Brahmins, Baidyas, and Kayasthas, were smaller. The bulk of the Hindu population consisted of low caste whose Hinduization was not then completed. Among these low castes traces of old Animistic beliefs could still be observed especially in the Uluberia subdivision where the villages were furthest from industrial centre. Animism could be traced in the worship of godlings or village deities (gram devta) for
protecting them from various diseases, snakes and other animals. This worship played an important part in the domestic life of the people and the religious beliefs of the female. In the process of Hinduization these features had become obscured and had more or less disappeared in advanced villages, but in the remote villages and among the lower castes they could still be found (O’Malley and Chakraborty, 1909: 41-42).

Some of the principal godlings in this district include: (1) Dharamraj; (2) Bankura, Kalu and Dakshin Rai; (3) Manasa; (4) Panchanan; (5) Sasthi; (6) Sitala; (7) Ola Bibi; (8) Ghanta Karna; (9) Jwarasur; (10) Satyanarayan; (11) Subachani, (12) Mangal Chandi; (13) Siva; (14) Vishnu who are believed to protect the people from various diseases and snakes.

7.4 DEVELOPMENT OF HEALTHCARE FACILITIES IN HOWRAH DISTRICT SINCE INDEPENDENCE

Healthcare is defined as a programme of services that should make available all facilities of health and allied services necessary to promote and maintain the health of mind and body. The programme should take into account the physical, social and family environment in the view of prevention of diseases and restoration of health. Healthcare in India is handicapped because it has to face serious crisis in cost, quality of care, equitable distribution of modes, and standard of services to the population as a whole (Agnihotri, 1995: 193).

The distribution of healthcare services and modern health facilities are highly centralized. Though 80% of Indian population lives in the rural areas, only 11% of the physicians practice in these areas (Banerjee and Joshi, 1985). In India healthcare delivery system is controlled by different state governments. The wide disparities in the level of development and organization of different government health schemes are obvious due to the state governments’ policies and political attitude in terms of priority of different regions. Parallel to government organized healthcare system, there are number of private enterprises and charitable institutions serving the regional or sub-regional population (Agnihotri, 1995: 193). Healthcare being an integral part of socio economic condition has a major role in the prevention of diseases and promotion of health. Healthcare facilities available in regional unit manifest itself in the level of health and human well being. Healthcare infrastructure rests upon different systems (ibid: 194).
In this chapter an attempt has been made to discuss the different aspects of healthcare facilities available and systems of medicines practiced in Howrah district since the Independence.

7.4.1 Availability of Medical Facilities in the Villages of Howrah District

7.4.1.1 Percentage of Villages having Medical Facilities or not in the Different Police Stations (1951-2001)

According to Census of India (2001) Medical Facilities (MF) include the health facilities available in any unit. Name of these facilities are presented in the following table.

Table: 7.1 Components of Medical Facilities/ Health Services/ Healthcare Facilities

<table>
<thead>
<tr>
<th>SI No</th>
<th>Medical Facilities</th>
<th>SI No</th>
<th>Medical Facilities</th>
<th>SI No</th>
<th>Medical Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Allopathic Hospital</td>
<td>9</td>
<td>Maternity and Child Welfare Center (MCWC)</td>
<td>17</td>
<td>Nursing Home</td>
</tr>
<tr>
<td>2</td>
<td>Ayurvedic Hospital</td>
<td>10</td>
<td>Maternity Home</td>
<td>18</td>
<td>Registered Medical Practitioner</td>
</tr>
<tr>
<td>3</td>
<td>Homoeopathic Hospital</td>
<td>11</td>
<td>Child Welfare Center (CWC)</td>
<td>19</td>
<td>Subsidized Medical Practitioners</td>
</tr>
<tr>
<td>4</td>
<td>Unani Hospital</td>
<td>12</td>
<td>Health Center</td>
<td>20</td>
<td>Community Health Workers</td>
</tr>
<tr>
<td>5</td>
<td>Allopathic Dispensary</td>
<td>13</td>
<td>Primary Health Center</td>
<td>21</td>
<td>Rural Medical Practitioners (Rural MP)</td>
</tr>
<tr>
<td>6</td>
<td>Homoeopathic Dispensary</td>
<td>14</td>
<td>Primary Health Sub Center</td>
<td>22</td>
<td>Others</td>
</tr>
<tr>
<td>7</td>
<td>Ayurvedic Dispensary</td>
<td>15</td>
<td>Family Welfare center</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Unani Dispensary</td>
<td>16</td>
<td>Tuberculosis (TB) Clinic</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on Census of India, 2001

The village having any one of the facilities mentioned above is called the “Villages with MF”, and the villages having no such facilities are popularly known as “Villages with no MF”.

The real development of MF in rural areas is a cornerstone of health service progress of an area. The district is designated as developed in respect of health when all the villages have medical facilities.

(A) District Level Scenario

According to the data of Census of India the healthcare facilities in Howrah district was very poor in 1951, as only 39 villages, out of 815, accounting only 4.78% of all villages of the
district, had medical facilities. Thus, it was an indicator of very poor status of healthcare facilities in the district, and the prevalence of diseases and resultant morbidity was quite high in it.

In 1961, the situation was almost the same as of the previous decade indicating very slow progress of health services in the district. In this year only in 49 villages of 787 i.e. 6.23% of the villages were provided with medical facilities.

In 1971, medical facilities were provided in 147 villages of 771, registering only 19% villages of the district. This clearly indicates that level of healthcare facilities in the district were improving.

The conditions of the villages in this regard started improving since 1981 when 183 of 755 villages of the district, accounting 24.24%, had at least one or more medical facilities.

During 1980s Howrah Zilla Parishad and District Health Department took various steps for establishing new medical institutions in the district and many new villages came under these facilities. In the year 1991, 357 villages constituting 48.63% of total villages of the district, were marked with any one or more medical facilities. This was still not sufficient for proper healthcare of the public in the district. Many villages had to depend on neighbouring villages for availing the facilities for curing the diseases. During 1990s the situation improved slightly and in 2001, 400 of 727 villages accounting 55.02% were characterized by any one or more medical facilities.

(B) Sub-Region Level Scenario

The disparity among police stations with regard to the MFs in different rural areas is presented in Table- 7.2 for the different decades. On the basis of the disparities range the district can be divided into six categories.

It is very clear that after the Independence the medical facilities in the rural areas were very poor. In most of the police stations (10 in number) of the district below 25% of the villages
were provided with MF in 1951. This indicates that most of the villages were suffering from lack of the health services in the district and the disparity among the police stations was low. Shibpur being very small area was in a very good condition.

Table-7.2 Percentage of Villages with Medical Facilities in the Different Police Stations of Howrah District: 1951-2001

<table>
<thead>
<tr>
<th>Census Years</th>
<th>Status of Coverage in %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt;85</td>
</tr>
<tr>
<td>1951</td>
<td>Shibpur</td>
</tr>
<tr>
<td>1961</td>
<td>Shibpur</td>
</tr>
<tr>
<td>1971</td>
<td>-</td>
</tr>
<tr>
<td>1981</td>
<td>-</td>
</tr>
<tr>
<td>1991</td>
<td>Bawria</td>
</tr>
<tr>
<td>2001</td>
<td>Sankrail, Lilua</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the data of the DCH, Howrah, (1951 – 2001)
Fig. 7.2: Development of medical facilities in the rural areas of different police stations of Howrah District.
Fig. 7.3: Development of medical facilities in the rural areas of different police stations of Howrah District.
The situation was almost the same in the next decade and Bally showed some improvement, while in Sankrail the facilities deteriorated in 1961. In 1971, Uluberia, Bagnan and Bawria were marked with some improvements but most of the police stations of the district were in very poor conditions. The situation was almost the same in the year of 1981. The scenario improved highly in the year of 1991 as the state government of West Bengal took some positive steps for providing MF so that health can be provided to all of the people. In this year only Domjur, Sankrail and Jagatballavpur were lagging behind. The MF in the village areas of the district improved more in 2001 when Sankrail and Lilua came to be the most the developed. Bagnan, Lilua and Panchla were also quite good in providing MF in rural areas of the district. No police station was found where villages were not provided MF. This is a very good achievement for the district.

Thus, it is evident from the above discussion that in the first 30 years after the Independence the concentration of police stations in terms of medical facilities was in category of poor development, but since 1981 the concentration was in the first three categories. Hence, it may be inferred that with time, the district of Howrah was marked with the increase of health services in rural areas, although disparity level among the police stations increased with time as police stations were distributed in the different categories (Fig-7.2 and 7.3).

7.4.1.2 Percentage of Rural Population served by Medical Facilities

In 1977, the “World Health Assembly” decided that the main social goal of governments and WHO in the coming years should be the “attainment by all the people of the world by the year 2000 AD of a level of health that will permit them to lead a socially and economically productive life”. This goal has come to be popularly known as ‘Health for All’ (HFA) by the year 2000 (Park, 2001: 9).

Keeping this HFA in mind it is worthy to find out the status of health facilities provided to the people at present as well as its development since the Independence in Howrah district. When a village has any one or more medical facilities, it indicates that each and every person is served by these medical facilities. Percentage of population served by MFs indicates the progress of HFA in district.
(A) District Level Scenario

The study indicates that there has been some development of healthcare facilities in the rural areas of Howrah district since 1950s. The proportion of rural population served by MFs in the rural areas of different PSs increased in the district. In 1951, only 11.15% of the total rural population of the district was served by MFs directly, indicating very poor situation of health in the rural areas of the district. In the next decade of 1961, the situation became worse than the previous decade, and only 10.31% of total rural population of the district could avail the MFs in their villages causing the death of people in case of serious disease like cholera and diarrhoea. Thereafter some improvement took place since 1971 when 24.78% of rural population could avail the health services in their villages. In 1981, still only 34.45% rural people came under MFs in their villages. Hence the alarming situation continued up to 1981. During 1980s the new government of the Left Front took some positive initiatives through Zilla Parishad in its Panchayat systems. Howrah Zilla Parishad constructed many PHCs, SCs in the district. Hence many new villages were provided with MFs during this period. Thus, in 1991 the percentage of the rural population served by MFs increased highly to 60.57 which was quite satisfactory in comparison to the previous decades. During 1990s the pace of improvement was slower in comparison with the previous decade. In 2001, 68.87% of the rural population was served with MFs.

(B) Sub-Region Level Scenario

Sub-regional pattern showed temporal and spatial disparity during 1951-2001. On the basis of the variation of percentage of population covered the district may be divided into seven categories (Table-7.3).

During the first part of the 1950s, most of the police stations of the district (7 PS) were in poor situation as very low percentage of rural population was served by the MF. Hence disparity among the police stations was very low in this regard in 1951. The situation was almost same in 1961. Sankrail and Bawria police station exhibited poorer situation as no population was served by MF in this year. In the next decade of 1970s the coverage improved slightly and the number of PS in the poor category reduced in 1971. This trend of low improvement of MF in rural areas continued up to 1981. During 1980s Howrah Zilla Parishad
(HZP) took some major steps for supplying MF in the rural areas of different PSs and the coverage increased very well. Most of the police stations came under first three categories of development in 1991.

Table- 7.3: Percentage of Rural Population served by MFs in the Different Police Stations of Howrah District: 1951-2001

<table>
<thead>
<tr>
<th>Years</th>
<th>Percentage of Rural Population served</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt;80</td>
</tr>
<tr>
<td>1951</td>
<td>Shibpur</td>
</tr>
<tr>
<td></td>
<td>1961</td>
</tr>
<tr>
<td></td>
<td>1971</td>
</tr>
<tr>
<td></td>
<td>1981</td>
</tr>
<tr>
<td></td>
<td>1991</td>
</tr>
<tr>
<td></td>
<td>2001</td>
</tr>
</tbody>
</table>

Source: - Prepared by the researcher based on the District Census Handbook, Howrah (1951-2001)
Fig. 7.4: Rural population served by medical facilities in the different police stations of Howrah District.
Fig. 7.5: Rural population served by medical facilities in the different police stations of Howrah District.
The trend of improvement of MF for the rural population continued in 1990s; and in 2001 five police stations like Lilua, Sankrail, Panchla, Uluberia and Bagnan were marked with high development, and the number of police stations in last three categories were nil.

Thus, it is clear from the above discussion that up to 1980s the concentration of police stations was in category of poor development, but since 1991 concentration was in the first three categories (Fig-7.4 and 7.5). Hence it may be inferred that with the passage of time, the rural population of the district of Howrah had been getting more access to the medical facilities and approaching towards the HFA goal.

7.4.1.3 Number of Villages where Medical Facilities are not Available & Available at a Fixed Distance in Nearest Village

In the previous section it is observed that many villages of different PSs of the district were lacking medical facilities and people of these villages had to travel long distance for getting access to health services.

Now in this section it will be studied to know the people of villages where no MFs are available go how long distance to avail such facilities. This study will indicate the failure of the health department to provide “Health for All” and the level of healthcare development in the rural areas of the district where 50% of population live. The Villages where no such medical facilities are found are considered ‘Non-MF Villages’ in the study. If number of ‘Non-MF Villages’ is more it will indicate poor status of healthcare development, and if people have to travel long distances it will too indicate low status of same.

In this case the distance travel by rural people to access health services is the key factor. The distance has been divided into mainly three categories, as follows:

(1) 0-5 km.
(2) 5-10 km.
(3) 10-15 km.

Availability of medical facilities within 5 kms is yet permissible but the distance beyond 5 km is poor sign of healthcare facilities in any part of the country.
District Level Scenario

The data about the distance traveled by the villages weren't available for the years 1951, 1961 and 1971. Hence, from the 1981 onwards the status of MFs and the distance people had to travel is discussed here.

• (i) Medical Facilities Available at 0-5 km distance

In 1981, 572 villages out of 755 in Howrah (75.75%) had no medical facilities. Of these 572 villages, the people of 482 villages (84.24%) had to travel the distance within 0-5 kms to get any medical facilities during illness.

In 1991, 377 out of 734 villages of the district (51.37%) had no MFs. Of these 377 villages, 363 (96.29%) could avail the healthcare facilities within 0-5 kms distance. This indicates some improvement of health services in the rural areas of the district.

In 2001, 325 villages of 727 (44.70%) had no MFs indicating the same trend. 2 villages had no data. 186 villages of 325 accounting 57.23% had to depend on the villages located within 0-5 kms. This is not favourable because a large number of villages still had to depend on more than 5 kms distances.

Sub-Region Level Scenario

Among the 'Non MFs Villages' many have to avail such facilities from different distances. The study indicates that there is great disparity of availing MFs for various distances in the PSs of the district in different decades, as discussed below.

• Medical Facilities Available at 0-5 km distance

In 1981, the maximum number of villages (100%) depending on other areas within 0-5 kms was found in Lilua, Jagatballavpur, Amta, Udaynarayanpur and Panchla. This was followed by Bagnan from where 92.98% villages could meet their health need from this distance. Shyampur was also in good condition as 90.52% of Non-MFs Villages get the same within this distance. Thereafter came Sankrail (63.15% villages) and Domjur (59.09%). The situation was the worst in Uluberia PS because only 51.96% villages availed healthcare services at a distance of 0-5 kms. This indicates that in Uluberia the people of a large number of villages had to travel more than 5 kms which put hindrance to obtain HFA.

In 1991, due to development of health services in rural areas in 1980s the number of villages availing health services from within 0-5 kms had been decreased in most of the PSs of the
district except Sankrail where it increased. But percentage of such villages had been increased due to lowering of total number of Non-MFs Villages in all the PSs of the district.

It was quite satisfactory situation in case of Non-MFs Villages in the district in 1991 as cent percent people of eight PSs could fulfill their medical demand from within 5 kms. These 8 PSs were Lilua, Sankrail, Jagatballavpur, Panchla, Uluberia, Amta, Bagman, and Udaynarayanpur. Besides, condition was satisfactory in Shyampur PS as 97.53% villages could get health services from the same distance. But situation was dissatisfactory in Domjur because only 68.57% villages could manage to treat their people in the same distance indicating more than 31% villages depending on more distance. Those villages suffer great problem in time of severe ailment.

In 2001, the Non-MFs Village decreased considerably in the different PSs of the district. Hence the number of Non-MFs Village enjoying health services from within 5 kms went down. The condition was good in Sankrail as 75% Non-MFs Villages was getting the same within 5 km distance. Condition was more or less the same in Udaynarayanpur (73.33%). The condition was moderate in five PSs where 50-70% villages had to travel the same distance for this purpose. These villages were Uluberia (66.67%), Shyampur (68.42%), Amta (61.29%), Joypur (60.61%) and Bagman (52%). The situation was quite dissatisfactory in three PSs such as Domjur (46.67%), Panchla (42.85%) and Jagatballavpur (36.36%) as only 30-50% villages had access of MFs within 0-5 kms indicating most of the villages had to travel more than 5 kms.

7.4.1.4 Medical Facilities According to Size-Class of the Villages

On the basis of the population size (in persons) the villages can be divided into seven categories, as given below.

1) Very Small Size Villages (<499)
2) Small Size Villages (500-1999)
3) Medium Size Villages (2000-4999)
4) Large Size Villages (5000-9999)
5) Very Large Size Villages (10000-14999)
6) Extremely Large Size Villages (15000-19999)
7) Extremely Very Large Size Villages (>20000)
In this section the relationship of settlement or village size with the level of healthcare development is discussed for the Howrah district.

(A) District Level Scenario

In 1951, Small Size Villages were predominant accounting 63.31% of all villages. The study shows that medical facilities were poor in very small size villages because only 2 villages out of 155 (1.29%) had MFs for this year. Out of 516 Small Size Villages only 16 (3.10%) had such facilities. Out of 123 Medium Size Villages, 12 (9.75%) and out of 18 Large Size Villages 7 villages (38.89%) had medical facilities in 1951. Thus it is clear that medical service increased with the size of villages.

In 1961, the same trend was found in the district. The MFs were very poor in Very Small Size Villages (1.83%) and slightly better in Small Size Villages (4.35%). The condition became quite better in Medium Size Villages as 11.29% such villages were provided health services. On the other hand, 35.29% of Large Size Villages of the district had MFs in this year. Thus, this clearly reflects that bigger settlements were favoured with more access to health services.

In 1971, the trend was almost the same as before. The facilities of healthcare was the worst in Very Small Size Villages as only 2.86% of them were provided with MFs. MFs were better in
Small Size Villages as 14.94% of them had the same, and far better in Medium Size Villages because 29.16% of such villages were equipped with MFs in this year. The best situation was noticed in Large Size Villages of which 41.67% could avail health services. Thus, it is found that larger villages were given more importance in providing MFs.

In 1981, the same trend had been going on in the district. 8.16% villages of the total Very Small Size Villages were characterized by any one or more MFs while 16.24% of the total had the same. The status of MFs was far better in Medium Size Villages of which 33.45% were provided with MFs in this year. In Large Size Villages condition was quite satisfactory because 62.5% of them had health services. There was only one Very Large Size Village in the district and that was provided with MFs.

In 1991, some improvement took place in Very Small Size Villages as 11.11% of them were provided MFs. Again, in Small Size Villages the status was quite satisfactory as 34.06% of them such facilities. 62.14% of total Medium Size Villages in the district had been provided with healthcare facilities. 71.21% of Large Size Villages could fulfill their health needs in this year. Besides, 100% of Very Large Size Villages and Extremely Large Size Villages had proper health services. Thus, the bigger the settlement the higher the level of health services was observed.
In 2001, the situation improved in case of Very Small Size Villages as 12% of them were provided with health services. The situation became far better in Small Size Villages because 39.06% of them had such services in this year. Medical facilities started to increase in bigger villages. In the Medium Size Villages of which 67.18% had such facilities, the status of MFs was quite satisfactory. In the Large Size Villages of which 80.95% was provided MFs the condition was very satisfactory. 90.90% of the Very Large Size Villages in this year had access to MFs. The MFs were provided in all of the Extremely Large Size Villages and the Extremely Very Large Size Villages in the district as the number of such villages were few.

(B) Sub-Region Level Scenario

Police station wise pattern of healthcare facilities in the different size of villages in Howrah district exhibited a great disparity since 1951. In this section this variation will be analyzed.

B.1 Very Small Size Villages

The study shows that most of the Very Small Size Villages had no medical facilities since the Independence. In 2001, 50% of the Very Small Size Villages of Bagnan; 50% of Uluberia and 20% of Shyampur had MFs. In the rest of the PSs of the district the Very Small Size Villages were kept out of such facilities.

