



### 5.1 INTRODUCTION :

The study of localization of health care facilities is the integral part of Medical Geography. It is apart from the study of distribution diseases which has focal theme of traditional Medical Geography. As the medical geography deals with the medical phenomenon in relation to place, the study of localization of medical services may also be the focal study of Medical Geography.

The health services may be analysed in terms of the community for which they serve and deal with. These services are the integral part of a particular health system and represent responses to the health concern and to the health needs. But it has been found that the localization of health services are not examined by relating them to the community to which they serve and hence unequal distribution of medical facilities are observed in any region (Pandurkar, 1981).

The researcher has attempted to analyse the existing health care system of Marathwada division in this chapter. Taking into consideration the volume of population of district, the availability of medical services has been studied.

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The researcher has collected the data about the number of deaths and cases of illness by certain diseases occurring in different districts of Marathwada division.

## 5.2 AVAILABILITY OF MEDICAL SERVICES

### IN INDIA AND MAHARASHTRA :

The availability of medical services was very poor in early 20th century in India. The doctor population ratio was 1:10,000 and most of the medical personnel were available in major cities. Due to the lack of transportation linkages, the rural population was deprived off it's availability. Because of severe epidemics, the crude death rate was very high. The expectation of average life was even below 30 years. All these things have led the Government of India to appoint a committee called the, 'Health Survey and Development Committee' under the Chairmanship of Sir Joseph Bhore.

Considering even the present medical services of India, the imbalance in the distribution of services is quite remarkable. The bed population ratio at present is 1:2000 and as 0.13 million doctors are working at present in India, the doctor population ratio has been decreased below 1:4500 and only 20 percent of the total doctors are serving for the 80 percent of country's rural population. The rural India has still the shortage of doctors. On an average only one doctor is available for 45,327 people in villages in our country.

It clearly indicates that health care services must be made available to weaker sections of the community. The rich can spend money and buy the facilities but poor cannot afford

for, so it must be adequately provided to the majority of weaker section.

In Maharashtra, during early 20th century like other states of India, the basic medical facilities were available only in the major cities. The infant mortality rates were very high in the villages. Availability of medical aid at right time in most of the villages was very rare. Health education and knowledge of basic sanitation was seldom found even in the well-to-do families in villages. After the implementation of recommendations of the Bhore Committee the health status of Maharashtra State has been improved, still the major medical facilities are concentrated in major cities like Gr. Bombay, Pune, Nagpur, Thana etc.

### 5.3 DISTRIBUTIONAL PATTERN OF MEDICAL SERVICES IN MARATHWADA DIVISION :

#### 5.3.1 Methodology :

In the context of health planning the author in this chapter, proposes to examine the status of medical facilities in the Marathwada division. The study of present status of medical facilities is based on the 1974 to 1979 health statistics. For this study by collecting the data of medical establishments the number of surplus and deficit beds have been calculated.

### 5.3.2 P.H.C. Population Ratio :

PHC is an organisation which provides and integrates preventive and curative services for the people. Mr. Bhole has proposed to establish one primary health centre in rural area for every 20,000 people. In Marathwada division, during 1974 there were the seventy one (71) PHC serving to the total population of 7,486,000. It means that one PHC was serving to the population of 105,436. This PHC population ratio is still very high than the Bhole norms.

In Aurangabad district during 1974, 18 PHCs were serving to a total rural population of 1,792,000. It means that one PHC was serving to a population of 99,555. This PHC population ratio is still more than the Mr. Bhole's norms. In Beed district in 1974, there were 13 PHCs serving to a total population of 1,240,000. It means that one PHC was serving to a total population of 953,846. In Nanded district 11 PHCs were serving to a total population of 1,279,000. It means that one PHC was serving to a total population of 116,272. In the districts of Osmanabad and Parbhani, during 1974 there were 15 and 14 PHCs serving to a total population of 1,810,000 and 1,365,000 respectively. There was one PHC serving to a total population of 120,666 and 97,500 respectively. Hence, in the districts of Marathwada division the PHC population ratio is still higher than the recommended Bholes norms (Table 5.1).

