Equity Effect of Rajasthan Health System Development Project on Utilization of Health services and Unmet Need for Health Care Services: A Case Study from Rajasthan

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Dissertation submitted in partial fulfillment of the requirement for the award of the degree of Master of Public Health

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Declaration

I hereby declare that this dissertation work titled "**Equity Effect of Rajasthan Health System Development Project on Utilization of Health services and Unmet Need for Health Care Services: A Case Study from Rajasthan** " is the result of Original research and it has not been submitted for the award of any degree in any other institution.

Thiruvananthapuram, Kerala October 2007

Dr. Abhay Kumar Bohara

Certificate

I hereby certify that the work embodied in this dissertation titled **"Equity Effect of Rajasthan Health System Development Project on Utilization of Health services and Unmet Need for Health Care Services: A Case Study from Rajasthan"**, is a bonafide record of original research work undertaken by Abhay Bohara in partial fulfillment of the requirement for the award of the Masters of Public Health degree under my guidance and supervision.

Guide: Sundari T.K. October 2007

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Abbreviations

AIDS	Acquired immune deficiency syndrome
ANC	Anti natal checkup
BPL	Below poverty line
BPHC	Block primary health center
CHC	Community health center
DH	District hospital
HSR	Health sector reform
ID	Institutional delivery
LTFQP	Less than fully qualified provider
MDG	Millennium development goals
NGO	Non- governmental organization
NSSO	National sample survey organization
PHC	Primary health center
RH	Rural hospital
RHSDP	Rajasthan health system development project
SDH	Sub divisional hospital
SHDP	State health system development project
SC/ST	Schedule caste and Schedule tribe
SLI	Standard of Living Index
WDR	World development report

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Abstract

1. Background

Rajasthan is one of the nine states in India where health system development projects are being implemented with the aim to reform the health sector in fundamental ways assisted by World Bank. This project is implemented in the state since 2004. One of the project objectives is to improve quality of and access to health services specifically for the poor and the disadvantaged population in the rural area of the state.

2. Objectives

The objective of the study was to measure and compare the effect of project on utilization of the health services and unmet need for health care services in the rural community by gender, SLI and social group in one area covered by project and one area which is not covered by the project.

3. Methodology

This study used comparative, descriptive, cross sectional community based survey supplemented by in-depth interviews with key informants and non-participant observation of health facilities. A pre structured questionnaire was used for data collection in the survey. We collected data from 400 house holds selected by systematic random sampling method in two Block primary health center one with project and another one comparable but without project in Jhunjhunu district of the state. We collected information about health seeking behavior, nature of health care sought and whether or not they completed treatment and reason for not doing so for short term illness within last 2 weeks, any episode of delivery and any episode of hospitalization in last one year from my survey in those house holds. In depth interviews were conducted with health managers working in the RHSDP, and non-participant observation using a facility check-list was carried out in the project and non-project BPHCs.

4. Results

The prevalence of three health conditions; short term illness, hospitalization and delivery were almost comparable in both project as well as non-project areas. However, the population in the project area fared worse than that in the non-project area in terms of health care utilization for short term illnesses and for delivery care. And of those who did utilize health care services, a significantly higher proportion in the project area used private services as compared to those in the non-project area. Differences by type of health facility used were not significant for those hospitalized.

A much lower proportion of those from socially disadvantaged groups: SC/ST and Muslims, (65.2% vs 83.3%, p=.03), middle and low standard of living (63.7% vs 76.5%) and women (63.6% vs 76.4%) used any health care services for short term illnesses, in the project area as compared to the non-project area. Also, fewer women (36.7% vs 55.8%), significantly lower proportion of those in socially disadvantaged group (31.9% vs 68.6%, p=.00) and smaller proportion (43.1% vs 69.4%, p=.01) among medium or low SLI

sought care from the public providers in the -project area as compared to the non- project area.

For delivery care, a significantly lesser proportion of women in socially disadvantaged group (65% vs 100%, p = .02) and those from medium and low SLI (64.7% vs 100%, p=.01) sought care from public health facility in project as compared to non-project area.

The proportion using public facilities among socially disadvantaged group for hospitalization was 84.0% in non-project area while more people (56.9%) used services from private provider in project area (p=.00).

Findings from the qualitative data show that there has not been an improvement in quality of services rendered in project facility, although drugs and supplies are abundant. Provider attitudes do not seem to be positive, or infuse confidence in users. Discussions with health managers indicate problems in terms of unnecessary investments in non-priority areas, unfilled vacancies, and also poor monitoring of the implementation.

4. Conclusion

The results show that the Project has not increased utilization of health services or benefitted the intended target groups, namely socially disadvantaged sections, medium and low SLI groups and women. This is true both for health care utilization and utilization of public health services.

It is of concern that despite the large investments in the project, the project appears to have pushed more people towards private health care, despite millions of dollars spent for upgrading public facilities. Further studies are needed to examine the factors contributing to this.

Chapter – 1

Introduction and Literature Review

1.1 Background

Advances in medical knowledge and technology have significantly improved general health status at the global level. Over the last 30-40 years, globally the average life expectancy improved from 50 years to 67 years and the under-five mortality rate decreased from 192 to 81 per 1,000 live births.[1] But these average numbers mask the actuality of patchy progress across and within countries. There are huge differences in health indicators between developing and developed countries. [2]

At the beginning of the 2000s 54% of children under two received immunization (DPT) in Sub-Saharan Africa, compared to 98% in high income countries. Under-five mortality rate averaged 126 in low income countries compared to 7 in high-income countries.[1] Ninety nine per cent of the AIDS deaths in 2001 occurred in developing countries. [3] To recognize and give importance to health as a part of human development, four out of the eight goals in the UN's Millennium Development Goals are related to health. Some of reasons for sluggish progress in health indicators in developing countries could be lack of funds, inadequate management and inefficient use of resources, and poor motivation of staff to address the health needs of populations.[4, 5] There was therefore a strong felt need to improve health systems everywhere, but especially in developing countries for reducing the health gap within and between nations.

In developing countries health reforms were a set of responses to deal effectively with the above cited reasons responsible for poor health of their population.[6] Cassels defines

health sector reforms as being concerned with "*defining priorities, refining policies and reforming the institutions through which these policies are implemented*" .[6] However, not all attempts at change can be termed health sector reform (HSR). According to Peter Berman, for reforms to take place changes must be purposive (aiming to achieve a series of policy objectives), sustained (long term changes rather than a one-off change) and fundamental (change should be included in the policy).[7]

Although reforms in the health sector have been happening in most countries for many decades, a new era of wide spread reforms in many developing countries came into existence in the 1990s. The World Development Report 1993 "Investing in Health" has been the basis of many of the health sector reform initiatives since the 1990s. That Report proposed a three-pronged approach to government policies for improving health status in the developing countries. First, that a country should foster an environment that enables households to improve health by pro-poor growth policies or by adjustment policies to preserve cost- effective health expenditures. Second, government spending on health was to be improved by targeting allocative and technical efficiency and third, diversity and competition were to be promoted, suggesting a reduced role of the state and greater reliance on market mechanisms to increase efficiency of the sector.[8] The package of suggested health sector reforms in many countries has generally included:

-Organizational reform and restructuring (decentralization, downsizing, introduction of performance related incentives, 'corporatization').

- Broadening health-financing options (introduction of user fees, community financing or social health insurance).

- Encouraging greater diversity and competition in health service provision (Privatization, establishment of public-private partnerships) and

- Increasing the role of health service consumers (prioritization of user choice, mechanisms to increase community accountability and participation).[6, 9, 10]

The overarching purpose of all health sector reform was to promote equity and reduce health gaps within countries.

1.2 Literature review

Health sector reforms as a set of policy measures which were formulated and implemented on the basis of WDR 1993 will be my area of concern for this study. My major focus will be on the equity implications of those set of policy measures and a step to find out the impact or trends generated by those policy measures especially for utilization of health services.

1.2.1 Experiences with health sector reform in developing countries

There is increased attention to the issue of equity in health and healthcare with the new commitment of governments and international organizations to improve the health status of the poor and marginalized.[11,12] Equity was one of the basic principles of the Primary Health Care approach and features clearly in the health policies of most countries.[13,14] but introduction of these newer reforms and their impact on access or on utilization of health services tells a different story.

One multi- country study in Latin America concluded that health reforms that were based on Neo-liberal principals had not solved the human resources problems which are identified as the leading causes of health system inefficiency and low-quality services that

existed before the reforms. The reforms worsened the situation by putting new pressures on health personnel, in terms of both the lack of necessary training to face the challenges that came with the reforms and efforts to take away from workers the rights and benefits that they had gained during years of struggles by unions, and to replace them with temporary contracts, reduced job security, and lower benefits.[15]

One study from Burkina Faso shows that despite health reform and increasing public investment in the health sector, utilization of health services and patient satisfaction with the public health care system were not improved. They found a downward trend in the utilization of curative services nationwide between 1986 and 1997, from 32% to 17%. It was striking that none of the heath policy reforms of the previous 12 years had any positive effect on health services utilization.[16]

In a national household survey in China it was found that mortality rates had been falling in both urban and rural areas. But the fall had been faster in urban areas, with the rural-urban gap widening. The volume of health care utilization, on the other hand, had fallen in both urban and rural areas, mainly because of increasing costs and the breakdown of insurance systems due to introduction of new set of health reforms. For utilization, the drop had been greater in the cities, thus tending to widen the gap with rural area.[17]

One of the major motivation for reforms was lack of funds, and so introduction of new financing options especially user fee was main approach in almost all reforms.[19] The basic idea behind introduction of user fees was that it freed up some resources and they can be used to improve the quality of services. There are lots of studies on negative impact of user fees, and how it has affected adversely utilization of health services for poor especially poor women.[20] One study in Zaria in Nigeria found that there was

significant drop in (46%) institutional deliveries after the introduction of user fee and as a result of it maternal deaths increased by 56%. [18]

If introduction of user fees would coupled with improved quality of care it could have increased the demand for as well as utilization of services [21] but most of the time it does not happen. For example, in Bangladesh where people relied on free public health services for a long time, many did not seek health care for minor illnesses after the introduction of user fees. [22]

1.2.2 Health sector reform in India

Despite the improvements in the economic conditions in the last decade, health conditions for India's people are still comparable to those of other low-income countries. Its infant mortality rate, for instance, is 68 deaths per 1,000 live births, as compared to 76 among all low-income countries.[23] We have witnessed significant change in our health sector after 1980's. Different stake holders, national as well as international, have participated actively and many innovative ideas tested across the nation at different levels of health system.[24]

Since the 1990s, the Government of India and the World Bank have been engaged in a dialogue on health sector development.[25] The focus of that dialogue has been on helping India address the most burdensome diseases in a cost-effective manner and move towards the establishment of health systems that are efficient and effective. This has gradually caused a paradigm shift in health policy, that is need-based and efficiency driven health service provision; more participation of private health sector; introduction of user fees and improving capacity building among managers to strengthen the public health care sector.[26]

Health sector reform initiatives in India at the state level have been taking place at varied paces across different states. These have depended on the commitment and stewardship of state governments and have often also been initiated through various donor-funded projects.

The World Bank has initiated since the 1990s, nine state level projects in India known as the State Health Systems Development Projects (SHDP). [27, 28] The first World Bank funded project for Health Systems Development in the state of Andhra Pradesh. Many states followed suit: Karnataka, Punjab and West Bengal in 1996, Orissa and Maharashtra in 1998, Uttar Pradesh in 2000 and Rajasthan and Tamil Nadu in 2002.[28]

There are not many studies on the impact of health sector reform in India. However, comparing national data from the National Sample Survey Organization (NSSO), some authors have suggested that the introduction of neoliberal economic reforms in India, including reform in the health sector, have had adverse consequences for the poor. A comparison of two official estimates for 1986–87 and 1995–96 on utilization of health care facilities published by NSSO, (1998) found that there was a 4% increase in the proportion who did not seek any health care in the lowest expenditure fractile group during this period. This shows that there was a rise in inaccessibility to treatments due to financial reasons and lack of facilities.[29, 30] During the same period the utilization of public facilities declined: from 26% to 19% in rural India and from 28% to 20% in urban India. For hospitalized treatment, the decline in utilization of government sources was from 59.7% to 43.8% in rural areas and from 60.3% to 43% in urban areas.[29, 31]

State Health System Development Projects funded by the World Bank have been reviewed by the Bank and have also been the subject of a small number of studies.

