Journal of Economic & Social Development, Vol. - XVIII, No. 1 & 2, 2022 ISSN 0973 - 886X

MORBIDITY PROFILE OF PATIENTS ATTENDING PRIMARY HEALTH CARE FACILITIES IN PUNJAB: REFLECTIONS FROM RURAL FIROZEPUR DISTRICT

Gurjeet Kaur* and Sukhwinder Singh**

Knowledge about distribution and pattern of diseases in a region/community is valuable for planning of public health services. In the absence of such information through community based surveys, health facility (PHCs/CHCs) based data provide a good alternative. This study examined the morbidity profile of patients seeking treatment from the PHC/CHCs located in rural Firozepur district (Punjab). Information on age, gender, residence, new or old cases and principal diagnosis of diseases were extracted from the patient registers maintained at the PHCs/CHCs. Descriptive analysis was carried out on 6.13 lakh patients who these PHCs/CHCs for treatment during 2013-15.Of them, more than one-half of the patients were females who sought treatment from PHCs/CHCs. The study found surging number of patients were suffering from the NCDs along with commonly diagnosed diseases/ailments of digestive system, respiratory system, musculo-skelton system, eye & odnexa, skin/sub-cutaneous tissues, etc. visited for treatment. The analysis built a strong case for designing a region-specific health policy for tackling emerging disease, and future requirements in the state.

Keywords: *Morbidity pattern, rural health, primary care, patients, health policy*

INTRODUCTION

Primary health care is the most important component of India's public health care system. It is based upon the community oriented approach having features of practical utility, scientifically sound and socially acceptable (WHO 2008). In fact, all over world, medical and technological advances have made primary health care more relevant as such care is certainly cost effective, universally acceptable and easily accessible to the community (Gupta et al. 2014). After India's independence, a large number of primary health centres (PHCs) were established for catering people's health care needs at the community level. And, these centres have become an integral part of India's overall socio-economic development (Annapoorani 2007). Being holistic in nature, major aim of the PHCs is to provide preventive, curative, promotional and rehabilitative health care services to the people living in rural India (Singh 1991; Banerjee et al. 2004; Gill et al. 2010).

In fact, need for primary health care in India was envisioned by the British regime (GOI 1948). After Independence, creation of basic health infrastructure and manpower in the public sector was given utmost importance (Banerji 1985). Mudalliar Committee (1961) again reiterated to create more PHCs in India. Further, Alma-Atta Declaration (1978) and WHO (2008) reinforced the role of PHCs for providing universal health care (WHO 2008). In subsequent years, Sub-Centres (SCs) at the lowest level in the 1970s and Community Health Centres (CHCs) at higher level in the 1980s were added. It means that the health care needs of rural people are catered through three-

** Ph.D. Scholar, Department of Economics, Punjabi University, Patiala-147002., Email: kgeet77@gmail.com*
***Consultant, 6th Punjab State Finance Commission, Government of Punjab, Chandigarh. Earlier, Professor of Economics, Punjabi University, Patiala-147002, Email: sohi42pbi@yahoo.com*

tier structure: a SC for 3000-5000 people; a PHC for 20000-30000 people; and a CHC as a referral unit for 100,000-150,000people (see Appendix-A). In late 1990s, Government also laid down the norms for appointing medical staff and adequate infrastructural facilities at each PHC/CHC; which are supposed to provide a wide range of curative, preventive and promotional cares to rural people (GOI 2001).

POOR UTILIZATION OF PHCS/CHCS

In India, although a large number of PHCs and CHCs were established, however, performance of these centres, in the numerous contexts, showed a very dismal picture. For instance, many research studies (Singh 1991; Kumar 2011; Das and Hammer 2015; Kaur 2017; Bala and Kumar 2016) found a poor utilization of PHCs/CHCs by the rural patients. In fact, the poor utilization of PHC/CHCs was largely due to the shortage of essential medicines, absence of doctors/para-medics, poor infrastructural facilities, and lack of awareness among the patients. It is indeed true that pattern of diseases has also changed at the grassroots level, i.e., rural areas (GOI 1999).

