

A COMPARATIVE STUDY ASSESSING THE QUALITY OF PUBLIC HEALTH FACILITIES AND HEALTH PRACTICES OF THE HOUSEHOLDS ACROSS TWO INDIAN VILLAGES

Akansha Batra, Arijit Sen, Naveen Sunder, Nirangkush Ganguly and Priyanka Agarwala

ABSTRACT

For the Krishna Raj Summer Programme 2009, we attempted to do a comparative study regarding the quality of public health facilities and health practices of the households across two Indian villages. In a rural setting, especially that of a developing nation like India well functioning public health facilities at every level from the district hospitals to the anganwadis and their efficient utilisation is imperative to the wellness of the households. Also, practices like maintaining proper animal shed, using and cleaning toilets in a regular basis, usage of iodized salt, usage of chimney while cooking in chullah and filtering drinking water also play a big part in the health of the villagers, and even in the existence of a well functioning public health system- can be the root of a lot of health problems if not taken care of suitably. We chose two villages Karbari and Guri, respectively in the districts of Dehradun (Uttarakhand) and Badwani (Madhya Pradesh) based on their disparate district rankings as gauged by Ram and Chander Sekhar (2006) to study whether differences in these parameters are the causes of the disparity. We adopted a two-way approach. Our main fieldwork consisted of interviewing a sample of households (85 in both villages) regarding the two issues under considerations with the aid of a questionnaire carefully formulated after studying the questionnaires of leading health surveys undertaken in India. Some of the questions asked to determine average quality of healthcare in public facilities were regarding doctor and staff behaviour with the patient, waiting time, provision of medicines, cost incurred, incidence of bribes, discrimination due to specific socio-economic status etc. The second method was to visit the various public and private health facilities used by the households and gather information regarding infrastructure and state of affairs with respect to treatment of patients through observation and interviewing the personnel in charge. We came to the conclusion that both the villages have a number of different problems regarding the public health facilities and their personal health practices. The result was both the villages being moderately pleased with the health facilities offered to them, although for entirely different reasons as their needs and expectations from the facilities were different. One could argue that by sheer quality, the health facilities offered to the villagers in Dehradun outranked their counterpart in Badwani, but while the villagers of Karbari had to face long waiting hours in public facilities which meant they rather preferred going to private facilities, the households of Guri had the problem of sub-standard facilities and facilities with inflexible timings. On the health practices front, both the villages had positives and negatives over the other and as a whole it can't be said that the combination of two factors in one village completely overwhelmed the other. Examples include residents of Guri fairing better in practices like maintaining animal shed, treatment of drinking water and treatment of animals, while those in Karbari fairing better in usage of toilets, cooking conditions and protection against mosquitoes. Both villages seemed to be equally aware of health insurance benefits (which was a surprise considering the superior wealth and education status of Karbari) and equally adept in usage of iodized salt.

INTRODUCTION

We are very pleased to present the findings of the economic survey undertaken by us under the aegis of the Krishna Raj Summer Programme to assess the quality of health and public provisions for the same in the villages of Karbari (Dehradun, Uttarakhand) and Guri (Badwani, Madhya Pradesh). We thank the organizers of the Krishna Raj Summer Programme and The Centre of Development Economics, Delhi School of Economics for giving us the opportunity and support to organize this effort. We are also very thankful to the relevant authorities and the general populace in Uttarakhand and Madhya Pradesh, who co-operated with us by taking out valuable time out of their daily schedule and providing us with useful support and information.

Our goal was to assess the quality of health and public provisions for the same in two villages of India, compare the findings across the two villages and provide some input which may result in the betterment of the existing quality. We deliberately chose two villages which belong in districts with contrasting qualities of healthcare in general in order to bring out the exact reasons behind the disparity and the differences in households in regards to their usage of healthcare facilities, education levels and maintenance good sanitary conditions, all of which are crucial for good overall health standards of any village. We collected data through surveys in households and public health facilities, interviews with health officials and village authorities. The household head, village head, health officials and a number of health workers (e.g. Anganwadi worker) were administered questionnaires for the purpose. The questionnaires were created on the mix of information obtained from similarly themed National Family Health Survey and WHO World Health Survey amongst others. They looked at various factors like demographic composition, animal hygiene, basic measures of sanitation undertaken, education levels, major diseases suffered, experience in public health facilities with regards to doctors, medicines, overall facility experience etc.

From the data obtained we tried to see a number of factors which might be affecting the health standards of the village and their relationship with other factors. For example, we generally found that the households following proper immunization procedures and hospital deliveries are likely to be in better health conditions but the more educated households are more likely to follow these procedures in the first place. In individual analysis we found that the village of Karbari, which is highly educated, follows better health practices in general and rarely have the need to go to hospitals. When they do however, they prefer the private facilities which are run more efficiently. Intra village, we find that the better off Gorkha Karbari are also healthier and more aware of good healthcare practices than the economically weaker Garwali Karbari. The village of Guri on the other hand was composed of very homogeneous households evident by their almost similar sanitary and healthcare practices. Compared to Karbari, they used the public facilities often, although in absolute terms the quality of public healthcare was of no match to that we found in Karbari. However, it seemed the public health facilities serving Karbari often suffered from the problem of patient overload. That being said, the healthcare facilities serving both villages got mediocre reviews from the households.

The rest of the paper is organized as follows. First we specify the background on which the survey was undertaken, including the factors that determine health status and their importance along with a review of the existing literature in the field. Then we discuss our survey procedure, chiefly questionnaire formation and post-fieldwork analysis in some detail. The main part of our report, a village-by-village account of our findings along with a comparative study follows. We close the report with a set of conclusions drawn from our survey and suggesting some remedial measures. As appendix, we have included all the data we obtained from our survey quantified in the form of tables and diagrams. Finally, there is a list of references from which the report and various parts of our survey draws information from.

BACKGROUND

In this survey we have mainly considered the sanitary conditions of the households and the access, utilization and the quality of health care facilities available to the villagers (whether public or private) as determinants of health standards of the villages under study. Sanitation is considered important because a lot of diseases arises simply from poor hygienic conditions and are readily preventable by the households itself. They include waterborne diseases (e.g. cholera), vector-borne diseases (e.g. malaria), food-related diseases (e.g. from eating improperly maintained left-over food) and even problems which can arise due to not having a proper kitchen or toilet facilities (e.g. ingestion of smoke and contamination of water by excretory products). If the villagers do their bit in maintaining relatively clean hygienic conditions then it is found that a lot of common ailments do not even occur.

That being said- it is of utmost importance to have functioning public health facilities which treat a reasonably common number of diseases accessible to the villagers. The reason is the villagers are often poor to afford private treatment and due to their daily wage earning type of work, they cannot often find sufficient time off to travel long distances for the appropriate public health facilities. Also in the village areas, a problem is the lack of well qualified private practitioners, most of them not having MBBS or any recognized degrees. This is also another reason why good public facilities are a requirement for the medical well-being of any village.

There are a number of types of public health facilities that usually should serve a typical Indian village. They are 1 The District Hospital, 2. The Community Health Centre, 3. The Primary Health Centre, 4. Sub-Centre amongst others. Also important are Anganwadi centres which provide healthcare, nutrition and education for young children and expecting mothers. Ideally speaking, Anganwadis and the PHC's should be readily accessible to all of the villages/areas in a village it tries to cover- as they are equipped (theoretically) to cover the basic health problems a village might face as well as things like child delivery and blood tests. Thus it is important to a) make sure these health centres have adequate facilities and b) the villagers are aware of the locations and facilities offered by these health centres.

There have already been several literature dedicated to the issues we are to discuss. **Mavalankar, Satia and Sharma** (1992,1993) highlighted the importance of Micro Level Planning for PHC's and also pointed out to the reasons of nonuse of public health facilities (with ways of rectification) through an intensive survey in West India. **Das Gupta** (2005) provided a comprehensive look on the state of public health in India, underlying the reasons for its well publicized decline and suggesting new policy tools to restore the level of public health system. Important empirical was done in the field by **Lokshin and Ravallion** (2006), who used a sophisticated estimation method to explain a part of "self-assessed" health in terms of objective health indicators and capturing broader dimensions of data on economic welfare, and **Ram and Chander Sekhar** (2006) who ranked the districts of India using health indicators such as number of children, birth order, sanitation condition and emergency healthcare indicators. **Chakrabarti and Chaudhuri** (2007) concluded after studies in the northeastern states that "availability of a rural health facility in the village and other community level programme propagates the utilization of health care." On the grounds of sanitation, **Ramani** (2008) conducted an extensive study on toilets in India and the role of various organizations to mitigate the poor conditions of toilet distribution in the country. Negative externality due to groundwater pollution was investigated by **Varuni, Chandrakanth, Nagraj and Srikanthmurthy** (2006).