According to a mid-term review[32] and a review of the SHDPs [33] most of the efforts have gone into developing state hospitals using a fairly standardized project design. Overall these measures increased access and utilization of hospital services, but the states failed to develop comprehensive state health policies and strategies because of insufficient project components.[34]

In West Bengal, Punjab and Karnataka, the HSDP was implemented during 1999-2003, and the World Bank has carried out an end of project assessment. Data on utilization of services presents a not so positive picture. The proportion of institutional deliveries in total deliveries improved significantly in West Bengal but in Punjab and in Karnataka the improvement was marginal. At the same time, the share of the public sector in institutional deliveries declined in the latter two states. In Karnataka the percentage share of institutional deliveries in public sector health facilities decreased from 55% to 33% during 1999-2003, and in Punjab, from 97% to 26% during the same period. The reduction in public sector share of institutional deliveries is true also for West Bengal although the extent of reduction is not so steep.[35]

There is also information on utilization by income groups in these three states. There was more than 40% increase in the antenatal care coverage in the poorest group for all the three states during the project period.[35] The proportion of children having full immunization, rose significantly for the better off 20% in the three states after the completion of the project: in Karnataka form 21% to 68% and in Punjab from 20% to 58%. But for the poorest 20% the rise was 0% in Punjab and 4 % in Karnataka. [35]

In one more state-Uttar Pradesh, where HSDP was implemented, in a quasi experimental study, Peters had two major findings. Utilization of services and their distribution was

increased at all types of health facilities and for both poor and rich, but the largest gains were made by the wealthier groups. The second finding highlights better satisfaction of all groups of patients at primary level care than higher level of care.[36]

Another independent impact evaluation of health system development project in West Bengal by IIHMR Jaipur, found that each of the hospital output indicators showed a positive trend. Admissions increased from 5% in SDH/SGH (Taluk level hospitals) to 40% in rural hospitals, outpatient visits increased by 15%, 37%, and 45% respectively in district hospital, SDH / SGH, and rural hospitals. Bed occupancy rate as well as the bed turnover rate significantly increased indicating improvement in utilization as well as productivity in inpatient services. At all levels the percentages of hospitals with low utilization and low productivity had decreased implying that the project has started shifting the low-performance hospitals to high performance level.[37] Overall, West Bengal appears to have had positive outcomes from HSDP in many aspects.

Narayana, in an analysis of Orissa's HSDP found the project to cause strains on the health system and affect its performance. One, by 'levering in' external assistance to the project left other activities, whether of national priority or not, poorly funded. He further observed that the HSDP in Orissa had led to diverting personnel from other programs. Existing programs did not receive adequate attention and their management suffered. He concludes that 'levering in' external assistance affects the overall planning at the local level, and that the overall planning was "levering out".[26]

We can see from above studies that these state SHDPs funded by the World Bank have had mixed results, and has in some instances resulted in increasing the gap between the

low and high income groups and also negatively affected routine health programs not part of the project.

1.2.3 Health sector reform in Rajasthan

Rajasthan is India's largest state with a population of 56.5 million. It has a total land area of 3.4 lack sq. km. More than half of state land area is desert with sparsely distributed population. The last decade witnessed a high growth rate in population (28.3%). Though the literacy level is improving, it is still the lowest in the country. With an infant mortality rate of 80 per 1,000 births, and maternal mortality ratio of 680 per one lakh live births one of the highest in India, the state ranked very low in health indicators in the country compared to other states.[38]

Rajasthan spends 6 percent of its gross domestic product (GDP) on health, amongst the highest in the world. Still out of pocket expenditure constitutes three fourth of total health expenditure, and the state has benefited little from substantial improvements in health outcomes in the rest of the country during the last half-century.[39, 40]

In an attempt to increase access to health care and ensuring sufficient funds for improvement of secondary and tertiary levels of care, the State Government has attempted certain reforms and innovations before 2000.[24] These were following:

- Public private partnerships – include policy measures on private sector participation for installation of sophisticated medical technology in public sector hospitals, policy of medical colleges, dental and nursing colleges in private sector and also include outsourcing of services like, security, cleaning and canteen etc.

- Decentralization – Initiatives include, decentralization of decision making at district level, involvement of local government in decision making, formation of district level societies like RCH society for effective implementation and monitoring of programs.

- Reforms related to human resource- these policy measures includes, appointments of health staff including doctor's, initiation of anesthesia training (to address the shortfall of anaesthatist and other staff)

- Changes in financing methods- these reforms include formation of medical relief societies up to CHC level and introduction of user charges for cost recovery and cost sharing up to secondary and tertiary level hospitals.[41,42]

Apart from these reforms which were underway, the state government also sought loan from World Bank for reforming the health system of the state under the name of Rajasthan Health Systems Development Project (RHSDP).

The Rajasthan Health Systems Development Project (RHSDP) is an $ 89-million World Bank–assisted project designed to improve quality of and access to health services specifically for the poor and the disadvantaged population in the rural and the tribal area of the state.[43] The major objective of the project is "*developing more efficient and effective health prevention and care systems at the state level that would better serve the needs of the poor.*" Additional objectives were enhancing the role of the private sector in achieving important public health goals, improving governance, and enhancing community participation. The following six issues were found which necessarily need to be supported by the project for the health system to be effective

- Weak Institutional Arrangements and Program Management
- Declining Financial Resources
- Lack of Synergy Between the Public and Private Sectors
- Quality of Health Care
- Access and Equity of Health Care
- Governance

The project components include policy reforms, management development, institutional strengthening, and improvements in health services access and quality.

RHSDP seeks to address key policy issues at the community and first referral levels of public sector health care. It is said that, the project would be an important step in the development of a coherent, effective and sustainable health system; and would strengthen the organizational and institutional structure of preventive and curative aspects of health care by integrating primary health care services with referral hospitals.[43]

The main policy reforms supported by the project are:

(i) A redefinition of the state government's policy towards the private health sector, which would be made more of a partner, initially through the development of contracting out schemes;

(ii) The assignment of a higher priority within the state's health-related programs to tribal and BPL populations; and

(iii) The assignment of a higher priority to demand-side interventions, initially through behavior change communications efforts with households as the target audience.

In terms of institutional reforms, the establishment of a state-level Strategic Planning Cell is potentially a key development for the evolution of the health sector policy in the state. Since the project began in 2004, a range of activities have been started, including management training, new staffing patterns and placement procedures, initiation of a fee exemption policy and other financing reforms, as well as provision of essential drugs, and rehabilitation and repair of equipment and facilities. The management and financing reforms were implemented across the state.

The project sites are located in poorer regions of the state. The selection of project sites are said to be based on scoring criteria that included the condition of the public health infrastructure and health systems performance and emphasis on the poor and the tribal area. However, we were unable find further information on the scoring criteria.

1.3. Rationale

This study aims to assess the extent to which RHSDP has benefited the poor in terms of increase in utilization and reduction in unmet need for health care services. There has been a relative lack of studies related to the effect of the health sector reforms or more specifically health system development project on the unmet need for health care services in general, and on the use of public health facility, accessibility, affordability and acceptability of health care services in the rural part of the state of Rajasthan. The outcome of this study will also try to fill the gap in the empirical evidence base on the consequences of many types of health sector reform, in particular concerning the effects of reforms on use of health services and health outcomes.

The outcomes of the study will help the policy makers to tailor the strategies of the project which will met the need or requirement of the disadvantaged and the rural population in an equitable manner.

Chapter – 2

Objectives and Methodology

2.1 Objectives

a) General Objective

- To assess whether the RHSDP has resulted in an increase in utilization of health care services and reduction in levels of unmet need for health care services among disadvantaged groups (the poor, women and SC/ST population).

b) Specific Objectives

- To compare the relative differences between disadvantaged groups as compared to other groups in utilization patterns and unmet need for health care services among the populations in one health institution covered by Rajasthan health system development project (RHSDP) and a health institution that is not covered by the Project, respectively.
- To examine by sex, social group and standard of living in utilization and unmet need for health care within the populations covered by one RHSDP health institution and compare these with differentials in the population covered by a non-RHSDP health institution.

2.2 Methodology

2.2.1 Study type

This study was a comparative descriptive; cross sectional community based survey supplemented by qualitative methods e.g. non participant observation, facility check list

and key informants interviews, to investigate the effect of project intervention on the utilization of the health services and the unmet need for health care services.

2.2.2 Study setting

The study was undertaken in Jhunjhunu, a rural but relatively prosperous and desert district of Rajasthan. The selection of the district is on the basis of the fact that the project was implemented only in the two BPHC of the state in two different districts, one of them is Jhunjhunu and other one is Jodhpur. The intervention BPHC in Jodhpur was approximately 15 km. form the district headquarters and on the main connecting road, so the health services utilization is very less in that particular BPHC because the population uses the higher level of health services at the district rather than at the BPHC level, so I chose the Jhunjhunu BPHC for my study.

The Jhunjhunu district is situated in north- west part of the state and adjoins the state of Haryana. The district consists of 6 Subdivision and my intervention BPHC Mahanser, is situated in the Jhunjhunu subdivision and the comparison non-project BPHC Sultana, is situated in the Chirawa subdivision. The total population of Mahanser BPHC area is 20,269 and entire population is residing in the rural area. The male population is 10,079 (50%) and female population is 10,190 (50%). Scheduled castes are 3157 (16%) and Scheduled tribes are negligible in number, 375 (2%). The 0 – 6 year population is 3698 (18%). The total literacy rate is 59 percent, for male 59 and for female 41 percents.

The total population of Sultana BPHC area is 25,369; all of them are resided in the rural area. The total male population is 13,113 (52%) and female population is 12,282 (48%). Scheduled castes are 2849 (12%) Scheduled tribes are 49 (0.1%). The total 0-6 year

population is 4718 (19%). The literacy rate is 57 percents, for male 62 percent and for female 38 percents (Table 2.1).

Table 2.1 Demographic characteristics of the project and non-project BPHC

	Block PHC	
	Project BPHC (%)	Non-project BPHC (%)
Total Population	20269	25369
Population (rural)	100%	100%
Total Male	10079 (50%)	13113 (52%)
Total Female	10190 (50%)	12282 (48%)
Total 0-6 yr. Population	3698 (18%)	4718 (19%)
Total SC Population	3157 (16%)	2849 (12%)
Total ST Population	375 (2%)	42 (0.1%)
Total literacy	11960 (59%)	14364 (57%)
Male literacy	7002 (59%)	8899 (62%)

Source: census 2001. GOI

2.2.3 Study period

The data collection for the study was carried out during June 15, 2007 - August 31, 2007.

2.2.4 Sample selection procedure

I chose the latest action plan which was used for the pulse polio campaigns[1] of the concerned facility as my sample frame and then selected the households by using systematic random sample method in the catchment area of both the block primary health centers, after carrying out house listing with the help of local volunteers.

2.2.5 Sample size

Using the prevalence of untreated morbidity (as a proxy for unmet need for health care services) for the rural part of the Rajasthan in a survey by NSSO in 1995-96, that is 15 %,

[1] For every PHC, there is an action plan for the pulse polio immunization in which every household in the area covered by the PHC, and the total no. of children less than 5 years of age in each household are mentioned and this plan is revised before each round of Polio immunization

worst acceptable level 10% and CI 95%, StatCalc of EpiInfo version 3.3 calculated the sample size to be 194 for one facility so I rounded off to 200 households per BPHC area, a total of 400 households.

2.2.6 Data collection techniques and tools

The quantitative data was collected with the help of a pre-tested structured interview schedule. The language of the interview schedule was Hindi, the local language. The principal investigator (PI) himself, who is a trained MBBS doctor and is from the same state, carried out the interviews and filled up the schedule. PI also took help of local trained volunteers for the data collection. During the data collection PI went to the assigned household and interviewed any person above the age of 20 years preferably women, after taking the consent.

I interviewed some of the health managers who were involved in the implementation of the project, namely, the chief medical and health officer, district project coordinator and block primary health center in -charge in both the BPHCs. To assess the condition and availability of other resources, I also carried out non-participant observation by using facility check-list at both the project and non-project BPHCs.

2.2.7 Operational Definitions

a) Unmet need for health care services for short term illness – For any reported episode of illness in a house hold during the two weeks preceding the survey for which they did not seek any health care; or, if they sought services from a less than qualified health provider (LTFQ).

b) Unmet need for health care services for Hospitalization – For any reported hospitalization during the past one year preceding the survey for which they used services from an LTFQ during or after discharge from the hospital.

c) Unmet need for Delivery-related care – Any home delivery not assisted by a skilled personal or use of services from an LTFQ for post delivery complications since one year preceding the survey.

d) Illness - Any diseases or aliments acute or chronic, in any member of the house hold which confined them in bed at least for one day or due to which they were unable to perform their day to day activity for at least one day.

e) Hospitalization - Any member in house hold admitted in any hospital for any reason other than delivery related causes for more than one day in last one year.

f) Socially disadvantaged groups – Apart from the Schedule Caste and Schedule Tribe we also include Muslims in this group because development indicator of later was also as same as previous ones.

g) SLI groups - The standard of living index was calculated by using the standard of living (SLI) matrix of National family health survey (NFHS) 2 with slight modification for the rural population. Standard of living of respondents' houses was assessed by enquiring about ownership of land, house and other assets and availability of facilities like toilet, drinking water, and electricity. The SLI scores according to this matrix fell between 0 (lowest) to 67 (highest). They were then grouped into low (0-14), medium (15-24) and high (25- 67) SLI group. In our analysis we club low and medium group together in one group.

2.2.8 Data Analysis

Data collected from questionnaire survey were de-linked from the source while entering in Microsoft Excel. Quantitative data were analyzed using SPSS version 11.5. For bivariate analysis p-value 0.05 considered as statistically significant.

The details of the interview were transcribed as soon as they were over. Analyses of these in-depth interviews and the information collected in the facility check-list will be executed manually.

2.2.9 Ethical considerations

Written informed consent was taken from appropriate institutions and the individuals participating in the study. All the quantitative and qualitative data was coded and the coded data entered into the data entry sheet and identities of the individuals kept completely confidential.

Chapter 3

Results

This chapter presents the results of the study. We start with a description of the project and non project health facilities, based on non-participant observation using a facility checklist. This is followed by the analysis of data from the community survey.