On the other side, with the rising real income, education level, better medicines, diagnostic techniques, etc., demand for better health care has also gained importance in the country-side also (Annapoorani 2007). In addition, health consciousness among the rural people has also increased and it has created unprecedented demand for better health care services. For instance, a study done Das and Hammer (2015) revealed that in rural Rajasthan - a low-income and low density populated state of India –a patient visited the doctor about six-times per year for getting health care compared to the USA where a citizen made just 3.4 visits per year to the doctor.

CHANGING PATTERN OF DISEASE AT PHCS/CHCS

Many research studies (Singh 1991; Kumar 2011; Iyengar and Dholakia 2012; Das and Hammer 2015; Bala and Kumar 2016; Kaur 2017) highlighted that a wide spectrum of patients were found to be attending PHC/CHC and sought health care treatment available in these institutions. But, none of these studies pointed out: (i) for what type of patients were visiting the PHCs/CHCs; and (ii) what type of disease/s was emerged among the people catered by these centres. There is urgent need to prepare patients' profile and magnitude of their health problems for understanding the changes in the morbidity pattern at the grass-root level.

Research done by Gupta et al. (2014) found that out of 68,818 episodes of illnesses treated at PHCs in rural Pondicherry, adult patients (>15 years) constituted nearly 84 percent of total episodes and the rest of them were the children. The most common diseases among the patients visiting the PHCs were related to respiratory disorders (26.2 percent), followed by musculoskeletal disorders (26.0 percent), circulatory disorders (10.9 percent), digestive disorders (9.5 percent) and external causes of morbidity (7.6 percent).

Swain et al. (2017) also examined emerging pattern of diseases from the records of 2249 patients attending primary care settings in Bhubaneswar District (Odisha). Out of total patients recorded, 1241 (55.2 percent) were males with mean age of 41.8 years; whereas 1008 (44.8 percent) were females with mean age of 38.2 years. Around 151 patients (6.7 percent) had two or more symptoms/conditions of diseases. The most common ailments among the males were fever (11.4 percent), heart burn (8.1 percent), and vertigo or dizziness (3.6 percent). A same pattern was observed among the females. Further, respiratory (17.0 percent) and cardiovascular (10.2 percent) problems were the most common ailments among the males and females.

NSSO survey data also showed that incidence of ailing persons in Punjab rose very sharply (Singh 2009). For instance, growth rate of ailing persons in the rural areas was doubled: from 3.01 percent per year during 1973-74 to 1995-96 to 8.13 percent per year during 1995-96 to 2004-05. Though, yearly growth rate across the urban ailing persons decelerated: from 6.16 percent to 4.76 percent during the same time periods. During 2004-05, overall incidence of diseases in Punjab was found to be 127 persons per thousand people. Incidence of morbidity was much more in the rural Punjab (136 per thousand people) than that of the urban Punjab (107 per thousand people). Further, incidence of morbidity was very higher among females both in the rural areas (160 per thousand females) and urban areas (115 per thousand females) of state (Singh 2016; Kaur 2017).

NSSO data of 2004-05 also highlighted about the changing pattern of diseases in Punjab. The data revealed that respiratory/ENT diseases, unknown fevers, cardiovascular diseases, gastro-intestinal infections, disorder of joints and bones, and bronchial asthma were the six top ailments in Punjab. These diseases together constituted 54.27 percent share of total ailments (Singh 2009; Singh 2016). The changing pattern of diseases was also supported by the patients' data derived from the registered medical institutions in Punjab (Singh 2016). These health statistics clearly revealed changing pattern of diseases in Punjab – favouring non-communicable diseases and man-made accidents/injuries.

Along with rising incidence of diseases and changing pattern of diseases, health seeking behaviour has also been altered drastically at the grassroots level (Uuteia and Tuomilehlo 1992), which must be known to the policy makers. In the light of these observations, there is urgent need to examine the emerging pattern of diseases at the community or grassroots level. In the absence of such knowledge through the community based surveys, the facility based data (PHCs/CHCs) provides a good alternative. In addition, such knowledge (about emerging pattern of diseases) will help the state authority in providing effective and timely treatment at the doorsteps of community. The present study makes a modest attempt to examine changing pattern of diseases among the patients seeking health care from the rurally located PHC/CHCs. The significance of study, therefore, is obvious.

