UGC FUNDED MAJOR RESEARCH PROJECT

REPORT

Status of Public Health Care Services in Punjab: A Case Study of Punjab Health Systems Corporation (PHSC)

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2020

PREFACE

Health is a basic component of human development and hence determines society's well-being. Higher level of human development enables a country to build up a sound health system which further enhances labour productivity and contributes to material progress. The analysis of the status of health services in a country like India, which is the second largest populous country of the world, is very important to improve the well-being of the people. The health care services in India are marred by class inequalities, denial of opportunities to disadvantaged groups, low accessibility to lower strata and the poor quality services in the public sector hospitals. As per Human Development Report, 2019 out of 189 countries, India was ranked 129 with Human Development Index of 0.647.

Further, the status of health in a country largely depends on the resources allocated to the health sector. It has been noticed that countries with higher level of health spending achieve better health outcomes as compared to the countries with low level of spending. As per WHO statistics, 2017 the health expenditure accounted for only 3.5 per cent of GDP in India which is even less than some low income countries. Further, out of the total health expenditure in India the private health expenditure forms a very high proportion. The health sector in India falls in the concurrent list due to which both centre and the state governments provide funding for the public health sector. After the implementation of new economic policy in 1991 the rising cost of health services due to privatization of health services under the garb of reforms has become a major issue of debate at the national and the state level.

In the implementation of these reforms, the Punjab government established Punjab Health Systems Corporation (PHSC) in 1996 for the improvement of health services in terms of access as well as quality with the help of World Bank funding. However, many researchers have pointed out that the public sector health services in Punjab have further deteriorated even after the formation of PHSC. So, the present study was planned to enquire this issue by collecting data from various stakeholders by taking a sample of thirty hospitals working under the PHSC in Punjab during the period September, 2016 to October, 2017. These thirty hospitals were selected by taking a sample of six district hospitals, twelve each from sub-divisional hospitals and community health centers from the six districts of Punjab. Further, a sample of 300 patients and 95 doctors was taken to record their views in regard to the delivery of health services provided by the PHSC institutions. The findings of the study based on secondary and primary data will go a long way for the development of a long term health policy for Punjab to improve the access and quality of public health services.

This work could not have been completed without the active support of our employer Guru Nanak Dev University, Amritsar which provided us whole-hearted support for the completion of this study. Our special thanks go to Mr. Paramveer Singh, Project Fellow who worked hard for the collection of data from the patients and the working doctors in the sampled hospitals. We are also thankful to the University Grants Commission, New Delhi for sanctioning grant of Rs. 10,22,000/- vide its office letter no. F.No. 5-251/2014(HRP) dated 17/09/2015 out of which

only Rs. 6,02,000/- was disbursed as first installment. In spite of the fact that we could not get second installment we succeeded to complete this project. We are thankful to all the doctors, the patients and the staff working in these hospitals for extending their support in various capacities for the completion of this project. We are thankful to Mr. Rakesh Mahajan, Senior Research Fellow, UGC who worked hard and helped us for the preparation of this manuscript. We are thankful to the Grants Section of Guru Nanak Dev University for their cooperation in the completion of the project. Last but not the least, we acknowledge the support of our colleagues and friends who extended their whole hearted support during the completion of this research work.

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CHAPTER I

INTRODUCTION

Good health is considered to be a pre - requisite for the socio - economic development of any nation. Health is a basic component of human development, and hence, determines society's well-being. Through human development, sound health enhances labour productivity and contributes to material progress. It is a means to empower the deprived sections of society and thus, had emerged as an important element in the strategy for poverty alleviation (Rao and Choudhry, 2008). Health has been identified as a single sector in which the impact of public finance and public policy is of particular importance (WDR, 1993). The government's active role either in the form of direct provision of health care services or regulation of the health care services by the private sector is essential for ensuring equitable access particularly to the poor (Walsh, 1997). Moreover, public health care interventions are required in order to improve health and quality of life through prevention and treatment of disease and other physical and mental health conditions through surveillance of cases and promotion of healthy behavior. However, the working of current health care system is being questioned not only in developing countries (including India) but also in developed nations like USA, UK and others (Bose, 2012). As far as India is concerned, the health care services are marred by class inequalities, denial of opportunities to disadvantaged groups, low accessibility to lower strata and rampant corruption. As a result, the health care outcomes in India are below the levels that might be expected even at India's specific level of development (Singh, 2011). All this necessitates the active role of government in the provision of health services, particularly to the poor (Ghuman and Mehta, 2005).

This chapter has been divided into three sections. Section I presents discussion related to international scenario in health sector. Section II discusses the facts related with national scenario. And lastly, section III presents the main highlights of Situation Analyses Report, 2017 and National Health Policy, 2017.

Section I

1.1 International Health Scenario

The health care provision varies around the world. Almost all developed and wealthy nations provide universal health care services except the USA. The issue of health is challenging due to the shortage of required funding as well as various social, cultural, political and economic

conditions. While looking at the pattern of health care around the world, the WHO (2008) found five common shortcomings of health care delivery which includes the following: (1) **Inverse care:** It means that people with the most means – whose needs for health care are often less – consume the most care, whereas those with the least means and greatest health problems consume the least. In other words, public spending on health services most often benefits the rich more than the poor in high- and low-income countries alike; (2) **Impoverishing care :** It means that wherever people lack social protection and payment for care is largely out-of-pocket at the point of service, they can be confronted with catastrophic expenses. Over 100 million people annually fall into poverty because they have to pay for health care; (3) **Fragmented and fragmenting care:** It refers to the excessive specialization of health-care providers and the narrow focus of many disease control programs discourage a holistic approach to the individuals and the families they deal with and do not appreciate the need for continuity in care. Health services for poor and marginalized groups are often highly fragmented and severely under-resourced, while development aid often adds to the fragmentation ; (4) **Unsafe care:** It refers to the poor system design that is unable to ensure safety and hygiene standards leads to high rates of hospital-acquired infections, along with medication errors and other avoidable adverse effects that are an underestimated cause of death and ill-health, and (5) **Misdirected care:** It means that the resource allocation clusters around curative services at great cost, neglecting the potential of primary prevention and health promotion to prevent up to 70 per cent of the disease burden.

Ashtekar (1999) examined the health care measures of Chinese government. The study found core principles of Chinese healthcare reform plan which are applicable to all countries having same set of problems. These include “priority for the problems of the masses, prevention first, making the most of traditional and local resources, combining these with modern medicines and mobilisation of community for solving health problems”. The Chinese rulers put a lot of emphasis on their native healing system at levels of health care. After the major reforms the biggest challenge was rising proportion of 'unmet needs' of people due to rising costs of health services. The study also revealed that apart from direct health care measures, China paid serious attention towards non-medical health inputs also such as safe water, sanitation and primary education which paid rich dividends in the long run. Due to these additional measures, infections go down steeply. Comparatively, India has a long distance to go on these fronts.

Filmer et al. (2000) observed a very disappointing experience with implementation of primary health care programs in developing countries. They identified two weak links in the

chain between government spending for services to improve health and actual improvements in health status. According to the researchers, first of all, institutional capacity is a vital ingredient in providing effective services. When this capacity is inadequate, health spending, even on the right services, may lead to little actual provision of services. Secondly, the net effect of government health services depends on the severity of market failures - the more severe the market failures, the greater the potential for government services to have an impact.

Baru (2003) examined the key processes which influence the size and characteristics of private provisioning in health care in four South Asian countries, namely, India, Pakistan, Bangladesh and Sri Lanka. The study found that the key processes as (i) global actors (research institutions, insurance companies, medical equipment industries, pharmaceutical), (ii) role of the state in investments/allocations in health services as well in quality/accessibility/availability of health services, and (iii) influence of middle class supply and demand of private health services.

Latief (2010) explored the success of community-based health care initiatives taken by Islamic charitable clinics in Indonesia. The study found the popularity of zakat (Islamic charitable obligation) agencies among poorer families in order to have access to health service. These charitable agencies serve well the poor families belonging to rural areas as well urban areas. Moreover, they enjoy strong support from society and Indonesian government also. The study shows how community-based initiatives and zakat agencies have provided wider access to viable health services for destitute families in poor urban and rural areas. Their services include accessible free medical assistance for poorer families.

Section – II

1.2 Health Scenario in India

The analysis of the status of the health sector in a country like India is very important. India is the second largest populous country of the world. Therefore, the improvement in the level of health has always been remained a major issue since independence. The first such effort was made by government with the setting up of Bhore Committee in 1943 even before independence. Noting a poor status of health in the country, it recommended in 1946 an integration of preventive and curative services at all administrative levels. On the recommendation of Bhore Committee India adopted the concept of three tier health system, namely, Primary, Secondary and Tertiary levels of care. The major initiative during post-independence period is the launch of National Rural Health Mission in 2005. Its main focus is on the strengthening of health

infrastructure particularly in rural areas with the increase in public spending. All these initiatives, contributed particularly in the improvement of health services in the country in terms of reduction in birth rate, death rate, infant mortality rate and the increase in the life expectancy. However, all these achievements have failed to improve rankings of Indian health system when we make international comparison. India has poor health indicators as compared to many of the Asian countries like China, Bangladesh (Deepa et. al. 2006). Further, large scale disparities exist at regional level, rural vs urban etc.

Furthermore, India is spending much less expenditure on health as compared to the developed and even under developed countries. In addition to low per capita expenditure by the government, there is a shortage of infrastructure and man power at all levels. In spite of some improvement in the health sector, still control of communicable diseases is a major challenge. The number of reported TB cases in India was 12,89,836 which was the highest in the world as per WHO Report, 2014. The changing lifestyle and increasing urbanization has contributed to the rise in the non-communicable diseases such as hypertension, cancer and diabetes which is further expected to increase at higher rate than infectious diseases in future (Rajan and Prabhakaran, 2012).

The situation has further deteriorated in the recent times. Recently world Health Organization (WHO) has reported that India had an estimated 11.6 lakh new cancer cases in 2018 only. It further said that one in 10 Indians will develop cancer during their life time and one in 15 Indians will die of cancer (The Tribune, Feb 5, 2020).

The lack of resources, the frequent change in the health policy, the implementation of new liberal policy of the government and lack of will in the government and lack of public pressure are major reasons which are responsible for the poor health standards in the country. The growth of unregulated privatization has further added to the problems of the poor people. All these developments have made health services unaffordable for large majority of the population.

1.2.1 Status of health in terms of selected health indicators in India

The important health indicators like infant mortality rate, crude birth rate, crude death rate and life expectancy provide a clear picture of Health Status of a country. As per HD report 2014, out of 187 countries, India ranks 135th with Human Development Index of 0.586.

The statistics on health indicators for some developing Asian countries as per WHO statistics 2015 reveals that in 2013, life expectancy at birth in India was 66 years which was less than China (75), Sri Lanka (75), Indonesia (71), Bangladesh (71) and Nepal (68). Under five

mortality rate in India was 52.7 which was more than the average global rate (45.6). The picture of Indian health status which is shown by the health indicators is not very satisfactory. The various health indicators over two different periods 1991-2001 and 2002-2013 are shown in annexure I.

The performance of health sector is generally evaluated on the basis of crude birth rate, crude death rate per 1000 people and infant mortality rate per 1000/ live births. The analysis of data during post reforms period i.e. since 1991 onwards is taken for this purpose. Further, annual growth rate for the period 1991 to 2001 and 2002 to 2013 has been compared.

The analysis reveals that CBR in urban areas declined at higher rate (1.8 percent) during the period 1991-2001, however, in the second period, decline in CBR is higher in rural areas. The higher decline in rural areas in CBR may be due to the implementation of National Rural Health Mission programme in 2005, which aims at improving the health infrastructure in the rural areas and to increase the public spending on health.

The analysis of data relating to Crude Death Rate (CDR) reveals that there is higher decline in CDR (1.6 per cent) during the first period i.e. 1991-2001 than during the second period (1.2 per cent). The CDR in urban areas has declined at a very slow rate 0.7 per cent since 1991. Further, CDR has declined at the higher rate in rural areas in both the time periods but still CDR in rural areas was higher (7.5 per cent) than in urban areas (5.6 per cent). The decline in CDR is the result of decline in epidemics, improvement in medical facilities, increase in literacy rate and improved sanitation facilities (curative measure) during the post reforms period.

The number of infants dying before attaining one year of age per 1000 live birth rate is the Infant Mortality Rate (IMR). The analysis of data reveals that the IMR has declined from 80 deaths per 1000 live births in 1991 to 40 in 2012. However, decline rate in IMR has been higher during 2002-2013 (4.1 per cent) as compared to 1.7 per cent during 1991-2001. The increase in public spending might be the reason of higher survival rate during the latter period. Further, there is a substantial fall in the overall IMR but still rural-urban variations exist. In spite of the launch of Rural Health Mission in 2005, the urban population is still in better position than the rural people, in terms of allocation of funds and higher access to quality health services. As per census 2011, about 70 per cent of the Indian population lives in rural areas, therefore, improvement in rural health indicators is the key to the overall health improvement in the country.

The Maternal Mortality is another important indicator of health status. The MMR was 398 in 1997-98 which declined to 167 in 2012-13(National Health Report India, 2015). Among

the major steps taken by government in this regard was the introduction of Janani Suraksha Yojna in 2005. It is one of the world's largest schemes which involve conditional cash transfer. Under this scheme, the women are given financial incentives to promote the institutional delivery, due to which maternal deaths have reduced. Another scheme in this regard is Janani Sishu Suraksha Karyakram launched under the Reproductive and Child Health Programme to reduce IMR and MMR. The MMR deaths have declined to half in the last two decades; even then India could not achieve Millennium Development Goal of 109 by 2015. Furthermore, the male life expectancy in India has improved from 63.8 per cent in 2001-05 to 67.3 per cent in 2011-15 which increased from 66.1 to 69.6 during the same period in case of females. This increase can be attributed to better immunization and nutrition along with the prevention and treatment of communicable diseases.

1.2.2 Pattern of Health Expenditure in India

The status of health services in the country largely depends on the resources allocated to the health sector. It has been noticed that the countries with higher level of health spending achieve better health outcomes, compared to the countries with low level of spending. Thus, it becomes important to have a higher level of health spending. The plan-wise total investment made by the Indian government on all heads and on health in particular reveals that the allocation for health in the first plan was Rs. 65.3 crores which increased to Rs. 300018 crores in the twelfth plan. The health outlay as a proportion of the total investment has shown an increase from 3.4 per cent to 6.5 per cent over the period. The effect of NRHM can be clearly seen in the eleventh five year plan as the health allocations were substantially increased from 3.97 per cent of outlay to 6.50 per cent. The eleventh plan highlighted the poor state of the health system in India. The shortage of health personnel and the inter-state disparities in terms of health access and health outcomes were reported as the major issues in the public health system of India. Besides this, the deteriorating quality of medical education was also considered critical. In the twelfth plan, the health allocation has been further increased to 8.40 per cent of the total plan investment. Though, the efforts have been made to increase the health spending as a percentage of GDP at the national level but it is still below the developed countries.

Undoubtedly, the total investment on health has increased enormously in absolute terms, but as a percentage of GDP, the health expenditure is still inadequate. India ranks below

developed and emerging countries in this respect and ranks lowest among the BRICS (Brazil, Russia, India, China and South Africa) countries (Economic survey 2013-14). Table 1.1 shows that as per WHO statistics 2015, total health expenditure accounted for only 3.8 per cent of GDP in India as compared to 17.7 per cent in the USA, United Kingdom (9.3 per cent), Malaysia (4 per cent) and Nepal (5.5 per cent). India's health expenditure is even less than the low income countries.

Out of the total health expenditure in India, private health expenditure forms a very high proportion whereas other countries like Australia, China, Canada, and the USA have higher public expenditure on health. The government expenditure on health forms only 30.5 per cent of the total health expenditure making Indian health sector highly dependent on private health expenditure. Even the countries like Bangladesh, Pakistan, Nepal which have lower Human Development Index than India, have higher share of government expenditure on health than the private expenditure.

Table 1.1
Health Expenditure: An International Comparison

Country	Total Expenditure on health as per cent of Gross Domestic Product	Public Expenditure on health as a per cent of GDP	Government Exp. on health as per cent of total exp. on Health	Private Exp. on health as per cent of total exp. on health	Out of pocket expenditure as a per cent of Private Expenditure on health
Australia	8.9	6.3	67	33	57.8
USA	17.7	8.5	48.2	51.8	22.7
Canada	10.9	7.6	70.1	29.9	50.1
New Zealand	7.6	8.1	82.9	17.1	62.8
United Kingdom	9.3	7.6	84	16	56.4
China	5.4	3.1	56	44	78
Malaysia	4	2.2	55.2	44.8	78
Sri Lanka	3.1	1.4	39.1	60.9	83
Maldives	7.1	6.2	57.1	42.9	88.3
India	**3.8**	**1.2**	**30.5**	**69.5**	**87.2**
Bangladesh	3.5	1.3	31.9	68.1	93
Nepal	5.5	2.6	39.5	60.5	81.4
Pakistan	2.8	1	31	69	90.2

Source: WHO Statistics 2015 and Human Development Report 2014, The World Bank Data (2015)

The misery of the Indian health sector is that out of the total private health expenditure, 87.2 per cent is Out Of Pocket (OOP) expenditure, which makes it most privatised health sector in the world (Dutta, 2012). This high proportion of out of pocket expenditure puts additional financial burden on the poor leading to households spending a huge amount of their consumption expenditure on health. The low level of government spending on health has resulted in low utilisation of public health care services. Due to unavailability and inefficiency of the public health services, the poor people have been forced to use the services of expensive and unregulated private sector. It exposes the poor people to financial risk and sometimes even push them in poverty. According to NSSO report, the percentage of medical conditions not treated due to unaffordability has increased from 15 to 28 per cent in rural areas between 1986-87 and 2004 (NSSO 60th round report). The report reveals that the major source of finance for both urban and rural people to pay the healthcare costs is the household income. Unfortunately, one-fourth of the rural patients are forced to borrow money for their treatment. Nearly one per cent of the patients in the rural area have to sell their assets to arrange money for availing the health services.

Table 1.2
Sources of finance for meeting the Out of Pocket Expenditure on Hospitalised Treatment (Percentage)

Region	Household income/savings	Borrowings	Sale of Physical Assets	Contribution from friends/relatives	Others
Urban	74.9	18.2	0.4	5	1.3
Rural	67.8	24.9	0.8	5.4	0.7

Source: 71st round report, National Sample Survey Organisation (2015)

According to the 71st round report (2015), NSSO nearly 85.9 per cent of persons in rural areas and 82 per cent in urban areas are not covered by any of the government funded, employer insurance or the private insurance scheme.

It has been found that in each year of mission, releases have been less than the planned allocations for the year. In 2013-14, Rs. 18369.01 crores were allocated for the mission out of which only Rs. 15660.72 crore were released (NRHM Management Information System Report, 2014). In the first three years of the mission, the states were unable to spend the funds granted under the mission. Although in the recent years the total amount released under NRHM was fully utilised by the states, however, the utilisation level has been found different across states. Some states like Uttar Pradesh, Jharkhand and Sikkim had a very low absorptive capacity of the funds.

The inability of the state governments to develop district and lower level health plans has been identified as the major reason for poor utilisation of released amount for health services.

In order to ensure proper utilisation of the released funds, the Central Government framed a new policy in 2012 in which the allocations were linked to the performance of the state. Till 2012, NRHM allocations to states were inflexible and the states used to get the allocated fund irrespective of their performance. The new policy follows 'carrot and stick' approach which aims to reward the high performing states and to punish the poor performing states. It provides an opportunity to the states to gain up to 30 per cent of the allocations by introducing reforms in health sector like the supply of free generic medicines. Besides this, the states can also face a reduction in the allocation if they fail to solve the issues like covering the shortage of health manpower. In order to avail this opportunity, state governments need to put in efforts to introduce new reforms and improve their performance. Since the adoption of this policy, the utilisation patterns of the states have improved (Ghuman, Saif, 2016).

Health being a state subject, the total government expenditure on health in India comes from two sources: Central Government (grants) and State Governments. Under NRHM the funds are contributed by centre and state in the ratio 85:15.The goals set at the central level to increase the proportion of public spending on health cannot be achieved without the involvement of the states. It was estimated that to achieve the goal of 2-3 percent of expenditure on health as percentage of GDP, the states needed to increase their health allocations by 22 per cent each year, which was beyond the reach of the states (Berman et al., 2010). As the Indian states form the primary source of healthcare finance, the healthcare expenditure level is more dependent on the state health spending. Major attempt was made in Eleventh five year plan to convince the states to spend at least 7-8 percent of total state expenditure on healthcare. However, until 2013, the health spending by the states as a percentage of total state expenditure has remained low and none of the states has been able to meet this target.

The interstate inequality in health spending and low per capita expenditure is another big hurdle being faced by the Indian health sector. There are various states whose per capita public health expenditure is lower than the national average of Rs.444. These include Bihar (Rs. 173), Madhya Pradesh (Rs. 301), Orissa (Rs. 317), Uttar Pradesh (Rs. 328), Chhattisgarh (Rs. 338), Rajasthan (Rs. 381), West Bengal (Rs. 421) and Assam (Rs. 434).

1.2.3 Highlights of National Rural Health Statistics

As on 31st March, 2018, there were 158417 Sub Centres (SCs), 25743 Primary Health Centres (PHCs) and 5624 Community Health Centres (CHCs) functioning in the country. While the Sub Centres and PHCs have increased in number in 2017-18 with respect to previous year, however, there is no change in the number of CHCs. The current numbers of SCs, PHCs & CHCs are not as per the Indian Public Health Standards (IPHS) norm.

Sub Centres (SCs)

Number of SCs had been increased by 12391 during the period 2005-2018, from 146026 in 2005 to 158417 by March 2018. There is a significant increase in the number of SCs in the States of Rajasthan (3893), Madhya Pradesh (2318), Gujarat (1878), Chhattisgarh (1382), Karnataka (1300), Jammu & Kashmir (1088), Odisha (761), Tripura (481), Kerala (286) and Uttarakhand (271).

There had been an addition of 2186 Sub Centres, during the year 2017-18. Significant increases in the number of Sub Centres have been reported in the States of Madhya Pradesh (2000), Gujarat (71) and Karnataka (62). The increase of 2000 SCs in the State of Madhya Pradesh is due to additional SCs sanctioned during the period.

Percentage of Sub Centres functioning in the Government buildings had increased from 49.7 per cent in 2005 to 72.2 per cent in 2018. The increase was mainly due to addition in the number of government buildings in the States of Uttar Pradesh (11672), West Bengal (5559), Madhya Pradesh (4294), Karnataka (3188), Rajasthan (3076), Gujarat (2835), Chhattisgarh (2596), Maharashtra (2109), Odisha (1869), Assam (1279) and Uttarakhand (42).

There were 28091 numbers of functional Sub Centres in the tribal areas as on 31st March 2018. There were 31 per cent of SCs with separate toilet for male & female patients and 58 per cent of SCs with toilet facility for staff. So, these statistics reveals that a lot is need to be done in the rural health sector.

Primary Health Centres (PHCs)

Number of PHCs has increased by 2507 during the period 2005-2018, from 23236 to 27413. Mix trend is observed in different States. In the States of Karnataka (678), Gujarat (404), Assam (336), Rajasthan (365), Jammu & Kashmir (303) and Chhattisgarh (276) and Bihar (251) a significant increase has been observed.

The analysis of data further reveals that the percentage of PHCs functioning in government buildings has increased significantly from 78% in 2005 to 92.9 per cent in 2018. This is mainly due to increase in the government buildings in the States of Uttar Pradesh (1681), Karnataka (841), Gujarat (697), Rajasthan (422), Madhya Pradesh (418), Chhattisgarh (351), Assam (331), Maharashtra (255) and Himachal Pradesh (120).

There were 3971 numbers of functional PHCs in the tribal areas as on 31st March 2018. There were 20 per cent of PHCs with separate toilet for male & female patients and 82 per cent of PHCs with toilet facility for Staff. So, again all is not well in regard to the provision of basic facility like toilets for the patients in the PHCs.

Community Health Centres (CHCs)

Number of CHCs has also increased by 2278 during the period 2005-2018. Significant increase was observed in the States of Uttar Pradesh (436), Tamil Nadu (350), West Bengal (253), Rajasthan (253), Odisha (146), Jharkhand (124), Kerala (121), Gujarat (91) and Madhya Pradesh (80).

However, no change has been found in the total number of CHCs as on March 2018 as compared to the number reported on March, 2017 i.e 5624. Minor increase was observed in the State of Assam (14), Rajasthan (9) and Odisha (7), however, comparative fall is also noticed in few states.

Number of CHCs functioning in government buildings has also increased during the period 2005-2018. The percentage of CHCs in Govt. buildings has increased from 91.6 per cent in 2005 to 99.2 per cent in 2018 over the period of 13 years.

There were 1017 numbers of functional CHCs in the tribal areas as on 31st March 2018. Analysis of data further reveals that 89 per cent of CHCs were having separate toilet for male & female patients and 88 per cent of CHCs were with toilet facility for Staff.

Developments Relating to the Manpower in Public Health Sector

Number of HW (F) / ANM at Sub Centres and PHCs has increased from 133194 in 2005 to 219326 in 2018 which amounts to an increase of about 64.7 per cent. As on 31st March, 2018 the overall shortfall in the posts of HW(F) / ANM at SCs & PHCs was 5.9 per cent of the total requirement as per IPHS norms.

The number of allopathic doctors at PHCs has increased from 20308 in 2005 to 27567 in 2018, which is about 35.7 per cent increase. A shortfall of allopathic doctors in PHCs was 14.3 per cent of the total requirement for existing infrastructure.

Regarding the specialist doctors at CHCs, the number has been decreased marginally from 4156 in 2017 to 4074 in 2018. A mix trend has been observed in all the states. Reduction has been noticed in the states of Uttar Pradesh (292), Punjab (98), Odisha (65) and Maharashtra (23). However increase has been observed in the states of Tamil Nadu (132), Madhya Pradesh (68), Rajasthan (68), Jammu & Kashmir (65) and Andhra Pradesh (36). The shortfall has also been noticed in case of surgeons (84.6 per cent), obstetricians & gynecologists (74.7 per cent), physicians (85.7 per cent) and pediatricians (82.6 per cent). Overall, there is a shortfall of 81.9 per cent specialists at CHCs during the year 2018 in comparison with the IPHS norms. However, significant increase in the number of paramedical staff has been observed in 2018 as compared to the position of 2005.

1.2.4 The Empirical Evidences of Poor Health Scenario in India

The different aspects of public health care system which have been examined by the researchers in India till date and are relevant to the present study are presented briefly in the following discussion:

Jeffery (1988) reviewed health care policy of India and appreciated the consistent efforts of Indian government for the allocation of resources to rural health, preventive medicine and paramedical training. He pointed out the successful fight of government against diseases like smallpox. Further, the study found that although better quality of care is provided to higher castes but the poor people in rural India have not been excluded. He concluded that “a movement toward greater equity in health care is only present in those states which are relatively free of class domination and where the landless poor play a critical role in local politics”.

Considering the significance of proper utilization of existing health facilities, Basu (1990) argued that simply the provision of health care services doesn’t ensure its proper utilization by public. The study hypothesized that “cultural or regional identity has an important bearing on the knowledge, attitudes, and practices relevant to the use of health care facilities”. Data were collected from the poor households of two culturally distinct regional groups but settled at Delhi, These were people from Uttar Pradesh and Tamil Nadu that represents contrasting north India and south India culture. The two study groups were having similarities in their socioeconomic status, locality and thus having access to same health services available in that area. Findings of

the study revealed that as far as treatment of normal diseases, respondents from both groups shown strong reliance on modern medicine especially from private practitioners. But in case of specialised medical needs important cultural differentials surfaced for medical services sought. For instance, at the time of childbirth, in case of rural Uttar Pradesh, around 94 percent births had been delivered by untrained personnel, whereas in case of rural Tamil Nadu the figure was 50 percent.

Kethineni (1991) analysed the health care system in India by examining the distribution of resources between various sectors (preventive and curative), between rural and urban areas and finally between different regions. The study found that nearly55 per cent of public expenditure on health services is spent on curative health care and medical education. The share of public health services is just one-third of total expenditure and rest amount spent on family-welfare programmes. The study also found contradictions in health policy documents and actual practice. For instance, the real emphasis is on producing highly specialised manpower in curative services whereas health policy documents kept on repeating the need for creating physicians in social and preventive medicine and paramedical personnel. This difference in theory and practice results numerous negative consequences like (a) more than one doctor per nurse instead of having several nurses per doctor, (b) more doctors per person rather than having more health visitor or midwife per person, (c) trained doctors' intent to settle down in urban areas rather than serving rural poor who lack even basic medical services, (d) focus on sophisticated diseases of international repute such as heart related diseases, cancer, AIDS rather than focus on diseases like malaria, leprosy etc. which are more relevant to Indian health.

Bhat (1993) examined the growth of the private health sector in India. The study found that a huge amount was spent in private health sector. The study highlighted the potential of private sector in preventive as well as curative health sector. The author emphasized on more investment in R&D in health sector as well as medical technology so that in future cost on healthcare services can be reduced with enhanced quality. In the end the study suggested for monitoring of investment in health sector by concerned government bodies along with financial incentives in order to reduce urban rural disparities for doctors and basic healthcare infrastructure.

Purohit and Siddiqui (1994) observed that the pattern of utilisation in our country had some-desirable outcomes, namely, growing popularity of indigenous non - allopathic systems and growth in private sector's involvement in expensive tertiary care. As against the National

Health Policy guidelines the regional disparities in health service utilisation among different expenditure groups of states as well as rural-urban disparities tend to continue. Further, in spite of inadequacy of health services and prevalence of inequality in utilisation, there has been no serious governmental initiative to encourage appropriate utilisation by means of devising health insurance and other cost recovery mechanisms.

Bhat (1996) examined the attentiveness of healthcare providers upon the implementation of Consumer Protection Act in health sector. Data was collected with the help of a structured questionnaire from a sample of 130 private health care providers of Ahmedabad (India). The findings of the study revealed that in comparison to other acts in health sector doctors were found to be more aware of Consumer Protection Act. In addition, the doctors raised their concern regarding the protection of patients as after the implementation of this Act could raise fee of doctors, prescription of more medicines, more diagnostic costs etc. Apart from all these patients may stay away from using their consumer rights due to cost of filing complaints in consumer courts.

Duggal (1997) argued that a meaningful analysis of health budgets can only be made in the context of the direct and indirect encouragement given by the state to the growth of the private sector in health services. First, the slowing down of state investment in the hospital sector and the subsidies, soft loans and duty and tax exemptions offered; second, the creation of a market for modern health care through the setting up of PHCs and cottage hospitals in the rural areas; and third, the consistent expansion in highly qualified medical personnel who could not be absorbed in the state sector.

Yesudian (1999) also reported that there are numerous misconceptions among the poor about the utilisation patterns of health care which has led to the formulation of inapt urban health services. The study conducted a survey of utilisation patterns of health services among the poor in two areas in Mumbai and identified that there are four factors, namely, cost of services, proximity, convenience of timing and perceived quality of health care services which influence the utilisation pattern of health service. Further, the study found that the poor preferred availing health care services from private sector over public sector municipal health services as they perceive quality of private health care is superior than its counterpart.

Ellis et al. (2000) stated that there are growing evidences that the level of health care spending in India as a percentage of its total GDP is considerably higher than that in many other developing countries. It further suggests that more than three-quarters of this spending includes

private 'out-of-pocket expenses'. Despite such a high share of expenditure by individuals, the provision of health care, that is adequate in terms of quality and access, is becoming more and more problematic. Particularly, public delivery of health care is poor in quality, presumably for reasons of inadequate financing.

Qadeer (2000) examined the reforms brought by Indian government in health sector. The study throw the light on structural adjustment programmes initiated in health sector on the directions from World Bank and IMF brought two kinds of changes in health sector, these were, (i) reduction in the government allocations, and (ii) enlarged role of private sector. Due to reduction in the government spending on health sector the research work of Indian Council of Medical Research suffered badly. In this end, the author suggested that (i) government expenditure in health sector must be at least up to 2-3 per cent of GDP, (ii) decentralisation in health sector with more powers to local levels/ Panchayati Raj Institutions.

Bhat (2000) observed that public-private partnerships in the health sector can bring needed resources while also taking care that the vulnerable groups - the poor and rural populations - have access to health facilities. However, he emphasized that the government must clarify its policy towards the private sector and ensures that public spending on health does not decline.

Peterset al. (2002) pointed out although India has build up a huge network of public health care, yet public spending on health is very less or rather stagnant over the years in terms of spending on health as percentage of GDP. Further the study identified that discrepancy in health financing among Indian states widened the gap in public resources for health between rich and poor states. For instance, Kerala, Tamil Nadu and Punjab have double the per capita public health spending than that of Bihar and Madhya Pradesh. In quite similar to other nations' approach India too gave low priority topublic spending on preventive health services than curative care which are pro-rich in division. Furthermore the study found that in India private health care spending accounts for more than 80 percent of total health spending which is one of the highest proportions of private spending in the world. Moreover, most of private spending is out-of-pocket.

Gokhale et al. (2002) examined the influence of female literacy on the reduction of infant mortality rate. Data was collected from 317 mothers. Results reveal that illiteracy among females was related with all maternal care as well as infant mortality rate. Further the authors grouped the Indian states into best, medium, and worst on the basis of female illiteracy. The study found that

IMR was significantly higher among the worst group than that among the medium and the best. Furthermore, the study found that ill effects of female illiteracy were more detrimental in the rural areas in comparison to urban areas. In the end, the study advocated for the essential steps need to be taken in order to have health benefits in the long run like free education to girls etc.

Priya et al. (2004) examined the adoption of tough measures towards "an Indian model of reforms" in health care services, which is essential for becoming 'world class'. The authors cautioned that by simply raising amount of funds for the ongoing programmes will not serve purpose of improving health if it is not supplemented by reforms in content, functioning and overall revamping of structure of public health care services. For effective restructuring/functioning of health services in public sector, the authors suggested the strengthening of capacities at district level, rational utilization of existing infrastructure and human resources by aligning block, district and state level health care, ensuring sufficient supply of vital drugs and basic medical equipment, revamping administrative measures along with a review of medical education so as to enhance understanding towards public health matters.

Paul et al. (2004) observed that India has made considerable progress in the area of health care during the last five decades. The crude birth rate per 1,000 population, which was 40.8 in 1951, has declined to 25.8 by 2000. Similarly, infant mortality rate (per 1,000 live births) declined to 68 as compared to 146 in 1951. The number of sub-centres, PHCs and CHCs increased from 725 in 1951 to 57,363 in 1981 and further to 1,63,181 in 1999. The number of dispensaries and hospitals increased from 9,209 in 1951 to 23,555 in 1981 and further to 43,322 in 1996. Among the major states, Gujarat, Kerala, Karnataka and Tamil Nadu have relatively better coverage of health facilities. However, most of the states appear to have more or less fulfilled at an aggregate level, the stipulated norms for providing the health facilities (one sub-centre per 5,000 population in plain areas and per 3,000 population in tribal and hilly areas; one PHC per 30,000 population in plain areas and per 20,000 population in hilly and tribal areas). As a result of all these developments, the urban population has better access to health services compared to the rural population. Further, the extent of access to and utilization of health care has varied substantially between states, districts and different segments of society (Economic Survey, 2002-03). The authors emphasized that although the government has provided a large network of health institutions, the extent and frequency of the utilisation of these facilities is considerably low. Several factors might have come in the way of the utilisation of public health services such as distance, shortage of health personnel and medicines, absence of doctors, poor

quality of services, unhygienic atmosphere, inappropriate behaviour of health staff and corruption.

Ahuja (2004) examined health insurance for the poor in India and found that instead of government or market based insurance, community based health insurance (CBHI) is the most suitable method of reaching the poor living in developing countries. Considering the importance of CBHI in comparison to other methods/schemes the author advocated that depending upon the health needs of target, CBHI can take different suitable forms. The study concluded by stressing the need of appropriate regulatory changes that can reduce the risks and convert the potential benefits into gains for the poor.

According to Gupta (2005) the public health services, which reduce a population's exposure to disease through such measures as sanitation and vector control, are an essential part of a country's development infrastructure. The author observed that in India, policies have focused largely on medical services. Public health services, and even implementation of basic public health regulations, have been neglected so far.

Sengupta and Nundy (2005) argued that although private health sector in India is growing at the cost of public health care, but the two issues cannot be messed up together. Citing the example of necessity of simultaneous development in two extreme areas like potable drinking water and electricity for each village in India along with building of rockets, the authors stressed for simultaneous development in different areas and same for healthcare industry too. For instance, foreign exchange earned through medical tourism will generate certainly boost India's economy, that can in turn lift up standard of healthcare facilities. In the end, the study emphasises for adopting a systematic approach to ensure that a part of the funds is channelized towards primary health care and increase in the budget allocation for health sector shouldn’t be at the cost of new source of national income.

Chaudary (2006) examined the public health expenditure of those states in India which had low Gross State Domestic Product (GSDP). The findings of the study showed that low income states (e.g., Rajasthan, Bihar, Orissa, Assam etc.) had very poor health status. Moreover, these states were not capable of raising financial resources for healthcare in future also, thus, impacting overall Indian health status. In the end, the study stressed for government attention for the needy states for the improvement in health scenario in India.

Considering rising health divide between rich and poor countries and between rich and poor within the countries Athreya and Rao (2006) argued that these health inequalities are the

results of structural adjustment and reforms in health sector introduced on the advice of World Bank and IMF. As a result of these reforms, the commitment of State for health sector reduced and interventions introduced were not organized one. Citing some specific examples authors highlighted that rather than focusing on proper water supply and sanitation, focus was on ORS for diarrhea, similarly anemia was taken care only during pregnancy, care was not initiated for general population and nutritious food was never on the priority list. Another issue was high OOP expenditure especially in those states where public health care infrastructure was not properly built up. For instance cost of treatment was found highest in Punjab, Haryana, Uttar Pradesh and least in Kerala, West Bengal and Tamil Nadu.