3.1 Profile of Project and non-project BPHCs

3.1.1 Location

a) Project BPHC

The main building of the hospital was situated at one end of the village and there were no inhabitants behind or in both the sides of the hospital. There were two more CHCs within a radius of 4 Km. and one district hospital (DH) approximately 14 Km. from this BPHC. Apart from these public facilities, there were also private providers operating in the area covered by this facility. There were no private hospitals and there were 0.98 private clinics and 3.45 less than fully qualified providers per 10,000 populations.

b) Non-project BPHC

There were three more PHC's approximately 4 to 7 Km. from this BPHC and one CHC around 15 Km. from this place. There were 0.8 private hospitals, 3.15 private clinics and 5.1 less than fully qualified professionals per 10,000 of population in the area covered by this health facility. So, we can see that the project area was more favorable for the utilization of public facilities and there were more private providers in the non-project area.

3.1.2 Characteristics of facilities and out patients

I also did some observation on the condition of BPHCs, patient- client interaction and collected information on socio-economic characteristics of clients who utilized the services from these two public health facilities as part of my study.

a) Project BPHC

When I first entered the project BPHC after a walk of about 10 minutes from bus stand it was about 10.30a.m. It was an old but still intact huge building with a lot of empty space around the main building and surrounded be a high boundary wall. This building was donated to the government for the hospital.

The entrance with tall pillars and high ceiling had a long corridor in the center, with four rooms opening into it and leading to another perpendicular corridor where there was a table and two chairs on which two women – Auxiliary nurse midwives (ANM) - were sitting and one man - block health officer (BHS, newly deputed on this post) - was standing next to them. One man and one woman with a child were also standing there with an outpatient (OP) card in their hand. They seemed to be waiting for the doctor. I was told that the doctor would come after 15 minutes; he was having his breakfast at his residence, located just behind this building. Two young men came with some minor injuries and one of the ANMs gave one injection of TT to each one of them and wrote some drugs on the out OP card, for which they had to pay Rs 2 each. One of those young men asked them to write some "good" medicines so that he could purchase it from the store outside. It seemed to me that they don't trust the hospital or free drugs.

Finally the medical officer in charge of the BPHC made his entry. After greetings he took me to another room at the other end of the corridor, which was full of cartons of

medicines, IV fluids and other consumable items. Our discussion was interrupted by the entry of one man, who didn't have an OP slip with him. The doctor shouted at him and asked him to return with the slip. After some time the man came back and started describing his health complaints. This time he was not offered the chair (whereas there were four new chairs in that room); there was no eye contact between doctor and the patient. After writing the prescription the doctor told the patient "take one medicine from here and buy two other medicines from outside." The man tried to enquire more about his disease but was interrupted by an official of the BPHC who wanted to know about some reports from the doctor. The doctor and this official left the room and the patient was left alone with the prescription slip in his hand.

When I asked the doctor why he was not prescribing all the medicines from the hospital, he told me that that the patients did not have any trust in free medicines and that they would throw all of it away on going outside and would then consult a quack. He also told me that in the coming months the whole building would be unnecessarily renovated because they would make it according to some specifications and one new X-ray machine would also be installed in this PHC.

Later on he showed me an in-patient ward, which had no patients and was being used as the office of the BPHC. They gave me a new patient bed, new bed sheet and one new pillow with cover for my stay there for the next few days. This room was also full of cartons of IV fluids, new tables, chairs and patient's beds and any one could tell that room had not been used as a hospital ward for a long time.

On the next day and after another 4-5 days, I collected information about the patients and their social class and found that the average number of patients per day who came to that

PHC was 20. Out of this, 10 (50%) were male and 10 (50%) were female. The proportion of SC/ST people was 17.5% (3.5) out of that two were male and remaining were females (1.5). The proportion of patients below poverty line (BPL) out of the total patients was 12.5% (2.5), out of that only 0.5 were female and the remaining two were male. Thus, the project BPHC had an extremely small proportion of SC/ST and low-income users on the days of my observation.

b) Non- Project BPHC

This BPHC was at walkable distance of about 5 minutes from the bus stop. There were a series of medical shops in front of the PHC. The BPHC had been newly painted and looked like a typical government building. When I entered 7-8 patients were standing in a queue waiting for their turn. I entered the doctor's room and told him about the purpose of my visit, he called someone and again became busy in seeing the patient sitting on a revolving stool. When I looked around, it was a very small room with one small table, two chairs and one examination table along with curtain.

After a few minutes one person came in, and the doctor told him to provide me the information I needed. I asked for some old records and he provided me all the information I needed. It was only after finishing the OPD hours that doctor came out to speak to me. I came to knew that he was a junior doctor there. There was also one senior medical officer (SMO) who had gone to the CHC to attend a meeting. He also told me that there were residences for all the staff and almost all the staff stayed there including himself. He also told me that average OPD in this hospital was around 50 – 60 patients.

Later on two random days I collected information regarding the total number of patients and their socioeconomic class. The average number of patients per day for that PHC was

46.5. Out of this, 51.7% (24) were female and the rest were male. The proportion of SC/ST patients were 31.1% (14), out of this 50.0% (7) were male. The proportions of BPL patients were 16.4% (7) and out of this 43.0% (3) were female and the rest were male. Thus, not only were there twice as many patients utilizing this facility on average, the proportion of SC/ST and those belonging to the BPL category was also much higher in this BPHC. However, in both facilities there were an equal proportion of women and men users.

3.1.3 Facility check-list

I used a facility check list to assess human and other resources available in project and in the non-project BPHC before (2003) and after implementation of the RHSDP (2006). (Table 1 annexure)

a) Sanctioned posts and vacancies

All posts of doctors and nursing staff were found to be filled at the time of survey in both BPHCs. However, there was only one post for doctor in project-BPHC as compared to two posts in non-project BPHC. Four and five support staff positions were vacant respectively in project and non-project BPHC area and in project BPHC one of these vacancies was for the post of laboratory technician.

b) Services

In both facilities there were in-patient (IP) as well as labour room facilities. X – ray facility was not there in both BPHC but there was provision of installation of X-ray machine within few months after my survey in the project-BPHC. There was a minor Operation Theatre (OT) in the project BPHC but this facility was not available at the non-

project facility. In the project-BPHC, there was no increase in the number of tests performed in the laboratory after the project, and only two tests could be performed: malaria and blood sugar. In contrast, in the non-project facility, they can perform a total of five (including urine, Hb and sputum for AFB) tests. Clearly, the absence of lab technician in the project facility would be causing further difficulties.

In the project BPHC after implementation of project there was 273% increase (from 6 beds to 30 beds) in the total number of beds available but bed occupancy rate (BOR) was negligible: 1.2%. In the non-project BPHC, the total number of beds had remained 6, but the occupancy rate was 80%. There was no record available to find out the variation in number of admission in project BPHC but there was 12.7 percent increase in the admissions per month during this period in the non-project BPHC, to an average of 48.5 admissions per month.

The total number of out patients increased by 44% in project BPHC while in the non-project BPHC where there was slight decrease in patients (3%) during the same period. However, the average number of out patients in the former was much lower than the latter, both before and after the implementation of RHSDP.

In the project-BPHC there was not a single institutional delivery even after about 3 years of implementation of the project until the introduction of Janani Suraksha Yojana (JSY, which gave monetary incentives for delivery in government facilities) in August 2006. After this there were only 8 deliveries per month in the project facility. At the same time in the non-project facility there were 12.7 and 11.9 deliveries per months in 2003 and 2006 (before JSY) respectively, and after the introduction of JSY there was a 74.7 % increase in the deliveries per month, to an average of 20.5 deliveries per month.

One major change in both these facilities after the introduction of the project was introduction of the user fees with exemption of the BPL patients from it. Before this project there were no user fees in both these facilities.

Overall, the project BPHC had some additional equipment, drugs and more beds than non-project BPHC but one medial officer (MO), no lab technician, very low patient utilization, and lower proportion of socially disadvantaged and economically weaker sections among users. There were more doctors and the doctor's attitude was also much more positive in the non-project facility as compared to the project facility.

3.2. Results from the community survey

This section presents the results of the primary survey covering 656 respondents who had any episode of short-term illness during the two weeks preceding the survey, and any delivery or any episode of hospitalization during the one year preceding the survey. These respondents were residing in the 400 households spread over 16 villages of two (different administrative blocks) block primary health centers of Jhunjhunu district of Rajasthan state. One Block primary health center area is covered by the Rajasthan health system development project (RHSDP) and other is not (200 households in each block primary health center).

3.2.1 Household characteristics

This section presents a profile of the demographic and socioeconomic characteristics of the heads of the households.

A higher proportion of household heads were illiterate (43% vs 16.5%) in the project area. Four times more household heads (49% vs 12.5%) had studied upto graduation and

above in the non- project- BPHC than in the project- BPHC area. In the project area, higher proportions (45.5% vs 26%) of household belonged to socially disadvantaged groups (schedule caste, schedule tribes and Muslims) as compared to the non-project-BPHC area. The single largest occupation group in the project-BPHC was of farmers (39%) while government employees (36%) and farmers (33.5%) respectively contributed to the largest occupation groups for the non-project –BPHC area (Table 3.1).

Table 3.1 Comparison of household characteristics

Variables	Project BPHC (%) (n = 200)	Non- project BPHC (%) (n = 200)	Total (%) (N = 400)
Education Status of the HH Owner			
Illiterate	86 (43)	33 (16.5)	119 (29.8)
Middle School	89 (44.5)	69 (34.5)	158 (39.5)
Up to Graduate	15 (7.5)	87 (43.5)	102 (25.5)
Above Graduation	10 (5.0)	11 (5.5)	21 (5.3)
Social class			
Socially disadvantaged	91 (45.5)	52 (26.0)	143 (35.8)
Others	109 (54.4)	148 (74.0)	257 (64.3)
Occupation			
Farmer	78 (39.0)	67 (33.5)	145 (36.3)
Shop Keeper	22 (11.0)	23 (11.5)	45 (11.3)
Govt. Employee	28 (14.0)	72 (36.0)	100 (25.0)
Non-Govt. Employee	18 (9.0)	11 (5.5)	29 (7.3)
Daily Wage Worker	31 (15.5)	20 (10.0)	51 (12.8)
Not Working	23 (11.5)	7 (3.5)	30 (7.5)
Is any member in govt. job (Other than HH owner)			
Yes	20 (10.0)	46 (23.0)	66 (16.5)
Standard of Living Index			
High(>24)	88 (44.0)	133 (66.5)	221 (55.3)
Medium and Low (=< 24)	112 (56.0)	67 (33.5)	179 (44.8)
Total Members in all HH	1525	1322	
Mean (SD)	7.63 (3.50)	6.61 (2.82)	
Range	2 - 20	2 - 18	

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

Medium and low SLI groups make 56 percent and 33.5 percent for project and non-project –BPHC respectively. The total numbers of members in the 200 households in the project area was 1525, with a mean of 7.63 ± 3.50 (Range 2 - 20) per household. In the

non-project BPHC area, the number of members was 1322, and mean number of members per household was 6.61 ± 2.82 (Range 2 - 18).

So, a higher proportion of household heads were illiterate, smaller proportion of heads were in government jobs in project than non-project area. Also a higher proportion in the project area belonged to socially disadvantaged group and low and medium SLI group.

3.2.2. Characteristics of those reporting an illness, delivery or hospitalization

A total of 656 people reported either an episode of short-term illness in the two weeks preceding the survey, an episode of delivery or hospitalization in the last one year prior to survey. Out of the total, 354 were in the project-BPHC and 302 were in the non-project-BPHC area. Details of their characteristics are provided in Table 3.2.

Table 3.2 Comparison of characteristics of those reporting an illness or delivery in the 12 months prior to survey

Variable	Project BPHC (%)			Non-Project BPHC (%)		
	Male n= 137	Women n=217	Total n=354	Male n=128	Women n=174	Total n=302
Completed Age In Years						
1 - 15	60(43.8)	42 (19.4)	102(28.8)	52 (40.6)	26 (14.9)	78 (25.8)
16-45	45(32.8)	148 (68.2)	193(54.5)	47 (36.7)	130 (74.7)	177 (58.6)
46-60	23(16.8)	18 (8.3)	41 (11.6)	22 (17.2)	16 (9.2)	38 (12.6)
> 60	9 (6.6)	9 (4.1)	18 (5.1)	7 (5.5)	2 (1.1)	9 (3.0)
Mean (SD)	26.6 (22.48)	28.4 (15.96)		25.3 (20.20)	27.3 (13.48)	
Range	1 - 80	1 - 75		1 - 72	1 - 65	
Marital status of the Patients						
Unmarried	72(52.6)	50 (23.0)	122(34.5)	59 (46.1)	32 (18.4)	91 (30.1)
Married	60(43.8)	154(71.0)	214(60.5)	62 (48.4)	137 (78.7)	199 (65.9)
Divorced	0 (00)	1 (0.5)	1 (0.3)	0 (00)	0 (00)	0 (00)
Widow	5 (3.6)	12 (5.5)	17 (4.8)	7 (5.5)	5 (2.9)	12 (4.0)

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

3.2.3 Utilization of health care services: An overview

This section compares overall prevalence and utilization patterns in the project and non-project BPHC areas.

a) Prevalence of Short-term illness, Deliveries and Hospitalization

By and large, there was no statistically significant difference in the prevalence of short-term illness and deliveries between project and non-project areas. The only exceptions were as follows: a significantly higher proportion was hospitalized (8.1% vs 6.0%, p=.02) or had post delivery complication (50.7% vs 26.4%, p= .00) in the project area compared to the non-project area (Table 3.3).