DATA BASE, SAMPLING AND METHODOLOGY OF STUDY

The study has chosen rural Firozepur district as a representative of rural Punjab. Presently, this district bordering with Pakistan is one of the highly backward districts of Punjab (Singh et al. 2004). Of 10.03 lakh population in 2011, 6.92 lakh people (67.63 percent) were living in rural areas. Rural sex ratio was 907 females per 1000 males. 48.08 percent of rural population belonged to the SCs. Rural work participation rate was just 30.01 percent in 2011. Amongst the total rural workers, 70.37 percent workers were employed in the agricultural either as the cultivators or agricultural labourers. Cropping intensity was 193 percent in 2014-15 and wheat-paddy crops covered more than 91 percent of gross cropped area of district. Its rural literacy was just 65.06 percent (71.27 percent among males and 58.28 percent among females) in 2011. At current prices, per capita income of Firozepur district was Rs. 30350 (Ranked 14th out of 20 districts) during 2004-05, Rs. 62529 (Ranked 18th out of 20 districts) during 2010-11 and Rs. 86593 (Ranked 19th out of 22 districts) during 2014-15 (GOP 2016). Its per capita income was not only low, but also went down – indicating the backwardness of the district.

The study is primarily based upon the unpublished data collected from the office records of all 17 PHCs and 4 CHCs located in Firozepur district (Punjab) during the months of August 2016 to December 2016. The data pertained to three calendar years, namely, 2013, 2014 and 2015 were collected. The survey revealed that each PHC/CHC maintained a record of all patients (outdoor

patients, indoor patients and deaths) who visited these centres for seeking treatment of diseases/ illnesses. The details of patient (age, sex, residence, new/old patient, etc.), diagnosis of disease/s and treatment provided by the physicians were extracted from the morbidity registers available at each PHC/CHC. And, these diseases were categorized as per International Classification of Diseases (ICD) adopted by the Department of Health and Family Welfare, Punjab. Further, patients aged less than or up to 14 years were classified as children and the rest as the adults. And, simple statistical tools such as average, proportions/ratios, etc. were worked out to portray the significant trends.

PATIENTS ATTENDED PHCS/CHCS FOR TREATMENT

Total number of patients attended PHCs/CHCs for getting treatment has been presented in Table 1. An assessment of such data of patients revealed that 6.13 lakh patients visited these PHCs/CHCs for seeking treatment during 2013-15. Over the time period, total number of patients attending these centres showed a rising trend. For instance, overall 1.81 lakh patients in 2013 visited these PHCs/ CHCs for treatment. Their number rose to 232,404 patients in 2014 and declined to 199,891 patients in 2015. Further, 93.61 percent of these patients (169,157 patients) during 2013 sought treatment as the outdoor patients and just 6.39 percent patients (11,551 patients) got treatment as indoor patients. Similarly, in 2014, 95.52 percent of total patients (221,992 patients) sought treatment as outdoor patients and just 4.48 percent patients (10,412 patients) got treatment as indoor patients. In 2015, 94.75 percent of patients (189,405 patients) visited these centres for treatment as outdoor patients and 5.25 percent patients (10,486 patients) for getting treatment as indoor patients. Further, number of deaths occurred in these PHCs/CHCs were 51 deaths in 2013, 137 deaths in 2014 and 97 deaths in 2015. Overall, number of indoor patients formed 5.59 percent and outdoor patients were (94.71 percent) during 2013-15 and deaths just formed 0.88 percent of indoor patients during these years.

Table 1: Distribution of Patients Sought Treatment from PHCs/CHCs in Rural Firozepur District, 2013-15

Year	Number of Patients Attended PHCs/CHCs and Deaths				Deaths as %age of Indoor Patients
	Outdoor	Indoor	Total	Deaths	
2013	169,157	11,551	180,708	51	0.44
	93.61	6.39	100.00	17.89	
2014	221,992	10,412	232,404	137	1.32
	95.52	4.48	100.00	48.07	
2015	189,405	10,486	199,891	97	0.93
	94.75	5.25	100.00	34.04	
Total	580,554	32,449	613,003	285	0.88
	94.71	5.29	100.00	100.00	

Source: Source: Office Records of all PHCs/CHCs of Firozepur District Assessed during Field Survey.