SURVEY PROCEDURE

For the purpose of our academic exercise, we administered separate questionnaires to **i. Households ii. Village head iii. ANM iv. ASHA (wherever applicable) v. Doctors in public and private health facilities**. We covered 85 households for each village and felt that we had an appropriate sample of the entire village in both the cases. We chose this technique because we thought that increasing the sample size would be a futile exercise if it doesn't contribute to the understanding of the village as a whole. This process was different for the two villages- In Karbari there was a clear segregation of the relatively well-off Gorkha households and the poorer Garwali households, so we had to keep in mind the fact that the households covered should give us an understanding of both these communities as well as the village as a whole. For Guri, the households were nearly uniform in economic structure, but the residents used the health facilities more actively than their counterparts in Karbari so they had more and varied stories to tell.

Three things must be mentioned here before we proceed to the next section. Firstly, the exact nature of questionnaires, Secondly, the rationale of choosing the two villages that we have chosen and Lastly, a brief overview of our analysis procedure. We shall tackle these issues one by one from the following paragraph.

Our prime importance was given to the **village household questionnaire** because the bulk of information we needed to obtain could be only be from each individual households. Each village household questionnaire comprised of three distinct parts. **Questions 1 to 13** covered the general nature of household (number of residents,

educational level, major diseases in past one year, caste, wealth status, health insurance status, agricultural holdings, animal ownership etc.). **Questions 14 to 35** covered the state of sanitation of the household concerned (animal sanitation, proper treatment of drinking water and leftover food, protection from flies and mosquitoes, nature of cooking and toilet facilities etc.). **Questions 36 to 50** covered the primary topic under consideration- utilization of health facilities (with an emphasis on public) by the household and their own experiences regarding them. The bulk of the data regarding formation of this questionnaire was obtained from the NFHS Household Questionnaires, with the health facility related questions mainly being obtained using data of the 2002 WHO World Health Survey Questionnaire.

The village head questionnaire contained questions pertaining to general information regarding the village (population, connectivity, presence of educational and health facilities etc.) and most importantly, specific questions regarding the health status of the village in general. The major source of inspiration was the NFHS Villager Questionnaire.

The ANM and ASHA questionnaires included questions relating to coverage, nature of services performed, personal experiences and observations in the line of duty.

Finally, **The Doctors** in public and private health facilities were also administered questionnaires. Typically this involved interviewing the doctor in-charge of the facility regarding the advantages offered by the facility and his outlook on the health status of the area covered. A few other doctors were also questioned regarding the challenges they faced in working at a health facility in a rural setting.

The Janasankhya Shtirata Kosh (JSK) or The National Population Stabilization Fund provides District Level Health Facility Data on its official website. Using this data, we find the Dehradun District ranks 196th out of 593 districts studied in the country while Badwani finds itself in the 458th position. The ranking is based on a study “**Ranking and Mapping of Districts**” done by Prof. F. Ram and Dr. Chander Shekhar of International Institute for Population Sciences (IIPS), Mumbai in 2006. They used factors such as number of children, birth order, sanitation conditions and emergency healthcare indicators. This study thus closely corresponds to that of our own and hence we take the rankings as a basic guideline.

From the rankings it is clear that we have chosen two villages in two districts which are widely different in terms of the level of common health parameters. Our interest in choosing two such villages (standing as proxies for the districts) is to check the exact state of health levels of the village itself and those of the public and private health facilities by interviewing the relevant persons involved in the system (i.e. caregiver and care-receiver) and find out how different they are in the cases of two villages concerned and if that difference justifies the differences observed in the rankings.

Our analysis has been limited, due to our limited expertise in advanced and sophisticated statistical methods, shortage of time and manpower to simple analysis of the data obtained through questionnaires by way of frequency distributions and derived diagrams.

We have focused more on the qualitative analysis of the data obtained rather than looking for answers in statistical processes. We have also tried to link various factors in our analysis and see if they have a correlation as one may perceive- for example, that between education level of head and treatment of major diseases or that between the number of households having an educated head coupled with the number of hospital deliveries.

KARBARI

I. Overview

Karbari lies in the Dehradun District, very close to the capital of Uttarakhand (about 20km), along the Simla Bypass, (the nearest town is Prem Nagar some 10km away). The village can roughly be divided into two parts- the Gorkha Karbari, comprising of the relatively wealthy Gorkhas, most of whom were army men and the Garwali Karbari, comprising of the poorer farmers and casual labourers (mostly of the Kashyap caste). About 400 families live in the villages, a large section of them being quite well-off but inclusion error is predominant throughout the village with incidents of people having a TV, Fan, Cellular Phone, Bike and a BPL Card being not uncommon. The age distribution seemed to be skewed towards the 20-40 region with no apparent gender bias noticeable amongst the children.

The main source of irrigation of the village, although agriculture was not widely practiced, was the glacial stream of the Himalayas, locally known as “Karva Pani”. Tubewells provided the rest of the water for irrigation. As a result, crops like wheat and paddy grew easily along with maize and sugarcane. A lack of a centralized drainage system did not seem to hamper the cleanliness of the village a lot because most houses had their own way of drainage- either connecting to the river or underground. There was a semi metalled road which accessible by vehicles, which roughly bisected the village and the Simla Bypass nearby means that road access to Dehradun was not much of a problem. The village was fully electrified with load shedding occurring only half an hour to an hour per day. Post-office, Bank and STD Booth were all located within the village.

The village seemed to be highly educated overall with a number of people completing high school (especially amongst the wealthier section). Most of the children are educated up to high school and some were pursuing graduation. All the schools (primary, middle and secondary) were closeby within a radius of 5km. The nearest college was in Dehradun. In fact, there existed a few Private English Medium schools as well in the region apart from the government funded institutions, the former being preferred by the parents due to their apparent “superior” quality.

The village was served by the district hospital of Dehradun, in common parlance “The Doon Hospital”- which despite having good facilities was overburdened by patients from across the State (being the largest in State) and from the neighbouring districts in the states of Uttar Pradesh (Saharanpur) and Himachal Pradesh(Paota). The nearest PHC was in Nayagaon (3km), but being located in an awkward location (off the main road) people

were not aware of it or were unable to go there. Buddhi Chowk was the location of the nearest CHC(3km- not covered due to lack of time and resources), although there were a number of private doctors (most of them not MBBS) in the same region as well and the villagers preferred them greatly. There were 3 ASHA's and 3 ANM's in charge of the 3 Anganwadis located in the village. However, the village was in excellent health in general with fever, cough and common cold being the most common ailments. ASHA's provided DOTS to the TB patients and also took part in immunization (although according to an ANM and a few villagers ASHA was non-existent). Village head Malagurum said "The ANM's keep visiting the school... they also take active part in providing vaccines to pregnant mother and children and educating them." There was no polio affected child in the village.

The concerns for the village, according to the village head Malagurum were... "lack of public toilet... non-availability of health card (check name later) to many of the poor". Although a commendable job has been done in providing job cards (NREGA) to many of the villagers, Malagurum wanted this to expand further.

A notable organization in the village was PACL (Pearls Agrotech Corporation Limited) : under this , the zamindars take peoples' land in return of an assured sum and use this land to plant medicinal plants, spices, etc. after making the land fertile. Aforestation was also one of the main aims of this undertaking.

II. Household Structure

The families were in general of medium size (5 to 8) members, with the houses pretty densely packed. This meant that their landholding was amounted to a few bighas in most cases and agriculture was not the predominant occupation. As noted, a high percentage of population had BPL cards in the wealthier areas as well- suggesting large inclusion error. However there were a number of exclusion errors, some of them quite puzzling. Take the case of Bala Devi Kasyhap- she removed herself from the BPL list after she thought that she was "not poor enough" where all the evidences point to the contrary. The newly promoted "Smart Card" (Rashtriya Sasthya Bima Yojona which provides cover up to Rs.30,000 for BPL families) health insurance was a rarity in the households with those having it rarely making use of it. This was mainly because they were not clearly explained as to what exactly was the use of this card and also the fact that a lot of them preferred going to a private doctor rather than to a public medical facility.

Domesticated animals were not ubiquitous, because majority of the families were not agro based and hold service jobs/ casual employment. The Garwali Karbari households consisted of a few cows with a good portion of them having permanent animal sheds which were cleaned on a daily basis. Animal hygiene seemed to be well maintained, which brings us to the question of sanitation.

III. Sanitation

The sanitation level of the households was in general very good, barring a few very poor households in the Garwali area. Almost all the buildings in the Gorkha region were "Pucca" and a number is significant in the Garwali area as well. The interiors and the

exteriors were quite clean. Garbage disposal was done through burning (including plastic) which is very harmful for the environment. This was understood by the villagers to a certain extent but according to an educated villager, Rahul Chetri- “there is not much we can do about it. There is no recycling facility like the cities, no provision of a garbage man... we can’t let things pile-up...”. Animal faeces was used as manure but also dumped along with garbage. The manure was not necessarily for agriculture but also for maintaining personal gardens. The main water source was the canal water which came through tap along with tubewell water. Drinking water was found to be clean and it used for other purposes as well. However water supply was a point of contention, with the tap water coming for 2 hours in the morning and 2 in the evening. Sukhbir Thapa complained “we do not get water when we want... but we do get provided with plentiful of water in the four hours... tube wells sometimes behave erratically in the summer as well... you can’t blame machines... they can also have off days.” Water is as such drunk directly, although a few families strained it through cloth and even fewer use filters.

