

# A STUDY OF HEALTH CARE FACILITIES IN KANKAVLI TALUKA OF SINDHUDURG DISTRICT (MS)

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**Abstract:** Health is defined as a condition of quality of human organism expressing the adequate functioning of the organism in a given condition in genetic and environment. Healthy workforce in both industrial and agricultural sector is the backbone of any nation. It is found that the quality of Healthcare Facility during the period 2001-2011 of Kankavli Taluka, is comparatively poor (In comparison to Bhore Norms). It is observed that the Bed-Population Ratio is very high in respect to PHC Kanedi and Warvade, it is one bed for 1500 population during 2011. It is noticed that during the year 2011 Doctor to Population ratio was above 18000, which is comparatively very high. It is found that during the year 2011 Nurse to Population ratio was 4000, which is comparatively very high.

**Index Terms - Bhore Norms, Bed-Population Ratio(BPR), Doctor-Population Ratio(DPR), Nurse-Population Ratio(NPR), Primary Health Centre(PHC)**

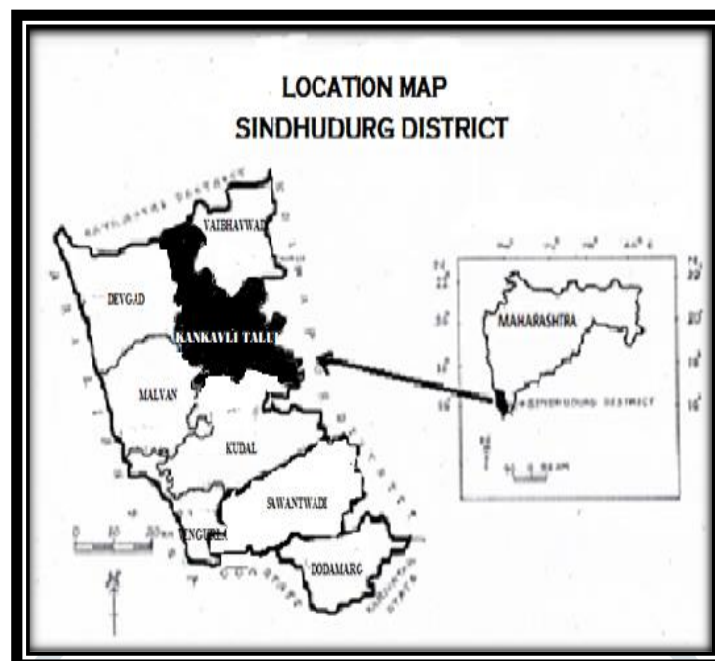
## I. INTRODUCTION:

Health is defined as a condition of quality of human organism expressing the adequate functioning of the organism in a given condition in genetic and environment. In simple words 'Health' implies the condition of a person's 'Body and Mind'. 'A Person without major physical and psychological problem can be called healthy'. Health has a bearing on man's capacity to earn his livelihood and support his family. In other words, economic development of a person depends upon good health. Healthy workforce in both industrial and agricultural sector is the backbone of a nation. Economic development affects the social and political life of habitants of the nations (Park, 2011).

The health services may be analyzed in terms of community for which they serve and the health concern deals with the facilities that are the internal part of the particular health system and represent a response to the health concerns and to the health need. But it seems that health services are not examined by relating them to the community they serve and hence the uneven distributions of medical facilities are observed in many countries. There is a great need of proper health planning in relation to community as per its demands and needs.

## II. STUDY AREA:

Kankavli is a taluka in the Sindhudurg district (MS), India. The taluka is situated along the West coast and forms the part of Konkan region. The study region which lies between 16°21' North latitude and 73° 44' East longitude covers an area about 784 sq.km. and having total population 135295 according to 2011 census. (Fig.No.1)



**Fig.No.1 Location map of Kankavli Taluka**

### III. OBJECTIVES:

The main objectives of the present study are:

1. To study the Bed-Population Ratio in Kankavli Taluka of Sindhudurg District.
2. To study the Doctor-Population Ratio in Kankavli Taluka of Sindhudurg District
3. To study the Nurse-Population Ratio in Kankavli Taluka Sindhudurg District.