B.2 Small Size Villages

Healthcare facilities in Small Size Villages were better than that of Very Small Size Villages in the different Police Stations of the district since Independence, and the scenario had been changing with time. In 2001, only in Panchla, Domjur and Uluberia police stations, more than 50% of the Small Villages had healthcare facilities, while in the rest of the police stations a large number of Small Villages were suffering from lack of medical facilities. Thus, the regional disparities were very high in this regard.

B.3 Medium Size Villages

In Howrah district during the 1950s, the number of Medium Size Villages was small, and due to population growth at alarming rate the number had increased rapidly. Healthcare facilities were also developed in these villages with time. It is seen that the level of healthcare facilities were better in Medium Size Villages in comparison with the Small Size Villages.
In 2001, more than 75% of the Medium Size Villages of Lilua, Amta, Sankrail, Uluberia and Bagnan police stations were provided with any one of the healthcare facilities. The facilities were good in Domjur, Panchla, Joypur and Shyampur police stations as 50-75% Medium Size Villages had such amenities. The facilities were insufficient in Udaynarayanpur and Jagatballavpur police stations where only 40-50% Medium Size Villages had the same. This indicates the imbalance of healthcare facilities in the district.

B.4 Large Size Villages

The number of Large Size Villages was very small during the time of independence in the different Police Stations of the district, but with the passage of time the number of such villages increased significantly.

In the year 2001, there was enormous variation in regard to the medical facilities in Large Size Villages of the Police Stations. In this year, more than 95% of such villages of Joypur, Domjur, Lilua and Sankrail had medical facilities. The situation was also good in Bagnan, Shyampur and Panchla police stations because more than 75% of the villages had such facilities. In Amta Uluberia and Udaynarayanpur the development was moderate. On the other hand, Jagatballavpur was lagging far behind as only 25% of the Large Size Villages were enjoying such facilities.

B.5 Very Large Size Villages

The number of Very Large Size Villages was very few at time of the independence, but gradually they increased by number.

In 1951, only two Very Large Size Villages existed in the district. One such village was located in Sankrail PS and another one was in Uluberia PS. Both of these villages were divested of healthcare facilities. This reflected the poor status of healthcare facilities in the villages. In 2001, the number of such villages increased more in comparison to the previous decade. However, Udaynarayanpur, Joypur, Domjur, Lilua and Shyampur had no Very Large Size Village till 2001.

Maximum number of these Villages was located in Uluberia where 3 of such villages were existed and cent percent of them had health services. It was followed by Panchla where 3 villages were found and 2 (66.67%) of them were supplied MFs. Thereafter came Jagatballavpur where 2 villages were of Very Large Size and cent percent of them were
equipped health services. Amta, Bagnan and Sankrail had one such village in each of them and all of these villages were enjoying health services.

**B.6 Extremely Large Size Villages**

The number of Extremely Large Size Villages was very few in time of the Independence. In 1951, only one village was of Extremely Large Size in the district and that was found in Bally PS only and that was provided with healthcare facilities. In 2001, the number of such villages increased to 2 in the district of Howrah. Amta had one such village which was provided with MFs. The 2nd one was located in Sankrail and this was also equipped with health services.

**B.7 Extremely Very Large Size Villages**

From 1951 to 1991 there was no Extremely Very Large Size Village in the district of Howrah. In 2001 only one village was of Extremely Very Large type was identified in the district. This village was located in Panchla PS. This village could enjoy the health services provided by the government.

Thus from the above study it is clear that health services were better in more populated villages than the small villages.

**7.4.2: HEALTH PERSONNEL IN RURAL AREAS**

Resources are needed to meet the vast health needs of a community. No nation, however rich, has enough resources to meet all of the needs for all healthcare services. Therefore, an assessment of the available resources, their proper allocation and efficient utilization are important consideration for efficient healthcare services. The basic resource of providing healthcare is health manpower or personnel.

The term ‘Health Manpower’ includes both professional and auxiliary personnel who are needed to provide the healthcare. An ‘auxiliary, is defined by WHO as “technical worker in a certain field with less than full professional”. Health manpower planning is an important aspect of community health planning. It is based on a series of accepted ratio.
Table 7.4 Suggested Norms for Health Personnel

<table>
<thead>
<tr>
<th>SI No</th>
<th>Category of Personnel</th>
<th>Norms Suggested</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Doctors</td>
<td>1/3500 population</td>
</tr>
<tr>
<td>2</td>
<td>Nurses</td>
<td>1/5000 population</td>
</tr>
<tr>
<td>3</td>
<td>Health Worker (Male &amp; Female)</td>
<td>1/5000 population for plain land and 3000 population in hilly and tribal areas</td>
</tr>
<tr>
<td>4</td>
<td>Trained Dāi</td>
<td>1 for each village</td>
</tr>
<tr>
<td>5</td>
<td>Health Assistant (Male &amp; Female)</td>
<td>1 for 30000 population in plain land and 20000 population for tribal and hilly areas</td>
</tr>
<tr>
<td>6</td>
<td>Pharmacist</td>
<td>1/10000 population</td>
</tr>
<tr>
<td>7</td>
<td>Laboratory Technicians</td>
<td>1/10000 population</td>
</tr>
<tr>
<td>8</td>
<td>Health Guide</td>
<td>1/1000 population</td>
</tr>
<tr>
<td>9</td>
<td>Accredited Social Health Activist (ASHA)</td>
<td>1/1000 population</td>
</tr>
</tbody>
</table>

Source: Park, 2001: P-637

Apart from these personnel, Ophthalmic Assistant, Multipurpose Workers etc. have been introduced for achieving the “Health for All”.

Keeping these norms in mind, the present study put emphasis on the distribution of health personnel in the district especially in rural areas of the different police stations. The study shows maldistribution of manpower both temporally and spatially.

In this study, three types of Health Personnel have been included as per data available. These are-

1) Doctors in Government Sector
2) Registered Medical Practitioners (RMP)
3) Health Workers

7.4.2.1 Availability of Doctors

According to Mudaliar Commission (1962), each doctor should serve 3500 population. This norm is standard of providing minimum healthcare to the people of India. It is now to find out the level of the district in regard to availability of doctor so that it can fulfill the norm of Population-Doctor Ratio (PDR). In this study the doctors of State Health System have been considered. No RMP has been taken into account.

District Statistical Handbook, Howrah, 2005 (published in 2007) provided the number of doctors under State Government of West Bengal in each Block of Howrah district. On the basis of this information and the rural population of 2001 of the district and police station wise “Population-Doctor Ratio” i.e. “Number of Population Served per Doctor” has been computed.
A.1: District Level Scenario

In the year 1998, PDR was very high meaning the pressure on doctors of Government sector was enormously high. This was very much unfavourable for the public health of the district. In this year, in the district as a whole, each doctor had to serve 15423 persons, which was 3.5 times higher than the norm of 3500. Hence, manpower was considerably poor in the district for providing health services to all.

In 2001, the district exhibited considerable development and PDR reduced to 8139. This year too, the district was far below the standard norm indicating poor situation in it.

In 2004, PDR reduced slightly to 7860 which was still far below the norm of 3500. This is clear that the district was still not fit for providing healthcare to all.

A.2: Sub-Region Level Scenario

In 1998, PDR was very much uneven in the different PSs of the district (Table-7.8). This varied from 8466 in Lilua to 55740 in Sankrail. Most of the police stations of the district had very high PDR which was not favourable for the public health. No police station fulfilled the norm of PDR. The situation was slightly improved in 2001 and Howrah Municipal Corporation (HMC) fulfilled the norm of PDR. The situation was better in Bally and Panchla due to the respective urban and semi-urban character of their location. Most of the police stations were still lagging behind. In 2004, HMC and Bally fulfilled the norm due to high urbanization吸引了 doctors to join in the government health units. On the other hand, Amta, Shyampur failed to attract doctors for their rural and remote location compared to the industrial north eastern part of the district. Each of the doctors had to cover 25000 population, which was not suitable for the public health (Fig-7.11).
Fig. 7.11: Police station wise distribution of population-doctor ratio of Howrah District.

Legend

<table>
<thead>
<tr>
<th>Population-Doctor Ratio</th>
<th>Legend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Development (&lt;3500)</td>
<td></td>
</tr>
<tr>
<td>High Development (3500-10500)</td>
<td></td>
</tr>
<tr>
<td>Moderate Development (10500-17500)</td>
<td></td>
</tr>
<tr>
<td>Poor Development (17500-24500)</td>
<td></td>
</tr>
<tr>
<td>Very Poor Development (&gt;24500)</td>
<td></td>
</tr>
<tr>
<td>Data not available</td>
<td></td>
</tr>
</tbody>
</table>
Table-7.5: PDR in the Different Police Stations of Howrah District: 1998-2004

<table>
<thead>
<tr>
<th>Years</th>
<th>PDR</th>
<th>HMC, Uluberia, Joypur, Udaynarayanpur</th>
<th>Jagatballavpur</th>
<th>Domjur, Sankrail, Amta, Bagnan Shyampur Bawria (NA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>-</td>
<td>Bally, Lilua, Panchla</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>HMC</td>
<td>Bally, Panchla</td>
<td>Uluberia, Lilua</td>
<td>Domjur, Jagatballavpur, Udaynarayanpur</td>
</tr>
<tr>
<td>2004</td>
<td>HMC</td>
<td>Bally, Domjur, Uluberia Udaynarayanpur</td>
<td>Sankrail, Panchla, Joypur</td>
<td>Jagatballavpur Amta, Shyampur, Bawria (NA)</td>
</tr>
</tbody>
</table>

Source: - Prepared by the researcher based on DSH, Howrah, 1998, 2001 and 2004


Doctors generally prefer to serve people more in urban areas. It is found that the number of doctors is very low in rural parts of any PS. The distribution of doctor is highly concentrated in well communicated areas. The people of remote rural areas are suffering from proper treatment which in turn leads to increase of morbidity. It is also seen that the number of doctor is very low in fully rural PSs and high in totally urban PSs. Hence, mere number of doctor in the district will not clearly depict the health picture. Distribution of doctors will be of great importance in this study to get hints of morbidity condition of the people in the different PSs of the district.
B.1 District Level Scenario

In 1998, 268 doctors were providing health services to people in Howrah district as a whole. The figure increased sharply in 2001 with 525 doctors. The number of doctors again increased to 569 in the district in the year of 2004. The trend was good for the development of healthcare facilities in the district.

B.2 Sub-Region Level Scenario

In 1998, concentration of the doctors of the district was found in the HMC where 31.72% of the total doctors of the district were engaged, while the poorest situation was found in Sankrail PS where only 1.87% of the total doctors were working. Most of the police stations were poor as the percentage of doctors was very low. Situation was better in Uluberia and Bally as these are urban areas and communication is good for the doctors working in hospitals and health centres.

In 2001, the same trend prevailed as most of the doctors numbering 329 i.e. 62.67% of the total doctors were engaged in HMC, while the poorest situation was existed in four PSs such as Lilua, Sankrail, Joypur and Shyampur where 1.14% of doctors were working in each of them.

In 2004 as before most of the doctors (234) accounting 41.42% of total district doctors were working in the HMC for the same reasons. This was followed by Bally (86 doctors) and Uluberia (70 doctors). The situation was the poorest in Lilua and Amta where 8 doctors (1.41%) in each were working.

Table-7.6: Distribution of Doctors in the Different Police Stations of Howrah District: 1998-2004

<table>
<thead>
<tr>
<th>Years</th>
<th>Doctors available in the Police Stations (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt;20</td>
</tr>
<tr>
<td>1998</td>
<td>HMC</td>
</tr>
<tr>
<td>2001</td>
<td>HMC</td>
</tr>
<tr>
<td>2004</td>
<td>HMC</td>
</tr>
</tbody>
</table>

Source - Prepared by the researcher based on DSH, Howrah, 1998, 2001 and 2004

Notes- NA: Not available
C.1 District Level Scenario

As per data available the district was in a very poor condition regarding the number of doctors under the health service of the State Government of West Bengal in rural areas. The district could not fulfill the norm for PDR. In this year, each doctor had to serve 11465 rural population which were three times higher than the norm of 3500 rural population.

C.2 Sub-Region Level Scenario

Police station wise pattern of PDR in rural areas for the period of 2004-05 shows substantial disparity ranging from 1823 in Lilua to 62591 in Bagnan. The study exhibits that only two PSs of the district namely Lilua and Domjur had been able to satisfy the norm of 3500 rural population per doctor. On the other hand, Bagnan, Shyampur, Amta, Jagatballavpur, Joypur, Udaynarayanpur, Sankrail and Panchla were failed to meet the norm. Of them six PSs such as Bagnan, Shyampur, Uluberia, Jagatballavpur, Amta, and Joypur showed higher ratio than the district average of 11465 PDR indicating very poor availability of health manpower in these agriculture dominated areas.

Udaynarayanpur, Panchla and Sankrail showed lower ratio than that of district indicating better situation in this regard. In Sankrail, the situation was nearly that of standard norm as each doctor had to serve 3714 population only. Thus, the study indicates that Howrah district is still suffering from the lack of doctors in state government institutions.

At present most of the rural population are to consult the private practitioners (doctors) for their treatment due to dearth of government doctors in the rural areas. Hence the role of RMP in serving the rural people can not be ignored.

7.4.2.2 Availability of Registered Medical Practitioners (RMP)

In general people have to depend on RMPs who practices privately when the doctors of state government cannot fulfill their demand for health problem. In the district the number of doctors under state government is quite low in all of the PSs. This warrants the necessity of
private practitioners in health system. Thus, the present study tries to understand the role of RMP who practice privately in their own chamber or any medical shop or in the polyclinics. No data is available for the year of 1951, 1961, and 1971. Data on RMP are available on the census years for 1981, 1991 and 2001.

[A] Percentage of the Villages Having RMP

A.1 District Level Scenario

The percentage of villages having RMPs is a good indicator of healthcare facility. In 1981, only 9.27% of 755 villages had RMP. People had to suffer more during serious illness. Situation improved slightly during 1980s, but in 1991 still only 22.89% of 734 villages could avail RMP services in their own villages. In 2001, the situation became more vulnerable as only 16.64% of 727 villages had private practitioners. This happens as RMPs generally dislike to practice in rural areas and prefer urban centers or nodal places like markets, railway stations etc.

A.2: Sub-Region Level Scenario

In PS level, great disparity prevailed in regard to the villages having RMP who practice privately.

In 1981, in most of the PSs like Lilua, Domjur, Sankrail and Uluberia and Bawria no village had RMP. Shyampur PS ranked top in this regard as 20.98% villages could get facilities of RMP.

In 1991, situation improved slightly. Only in two PSs such as Domjur and Sankrail, no village had RMP. People have to depend on private practitioners of urban centers. Except Bagnan PS, all of the PSs of the district experienced some increase in percentage of villages having RMP. In this year, diversity among PSs in regard to percentage of villages having RMP had increased very significantly.
Fig. 7.14: Share of villages having Registered Medical Practitioners in different police stations of Howrah District.
In 2001, Sankrail came to the top as 52.38% of its villages had private practitioners. Udaynarayanpur being located far away from north eastern urban parts was in a very much deplorable condition, as only 1.33% of its villages (1 village of 75) had private practitioner. In Jagatballavpur PS none of the villages had RMP, and people had to depend on the Rural Medical Practitioners (Rural MP) for their treatment. Almost the same type of disparity prevailed in 2001 (Fig-7.14).

Table- 7.7: Percentage of Villages having RMP in the Different Police Stations of Howrah District: 1981-2001

<table>
<thead>
<tr>
<th>Years</th>
<th>Percentage of Villages having RMP in the Police Stations</th>
<th>Absence of RMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>Panchla, Bagnan, Shyampur</td>
<td>Jagatballavpur, Amta, Udaynarayanpur, Lilua, Domjur, Sankrail, Uluberia, Bawria</td>
</tr>
<tr>
<td>1991</td>
<td>Panchla, Bawria, Uluberia, Lilua</td>
<td>Jagatballavpur, Bagnan, Shyampur, Amta, Udaynarayanpur, Domjur, Sankrail</td>
</tr>
<tr>
<td>2001</td>
<td>Sankrail, Lilua, Domjur, Panchla, Bagnan, Uluberia</td>
<td>Jagatballavpur, Amta, Jaspur, Shyampur, Udaynarayanpur</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the DCH, Howrah, 1951-2001

[B] Population-RMP Ratio

During 1981, 1991 and 2001 data have not been available about the doctors under government sectors, but number of RMP is available. Hence the norm of 3500 population served per doctor has been computed in case of RMP as they serve villagers. In this study ‘Population-RMP Ratio’ is presented below.

B.1: District Level Scenario

It is found that in 1981, one RMP had to serve 12428 rural population of Howrah district. This was far below from the norm of 3500 population. In 1991, this “Population-RMP Ratio” was reduced sharply and each RMP was covering 5840 rural population which was nearly standard norm.
In 2001, the situation again became poorer and the ratio increased to a little extent. In this year each RMP covered 7314 rural population which was nearly double of the standard norm.

### B.2: Sub-Region Level Scenario

With respect to “Population-RMP Ratio” temporal and spatial variations were prevailing (Table-7.8) in sub-regional level of the district.

### Table- 7.8: Rural Population Served per RMP in the Different Police Stations of Howrah District: 1981-2001

<table>
<thead>
<tr>
<th>Years</th>
<th>Number of Rural Population Served Per RMP in the Police Stations</th>
<th>Absence of RMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>&gt;3500: Bagnan, Shyampur</td>
<td>Lilua, Domjur, Uluberia, Sankrail, Bawria</td>
</tr>
<tr>
<td></td>
<td>3500-10500: Panchla, Bagman, Shyampur</td>
<td>Jagatballavpur, Panchla, Amta, Udaynarayanpur</td>
</tr>
<tr>
<td></td>
<td>10500-17500: -</td>
<td>Amta, Udaynarayanpur</td>
</tr>
<tr>
<td></td>
<td>17500-24500: -</td>
<td>Bawria</td>
</tr>
<tr>
<td>1991</td>
<td>3500-10500: Lilua, Uluberia</td>
<td>Domjur, Sankrail</td>
</tr>
<tr>
<td></td>
<td>10500-17500: Panchla, Bagman, Shyampur</td>
<td>Jagatballavpur</td>
</tr>
<tr>
<td></td>
<td>17500-24500: Jagatballavpur, Panchla, Bagman, Shyampur</td>
<td>Amta, Udaynarayanpur</td>
</tr>
<tr>
<td>2001</td>
<td>3500-10500: Domjur, Sankrail</td>
<td>Jagatballavpur</td>
</tr>
<tr>
<td></td>
<td>10500-17500: Uluberia, Bagnan</td>
<td>Lilua, Amta, Udaynarayanpur</td>
</tr>
<tr>
<td></td>
<td>17500-24500: Lilua, Amta, Udaynarayanpur</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: - Compiled by the researcher based on District Census Handbook, Howrah, 1951-2001

In 1981, Bagnan PS was in the best condition as each RMP served 4291 rural population which was of nearly ideal norm of 3500. Most of the police stations such as Lilua, Domjur, Uluberia, Sankrail and Bawria were lagging behind as no village of them had RMP, although the chance of having RMP was higher in these PSs. Overall situation of Population-RMP ratio was not up to the mark in the different PSs of the district.

In 1991, only two PSs of the district, such as Domjur and Sankrail, were devoid of RMP. Bawria was the best of all because each RMP was covering 1678 rural persons. The Population-RMP ratio improved in most of the police stations although disparity was high among them.
Fig. 7.16: Population-Registered Medical Practitioner Ratio in rural areas of different police stations of Howrah District.
In 2001, almost the same trend prevailed though the ratio became favourable in most of the PSs. Domjur was the best of all PSs as each RMP served 2684 persons this year. Jagatballavpur was the poorest of all as no RMP was working in this PS (Fig-7.16).

7.4.2.3 Availability of Health Workers (HW)

Keeping in view of the WHO goal of “Health for All” by 2000 AD, the Government of India evolved a “National Health Policy” in 1983, based on primary healthcare approach. Steps were taken to implement NHP objectives towards achieving this goal.

Under the “Multipurpose Worker Scheme” one Health Worker Male and one Health Worker Female were posted at each Sub-Center (SC) and were expected to cover 5000 population in plain and 3000 population in tribal and hilly areas.

Government of India prepared another “National Health Policy” in 2002, and laid emphasis on preventive and first line curative initiatives at the primary health level. Hence, Community Health Workers had to play very important role in providing primary healthcare services to the people.

[A] Percentage of Villages having Health Workers (HWs)

A.1: District Level Scenario

With regard to percentage of villages having HWs to provide healthcare facilities at grass root level, there was great scarcity in 1981. Only 4.11% of 755 Villages of the district were provided with HWs. This is very deplorable situation in regard to the number of HWs and unfavourable for public health of the district.