Toilet was omnipresent with pour flush being the dominant type although a number of wealthy households had a mechanical flush system. Toilets were cleaned daily, or at least twice or thrice a week for most of the cases. Harpic was the brand of choice although some families reported using phenyl or other acids.

Food was covered, but not usually stored more than a day with the left over being fed to the animals. In wealthy families, fridge was used. Some of the poorer families who do store food could not give any convincing answers on their methods. Dhani Ram, one of the respondents muttered “we keep it in a place away from the sun and try and keep it cold... we take good care so no flies go in.... the food is kept safe.” Flies were however a large problem in the village, especially in the poorer areas where the houses are not pucca and the courtyards are relatively unclean. However, not many households used additional mechanisms (apart from covering the food) to counteract the problem of flies. A few used flea net and some scrub their floors with phenyl. “The flies do not get inside much... so we don’t really need to do that much to take care of them” claimed Gulab Singh Negi.

Chullah was predominantly used to cook food and the number of chullahs with chimneys was less than the ones without. A separate kitchen was predominantly used for cooking purposes. Salt was almost universally iodized- bought from the PDS/ open market is of the “Tata” namak variety. A few cases where salt was not iodized were those who bought salt from the open market in small amounts rather than in packets. An unusual case was the presence of a cockroach inside a salt packet in one of the houses. Mosquitoes were not apparently a large problem as only a small proportion used remedies such as mosquito nets, coils, window nets etc.

IV. Usage of Health Facilities

The health level of the villagers seemed to be excellent and as a result quite a good number of them never went to a health facility in the last few months or so. As noted previously, there were no recurring diseases as such common to the village but some ailments we found on the course of the survey (apart from accidental injuries) were kidney damage, eye problem (mostly with old age), respiratory tract pain, pneumonia,

diabetes (not cured by Doon Hospital) and blood pressure. According to the son of A.P. Thapa, stone problem was prevalent in the village due to presence of excess calcium in water. Private facilities were widely preferred and the reasons are plenty. Dhaniram said, "The Distance is too long... it is thus costly both in terms of time and money to get there... add to that the long waiting time." Naresh Singh accused that "In Doon Hospital... the Doctors who are supposed to be there are often missing in action... diagnosis is rushed and often flawed..." Money seemed to be biggest roadblock of not getting proper healthcare especially for the backward class. The government facilities were too far away (with awareness of the PHC being very low, although the administrators at the facility claimed otherwise from a "Well educated village like Karbari.") and private facilities were not cheap, both in terms of visitation fees and cost of medication. A quick look at the healthcare expenditures of the villagers tells us that every time a person visited a private doctor, the charges could have ran up to a few hundred rupees plus the medicines prescribed. Going to Doon Hospital cost Rs.20 per head one way and even there some tests were not free (although the poor does not use the BPL card, lack of awareness or alleged "indifference of the hospital" according to Ramesh Kashyap being the reasons.) and cases of outside medicines being prescribed were not unheard of (this is vehemently denied by Dr. Rammurthi, the hospital administrator).

The most notorious part of the Doon Hospital experience which deterred the villagers from going there was the waiting time and the waiting conditions. "It is an utter chaos for two hours...you have people in long queue standing outside in the sun... the corridors are jam packed" summarized Kaushal Thapa. Although a significant number had given positive experiences on the phenomenon as well, citing "adequate waiting space". The staff and the doctors also received mixed reviews with frequent accusations of fast and improper diagnosis, rude behaviour and mistreatment on the grounds of financial status and social class. "Contacts are important to get things done in Doon" felt Sukhdeb Bahadur and Hari Prashad Nautiyal stated that "Doon Hospital refused admission on the grounds of being too sick." When Genda Kashyap's father injured his hand, the Doctor "refused to treat him... as soon as he saw the report."

There was a 108 ambulance service which also received mixed reviews from the residents; Kaushal Thapa dismissed it as "useless" while A.P. Thapa praised its "quick response time." It was generally agreed upon that the cleanliness of Doon had improved greatly. There were a few accusations of bribes taken by nurses and ward boys. Madan Lal recounted that "Nurses and ward boys sometimes demand as much as Rs.200 before discharge as a service fee for what they did during the time the patient was admitted in the hospital."

Animals were generally treated by the households by private doctors who charge around Rs.100 to Rs.200. Public facilities were also availed, but mainly for purposes like vaccinations. Immunization record (where stated) was fair in the village especially in the wealthier regions. Apart from the Anganwadis and ANM's, the role of ASHA in this regard was praised by Suresh Kashyap, "They really helped out a lot after the birth of my children". This is in contrast to one Anganwadi worker who criticized the role of ASHA in the village.

There were also a good number of hospital deliveries although the poorer people had to do with Dai's (non-official) who nevertheless charged "a healthy amount". They also lacked awareness about the money that is paid by the government if a delivery is done in a public facility.

As a whole the public healthcare facilities offered to the village got moderate marks in the eyes of the villagers with the overall village healthcare facilities fairing not much better. Inability to cope with an emergency in the night was a point raised by many. However the villagers were not really aware of the PHC in Naegaon which was fairly well endowed. We were not exactly sure of the reason but talking to the villagers it seems that the facility's off the road location and the lack of publicity and awareness on the behalf of the people seemed to be the cause.

V. HEALTH FACILITIES

We covered the Doon Hospital, The PHC in Naiagaon, the Anganwadis of the village and a few private doctors in Buddi Chowk through visitation, detailed observations and interviews with key personnel.

a. Doon Hospital

We visited the much maligned Doon Hospital before doing the survey proper. The institution very recently was awarded with the ISO 9001:2008 certificate. It had excellent facilities, meeting the IPHS requirements for a district hospital, but as state-level hospital it was unable to cope up with the sheer number of patients it had to entertain. 1500 patients visited the hospital every day on an average.

In an interview with the hospital manager, Dr. Rammurthi we came to know that the hospital has 250 authorized beds at present. The government has sanctioned Rs. 550 lakhs for the development of the hospital in 2003. In total there were four operation theatres and six OT tables. The OT's had all the possible equipments required. But the number of anesthetists was very low (2). Though the number of doctors was large, when compared to the number of patients, it is low. There were 24 female doctors and the number of beds in the female section (124) was more than the authorized number. The incubator facility was not fully operating but under development. The hospital staff was given regular professional training and administrative training. The government also organized professional up gradation training, administrative training and fellowships for the doctors. There were ayurvedic and homoeopathic doctors also.

We also visited the medicinal store where we came to know that the medicine supply was quite regular and adequate. All medicine and vaccines were supplied free of cost to the patients. The storage space was also good. There was a record room presently under construction and soon the billing system will get centralized. Before the year 2000, when the state was formed and Dehradun was named the capital, the government provided separate funds for different departments, so the medicine supply was never disturbed. But after 2000, the government turned to the Single-Window system by which it provided a one-short fund and it was up to the hospital to allot funds to the different departments

according to its priorities, Due to this the medicine store, often, is allotted lower funds than it is normally supposed to be done.

We also interviewed a skin-specialist – Dr. Anil Arya, from whom we came to know that there was no region-specific skin diseases in the neighbouring areas but skin diseases were very common, sun allergy, psoriasis, fungal infection and air-borne hepatitis, to name a few. Sun allergy was more common in men as they usually stay outside due to their jobs. The doctor was provided a quarter, vehicle allowance, non-practicing allowance. He had worked for ten years in a village before, where he had several problems like he was not provided a proper house, no proper education for children, no clean drinking water. etc. These reasons demotivated him to practice in a village further.

We went around the whole building. The general wards were quite spacious and clean but the toilets were too dirty. Only the paying wards had clean toilets. The waiting time at the doctors' was too long. The waiting halls usually remained overcrowded. The patients are provided medicines and treatment free of cost. The tests were done for nominal rates; The BPL card holders are provided free tests like X-ray, mammography, saliva test. etc. The kitchen was quite clean. There was a separate section for DOTS- treatment for tuberculosis. There was also a separate burn ward and an ICCU. The hospital also has plastic surgeons. Being located on a roadside, there is a problem of extreme noise pollution. Power supply is okay. Drainage facility is good- closed drains for sewage-disposal and open for storm water disposal. The drinking water supply was good and managed through an hospital-owned bore well.

b. PHC in Naigaon

The facilities provided at the PHF can be compared to the provisions stated under the NHRM. This health centre had an appropriate building infrastructure (puccaa) with male and female wards (4 beds), operation theatre, medicines, facility of stool and malaria test, vaccines were stored at the proper temperature , drinking water and toilet facility. The population coverage was around 36000.