### IV. DATA COLLECTION AND METHODOLOGY:

The study is mainly based on secondary data. The secondary data was collected from the District Census Handbook, District Gazetteers, Vital Statistics Office of Pune, Socio-economic Abstract of Sindhudurg District.

The work load factors deal with, Bed Population Ratio (BPR), Doctor Population Ratio (DPR) and Nurse Population Ratio (NPR). All these indices are calculated with the norms suggested by the Bhore Committee (1946) and the ratio was calculated with the help of McGlashan formula (1).

$$\text{Work load} = \frac{\text{Population served in '00'}}{\text{General use of patient's beds}} \quad (1)$$

The results of analysis are represented with the help of maps, graphs and diagram.

### V. RESULTS AND DISCUSSION:

#### 1. Bed-Population Ratio in Kankavli Taluka of Sindhudurg District During 2001:

Total existing BPR in Kankavli Taluka of Sindhudurg District was registered by 1471 during 2001. High BPR was observed in PHCs of Phonda as well as Kanedi and Nandgaon from Kankavli Taluka. It was found that BPR of Phonda was 1728 and BPR of Kanedi was 1720, and BPR of Nandgaon was 1639 respectively, which was comparatively high. While medium BPR was found in respect to Kalsuli and Warvde, it was 1474 and 1425 respectively. On the other side low BPR was found in respect to Kasarde and Kharepatan PHCs, which was 1160 and 1150 respectively.

As per expected BPR of Bhore Norms it should be 95 beds in respect to Kankavli Taluka in terms of PHCs during 2001. High BPR was observed in PHCs from Kankavli Taluka, such as PHC Phonda which should have 16, Kanadi 16 and Nandgaon 15 as per Bhore Norms. Expected medium BPR should be 13 for Kalsuli and Warvde PHCs. Expected low BPR should be 11 for Kasarde and Kharepatan PHCs.

**1.1. Bed-Population Ratio in Kankavli Taluka of Sindhudurg District during 2011:**

Total existing BPR in Kankavli Taluka of Sindhudurg District was registered by 1397 during 2011. High BPR was observed in PHCs of Phonda as well as Warvde and Kanedi from Kankavli Taluka. It was found that BPR of Phonda was 1600 and BPR of Warvde was 1578, and BPR of Kanedi was 1573 respectively, which was comparatively high. While medium BPR was found in respect to Nandgaon and Kalsuli, it was 1487 and 1402 respectively. On the other side low BPR was found in respect to Kasarde and Kharepatan PHCs, which was 1105 and 1030 respectively.

As per expected BPR of Bhore Norms it should be 94 beds in respect to Kankavli Taluka in terms of PHCs during 2011. High BPR was observed in PHCs from Kankavli Taluka, such as PHC Phonda which should have 16, Kanedi 15 and Warvde 15 as per Bhore Norms. Expected medium BPR for Nandgaon should be 14 and Kalsuli 13. Expected low BPR should be 11 for Kasarde and 10 for Kharepatan PHCs.

**Table No. 1**  
**Bed-Population Ratio in Kankavli Taluka of Sindhudurg District**

Sr.No.	Name of PHC	2001		2011	
		Existing Bed-Population Ratio	No. of Expecting Bed as per Bhore Norms	Existing Bed-Population Ratio	No. of Expecting Bed as per Bhore Norms
1	Kharepathan	1150	11	1030	10
2	Kanedi	1720	16	1553	15
3	Phonda	1728	16	1600	16
4	Kalsuli	1474	13	1402	13
5	Kasarde	1160	11	1105	11
6	Warvde	1425	13	1578	15
7	Nandgaon	1639	15	1487	14
<b>Total</b>		<b>1471</b>	<b>95</b>	<b>1397</b>	<b>94</b>