During the 1980s many steps were taken by the West Bengal Government as well as Howrah Zilla Parishad in the district to raise the number of health manpower and subsequently some improvement took place. In 1991, 20.71% of the total 734 villages of the district were equipped with the HWs.
During the 1990s West Bengal Government through Howrah Zilla Parishad took some more positive steps for the improvement of the number of HWs in the district. Thus, in the year 2001, 34.25% of 727 villages of the district had HW to provide healthcare services.

A. 2: Sub-Region Level Scenario

In respect of the number and percentage of HWs there were huge temporal and spatial variations in the different police stations of the district since 1981.

In the year 1981, only three police stations of the district had HWs and Udaynarayanpur was the best of all as 37.33% of the total villages of police stations had HW.

In 1991, the situation was improved and most of the police stations of the district were marked with increase of percentage of villages having HW, except Bawria, Sankrail and Panchla where still no health worker posted. Imbalance was prevailing in the different PSs of the district. Udaynarayanpur was the most developed in this regard as 54.67% of villages were provided with HWs. Moreover in this period Lilua, Amta and Shyampur were slightly better in this regard.

Based on this disparity in different years the district has been divided into six categories (Table-7.9) keeping pace with next decade and comparison with the different decades.

**Table- 7.9: Villages having HW in the Different Police Stations of Howrah District: 1981-2001**

<table>
<thead>
<tr>
<th>Years</th>
<th>Percentage of Villages having HW in the Different Police Stations</th>
<th>Absence of HW</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt;60</td>
<td>60-45</td>
</tr>
<tr>
<td>1981</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1991</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>Lilua, Sankrail</td>
<td>Uluberia,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the DCH, Howrah, 1981-2001
Fig. 7.18: Health worker facilities in the rural areas of different police stations of Howrah District.
In 2001, the coverage of villages with HW increased highly. All of the police stations of the district were characterized by increase of village coverage, except Udaynarayanpur which exhibited a negative change. Diversity was predominant in sub-regional level as indicated from variation ranging from 66.67% coverage in Lilua and Sankrail to 14.67% coverage in Jagatballapur. Most of the police stations (six) were poor in this regard (Fig-7.18).

[B] Population - Health Worker Ratio

In this section an assessment is done to know whether Howrah district has been able to meet the national norm i.e. one health worker has to cover 5000 rural population in the plain land. The norm is applicable in Howrah district as it is located in the flood plain of the lower Damodar valley region.

B.1: District Level Scenario

In 1981, Population-Health Worker Ratio was very poor in Howrah district as each HW had to cover 49335 rural population. This was a very much deplorable condition. During the 1980s Howrah Zilla Parishad took many steps for the development of primary healthcare facilities. In 1991, the Population-Health Worker Ratio developed highly as each HW was to cover 7552 population which was near the national norm. In 2001, the situation was improved significantly, as each HW could provide primary healthcare services for 4359 rural population. The district was able to fulfill their national norm of 5000 persons in this regard. This was very much satisfactory for the people as they could primary healthcare facilities.

B.2: Sub-Region Level Scenario

Temporal and spatial variations were quite high in the different PSs of the district so far as Population-HW ratio is concerned (Table-7.13). In 1981, sub-region pattern of Population-HW ratio exhibited low disparity as most of the PSs of the district had no HW. Only three PSs of the district namely Udaynarayanpur, Bagnan and Jagatballapur had HWs. Only Udaynarayanpur PS attained such level to fulfill the standard norm of 5000 population served by each HW (Fig-7.20).
Fig. 7.20: Population-health worker ratio in the rural areas of different police stations of Howrah District.
In 1991, due to developmental steps taken by Howrah Zilla Parishad, Population-HW ratio was improved in most of the PSs of the district except Sankrail, Bawria and Panchla which were still divested of HWs. On the other hand, Lilua, Amta and Udaynarayanpur PSs were fully developed as they had achieved the standard norm. Thus very strong disparity was existed in the district during this period.

2001 showed very high development in population-health worker ratio though three PSs such as Udaynarayanpur, Lilua and Amta recorded some negative growth. In this year each of the PSs of the district had HW for providing health care facilities to the grass roots level. The PSs like Lilua, Panchla, Uluberia, Joypur, Bagnan, Sankrail and Amta achieved the national norm.


<table>
<thead>
<tr>
<th>Years</th>
<th>Population Served per HW</th>
<th>Absence of HW</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; 5000</td>
<td>5000-10000</td>
</tr>
<tr>
<td>1981</td>
<td>Udaynarayanpur</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Lilua, Amta, Udaynarayanpur, Shyampur</td>
<td>Bagnan Domjur, Uluberia, Jagatballavpur</td>
</tr>
<tr>
<td>2001</td>
<td>Lilua, Panchla, Uluberia, Joypur, Bagnan, Sankrail, Amta</td>
<td>Domjur, Shyampur, Udaynarayanpur</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the DCH, Howrah, 1981-2001

7.4.3 HEALTH INFRASTRUCTURES IN HOWRAH DISTRICT

According to “National Health Policy”, 1983 and 2002 in India, emphasis was placed on the WHO Goal of ‘Health for All’. The ‘Primary Healthcare Approach’ aimed at universal coverage and equitable distribution of health resources. Healthcare must penetrate into the farthest reaches of rural areas and every one should have access to it. For implementing the primary healthcare special emphasis was put on building some health infrastructure.

The present organization of health services of the government sector consists of the following four institutions.
1] **Sub-Centres (SCs):** Primary Health Sub-Centre popularly known as Sub-Centre (SC) is the peripheral outpost of the existing health delivery system in the rural areas. They are being established on the basis of one SC for every 5000 population in the district.

2] **Primary Health Centres (PHCs):** PHC is a basic health unit to provide as close to the people as possible. This is an integrated curative and preventive healthcare to the rural population with emphasis on preventive and promotive aspect of healthcare (Park, 2001: 640). Each PHC has to cover 30000 rural population in the district.

3] **Community Health Centres (CHCs):** These are established by upgrading the PHCs, and each CHC has to cover a population of 80,000 to 1, 20,000 and are expected to be located one in each CD Block.

4] **Hospitals:** Apart from the SCs and PHCs the present organization of health services in the government sector consists of hospital. This is a health unit which provides only curative services and it has no catchment area i.e. it has no definite area of responsibility. Patients may be drawn from any part of the country.

Besides, dispensaries play vital role in providing health services in the district.

In the present study emphasis is given on finding out the status of health infrastructures in Howrah district since the Independence of India.

**7.4.3.1 Status of Dispensary Facilities in Howrah District: 1951-2001**

The level of development of dispensaries, as a health unit may be assessed in two ways.

[A] **Percentage of Villages having Dispensary Facilities**

This reflects the level of healthcare facilities in rural areas of the district.

**A.1: District Level Scenario**

It is found that the development of Dispensary Facilities in Howrah district since the Independence is progressive. In 1951, only 4.05% of the total 815 PSs of the district had Dispensary Facilities reflecting very poor level of public health.

In the next decade of 1961, situation became poorer as only 1.65% of 787 villages of the district were provided with the facilities.

In 1971, the condition improved registering 14.66% of the total villages (771) of the district with dispensary facilities.
In 1981, importance of the Dispensary Facilities went down as only 6.09% of 755 villages of the district were equipped with the facilities. In 1991, the condition further deteriorated in this regard as indicated from 5.99% of 734 villages in the district having same. Mention may be made that in this year more emphasis was placed on the building of SCs in the rural areas of the district.

During the 1990s the situation exhibited very good trend in the district. Many new Ayurvedic, Homoeopathic, and some Unani Dispensaries were established in different parts of it. In 2001, 22.28% of 727 villages of the district were equipped with Dispensary Facilities reflecting satisfactory level of primary healthcare.

**A.2: Sub-Region Level Scenario**

Percentage of villages having dispensary facilities indicated very high disparity in sub-region level during 1951 to 2001.

In 1951, there was diversity in regard to dispensary facilities in the different PSs of the district. The best condition was seen in Shibpur as 100% of the villages (only one village existed there) having dispensary and Bawria was the poorest of all as it had no dispensary. Most of the PSs namely Sankrail, Jagatballavpur, Uluberia, Amta, Bagnan and Shyampur were poor as below 5% of the villages of them had such facilities. In 1961, most of the PSs of the district were marked with the reducing trend of dispensary facilities except Jagachha where an opposite trend was observed. Shibpur was the most developed in this regard due to one village. On the other hand, Balý, Sankrail, Shyampur and Bawría had no such facilities. In 1971, the dispensary facilities increased in the different PSs. Bagnan was the best as 36.36% of its villages were provided with this facility. Lilua was the poorest of all as no dispensary was established there. Most of the PSs were still poor in dispensaries. In 1981, the overall scenario of the different police stations remained very much unsatisfactory. However, Some disparities...
were prevailing in the different PSs. Bagnan was the most developed although only 19.38% of total villages had dispensary, while five PSs like Bawria, Panchla, Jagatballavpur, Sankrail, and Lilua had no dispensary at all. Thus, the situation was not favourable for public health. In 1991, the overall situation was very unsatisfactory as six PSs of the district were totally deprived of dispensary except Shyampur with 16.78% of the villages having the facilities. Based on this high disparity in the different decades, the district has been divided into six categories (Table-7.11).

Table-7.11: Percentage of Village having Dispensary Facilities in the Different Police Stations of Howrah District: 1951-2001

<table>
<thead>
<tr>
<th>Years</th>
<th>Villages with Dispensary Facilities (in %)</th>
<th>Absence of Dispensary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td>Shibpur (100%)</td>
<td>Bawria</td>
</tr>
<tr>
<td></td>
<td>Domjur, Jagachha, Panchla</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sankrail, Jagatballavpur, Uluberia, Amta, Bagnan, Shyampur</td>
<td></td>
</tr>
<tr>
<td>1961</td>
<td>Shibpur (100%)</td>
<td>Bally, Sankrail, Shyampur, Bawria</td>
</tr>
<tr>
<td></td>
<td>Dom, Bagnan, Jagatballavpur, Uluberia, Panchla Amta, Udaynarayanpur</td>
<td></td>
</tr>
<tr>
<td>1971</td>
<td>Amta, Bagnan, Uluberia</td>
<td>Lilua</td>
</tr>
<tr>
<td></td>
<td>Domjur</td>
<td>Sankrail, Panchla Jagatballavpur, Shyampur, Udyanarasayanpur</td>
</tr>
<tr>
<td>1981</td>
<td>-</td>
<td>Bawria, Panchla Jagatballavpur, Sankrail, Lilua</td>
</tr>
<tr>
<td></td>
<td>Bagnan</td>
<td>Domjur, Uluberia, Amta</td>
</tr>
<tr>
<td>1991</td>
<td>-</td>
<td>Bawria, Jagatballavpur, Sankrail, Lilua</td>
</tr>
<tr>
<td></td>
<td>Shyampur</td>
<td>Bagnan, Uluberia, Amta, Udyanarasayanpur</td>
</tr>
<tr>
<td>2001</td>
<td>Domjur</td>
<td>Jagatballavpur, Udyanarasayanpur</td>
</tr>
<tr>
<td></td>
<td>Sankrail, Lilua, Amta</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Panchla</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Uluberia</td>
<td></td>
</tr>
</tbody>
</table>

Source: - Prepared by the researcher based on the DCH, Howrah, 1951-2001

The year 2001 exhibited spectacular increase in the percentage of villages having dispensaries of Homoeopathic, Allopathic, Ayurvedic and Unani types in almost all of the PSs except Shyampur which showed a reducing trend.
Fig. 7.22: Dispensary facilities in the rural areas of different police stations of Howrah District.
Fig. 7.23: Dispensary facilities in the rural areas of different police stations of Howrah District.
Lilua was the most developed as 100% villages were provided with dispensary, while Jagatballavpur was the poorest of all with only 2.67% villages were equipped with the facility. The disparity level among the PSs also increased in this year (Fig-7.22 and 7.23).

[B] Population Served per Dispensary in Howrah District

This reflects the level of healthcare facilities in an area. If the dispensary serves more than 5000 population in rural areas, the level of facilities will be low. Thus, in the present study ‘population-dispensary ratio’ of Howrah district has been taken into consideration.

B.1: District Level Scenario

In 1951, one dispensary had to serve 30251 rural population. During the 1950s situation became poorer and in 1961 each dispensary had to cover 93337 rural population which was very much unfavourable because population growth was more than the growth of the dispensaries.

During 1960s the number of dispensary in Howrah district increased very highly and the population-dispensary ratio obviously decreased. Hence in 1971, each dispensary had to cover 8885 rural population indicating quite satisfactory situation in the district.

Again in 1981, the situation deteriorated as the pressure on dispensary increased and each dispensary had to serve 17696 population. In the next decade, the situation deteriorated again in the district. Pressure had been increasing on the dispensaries as every dispensary had to cover 20665 rural population in 1991.

During 1990s many new Allopathic, Homoeopathic, Ayurvedic and Unani type of dispensaries were established in the different parts of the district and thereby pressure on dispensary reduced sharply. Hence in 2001, population-dispensary ratio in the district was very satisfactory, because every dispensary was covering 5062 population.
B.2: Sub-Region Level Scenario

In 1951 there was high disparity in regard to 'population-dispensary ratio' in the different PSs of the district as indicated from the range of 332 population served per dispensary in Shibpur to 146012 in Uluberia PS. In Bawria, rural areas were deprived of any dispensary facilities. In 1961, the level of dispensary facilities in the rural areas deteriorated. Most of the PSs had high pressure of population on dispensary, and even four PSs such as Bally, Sankrail, Shyampur and Bawria had no dispensary.


<table>
<thead>
<tr>
<th>Years</th>
<th>Population-Dispensary Ratio</th>
<th>Absence of Dispensary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;5000</td>
<td>5000-30000</td>
</tr>
<tr>
<td>1951</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1961</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1971</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1981</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1991</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: - Prepared by the researcher based on the District Census Handbooks, Howrah 1951-2001

In 1971, the dispensary facilities improved in rural areas. Uluberia was the best as 2820 rural population were served by each dispensary, while Lilua was the poorest.
Fig. 7.25: Population served per dispensary in the rural areas of Howrah District
Fig. 7.26: Population served per dispensary in the rural areas of Howrah District.
The number of district in the poor group reduced. In 1981, the trend of development of dispensary facilities became worse because five PSs were fully divested of dispensary facilities. Uluberia, the poorest of all PSs having dispensary, served 247797 rural population. Bagnan was the best of all as it had been able to fulfill the national norm as each dispensary was serving only 4548 rural population. In 1991, almost the same trend of poor situation continued. The year 2001 showed very high improvement as all of the PS had dispensary facilities. Most of the PSs (6) of the district fulfilled the norm of 5000 population per dispensary. Jagatballavpur was the poorest of all as each dispensary of it had to cover 109905 population. Sankrail was the best of all as many new dispensaries were established and each dispensary was serving was serving only 1360 rural population here (Fig-7.25 and 7.26).

Based on this disparity in the different decades the district has been divided into five categories (Table- 7.12).

7.4.3.2 Status of Primary Health Sub-Centre [SC] Facilities in Howrah District: 1981-2007

Keeping the view of WHO Goal of “HFA” as proposed in “World Health Assembly” in 1977, The National Government of India prepared a “National Health Policy” [NHP] in 1983 first and 2002 later. According to these to NHPs many new health units have been established throughout the country. As per the National Health Policy (1983 and 2002) the Ministry of Health decided to establish Primary Health Sub-Centres (SCs) to provide health care facilities to each and every population of the country. The standard norm was set up, that each SC had to cover 5000 population in plain areas and 3000 population in hilly and tribal areas. Thus, SC has a great role to play in the health system of India especially in the rural areas. So “Population and Sub-Centre Ratio” is very good indicator of healthcare development. SC is the peripheral out post of the existing health delivery system in the rural areas.

It is to be mentioned here that the concept of SC was new in India, and hence during 1950s to 1970s no SC was existed in the country. In fact, the Sub-Centres were established in the different PSs of the district of Howrah since the 1980s.

For providing of health services to the public SCs should be established in each of the villages of the district. The level of development of SC in Howrah district as health unit may be evaluated in the following two ways.
The present study anticipates that there has been a great change in the status of SC in the different parts of the district of Howrah.

A.1: District Level Scenario

No SC was established in the period 1951, 1961 and 1971 in the district of Howrah as whole. In 1981 only 0.93% of the total villages were provided with some SCs. In this year, 9.40% of the total villages were equipped with these facilities. In 2001, the level of SC facilities had been improving well. In this year, 20.63% of villages were enjoying the facility. In 2007, the situation improved spectacularly, as 448 villages accounting 66.55% of total 727 villages of the district were getting the facility.

A.2 Sub - Region Level Scenario

The level of development of SC facilities in the different PSs of the district showed huge temporal and spatial disparities since 1981 (data are not available for 1951, 1961 and 1971). In 1981, the number of SC in the different PSs of the district was too less, as most of PSs such as Bagnan, Sankrail, Lilua, Uluberia, Shyampur and Bawria had no SC. Only five PSs like Jagatballavpur, Panchla, Amta, Bagnan and Udaynarayanpur had SC, though very limited in number. Udaynarayanpur was the best of all, although only 4% villages were provided with SC facilities. In 1991, the district experienced some development of SC facilities, and hence, barring Lilua, all of the PSs of the district had SC facilities. All of the PSs of the district exhibited some increase of coverage compared to the previous decade. Bagnan was the most developed area as 21.88% villages had SC facilities. In 2001, SC was established in each of the PS of the district. Each PS except Domjur had recorded very high growth of SC facilities in comparison with the previous decades. The highest development took place in Lilua PS.
66.67% villages had SC facilities. Domjur was the poorest of all as only 2.56% villages had SC. In 2007, situation has phenomenally changed in the district. After NHP-2002, many new SCs have been established in the different PSs. Lilua was the best of all in this regard because 39 SCs have been established only in 3 villages (Bally-Jagachha Block). The poorest condition was existed in Shyampur PS located in remote southernmost part of the district, where only 37.76% of the total villages have such facility. Most of the police stations of the district are now concentrated in the moderate level. The Situation is quite satisfactory in four PSs like Domjur, Sankrail, Lilua and Panchla as all of the villages are provided SC facilities (Fig-7.28 and 7.29). The district can be divided into six categories (Table-7.13) to show the growth of SC in the different decades since 1981.

**Table- 7.13: Villages having SC in the Different Police Stations of Howrah District: 1981-2007**

<table>
<thead>
<tr>
<th>Years</th>
<th>Villages Having SC (in %)</th>
<th>Absence of SC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100 (Full Coverage) 70-50</td>
<td>50-30 30-10 &lt;10</td>
</tr>
<tr>
<td>1981</td>
<td>-</td>
<td>Jagatballavpur, Panchla, Amta, Bagnan, Uluberia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bagnan, Sankrail, Lilua, Uluberia, Shyampur, Bawria</td>
</tr>
<tr>
<td>1991</td>
<td>-</td>
<td>Domjur, Bagnan, Amta, Jagatballavpur, Panchla, Uluberia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shyampur, Udyanarayanpur</td>
</tr>
<tr>
<td>2001</td>
<td>Lilua</td>
<td>Sankrail, Uluberia, Amta, Bagnan, Shyampur</td>
</tr>
<tr>
<td></td>
<td>Panchla, Joypur</td>
<td>Jagatballavpur,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Domjur, Jagatballavpur,</td>
</tr>
<tr>
<td>2007</td>
<td>Domjur, Sankrail, Lilua, Panchla</td>
<td>Uluberia, Bagnan, Jagatballavpur, Amta, Shyampur, Udyanarayanpur, Joypur</td>
</tr>
</tbody>
</table>

Source: - Prepared by the researcher based on the DCH, Howrah 1981-2001 and HZP data -2006-07
Fig. 7.28: Sub-centre facilities in the rural areas of different police stations of Howrah District.
Fig. 7.29: Sub-centre facilities in the rural areas of different police stations of Howrah District.

According to NHP-2002, each SC has to cover 5000 population in the district. The level of primary healthcare facilities is determined by the Population and SC Ratio. Here it is assessed whether the national norm has been fulfilled or not. If the norm is met the area is considered developed, if not fulfilled then the area is lagging behind.

B.1: District Level Scenario

In 1981, the status of SC facilities in the district as a whole was very poor as each SC had to cover 232581 population which was alarming for public healthcare. During the 1980s many new SCs were established in the different parts of the district. In the year 1991, the Population-SC Ratio reduced sharply and each SC was covering 22933 population in the rural areas. The district was still far away from the standard norm of 5000 population per SC.