Table 5.1 : Medical facilities ratio's in Marathwada division.

Districts	No. of PHC	PHC population ratio	No. of beds	Bed population ratio	Districts	No. of PHC	PHC population ratio	No. of beds	Bed population ratio
		<u>1974</u>					<u>1975</u>		
Aurangabad	18	99,555	983	2,188	Aurangabad	19	96,684	996	2,214
Beed	13	953,846	636	2,205	Beed	13	97,769	646	2,226
Nanded	11	116,272	449	3,405	Nanded	11	119,363	447	3,510
Osmanabad	15	120,666	439	4,710	Osmanabad	15	123,733	457	4,641
Parbhani	14	97,500	257	6,326	Parbhani	14	99,714	257	6,470
Total	71		2,762		Total	72		2,803	
Average ratio		105,436		3,177	Average ratio		106,569		3,209
		<u>1976</u>					<u>1977</u>		
Aurangabad	19	99,105	996	2,270	Aurangabad	19	99,736	1,143	1,951
Beed	13	100,230	688	2,142	Beed	13	98,923	688	2,114
Nanded	12	112,250	648	2,484	Nanded	13	101,769	668	2,366
Osmanabad	15	126,800	647	3,358	Osmanabad	15	125,200	513	4,183
Parbhani	14	101,928	283	6,007	Parbhani	14	102,214	363	4,696

From 1974 to 1977 only three more centres were introduced in the region. But the growth of the population was much more in the proportionate of new PHCs centres.

In 1978, in Marathwada division, there were 98 PHCs and each of them was serving for 80,775 population generally. In Aurangabad district, during 1978, there were 19 PHCs serving to a total population 1,891,000. It means that one PHC was serving to the population 99,526.

In Beed, Nanded, Osmanabad and Parbhani there were 13, 13, 15 and 38 PHCs and each of them was serving generally for the population of 100,692; 103,615; 114,133 and 38,342 population respectively. Only in Parbhani district during 1978, twenty four (24) new PHC centres were established. Still the PHC population ratio of the above districts is more than the Mr. Bhore's norms.

In the next year, totally there were 103 PHCs serving in the Marathwada division. Out of which in Aurangabad 19, in Beed 13, in Nanded 13, in Osmanabad 15 and in Parbhani 43 PHCs were serving. In the same year the average population ratio of Marathwada division for one PHC was 77,708.

Though, there is increase in numbers of PHCs from 1974 to 1979 in Marathwada division, there is also increase in the population ratio for each PHC centre.

Thus, we can say that now-a-days there are no well equipped medical services in Marathwada division.

### 5.3.3 Workload factor :

Although the medical facilities in Maharashtra are generally above the national average, they are unevenly distributed regionally. Here, an attempt is made to examine the tahsilwise disparities in the medical facilities available by considering the workload factor and other ratios. The hospital workload factor is calculated by the formula -

$$WL = \frac{\text{Population served in '00 s}}{\text{General use in patients beds}}$$

(McGlashan, 1972).

In Marathwada division in 1974 one bed was available on and average for every 3177 population. In Aurangabad one bed was available for 2188 population for treatment. At the same time in Beed, Nanded, Osmanabad and Parbhani district there was a pressure of 2205, 3405, 4710 and 6326 population respectively one bed.

In 1975, the Marathwada division WL factor was 1:32. It means that one bed was available for every 3200 population for treatment. In the next year the WL was 1:28. It means for every 2825 population one bed was available for treatment. In 1977, the total beds were increased but the WL factor has



not decreased proportionately. In the same year, the total 3375 beds were available for the treatment, but the WL 1:27 hence one bed there was a pressure of 2701 population. In 1978 the number of beds have slightly increased i.e. 3755. Hence one bed was available for every 2471 population for the treatment.

