



DISTRIBUTION AND GROWTH OF HEALTH FACILITIES IN TARAI REGION OF EASTERN UTTAR PRADESH

Geography

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ABSTRACT

Spatial distribution of health care facilities is an important factor to know the utilization pattern of health care services which is mostly affected by uneven distribution of such facilities on account of spatial variations. Keeping this in mind, the present study has been designed to analyse the spatial pattern of health care delivery system in the Tarai Region of Eastern Uttar Pradesh based on the Indian government norms to establish health care services. (Health for All by 2000 A.D.). Besides this an attempt has also been made to compare variations in the growth of health facilities over two points of time 2001 and 2011. The paper is based on secondary data taken from Census of India-2011, Statistical Magazine-2001 & 2011, and District Census Handbook- Uttar Pradesh 2001 & 2011.

KEYWORDS

Tarai Region, Spatial, Variations, Health care facilities, Utilization pattern.

INTRODUCTION

Good Health of the any individual is most important indicator of the development. Without good health it is very hard to survive well. That is why Mahatma Gandhi has said that "It is health that is wealth and not pieces of gold and silver." The statement tells us that good health is most important and necessary more than money or golden coin because a person full of diseases cannot live happy and healthy life. In this context we can see the definition of World Health Organisation (WHO 1948) that is "health is a state of complete physical, mental and social well being and not merely the absence of diseases or infirmity." The definition of WHO shows ideal condition of health which anyone wants to achieve, but a person may not be able to do so. Health is not static but it is dynamic and fluctuating as health depends on the state of a person's body and mind which is affected by his surrounding environment. The member country of WHO has adopted a resolution in 1978 to achieve the goal of "Health for All" by 2000 A.D, keeping this in mind and to fulfil the above objective government of India proposed health policy that envisages a three tier structure comprising the primary, secondary and tertiary health care facilities to bring health care services within the reach of the people. The primary tier is designed to have three types of health care institutions, namely a sub centre (SC) for a population of 3,000-5,000, a primary health centre (PHC) for 20,000 to 30,000 people and a community health centre (CHC) as referral centre for every four PHCs covering a population of 80,000 to 1.2 lakh

(Public Health Standards-2012). The district hospitals are to function as the secondary tier for the rural health care, and as the primary tier for the urban population. The tertiary health care was to be provided by health care institutions in urban areas which are well equipped with sophisticated diagnostic and investigative facilities. In this context, it has become essential to analyse the availability of health care facilities in the study area according to suggested norms of the country's health care policy. It will help to provide proper health care services to the population of the study area and to frame better strategy for rational distribution of health facilities.

Statement of the Problem

Despite the growth in health care facilities provided by the government for the curative health care of the people is still lagging in the several health parameters. In Tarai Region of Eastern Uttar Pradesh the health status of the population varies widely across the states according to its spatial variations. So this paper made an attempt to analyse the availability of spatial distribution of health care services and tries to see the gap in the implementation of the services.

OBJECTIVE OF THE STUDY

- To analyse the spatial distribution of health care services in the study area.
- To find out the pattern of growth of health care facilities in the study area.

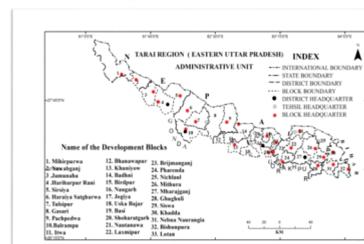
DATABASE AND METHODOLOGY

The paper is based on secondary data taken from various sources as Census of India - 2011, District Statistical Magazine-2001 & 2011, District Census Handbook –Uttar Pradesh 2001 & 2011. For mapping Arc GIS 10.1 software has been used for the analysing and diagrammatic representation of the data Excel 2007, Ms Word 2007 software has been used. Health index to assess the development level of Tarai region of eastern Uttar Pradesh has been calculated by using the Z score method based on 18 variables related to availability of allopathic, Ayurvedic, Unai, Homeopathic health care services.

Study Area

The selected study area is a part of the whole tarai region (between Kali river in western side and Tista river in Eastern Side) lies in a thin belt parallel to Bhabhar belt on foothills of Himalaya. The latitudinal expansion of tarai region of Eastern Uttar Pradesh is 26° 5' N to 28° 19' N an longitudinal expansion is 81° 4' E to 82° 2' E according to demarcation of L.R.Singh and S. C, Sharma on the basis of river basin (between Ghaghara river on western and Great Gandak on eastern side), rice intensity and crop combination etc. On this basis the study area comprises 6 districts and 33 blocks. The Tarai region is lowland tropical and subtropical belt of flat, alluvial land stretching along the Nepal-India border, parallel to the foothills of Himalaya after bhabhar region. It is the northern extension of the Gangetic Plain in India, commencing at about 300 meters above sea level and rising to about 1,000 meters at the foot of the Sivalik Range. It consists of marshy land, swampy region and often waterlogged because of river comes on the surface after bhabhar region (Srivastava, A.K.2007). The area comprises with wet humid climate, dense forest, generation of mosquitoes and generation of many fatal diseases like encephalitis, goiter etc.

