

# Spatial Distribution Of Health Care Facilities In Kashi Vidyapeeth Block, Varanasi District

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*Abstract: Utilization pattern of health care facilities, an assessment of distribution of health care facilities and availability of infrastructures on these health care centres is essential. If the distribution of health care centres is adequate enough in any area, it means the concerned area has made considerable progress in terms of medical services and that can provide good health services to its people. In view of this background, health care system, public health care network, social indicators, distribution of health care facilities along with various components of physical health care facilities available at health care centres have been dealt in this chapter. Some Indian scenarios related to health care centres and facilities have also been described as an introductory part. Every country maintains its own health service system to meet the health needs of all citizens. The kind of health service system differs from one country to another depending on the value system of the society. Health care is an expression of concern for fellow human being. It is defined as a "Multitude of services rendered to individuals, families or communities by the agents of health services or professions, for the purpose of promoting, maintaining, monitoring or restoring health". Growth and prosperity of any country depend on a good health of its citizen. Nothing could be of greater significance than health of the people in terms of resources for socio-economic development.*

*Keywords: health, socio-economic development, health care system, public health care*

## I. INTRODUCTION

Health is the basic and primary need of an individual who makes the nation progress in socio- economic, scientific, literary and cultural spheres. Health is the both an input and output and is linked with development, therefore it should not be viewed in isolation from all goals of development. Comprehensive health care has been as "The community guaranteeing all groups of population the best available medical care and the maximum coverage for the prevention of illness and promotion of health" (Srivastava1993). In a large country like India where nearly 73 % of its population lives in rural areas as well as where society is characterized by multi ethnic groups and traditions, it is quite difficult to ensure proper health care to all strata of the society but effort for this purpose is on through the network of public health services. India's health service system is neither of capitalistic nor socialistic type but a mixture of the two. Public health service

as well as private health service both coexists in our country. India's political ideology of democratic socialism allows both public and private health services to function side by side. Rural areas in our country are characterized by the poor health care facilities. Most of the medical professionals intend to give their services in urban areas as well as in private sectors rather than in public health systems working in rural areas. Recently one newspaper coated that there are more than 7,00,000 registered doctors in India but only 10 % of those are available in public health care units and that's even poor in rural area. As far as private sector is concerned there are a large number of private hospitals mushrooming in all over the country but their high cost of treatment acts as barrier for rural poor people to avail their services.

In the country ayurvedic, homoeopathic, unani and allopathic medicine systems are prevalent. But the study area is not endowed with unani system of medicine. Unani and homoeopathic systems are not of Indian origin. Ayurvedic

system of medicine is truly Indian which is practiced throughout India. Its origin is traced back to the Vedic times, about 5000 B.C. and is based on the plants and their roots. Homoeopathic medicine system is of German origin and is practiced in India since 1810. It is a system of pharmacodynamics based on "treatment of disease by the use of small amounts of a drug that, in healthy persons, produces symptoms similar to those of the disease being treated (WHO, 1984). Unani system of medicine is of Greek origin which was introduced in India in 10<sup>th</sup> Century AD by Muslim rulers. Allopathic medicine system is the modern system of medicine. It is universally accepted system of medicine and is frequently used in India. Modern medicine system is divided into three groups- preventive, curative and social medicine. In accordance to WHO resolution of 1978 Govt. of India decided to achieve the goal of health for all by 2000 AD by expanding the health care facilities all over the country through establishing a good network of primary health institutions. Accordingly it was planned to have a community centre on every 1, 20,000 population in plain area (on every 80,000 population in hilly and tribal areas), a primary health centre on every 30,000 population in plain area (on every 20,000 population in hilly and tribal areas) and a sub- centre on every 5,000 population in plain area (on every 30,000 population in hilly and tribal areas). Health care services in rural areas are being provided through these health centres and district hospitals. Thus at district level there are sub-centres (SCs), primary health centres (PHCs), and community health centres (CHCs). District hospital (DH) has been set up as a first referral unit (FRU). The population norm for establishing the above said health care centres are also given in table 1.