Hammer et al. (2007) investigated the government and private healthcare sector in India, namely, in the two categories, (i) preventive and promotive, and (ii) curative health care. The study revealed that in case of preventive healthcare the programmes focused equally on poor and rich. Whereas, in case of curative healthcare services, it was found that there was shortage of staff, absenteeism of health workers, untrained staff, lack of courtesy and care for patients in the primary health centres. Lack of accountability was identified as the main reason for the failure of government health schemes. In the end, the study suggested that needs of patients should be given priority while designing policies in health sector and healthcare personnel should be provided with attractive incentives.

Selvaraj and Karan (2009) compared the public and private treatment costs and reported that on an average private health care is one and half times more costly than public health care for outpatient treatments. Whereas in case of hospitalisation, cost of treatment in private healthcare facilities is more than twice in comparison to public health care. Moreover, the government facilities force the patients to obtain drugs and get diagnostic services from private sector providers. Regarding rural-urban difference of per episode expenditure, in case of outpatient care, expenditure in the public sector is more or less similar both in rural and urban areas. In case of inpatient care, per episode expenditure in public healthcare is only slightly higher for urban patients. However, huge rural-urban difference was visible in case of private health facilities as significantly higher per episode expenses incurred by people living in urban areas.

Baru et al. (2010) examined the inequities in access to health care services in India and found large inequities exist even today and moreover widened their base between rural and urban areas and further within the different communities. The authors found the presence of three kinds

of inequities which have ruled health sector in India. These are (i) historical inequities (these are based on the policies of British India which still continued), (ii) socio-economic inequities (due to caste, gender and class differentials) and (iii) lastly those inequities which lie in the availability and affordability of health care services.

Lalneizo and Reddy (2010) examined the child health status in North Eastern states of India. The findings revealed that in these states the child health indicators (IMR and under five mortality) were found to be much better when compared to all India average. Further the study found good breast feeding practices in North Eastern States. However, immunization coverage was found to be poor and high morbidity levels and Vitamin A supplement was less available. But these states rely on Vitamin A rich foods.

Rai and Usha (2010) highlighted that every year 60,000 to 70,000 maternal deaths occur in India and 20 to 30 times more women become very ill due to pregnancy, childbirth or abortions. Women die because they are unable to access good quality affordable and specialized care. It was estimated that one in 48 pregnant women run the risk of dying during childbirth. The situation becomes alarming in tribal population and among the marginalized living in prolated pockets of the counting. The study further estimated that 87 percent of pregnant women were found anemic which accounted for 20 to 40 percent of the maternal deaths.

Radha (2011) argued that although India as a nation has been growing economically at a rapid pace particularly after the advent of New Economic Policy of 1991 but this rapid economic development has not been accompanied by social development particularly health sector development. According to the author, "the health sector in India has been accorded very low priority in terms of allocation of resources. Public expenditure on health was recorded less than 1 per cent of GDP in India which further declined during the post economic liberalization period. The meager resource allocation to health sector has adversely affected both access and quality of health services. The unequal access to health services is reported across strata, gender and location (i.e. urban and rural areas). With a view to improve access and quality of health services, government should enhance public spending on health sector in the vicinity of 3 per cent of GDP. Today, the healthcare system in India faces a challenge in raising the service quality and ensuring equitable access to people while simultaneously gearing up its capabilities to tackle the changing disease incidence profiles. This challenge needs to be addressed through a concerted effort of both public and private sectors by their agreeing on suitable public policy

initiatives which incentivize financing and provision of healthcare, and thereby increase healthcare access to the people".

Deosthali et al (2011) investigated standards of care in 216 small, private hospitals (less than 30 beds) in Maharashtra, with a focus on maternity care. Data was collected with the help of interviews of hospitals' owners or senior staff, and personal observation. The study found overall poor standards of care in most of the hospitals. Specifically, authors observed few or no qualified nurses or a medical officer, most of the hospitals did not have a qualified midwife, in so called emergency care, only 3 hospitals had a blood bank and only 8 had an ambulance service. The study stressed on the enforcement existing of regulations on the healthcare services providers.

Joshi (2011) conducted a study on needs of old people in India and found that health system network for an old person is in very poor shape. Moreover, old people don't have access to any particular health care programmes of government except the employees retired from organized sector who get medical facilities. However, individuals belonging to unorganized or informal sector face difficulties in getting proper health attention due to poor financial conditions. Further, the study found that most of the aged people have to rely on government hospitals, charitable hospitals, and PHCs for health checkups. But these facilities lack in quality care due to which mostly aged people remained deprived of good health facility. In addition, introduction of user charges as a part of structural reforms has added more to their woes.

Radha (2011) argued that although India as a nation has been growing economically at a rapid pace particularly after the advent of New Economic Policy of 1991 but this rapid economic development has not been accompanied by social development particularly health sector development. According to the author, "the health sector in India has been accorded very low priority in terms of allocation of resources. Public expenditure on health was less than 1 per cent of GDP in India. It has further witnessed decline during the post economic liberalization period. The meager resource allocation to health sector has adversely affected both access and quality of health services. The unequal access to health services is reported across strata, gender and location (i.e. urban and rural areas).

Kumar and Prakash (2012) examined the differences in utilization of health care services provided by the public and private sectors in India along with differences in utilization of health services region/state wise. The study found that utilization of public health care services mainly depend upon the provision of subsidized services provided by government. In addition the findings revealed that drive behind utilization of public services seems to be most likely to avail

government's free services or medicines etc. Further, the study identified inclination towards the use of private health services due to perception of poor and in adequate public health care services. Regarding state wise utilization of health services the results revealed that in states like Assam, Chhattisgarh, Jharkhand and Madhya Pradesh highest proportion of people utilized public health care services. In the end the study stresses for affordable and better quality health care services for common man.

Singh (2012) investigated availability and role of public health care services provided by public sector in Thar Desert of India. The study also explored the main reasons behind the high dependency on quacks. With the help of a structured questionnaire data was collected by conducting in-depth interviews of 610 respondents. The study found inadequacy in the number of CHCs/PHCs/Sub-centres in the Thar Desert in order to meet the health needs of entire population of this area. The study concluded that the illiteracy, poverty, lack of transportation facilities push people towards quacks for medical help.

Sengupta and Chatterjee (2013) examined the end of life care within the framework of public health in India. The study investigated four possible health care settings, i.e., primary, hospital, palliative and home. Findings of the study reported that at the primary level, information deficit occurs as it has low capacity to identify the dying process and thus put limitations on providing long term care at this level. Thus mostly hospitals are the main place for dying. Next are the palliative centres which are known for cost-effective services during end-of-life. However, they are very few in India and mainly concerned for providing pain relief.Lastly, home is not recognised as conducive place for dying as care givers are not properly trained and well-equipped. A fragmented health care system does not qualify home as a conducive place for dying either. The study concluded that health care in India is not well-prepared yet to deliver quality end of life care.

Bajpai (2014) stated that even after the setting up of National Rural Health Mission (NRHM) since 2005, the public health system in India was still struggling with numerous challenges. The study identified the key challenges, namely, (i) deficiency in infrastructure (it includes basic infrastructure also like safe drinking water, paramedical workforce, beds, electricity etc.), (ii) deficiency of human resources (it includes deficiency of manpower at various levels like between rural & urban, between public & private sectors, between different regions), (iii) high patients load (due to rise in unplanned cities and ever growing urban population, lack of purchasing power of migrants in cities etc.), (iv) lack of quality of healthcare

services (due to more liberal polices for private healthcare and even outsourcing of public health service) and (v) high out of pocket expenditure (due to less spending on healthcare by Indian government). In regard to these challenges, the author suggested some measures that need to be undertaken to cure public health system in India. These includes (i) on the pattern of defence personnel, provision of living and working conditions in the peripheral areas that would motivate the doctors and other health staff to serve rural areas. Taking care of family and kids of health care team will surely enhance their job involvement, (ii) prompt filling of vacant posts in the health sector and fast response in administrative tasks, (iii) mandatory rural service immediately after medical graduation and strictly no waiver in this rule, (iv) enhanced capacity of health facilities so as to absorb maximum health care workers, and (v) regular training cum workshops for paramedical personnel.

Section – III

1.3 The Status of Health Services in India as per National Health Policy: Situation Analyses, 2017

Report on Situation Analyses carried-out by the Ministry of Health and Family Welfare, Government of India prepared a background paper for the preparation of the National Health Policy, 2017. The government of India appointed experts to analyse the ground realities of health system working at the national and the state level. The main highlights of this report are presented in this section. Further, the major highlights of the National Health Policy, 2017 prepared by the Ministry of Health and Family Welfare, Government of India is also presented in this section.

The paper has highlighted that India is close to reaching the MDGs with respect to maternal and under 5 mortality rate. MDG-5 target was to reduce MM Ratio (MMR) by three quarters between 1990 and 2015. From a baseline of 556 in 1990, India has achieved MMR of 167 by 2011-13. However, the rate of decline of still-births and neo-natal mortality has been slow. The report also noticed inter and intra state variations. For instance, under 5 Mortality rate ranges from 73 (Assam) to 12 (Kerala). Madhya Pradesh has wide disparity in Infant Mortality Rate with Indore at 37 and Panna at 85.

Nutrition status has been considered another important underlying cause of mortality and morbidity especially among young children. MDGs for eradicating hunger states that proportion of underweight children should have decreased by 26 per cent by 2015. However, India has been able to reduce proportion of underweight children below five years of age to 29.4 per cent in

2013-14 from the estimated 52 per cent in 1990. Further, percentage of underweight children <3 years was higher in rural areas (44 per cent) as compared to urban areas (30 per cent). The inter-state variations are also visible. India has also shown consistent improvement in population stabilization, with a decrease in decadal growth rate both in percentage and absolute numbers.

However, the persistent challenge on the population stabilization front is the declining sex ratio. India has child sex ratio (0-6 years) of 919 females per 1000 males and it is worse in urban areas with 905 females as compared to rural areas (923).

The report noted that India is currently experiencing rapid health transition. Overall, communicable diseases (CDs) contribute 28 per cent of the entire disease burden, while non-communicable diseases (60 per cent) and injuries (12 per cent) now constitute the bulk of the country's disease burden. Anemia in women is another area of concern and it has a multiplier effect through birth of low weight babies, which affects the mental and physical growth in children.

The rising occurrence of non-communicable diseases in India has been highlighted as a major public heath challenge. WHO estimates that these diseases (with mostly preventable risk factors) account for 60 per cent of all deaths and significant morbidity in India. The report further mentioned that so, for the occupational health needs were largely unaddressed in both formal and informal sector. Like nutrition, adolescent health also has an inter-generational effect. 70 per cent of adult deaths from non-communicable diseases were linked to risk factors that start in adolescence.

The situation analysis noted that there has been a steady rise in mental illness in the country. According to a recent publication one in every four women and 10 per cent men suffer from depression in India. Increase in the life expectancy has increased the requirement of geriatric care. The elderly (above 60 years) comprise 103.8 million or 8.6 per cent of total population and 8 per cent of them are confined to bed or in home. The preventive aspect needs to be adequately addressed through assessing the impact of existing and future non-health sector programmes and policies through the health lens.

The report noted that a high degree of inequity in health outcomes and access to health care services exist in India. So, there is a need to address the existing inequities in health outcomes between and within states in India. Even in states where overall averages are improving, marginalized communities and poorer economic quintiles of the population, especially in remote and tribal areas, continue to perform poorly.

Table 1.3
Disparities in Health Outcomes

Indicator	India			Percentage difference
	Total	Rural	Urban	
TFR (2013)	2.3	2.5	1.8	39
IMR (2013)	40	44	27	63

Source: Statistical Report 2013, Registrar General of India and SRS Bulletin, 2014

Accreditation and certification through voluntary process are nascent methods, introduced to determine standards of particular health care unit. Also Indian Public Health Standards (IPHS) revised in 2010, lays-down the essential and durable requirements for services, building, equipment, man power and drugs for public health facilities across various levels.

Performance in disease control programmes is largely, a reflection of the strengths of the Public health system, e.g. human resource development, logistics and infrastructure.

1.3.1 National Rural Health Mission

The situation analysis report has appreciated that the National Rural Health Mission (NRHM) led to a significant strengthening of public health systems. It brought in a workforce of close to 9,00,000 community health volunteers, the ASHAs, who aided in bringing the community closer to public services, improving utilization of services and health-seeking behaviors. The NRHM deployed over 18,000 ambulances for free emergency transport of a million patients monthly and added over 178,000 health workers to the public health system. It also provided cash transfers to over ten million pregnant women annually -to seek free care in the institutions. NRHM also made serious attempt to address infrastructure gaps. Across States, there is a major increase in outpatient attendance, bed occupancy and institutional delivery. However, much of the increase in service delivery was related to select reproductive and child health services and the national disease control programme. Further, States with better capacity at baseline were able to take advantage of NRHM financing promptly. Larger gaps in baselines and more time taken to develop capacity to absorb the funds, meant that the gaps in achievement were larger in high focus States. These gaps were further compounded by inefficiencies in fund utilization, poor governance and leakages. Therefore, a differentiated strategy is called for by the situation analysis report.

The situation analysis report, 2017 further noted that the National Rural Health Mission was intended to strengthen State health systems to cover all health needs. The progress, however, remained confined to a few indicators only, like mortality and disease prevalence. Such selective

focus and facility development is clearly not efficient. Strengthening health systems for providing comprehensive care requires higher levels of investment and human resources, than were made available. The budgetary support and the expenditure was only about 40 per cent of what was envisaged for a fully revitalised NRHM Framework.

1.3.2 Urban Health Scenario

Rapid and unplanned urbanization has led to massive growth in the number of the urban poor, including migrant populations. This section of the population has poorer health outcomes due to adverse social determinants and poor access to health care facilities, despite living in close proximity to many hospitals - public and private. As a matter of fact, primary healthcare in many urban areas require considerable strengthening. The National Urban Health Mission (NUHM), introduced in 2013, has a strong focus on primary care especially for urban poor and vulnerable population. NUHM aims at strengthening primary health care- through additional ANMs, urban ASHAs, women's health committees, a network of primary health centers and inter-sectoral convergence. However, substantial expansion on a sustained basis is required to improve urban health.

1.3.3 Cost of care and Financial Protection

The fact, however, remains that inability to cover the entire spectrum of health care needs, through increased public investment has led to a rise in the out of pocket expenditure and consequent impoverishment. The analysis highlighted that over 63 million persons are pushed to poverty every year due to health care costs. In 2011-12, the share of out of pocket expenditure on health care as a proportion of total household monthly per capita expenditure was 6.9 per cent in rural areas and 5.5 per cent in urban areas. This led to an increasing number of households facing catastrophic expenditures due to health costs (18 per cent of all households in 2011-12 as compared to 15 per cent in 2004-05). It has been observed that, in 2014 the average amount spent per child birth as inpatient in private hospitals was nine times that spent in public hospitals for both rural and urban areas across all quintiles. Under NRHM, free care in public hospitals was extended to a select set of conditions. User fees on all other services especially for diagnostics, as also the purchase of drugs added to the cost of care. Several essential services, especially for chronic illnesses, were only available at overcrowded district and medical college hospitals - resulting in physical and financial hardship and poor quality of care.

1.3.4 Publically Financed Health Insurance

The Central Government launched the Rashtriya Swasthya Bima Yojana (RSBY) in 2008. The population coverage under these various schemes expanded from almost 55 million in 2003-04 to about 370 million in 2014 (almost one-fourth of the population). Nearly two thirds (180 million) of this population were those in the Below Poverty Line (BPL) category. Evaluations show that schemes such as the RSBY, have improved utilization of hospital services, especially in private sector and among the poorest 20 per cent of households and SC/ST households.

1.3.5 Regulatory Role of Government

The Government's regulatory role has been extended to the regulation of drugs through the CDSCO, the regulation of food safety through the office of the Food Safety and Standards Authority of India, support to the regulation of professional education through the six professional councils and the regulation of clinical establishments by the National Council for the same. Progress in each of these areas has been challenging. Some of the challenges relate to institutional strengthening as also the mechanisms of institutional governance, which may sometimes require amendments to the laws. Regulation of drug pricing is under the Department of Pharmaceuticals which has been playing an active and effective role in monitoring of drug prices and its implementation. Reforms in each of these areas, especially in professional councils and clinical establishments are facing resistance from certain stakeholders. Considerable political leadership and public support would be required to implement these reforms. But clearly, as private industry grows rapidly and quality health care for all is envisioned, the Government needs to find ways to move forward on these responsibilities.

1.3.6 Investment in Health Care

The report noted that despite years of strong economic growth and increased health spending by the Government in the 11th Five Year plan period, the total spending on healthcare in 2013-14 in the country was just about 4.02 per cent of GDP. Global evidence on health spending shows that, unless a country spends at least 5–6 per cent of its GDP on health with Government expenditure being a major part, basic health care needs are seldom met. The Government spending on healthcare in India is only 1.15 per cent of GDP. This is 3.8 per cent of total Government expenditure and accounts for 28.6 per cent of total health spending. This translates in absolute terms to Rs. 1042 per capita at current market prices. The Union Government share of this is only Rs. 365 per capita (0.40 per cent GDP) while State Government share translates to about

Rs. 677 per capita (0.75 per cent of GDP) at base line scenario. Perhaps the single most important policy pronouncement of the National Health Policy 2002 articulated in the 10th, 11th and 12th Five Year Plans, and in the NRHM Framework, was the decision to increase public health expenditure to 2 per cent to 3 per cent of the GDP. As a result, public health expenditure rose briskly in the first few years of the NRHM, but at the peak of its performance it started stagnating at about 1.04 per cent of the GDP.

Though there is always space to generate some more value for the money, it is unrealistic to expect achieving key goals in a Five Year Plan on half the estimated and sanctioned budget. The failure to attain threshold minimum levels of public health expenditure, remains the single most important constraint. While it is important to recognize the growth and potential of a rapidly expanding private sector, international experience (as evidenced from the table 1.4) shows that health outcomes and financial protection are closely related to absolute and relative levels of public health expenditure.

Among the developing countries (Table-1.4), two nations, Brazil and Thailand, are considered to have achieved close to universal health coverage- Thailand at 3.2 per cent has almost the same percent of total health expenditure to GDP as India, but its proportion of public health expenditure is 77.7 per cent of total health expenditures, which results from a form of strategic purchasing in which about 95 per cent is purchased from public health care facilities. This is what gives its public health system such a high efficiency. Brazil spends 9 per cent of its GDP on health of which public health expenditure constitutes 4.1 per cent of the GDP and 45.7 per cent of total health expenditure. This public health expenditure accounts for almost 75 per cent of all health care provision. Most expert groups have estimated 2.5 per cent as being realistic and achievable public health expenditure target. At such levels of expenditure, "purchasing," would have to be mainly from public health providers for efficient use of resources with purchasing from private providers only for supplementation.

Table 1.4
Health Outcomes and Health Expenditures in Selected Countries

Country	Total Health Exp. per capita (USD) – 2011	Total Health Exp. as % of GDP – 2011	Govt. Health Exp. as % of Total Health Exp. -2011	Life Expectancy at birth (years) 2012
India	$62	3.90	30.50	66
Thailand	$214	4.10	77.70	75
Sri Lanka	$ 93	3.30	42.10	75
BRICS Countries				
Brazil	$ 1119	8.90	45.70	74
China	$ 274	5.10	55.90	75
Russia	$803	6.10	59.80	69
South Africa	$670	8.70	47.70	59
OECD Countries				
USA	$ 8,467	17.70	47.80	79
UK	$ 3,659	9.40	82.80	81
Germany	$ 4,996	11.30	76.50	81
Norway	$ 9,908	9.90	85.10	82
Sweden	$ 5,419	9.50	81.60	82
Denmark	$ 6,521	10.90	85.30	80
Japan	$ 4,656	10	82.10	84

1.4 Highlights of National Health Policy 2017

The national health policy 2017 has been prepared after success of 1983 and 2002 national health policies in strengthening the health care system in India. Some new initiatives have been taken in the new Health Policy, 2017. The change has been necessitated due to the following four major reasons:

Firstly, the health priorities are changing. Although, maternal and child mortality have rapidly declined, there is a growing burden on account of non-communicable diseases and some infectious diseases. Second, the emergence of robust health care industry estimated to be growing at a double digit growth rate. Third, change in the growing incidents of catastrophic expenditure due to health care cost, which are presently estimated to be one of the major contributors to poverty. Fourth, a rising economy has enabled to enhance fiscal capacities. However, a question mark has been put on the last point due to fall in growth rate in the recent times.

The major focus of the national health policy 2017 is to inform, clarify, strengthen and prioritize the role of government in shaping the health system in all its dimension (which was halted after 1991), investments in health, organization of health services, prevention of diseases and promotion of good health through cross sectional actions, access to technology, developing

human resources, encouraging medical pluralism, building knowledge base, developing better financial protection strategies, strengthening regulations and health assurance.

The goal of health policy 2017 is to attain highest level of health and well-being for all ages, through a combination of preventive and promotive health care system for universal access to good quality services without leaving anyone at affordable price. The emphasis is on access, improved quality and lowering the cost of health care delivery.

These goals are expected to be achieved through the following key policy principles:

- Introducing professionalism, integrity and ethics. Equity, affordability, universality and patient centered quality care will guide the policy;
- Accountability, intensive partnership pluralism, decentralization and dynamism and adaptiveness are the other key features of this new policy; and
- Emphasis will be on progressively achieving universal health coverage with a focus on significant reduction in out of pocket expenditure due to increasing health care costs and achieving a reduction in proportion of households experiencing catastrophic health expenditure and consequent impoverishment. To achieve this goal the trust of the public will be reinforced in public health care system which has been eroded in the recent past. The growth of private health care sector will be aligned in public health goals.

Specific quantitative goals and objectives are further outlined under three broad components:

a) Health status and program impact;
b) Health systems performance; and
c) Health system strengthening.

These goals and objectives are aligned to achieve a sustainable development in health sector in keeping with policy trust. The important step in this direction is to increase health expenditure by government as a percentage of GDP from the existing 1.15 per cent to 2.5 per cent by 2025, increase in state health sector spending to more than 8 per cent of their budget by 2020 and decrease in proportion of households facing catastrophic health expenditure from current level by 25 per cent by 2025.

These three issues have been highlighted by many researchers through empirical studies. In addition to the higher spending by the government through public health sector, the policy articulates to institutionalize inter-sectoral coordination at national and sub-national level to optimize health outcomes through constitutional bodies that have representation from relevant non-health ministries. This is in line with the emergent international “Health in All” approach as

compliment to “Health For All”. The policy pre-requisites is for an empowered public health cater to address social determinants of health effectively, by enforcing regulatory provisions.

The policy identifies, coordinated actions on seven priority areas for improving the environment for health:

- The Swachh Bharat Abhiyan;
- Balanced, healthy diets and regular exercise;
- Addressing tobacco, alcohol and substance abuse;
- Yatri suraksha-preventing deaths due to rail and road traffic accidents;
- Nirbhaya Nari-action against gender violence;
- Reduced stress and improved safety in the workplace;
- Reducing indoor and outdoor air pollution;
- The policy lays greater emphasis on investment and action in school health by incorporating health education as part of the curriculum, hygiene and safe health practices within the school environment and by acting as a site of primary health care; and
- Recognizing the risks arising from physical, chemical and other workplace hazards, the policy advocates for providing greater focus on occupational health. Work-sites and institutions would be encouraged and monitored to ensure safe health practices and accident prevention, besides providing preventive and promotive health care services.

The policy proposes seven key policies shifts in organizing health care services.

- In primary care- from selective care to assured comprehensive care with linkages to referral hospitals.
- In secondary and tertiary care-from an input oriented to an output based strategic purchasing.
- In public hospitals- from user fee and cost recovery to assured free drugs, diagnostic and emergency services to all.
- In-infrastructure and human-resource development-from normative approach to targeted approach to reach under-serviced areas.
- In urban health-from token interventions to on-scale assured interventions, to organize primary health care delivery and referral support for urban poor. Collaboration with other sectors to address wider determinants of urban health has been advocated.
- In national health programmes-integration with health systems for programme effectiveness and in turn contributing to strengthening of health system for efficiency.

- In AYUSH services-from stand alone to a three dimensional mainstreaming.

In the long run, the policy envisages to have fully equipped and functional public sector hospitals in these areas to meet secondary and tertiary health care needs of population, especially the poorest and marginalized. Public facilities would remain the focal point in the healthcare delivery system and services in the public health facilities would be expanded from current levels. In order to provide access and financial protection at secondary and tertiary care levels, the policy proposes free drugs, free diagnostics and free emergency care services in all public hospitals. To address the growing challenges of urban health, the policy advocates scaling up National Urban Health Mission (NUHM) to cover the entire urban population within the next five years with sustained financing.

1.4.1 Primary Care Services and Continuity of Care

This policy denotes important change from very selective to comprehensive primary health care package which includes geriatric health care, palliative care and rehabilitative care services. The facilities which start providing the larger package of comprehensive primary health care will be called "Health and Wellness Centers". Primary care must be assured. The policy recommends that health centres be established on geographical norms apart from population norms. To provide comprehensive care, the policy recommends a matching human resources development strategy, effective logistics support system and referral backup. This would also necessitate upgradation of the existing sub-centres and reorienting PHCs to provide comprehensive set of preventive, promotive, curative and rehabilitative services.

1.4.2 Secondary Care Services

The policy aspires to provide at the district level most of the secondary care which is currently provided at a medical college hospital. Basic secondary care services, such as caesarian section and neonatal care would be made available at the least at sub-divisional level in a cluster of few blocks. To achieve this, policy therefore aims:

- To have at least two beds per thousand population distributed in such a way that it is accessible within golden hour rule. This implies an efficient emergency transport system. The policy also aims that ten categories of what are currently specialist skills be available within the district. Additionally four or at least five of these specialist skill categories be available at sub-district levels. This may be achieved by strengthening the district hospital and a well-chosen, well located set of sub-district hospitals.

- Resource allocation should be responsive to quantity, diversity and quality of caseloads provided.
- Purchasing care after due diligence from non-Government hospitals as a short term strategy till public systems are strengthened.

National Health Policy proposes a responsive and strong regulatory framework to guide purchasing of care from non-government sector so that challenges of quality of care, cost escalations and impediments to equity are addressed effectively.

In order to develop the secondary care sector, comprehensive facility development and obligations with regard to human resources, especially specialists needs, are to be prioritized. To this end the policy recommends a scheme to develop human resources and specialist skills.

Further, Access to blood and blood safety has been a major concern in district healthcare services. This policy affirms in expanding the network of blood banks across the country to ensure improved access to safe blood.

1.4.3 Closing Infrastructure and Human Resources/Skill Gaps

The policy duly acknowledges the roadmap of the 12th Five Year Plan for managing human resources for health. The policy initiatives aim for measurable improvements in quality of care. Further, the policy emphasize on strengthening the urban health care also. National health policy prioritizes addressing the primary health care needs of the urban population with special focus on poor populations living in listed and unlisted slums, other vulnerable populations such as homeless, rag-pickers, street children, rickshaw pullers, construction workers, sex workers and temporary migrants.

The national health policy has reiterated by focusing on the national health programmes, namely, RMNCH+A services, Child and Adolescent Health, Interventions to Address Malnutrition and Micronutrient Deficiencies, Universal Immunization, Communicable Diseases, Control of Tuberculosis, Control of HIV/AIDS, Leprosy Elimination, Vector Borne Disease Control. The policy recognizes the interrelationship between communicable disease control programmes and public health system strengthening. Every one of these programmes requires a robust public health system as their core delivery strategy. At the same time, these programmes also lead to strengthening of healthcare systems.

- In regard to Non-Communicable Diseases, The policy recognizes the need to halt and reverse the growing incidence of chronic diseases. The policy recommends to set-up a

National Institute of Chronic Diseases including Trauma, to generate evidence for adopting cost effective approaches and to showcase best practices.

- The policy will take into consideration the provisions of the National Mental Health Policy 2014.
- The National Health Policy recognises that improved access, education and empowerment would be the basis of successful population stabilization. The policy further emphasizing on Women's Health & Gender Mainstreaming, Gender based violence (GBV):, Supportive Supervision, and Emergency Care and Disaster Preparedness.

National Health Policy emphasizes on mainstreaming the Potential of AYUSH, Tertiary care Services, Human Resources for Health and change in Medical Education. This policy recommends that the current pattern of MCQ (Multiple Choice Question) based entrance test for post graduates medical courses- that drive students away from practical learning- should be reviewed. The policy recognizes the need to revise the under graduate and post graduate medical curriculum keeping in view the changing needs, technology and the newer emerging disease trends. Further, Attracting and Retaining Doctors in Remote Areas, Specialist Attraction and Retention, strengthening of Mid-Level Service Providers through expansion of primary care from selective care to comprehensive care, complementary human resource strategy is the development of a cadre of mid-level care providers. This can be done through appropriate courses like a B.Sc. in community health and/or through competency-based bridge courses and short courses.

Moreover, improvement in the regulation and quality management of nursing education, the certification programme for ASHAs for their professional selection into NAM, Nursing and Para-medical courses has been proposed. The policy recommends revival and strengthening of Multipurpose Male Health Worker cadre, in order to effectively manage the emerging infectious and non-communicable diseases at community level. The addition of a second Community Health Worker would be based on geographic considerations, disease burdens, and time required to perform multiple tasks to be performed by ASHA/ Community Health Worker. Further, the paramedical skills required for super-speciality paramedical care needs strengthening.

The policy proposes creation of Public Health Management Cadre in all States based on public health or related disciplines, as an entry criteria. The policy also advocates an appropriate career structure and recruitment policy to attract young and talented multi-disciplinary

professionals. Medical & health professionals would form a major part of this, but professionals coming in from diverse backgrounds such as sociology, economics, anthropology, nursing, hospital management, communications, etc. who have since undergone public health management training would also be considered. States could decide to locate these public health managers, with medical and non-medical qualifications, into same or different cadre streams belonging to Directorates of health. Further, the policy recognizes the need to continuously nurture certain specialized skills like entomology, housekeeping, bio-medical waste management, bio medical engineering communication skills, management of call centres and even ambulance services. The major emphasis is on financing of health care by allocating major proportion (up to two-thirds or more) of resources to primary care followed by secondary and tertiary care.

The foregoing discussion based on empirical evidences highlighted by the social, the finding of the situation analysis report, 2017and the policy changes introduced in the national health policy, 2017 clearly reveals that all is not well in regard to the working of health system in general and public health system in particular in India. Therefore, an attempt has been made to study the working of a major flagship program introduced by Government of Punjab under the garb of reforms in the public health sector by setting up Punjab Health Systems Corporation (PHSC) in 1995 to improve the access and quality of health services in Punjab.

1.5 The Scheme of the Study

The present study is divided into seven chapters. Chapter-I deals with the global health scenario with special reference to India. This chapter also presents the important research studies carried out at the national level in India, the Situation Analyses Report, 2017 and the main highlights of National Health Policy, 2017.

The database and research methodology is presented in Chapter-II. The dynamics of health services in Punjab is carried out in Chapter-III. The working of Punjab Health Systems Corporation is carried out in Chapter-IV. Further, the access and quality of services provided by PHSC in Punjab is presented in Chapter-V. Users' perception towards delivery of health services in Punjab is presented in Chapter-VI and the perception of doctors towards health services and level of job satisfaction among the doctors is carried out in Chapter-VII. The Summary, Conclusion and Recommendations are presented in Chapter-VIII.

CHAPTER II

DATABASE AND RESEARCH METHODOLOGY

2.1 Importance of the Study

The health services have become an important issue after the acceptance of neo-literal model of development at global level in general and India in particular. With the implementation of liberalization, the state has been continuously withdrawing from the field of health. As a result, the poor people are facing difficulties to avail these services. Moreover, the quality of public sector health services has deteriorated over the period of time. On the other hand, the private health services are going beyond the reach of common people. The mushrooming growth of unregulated private health players and the fall in the standard of the government health care sector demand the evaluation of existing situation of health sector at national level as well as the state level.

Although good number of studies has been conducted at national level in India, however, very few studies are available relating to the working of health sector in Punjab. Majority of studies are unanimous that the public health expenditure in India is very meager as compared to the developed economy as well as the developing countries at the global level.

The WHO data, 2015 reveals that India's total expenditure on health as percentage of GDP was 3.8 out of which public expenditure on health as percentage of GDP was only 1.2 percent which was lower than Sri Lanka (1.4 per cent), Bangladesh (1.3 per cent), and Nepal (2.6 per cent). Further, the share of government and private expenditure on health as percentage of total health expenditure was 30.5 per cent and 69.5 per cent. Moreover, the out of pocket expenditure as percentage of private expenditure on health was 87.2 per cent whereas in USA it was only 22.7 per cent (WHO statistics 2015).

Although Punjab government did not make any planned effort to improve the health scenario in Punjab, it took few initiatives in this direction. The main health initiatives taken to improve the Punjab health system include, namely, the formation of Punjab health system corporation (PHSC) in 1995, opening the health sector to private players and decentralization of health services at the block and village level. The purpose of setting PHSC was to improve the secondary level health services in the state. The access and quality of the health services were also sought to be improved. However, many studies carried out in Punjab as presented in the following discussion reveals that PHSC has failed to improve the delivery of quality health services in Punjab.

2.2 Objectives of the Study

The present study has been planned to focus on the following objectives:

1. To analyse the health scenario at the national level with special reference to National Health Policy, 2017;
2. To examine the present status and problems of public health care services in Punjab;
3. To study the working of Punjab health systems Corporation (PHSC) in terms of provision of access to quality health care services;
4. To examine the perception of user of health services provided by PHSC;
5. To identify the factors which influence the level of satisfaction among doctors working in PHSC hospitals; and
6. To suggest suitable recommendations for the improvement of access and quality of public health services in Punjab.

2.3 Universe of the study

The universe of the study includes all the District Hospitals (DHs), Sub-Divisional Hospitals (SDHs) and Community Health Centers (CHCs) working under Punjab Health Systems Corporation (PHSC). All the doctors working in these hospitals and the patients (both in-patients and out-patients) who got treatment from the hospitals and the doctors working in these hospitals constitute the population for the study.

2.4 Sources of Data

The present study focuses on the state of Punjab. The study is based on both primary and secondary data. However, secondary data has been collected from various published reports of Government of India and state of Punjab. The publications of World Health Organization have also been consulted. First two objectives of this project have been achieved on the basis of secondary data. Third objective has been achieved on the basis of both primary and secondary data while Fourth and Fifth objectives have been achieved by analyzing the primary data collected from the field. The primary data were collected during the period September 2016 to October 2017.

2.4.1 Secondary data sources

The online sources which have been accessed includes websites of World Health Organisation, Ministry of Health and Family Welfare, India (MoH&FW), National Sample Survey Organisation, Central Statistical Organisation (New Delhi), Union Budget of India, Punjab Health Systems Corporation, Health Department (Punjab), Economic and Statistical

Organisation (Punjab), JSTOR, Science Direct etc. various other papers, journals, books and Ph.D. Theses have been also consulted for the collection of required data. Apart from online data sources, various libraries at Delhi and Punjab were visited for the collection of secondary data.

2.5 Sampling Methodology

To achieve the objectives of the study the data were collected from 30 hospitals from 6 districts of Punjab, namely, Amritsar, Tarn Taran, Jalandhar, Hoshiarpur, Ludhiana and Bathinda. The due weightage has been given to all the three geographical regions of Punjab, namely, Amritsar and Tarn Taran of Majha region, Jalandhar and Hoshiarpur from Doaba region & Ludhiana and Bathinda from Malwa region. At first stage, from each region, 2 districts have been selected. In each district, 5 hospitals have been selected, namely, 1 District Hospital, 2 Sub-Divisional Hospitals and 2 Community Health Centers. Thus, total ten hospitals were selected from each region. These districts also represent substantial part of the international border area with Pakistan, namely Amritsar and Tarn Taran, the interstate border area with Himachal Pradesh, namely Hoshiarpur and the central part of Punjab, namely, Jalandhar, Ludhiana and Bathinda having border with Haryana. At the first stage, the hospitals were selected by proportionate stratified random sampling technique. At the second stage, the doctors and patients were selected by applying convenience random sampling technique.

2.5.1 Sample of Hospitals

We have selected 6 District Hospitals, 12 Sub Divisional Hospitals and 12 Community Health Centers. All the hospitals were managed by Punjab Health Systems Corporation at the time of survey. Table 2.1 shows the list of hospitals selected for the present study.

Table 2.1
List of hospitals selected for the study

S. No	Geographical Region	District	Name of the Hospital
1.	Majha	Amritsar	District Hospital, Amritsar
2.			Sub Divisional Hospital, Ajnala
3.			Sub Divisional Hospital, Baba Bakala
4.			Community Health Center, Lopoke
5.			Community Health Center, Majitha
6.		Tarn Taran	District Hospital, Tarn Taran
7.			Sub Divisional Hospital, Khadoor Sahib
8.			Sub Divisional Hospital, Patti
9.			Community Health Center, Kairon
10.			Community Health Center, Sur Singh

11.	Doaba	Jalandhar	District Hospital, Jalandhar
12.			Sub Divisional Hospital, Nakodar
13.			Sub Divisional Hospital, Phillaur
14.			Community Health Center, Kala Bakra
15.			Community Health Center, Kartarpur
16.		Hoshiarpur	District Hospital, Hoshiarpur
17.			Sub Divisional Hospital, Dasuya
18.			Sub Divisional Hospital, Mukerian
19.			Community Health Center, BholKalota
20.			Community Health Center,Tanda
21.	Malwa	Ludhiana	District Hospital, Ludhiana
22.			Sub Divisional Hospital, Jagraon
23.			Sub Divisional Hospital, Samrala
24.			Community Health Center, Machiwara
25.			Community Health Center,Sahnewal
26.		Bathinda	District Hospital, Bathinda
27.			Sub Divisional Hospital, RampuraPhool
28.			Sub Divisional Hospital, Talwandi Sabo
29.			Community Health Center, BhagtaBhaiKa
30.			Community Health Center,MaurMandi

2.5.2 Sample of Respondents (Patients)

After selecting the hospitals at three levels, namely, District Hospital, the Sub Divisional Hospital and the Community Health Centers, a representative sample of patients was taken at the second level. In order to measure the user's perception about the service providence, a sample of 300 patients (from both In Patient Department and Out Patient Department) was taken. The respondents were interviewed at the time of their exit from the hospitals. Further, 50 respondents were selected from each district at three levels. A convenience random sampling has been followed for the selection of respondents. It implies that respondents were selected by chance who happened to visit a particular hospital. Table 2.2 shows the district wise composition of respondent's sample.