Table 3.3 Comparison of prevalence of short term illness, Delivery and Hospitalization

Variables	Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
Prevalence of short-term illness (OP)	162 (10.8)	157 (11.8)	319 (11.4)	P = .290
Prevalence of Hospitalization (IP)	125 (8.1)	80 (6.0)	205 (7.0)	P = **.027**
Prevalence of Deliveries	69 (4.5)	68 (5.1)	137 (4.8)	P = .44
Prevalence of post Delivery complication	35 (50.7)	18 (26.4)	53 (38.6)	P = **.003**

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

b) Utilization of health care services

For all health care needs: short-term illness, delivery or post delivery complications, the proportion of those who did not seek any health care from outside was more in project area than in the non-project area. A significantly smaller proportion sought health care from outside for short-term illness (63.0% vs 79.0% p=.00) and for delivery care (56.5% vs 70.6% p=.00) in the project area compared to non-project area (Table 3.4).

Table 3.4 Comparison of utilization of health care services

Variables		Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
For short-term illness	Do nothing	60 (37.0)	33 (21.0)	99 (29.0)	P = **.002**
	Seek health care services	102 (63.0)	124 (79.0)	226 (71.0)	
For Delivery	Home delivery	30 (43.5)	20 (29.4)	50 (36.5)	P =**.004**
	Seek health care services	39 (56.5)	48 (70.6)	87 (63.5)	
For Post Delivery	Do nothing	13 (37.1)	2 (11.1)	15 (28.3)	P = .059 (FET)
	Seek health care services	22 (62.9)	16 (88.9)	38 (71.7)	

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

c) Reasons for not seeking health care services

The clients were asked about reasons for not using health care services for an episode of illness or for delivery care. A higher proportion in the project area than in the non-project area (28.1% vs 24.5%) said the condition was not serious enough to seek health care. Many more also mentioned affordability as the issue. A slightly higher proportion in project as compared to non-project area also cited no permission from family member as a reason (11.4% vs 9.0%) (Table 3.5).

Table 3.5 Comparison of reasons for not seeking health care services

Reason for not seeking health care services	Project – BPHC (%)	Non Project – BPHC (%)	Total (%)
Tt not necessary, disease not serious	42 (28.1)	27 (24.5)	69 (26.6)
Home Tt enough	34 (22.8)	27 (24.5)	61 (23.5)
Not affordable	41 (27.5)	24 (21.8)	65 (25.0)
Family member did not allow	17 (11.4)	10 (9.0)	27 (10.4)
Allopathic Tt not good for this Disease	8 (5.3)	11 (10.0)	19 (7.3)
No time	7 (4.6)	11 (10.0)	18 (6.9)
Total	**149**	**110**	**259**

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

Almost half the women (45.8%) mentioned non-affordability as most important reason for not using any health care from outside for post delivery complication in project area. None said this in non-project area as an issue (Table 3.6).

Table 3.6 Comparison of reasons for not seeking health care services for post-delivery complications

Reason for not using health care services	Project – BPHC (%)	Non Project – BPHC (%)	Total (%)
Tt not necessary, disease not serious	5 (20.8)	1 (25.0)	6 (21.4)
Home Tt enough	4 (16.6)	1 (25.0)	5 (17.8)
Not affordable	11 (45.8)	-	11 (39.2)
Family member did not allow	4 (16.6)	1 (25.5)	5 (17.8)
Allopathic Tt not good for this Disease	-	1 (25.0)	1 (3.5)
No time	-	-	-
Total	**24**	**4**	**28**

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

d) Nature of health care sought

The clients were asked about the type of provider they went to for treatment when they sought any health care services from outside. Here we divided all providers broadly into two categories, namely public and private. Private providers also include less then fully qualified providers.

In the project area as compared to non-project area, a smaller proportion opted for public providers for short-term illness (39.2% vs 56.7%, p = .02), for delivery care (47.2% vs 60.0%, p=.00) and for post delivery complications (9.8% vs 68.8%, p=.00). The others went to private providers. For hospitalization the proportion who sought care from a public provider was lower in project area compared to non-project area but the differences were not statistically significant (Table 3.7).

Table 3.7 Comparison of nature of health care sought

Variables		Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
For short-term illness	Public	40 (39.2)	70 (56.4)	110 (47.8)	P = **.023**
	Private	44 (43.1)	41 (33.1)	85 (37.6)	
	LTFQP*	18 (17.6)	13 (10.5)	31 (13.7)	
For Hospitalization	Public	59 (47.2)	48 (60.0)	107 (52.2)	P = .074
	Private	47 (37.6)	29 (36.2)	76 (37.0)	
	LTFQP*	19 (15.2)	3 (3.7)	22 (10.7)	
For Delivery	Public	25 (64.1)	43 (89.6)	68 (76.8)	P = **.004**
	Private	14 (35.9)	5 (10.4)	19 (23.2)	
For Post Delivery complications	Public	2 (9.1)	11 (68.8)	13 (38.9)	P = **.000** (FET)
	Private	20 (90.9)	5 (31.3)	25 (61.1)	

* LTFQP: Less than fully qualified providers

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

e) Reasons for using /not using public services

When asked about the reasons from those who availed services from public service providers for short-term illness, for delivery care and for hospitalization the majority opined that those services were less costly than other providers (52.7% vs 41.8%) followed by "faith in those providers" (27.1% vs 12.2%). More mentioned good services in non-project area (17.8%) as compared to project area (6.2%), and near to home (10.0% vs 14.2%) in project than non-project area.

This shows that though people use public services more because these services were less costly than the private services in both areas but more people uses public services in non-project area because of good services also (Table 3.8).

Table 3.8 Comparison of reasons for using Public Services

Reasons	Project- BPHC (%)	Non Project – BPHC (%)	Total (%)
Faith	35 (27.1)	24 (12.2)	59 (18.1)
Previous Tt not worked	2 (1.5)	18 (9.1)	20 (6.1)
Near to home	13 (10.0)	28 (14.2)	41 (12.6)
Less costly	68 (52.7)	82 (41.8)	150 (46.1)
Good Behavior	3 (2.3)	5 (2.5)	8 (2.4)
Good Services	8 (6.2)	35 (17.8)	43 (13.2)
Availability	-	4 (2.0)	4 (1.2)
Total	**129**	**196**	**325**

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

We also asked from those who availed health care services about the reasons for not using the services from public providers. Majority (22.5% vs 20.2%) for the project as well as non-project area respectively mentioned that poor quality of services in those facilities as the single most important reason for not using public health services. No medicine (21.8% vs 19.3%), doctor not available (17.6% vs 17.1%), and behavior of the provider not good (6.6% vs 3.5%) were other reasons given respectively for the project and non-project areas.

Surprisingly, as we showed in previous section although majority of people who used public services did so because services were less costly, the people who did not use public service also said that they did not use them because they were too costly; this was true in project (20.0%) and in non-project (18.3%) facility areas. What they implied was that for a public facility, it was costing too much whereas these had been previously free of cost.

In the project area, two other reasons were cited. One was that public providers prescribed same medicines for all the diseases (58.4%). Another was absence of emergency services (41.6%). None said this in non-project area (Table 3.9).

Table 3.9 Comparison of reasons for not using Public Services

Reasons	Project- BPHC	Non Project - BPHC	Total
No Medicines	89 (21.8)	44 (19.3)	133 (20.9)
Too costly	82 (20.0)	43 (18.3)	125 (19.6)
Dr. not available	72 (17.6)	39 (17.1)	111 (17.4)
Services not good	92 (22.5)	46 (20.2)	138 (21.7)
Services not available	33 (8.0)	32 (14.0)	65 (10.2)
Behavior not good	27 (6.6)	8 (3.5)	35 (5.5)
Too far	9 (1.6)	11 (4.8)	20 (3.1)
Waiting time too long	4 (0.09)	4 (1.7)	8 (1.2)
Total	**408**	**227**	**635**
Other Reason			
Emergency services not available	15 (41.6)	-	17 (41.6)
Same drug for every disease	21 (58.4)	-	21 (58.4)
Total	**36**	**-**	**36**

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

f) Incomplete Treatment

Those who sought care either from public or private providers were asked whether they completed their treatment or not. Once again we found the project area faring poorly. A significantly smaller proportion (60.8% vs 80.6%, p=.00) for short-term illness and (72.2% vs 85%, p=.04) for hospitalization completed their treatment in project than in non-project areas (Table 3.10).

Table 3.10 Comparison of completed Treatment

Variables		Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi-square p-value
For short-term illness	Completed treatment	62 (60.8)	100 (80.6)	162 (71.7)	P = **.001**
	Incomplete treatment	40 (39.2)	24 (19.4)	64 (28.3)	
For Hospitalization	Completed treatment	91 (72.8)	68 (85.0)	159 (78.9)	P = **.041**
	Incomplete treatment	34 (27.2)	12 (15.0)	46 (21.1)	

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

A majority of respondents in the project area as compared to non-project area (59.4% vs 44.1%) said that they did not complete treatment for short-term illness and hospitalization because they could not afford it. This was followed by "no relief" from the treatment (27.7% vs 34.8) (Table 3.11).

Table 3.11 Comparison of reasons for not completing the treatment

Reasons	Project- BPHC (%)	Non Project – BPHC (%)	Total (%)
Not affordable	107 (59.4)	38 (44.1)	145 (54.5)
No relief	50 (27.7)	30 (34.8)	80 (30.0)
Too far to revisit	8 (4.4)	5 (5.8)	13 (4.8)
Fear of side effects	6 (3.3)	1 (1.1)	7 (2.6)
Patient get cured	2 (1.1)	9 (10.4)	11 (4.1)
Treatment not working	7 (3.8)	3 (3.4)	10 (3.7)
Total	**180**	**86**	**266**

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

g) Unmet Need for health care services

As we mentioned earlier in the operational definition of unmet need for health care services in Chapter 2, we include in unmet need for health care services those who did not seek any care from outside whenever there was a need to do so, and those who sought health care from outside but availed care from a less than fully qualified providers.

For short-term illness, slightly more than half (53.7% vs 42.6%, p = .04) out of those who reported sickness either did nothing or sought health care from less than qualified health care providers in the project area in comparison to the non-project area.

For hospitalization and for delivery services difference was most marked: there were more than four times (21.6% vs 5.0%, p = .00) and three times more (40.5% vs 13.2%, p = .00) respondents experiencing an unmet need for health care services respectively in the project area as compared to the non-project area (Table 3.12).

Table 3.12 Comparison of extent of unmet need for health care services

Variables	Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
Prevalence of unmet need fro health care for short-term illness (OP)	87 (53.7)	67 (42.6)	154 (48.1)	P = **.048**
Prevalence of unmet need for health care for Hospitalization (IP)	27 (21.6)	4 (5.0)	31 (15.1)	P = **.001**
Prevalence of unmet need for delivery care	28 (40.5)	9 (13.2)	37 (27.0)	P = **.000**

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

From above results we can see that even there were not much difference in the prevalence of different health conditions in both project as well as non-project areas but unmet need for health care was higher in project as compared to non-project area.

3.2.4 Utilization of health services by gender, social groups and SLI groups

This section compares the result of community survey on utilization of health services between project and non-project area across sex, social groups and SLI groups. The purpose is to examine whether women, socially disadvantaged groups and low and medium SLI groups in project area have better access to and utilization of health care services as compared to non-project area.

a) Short-term Illness

Prevalence

There was no significant difference in the prevalence of short-term illness across all the groups in both areas (Table 3.13).

Table 3.13 Comparison of prevalence of Short-term Illnesses by sex, social and SLI groups

Variables		Total in sample	Project-BPHC (%)	Total in sample	Non Project-BPHC (%)	Total (%)	Chi-square p-value
Sex	Male	793	85 (10.7)	688	89 (12.9)	164 (11.8)	P = .186
	Female	732	77 (10.5)	634	68 (10.7)	145 (10.6)	P = .901
Social group	Socially disadvantaged	562	72 (12.8)	350	42 (12.0)	114 (12.4)	P = .718
	Others	963	90 (9.3)	972	115 (11.8)	205 (10.5)	P = .075
SLI group	High	684	71 (10.3)	926	110 (11.8)	181 (11.0)	P = .346
	Medium and Low	841	91 (10.8)	396	47 (11.8)	138 (11.3)	P = .584

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

Utilization of health care services

We found that for short-term illness, a lower proportion of women (63.6% vs76.4%), and members of socially disadvantaged groups (65.2% vs 83.3%, p = .03), medium and low SLI group (63.7% vs 76.5%) sought any health care in the project area compared to non-project area respectively. We can see from above results that, though there were no significant differences in the prevalence of short-term illness across all groups in both areas but proportion of those who sought health care was more in non-project BPHC area than project BPHC area (Table 3.14).