Centre	Population norm	
	Plain area	Hilly/ Tribal area
Sub- Centre	5,000	3,000
PHC	30,000	20,000
CHC	120,000	80,000

Table 1: Population norm for establishment of health care centres

At present there are 46,026 sub-centres (SCs), 23,236 primary health centres (PHCs) and 3,346 community health centres (CHCs) in India. To meet the norm for, 2001 population additional 19,268 SCs, 4,337 PHCs and 3206 CHCs are needed. While 60,762 SCs, 2948 PHCs and 205 CHCs need their own buildings and several others having own building need toilets, electricity and drinking water facilities, equipments and machines. Rural health centres are served by 28,930 midwives, 1, 33,194 additional midwives, 61,907 male medical professional workers, 17,708 pharmacists and 58,752 paramedical staffs in addition to non technical staffs. While 9869 PHCs are with single doctor and 5769 SCs are without additional midwives, most of them face very higher rate of absenteeism (Kurukshehra, October 2008). According to the recent report of National Rural Health Mission, nearly 8 % of the country's 22,669 primary health centres don't have a doctor while nearly 39 % were running without a lab technician and 17.7 % without a pharmacist. The condition of the 3,910 community health centres, supposed to provide specialized medical care, is equally appalling. Out of the sanctioned strengths, posts of 59.4 % surgeons, 45 %

gynecologists, 61 % physicians and 53.8 % pediatricians are vacant.

## OBJECTIVES

With the acceptance of 'Health for All by 2000 AD' in 1978, government of India decided to improve the health of rural masses through the network of rural health centres (CHCs, PHCs and sub-centres). After creation of the above said centres, it was thought that the health of country side people will improve substantially but considerable improvement in rural areas has not been achieved. Keeping the above facts in mind the present paper aims at analyzing

- ✓ To know the pattern of health infrastructures and health care services available at CHC, PHCs and sub-centres
- ✓ To assess the utilization pattern of health care facilities

## II. MATERIAL AND METHOD

The data were collected by secondary survey. Secondary data have been collected from the census handbook of the Varanasi district and district statistical year books and some information from block headquarters. Data regarding the availability of different types of health care facilities at CHC, PHCs, and Sub- centres were obtained by personal survey conducted during 2015-16.

## III. DISTRIBUTION OF SOCIAL INDICATORS

The data pertaining to social indicators, collected for 13 nyaya panchayat of Kashi Vidyapeeth community development block include area, population, and number of villages and households. With the help of these social indicators the density of settlements, households and population can be understood. In fact the distribution of health care centres should be in conformity to the distribution of the said social indicators. In context of population density, Sheodaspur nyaya panchayat ranks first (5197 persons / km<sup>2</sup>) followed by Kesariapur (3637 persons / km<sup>2</sup>) and Kandwa (2946 persons / km<sup>2</sup>). The lowest population density has been found in Tikari nyaya panchayat (720 persons / km<sup>2</sup>). In the case of density of households the condition is almost similar because here again Sheodaspur tops the list encompassing 749 households / km<sup>2</sup> followed by Kesariapur and Kandwa nyaya panchayat. Tikari nyaya panchayat (94 households / km<sup>2</sup>) reveals minimum density. Density of villages / km<sup>2</sup> is found highest (1.4) in Mishirpur and lowest (0.4) in Tikari nyaya panchayat. A look at the social indicators at nyaya panchayat level provides a glimpse of magnitude of concentration of population, households and villages / km<sup>2</sup> for making the distribution of health care centres and facilities accordingly because higher concentration of these aspects needs more health care facilities

## IV. DISTRIBUTION OF HEALTH CARE CENTRES

Health is a fundamental human right and it is responsibility of the government to provide health care