Figure No. 1-Location Map



Source – Based District Census Handbook-2011

Distributional Pattern of Social Indicator

As health care services are an important part of social welfare, it becomes very necessary to analyze the variations in social indicator of the study area, because social indicators directly influence and affect the status of people and required facilities of health care services.

Table No.1 -Distribution Pattern of Social Indicator

Ser. No.	Name of Block	Area in Kilometre Square	Total Popula tion	Popula tion Density	No. of Villages	No. of Househo ld
1	Mihirpurawa	595.47	282474	474	112	1041
2	Nawabganj	244.21	149563	612	87	978
3	Jamunaha	362.41	179414	495	101	1040
4	Hariharpur Rani	362.06	150203	415	79	1295
5	Sirsiya	527.57	168854	320	106	1400
6	Haraya Satgharva	599.23	200341	324	129	1612
7	Balrampur	446.23	249116	558	135	2312
8	Tulsipur	471.76	207698	440	108	1180
9	Gesari	545.00	193420	355	138	934
10	Pachperwa	478.84	167405	349	130	938
11	Khuniyou	285.07	174644	627	204	0
12	Itwa	281.24	156834	558	182	0
13	Bhanawapur	306.75	167705	547	211	0
14	Barhni	186.16	111330	598	120	505
15	Soharatgarh	210.69	103191	489	104	575
16	Birdpur	162.49	128270	789	73	906
17	Naugarh	139.62	133027	953	139	388
18	Jogia	205.37	106943	521	142	978
19	Uska Bazar	130.20	85368	656	103	1142
20	Bansi	191.89	123973	646	185	934
21	Lotan	34.41	77041	2239	116	556
22	Nautanava	259.24	194655	751	123	1118
23	Lksmipur	317.86	173244	545	136	1314
24	Nichlaul	358.76	206485	576	162	1591
25	Mithaura	287.65	203865	709	106	1648
26	Sosa	232.47	189938	817	104	1497
27	Bridgemanganj	246.59	166836	677	93	1359
28	Maharajganj	240.96	177483	737	81	1269
29	Ghughuli	205.80	159317	774	72	1011
30	Pharenda	183.51	151671	826	92	1146
31	Khadda	307.39	189530	617	117	1454
32	Nebua Naurangia	198.34	175555	885	112	1459
33	Bishunpura	217.85	204148	937	134	2058
Total		9823.09	5509541		4036	35638

Source- Based on District Statistical Magazine U.P.-2011

Analysis of data (Table No.1) collected for 33 blocks of 6 districts reveals intra - regional variations at block level for different social indicators. Here social indicator includes area per km², population, household and number of villages. In terms of area haraya Stagarwa (Balrampur) block is highest (599.23 km²) and Lotan block of Siddhathanagar district is lowest (34.41 km²). In terms of density of population and total population Lotan and Mihirpurwa block ranks first encompassing the values 2239 and 282474 respectively. Further blocks such as Vishunpura, Haraya Satgharva have highest population respectively. Minimum density of population is found in Sirsiya, Harya Statgharwa, Pachpedwa block that is 320,324,349 respectively. The Blocks such as Balrampur, Hariharpur Rani, Nichlaul and Mithaura has the highest number of Household. The above analysis clearly evinced that both the household and population densities in most of the blocks are quite high and therefore there is need of effective health care in the study- area.

Distribution Pattern of Health Care Facilities in terms of Population

Spatial distribution of health care facilities is most important and effective factor in utilising health care facilities of any area at first glance. Health facilities are a basic issue in the utilization pattern of health care facilities on account of spatial variations and the study area is not an exception of this. For the sake of analysing the utilization pattern of health facilities in any unit, it is most important to first access the distribution of Health care facilities in spatial perspective. Spatial distribution of any services is as an important indicator of an area, and about health it is essential to go with the distributional pattern of the health care services. We know that most of the population of the country believes on allopathic practice as it works and cures immediately. This is the reason that government has set the norms for to establish the allopathic health care services all over the country. At the same time population is an important indicator to provide health

care facilities in any area. Table no. 1 shows the larger number of variations in terms of population that varies notably in the different blocks of the study area. So to analyse health care facilities in terms of per 10, 000 population has been taken into consideration that is given in Table no. 2 & 3.

