

# Medical Geography of Distribution of Medical Facilities in Bhiwani District, Haryana

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**Abstract:** As far as geographical position point of view that District has extension from 27° 57' N to 28° 53' N latitude but from longitudinal extension it lies in between 75° 13' E to 75° 58' E. In this way the state has its location somewhat in North-western part of our country. The location of Bhiwani District in India, than Haryana. The state has 19 districts in all in which Bhiwani is one of them. The district is located in south western part of the state. Location of Bhiwani district revealed than in the west direction of the district – the state of Rajasthan lies, in the south – Mahendergarh district is located, in the east it is covered by two district boundaries i.e. Rohtak and Jhajjar district, respectively. In this way the district Bhiwani is surrounded by four district and the interstate boundary of Rajasthan in the western direction.

## 1. Introduction

If one compare the district's population of Haryana state than one can observe that Faridabad district ranks first in maximum population where as Panchkula district has lowest population - while Bhiwani district covers 6.7 percent population of the state's total. Similarly from total area point of view, it is quite obvious that Bhiwani district ranks first in the state with 10.8% area and again Panchkula district stands at last by minimum area point of view. As far as density is concerned – Bhiwani district has 298 persons per square kilometer which is above from the average of state's density value. It revealed from the overall observations point of view that comparatively Bhiwani district's covers more than one-tenth area of the state's total but low in comparison from population point of view.

## 2. Objectives

To study the nature of dispersion and quantum of medical health care facilities.

## 3. Distribution Of Medical Facilities

The distribution of medical facilities in any area is a health symbol of the population in that area. Most of the countries which are developing or under developed are not appropriate up to the mark and parameters as prescribed by World Health Organization (WHO). According WHO there are instructions given to each and every country of the world to follow the health status in favour of the welfare of the population. If the number of various health facilities will be lesser many area specially in public sector. The public health facilities includes the number of medical staff persons in General Hospitals, Community Health Centres, Primary Health Centers or any other related health unit working for the welfare of human beings. It may generally observed that in most of the districts of the state the number of medical staff persons are not satisfactory in proportion with the population in that particular area or periphery of any health center. The total number of medical staff persons distribution is found un even by including the case of Bhiwani district.

Bhiwani district has six tehsil's in all, hence according WHO norms there should be six General Hospitals in the district but presently there are four General Hospital in Bhiwani district in which Loharu and Tosham tehsils are avoided from the facility of general hospital, thus out of six tehsil's two tehsil's left from this kind of health facility from public sector. The district has four general hospital namely – Bhiwani, Bawani Khera, Dadri and Siwani. The distribution of number of medical staff persons in four general hospitals in Bhiwani district, data are recently collected for the year 2004-05. By going through Datas there are seven categories of medical staff persons viz; Doctors, Nurses, Pharmacist, Lab Technician, Sweeper, Health Inspector, Forth class (Peon). It is quite obvious from the datas, we can compare very well that in comparison to other general hospital Bhiwani General Hospital covers the maximum medical staff persons. In doctors numbers Bhiwani general hospital alone covers about 63% doctors of Bhiwani district at the part of general hospital.

Thus, Bawani general hospital in number of doctors stands at first position which is follow by Dadri general hospital at second place by covering 30% number of doctor Bawani Khera and Siwani general hospitals have two doctors by each which is quite unsatisfactory in number. Among all seven categories the number of doctors of Bhiwani district general hospital cover 4.9% of the total medical staff persons. Among number of medical staff persons Fourth Class (Peon) covers the highest 15.1% in number of medical staff persons and stands at first place which is followed by the percentage of Nurses in general hospital of Bhiwani district that is 13.8% at second place. The lowest percentage of medical staff persons is of health Inspector (0.13%) it is due to only one Health Inspector in Dadri general hospital. Among lowest percentage in Dadri general hospital. Among lowest percentage Pharmacist (1.8%) stands at second place and Lab-Technician (2.2%) stands at third place in number of medical staff persons at the part of general hospitals in Bhiwani district. An appropriate percentage of Sweeper Class persons found with 9.9% of the total number of medical staff persons in general hospitals. It is based on the datas that Bhiwani general hospital alone covers 74.2% of the total number of medical staff persons and stands at first place in the district which is followed by Dadri general hospital by covering 13.9% of the total number of medical staff persons of Bhiwani

district's general hospitals. As far as the number of medical staff persons of general hospital of Bawani Khera and Siwani both covers 5.9% each of the total of number of medical staff persons of Bhiwani district.

It is very interesting to mention here that in number of Beds facilities Bhiwani general hospital alone covers 75% of the total and stands at first place by 300 beds out of 400 in all general hospitals of Bhiwani district. Dadri general hospital covers 15% number of beds and stands at second place in Bhiwani district. The particular facility it self covers 52% of the total number of medical staff facilities in general hospital of Bhiwani).