Table 3.14 Comparison of utilization of health services for short-term illnesses by sex, social and SLI groups

Variables		Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
Sex	Male	53 (62.3)	72 (80.8)	125 (71.5)	P = **.006**
	Female	49 (63.6)	52 (76.4)	101 (70.0)	P = .09
Social group	Socially disadvantaged	47 (65.2)	35 (83.3)	82 (74.2)	P = **.038**
	Others	55 (61.1)	89 (77.3)	144 (69.2)	P = **.011**
SLI	High	44 (61.9)	88 (80.0)	132 (70.9)	P = **.007**
	Medium and Low	58 (63.7)	36 (76.5)	94 (70.1)	P = .12

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

Type of health care sought

A smaller proportion sought health care from a public provider in project area than the non-project area for short-term illness and this was true for all groups considered. A smaller proportion of women (36.7% vs 55.8%), socially disadvantaged group (31.9% vs 68.6%, p=.00) and medium or low SLI group (43.1% vs 69.4%, p=.01) sought health care from public providers in project area compared to non-project area (Table 3.15).

Table 3.15 Comparison of type of Health Care Sought for short-term illnesses by sex, social and SLI group

Variables			Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
Sex	Male	Public	20 (40.0)	41 (56.9)	63 (49.3)	P = .058
		Private	33 (60.0)	31 (43.1)	64 (50.4)	
	Female	Public	18 (36.7)	29 (55.8)	47 (46.5)	P = .055
		Private	31 (63.4)	23 (44.2)	54 (53.5)	
Social group	Socially disadvantaged	Public	15 (31.9)	24 (68.6)	39 (47.6)	P =**.001**
		Private	32 (68.1)	11 (31.4)	43 (52.4)	
	Others	Public	25 (45.5)	46 (51.7)	71 (49.3)	P = .467
		Private	30 (54.5)	43 (48.3)	73 (50.7)	
SLI group	High	Public	15 (34.1)	45 (51.1)	60 (45.5)	P = .64
		Private	29 (65.9)	43 (48.9)	72 (54.5)	
	Medium and Low	Public	25 (43.1)	25 (69.4)	50 (53.2)	P = **.013**
		Private	33 (56.9)	11 (30.6)	44 (46.8)	

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

Incomplete Treatment

A significantly higher proportion among women (32.6% vs 15.3%, p=.00), members of disadvantaged group (40.4% vs 25.7%), and those belonging to medium and low SLI group (41.3% vs 27.7%) did not complete their treatment in area covered by project as compared to non-project area (Table 3.16).

Table 3.16 Comparison of incomplete Treatment

Variables		Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
Sex	Male	23 (43.3)	16 (22.2)	39 (32.7)	P= **.010**
	Female	16 (32.6)	8 (15.3)	24 (23.9)	P = **.004**
Social group	Socially disadvantaged	19 (40.4)	9 (25.7)	28 (33.0)	P = .077
	Others	20 (36.3)	15 (16.8)	35 (26.5)	P = **.002**
SLI	High	15 (34.0)	14 (15.7)	29 (24.8)	P = **.008**
	Medium and Low	24 (41.3)	10 (27.7)	34 (34.5)	P = .070

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

Unmet need for health care services

There were significant differences in the overall unmet need for health care services for short-term illness as we showed in previous section in both these areas.

Table 3.17 Comparison of unmet needs for health care services for short-term illness

Variables		Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
Sex	Male	45 (52.9)	36 (40.4)	81 (46.6)	P = .098
	Female	42 (54.5)	31 (45.5)	73 (50.0)	P = .281
Social group	Socially disadvantaged	35 (48.6)	16 (38.0)	51 (43.3)	P = .276
	Others	52 (57.7)	51 (44.3)	103 (51.0)	P = .051
SLI group	High	36 (50.7)	45 (40.9)	81 (45.8)	P = .195
	Medium and Low	51 (56.0)	22 (46.8)	73 (51.4)	P = .302

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

But when we stratified unmet need for health care services by different groups, the proportion of those who had unmet need for health care services for short-term illness, although higher for project area as compared to the non-project area, was not statistically significant for any of the groups under consideration, viz. women, socially disadvantaged

groups and middle and low SLI groups (Table 3.17). Interestingly, the main sources of differences are between males in project and non-project areas and between "other" castes in these two areas.

b) Delivery related care

Prevalence of deliveries and delivery-related complications

Prevalence of deliveries was found to be comparable in both areas across all the groups. Despite this, in terms of prevalence of post-delivery complications, in the project area there was about four times higher prevalence (4.0% vs 1.1%, p=.01) in socially disadvantaged group and higher proportion (2.6% vs 1.0%) in medium or low SLI groups, as compared to non-project area. (Table 3.18).

Table 3.18 Comparison of prevalence of delivery and delivery related complication

Variables		Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
Prevalence of delivery					
Social group	Socially disadvantaged	41 (7.2)	21 (6.0)	62 (6.7)	P = .449
	Others	28 (2.9)	47 (4.8)	75 (3.8)	P = **.028**
SLI group	High	33 (4.8)	44 (4.7)	77 (4.7)	P = .945
	Medium or Low	36 (4.2)	24 (6.0)	60 (5.1)	P = .223
Prevalence of delivery related complication					
Social group	Socially disadvantaged	23 (4.0)	4 (1.1)	27 (2.9)	P = **.01**
	Others	12 (1.2)	14 (3.5)	26 (2.3)	P = .71
SLI group	High	13 (1.9)	14 (1.5)	27 (1.7)	P = .54
	Medium and Low	22 (2.6)	4 (1.0)	26 (1.8)	P = **.06**

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

Utilization of health care services

We found that a smaller proportion (48.7% vs 55.3%) and (47.2% vs 66.6%) of socially disadvantaged group and medium and low SLI group respectively sought health care services from outside for delivery care in project compared to non-project area, but the difference between groups in both areas was found to be not significant.

For post delivery complications, a smaller proportion in both social groups and in both SLI group sought health care from outside in project facility area than in non-project area. The difference was significant for medium or low SLI in project area (54.4% vs 100%, p=.01) (Table 3.19).

Table 3.19 Comparison of utilization of health care services for delivery and delivery related complications by social and SLI groups

Variables		Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
Institutional delivery					
Social group	Socially disadvantaged	20 (48.7)	13 (61.9)	33 (55.3)	P = .326
	Others	19 (67.8)	35 (74.4)	54 (71.1)	P = .537
SLI group	High	22 (66.6)	32 (72.7)	54 (69.6)	P = .565
	Medium and Low	17 (47.2)	16 (66.6)	33 (56.9)	P = .138
Use of health services for delivery-related complications					
Social group	Socially disadvantaged	13 (56.5)	3 (75.0)	16 (65.7)	P = .48
	Others	9 (75.0)	13 (92.9)	22 (83.9)	P = .306
SLI group	High	10 (76.9)	12 (85.7)	22 (81.3)	P = .648
	Medium and Low	12 (54.5)	4 (100)	16 (77.2)	P = **.013**

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

Type of Health Care Sought

When they went for institutional deliveries, in socially disadvantaged group significantly smaller proportion (63.2% vs 100%, p = .02) and (64.7% vs 100%, p = .01) in medium or

low SLI group went to public providers in project facility area in comparison to non-project area respectively. In the project-facility area, use of public facilities was even lower for post-delivery complications. A significantly smaller proportion (15.4% vs 66.7%) in socially disadvantaged group and in medium and low SLI group (16.0% vs 75.0%) sought health services for post delivery complications from public facilities in project than in non-project area (Table 3.20).

Table 3.20 Comparison of type of health care sought for delivery-related care by social and SLI groups

Variables			Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
Type of health care sought for delivery care						
Social group	Socially disadvantaged	Public	13 (65.0)	13 (100)	26 (78.8)	P =**.027** (FET)
		Private	7 (35.0)	0 (0.0)	7 (21.2)	
	Others	Public	12 (63.2)	30 (85.7)	42 (77.8)	P =.057
		Private	7 (36.8)	5 (14.3)	12 (22.2)	
SLI group	High	Public	14 (63.6)	27 (84.4)	41 (75.9)	P =.08
		Private	8 (36.4)	5 (15.6)	13 (24.1)	
	Medium and Low	Public	11 (64.7)	16 (100)	27 (81.8)	P =**.018** (FET)
		Private	6 (35.3)	0 (0.0)	6 (18.2)	
Type of health care sought for post delivery complications						
Social group	Socially disadvantaged	Public	2 (15.4)	2 (66.7)	4 (25.0)	P =.136 (FET)
		Private	11 (84.6)	1 (33.3)	12 (75.0)	
	Others	Public	0 (0.0)	9 (69.2)	9 (40.9)	P =**.002** (FET)
		Private	9 (100)	4 (30.8)	13 (59.1)	
SLI group	High	Public	0 (0.0)	8 (66.7)	8 (36.4)	P =**.002** (FET)
		Private	10 (100)	4 (33.3)	14 (63.6)	
	Medium and low	Public	2 (16.7)	3 (75.0)	5 (31.3)	P =.063 (FET)
		Private	10 (83.3)	1 (25.0)	11 (68.8)	

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

Significantly smaller proportion (0% vs 69.2%, p = .00) in "other" social group and (0% vs 66.7%, p = .00) in high SLI group seeking care for post delivery complication from public providers in project than non-project area. In these two group all (100%) seeking care from private providers and the difference was found to significant (Table 3.20).

d) Unmet need for delivery-related services

Unmet need for delivery-related services was significantly higher in middle and low SLI groups in the project area as compared to non-project area. Differences between the two areas were not significant among socially disadvantaged groups, but were statistically significant in the medium and low SLI groups. Once again, the major differences between project and non-project areas seem to arise from "other" – socially better-off castes and from the high SLI group. There was about five times more (50.0%) unmet need for delivery care in project area in comparison to non-project (10.6%) in "other" group while in more than the double (33.3%) in high SLI in the project area compared to non-project area (13.6 %) (Table 3.21).

Table 3.21 Comparison of unmet needs for delivery related services

Variables		Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
Social group	Socially disadvantaged	14 (34.1)	4 (19.0)	18 (26.5)	P = .215
	Others	14 (50.0)	5 (10.6)	19 (30.3)	P = **.000**
SLI group	High	11 (33.3)	6 (13.6)	17 (23.4)	P = **.039**
	Medium and Low	17 (47.2)	3 (12.5)	20 (29.8)	P = **.005**

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

c) Hospitalization

Prevalence

The prevalence of reported hospitalization was found to be high in all the groups in project area than in the non-project area except in medium or low SLI group (8.0% vs 9.0%). The differences were significant only for women (9.9% vs 6.4%, p = .01) and high SLI group (8.3% vs 4.7%, p = .00) (Table 3.22).

Table 3.22 Comparison of prevalence of hospitalization by sex, social and economic groups

Variables		Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
Sex	Male	52 (6.5)	39 (5.6)	91 (6.1)	P = .477
	Female	73 (9.9)	41 (6.4)	113 (8.1)	P = **.019**
Social group	Socially disadvantaged	58 (10.3)	25 (7.1)	83 (8.7)	P = .104
	Others	67 (6.9)	55 (5.6)	122 (6.2)	P = .239
SLI group	High	57 (8.3)	44 (4.7)	101 (6.5)	P = **.003**
	Medium and Low	68 (8.0)	36 (9.0)	104 (8.5)	P = .55

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

Type of Health Care Sought

Over all a higher proportion of people sought care from public providers in the population covered by non-project facility than the population covered by project facility for all the groups. The difference was significant only for socially disadvantaged group (56.1% vs 84.0%, p = .00) (Table 3.23).

Table 3.23 Comparison of type of Health Care Sought for hospitalization by sex, social and SLI groups

Variables			Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
Sex	Male	Public	24 (46.2)	23 (59.0)	47 (51.6)	P = .226
		Private	28 (53.8)	16 (41.0)	44 (48.4)	
	Female	Public	35 (47.9)	25 (61.0)	60 (52.6)	P = .181
		Private	38 (52.1)	16 (39.0)	54 (47.4)	
Social group	Socially disadvantaged	Public	25 (43.1)	21 (84.0)	46 (55.4)	P =**.001**
		Private	33 (56.9)	4 (16.0)	37 (44.6)	
	Others	Public	34 (50.7)	27 (49.1)	61 (50.0)	P = .856
		Private	33 (49.3)	28 (50.9)	61 (50.0)	
SLI group	High	Public	25 (43.9)	24 (54.5)	49 (48.5)	P = .287
		Private	32 (56.1)	20 (45.5)	52 (51.5)	
	Medium and low	Public	34 (50.0)	24 (66.7)	58 (55.8)	P = .104
		Private	34 (50.0)	12 (33.3)	46 (44.2)	

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

Incomplete Treatment

Significantly higher proportion among women (26.0% vs 9.7%, p=.03) and among medium and low SLI group (32.4% vs 13.9% p = .04) had not completed their treatment in area covered by project than the non-project area (Table 3.24).

Table 3.24 Comparison of incomplete Treatment for hospitalization by sex, social and SLI groups

Variables		Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
Sex	Male	15 (28.8)	8 (20.5)	23 (25.2)	P = .365
	Female	19 (26.0)	4 (9.7)	23 (20.1)	P = **.037**
Social group	Socially disadvantaged	19 (32.8)	4 (16.0)	23 (24.4)	P = .117
	Others	15 (22.4)	8 (14.5)	23 (18.4)	P = .270
SLI group	High	12 (12.1)	7 (15.9)	19 (14.0)	P = .511
	Medium and Low	22 (32.4)	5 (13.9)	27 (23.1)	P = **.041**

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

Unmet need for hospitalization

There were significantly higher proportion among women (21.9% vs 2.5%, p=.00) and among medium and low SLI group (25.0% vs 5.5% p = .01) with unmet need for health care services for hospitalization in area covered by project than the non-project area. In socially disadvantaged group where higher proportion (25.8% vs 8.0%) was having unmet need for health care services in area covered by project than the non-project area, the difference was not found to be statistically significant (Table 3.25).