Table No.2- Block wise No. of Allopathic Health care services Per 10,000 Population and Percentage change-2001 & 2011

Se. No.	Name of Block	No. of Community Health Centres Per 10,000 Population			No. of Primary Health Centres Per 10,000 Population			No. of Sub Centres Per 10,000 Population		
		2001	2011	% Chan ge	2001	2011	% Chan ge	2001	2011	% Chan ge
1	Mihirpurawa	0.00	0.04	0.00	0.29	0.21	-0.26	1.73	1.20	-0.31
2	Nawabganj	0.00	0.00	0.00	0.36	0.27	-0.25	1.88	1.27	-0.32
3	Jamunaha	0.00	0.06	0.00	0.07	0.17	1.37	1.83	1.45	-0.21
4	Hariharpur Rani	0.00	0.07	0.00	0.08	0.20	1.42	1.98	1.93	-0.03
5	Sirsiya	0.00	0.06	0.00	0.08	0.18	1.34	2.21	1.42	-0.36
6	Haraiya Satgharva	0.00	0.05	0.00	0.06	0.20	2.24	1.72	1.40	-0.19
7	Balrampur	0.00	0.00	0.00	0.10	0.24	1.36	1.27	1.24	-0.02
8	Tulsipur	0.00	0.00	0.00	0.06	0.14	1.34	1.73	1.35	-0.23
9	Gesari	0.00	0.05	0.00	0.06	0.10	0.59	1.62	1.24	-0.23
10	Panchpheda wa	0.00	0.00	0.00	0.07	0.12	0.60	1.87	1.43	-0.24
11	Khuniyon	0.00	0.00	0.00	0.50	0.46	-0.09	1.72	1.32	-0.24
12	Itwa	0.00	0.06	0.00	0.00	0.26	0.00	0.78	1.47	0.87
13	Bhanawapur	0.00	0.00	0.00	0.29	0.30	0.01	1.76	1.37	-0.22
14	Barhni	0.00	0.00	0.00	0.45	0.54	0.21	2.56	1.98	-0.23
15	Soharatgarh	0.12	0.00	-1.00	0.12	0.00	-1.00	0.62	0.00	-1.00
16	Birdpur	0.00	0.00	0.00	0.42	0.55	0.30	2.09	1.72	-0.18
17	Naugarh	0.00	0.00	0.00	0.39	0.60	0.53	2.36	1.73	-0.27
18	Jogia	0.00	0.00	0.00	0.47	0.37	-0.21	1.65	1.40	-0.15
19	Uska Bazar	0.08	0.12	0.50	0.31	0.82	1.63	1.79	3.05	0.70
20	Basi	0.00	0.08	0.00	0.41	0.40	-0.01	2.25	1.69	-0.25
21	Lotan	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.39	0.00
22	Nautanawa	0.00	0.00	0.00	0.14	0.15	0.14	1.29	0.03	-0.21
23	Laxamipur	0.00	0.06	0.00	0.08	0.23	2.04	1.52	1.15	-0.24
24	Nichlaul	0.00	0.00	0.00	0.13	0.15	0.16	1.13	0.97	-0.15
25	Mithura	0.00	0.00	0.00	0.20	0.20	0.00	1.31	0.98	-0.25
26	Siswa	0.00	0.00	0.00	0.15	0.16	0.04	1.37	1.05	-0.23
27	Bridgemanganj	0.00	0.06	0.00	0.23	0.18	-0.23	1.56	1.20	-0.24
28	Maharajganj	0.00	0.00	0.00	0.07	0.17	1.26	1.34	1.13	-0.16
29	Ghughuli	0.00	0.00	0.00	0.08	0.25	2.29	1.45	1.19	-0.15
30	Pharenda	0.00	0.00	0.00	0.09	0.20	1.28	1.65	1.32	-0.21
31	Khadda	0.00	0.00	0.00	0.83	0.21	-0.75	5.00	1.16	-0.79
32	Nebua Naurangia	0.00	0.00	0.00	0.23	0.17	-0.25	1.60	1.31	-0.18
33	Bishunpura	0.00	0.00	0.00	0.39	0.24	-0.37	1.48	1.27	-0.14
Total		0.20	0.70	2.47	7.21	8.70	0.21	56.13	43.81	-0.22