The facilities at PHC were availed only by the poor. The point itself draws light on the inefficiency that PHCs fail in attracting the richer class. Reasons of low preference among the richer class were --no provision of lady doctors, complications in delivery cannot be managed, no provision of blood bank, incubators and only one doctor for the entire population (suggest long waiting time). There were also major problems like costlier medicines not being available, service timings were less, and emergency could not be well managed. In the region, number of sub-centers was less than required as informed by the authorities.

Dealing separately with the issue of maternal and child care, we found some serious issues related to failure of polices as a result of low acceptance among poor regarding birth control measures especially in few communities. For them money offered for institutionalized deliveries was acting as an incentive (this problem was restricted to very few communities).

The major problem was the inappropriate location of the PHC also people were ill-informed. These factors worsened the situation as people preferred to visit the nearest quacks.

This study rose up the issue of inefficiency and inappropriate location of public health facilities, but at the same time it became obvious that the government plan has resulted in some improvement in deserted areas which otherwise would not have been possible. Different issues crop up regarding inefficiency. Leaving apart question on the governments plan or NRHM we found poor implementation at the micro level.

c. Anganwadi

There were three Anganwadis in the village. The first one we encountered was in the Gorkha area run by Anita Sahi. It was one of the “mini-Anganwadis” and is thus often depended on the support of the “Mother Anganwadi”. The supply of materials was reportedly as stipulated but Sahi conceded that they were not enough and also admitted to the possibility of leakages. She also explained to us about great length regarding anganwadi politics especially in part of the mother anganwadi (elaborate). The Mini Anganwadi gets allotted Rs. 500 which was not sufficient considering the fact that it covered a population in excess of 500, well over the stipulated 150. Abortion cases were rare. The anganwadi itself was a medium sized room, equipped with educational paraphernalia like charts, toys etc. Electricity was not there, latrine was present as well as cooking facilities in a separate enclosure, which however unfortunately lacks chimney or much precaution from the smoke from entering the anganwadi proper. The food supply was erratic with no biscuits or nutrient powders visible to us as evidence. There were some 15 children enrolled and it was quite clear that budgetary and supply constraints made the well being for them difficult to look after.

The second anganwadi we encountered was run by Pushpa Devi. It was well equipped in terms of educational equipments with lots of charts, toys, slates and building blocks. There was no provision for electricity as there was no facility for bill payment by the government! Cooking was done inside. This was troublesome for a number of reasons. Firstly, there was no chimney and moreover the area was quite small and not very clean. The food supply consisted of biscuits and nutrient powders from state health department. These were found unused and past expiry date. The norm was generally that a child was given one packet (75 grams) per day and that would meet the need for nutrients for that child. In addition to this there was khichdi which was served on a regular basis which has stopped for unexplainable reasons. Nowadays Sattu was served in the anganwadi, but the problem was that the supply was a little bit short and hence there was a tradeoff whether to give it to the children or to the pregnant ladies.

According to the care taker, medicines used to come earlier (around 2 years ago) but not now. It mainly comprised of a kit containing cotton, paracetamol and other basic first aid stuff. A register was maintained with nine children being registered in the month of May. The latrine was existent but non-functional, not adding to the average state of sanitation of the facility.

As far as the facilities go, they get Rs.1500 per year for the government scheme Sarva Shiksha Abhiyan and apart from that they get Rs. 1950 biannually from the Mata Samiti for the purchase of oil, sugar, utensils etc. the anganwadi also has to conduct a bi-annual

survey apart from educating girls from 11-18 years old about menstrual cycles and cleanliness methods.

The third anganwadi was another one in Gorkha Karbari, run by Sunita Thapa, who was working for two years. It has 7 to 10 children registered from Gorkha Karbari with weekly meetings being held for women and young girls (11 to 15yrs). Children were provided vaccinations every third Saturday, the supply being erratic at times but presently okay. Apart from that she also provided training on healthcare, food types for children etc. to the mothers. "Sattu" was the food supplied to the children, young girls and pregnant ladies, but was recently very short in supply. There was no electricity or latrine. Among the learning equipments, toys were not supplied- but there were boards and chalks. Medicine was not supplied and the ANM came and provided vaccines only if there were a large number of children. Interestingly, the people of Gujjar Mohalla were resistant towards vaccination and blamed the Anganwadi if the children got sick- examples include Naresh Kashyap and Kailash Kashyap, which corroborated with their responses in the questionnaire.

d. Private Doctors

There were a total of 3 Private doctors in and nearby the village. They were mainly located at Buddhi Chowk. We have profiled them separately as they were disparate in nearly all terms (type of medicine, experience, genre of clientele and their opinions on various common topics)

1. Mr. Ansari: He had done his graduation in Biology and had then done a specialization Diploma in Electro Homeopathy. He had been living in the area for more than 27 years. He said that, "earlier there was nothing here... no mode of transport neither was there any bridge...it was hell". He had a small shop which he had bought about 15 years ago in the bazaar. He used to rent the same place before that. In line with his education, he practiced homeopathy. On being asked why homeopathy, pat came the reply, "No pathy is complete for the cure of all diseases... only homeopathy can cure diseases like kidney stone and hepatitis... it is a long run cure and for short term relief one should resort to Allopathy."

He can be classified as a general physician with limited expertise and facilities. The knowledge that he has is mainly due to the experience of practicing for so long and he agrees to that fact. According to him Kidney Stone and Arthritis are the most common diseases in the village. He has his own theory as to why these are becoming more and more of a problem. He thinks that the younger generation is moving w\away from agriculture and hence is leading a more comfortable lifestyle and hence is sweating lesser and lesser and hence this leads to weakening of the bones and muscles leading to Arthritis. On asked what alternate form of employment has been taken by the younger generation, he nonchalantly replies, "ancestral property is being sold on a large scale as the younger generation is not educated enough to be absorbed in the service sector... in any case unemployment is on the rise..."

He has an assistant for the past 3 years. The clinic has facilities for a Blood Pressure check, temperature check and a spherometer. According to him, the number of visits has been on a rapid decline as people have either moved on to other alternatives or they prefer to call the doctors home for check ups. In his words, "Homeopathy needs patience... people say that only the city folk lack patience but even the villages are not far behind." In case of referrals, he gauges the economic status and the status of the patient before referring to any place. He mostly refers to the Public Hospital, but some times even refers to Mahant Indresh. He is an active member of the red Cross and attends a few seminars here and there if and when time is available.

2. Mr. Vijender: He had studied B.M.S from a private institute near Chandigarh. He had arrived in the area around 6 months ago. Before that he interned with an "eminent doctor" in Chandigarh for a period of around 3 years. He acknowledged the fact that he was not a Medical Doctor by qualification but he took pride in the training that he had under the tutelage of that famous doctor in Chandigarh. In his words, "those were real learning days... I worked very hard... sometimes 18 hours a day... I took no payment and used to always be around him... we shared a student-teacher relation and I owe everything I know to him."

As he was new to the region, he did not know much about the place and was still finding his feet in professional and personal terms. On questioned about the scenario of medical facilities in the village, he replied bluntly, "all the doctors here are thugs... they do not have any legitimate degree... they are uselessly killing people by prescribing wrong medicine... all the doctors were locked out when the CMO (Chief Medical Officer) raided these places to verify their certificates." On being further quizzed, he went on to add that medicines are generally of 3 types: Ethical, Generic and Loose. Ethical medicines are generally costly but they are given after a thorough diagnosis is done of the patient and the medicine prescribed is on the basis of a cumulative assessment of the symptoms. Generic and loose medicines are administered in a very ad hoc manner and they are generally cheap and do not generally follow a proper assessment of the disease.

According to the doctor, there was a huge problem that you face when one is practicing in the rural areas. He said that, "here you cannot give people costly medicines and therefore ethical medicines have to be mixed with generic medicines... also people think that more the number of medicines a doctor prescribes the better the doctor is". This is his first individual practice and he still finding his feet in this place.

He finds the Hindu-Muslim divide in the place to be very strong and it affects the health scenario as well. Most of his clients are Hindu and he feels that the other Muslim doctor in the region pollutes the mind of the people and advises them not to go to him. He still feels optimistic and says that the number of people coming

to him is on a constant rise and most of the people who come are mainly people who heard rave reviews about him from his existing patients.

3. Mr. Navneet Unniyal: His educational background is that he has done a Bachelor Degree in Medical Sciences and then done a specialized course in Ayurveda. He has been practicing in and around this region for around 10 years. He resides in Panditwadi (10 kms from Buddhi Chowk). Before that he has practiced in New Delhi for about 3 years in a private hospital. During that period he allegedly gained expertise in Allopathic medicines as well. He now prescribes medicines of both nature: Ayurvedic and Allopathic.