Regarding the gender and age composition of these patients, the data revealed (Table 2) that amongst the out-patients in 2013, 44.30 percent patients were males and 55.70 percent were females. Individually, adult male patients constituted 38.70 percent, adult female patients 51.02 percent, male child patients 5.60 percent and female child patients 4.68 percent. Similarly, amongst the outdoor patients in 2014, 46.04 percent patients were males and 54.96 percent were females. The adult male patients consisted of 37.47 percent, adult female patients 44.81 percent, male child patients 8.57 percent and female child patients 9.15 percent in 2014. In 2015, overall the proportion of male patients was 48.22 percent and females 51.78 percent. In 2015, proportion of adult male patients was 36.38 percent, adult female patients 38.08 percent, male child patients 11.84 percent and female child patients 13.70 percent. The data made it clear that amongst the total out-door patients, number of female patients were more than that of male patients although the females generally constituted a low share in total rural population of Firozepur district.

Table 2: Percentage Distribution of Outdoor and Indoor Patients Treated in Rural Firozepur by Gender, 2013-2015

Year	Percentage Distribution Patients Treated by Type of Patients and Gender						
	Adult >14 years		Child ≤14 Years		Total		G. Total
	Male	Female	Male	Female	Male	Female	
Out-Patients							
2013	38.70	51.02	5.60	4.68	44.30	55.70	100.00
2014	37.47	44.81	8.57	9.15	46.04	53.95	100.00
2015	36.38	38.08	11.84	13.70	48.22	51.78	100.00
Total	37.52	44.64	8.67	9.18	46.19	53.81	100.00
In-Patients							
2013	30.47	53.40	8.48	7.66	38.95	61.05	100.00
2014	30.22	54.66	7.76	7.36	37.98	62.02	100.00
2015	29.47	55.30	7.81	7.42	37.28	62.72	100.00
Total	30.05	54.45	8.02	7.48	38.07	61.93	100.00

Source: Office Records of all PHCs/CHCs of Firozepur District Assessed during Field Survey.

In the case indoor patients in 2013, 38.95 percent patients were males and 61.05 percent were females. The adult male patients cornered 30.47 percent, adult female patients 53.40 percent, male child patients 8.48 percent and female child patients 7.66 percent. Similarly, amongst indoor patients in 2014, 37.98 percent patients were males and 62.02 percent were females. The adult male patients constituted 30.22 percent, adult female patients 54.66 percent, male child patients 7.76 percent and female child patients 7.36 percent in 2014. In 2015, male patients constituted 37.28 percent and females 62.72 percent. In 2015, the proportion of adult male patients was 29.27 percent, adult female patients 55.30 percent, male child patients 7.81 percent and female child patients 7.42 percent. The data analysis showed that among indoor patients, number of female patients were more than that of

male patients compared to although the females constituted a low share in total rural population of Firozepur district.

MORBIDITY PATTERN OF PATIENTS ATTENDING PHCS/CHCS

Before studying the morbidity profile of patients attending these PHCs/CHCs, it pertinent to add here that knowledge about the morbidity will help the public health planners (i) in providing effective and timely treatment to the community and (ii) in enhancing the quality of health care services (Gupta et al. 2014). For building a correct picture of morbidity pattern, the study, instead of analysis each year's proportions, added total number of patients attending the PHCs/CHCs for seeking treatment during 2013-2015 together and then proportion out of 613,003 total patients by broad category of diseases were worked out (Table 3).

The data in Table 3 highlighted that the most common diseases among the patients were of the digestive system (101,230 patients; 16.51 percent), followed by diseases of respiratory system (69,532 patients; 11.34 percent), disease of eyes and odnexa (67,941 patients; 11.08 percent), diseases of musculo-skelton system & connective tissues (39,390 patients; 6.43 percent), diseases of skin and sub-cutaneous tissues (39,405 patients; 6.43 percent), diseases of circulatory system (38,546 patients; 6.35 percent), infective and parasitic diseases (35,546 patients; 5.80 percent), congenital malformation/deformation and chromosomal abnormalities (32,290 patients; 5.27 percent), diseases related to pregnancy, pre-natal period, child birth and puerperium (26,829 patients; 4.38 percent), and blood and blood forming diseases (24,585 patients; 4.01 percent).