Source- Based on District Statistical Magazine -U.P. 2001& 2011

Table no. 2 represents the status of block wise availability of community health centre, primary health centre and sub centre between 2001 and 2011 which is very essential to study while studying available health facilities in any area. These health centres are first priority for any ill person for curative health care services. To assess the pattern of change of these centres over two points of time has been taken from 2001 and 2011. Maximum number of CHCs is available in Soharatgarh block in 2001 per ten thousand population that is 0.12. It is significant to note that none other block has availability of CHC in 2001 except Soharatgarh. In 2011 only some blocks noted increase in the number of CHCs like Jamunaha, Hariharpur Rani and Bansi. It is notable that Sohartgarh block which has maximum number of CHCs in 2001 experienced maximum percentage of decrease in 2011, because the CHCs has not been increased even significant increase in number of the population. In terms of PHC which is main pillar of health care

services for the people from rural areas we can see larger number of variations in different blocks. There is significant decrease in the number of PHCs per ten thousand population in many blocks like Mihirpurawa, Nawabganj, Khuniyon which are showing negative change of growth rate that is -0.26, -0.25, 0.09 respectively between 2001 and 2011. Very few blocks are showing positive growth like Ghughuli, Jamunaha Hariharpur Rani. In the year 2001 Khadda block stood first in the availability of sub enters with availability of 5.00 sub centres per the thousand population while in 2011 Uska Bazar stood first with number of 3.05 respectively. Soharatgarh block is showing maximum negative percentage change in availability of sub enters. It is significant to note that none of the blocks is showing positive growth. Even significant number of increase in population between last two decade the number of sub centers are not being increased which is showing inadequate number of facility in the study area .So there is need and scope for increasing the number sub centres in all blocks.

Table No.3- Block wise No. of Allopathic Health Care Services in terms of Per 10,000 Population and Percentage Change - 2001&2011

Ser. No.	Name of Block	No. of Available Beds Per 10,000 Population			No. of available Doctors Per 10,000 Population			No. of Paramedics Per 10,000 Population		
		2001	2011	% Change	2001	2011	% Change	2001	2011	% Change
		1	Mihirpurwa	1.05	1.49	0.41	0.24	0.04	-0.85	1.10
2	Nawabganj	2.50	0.67	-0.73	0.36	0.07	-0.81	1.43	0.07	-0.95
3	Jamunaha	0.71	0.67	-0.05	0.00	0.33	0.00	0.21	1.06	4.01
4	Hariharpur Rani	0.66	2.40	2.63	0.00	0.80	0.00	0.33	0.87	1.62
5	Sirsiya	2.74	2.13	-0.22	0.15	0.47	2.12	0.53	0.71	0.34
6	Haraiya Satgharwa	2.83	2.30	-0.19	0.12	0.30	1.43	0.31	1.00	2.24
7	Balrampur	1.43	0.96	-0.32	0.10	0.16	0.58	0.31	0.04	-0.87
8	Tulsipur	2.84	2.02	-0.29	0.49	0.34	-0.32	0.49	0.82	0.66
9	Gasari	1.43	0.62	-0.57	0.13	0.16	0.20	0.32	0.62	0.91
10	Panchphedawa	2.84	2.27	-0.20	0.30	0.30	0.00	0.45	0.66	0.46
11	Khuniyon	2.29	1.83	-0.20	0.14	0.46	2.20	0.50	0.69	0.37
12	Itwa	0.00	2.68	0.00	0.00	0.38	0.00	0.00	1.15	0.00
13	Bhanawapur	1.76	1.43	-0.19	0.22	0.42	0.89	0.37	0.66	0.78
14	Barhni	1.78	1.44	-0.19	0.33	0.72	1.15	0.22	1.17	4.25
15	Soharatgarh	3.69	0.00	-1.00	0.37	0.00	-1.00	0.25	0.00	-1.00
16	Birdpur	1.34	1.25	-0.07	0.25	0.55	1.17	0.50	0.78	0.55
17	Naugarh	1.18	0.00	-1.00	0.49	0.60	0.22	0.69	0.90	0.31
18	Jogia	1.89	1.50	-0.21	0.24	0.37	0.58	0.47	0.75	0.58
19	Uska Bazar	3.27	4.69	0.23	0.54	0.82	0.50	0.70	1.64	1.34
20	Basi	1.63	1.77	0.09	0.72	0.40	-0.44	0.31	1.61	4.26
21	Lotan	0.00	0.26	0	0.00	0.39	0	0.00	0.91	0.00
22	Nautanawa	0.68	0.51	-0.24	0.20	0.21	0.01	1.27	0.26	0.05
23	Laxamipur	1.22	2.66	1.18	0.30	0.35	0.14	1.29	0.52	-0.60
24	Nichlaul	0.50	0.39	-0.23	0.06	0.19	2.08	0.50	0.15	-0.71
25	Mithura	0.79	0.59	-0.25	0.07	0.10	0.50	0.39	0.29	-0.25
26	Siswa	0.91	0.42	-0.54	0.00	0.16	0.00	0.61	0.16	-0.74
27	Bridgemanganj	0.78	2.40	2.07	0.08	0.18	1.30	0.47	0.24	-0.49
28	Maharajganj	0.75	0.56	-0.25	0.07	0.23	2.02	0.60	0.23	-0.62
29	Ghughuli	1.07	0.88	-0.18	0.15	0.25	0.64	0.76	0.31	-0.59
30	Pharenda	0.87	0.66	-0.24	0.00	0.20	0.00	0.87	0.33	-0.62
31	Khadda	3.33	0.84	-0.75	0.42	0.11	-0.75	0.42	0.26	-0.37
32	Nebua Naurangia	0.92	0.68	-0.25	0.15	0.34	1.24	0.69	0.17	-0.75
33	Bishunpura	1.55	1.76	0.14	0.19	0.39	1.03	1.03	0.39	-0.62
To.		51.22	44.72	-0.13	6.91	10.77	0.56	17.39	19.57	0.13