He claims that he provides only the first line of treatment and in case of a severe problem he refers it further to the Government Hospital in Dehradun. The reason he says are twofold: firstly, the doctors are very competent and also the economic status of his patients is such that they cannot afford treatment from private clinics. According to him the most common diseases are Kidney stone and arthritis. The reason for the former is apparently the high level of calcium in the water and for the latter is genetic reasons. He claims that the problem with the patients nowadays is that they want instant relief and they do not understand that persisting with a certain dose of medicine is very important.

We had learned from sources in the village that his clinic was shut down for a while when the CMO had raided near-by villages for people fraudulently practicing medicine without being competent to do so. When asked about it he vehemently claimed, "the policemen came... they misbehaved... asked for certificate and on showing them they said it is not authentic... the policeman must not even have cleared 10th class, what does he know about my degree... they closed my clinic for no reason." Then he went on to explain that he had to file a case with the CMO, whose final verdict is still pending but he was allowed to open the shop till then.

4. Vohra's Clinic: While conducting our survey we learnt that most of the families in the village preferred private clinics for institutionalized deliveries. We surveyed a private clinic in order to find out the reason of such preference (as such clinics are far more expensive). The clinic was called 'Vohra's clinic'

The facilities available were far better than at PHC. They provided 24 hours service and for the support the clinic had huge staff (four resident doctors, nine nurse and six ward boys). In total there were 24 beds with general and private wards facility. Other facilities were also available like labor room, operation theatre, incubators facility, ambulance, generator, drinking water and anesthetist on demand. The operation theatre is used for operations like gallbladder or caesarian delivery. There is a blood bank close by. It is therefore no surprise that this place a large and varied clientele from the village.

GURI

I. Overview

The village of Guri lies in the Badwani district of Madhya Pradesh, about 30km from the district headquarters Badwani and about 10km from the chief township of the Tehsil it belongs to, Pati. The other important location nearby the village was the township of Rosher, about 5km away. The village was mainly composed of uneven non metallic roads and the nearest metalled road was about 3km away from the village centre. The terrain was extremely rugged and the area was in the form of permanent dunes making access a major worry. Most of the 500 households live below poverty line, with exclusion errors being very few (about 2 in the 85 households we surveyed) and no notable inclusions errors to speak of.

The village was fully electrified, although electricity was present only for 2 hours per day (from 8 PM to 10 PM), so the advantages of electricity were not really enjoyed by the villagers in earning their livelihood or even their comfort. The nights were typically cooler and all the activities finished around 7 PM. Due to the extreme climate present through much of the year, irrigation was often problematic as shortage of water was pretty pronounced. A number of ways were adopted to counter this problem, including construction of tube wells and water wells. Drinking water was obtained from the same source and was usually used in other activities as well. Jowar, Bajra, Maize, Cotton and Pulses were the major crops grown here. There was no drainage system to speak of but according to the village Sarpanch, it was neither necessary nor feasible because the houses were very far apart and the terrain uneven.

Theoretically speaking, the village was not very short on facilities. There was a primary school and middle school present within the village panchayat itself. The nearest PHC was in Rosher and the CHC was in Pati. Apart from the district hospital at Badwani, which was accessible through a 2 hour bus ride, there were a number of private doctors in Pati and Rosher as well. There was an Anganwadi just on the main road. ANM and ASHA were present in the village.

On a practical aspect however, none of these facilities were very well functioning. The schools were frequently devoid of teachers and the good educational facilities at Pati were 10km away. The PHC in Rosher was mostly vacant as well with *no registered doctors* attached to the facility. The CHC in Pati was only good for delivery and very basic medical check-ups. We shall discuss this CHC and Badwani District Hospital at length later. Bad roads often prevented the villagers to avail healthcare facilities as even a 10km trip can take more than an hour or so. Also there were stipulated hours of a day when one can catch a bus from the main road (3kms from the village). The private doctors in Pati were not really well qualified (no MBBS or MD) and *the village seemed to were very dependent on quacks*. The Anganwadi were non-existent in the sense that most of the villagers had no idea where the Anganwadi was located and it was in a deplorable condition. In fact, *not a single Anganwadi- eligible child was going to the Anganwadi in the households we surveyed*.

Moving to general health conditions of the village, we found that Asthma, Colitis, Body-ache, Nausea and Loose Motions were amongst the most prevalent diseases in the village. Malaria was common in monsoon. There were a few cases of Epilepsy as well, but this reporting was done in a public gathering (namely, a NREGA worksite) and we suspect that the simultaneous cases of Epilepsy cropping up here was due to a “domino” effect because we did not encounter a single case of Epilepsy on the households we surveyed one at a time.

Health checkups were done by the way of immunizations and general checkup twice a month through government camps in Rosher and Pati. There was also a mobile van unit which stopped by the village every Tuesday on its way to Rosher. There was no formal campaign of health education organized in the village by major organizations, but it was largely informally done by the village Sarpanch advocating clean water, covered food, clean living conditions and the like. School health checkups were sparingly done, usually once or twice in a year.

II. Household structure

In surveying the households, we found that generally the families were of medium size (5 to 8 members) and often held significant landholdings (i.e. 5 to 9 acres)- although it was the case that the larger the landholdings, the higher the probability that it was being shared by parents/siblings living in separate houses. The Guri households were typically composed of middle aged (between 20-40) family heads and a number of small children (between 0 to 10). Pre-dominantly the villagers depended on rainfed irrigation, as stated above- with secondary methods such as canal, dug well or tube well. A few villagers reported using motorized irrigation mechanisms. A fair share of the villagers had the *Din Dayal Antyoday Upchar Yojana* card which provided “Free medical treatment and investigation up to a limit of Rs. 20000/- per family per annum for treatment and investigation in all government health facilities.” In practice, only a few households knew what this card actually did and a fewer proportion actually availed the benefits of the card.

Almost all households had domesticated animals with a mixture of cows, buffaloes, goats and chickens. However, animal hygiene was poorly maintained in general. The animal sheds were mostly ad-hoc in nature, a cane structure covered by straws which provided little protection to the livestock in calamitous weather. In some cases the animal shed was integrated with the living area, which creates a most unhygienic situation for both animals and humans. The animal “shed” was cleaned twice a day according to most of the households but in general we found that the living conditions were not really very clean, exposing the villagers to a number of animal related diseases.

Coming back to the human inhabitants, we found without exception that all the senior members of the household were illiterate- which was quite expected since the education and communication system of the village were presumably worse before. Amongst the children, we found most children were illiterate- with most of them being the eldest/second eldest male child, not sent to school so as to help in agricultural activities. Female child were not usually discriminated against in giving education, and indeed we

found that some of the highest educated children are female with a few of them studying in class XII.

III. Sanitation

The households in general showed a below average level of sanitation. Aforementioned animal sanitation problems aside, the garbage disposal technique was a suspect. Both animal faeces and other garbage were used as manure. But the problem was that cow dung should be stored for six months before they are eligible to be used in agricultural fields and this storage of cow dung in some cases was just next to the animals themselves without proper covering. Also the use of plastics in the agricultural fields was extremely harmful not only to the crops but was unsafe for general environment as well through release of a number of harmful substances. The villagers seemed to be mildly aware of the problem but maintained that they were helpless as they knew of no other plastic disposal means. There was no plastic disposal/recycling schemes in these remote villages as there are in cities or townships.

Water was predominantly obtained from underground by hand pump. Although arranging water for irrigation was a reported problem, drinking water was readily available in most households and only a fraction reported water problems and that too mainly during summer. The water seemed to be clear enough for drinking but still most households strained it through cloth before drinking which was good to see. Water for other purposes was obtained from the same source.

Perhaps the biggest drawback of the village was that *not a single household had a dedicated toilet facility*. The ill effects of not having a dedicated toilet facility have been well documented and was a prime cause of diseases and untimely deaths in India. This was a strange occurrence, considering that construction of a toilet was not very difficult and was not too costly as well considering the fact that most of the villagers had constructed their own houses in the last decade or so. But the main problem in the village was that of the construction of a drainage system which was next to impossible because of the rugged terrain in the region. Hence there has to be intervention from the government and a concerted effort from them in unison with the local people if an effective solution to this problem has to be developed.

Food was in general was covered and was eaten within 24 hours of cooking. In some cases food was stored keeping bowls on water but in the cases where we found the food was stored, no convincing answer on the exact storage technique was found. Flies are a problem due to animal related hygiene but no measures are explicitly taken to counter this problem. Rooms are averagely clean but there was lot of animal faeces was lying on the floor as there was not any separate shed for the domesticated animals and they roam around freely in the courtyard. Cooking was done in all houses by a chullah inside the house with no chimney to let out the smoke which causes health problems. The walls near the chullah have become black due to the amount of soot that has settled on them during the course of time. This gives us an indicator as to how big a health hazard was the non presence of a chimney.

Iodized salt available from PDS/open market was used, which was an imitation of the popular “Tata” salt. Finally, mosquito nets are not the norm and to tackle the problem of mosquitoes in the monsoons- the villagers employ the technique of burning neem leaves to repel mosquitoes.