Further, many types of diseases seems to be less important, as the nutritional and metabolic diseases cornered just 3.81 percent (23,353 patients), followed by man-made illness such as injury poisoning and consequents of external injuries (16,652 patients; 2.72 percent), mental disorders (15,924 patients; 2.60 percent), external causes of morbidity and mortality (15,908 patients; 2.60 percent), diseases of ears and mastoid (9,994 patients; 1.63 percent), diseases of genito-urinary system (9,138 patients; 1.49 percent), disease related to abnormal laboratory and clinical findings (6,940 patients; 1.13 percent). Besides, a few disease-group cornered less than one percent share of total patients such as the diseases of nervous system (1,685 patients; 0.27 percent) and neoplasm (1,336 patients; 0.22 percent). Interestingly, unspecified diseases under the category of others cornered 5.94 percent share (36,382 patients).

Further, many research studies (Uuteia and Tuomilehlo 1992; Gupta et al. 2014; Singh 2015; Kaur 2017) carried out in India and abroad also showed changing pattern of diseases, whereas non-communicable diseases (NCDs) such as diabetes, hypertension, obesity, heart attacks, cancers, joint pains, etc has burdened the community more (GOI 2017) along with wide spread presence of communicable and mal-nutrition related diseases in Punjab (Singh 2015; Kaur 2017). An attempt has also been made to count the number of NCD patients who sought treatment from these PHCs/CHCs during 2013-15. The data in Table 6 revealed that in 2013, 33,700 NCD patients were found seeking treatment by visiting these centres; of them, 58.72 percent were males and 41.28 percent females. Their number decreased to 27,455 patients in 2014; of them 57.96 percent were males and 42.04 percent females. In 2015, just 7329 NCD patients visited these PHCs/CHCs; of them 67.31 percent patients were males and 32.69 percent females. Overall, total number of NCD patients for three years (2013-2015) was 68,484 patients; of which 59.34 percent were males and 40.66 percent females. It highlighted that more men compared to women in the rural areas of Firozepur district were found to be sought treatment in the case of NCDs.

Table 3: Distribution of Total Patients (Outdoor and Indoor) Seeking Care from PHCs/CHCs Located in Rural Firozepur District by Broader Category of Diseases

Sr. No.	Broad Category of Diseases	2013	2014	2015	Total
1	Infective and Parasitic Disease	7954	14189	13403	35546
	%	4.40	6.11	6.71	5.80
2	Neoplasm	103	575	658	1336
	%	0.06	0.25	0.33	0.22
3	Blood and Blood forming Disease	6666	10077	7842	24585
	%	3.69	4.34	3.92	4.01
4	Nutritional and Metabolic Disease	5093	9448	8812	23353
	%	2.82	4.07	4.41	3.81
5	Mental Disorders	3313	7186	5425	15924
	%	1.83	3.09	2.71	2.60
6	Nervous System	386	678	621	1685
	%	0.21	0.29	0.31	0.27
7	Eye and Odnexa	18465	25196	24280	67941
	%	10.22	10.84	12.15	11.08
8	Ear and Mastoid Process	2501	3763	3730	9994
	%	1.38	1.62	1.87	1.63
9	Circulatory System	9603	14650	14690	38943
	%	5.31	6.30	7.35	6.35
10	Respiratory System	16195	28099	25238	69532
	%	8.96	12.09	12.63	11.34
11	Digestive System	30445	39590	31195	101,230
	%	16.85	17.03	15.61	16.51
12	Skin and Sub-cutaneous Tissue	10384	17105	11916	39405
	%	5.75	7.36	5.96	6.43
13	Musculo-skelton System and Connective Tissue	28417	5865	5108	39390
	%	15.73	2.52	2.56	6.43
14	Genito Urinary System	2462	3821	2855	9138
	%	1.36	1.64	1.43	1.49
15	Pregnancy, Prenatal Period, Child Birth and Puerperium	7608	9573	9648	26829
	%	4.21	4.12	4.83	4.38
16	Congenital Malformation Deformation Chromosomal Abnormalities	8338	11730	12222	32290
	%	4.61	5.05	6.11	5.27
17	Abnormal Laboratory and Clinical finding	3026	3010	904	6940
	%	1.67	1.30	0.45	1.13
18	Injury Poisoning and Consequents of External Injuries	5420	6502	4730	16652
	%	3.00	2.80	2.37	2.72
19	External Cause of Morbidity and Mortality	5716	5184	5008	15908
	%	3.16	2.23	2.51	2.60
20	Others (unspecified)	8613	16163	11606	36382
	%	4.77	6.95	5.81	5.94
Total		180708	232404	199891	613003
%		100.00	100.00	100.00	100.00

Source: Office Records of all PHCs/CHCs of Firozepur District Assessed during Field Survey.