services to all people in equal proportion. Even since India's Independence in 1947, various national health schemes and programs have been launched with the view to improve the health status of people living in rural areas. In order to improve the health the government of India has launched the National Rural Health Mission (NHRM) on 12 April 2005. The aim of the NRHM is to bring about dramatic improvement in the health condition of the people, especially those who live in rural areas of the country. The mission seeks to provide universal access to equitable, affordable and quality health care as well as to bring about an improvement in the health status of the underprivileged sections of the society especially women and children. Health is often taken for granted and its value is not fully understood until it is lost. During the past few decades there has been reawakening that health is fundamental human right and therefore the attainment of the highest level of health is most important social goal (Jain and Gupta, 1992). The distribution pattern of health centres plays the crucial role. If the number of health institutions are increasing in any area that is good sign of progress. In Varanasi district there were 1 allopathic aushadhalaya and chkitsalaya, 173 sub-centres (SCs), 17 ayurvedic and 6 homoeopathic centres in 1980-81, while there were no PHCs and CHCs in that year. The number of aushadhalaya, ayurvedic and homoeopathic centres, SCs and PHCs increased considerably during 10 years period (1990-91). After this year a notable decline in the number of health care centres can be seen but this is not real. Indeed this is mainly because of separation of some areas and creation of a new district from Varanasi. The area under study is micro region as such presently it is endowed with only one community health centre (CHC), two primary health centres (PHCs) and fourty sub- centres. Besides, there are two ayurvedic and one homoeopathic medicine centres for providing health care services to the people. The trend of decline in number of health care centres in the study area is in conformity to the trend of Varanasi district and the same reason of decline applies here also. In Kashi Vidyapeeth block the community health centre is located in Mishirpur while primary health centres are situated in Sheodaspur and Ramana of Sir Gobardhan nyaya panchayat. Two ayurvedic and homoeopathic health centres each are established in Kakarmatta, Bhagwanpur, Sheodaspur and Naipur Kala respectively. As far as the spatial analysis for variation in health care facilities is concerned it can be made at nyaya panchayat level in relation to sub-centres. The highest number of sub- centres is found in Sheodaspur and Sir Gobardhan nyaya panchayats (6) followed by Lohta (5) and Karsara (4) nyaya panchayats. Susuwahi, Amara Khaira Chak, Tikari, Kandawa, Kesariapur and Sarhari nyaya panchayats witness pathetic condition in terms of the number of sub-centres (table 2).

Amara Khaira Chak	-	-	1	-	-
Kandwa	-	-	2	-	-
Susuwahi	-	-	1	-	-
Karsara	-	-	4	-	-
Tikari	-	-	2	-	-
Sir Gobardhan	-	1	6	1	1

Source: Based on personal survey, 2015-16

Table 2: Nyaya panchayatwise distribution of health care facilities in Kashi Vidyapeeth block (2015-16)

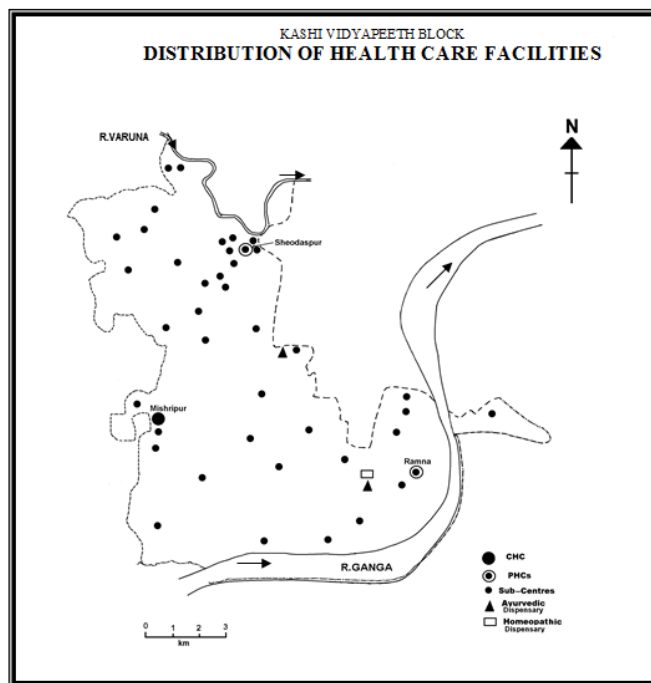


Figure 1

For ascertaining the accessibility and efficiency, the availability of sub- centres per 10,000 population and 10 km<sup>2</sup> has been calculated and presented in table 3. The highest density of sub- centres in context of area has been found in Sheodaspur (23.2) while the lowest density (0.9) has been recorded in Tikari and Amara Khaira Chak (0.8) nyaya panchayats. Highest density of sub- centres in terms of 10,000 population accounts for 4.5 in Sheodaspur and the lowest is recorded in Amara Khaira Chak (0.7), Alauddinpur (0.7) and Susuwahi (0.6) nyaya panchayats. In this regards 4 nyaya panchayats showed lower density, 5 nyaya panchayats marked medium density and remaining four recorded higher density.