IV. Usage of Health Facilities

Public facilities were the first preference of most of the households although they were not always availed by the villagers. Veer Singh, a respondent, said that “While we would very much like to go to public hospitals for treatment, the roads are very bad and we don’t get enough time in case of emergencies or at night- then we would rather go to the quacks.” However, in general they were not denied of healthcare once they went to a public facility and got all medicines from the facility itself. There were some cases, especially in Pati where some doctors were accused of not treating the patient fairly in the facility itself. “He said that, come back to my house some other time and I will see your son” reported Sarpo whose son had complained about body aches. He also went on to say that the doctor charged a “visit” of Rs.100 and prescribed some medicines from the chemist. Otherwise, the fees in public facilities were very nominal (Rs. 2 for a visitation slip) and tests, medicines were free. Going to Pati cost Rs.10 per person one way and going to Badwani cost Rs.20 per person one way. However, as mentioned previously, the long hours and bad roads made the villagers unwilling to undertake the journey. The villagers were generally satisfied with the private doctors because of less waiting time, instant medication (not generally free) and more personalized attention. Bilar Singh Ranjan said that “We know the private doctors cost us a lot.. about Rs. 200 on an average... but the peace of mind was unparalleled”. A common complaint about the facility in Pati, which was most used by the villagers was its inability to cure a large number of diseases and accidental injuries. “They only know one thing in most cases- refer to Badwani... which was pretty far and going there was not possible every time for some thing or the other.” griped Bhai Singh.

Although most of the villagers were not aware of the usage of the Din Dayal card, those who were have a rough time using it in the public health facilities, especially Pati. Kailash quoted that “Once I went for my daughter’s Malaria treatment... and tried to avail the Din Dayal Scheme... the staff member at Pati... looked to me like an alien being... and ultimately after much haranguing.... convinced him to use the card.”.

The waiting time for the public facilities were usually clocked under 30 minutes.. or an hour in case it was Badwani and people were reasonably pleased about that although some villagers like Madho complained about the Badwani facility that “..first we have to undertake a 2 hour journey... then we have to wait for 2 hours... if our whole day was wasted like this... when are we going to fields to earn our wages?”. The staff members and the doctors were in general were reported to be polite and willing to listen to the health problems, although diagnosis was “unusually fast” in some cases. According to Bura, “No matter how much they listen to your problem... they never perform any tests... at the end of the day their interest was to prescribe as many pills and injections as possible.” Cleanliness and waiting space were rated satisfactorily although some noted the great lack of space and general dirtiness of the waiting area. Bribes were heard about

in a few cases- a lady Lata said that “nurses were queuing up after my delivery to collect payments” – although in most cases it was reported that the patients themselves gave money to the staff members as gifts. Rohas Singh begs to differ by saying that “every staff member in Pati was downright crooked... from the head to the cleaning boy.”

The public hospital experience was rated as moderate to average by most of the villagers, most citing the fact that they can't cure all the ailments. The village healthcare overall also was rated below par due to bad roads and irregular health checkups. A good thing to see was that there were virtually no untreated cases. Hospital deliveries were however few and far between, and even deliveries at home were often not proper with untrained Dai and/or absence of ASHA or Anganwadi workers.

The most shocking thing however was the absence of proper immunization records in *every* household surveyed- with most of the people having no idea about immunization procedure although they are administered free by the CHC in Pati. Animal treatment was also not done in a regular basis. Half of the sick animals were often left untreated by professional means. This surely compounds the chance of animal-borne diseases given the state of animal sanitation already discussed. Government veterinarians from Pati and Rosher were usually called for treatment, some of them even asked for fees- the quacks were another equally popular source, they demanded things like “coconuts and chickens.”

V. EXAMINING THE HEALTH FACILITIES (INCLUDING ANGANWADI)

To supplement and cross-check the tales of the villagers regarding the healthcare system, we visited the Badwani district hospital, CHC at Pati and PHC at Rosher for a first-hand observation and to listen to the medical personnel's side of the story. We also interviewed a private doctor from Pati and visited the village anganwadi.

a. Rosher

The healthcare centre at Roshar was a Primary health care centre established in 1979. The situation at this PHF was worse than in Dehradun. The PHC was a small pucca building with three beds and in total six health workers (dresser, ANM, sweeper, supervisor, compounder and ward). In addition, visiting doctors are posted but they barely visit the hospital. The facilities available include labour room, normal medicines, availability of drinking water, malaria test (slides were collected), general check-up (primary treatment was done by the compounder who himself agrees his incapability in correct diagnosis). One of the gross visible inefficiencies was the absence of doctor (male/ female). Even poor people from the nearby village don't prefer to visit this centre as in most of the cases they are referred to Patti PHC; medicines are not available in the centre (no private stores in the village) and they also face dresser delays in the absence of compounder. At the same time, their visit to distant PHCs was a problem because of the limited bus service. The only ray of hope was that there was facility of vaccination for children, normal delivery facilities (done by ANM) and ambulance facility.

b. Pati

The Pati CHC was the principal destination of the villagers in case of an illness. However, we found it very unequipped, corroborating with the statement of the villagers. There was an ambulance (Janani Express) which was used to transport expecting mothers but was very irregular according to the villagers. There was little waiting space and what was there was extremely dirty. The worst thing, the outdoor ward was literally just that, a few beds lying out on the open and out on the sun- with newborn babies and mothers. There was every chance of both the baby and mother contracting some infectious disease in these conditions. The authorities are helpless, according to Dr. C.S. Roslya “we can not do anything without proper funding... however these problems and the lack of facilities would be alleviated once the new hospital building... which was under construction comes up.” The current facilities included a not very clean dressing room, x-ray room, injection room and a delivery room. There was also a separate eye division but it mostly remains non-functional due to lack of doctors. In fact, we found the CMO- the only doctor to be present on the facility on the day to be on vacation. The medicine storage room and cold storage facilities appeared to be in order. There was access to clean water 24 hours. The toilets are decent enough with running water. The garbage disposal was done in the backside of the facility in a vat. The facility also seemed to organize camps infrequently; the last one was in February on Family Planning.

According to Dr. C.S. Roslya, the former CMO we interviewed in his residence- the biggest drawback of the hospital was the lack of electricity from 1 pm to 10 pm which renders the blood storage and critical equipments useless. There was no OT which forces them to send injuries to Badwani. There was a woeful shortage of staff with no permanent staff nurse and only 3 doctors operating on a rotation basis. Thus attending 75 cases per day and making 7 deliveries (4 according to the ANM who we also interviewed on the premises) per day was very stressful. He also complained of lack of government support and general indifference.

c. Badwani

The Badwani District Hospital was situated at the district headquarters of Badwani, 30 Km from Guri and was vastly more advanced than the CHC in Pati. However, the turnout from Guri to the District Hospital was very low- although the hospital was sufficiently crowded, getting 1000-1200 patients per day. According to the civil surgeon R.K.Savnir, the hospital has facilities of operation theatre and blood bank, in addition to whatever there was in Pati plus 37 specialist doctors in various fields like Child Specialist, Medicine, ENT etc. However, he also admits both the number of doctors and the number of staff nurses (30) are woefully short of requirement. There was a single general surgeon and four female doctors (including 2 gynecologists). Medicine supply was “okay” but government funding for it was sometimes a problem, as it was for obtaining new instruments or paying the family of the newborn child. Staff shortage affects cleanliness as well, although we found the premises to be decently clean. There was a problem for waiting space- with no clearly defined area. Also according to Savnir, insufficient salaries, political pressure and lack of governmental supports sometimes makes work very difficult. Child specialist Dr. T.C. Malviya said that the government does not often provide staff quarters for the doctors. We saw some of the reported “instant diagnoswas”

cases, but even with that the doctors seemed to be under a lot of pressure with the volume of patients.

d. Private Doctor in Pati

We interviewed Doctor Tarak Biswas in Pati. A BMS, he has been practicing in the area for around 7 years and was happy with his life. He generally treats around 10 patients per day for common ailments like cough and cold. He gave us two factors for settling in a relatively remote area, one being the competition of MBBS doctors in the city and secondly to reduce the expenditure (mainly in the way of transport cost) of the villagers for treating minor diseases. He charged fees around Rs.40 and the patients were seemingly satisfied. However it was clear that he was not equipped to treat major cases, for which the villagers have to travel to Badwani.

e. Anganwadi:

The Anganwadi was located on the main road near the village and was supposed to be looked after by an Anganwadi and her assistant. The building had two rooms, one for storage of inventories and the other for cooking and other purposes. When we visited the Anganwadi, there was no one there and the place was locked down. The wall surrounding the Anganwadi had gaping holes and the building was in a pathetic condition. To be fair it looked that the building had not been used for a considerable amount of time. There was a chart painted on the wall depicting what was to be fed to the children on what day of the week. This was not at all followed according to a few children and parents who had collected over there, seeing us at the spot. Some of the older children said that the facility would not open everyday and the parents then added that the Anganwadi did not come here everyday. On being further quizzed, it was known that the woman stayed in the city and it was quite far off and hence she used to come here once in a while. The assistant did not have the keys to the room with the food stuff. But we could see from the window, sacks of food stuff lying over there. On looking closely we found that a few of them were past their expiry date. The room allocated for cooking looked like a dungeon and did not seem to befit a place which could be labeled as a kitchen.