Table 3.25 Comparison of unmet need for hospitalization by across groups

Variables		Project-BPHC (%)	Non Project-BPHC (%)	Total (%)	Chi- square p-value
Sex	Male	11 (21.1)	1 (2.5)	12 (11.8)	P = **.009**
	Female	16 (21.9)	3 (7.3)	19 (14.6)	P = **.044**
Social group	Socially disadvantaged	15 (25.8)	2 (8.0)	17 (16.9)	P = .06
	Others	12 (17.9)	2 (3.6)	14 (10.7)	P = **.01**
SLI group	High	10 (17.5)	2 (4.5)	12 (11.0)	P = **.045**
	Medium and Low	17 (25.0)	2 (5.5)	19 (15.2)	P = **.01**

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

3.2.5 Differentials within project area and non-project area by sex, social and SLI groups

We also examined within group differentials for utilization of any health care and utilization of public health care services for both project and non-project area. No gender, social group and SLI group differentials were found either in project or non-project area for utilization of any health care and utilization of public health services. The significant differentials were higher proportion of socially disadvantaged class used public health services as compared to "others" in non-project area (Table 3.26).

Table 3.26 Comparison of differentials within project area and non-project area by sex, social and SLI groups

	Utilization of any health care		**Utilization of public health care**	
	Project area	Non-project area	Project area	Non-project area
For short term illness				
Male vs Women	NS	NS	NS	NS
Socially disadvantaged vs Others	NS	NS	NS	NS
Medium and low SLI vs High	NS	NS	NS	NS
For delivery care				
Socially disadvantaged vs Others	NS	NS	NS	NS
Medium and low SLI vs High	NS	NS	NS	NS
For post delivery complications				
Socially disadvantaged vs Others	NS	NS	NS	NS
Medium and low SLI vs High	NS	NS	NS	NS
For Hospitalization				
Male vs Women	NA	NA	NS	NS
Socially disadvantaged vs Others	NA	NA	NS	S (p = .00)
Medium and low SLI vs High	NA	NA	NS	NS

Source: Primary survey, Jhunjhunu district, Rajasthan 2007
NS = Not significant, S = Significant NA = Not applicable

Chapter – 4

Managers perspectives

In – depth interviews were carried out with three program managers at different levels in the district to gather their insight and about the project. They were the chief medical and health officer (1), district project coordinator (1) and BPHC medical officer in charge of the project facility (1).Their responses were later transcribed. The transcripts were coded and analyzed. The results of the analysis are as follows.

4.1 About the project and aim of project

All the managers were of the opinion that the presence of the project was good and that it was a big achievement for the state. Two of them also thought that this project would help people by providing free drugs and more number of laboratory tests. One manager believed that the project would improve the productivity of the staff by providing various training.

About the aim of the project two of them were of the opinion that it would help poor people more because of increased provision of drugs and other services which would be provided free of cost to the poor. One person opined that aim of the project was to raise the health status of the public and to provide them better health services.

4.2 Aspects of project aim at socially disadvantaged group

Two of the health managers felt that members of the socially disadvantaged groups were the real beneficiaries of the project. They felt that this project was especially beneficial to them as now there are more services available for the poor at no cost.

4.3 Differences between project and non-project facilities

Two of them affirmed that the differences between the project and non-project facilities will be accentuated. In project facilities there were lot of new supplies like drugs, minor surgical equipments, furniture, X-ray machine and other laboratory tests.

"Daviyon se to kamre bhare pade hain." (Rooms are filled with medicines)

..... Block medical officer

All three managers believed that these increased resources would definitely improve the quality of services resulting in increased utilization of the facility by people.

4.4 If project was not there

All three respondent's opinion was that there would not be any effect if this project was not there. They also said that poor/BPL patients were getting all those services free of cost even before the project at these facilities. Now of course the quantity of these was increased.

"Pahle kam chijon mein kam chalna padta tha, jo facility abhi logon ko mil rahi hai woh nahin milti". (Previously we had to worked with shortage of supplies, people would not get what they are getting now)

..... Chief medical and health officer

"Rajya sarkar to pahle bhi kam kar rahi thi, yeh to sarkar ki taraf se additional help hai". (Government was working before the project, It's a additional help from government)

..... District project coordinator

4.5 Most effective strategy of project

All of them said that availability of more drugs and advancement of laboratory was the most effective strategy of the project. One of them added more and said that health care waste management was also one of the effective strategies. If people utilize these services it would raise the credibility of the public health care system and people would use more services. One of them also said that project also strengthened the Medicare relief society (MRS) and that it would improve the functioning of the facility in the future.

4.6 Strategies that are not effective and change needed in project

There were three different opinions for strategies which were not effective. One of them said that monitoring was very weak and it can affect the implementation of the project with adverse outcomes. One of them said that procurement of the drugs should be at the facility level. Third one opined that provision of supportive staff would be the key factor for the effective implementation of the project. Regarding changes in the present components of the project one person said that they should give some flexibility about the functioning of the project. Remaining two told that they needed change in procurement of drugs and provision of supportive staff along with provision of new services like, technician for X- ray and for laboratory.

"There are no guidelines for us; we have to follow the orders from above"

..... Chief medical and health officer

"Without technician laboratory equipments are useless for us as well for community"

..... Block medical officer

4.7 About workload and attitude of staff

All three respondents expressed the view that due to this project their workload increased drastically. One of them mentioned that it also left them with no time to attend to patients which left them very frustrated at times. Even other staff felt irritated sometimes due to this and complained that it affected their performance as well. According to one of them there were lots of trainings, and that it improved their knowledge but also wasted their time and took them away from the health facility. This made them vulnerable to public criticism and their credibility was going down, because their primary job was to see the patients.

"Behavior of the staff is changed especially towards poor patients"

..... District project coordinator

4.8 Performance of the project

According to two respondents the project was doing well but one of them also said that implementation was the key for the success of the project. Another one said that performance would also improve overtime. One person said that though, the project is doing well but at the same time there was dead investment in some infrastructure, which was not necessary at all.

"I do not know why they are investing huge amount in the building, this building is sufficient for this PHC"

..... Block medical officer

Chapter- 5

Discussion and Conclusions

5.1. Summary and discussion

This study sought to explore the equity effect of Rajasthan Health System Development Project (RHSDP) on utilization of any health care as well as utilization of public health services for short term illness, delivery-related care, and for any episode of hospitalization by comparing the utilization pattern by sex, social and economic groups. This chapter discusses our major findings and makes recommendations for improving the utilization of any health care and especially public health facilities.

Although the prevalence of short term illness, deliveries and hospitalization was not very different in the project and non-project areas, we found utilization of any health care as well as utilization of public health facilities to be significantly lower in the project area as compared to the non-project area for short term illnesses, delivery-related care and for hospitalization. Dependence on private providers may underlie the fact that a significantly higher proportion of those seeking health care could not complete their treatment because of inability to afford. Overall, unmet need for health care services was higher in the project area as compared to the non-project area for all three health conditions considered.

Turning now to the major question under consideration: utilization of health care services and reduction in levels of unmet need for health care services among disadvantaged groups (the poor, women and SC/ST population). Tables 5.1 and 5.2 summarize the findings in this regard.

Table 5.1 Summary of findings for short term illness and hospitalization women, medium and low SLI group and socially disadvantaged group

Characteristics	women	Medium and low SLI group	Socially disadvantaged group
For short term illness			
Prevalence	↑* In P	↑ In P	↑ In P
Utilization of health care	↑ In NP	↑ In NP	↑ In NP (p = .03)
Utilization of public health care	↑ In NP	↑ In NP(p =.01)	↑ In NP (p = .00)
Incomplete treatment	↑ In P (p=.00)	↑ In P	↑ In P (p= .01)
Unmet need for health care	↑ In P	↑ In P	↑ In P
For hospitalization			
Prevalence	↑ In P (p =.01)	↑ In NP	↑ In P
Utilization of public health care	↑ In NP	↑ In NP	↑ In NP (p = .00)
Incomplete treatment	↑ In P (p=.03)	↑ In P (p =.04)	↑ In P
Unmet need for health care	↑ In P (p=.03)	↑ In P (p=.01)	↑ In P

↑ Higher proportion **P** = Project area **NP** = Non-project area

Source: Primary survey, Jhunjhunu district, Rajasthan 2007

Table 5.2 Summary of findings for delivery related care in medium and low SLI and socially disadvantaged group

Characteristics	Medium and low SLI group	Socially disadvantaged group
For delivery care		
Prevalence	↑ In NP	↑ In P
Utilization of health care	↑ In NP	↑ In NP
Utilization of public health care	↑ In NP (p=.01)	↑ In NP(p =.02)
Unmet need for health care	↑ In P (p=.00)	↑ In P
For post delivery complication		
Prevalence	↑ In P	↑ In P(p =.01)
Utilization of health care	↑ In NP (p=.01)	↑ In NP
Utilization of public health care	↑ In NP	↑ In NP

↑ Higher proportion **P** = Project area **NP** = Non-project area

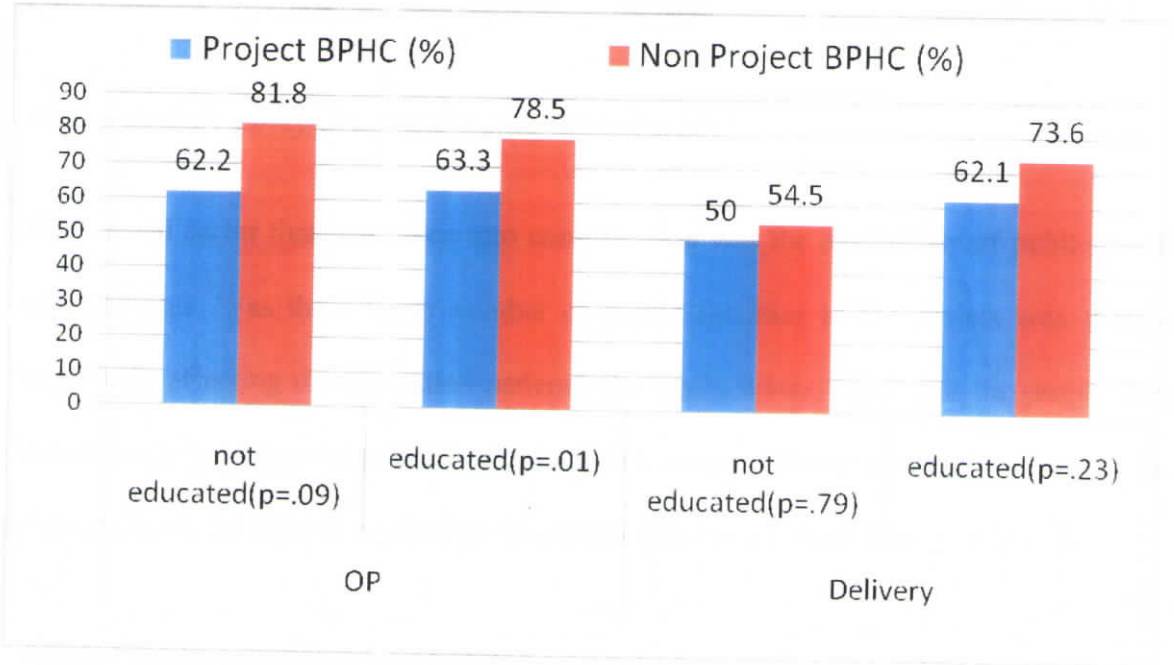
Source: Primary survey, Jhunjhunu district, Rajasthan 2007

Unmet need for hospitalization emerges as significantly higher for women and medium and low SLI groups in the project area as compared to their counterparts in the non-project areas. Unmet need for delivery-related care was also significantly higher in the

medium and low-SLI groups in the project area as compared to non-project area. In other words, even comparing only disadvantaged groups, we find that the non-project area is doing better than the project area.

This gives rise to the concern why people in project BPHC area are doing badly in terms of health care utilization and in using public health facilities. Many reasons were considered to provide an answer for this question. The most prominent one was whether this difference is due to the observed variation in the educational status between the project and non project areas. However, we found that education may not be the important contributing factor. While comparing, we found that even the "not educated" in the non-project area had a much higher rate of utilization of any health care (81.8%) as compared to the "not-educated" group in the project area (62.2%) (Figure 5.1).