Table 2.2
District wise composition of the Patient's Sample

District	Type of the Hospital			Total number of responses
	District Hospitals	Sub-Divisional Hospitals	Community Health Centers	
Amritsar	10	20	20	50
Tarn Taran	10	20	20	50
Jalandhar	10	20	20	50
Hoshiarpur	10	20	20	50
Ludhiana	10	20	20	50
Bathinda	10	20	20	50
Total	**60**	**120**	**120**	**300**

2.5.3 Sample of Doctors

Initially, it was planned to interview 120 doctors i.e. 20 doctors from each district, however, we could not get sufficient number of doctors to complete this target as a large number of doctors positions were lying vacant at the time of the survey. Therefore, only 95 doctors were interviewed by selecting at least 15 doctors from each district.

2.6 Instruments of Data Collection

Three separate research schedules were framed for the collection of primary data, namely, for collection of information from the hospitals relating to existing infrastructure and the provision of various services, second for the users (patients) of the services provided by PHSC and third for the doctors working in these hospitals.

- The first research schedule was framed to get the information on the hospital working, ease of access, hospital performance indicators, infrastructure, human resources and service providence facilities. In each hospital, officials working at reception, accounts branch, computer section, pharmacy and nursing station were interviewed to get the required data.
- The second research schedule was framed for the users i.e. the patients who had availed the services provided by the Punjab Health Systems Corporation in the selected districts. Both out-patients (OPD) and in-patients (IPD) were interviewed. The research schedule had questions related to demographic, socio-economic background of the patients as well as to record their perception regarding services provided by the hospitals. Further, the patients were also encouraged to mention the problems faced by them during the period of their treatment. A

sample of 300 patients was selected taking 50 patients from each sampled district. Due care was also given to give representation to the patients of three types of the hospitals.

- The third research schedule was framed to collect information relating to the demaographic profile of the doctors and to identify the factors which influence the level of satisfaction of the doctors working in PHSC hospitals. 23 statements were developed to record the responses of the doctors on a five point likert-type scale with the five options from 1 to 5 where 1 means 'Strongly Disagree', 2 means 'Disagree', 3 means 'Neither Agree nor Disagree', 4 means 'Agree' and 5 means 'Strongly Agree'. All the statements were positively worded to avoid any confusion. The statements were examined for the content validity through discussion with the experts.

2.7 Analysis of Secondary and Primary Data

For the analysis of data both simple and advanced statistical tools have been applied. The secondary data have been analysed by calculating percentages on the basis of frequencies. The bar-charts have also been prepared to show the data. SPSS (version 21) was used to analyse the data. Exploratory Factor Analysis (EFA) was applied to identify the factors which influence the level of satisfaction of the doctors working in PHSC. It is a multivariate technique which find-out the interrelationship between several variables. This technique is generally used to reduce the large number of variables to a small set of factors. These factors determine the dimensions within the data. Before applying factor analysis, data must fulfill the following assumptions, namely, Normality i.e. data should be normally distributed, Kaiser Meyer Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity. The value of KMO ranges between 0 to 1 and it should be closer to 1 for better results. Similarly, the Bartlett's test of sphericity is a test of null hypothesis which help us to find out that all the variables under study are uncorrelated. Further, the Correlation Matrix is prepared which indicate the relationship between the variables. Hair et. al. argued that the values of the matrix should be greater than 0.40 and preferably 0.50. If the value of elements in the correlation matrix is less than 0.30 then data is not considered fit for running factor analysis. After testing the data for above assumptions, Principal Components Analysis Method with Varimax Rotation was used for the extraction of factors. The Varimax Rotational approach makes the interpretation of factor loadings more clear. The factor loadings closer to 1 clearly indicate a high correlation between the variable and the factor whereas the factor loading closer to zero (0) shows the absence of such correlation.

2.8 Limitations of the study

- The study has been restricted to only six districts of Punjab, namely, Amritsar, Tarn Taran, Jalandhar, Hoshiarpur, Ludhiana and Bathinda. The findings may not be applicable to other areas of the Punjab.
- Due to limitation of time and resources, the response of limited respondents was collected. With greater sample size there would have been more possibility to generalize the findings of the study.
- The data have been collected in the study through a primary survey. The feedback of the respondents in such surveys may be biased. Sometimes the responses of the respondents are different than what they actually experienced because they want to keep their experiences confidential.

Chapter III
The Dynamics of Health Services in Punjab

Among the Indian states, Punjab is relatively a small state situated at the sensitive border of the country. It is among the highest income states, and was at the forefront of India's green revolution, which increased yields through the adoption of new high-yielding varieties of wheat and rice. It is among the first few states in the country with 100 per cent road connectivity in rural areas.

Punjab, known as India's granary, had been the fastest growing state of India till the 1990s. The compound annual growth rate of Gross State Domestic Product of Punjab was 7.88 per cent in 1985-86 as compared to 4.08 per cent growth in Gross Domestic Product of India (Sawhney, 2011). According to National Human Development Report (2001), Punjab was ranked second next only to Kerala in terms of Human Development Index (HDI) with lowest poverty rate. However, the speed of growth of the state started declining during the 1990s due to several reasons, particularly the saturation of agricultural sector, lack of industrial development and terrorism. As a result, the per capita income of the state started declining as compared to other major Indian states. Punjab was ranked 5th in terms of HDI as per Indian Human Development Report 2011. In the 1980s, Punjab ranked first in terms of per capita Net State Domestic Product (NSDP), however, in 2013-14 its rank declined to 14th. Although its per capita income is still more than the majority of the states of the country (Rs. 1,53,061/- in 2018-19) at the same time it has become one of the most debt burdened state of India. The debt of Punjab which was estimated 1.95 Lakh Crore in 2017-18 has increased further to 2.12 Lakh Crore estimated in budget 2018-19. The situation has reached to such level that the Punjab government generally borrows for paying off the salaries, pensions and for providing subsidies.

The financial crisis of the state has affected public spending in every sector especially the health sector. The funds allocated for the development of public health services got stagnated during the 1990s. The public health expenditure in Punjab (as a percentage of total budget expenditure) has continuously decreased over the last four decades from nearly 9-10 per cent in 1980-81 to 6.97 per cent in 1989-90 which further declined to 4.3 per cent in 2004-05 and 3.81 per cent of total annual budget in 2016-17. The low government health expenditure at the state levels has led to the deterioration of the health services.

Further, huge inter district disparities were observed as the health infrastructure was concentrated in three districts, namely, Amritsar, Ludhiana and Gurdaspur. Therefore, the Fourth

plan aimed at expanding the health services in the lagging districts especially in the rural areas. Besides this, the family planning programmes were given importance to control the growing population. During the Fifth plan, the development of health infrastructure was the major goal. In order to achieve this, the plan proposed to set up new dispensaries, dental clinic and to upgrade the existing Primary health centres (Human Development Report of Punjab, 2004).

The Sixth plan observed that there were an adequate number of medical institutions in the state but these were not working properly due to the absence of health manpower and up to date equipment. So, the focus of the plan was shifted from improvement of infrastructure to its efficient functioning. Similarly, the Seventh plan decided to spend on the transformation of the existing equipment in the medical institutions. The health infrastructure and workforce remained the prime concern of the Eighth and the Ninth plan. In these plans, the government emphasized the need to figure out the factors responsible for the poor health conditions in the state. Like the earlier plans, the Tenth plan focused on strengthening the existing medical infrastructure providing Allopathic, Homeopathic and Ayurvedic health services. The impact of the launch of National Rural Health Mission by the central government in 2005 was visible in the Eleventh plan of Punjab. As a result, in this plan, the Punjab government aimed at improving the rural health in the state. For this purpose, Rog Kalyani Samitis at the village levels were formed to increase the participation of the masses.

The most recent plan i.e. the Twelfth plan aimed to improve the infrastructure and educational facilities in the medical colleges. It also proposed to start programmes to train the medical and para-medical staff to improve their skills (Draft Twelfth five year plan, 2007-12). Although in the recent plans there has been an increase in the health expenditure in absolute terms but it has been spent mostly on the curative health services. However, the state government like the central government has not given due importance to the preventive health care measures to check the incidence of Non communicable diseases like diabetes, Cardiovascular disease and cancer which has put a serious challenge to the health sector in Punjab. The absence of a regulatory system for the private health players is yet another issue in the health sector of Punjab. Further, the deficiency of modern equipment and shortage of doctors and other supporting staff has impacted the access and delivery of quality health services in Punjab.

In spite of all these efforts made by the government the health outcomes record in many dimensions (e.g. maternal and infant mortality rates) have not been found satisfactory in terms of Millennium Development Goals and Sustainable Development Goals. Due to the declining share

of public health expenditure, the government hospitals in Punjab are suffering from lack of medicine supplies, shortage of doctors, and possibly, a misplaced emphasis on treatment rather than prevention. Even the funds that are available are not being used fully. In Punjab, most of the government hospitals are overcrowded and private health sector services are out of reach of common public. Moreover, there are very few government hospitals in proportion to population which are providing tertiary healthcare which is the most expensive.

3.1 Health reforms in Punjab

In the post liberalization period, the government allocation to the health sector got major set-back at the national as well as the state level. Although the Punjab state government failed to make any planned efforts to improve the health scenario, however, under the influence of the national economic reforms, few initiatives were taken. The main health initiatives taken to restructure the Punjab health system include the formation of Punjab Health Systems Corporations (PHSC) in 1995, opening the health sector to private players and decentralization of health services at the village levels.

3.2 Punjab Health System Corporation (1996)

The secondary level health care institutions occupy a very important position in the state health care system. In the mid 1990s, the district hospitals, sub divisional hospitals and Community health centres of Punjab were in pitiable condition due to the shortage of infrastructure, manpower and lower health expenditure. To overcome this, Punjab government requested the World Bank to provide financial aid to improve the access and quality of basic health services in the state. As a result, the International Development Association (IDA) approved credit under Multi-State Health System Development Project to three states of India namely, Punjab, Karnataka and West Bengal (National Institute of Health and Family Welfare report on PHSC, 2008). The total project cost in Punjab was estimated around US$106.1 million out of which US$ 89.7million was sanctioned by IDA and rest of US$16.4 million was met by the Punjab Government. Thus, the Punjab Health Systems Corporation (PHSC) was incorporated by the State Government in the year 1996 through the enactment of Legislative Act, “The Punjab Health Systems Corporation Act, 1996” (Punjab Act No.6 of 1996). The corporation took over around 166 medical institutions which included district hospitals, sub divisional hospitals and community health centres. It is pertinent to mention that IDA agreed to extend financial assistance for the health sector subject to the conditions that the government of Punjab will set-up a separate corporation in addition to the existing departments of health sector in Punjab. At the initial stage, Punjab government resisted the proposal but later on it succumbed to the

pressure of the World Bank. So ultimately a parallel health system was created in the form of a corporation.

However, the setting up of PHSC as a parallel system of health to the existing state health department further contributed to the existing disorder in the health system of Punjab (Gupta, 2000).The problems of corruption, poor management and favouritism continued in PHSC as it was controlled by the same officials who were managing the previous system. Contrary to the objective of increasing health financing, the government allocation to secondary level health services decreased from 25 per cent (of total health expenditure) in 1994 to 19 per cent in 2003 (State health system development project II: World bank implementation report, 2004). It is interesting to note that the Directorate of Public Enterprises and Disinvestment, Punjab in their policy for disinvestment (2002) recommended the winding up of Punjab Health System Corporation due to its inability to improve the health scenario of Punjab during 7 years of its functioning. On the other hand, the World Bank II state development project implementation report found it to be a success and suggested the continuation of the corporation. Finally, the status of PHSC was converted from an autonomous body to a government entity under the Department of Health and Family Welfare, Punjab from 2002 (Mulay and Sharma, 2006). So the attempt to improve the health services at the secondary level got a serious set-back.

3.3 Public Private Partnership

Under the influence of National Economic Reforms and the formation of PHSC in Punjab, the state government opened the health sector to the private investment. With the objective of setting up super speciality medical institutions, Punjab Urban Development Authority (PUDA) started offering lands at subsidised rates to the private sector (Bhatt, 2000). In return, it was expected that these private hospitals would provide free treatment to below poverty line people- up to 10 per cent of the outdoor and 5 per cent of the indoor patients coming to these hospitals. However, according to a field survey majority of the people were unaware about this scheme under which the yellow card holders were exempted from the user fee in private super speciality hospitals (Ghuman and Mehta, 2005).

Another, Public Private Partnership (PPP) initiative was the implementation of Rashtriya Swasthya Bima Yojna under which private health insurance companies were also involved in managing the scheme. In addition, Punjab government also took various PPP initiatives which include setting-up Mohali and Bathinda Hospitals in collaboration with Max Healthcare, Fatehgarh sahib Mother and child hospital, Nangal General Hospital and Nabha Civil Hospital.

The major reason for inviting private investment was the shortage of government funds which led to incomplete hospital construction projects and the poor functioning of the completed projects.

The empirical evidence support that except the Max healthcare project, the other PPP initiatives in the state have faced several challenges. Firstly due to the local variations within the state, similar type of projects cannot be launched everywhere. Secondly, these projects have attempted to expand the infrastructure rather than planning to make optimum use of the existing private sector infrastructure. The reason behind more investment on infrastructure seems to be the government's desire to show that it is doing a lot to improve the public health.

3.4 Decentralisation of Health Sector

In 1993, the World Bank in its report recommended the decentralisation of management of health services to increase efficiency (The World Development Report, 1993). As a result various developed and developing countries implemented this idea and experienced mixed results. In India, to strengthen the rural self governance system, Panchayati Raj Institutions (PRIs) was formed through 73rd constitutional amendment act in 1992. Health was one of the 29 functions transferred to the PRIs. Although some of the states transferred the powers and funds to the PRIs but overall the response was not very encouraging.

The government of Punjab also remained slow in devolving power to the panchayat bodies. However, the launch of NRHM gave an impetus to the decentralization process. The district health mission launched under NRHM, 2005 was to be carried on, under the leadership of Zila Parishad with district health head as convener, thereby, indicating the transfer of powers by the Department of Health and Family Welfare. Another step taken to increase the community participation was the formation of Rogi Kalyani Samitis (RKS) at district, sub divisional, CHC and PHC levels (Kaur et al. 2012). In 2006, the Punjab government introduced the concept of decentralisation in the health sector in order to better understand and fulfil the local health needs of the rural areas. An initiative was taken to transfer 1186 Subsidiary Health centres (rural dispensaries) out of total 2951 to Panchayati Raj Institutions. Under this scheme, the zila parishads were authorized to appoint a service provider for every dispensary who was, in turn, responsible for hiring the required workforce in the SHC. Unfortunately, all these initiatives under the decentralized policy could not produce good results in Punjab.

The critics are of the view that handing over of rural dispensaries to PRIs has resulted in two parallel health systems in Punjab as it happened in case of PHSC. At the time of initiating this reform, the Punjab government promised to supply medicines to each dispensary to be provided to poor patients free of cost. However, the actual picture remained quite gloomy as the dispensaries lack adequate facilities and the medicine supply was totally stopped after sometime. The unavailability of basic medicines led to a huge decline in the number of patients visiting these dispensaries. In 2006, these dispensaries were visited by nearly 80 lakh patients per year which came down to 15 lakhs in 2014 (The Times of India, 2014). The officials of the Rural Development and Panchayats Department, responsible for supervising the dispensaries were found to be least concerned about the supply of the medicines. Lack of exposure to training and medical seminars, the rural medical officers started demanding their merger with the health department run by the government. Moreover, the doctors were facing lot of problems in getting their salaries due to irregular delivery of finance by the department.

It has been observed that the government has implemented only administrative decentralization which was not a solution to improve the faulty health care system. There was a need to transfer decision making and financial powers at the lower levels so that the resources can be used according to the local needs.

3.5 Health Scenario of Punjab in the backdrop of Liberalisation

3.5.1 Major Health Indicators

As the health status is a multidimensional concept, so its exact measurement is very difficult. However, some important indicators are often used to measure the status of health. These include the Birth Rate, Death Rate and Infant Mortality Rate (IMR). In this section the various health indicators in Punjab have been analyzed for the last few decades and the decadel averages are presented in table 3.1.

Table 3.1
Trend of Health Indicators in Punjab

Year	Birth Rate			Death Rate			Infant Mortality Rate		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
1981-1990 10 yearly average	29.6	27.8	29.1	9.2	6.6	8.5	74	53	69
1991-2000 10 yearly average	25.5	20.9	24.3	8.1	6	7.6	57.4	38.9	53.2
2001-2010 10 yearly average	19.3	17	18.5	7.4	5.9	6.9	48	34	44

Source: Statistical Abstract of Punjab (Various issues)

The analysis of data reveals that there is a visible decline in many of the parameters over the period of time.

This decline can be attributed to the increased immunisation coverage of the infants for health problems like measles, Diphtheria etc. Moreover, the introduction of various child survival programmes under NRHM has also helped to bring down the IMR. However, the decline in the total death rate was higher in the pre-reform period as compared to the next two decades. The higher death rate after 2000 has been due to the outbreak of dengue in this period. The changing lifestyle of the people has also led to an increase in the number of deaths due to non-communicable diseases like cancer, cardiovascular disease, diabetes etc. On the contrary, the birth rate declined at 3.0 per cent per year between 1990 and 2000 which is higher than the pre reform period. There has been a reduction of 50 per cent in birth rate between 1980 and 2010. The increasing literacy rate, urbanization and higher economic status are mainly contributing to the low levels of fertility. The life expectancy in Punjab for male and females was 69.7 and 72.8, which was higher than national average of 67.3 and 69.6 (National Health Profile of India, 2015). All these improvements show positive developments in the field of health sector in Punjab.

In spite of the fact that Punjab is heading fast towards the achievement of Millennium Development Goals on these health indicators, however, there are various health issues which need attention. One of these issues is rural urban differences in the health standards. For instance, 2001-2010 average birth rate in rural Punjab was 19.3 compared to 17 in urban Punjab. Similarly, the average rural death rate (7.4) was higher than the urban death rate (5.9). As regards the Infant Mortality Rate, it was 48 in rural Punjab and 34 in urban Punjab. The lack of physical health facilities, manpower and basic medicines in the rural areas was given the primary reason for these disparities (Gill et al., 2010). In the absence of sound health facilities, rural people depend on the expensive and poor health services provided by the unqualified doctors. In order to bridge this gap, the Punjab government needs to put the rural health issues on its agenda.

3.5.2 Health Expenditure

One of the reasons for the difference in the pace of economic development and social development in Punjab is the lower allocation of resources to the social sector particularly the health sector. In absolute terms, the government health expenditure on revenue account has increased from Rs 196.97 crores in 1990-91 to Rs 2561.29 crores in 2014-15. According to the

Statistical Abstract of Punjab, 5.21 per cent of the government expenditure has been spent on health and family welfare in 2014 -15 which is still lower than the pre-reforms period. Although the PHSC attempted to increase the public expenditure on health after its formation, however, it could not retain it for long. A similar trend is observed when health expenditure is seen as a proportion of development expenditure and social sector expenditure. In 2014-15 the government expenditure on health was Rs. 2561.29 which is nearly one-third of the expenditure on education, sports and art (Rs. 7799.83 crore). Despite the fact that health is an important determinant of human capital, the Punjab Government has allocated lesser funds to health as compared to other sectors (Ghuman, Saif 2016).

Besides the health expenditure by the state government, the health sector of Punjab also depends on the funds allocated by Central government under various health programmes. The funds for these schemes are released under the NRHM. Table 3.2 shows the percentage of committed funds released under NRHM and the proportion of the released amount which remained unspent in the state.

Table 3.2
NRHM Funds utilisation by states

State	Amount released by Central Government as a ratio of funds committed under NRHM: 2005-06 to 2012-13 (percentage)	Absorptive capacity: Unspent amount as a ratio of funds released under NRHM:2005-06 to 2012-13 (percentage)
Punjab	96.20	47.60
Andhra Pradesh	81.30	29.10
Kerala	83.90	17.10
Assam	76.50	7.10
Rajasthan	103.40	4.70
Tamil Nadu	86.60	10.20

Source: Press Information Bureau, Government of India, Ministry of Health and Family Welfare

The analysis of data reveals that during the period between 2005-06 and 2012-13, 47.6 per cent of the total funds released remained unspent in Punjab. In comparison, this percentage is very low in most of the other states. It shows the failure of the Punjab government to utilize the funds received under NRHM. The government's inability to do so can be attributed to lack of plans and their execution in the state. In order to improve the health status of Punjab, it is essential to increase the absorptive capacity of the state and the allocation of resources by the state to the health sector. It may also be due to the fact that some schemes of the central government have condition of matching share of the state.

3.5.3 Health Infrastructure and Manpower in Punjab

The available data reveals that from 1980 to 1986, nearly 10 per cent of the total government expenditure was spent on the health sector in Punjab. As a result, the number of health institutions in Punjab showed an upward trend during this period. There were 1008 rural medical institutions in 1979 in the state which went up to 1799 in 1990 (Statistical Abstract of Punjab). The primary reason for this increase in the rural health infrastructure was the introduction of Minimum Needs Programme by the Central Government in the fifth five year plan. The programme was continued during next five year plans and it focussed on the issues in the rural areas. However after the introduction of economic reforms, the government health expenditure went down which led to stagnation in the health infrastructure in Punjab (Randhawa and Sidhu, 2011).

An attempt has also been made to compare the data relating to health infrastructure in Punjab on the basis of three indicators, namely, total number of medical institutions, total number of beds and total number of doctors during the period 1971 to 2010. Further, the period from 1971-1990 was taken as pre-reforms period while period from 1991-2010 has been considered as the post-reforms period on the basis of data available in various issues of statistical abstract of Punjab. The analysis of data reveals that the average number of medical institutions for the period 1971-1980 was 919, the average number of beds was 13005, and the average number of doctors was 6939 for the same period. If we take the 10 years average for the period 1981-1990 the figure increased to 2141, 22590 and 11119 respectively. So, the comparison of these two decades clearly shows that there is a substantial increase on account of all these three parameters which indicates the improvement in the health infrastructure in Punjab during the pre-reforms period. However, this increase was marginal during the period 1991-2000 as the first decade of economic reforms and the number increased to 2222, 24931 and 15056 respectively. When we move further and look on the period 2001-2010 i.e. the second decade of economic reforms we find that there is a decline in the first two indicators and the number declined to 2177 and 24381whereas the third indicator (doctors' strength) increased from 15056 to 19728 during the same period. So, Punjab witnessed a negative growth rate during the post-reforms period in regard to number of medical institutions and number of total beds available during the period from 1991-2010. This decline has impact on population served per institution and availability of beds in Punjab during the post-reforms period. So, again three parameters are taken to analyse the data for these four decades by taking the indicators, namely, population served per

institution, population served per bed and population served per doctor. The figures for these three parameters are 18109, 1189 and 2210 as an average for the period 1971-1980. This situation improved during the period 1981-1990 when the population served per institution declined to 8795, 833 (population served per bed) and 1687 (population served per doctor). However, we find a reverse trend during the first decade of post-reforms period (1991-2000) with the number increased in case of first two parameters while there was decline on account of third parameter. The population served per institution increased to 9967, 888 (population served per bed) and 1500 (population served per doctor). This number further increased in case of first two parameters to 11919, 1068 but declined to 1346 in case of third parameter i.e. population served per doctor. So, a clear relationship emerge that the decline in the total number of medical institutions, total number of beds during the post-reforms period has led to the increase in population served per institution and per bed. On the other hand, the increase in the number of doctors has improved the situation in regard to the population served per doctor in Punjab during both pre and post-reforms period. The declining trend of the medical institutions and the number of beds in Public health sector of Punjab accompanied with the increasing population in the state has affected the population served per institution and availability of bed. However, this trend has reversed from 2011 onwards. The recent data analysis reveals that population served per doctor has drastically increased to 9817 as on 31/12/2017.

The analysis of data further reveals that the health infrastructure at the rural end remains inadequate as the state has not been able to meet the standards set by the centre regarding the population served by CHC, PHC and SC. According to the IPHS norms, there should be one CHC for 1,20,000, PHC for 30,000 population and SC for 5000 in plain areas. As against these standards, each SC was serving a population of 5,877 and the people served by PHC are 40,619. Due to the deficient number of government medical institutions, the patient load is very high on the existing health institutions. In Punjab the number of villages covered by one PHC is 29 and only one CHC is available for 84 villages. All these indices show the poor condition of the health services in rural Punjab. Besides this, the condition of the existing rural health dispensaries is deplorable as they lack the basic facilities. In Punjab, nearly 165 sub centres were working without proper water supply and 200 were without regular electric supply. So in order to improve the overall health status of Punjab, the rural health should be given the top most priority (Ghuman Saif 2016).

3.5.4 Patients Treated in Medical Institutions of Punjab

The number of patients availing the public health services is another indicator of the utilisation of the health facilities provided in the government hospitals. The analysis of data based on four decades covering the period from 1970-1990 and 1991-2010 by taking two important indicators, namely, number of in-patients and out-patients treated by the public hospitals reveals that there is a continuous increase in the in-patients and out-patients during both the pre and post-reforms period in Punjab. However, the increase in number of patients during the pre-reforms period was higher than the increase during the post-reforms period. For instance, the number of in-patients was 300980 which increased to 444694 which further increased to 457620 and 483700 for the period 1971-1980 (average), 1981-1990 (average) followed by 1991-2000 and 2001-2010. Similarly, the number of out-patients treated also increased from 9431703 (10 year average) to 12732989 which declined to 10921590 but again increased to 12575000 for the same period i.e. four decades of pre and post-reforms period in Punjab. The declining growth rate, despite the increasing population, shows the lack of trust in the public medical institutions among the people. Another finding which is a matter of great concern is the small number of indoor patients availing the government health services. The analysis reveals that the post reforms period witnessed the deterioration of the government health services and the growth of the private health care providers (Ghuman Saif 2016).

3.6 Major Health Issues in Punjab and Government's Initiatives

3.6.1 Maternal Health

In order to achieve the targets, the government has focused on providing the ante-natal care, safe delivery and post natal care through various maternal health programmes. Janani Suraksha Yojana (JSY) was the first major initiative launched under NRHM in 2005. It aims to shift the births from home to health institutions and also provides financial support to the women belonging to scheduled castes and below the poverty line. Apart from the central government schemes for improving the maternal health, several other initiatives have been taken by the Punjab government. These include Surakhit Janepa Yojana, a public private partnership under which BPL and SC women can get the delivery done for free from certain accredited private institutions. Another state scheme named Mata Kaushalya Yojna was started in 2011 to motivate the women for deliveries in public health institutions by giving them financial incentives. Under this scheme, every woman irrespective of caste and economic status is given Rs 1000 for delivering their baby in a government medical institution. The Punjab government has also

launched Mother and Child Health Plan (2014-2017) to effectively implement the maternal and child health schemes framed by the central government.

All these steps have led to a drastic change in the percentage of institutional deliveries in Punjab. In 2008-09, only 59 per cent of the total births took place in health institutions which increased to 85 per cent in 2014 (Health Management Information System, Punjab). Despite this increase, the MMR has shown a very slow improvement. The reason is that these schemes concentrated on only one aspect of maternal health which is institutional delivery, ignoring the improvement in quality of care which is provided to pregnant women in the health institutions. A large proportion of the Auxiliary Nurse Midwives and doctors handling the deliveries lack the Skilled Birth Attendant (SBA) training (Randive et al., 2013) The current status of maternal health and the achievement of the maternal health programmes indicate that the objective of 'skilled birth attendance' has been substituted with 'institutional deliveries'. Moreover, the programmes have failed to reach the neediest section of the women highlighting the inequitable approach of these schemes. Inter district variations also exist in the number of women registered for JSY. Out of the total number of women registered for Ante Natal Care only a small proportion was registered to receive the benefits of the JSY in some districts such as Pathankot, Gurdaspur, Fatehgarh Sahib (SRS Bulletin, 2014). Another issue of concern for these schemes is the lack of timely disbursement of financial incentives. This problem is more critical in the Punjab's Mata Kaushalaya Yojana which is currently facing a fund deficit. As per the scheme the beneficiaries should be given the financial support on the day of discharge from the hospital, however, the hospitals often receive grants after the discharge of the patient (The Tribune, July 30, 2015). Thus, the beneficiaries are facing hardship to collect the incentives promised by the government.

3.6.2 Cancer crisis in Punjab

The increasing incidence of cancer cases in Punjab is the most critical issue being faced by state health system. The situation is so alarming that there are 90 cancer patients per 1,00,000 people which is higher than the Indian average of 80 per lakh. In 2012 it was found that on an average 127 people die of cancer per lakh population in Punjab and this number was 144 in Malwa region. The second highest incidence is in Doaba region with a death rate of 136.

The Cancer survey report (2012) revealed that 34,430 people died of cancer in Punjab in five years (2007-2012). It was after this report that the government woke up and felt the need of cancer prevention schemes and hospitals offering specialised treatment. As a result, Mukh

Mantri Punjab Cancer Rahat Kosh Scheme (MMPCRKS) was launched in 2012. Under this scheme, the cancer patients who are non-government employees and are without health insurance are entitled to free treatment of cancer (with maximum ceiling of 1.5 lakh per case) in the hospitals empanelled by the Punjab Government. The majority of the empanelled hospitals are private which inflates the treatment costs beyond 1.5 lakhs compelling the patients to pay the balance.

It has been seen that in the absence of an affordable treatment option in Punjab the poor patients travel to Acharya Tulsi Regional Cancer Institute, Bikaner to avail the benefits of MMPCRKS. The train from Bathinda to Bikaner carries an average of 100 patients everyday and is commonly called as 'The Cancer Train'. The recent development in this field is the setting up of two new cancer hospitals in Punjab, namely, Homi Bhabha Cancer Super speciality hospital in Sangrur and Advanced Cancer Treatment and Research Centre at Bathinda. Moreover, a Cancer hospital is under construction in Mullanpur (Chandigarh) and is expected to start operating soon. In another initiative, the state government has collaborated with a non government organisation called 'Roko cancer' which organises cancer detection and awareness camps free of cost. The diagnosis is done with the help of cancer detection mobile units. A total of 987 common cancer patients were found from 1.1.2018 to 31.12.2018 as per National Health Profile 2019.

The higher incidence of cancer has forced the Central Government to start Punjab Cancer atlas project under Indian Council of Medical Research. The project aimed at collecting the data to determine the most prevalent type of cancer and its patterns across the state. The first report of Cancer Atlas was prepared for the years 2012 and 2013. The report revealed that in male patients the prostate cancer was the most common whereas the majority of the female patients had breast cancer. Although the government has taken few steps for the treatment of cancer patients, a lot more needs to be done to control the deadly disease. Besides, the curative measures the government needs to emphasize on the preventive measures. The people should be educated about the harmful effects of excessive use of pesticides and the intake of alcohol and tobacco should also be discouraged (Ghuman, Saif, 2016).

3.7 Recent Initiatives to Strengthen Health System in Punjab

Besides the health initiatives taken by the Punjab government discussed above the following citizen services have also been started recently in the state to strengthen the existing health system.

The Punjab health department is developing integrated HMIS under which the information of all the health schemes in the state will be pooled. This information system will help to monitor the performance of various health programmes being run in the state.

ERS also called 108 service is a 24-hour ambulance service for the accident victims and the patients requiring critical care. This free of cost service was started in Punjab in 2011 under public private partnership model. The Punjab government in partnership with Ziqitza Healthcare Limited (ZHL) launched this service with 90 ambulances and the number was later increased to 240 in a phased manner (Punjab Health System Corporation). The service proved to be very beneficial and in four years of its operation, it was used by nearly 10 lakh people (The Tribune, 2015). The annual expenditure on this network of ambulances is Rs. 17 crores out of which 80 per cent is incurred by the Punjab government and 20 per cent by the centre (NRHM). A study by PGIMER regarding 108 ambulances found the number of ambulances to be adequate but it criticized the service for its high cost. The operating cost of ERS per patient is quite high. Therefore, the state government should take steps to bring down the operating cost of the ambulances.

104 health helpline service was launched by Punjab government in 2014. It is a 24-hour toll-free service through which the callers can get medical advice from a doctor and information on various health issues and schemes from a competent and qualified person. The aim of the service is to provide health information to the people, particularly in the far flung areas. Apart from this, it also acts as a grievance redressal system for the patients of the government health institutions. The service is provided through a call centre operated by ZHL. The utility of this service may be judged from the fact that total of 47, 476 calls were received at 104 helpline in one year i.e. from June 2014 to June 2015 out of which majority of the callers sought information about the health schemes in Punjab (The Tribune, 2015).

MMU is a service which attempts to take the delivery of health services at the doorstep of the people living in the rural areas and urban slums where the health facilities are not easily accessible. The MMUs in Punjab operate under Punjab Health System Corporation since 2008. There were 24 well equipped MMUs in the state (PHSC data). Each MMU consists of one or two vehicles which carry a team of medical staff and diagnostic tools such as X-ray, ECG machine. At least one MMU is assigned to each district to provide primary health care facilities by

conducting basic health investigations of the people. All the diagnostic services and supply of medicines are provided free of cost. The concept of MMUs is undoubtedly a positive step to improve the provision of health services. But the PHSC data shows that the number of patients examined and X-rays done is declining year by year. In 2013-14, 354654 patients were examined by MMUs and 6795 X-rays were done as compared to 477006 and 9998 in 2010-11. The decrease in the number of patients may be attributed to low efficiency and quality of health care provided by MMUs. It has been reported that the Punjab government has failed to release the funds in time to effectively run these units. The shortage of medical officers and laboratory technicians is another issue being faced by this service (Hindustan Times, 2014).

Telemedicine refers to the use of information technology to provide specialised healthcare to the patients in remote areas. In Punjab, there are 22 telemedicine sites which include 3 medical colleges and 19 hospitals. The hospitals are digitally connected to PGI, Chandigarh and state medical colleges which help the patients to get expert advice from the doctors through video conferencing without spending time and money on travelling. The success of this project is possible only if the installed technology is efficiently used by hiring tech-savvy staff. The telemedicine sites in Punjab are facing a shortage of motivated and skilled staff which results in frequent mistakes such as sending incomplete histories of the patient. Moreover, it has been observed that most of the referrals are made in the last week of the month which might be due to pressure to meet the utilisation targets set for each month (Mittal, 2013). As this concept is new, the state health department should provide proper training to the doctors and motivate them to make increased use of it.

3.8 Empirical Evidences of Health Scenario in Punjab

Gill and Ghuman (2000) observed that prioritising rural health care in the state policy by allocating additional investments for sanitary infrastructure and medical personnel in rural areas is essential for redressing the growing disparity in health care facilities between rural and urban Punjab.

Ghuman and Mehta (2009) investigated the key concerns of health sector in India, i.e., quality of healthcare and accessibility of health services. The study was conducted in the Muktsar District of Punjab state. Data was obtained from a sample of 352 families which includes 300 rural and 52 urban families. The findings of the study revealed the preference of

people for private health care services over public health care services. Lack of proper health care infrastructure and its maintenance along with insufficient government attention towards health sector in state allowed the even existing facilities to deteriorate. The authors suggested for allocation of more funds for shaping public health care services in order to tackle key concerns of health sector (like scarcity of health care personnel, lack of range of good health care facilities/schemes etc.).

Singh (2010) observed that commercialisation and privatisation of health services have excluded a sizeable proportion of the population, particularly those belonging to socially disadvantaged groups like landless labourers, marginal and small farmers, and poor from the coverage of health services provided by organized sector in rural areas. The subsequent financial burden of private healthcare services is responsible for a large proportion of total borrowing by these underprivileged sections of society. Therefore, policy measures like increasing the share of state's expenditure on healthcare, especially in rural areas, improving the existing healthcare facilities, filling up of vacant posts in these institutions, frequent surprise visits by higher officials to check absenteeism, compulsory rural postings of staff and fixing accountability of employees are necessary to improve the rural health service delivery in the Punjab state.

Gill et al. (2010) conducted a study to investigate the impact of withdrawal of state government from the health sector in Punjab. The findings of the study showed that (i) due to stagnated public care infrastructure, bed occupancy rate is very low in public hospital, and (ii) due to lack of funds, vacancies are not filled, thus shortage of health workforce. In this context, the study recommended for the adoption of a proper health policy by the state government with fresh investment in health sector along with providing platforms for community participation in this sector.

Randhawa and Sidhu (2011) examined the status of public health care services in the Punjab state in the post reform period. The study was based on the secondary sources of data. The authors argued that although Punjab state is among front runners as per agricultural produce indicators but lags behind as compared to other states in terms of health indicators. Further, even the setting up of Punjab Health Systems Corporation (PHSC) with the assistance of World Bank couldn't save the fall in accessibility and quality of health care services in the state. The study found that healthcare has become a pure commodity in Punjab, those who can afford can avail the services and for others especially the poor section of society, it has become a distant dream.