In 2001, the level of SC facilities increased significantly in the district but failed to reach the national norm because in this year each SC had to serve 13597 rural population.

During the first decade of this 21st century, many new SCs have been set up in different regions of the district under the guidance and assistance of Howrah Zilla Parishad. In 2007, there were 448 SCs in the district. The national target of standard norm of Population-SC Ratio was almost achieved. In this year 2007 each SC was providing medical facilities to 5137 population indicating moderate level of primary healthcare facilities in the district.

B.2: Sub-Region Level Scenario

The sub-regional pattern of Population-SC Ratio exhibited many temporal and spatial disparities since 1981. As Howrah district was very poor in SC facilities, there was very low disparity among the different PSs of the district in 1981. Udaynarayanpur PS was the best of all, although each SC served 131325 population. Thus, the SC facilities were considerably unfavourable for the public health of the district.
Fig. 7.31: Population – Sub-centre Ratio in the different police stations of Howrah District.
Fig. 7.32: Population – Sub-centre Ratio in the different police stations of Howrah District.

<table>
<thead>
<tr>
<th>Years</th>
<th>Population Served per SC</th>
<th>Absence of SC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; 5000</td>
<td>5000-10000</td>
</tr>
<tr>
<td>1981</td>
<td>Jagatballavpur, Panchla, Amta, Bagnan, Udaynarayanpur</td>
<td>Domjur, Sankrail, Lilua, Uluberia, Shyampur, Bawria</td>
</tr>
<tr>
<td>1991</td>
<td>Amta, Bagnan, Domjur, Uluberia Shyampur, Udaynarayanpur</td>
<td>Jagatballavpur, Panchla, Sankrail, Lilua, Bawria</td>
</tr>
<tr>
<td>2001</td>
<td>Lilua, Panchla, Joypur, Uluberia, Bagnan, Shyampur, Amta, Domjur, Sankrail, Jagatballavpur, Udaynarayanpur</td>
<td>-</td>
</tr>
<tr>
<td>2007</td>
<td>Domjur, Panchla, Lilua, Sankrail, Jagatballavpur, Uluberia, Amta, Joypur, Bagnan, Udaynarayanpur, Shyampur</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: - Prepared by the researcher based on the DCH, Howrah 1981-2001 and HZP data -2006-07

In 1991 too, no PS fulfilled the norm of 5000 rural population served per SC. The situation improved slightly in comparison with the previous decade. In this period the condition was the best in Amta where each SC was covering 11460 population, while the worst situation was existed in Jagatballavpur where each SC served huge population of 197425. In 2001, the pressure on the SC reduced in different PSs as ratio was decreased. The most satisfactory condition was observed in Joypur where each SC served 7010 population and the most unsatisfactory condition was found in Domjur where each SC population served 99324 population. In the year 2007, most of the PSs of the reached nearly the national norm of 5000 population served per SC indicating very low disparity among the PSs. Domjur, Panchla, Lilua and Sankrail achieved the national norm reflecting good situation for the public health. This low disparity is highly favourable for the health for the entire district. Lilua was the most developed as each SC serves only 426 rural population exhibiting phenomenal development. The lowest development has been observed in Joypur where each SC served 7379 rural population (Fig-7.31 and 7.32).
7.4.3.3: Status of Primary Health Centre [PHC] Facilities in Howrah District: 1951 to 2007-08

The “Primary Health Center” (PHC) is not new in India. The “Bhore Committee” in 1946 gave the concept of PHC as a basic health unit to provide an integrated curative and preventive healthcare to rural population with emphasis on preventive and promotive aspects of healthcare (Park, 2001: 618). The health planners in India have visualized the PHC and Sub-Centres (SC) as the proper infrastructure to provide health services to the rural people. The “Central Council of Health” at its first meeting held in January 1953 had recommended the establishment of PHC in each CD Block to provide comprehensive healthcare to rural population. The number of PHCs established since then had increased in the country. In this time each PHC was covering 100,000 population or 100 villages.

The “Mudaliar Committee” in 1962 had recommended that the existing PHCs should be strengthened and the population to be served by them to be scaled down to 40000 persons. Keeping in the view WHO Goal of “HFA by 2000 AD”, the NHP 1983 proposed reorganization of the PHCs for every 30000 rural population in the plains, and 20000 population in hilly and tribal backward areas for more effective coverage (Park, 2001: 618).

Though the national norm of population has been changed with time the present study has taken into consideration of 30000 population per PHC for keeping parity since the independence. In this study Health Centres, Rural Health Centres and PHC have been considered as the same and PHC has been used to keep parity.

For measurement of level of primary healthcare facilities in the rural areas of the district of Howrah emphasis has been given on the “Number of Population served per Health Centres” (HC). If it could fulfill the national norm of 30000 populations per HC, the situation may be regarded as satisfactory.

A. Population Served per PHC: 1951- 2008

“Population served per Primary Health Centres” also known as “Population-PHC Ratio” varied with time since 1951, and it has been improved later on.
A.1: District level Scenario

In 1951, the district level scenario of “Population- PHC Ratio” was very much alarming because each Primary Health Centre (PHC) was covering 217810 population which was much more than the standard norm.

During 1950s many new PHCs were established in the district numbering 33 in total. This helped in lowering the Population-PHC Ratio sharply. In 1961, each PHC was covering 36769 population that was nearly to the standard norm. The level of primary health services increased highly in the district.

During 1960s the situation was more or less remained same as of the previous decade. In 1971, 33 PHCs were functioning in the district and each of them had to cover 42538 population indicating some deteriorating situation in the district.

During 1970Ss the number of PHC increased to 50 and district nearly became satisfied in Population-PHC Ratio. In 1981, each PHC had to provide services for 32561 rural population indicating much better situations.

Due to high population growth the “Population-PHC Ratio” deteriorated in 1991. In this year each PHC was covering 39177 population.

During the next decade of 2001, situation again developed to some extent and the number of PHC increased to 62, and 34772 population were served by each PHC. It was nearly satisfactory level. Thus it may be inferred that the people of the district of Howrah were enjoying primary healthcare facilities in such a level as envisaged by WHO in 2001.

In 2004, the ratio increased slightly to 35635 population served per PHC, which was little higher than the standard norm of 30000 population indicating moderate healthcare facility in the district. Again in 2007, the ratio increased substantially due to no increase of PHC in the
district. In this year each PHC was serving 53525 rural population which was far above the standard norm of 30000 population.

A.2 Sub-Region Level Scenario

Sub-Region pattern of “Population-PHC Ratio” (P/PHC Ratio) exhibited very high temporal and spatial variations since 1951.

In 1951, out of 14 PSs of the district only two PSs had such facilities, but to a very little extent. In Jagatballavpur PS only 2 PHCs were functioning and each of them had to cover 39497 population. In Amta, 3 PHCs were established and each of them was covering 76751 population. The rest 12 PSs of the district had no PHC facilities. In 1961, many new PHCs were set up in the different PSs of the district and the P/PHC ratio became favourable. 10 PSs of the district, out of 14, were characterized by increase of new PHCs. Jagatballavpur, Amta and Udaynarayanpur fulfilled the national norm. The best condition was observed in Jagatballavpur where the maximum numbers of PHC were established as well as P/PHC Ratio was the best because each PHC covered only 15060 population. On the other hand, four PSs of the district had no PHC facilities at all. Very high disparity was prevailing among the PSs of the district regarding P/PHC Ratio. In 1971, out of 1P3 PSs of the district, 2 were fully kept out of PHC facilities. The condition deteriorated in five PSs while that improved in the other five PSs. The condition was the best in Jagatballavpur where each PHC served 17761 rural population and was the poorest in Sankrail and Bawria where no PHC was founded. However, the overall situation of PHCs improved in the district. In 1981, the situation improved in the different PSs. Barring Lilua, Jagatballavpur and Udaynarayanpur the rest of PSs showed positive development in this respect. But, there was very high disparity among the PSs ranging from 202594 population served per PHC in Bally to nil in Lilua where no PHC was established. Most of the PSs were concentrated in low ratio group. In 1991, all of the PSs of the district had PHC facilities except Lilua where no PHC was found. Most of the PSs exhibited deteriorating conditions barring Domjur and Sankrail where some improvement took place in this regard. Bawria PS had only 1 PHC to serve 5034 rural population. Still Lilua was the poorest of all, as there was no PHC facility. In 2001, all 11 rural PSs of the district were provided with PHC facilities indicating well development of healthcare facilities in the district. Hence the disparity level also went down slightly in comparison with the previous decades. Uluberia was the poorest of all in this regard as each PHC had to cover 52814 rural
population. On the other hand, Lilua was the most developed as one PHC served 14583 rural population. HMC, Bally and Bawria had no PHC as they were fully urban where PHC is not usually established.

Table-7.15: Population Served per PHC in the Different Police Stations of Howrah District: 1951-2004

<table>
<thead>
<tr>
<th>Years</th>
<th>Population Served per PHC in Police Stations</th>
<th>Absence of PHC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;30000</td>
<td>30000-50000</td>
</tr>
<tr>
<td>1951</td>
<td>Jagatballavpur</td>
<td>Amta</td>
</tr>
<tr>
<td>1961</td>
<td>Jagatballavpur</td>
<td>Amta</td>
</tr>
<tr>
<td>1971</td>
<td>Lilua, Jagatballavpur</td>
<td>Amta</td>
</tr>
<tr>
<td>1981</td>
<td>Bally</td>
<td>Amta</td>
</tr>
<tr>
<td>1991</td>
<td>Bawria</td>
<td>Sankrail, Jagatballavpur, Panchia, Ulubheria, Amta, Bagman, Udaynarayanpur</td>
</tr>
<tr>
<td>2001</td>
<td>Lilua, Sankrail</td>
<td>Jagatballavpur</td>
</tr>
<tr>
<td>2004</td>
<td>Lilua</td>
<td>Domjur</td>
</tr>
<tr>
<td>2007</td>
<td>Lilua</td>
<td>Domjur</td>
</tr>
</tbody>
</table>


In the year 2007-08, the P/PHC Ratio was the best in Lilua as each PHC served 4157 population while it was the poorest in Shyampur where each PHC served 95757 rural population which was three times higher than standard norm of 30000 population (Fig-7.34 and 7.35). All PSs of the district registered considerable increase of P/PHC Ratio which was unfavourable for healthcare facilities for the district (Table-7.15).
Fig. 7.34: Population – PHC Ratio in different police stations of Howrah District.
Fig. 7.35: Population – PHC Ratio in different police stations of Howrah District.
7.4.3.4 Status of Hospital Facilities in Howrah District: 1951-2004

Apart from the PHCs and SCs, the present organization of health services in the government sector consists of Rural Hospitals (RHs), Sub-Divisional Hospital (SDH), District Hospital and Teaching Institution (Park, 2001). NHP, 1983 proposed to upgrade Rural Dispensary to PHCs. It has been proposed to convert the Sub-Divisional Hospitals into Sub-Divisional Health Centres (SDHC) so as to cover population of 5 lakh. There was a proposal to convert the District Hospitals into "District Health Centres" (DHC). A Hospital has no catchment area i.e. it has no definite area of responsibility. Patients may be drawn from any part of the country. A Health Centre, on the other hand, is responsible for a definite area and population. The current opinion is that the hospital should not remain "An Ivory Tower of Diseases" in the community but should take an active part in providing health services to the community. Thus, a hospital can not fix its areas only to a PS or CD Block or Sub-division for treatment. Hence PS wise "Population- Hospital Ratio" (PHR) should not be useful.

A: District Level Scenario

In 1951, there were 21 Hospitals in Howrah district as whole. In this year each Hospital extended their curative services for 76732 population indicating good situation of curative services in the district.

During the 1950s the hospital facilities became poorer and total number of the hospital decreased to 16 in 1961, because some of the hospitals were redesignated as primary health centres owing to their lack of infrastructure and other facilities. In this year the pressure on hospital increased highly as reflected in the figure of 127405 population served per hospital in the district.
In the next decade of 1971, the number of hospitals in the district remained the same 16 as of the previous year. It exerted more pressure over the hospitals as population increased highly in the district. Each hospital of the district had to cover 151080 population for providing curative health services.

In the year 1981, the number of hospitals in Howrah district increased to 18 that improved the healthcare facilities of the district. Each hospital was then serving 164826 population in this year due to huge population growth in the district.

In 1991, the number of hospitals remained the same and due to high population growth the pressure on hospitals increased tremendously. Each hospital had cover 207202 population.

In 2001, the number of hospital increased to 29 which reflected the better curative services in the district in comparison with the previous decades. Each hospital then covered 147348 population.

In 2004, the number of hospital in the district increased to 32. Each hospital of the district provided health services to 139762 population which reflected quite favourite conditions in the district because it was far below the norm of 5 lakh population served per hospital.

B: Sub-Region Level Scenario

In 1951 the hospital facilities was good as most PSs had hospitals except Jagachha, Uluberia and Bawria. Shibpur was the best of all as one hospital was serving 332 population. In general, the pressure on hospital was not high in any PS as each hospital served 1 lakh population (standard norm 5 lakh population per hospital). In 1961, the scenario changed to some extent due to increase of Health Centres Facilities. Many PSs had lost their hospital facilities. 9 PSs of the district had no hospital facility. Shibpur being a very small area was the best of all as one hospital served 374 population. There was some disparity among PSs having hospital facilities.

In 1971, almost the same trend continued in the district and the concentration of hospital was confined to only four PSs of the district. HMC was best of all in this regard as each hospital was serving 61490 population in this year. In 1981, only two new PSs such as Bally and
Sankrail were enjoying hospital facilities along with Domjur, HMC, Uluberia and Bagnan PSs. In 1991, two more PSs such as Panchla and Bawria hospital facilities were provided with this facility along with Bally, HMC, Domjur, Sankrail, Uluberia, and Bagnan. The condition was the best in Bawria PSs where only one hospital existed for 25836 population.

Table- 7.16: Population Served per Hospital in the Different Police Stations of Howrah District: 1951-2004

<table>
<thead>
<tr>
<th>Years</th>
<th>Population Served per Hospital in Police Stations</th>
<th>Absence of Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td>Bally, Domjur, Panchla, Howrah Municipal Corporation, Amta Sankrail, Shyampur</td>
<td>Bagnan</td>
</tr>
<tr>
<td>1971</td>
<td>Howrah Municipal Corporation, Bagnan, Domjur, Uluberia</td>
<td></td>
</tr>
<tr>
<td>1981</td>
<td>Bally, Sankrail Howrah Municipal Corporation, Bagnan</td>
<td>Uluberia</td>
</tr>
<tr>
<td>1991</td>
<td>Bally, Bawria Howrah Municipal Corporation, Domjur, Panchla Sankrail, Uluberia, Bagan</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>Howrah Municipal Corporation, Bally Uluberia, Udyanarsanpur, Joypur Sankrail, Panchla, Jagatballavpur,</td>
<td>Bagman, Domjur</td>
</tr>
<tr>
<td>2004</td>
<td>Howrah Municipal Corporation, Bally Uluberia, Udyanarsanpur, Joypur Jagatballavpur, Panchla Sankrail, Bagan, Domjur</td>
<td></td>
</tr>
</tbody>
</table>

Source: - Prepared by the researcher based on the District Census Handbooks, Howrah 1951-2001 and District Statistical Handbooks, Howrah, 2001 & 2005

In 2001, in Jagatballavpur, and Udyanarsanpur hospital facilities were extended along with the earlier PSs such as Bally, HMC, Domjur, Sankrail, Panchla, Uluberia, Bagnan, Udyanarsanpur and Joypur. But Bawria lost the facility in this year. Bally PS was the best of all as each hospital was serving 70764 population. This is good for the public health as PHR was not more than 4 lakhs in any one of the PS of the district. In 2004, the situation was the same as of 2001 (Fig. 7.38 and 7.39).
Fig. 7.38: Population – Hospital Ratio in different police stations of Howrah district.
Fig. 7.39: Population – Hospital Ratio in different police stations of Howrah district.
7.4.3.5 Status of Family Planning Centres (FPC)/Family Welfare Centres (FWCs) in Howrah District: 1971-2004

Family Planning Centres (FPCs), now termed as Family Welfare Centres (FWCs) play a vital role in family planning programmes, and maternal and child health (MCH) in the country. The status of FPC/FWC in any area reflects the level of primary healthcare facilities in that area. Hence in the present study emphasis has been given on the status of FPC/FWC in the district of Howrah since the Independence.

India launched a nation wide “Family Planning Programme” in 1952. During the 3rd Five Year Plan (1961-66) family planning was declared as the very center of planned development. During 1966-69, “Family Planning Infrastructures” (PHC, Sub-Centres and FPC) was strengthened. During the 4th Five Year Plan (1969-74) the Government of India gave top priority to Family Planning Programme. During the 5th Five Year Plan (1974-79) “Family Planning” has been renamed as “Family Welfare”. In the NHP 1983, and NHP 2002, family planning/welfare has been accorded a central place in the health development.

A: District Level Scenario

In 1951 and 1961, there was no FPC in the district reflecting the very low status of Family Planning Programme (FPP) in the district. In 1971, only 10 Family Planning Centres were in action in the district of Howrah for implementing FPPs. In the next decade of 1981, the number of FPC was decreased, and only 1 FPC was existed in the district. In 1991, 23 FPC/FWC were functioning in the district indicating the development of primary healthcare facilities. However, in 2001, the number of FWC decreased to 16.

In 2004, special emphasis was placed on FWP under the guidance and supervision of Howrah Zilla Parishad through Department of Health. Many new Family Welfare Units such as Family Welfare Centres (FWCs) etc. have been set up in the district. In this year, 461 FWCs were established in the district. This indicated that FPP was very much active in the district.
B. Sub-Region Level Scenario

In 1951 and 1961 no PS of the district was provided with FPCs facility. In 1971 the situation improved, as in five PSs such as HMC, Sankrail, Jagatballavpur, Amta and Bagnan where some FPCs were established. The rest of the PSs had no such centre. In the next decade, the situation deteriorated as all of PSs had no FPC except Jagatballavpur. In 1991, the FPC number increased in Bagnan and Uluberia. The family planning was suffering in the different PSs of the district as most of the PSs had no such centre. In 2001 the situation improved very slightly, still most of the PSs had no FPC/FWC. In 2004, all of the PSs were marked with very high increase of FPCs. Most of the PSs had well number of FPC. But, Bawria had no FPC. Even HMC and Bally which were fully urban had small number of FPCs.

7.4.3.6 Status of Maternity Home (MH) & Child Welfare Centres (CHCs) and Maternity & Child Welfare Centres (MCWCs) Facilities in Howrah District: 1971-2004

Maternity Home is a sector in a hospital and it plays a vital role in ante natal care (ANC) and delivery of pregnant mother safely. Child Welfare Centre looks after new born baby and mothers as well as children. Hence keeping the responsibilities of these two health institutions in view, Ministry of Health and Family Welfare introduced “Maternity and Child Welfare Centres (MCWCs)” for the development of health status of both mother and children. Thus, in all CD Blocks of the district in all PSs of the district should be provided with MCWCs for providing primary healthcare services. The number of MCWCs reflects the level of healthcare facilities in any district or region.

A. District Level Scenario

In 1951, there was no separate Maternity Home (MH) in the district of Howrah.

In 1961, the situation started to be improved and number of MH increased to 23. In 1971, the number of MH reduced very sharply to only 2. In 1981, the situation was more or less the same. Only 5 MHs were operating in the district. This was very insufficient for the
women and children. In 1991, the number of MCWCs increased highly in the district and reached 44. This indicated that the health status of child and women was getting more attention to the district health department. In 2001, Howrah Zilla Parishad through Health Department of the district took various initiatives for its development. The number of MCWCs increased very significantly and the number of them reached to 195.