A COMPARATIVE STUDY OF THE TWO VILLAGES REGARDING THE CHIEF INDICATORS

The disparity in the two villages chosen on the basis of their district rankings is apparent even before we try to do an analysis on the chief indicators. Starting with the demographic structure, we can see a greater population of Karbari is concentrated on the age group of 20 to 40, while in case of Guri; the children (0 to 10 years) dominate. A cause might be lack of education regarding family planning and education in general for the villagers in Guri coupled with the observed level of significant poverty. BPL card was commonplace in Guri with minor inclusion and exclusion errors. In Karbari, BPL card was less common and compared to that in percentage terms, the inclusion error was quite significant. Coming to the field of education, the startling fact that every single village household head, or indeed members above 30 years old are illiterate has already been

mentioned. Education level of members under the age of 20 is significant in Guri, considering that the educational facilities nearby are qualitatively below average. Compared to Karbari, the figures don't look that bad in terms of primary and middle school education, but beyond that the figures widely differ in favor of Karbari. Although strangely, in the households we interviewed, the number of members having class 12 level education at most is *more* in Guri than in Karbari. Average family size is similar with 5-8 member families dominating the samples. Occupation wise, service sector dominated the household occupation pattern in Karbari, especially with regards to Gorkha Karbari, where as previously mentioned most household heads are stationed with the Indian Army. Infrastructure wise, Karbari is ahead in almost every indicators starting from connectivity with major towns to electrification with Guri's electricity being only temporarily available in the night. Agricultural land holding is more sizeable in Guri with majority households holding lands of multiple acres. In Karbari, this was limited to a few Bighas (roughly, 1 acre= 6 bighas). Well was mostly widely used in Guri, while in Karbari it was water from the canals channeled from a natural stream in the mountains.

Coming to our main topic of discussion, the health indicators- we find that neither Guri nor Karbari are too far off from their nearest CHC or PHC's. Even the nearest district hospitals are comparable distances (30 km for Badwani District Hospital in case of Guri and 20 km for Doon Hospital in case of Karbari). The Anganwadis are also located in the villages themselves. Karbari, being located near the capital of Uttaranchal, also has access to a number of private hospitals- Mahant being the most quoted amongst them.

In practical purposes however, accessibility is more of a problem for the people in Guri, because of the uneven terrain, lack of proper transportation and sometimes want of time or financial situations. In case of Karbari, there is a lack of knowledge regarding the existence of the PHC and people simply don't go the CHC because of the availability of private doctors in the same region. The district hospitals are not used as extensively as one might think in both the villages. For Guri, the CHC in Pati was the most frequently used while the people in Karbari preferred private doctors.

The single most reason given for not attending private facilities in Karbari was the distance of the Doon Hospital. Long queues in Doon also dissuaded the villagers from going there. Poor quality of health care was the third most common reason in Karbari while it turned out to be the primary reason in Guri. However, in general for both the villages- when they wanted health care they usually were not denied. Financial reasons seemed to be the main cause when they were unable to get healthcare in both the villages, although in Guri- inadequate skills of the health provider is also cited as a major reason. In keeping with the private-public preference pattern in Karbari and Guri respectively, we found that the major source of medicines were the private chemist shops in Karbari and government doctors in Guri.

Coming to the cost of healthcare, we found that the majority of households were provided initial healthcare services free of cost in public facilities. In fact in Karbari, the maximum expenditure a typical household incurred for treatment in public facilities was the transport cost. In Guri, there were a number of illustrations of public facilities charging

between Rs.100 to Rs.300 for medicines. It would not be fair to make a comparison regarding private expenses as firstly the people of Guri didn't use them much and most facilities are small-time only. There were a similar number of incidents of bribes reported in both the villages. Guri people were well shielded with regards to health insurance compared to their Karbari counterparts. Although, it was seen a close percentage of people in both villages (around 55%) actually knew the benefits of having health insurance. More baffling was the lack of non-usage of insurance in case of Guri, even when people are aware of what it does and uses public facilities regularly.

Waiting time, one of the primary reasons why people of Karbari choose to avoid public facilities is over 2 hours as reported by almost half of the households. The majority of the households in Karbari reported the same of around 30 minutes. However, the staff and doctor experience were similar in both the villages, and as such they were satisfied on both counts. Cleanliness got good marks in both villages as well, as did waiting room experiences. Mistreatment was reported in a few cases from both the villages (more from Karbari), with financial reasons being cited as the primary reason. In general, both the villages were moderately satisfied with the standards of public health care and overall health care accessible to the villages. We do not attempt a comparison between the villages with regards to correlation between education level of household head and standard practices followed, as this would make little sense- since every household head was illiterate in Guri. However, amongst the illiterates, major diseases are generally treated in both the villages but Guri lags behind in hospital deliveries and proper immunization practices.

Coming to the personal practices of the villagers, the majority of the households in Karbari used permanent sheds for the domesticated animals, whilst the Guri households used a semi-permanent straw made animal shed. This made keeping animals difficult in the monsoon and often they shared space with the household members, which made maintaining good hygiene difficult. Perhaps to compensate for this, most of the households in Guri reported cleaning the animal shed more than once a day- while just once a day was the most common practice followed by the households in Karbari. Being largely an agro-dependent village, unsurprisingly all the animal waste products were used as manure in Guri. This was the leading practice in Karbari as well, however a significant number of households disposed of the animal waste along with their regular garbage. A surprising event was relative apathy in treating sick animals in Karbari, considering their level of education and health practices. Around 47% households did not treat their animals the last time they were sick compared to 36% in Guri. However a few things must be noted in this context. Firstly, it is the poorer households who had animals in Karbari, although their conditions were arguably better than those in Guri. Secondly, animals did not seem indispensable to the villagers of Karbari as they were in Guri. With regards to garbage disposal in general, the predominant practice of Karbari is to burn all the garbage, in most cases *including* plastic. Similarly harmful was the practice of using garbage *including* plastic as manure as was the most significant case in Karbari. The first practice leads to air pollution and the second leads to loss in soil productivity as well as possibly introducing toxic elements to agricultural produce- neither of which are particularly pleasant for the residents. Handpump was the major source of water in both

villages. Surprisingly, it is Guri- located in the uneven and tropical terrains has lesser trouble with water supply than Karbari. The latter had a variety of water supply regularity problems with the most common mode of supply being 2 hours each in the morning and evening. Karbari also lags behind in water cleansing practices with more than half households taking no measures in cleaning drinking water. The households in Guri mostly strained water through cloth before drinking. In general, the quality of drinking water was good in both places although lack of cleaning practices in Karbari does not ensure the sustenance of the same.

The lack of toilets in Guri makes comparison of toilet facilities unfeasible. It must be stressed that this itself brings down the standard of health practices at Guri. In case of storage and protection of cooked food from pollutants, Karbari and Guri both consume food within a day, with storage usually in fridge or water. Unconvincing answers regarding storage procedures were mostly obtained from Guri. They also don't use any mechanism to protect food from flies- which is a problem in some cases considering the presence of a lot of domesticated animals and lack of proper animal shed. In Karbari, about 50% do not use any additional mechanism (apart from covering food). In fact, strangely 17% of the residents do not even cover their food properly. Although the problem of flies is not too severe in Karbari, improper covering of a food invites a host of other diseases as well. Mosquitoes are not much of a problem in Guri, and appropriately no special measure was taken in most cases- although quite a few households burnt neem leaves to get rid of the problem. In Karbari, coils were the instrument of choice.

Coming to cooking procedure, Chullah and Gas were used in equal proportion in Karbari compared to all Chullah in Guri. 64% of the households using Chullah in some capacity did not have a chimney in Karbari, this harmful practice reaching 100% in Guri. However, Karbari had pre-dominantly separate kitchen while kitchens in Guri were mostly integrated with the living quarters themselves, magnifying the risk of smoke. One surprise was that the number of households using iodized salt in Karbari was slightly lower than that in Guri.