Source: Socio Economic Review and Statistical Abstract, 2001 and 2011

**2. Doctor-Population Ratio in Kankavli Taluka of Sindhudurg District During 2001:**

Total existing DPR in Kankavli Taluka of Sindhudurg District was registered by 15443 during 2001. High DPR was observed in PHCs of Phonda as well as Kanedi and Nandgaon from Kankavli Taluka. It was found that DPR of Phonda was 20735 and DPR of Kanedi was 20636, and DPR of Nandgaon was 19671 respectively, which was comparatively high. While medium DPR was found in respect to Kalsuli, it was 17688. On the other side low DPR was found in respect to Kasarde, Kharepatan and Warvde PHCs, which was 13915, 13801 and 8548 respectively.

As per expected DPR of Bhore Norms it should be 34 doctors in respect to Kankavli Taluka in terms of PHCs during 2001. High DPR was observed in PHCs from Kankavli Taluka, such as PHC Phonda which should have 06 and Kanedi 06 as per Bhore Norms. Expected medium DPR should be 05 for Kalsuli and Nandgaon PHCs. Expected low DPR should be 04 for Warvde, Kasarde and Kharepatan PHCs.

**2.1. Doctor-Population Ratio in Kankavli Taluka of Sindhudurg District During 2011:**

Total existing DPR in Kankavli Taluka of Sindhudurg District was registered by 14671 during 2011. High DPR was observed in PHCs of Phonda as well as Warvde and Kanedi from Kankavli Taluka. It was found that DPR of Phonda was 19217 and DPR of Warvde was 18940, and DPR of Kanedi was 18635 respectively, which was comparatively high. While medium DPR was found in respect to Nandgaon and Kalsuli, it was 17846 and 16830 respectively. On the other side low DPR was found in respect to Kasarde and Kharepatan PHCs, which was 13262 and 6316 respectively.

As per expected DPR of Bhore Norms it should be 31 doctors in respect to Kankavli Taluka in terms of PHCs during 2011. High DPR was observed in PHCs from Kankavli Taluka, such as PHC Phonda which should have

05, Kanadi 05, Nandgaon 05 and Warvde 05 as per Bhore Norms. Expected medium DPR should be 04 for Kasarde and Kalsuli. Expected low DPR should be 03 for Kharepatan PHCs.

**Table No.2**  
**Doctor-Population Ratio in Kankavli Taluka of Sindhudurg District**

Sr.No.	Name of PHC	2001		2011	
		Existing Doctor-Population Ratio	No. of Expecting Doctor as per Bhore Norms	Existing Doctor-Population Ratio	No. of Expecting Doctor as per Bhore Norms
1	Kharepathan	13801	04	6316	03
2	Kanedi	20636	06	18635	05
3	Phonda	20735	06	19217	05
4	Kalsuli	17688	05	16830	04
5	Kasarde	13915	04	13262	04
6	Warvde	8548	04	18940	05
7	Nandgaon	19671	05	17846	05
<b>Total</b>		<b>15443</b>	<b>34</b>	<b>14671</b>	<b>31</b>

Source: Socio Economic Review and Statistical Abstract, 2001 and 2011

### 3. Nurse-Population Ratio in Kankavli Taluka of Sindhudurg District during 2001:

Total existing NPR in Kankavli Taluka of Sindhudurg District was registered by 4402 during 2001. High NPR was observed in PHCs of Phonda 6912. While medium NPR was found in respect to Kasarde, Kharepathan, Kalsuli and Warvde PHCs, which was 4638, 4600, 4417 and 4274 respectively. On the other side low NPR was found in respect to Nandgaon and Kanedi PHCs, which was 3934 and 3439 respectively.

As per expected NPR of Bhore Norms it should be 142 nurses in respect to Kankavli Taluka in terms of PHCs during 2001. High NPR was observed in PHCs from Kankavli Taluka, such as PHC Phonda and Kanedi which should have 24 and Nandgaon was 23 as per Bhore Norms. Expected medium NPR should be 20 for Kalsuli and 19 for Warvde PHCs. Expected low NPR should be 16 for Kasarde and Kharepatan PHCs.