Table 4: Distribution of NCD Patients Seeking Treatment from PHCs/CHCs Located in Rural Firozepur District by Gender, 2013-2015

Year	Number of Non-Communicable Disease Patients		
	Male	Female	Total
2013	19790	13910	33700
%	58.72	41.28	100.00
2014	15912	11543	27455
%	57.96	42.04	100.00
2015*	4933	2396	7329
%	67.31	32.69	100.00
Total for 2013-15	40635	27849	68484
%	59.34	40.66	100.00

*Few months' data were available for 2015.

Source: Office Records of all PHCs/CHCs of Firozepur District Assessed during Field Survey.

Regarding the broad pattern non-communicable diseases among the patients seeking care from given PHCs/CHCs, an assessment of the data in Table 5 showed that during the last three years (2013-15), cardio-vascular diseases emerged as the most important category of non-communicable diseases as such diseases cornered 37.63 percent (25,770 patients) share of total non-communicable disease patients (68484 patients), followed by patients of lung related diseases (15,977 patients; 23.33 percent), patients of diabetes mellitus (9872 patients; 14.42 percent), patients of accidental injuries (9062 patients; 13.23 percent), patients of psychiatric disorders (4277 patients; 6.25 percent), patients of neurological disorders (2799 patients; 4.09 percent), other diseases (607 patients; 0.78 percent), patients of malignant & benign cancer (120 patients; 0.18 percent) and snake bites (0.11 percent).

Comparing across the males and females, cardio-vascular diseases were most significant non-communicable diseases as this disease cornered again a highest proportion of patients (34.03 percent in case of males and 42.88 percent in case of females), followed by the lungs diseases (20.87 percent in the case of males and 26.91 percent in the case of females) and diabetes mellitus (12.93 percent in the case of males and 16.58 percent in the case of females. However, more males were found to suffer from accidents as 84.36 percent of male patients compared to just 15.64 percent female patients were victims of accidental injuries. On the other hand, female patients were dominated male patients in the case cancer disease as more than one-half of cancer suffering patients (53.33 percent) were females compared to 46.67 percent males. The data revealed that the diseases of heart, lungs and diabetes were the most prominent non-communicable diseases that had emerged in the rural areas of Firozepur district.

MAIN CONCLUSIONS AND PUBLIC POLICY SUGGESTIONS

The study, in brief, highlighted that a large number of patients were found to be getting/seeking treatment from the PHCs/CHCs located in the rural Firozepur district. The commonly diagnosed diseases at these centres were belonged to eight major diseases groups such as (i) digestive system; (ii) respiratory system; (iii) eyes and odnexa; (iv) musculo-skelton system & connective tissues; (v) skin and sub-cutaneous tissues; (vi) circulatory system; (vii) infective and parasitic diseases; and

(viii) congenital malformation/deformation and chromosomal abnormalities. Together, these groups of diseases counted more than 70 percent of total patients during 2013-15. Further, although the neoplasm (cancer) and man-made diseases (injuries, poisoning and external causes) had very small number of patients as compared to other diseases, yet impacts of such diseases in ruining family/ household finances and lives are more serious in nature as compared to treatment seeking of other types of diseases.

Table 5: Distribution of NCD Patients Seeking Treatment from PHCs/CHCs Located in Rural Firozepur District by Type of Disease and Gender, 2013-2015

Type of Disease		2013-15*			Percent Share by Gender		
M		F	T	M	F	T	
1	Cardio Vascular Diseases	13828	11942	25770	53.66	43.34	100.00
	%	34.03	42.88	37.63			
2	Lungs Disease	8482	7495	15977	53.09	46.91	100.00
	%	20.87	26.91	23.33			
3	Diabetes Mellitus	5255	4617	9872	53.23	46.77	100.00
	%	12.93	16.58	14.42			
4	Accidental Injuries	7645	1417	9062	84.36	15.64	100.00
	%	18.81	5.09	13.23			
5	Psychiatric Disorder	2897	1380	4277	67.73	32.27	100.00
	%	7.13	4.96	6.25			
6	Neurological Disorders	1989	810	2799	71.06	28.94	100.00
	%	4.89	2.91	4.09			
7	Cancer (Malignant & Benign)	56	64	120	46.67	53.33	100.00
	%	0.14	0.23	0.18			
8	Others	483	124	607	79.57	20.43	100.00
	%	1.19	0.45	0.89			
	Total	40635	27849	68484	59.34	40.66	100.00
	%	100.00	100.00	100.00			

*Few months' data were available for 2015.