Singh (2011) examined the current state of public-private partnerships (PPPs) in health care in Punjab, and possibilities for new kinds of initiatives in this broad category of institutional arrangements. The study observed that Indian government has recognized the need for public policy action, and is implementing a massive National Rural Health Mission (NRHM) to improve public sector delivery of health care services, especially in poorer states, and especially to the poor all over the country. The NRHM involves substantial increases in funding, and many innovations in organizational arrangements, including collaborations with a range of private sector entities. In the state of Punjab also the NRHM provides substantial new funding to the Punjab government, and it, too, is attempting reforms in publicly provided health care services. In parallel, the Punjab government has a well-defined procedure for considering PPPs, including in health care, but with a focus on the strengthening of infrastructure, i.e., hospitals in this particular sector. The study found that the current use of PPPs for health care in Punjab is moderately successful, but with extremely limited scope.

Singh et al. (2013) carried out a study to measure patient's satisfaction with the help of simple and cost effective way of evaluating hospital's performance and the services they provide. The study found that most of the patients were satisfied with the behavior of the doctors and were dissatisfied with the cleanliness of hospital premises (toilets and wards). Maximum number of patients visiting government hospitals was from the poor section of the community.

The cancer survey report (2012) revealed that 34430 patients died of cancer in Punjab in Five years (2007-12). There was threefold increase in the number of cancer patients between 2009 to 2012. It was after this report that government launched Mukh Mantri Punjab Cancer Rahat Kosh Scheme (MMPCRKS) in 2012. Under this scheme, the non-government employees and those who are without health insurance are entitled to free treatment of cancer (with maximum ceiling of Rs. 1.5 lakh per case) in hospitals empanelled by the government of Punjab. However, majority of the empanelled hospitals are private in nature which inflates the treatment cost beyond 1.5 lakh compelling the patients to pay from the pocket. This has become a major cause of increasing debt burden in rural Punjab leading to suicide by farmers and agricultural labourers in Punjab (The Tribune, April 4, 2015).

Prinja et al. (2016) analyzed the economic cost of delivering health care services in fourteen hospitals of three states, namely, Punjab, Haryana and Himachal Pradesh. The study found that more than 50 per cent of the funds were utilized to pay salaries to the doctors and the

staff. They also found that a very meager allocation of Rs. 162 per capita per year was to meet the cost of preventive and curative services at PHC and CHC level of care.

Ghuman, Saif (2016) highlighted that beside cancer, drug addiction is another serious problem in Punjab. To deal with the situation, 31 drug de-addiction centres (DDCs) have been set-up by the government of Punjab in addition to large number of private drug de-addiction centres. Apart from this, the government has set-up five 50 bedded drug de-addiction centres with modern facilities at Bathinda, Faridkot, Jalandhar and Amritsar. The government approved a sum of Rs. 100 lakh for the year 2014-15 to control the drug menace. The number of drug addicts is so large, but the government charged an amount of Rs 1000 as admission fee from the addicts and Rs. 200 per day in DDC which lead to decrease in bed occupancy in these centres.

Ghuman, Saif (2016) further, found that there is a significant association between the monthly income of the family and occupation of the patient and the type of hospital chosen for treatment by the patient. In other words, analysis reveals that the families with higher income prefer to use the services of private hospitals. On the other hand, majority of the government health services users belong to either farming sector or were labourers who happen to be from poor income group. The study further found that except 'cost of availing hospital services', on all other factors the private hospitals' patients were found more satisfied than the government hospitals' patients. Despite the dissatisfaction of the patients with the high cost of the private health services they were found to be overall more satisfied. This is the cause of poor condition of the government health services in Punjab.

The foregoing analysis of the review of literature leads us to the conclusion that health reforms have failed to improve the health system in Punjab. It has been noticed that the government created new infrastructure under PHSC instead of strengthening the existing one which lead to wastage of funds in the creation of a parallel health system to the existing system. Further, the state is still facing a huge shortage of specialist doctors and infrastructure which is forcing people to use private health services. Further, gradual withdrawl of the government from the health sector and encouragement to private sector by giving them subsidies and exempting them from taxes has further weakened the public health sector. The dependence of patients on private sector has increased the financial burden on the poor. Further, public-private partnership has also not been found to be successful in Punjab. The increasing cost of health services in the private sector forced the poor sections to depend on the poor quality services of the public health sector.

Furthermore, the decentralization of public health services through the zila parishad has also failed to improve the access and delivery of public health services in Punjab. It has been found that due to the poor financial health Punjab government has failed to utilize the health funding provided under the NRHM as well as the other centrally financed schemes of health. The most important issue which emerge from the empirical evidences that common people has lost faith in public health system due to which they prefer to avail private health services in Punjab. Moreover, Punjab government could not develop a long run health policy to deal with non-communicable diseases like cancer and drug addiction.

CHAPTER IV

WORKING OF PUNJAB HEALTH SYSTEMS CORPORATION

Secondary or First Referral Healthcare institutions play a vital and complementary role in the primary and tertiary health care system. In the 1990s, District hospitals, Sub – Divisional Hospitals and Community Health Centers of the Punjab state were in the poor condition due to staff crunch and lack of funds required for development of infrastructure. To overcome this problem, Punjab government approached the World Bank to provide financial aid to improve quality of healthcare delivery system. As a result, on Feb 20, 1996 World Bank proposed a credit of USD 350 million under Multi-State Health System Development Project to India with the aim to assist Government of Punjab, Karnataka and West Bengal to put in place a first referral healthcare system (MoU World Bank, 1996). Out of USD 350 million allocated to three states of India, in the state of Punjab, PHSC was set up with the financial assistance of around USD 106.1 million in the state of Punjab. USD 89.7 million was sanctioned by International Development Association (IDA) and rest of USD 16.4 million was planned to be met by Punjab Government.

It is worth mentioning here that the World Bank agreed to extend financial aid subject to the condition that government of Punjab will set up a separate corporation in addition to existing healthcare delivery system. At the initial stage, government was reluctant to form a new corporation but later on failed to resist pressure of the World Bank. So ultimately a parallel health system was created in the form of PHSC (Ghuman, 2016). Thus, with the approval of Governor of Punjab in April, 1996, Punjab Health Systems Corporation (PHSC) was incorporated through the enactment of Legislative Act which is called "The Punjab Health Systems Corporation Act, 1996" (Punjab Act No. 6 of 1996). The corporation took over around 166 existing medical institutions which included District hospitals, Sub – Divisional Hospitals and Community Health Centers. The main objective of setting up of PHSC was to improve efficiency of health resources through policy and institutional development and to provide quality services, coverage and effectiveness at secondary level of healthcare. Ultimate goal of this project was to improve health status especially of poor people, by reducing mortality, morbidity and disability.

Specifically the main objectives of PHSC were as follows:

(a) To improve efficiency in the allocation and use of health resources in the Punjab State through policy and institutional development; and

(b) To improve the performance of the health care system in the State through improvements in the quality, effectiveness and coverage of health services at the first referral level and selective coverage at the primary level, so as to improve the health status of the people, especially the poor, by reducing mortality, morbidity and disability.

In order to revamp the secondary level health care services PHSC was supposed to help in:

(a) Adding and renovating hospital building at the block, sub-divisional and district headquarters;

(b) Supplementing accommodation for essential staff;

(c) Making provision of more ambulances and better machinery and equipment;

(d) Increasing body strength at some places;

(e) Additional hospital linen and accessories;

(f) Maintaining funds for building, vehicles, machinery and equipment; and,

(g) Cleanliness, repair and up-keep of all buildings.

Initially, the Corporation took over 166 Institutions, which includes district hospitals, sub-divisional hospitals and community health centres. Out of which 86 Medical Institutions were situated in rural areas and 80 were in urban areas. Two training institutes viz. State Institute of Health and Family Welfare, Mohali and State Institute of Nursing and Paramedical Sciences, Badal, District Muktsar have also been constructed and were brought under PHSC institutions. This project ended in the year 2002, and since then the Government of Punjab is supervising it through PHSC. At present there are 176 health institutions under PHSC, out of which 21 are district hospitals, 2 special hospitals, 34 sub – divisional hospitals and 119 community health centres.

Out of the total allocation of Rs.450 crores for PHSC, the outlay for procurement under various components was in the following order: Rs.124.64 crores for major/minor other equipments; Rs.83.24 crores for hospital furniture and other supplies; medicines and lab supplies Rs.22.45 crores, MIS/IEC Material Rs.9.85 crore and vehicles of Rs.9.10 crores. Out of the above plan out lay procurement of worth Rs.118.28 crores was made by PHSC which comprise equipment valuing Rs.63.53 crores, Rs.17.96 cr. on drugs, Rs.11.04 cr. on hospital furniture, Rs.7.65 cr. on supplies, Rs.8.20 cr. on vehicles, Rs.9.90 cr. on MIS/IEC. Subsequent to the completion of World Bank Project, PHSC also got the budget from State Govt. for procurement of medicine and supplies for PHSC hospitals during the year 2004-05.

In the light of above discussion, the present study was planned to evaluate the working of PHSC in the light of objectives to be achieved to enhance access of health services and the improvement of quality of these services.

When PHSC was formed, the idea was to provide free consultation to all irrespective of the income groups but later on the user charges were introduced and charged from all the patients except the holders of yellow card (below poverty line card). There was a huge decrease in the utilization of services after the imposition of user charges. The major difference was observed in number of OPD's in government hospitals before and after the introduction of user charges. PHSC adopted a policy in which user charges collected from the patients were retained by the hospitals to meet their daily expenses, purchase of medicines, equipment and infrastructure maintenance. The main goal behind this was to expand the health services in the state with the help of collected user charges but even after charging the fee from the users, cost recovery ratio was very low. In other words, even after setting up the parallel health system of health (PHSC) to the existing Directorate of Health Services, the existing problems of corruption, poor management and favouritism continued as it was headed by the same officials who were managing previous system.

It is pertinent to mention that in November, 2016 a major initiative was taken to provide help to the patients. The government had set up the separate medicines centers inside the hospital premises with a focus to ensure availability of high quality medicines and providing the facility of all the laboratory tests without any inconvenience to the people. A total of 218 drugs were included in Essential Drug List (EDL) and 50 commonly required tests including blood, urine, stool and other pathology tests were aimed to be done free of cost. The test results were to be reported through SMS to the patients or attendant but because of staff crunch, more than half of them had already closed down and others are about to shut down in the near future. Image 4.1 shows the building of closed medicine center at CHC Bhagta Bhai in Bathinda district.

Image 4.1
Closed Medicine Center at hospital in district Bathinda

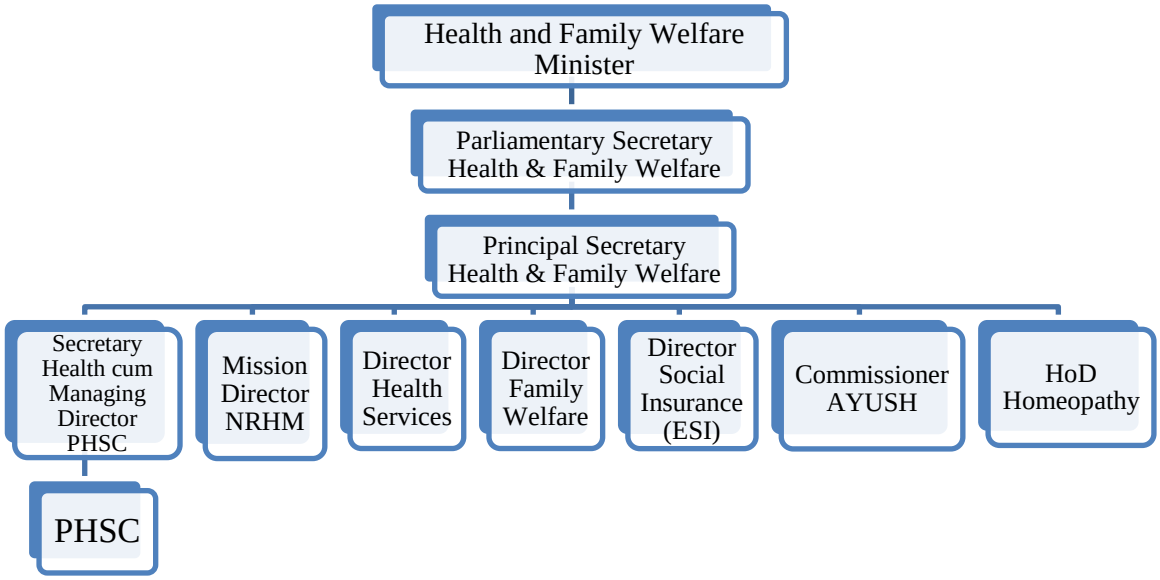
Source: Image taken during field survey

4.1 Structural Framework of Punjab Health Systems Corporation (PHSC)

- The corporation consists of a Chairman who is also Parliamentary Secretary to the Government of Punjab. He is accountable to Health and Family Welfare Minister, Punjab.
- The Vice Chairman is Principal Secretary, Health and Family Welfare.
- Secretary Health cum MD PHSC, Mission Director NRHM, DHS, Director Family Welfare, Director ESI, Commissioner AYUSH and HoD Homeopathy, all are answerable to Principal Secretary, Health and Family Welfare.
- Secretary Health cum Managing Director of Punjab Health Systems Corporation is an officer of Indian Administrative Services. He assists the Vice Chairman with the administrative issues which include recruitment, posting, transfers, disciplinary actions, rules and regulations etc.

Figure 4.1 shows the organizational structure of Department of Health and Family Welfare.

Figure 4.1
Organisational Structure of Department of Health and Family Welfare



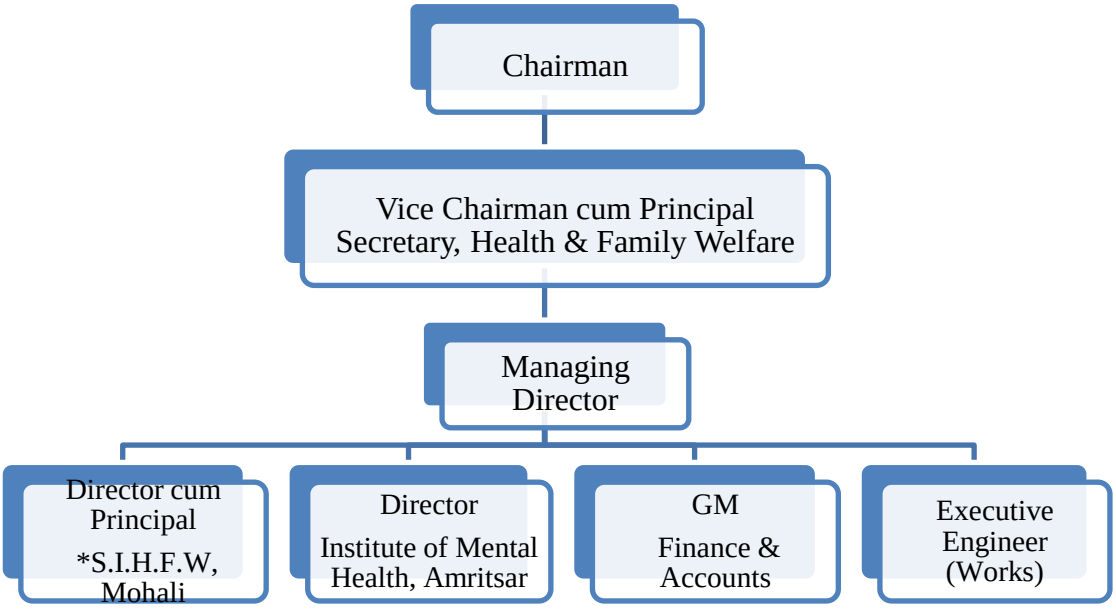
Source: PHSC website URL: http://pbhealth.gov.in/org.htm

- At district headquarter level, there is one Deputy Director (DD) cum Civil Surgeon (CS) in each district and hence a total of 22 DD cum CS are posted in Punjab.
- At block level, the Civil Surgeon is supported by Senior Medical Officers (SMO) and one hospital may have more than one SMOs depending upon bed strength of the hospital. For every 100 beds, 1 SMO is deputed. For example, Amritsar is 200 bedded hospital and have 2 SMO posts.
- Deputy Medical Commissioner (DMC) looks after the health care services in District Hospitals, Sub-Divisional Hospitals and Community Health Centers, which are headed by SMOs of the hospital.

Figure 4.2 shows the hierarchical structure of Punjab Health Systems Corporation. Chairman is head of PHSC and Managing Director of PHSC is an officer of IAS rank.

Figure 4.2

Structure of Punjab Health Systems Corporation



**State Institute of Health & Family Welfare, Mohali*
Source: PHSC website URL: http://pbhealth.gov.in/org.htm

4.2 Current Status of PHSC Services in Punjab

After the setting up of PHSC, the corporation took over around 166 medical institutions which included district hospitals, sub- divisional hospitals and community health centres (CHC). At the time of incorporation, a total of 86 Medical Institutes were situated in rural areas and 80 were in urban areas. Two training institutes, namely, State Institute of Health and Family Welfare, Mohali and State Institute of Nursing and Paramedical Sciences, Badal, District Muktsar were also included under PHSC institutions. At present, PHSC provides health care in over 205 institutions which include 22 district hospitals, 42 sub-divisional hospitals and 141 CHCs. All the hospitals under Punjab Health Systems Corporation (PHSC) are listed in Annexure II.

4.3 Status of Ambulance Service at the Time of Survey

Ambulance services are the primary and first level service providers in the healthcare system. It provides early and fast transport to the patients of hospitals and are fully equipped to deal with medical and accident care related emergencies. In Punjab, most of the ambulances running in PHSC's hospitals are more than 10 years old and are in a pity condition. These are ill-equipped and are not capable enough to deal with the emergencies. Most of the times they are used for

hospital's other miscellaneous routine activities, for example, transportation of the medicines from warehouse to hospital etc. Maximum burden of transporting patients is being carried out by centrally NRHM funded 108 ambulances. The ambulance service facilitates 24x7 is free of cost to pregnant women, new born babies and mothers under centrally sponsored programs such as Janani Suraksha Yojana and Janani Shishu Suraksha Karyakram. Other patients are charged Rs. 10 per kilometer (minimum Rs. 50). Table 4.1 shows the number of ambulances provided by the PHSC to the hospitals selected in the study.

Table 4.1
Ambulances run by Punjab Health Systems Corporation

S. No	District Hospital	Sub-Divisional Hospital		Community Health Centre	
1.	Amritsar	Ajnala	Baba Bakala	Lopoke	Majitha
	2	1	1	1	1
2.	Tarn Taran	Khadoor Sahib	Patti	Kairon	Sur Singh
	2	0	1	1	0
3.	Jalandhar	Phillaur	Nakodar	Kala Bakra	Kartarpur
	2	0	0	0	0
4.	Hoshiarpur	Dasuya	Mukerian	Tanda	BholKalota
	0	0	1	1	1
5.	Ludhiana	Samrala	Jagraon	Machiwara	Sahnewal
	2	1	0	1	1 (Off Road)
6.	Bathinda	RampuraPhool	Talwandi Sabo	BhagtaBhai	MaurMandi
	1	0	1	1	1

Source: Information received through RTI from Punjab Health Systems Corporation

Data in the above table reveals that in most of the hospitals administrated by PHSC, only one ambulance had been provided. Only District Hospitals (DH) of Amritsar, Tarn Taran, Jalandharand Ludhiana had 2 ambulances each. DH Hoshiarpur, Sub-Divisional Hospital (SDH) Dasuya of district Hoshiarpur, SDH Khadoor Sahib of district Tarn Taran, SDH Phillaur and Nakodar of district Jalandhar and SDH Jagraon of district Ludhiana did not have the facility of even a single ambulance van from the quota of PHSC. Similarly, Community Health Centre (CHC) Sur Singh of district Tarn Taran, CHC Kala Bakra and Kartarpur of district Jalandhar did not have any ambulance vehicle funded by PHSC.

Image 4.2
Condition of PHSC Ambulance at CHC BhagtaBhaiKa (Bathinda)

Source: Image taken during field survey

4.4 User Charges

When Punjab Health Systems Corporation was formed, the idea was to provide free consultation to all irrespective of the income groups but later the user charges were introduced and increased over the years from all the patients except the holders of yellow card (Below poverty line card). Introduction of charges had a catastrophic effect on the poor who were not aware about the procedures to get the yellow card and were deprived to avail the free services. Hence, there was a decline of approximately 20 per cent in bed occupancy in the wards of the hospitals. This proved to be a major setback to government's promise to raise the health status of people below poverty line which was the main objective of PHSC.

In the last five years, since 2013, user charges have been increased two times. First increase was approximately after 11 years notified on April 5, 2013 in which registration charges (OPD slip charge) were increased from Rs. 2 to Rs. 5. Similarly, all the charges including Admission Charges in General Ward, Private Room, Surgery, Medico – Legal Charges, Laboratory Tests, X-Rays, Ultrasound etc. were also increased (Table 4.2). Second increase in user charges was introduced just after 1 year of previous increase i.e 2013 which burdened people between 2 to 5 times in the short span of two years.

Table 4.2

User Charges Collected per patient since 2002 (in rupees)

Category	Before April 2013	April 2013 - June 2014	Since July 2014
Registration Fee	2	5	10
Admission Charges	10	25	30
Minor Surgery	50	100	150
Major Surgery	375	500	1000
MLC	50	200	300
X-Ray	40	70	80

Source: Information received through RTI

Data in the table 4.3 reveals that user charges receipts of PHSC hospitals in 2012-13 were Rs. 31.56 crore when charges were taken as per 2001 unrevised rates compared to Rs. 93.43 crore in 2016-17 as per the revised rates. There was three times increase in the income of PHSC in the four years after the revision of charges. However, the user charges were increased by ten times if 2002-03 is taken as the base year. Table 4.3 shows the detail of user charges collected from hospitals under PHSC 2002 onwards.

Table 4.3

Detail of User Charges Collected from hospitals under PHSC 2002 onwards

Financial Year	User Charges Receipt (Rs. In crores)
2002-03	9.09
2003-04	12.12
2004-05	12.69
2005-06	15.36
2006-07	16.46
2007-08	18.59
2008-09	21.55
2009-10	22.62
2010-11	26.75
2011-12	30.87
2012-13	31.56
2013-14	40.81
2014-15	59.89
2015-16	70.84
2016-17	93.43

4.5 Sanctioned and Functional Beds under PHSC in Punjab

According to a study conducted by World Health Statistics (2011), India is among the lowest in beds per thousand population and doesn't have even a single bed per thousand people. India has 0.9 beds per thousand persons whereas global average is 2.9 beds.

In this regard, table 4.4 shows sanctioned and functional beds in the institutions under PHSC chosen for the present study. Although most of the data collected through field survey and data received through Right to Information Act (RTI) from PHSC is identical yet discrepancy was observed in the data of 13 hospitals out of 30 in terms of number of functional beds to number of sanctioned beds. The data in the said table reveals that in many hospitals, especially in Community Health Centers, functional beds were very less as compared to number of beds sanctioned. The condition of mattresses of beds at some hospitals was also found to be of very poor quality. The hospitals where ratio of functional beds to sanctioned beds was found to be very low were CHC HartaBadla of district Hoshiarpur (0:30), CHC KotSantokhRai (4:30) and CHC Dhariwal (6:30) of district Gurdaspur, CHC Apra of district Jalandhar (6:30), CHC Jhabalof district Tarn Taran (6:30), CHC Chananwal of district Barnala (8:30). The number of beds sanctioned at CHC BhuchoMandi was only four.

Table 4.4

Sanctioned and Functional Beds

Name of Hospital	Category	As per data received from PHSC through RTI		As Per Data Collected through Field Survey	
		Sanctioned	Functional	Sanctioned	Functional
Amritsar	DH	200	200	200	200
Ajnala	SDH	50	50	50	50
Baba Bakala	SDH	50	50	50	50
Lopoke	CHC	30	30	30	22
Majitha	CHC	30	30	30	22
Tarn Taran	DH	100	100	100	100
Khadoor Sahib	SDH	50	30	50	30
Patti	SDH	80	50	75	60
Kairon	CHC	30	30	30	24
Sur Singh	CHC	30	30	30	NA
Jalandhar	DH	400	400	511	450
Phillaur	SDH	50	50	50	39
Nakodar	SDH	50	50	70	70
Kala Bakra	CHC	30	30	30	30
Kartarpur	CHC	30	30	30	30
Hoshiarpur	DH	200	200	200	200
Dasuya	SDH	100	100	100	100

Mukerian	SDH	75	75	75	75
BholKalota	CHC	30	12	25	16
Tanda	CHC	30	30	30	30
Ludhiana	DH	200	200	150	130
Samrala	SDH	50	50	50	50
Jagraon	SDH	50	50	50	50
Machiwara	CHC	30	30	30	20
Sahnewal	CHC	30	30	30	27
Bathinda	DH	200	200	200	200
RampuraPhool	SDH	50	50	50	45
Talwandi Sabo	SDH	50	50	50	50
BhagtaBhaiKa	CHC	30	18	30	25
MaurMandi	CHC	25	25	25	20

Source: Through RTI and field survey

Less number of functional beds and low occupancy in the wards is due to low footfall in In-Patients Department (IPD). In most of the hospitals, especially in CHC, major surgeries in which more days of hospitalization is needed were not done due to non-availability of specialist doctors. CHCs were confined only to deal with OPD patients and had become just a referral centers. The poor segment of society was often deprived from using the services due to excessive charge of user fee and lack of awareness to get Yellow Card (BPL card). Also due to non-availability of services and specialist doctors, most of the middle and upper class patients are forced to take private healthcare services at the cost of borrowed financed prefer to visit those hospitals.

Moreover, withdrawal of investment by government in public health services had led to decline in the faith of the users in government supported health services. Most of the CHCs were not capable of providing institutional delivery care services to pregnant women. It is an irony that the presence of three doctors mainly, Gynecologist, Pediatrician and Surgeon is mandatory to be present at the time of institutional delivery but not even a single CHC has reported having sanctioned/filled posts of all the three doctors. Despite the Centre sponsored schemes such as Janani Suraksha Yojana (JSY) and Janani Shishu Suraksha Karyakram (JSSK) which aim at providing all the services free of cost to the pregnant women who get themselves checked in public health institutions, the reality is that the women have to pay out of pocket. Users had to pay handsome amount of money for the outsourced doctor fee, medicines, surgical items, laboratory tests and other services due to shortage or non-functioning of services at public hospitals.

Image 4.3
Glimpse of General Wards at different hospitals

Glimpse of Ward at CHC Bhagta Bhai (Bathinda)

Condition of beds at CHC Majitha(Amritsar)

Vacant beds at SDH Nakodar (Jalandhar)

Vacant beds at SDH Phillaur (Jalandhar)

Beds without mattress sheets at CHC Sur Singh (Left) and CHC Kairon (Right) (Tarn Taran)

Source: Images taken during field survey

A patient at CHC Tanda in district Hoshiarpur said during the field survey that they had paid Rs. 1800 as outsourced Gynecologist fee otherwise they were asked to shift to Sub-Divisional Hospital Dasuya due to the non-availability of Gynecologist and other supporting staff. Ultrasound and protein powder needed during the course of pregnancy were also not available in the hospital. In Punjab, on an average Out of Pocket Expenditure (OOPE) per delivery in public hospitals was Rs. 1890 (National Family Health Survey- 4, 2015-16). This high Out of Pocket Expenditure had put unbearable burden on poor families who are often pushed to poverty due to this financial burden.

4.8 Sanctioned and Vacant Posts of Doctors under PHSC controlled Hospitals

The hospital is just like the any other building of brick and mortar if it is without doctors and supporting staff. Total count of OPD and IPD coming at the institution directly depends upon quantity and quality of their doctors and staff. Despite the government's assurance to provide high class healthcare facilities to the people, state's healthcare delivery system is in disarray. In District Hospitals, more than 21 per cent of the sanctioned posts of specialist doctors and 46 per cent of the sanctioned posts of Medical Officers (MBBS) were lying vacant at the time of survey. Situation of Sub-Division Hospitals and Community Health Centers were even worse than that. In Sub-Division Hospitals half of the sanctioned posts of MBBS doctors were lying vacant. In CHC's, there were only 3 specialist doctors filled out of 10 sanctioned. All these posts were either changed from Specialist to General Medical Officers (MBBS) or were vacant.

Less number of MBBS doctors in the public hospitals is also because of the governments rule to pay only basic salary for the first three years. All the new recruits are just getting a meager monthly amount between Rs. 20,000 – Rs. 25,000. Doctors demanding for "Equal Work, Equal Pay" either do not join the government services or leave after getting better opportunity in private institutions.

4.9 Status of District Hospitals under the control of PHSC

Table 4.5 shows the position of sanctioned and vacant posts of specialist and Medical Officers (MBBS) in six District Hospitals chosen for the study. Detailed list of sanctioned and vacant posts of doctors in these district hospitals is given in annexure III.

Table 4.5

	Sanctioned Posts	Vacant Posts	Percentage of vacant post to Sanctioned post
Specialist Doctors	130	28	21.54
Medical Officers	61	28	45.90

4.10 Status of Sub – Divisional Hospitals under PHSC controlled Hospitals

Table 4.6 shows the position of sanctioned and vacant posts of specialist and Medical Officers (MBBS) in twelve Sub–Divisional Hospitals chosen for the study. Detailed list of sanctioned and vacant posts of doctors in these Sub-district hospitals is given in annexure IV.

Table 4.6

	Sanctioned Posts	Vacant Posts	Percentage of vacant post to sanctioned post
Specialist Doctors	108	25	23.15
Medical Officers	69	35	50.72

The analysis of data reveals that a shortfall of 23 percent was recorded in case of specialist doctors. However, the shortfall in case of medical officers was up to 50.00 percent of the sanction strength at Sub-divisional Hospitals working under PHSC.

4.11 Status of Community Health Centers

Table 4.7 shows the detail of sanctioned and vacant posts of specialist and Medical Officers (MBBS) in twelve Community Health Centers chosen for the study. Detailed list of sanctioned and vacant posts of doctors in these Sub-district hospitals is given in annexure V.

Table 4.7

	Sanctioned Posts	Vacant Posts	Percentage of vacant post to sanctioned post
Total Specialist Doctors	45	32	71.11
Medical Officers	35	00	0.00

The analysis of data reveals that most of the Community Health Centers have only Medical Officers and the posts were filled. SMO of CHC Majitha informed us that the post of Specialist doctors is being changed into Medical Officers and specialists are mostly posted at SDH or DH to fill up the vacant posts there, thus making CHCs just a referral hospital. This was the main

reason of over filled posts of MBBS doctors. CHC Maur Mandi and Bhagta Bhai Ka in Bathinda district had only have 1 Medical Officer sanctioned. CHC Kartarpur in district Jalandhar and CHC Machiwara in district Ludhiana had 2 sanctioned posts and were filled. In CHC Lopoke, all the posts of specialist doctors were converted into Medical Officers. CHC Kala Bakra had 9 sanctioned positions of MBBS doctors.

So, the analysis of data reveals that the percentage of functional beds to the sanctioned beds at all three levels of PHSC hospitals is very less. On the similar line, the percentage of vacant positions of doctors against the sanctioned positions is also very high. The increase in the user charges is another important issue in the PHSC hospitals. The analysis further reveals that overall infrastructure of these hospitals has been found poor. All these factors have contributed to the poor performance of these hospitals in terms of access to quality and affordable health services in Punjab. It is only the poor section of the population who are availing these services as they cannot afford high priced private hospitals.

CHAPTER V

Access and Quality of Services Provided by PHSC in Punjab

Present chapter is divided into three sections. The first section (5.1) deals with infrastructure facilities and provision of other basic services provided by District Hospitals. The existence of infrastructure and other facilities in sub divisional hospitals are presented in section 5.2. The state of infrastructure and other basic facilities available in CHCs is presented in section 5.3.

Evaluation of working of the PHSC hospitals

A separate research schedule was designed for the collection of data to study the working of the hospitals with respect to various indicators. The detailed analysis on the basis of data collected through personal visits to the sampled hospitals is presented in the following discussion.

Section 5.1

District Hospitals Scenario at the time of survey

The data was collected from six district hospitals selected as sample, namely, Amritsar, Tarn Taran, Jalandhar, Hoshiarpur, Ludhiana and Bathinda. So, the sample covers all the geographical regions of Punjab i.e. Majha, Malwa and Doaba.

Accessibility

The analysis of primary data reveals that all the district hospitals were well connected with the roads. Distance of DH Amritsar and DH Hoshiarpur was less than 1 km from the bus stand. Distance of DH Jalandhar was more than 3 kms from bus stand and distance of DH Tarn Taran, DH Ludhiana and DH Bathinda was more than 5 kms from the bus stand. Average distance of all the hospitals from railway station was about 3 kms except DH Bathinda which was about 14 kms from the railway station. So, the analysis reveals that all the District hospitals, under PHSC were easily accessible to the public.

Water Supply

As per the information collected through field survey, all the hospitals had adequate supply of water and four hospitals from Majha and Doaba region had bore-well supply and two hospitals Ludhiana and Bathinda of Malwa region had Municipal Corporation water supply.

Electricity Supply

Only two out of six hospitals namely, Jalandhar and Amritsar had regular power supply. However, Backup generator was available in all the hospitals.

Lifts and Ramps

Lifts were found in four out of six hospitals but was functional in only two hospitals. DH Amritsar had 4 lifts but only two of them were functional at the time of survey. However, ramps were available in all the hospitals which are an important requirement for the patients and attendants.

Ambulance Services

The analysis of data reveals that ambulance services were available in all the hospitals through centrally sponsored 108 ambulance service. All the hospitals had at least one ambulance provided by PHSC except DH Hoshiarpur where no ambulance was provided by PHSC. The ambulance service is the primary service for the patients.

Operation Theatre

All the hospitals had at least one minor OT, except DH Ludhiana and Jalandhar, which both had 4 minor OT's. Regarding the major OT's, all the hospitals had 1 major OT except DH Ludhiana and Jalandhar which had 2 and 4 major OT's respectively.

Air Conditioners and Air Coolers

No hospital had provision of AC rooms except Ludhiana which had 2 air conditioners in Emergency and Bathinda which had AC in burn ward. DH Tarn Taran and Bathinda had only provision of air coolers in their general ward. The lack of provision of ACs in the hospitals shows that much has not changed after the formation of PHSC in terms of availability of quality infrastructure in Punjab for the convenience of the patients.

Emergency, Maternity and Dental Services

All the hospitals provide Emergency, Maternity and Dental Services and had separate rooms/wards to perform these services.

Laundry Services

Laundry services in five out of six hospitals were found to be outsourced while DH Ludhiana had In-House laundry service. Quality of washing and linen was found average in four hospitals and in two hospitals, namely, Ludhiana and Bathinda, it was found to be good.

Provision of Security

All the hospitals had contract with the agencies to provide security arrangements in the hospitals except Ludhiana where there was not even a single security guard available during the visit. The respondents during the survey also raised the issue of lack of security in the PHSC.

Sign, Roads and Lighting

Four of the six hospitals had good roads to their premises except DH Amritsar and Ludhiana which had average roads and lighting. Sign post system was only good in DH Hoshiarpur. Rest of the hospitals had average signage system.

General Impression on state of building and cleanliness

The status of building was found to be average in all the hospital except DH Amritsar which had good quality of infrastructure. In DH Ludhiana, the newly constructed building was good whereas status of old building was found to be average. All the hospitals were found to have average level of cleanliness except DH Amritsar which is the basic requirement for the performance of quality services in the hospitals.

Bed Strength

All the hospitals were 100-200 bedded, except DH Jalandhar which was found to be 511 bedded hospital out of which 450 beds were functional at the time of survey. DH Ludhiana had 150 beds hospital out of which only 130 beds were found to be functional. DH Bathinda had 200 beds capacity, out of which only 100 beds were in the newly built building of Children Hospital. So, the analysis shows that there was a deficiency of beds in PHSC which is the primary requirement for any hospital at district level.

Staff Strength

In all the hospitals most of the posts of General Medical Officers (MBBS) was found to be vacant except Ludhiana. The analysis of data reveals that 46 per cent of the posts were vacant with respect to sanctioned posts of MBBS doctors. So, the high percentage of vacant positions of doctors affects the performance of these hospitals which leads to the lack of faith among the people in Public Health System. Study further found that more than 21 per cent of the posts of specialist doctors were also lying vacant in the District Hospitals.

MRI, CT scanning, X-Ray and Ultrasound facilities

None of the hospitals were found to have the provision of MRI scanning and only two out of six hospitals were having CT scanning available. All the hospitals were found to have X-Ray and Ultrasound scanning facilities. In the present times, the non-availability of such machines forced the patients to pay for these services from their pockets to avail these services from private sector.

Medical Ventilators and Dialysis Machine

Only two hospitals were found to have ventilator support system and four out of six hospitals had the provision of dialysis services. So, the non-existence of ventilator support system put question mark on the quality and access of services provided under the PHSC in Punjab.

Mortuary with cold storage and facility of Post-Mortem

All the hospitals were found to have mortuaries with cold storage and post mortem facilities. One day charge for the cold storage in mortuary was Rs. 100. The availability of mortuaries in PHSC is a good development as large number of families in Punjab is living abroad due to which the families have to wait for their relatives for cremation.

Section 5.2

Sub – Divisional Hospitals (SDH) Scenario at the time of survey

The study was conducted in twelvesub divisional hospitals selected as sample, namely, Ajnala, Baba Bakala, Patti, Khadoor Sahib, Nakodar, Phillaur, Dasuya, Mukerian, Jagraon, Samrala, RampuraPhool and Talwandi Sabo. Selection of the sub-divisional hospitals also covers all the geographical regions of Punjab. The detailed survey is given in the Annexure – II.

Accessibility

All the sub divisional hospitals were found well connected with the roads. Average distance of all the hospitals was about 1 km from the bus stand. Four sub-divisional hospitals were not having railway connectivity while rests of hospitals were about 2 kms from the railway stations.

Water Supply

All the hospitals had adequate supply of water and ten out of twelve hospitals had bore well supply and two hospitals had Municipal Corporation water supply.

Electricity Supply

Only three out of twelve hospitals had regular power supply. However, Backup generator was available in all the hospitals.

Lifts and Ramps

None of the hospitals was found to have lifts. Ramps were available in all the hospitals except SDH Jagraon which was a single storey hospital. So, the lack of lifts in these hospitals sometime demands more manpower for the shifting of patients from one floor to another floor.