The number of medical staff persons with the number of bed facility in 9 Community Health Center (C.H.C.). The data of seven categories of medical staff persons viz; Doctors, Nurses, Pharmacist, Lab-Teshnician, Sweeper, Health Inspector and the Forth Class (Peon). Besides this the number of Beds in each C.H.C. of Bhiwani district. If we compare CHC wise than Kairu CHC ranks at first in number of doctors where as Jhojhu Kalan stands at last in this aspects. Out of total number of medical facilities the doctors group covers 6.6 % of all 9 CHC of Bhiwani district and doctors facility ranks at fourth place. In total number of Nurses four CHC stands at first place (Tosham, Kairu, Bond Kalan and Gopi) where or four CHC stands at the last in number of nurses (Dhanana, Manheru, Jhojhu Kalan and Miran). The facility of nurses stands at fifth place in the CHC of Bhiwani district by covering only 5.9%. The Datas clearly shows the high figures of the facility of number of Beds. This facility alone covers about half of the total number of medical facilities in CHC of Bhiwani district. It is very interesting to mention here that each CHC of Bhiwani district has distribution of 30 number of Beds, and this facility ranks at first place. Among number of medical staff persons the category of Forth Class (Peon) stands at first place by covering 23.1%. Further in this context Kairu CHC has maximum number of forth class and stands at first place with Dhanana CHC where as the lowest number observed in Bond Kalan and Miran CHC. Sweeper category stands at second place by covering 8.2% facility out of total number of medical staff persons. Further in this context Miran CHC stands at first place where as Manheru stands at the last among all 9 CHC of Bhiwani district.

In the comparison of each CHC, the data revealed that in number of medical staff persons and number of beds Kairu CHC stands at first place among all CHC of Bhiwani district which is followed by Tosham CHC at second place in this aspect. Among 9 CHC the lowest contribution in total number of medical facilities Jhojhu Kalan stands at last which is followed by Gopi CHC in Bhiwani district, Haryana.

#### **4. Tehsil-Wise Distribution**

The net work of presentation of data of the number of medical staff persons tehsil-wise in Bhiwani district which covers the number of medical staff persons of 4 general hospitals and all a CHC in Bhiwani district. By going through the comparative account of data of different categories of medical staff persons, it is quite clear that in this aspect number of doctors stands at forth place (6.0%) where as Nurses category stands at second place by covering 10.4% of the total number of medical staff persons in all Health centers of Bhiwani district. In medical staff persons facility the category of forth class (Peon) stands at

first place by covering 18.4% of the total number of medical staff persons of Bhiwani district. It is very interesting to mention here that the facility of number of beds alone covers more than 50% of the total number of medical facilities of all health centers in Bhiwani district. In number of doctors Bhiwani tehsil ranks at first and Siwani tehsil ranks at last. Similarly in number of nurses again Bhiwani tehsil ranks at first place which followed by Dadri tehsil at second place, lowest number of nurses contribution is found in three tehsils (Bawani Khera, Loharu and Siwani). The district shows the lowest percentage (0.5%) contribution by the category of Health Inspector which is followed by Lab Technician (2.0%).

The real illustrates the comparison of six tehsil's of Bhiwani district of all health centers in number of medical staff persons. Further in this aspect the Bhiwani tehsil stand at first place in high contribution of number of medical staff persons which is more than half of the total number of medical staff persons of Bhiwani district that is 52.0%. After Bhiwani tehsil in this aspect Dadri tehsil ranks of second place by covering 21.6% total facilities of medical aspect of Bhiwani district. Tosham tehsil ranks at third place in contribution in total number of medical facilities that is 14.7% of the district's total. At the forth place Loharu tehsil contributes only 14.57% total number of medical facilities of the districts total. At last fifth place two tehsil's and that is Bawani Khera and Siwani by contributing each 3.5% number of medical facilities of district's total by including all health centers specially four general hospitals and 9 CHC of Bhiwani district during the year of 2004-05.

#### **5. Doctor / Population Ratio**

The number of doctors in a particular area is an important factor to decide the facility from medical side in this aspect. Only more number of doctors is not a deciding factor but the number of persons in any particular area plays an important factor. The data of number of persons per doctor tehsil-wise in Bhiwani district during the year of 2004-05. Although the population of Bhiwani tehsil is maximum but doctor/population ratio is low in comparison to Tosham tehsil in which number of doctor are half than that of Bhiwani tehsil. A number of doctors Bhiwani tehsil ranks at first place which is followed by Dadri tehsil at second and Tosham at third place. In lowest number of doctors Siwani tehsil stands at first place which followed by Bawani Khera and at second and Loharu at third place. The maximum population falls in Bhiwani tehsil at first place which is followed by Dadri at second place. In Bhiwani district tehsil-wise lowest population is observed in Siwani tehsil. As per norms of WHO there should be one doctor per 2000 persons in rural sector of and district. Here a comparative account of the doctor / population ratio of rural sector is given. In this aspect one can observe that more doctor/population ratio is a symbol of unsatisfactory medical facility in the particular tehsil of Bhiwani district. Further in this context the most unsatisfactory position is found in Bawani Khera where 57066 persons are per one doctor and the tehsil ranks at first place in high doctor / population ratio.