From 1974 to 1979 the number of beds have been increased from 2762 to 3876. Hence, the WL factor has slightly been decreased from 3177 to 2437. In 1979, in Aurangabad districts 1136 beds were available for treatment. In Beed 846, in Nanded 715, in Osmanabad 816 and in Parbhani 363 beds were available for treatment. Hence the number of population dependant on one bed was 1782, 2270, 2725 and 4267 for Beed, Nanded, Osmanabad and Parbhani respectively.

After studying the workload factor this is seen that even though number of beds have increased the pressure of population has not decreased proportionally. The bed population ratio has decreased from 3177 (in 1974) to 2437 (in 1979) but still this ratio is comparatively high than the recommended Bhore norm. Bhore has suggested their for every 9000 population, there is a need of one bed, with taking into consideration this norm, still the Aurangabad division needs 2.437 times more beds than the present beds, it means that the division requires. Still some 6000 new beds to meet the needs of vast rural population of Aurangabad division.

#### 5.3.4 Districtwise distribution of beds :

The districtwise number of existing beds are taken into consideration for 1974 to 1979. Number of beds available in the district of Marathwada division can be used as a yardstick to measure the intensity of availability of health facilities.

Considering the Bhore norms (1:1000), how many beds are actually required to serve the population have been calculated for Marathwada division as a whole and also separately for each district. It is found out that (Fig.5.1 and 5.2 and Table 5.2) whatever total beds are actually existing in Marathwada division are more than the required beds per Bhore norms. Divisional figures shows deficit beds than the requirements.

The fact indicates that the beds are not distributed proportionally to the population in the division. It is clearly stated that the beds are mainly concentrated in the urban areas.

In 1979 as per, Bhore norms, the Marathwada division had 5572 deficit of beds. However, the existing beds are not distributed evenly. The beds were not concentrated in any district of Marathwada division. Table 5.2 clearly shows that the districts of Marathwada division has the deficit of the beds than its requirement.