Ambulance services

Ambulance services were available in all the hospitals through centrally sponsored 108 ambulance service. It was found that there was not even a single ambulance in SDH Nakodar, Phillaur, Dasuya, Jagraon and Rampura Phool provided by the PHSC. Rest of the hospitals had one ambulance per hospital. So, the lack of ambulance facilities forced the poor patients to pay for costly transport particularly at the time of emergencies.

Operation Theatre

All the hospitals had one minor operation theatre and one major operation theatre except SDH Patti which had 2 major OT's.

Air Conditioners and Air Coolers

Four hospitals out of twelve had the provision of AC rooms/wards, namely, Patti, Nakodar, Khadoor Sahib and Dasuya. Seven hospitals had only provision of air coolers in their general ward.

Emergency, Maternity and Dental Services

All the hospitals provide Emergency, Maternity and Dental Services and had separate rooms/wards for the performance of these services.

Laundry Services

Laundry services in all the hospitals were found to be outsourced. Quality of washing and linen was found average in eight hospitals and in four hospitals, namely, Baba Bakal, Patti, Phillaur and Jagraon, it was found to be good.

Security Arrangements

Six hospitals had no security arrangement at all. Five hospitals had contract with the agencies to provide security in the hospitals except Dasuya where they have in-house security provisions. The provision of security in the hospitals is a basic requirement which is lacking in sub-divisional hospitals.

Sign, Roads and Lighting

Eight of the twelve hospitals had good roads to their premises except SDH Rampura Phool, Ajnala, Patti and Nakodar which had average roads and lighting. Sign post system was found good at four hospitals. Three hospitals had poor sign posting and rest of the hospitals had average signage system.

General Impression on state of building and cleanliness

It was observed during the visit to these hospitals that the status of building was good in eight hospitals and four of them were found to be having average level. Five hospitals were found to have good level of cleanliness while rests of the hospitals were found averagely cleaned.

Bed Strength

All the hospitals were 50 and 75 bedded, except SDH Nakodar with 70 beds, SDH Dasuya with 100 beds, SDH Patti with 75 beds, however, only 60 beds were found to be functional. SDH Phillaur had a capacity of 50 beds while 39 beds were functional. It was found during the visit that SDH Jagraon was admitting patients above their capacity of 50 beds. 74 patients were admitted at SDH Jagraon against the availability of 50 beds in the hospital at the time of survey.

Staff Strength

In all the hospitals half of the posts of General Medical Officers (MBBS) were found to be vacant. Further, 51 per cent of the posts were vacant with respect to sanctioned posts of MBBS doctors. More than 23 per cent of the posts of specialist doctors were lying vacant in the Sub – Divisional Hospitals of PHSC.

MRI, CT scanning, X-Ray and Ultrasound services

None of the hospital was found to have the provision of MRI and CT scanning. All the hospitals were found to have provision of X-Ray and nine hospitals were found to have Ultrasound scanning services. So, the lack of these modern diagnosing techniques hampers

the efficiency of the doctors working in these hospitals which is reported by doctors during interaction.

Medical Ventilators and Dialysis Machine

None of the hospitals were found to have ventilator support system and only one hospital i.e SDH Dasuya had the provision of dialysis services at the time of survey. The ventilator support system is an important requirement which should be made available in these hospitals.

Mortuary with cold storage and facility of Post-Mortem

Nine out of twelve hospitals were found to have mortuaries with cold storage and post mortem facilities. One day charge for the cold storage in mortuary was Rs. 100.

Section 5.3

Community Health Centers (CHCs) Scenario at the time of survey

The study was conducted in twelve community health centers selected as sample, namely, Lopoke, Majitha, Kairon, Sur Singh, Kala Bakra, Kartarpur, Bhol Kalota, Tanda, Machiwara, Sahnewal, Bhagta Bhai Ka and Maur Mandi. Selection of the community health centers covers all the geographical regions of Punjab. The detailed survey is given in the Annexure – III.

Accessibility

All the community health centers were well connected with the roads with average distance of about half km from the bus stand except Majitha and Maur Mandi which were located in the densely populated commercial areas. Five community health centers were having no railway connectivity while average distance of rest of the hospitals was about 1 km from railway station.

Water Supply

All the hospitals had adequate supply of water except CHC Kartarpur and ten out of twelve hospitals had bore well supply and two hospitals had Municipal Corporation/ Municipal Committee water supply.

Electricity Supply

Only three out of twelve hospitals had regular power supply. However, Backup generator was available in all the hospitals.

Lifts and Ramps

None of the hospitals was found to have lifts. Ramps were available in all the hospitals except CHC Machiwara and Sahnewal which were single storey hospital.

Ambulance Services

Ambulance services were available in all the hospitals through centrally sponsored 108 ambulance service. It was found that five sampled hospitals were not having even a single ambulance provided by the PHSC while rest of the hospitals had one ambulance each.

Operation Theatre

All the hospitals had one minor operation theatre and one major operation theatre except CHC Bhol Kalota which had 2 major OT's.

Air Conditioners and Air Coolers

Only one hospital (CHC Kartarpur) out of twelve had the provision of one AC room in their hospital. Six hospitals had provision of air coolers in their general wards. It is important to mention that Punjab face high temperature and humid weather in summer and severe cold in winter. So, the non-availability of proper system for the control of temperature for the patients is a serious lapse.

Emergency, Maternity and Dental Services

All the hospitals provide Emergency, Maternity and Dental Services and had separate rooms/wards for these services. Most of the hospitals had discontinued performing caesarean deliveries due to shortage of specialist doctors. In case of any emergency, the hospitals outsource the specialists and their fee is charged from the patients.

Laundry Services

Laundry services in all the hospitals were found to be outsourced except in CHC Bhagta Bhai Ka and Maur Mandi. Quality of washing the linen was found of average level in ten hospitals while the quality of washing was found good in two hospitals, namely, Bhol Kalota and Tanda.

Security Arrangements

All the twelve hospitals had no security arrangements at all. The provision of security in the hospitals is a basic requirement which is lacking in all the community health centres. The incidences of attacks on hospital staff by outraged patients or their attendants were reported by hospitals staff during the interaction.

Sign, Roads and Lighting

Five of the twelve hospitals had good roads leading to their premises and five had average roads while the two hospitals had poor road connectivity. Sign post system was good at three hospitals while four hospitals had poor sign posting and rest of the hospitals had average sign boards displayed.

General Impression on state of building and cleanliness

It was found during the visit that the building was good in only three hospitals, one hospital had poor quality of infrastructure and rests of the hospitals were found to have average level of building/ infrastructure. Moreover, only two hospitals were found to have proper cleanliness, three hospitals had poor cleanliness and rests of the hospitals were found with average level of cleanliness.

Bed Strength

All the hospitals were having the capacity of 30 beds each except CHC Bhol Kalota which was found to have sanctioned capacity of 25 beds. Nine out of twelve hospitals were found to have less functional beds as compared to sanctioned.

Staff Strength

More than 70 per cent of the posts of specialist doctors were lying vacant in the community health centers. Non-availability of doctors in the CHCs forced the patients to visit the private hospitals for chronic diseases.

MRI, CT scanning, X-Ray and Ultrasound services

None of the hospitals were found to have the provision of MRI and CT scanning. All the hospitals were found to have provision of X-Ray while only CHC Bhol Kalota was found to have Ultrasound scanning services.

Medical Ventilators and Dialysis Machine

None of the hospitals were found to have ventilator support system and dialysis services.

Mortuary with cold storage and facility of Post-Mortem

None of the hospitals was found to have mortuaries with cold storage and post mortem facilities.

The major issues emerge from the above discussion carried out in the three sections dealing with District Hospitals, Sub-Divisional Hospitals and Community Health Centers reveals that the shortage of doctors particularly of specialist doctors is the major problem faced at all levels. Furthermore, the percentage of functional beds against the sanctioned beds is another major problem. The non-availability of advanced diagnostic equipment like MRI and CT scanning is another major issue for the doctors to perform their services efficiently. Even ultrasound facility is not available in most of the hospitals. The proper cleanliness and lack of security arrangements are another major problems faced by these hospitals.

CHAPTER VI

USERS' PERCEPTION TOWARDS DELIVERY OF HEALTH SERVICES IN PUNJAB

According to World Health Organisation, health should be a fundamental right of every human being and it is the duty of every government to provide minimal level of health services to the masses. Unfortunately, healthcare costs are increasing all over the world. In India, where major share of population lives below poverty line, rising cost of healthcare has made medical assistance almost out of reach, even for the middle class (S. M. Bose, 2012). In Punjab, most of the government hospitals are overcrowded; on the other hand, private health services are very costly. Moreover, the proportion of government hospitals to population, which are providing tertiary healthcare is very low and is also expensive. As a result of which out-of pocket expenditure of patients has increased many folds over the period of time.

User's Perception

To know the perception of patients towards the extent and quality of health services, 300 patients were interviewed from various health institutions, namely, District Hospitals, Sub-Divisional Hospitals and Community Health Centers working under the Punjab Health Systems Corporation.

Socio-Economic Profile of Respondents

Socio-economic background of the respondents has been analysed on the basis of selected variables as discussed below.

6.1 Gender-wise Distribution of Respondents

The gender-wise composition of respondents is presented in table 6.1. The analysis of data reveals that the share of female patients is higher than males at all the three levels of public health services.

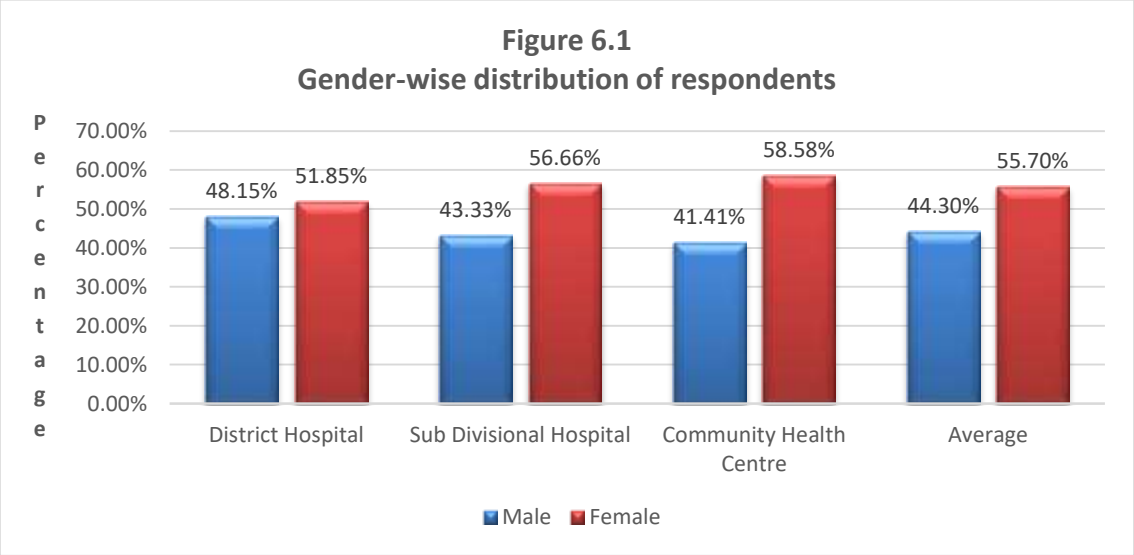
Out of 300 respondents, the average services were utilized more by females, approximately 56 percent as compared to 44 percent by males in all the hospitals as shown in table 6.1. The higher share of female patients may be due to the reason that females are more prone to sickness as compared to male patients.

Table 6.1: Gender-wise Distribution of Respondents

Gender (Percentage)	District Hospital	Sub Divisional Hospital	Community Health Centre	Average
Male	39 (48.15)	52 (43.33)	41 (41.41)	132 (44.30)
Female	42 (51.85)	68 (56.66)	58 (58.58)	168 (55.70)
Total	81	120	99	300

**Figures in brackets are percentages*

The gender-wise distribution of respondents is also shown with the help of bar-chart in figure 6.1.



6.2 Age-wise Distribution of Respondents

Table 6.2 shows the age-wise distribution of respondents covered in the sample from different hospitals in Punjab.

Highest percentage of the patients was found in the age group of 16 to 30 years who availed the health services from Punjab Health Systems Corporation in all the three types of hospitals i.e. District Hospitals, Sub – Divisional Hospitals and Community Health Centers.

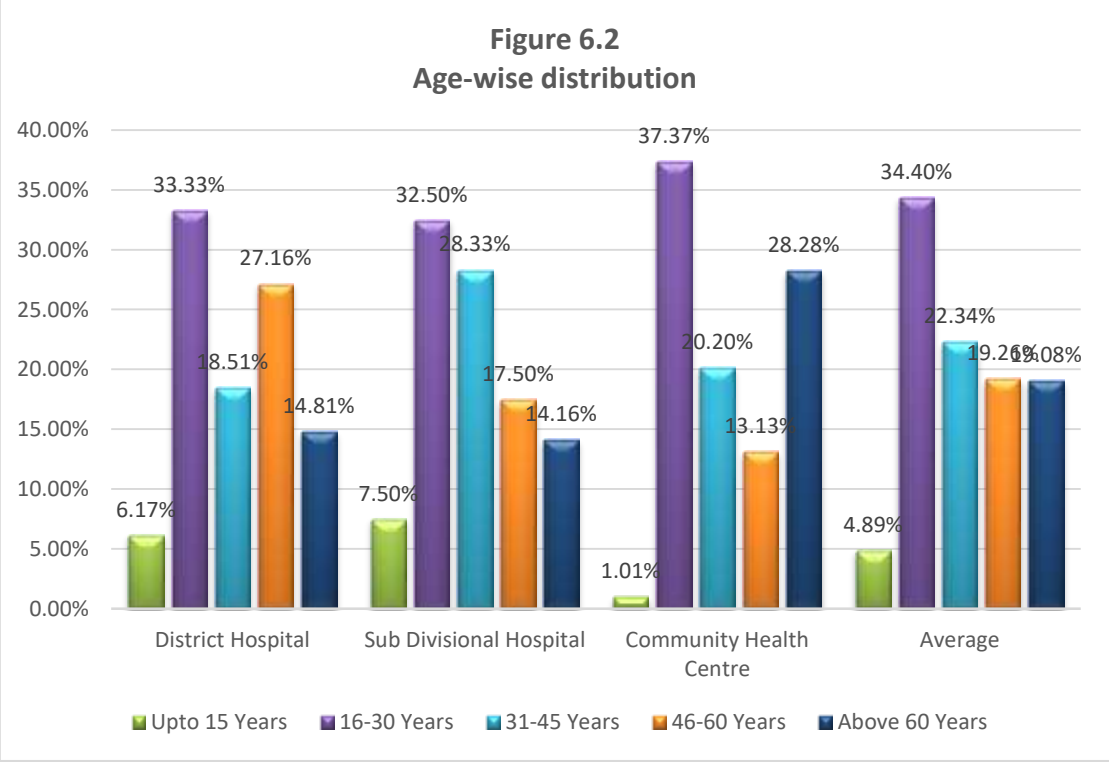
If we analyse the age distribution of patients getting service in Sub Divisional Hospitals, it is found that the 28.33 percent of the respondents are in the age group of 31-45 years. On the other hand, 27.16 percent of the patients from District Hospitals are in the age group of 46-60 years whereas, in Community Health Centers the service utilization by age group of 60 years and above is 28.28 percent.

Table 6.2: Age-wise Distribution of Respondents

Age- Group (Percentage)	Upto 15 Years	16-30 Years	31-45 Years	46-60 Years	Above 60 Years	Total
District Hospital	5 (6.17)	27 (33.33)	15 (18.51)	22 (27.16)	12 (14.81)	81
Sub Divisional Hospital	9 (7.50)	39 (32.50)	34 (28.33)	21 (17.50)	17 (14.16)	120
Community Health Centre	1 (1.01)	37 (37.37)	20 (20.20)	13 (13.13)	28 (28.28)	99
Average	4.89	34.40	22.34	19.26	19.08	300

**Figures in brackets are percentages*

The age-wise distribution of the respondents is also shown with the help of bar-charts in figure 6.2.



6.3 Level of Education among the Respondents

The distribution of respondents on the basis of level of educational is presented in table 6.3. The analysis reveals that on an average 36.66 percent of the respondents were found illiterate. The analysis further reveals that 38.27 percent respondents from District Hospitals, 33.33 percent from Sub-Divisional Hospitals and 38.38 percent from CHCs were found illiterate as shown in table 6.3.

Data further reveals that on an average 15.15 percent of respondents have primary level education while 31.31 percent of respondents were educated up to secondary level. Only

12.12 percent of the patients acquired education up to senior secondary level and remaining approximately 4 percent were found graduate and post graduate.

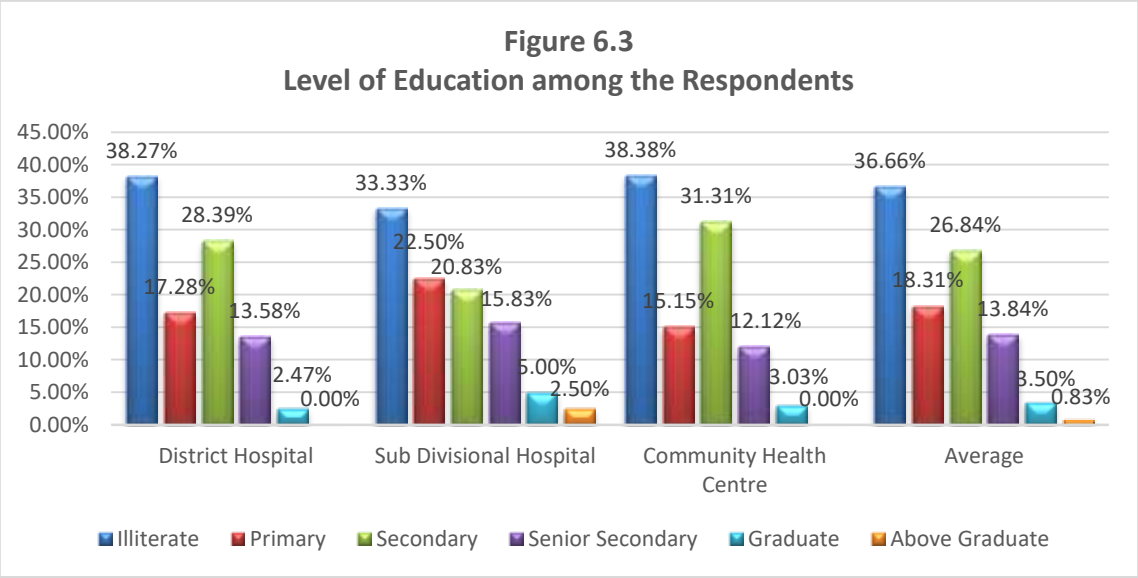
So, the analysis reveals that more than fifty per cent of the respondents were either illiterate or having education upto primary level. It further implies that poor and less educated people are availing the services of PHSC run hospitals.

Table 6.3: Distribution of Respondents on the basis of Level of Education

Level of education	Illiterate	Primary	Secondary	Senior Secondary	Graduate	Above Graduate	Total
District Hospital	31 (38.27)	14 (17.28)	23 (28.39)	11 (13.58)	2 (2.47)	0 (0.00)	81
Sub Divisional Hospital	40 (33.33)	27 (22.50)	25 (20.83)	19 (15.83)	6 (5.00)	3 (2.50)	120
Community Health Centre	38 (38.38)	15 (15.15)	31 (31.31)	12 (12.12)	3 (3.03)	0 (0.00)	99
Average (Percentage)	36.66	18.31	26.84	13.84	3.5	0.83	300

**Figures in brackets are percentages*

The level of education among the respondents is also shown with the help of bar-charts in figure 6.3.



6.4 Economic Status of the Respondents

Table 6.4 shows the distribution of the patients at various levels of health care institutions in Punjab on the basis of their level of income. The economic status of the respondents was found low, as on an average, monthly income of approximately 55 per cent of the

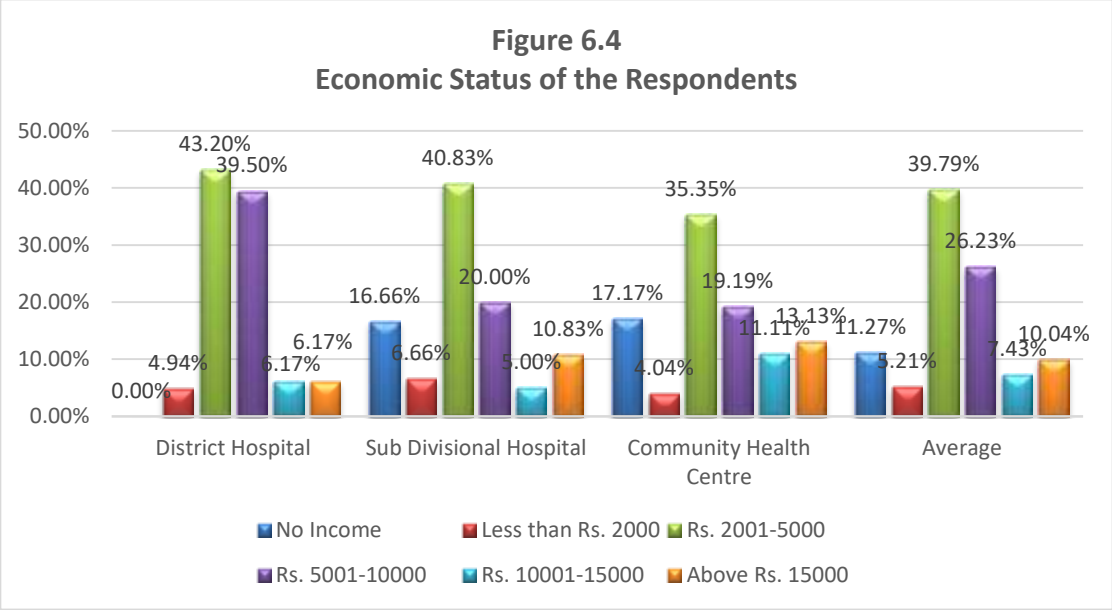
respondents was less than Rs. 5000 at the time of survey. Around 26.23 per cent of the respondents had income between Rs. 5000- Rs 10000 only. Only 10.04 per cent patients had monthly income of Rs 15000 and above.

It implies that higher income group does not consider the services provided by PHSC in Punjab worth utilizing during the course of their sickness.

Table 6.4: Economic Status of the Respondents

	No Income	Less than Rs. 2000	Rs. 2001-5000	Rs. 5001-10000	Rs. 10001-15000	Above Rs. 15000	Total
District Hospital	0 (0.00)	4 (4.94)	35 (43.20)	32 (39.50)	5 (6.17)	5 (6.17)	81
Sub Divisional Hospital	20 (16.66)	8 (6.66)	49 (40.83)	24 (20.00)	6 (5.00)	13 (10.83)	120
Community Health Centre	17 (17.17)	4 (4.04)	35 (35.35)	19 (19.19)	11 (11.11)	13 (13.13)	99
Average	11.27	5.21	39.79	26.23	7.43	10.04	300

The distribution of the respondents on account of their economic status is also shown with the help of bar-charts in figure 6.4.



6.5 Occupational Distribution of Respondents

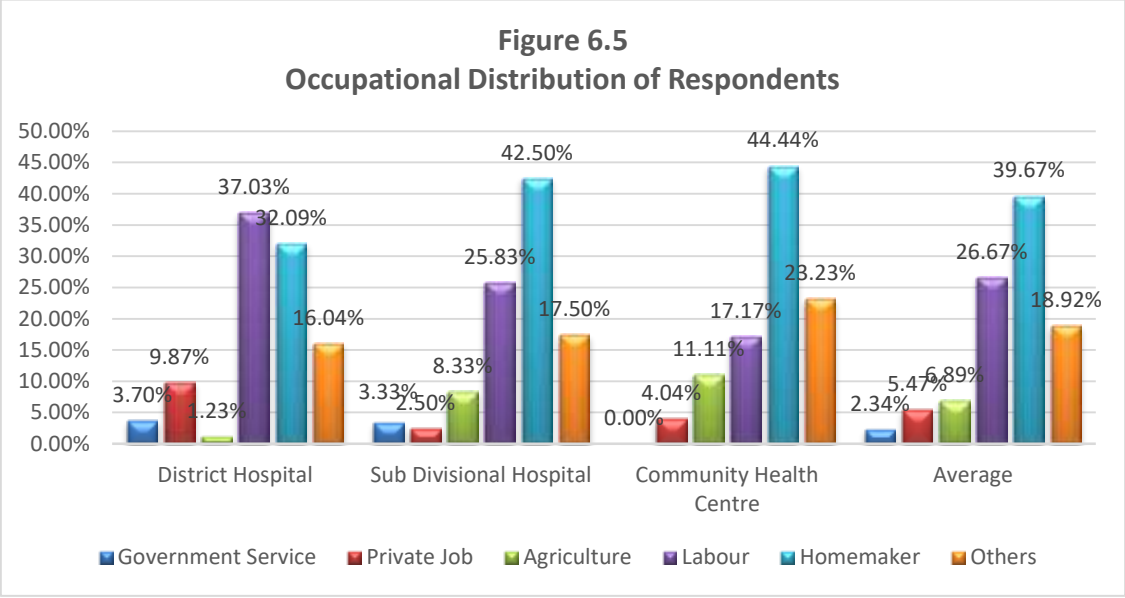
Table 6.5 shows the distribution of the patients who had utilized the services of PHSC on the basis of their occupation. There is a very close relationship between the level of income and the occupation of the respondents.

The analysis of data reveals that large majority of male respondents who came at the hospital were from the labour class and female patients who came were home makers in majority which may be the reason that our analysis shows large number of respondents placed in the low income group.

Table 6.5: Occupational Distribution of Respondents

	Govt. Service	Private Job	Agri-culture	Labour	Home-maker	Others	Total
District Hospital	3 (3.70)	8 (9.87)	1 (1.23)	30 (37.03)	26 (32.09)	13 (16.04)	81
Sub Divisional Hospital	4 (3.33)	3 (2.50)	10 (8.33)	31 (25.83)	51 (42.50)	21 (17.50)	120
Community Health Centre	0 (0.00)	4 (4.04)	11 (11.11)	17 (17.17)	44 (44.44)	23 (23.23)	99
Average	2.34	5.47	6.89	26.67	39.67	18.92	300

The distribution of the respondents on the basis of their occupation is shown with the help of bar-charts in figure 6.5.



6.6 Distribution of Respondents on Rural-Urban Basis

The distribution of respondents on the rural-urban basis is shown in table 6.6. The data reveals that majority of the male respondents were from the labour class and most of the female respondents were housewives.

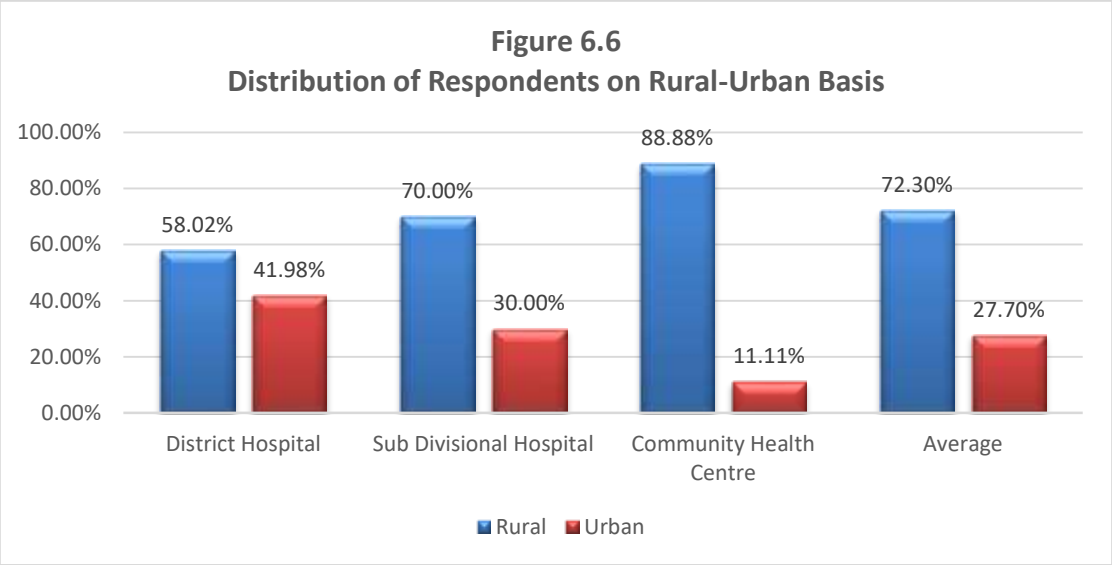
As most of the CHC's were in the rural areas, therefore, 88.50 per cent of the respondents were belongs to the rural areas followed by 70.20 per cent in case of SDH and 58.30 per cent in case of DH.

When data was analyzed for all the three levels, majority of the respondents were found living in rural areas (74 per cent) while 26 per cent were from urban areas. As we move lower in the hierarchy from DH to SDH and CHC's, more share of rural population was found to avail the services of these hospitals.

Table 6.6: Distribution of Respondents on Rural-Urban Basis

	Area of Residence		Total
	Rural	Urban	
District Hospital	47 (58.02)	34 (41.98)	81
Sub Divisional Hospital	84 (70.00)	36 (30.00)	120
Community Health Centre	88 (88.88)	11 (11.11)	99
Average	72.30	27.70	300

The distribution of the respondents on rural-urban basis is also shown with the help of bar-charts in figure 6.6.



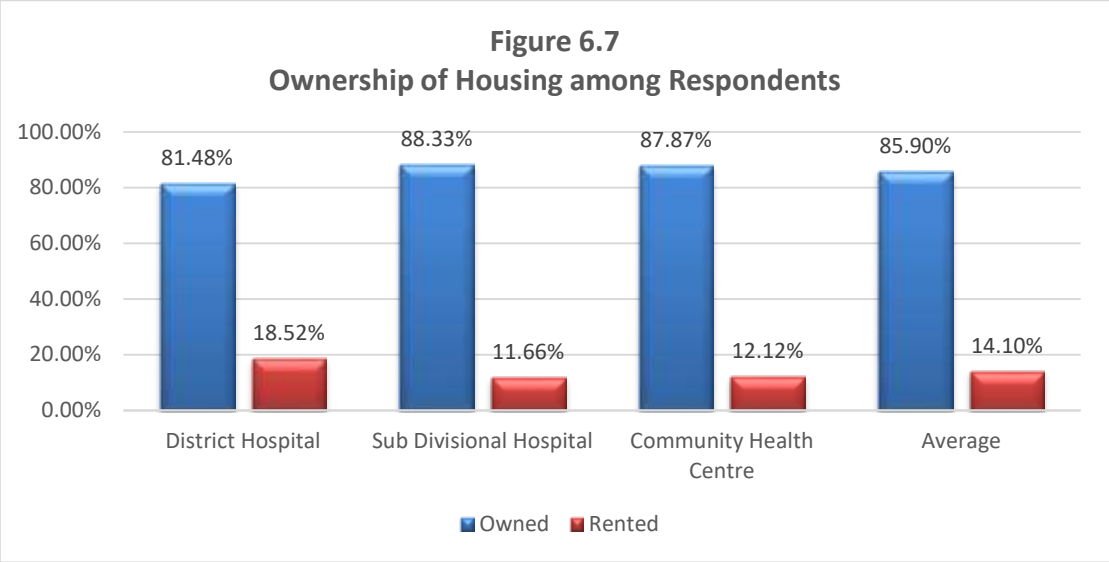
6.7 Ownership of Housing among the Respondents

The distribution of respondents on the basis of ownership of house is presented in table 6.7. The data reveals that on an average, 85.90 per cent of the respondents have their own living place while 14.10 percent of them were residing in their rented house. The pattern was almost same at all the three levels.

Table 6.7: Ownership of Housing among the Respondents

	Owned	Rented	Total
District Hospital	66 (81.48)	15 (18.52)	81
Sub Divisional Hospital	106 (88.33)	14 (11.66)	120
Community Health Centre	87 (87.87)	12 (12.12)	99
Average	85.90	14.10	300

The distribution of the respondents on the basis of ownership of a house is also shown with the help of bar-charts in figure 6.7.



6.8 Distribution of Respondents on the basis of Land Holding

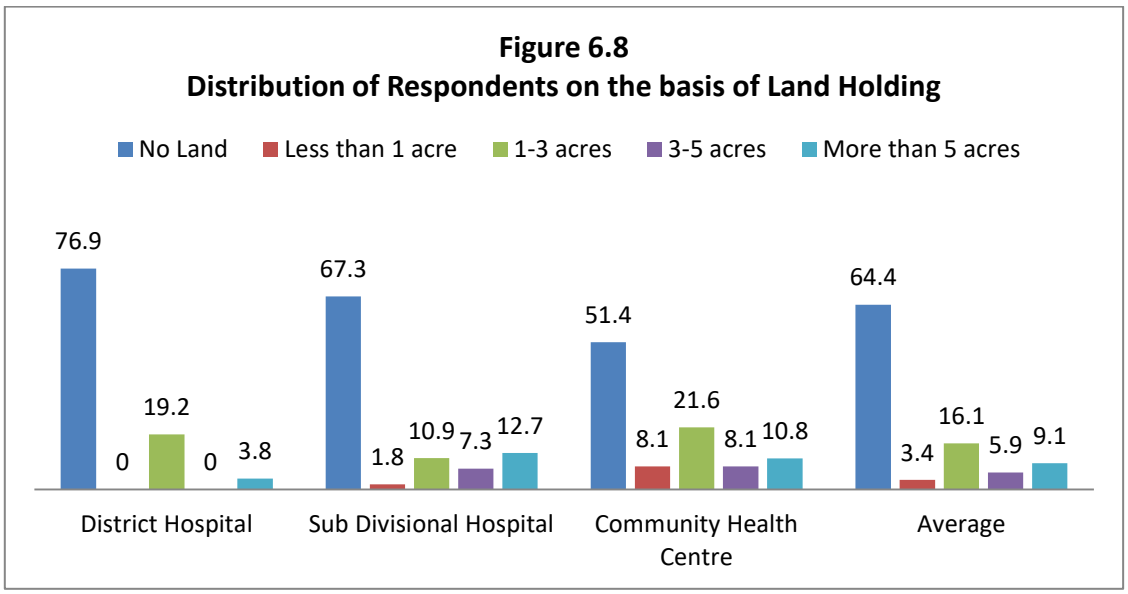
As most of the respondents belongs to rural areas and largely depend on agriculture and labour, therefore, the information in regard to their land holding is very important.

The distribution of respondents on the basis of their land holding is presented in table 6.8. The analysis of data reveals that land holding of the respondents was very low with approximately 65 per cent of them were having no land and 3.4 per cent of them had land less than 1 acre, 5.90 per cent of the respondents had land between 3 to 5 acres and only 9 per cent of them were having land holding above 5 acres. So, the analysis of data reveals that PHSC hospitals are catering to the needs of landless, small and marginal farmers which constitute about 90 per cent of the sample.

Table 6.8: Distribution of Respondents on the basis of Land Holding

	No Land	Less than 1 acre	1-3 acres	3-5 acres	More than 5 acres	Total
District Hospital	76.90	0.00	19.20	0.00	3.80	81
Sub Divisional Hospital	67.30	1.80	10.90	7.30	12.70	120
Community Health Centre	51.40	8.10	21.60	8.10	10.80	99
Average	64.40	3.40	16.10	5.90	9.10	300

The distribution of the respondents on the basis land holding is also shown with the help of bar-charts in figure 6.8.



6.9 Distribution of Respondents on the basis of Religion

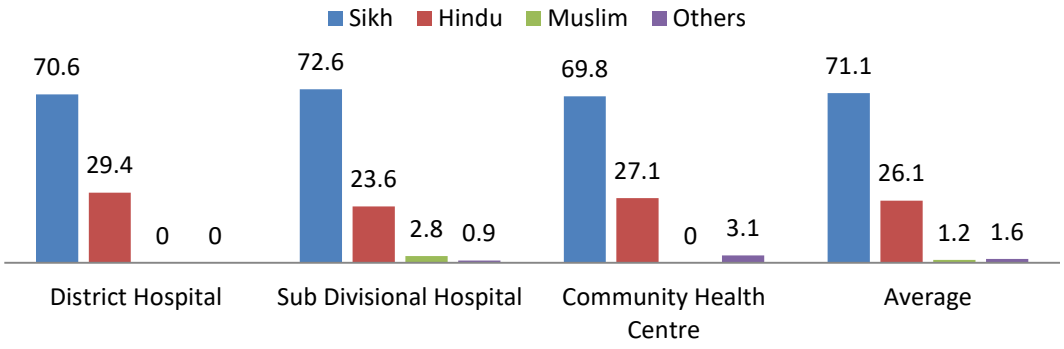
The distribution on the basis of religion is presented in table 6.9. The analysis of data shows that more than 71 per cent of the respondents were Sikhs and 26.1 per cent were Hindus whereas only 2.8 per cent were from other religions.

Table 6.9: Distribution of Respondents on the basis of Religion

	Sikh	Hindu	Muslim	Others	Total
District Hospital	70.60	29.40	0.00	0.00	100.00
Sub Divisional Hospital	72.60	23.60	2.80	0.90	100.00
Community Health Centre	69.80	27.10	0.00	3.10	100.00
Average	71.10	26.10	1.20	1.60	100.00

The distribution of the respondents on the basis of religion is also shown with the help of bar-charts in figure 6.9.