Source- Based on District Statistical Magazine U.P. - 2001 & 2011

Table no. 3 shows availability of beds, doctors and paramedics per ten thousand population in 2001 and 2011 with percentage between these two decade. Uska Bazar has highest number of beds available in 2001 and 2011 both year which is 3.27 and 4.69 respectively. While Soharatgarh block has no availability of bed, doctor and paramedics available in 2011 per ten thousand population. It is notable that

availability of total beds has recorded negative growth rate which shows lackness of availability of beds in many blocks. The number of doctors in the study area ranges 0.01 to 0.7 in 2001 and 2011 both decades, which showing less availability of doctors per ten thousand population in the study area. Maximum paramedics per ten thousand population available Uska Bazar block which is 1.64 in 2011. Very few blocks are showing positive change in availability of paramedics like Hariharpur Rani, Sirsiya, Harya Satgharwa.

Table No.4- Block wise No. of Ayurvedic Health care services in terms of Per 10,000 Population

Ser. No.	Name of Block	Ayurvedic Health Care Services					
		2001 H.D.	2011 H.D.	2001 Bed	2011 Bed	2001 Doctor	2011 Doctor
1	Mihirpurawa	0.19	0.14	0.77	0.14	0.10	0.14
2	Nawabganj	0.09	0.00	0.36	0.00	0.00	0.27
3	Jamunaha	0.14	0.17	0.28	0.17	0.14	0.17
4	Hariharpur Rani	0.17	0.13	0.66	0.13	0.00	0.00
5	Sirsiya	0.15	0.00	0.61	0.00	0.00	0.53
6	Haraiya Satgharwa	0.31	0.30	1.23	0.30	0.06	0.00
7	Balrampur	0.10	0.20	0.41	0.20	0.00	0.12
8	Tulsipur	0.12	0.10	0.49	0.10	0.06	0.00
9	Gasari	0.26	0.21	1.04	0.21	0.06	0.16
10	Panchpedawa	0.15	0.12	0.60	0.12	0.07	0.00
11	Khuniyon	0.14	0.11	0.57	0.11	0.00	0.23
12	Itwa	0.08	0.06	0.31	0.06	0.00	0.26
13	Bhanawapur	0.37	0.36	1.47	0.36	0.15	1.19
14	Barhni	0.22	0.27	0.89	0.27	0.11	0.00
15	Soharatgarh	0.62	0.39	0.62	0.39	2.46	0.00
16	Birdpur	0.08	0.00	0.33	0.00	0.08	0.00
17	Naugarh	0.10	0.15	0.89	0.15	0.10	0.23
18	Jogia	0.24	0.28	0.94	0.28	0.12	0.19
19	Uska Bazar	0.16	0.12	0.62	0.12	0.08	0.00
20	Basi	0.31	0.40	0.72	0.40	0.31	0.08
21	Lotan	0.00	0.13	0.00	0.13	0.00	0.00
22	Nautanawa	0.20	0.15	0.54	0.15	0.14	0.05
23	Laxamipur	1.52	0.12	0.23	0.12	0.91	0.12
24	Nichlaul	0.19	0.15	0.25	0.15	0.13	0.05
25	Mithura	0.07	0.05	0.00	0.05	0.00	0.05
26	Siswa	0.08	0.05	0.30	0.05	0.00	0.00
27	Bridgemanganj	0.16	0.18	0.62	0.18	0.16	0.12
28	Maharajganj	0.00	0.06	0.00	0.06	0.00	0.06
29	Ghughuli	0.08	0.06	0.31	0.06	0.08	0.06
30	Pharenda	0.00	0.07	0.00	0.07	0.00	0.07
31	Khadda	0.42	0.11	1.67	0.11	0.21	0.05
32	Nebua Naurangia	0.23	0.11	0.61	0.11	0.08	0.11
33	Bishunpura	0.19	0.20	0.77	0.20	0.06	0.20
Total		7.11	4.94	19.11	4.94	5.66	4.49