# MARATHWADA DIVISION

## NO. OF SURPLUS AND DEFICIT BEDS AVAILABLE

137

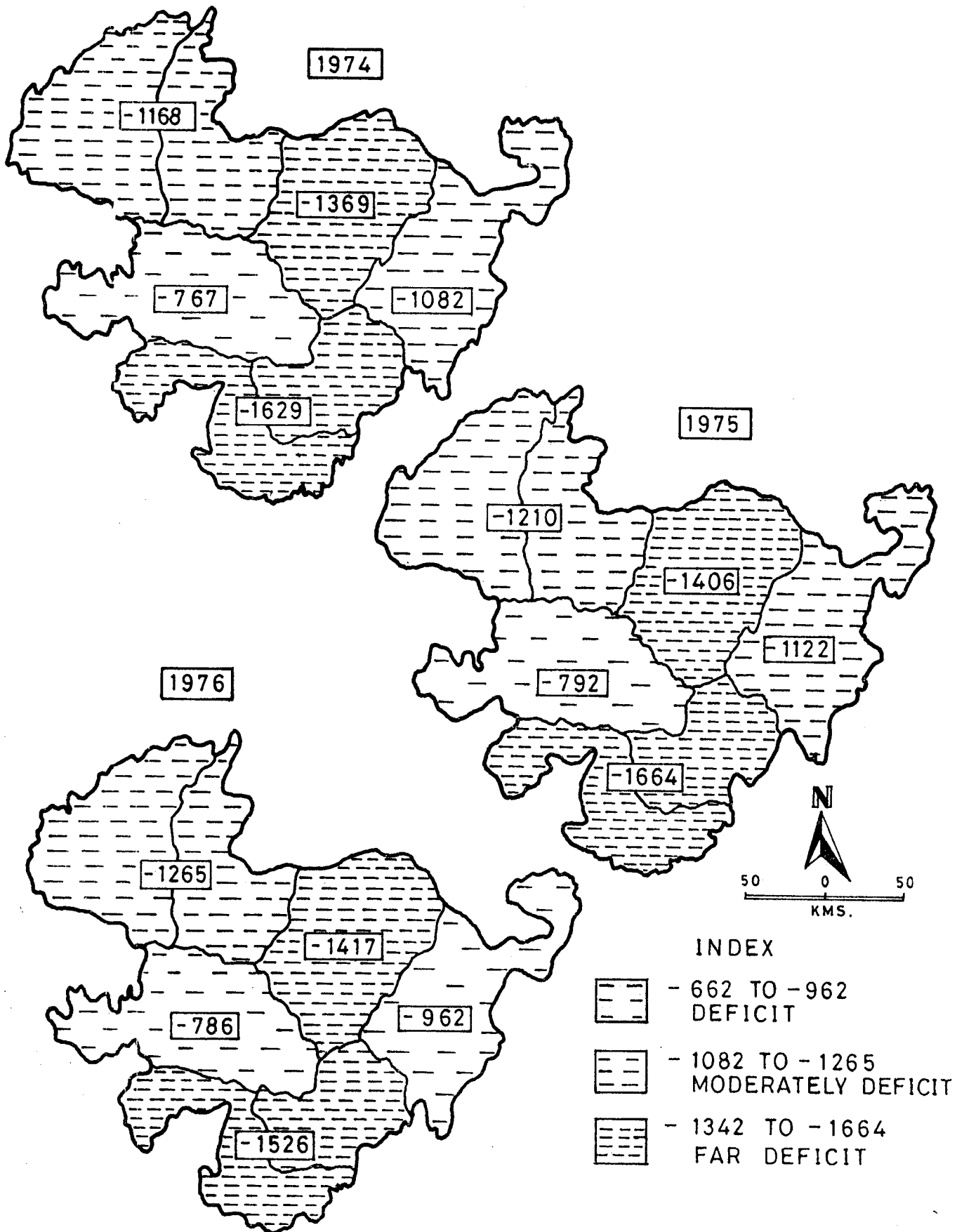


Fig. 5-1

# MARATHWADA DIVISION

## NO. OF SURPLUS AND DEFICIT BEDS AVAILABLE

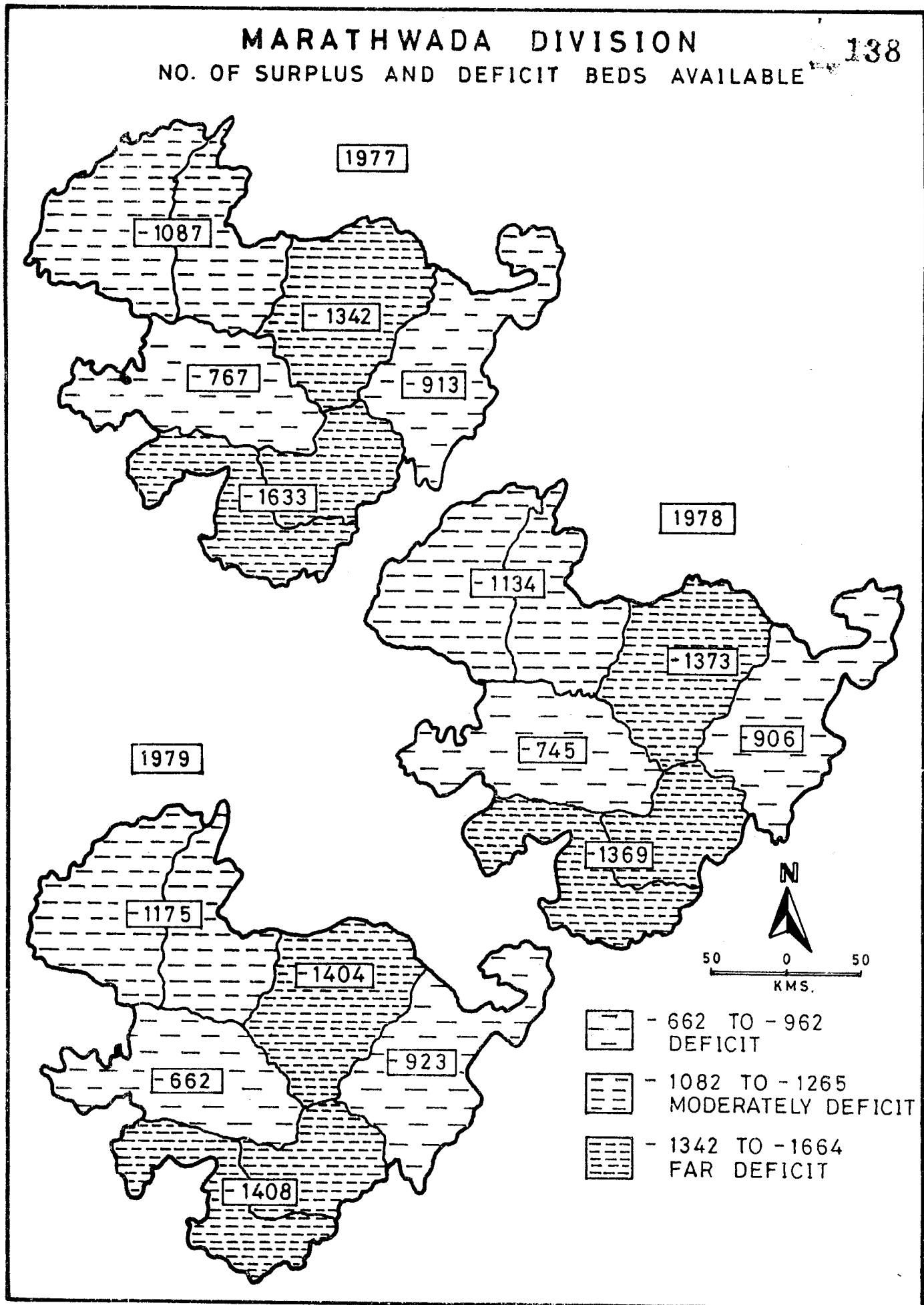


Fig. 5.2

Table 5.2 : Marathwada division - Availability of medical facilities.

Districts	Number of existing beds	Number of required beds if the existing beds are distributed as per population (expected beds)	Difference between existing beds and expected beds (col. 2-3)	Number of required beds as per Bhore norms (Bhore norm 1:1000)	Number of Deficit/ Surplus beds as per Bhore norms (col.2-5)
	2	3	4	5	6
<u>1978 YEAR</u>					
Aurangabad	1136	918	+ 218	2270	- 1134
Beed	736	599	+ 137	1481	- 745
Nanded	704	652	+ 52	1610	- 906
Osmanabad	816	884	- 68	2185	- 1369
Parbhani	363	702	- 339	1736	- 1373
Divisional Total	3755	3755	000	9282	- 5527
<u>1979 YEAR</u>					
Aurangabad	1136	948	+ 188	2311	- 1175
Beed	846	619	+ 227	1508	- 662
Nanded	715	672	+ 43	1638	- 923
Osmanabad	816	912	- 96	2224	- 1408
Parbhani	363	725	- 362	1767	- 1404
Divisional Total	3876	3876	000	9448	- 5572

SOURCE : Compiled by Author, based on Health Establishment Maharashtra State.

The Marathwada division as a whole has sufficient beds available hence with considering this the available beds are distributed proportionate to the population. The required and (expected) beds per district are actually available. These figures were calculated. The difference between expected beds and existing beds was also calculated and are shown with the help of choropleth in Fig.5.1 and 5.2. In Marathwada division as a whole in 1974, in all the districts of Marathwada division the beds are indeficit i.e. they are less than what they are actually needed. In the districts like Aurangabad, Beed, Nanded, Osmanabad and Parbhani the beds are indeficit. Especially in the Osmanabad district, the deficit is of highest value i.e. -1629. Secondly Parbhani district has higher deficit beds in the Marathwada division i.e. -1969. The districts Aurangabad and Nanded are moderately indeficit in the Marathwada division i.e. -1168 and -1082 respectively. These four districts need greater attention for improving the bed facilities. The only Beed districts has lowest deficiating beds in Marathwada division i.e. -767.