Source: Office Records of all PHCs/CHCs of Firozepur District Assessed during Field Survey.

Further, the study pointed out that both among the inpatients and outpatients, more than one-half of patients were females who visited PHCs/CHCs for treatment. In the case of outdoor patients, adult male patients constituted 37.52 percent, adult female patients 44.64 percent, male children 8.67 percent and female children 9.18 percent. In the case indoor patients, adult male patients cornered 30.05 percent, adult female patients 54.45 percent, male children 8.02 percent and female children 7.48 percent. Regarding the emergence of NCDs, cardio-vascular diseases emerged as major disease, followed by lung diseases, diabetes mellitus, accidental injuries, psychiatric disorders, and neurological disorders. Surging number of these diseases is a major concern of future health care strategy.

The study clearly found a changing pattern of diseases in the rural areas where surging NCDs and man-made diseases along with re-emergence of communicable and infectious diseases has gained weightage. Treatment of these diseases, in the absence of adequate public primary health care facilities, is putting an additional financial burden on the poor rural people. Adequate measures must be taken to raise the quality of rural health infrastructure facilities in rural set-up. Moreover, there is need to bring a reasonable efficiency in the working of PHCs/CHCs. The state must take steps for raising the awareness of people related to the prevention of diseases than that of cure.

There is urgent need to have a state-specific policy for health care planning and future requirements in the state. In fact, such a health care policy should take a holistic view of the health care problems of rural people, identify the basic necessities and priorities of rural set-up, and ensure optimal utilization of the allocated resources by removing constraints of the rural health care system. Last but not the least, rising costs of treatment, both in the public and private sectors, warranted for a viable health insurance policy. There is a dire need to enhance public investments in public health sector and health investments must be biased towards the under-privileged people and areas.

Appendix-A

Three-Tier Structure of Primary Health Care

The three-tier institutional structure of primary health care is as under:

1. **Sub Centre (SC):** It is the first most peripheral contact point between the primary health care system and the community. It is manned with at least one auxiliary nurse midwife (ANM) / health worker female (HW-F) and one health worker male (HW-M). They are assigned the tasks relating to the interpersonal communication in order to bring about behavioural change and provide services in relation to maternal and child health, family welfare, nutrition, immunization, diarrhoea control and control of communicable diseases programmes. In Punjab, 2950 Sub Centres were functioning as on 31st March, 2018.
2. **Primary Health Centre (PHC):** It is the first contact point between village community and the medical officer. A typical PHC having 4-6 beds is expected to cater the health care needs (indoor and outdoor) of 20-30 thousand people. The PHCs are envisaged to provide an integrated curative and preventive health care with emphasis on promotive aspects. Moreover, each PHC will act as a referral unit for 5-6 SCs. There were 432 PHCs were working on March 31, 2018.
3. **Community Health Centre (CHC):** Each CHC having 30 beds and manned by four specialist doctors (medicine, surgery, paediatrics and gynaecology) supported by 21 para-medical and other staff. It is endowed with one OT, X-ray, labour room and laboratory facilities. Besides providing general and specialized health care, it is also acting as referral unit (usually for 4-5 PHCs). On March 31, 2018, there were 151 CHCs working in Punjab.

   In nutshell, a PHC/CHC, apart from acting as a referral centre, has to provide three-fold functions: (i) catering the health care needs of rural people at the doorsteps; (ii) making available modern medicine and specialists' services accessible to the people; and (iii) preventing the overcrowding of patients at tehsil/district hospitals.

REFERENCES

Alma-Ata Declaration (1978), International Conference on Primary Health Care, Alma-Ata, USSR, September, Available from http://www.who.int/publications/almaata_declaration_en.pdf (Accessed on March 11, 2018).

Annapoorani, R. (2007), 'Use of Primary Health Care Services among Rural Population', in Rout, H. S. and P. K. Panda (Eds.), Health Economics in India, New Century Publications. New Delhi.