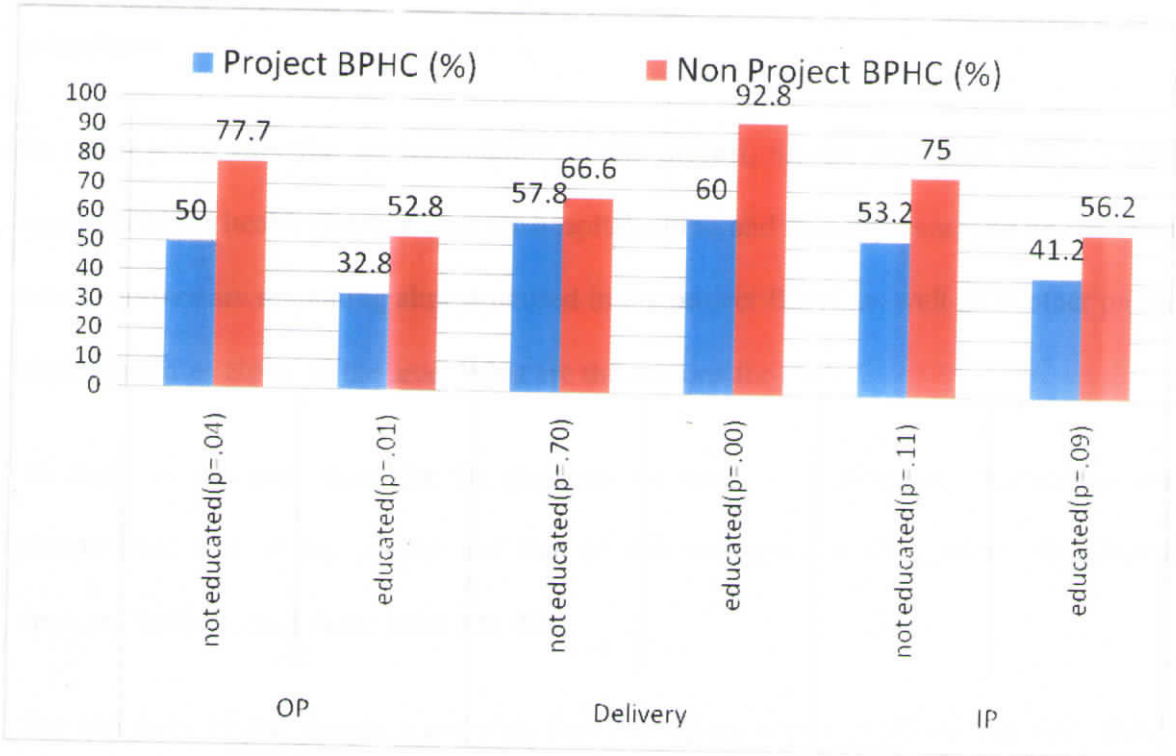
Figure 5.1 Comparison of utilization of any health care among not educated and educated groups in project and non-project area.



Source: Primary survey, Jhunjhunu district, Rajasthan 2007

Also, public service utilization for short term illness (50.0% vs. 77.7%) was found to be significantly smaller in the project area as compared to non-project area. (Figure 5.2)

Figure 5.2 Comparison of utilization of public health facilities among not educated and educated groups in project and non-project area.



Source: Primary survey, Jhunjhunu district, Rajasthan 2007

The second factor that was taken into consideration was the availability of public health care services. Was there lesser number of public facilities in the project area thereby negatively affecting the utilization pattern? But again it was found that the project area was actually having more public health facilities compared to the non project area. So the utilization should have been more in the project area (as we explained in chapter 3).

Another reason may be that the RHSDP selected a low-performing BPHC area in the first place. The project-BPHC had a much lower average number of patients per day as

compared to the non-project BPHC, even at the time that the project started, and there has been some improvement in the average number of outpatients (44%) per day. But the inpatient beds were not being used at all, and the number of deliveries in the facility, even after JSY, was very low. There was no data being maintained on utilization of services by SC/ST and BPL patients, but on the days of my observation, they formed hardly 15% of outpatients.

So three years after the implementation of the project, on the one hand, there is high unmet need for health care services for hospitalization and delivery care, and on the other hand, services are remaining almost unused in the project BPHC as well as in other public health facilities closer to the area. What are the reasons for this?

To find out the root cause for the problem we tried to analyze the situation in two perspectives that of the people and that of the managers of the project. Qualitative analysis findings shed some light into this.

The mindsets of the people were such that the illness was recognized but they didn't perceive any need for treatment for the same. [44] Majority of them thought that home treatment is enough for such illnesses. One of the major components of the project was to improve the awareness, demand and utilization of the public health care services by the weaker sections of the society. They aimed at achieving this target by improving the quality of services offered at one hand and through increasing demand among the disadvantaged sections on the other hand. But even after three years of implementation of the project it is found that the project has achieved neither of these aims. One of the reasons for this failure in creating demand could be the non-affordability of these services.

The reasons for the non utilization of the public services were many. Majority of the patients cited poor quality of services (bad behavior of the doctor, non availability of the doctor and emergency services)[45] and high cost of treatment or service as reasons for this non utilization. We think that cost and perception of the quality of care are two major factors responsible for utilization of health services.

This should be linked with the views of the managers and health care providers. The doctor after the implementation of the project was given the additional responsibility to manage the activities of the project. These included attending meetings, training of PHC staff under him, and reporting of different vertical programs. With these additional responsibilities the doctor was not available for the patients most of the time. Inpatient services and emergency services were also likely to be affected under these circumstances. The project should have increased the number of medical officer posts to counter these problems, but this was not done.

Drugs were mostly bought from outside by the patients and although the laboratory equipments were present most of the procedures were done outside as there was no lab technician in the project facility. These gave the impression to patients that even though they used public facility and paid a user fee they still have to spend money in pharmacies and private laboratories. This could have an implication on the choice of type of provider as people would choose private facility where the perceived quality is higher, where services including emergency are available all the time when they are anyway paying for these services.[44, 45]

Another interesting finding was regarding the drugs supplied from the centre. People complained about the non availability of medicines even when there were a good supply

of drugs, in fact drugs and supplies were lying all around the project BPHC in unopened cartons, which could mean an excess of supply over usage. The answer to this paradox might be that the perceived quality of the drugs from the health facility was poor. People were feeling that the same drugs were being supplied for every disease. The health staff were not motivated enough to explain about the drugs to the patients. Even the people who initialized treatment were discontinuing due to non affordability of services as well as lack of relief from the treatment.

The problem seems to be in the implementation of the project as explained by one of the managers. There is no flexibility in the implementation of the project and there is a lack of decentralization of decision making power about what is needed and what is not. For example there is huge investment in the infrastructure while basic needs like supportive staffs were not met with. They were trying to improve the quality of services and thereby utilization of the facilities but these efforts was incomplete without the provision of basic inputs. District managers cannot take decisions regarding appointment of extra supportive staff or doctors in the facility area. They cannot even redirect the drugs that are available in excess from one facility to another where there is a real need.

So, we can see that the factors responsible for high cost and poor quality care as we explained earlier may be due to poor financial and human resources' policies and management.

5.2 Conclusion

The project BPHC was located in a poorly performing area, with low utilization of health care services by the local population. After the implementation of the project, the BPHC had improved its facilities and registered a small increase in outpatients per month.

However, despite huge investments, the project seems to have made limited progress in improving utilization of health care services, especially among weaker sections of the society, unmet need for health care services among whom is substantial. No special efforts are seen to be made to increase demand for public health services in the project area. Although drugs and supplies are available in plenty, users have no confidence in the quality of care and are seeking health care from private providers or not using health care at all. The exemption of BPL patients from user fees does not seem to have increased the number of users from this group.

Overall, it seems unfortunate that not enough efforts are made to reach out to the weaker sections, especially for inpatient and delivery care, and to improve the morale and behavior towards patients of the health providers. Small problems like need for additional medical officer and filling of lab technician post, and of the medical officer not prescribing drugs available at the facility feed into an already existing lack of confidence among people about public health facilities. The contrast with the non-project BPHC, where the presence of two medical officers and the commitment to patient care shown by health providers made a big difference to utilization of services needs to be kept in mind. The project appears to be focusing more on infrastructure and facilities and less on improving service delivery on the ground by putting in place appropriate monitoring and assessment mechanisms and incentives for increasing utilization of services and for reaching out to weaker sections of the population.

5.3. Recommendations

- Prioritize areas for investment. The investment should be based on the real needs of the facilities rather than following a rigid protocol.

- Decentralize planning process and decision making so that the district managers have more power to take decisions regarding the allocation of resources.

- Provide supportive staff (lab technicians, accountants) wherever required before/along side investing in equipments and technology.

- Sensitize the health care providers regarding the real needs of the people.

- Ensure the availability of health care staff throughout the working hours whether by reducing the number of meetings or by providing additional staff to the facility.

- Enforce strict quality control for services provided in public facilities through effective monitoring and supervision, incentives and disincentives.

- Cost of care including in purchasing drugs and supplies needs to be reviewed and investment should be in subsidizing health care rather than only in more infrastructure.

- There is need to understand user's perspectives, and invest in improving confidence of people in using public health facilities.

5.4. Strengths and limitations of the Study

5.4.1. Strengths

- A combination of quantitative and qualitative data collection methods was employed in this study. From the qualitative perspective, the use of combined methods improved the credibility of the findings through triangulation of data collection methods.

- Recall bias was reduced to the lowest possible level by taking two weeks recall period for short term illness, there should not be any question of recall bias for delivery and hospitalization in last one year.
- A single researcher did all the data collection and interviews for the quantitative and qualitative components to reduce inter-observer bias.
- The health seeking behavior and utilization of health facilities were asked for three disease conditions namely; short term illness, delivery care, post delivery care and hospitalization which reveal overall pattern of utilization of the area.

5.4.2. Limitations

We have focused on only one facility for data collection, the generalizability of the study is limited and this is only an illustrative case study.

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Annexure

Table1 Facility check- list

S.N.	Name		Project – BPHC		Non-Project - BPHC	
			2003	2006	2003	2006
1	No. of post vacant against sanctioned Post	Doctors	Nil	Nil	Nil	Nil
		Others staff	Nil	1 (LT) 1 (UDC) 1 (BHS) 1 (MI)	2 (BHS)	1 (MN II) 1 (UDC) 2 (BHS) 1 (MI)
2	No. of post sanctioned for Doctors		1	1	2	2
3	No. of post sanctioned for Nursing staff		2	2	3	3
4	IP facility (yes/No)		Yes	Yes	Yes	Yes
5	No. of beds		8	30 (+273%)	6	6
6	Labour room (Yes / No)		Yes	Yes	Yes	Yes
7	Minor O.T. (Yes/No)		Yes	Yes	No	No
8	X- ray facility (Yes / No)		No	No	No	No
9	Total no. of IP (/ Month)		Record not available	3.75 (BOR=1.25%)	43	48.5 (+12.7%) (BOR=80%)
10	Total no. of OP (/ Month)		412	595 (+44%)	1012	970.7 (-3.0%)
11	Lab. facility (Total No. of Test)		1 (Malaria)	2 (BS, Malaria)	5	5 (malaria,AFB Hb,Urine,ESR)
12	Total deliveries (Per Month)	Before JSY	Nil	Nil	12.7	11.9
		After JSY	Nil	8	Nil	20.5 (+74.7%)
13	User Fee (Yes/ No)		No	Yes	No	Yes

Informed consent form

Sir/Madam,

I Dr. Abhay Bohara, doing Master of Public Health (MPH) from Achuta Menon Center for Health Science Studies, Sree Chitra Tirunal Institute for Medical Sciences and Technology Trivandrum, Kerala- 695011. As part of requirement of my course, I am doing a study on ***"Equity effect of Rajasthan Health System Development Project on Utilization of health services and untreated morbidity: A case study from Rajasthan"***. I would like to ask you some questions about you and your family members experiences with illness and the use of health services, which will take 30- 45 minutes time. This is a routine procedure to obtain informed consent from the participant in a study.

I request you to participate in this interview session that will enable me to understand about when and what type of services people use when they get ill.

There is no direct benefit for you and about other 400 people which are taking part in this study from the study, but using your collective information the community may benefit as a whole. The information given by you will not be disclosed to anyone under any circumstances any where in the public at any time and kept confidential and will be used for research purposes only. Participation in this study is purely of voluntary nature. You have the right to refuse any question to answer or the interview as a whole. You are free to withdraw from the interview at any time if you want.

If you have any queries or doubts you should feel free to clarify those. I will try my level best to answer to any of your queries right now or in future as well. My contact number is +91-9446979826. In case you need any clarifications about my credentials or the study you can also contact the head of the institution, Dr.K.R.Thankappan , Professor AMCHSS, SCTIMST, Trivandrum-695011,or the Member-Secretary of the IEC at SCTIMST, Dr.Anoopkumar Thekkuveettil.

Are you willing to participate in this study?

Yes: **No:**

As part of the requirement, I need your signature/thumb impression which indicates your willingness to participate. Will you be able to sign below?

Signature of the participant:

Thumb impression

If you are unwilling to sign/give thumb impression, but willing to be interviewed, Can you arrange one witness that can sing on behalf of you?

Signature of witness

Signature of the interviewer:

Date: **Time:**

Place:

Tool-1: Interview schedule

Date:

BPHC: (Interventional BPHC-1, non-interventional BPHC-2)

Name of the village: ----------

Name of the mohlla/ Dhani/ Ward: ----------

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1. Serial No. of House hold:

2. Caste: 1- SC 2-ST 3-OBC 4-General 5-Others

3. Characteristics of Household Members

3.1	Total members in the Household
3.2	Education status of HH head (code)
3.3	Main occupation of the HH head (code)
3.4	If in 3.3 other than 3, Is there any member in the HH who is a Govt. employee/regular salaried employed? (yes-1; no-2)

Characteristics of Household Members which were falling sick in last one year (including deliveries).