B: Sub-Region Level Scenario

In 1951, no Police Station, out of 13, had MH. In 1961, the number of MH started to increase and out of 13 PSs, eight PSs of the district were provided with MHs although the number of MH was very low for healthcare of women and children. Bally was the most developed of all. On the other hand, five PSs of the district had no MH at all in this year. During 1960s the situation started to be deteriorated in such a way that 11 PSs had lost the MH facilities and only two PSs namely Lilua and Amta had one MCWC/MH/CWC each. This reduction was due to merger of the MH with the local hospitals. Thus, it may be said that facilities for MCH was very much poor in the district in this year. The same poor trend continued during 1970s and situation became even poorer in 1981 as only one PS namely Bagman had five MHs while the rest 12 PSs had no such centres. During 1980s MCH facilities were not emphasized in the district. Hence, in 1991 only three PSs such as Bagman (37 MH), Uluberia (6) and Udaynarayanpur (1) were provided with such facilities. The rest 10 PSs were still deprived of independent MCH facilities. The MCH activities were then performed in PHC and hospitals along with other activities which is not as favourable for the MCH as expected by the ministry of health. During the 1990s the CMOH of the Howrah along with Howrah Zilla Parishad, put special emphasis on the healthcare of mother and children (MCH and RCH). Hence many new MCWC/MH/CWC were established in the district. In the year of 2001, Bagman registered spectacular development of these facilities as 73 centres were functioning here. This was followed by Shyampur PS. Most of the PSs like Jagatballavpur, Panchla, Uluberia, Amta, Joypur and Udaynarayanpur had moderate number of this facility. In HMC the MCH activities were performed in different hospitals and private nursing homes and independent MCWC centres were not established. Lilua and Bawria also had no separate centres of the children and mothers.
Table 7.17: Development of MCWC in the Different Police Stations of Howrah District: 1951-2001

<table>
<thead>
<tr>
<th>Years</th>
<th>Number of MCWCs</th>
<th>Absence of MCWCs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt;45</td>
<td>45-5</td>
</tr>
<tr>
<td>1951</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1961</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1971</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1981</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1991</td>
<td>-</td>
<td>Bagnan (37)</td>
</tr>
<tr>
<td>2001</td>
<td>Bagnan (73)</td>
<td>Shyampur</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the District Census Handbooks, Howrah 1951-2001

7.4.3.7 Status of Ayurvedic College and Dispensary Facilities in Howrah District vis-a-vis West Bengal: 2005-06 & 2007-08

A: 2005-06

A.1: Status in West Bengal
In West Bengal, a total of 301 State Ayurvedic Dispensaries (SADs) were functioning for serving the people. Out of them, 103 (34.22%) were Independent Type, 73 (24.25%) were attached to BPHCs, 80 (26.58%) were attached to PHCs, 31 (10.38%) were attached to RHs, 6 (2%) were attached to Sub-divisional Hospital (SDHs) and 4 (1%) were attached to District Hospitals.

A.2: Status in Howrah
In Howrah district no “Ayurvedic College and Hospitals” was built up to 2005-06. In West Bengal, 4 such College Hospitals were established.
In this year there were 9 independent “State Ayurvedic Dispensary” (SAD) in Howrah district accounting 9% of the 100 SAD of West Bengal as a whole. This indicates that the share of SAD was quite higher in the district.

Apart from these, another 9 SADs which were attached to any Health Centres, 6 of such SADs were attached to BPHCs and 3 were attached to Rural Hospitals of the district.

Thus, in Howrah district number of SADs was 18, out of which 50% were independent and 33.33% were attached to BPHC and 16.66% were attached to Rural Hospitals (RHs).

Thus, it is clear that Independent SADs were quite higher in the district in comparison with the state as whole.

[B] 2007-08

B.1: Status in West Bengal

In 2007-08, in West Bengal, the situation of SAD was almost the same as of the previous year of 2005-06. A total of 299 SADs were functioning in the state. Out of them, 100 were Independent Type (33.44%), 72 (24.42%) were attached to BPHCs, 82 (27.42%) were attached to PHCs, 31 (10.36%) were attached to RHs, 6 (2%) were attached to Sub-divisional Hospital (SDHs) and 3 (1%) were attached to District Hospitals.

B.2: Status in Howrah

In the district the situation was almost the same as of before. Thus, in Howrah district number of SADs was 18, out of which 50% were independent and 33.33% were attached to BPHC and 16.66% were attached to Rural Hospitals (RHs).

7.4.3.8 Status of Homoeopathic Medical College and Hospital (HMCH) & Homoeopathic Dispensary (HD) and Gram Panchayat Dispensary (GPD) Facilities in Howrah District vis-a-vis West Bengal: 2005-06 and 2007-08

A: 2005-06

A.1: Status in West Bengal

In the state of West Bengal the number of HMCH was 12 in 2005-06. Out of 1520 HD, 975 were GPD occupying 64.14% of all and 545 were State Homoeopathic Dispensary (SHD) constituting 35.86% of all Homoeopathic Dispensary in the state. Again, out of 545 SHD 305
(55.96%) were Independent SHD, 105 (19.27%) were attached to BPHCs, 135 (24.77%) were attached with PHCs.

A.2: Status in Howrah

In the district the number of HMCH was 2 occupying 16.66% of the state. Thus, the district of Howrah was in a better position compared to other districts of the state in this regard.

In the district there were 74 HD which occupied 4.87% of total such dispensaries of the state as whole. In this regard the district performed moderately. Out of these 74 HDs in the district, 47 were GPD constituting 63.51% and 27 were State Homoeopathic Dispensary occupying 36.49% of all in the district.

Thus, it is clear that the role of Gram Panchayat was considerably higher in functioning of Homoeopathic Dispensary in the district as seen in the state as whole.

In the district out of 27 State Homoeopathic Dispensaries 11 (40.74%) were Independent State Homoeopathic Dispensary, 10 (37.04%) attached to BPHCs and 6 (22.22%) were attached to PHCs in this year.

The situation was same in both State and District in the year 2007-08.

7.4.3.9 Status of Availability of Bed in Howrah District: 1951-2004

Availability of bed reflects the status of development of healthcare facilities. The higher the number of bed in any place is the indication of high development of healthcare. However, mere number of bed does not reflect the total scenario of healthcare development of any unit. Hence availability of bed is evaluated through the following parameters.

[A] Percentage of Bed Occupancy

[B] Distribution of Workload

[C] Rural & Urban Workload

[D] Workload Ratio

[A] Percentage of Bed Occupancy

Availability of beds in different areas of the district is generally measured through the percentage of beds occupied by those administrative units (PSs in this study) with respect to total beds in the district. This percentage of available beds in different PSs of the district will reflect the level of disparities in the district.
**Sub-Region Level Scenario**

Sub-Region pattern of percentage of bed occupancy in different PSs of the district exhibited great temporal and spatial variations since 1951.

**Table 7.18: Percentage of Bed Occupancy in the Different Police Stations of Howrah District: 1951-2004**

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage of Bed Occupancy</th>
<th>Absence of Bed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; 25%</td>
<td>25-15%</td>
</tr>
<tr>
<td>1951</td>
<td>Howrah Municipal Corporation (55%)</td>
<td>Bally, Amta</td>
</tr>
<tr>
<td>1961</td>
<td>Howrah Municipal Corporation (54%)</td>
<td>Bally, Amta</td>
</tr>
<tr>
<td>1974</td>
<td>Howrah Municipal Corporation (33%)</td>
<td>Bally, Uluberia</td>
</tr>
<tr>
<td></td>
<td>Howrah Municipal Corporation (63%)</td>
<td>Domjur</td>
</tr>
<tr>
<td>1993</td>
<td>Howrah Municipal Corporation (69%)</td>
<td>Uluberia</td>
</tr>
<tr>
<td>2001</td>
<td>Howrah Municipal Corporation (49%)</td>
<td>Bally</td>
</tr>
<tr>
<td>2004</td>
<td>Howrah Municipal Corporation (45%)</td>
<td>Bally</td>
</tr>
</tbody>
</table>


*Note: No data is available for Uluberia, Bagnan, Shyampur and Udaynarayanpur PSs for 1981 and no separate data is available for Bawria as some parts of it included in Uluberia municipality.*
In 1951, there was great variation of the percentage of beds in the different PSs of the district. Concentration of the beds was the highest in Howrah City as 54.89% of the total bed of the district was provided there and Bawria and Jagachha were the poorest of all as there was no bed facility. Most of the PSs (7 in number) had below 5% bed each to the total beds of the district. During 1960s the situation improved slightly and in 1961, out of 14 PSs of the district, 5 PSs registered positive growth of bed occupancy. HMC (54%) was the best of all regarding the bed occupancy. Jagachha, Panchla and Bawria had no bed facilities in this year. The pattern of bed occupancy was almost the same as of the previous year. In 1974, out of 13 PSs, only two PSs such as Bawria and Sankrail were devoid of bed facilities. Percentage of bed occupancy decreased in HMC though it was still the best of all, registering 33.01% of total bed in the district. It was followed by Bally (18.60%) and Uluberia where number of beds increased significantly. The trend of bed occupancy changed in this year and disparity level increased among the PSs. In 1981, the overall situation of bed occupancy rate in the district showed negative growth and due to lack of proper data many PSs were regarded as bed less. However, out 13 PSs of the district, only five PSs had bed facilities and the rest 8 PSs had no such facilities. HMC was the most developed of all PSs as 63.53% of bed was occupied by it indicating very high imbalance of such facilities in the different PSs. In 1993, very strong sub-region imbalance of bed occupancy was prevailing in the district as indicated from very wide range of 68.55% bed occupancy in HMC to nil in Bawria. Out of 13 PSs in the district, 12 PSs had bed facilities. 10 PSs of the district had lower than 5% bed occupancy each reflecting the poor curative facilities. In 2001, the range of disparity among PSs decreased to some extent in comparison to previous decades, as the share of bed occupancy in HMC reduced to 48.87% although strong disparity was still prevailing. Otherwise the pattern of distribution of bed was the same as of the previous decade. In 2004 the distribution was more or less the same and still very high imbalance was found in the district. HMC had the highest share of bed occupancy (45%) while Bawria having no bed was the poorest of all.

On the basis of this disparity in different decades, the district has been divided into five categories (Table-7.18).

Thus, it is clear that since 1951 tremendous imbalance had been existing in respect of bed occupancy. HMC occupied maximum number of bed and most of the police stations had less than 5% beds of the district.
[B] Distribution of Workload (DWL) on Bed

Distribution of Workload (DWL) is the ratio of total population and total beds (TP/TB) of any administrative unit. It indicates clearly the population pressure on each bed. This means DWL is the number of population served per bed. It reflects the status of curative services in any area, for achieving the health for all goals.

B.1: District Level Scenario

The district level scenario of distribution of workload varied with time due to population growth.

In 1951, the distribution of workload was very high in the district registering 2464 which was unfavourable for curative services for all.

In 1961, the number of beds in the district increased. This helped the distribution of workload to 2260 that too was also not good enough for the people to get proper curative services.

In 1974, this unfavourable condition had been changed into favourable condition due to increase of beds by more than double. The distribution of workload reduced sharply to only 1065.

In 1981, the situation deteriorated again due to decrease of number of beds. The distribution of workload was 2212 which lead to increase the morbidity in the district for the lack of curative services.

In 1993, the disappointing situation had been arrested due to some efforts by the Zilla Parishad for achieving the Goal of HFA by 2000. Number of health infrastructure and beds increased highly lowering the distribution of workload to 1015 which improved the curative services in the district.

During the 1990s the State Government of West Bengal through Howrah Zilla Parishad had been continuing its great endeavours to strengthen and develop the curative health services in the district. This helped distribution of workload to remain nearly same as of the pervious decade. Distribution of Workload in the district was 1049, reflecting good status of curative services, in 2001.

Due to reduction of beds in Howrah MC and Bally PS in 2004 the distribution of workload in the district increased slightly. In 2004, this was 1242 in the district exhibiting moderate status of curative services.
In 2006, the estimated population of the district was 4520584 (as per the Health on March 2005-06) and the number of bed reached 4413. Hence, the distribution of workload was reduced to 1024 which was poorer than the state load of 931 reflecting the improvement of health status in the district, but still the district was lagging to some extent.

In 2008, the distribution of workload was reduced to 970 which was poorer than the state average figure of 870.

B.2: Sub-Region Level Scenario

In 1951, the workload on bed was standard (very low) only in Shibpur PS which was very small area having very low population. On the other hand, workload was very high in Jagatballavpur where each bed was serving a huge 78995 populations. Jagachha and Bawria were the poorest as they had no bed facilities. In most of the police stations each bed served more than 2000 population which was not the good for public health. In 1961, Out of 11 PSs, 7 registered positive growth of DWL and 4 registered negative growth. Shibpur was the most developed area as workload was only 16 which was very much favourable for public health. The pressure on bed was high in Domjur, Sankrail, Uluberia, Bagnan and Shyampur as each bed served more than 5000 populations. Contrarily, Bawria, Panchla and Jagachha had to depend on other PSs for the curative services as they were totally kept out of bed facilities. During 1960s and first part of 1970s the different PSs were provided new beds and pressure on bed was reduced. Hence, in 1974, 9 PSs were marked with very positive growth of workload while two showed negative growth. This was an indicator of improvement of workload as well as curative facilities in the district. HMC, Bally, Lilua, Uluberia and Domjur, where urbanization was high, fulfilled the standard norm 1000 population served per bed. The range of imbalance of DWL was high as indicated from 92 in Bally to nil in Sankrail and Bawria. In 1981, Howrah MC was the most developed with a workload of 874 followed by Domjur, while other 8 PSs had no bed. The lack of data in the time of change of new government in 1977 in West Bengal perhaps lowered this bed facility. In 1993, the distribution of workload reduced in most of the PSs and 10 PSs were marked with the positive growth of workload meaning lowering the pressure on bed. There was great diversity in the different PSs, and HMC was the best of all followed by Uluberia and Lilua. The rest of the PSs could not attain the standard norm (Fig-7.42 and 7.43).
Fig. 7.42: Distribution of workload on bed in different police stations of Howrah District.
Fig. 7.43: Distribution of workload on bed in different police stations of Howrah District.
### Table 7.19: Distribution of Workload on Bed in the Different Police Stations of Howrah District: 1951-2004

<table>
<thead>
<tr>
<th>Years</th>
<th>Number of Population Served per Bed</th>
<th>Absence of Bed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;1000</td>
<td>1000-3000</td>
</tr>
<tr>
<td>1951</td>
<td>Shibpur</td>
<td>Howrah Municipal Corporation, Amta Bally Panchla</td>
</tr>
<tr>
<td>1961</td>
<td>Shibpur</td>
<td>Howrah Municipal Corporation, Bally, Jagatballavpur, Amta</td>
</tr>
<tr>
<td>1974</td>
<td>Howrah Municipal Corporation, Bally, Jagatballavpur, Amta</td>
<td>Udaynarayanpur</td>
</tr>
<tr>
<td>*1981</td>
<td>Howrah Municipal Corporation, Domjur</td>
<td>Bally</td>
</tr>
<tr>
<td>1993</td>
<td>Howrah Municipal Corporation, Uluberia, Lilua</td>
<td>Bally, Jagatballavpur, Panchia</td>
</tr>
<tr>
<td>2001</td>
<td>Howrah Municipal Corporation, Bally</td>
<td>Lilua, Sankrail, Jagatballavpur, Panchia, Uluberia, Udaynarayanpur Joypur</td>
</tr>
<tr>
<td>2004</td>
<td>Howrah Municipal Corporation, Bally</td>
<td>Lilua, Sankrail, Jagatballavpur, Panchia, Uluberia, Udaynarayanpur Joypur</td>
</tr>
</tbody>
</table>


* Note: No data is available for Uluberia, Bagnan, Shyampur and Udaynarayanpur PSs for 1981 and no separate data is available for Bawria as some parts of it included in Uluberia municipality.

In 2001, 6 PSs were characterized by positive growth of workload meaning lower pressure on each bed. On the other hand, 6 PSs of the district exhibited negative growth meaning rising of pressure on each bed. The workload on bed was the lowest in Bally followed by HMC being located in urban more accessible area. Most of the PSs (7) had moderate pressure on bed. In 2004, only two PSs namely HMC and Bally were characterized by negative growth of workload.
on bed. HMC was the most developed followed by Bally. Otherwise, the pattern of distribution of workload was more or less the same as of the previous year.

On the basis of this diversity in each decade, the district has been classified into five classes (Table-7.19).

[C] Rural-Urban Workload

To explain the systematic account of workload on rural and urban curative health services, the rural and urban workload have been calculated on the basis of number of beds in rural areas and also in urban areas for their respective total population. This may clearly depict the imbalance between rural and urban workload for the period 1951-2004.

(1) District Level Scenario

In 1951, rural and urban workload exhibited great disparity in the district of Howrah. Rural workload of 4173 was quite high in comparison with urban workload of 1148. Ultimately, this led to over burden on the bed in the urban areas of the district, as people from the rural areas had to travel constantly to the urban areas for getting better health services.

In 1961, this rural and urban workload on beds exhibited strong imbalance. Urban Workload of 1224 was far ahead of 5322 workload in rural areas.

In 1974, the disparity between rural and urban workload increased phenomenally. The urban workload showed a steep decreasing trend and reached only 489 in this year, while the rural workload exhibited an increasing trend and reached 6295. This vulnerable situation in rural areas of the district in turn compelled the rural patients to travel to urban hospitals for availing improved curative health services.

In 1981, due to lack of proper data in the rural part of Uluberia Sub-division, the disparity level increased very tremendously in the district with regard to urban and rural workload on curative services. Rural workload reached an unbelievable figure of 108538 which was very much higher than urban workload of 1010.

In 1993, rural workload on bed services decreased to some extent yet it was phenomenally high registering 75521. On the other hand, the figure in urban areas increased to 1673. Thus, huge imbalance was noticed in the district. The patients of rural areas were suffering lots due to lack of beds.
In 2001, the rural workload decreased sharply while urban workload, too, reduced considerably thus lowering the imbalance level very sharply in the district. The burden on bed reduced significantly in the rural areas for which rural people failed to avail curative services. The push factors of rural areas lessened in this year. The patients of urban areas were enjoying good curative services. The rural workload of 2638 was still much higher than that of 659 in rural areas.

In 2004, the situation was more or less the same in comparison with 2001. On the basis of estimated population of 2004, the rural workload was 2748 while urban workload was 809 indicating quite good curative health services.

In 2008, both workloads reduced slightly. The rural workload became 3423, lower than the state figure of 4105, and urban workload became 573 which was very much higher than the state average of 290 of West Bengal.

(2) Sub-Region Level Scenario

Sub-Region Level study of rural and urban workload of bed facilities shows marked imbalance since 1951. It is notable that the rural-urban differentiation of workload on bed is possible to calculate when both rural and urban areas are found in a police station. This differentiation is not possible for fully urban or fully rural police station. The disparity will be highest if rural areas had no bed facilities while urban areas had such facilities. The development of rural-urban workload since 1951 is presented below.

In 1951, only in two PSs the imbalance of rural-urban workload was found. In Bally very high disparity was prevailing as urban workload was 1289 in comparison to no bed in rural areas. In Uluberia PS urban workload was 967 indicating very high disparity as rural area had no bed facilities. The rural people had to depend on urban bed for the curative services. In rest of the PSs this differentiation was not possible. In 1961, Bally, Domjur, Sankrail, Uluberia and Amta police stations shows imbalance between rural and urban workload. But only in Amta rural workload of 3987 was very much higher than that of 323 in urban areas. On the other hand, the rest 4 PSs had only urban bed facilities indicating very strong imbalance of rural-urban workloads. Still rural bed facilities were very poor in the district. In 1974, only in 5 PSs of the district the matter of disparity between rural and urban workload was possible. In 4 PSs namely Domjur, Sankrail, Uluberia and Amta bed facilities were provided in only urban areas,
while in Panchla only rural areas had the same. Thus, in these 5 PSs very strong disparity between rural-urban workload prevailed and rural people had to suffer in time of critical cases due to lack of bed facilities. In 1981, in Sankrail and Amta the urban workload was 9749 and 1157 respectively and rural areas had no bed. In Domjur rural workload (7532) was significantly higher than urban workload (276). Thus only 3 PSs had rural-urban workload disparity while rest of the PSs had no such imbalance. The same trend of poor condition of rural healthcare prevailed. In 1993, in 5 PSs the urban and rural bed facilities showed very strong disparity. In Domjur PS the rural workload of 4506 was better than that of 5687 of urban areas. In Sankrail, Uluberia, Amta and Bagnan beds were provided only in urban areas and rural regions were deprived of such facilities. In 2001, the bed facilities were provided in the rural areas of the district as in 7 PSs the disparity between urban and rural workload were possible. In Jagatballavpur and Panchla only rural areas were provided with the bed facilities. Besides, the rural workload was better in Sankrail and Lilua. On the other hand, in Bagnan, Uluberia and Domjur urban workload were far better than the rural workload. In 2004 the situation was almost the same as of 2001. The highest disparity between rural and urban workload was found in Sankrail where rural workload was only 781 and urban workload was 20516. It was followed by Lilua where rural workload of 1112 was better than urban workload of 4201. Besides, in Jagatballavpur rural workload was 2123 but in urban areas no bed was available. In Panchla, too, the rural workload was 1074 but in urban areas no bed facility was available. Thus, in these 4 PSs very strong disparity prevailed and rural workload was better than urban one. Very strong disparity of workload on bed was found in Bagnan where urban workload of 652 was far better than that of 9636 in rural areas. It was followed by Uluberia where urban workload was 510 and rural workload was 5220; and in Domjur PSs where urban workload was 6600 and rural workload was 7310.