Figure 6.9
Distribution of Respondents on the basis of Religion



6.10 Caste-wise Distribution of Respondents

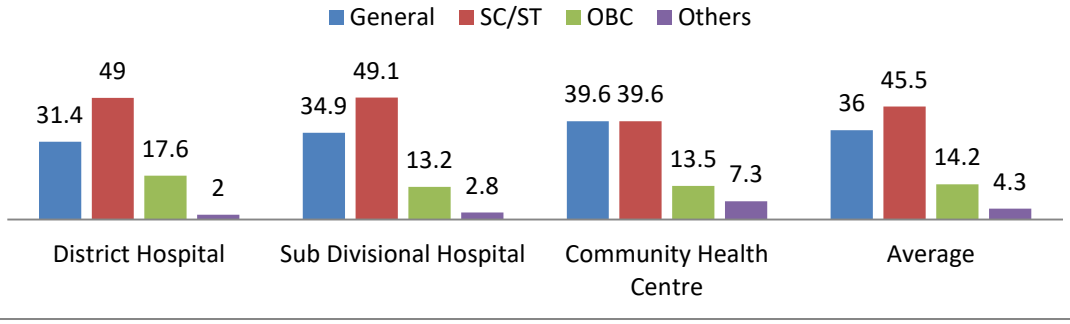
The caste-wise distribution of the respondents is presented in table 6.10. The analysis of data reveals that half of the respondents in District and Sub-Divisional Hospitals were SC/STs while this share in case of CHC was 40 per cent. On an average 45.5 per cent of the respondents were from SC/ST category, 36 per cent of patients were from General Category and 14.2 per cent were OBCs for all the three levels of health care institutions.

Table 6.10: Caste-wise Distribution of Respondents

	General	SC/ST	OBC	Others	Total
District Hospital	31.40	49.00	17.60	2.00	100.00
Sub Divisional Hospital	34.90	49.10	13.20	2.80	100.00
Community Health Centre	39.60	39.60	13.50	7.30	100.00
Average	36.00	45.50	14.20	4.30	100.00

The distribution of the respondents on the basis of religion is also shown with the help of bar-charts in figure 6.10.

Figure 6.10
Caste-wise Distribution of Respondents



Section – II

ANALYSIS OF TREATMENT RELATED ISSUES OF THE RESPONDENTS

This section deals with the treatment related issues as reported by the respondents. The important issues includes, namely, Reasons for selecting a particular hospital, Share of In and Outpatients, Period of stay of the In-patients, Nature of treatment, extent of private consultation by patients before visiting PHSC, timing to visit hospital, waiting period involved, quality of services, attitude of service providers and level of awareness among the respondents in regard to the concessional schemes of health.

6.11 Reasons for selecting a particular hospital by respondents

The attempt was made to know the reasons of selecting PHSC hospitals by the respondents. The responses of the respondents are presented in table 6.11. Further, the ranking of the reasons is also done. In all type of hospitals, it is clear that people go to the government hospitals because they are inexpensive and skilled doctors are available and the patients may avail quality services by spending less out of pocket. So, the analysis of data reveals that large majority of patients mentioned inexpensive and availability of skilled doctors as the main reason of choosing these hospitals as shown in table 6.11. These two reasons have emerged at rank one and second respectively in all the three type of hospitals.

Table 6.11: Reason for selecting a particular hospital

Reason	DH		SDH		CHC	
	Count	Rank	Count	Rank	Count	Rank
Inexpensive	43	1	78	1	85	1
Skilled doctors	15	2	32	2	29	2
Recommended by (family/ friends)	9	3	17	3	7	5
Had visited hospital earlier	8	4	15	4	9	4
Recommended by private doctor	5	6	4	8	1	13
Special Facilities Available	1	7	9	5	3	7
Good Infrastructure	1	7	6	7	2	11
Close to home	0	13	4	8	3	7
Good equipments	1	7	1	11	3	7
Only hospital in area	1	7	1	11	6	6
Recommended by doctor from government hospital	1	7	0	13	3	7
Easy to reach	1	7	3	10	2	11
Others	7	5	9	5	10	3

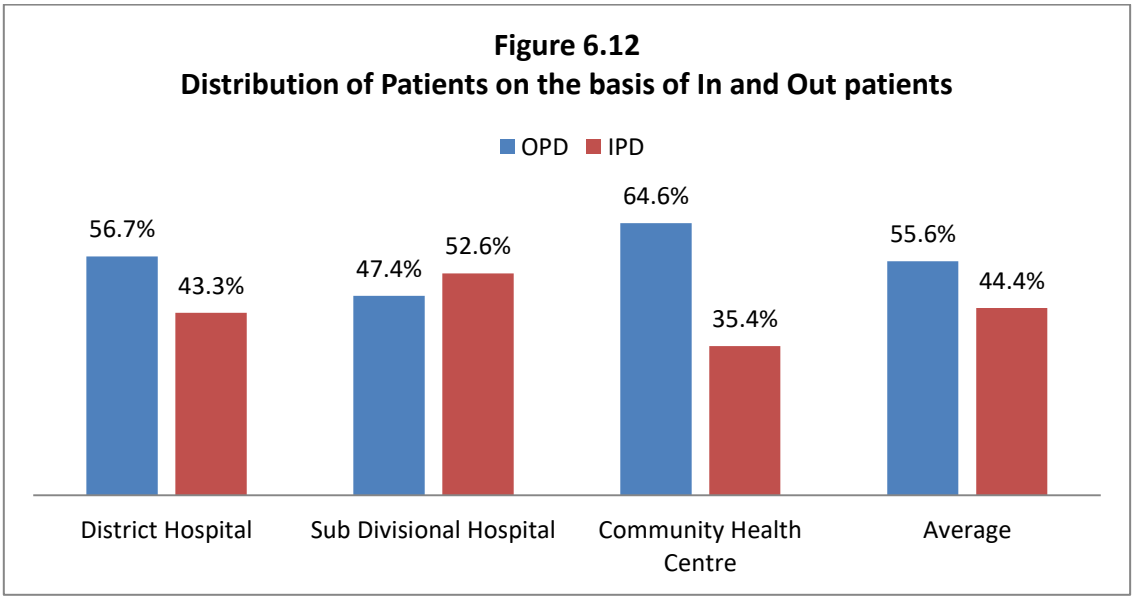
6.12 Distribution of Respondents on the basis of In and Out-patients

Two types of patients visit PHSC hospitals. The distribution of respondents on the basis of in and out-patients is presented in table 6.12. The analysis of data reveals that 44.40 per cent of the respondents were in-patients hospitalized in the different wards of hospitals (IPD) while 55.60 per cent of the respondents were registered as out-patients (OPD). However, the percentage share of IPD was higher in case of DHs and SDHs as compared to CHCs.

Table 6.12: Distribution of Patients on the basis of In and Out patients

	OPD	IPD	Total
District Hospital	56.70	43.30	100.00
Sub Divisional Hospital	47.40	52.60	100.00
Community Health Centre	64.60	35.40	100.00
Average	55.60	44.40	100.00

The distribution of the respondents on the basis of in and out-patients is also shown with the help of bar-charts in figure 6.12.



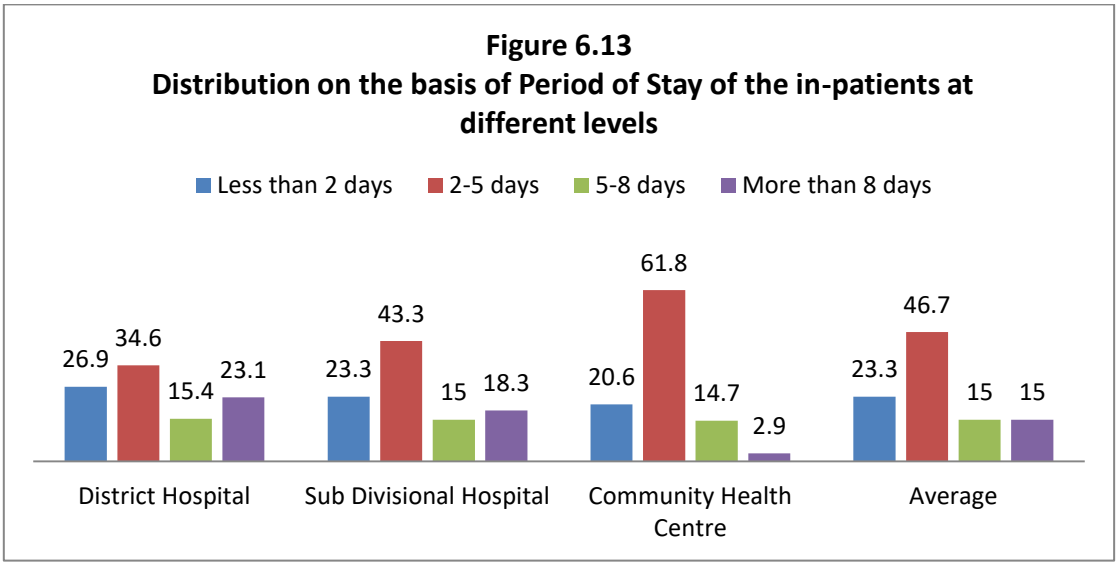
6.13 Distribution on the basis of Period of Stay of the in-patients at different levels

The distribution of the respondents on the basis of period of stay of the in-patients is presented in table 6.13. The analysis of data reveals that majority of patients stay in the hospitals falls between 2 to 5 days. However, maximum number of days i.e. more than 8 days stay was taken by District Hospitals to cure the patient. This may be due to severity of the disease that comes to District Hospitals for their treatment. The short stay of patients in these hospitals also implies that the patients with chronic diseases might not be coming to these hospitals.

Table 6.13: Distribution on the basis of Period of Stay of the in-patients at different levels

	Less than 2 days	2-5 days	5-8 days	More than 8 days	Total
District Hospital	26.90	34.60	15.40	23.10	100.00
Sub Divisional Hospital	23.30	43.30	15.00	18.30	100.00
Community Health Centre	20.60	61.80	14.70	2.90	100.00
Average	23.30	46.70	15.00	15.00	100.00

The distribution of the respondents on the basis of period of stay of the in-patients is also shown with the help of bar-charts in figure 6.13.



6.14 Distribution of Respondents on the basis of Nature of Treatment

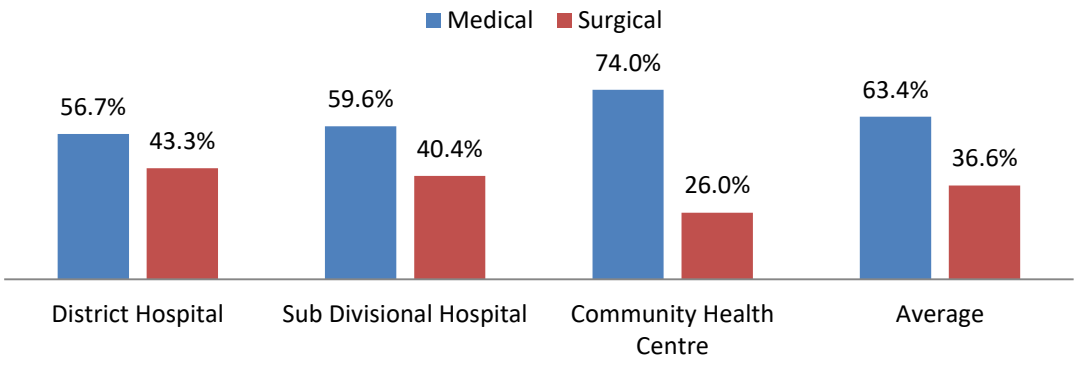
The distribution of respondents on the basis of nature of treatment availed in PHSC hospitals is presented in table 6.14. The analysis of data reveals that CHC's mainly deal with the patients who come for minor surgeries and medical treatment. Major surgeries were done in SDHs and DHs. However, on an average 63.40 per cent patients come for non-surgeries or medical consultation while 36.60 per cent come for different kind of surgeries.

Table 6.14: Distribution on the basis of Nature of Treatment of Respondents

	Medical	Surgical	Total
District Hospital	56.70	43.30	100.00
Sub Divisional Hospital	59.60	40.40	100.00
Community Health Centre	74.00	26.00	100.00
Average	63.40	36.60	100.00

The distribution of the respondents on the basis of nature of treatment is also shown with the help of bar-charts in figure 6.14.

Figure 6.14
Distribution on the basis of Nature of Treatment of Respondents



6.15 Distribution of Respondents on the basis of Consulting the Private Doctors before visiting the PHSC Hospitals

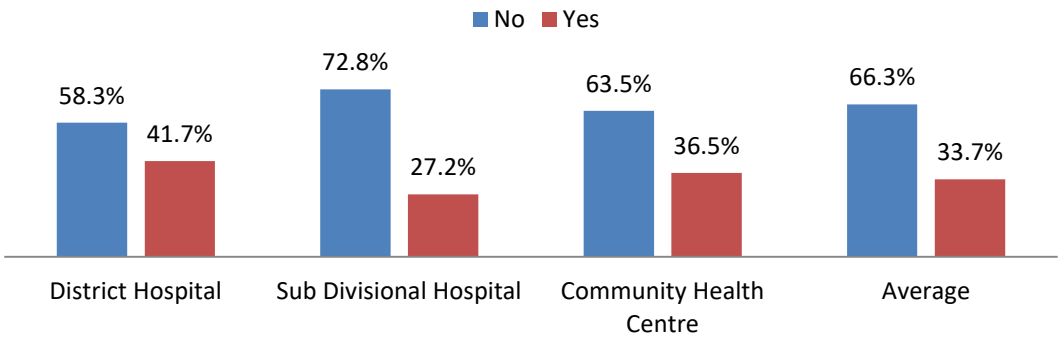
The distribution of the respondents on the basis of consulting the private doctors before visiting the PHSC hospitals is presented in table 6.15. The analysis of data reveals that more than 40 per cent of the patients consulted private doctors before coming to DHs. However, percentage comes down to 27 per cent in case of SDHs and 36.5 per cent in CHCs.

Table 6.15: Distribution of Respondents on the basis of Consulting the Private Doctors before visiting the PHSC Hospitals

	Whether patient consulted private hospital before coming to PHSC hospital		Total
	No	Yes	
District Hospital	58.30	41.70	100.00
Sub Divisional Hospital	72.80	27.20	100.00
Community Health Centre	63.50	36.50	100.00
Average	66.30	33.70	100.00

The distribution of the respondents on the basis of consulting the private doctors before visiting the PHSC hospitals is also shown with the help of bar-charts in figure 6.15.

Figure 6.15
Distribution on the basis of Consulting the Private Doctors before visiting the PHSC Hospitals



6.16 Distribution on the basis of Timings to Visit Hospitals

The distribution of the respondents on the basis of timing to visit hospitals is presented in table 6.16. The analysis of data reveals that the majority of the patients were aware of the OPD timings of the hospital and most of the doctors were also available from 9:00 am to 3:00 pm in winters and 8:00 am to 2:00 pm in summers. The analysis further reveals that more than 70 per cent of the patients visit hospitals between 8 am to 2 pm.

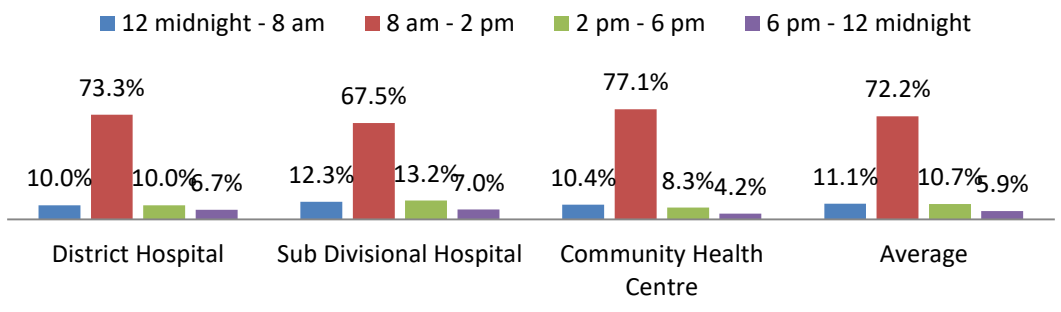
Table 6.16: Distribution on the basis of Timings to Visit Hospitals

	Timing of Admission				Total
	12 midnight - 8 am	8 am - 2 pm	2 pm - 6 pm	6 pm - 12 midnight	
District Hospital	10.00	73.30	10.00	6.70	100.00
Sub Divisional Hospital	12.30	67.50	13.20	7.00	100.00
Community Health Centre	10.40	77.10	8.30	4.20	100.00
Average	11.10	72.20	10.70	5.90	100.00

**All figures are in percentages.*

The distribution of the respondents on the basis of timing of visiting the hospitals is also shown with the help of bar-charts in figure 6.16.

Figure 6.16
Distribution on the basis of Timings to Visit Hospitals



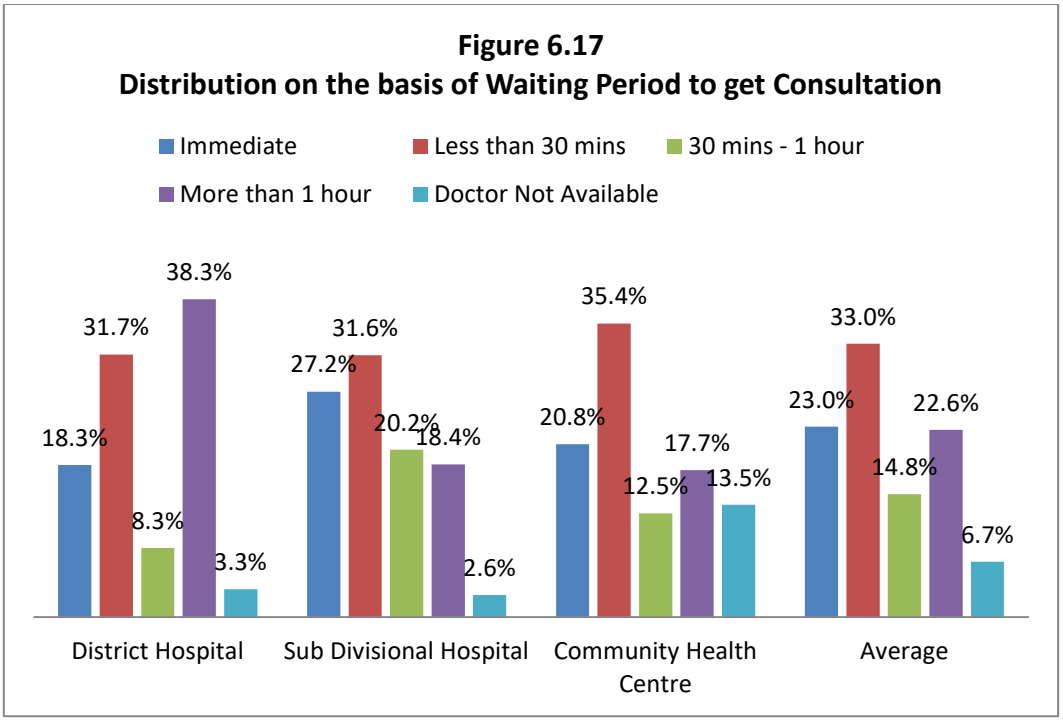
6.17 Distribution of Respondents on the basis of Waiting Period to get Consultation

The distribution of the respondents on the basis of waiting period to get consultation is presented in table 6.17. The analysis of data reveals that standing in long queues and more waiting time to see the doctors was the biggest concern which respondents revealed during the interviews. After waiting for an hour, if doctor recommends laboratory tests for examination, patients had to wait extra time to get the reports. In most of the hospitals, there was fixed time to get the results of lab tests between 1:30 pm – 2 pm. Therefore, patients need to prepare themselves for the 4-5 hours hardship to get the treatment. In every hospital, it has been noticed that there were 1-2 popular doctors who were more preferred by the people and waiting time for such doctors was more than 1 hour.

Table 6.17: Distribution on the basis of Waiting Period to get Consultation

	Waiting time to avail services					Total
	Immediate	Less than 30 mins	30 mins - 1 hour	More than 1 hour	Doctor Not Available	
District Hospital	18.30	31.70	8.30	38.30	3.30	100.00
Sub Divisional Hospital	27.20	31.60	20.00	18.40	2.60	100.00
Community Health Centre	20.80	35.40	12.50	17.70	13.50	100.00
Average	23.00	33.00	14.80	22.60	6.70	100.00

The distribution of the respondents on the basis of waiting period to get consultation is also shown with the help of bar-charts in figure 6.17.



6.18 Perception of Out-Patients on Quality of Services in the Hospitals

The data relating to out-patients on quality of services is presented in table 6.18. The responses of patients were recorded on the basis of three options i.e. good, average and poor. In every aspect, whether it is rating about OPD/Emergency, Reception, Admission procedure, quality of treatment, security or overall service providence, majority of the respondents rated the services as "average". The majority of respondents were concerned about the poor security arrangements in all types of hospitals. There were only a few hospitals where they hired or outsourced security guards. The analysis further reveals that approximately 90 per cent of the respondents rated the security as "average to poor" in the hospitals.

Table 6.18: Out-Patient's experience regarding different services of hospitals

RATING EXPERIENCE		Type of Hospital		
		DH	SDH	CHC
OPD/ Emergency	Good	33.00	32.00	25.00
	Average	57.00	64.00	67.00
	Poor	10.00	4.00	8.00
Reception	Good	33.00	35.00	24.00
	Average	58.00	59.00	67.00
	Poor	9.00	6.00	9.00
Admission Procedure	Good	30.00	35.00	23.00
	Average	57.00	62.00	67.00
	Poor	13.00	3.00	10.00
Quality of Treatment	Good	36.00	41.00	32.00
	Average	54.00	56.00	61.00
	Poor	10.00	3.00	7.00
Security	Good	8.00	18.00	5.00
	Average	58.00	48.00	48.00
	Poor	34.00	34.00	47.00
Overall Service Providence	Good	15.00	22.00	17.00
	Average	77.00	75.00	73.00
	Poor	8.00	3.00	10.00

**All values are in per cent*

6.19 Perception of In-Patients on Quality of Services in the Hospitals

The perception of in-patients on quality of services in the hospitals is presented in table 6.19. Again the perception of respondents was recorded on the basis of three options i.e. good, average and poor. The analysis of data reveals that food is only provided to the hospitalized woman who had caesarian (LSCS) or normal delivery. For caesarian cases, food is provided for 7 days and for normal delivery cases, food is provided for 4 days. Most of the hospitals

outsource the food from their hospital canteen or local dhabas. Funds provided by the government to provide food is Rs. 100 per day.

In majority of the hospitals, condition of washroom was rated "average to poor" by the respondents. In DHs, 77 per cent of the respondents rated it as average. In SDHs, 45 per cent rated it as "average" and 43 per cent rated it as "poor". In CHCs, 72 per cent of the respondents rated the condition of the washroom as "poor". The analysis of data reveals that maintenance of cleanliness is the major issue at all levels which needs attention. The insufficient manpower is the major reason for the poor level of cleanliness.

Table 6.19: In – patient's rating regarding different aspects of hospital wards

Rating Experience		Type of Hospital		
		DH	SDH	CHC
Ward and Bed Cleanliness	Good	35.00	32.00	32.00
	Average	52.00	41.00	41.00
	Poor	13.00	27.00	27.00
Bed Linen Quality	Good	33.00	44.00	32.00
	Average	53.00	42.00	41.00
	Poor	14.00	14.00	27.00
Ward and Bed Comfort	Good	27.00	46.00	23.00
	Average	60.00	45.00	59.00
	Poor	13.00	9.00	18.00
Power Supply	Good	47.00	54.00	59.00
	Average	53.00	44.00	41.00
	Poor	0	2.00	0
Food	Good	10.00	18.00	11.00
	Average	17.00	14.00	40.00
	Poor	0	3.00	0.00
	Not Provided	73.00	65.00	49.00
Washrooms	Good	7.00	12.00	8.00
	Average	77.00	45.00	20.00
	Poor	16.00	43.00	72.00

**All values are in per cent*

6.20 Perception of Patients in Regard to the Attitude of Service Providers

In addition to the availability of quality infrastructure, qualified doctors, the attitude of the service providers is a major issue in health sector. So, again the responses of the respondents were recorded on the basis of three options i.e. good, average and poor. The perception of patients in regard to the attitude of service providers is presented in table 6.20. The analysis of data reveals that in the DHs, behaviour of the employees was rated "good" by more than 75 per cent of the respondents, in SDHs more than 65 per cent of the respondents rated the

behaviour as “good” whereas in CHCs, only half of the respondents rated the behaviour of employees as “good”.

So, the analysis of data reveals that the rating of behaviour of doctors, nurses and the supporting staff is quite high which is a positive indicator for the service providers. However, as we move from DHs to CHCs the rating of behaviour of service providers decline. This might be due to the fact that CHCs are not equipped with good infrastructure as well as required manpower to deal with the patients which ultimately reflects in the form of poor rating.

Table 6.20: Patient’s rating regarding behaviour of employees

Behaviour of Employees		Type of Hospital		
		DH	SDH	CHC
Behaviour of Doctors	Good	85.00	74.00	53.00
	Average	15.00	24.00	42.00
	Poor	0.00	2.00	5.00
Behaviour of Nurses	Good	78.00	69.00	55.00
	Average	20.00	30.00	35.00
	Poor	2.00	1.00	10.00
Behaviour of rest of staff	Good	75.00	65.00	48.00
	Average	23.00	32.00	43.00
	Poor	2.00	3.00	9.00

**All values are in per cent*

6.21 Level of Awareness among the Patients in regard to General Information about Hospital Services

The level of awareness among the patients in regard to general information about hospitals is presented in table 6.21. Four options were given to the respondents. The analysis of data reveals that most of the patients coming to government hospitals were either from the rural background or illiterate. Therefore, when asked about the information about rules and regulations, information about disease and their treatment and information about lab tests, majority of them were not fully aware or had inadequate knowledge. As the level of awareness among the respondents was very low due to their low level of education, therefore, the majority of responses were fall in the category of partial or incomplete. So, the study suggests that there is need to launch an awareness campaign for the rural patients for the enhancement of their awareness level about the availability of schemes in these hospitals.

Table 6.21: Patient's rating regarding information available to them

Information available		Type of Hospital		
		DH	SDH	CHC
Information about rules and regulations	Complete	7.00	3.00	3.00
	Partial	25.00	49.00	40.00
	Inadequate	68.00	46.00	57.00
	Can't Say	0.00	2.00	0.00
Information about disease and treatment	Complete	17.00	9.00	6.00
	Partial	25.00	57.00	45.00
	Inadequate	58.00	32.00	49.00
	Can't Say	0.00	2.00	0.00
Information about lab tests	Complete	8.00	7.00	3.00
	Partial	34.00	52.00	43.00
	Inadequate	58.00	39.00	54.00
	Can't Say	0.00	2.00	0.00

6.22 Patients' Experience in Regard to the Pharmacy

The patients experience in regard to medicine status is presented in table 6.22. The analysis of data reveals that majority of the respondents had the concern that all the medicines were not available in the hospital. More than 65 per cent of the respondents in all type of hospitals stated that only few medicines were available in hospital pharmacy. In DHs, there were centrally funded "Jan Aushadhi" medical stores which provide the medicines at the discounted rates. Red Cross Society was also associated with these centers and procures medicines for the same. However, majority of the patients visiting hospitals were not even aware of Jan Aushadhi stores.

The major problem in this regard is that there were 3 warehouses for the medicines in Punjab, namely, Wallah in Amritsar, Bathinda and Mohali. All the hospitals need to go to these warehouses to collect the medicines. Most of the hospitals use their ambulances for transporting the medicines due to the lack of alternative transport systems which deprived the patients from the use of ambulances in emergencies. Again the study suggests that patients should be made aware in regard to the availability of medicines under different schemes of the centre and state government. Further, the delivery of these subsidized medicines should be ensured through separate transport system rather than the use of ambulances.

Table 6.22: Patient's experience regarding Pharmacy

Medicines		Type of Hospital		
		DH	SDH	CHC
Availability of Medicines	All available	20.00	28.00	27.00
	Some available	77.00	67.00	67.00
	None available	3.00	7.00	6.00
Amount paid inside the hospital for medicines	Yes	25.00	1.00	0.00
	No	75.00	99.00	100.00
Whether amount paid to outside chemist	Yes	83.00	70.00	72.00
	No	17.00	30.00	28.00

**All values are in per cent*

6.23 Level of Awareness among the Respondents in regard to the Health Schemes of the Government

The level of Awareness among the Respondents in regard to the Health Schemes of the Government is presented in table 6.23. The analysis of data reveals that majority of the respondents were not found to be aware of the government sponsored health schemes though they were aware of "Badal Card" for poor families named after former CM Punjab Parkash Singh Badal. The level of awareness in regard to the rest of the schemes relating to health was very poor. Therefore, efforts should be made to make the people aware of the government schemes so that they could be benefitted from these subsidized health services. Moreover, government should not change the name of the schemes with the change of government which confuses the illiterate patients.

Table 6.23: Patient's awareness regarding government health related schemes

Awareness among schemes of government		Type of Hospital		
		DH	SDH	CHC
RashtriyaSwasthaBimaYojna	Yes	8.00	2.00	0.00
	No	92.00	98.00	100.00
Jan AushadhiCentres	Yes	17.00	1.00	1.00
	No	83.00	99.00	99.00
Tele Medicine	Yes	2.00	1.00	1.00
	No	98.00	99.00	99.00
BhagatPuran Singh BimaYojna	Yes	17.00	8.00	15.00
	No	83.00	92.00	85.00

**All values are in per cent*

6.24 Suggestions for the Improvement of Quality of Health Services

The data relating to the suggestions provided by the respondents for the improvements of quality of health services is presented in table 6.24. The analysis of data reveals that

provision of all medicines, facilities for clinical tests and clean washrooms emerged as the top ranking suggestions.

Table 6.24: Suggestions

Suggestions	DH		SDH		CHC	
	Count	Rank	Count	Rank	Count	Rank
Provide all medicines	35	1	63	1	51	1
All diagnostic facilities should be available	25	2	42	2	32	3
Free medicines	19	3	16	12	15	9
Washrooms should be clean	11	8	26	6	33	2
Waiting time should be reduced	14	5	42	2	18	6
Needs higher authority visits	13	7	32	4	24	4
Needs more general doctors	16	4	17	9	18	6
Needs more specialist doctors	14	5	30	5	18	6
Doctors should be available at night	11	8	23	7	20	5
Better facilities during night	5	13	17	9	8	12
Subsidized food should be given to all patients	11	8	20	8	8	12
Behavior of staff needs improvement	5	13	8	15	9	11
Hospital should be more clean	7	11	17	9	14	10
No. of beds should be increased	5	13	12	13	0	16
Drinking water should be available	2	16	3	16	4	15
Others	7	11	12	13	6	14

6.25 Level of Satisfaction among Patients in regard to the overall Hospital Services

The data relating to the level of satisfaction among patients in regard to overall hospital services is presented in table 6.25. The responses were recorded on a likert-type scale having five options. The analysis of data reveals that the majority of the patients were satisfied with the health providence as they came to the hospital with little expectations. They were happy that they are getting free consultation and some medicines also. They were found familiar with the system that costly medicines were to be bought from the market by spending from their own pocket.

The analysis of data further reveals that 65 to 70 per cent of respondents were satisfied or highly satisfied with the services provided by the hospitals in spite of the issues raised by them in regard to poor quality of services.

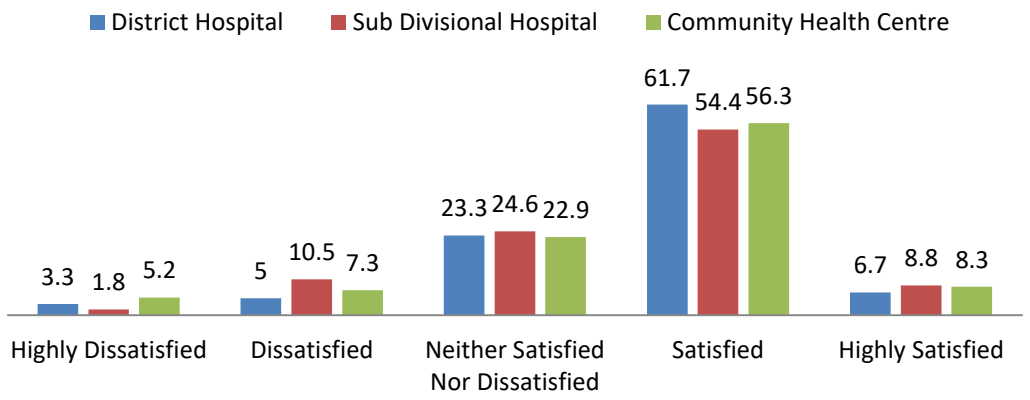
Table 6.25: Satisfaction among the users of the hospital services

	HD	D	NSND	S	HS	Total
District Hospital	3.30	5.00	23.30	61.70	6.70	100.00
Sub Divisional Hospital	1.80	10.50	24.60	54.40	8.80	100.00
Community Health Centre	5.20	7.30	22.90	56.30	8.30	100.00
Average	3.30	8.10	23.70	56.70	8.10	100.00

HD: Highly Dissatisfied, D: Dissatisfied, NSND: Neither Satisfied Nor Dissatisfied, S: Satisfied, HS: Highly Satisfied
**All values are in per cent*

The distribution of respondents relating to level of Satisfaction in regard to the overall Hospital Services is also shown with the help of bar charts in figure 6.25.

Figure 6.25
Satisfaction among the users of the hospital services



Section – III

Patient's Opinion towards health care services offered by PHSC on the basis of Field Observations

Field observations based on the comments of the patients/ respondents are as under:

- A patient at DH, Amritsar reported, "I have to wait 2 hours to consult a gynecologist doctor. Only I got one pack of free Iron tablets from hospital's medical store and got Calcium and Protein Powder from Jan Aushadhi Center by paying Rs. 110."
- Another patient at DH, Amritsar said, "Most of the time only cheaper medicines are available free of cost. Generally the costly medicines have to buy from the market.
- Patients at SDH Baba Bakala said, "Due to commission of doctors, medical stores near hospital charge thrice the actual price of medicine. Same medicine from wholesale store is available at much cheaper rate. No provision of food for the poor in the hospital. Local Gurudwara Sahib is daily doing the sewa of the food for the patients."

- One patient at SDH Baba Bakala said, “I got operated my arm in the hospital. An injection which costs Rs. 750 was not available in the hospital medical store. We are not able to afford such a high cost of medicines. More than Rs. 22,000 we spent out of pocket in 10 days to complete the treatment which we borrowed at market interest.”
- One patient at SDH Ajnala reported that he bought operation kit and plates required for surgery from outside medical store for Rs. 15,000.
- Patients at CHC Lopoke said that OPD timing was 8 am to 2 pm, but doctors came at 9 am and see the patients only till 12 noon. There was no washroom for male patients in the hospital.
- A patient at DH Jalandhar said, “I have to buy costly medicines from outside chemist. Cost of the medicine was Rs. 800 for 1 day. However, daily food was served from outside by sewa wala which reduce our cost to stay in the hospital.”
- A patient at DH Jalandhar commented that he had to wait for one day and one night for the operation because doctors were not available.
- Some patients told that old machines like X-Rays and Ultrasound in the hospital were not giving the accurate results. Doctors sometimes suggest to get the procedure done from outside. Machines should be upgraded/ replaced in SDH Nakodar.
- “I delivered a child through caesarian at the hospital but no food was provided though it is mandatory under central sponsored scheme and LSCS cases are entitled for meals for 7 days”, said a patient at SDH Nakodar.
- Doctors advised Ultrasound from outside and we had to spend Rs. 700 twice said a patient at SDH Phillaur.
- “I have Rasoli and when I visited hospital the doctors said they don’t have treatment at the hospital. All type of treatment should be made available at CHC level”, said a patient at CHC Kala Bakra.
- Attendant of a patient at CHC Kartarpur said, “Daily we were asked to buy medicines from outside chemist shops, when we expressed our inability to buy after 16 days, then doctor wrote the medicines which were available inside the hospital medical store.”
- We were forced to buy most of the medicines from outside. We never got all the medicines prescribed from the hospital’s medical store reported another patient at CHC Kartarpur.

- Another respondent at the CHC informed that doctors were not available during holidays, only nurses attend the patients at such times. Moreover, no lab tests are done at hospital though I was suffering from Typhoid.
- One patient praised the doctors at DH Tarn Taran that his operation was very well done by the doctors but hospital needs to reduce waiting time to consult a doctor. There should be a separate line for senior citizens.
- Respondents at DH Tarn Taran suggested that lab test reports should be made available as soon as the examination of tests is done. They had to wait till 1:30 pm (fixed time) to get the reports.
- Another respondent at DH Tarn Taran said that his son was suffering from bleeding disorder Hemophilia. When the problem occurs, an injection of Rs. 3500 needs to be given twice a day. Delhi government is providing treatment of this disease for free but there is no such facility provided by government of Punjab.
- Respondents from CHC Sur Singh reported that they were forced to go to Amritsar as there is neither any doctor nor any medicine available at the hospital. Doctors remained absent most of the time, may be due to other works/ duties assigned to the doctors.
- Sign boards are not displayed to provide information that subsidized medicines are also available at the Jan Aushadhi Store. I regularly visit this hospital and today I come to know about this store after a long time a respondent at DH Hoshiarpur informed.
- Another patient at DH Hoshiarpur suggested that number of beds in the emergency should be increased. Even after one day of admission no bed had been made available to him due to the shortage of beds.
- Though the OPD registration charge was Rs. 10 but if you need immediate consultation, doctor will charge Rs. 100 to check the patient said a patient at SDH Mukerian.
- A respondent at CHC Tanda reported that she had paid fee of Rs. 3000 to avail outsource doctor services for the caesarian operation at the hospital otherwise they were referring her to SDH Dasuya. It shows the non-availability of specialist doctor in the PHSC hospital which is a common problem in many hospitals of PHSC in Punjab.
- Respondents at CHC Tanda suggested that the parking fee for the vehicles inside the hospital premises should be abolished.
- A patient at DH Ludhiana complained that he had prostate problem. Doctors were referring him to Patiala as no doctor and required apparatus were available for the

treatment of this problem. He didn't have money to go to Patiala. All services should be made available at the district hospitals.