Source- Based on District Statistical Magazine- U.P.2001&2011

Ayurvedic system of medicine is becoming more popular in recent times throughout the country. The number of Ayurvedic medical colleges and hospital in various states are providing health care facilities and education to the people. These medicals are locally known as *Vaidyas*. The people of some areas have more faith in this system of treatment as it uses indigenous products easily available at a comparatively smaller cost also does not have any side effects (Choubey, K. 1996). Table no. 4 shows the availability of ayurvedic hospital & Dispensaries, beds and doctors per thousand population in Tarai region of eastern Uttar Pradesh. Maximum number of Ayurvedic H & D available in Haraya Satgharwa, Basi bed Bhanawapur block in 2001 and 2011 while maximum availability of beds is being found in Basi, Bhanawapur and Khadda block in 2001. Maximum number of Ayurvedic Doctor available in Soharatgarh Block in 2001 which is 2.46 per ten thousand population. It is significant to note that Every Ayurvedic services (H & D, Beds, Doctors)

Are decreasing between 2001 and 2011 in many blocks of the study area like Hariharpur Rani, Tulsipur, Pachphedwa, Barhni, Soharatgarh etc.

Table No.5- Block wise No. of Unani Health care services in terms of Per 10,000 Population

Ser. No.	Name of Block	Unani Health Care Services					
		2001 H.D.	2011 H.D.	2001 Bed	2011 Bed	2001 Doctor	2011 Doctor
1	Mihirpurawa	0.00	0.00	1.73	0.00	0.00	0.00
2	Nawabganj	0.00	0.07	0.00	0.00	0.00	0.00
3	Jamunaha	0.07	0.06	0.28	0.22	0.00	0.06
4	Hariharpur Rani	0.00	0.00	0.00	0.00	0.00	0.00
5	Sirsiya	0.00	0.00	0.00	0.00	0.00	0.00
6	Haraiya Satgharva	0.00	0.00	0.00	0.00	0.00	0.00
7	Balrampur	0.00	0.12	0.00	0.00	0.00	0.00
8	Tulsipur	0.06	0.00	0.00	0.00	0.06	0.00
9	Gasari	0.00	0.16	0.00	0.00	0.00	0.00
10	Panchpedawa	0.15	0.00	0.60	0.48	0.07	0.12
11	Khuniyon	0.00	0.00	0.00	0.00	0.00	0.00
12	Itwa	0.00	0.00	0.00	0.00	0.00	0.00
13	Bhanawapur	0.00	0.12	0.00	0.00	0.00	0.00
14	Barhni	0.00	0.00	0.00	0.00	0.00	0.00
15	Soharatgarh	0.12	0.00	0.00	0.00	0.00	0.00
16	Birdpur	0.00	0.00	0.00	0.00	0.00	0.00
17	Naugarh	0.00	0.23	0.00	0.00	0.00	0.00
18	Jogia	0.00	0.19	0.00	0.00	0.00	0.00
19	Uska Bazar	0.00	0.00	0.00	0.00	0.00	0.00
20	Basi	0.00	0.08	0.00	0.00	0.00	0.00
21	Lotan	0.00	0.00	0.00	0.00	0.00	0.00
22	Nautanawa	0.00	0.00	0.00	0.00	0.00	0.00
23	Laxmipur	0.23	0.00	0.00	0.00	0.00	0.00
24	Nichlaul	0.00	0.00	0.00	0.00	0.00	0.00
25	Mithura	0.00	0.00	0.00	0.00	0.00	0.00
26	Siswa	0.00	0.00	0.00	0.00	0.00	0.00
27	Bridgemang anj	0.00	0.00	0.00	0.00	0.00	0.00
28	Maharajanj	0.00	0.00	0.00	0.00	0.00	0.00
29	Ghughuli	0.00	0.00	0.00	0.00	0.00	0.00
30	Pharenda	0.00	0.00	0.00	0.00	0.00	0.00
31	Khadda	0.00	0.00	0.00	0.00	0.00	0.00
32	Nebua Naurangia	0.00	0.00	0.00	0.00	0.00	0.00
33	Bishunpura	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.63	1.01	2.61	0.70	0.14	0.18