#### 3.1. Nurse-Population Ratio in Kankavli Taluka of Sindhudurg District During 2011:

Total existing NPR in Kankavli Taluka of Sindhudurg District was registered by 3668 during 2011. High NPR was observed in PHCs of Kanedi and Kasarde from Kankavli Taluka. It was found that NPR of Kanedi was 4659 and Kasarde was 4421 respectively, which was comparatively high. While medium NPR was found in respect to Phonda and Nandgaon, it was 3727 and 3569 respectively. On the other side low NPR was found in respect to Warvde, Kharephtan 3090 and Kalsuli PHCs, which was 3157, 3090 and 2805 respectively.

As per expected NPR of Bhore Norms it should be 139 Nurses in respect to Kankavli Taluka in terms of PHCs during 2011. High NPR was observed in PHCs from Kankavli Taluka, such as PHC Phonda which should have 23, Kanadi 22 and Warvde 22 as per Bhore Norms. Expected medium NPR should be 21 for Nandgaon and 20 for Kalsuli. Expected low NPR should be 16 for Kasarde and 15 for Kharepatan PHCs.

**Table No.3**  
**Nurse-Population Ratio in Kankavli Taluka of Sindhudurg District**

Sr.No.	Name of PHC	2001		2011	
		Existing Nurse-Population Ratio	No. of Expecting Nurse as per Bhore Norms	Existing Nurse-Population Ratio	No. of Expecting Nurse as per Bhore Norms
1	Kharepathan	4600	16	3090	15
2	Kanedi	3439	24	4659	22
3	Phonda	6912	24	3727	23
4	Kalsuli	4417	20	2805	20
5	Kasarde	4638	16	4421	16
6	Warvde	4274	19	3157	22
7	Nandgaon	3934	23	3569	21
<b>Total</b>		<b>4402</b>	<b>142</b>	<b>3668</b>	<b>139</b>

Source: Socio Economic Review and Statistical Abstract, 2001 and 2011

**VI. CONCLUSIONS: --**

1. It is found that the quality of Healthcare Facility during the period 2001-2011 of Kankavali Taluka, is comparatively poor (In comparison to Bhore Norms).
2. It is observed that the Bed-Population Ratio is very high in respect to PHC Kanedi and Warvade, it is one bed for 1500 population during 2011.
3. It is noticed that during the year 2011 Doctor to population ratio was above 18000, which is comparatively very high.
4. It is found that during the year 2011 Nurse to population ratio was 4000, which is comparatively very high.

**VII. SUGGESTIONS:**

1. As per Bhore Norms Bed-Population Ratio have to be minimum 20 Beds per PHC.
2. As per Bhore Norms Doctor-Population Ratio have to be minimum 5 Doctors per PHC
3. As per Bhore Norms Nurse-Population Ratio have to be minimum 20 Nurse per PHC.

**REFERENCES:**

1. Census of India, (2001&2011): Maharashtra, District Census Handbook of Sindhudurg, Publishing of the Indian Administrative Services, Directed of Census operations, Maharashtra at Mumbai.
2. Ghosh, A. (2010): Disparity in Health Services in Paschim Medinipur, West Bengal. A Geographical Review of India Vol. 2, P. 162-168.
3. Hajare, Maruti (1996): Geographical Analysis of Diseases and Health Care Facilities in Urban Areas of Kolhapur District, Unpublished M. Phil, dissertation, submitted to Shivaji University, Kolhapur.
4. McGlashan, N. D. (1972): Medical Geography Techniques and Field Studies, Published by Methuen and Co-Ltd, 11 New Fetter Lane, BC4 (London), pp 50, 94.
5. Park, K. (2011): A Textbook of Preventive and Social Medicine, "Publication by m/s Banarsidas Bhanot, 1167, Perm Nagar, Nagpur Road, Jabalpur. (India) PP.812-814 and 837.
6. Socio Economic Review and Statistical Abstract, of Sindhudurg (2001 & 2011)