[D] Workload Ratio of Bed
To measure the imbalance between rural and urban workload, “Workload Ratio” (WR) has been computed. It is very much clear that the rural workload was too high since the Independence in the district of Howrah. WR is calculated using the formulae; WR= Rural Workload/Urban Workload.
If WR is more than 1, both workloads will be the same. If more than 1, the rural workload is higher; whereas if it is less than 1, the Urban Workload is more.

D.1 District Level Scenario
In 1951, Workload Ratio for Howrah district was 3.63 meaning rural workload was much higher than the urban workload. In 1961, it increased to some extent and became 4.35 which indicates that the situation of load on the beds deteriorated in the rural areas of the district. In the next decade of 1974, WR grew tremendously and reached 12.87 which was not favourable for the rural areas of the district. In 1981, phenomenal and unbelievable growth of Workload Ratio of 107.46 was recorded due to lack of proper data of health in Howrah district and also because of the administrative change in the state. Rural workload was very higher than the urban workload. The rural population of the district was in very distressed condition in this year. In 1993, the situation developed substantially but WR (44.96) was unfavourable for healthcare development in the district. During 1990s the West Bengal Government took various steps for the development of healthcare facilities, and bed facilities were provided in rural areas of the district. Thus, in 2001, the WR reduced to only 4.0 which was very good sign of the healthcare development in the district. The rural areas of the district were marked with tremendous growth of bed facilities. Still the rural workload was 4 times higher than urban Workload Ratio indicating high disparity level. In 2004, WR reduced to 3.40 indicating still higher rural workload than the urban one. In 2008, it became 5.97 which was considerably lower than that of 14.16 in West Bengal as a whole.

D.2: Sub-Region Level Scenario
In 1951, the Workload Ratio was not found in any PS of the district meaning rural-urban disparity was low. In 1961 WR was found only in Amta PS, where the figure was 12.34 which indicates that bed facility was very poor in rural areas. In 1981 only one PS i.e. Domjur had WR of 27.09 which exhibited very high workload on beds in rural areas. In 1993 WR was measured only for Domjur PS where the figure was only 0.79 which showed reducing trend of WR. In 2001 due to development of bed facilitates in rural parts of the different PSs of the district, WR was calculated in 5 PSs. In Lilua and Sankrail WR were 0.27 and 0.04 respectively. The maximum WR was recorded in Bagnan where the figure was 14.99 meaning very high workload in rural areas. It was followed by Uluberia where very high WR was also found as
indicated from the figure of 10.27. The lowest WR was recorded in Domjur (1.07). In 2004, everything was almost the same as of 2001. Only 5 PSs of the district had WR in the district. The highest workload ratio was registered in Bagnan where WR was 14.78 meaning extremely high workload in rural areas there. It was followed by Uluberia where WR was 10.23. Domjur was the third in this regard where WR was 1.11. The lowest WR was registered in Sankrail where the figure was only 0.04 showing very low rural workload. It was followed by Lilua where WR was only 0.26 indicating very low burden on the beds in the rural areas.

7.5 LEVEL OF CURATIVE SERVICES IN HOWRAH DISTRICT: 2007-08

Primary healthcare is the only way to achieve the “Health for All” as per the WHO goal. It is a new approach to healthcare development which integrates, at the community level, all of the factors required for improving health status of the population. Thus, it integrates promotive, preventive and curative health services.

Curative services are provided to the people through different health units such as Hospitals and Primary Health Centres (PHCs) and Block Primary Health Centres (BPHCs) in the government sector. Besides, these services are also provided through nursing home in the different parts of the district in private sector. This system of healthcare is considered as “Referral Healthcare System” (RHS) which is a crucial part of primary healthcare. RHS is normally designed to operate with a proportion of slack so that additional capacity is available within the system to handle the exceptional situation that may arise during epidemic or natural calamities. The standard ratio for the system indicates the permissible extent of slack. In general, level of curative health services means the services provided in government sector; private sector is not considered for the purpose.

The curative service of the district is evaluated through the performance of Howrah District Hospital, Uluberia Sub-Divisional Hospitals and other six State General Hospitals, Four Rural Hospitals, and the different Primary Health Centres (PHCs) and Block Primary Health Centres (BPHCs).

7.5.1 PERFORMANCE OF HOWRAH DISTRICT HOSPITAL: 2007-08

In Howrah district, as per rule, one District Hospital namely ‘Howrah District Hospital’ (HDH) is functioning in the city of Howrah at Maidan area. The performance of this hospital has been assessed on the basis of some standard parameters, as discussed below.
1) Bed Occupancy Rate (BOR)
In the year 2007-08, HDH registered BOR of 86.4% which was lower than the state average figure of 91.0% exhibiting better condition of the HDH. It is found that HDH was in better position regarding the pressure on bed in comparison with state level scenario. The BOR was within the standard norm of 75-100% in this year. Thus, it is clear that the people of the district can easily enjoy the bed facilities in Howrah District Hospital.

2) Bed Turnover Rate (BTR)
In 2007-08, BTR was 56.2% in HDH while the pressure was higher in state level as BTR was 91.4%. HDH was in better position in this regard. BTR in HDR was far below the standard norm of 72-96%. Thus, the pressure on bed of the district was not heavy and there was many slack to take more pressure in time of emergency.

3) Emergency Admission Rate (EAR)
The Emergency Admission Rate in HDH was 49.1 which was more than the standard norm of 40-45%, but far lower than the state average figure of 66.3% indicating low pressure of patient in the district hospital.
On the basis of these three ratios, it is evident that the ‘referral healthcare system’ in West Bengal was overloaded and operates with little slack in this year. The situation was far better in the district of Howrah than the average of West Bengal as a whole, because the load in the district hospital was quite low and was operating with a proportion of slack. HDH provides better referral healthcare system in Howrah district in comparison with all district hospital average of West Bengal in 2007, and the situation is expected to improve because of more development of rural health infrastructure like SC, PHC, BPHC, CHC and RH in the district of Howrah.
Apart from these three major indicators, the following other indicators have also been taken into consideration for judging the performance of the district hospitals in the district of Howrah and West Bengal.

4) Proportion of Patients Referrals out to Total Discharge
In 2007-08, the proportion of referrals out-patients was considerably lower (3.4%) than that of state average of 6.4% indicating much better infrastructural development in this hospital than the state average.
5) Percentage of Delivery to Admission
In 2007-08, the share of delivery to admission was 23.3% although it is well above state average of 18.2%. At present, a large section of population, both rich and middle class are depending on private nursing homes of Howrah city. This leads to the low percentage of delivery in HDH. Besides, the dependence on HDH is low due to increase of PHC, SC and CHC in the rural areas of the district.

6) Percentage of Patients Referrals to Total Inpatients
In 2007-08, in HDH the share of referrals was 7.2% which was far behind the state level scenario of 10.8%. This demands more infrastructural development in this hospital to prove its reliability to the outpatients.

7) Average Length of Stay in the Hospital
In 2007-08, the average length of stay within the HDH was 5.6 days which was higher than state figure of 3.6. This means that the time of cure is more in HDH than the state.

8) Percentage of Major Surgeries to Admission
In 2007-08, the percentage of major surgeries has progressed considerably in HDH accounting 15.0% of total admission which is significantly higher than state average of 9.9%. Thus it is clearly reflected that the operation theater is quite better in the district hospital in comparison to the other district hospitals of the district in general.

9) Percentage of Laboratory Test to Total IPD and OPD
In 2007, the share of laboratory test in HDH was 17.6 which were lower than the state average of 19.6%. Thus in HDH the pressure on laboratory was lower than the state level scenario.

10) Percentage of Images and Electro- Medical Test to Total IPD and OPD
The share of Images and EM Test was 6.7% which was higher than that of 5.1% in the state level district hospitals. This means that the people of Howrah depend more on the district hospital for this test.

11) Out Patient per Bed Day (OPBD)
OPBD is the number of patients attending the outdoor clinics of any hospital per bed-day. Bed-days are number of sanctioned beds multiplied by the number of days in a given period.
In 2007-08, OPBD was only 1.0 while the state figure was 1.6. Thus, the pressure of out door patients in HDH is lower in comparison with the state level performance.
7.5.2 PERFORMANCE OF SUB DIVISIONAL HOSPITAL & STATE GENERAL HOSPITALS: 2007-08

In addition to district hospital in the city of Howrah, 7 hospitals were serving the referral healthcare needs of the residents of both rural and urban areas of the district. These hospitals include the following:

1) Uluberia Sub division Hospital (USDH) in Uluberia
2) Belur State General Hospital (BSGH) in Howrah City
3) Gabberia State General Hospital (GSGH) in Sankrail PS
4) South Howrah State General Hospital (SHSGH) in Howrah City
5) Tulsiiram Laxmidevi Jaiswal Hospital (TLJH) in Lilua in Howrah City
6) Udaynarayanpur State General Hospital (USGH) in Udaynarayanpur
7) Bawria State General Hospital (BWSGH) in Bawria

These hospitals are situated in both rural and urban areas. Both rural and urban residents of the district prefer SG/SD hospitals for their curative services.

In this section the performance of these hospitals as in 2007-08 will be evaluated on the basis of the standard parameters.

(1) Bed Occupancy Rate (BOR)

In West Bengal as whole the SD/SG Hospitals registered BOR of 88.6% which remained within the standard rate of 75-100% indicating very well achievement of the hospitals. There was very high uneven BOR in these hospitals. The highest BOR of 140.3 was recorded in Belur SG Hospital while the lowest one was recorded in TLJH Hospital where BOR was only 39.9.

Based on this very wide range of achievements the hospitals are divided into three classes.

1. Very Good Hospitals (Below Standard Norm of 75%): TLJH and SHSGH were very good in this regard. These hospitals were in much better position in comparison with the state level performance.

2. Standard Hospitals (75-100%): GSGH and BWSGH were two hospitals where standard BOR was registered. These hospitals exhibited good achievements.
3. Poor Hospitals (Above Standard Norm): Higher than 100.0% BOR were registered in three hospitals like USDH, USGH and BSGH. These three hospitals were more overloaded in comparison with the average performance of state level SG/SG hospital.

(2) Bed Turnover Rate (BTR)

In 2007, the BTR in SD/SG Hospitals of West Bengal as whole was 91.1% which was within the standard norm of 72-96%. This is evident that the load of patients in SD/SG hospitals of the state was sustainable.

In Howrah district the BTR in SD/SG hospitals was considerably uneven varying from 117.8% in USDH to a meagre 19.6% in TLJH in Lilua.

Based on these wide disparities the hospitals have been classified into three categories.

1. Very Good Hospitals (Below Standard Norm): SHSGH, TLJH and GSGH were very good regarding the BTR in 2007-08. These three hospitals showed better performance in comparison with the state average performance of 91.1%. Thus, these hospitals were free from pressure on the beds.

2. Standard Hospitals (72-96%): The two hospitals namely USGH and BSGH were within the standard position.

3. Poor Hospitals (Above Standard Norm): USDH (117.8%) and BWSGH (111.5%) recorded higher BTR than standard rate of 72-96%. This means that these hospitals were overloaded and operating with no slack. Due to good location of these hospitals many rural residents from Bagnan, Shyampur, Amta, Joypur and Uluberia PS used to come to these hospitals for admission in time of critical condition.

(3) Emergency Admission Rate (EAR)

In the SD/SG hospitals of West Bengal as whole EAR were 58.5% which were very much above standard rate of 40-45% indicating the overload in the hospitals in 2007-08.

In Howrah district the EAR varies considerably from one Sub-Divisional / State General hospital to another as seen in the wide range that varied from 80.0% in USGH to only 7.5% in BSGH.

Based on these wide disparities the hospitals have been divided into three classes. These are as follows-
1. Very Good Hospitals (Below Standard Norm): BSGH and SHSGH registered very low EAR in 2007-08. This means that there was no pressure in these two hospitals. Due to location near the Kolkata City and HDH, emergency patients were very much low in these two hospitals. People prefer district hospitals or private nursing homes or medical college and hospitals in Kolkata in time of critical cases.

2. Standard Hospitals (40-45%): Only BSGH was standard in respect of the EAR this year in the district.

3. Poor Hospitals (>45%): USDH, TLJH and GSGH were poor as EAR was high indicating high pressure of emergency patients. Due to nodal location people depend on USDH during emergency cases. These three hospitals were experiencing high pressure than the state average achievement. USGH was characterized by very high (80.0%) EAR. This hospital was functioning with very high load due to location in northern remote part of the district and lack of other curative institutions. The category of hospitals is listed in the following table.

<table>
<thead>
<tr>
<th>Category</th>
<th>Hospitals</th>
<th>Category</th>
<th>Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Good (Below 75-100% BOR)</td>
<td>TLJ Hospital, South Howrah SG Hospital</td>
<td>Very Good (Below 72-96% BTR)</td>
<td>TLJ Hospital, South Howrah SG Hospital, Gabberia SG Hospital</td>
</tr>
<tr>
<td>Standard (75-100%)</td>
<td>Gabberia SG Hospital, Bawria SG Hospital</td>
<td>Standard (72-96%)</td>
<td>Udaynarayanpur SG Hospital, Belur SG Hospital</td>
</tr>
<tr>
<td>Poor (&gt;Standard Norm)</td>
<td>Uluberia SD Hospital, Udaynarayanpur SG Hospital, Belur SG Hospital</td>
<td>Poor (&gt;Standard Norm)</td>
<td>Uluberia SD Hospital, Bawria SG Hospital</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Hospitals</th>
<th>Category</th>
<th>Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Good (Below 40-45% EAR)</td>
<td>No Pressure</td>
<td>Standard (40-45%)</td>
<td>Bawria SG Hospital</td>
</tr>
<tr>
<td>Poor (&gt;Standard Norm)</td>
<td>Uluberia SD Hospital, TLJ Hospital, Gabberia SG Hospital, Udaynarayanpur SG Hospital</td>
<td>Poor (&gt;Standard Norm)</td>
<td>High Load</td>
</tr>
</tbody>
</table>

Source: Calculated and Classified by the researcher based on the Health on March, 2007-08
Three parameters of the performance of SD/SG hospitals clearly reflect that USDH is functioning with very high load of patients and there is almost no slack. Besides, this hospital was experiencing more pressure than that of the state level average pressure in SD/SG hospitals.

USGH is working with overload and is operating with very little slack due to location at the northern remote part of the district, and as there is no other hospital within Udaynarayanpur PS. People have to get admitted within this hospital during their critical situation. This hospital is under more pressure in comparison with the state hospitals.

GSGH, BSGH, SHSGH, TLJH and BSGH are performing very well without pressure of patients at present. These four hospitals are in far better position in compared to the state level hospitals.

Thus, it is evident that most of the state general hospitals are performing their role to provide curative services to the public of the district of Howrah without pressure of patients for the present.

7.5.3 PERFORMANCE OF RURAL HOSPITALS OF THE DISTRICT: 2007-08

In addition to HDH and seven SD/SG hospitals, four Rural Hospitals (RHs) serve the referral healthcare needs of rural communities in the different regions of the district of Howrah. These hospitals are as follows:

1] Bagnan Rural Hospital (BRH) in Bagnan Town of Bagnan PS
2] BB Dhar Rural Hospital (BBDRH) in Joypur PS
3] Domjur Rural Hospital (DRH) in Domjur PS
4] Jagatballavpur Rural Hospital (JRH) in Jagatballavpur PS

The number of rural hospitals is not adequate in the district because some PSs are deprived of hospitals of any type. The people of these police stations have to rely on Primary Health Centres (PHCs) for their curative services. Shyampur, Amta and Sankrail are lacking hospital till now and they have no own referral healthcare unit i.e. hospital.

Yet these four 'Rural Hospitals' are better equipped than the PHCs, in terms of more medical officers, more support staffs, more beds and more medical instruments, and are expected to take care of referral and hospitalization needs of inpatients from surrounding PHCs and SCs so that system load on HDH as well as USDH and six SG Hospitals is relieved.
Performances of the Rural Hospitals of Howrah district are analyzed on the basis of the same three indicators as used earlier.

(1) Bed Occupancy Rate

The BOR of rural hospitals of West Bengal on an average was 91.4% which was within the standard rate of 75-100%. This reflects that the load of patients in the rural hospitals of the state in 2007-08 was not so high and was operating with some slack.

The BOR in RHs of the district was almost even in this year. All rural hospitals of the district in respect of BOR were very good as all of them registered BOR lower than the standard norm of 75-100%. All 4 Rural Hospitals such as BRH, BBDRH, DRH and JRH were in very good positions as there were very low patient load. The people of Bagnan, Joypur, Domjur and Jagatballavpur PSs could easily avail the curative facilities. This is very good for public health that all ‘Rural Hospitals’ of the district are functioning with significantly lower load in comparison with that of contemporary state level rural hospitals.

(2) Bed Turnover Rate

The BTR of rural hospitals of West Bengal as whole was 125.1% in 2007-08 which was well above the standard rate of 72-96%. So, RHs of the state were operating with overload on bed and had no slack. The pressure was gradually increasing in rural hospitals. This also indicates that role of RHs in referral healthcare system of West Bengal has been getting more important.

In Howrah district the BTR was very much uneven in the different RHs. The highest BTR was recorded in DRH where the rate was 154.5% while it was the lowest in JRH registering 60.1% BTR. Based on this disparity rural hospitals are classified into three categories.

1. Very Good Hospital (< Norm, 72-96%): BBDRH (61.2%) and JRH were characterized by very low patients load in this year. People were in ideal condition to avail very well curative services.

2. Standard/ Good hospitals (72-96%): BRH was the only good hospital as it registered BTR of 80.1% indicating low overall pressure there. But the condition is still sustainable.

3. Poor Hospital (>Norm): DRH (154.5%) in Domjur PS was poor as the pressure on hospital was tremendously high. In this year Domjur RH experienced tremendous load on bed. This is not desirable for public health especially curative services.
Thus, excluding DRH, all of the rest 3 RHs of the district were operating with very low load and high slack in comparison with the state level scenario. Domjur RH is poor in providing proper curative services for the present.

(3) Emergency Admission Rate
No data is available for the year 2007-08.
Thus, it is found that overall performance of rural hospitals of the district is good and load of patients is low.

7.5.4 PERFORMANCE OF BLOCK PRIMARY HEALTH CENTRES (BPHCs)
In addition to Howrah District Hospital, 7 SG/SD Hospitals and 4 Rural hospitals which were serving both rural and urban people, 11 BPHCs were also serving the referral health needs of rural communities only in the different police stations of Howrah district in 2007-08 (Table-7.24).

Table-7.21: Name of the BPHCs of Howrah District

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Name of BPHCs</th>
<th>Name of BPHCs</th>
<th>Name of PS</th>
<th>Sl No</th>
<th>Name of BPHCs</th>
<th>Name of BPHCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Amta BPHC</td>
<td>Amta</td>
<td>7</td>
<td>Jhumjhumi BPHC</td>
<td>Shyampur</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Brindabanpur BPHC</td>
<td>Uluberia</td>
<td>8</td>
<td>Kamalpur BPHC</td>
<td>Shyampur</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Chandipur-Manikpur BPHC</td>
<td>Uluberia</td>
<td>9</td>
<td>Kulai BPHC</td>
<td>Panchla</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Dehipur BPHC</td>
<td>Udaynarayanpur</td>
<td>10</td>
<td>Mugkalyan BPHC</td>
<td>Bagnan</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Hazi ST Mullick BPHC</td>
<td>Sankrail</td>
<td>11</td>
<td>Joypur BPHC</td>
<td>Joypur</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Jagadishpur BPHC</td>
<td>Lilua</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These 11 BPHCs play vital role in providing various referral healthcare facilities in the rural areas of the district.

The performance of these BPHCs as referral healthcare system in 2007-08 has been evaluated in this section on the basis of following six indicators.

(1) Bed Occupancy Rate (BOR)
In BPHCs of West Bengal as whole BOR in 2007-08 was 78.9%. Yet the pressure on beds in BPHCs of the state remained within the standard norm (75-100%) meaning there was some
slack to take the load of patient. This exhibits the good role of BPHCs in the state as a whole in providing curative services to rural people of the state.

This is evident that the rural people of the district depend on more on local BPHC for referral cases, and in case of severe illness they prefer hospitals at sub-division or district level.