Source- Based on District Statistical Magazine U.P.-2001&2011

Table No.6- Block wise No. of Homeopathic Health care services Per 10,000 Population

Ser. No.	Name of Block	Homeopathic Health Care Services Per Ten Thousand Population					
		2001 H.D.	2011 H.D.	2001 Bed	2011 Bed	2001 Doctor	2011 Doctor
1	Mihirpurawa	0.19	0.14	0	0	0.19	0.04
2	Nawabganj	0.09	0.13	0	0	0.00	0.00
3	Jamunaha	0.14	0.06	0	0	0.14	0.17
4	Hariharpur Rani	0.17	0.13	0	0	0.17	0.27
5	Sirsiya	0.15	0.30	0	0	0.15	0.00
6	Haraiya Satgharva	0.00	0.00	0	0	0.00	0.00
7	Balrampur	0.00	0.00	0	0	0.00	0.00
8	Tulsipur	0.12	0.00	0	0	0.12	0.10
9	Gasari	0.26	0.10	0	0	0.26	0.16
10	Panchpedawa	0.30	0.24	0	0	0.15	0.06
11	Khuniyon	0.07	0.06	0	0	0.07	0.06
12	Itwa	0.08	0.13	0	0	0.08	0.06
13	Bhanawapur	0.00	0.00	0	0	0.00	0.00
14	Barhni	0.11	0.27	0	0	0.11	0.09

15	Soharatgarh	0.25	0.19	0	0	0.25	0.10
16	Birdpur	0.33	0.08	0	0	0.33	0.08
17	Naugarh	0.10	0.08	0	0	0.10	0.08
18	Jogia	0.12	0.09	0	0	0.00	0.09
19	Uska Bazar	0.08	0.12	0	0	0.00	0.12
20	Basi	0.10	0.08	0	0	0.10	0.08
21	Lotan	0.00	0.13	0	0	0.00	0.13
22	Nautanawa	0.20	0.10	0	0	0.20	0.10
23	Laxmipur	0.15	0.12	0	0	0.15	0.12
24	Nichlaul	0.13	0.10	0	0	0.06	0.00
25	Mithura	0.07	0.05	0	0	0.07	0.00
26	Siswa	0.23	0.16	0	0	0.23	0.11
27	Bridgemang anj	0.16	0.12	0	0	0.16	0.12
28	Maharajanj	0.07	0.11	0	0	0.07	0.06
29	Ghughuli	0.15	0.13	0	0	0.15	0.06
30	Pharenda	0.09	0.13	0	0	0.09	0.07
31	Khadda	0.42	0.11	0	0	0.42	0.11
32	Nebua Naurangia	0.08	0.06	0	0	0.08	0.06
33	Bishunpura	0.26	0.20	0	0	0.26	0.20
Total		4.65	3.70	0.00	0.00	4.16	2.65

Source- Based on District Statistical Magazine U.P.- 2001 & 2011

Table No. 5. and 6 shows the availability of Unani and Homeopathic hospital and dispensaries, beds and doctors per ten thousand population in the study area. After analysing these tables we can see very less number of availability of these physical facilities in all blocks. These health care services are not very much practiced in the country and study area also as it takes a long time for curing the diseases as it works very slowly. On the other side it is believed that these methods eradicate the diseases from the root. It is notable that total number of Unani and Homeopathic H & D, beds and doctors are very inadequate per ten thousand population in maximum blocks as Sirsya, Harya Satgharva, Tulsipur, Balrampur etc.. Only some block has availability of Unani health care services like Jamunaha, Balrampur, Naugarh and Jogia in 2011.