Bala, Anju and Kumar, Kush (2016), State, Market and Utilization Pattern of Health Services: A Socio-Economic Analysis of Rural Urban Differences, Global Vision Publishing House, New Delhi.

Banerjee, Abhijit, Deaton, Angus, and Duflo, Esther (2004), 'Wealth, Health and Health Services in Rural Rajasthan', Health, Health Care and Economic Development, Vol. 94 (2), pp. 326-330.

Banerji, D. (1985), Health and Family Planning Services in India: An Epidemiological, Socio-Cultural and Political Analysis and A Perspective, Lok Pakash, New Delhi.

Das, Jishnu and Hammer, Jeffrey (2015), 'Quality of Primary Care in Low- Income Countries: Facts and Economics', Annual Review of Economics, Vol. 6, pp. 525-553.

Gill, Sucha Singh, Singh, Sukhwinder, and Brar, Jaswinder Singh (2010), Globalization and Indian State: Education, Health and Agricultural Extension Services in Punjab, Aakar Books, Delhi.

GOI (1946), Report of the Health Survey and Development Committee, (Bhore Committe Report), Vol. II, Manager of Publications, New Delhi.

GOI (1948), Report of National Planning Committee: Sub-Committee on National Health, Government of India.

GOI (1961), Report of the Health Survey and Planning Committee, (Mudaliar Committee Report), Vol. I, Ministry of Health, Government of India.

GOI (1999), Evaluation Study on Functioning of Community Health Centres (CHCs), Programme Evaluation Organization (PEO), Planning Commission, Government of India, New Delhi.

GOI (2001), Evaluation Study on Functioning of Primary Health Centres (PHCs) Assisted Under Social Safety Net Programme (SSNP), Programme Evaluation Organization, Planning Commission, Government of India, New Delhi.

GOP (2016), Punjab-at-a-Glance (District Wise), Economic Adviser to the Government of Punjab, Chandigarh.

GOI (2017), India: Health of the Nation's States - The India State–level Disease Burden Initiative, Ministry of Health and Family Welfare, Government of India, New Delhi.

Gupta, Arti, Chellaiyan,Vinoth, Lohiya, Ayush, S.A., Rizwan, Upadhyay, Ravi P., C. Palanival (2014), Morbidity Profile of Out-Patients Attending a Primary Health Centre in Rural Pondicherry, South India, National Journal of Community Medicine, Vol. 5 (4). pp. 424-427.

Iyengar, Shreekant and Dholakia, Ravindrra H. (2012), Access of the Rural Poor to Primary Health Care in India, Indian Institute of Management, Ahmedabad.

Kaur, Gurjeet (2017), An Evaluation of Primary Health Care Facilities in Rural Punjab: A study of Firozepur District, M. Phil. Thesis, Department of Economics, Punjabi University, Patiala.

Kumar, Kush (2011), State, Market and Utilization Pattern of Health Services: A Study of Punjab, Ph. D. Thesis, Department of Economics, Punjabi University, Patiala.

Rajeshwari (1996), 'Gender Bias in Utilization of Health Care Facilities in Rural Haryana', Economic and Political Weekly. Vol. 31 (8), pp. 489-494.

Raman, A. Venkat, and Bjorkman, James Warner (2009), Public Private Partnership in Health Care in India: Lessons for Developing Countries, Routledge, London.

Singh, Sukhwinder (1991), 'Dynamics of Health Care Expenditure in India: Some Policy Implications', in Nagpal, C.S. and Mahajan, R. K. (Eds.), Economic Policies, Anmol Publications, New Delhi. pp. 507-28.

Singh, Baldev, Singh, Sukhwinder and Brar, Jaswinder Singh (2004), Border Risk and Unemployment Dynamics, Publication Bureau. Punjabi University, Patiala.

Swain, Subhashisa, Pati, Sandipana and Pati, Sanghamitra (2017), 'A Chart Review of Morbidity Patterns among Adult Patients Attending Primary Care Setting in Odisha: An International Classification of Primary Care Experience', Journal of Family Medicine and Primary Care, Vol. 6 (2), pp. 316–322.

Uutela, A. and Tuomilehto, J. (1992), 'Changes in Disease Patterns and Related Social Trends', Social Science & Medicine, Vol. 35 (4), pp. 389-99.

WHO (2008), World Health Report - Primary Health Care: Now More than Ever, World Health Organisation. Geneva.