Nyaya panchayats	Area (km <sup>2</sup> )	Population	Sub-centres	Density	
				Per 10 km <sup>2</sup> area	Per 10,000 Population
Sarhari	7.27	13701	4	5.5	2.9
Lohta	6.84	19942	5	7.3	2.5
Sheodaspur	3.02	15696	7	23.2	4.5
Kesariapur	6.34	23064	2	3.2	0.9
Alauddinpur	6.93	13511	1	1.4	0.7
Khulaspur	8.09	16559	2	2.5	1.2
Mishirpur	7.7	13553	3	3.9	2.2
Amara Khaira Chak	12.02	15262	1	0.8	0.7
Kandwa	6.15	18119	2	3.3	1.1
Susuwahi	7.96	15624	1	1.3	0.6
Karsara	21.17	20821	4	1.9	1.9
Tikari	21.17	16192	2	0.9	1.3
Sir Gobardhan	28.24	55572	6	2.1	1.1

Nyaya panchayats	CHC	PHCs	Sub-centres	Aurvedic dispensary	Homeopathic dispensary
Sarhari	-	-	2	-	-
Lohta	-	-	5	-	-
Sheodaspur	-	1	6	1	1
Kesariapur	-	-	2	-	-
Alauddinpur	-	-	3	-	-
Khulaspur	-	-	3	-	-
Mishirpur	1	-	3	-	-

Source: Self computed

Table 3: Nyaya panchayatwise density of sub- centres

### V. COMPONENTS OF PHYSICAL HEALTH CARE FACILITIES

Surprisingly there is little information about the delivery of health care and relationship between health care and health status in developing countries in general and in rural India in particular. The commission on Macro Economics and Health of the World Health Organization (2001) has argued that better health care is the key to improve health as well as economic growth in poor countries, but there is little systematic evidence that gives us a sense of health delivery and wellbeing of the population. Provision of health care facilities through primary health centres / community health centres and hospital and disease control through health education are the two major components in the delivery of primary health. Government of India's bulletin on Rural Health Statistics, Ministry of Health and Family Welfare, New Delhi, 1988 highlights on the health care facilities available at different levels namely CHC, PHC and SC levels in terms of health services, staffs and infrastructures. The analysis of personal survey in context of availability of staffs, health infrastructural facilities and equipments/ stocks of 1 CHC, 2 PHCs and 40 sub- centres of the study area is given in tables 3.8 – 3.24. In this survey availability of staffs and buildings, doctor's residence, supply of water and electricity, telephone and vehicles are included. All facilities are shown in different tables. The shortcomings of physical facilities with regards to recommended norms have been described under following sub heads at three levels of public health system.

### VI. AVAILABILITY OF STAFFS AT COMMUNITY HEALTH CENTRE, PRIMARY HEALTH CENTRES AND SUB-CENTRES

Availability of doctors and para medical staffs as per stipulated norm at community health centre, primary health centres and sub- centres, are must to ensure efficient delivery of health care services. Community health centres are established and maintained by the State Government. It is manned by four medical specialists i.e. surgeon, physician, gynecologist and pediatrician supported by 21 paramedical and other staffs. The availability of specialists is essential for providing specialized services. Mishirpur CHC of the study area is presently endowed with one medical officer, four specialists and six paramedical staffs. This means this community health centre has no lady doctor and gynecologist although their presences are must for providing good health care to women. Similarly, the posting of an anesthesiologist is must at CHC for smoothening the minor operations. Also there is no any RTI/ STI specialist as well as female health worker. Primary health centre (PHC) is the first contact point between village community and the medical officer. The PHCs were envisaged to provide an integrated curative and preventive health care to the rural population with emphasis on preventive and promotive aspects of health care. The PHCs