Srl. No.	Name of the member (starts from the HH head)	Sex (Male-1 Female-2)	Age (completed years)	Marital status (code)		
1						
2						
3						
4						
5						
6						

Codes Marital status: 1-never married; 2- currently married; 3-divorced; 4- widowed;; 5-separated
Education- 1- no education; 2-Up to middle; 3- Up to graduation; 4- post graduation; 5-professional; 6- others
Occupation: 1-Farmer; 2-Trader; 3- Govt.employee; 4-Private employee; 5-Daily wage labourer;6-Housewife; 7- Student; 8- Unemployed; 9- Others

4. Standard of living index:

Facility	Types	Value	Score
House	Pucca	4	
	Semi pucca	2	
	Kutchha	0	
Toilet facility	Own flush toilet	4	
	Public/shared flush toilet/own pit toilet	2	
	Shared/public pit toilet	1	
	No facility	0	
Source of lighting	Electricity	2	
	Kerosene, gas, oil	1	
	Other	0	
Main fuel for cooking	Electricity/LPG/biogas	2	
	Coal/charcoal/kerosene	1	
	Other	0	
Drinking water source	Pipe, hand pump, well in residence/yard/plot	2	
	Public tap/hand pump/well	1	
	Other	0	
Separate room for cooking	Yes	1	
	No	0	
House ownership	Yes	2	
	No	0	
Agricultural land ownership	> 5 acres	4	
	2-4.9 acres	3	
	<2 acres/acreage not known	2	
	No agricultural land	0	
Irrigated land ownership	Some irrigated land	2	
	No irrigated land	0	
Livestock ownership	Cattle	4	
	Poultry	2	
	No	0	
Ownership of durable goods	Car	4	
	Tractor	4	
	Moped/scooter/motorcycle	3	
	Telephone	3	
	Refrigerator	3	
	Color TV	3	
	Bicycle	2	
	Electric fan	2	
	Radio/transistor	2	
	Sewing machine	2	
	Black and White TV	2	
	Water pump	2	
	Bullock cart	2	
	Thresher	2	
	Mattress	1	
	Pressure cooker	1	
	Chair	1	
	Cot/bed	1	
	Table	1	
	Clock/watch	1	

Total (0-14 Low, 15-24 Medium, 25-67 High)	

Source: Adapted from Ashish et. al. 2006 and NFHS-2

4.1 SLI: [ ] 1-High; 2-Medium; 3-Low;

[5]Now I will ask, few questions about your or any of your family member's health during the past 14 days. During that period, did you or any of your family member stay in bed at all because of illness or injury, including any admission as a patient in a hospital less then 24 hours?(Yes-1;No-2)

if 1, continue; if 2, Go to section [6]. (Mark all that apply in serial manner)

5.1. No. of cases	1	2	3	4	5
5.2. srl. no. of sick cases					
5.3. nature of ailment (code in a seprate sheet in last page)					
5.4. What action was taken? 1. Did nothing **2.** Home remedies **3.** Self-medication with drugs **4.**Sought help from health facility or provider **5.** Others (specify)					
5.5. If 1, 2, 3 in 5.4: Reason for not seeking external health care 1. Treatment not necessary, illness not serious 2. Home remedies sufficient 3.medical treatment not appropriate for the illness 4. Financial constraints 5.No time 6. Family did not allow 7.health facility far away 8. Poor quality services 9. Others (specify)					
5.6. If 4 in 5.4: If seeking external health care, type of provider 1. Indigenous practitioner (Aruveda, homeopathy), 2.Religious healer, 3. public facility, 4. Govt. hospital, 5. private hospital, 6. Pvt. consultation with govt. doctor, 7. Pvt. Doctor (qualified), 8. Pvt. Doctor (unqualified), 9. paramedical staff, 10. pharmacy shop, 11. Others (specify).....					
5.7. Reason for going to provider 1. Faith & belief **2.** Previous treatment not successful **3.**Proximity 4.Cheap 5. Provider attitude 6. Provider's availability 7. Short waiting time 8. Quality is good, 9. Others (specify).....					
5.8. Reason for not going to govt. facility 1. Did not know about it **2.**Lack of drugs **3.** Too far **4.** Poor provider attitude **5.** Unaffordable cost **6.** Long waiting time **7.** Lack of doctor 8. Poor quality services 9. Others (specify).....					
5.9. Whether you completed the treatment? Yes-1; no-2					
5.0 Reason for not completed the treatment 1- Cost unaffordable, 2- Not effective 3- Fear of side effects 4- Revisit difficult (provider too far) 5- Others (specify)...					

[6] Now I will ask you some questions about any delivery in last one year in your family. Is there was any delevery in last one year in your family (Yes-1; No-2) If 1 , continue, If 2, go to section [7].(Mark all that apply)

6.1	**Total no. of deliveries**	1	2	3		
6.2	**Serial no. of mother delivered**					
6.3	**Place of delivery 1.** Home **2.** In sub-center **3.**in government facility **4.** In private facility **5.** Others					
6.4	**If 1 in 6.3: If home delivery , assisted by whom** 1.Skilled birth attendant (Doctor, ANM) 2. Non skilled (TBA, Local Dai) 3.Others (specify)……..					
6.5	**If 2,3,4 in 6.3:Reason for choosing provider 1.** Faith & belief **2.** Proximity **3.** Cheap **4.** Provider attitude **5.** Provider's availability **6.** Short waiting					
6.6	**Reason for not choosing govt. facility 1.** Did not know about it **2.**Not available **3.** Too far **4.** Poor provider attitude **5.** Unaffordable cost **6.** Long waiting time **7.** Poor quality services **8.** Others					
6.7	**Complication if, any** (yes-1; No-2),if No go to section [7]					
6.8	**If yes, what action taken 1.**Did nothing **2.** Home remedies **3.** Self-medication with drugs **4.** Seek help from external health care **5.** Others (specify)….					
6.9	**If 1, 2, 3 in 7.8: Reason for not seeking external health care 1.** Treatment not necessary, illness not serious 2. Home remedies sufficient 3.medical treatment not appropriate for the illness 4. Financial constraints 5.No time 6. Family did not allow					
6.10	**If 4 in 7.8: If seeking external health care, type of provider** 1.indigenous practitioner, 2. Traditional healer, 3. public facility, 4. Govt. hospital, 5. private hospital, 6. Pvt. consultation with govt. doctor, 7. Pvt. Doctor (qualified), 8. Pvt. Doctor (unqualified), 9. paramedical staff, 10. pharmacy shop, 11. Others					

[7] Now I will ask you few questions on any illness affecting you or any member in your family, which require hospitalization for more than one day(IP) in last 1 year. During that period, did you or any of your family member required admission as a patient in a hospital more than one day. (Yes-1; No-2) If 1,continue; If 2, leave blank (Mark all that apply)

7.1	**No. of cases**	1	2	3	4	5
7.2	**Srl. no. of the case**					
7.3	**Nature of ailment** (code in a seprate sheet in last page)					

7.4	**Type of Hospital 1** Govt. hospital (PHC, CHC, DH) 2. private hospital, 3. Pvt. consultation with govt. doctor, 4. Pvt. Doctor (qualified), 5. Pvt. Doctor (unqualified), 6. Others (specify).....					
7.5	**Reason for going to Hospital 1.** Faith & belief **2.** Proximity 3. Cheap 4. Provider attitude 5. Provider's availability 6. Short waiting time 7. Quality is good, 8.Others (specify).....					
7.6	**Reason for not going to govt. facility: 1.** Did not know about it **2.**Lack of drugs **3.** Too far **4.** Poor provider attitude **5.** Unaffordable cost **6.** Long waiting time **7.** Lack of doctor 8. Poor quality services 9. Not available 10.Others (specify).....					
7.7	**Did you complete the treatment (yes-1; no-2)**					
7.8	**Reason for not completed the treatment 1-** Cost unaffordable, **2-** Not effective **3-** Fear of side effects **4-** Revisit difficult (provider too far) **5-** patients gets cured **6-** Others (specify)...					
7.9 Details of medical services received in govt. facility (1-not received/refer to higher center; 2-received free, 3-partly free, 4-on payment, 5-did not use the govt. facility)						
	1. Minor surgery					
	2. Consultation for minor illness					
	3. Drugs					
	4.X-ray/ECG					
	5.Other lab tests (routine urine/blood/stool test)					
7.10	**whether treatment availed before hospitalisation** (yes - 1, no - 2) If No, go to 7.14; if yes, continue					
7.11	**Type of provider 1.**indigenous practitioner, **2.** Religious healer, **3.** public facility, 4. Govt. hospital, 5. private hospital, 6. Pvt. consultation with govt. doctor, 7. Pvt. Doctor (qualified), 8. Pvt. Doctor (unqualified), 9. paramedical staff, 10. pharmacy shop, 11. Others					
7.12	**whether treatment continued after discharge from hospital** (yes - 1, no - 2) If No, leave blank; if yes, continue					
7.13	**Type of provider 1.**indigenous practitioner, **2.** Traditional healer, **3.** public facility, 4. Govt. hospital, 5. private hospital, 6. Pvt. consultation with govt. doctor, 7. Pvt. Doctor (qualified), 8. Pvt. Doctor (unqualified), 9. paramedical staff, 10. pharmacy shop, 11. Others (specify).....					
7.14	**Reason for changing the provider(If any): 1.** Not satisfied by Quality of Care 2. Services Unaffordable 3. Far from home 4. Provider refers to other facility 5. Others (specify).....					
7.15	**Reason for discontinue the treatment(If any): 1-** Cost unaffordable, 2- Not effective 3- Fear of side effects 4- Revisit difficult (provider too far) 5- patients gets cured 6- Others (specify).....					

Tool No.-2: Guidelines for In-depth interview of

CMHO, DPC, MO I/C BPHC

Informed consent form

I am Abhay Bohara, Master of Public Health (MPH) scholar in Sree Chitra Tirunal Institute for Medical Sciences and Technology, doing a study on ***"Equity effect of Rajasthan Health System Development Project on Utilization of health services and untreated morbidity : A case study from Rajasthan "***. This is a part of my course requirement. I would like to ask you some questions about your experiences and knowledge about the project and activities related to the project. This will take 30- 45 minutes time. There is no direct benefit for you from the study, but using your information the community may benefit as a whole. The information given by you will be kept confidential and will be used for research purposes only. The information will not be disclosed to anyone under any circumstances. Participation in this study is purely of voluntary nature. You have the right to refuse any question to answer or the interview as a whole. You are free to withdraw from the interview at any time if you want.

If you have any queries or doubts you should feel free to clarify those. I will try my level best to answer to any of your queries right now or in future as well. My contact number is +91-9446979826. In case you need any clarifications about my credentials or the study you can also contact the head of the institution, Dr.K.R.Thankappan , Professor AMCHSS, SCTIMST, Trivandrum-695011,or the Member-Secretary of the IEC at SCTIMST, Dr.Anoopkumar Thekkuveettil.

Are you willing to participate in this study?

Yes: **No:**

Sir, as per requirement I have to analyze the information given by you. If I write all the information it will take time so, to save your time as well as for my convenience if you permit me can I record the remarks made by you about the project in a tape record? Because later on when I will transcribe it into text I can recollect all the information given by you and it will help me during analysis. Again I am assuring you sir, the information given by you will not be disclosed to any one in any circumstances and I destroy the

recording with in two or three days. Even I will not use your name or designation in my study any where.

Are you willing to record the conversation in a tape record?

Yes: **No:**

Signature of the participant Signature of the investigator

Date:

Place:

Basic facts: Age, Sex, total duration of service in years, duration of services at this post, any post graduation degree,

Guidelines for In-depth interview

Knowledge about the project:

- What do you know about the project?
- What does this project aim to achieve?
- Are there any aspects of the project aimed specifically at the poor? If yes, what are they?
- Are there any aspects of the project aimed specifically at SC/ST population? If yes, what are they?
- What differences this project going to make between institutions where this project is implemented and where not?
- What happened if this project was not there?
- Which strategy in the project do you think most effective?
- Which strategy in the project do you think not effective and why?
- Do you advise any change in the project? What?
- How this projects affecting your workload?
- How this project affecting the attitude of health workers including doctors?
- How would you rate the overall performance of this project?
- If this project is doing well, then do you have any strategy for non-project facilities?
- If yes, what?
- If no, how will you manage the performance of non-project facilities?
- Do you want this project be implemented in all the facilities?

Tool No. – 3: Facility Check list-I

10.1 Facility checklist:

S.N.	Name of items		Project - BPHC		Non-Project - BPHC	
			2003	2006	2003	2006
1	No. of post vacant against sanctioned Post	Doctors				
		Others staff				
2	IP facility (yes/No)					
3	No. of beds					
4	Labour room (Yes / No)					
5	Minor O.T. (Yes/No)					
6	X- ray facility (Yes / No)					
7	Total no. of IP (/ Month)					
8	Total no. of OP (./ Month)					
9	Lab. facility (Total No. of Test)					
10	Total deliveries (Per Month)	Before JSS				
		After JSS				
11	User Fee (Yes/ No)					

Facility Checklist –II

S.No.	Check list		Project – BPHC	Non- Project - BPHC
1	No. of Patients (in a day)	Total		
		Male		
		Female		
2	SC/ ST Patients out of total Patient	Total		
		Male		
		Female		
3	BPL Patients out of Total Patients	Total		
		Male		
		Female		