Siwani doctor/population ratio is very high which stands at second place by showing 42463 persons per doctor which is also quite unsatisfactory. Loharu tehsil stands at third place where doctor / population ratio is 1:27586, as per WHO norms

if Loharu tehsils number of doctors increased ten times than it may be appropriate.

The low doctor/population ratio is a symbol of good medical facility in a particular tehsil or any area. In this aspect the position of Tosham tehsil is comparatively much better that is 10155 persons per doctor, it is lowest in Bhiwani district. After Tosham tehsil Bhiwani tehsil ranks at second place in better medical facility by considering the doctor / population ratio that is 14840 persons per doctor, in this way Bhiwani tehsil position is also comparatively better in comparison to the very adverse position of Bawani Khera and Siwani tehsil. Dadri tehsil also has a good position in doctor/population ratio which is not high and stands at third place in Bhiwani district by presenting 20485 persons per doctor in rural sector, it is earlier mentioned that in rural sector the doctor / population ratio according the norm of WHO should be 1:2000 persons in rural sector, by thus Dadri tehsil requires ten times more numbers of doctor than it can be appropriate ratio. The description as mentioned above is a comparative position among the tehsil's of Bhiwani district and high doctor / population ratio represented the unsatisfactory position of three tehsil's of Bhiwani district and low doctor/population ratio represented satisfactory position of medical facility in doctor/population ratio in rural sector of Bhiwani district. Although according the norms of WHO, not a single tehsil of Bhiwani district stands at satisfactory position due to the fact that all six tehsil's of the district in rural sector have more than 1:2000 persons as doctor/population ratio.

## 6. Beds/Population Ratio

The tehsil-wise population in respect to the persons per Bed in different total number of Beds tehsil-wise in Bhiwani district. By going through the data of number of beds is highest in Bhiwani tehsil and due to this we found the lowest Bed/population Ratio which is 1:709 it means that in Bhiwani tehsil a satisfactory position in this aspects and it stands at first position in this facility in Bhiwani district. After Bhiwani, the Tosham tehsil has better position in Bed/population ratio that is 1805 persons per Bed. Bhiwani and Tosham both tehsil's is better in this facility. In Bhiwani district Loharu tehsil position is quite unsatisfactory due to high Bed/population ratio which is 1:4597. The same adverse position is of Bawani Khera tehsil where Bed/population ratio is high which stands at second place after Loharu in which 4565 persons per bed.

Siwani tehsil position and Loharu tehsil position in Bed/population ratio is also not much satisfactory for the reason at more than three thousand persons fall per bed. According the norms of WHO the Bed/population ratio in rural sector should not exceed more than one thousand persons per bed. In this aspect as mentioned above only Bhiwani tehsil is covered according the norms of WHO otherwise remaining five tehsil's of Bhiwani district is not found according the norms of WHO. In this way satisfactory position can be termed can be applied for remaining five tehsil of Bhiwani district viz; Bawani Khera, Dadri, Loharu, Siwani and Tosham, respectively.

## 7. Results

1. It is very interesting to mention here that in number of Beds facilities Bhiwani general hospital alone covers 75% of the total and stands at first place by 300 beds out of 400 in all general

hospitals of Bhiwani district. Dadri general hospital covers 15% number of beds and stands at second place in Bhiwani district. The particular facility it self covers 52% of the total number of medical staff facilities in general hospital of Bhiwani).

2. Number of medical staff persons and number of beds Kairu CHC stands at first place among all CHC of Bhiwani district which is followed by Tosham CHC at second place in this aspect. Among 9 CHC the lowest contribution in total number of medical facilities Jhohju Kalan stands at last which is followed by Gopi CHC in Bhiwani district, Haryana.

3. According to the norms of WHO, not a single tehsil of Bhiwani district stands at satisfactory position due to the fact that all six tehsil's of the district in rural sector have more than 1:2000 persons as doctor/population ratio.

4. Only Bhiwani tehsil is covered according the norms of WHO otherwise remaining five tehsil's of Bhiwani district is not found according the norms of WHO. In this way satisfactory position can be termed can be applied for remaining five tehsil of Bhiwani district viz; Bawani Khera, Dadri, Loharu, Siwani and Tosham, respectively.

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