- One patient at DH Ludhiana informed that some NGOs are helping the patients. He was getting the free medicines from Nikhil Singhal Noble Trust and Eknoor Trust and food from the sewa. Eknoor Trust beared the expenses of his operation.
- Another patient at DH Ludhiana argued that he had been asked to get MRI done from outside worth Rs. 7000. In Delhi it is free why such facilities are not provided in Punjab.
- A patient at SDH Jagraon complained that every time he came at the hospital, he always had to share the bed with other patients. So, number of beds should be increased in the hospital.
- A patient at SDH Rampura Phool said that doctors asked for MRI of brain but he didn't have money for this costly procedure. Such facilities should be provided to the poor people free of cost.
- An old patient at CHC Bhagta Bhai Ka said, "Only one week medicine is given from the medical stores. As I am old it is difficult for me to come again and again from the village. Even doctor wrote medicine for 1 month on the prescription slips. It should be allowed for senior citizens to take medicine for longer period because the frequent visits to the hospital add extra cost to the poor patients.

CHAPTER VII

Perception of Doctors towards Health Services and Job Satisfaction

Present chapter deals with the perception of doctors towards health services being provided by the PHSC. An attempt has also been made to measure the level of job satisfaction among the doctors working in these hospitals. For this purpose, 95 doctors were interviewed to get their responses in regard to working of these hospitals and to measure the level of job satisfaction among them. Initially, it was planned to interview 120 doctors i.e. 20 doctors from each district but we end up with a sample of 95 doctors due to large number of vacant positions in the sampled hospitals.

7.1 Demographic Profile of the Respondents

Table 7.1 shows the demographic profile of the doctors. The data shows that 65.30 per cent of the respondents were male and 34.70 per cent of them were female. Majority of the respondents i.e. 37.90 per cent were in the age group of 41 to 50 years followed by 28.40 per cent from the age group of 31 to 40 years. 27.40 per cent of the respondents were in the age group of 21 to 30 years and only 6.30 per cent of them were above 50 years of age. The profile of doctors also indicates that 57.00 per cent of the respondents were either holding a degree of MS or MD. The analysis further reveals 36.80 per cent of the doctors come from rural background while 63.20 per cent were from urban background.

Table 7.1
Demographic Profile of Doctors

S. No	Characteristic		Number	Percentage
1.	Gender	Male	62	65.3
		Female	33	34.7
2.	Age	21 to 30 years	26	27.4
		31 to 40 years	27	28.4
		41 to 50 years	36	37.9
		Above 50 years	6	6.3
3.	Qualification	MBBS	31	32.6
		BDS	8	8.4
		MD	28	29.5
		MS	26	27.4
		Others	2	2.1
4.	Origin	Urban	60	63.2
		Rural	35	36.8

Source: Field Survey

7.2 Exploratory Factor Analysis

To apply factor analysis a set of 23 statements was taken. The responses of doctors were recorded on a five point likert-type scale. The list of the statements is provided in table 7.2. The dimensions of the 23 statements (Annexure V) have been explored through Exploratory Factor Analysis. Exploratory factor Analysis is used to reduce a large number of variables into a smaller set of factors which represent the underlying dimensions. SPSS version 19 has been used for the purpose of item reduction. We used Principal Component Analysis with Varimax Rotation method for the analysis of data as it is considered the best because it explains the total variance in items (Field, 2000).

Table 7.2

List of Statements

Labels	Statements
X1	Physical working conditions in the hospital are good
X2	I have sufficient space to see my patients
X3	OT is the hospital is quiet good
X4	Hospital has good rest rooms
X5	My total monthly pay package is fair as per work requirement/ responsibilities
X6	My work schedule leaves me enough time for my family life
X7	I am satisfied with my working hours (per day)
X8	My seniors treat me fairly
X9	My seniors provide sufficient opportunities for participation in the decision making process of the hospital
X10	My seniors give me credit and recognition for good work done by me
X11	The suggestions made for improvement are always welcomed
X12	I am free to refer patients when necessary
X13	The hospital gives me full freedom in treating my patients
X14	I have adequate equipment for treatment of the patients
X15	The hospital gives me liberty to choose or reject my support staff on the basis of their competency
X16	I am well paid as per my training and experience
X17	The hospital provides adequate monetary/ non-monetary benefits to the doctors
X18	My co-workers share their experience to help each other
X19	My co-workers are an important source of personal support
X20	The staff is very cooperative
X21	The hospital provides adequate opportunities for promotion
X22	The promotion policy of the hospital is simple and transparent
X23	I have option to stay at hospital residence accommodation

Before applying the factor analysis, the data were tested for the fulfillment of certain assumptions. If the data fail to satisfy these assumptions, the factor analysis cannot be proceeded with.

7.2.1 Normality

As per the requirement of the factor analysis, the data should be normally distributed. The normality of the data was checked with the help of skewness and kurtosis values of the data. The value of all the variables was found to be within the recommended range, which implies that the data is normally distributed.

7.2.2 Reliability Analysis for Scale

Reliability analysis was performed to check the internal consistency of the data. It insures whether the research performed at a similar settings and environment will generate the same results (Hair et al., 1992). Hair et al. (2007) also suggested that Cronbach's Alpha having value more than 0.70 is considered reliable metric to check high internal consistency. Further, the scale is considered to be reliable the value is greater than 0.60 (Malhotra, 2008). Cronbach's Alpha was calculated for the present study and the calculated value obtained was 0.891. Hence, the data was found to be reliable.

Table 7.3
Reliability Analysis

Cronbach's Alpha	No. of items
0.831	23

Source: Based on SPSS Results

7.2.3 Kaiser Meyer Olkin Measure of Sampling Adequacy

The sampling adequacy is measured with the help of KMO. The value of KMO ranges between 0 and 1. The value of the KMO index is interpreted in the following manner: 0.90 is 'marvellous', 0.80s is 'meritorious' 0.70 is 'middling', 0.60s is 'mediocre', 0.50s is 'miserable' and below 0.50 is unacceptable (Kaiser, 1974).

According to Hair et al. (1998), it is important to calculate KMO and Bartlett's test of sphericity values before conducting EFA. These tests were applied to examine the correlation among the variables and to check the adequacy of sample. The results of KMO and Bartlett's test of sphericity are shown in the table 7.4. Table reveals that the value of KMO is 0.718 which implies that data is suitable for factor analysis. Similarly, Bartlett's test of sphericity is found significant as p value is found to be less than 0.001 which implies that required correlation exists between the variables to proceed further.

Table 7.4
KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.718
Bartlett's Test of Sphericity	Approx. Chi-Square	1819.946
	Df	190
	Sig.	.000

Source: Based on SPSS Results

7.2.4 Communalities and Descriptive Statistics

The initial communalities represent the relation between the variables and with all other variables (i.e., the squared multiple correlation between the item and all other items) before rotation. If many or most of the communalities take small value (< 0.30), a large sample size is less likely to distort results. The communalities of items (statements) of the scale are presented in Table 7.5. The extraction communalities are functional as these were calculated using the various extracted factors. Extraction communalities for a variable provide the total amount of variance in that variable, explained by all the factors. Higher the value of communality for a particular variable after extraction, higher is its amount of variance explained by the extracted factors. In Table 7.5, the rows specify the various components taken into consideration to examine and scan the factor analysis. There are 23 variables (statements) which are converted into six factors. Second column (Initial) indicates that "what will be the total weight of each of the components if there is only one component". The third column (Extraction) indicates that "in existence of all the components what will be the weight of all the components individually". Further, Table 7.5 describes the mean score and Standard Deviation (SD) of all the 23 variables independently.

Table 7.5
Communalities and Descriptive Statistics

Labels	Statements	Initial	Extraction	Mean	Std. Deviation
X1	Physical working conditions in the hospital are good	1.000	.707	3.52	1.089
X2	I have sufficient space to see my patients	1.000	.668	3.85	.783
X3	OT is the hospital is quiet good	1.000	.717	3.83	.767
X4	Hospital has good rest rooms	1.000	.696	2.54	1.123
X5	My total monthly pay package is fair as per work requirement/ responsibilities	1.000	.867	2.98	1.318
X6	My work schedule leaves me enough time for my family life	1.000	.809	3.31	1.108
X7	I am satisfied with my working hours (per day)	1.000	.788	3.70	.835
X8	My seniors treat me fairly	1.000	.742	4.17	.538

X9	My seniors provide sufficient opportunities for participation in the decision making process of the hospital	1.000	.864	3.87	.866
X10	My seniors give me credit and recognition for good work done by me	1.000	.907	3.85	.915
X11	The suggestions made for improvement are always welcomed	1.000	.865	3.81	.908
X12	I am free to refer patients when necessary	1.000	.761	4.11	.688
X13	The hospital gives me full freedom in treating my patients	1.000	.520	3.98	.761
X14	I have adequate equipment for treatment of the patients	1.000	.737	2.93	1.074
X15	The hospital gives me liberty to choose or reject my support staff on the basis of their competency	1.000	.674	2.89	1.105
X16	I am well paid as per my training and experience	1.000	.835	3.09	1.272
X17	The hospital provides adequate monetary/ non-monetary benefits to the doctors	1.000	.793	2.91	1.164
X18	My Co-workers share their experience to help each other	1.000	.932	3.72	1.012
X19	My co-workers are an important source of personal support	1.000	.934	3.80	1.012
X20	The staff is very cooperative	1.000	.805	3.96	.864
X21	The hospital provides adequate opportunities for promotion	1.000	.869	2.94	1.031
X22	The promotion policy of the hospital is simple and transparent	1.000	.888	2.93	1.020
X23	I have option to stay at hospital residance accommodation	1.000	.762	3.30	1.087

Source: Based on SPSS Results (Extraction Method: Principal Component Method)

7.2.5 Factor Extraction

Principal Component analysis method with varimax rotation was applied for the extraction of the factors. The interpretation of factor loading become easier with varimax rotational approach as some of the loadings are large (close to 1) and some are very small (near zero). The factor loadings closer to 1 clearly indicate a high correlation between the variables and the factor whereas a near zero factor loading represents a lack of such correlation. The extraction method resulted in factor loadings of all the 23 statements equal to or greater than 0.5 as recommended by Hair, Anderson, Tatham and Black (1998) are accepted. The factors were extracted on the basis of three parameters: Eigenvalue > 1, Scree plot and the variance explained. After extracting the factors, each of the dimensions is named on the basis of variables falling in it. The variables with higher factor loadings are considered to assign appropriate name to a particular factor.

7.2.6 Variance Analysis

Table 7.6 summarizes the total variance explained by the Exploratory Factor Analysis solution and describe about the number of useful factors. This table has three parts and each part has three columns. The first column of first part, titled Initial Eigen values gives the variance explained by all the possible factors. There are total of 23 statements, which is same as the number of variables goes through the EFA. The first column under initial Eigen values provides the Eigen values for all the possible factors in a descending order. This is followed by the variance as a percentage of all the variance and Cumulative Variance. Table 7.6 shows that cumulative value of the six factors becomes approximately 80.15 per cent. It means these six factors are strong enough to overpower the remaining factors. The factors with Eigen values greater than 1 are considered important. The review of literature helps us to decide that only factors with Eigen values greater than 1 should be retained and considered significant while values less than 1 are considered insignificant and should be deleted for further analysis. Malhotra (2002) recommended that "the minimum 50 per cent of the variance should be accounted for explaining the variation of factors". In the present study, six factors explained 80.148 per cent (Table 7.6) of the total variance, which is considered acceptable.

Table 7.6
Total Variance Explained

Com-ponent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Var.	Cumu. %	Total	% of Var.	Cumu. %	Total	% of Var.	Cumu. %
1	6.791	33.956	33.956	6.791	33.956	33.956	3.486	17.432	17.432
2	2.979	14.896	48.852	2.979	14.896	48.852	2.968	14.841	32.273
3	2.492	12.461	61.313	2.492	12.461	61.313	2.936	14.680	46.953
4	1.537	7.683	68.995	1.537	7.683	68.995	2.780	13.899	60.851
5	1.203	6.015	75.010	1.203	6.015	75.010	2.004	10.020	70.872
6	1.028	5.138	80.148	1.028	5.138	80.148	1.855	9.277	80.148

Var: Variance, Cumu: Cumulative Variance
Source: Based on SPSS Results (Extraction Method: Principal Component Analysis)

7.2.7 Factor Loadings

After running of factor analysis, the selected 23 items were reduced to a set of six factors. These six factors is the outcome of Varimax Rotated Method. Table 7.7 shows the factor loadings which have been used to measure the correlation between variables and the factors. It is argued that loading close to 1 indicates strong correlation between a variable and the factor, while a loading close to zero indicates weak correlation. The factors were rotated with the help of Varimax with Kaiser Normalization rotation method and Principal Component

Analysis (PCA) method for factor extraction. Only those factors having loadings greater than 0.50 were retained for the interpretation purpose and factors with loading less than 0.50 were dropped for further analysis. However, in the present analysis, all the statements have loadings higher than 0.50.

Table: 7.7
Rotated Component Matrix

Sr. No.	Factors					
	1	2	3	4	5	6
X1	0.018	0.222	0.834	-0.044	0.080	0.143
X2	0.136	0.132	0.829	0.001	0.190	-0.086
X3	-0.034	0.273	0.718	-0.111	0.238	-0.033
X4	0.124	-0.045	0.649	0.026	0.312	0.165
X5	0.232	0.706	-0.030	0.014	-0.125	0.059
X6	0.010	0.078	-0.052	0.224	0.756	0.031
X7	0.013	0.121	-0.043	-0.069	0.649	0.121
X8	0.166	-0.072	0.121	0.867	0.087	0.069
X9	0.054	0.014	0.056	0.837	-0.073	0.061
X10	-0.111	0.023	0.087	0.688	-0.048	-0.029
X11	-0.165	0.079	3.010	0.521	0.088	-0.042
X12	-0.085	0.798	0.222	-0.054	0.031	0.712
X13	0.168	0.084	0.159	-0.050	0.315	0.638
X14	0.073	0.182	0.613	0.053	-0.013	0.556
X15	-0.067	0.038	0.220	0.246	-0.148	0.560
X16	0.024	0.662	0.534	-0.086	0.146	0.621
X17	0.064	0.660	0.017	0.010	0.415	0.481
X18	0.861	-0.154	0.888	0.089	0.080	0.045
X19	0.832	0.035	0.053	0.545	0.116	0.146
X20	0.765	0.231	-0.140	-0.019	0.449	-0.072
X21	-0.033	0.568	0.057	-0.025	0.621	0.068
X22	0.097	0.547	0.122	0.087	0.342	0.525
X23	0.022	-0.136	0.516	0.044	0.068	-0.031

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization

7.2.8 Naming of the factors

The naming of factors is purely a subjective in nature. However, due weightage is given to the items which are loaded on a particular factor. The details of the six dimensions extracted by exploratory factor analysis is presented in the following discussion.

Factor I: Relationship with Co-workers

This factor has emerged as the most important and three statements are loaded on this factor. The data reveals that all the variables loaded on this factor have high factor loadings which show the significance of this factor i.e. support of co-workers to performing doctors. Statements X18, X19, X20 are loaded on this factor. It implies that the support of co-workers is very important for the performing doctor.

Factor II: Monetary benefits and Career Development

The second factor is named as "Monetary benefits and Career Development" includes five statements and all the variables on this factor have high value of correlation i.e. greater than 0.5 which proves that all the variables are closely related to the factor. Statements X5, X16, X17, X21, X22 are loaded on this factor. So, the monetary benefits and career development has emerged as the second important factor.

Factor III: Workplace Environment

The third factor has the highest number of statements i.e. six that makes this factor very important to consider. This factor is obtained on the basis of responses of doctors in regard to their satisfaction with environment at the workplace. Statements X1, X2, X3, X4, X14, X23 are loaded on this factor. This factor highlighted that the workplace environment plays a very important role for the better outcomes.

Factor IV: Relationship with Seniors

The fourth factor that has emerged from the factor analysis is named as 'Relationship with seniors' and four items are loaded on this factor. This factor helps us to understand the extent of team work among the medical professionals. Statements X8, X9, X10, X11 are loaded on this factor. In medical profession, team work is very important as most of the diseases are multidimensional.

Factor V: Extent of Workload

This factor accounting for 10.020 per cent of the variance has been named as 'Extent of Workload'. It is related to the amount of burden on the doctors during the performance of their job and the time available for their personal life. The two items, namely, X6 and X7 are loaded on this factor.

Factor VI: Level of Autonomy at Workplace

Three statements are loaded on the last factor. Autonomy refers to the degree of freedom given to the employee to perform his/her job. Statements X12, X13 and X15 are loaded on this factor.

Hence, the factor analysis summarized the 23 statements into 6 factors. So, the application of exploratory factor analysis has enabled us to achieve our objective of getting six factors on the basis of 23 variables which are important job dimensions to carry forward future analysis as well as to suggest for the formulation of suitable health policy.

Overall Job Satisfaction Among Doctors

An attempt was also made to get the overall response of doctors on the basis of one statement and the mean obtained was 3.62 which indicate that most of the doctors were satisfied with their job. But when we analyzed satisfaction level of doctors who were MBBS with their job then mean value decreased to 3.29 which shows that satisfaction level was low among MBBS doctors. This may be due to low pay structure and more workload for newly joined doctors. It is pertinent to mention that Punjab government is not paying full salary to their employees as per their entitlement in all the departments. A newly appointed employee is to work on basic pay for first three years. It is after three years that an employee will get full pay which is also applicable in health department.

Table 7.8
Factor Loadings, Variance Explained and Eigen Values

	Factors Name	Label	Variables	Loadings	Eigen value	Variance percentage	Cronbach's alpha
I.	Relationship with Co-Workers	X18	My Co-workers share their experience to help each other	0.861	6.791	17.432	0.641
		X19	My co-workers are an important source of personal support	0.832			
		X20	The staff is very cooperative	0.765			
II.	Monetary Benefits and Career Development	X5	My total monthly pay package is fair as per work requirement/ responsibilities	0.706	2.979	14.841	0.735
		X16	I am well paid as per my training and experience	0.662			
		X17	The hospital provides adequate monetary/ non-monetary benefits to the doctors	0.660			
		X21	The hospital provides adequate opportunities for promotion	0.568			
		X22	The promotion policy of the hospital is simple and transparent	0.547			
III.	Workplace Environment	X1	Physical working conditions in the hospital are good	0.834	2.492	14.680	0.741
		X2	I have sufficient space to see my patients	0.789			
		X3	OT is the hospital is quiet good	0.718			
		X4	Hospital has good rest rooms	0.649			
		X14	I have adequate equipment for treatment of the patients	0.613			
		X23	I have option to stay at hospital residance accommodation	0.516			
IV.	Relationship with seniors	X8	My seniors treat me fairly	0.867	1.537	13.899	0.982
		X9	My seniors provide sufficient opportunities for participation in the decision making process of the hospital	0.837			
		X10	My seniors give me credit and recognition for good work done by me	0.688			
		X11	The suggestions made for improvement are always welcomed	0.521			
V.	Workload	X6	My work schedule leaves me enough time for my family life	0.756	1.203	10.020	0.812
		X7	I am satisfied with my working hours (per day)	0.649			
VI.	Level of Autonomy at the workplace	X12	I am free to refer patients when necessary	0.712	1.028	9.277	0.652
		X13	The hospital gives me full freedom in treating my patients	0.638			
		X15	The hospital gives me liberty to choose or reject my support staff on the basis of their competency	0.560			

Doctor's Opinion towards health care services offered by PHSC on the basis of Field Observations

The comments recorded during the field survey are presented below along with their suggestions. However, the name of the doctor/ hospital has been kept secret.

- Emergency Medical Officers are less in number. Basic infrastructure is not as per standards. Required equipments to treat the patients are not available. There is no system to ensure security of doctors.
- Overall system needs improvement. At least 3-4 security guards should be available at night. Hospitals are highly unsecure. 24x7 hours security should be made available.
- Political involvement in the healthcare services should be checked. Political transfers are done when the illegal work of influential person is not done and one has to pay huge price to come back to his/her family.
- There should be separate wings for child delivery. Moreover, laparoscope and trauma training should be provided to Emergency Medical Officers.
- To deal the emergency cases separate doctors should be deputed. Specialist doctors should not be involved in Medico-legal cases. Direct feedback of the system from the doctors should be implemented. Frequent training or conferences should be made compulsory for every doctor. Subsidized books should be provided to specialist doctors. Access to internet and journals should be provided in the hospitals.
- More generic medicines should be made available and more staff is needed in order to carry out the smooth functioning of the hospital.
- There is a need for increase in staff strength and number of beds in the hospital. Sometimes 80+ patients are admitted in our 50 bedded hospital. It affects the efficiency and quality of services provided in these hospitals.
- Regular funds should be provided for the maintenance of existing equipments and infrastructure which is lacking at present.
- Medicine stock should be increased as per requirements of the hospital. The dealing staff and the doctors have to face the reaction of the public due to the non-availability of sufficient medicines.
- Purchase of quality medicines from good companies should be done.

- There is need to pay good perks to specialist doctors as per their experience and working hours. Equipments needs up gradation/replacement.
- There is a need for sufficient manpower to maintain hygiene and good sanitation conditions in the wards and washrooms twenty four hours. Hygiene and infection control committees are required to be set in each hospital at all levels.
- The quality of medicines is a serious issue and should be addressed.
- Many of the PHSC run hospitals are without proper boundary wall. Funds should be made available for the construction of the boundary walls.
- The principle of equal pay for equal work should be followed. Presently, doctors are under-paid which de-motivate them. Highly qualified doctors are under paid during the probation period as per the new rules implemented by the Punjab government.
- Infrastructure should be modernized, medicines should be made available all the time and better equipments and facilities should be provided.
- Separate rooms are required for the admission of the patients. Sometimes the non-availability of separate rooms in PHSC run hospitals compels the patients to move to private hospitals.
- One doctor said, “I am satisfied with what I am doing but dissatisfied what government is doing with regard to initiatives taken for better health services”.
- Many times patients become aggressive when they come with their own prescription and compel the doctors to approve the same to get it free from the dispensary. The failure to accept their proposal leads to crisis.
- Beds of modern type are required which are patient friendly. There is shortage of nursing staff. Maximum of the time, 50 per cent of medicines are not available in stock. Protein powder needed for pregnant women remains out of stock all the time which is very much in demand.
- Sometimes patient forces us for treatment as per their choice. They want quick results which is not possible in case of chronic diseases.
- Many cases admitted in hospitals in critical condition. Sometimes they come to hospital after getting wrong treatment from unqualified doctors and blame us for not treating their patients in a proper manner.

CHAPTER VIII

Summary, Conclusion and Recommendations

Good health is considered to be a pre-requisite for the socio-economic development of a country. In the present times, the weightage of health parameters for the ranking of the countries at the International level has got special attention. Moreover, the role of state either in the form of direct provision of health care services or regulation of the supply of health care by the private sector has been considered essential to ensure equitable access of health services to lower section of the society.

A brief look on the International Health Scenario reveals that the access to health services is not free from controversies. WHO in 2008 identified five common shortcomings of health care delivery at the global level. Firstly, public spending on health services often benefits the rich more than the poor in high and low-income countries alike. Secondly, it has been found that about 100 million people annually fall into poverty because they have to pay for health care from their pockets. Thirdly, health services for poor and marginalized groups are often highly fragmented and severely under resourced while developmental aid further adds to the fragmentation. Fourthly, poor designing of health system has been failed to ensure safety and hygiene standards. Fifth, misdirected care i.e. resource allocation clusters around curative services at great cost, neglecting the potential of primary prevention and health promotion to prevent up to 70 per cent of the disease burden.

The misery of the Indian health sector is that out of the total private health expenditure 87.20 per cent was out of pocket expenditure which makes India the most privatized health sector in the world. The high proportion of out of pocket expenditure puts financial burden on the poor leading to household spending a major share of their consumption expenditure on health. The low level of government spending on health has resulted in low utilization of public health care services. Due to unavailability and inefficiency of public health services, the poor people have been forced to use the services of expensive and unregulated private sector. It exposes the poor people to financial risk and sometimes even results in poverty. Some initiatives have been taken in order to ensure proper utilization of the released funds. For this purpose the centre government framed a new health policy in 2012 in which the allocations were linked to the performance of the states as a result of which the utilization pattern of states have improved. The empirical studies relating to health sector in India reveals that the public sector has deteriorated over the period of time.

All the above mentioned problems have become more complicated with the implementation of neo-liberal model of development since 80s. India is not an exception to all these developments. Many studies have pointed out that disparities exist between rural and urban areas as well as distribution of resources between the two important functions of health sector i.e. preventive and curative. According to one study, the share of public health services is just one-third of total expenditure and rest is spent on family welfare programs. Contradictions have also been found between health policy documents and the actual practice.

Further, review of literature relating to India reveals that despite of policy changes at the national and state level, the delivery of health services at the grass-root level is below average which demands urgent attention of all the stake holders. Being on the concurrent list the health services are left largely as the responsibility of the states for their execution. Among the Indian states, Punjab is relatively a small state with high per capita income and was at the fore front of India's green revolution and contributed to make India self-sufficient in food grains. It is among the first few states in the country with 100 percent road connectivity in rural areas. The GDP of Punjab was at Rs. 398170 crores in 2018-19 and the per capita income was Rs 153061 in the same year. Punjab has also been considered number one state in the infrastructure index prepared by several agencies at the national level.

In spite of all these positive developments the health outcomes in many dimensions i.e. maternal and infant mortality rates have not reached to the goal set as the standards in Millennium Development Goals and Sustainable Development Goals. Over the period of time, Punjab which was ranked 1st in terms of Net State Domestic Product (NSDP) in 1980 has slipped to 15th rank in 2018-19. It has now become a debt-burdened state of India as government used to borrow for paying off the salaries, pensions and providing subsidies. The debt of Punjab which was estimated 1.95 lakh crores in 2017-18 has further increased to 2.12 lakh crores estimated in budget 2018-19. This financial crisis has affected public spending in every sector specially the health sector. As a result, the public health share out of the total budget expenditure has declined from around 9 per cent in 1980-81 to 6.97 per cent during 1989-90. It has further declined to 4.35 per cent in 2004-05 which was just 3.81 per cent of the total annual budget of Punjab during 2016-17. Further, within the health sector share of medical institutions has also gone down. Moreover, the rising cost of health services has become a major issue. Also, most of the government hospitals in Punjab are overcrowded and private health sector services are becoming out of reach of common public.

After the implementation of new economic policy in 1991, the public health services could not remain unaffected for long. Punjab government prepared a proposal in 1995, to revamp the health services with the financial assistance from World Bank. It was felt that the standard of curative health services including diagnostic services in most of District Hospitals, Sub-divisional Hospitals and Community Health Centers in Punjab was a source of inconvenience and dissatisfaction to the general public. Hence, a process of reform was initiated with the help of assistance from World Bank for the improvement of health services in terms of access as well as quality by establishing Punjab Health Systems Corporation (PHSC) in 1996. The PHSC was set-up by enacting "The Punjab Health Systems Corporation Act, 1996 (Punjab Act No. 6 of 1996)". At the outset this ambitious project's start-up was delayed due to continuing debate around the PHSC and constraint in the flow of funds. Finally, PHSC was established as a non-commercial statutory Corporation without a revenue stream, and it was originally funded by loans and grants from the World Bank and the state government. It was set up with the financial assistance (US$106.10 million) from World Bank, with an objective to upgrade health services at secondary level. Specifically the main objectives of PHSC were as follows:

(a) To improve efficiency in the allocation and use of health resources in the Punjab State through policy and institutional development; and

(b) To improve the performance of the health care system in the State through improvements in the quality, effectiveness and coverage of health services at the first referral level and selective coverage at the primary level, so as to improve the health status of the people, especially the poor, by reducing mortality, morbidity and disability.

In order to revamp the secondary level health care services PHSC was supposed to help in:

(a) Adding and renovating hospital building at the block, sub-divisional and district headquarters;

(b) Supplementing accommodation for essential staff;

(c) Making provision of more ambulances and better machinery and equipment;

(d) Increasing body strength at some places;

(e) Additional hospital linen and accessories;

(f) Maintaining funds for building, vehicles, machinery and equipment; and,

(g) Cleanliness, repair and up-keep of all buildings.

Initially, the Corporation took over 166 Institutions, which includes district hospitals, sub-divisional hospitals and community health centres. 86 Medical Institutions were situated in

rural areas and 80 were in urban areas. Two training institutes viz. State Institute of Health and Family Welfare, Mohali and State Institute of Nursing and Paramedical Sciences, Badal, District Muktsar have also been constructed and were brought under PHSC institutions. Out of the total allocation of Rs.450 crores for PHSC, the outlay for procurement under various components was in the following order : Rs.124.64 crores for major/minor other equipments; Rs.83.24 crores for hospital furniture and other supplies; medicines and lab supplies Rs.22.45 crores, MIS/IEC Material Rs.9.85 crore and vehicles Rs.9.10 crores. Out of the above plan out lay procurement of worth Rs.118.28 crores has been done by PHSC which comprise equipment valuing Rs.63.53 crores, Rs.17.96 cr. on drugs, Rs.11.04 cr. on hospital furniture, Rs.7.65 cr. on supplies, Rs.8.20 cr. on vehicles, Rs.9.90 cr. on MIS/IEC. This project ended in the year 2002, and since then the Government of Punjab is supervising it through PHSC. At present there are 176 health institutions under PHSC, out of which 21 are district hospitals, 2 special hospitals, 34 sub – divisional hospitals and 119 community health centres. Subsequent to the completion of World Bank Project, PHSC also got the budget from State Govt. for procurement of medicine and supplies for PHSC hospitals during the year 2004-05.

In the light of above discussion, the present study was planned to evaluate the working of PHSC in the light of objectives to be achieved to enhance access of health services and the improvement of quality of these services.

Objectives of the Study

The present study has been planned to focus on the following objectives:

1. To analyse the health scenario at the national level with special reference to National Health Policy, 2017;
2. To examine the present status and problems of public health care services in Punjab;
3. To study the working of Punjab health systems Corporation (PHSC) in terms of provision of access to quality health care services;
4. To examine the perception of user of health services provided by PHSC;
5. To identify the factors which influence the level of satisfaction among doctors working in PHSC hospitals; and
6. To suggest suitable recommendations for the improvement of access and quality of public health services in Punjab.

Universe of the study

The universe of the study includes all the District Hospitals, Sub-Divisional Hospitals and Community Health Centers (CHC) under Punjab Health Systems Corporation (PHSC), all the doctors working in these hospitals and the patients (both in-patients and out-patients) who got treatment from the hospitals. Responses of hospital staff, doctors and patients have been taken in three separate research schedules for achieving the objectives of the research.

The present study is based on both secondary and primary data. Primary data have been collected with the help of three structured research schedules, namely, the doctors working in Punjab Health Systems Corporation, second schedule was filled up from the officials working in PHSC. The third research schedule was filled up from the users of the services provided by the Punjab Health Systems Corporation. 30 hospitals were visited during the period September 2016 to October 2017.

Sampling Method

The data were collected from 30 hospitals across 6 districts of Punjab, namely, Amritsar, Tarn Taran, Jalandhar, Hoshiarpur, Ludhiana and Bathinda. The due weightage has been given to all the three geographical regions of Punjab, namely, Amritsar and Tarn Taran of Majha region, Jalandhar and Hoshiarpur from Doaba region & Ludhiana and Bathinda from Malwa region. At first stage, from each region, 2 districts have been selected. In each district, 5 hospitals have been selected, namely, 1 District Hospital, 2 Sub-Divisional Hospitals and 2 Community Health Centers. Thus, total ten hospitals were selected from each region. These districts also represent substantial part of the international border area with Pakistan, namely Amritsar and Tarn Taran, the interstate border area with Himachal Pradesh, namely Hoshiarpur and the central part of Punjab, namely, Jalandhar, Ludhiana and Bathinda having border with Haryana. At the first stage, the hospitals were selected by proportionate stratified random sampling technique. At the second stage, the doctors and patients were selected by applying convenience random sampling technique.

After selecting the hospitals at three levels, namely, District Hospital, the Sub Divisional Hospital and the Community Health Centers, a representative sample of patients was taken at the second level. In order to measure the user's perception about the service providence, a sample of 300 patients (from both In Patient Department and Out Patient Department) was taken. The respondents were interviewed at the time of their exit from the hospitals. Further, 50 respondents

were selected from each district at three levels. A convenience random sampling has been followed for the selection of respondents.

Further, a sample of 95 doctors was taken from these hospitals of Punjab to study their perception in regard to the working of these hospitals and to measure the level of job satisfaction among the doctors. After the collection of data the advance statistical tools like factor analysis were applied for the analysis of data.

Findings of the study

General Health Scenario in India

The analysis of data relating to crude birth rate, crude death rate and infant mortality rate during the post-reforms period reveals that India has achieved better targets. However, the problem of Indian health sector is that out of the total health expenditure, 87.2 per cent was out of pocket expenditure which makes it most privatized health sector in the world. The high proportion of out of pocket expenditure puts financial burden on the poor, leading to households spending a major share of their consumption expenditure on health. The low level of government spending on health has resulted in low utilization of public care services. Due to unavailability and inefficiency of the public health services, the poor people have been forced to use the services of expensive and unregulated private sector. It exposes the poor people to financial risk and sometimes even pushes them in poverty. According to NSSO report, the percentage of medical conditions not treated due to unaffordability has increased from 15 to 28 in rural areas between 1986-87 to 2004. The report reveals that the major source of finance for both urban and rural people to pay the health care costs is the household income. Unfortunately, one-fourth of the rural patients are forced to borrow money for their treatment.

According to 71st round report (2015) of NSSO nearly 85.90 per cent of people in rural areas and 82.00 per cent in urban areas were not covered by any of government funded, employer insurance or the private insurance scheme.

Further, health being a state subject, the total government expenditure on health in India comes from both centre and state governments. However, until 2013, the health spending by the states as a percentage of total state expenditure has remained low and none of the states has been able to meet the standards.

India has also shown consistent improvement in population stabilization, with a decrease in decadal growth rate both in percentages and absolute terms. However, the persistent challenge

on population stabilization front is the declining sex ratio. India has child sex ratio (0-6 years) of 919 females per 1000 males and it is worse in urban areas with 905 females compared to rural areas (923) as per the Situation Analyses report on health, 2017 of government of India.

Further, anemia in woman and rising occurrence of non-communicable diseases in India has been highlighted as a major public health challenge. According to WHO estimates non-communicable diseases (with mostly preventable risk factors) account for 60 per cent of all deaths and significant morbidity in India. The situation analyses report noted that there has been a steady rise in mental illness in the country. According to a recent survey one in every four women and 10 per cent of men suffer from depression in India. The analysis of data highlight that over 63 million persons are pushed to poverty every year due to health care costs mainly due to rise in the out of pocket expenditure in India.

Global evidence on health spending shows that unless a country spends 5-6 per cent of its GDP on health with government expenditure being a major part, basic health care needs are seldom met. The government spending on health care in India was only 1.15 per cent of GDP as per report. This is 3.8 per cent of total government expenditure accounts for 28.6 per cent of total health spending. This translates in absolute terms to just Rs. 1042 per capita at current market prices. The union government share of this is only Rs. 365 per capita (0.40 per cent og GDP) while state government share translates to about Rs. 677 per capita (0.75 per cent of GDP) at base line scenario.

Perhaps the single most important policy pronouncement of the NHP 2002 articulated in the 10^{th}, 11^{th} and 12^{th} Five year plans and in NRHM framework, was the decision to increase public health expenditure to 2 per cent to 3 per cent of the GDP. As a result, public health expenditure rose briskly in the first few years of NRHM. But at the peak of its performance it started stagnating at about 1.04 per cent of the GDP.

Growth of Health Sector Infrastructure

- As per the latest statistics relating to rural health sector, there were 1,58,417 sub-centers (SCs), 25743 primary health centers (PHCs) and 5624 community health centers (CHCs) functioning in the country as on March, 2018.
- The analysis of data reveals that number of Sub Centres (SCs) had been increased by 12391 during the period 2005-2018 from 1,46,026 in 2005 to 1,58,417 by March 2018. However, the share of different states in this growth is not uniform. The contribution of NRHM which

was launched in 2005 as a flagship programme is visible to this growth. The percentage of sub-centers functioning in government buildings had increased from 49.7 per cent in 2005 to 72.2 per cent in 2018.

- Number of PHCs has increased by 2507 during 2005 to 2018, from 23236 to 27413. However, mix trend is observed in different states. The analysis of data further reveals that percentage of PHCs functioning in government buildings has increased significantly from 28 per cent in 2005 to 92.9 per cent in 2018.
- The number of CHCs has increased by 2278 during 2005-2018. However, this increase is confined to selective states. The percentage of CHCs functioning in government buildings has increased from 91.6 per cent in 2005 to 99.2 per cent in 2018 over the period of 13 years of post NRHM programme.
- The total number of First Referral Unit (FRU) was only 33,369 as on 31st March, 2018 in entire rural India.
- The manpower position in the rural health care system still has not improved much. An overall shortfall in the posts of HW(F)/ ANM at SC and PHC was 5.9 per cent of the total requirement as per Indian Public Health Standards (IPHS) norms. However, the shortfall in case of allopathic doctors in PHCs was 14.3 per cent of the total existing requirement for existing infrastructure which affect the delivery of quality services in rural India.

Further, it has been noticed that number of specialist doctors at CHCs has declined from 4156 in 2017 to 4074 in 2018, which is a serious concern for the policy makers. The latest data on manpower in rural public health sector reveals that there is a shortfall of 81.9 per cent specialists at CHCs during the year 2018 in comparison with the IPHS norms.