In 1975, the district Osmanabad and Parbhani were having for deficit availability of beds. There were -1664 and -1406 beds indeficit than the requirements respectively. The district Nanded and Aurangabad have moderate deficitness of beds i.e. -1122 and -1210 respectively. The district Beed has least deficit beds which was -792.

In 1976, except Nanded all the districts in Marathwada division have same condition as it was in the previous year. In Nanded the moderately deficit condition turned into just deficit as some beds were newly added.

In 1977, the district Osmanabad and Parbhani where the far deficit beds are show in figure - 1633 and -1342 respectively. The district Aurangabad has moderate deficit beds i.e. -1087. The beds are less deficit in Nanded and Beed districts which figures respectively -913 and -767.

In 1978, the districts Parbhani and Osmanabad where the beds far deficit which indicate figures -1373 and -1369 respectively. The district Aurangabad has moderate deficit was of beds (-1134). The rest of two districts Nanded and Beed where the beds were less deficit i.e. -906 and -745 respectively.

In 1979, the less deficit beds were found in Nanded and Beed districts. The district Aurangabad has moderate deficit beds. The districts Osmanabad and Parbhani were having far deficit beds i.e. -1408 and -1404.

In general, it is found out that whole Marathwada division is lacking in availability of medical services. The other parts of Maharashtra state might be enjoying more medical facilities. The region always remained backward in its economic set up as well as on medical front. Parbhani and Osmanabad district suffer maximum due to non-availability

of beds in the hospitals. More attention needs to be paid in future on these two districts when new facilities of medical services are to be introduced in this division.

#### 5.4 EXISTING MEDICAL FACILITIES :

The statistical survey of medical facilities in Marathwada division shows that there are 103 PHCs, 548 qualified doctors and 3876 beds.

When, we refer the medical facilities in 1974 the today's condition is better one. Because in 1974 there were just 71 PHC, 396 doctors, and 2762 beds available to patients.

Though the existing survey shows better condition of the medical facilities it is not enough proportionate to the population in this area. It is very necessary to provide the adequate number of qualified doctors and beds. There is also a need of installing the PHCs in those towns in which the inhabitants cannot get the benefits from the existing PHCs.

#### 5.5 MAJOR HEALTH PROBLEMS :

While studying the available medical facilities for the people of Marathwada division, the author has noted the major health problems of the people.



- ( i ) It is observed that people who live in cities have more than their fair share of medical facilities.
- ( ii ) The primary health centres (PHCs) are established for the benefits of the rural people but all the villages coming under a particular PHC do not get the benefit because of lack of transportation facilities inbetween. Besides, the suggested medical aid is sometime beyond the monetary capacity of the people.
- (iii) The majority of the rural ailments of the districts are caused by poor sanitation, unsafe drinking water and poor nutrition.

#### 5.6. CONCLUSION :

Medical facilities are relatively good in the state of Maharashtra as compared to the all states of India. Specialised hospitals, PHCs and sub-centres are available sufficiently in the state. But, it is also true that the facilities are unevenly distributed districtwise. It is found out that medical facilities are not evenly distributed in the Marathwada division. The people who reside in big cities enjoy more medical facilities than their fair share. The more facilities are found to be concentrated in Aurangabad town while all other towns also shown deficit facilities.

In general, whole Marathwada region lacks in availability of medical services. In all the district of Marathwada the facilities are far deficit to meet the increasing demand of the population. The maximum deficitness of beds was observed in the district of Parbhani and Osmanabad. The total number of PHCs located in the region indicates that there is a heavy pressure of rural population on the PHCs. At present one PHCs is serving for roughly 78,000 population. This seems to be the population of 60 to 80 villages. It means that villagers from nearby 60 villages have to travel to receive the basic medical treatment from the PHC distance inbetween patient and PHC and time required to travel this distance for a patients is itself a cause for increasing the rate of mortality in this area. More medical facilities may be made available to the villages while allocating the new beds the priority to be given to those districts where beds are in far deficit and i.e. the Osmanabad and Parbhani.

R E F E R E N C E S

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