In Howrah district strong disparity was existed in BPHCs with regard to BOR being the highest in Amta BPHC registering 63.7% BOR and the lowest in Kulai BPHC having only 0.4% BOR. All BPHCs registered lower than the standard norm of 75-100%. This reflects that all BPHCs of the district have wide scope to serve people of the rural areas.

However, based on this wide range of disparities the BPHC have been divided into six categories.

1. **BPHC with Very Extremely Poor BOR (<10%)**: Kulai BPHC and Hazi ST Mullick BPHC are marked with extremely low BOR for this year. USDH and GSGH were responsible for lowering of BOR in these two BPHCs. The pressure was very low in these two BPHCs.

2. **BPHC with Extremely Poor BOR (10-30%)**: Most of the BPHCs of Howrah district, numbering six, had low BOR. Brindabanpur BPHC and Chandipur-Manikpur BPHCs of Uluberia PS had low BOR because the rural people of this PS mainly prefer USDH and private nursing homes (e.g. Treat Well Nursing Home, Sister Nibedita Hospital, Ideal Nursing Home etc) during their severe illness.

Debipur BPHC of Udaynarayanpur PS registered low BOR because rural residents of this PS prefer URH in time of serious or critical cases.

Hazi ST Mullick BPHC can not draw more people due to GSGH.

Jagadishpur BPHC fails to draw more patient due to proximity of Bally city where many SG hospitals and nursing homes play vital role in providing curative services.

3. **BPHC with Very Poor BOR (30-50%)**: Jhumjhumi BPHC was operating with high slack in this year.

4. **BPHC with Poor BOR (50-75%)**: Amta BPHC and Mugkalyan BPHC were included in this category. Amta PS had no hospital. Hence people had to depend on this BPHC for their referral healthcare. The people of the interior part of Bagnan Block -II of Bagnan PS get the easy access to Mugkalyan BPHC for their curative services. This BPHC mainly provide services in time of delivery.
5. **BPHC with Standard BOR (75-100%)**: No BPHC was included in this category.

6. **BPHC with Very High BOR (>100%)**: No BPHC was included in this class.

(2) **Bed Turnover Rate (BTR)**

BTR in BPHCs of West Bengal as a whole was 131.8% in the year 2007. This was very much above the standard rate of 72.96% providing ample evidence that rural people of the state largely depended on BPHCs for their referral cases and pressure on beds of BPHC was tremendously high.

The BTR was very much uneven in the different BPHCs of the district being the highest in Amta BPHC where BTR was 171.2% and the lowest in Kulai BPHC where the figure was a meagre 3.4%.

Based on this imbalance of BTR, the BPHCs of the district may be divided into five categories, as follows:

1. **BPHC with Extremely Low BTR (<24%)**: Three BPHCs namely Hazi ST Mullick, Kulai and Joypur were marked with extremely low BTR. Hence the load was very low there.

2. **BPHC with Very Low BTR (24-48%)**: Brindabanpur BPHC alone registered very low BTR this year indicating very low pressure on bed.

3. **BPHC with Low BTR (48-72%)**: Four BPHCs of the district such as Chandipur-Manikpur, Debipur, Jagadishpur and Kamalpur registered low BTR indicating that people of this area depend on hospital more than BPHCs during severe cases.

4. **BPHC with Standard BTR (72-96%)**: Only one BPHC namely Jhumjhumi BPHC of Shyampur PS had standard BTR in this year indicating comparatively higher load. Due to location in southern part of the district pressure was slightly higher.

5. **BPHC with High BTR (>96%)**: Two BPHCs of the district came in this category in this year. Amta BPHC had extremely high BTR (171.2%). Due to lack of any hospital facility in Amta PS and location in remote areas people had to rely on this BPHC during their critical situation which in turn raised the BTR tremendously.

Mugkalyan BPHC was marked with phenomenal increase of BTR in this year registering 135.9%. Thus, the pressure on these two BPHCs is tremendous.
(3) Out Patient per Bed Day (OPBD)

The pressure of outdoor patient in BPHCs of West Bengal as whole is higher than that of SD/SG and rural hospitals of the district in 2007-08. Thus the rural people of the district depend on outdoor of BPHCs.

In Howrah district the OPBD was very much uneven in the BPHCs of the district. The highest OPBD was recorded in Jagadishpur BPHC of Lila PS where the figure was 22.4. On the other hand, the lowest OPBD was registered in Joypur BPHC of Joypur Thana where the figure was 11.3. Based on this wide range of variability the district may be divided into two categories.

1] BPHC with High OPBD (25-15): Four BPHCs namely Debipur, Hazi ST Mullick, Jagadishpur and Jhumjhumi were highly loaded with outdoor patients which are also unfavourable for the development of public healthcare facilities. Udaynarayanpur PS is located far away from the main communication line of the district. Hence people have to rely on outdoor of Debipur BPHC for consultation with the doctors. Hazi ST Mullick BPHC can draw many people in outdoor department due to lack of such others in Sankrail PS.

2] BPHC with Low OPBD (5-15): Most of the BPHCs of Howrah district is characterized by low OPBD. Amta BPHC fails to draw people for RMPs in Amta rural areas. Brindabanpur and Chandipur-Manikpur BPHCs have low OPBD due to RMPs, private nursing homes and outdoor of SDH. Kamalpur BPHC has low OPBD due to more dependence on RMPs. Joypur BPHC had low OPBD in 2007-08. Due to Private practitioners in Nuntia and Bagnan, Mugkalyan BPHC fails to draw patients in outdoor department. Kulai BPHC also was marked with low OPBD for the location of Gabberia SG Hospital.

(4) Percentage of Patients Referred Out to Total Discharged Patients

In BPHCs of the state of West Bengal as a whole, the percentage of patients referred out to other hospitals was 15.5% as in the year 2007-08. This is higher than that of SDH/SGH/RHs. In Howrah district the share of referral out in BPHCs varied greatly from one to another. Out of 11 BPHCs three were characterized by increase of percentage of referral out while the rest with reduction of the same, which was a good sign for the development of BPHC although data were not available for Hazi ST Mullick and Jagadishpur BPHC. The highest referrals out was recorded in Chandipur-Manikpur BPHC of Uluberia PS (53.4%) while the lowest one was recorded in Kulai BPHC (0.0%).
Based on this wide range, the BPHCs of the district have been divided into four categories.

1. **BPHCs with Excessively High Share (>40% Referrals Out):** Only one BPHC that is Chandipur-Manikpur was included in this category.

2. **BPHCs with High Share (40-25% Referrals Out):** Only Mugkalyan BPHC was included in this class. Some critical cases perhaps led to increase of the referral out.

3. **BPHCs with Moderate Share (25-10% Referrals Out):** The maximum number of BPHCs was included in this class. Amta, Brindabanpur, Joypur, Kamalpur, and Debipur BPHCs had moderate share of referral out cases. The improvement of infrastructure within the BPHCs reduced the percentage of referral out.

4. **BPHCs with Low Share (<10% Referrals Out):** Due to improvement of health infrastructure, Kulai and Jhumjhumi experienced low percentage of referred out patients. Kulai BPHC showed excellent improvement for which no patient was referred out. This is a very good sign for healthcare development.

(5) **Percentage of Delivery to Admission**

The share of delivery case to total admission in BPHCs of the state of West Bengal, on an average in 2007, was 19.7%. The percentage of delivery in BPHC was obviously lower than that of RH, SDH and District Hospitals of the state.

In Howrah district, the share of delivery in the different BPHCs was considerably uneven as found in wide range that varied from 76.3% in Jhumjhumi BPHC in Shyampur PS to 0.0% in Kulai BPHC of Panchla.

On the basis of this wide disparity the BPHCs have been divided into four classes.

1. **BPHCs with Excessively High Share of Delivery (>60% to admission):** In Jhumjhumi the share of delivery to total admission was excessively high in 2007. In Shyampur PS no hospital has been established. Hence rural people of this PS have to depend fully on the Jhumjhumi BPHC for the delivery cases, which in turn increased the share of delivery there.

2. **BPHCs with High Share of Delivery (60-40% to admission):** In Jagadishpur, Hazi ST Mullick, Chandipur-Manikpur, and Kamalpur BPHCs the percentage of delivery cases were high.

Due to lack of RH and SDH in Shyampur PS (Block -II) the rural people are to depend on Kamalpur BPHC.
Rural people of the Uluberia PS depend on Chandipur-Manikpur BPHC. In Jagadishpur BPHC 57.4% of the total admission were delivery cases. Infrastructurally developed maternity ward draws the pregnant of Lilua PS. Hazi ST Mullick BPHC of Sankrail has improved its maternity ward for drawing pregnant mothers. Due to lack of hospital in Sankrail PS, people of the area depend on this BPHC.

3. BPHCs with Moderate Share of Delivery (40-20% to admission): Four BPHCs such as Amta, Mugkalyan, Debipur and Joypur registered moderate percentage of delivery cases during the recent past.

Bagnan Hospital and only one nursing home named JNU Nursing Home play vital role in delivery of pregnant in Bagnan PS. This was the factor for the moderate share of delivery in Mugkalyan BPHC.

USGH draw more pregnants for delivery cases that reduces the share of delivery in Debipur BPHC.

In Joypur BPHC maternity ward as well as in-patient department has improved moderately which in turn is responsible for the moderate level of delivery. This is a very positive development of this BPHC.

4. BPHCs with Low Share of Delivery (<20% to admission): Brindabanpur and Kulai BPHCs showed very low share of delivery in 2007-08.

Kulai BPHC Maternity ward was not so developed. GSGH was preferred by the family of Panchla PS and hence the share of delivery was reduced to nil here.

Brindabanpur BPHC had low share of delivery (10.0%) to total admission perhaps due to poor infrastructure of maternity ward and prosperity of USDH and private nursing homes in Uluberia Municipality.

(6) Percentage of Laboratory Test to Total IPD and OPD

In West Bengal the percentage of laboratory test to total i-patient department (IPD) and out-patient department (OPD) in BPHCs as whole was only 9.6 in 2007-08. This means that rural people are relying heavily on laboratory test department of BPHCs.

In Howrah district the percentage of test in BPHCs was very much uneven in 2007-08, though two BPHCs had no data. The highest percentage of test was recorded in Mugkalyan BPHC of Bagnan Block-II of Bagnan PS (19.3%) whereas the lowest was recorded in Kulai BPHC of

191
Panchla PS (2.0%). Based on this wide range the BPHCs of the district have been divided into four categories.

1. **BPHCs with High percentage of Laboratory Test (22-17%)**: Four BPHCs such as Mugkalyan, Jagadishpur, Brindabanpur and Jhumjhumi have high percentage of laboratory test indicating well development of laboratory. All of these BPHCs are marked with considerable increase of percentage of laboratory tests in this year.

2. **BPHCs with Moderate percentage of Laboratory Test (17-12%)**: Two BPHCs of the district have moderate share of laboratory test this year. Amta and Hazi ST Mullick BPHCs are included in this category.

3. **BPHCs with Low percentage of Laboratory Test (12-7%)**: Only Joypur BPHC had low percentage of lab test due to its remote location. Most of the people of Joypur PS depend on private establishments for diagnostic tests.

4. **BPHCs with Very Low percentage of Laboratory Test (7-2%)**: Kamalpur BPHC is located in the remote southern part of the district. Hence, development of testing department is poor and cannot serve the people properly. Due to facilities of GSGH, the percentage of laboratory test is very poor in Kulai BPHC of Panchla PS.

Data was not available for Debipur and Chandipur-Manikpur BPHCs for this year. Thus, the study depicts that at present out of 11 BPHCs of the district only two - namely Mugkalyan and Amta BPHCs are operating with some load in all sectors, and pressure on bed is higher than the average BPHCs of the state of West Bengal.

Jhumjhumi, Hazi ST Mullick, Chandipur-Manikpur BPHCs are functioning with very low burden of patient on the beds, but over all loads are high. The delivery cases are very much high in these BPHCs.

Brindabanpur BPHC, Debipur BPHC, Kamalpur BPHC, Joypur BPHC are not playing significant roles in providing healthcare facilities because the pressures are low in these BPHCs.

Kulai BPHC is almost free from pressure at present in comparison with the state level average performance of BPHCs.

This is evident that the main function of the BPHCs of the district of Howrah at present, is delivery of pregnant. In most of the BPHCs of the district, share of delivery is very much
higher compared to the average state level performance. Thus, BPHCs of the district have a
great role to play in carrying out delivery services.

7.6 VEHICLES UNDER THE STATE HEALTH TRANSPORT ORGANIZATION (SHTO) IN HOWRAH DISTRICT: 2008
SHTO of the Government of West Bengal permanently arrange different vehicles for the
officers and ambulance for patients. Different vehicles have been arranged in the District
Health Department of Howrah in the recent times.

In 2008, the number of vehicles under SHTO in the district of Howrah has increased
considerably by 52.94% (increase in the state is 25.09%) from the previous year of 2005. In
this year, throughout the district, 52 vehicles have been working for the health services. This
occupies 3.66% of total vehicles of 1419 in West Bengal registering high increase of total
number of vehicles for the purpose.

In 2008, in the district of Howrah, out of 52 vehicles, 33 (63.46%) were on road (76.11% in
the state) and 19 (36.54%) were off road (23.89%). Thus, it very much clear that off road car
increased in the district very highly, meaning that Health Department was putting more
emphasis on off road cars.

Therefore, it provides ample evidence that the number share of off road vehicles is quite
higher in the district in comparison with the state. In both Howrah and the state of West
Bengal the importance of off road car is highly increasing in the current years.

7.7 SPATIAL DEVELOPMENT OF HEALTHCARE FACILITIES IN THE
DIFFERENT DECADES: SINCE 1951
The study of healthcare development in the district since 1951 clearly reflects that very strong
imbalance existed among the police stations of the district in each of the decades. Ranks of the
police stations regarding healthcare facilities in the different decades are presented in the table
7.22.

Based on this wide disparity the district has been classified into five regions of development in
respect of Healthcare facilities.

For the purpose, the percentage marks for each police station has been calculated on the basis
of 14 indicators (although all indicators may not include in all decades).
Again on this percentage marks the district has been classified into five spatial levels of healthcare development in respect of healthcare facilities since 1951 to 2001. The positions of different police stations in these spatial levels of healthcare development in the different decades are presented in the table -7.22.

**Table -7.22: Rank of the Police Stations in respect of Healthcare Facilities since 1951**

<table>
<thead>
<tr>
<th>SI No</th>
<th>Name of the Police Stations</th>
<th>Rank of the Police Stations in respect of Healthcare Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Howrah Municipal Corporation</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Bally</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Shibpur</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Lilua</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Jagachha</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>Domjur</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>Sankrail</td>
<td>9</td>
</tr>
<tr>
<td>8</td>
<td>Jagatballavpur</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>Panchla</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Uluberia</td>
<td>13</td>
</tr>
<tr>
<td>11</td>
<td>Amta</td>
<td>5</td>
</tr>
<tr>
<td>12</td>
<td>Bagnan</td>
<td>11</td>
</tr>
<tr>
<td>13</td>
<td>Shyampur</td>
<td>10</td>
</tr>
<tr>
<td>14</td>
<td>Udaynarayanpur</td>
<td>-</td>
</tr>
<tr>
<td>15</td>
<td>Joypur</td>
<td>-</td>
</tr>
<tr>
<td>16</td>
<td>Bawria</td>
<td>12</td>
</tr>
</tbody>
</table>

Source: Calculated by the researcher based on the total score of each of the 14 indicators

The study reveals that in 1951, the development of healthcare was uneven and the police stations located near the industrial and urban areas of north eastern part of the district were very highly developed while the PSs like Shyampur, Bagnan, Uluberia and Bawria were very poor due to their location in the remote areas in respect of industrial and urban parts of Howrah. Because of highly population pressure, Howrah city never became the most developed region. The rest of the areas were moderate to highly develop. In the next decade the level of development slightly deteriorated as most of the PSs (6) were very poor in regard to healthcare development (1961). The same pattern of regional disparity prevailed in the district. The police stations of north and north eastern parts were developed. In 1971 Uluberia and Bagnan PS were marked well development of healthcare facilities. The location near the South-Eastern Railway line and National Highway -6 contributed to this development. Jagatballavpur showed quite negative development perhaps due to its interior location. Still 5
PSs were very poor, especially Shyampur due to its agricultural economy and remote location. Almost the same pattern of development continued in this decade. In 1981 Bagnan kept its development and became the most developed, but overall scenario of healthcare deteriorated in the district as seven PSs were very poorly developed in it. In 1991, the trend of development of healthcare facilities was downward as no PS was highly developed and most of the PSs were moderate to very poorly develop (Fig-7.44 and 7.45).

Table-7.23: Spatial Levels of Healthcare Development in Howrah District: 1951-2007

<table>
<thead>
<tr>
<th>Year</th>
<th>Police Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area of Very High Development (≥60% Marks)</td>
</tr>
<tr>
<td>1951</td>
<td>Shibpur, Bally, Domjur</td>
</tr>
<tr>
<td>1971</td>
<td>Uluberia</td>
</tr>
<tr>
<td>1981</td>
<td>Bagnan</td>
</tr>
<tr>
<td>1991</td>
<td>-</td>
</tr>
<tr>
<td>2001</td>
<td>Lilua</td>
</tr>
<tr>
<td>2004</td>
<td>-</td>
</tr>
<tr>
<td>2007</td>
<td>Lilua, Domjur, Sankrail</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the total score of each of the 14 indicators
Note: Bawria had no data for 2001 and 2004
Note: HMC, Bally and Bawria are excluded due to their urban character
Fig. 7.44: Availability of health care facilities in police stations of Howrah district.
Fig. 7.45: Availability of health care facilities in police stations of Howrah district.
Fig. 7.46: Availability of health care facilities in police stations of Howrah district.
During 1990s HZP and CMOH of Howrah took some developmental initiatives. Hence in 2001, most of the police stations of the district were characterized by some development of healthcare facilities, although Shyampur and Udaynarayanpur remained very poor. These PSs are located in the most southern and northern parts of the district both of which are remote in nature and less attractive for the doctors, ANMs etc. Besides, Jagatballavpur was also very poor for its rural and agricultural society. Lilua was the best of all due to its small area and nearness to urban Howrah. Thus, regional disparity was very much prominent and western part of the district located far away from north eastern industrial and urban areas were very poor in healthcare development.

The district has been divided into the following five regions of development to keep parity with different decades (Table-7.23).

Another attempt has been made to find out the present situation of healthcare facilities in the different police stations of the district. Data were not available for all of the 14 parameters. However, for some indicators data were found. These are presented below.

2004

In this year only 5 indicators have been used due to lack of data of all. Thus, the result is not as accurate as the previous six decades. Yet an attempt has been made to find out the level of development regarding healthcare services after 2001. The district has been classified into the following five regions of development in 2004.

1) **Area of Very High Development (>60% Marks):** Howrah City and Bally had formed this region. Due to high urbanization Howrah was developed very highly.

2) **Area of High Development (60-50% Marks):** No PS was included in this class.

3) **Area of Moderate Development (50-40% Marks):** Only Uluberia PS was characterized by moderate development.

4) **Area of Poor Development (40-30% Marks):** Joypur, Panchla and Udaynarayanpur were poorly developed.

5) **Area of Very Poor Development (<30% Marks):** Sankrail, Lilua, Amta, Bagnan Bawria, Shyampur, Domjur and Jagatballavpur PS together constituted this region of very poor development.
Still 8 in number (57.14%) of the PSs, are very poor regarding healthcare facilities, although data are not available for all parameters which may produce some erroneous scenario of the healthcare in the district.

2007
In this year, only 3 indicators of rural areas have been used due to lack of data for all. Hence, urban areas of HMC, Bally and Bawria are not included in this year. Thus, the result is not up to the highest level as of the previous years. An attempt has been made to find out level of development in the rural police stations of the district regarding healthcare services. The district, barring HMC, Bally, and Bawria, has been classified into the following five regions of development (Fig-7.46).

1) **Area of Very High Development (>60% Marks)**: Sankrail, Lilua, Amta and Domjur had formed this region.

2) **Area of High Development (60-50% Marks)**: Only Panchla PS was included in this class.

3) **Area of Moderate Development (50-40% Marks)**: Jagatballavpur and Udaynarayanpur PS were characterized by moderate development.

4) **Area of Poor Development (40-30% Marks)**: Bagnan, Joypur and Uluberia were poorly developed regarding healthcare facilities in this year.

5) **Area of Very Poor Development (<30% Marks)**: Bawria, Shyampur, Howrah City and Bally PS together constituted this region of very poor development.