Public Health Care in Punjab

Public health sector of Punjab is also facing all those problems which have been highlighted at the national level in the situation analyses report on health sector published in 2017. The financial crisis in Punjab has affected the Public health system. The analysis of data reveals that public health expenditure in Punjab (as a percentage of total budget expenditure) has continuously declined over the last three and half decades from nearly 10 per cent in 1980-81 to 6.97 per cent in 1989-90 which further declined to 4.30 per cent in 2004-05 and 3.81 per cent of total annual budget in 2016-17. The low government health expenditure at the state levels has led to the deterioration of the health services over the period of time despite of the introduction of

new policies to improve the public health system of Punjab. The public health sector is facing the problem of poor infrastructure and shortage of manpower (both doctors and supporting staff). Moreover, the state government like the central government has not given due importance to the preventive health care measures to check the incidence of non-communicable disease like diabetes, cardiovascular diseases and cancers which has put a serious challenge to health sector in Punjab.

The absence of regulatory system for the private health players is another serious challenge for the health sector of Punjab. The deficiency of modern equipments, the shortage of specialist doctors and supporting staff has impacted the access to quality health services provided by the public health sector at all levels i.e. primary, secondary and tertiary. The poor quality of services in public health sector has forced the large majority of population to avail private health services. The high cost private health services have increased the cost of health services many fold which is pushing the middle and poor section towards the poverty and sometimes to commit suicide due to the increase in out of pocket expenditure on health. The empirical studies conducted in Punjab support fully the deterioration of public health system in Punjab.

The reforms introduced after 1991, namely, the formation of Punjab Health System Corporation (PHSC), Public-Private partnership, the introduction of user charges from the patients and decentralization of the rural health services could not contribute much to improve the access and quality of health services in Punjab. Some researchers have pointed out that these new experiments by the government have further weakened the public health system in Punjab in general and rural health system in particular. The fragmentation of the meager funds allocated to the public health system has further harmed the public system in Punjab.

The problem of corruption, poor management, political interference and favoritism continued in PHSC as it is being controlled by the same officials who were managing the previous system. Contrary to the objective of increasing health financing, the government allocation to secondary health services declined from 25 per cent of total health expenditure in 1994 to 19 per cent in 2003. It is interesting to note that the Directorate of Public Enterprises and Disinvestment, Punjab in their policy for disinvestment (2002) recommended the winding-up of Punjab Health System Corporation due to its failure to improve the health system of Punjab since its inception. On the other hand, the word bank II state development project implementation report found it to be a success and suggested the continuation of the corporation. Finally, the

PHSC was converted from an autonomous body to a government entity under the Department of Health and Family Welfare Punjab from 2002 onwards.

The analysis of data related to NRHM under which the state gets funding for health sector with formation of NRHM in 2005, reveals that during the period 2005-06 to 2012-13, 47.6 per cent of the total funds released remained unspent in Punjab while this percentage for other states like Kerala was 17.10 per cent, Assam 7.10 per cent and Rajasthan only 4.70 per cent. It shows the failure of Punjab government to utilize the funds received under the NRHM.

The analysis of data relating to physical infrastructure and manpower to deliver the health services in Punjab is also not encouraging. In terms of total number of medical institutions, total number of beds and total number of doctors, the situation improved from 1971 to 1991. However, the Punjab witnessed a negative growth rate during the post-reforms period from 1991-2010 and onwards. This decline has impact on population served per institution and availability of beds in Punjab during the post-reforms period. The recent data reveals that even the population served per doctor has drastically increased to 9817 as on 31.12.2017 which was much lower even during the post-reforms period. It may be the result of faulty recruitment policy of the government adopted in the recent past as well as shortage of funding for the health sector. These developments have resulted into the decline of in-patients in the public health system during the post-reforms period in Punjab.

Further, the per capita expenditure on health has also increased which put extra burden on the patients to spend more from their pocket. Moreover, Punjab is facing the serious problem of increasing cancer patients and other non-communicable diseases due to change in life style and poor standards of environment.

Status of Existing Infrastructure in PHSC in Punjab

- The major findings of the study reveals that the PHSC committed to provide free consultation to all irrespective of the income groups but later the user charges were introduced and charged from all the patients except the holders of yellow card (below poverty line population).
- It has been found that the utilization of PHSC services at all levels has declined after the imposition of user charges. The study further found that the user charges have been further increased over the period of time.

- The study further found that the free medicines are also not available regularly. Many of the tests which were conducted at the different levels of PHSC are being denied to the patients which was introduced after the formation of PHSC.
- The provision of ambulance services was also made available by the PHSC at all the three levels which is also not working properly as most of the ambulance running in PHSC hospitals are more than ten years old and are ill-equipped and are not capable enough to deal with emergencies. Most of the times these ambulances are used for other miscellaneous works like transportation of the medicines from the warehouse to the hospitals. Maximum burden of transporting patients is being carried out by centrally NRHM funded 108 ambulances, which is free for few marked services while other patients are charged Rs. 10 per kilometer.
- The field visits to the PHSC run hospitals has revealed that the infrastructure of these hospitals is not in good condition.
- Further, the study found that a difference between the sanctioned and functional beds under the PHSC in Punjab was found on the basis of the information recorded through the field visits and the information provided under the RTI. This difference was observed in 13 hospitals out of 30 in terms of number of functional beds and number of sanctioned beds. Moreover, the condition of the beds and the mattresses at some of the hospitals was found to be of very poor quality.
- Further, the study found that a large number of sanctioned posts of doctors were found vacant as per the information collected from selected hospitals. It was found that the percentage of the vacant sanctioned posts was 21.54 per cent in case of specialist doctors while the same was 45.90 per cent in case of the medical officers in the District hospitals. The status of Sub-divisional hospitals has also not been found good. For example, 23.15 per cent positions of the specialist doctors were vacant while the percentage of the vacant sanctioned posts in case of medical officer was 50.72 per cent. Similarly, in case of the community health centres 71.11 per cent positions of the specialist doctors were found vacant at the time of the survey.
- The study found that the road connectivity to all these hospitals was good at all the three levels because Punjab has good road connectivity.
- Similarly, the water and electricity supply was also found satisfactory at all the three levels. However, some hospitals were not having backup generators to meet the emergencies.

- The study found that all the hospitals were having ramps but the provision of lifts was only available at the district level hospitals and not at the SDHs and CHCs.
- The ambulance services in all these hospitals were made available through centrally sponsored 108 ambulance service of NRHM. However, all the hospitals had at least one ambulance provided by PHSC except district hospital Hoshiarpur. However, many hospitals at SDH level were not having the ambulance services. Similarly, five sampled CHCs were not having a single ambulance provided by PHSC while rest of the hospitals had one ambulance each.
- All the hospitals had at least one minor OT.
- In case of DH only Ludhiana district had two air conditioners in emergency ward and Bathinda had one AC in burn-ward. All the other hospitals even at district level were found without the provision of ACs. The study further found that in case of Sub-divisional hospitals only 4 hospitals out of 12 had the provision of AC rooms/ wards whereas 7 hospitals had only the provision of air-coolers in their wards.
- In case of the laundry services, majority of the hospitals had outsourced this service.
- The other major problem in all the PHSC run hospitals is the lack of proper security arrangements for the doctors as well as for the patients.
- Lighting system as well as the proper sign-board system was also missing.
- The study found the average level of cleanliness in majority of the hospitals and this problem becomes more serious as we move from district level to CHCs. The major reason of poor cleanliness is the lack of proper staff to meet this requirement.
- The majority of the hospitals were maintaining the availability of functional beds in their hospitals as per the sanctioned strength, however, this problem was more serious in case of the CHCs in which nine out of the twelve hospitals were found to have less functional beds as compared to sanctioned.
- Moreover, the study found that there is a declining trend among the patients to avail the provision of in-patients in most of the PHSC run hospitals. It has been found during the survey that the CHCs are performing the role of a referral hospital rather than providing all kind of services to the patients at their doorsteps which lead to the higher cost of health services in rural Punjab.

- None of the district hospitals were found to have the provision of MRI scanning while only two out of six hospitals were having CT scanning. Of course all the hospitals were found to have X-ray and ultrasound facilities. At the same time, all the SDHs were without the provision of MRI and CT scanning while only nine hospitals were found to have ultrasound scanning services even at the sub-divisional level whereas X-ray facility was available in all the hospitals. In case of CHCs, they have the provision of X-ray only. Only one CHC was found to have ultrasound scanning service. So, the lack of these modern diagnostic facilities reflects the poor quality of health facilities in the PHSC run hospitals even in the modern times when these facilities are very important for the doctors to show their competency. It is unfortunate that the highly qualified doctors are blamed for the poor health services in Punjab while they are not equipped with the modern equipments to serve their patients.
- Another important finding of the study is that only two district hospitals were having ventilator support system and four had the provision of Dialysis services. This situation was worse in case of SDHs in which only one hospital had the provision of dialysis services at the time of survey. None of the CHCs were found to have ventilator support system and dialysis services. This is again a serious issue as the rural people are living at the mercy of almighty if they face any emergency and need an artificial support system for the survival of the system.
- The only satisfactory situation in case of the availability of mortuaries and post-mortem services in all the PHSC run hospitals.

Users' Perception towards Delivery of Health Services by PHSC

- The study found that on an average, services were utilized more by females as compared to males in the sampled hospitals. The higher share of female patients may be due to the reason that females are more prone to sickness as compare to male members.
- The study further found that the more than 50 per cent patients were in the age group 16-45 years at all the three levels of hospitals.
- The level of education among the respondents reveals that more than 50 per cent of the respondents were either illiterate or have education up to primary level.
- The study also found that the more than 60 per cent of the patients fall in the category of low income group i.e. having income between Rs. 2001-10000 per month. So, the analysis of data further found that the share of the low income group patient was as high as 80 per cent in

case of the District Hospitals. It implies that higher income group is not availing services provided by PHSC in Punjab.

- The occupational distribution of respondents reveals that large majority of respondents come from the labour class or the small and marginal farmers.
- The distribution of respondents on rural-urban basis reveals that as most of the CHCs were in rural areas therefore, 88.50 per cent of the respondents belong to rural areas followed by 70.20 per cent in SDHs and 58.30 per cent in District Hospitals. So, it implies that the rural people avail higher share of services provided by the PHSC.
- The distribution of respondents on the basis of land holding reveals that about 64.40 per cent of the respondents were landless. And only 9.1 per cent have land more than 5 acres.
- The caste-wise distribution of respondents reveals that the share of general class was 36 per cent, SC/ST was 45.50 per cent, OBC have a share of 14.20 per cent and others have 4.30 per cent share.
- The analysis of data reveals that the majority of the respondents mentioned inexpensive treatment and availability of skilled doctors as the main reasons for selecting the PHSC hospitals.
- The distribution of patients on the basis of in and out patients reveals that in case of district hospitals and CHCs the OPD had higher percentage as compared to IPD patients. However, in case of SDHs the share of IPD was higher among the selected respondents.
- The analysis of data in regard to the period of stay of in-patients at different levels reveals that majority of the patients stay for less than five days in these hospitals for their treatment. The distribution on the basis of nature of treatment of the respondents reveals that the share of non-surgery patients was 63.40 per cent while the share of patients coming for surgical procedure was 36.60 per cent.
- The distribution of the patients on the basis of timings to visit hospital reveals that large majority of the patient visit hospital from 8AM to 2PM. However, the distribution on the basis of waiting period to get consultation of the doctors was found quite satisfactory.
- The responses of the OPD patients in regard to the quality of services in the hospitals reveals that more than 50 per cent of the patients rated the various services as of average quality. However, the overall score of average quality services was found more than 70 per cent in all type of hospitals.

- Similarly, the perception of IPD patients in regard to the quality of services in PHSC hospitals reveals that more than 50 per cent of the patients rated their experience as of average quality.
- The rating of patients in regard to the behaviour of service providers reveals that 85 per cent of the patients rated the behaviour of doctors as good while 78 per cent of the patients rated the behaviour of nurses as good and 75 per cent of the patients rated the behaviour of the supporting staff as good. On the other hand, the awareness of the patients in regard to the availability of information about rules and regulations, about diseases and treatment and about lab test was found very low in regard to all type of hospitals.
- The experience of the patients in regard to availability of medicines reveals that the patients were not satisfied and it was found that more than 70 per cent of the patients were forced to buy medicines from the market. So, this finding further supports the general perception that the large majority of the patients pay from their pocket to get their treatment if they fell sick.
- Among the important suggestions, the patients have ranked the availability of all medicines in the hospitals as rank 1 followed by the availability of diagnostic facilities as well as the provision of free medicines from the hospitals.
- The level of satisfaction among the users of the hospital services reveals that more than 50 per cent of the respondents have shown their satisfaction with the provision of services made available in these hospitals.

Doctors' Perception and Level of Satisfaction in PHSC Hospitals

- The demographic profile of the doctors shows that majority of the doctors working in these hospitals were male. The large majority of the doctors were below the age of 50 years.
- The share of the MBBS doctors was 32.60 per cent followed by BDS 8.40 per cent, MD 29.50 per cent, MS 27.20 per cent and others 2.10 per cent.
- The analysis of the region of the doctors reveals that 63.20 per cent of the doctors come from urban background whereas 36.80 per cent of the doctors belong to rural background. This share is in contrast to the share of the patients in which large majority of the patients belongs to the rural areas.
- The findings of the factor analysis reveal that the major factors which emerge from the analysis are relationship with the co-workers which got highest accumulative percentage of 17.43 per cent. The second factor is monetary benefits and career development which had the

share of 14.84 per cent. Workplace environment emerged as the third important factor which has share of 14.68 per cent followed by relationship with seniors as fourth factor with 13.90 per cent. The workload emerged as the fifth factor with 10.02 per cent and level of autonomy at the workplace as sixth factor with 9.28 per cent share.

- The responses of the doctors in regard to their overall satisfaction on the basis of one question reveal that the level of satisfaction among the MBBS doctors was on the lower side. This may be due to the fact that the MBBS doctors are paid lower salaries as per the new rules of the government under which the doctors are forced to work on basic pay for first three years of their services as a result of which they have meager salaries even after paying higher fees for the completion of their degrees.

Recommendations and Policy Implications

- The study recommends that regulations are required to ensure quality and affordability of drugs. At present, the regulatory mechanism at all level is not effective at both national and state level. The Situation Analyses Report on Health Sector, 2017 has highlighted this aspect which has been further taken care in New Health Policy, 2017, Government of India. However, this aspect is still missing in the state of Punjab. No efforts have been made in regard to the formulation of long run health policy.
- The quantity and quality of infrastructure is not as per the International standards not even as per IPHS norms in India which has reflection on the functioning of health sector in Punjab. The number of hospitals, number of beds and number of doctors are not available as per the norms at the national level. This is also a major problem which the hospitals are facing at primary, secondary and tertiary level in Punjab. In spite of the reforms introduced in the health sector of Punjab, the availability of quality health services in Public funding hospitals is missing, particularly to the lower section of the society.
- It has been pointed out by the researchers at national level and at state level that patients are forced to avail health services from private sector which put extra financial burden on the patients and pushes the poor families into poverty. The patients are forced to pay for the private health services as well as the high cost medicines which contribute about 80 per cent of the cost of patients care. It has been found that both branded drugs as well as the branded generics are available at higher prices than the actual cost in the market. A major issue is that generic drugs are not bio-equivalent to the branded drugs. The government should ensure the

quality and bio-availability of generic drugs at par with the branded to ensure quality at affordable prices as has been pointed out by the former director general of the ICMR, Dr. R. Kumar, recently. The National Pharmaceutical Pricing Authority of India (NPPA) has reported that leading companies are selling the same drug in the same dosage under different brand names and at widely different prices. The retail price is marked up steeply, varying from 100 per cent to 5000 per cent. Cipla for instance sells the anti-allergic Cetrizine at Rs 30 under the Alerid brand and at Rs. 2.20 under the name Okacet for 10 tablets. Now the poor patients can not differentiate which is branded and which is not branded drug due their illiteracy and ignorance and are subjected to pay more to buy such medicines from the market. Therefore, there is an urgent need to regulate the sale of drugs to provide relief to the patients. It could be done easily if the government takes the responsibility to buy these generic drugs in bulk and provide through hospitals run pharmacies. The Punjab government has made such attempt to provide free medicines to the patients which was short living. At present, the Delhi government has already made it a reality by developing Mohalla Clinics and low price medicines through government pharmacies.

- Another important issue is the shortage and non-availability of modern diagnostic facility in the Public sector hospitals. The facility of ultra sound, which is a basic requirement, was not available even at SDHs under the PHSC in Punjab. It has been reported by the doctors working in the PHSC that it put question mark on their competency when they are compelled to diagnose the patient without the help of modern aids or the patients are advised to get these tests done from private sector which put extra cost on the poor patients as most of the patients come from poor section of the society to avail health services from PHSC.
- There is an urgent need to increase the manpower in the PHSC hospitals at all levels. The shortage of doctors, particularly the specialists in the different fields is a major cause of low access and poor quality of health services in the PHSC run health institutions. More than 50 per cent of the doctors' positions were lying vacant in the PHSC run health institutions. The situation has reached to a level that honorable Punjab and Haryana High Court Chandigarh has declared the right to health as a fundamental right before directing the Punjab government to fill the vacancies in the District Hospital, Hoshiarpur recently (The Tribune, 30 January, 2020). It is pertinent to mention that high level panel set-up by the 15th Finance Commission, Government of India on reforms in the health sector, recently suggested declaring the right to health as a fundamental right.

- Furthermore, there is a need to strengthen the manpower in regard to supporting staff, namely, nurses and pharmacists who play an important role for the delivery of health services in the hospitals. The poor security arrangement is another important issue which has been raised by the patients as well as doctors and staff at all levels.
- The lack of cleanliness is another important issue which has been highlighted by the users. Maintenance of cleanliness is the basic requirement in case of health services. However, insufficient staff to handle the sanitation work is a major hurdle in addition to the non-availability of material required for this purpose.
- The study found that the infrastructure in these hospitals is not only inadequate rather is of poor quality. The required instruments for diagnostic purpose are not available in these hospitals though the creation of a high quality infrastructure was the major objective of PHSC. At present, the most of the ambulances purchased by the PHSC are not operative which forced the poor patients to avail expensive private transport service during emergencies.
- The government statistics reveal that the number of patients on account of non-communicable diseases is increasing at alarming rate particularly, the diabetes, cancer, heart and drug addiction patients. Therefore, government must prepare itself to deal with the situation. The government has made some efforts to provide financial support to cancer patients, which is only meant for special category of patients. There is an urgent requirement to increase financial assistance to the cancer and drug addicted patients in all segments of the society and set-up special hospitals to deal with the situation.
- The study further recommends for a comprehensive health policy by considering preventive and promotive health care system for universal access to good quality health services without leaving anyone at affordable price. The emphasis should be on increased access, improvement in quality and lowering of cost of health care delivery.
- The National Health Policy, 2017 has proposed more than 8 per cent of the state budget on health by 2020. Therefore, the study recommends that Punjab government should insure higher funding to strengthen the public health system in Punjab which has declined to 3.81 per cent of the total budget expenditure in 2016-17.
- The study further proposed that government should create a single directorate of health services and all the institutions providing health services should be merged for the judicious

use of infrastructure and limited manpower of the public health including PHSC run institutions.

- Further, government should revive the mobile health services in Punjab to cater the needs of rural and border areas where health services are not available which could save the poor from both expenditure on health as well as the high transport cost to carry the patients to distant places.
- The study also recommends that as the health is subject of the concurrent list under which both centre and state provide finances for the public health services. The centre instead of imposing its own policies on the state government should allocate finance to the respective state governments so the state may plan its own health policy to strengthen the public health system. The governments should focus to build up a comprehensive public health system rather than running after the achievement of targets to avail the centre government funding schemes.
- Last but not the least, the public health sector should be given more autonomy to plan and execute by engaging the health experts rather than bureaucrats. There should be strong regulatory system to control both the public and private health institutions.
- Moreover, the public should be made aware about the government schemes meant for the poor sections of the society to save them from the clutches of the greedy private hospitals which are pushing them into poverty.

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Annexure 1
Health indicators trend in India (1991-2013)

Year	Crude Birth Rate (per 1000 people)			Crude Death Rate (per 1000 people)			Infant Mortality Rate (per 1000 live births)		
	Rural	**Urban**	**Total**	**Rural**	**Urban**	**Total**	**Rural**	**Urban**	**Total**
1991	30.9	24.3	29.5	10.6	7.1	9.8	87	53	80
1992	30.9	23.1	29.2	10.9	7	10.1	85	53	79
1993	30.4	23.7	28.7	10.6	5.8	9.3	82	45	74
1994	30.5	23.1	28.7	10.1	6.7	9.3	80	52	74
1995	30	22.7	28.3	9.8	6.6	9	80	48	74
1996	29.3	21.6	27.5	9.7	6.5	9	77	46	72
1997	28.9	21.5	27.2	9.6	6.5	8.9	77	45	71
1998	28	21.1	26.5	9.7	6.6	9	77	45	72
1999	27.5	20.8	26	9.4	6.3	8.7	75	44	70
2000	27.6	20.7	25.8	9.3	6.3	8.5	74	44	68
2001	27.1	20.3	25.4	9.1	6.3	8.4	72	42	66
Annual Decline rate for period 1991-2001(Per cent)	**1.5**	**1.8**	**1.6**	**1.7**	**0.7**	**1.6**	**1.7**	**2.1**	**1.7**
2002	26.6	20	25	8.7	6.1	8.1	69	40	63
2003	26.4	19.8	24.8	8.7	6	8	66	38	60
2004	25.9	19	24.1	8.2	5.8	7.5	64	40	58
2005	25.6	19.1	23.8	8.1	6	7.6	64	40	58
2006	25.2	18.8	23.5	8.1	6	7.5	62	39	57
2007	24.7	18.6	23.1	8	6	7.4	61	37	55
2008	24.4	18.5	22.8	8	5.9	7.4	58	36	53
2009	24.1	18.3	22.5	7.8	5.8	7.3	55	34	50
2010	23.7	18	22.1	7.7	5.8	7.2	51	31	47
2011	23.3	17.6	21.8	7.6	5.7	7.1	48	29	44
2012	23.1	17.4	21.6	7.6	5.6	7	46	28	42
2013	22.9	17.3	21.4	7.5	5.6	7	44	27	40
Annual decline rate for period 2002-2012(Per cent)	**1.4**	**1.3**	**1.5**	**1.3**	**0.7**	**1.2**	**4.1**	**3.9**	**4.1**

Source: Health and family welfare statistics report 2013 and sample registration system bulletin (various issues) (Adopted from Saif Ghuman, unpublished Ph.D. thesis 2016)

Annexure II

List of Hospitals under PHSC

S. No	District Hospitals	Sub-Divisional Hospitals	Community Health Centres
1.	Amritsar	1. Ajnala 2. Baba Bakala	1. Lopoke 2. Majitha 3.Tarsika 4. Jandiala 5. Verka
2.	Barnala	_____	6. Dhanola 7. Tapa 8. Bhadaur 9. Mahal Kalan 10. Chananwal
3.	Bathinda	3. RampuraPhool 4. Talwandi Sabo 5. Ghudda	11. Goniana 12. BhagtaBhaiKa 13. Nathana 14. Sangat 15. Mehraj 16. MaurMandi 17. Raman Mandi 18. BhuchoMandi 19. Ballianwal
4.	Faridkot	6. Jaitu 7. Kotakpura	20. Baja Khana 21. Sadiq
5.	Fatehgarh Sahib	8. MandiGobindgarh	22. Amloh 23. BassiPathana 24. Khamano 25. Khera 26. ChanarthalKalan
6.	Fazilka	9. Abohar	27. Jalalabad 28. DhabwalaKalan 29. SittoGuino 30. KhuiKhera
7.	Ferozepur	10. Zira	31. Mamdot 32. Ferozeshah 33. Guru HarSahai 34. Makhu
8.	Hoshiarpur	11. Dasuya 12. Garhshankar 13. Mukerian	35. Bhunga 36. MandMandher 37. Budha Bar 38. Hajipur 39. Tanda 40. Mahilpur 41. Sham Chorasi 42. BholKalota 43. Kamahi Devi 44. Binewal

			45. HartaBadla
9.	Gurdaspur	14. Batala	46. Quadian 47. KotSantokhRai 48. Kahnuwan 49. Kalanaur 50. FatehgarhChurian 51. Bhan 52. Ghuman 53. Singh 54. Dera Baba Nanak 55. Dinanagar 56. B M Khan 57. Shallapurana 58. Dhariwal
10.	Patiala	15. Nabha 16. Rajpura 17. Samana	59. Model Town 60. DhudanSudhan 61. KaloMajra 62. Ghanaur 63. Bhadson 64. Badshahpur 65. Shutrana 66. Patran 67. Tripuri
11.	Mansa	18. Budhlada 19. Sardulgarh	68. KhailaKalan 69. Bhikhi 70. Bareta 71. Jhunir
12.	Mohali	20. Kharar 21. DeraBassi	72. Kurali 73. Banur 74. Dhakoli 75. Lalru
13.	Ludhiana	22. Khanna 23. Samrala 24. Jagraon 25. Raikot 26. Payal	76. Sahnewal 77. Sidhwan Bet 78. Manupur 79. Machiwara 80. GurSarSudhar 81. Pakhowal 82. Malaud 83. Hathur 84. Dehlon 85. KumKalan
14.	Sangrur	27. Malerkotla 28. Sunam 29. Dhuri 30. Moonak	86. Lehragaga 87. Longowal 88. Bhawanigarh 89. Amargarh 90. Ahmadgarh 91. Kauhrian 92. Sherpur 93. Dirba
15.	Moga	_____	94. Nihal Singh Wala

			95. BaghaPurana 96. Dudhike 97. DaroliBhai 98. KotIse Khan 99. BadniKalan
16.	Pathankot	_____	100. BhungalBadhani 101. Ghrota 102. NarotJaimal Singh 103. Sujanpur
17.	Kapurthala	31. Phagwara 32. SultanpurLodhi 33. Bholath	104. Kala Sanghian 105. Begowal 106. Panchat 107. Tibba 108. FattuDhinga
18.	Muktsar	34. Malaut 35. Gidderbaha	109. Doda 110. ChakSherewala 111. SarawanBodla 112. Lambi 113. Bariwala
19.	Nawanshehar	36. Balachaur	114. Banga 115. Saroya 116. Mukandpur 117. Rahon 118. Kathgarh
20.	Jalandhar	37. Phillaur 38. Nakodar 39. Nurmahal	119. Bara Pind 120. Bundala 121. Kala Bakra 122. Kartarpur 123. LohianKhas 124. Shahkot 125. Shankar 126. Apra 127. Adampur 128. Cantt
21.	Ropar	40. Anandpur Sahib	129. Chamkaur Sahib 130. NurpurBedi 131. Morinda 132. Bharatgarh
22.	Tarn Taran	41. Patti 42. Khadoor Sahib	133. Ghariala 134. Khem Karan 135. Sur Singh 136. Sarhali 137. NaushehraPannuan 138. Mianwind 139. Kairon 140. Chabal 141. Kasel

Source: Information received through RTI from Punjab Health Systems Corporation

Annexure III

Sanctioned and Vacant Posts of Doctors in District Hospitals

DH with Bed Strength		Amritsar (200)			Tarn Taran (100)			Jalandhar (400)		
S.No	Category	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant
1	SMO	2	2	0	1	1	0	4	4	0
2	Medicine	2	2	0	1	2	-1	2	2	0
3	Surgery	2	3	-1	1	1	0	2	2	0
4	Gynae	2	2	0	1	2	-1	1	1	0
5	Pead	5	4	1	3	1	2	1	1	0
6	Ortho	2	1	1	1	1	0	2	2	0
7	Anaes	5	3	2	3	1	2	2	2	0
8	Pathology	1	1	0	1	1	0	2	1	1
9	Opthalo	1	1	0	1	1	0	1	1	0
10	Radiology	1	0	1	1	0	1	2	1	1
11	Psychatrist	1	1	0	1	1	0	1	0	1
12	BTO	1	1	0	1	1	0	1	1	0
13	Skin & VD	1	1	0	1	1	0	1	1	0
14	ENT	1	1	0	1	1	0	1	1	0
15	Dental	2	2	0	1	1	0	2	2	0
16	MO (MBBS)	10	3	7	9	2	7	0	0	0

Annexure III (Continued)

Sanctioned and Vacant Posts of Doctors in District Hospitals

DH with Bed Strength		Hoshiarpur (200)			Ludhiana (200)			Bathinda (200)		
S.No	Category	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant
1	SMO	2	2	0	1	1	0	2	2	0
2	Medicine	2	2	0	2	2	0	3	2	1
3	Surgery	2	2	0	2	2	0	1	0	1
4	Gynae	2	1	1	2	2	0	2	2	0
5	Pead	5	2	3	2	2	0	6	4	2
6	Ortho	2	1	1	2	2	0	1	1	0
7	Anaes	5	4	1	2	2	0	2	2	0
8	Pathology	1	1	0	1	1	0	1	1	0
9	Opthalo	1	1	0	1	1	0	3	3	0
10	Radiology	1	0	1	1	1	0	1	0	1
11	Psychatrist	2	2	0	1	1	0	2	0	2
12	BTO	1	1	0	1	1	0	2	2	0
13	Skin & VD	1	1	0	1	0	1	1	1	0
14	ENT	1	1	0	1	1	0	1	1	0
15	Dental	2	2	0	2	2	0	2	2	0
16	MO (MBBS)	15	10	5	12	12	0	15	6	9

Annexure IV

CategorywiseSanctioned and Vacant Posts of Doctors in Sub-Divisional Hospitals under PHSC

DH with Bed Strength		Ajnala (50)			Baba Bakala (50)			Nakodar (50)			Phillaur (50)		
S.No	Category	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant
1	SMO	1	1	0	1	1	0	1	1	0	1	1	0
2	Medicine	1	1	0	1	1	0	–	–	–	1	1	0
3	Surgery	1	2	-1	1	1	0	0	1	-1	1	2	-1
4	Gynae	1	1	0	1	1	0	–	–	–	1	1	0
5	Pead	1	1	0	1	1	0	0	1	-1	1	1	0
6	Ortho	1	1	0	1	1	0	0	1	-1	1	1	0
7	Anaes	1	1	0	1	2	-1	0	1	-1	1	1	0
8	Pathology	1	1	0	1	1		0	1	-1	1	1	0
9	Opthalo	1	1	0	1	2	-1	–	–	–	1	1	0
10	Radiology	1	1	0	1	0	1	–	–	–	1	0	1
11	Psychatrist	–	–	–	–	–	–	–	–	–	–	–	–
12	BTO	–	–	–	–	–	–	–	–	–	–	–	–
13	Skin & VD	0	1	-1	0	1	-1	–	–	–	–	–	–
14	ENT	–	–	–	–	–	–	–	–	–	–	–	–
15	Dental	1	1	0	1	1	0	0	1	-1	2	2	0
16	MO (MBBS)	7	0	7	7	1	6	0	2	-2	3	1	2

Annexure IV (Continued)

Sanctioned and Vacant Posts of Doctors in Sub-Divisional Hospitals

DH with Bed Strength		Khadoor Sahib (50)			Patti (50)			Dasuya (100)			Mukerian (75)		
S.No	Category	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant
1	SMO	1	1	0	1	1	0	1	1	0	1	1	0
2	Medicine	1	1	0	1	1	0	1	1	0	1	1	0
3	Surgery	1	1	0	1	0	1	1	2	-1	1	1	0
4	Gynae	1	1	0	1	1	0	1	2	-1	1	0	1
5	Pead	1	1	0	1	0	1	1	1	0	1	0	1
6	Ortho	1	1	0	1	0	1	1	2	-1	1	1	0
7	Anaes	1	0	1	1	1	0	1	1	0	1	1	0
8	Pathology	1	0	1	–	–	–	1	1	0	1	1	0
9	Opthalo	–	–	–	1	0	1	1	2	-1	1	1	0
10	Radiology	1	0	1	–	–	–	1	1	0	1	1	0
11	Psychatrist	–	–	–	1	1	0	1	1	0	–	–	–
12	BTO	–	–	–	1	1	0	1	0	1	–	–	–
13	Skin & VD	–	–	–	1	1	0	1	1	0	–	–	–
14	ENT	1	0	1	1	0	1	1	1	0	–	–	–
15	Dental	1	1	0	1	1	0	1	1	0	1	1	0
16	MO (MBBS)	5	2	3	7	1	6	10	7	3	3	2	1

Annexure IV (Continued)

Sanctioned and Vacant Posts of Doctors in Sub-Divisional Hospitals

DH with Bed Strength		Jagraon (50)			Samrala (50)			RampuraPhool (50)			Talwandi Sabo (50)		
S.No	Category	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant
1	SMO	1	1	0	1	1	0	1	1	0	1	1	0
2	Medicine	1	0	1	1	1	0	2	1	1	2	1	1
3	Surgery	1	1	0	1	1	0	2	1	1	2	1	1
4	Gynae	1	1	0	1	0	1	2	1	1	2	2	0
5	Pead	1	1	0	1	1	0	1	0	1	1	1	0
6	Ortho	1	1	0	1	1	0	1	1	0	1	1	0
7	Anaes	1	0	1	1	0	1	–	–	–	–	–	–
8	Pathology	1	1	0	–	–	–	–	–	–	–	–	–
9	Opthalo	1	1	0	1	1	0	–	–	–	–	–	–
10	Radiology	1	1	0	1	1	0	–	–	–	–	–	–
11	Psychatrist	1	1	0	1	1	0	–	–	–	1	1	0
12	BTO	–	–	–	1	0	1	1	1	0	1	1	0
13	Skin & VD	–	–	–	–	–	–	–	–	–	–	–	–
14	ENT	–	–	–	–	–	–	–	–	–	–	–	–
15	Dental	1	1	0	1	1	0	1	1	0	1	0	1
16	MO (MBBS)	7	5	2	7	6	1	7	4	3	6	5	1

Annexure V

Sanctioned and Vacant Posts of Doctors in Community Health Centers

DH with Bed Strength		Lopoke (30)			Majitha (30)			Kairon (30)			Sur Singh (30)		
S.No	Category	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant
1	SMO	1	1	0	1	1	0	1	1	0	1	1	0
2	Medicine	1	0	1	1	0	1	1	0	1	1	1	0
3	Surgery	1	0	1	1	1	0	1	0	1	1	0	1
4	Gynae	1	0	1	1	0	1	1	0	1	1	0	1
5	Pead	1	0	1	1	0	1	1	0	1	1	0	1
6	Ortho	–	–	–	1	1	0	–	–	–	–	–	–
7	Anaes	–	–	–	–	–	–	–	–	–	–	–	–
8	Pathology	–	–	–	–	–	–	–	–	–	–	–	–
9	Opthalo	–	–	–	–	–	–	–	–	–	–	–	–
10	Radiology	–	–	–	–	–	–	–	–	–	–	–	–
11	Psychatrist	–	–	–	–	–	–	–	–	–	–	–	–
12	BTO	–	–	–	–	–	–	–	–	–	–	–	–
13	Skin & VD	–	–	–	–	–	–	–	–	–	–	–	–
14	ENT	–	–	–	–	–	–	1	0	1	–	–	–
15	Dental	1	1	0	1	1	0	1	1	0	1	1	0
16	MO (MBBS)	2	5	-3	1	3	-2	3	3	0	5	5	0

Annexure V (Continued)

Sanctioned and Vacant Posts of Doctors in Community Health Centers

DH with Bed Strength		Kala Bakra (30)			Kartarpur (30)			BholKalota (30)			Tanda (30)		
S.No	Category	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant
1	SMO	1	1	0	1	1	0	1	1	0	1	1	0
2	Medicine	–	–	–	1	1	0	1	0	1	1	1	0
3	Surgery	–	–	–	1	1	0	1	0	1	1	1	0
4	Gynae	–	–	–	1	1	0	1	0	1	1	0	1
5	Pead	–	–	–	–	–	–	1	0	1	1	0	1
6	Ortho	–	–	–	–	–	–	–	–	–	–	–	–
7	Anaes	–	–	–	–	–	–	–	–	–	–	–	–
8	Anaes (ICU)	–	–	–	–	–	–	–	–	–	–	–	–
9	Opthalo	–	–	–	1	1	0	–	–	–	–	–	–
10	Radiology	–	–	–	–	–	–	–	–	–	–	–	–
11	Psychatrist	–	–	–	–	–	–	–	–	–	–	–	–
12	BTO	–	–	–	–	–	–	–	–	–	–	–	–
13	Skin & VD	–	–	–	–	–	–	–	–	–	–	–	–
14	ENT	–	–	–	–	–	–	–	–	–	–	–	–
15	Dental	1	1	0	1	1	0	1	1	0	1	1	0
16	MO (MBBS)	9	9	0	2	2	0	2	6	-4	3	3	0

Annexure V (Continued)

Sanctioned and Vacant Posts of Doctors in Community Health Centers

DH with Bed Strength		Machiwara (30)			Sahnewal (30)			BhagtaBhaiKa (30)			MaurMandi (30)		
S.No	Category	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant
1	SMO	1	1	0	1	1	0	1	0	1	1	1	0
2	Medicine	1	0	1	1	0	1	1	1	0	1	0	1
3	Surgery	1	0	1	1	0	1	1	0	1	1	0	1
4	Gynae	1	1	0	1	0	1	1	1	0	1	0	1
5	Pead	1	0	1	–	–	–	1	1	0	1	0	1
6	Ortho	–	–	–	–	–	–	–	–	–	–	–	–
7	Anaes	–	–	–	–	–	–	–	–	–	–	–	–
8	Pathology	–	–	–	–	–	–	–	–	–	–	–	–
9	Opthalo	–	–	–	–	–	–	–	–	–	–	–	–
10	Radiology	–	–	–	–	–	–	–	–	–	–	–	–
11	Psychatrist	–	–	–	–	–	–	–	–	–	–	–	–
12	BTO	–	–	–	–	–	–	–	–	–	–	–	–
13	Skin & VD	–	–	–	–	–	–	–	–	–	–	–	–
14	ENT	–	–	–	–	–	–	–	–	–	–	–	–
15	Dental	1	1	0	2	2	0	1	1	0	1	1	0
16	MO (MBBS)	2	3	-1	4	4	0	1	1	0	1	1	0