Table No.7- Block wise No. of Existing Centres and Required Health Centres

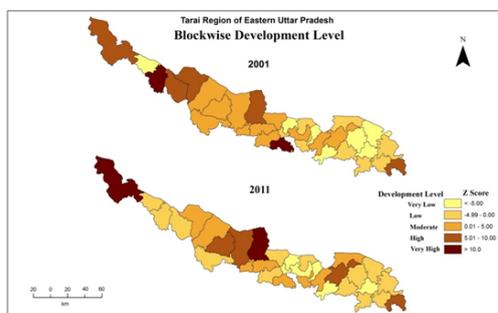
Ser. No.	Name of Block	No. of Existing Community Health centres	No. of Required Health Centres	No. of Existing Primary Health centres	No. of Required Primary Health Centres	No. of Existing Sub centres	No. of Required Sub Centres
1	Mihirpurawa	1	2.35	6	9.41	34	56.48
2	Nawabganj	0	1.25	4	4.99	19	29.91
3	Jamunaha	1	1.50	3	5.98	26	35.88
4	Hariharpur Rani	1	1.25	3	5.01	29	30.04
5	Sirsiya	1	1.41	3	5.63	24	33.77
6	Haraiya Satgharva	1	1.67	4	6.68	28	40.07
7	Balrampur	0	2.08	6	8.30	31	49.82
8	Tulsipur	0	1.73	3	6.93	28	41.58
9	Gasari	1	1.61	2	6.45	24	38.68
10	Panchphedawa	0	1.40	2	5.58	24	33.48
11	Khuniyon	0	1.46	8	5.82	23	34.93
12	Itwa	1	1.31	4	5.23	23	31.37
13	Bhanawapur	0	1.40	5	5.59	23	33.54
14	Barhni	0	0.93	6	3.71	22	22.27
15	Soharatgarh	0	0.86	0	3.44	0	20.64
16	Birdpur	0	1.07	7	4.28	22	25.65
17	Naugarh	0	1.11	8	4.43	23	26.61
18	Jogia	0	0.89	4	3.56	15	21.39
19	Uska Bazar	1	0.71	7	2.85	26	17.07
20	Basi	1	1.03	5	4.13	21	24.79
21	Lotan	0	0.64	2	2.57	3	15.41
22	Nautanawa	0	1.62	3	6.49	20	38.93
23	Laxmipur	1	1.44	4	5.77	20	34.65
24	Nichlaul	0	1.72	3	6.88	20	41.30
25	Mithura	0	1.70	4	6.80	20	40.77

26	Siswa	0	1.58	3	6.33	20	37.99
27	Bridgemanganj	1	1.39	3	5.56	20	33.37
28	Maharajanj	0	1.48	3	5.92	19	35.50
29	Ghughuli	0	1.33	4	5.31	20	31.86
30	Pharenda	0	1.26	3	5.06	20	30.33
31	Khadda	0	1.58	4	6.32	22	37.91
32	Nebua Naurangia	0	1.46	3	5.85	23	35.11
33	Bishunpura	0	1.70	5	6.80	26	40.83
Total		11	45.91	134	183.66		1101.94

Source- Based on District Statistical Magazine U.P.- 2001 & 2011

Table no. 7 shows the block wise existing number and required number of CHCs, PHCs and Sub Centres in respect of their total population which is a set objective of this study also. Maximum number of required of CHC is being seen in Mihirpurwa, Balrampur, and Hariya Satgharwa that is 2.35, 2.06, and 1.67 respectively. Less availability of CHCs being seen in Uska Bazar followed by Sohargarh, Jogia, Barhni block. Talking about PHCs which is main connecting point for the people from rural areas and also being considered as main pillars of health care centre maximum number is required in Mihirpurwa and Balrampur block which is 9.41 and 8.30. Requirement of sub centres in all blocks is high as many blocks is showing inadequate number of sub centres.

Figure No. 2- Blockwise Development Level in Tarai Region of Eastern Uttar Pradesh



Source- Based on District Statistical Magazine-2001 & 2011

Figure no. 2 shows the level of development of health care services between 2001 and 2011. It can be observed that there are significant number of blocks which secured maximum Z from 2001 to 2011 and showing maximum level of development as Mihirpurwa block of Baheraich district Nichloul, Mithura, Marajanj, Jogia, Uska bajar. blocks of Maharajanj district and tulsipur, Gasari, Pachpedwa block of Balrampur district shows positive increase in the level of development between 2001 and 2011. But the remaining many blocks shows decrease in the development level of health care facilities like Jamunaha from Srvasti district, Hariharpur Rani, Sirsiya from Balrampur district, Basi block of Sddharthnagar. So these blocks have not sufficient number of availability of health care services. Thus we can observe that there are many blocks which has inadequate number of health facilities which needed improvement.

Finding and Suggestions

Taking into consideration of above social and health data we can find block wise spatial variation in tarai region of eastern Uttar Pradesh. It is remarkable that many of the blocks has less number and inadequate health care services centres and facilities in terms of area and population as Lotan, Soharatgadh block etc. We can see lacking in the implementation of government norms to provide the facilities of curative health services according to ratio of the population. So the government must take the initiative as soon as possible and take step to provide basic facilities in the blocks where are lacking of the availability of health care services. Within aim of increasing physical infrastructure, it is also very essential to ensure the affordability and accessibility of the health care services also. Looking the picture of health care facilities in past years, we see that there is a trend of only curative health care in the country which is good but emphasis should also be given on preventive health care like improving education and to run awareness programmes about diseases, causes of the diseases and how to prevent from health related problems.

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