Still 8 in number (57.14%) of the PSs, are very poor regarding healthcare facilities, although data are not available for most of the parameters which may create a false impression of health services of the district.

7.8 **FACTORS FOR THE HEALTHCARE DEVELOPMENT IN HOWRAH DISTRICT: 1951-2001**

In this section an endeavour has been made to measure the degree of correlation between different factors (parameters) and healthcare facilities in the district in six decades since 1951. Level of urbanization, population number and population density mainly controlled the level of improvement of healthcare facilities in the district.
In 1951 level of urbanization, population number and population density had very low relation with the healthcare facilities in the district indicating the healthcare facilities was very much unplanned and not distributed for the betterment of the people.

The situation improved with the passage of time as the healthcare facilities were provided as per the population number and density which is the standard demand for the attainment of health for all. Urbanization also played positive role in the development of healthcare facilities in the district, in this year, but total population and population density played more positive roles in this regard, and provided more healthcare facilities for the people. In 2001, total number of population, population density and urbanization played positive role for the healthcare development of the district.

Table 7.24: Correlation of Urbanization, Population Density, and Number of Population with Healthcare Facilities using Pearson’s Product Moment

<table>
<thead>
<tr>
<th>Correlation</th>
<th>1951</th>
<th>2001</th>
<th>1951</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urbanization and Health Care Facilities</td>
<td>Population Density and Health Care Facilities</td>
<td>Urbanization and Health Care Facilities</td>
<td>Population Density and Health Care Facilities</td>
</tr>
<tr>
<td><em>r</em></td>
<td>0.106</td>
<td>0.128</td>
<td>0.087</td>
<td>0.360</td>
</tr>
<tr>
<td>Critical Value of <em>t</em> at 0.05</td>
<td>2.201</td>
<td>2.201</td>
<td>2.201</td>
<td>2.179</td>
</tr>
<tr>
<td>Observed Value of <em>t</em></td>
<td>0.3671</td>
<td>0.4280</td>
<td>0.2897</td>
<td>1.3367</td>
</tr>
<tr>
<td>Acceptance</td>
<td>Null Hypothesis Accepted</td>
<td>Null Hypothesis Accepted</td>
<td>Null Hypothesis Accepted</td>
<td>Null Hypothesis Accepted</td>
</tr>
</tbody>
</table>

Source: Prepared by the researcher based on the data from DCH, Howrah and Health on March 201.
7.9 REFORM OF HEALTH SECTOR IN WEST BENGAL

7.9.1 HEALTH POLICY: 2004-15

Recently the Department of Health and Family Welfare, Government of West Bengal, has reformed the health sector for the rural areas of all districts of the state. The mission of the Government of the West Bengal is to improve the health status of all, especially for the people with the greatest needs (Swasthya Smaranika, 2007). 'Health Sector Reform Programme' has been initiated by the Department of Health and Family Welfare, Government of West Bengal comprising the following interventions.

1] Upgradation of Physical Infrastructure in the Primary, Secondary and Tertiary sector.
2] Manpower Planning and Rationalization
3] Involvement of Panchayati Raj Institutions (PRIs) in health matters.
4] Partnership with profit and non-profit organizations
6] Grant of Functional Autonomy to hospitals through formation of Rogi Kalyan Samity (RKS) i.e. Patient Welfare Committee.

Table- 7.25: Goals to be achieved within 2010

<table>
<thead>
<tr>
<th>SI No</th>
<th>Health Indicators</th>
<th>Rate</th>
<th>India</th>
<th>West Bengal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Neonatal Mortality Rate</td>
<td>15/1000</td>
<td>43.4</td>
<td>31.9</td>
</tr>
<tr>
<td>2</td>
<td>Infant Mortality Rate</td>
<td>21/1000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Maternal Mortality Rate</td>
<td>70/100000</td>
<td>400</td>
<td>266</td>
</tr>
<tr>
<td>4</td>
<td>Deliveries under expert Dais</td>
<td>100%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Institutional Deliveries</td>
<td>80%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>Rate of Child Immunization</td>
<td>100%</td>
<td>42.0%</td>
<td>43.8%</td>
</tr>
<tr>
<td>7</td>
<td>Rate of Couple using Contraceptives (any one)</td>
<td>90%</td>
<td>48.2%</td>
<td>66.6%</td>
</tr>
</tbody>
</table>

Source: Compiled by the researcher from various sources

Central Government of India has determined some specific goals on the basis of the 10th Five Year Plan, Reproductive and Child Health-2 (RCH-2), and National Population Policy, 2010. In accordance with the National Goals, the Department of Health, West Bengal Government has determined some specific goals to reach within 2010.
For acquiring these predetermined goals some important activities have been initiated by the Health Department of West Bengal. These activities are as follows:

i. To reduce maternal mortality and neonatal mortality.

ii. To arrange more developed and powerful information exchange system and on the basis of this information more developed management system.

iii. Strengthening of decentralization and partnership and use of all the available facilities in proper ways.

iv. Re-evaluation and reorganization of human resource development system.

v. Re-evaluation of budget, process of money supply and financial arrangement.

vi. Spread and strengthening of plan of health policy.

Keeping pace with the national programmes, the state government of West Bengal is implementing the Reproductive and Child Health -2 (RCH-2 Programme), a major flagship programme under "National Rural Health Mission" (NRHM) launched by the Government of India on 12th April, 2005. Apart from the support from the state budget and national programme, the Government of West Bengal has received technical and financial support from external development partners viz. European Community (EC), Department of International Development (DFID), CTZ, World Bank, and KFW for this purpose (Economic Review, WB: 2006-07).

7.9.2 LEVEL OF HEALTHCARE

7.9.2.1 Primary Healthcare

Primary healthcare has been discussed in two ways.

[A] Primary Healthcare in Rural Areas

The objective of the state government is to provide integrated primary healthcare services especially to the poor and vulnerable sections of the society.

In the rural areas, through the network of primary healthcare system consisting of 10356 Sub-Centres; 922 PHCs; 251 BPHCs; in addition to Nursing Homes and NGOs, the main thrust has been given on the improvement of primary healthcare services.
1. National Rural Health Mission (NRHM)
During the year, 2006-07 following activities have been undertaken in West Bengal.

2 Reproductive and Child Health (RCH) - 2 Programme
Under the RCH-2 Programme, a major flagship programme under NRHM, thrust has been on scheme related to — (1) Institutional deliveries, (2) Safe Motherhood, (3) Operationalisation of First Referral Units (FRUs) and 21 FRUs are expected to be functional in 2006-07, (4) Basic and Comprehensive Emergency Obstetric care, (5) Strengthening of Referral System, (6) Strengthening of Routine Immunization and related cold chain system, (7) Referral Transport for Delivery, and (8) Formation of New Sick Born Care Units in the district level such as in Purulia and Birbhum districts.


3. Public Private Partnership (PPP) for Rural Primary Healthcare
[1] KFW Funded Basic Health Project
[2] Providing Ambulance Services
[3] Quality Management by GTZ
[4] Establishment of Diagnostic Centres (DC)

B Primary Healthcare in Urban Areas: (PPP Basis)
During the early 1980s there was no definite structure for delivery of “Urban Primary Health Care Services” (UPHCS) particularly to the urban poor. As a result the women and children were the major vulnerable group.
In view of the above situation the State Government launched Calcutta Urban Development Programme –III (CUDP-III-Health) assisted by the World Bank for the urban poor of selected Urban Local Bodies (ULB) in the jurisdiction of Kolkata Metropolitan Area (KMA) for a period of seven years. The resultant effect in terms of output in the health scenario was remarkable.

Above all the salient feature of the programme is to implement ‘Life Cycle Approach’ i.e. care of the individuals from ‘Womb to Tomb’. Keeping this in perspective the care package starts as soon as the women become pregnant.

Objectives of UPHCS

The major objectives of the UPHCS are: (a) Reduction in Crude Birth Rate (CBR), (b) Providing Primary Healthcare Services Delivery to the requirement of urban population with focus to BPL population, (c) Implementation of Public Health and National Health Programmes for the urban local bodies, and (d) Ensure maximum utilization of government institution for referral services with maternity and child health, diagnostic and curative services.

Table-7.26: Urban Health Programmes Running in West Bengal

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Project</th>
<th>Project Assisted</th>
<th>Duration of the Projects</th>
<th>Population Covered</th>
<th>Number of ULBs Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CUDP-III</td>
<td>World Bank</td>
<td>1985-86 to 1991-92</td>
<td>16 lakh in KMA</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>CSIP</td>
<td>DFID</td>
<td>1992-93 to 1997-98</td>
<td>2.85 Lakh in KMA</td>
<td>41</td>
</tr>
<tr>
<td>3</td>
<td>IPP - VIII</td>
<td>Wodd Bank</td>
<td>1993-94 to June 2002</td>
<td>38 Lakh in KMA</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>IPP –VII (Extnt.)</td>
<td>Wodd Bank</td>
<td>2000 to June 2002</td>
<td>8.30 Lakh in Non KMA</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>RCH Sub Project</td>
<td>Wodd Bank</td>
<td>1998 to March 2004</td>
<td>2.53 lakh in Non KMA</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>HHW Scheme</td>
<td>DFID</td>
<td>Feb 2004 continuing</td>
<td>2.86 Lakh in Non KMA</td>
<td>11</td>
</tr>
<tr>
<td>7</td>
<td>Community Based Primary Healthcare Services</td>
<td>Department of Health and Family Welfare</td>
<td>Feb 2006 continuing</td>
<td>11.23 Lakh in Non KMA ULBs</td>
<td>63</td>
</tr>
</tbody>
</table>

Source: - Economic Review, West Bengal: 2006-07

All of the above mentioned programmes are being continued and maintained by the state government of West Bengal after cessation of internal funding support.
Results of these Programmes

In the light of UPHCS, the main target groups, the poor and the marginalized people have been benefited to a great extent so far their health needs are concerned. The urban areas have shown remarkable progress in (1) Reduction of Birth Rate; (2) Reduction of IMR; (3) Reduction of MMR; and (4) Enhancement of Couple Protection Rate (CPR) (Economic Review, WB: 2006-07).

7.9.2.2 Secondary Healthcare

[A] PPP Basis

In order to provide better health services to the people the government undertook a lot of developmental activities at the secondary level under the World Bank funded projects.

1. The State Health System Development Project-2 (SHSDP-2): The major benefits from these projects are as follows-

| Table-7.27: Performance Indicators of Health in West Bengal (1997 and 2006) |
|---|---|---|---|
| SI No. | Indicators | Type of Hospitals | 1997 | 2006 (Provisional) |
| 1 | Average Number of Admission per month per Hospital | DH | 2338 | 3160 |
| | | SDH/SGH | 1104 | 1351 |
| | | RH | 257 | 424 |
| 2 | Average Number of Outpatients attendance per month per hospital | DH | 15348 | 20168 |
| | | SDH/SGH | 7998 | 11715 |
| | | RH | 6081 | 7914 |
| 3 | Bed Occupancy Rate (%) | DH | 81.2 | 92.6 |
| | | SDH/SGH | 74.2 | 88.7 |
| | | RH | 47.9 | 85.3 |
| 4 | Bed Turn Over Rate per Month | DH | 4.6 | 7.5 |
| | | SDH/SGH | 5.5 | 7.7 |
| | | RH | 6.2 | 9.8 |
| 5 | Percentage of Inpatients and Outpatients receiving image and electromagnetic tests | DH | 2.9 | 5.0 |
| | | SDH/SGH | 2.7 | 4.0 |
| | | RH | 0.6 | 1.8 |
| 6 | Percentage of Major Surgeries to Admission | DH | 7.8 | 10.1 |
| | | SDH/SGH | 6.8 | 7.8 |

Source: - Economic Review, West Bengal: 2006-07
2. Indo-German Basic Health Project in Secondary Healthcare (IGBHP)

The involvement of NGOs/Private Sector is an important component of KFW funded IGBHP. Apart from involvement of NGOs in the new Scheme of Ambulance Services, a scheme providing certain essential Diagnostic Services in Rural Hospitals under PPP is also being implemented by the project. During the financial year 2005-06 Diagnostic Units had been established under the PPP in 13 Rural Hospitals in West Bengal. Based on the positive impact of this initiative, the state government has decided to establish Diagnostic Units under PPP in 77 Rural Hospitals and 74 up graded BPHCs during the year 2006-07 (Economic Review, WB: 2006-07).

7.10 Reform of Health Sector in Howrah District in 2006-07

Howrah Zilla Parishad, in total rural development programmes, has been trying to implement the NRHM & RCH-2 Programmes in Howrah district in the following ways.

7.10.1 Reorganization of Sub-Centers (SCs)

According to government policy there must be one Sub-Centre per 5000 population in the rural areas and urban local areas. These SCs are the lower most government Health unit in remote areas of the district. There was grant for 338 SCs in the district of Howrah but due to tremendous population pressure 418 SCs were running in the district as a whole during 2006-07. According to the 10th Five Year Plan the number of SC were readjusted or redetermined, and the Ministry of Health, Government of India approved 448 SCs for the district. Thus, 448 SCs are now functioning in the district.

In the 10th Five Year Plan the working area of SCs have been redetermined and all the SC will work within Gram Panchayat (GP) area only. The SC will serve only the people of that Panchayat area where it is located. It must not serve the people of other Panchayat areas. Hence, the number of SC in any Gram Panchayat area is determined on the basis of population of that GP.

7.10.1.1 Order No 2873 (18) /RD (PH & S) /1M-1/04

According to this order, Department of Panchayat, Government of West Bengal, has taken decision to found one Sadar Sub-Centre in each Gram Panchayat of the district. The total number of Sadar Sub-Centre in the district was 157 in 157 Gram Panchayats during 2006-07.
Out of these, 50 are located in BPHCs, 88 in Panchayat Offices and 19 are not transferred in any institution.

7.10.12 Order Number 6338 (36)/ PN /0/1/4P-2/2003
According to this order Sub-Centre should be considered as Sadar Sub-Centre though it is located in Panchayat Office or in any Home.

According to this changed order,

i. There will remain one Female Health Worker in each SC.

ii. There will remain one Female Health Worker and one Male Health Worker in each Sadar Sub-Centre.

iii. One Health Supervisor should be appointed for the evaluation of performance of Sub-Centres in each GP areas. S/he will sit in Sadar Sub-Centre or in Panchayat Office if Sadar Sub-Centre Office is not located in GP Office. GP will arrange for his chair.

iv. Sadar Sub-Centre will serve people just like other SCs.

v. According to this order, on the last Saturday of every month a meeting will be held under the presidency of Pradhan or Sub-Pradhan in Education and Health Sub-Committee of each GP.

7.10.13 Orders No – 3373-PN/0/1/IM-1/04
According to this order issued by Panchayat and Rural Development the monthly meeting of sub-committee is mandatory. Pradhan or Sub-Pradhan, Member of Education and Public Health Subcommittee, Members of Female and Child Development Subcommittee, Health Supervisor, ICDS Supervisor, Health Workers of all Sub-Centres and one Health Officer of Block Level (medical officer) will remain present in this meeting. In this meeting total health status of GP and necessity of Sub-Centres and ICDS and evaluation of work etc will be discussed.

Health Supervisor will prepare a monthly short report on the basis of report of Sub-Centre, report of ICDS and information of PHC and GP and place it on the meeting of Sub-Committee of GP on the last Saturday of the month. This report signed by Pradhan and Health Supervisor and monthly report of SC (Form-6) should be submitted to Block Health Officer within the first Saturday of each month.
On the basis of monthly report of different GPs Public Health and Environment Permanent Committee will prepare block level report and will submit it to the District Public Health Cell within 20 days of the month through SDO.

7.10.14 DD NO HSL (MISC)-282(56)/05

A. Foundation of Sadar Sub-Centre
Keeping the poor infrastructure of SCs in mind the foundation of SC and its necessary furniture and machine will be provided through Health System Development Institute (HSDI). Through HSDI all the Head Quarter Sub-Centre will be established according to a fixed plan as there is fund crunch. This plan has been forwarded to all. GP will arrange land for Head Quarter Sub-Centre near its office. All of the Head Quarter Sub-Centre must have toilet, electricity and drinking water facilities. Rs. 5 Lakh cost has been estimated for each Head Quarter Sub-Centre establishment.

B. Upgradation of BPHCs
It is observed that Bed Occupancy Rate in rural hospitals is 80% and in BPHC it is 52%. Limited service in BPHC is the main cause of low BOR. Higher BOR in rural hospitals clearly indicates that the higher the number of services and the development of quality the higher is BOR.

Keeping this point in mind, under NRHM and HSDI all of the BPHCs will be up graded. Hence quarters for doctors and other staffs would be installed and renovated. For the purpose Rs. 100 lakh has been granted to each BPHC.

In the year 2005-06, under HSDI & NRHM Amta BPHC would be upgraded into Rural Hospital and for this purpose work has been started.

At present there are 10 BPHCs in the district. At first stage under HSDI two BPHCs and under NRHM 3 BPHCs have been identified for development; under other project namely RIDF the work for up gradation have been commenced in Jhumjhumi, Kulai, Sankrail BPHCs. Block Health officer, President of Panchayat Samity and BDO have been entrusted to look in to preparation of the plans.

C. Maintenance and management of BPHCs/PHCs/SCs:
According to the Order No 109/CFW/2005 of Department of Health, West Bengal from the month of May 2005, Panchayat Samity will establish and maintain the SCs and BPHCs and
Gram Panchayat will install and maintain the SCs within their areas. In all the cases of establishment or construction or leasing land, the Panchayat Samity and Gram Panchayats have to take prior permission of the Health Department of the state of West Bengal. According to the above order the Department of Panchayat and Rural Development, West Bengal grants financial assistance to each Zilla Parishad. Howrah Zilla Parishad has also received grants for establishing and maintaining SCs and BPHCs.

Following this order all the Block Medical Officer of Health (BMOH) are instructed to communicate with Gram Panchayat for repairing of SCs, and with Panchayat Samity for repairing and new construction of PHC and BPHCs instead of PWD as in the earlier system. For quick action of repairing of all of these PHCs/BPHCs/SCs, Gram Panchayat and Panchayat Samity must remain conscious always and all of the requirements should be submitted to Zilla Parishad through Chief Medical Officer of Health (CMOH) of the district.

**7.10.2 MNGO-FNGO SHCEME –RCH-2**

Under RCH-2 Programme, MNGO-FNGO SHCEME has been taken throughout the country after 2005. The Scheme has been implemented in West Bengal including Howrah district. Under this scheme the MNGO and FNGO put emphasis on the promotion of child and maternal health for the reduction of child mortality rate (CMR) and maternal mortality rate (MMR). Apart from RCH, these MNGO & FNGO also participate in Locality Development Programme and Sanitation Awareness Campaign.

**MNGO:** In Howrah district, in 2007, one MNGO is functioning for performing various activities under RCH-2. The name of this MNGO is Child-in-Need-Institute which is working for the promotion of health of poor children in the district.

**FNGOs:** 4 FNGOs are working in the district of Howrah since 2007 for the implementation of various maternal and child health activities throughout the district. These FNGOs are –

1) Nari-o-Sishu Kalyan Samity
2) Matri-o-Sishu Bikas Kendra
3) Ananda Niketan, Bagnan
4) Polly Unnayan Samity

All of these FNGOs specially work for children and mothers. Besides, various types of vocational courses and training courses are given here. Ananda Niketan has been arranging
training for tailoring, servicing electronic gadgets etc for the last two decades. Apart from these, Ananda Niketan has been participating in Total Sanitation Campaign (TSC) in Bagnan PS since 2005-06.

7.11 CONCLUSION
The study shows that there has been very good progress of healthcare facilities in the district of Howrah after the Independence of India in 1947. But, the current development is not up to the mark because in 2001 nearly 45% of the villages had no medical facility and more than 30% of rural population was not served by the healthcare facilities. The district has experienced satisfactory development in respect of health personnel like doctors in government sector, registered medical practitioners and health workers. In respect of health personnel the district is in nearly standard position, but sub-regional disparity is still high. The health infrastructure like sub-centre, dispensary, hospital, bed facilities and primary health centres are well developed although police station wise variations are profound. Based on three parameters, i.e., (1) bed occupancy rate, (2) bed turnover rate, and (3) emergency admission rate, this is clear that referral health care system in Howrah district is not overloaded and operating with proportion of slack which favourable for public health. The hospitals should be properly used. The Government of West Bengal government has taken some steps to establish and upgrade the sub-centres and has already upgraded Amta BPHC into Rural Hospital (RH). Besides, other 5 BPHCs are expected to be upgraded very soon.