are also established and maintained by the State Governments under the Minimum Needs Programme (MNP)/ Basic Minimum Services Programme (BMS). Staffs available at PHCs are given in table 3.9. At present, a PHC is manned by a medical officer supported by 14 paramedical and other staffs. The availability of doctor (male, female), laboratory technician, health assistant (male, female), staff nurse midwife, and health worker female (ANM) is essential at each PHC. Almost all staffs are available at Sheodaspur PHC. Only health assistant female and laboratory technician are not available here. But the condition of Ramana PHC is worst because most of the required staffs are missing over there This fact draws an immediate attention of the district officials for the posting of stipulated staffs (e.g. female doctor, pharmacist, health assistance female, laboratory technician, staff nurse midwife and female health worker at Ramana PHC.

PHCs	Medical officers		Pharmacist	Health assistant		Laboratory technician	Staff nurse mid-wife	Health worker female (ANM)
	Male	Female		Male	Female			
Sheodaspur	2(doctor)	2(doc tor)	1	1	-	-	1	1
Ramana	1(doctor)	-	-	1	-	-	-	-

Source: Based on personal survey, 2015-16

Table 4: Staff position at primary health centre

Recommendation of staffs at sub-centres includes the provision of male and female multipurpose workers along with permanent dai. A male health worker plays significant role in popularizing the male methods of family planning among men and in educating as well as counseling men about RTI / STI and HIV. He is also supposed to help female health worker during immunization sessions. In spite of their significant role, the male multipurpose workers are not posted at any sub-centre (table 4). Female health worker (ANM) posted at each sub-centre helps in implementing MCH programme. In terms of ANM availability, situation is satisfactory because all sub- centres of Kashi Vidyapeeth block have ANM. Another lady health worker known as dai plays considerable role in executing and counselling the health care services at lower level. Two sub- centres namely Kandwa and Chhittupur have no even part time dai (table 5).But it is unfortunate that in the study area roughly 95 per cent dais are working as part time.

Sub-centres	One male multi purpose worker	One female multi purpose worker	Part time dai
Total	Nil	100.0	95.0

Source: Based on personal survey, 2015-16

Table 5: Percentage of sub- centres having specific staffs position

### ASHA

The Government of India has decided to launch a National Rural Health Mission (NRHM) to address the health needs of rural population, especially most vulnerable sections of the society. Currently Anganwadi Workers (AWWs) under the Integrated Child Development Scheme (ICDS) are engaged in organizing supplementary nutrition programmes and other supportive activities. The very nature of her job responsibilities (with emphasis on supplementary feeding and

pre school education) does not allow her to take up the responsibility of a change agent on health in a village. Thus a new brand of community based functionaries, named as Accredited Social Health Activist (ASHA) is proposed to fill this void. The ASHA will be trained to advise village people about sanitation, hygiene, contraception, and immunization to provide primary medical care for diarrhoea, minor injuries, and fevers; and to escort patients to medical centres. They would also be expected to deliver direct observed short course therapy for tuberculosis and oral rehydration, to give folic acid tablets and chloroquine to patients, and to alert authorities of unusual outbreaks of diseases. ASHA will receive performance-based compensation for promoting universal immunization, referral and escort services for RCH, construction of household toilets, and other health care delivery programmes. Provision has been made to appoint one ASHA for every 1000 population. Table 6 clearly evinces that there is shortfall of about 40 ASHA (12.4%) in the study area.

Sl.no.	Staff	Required no. of ASHA as per norm	Existing ASHA staffs
1.	ASHA	325	285

Source: Based on personal survey, 2015-16

Table 6: Availability of ASHA at sub- centres

## VII. CONCLUSION

Health is one of the important components in the socio-economic development. The promotion and protection of health of the people is essential for sustained economic and social development; and for achieving a better quality of life and world peace. In spite of this, the people living in the developing countries and especially living in rural areas have little or no access to modern health care. Besides, the national development to a great extent depends on the welfare of women who are the real architects of the nation. The health of women puts substantial impact on health of the family and society, and so it is critical for national development. For ensuring good health for all, the study area in particular and the country in general needs adequate extension of health care services, including health infrastructural facilities and services at CHC, PHC and Sub- centres; availability of doctors (male and female); and residential quarters for doctors and para medical staffs that are appointed at every rural based centres.

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