We wrap up the comparisons by doing a quick comparative over the public health facilities and private facilities as investigated by us. Starting with the district hospital, it is no question that the Doon Hospital is superior to the Badwani District Hospital in terms of scope and quality of treatment. However, it is although more coldly received by the villagers- simply because it is unable to handle the pressure it is subjected to. Also, although the villagers were fairly satisfied with the cleanliness we found the state of hallways and especially the toilets deplorable in comparison to Badwani. However, the bottom line is both hospitals are not easily accessible from the villages concerned and treatment is extremely time consuming. As a result, there is little practicality in part of the villagers using the district hospitals on a regular basis. Coming to the CHC, the one serving Karbari is rarely used- while the one serving Badwani is in a pretty poor state, considering it is heavily depended upon. The PHC serving Karbari however is of good quality but again is not widely known, its counterpart in Badwani is inactive. Overall, we found the state of public health facilities serving Karbari better in several counts, as the rankings would have suggested. The main points of disparity are the non-functional PHC

and the sub-standard CHC in Pati serving Badwani. They are in need of improvement as they are also heavily used by the poorer village of Badwani. Despite possessing a reasonably good public health system, the relatively well-off Karbari prefers to use the private doctors, citing time as their primary concern.

There was also significant difference in depth and scope of private facilities serving the village. Karbari households had several prominent doctors at their disposal in Buddi Chowk and a Clinic (Vohra's Clinic) which outweighed the CHC and PHC present in terms of facilities. Together they covered allopathic, ayurvedic and homeopathic treatment and had facilities like blood bank, operation theatre, labor room and incubator. In comparison, the Pati (nearest town with private presence) private practitioners were small time like Dr. Tapan Biswas, limited to treated generic diseases like fever and stomach upsets. It however maybe the case, as Dr. Biswas points out that the private facilities simply exist to cater the demand of the poor villagers suffering from these sort of routine ailments, so that they don't need to pay unnecessarily high transportation cost to go to Badwani. Interestingly, he seemed to take it as given that the CHC in Pati was not a competition to him, which we found true to a certain extent by investigating the CHC and interviewing the households.

Finally coming to the Anganwadis- there is only one in Guri compared to three in Karbari. Awareness and demand-wise, the Guri Anganwadi is rendered virtually ineffective with people of the village don't even knowing such a facility exists. The villagers in Karbari on the other hand knew the names of the Anganwadi workers and all the anganwadis had a fair number of enrollment. It is difficult to determine the direction of causation, but we found the Guri anganwadi to be in a deplorable condition. Situated in a dilapidated building, it was more often closed than functional with the in-charge, living in a far off city- being infrequent. In contrast, all the Karbari anganwadis were in decent shape with visible supplies of nutrients and educational paraphernalia. However, their problems were lack of steady supply from the government end and inadequate budget.

CONCLUSION

As stated in the introduction, our goal in this project was "to assess the quality of health and public provisions for the same in two villages of India, compare the findings across the two villages and provide some input which may result in the betterment of the existing quality." After undertaking the exercise and detailing their outcomes in the previous sections, we might look at some broad conclusions overall.

Firstly, although in terms of district rankings, Dehradun is way ahead of Badwani (196 vs 458 out of 593 districts surveyed)- the level of satisfaction, both regarding the overall healthcare system offered to the village and the state of public facilities seemed fairly similar and at a mediocre level. What this means is that the present healthcare system in place just does its job in an adequate manner in perception to the villagers. Now this difference in perception is apparent considering the wide disparity in socio-economic

status of the two villages. Hence there is room for improvement of the facilities in both the villages.

Secondly, distance is a huge block for both the villages in accessing the most advanced facility available to them, the district hospital. Distances over 20 km seemed to more prohibitive especially in the light of time taken (and hence income for casual labourers, as a significant part of the poor were) and transport expenditure incurred. Two very different factors contribute to this in the two district hospitals. In Dehradun, the queues are too long for quick and efficient care of the ill, while in Badwani, the odd timings (8 AM to 1PM in the morning and 5PM to 6PM in the afternoon) make it difficult for most of the villages to visit the facility. While the Dehradun case has really no immediate solution (apart from expanding), the Badwani case, we feel, can be easily rectified.

Thirdly, part of the reason the district hospitals are in so much demand is due to the relative ineffectiveness of the PHC and CHC. Again the reasons are different for Karbari and Guri. For Karbari, its the lack of awareness (and perhaps an awkward location) regarding the PHC and preference of superior private facilities over the CHC located in the same region. For Guri, it is the literal non-functioning of the PHC and the inadequacy of the CHC. The Pati CHC serving Guri is undergoing expansion, so we hope that problem will be soon sorted out. However, the other problems are easily solvable as well- and for the sake of the poorer section of both the villages, for whom going to CHC or PHC is much more convenient and cost effective than going to district hospital or private facilities. In Guri, we found for this reason some people resort to quacks.

Fourthly, We found the private doctors are really not well qualified in both the cases. There are no MBBS doctors and plenty of doctors floating around with strange degrees. Considering significant sections of the villagers (especially in Karbari, where not even the “big three” are MBBS Doctors) cater to them especially in case of minor illnesses- this is a cause of worry. Another element common to both the villages is virtual lack of night time treatment facilities. There are ambulances available, but opinions regarding their usefulness are divided- and sometimes they are only used for deliveries.

Fifthly, The Anganwadis, an integral part of the development of pregnant mothers and young children are not smoothly functional in either of the villages. For Karbari, although a basic framework and sufficient demand is there- budgetary and supply problems hamper their functioning. In Guri, it is as good as non-existent, with a dilapidated building being locked most of the time.

Sixthly, In view of health practices of the villagers, we expected Karbari to be clear front runners ahead of Guri due to the higher wealth and education level. Our findings are tabulated below:-

Factor	Better Indicators
Quality of Animal Shed	Karbari
Cleaning of Animal Shed	Guri (need is possibly greater)
Treatment of Animals	Guri (need is possibly greater)
Treatment of Drinking Water	Guri (has slightly worse quality)
Toilet Facilities	Karbari
Storage of Cooked Food	No Clear Winner
Protection of food from flies	Guri
Protection against mosquitoes	Karbari (need is greater)
Cooking Practices	Karbari (although proportion of chimneys for chullahs is not very satisfying)
Usage of Iodized Salt	No Clear Winner
Knowledge of benefits of health insurance	No Clear Winner (Karbari has better usage)

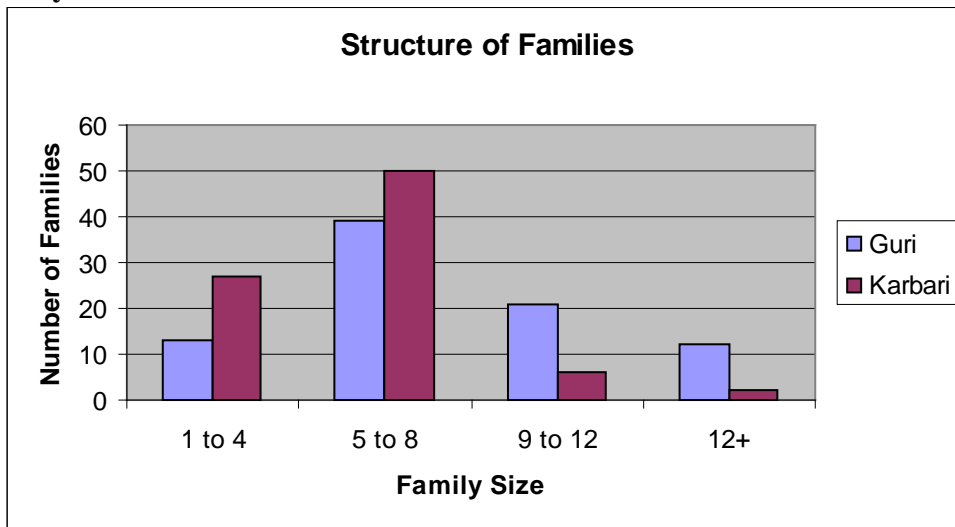
Also, both villages had harmful ways of disposing garbage. Both burning (including plastic) as for Karbari and using them in agricultural fields (including plastic) are not good practices. Separate measures are necessary to dispose off plastic. Burning also damages the soil, and in forest terrain of Karbari might lead to fires.

In short, we say that our findings and comparison of them leads us to some predictable and some surprising results in light of the district based rankings. Both sets of public facilities have their own problems, leading to relatively the same rankings from the villages. In absolute terms however, the health facilities serving Karbari is much better than that serving Guri. In health practices, each of the villages had their triumphs and shortcomings over the other and there is no clear winner as per our sample. This is surprising, as it is not easily comprehensible why people in Karbari should not treat animals more frequently or why they should not have better water treatment measures than present. Protection of food from flies also is a surprising indicator Guri beat Karbari in, considering the general lack of cleanliness in the households compared to Karbari. Also, health insurance knowledge is another area we expected Karbari to fare better. Both villages fared well in regards to consumption of iodized salt and storage of cooked food. Some of the things sorely lacking in Guri, probably due to the factors earlier mentioned is complete lack of toilets and good cooking premises. It was indeed baffling to see a household in Guri possessing a Dish Television but no toilets and no separate kitchen. Education is required to promote the usefulness of toilets and kitchens. On a final note, Guri suffers from a poor rate of hospital deliveries and almost absent level of immunization. These are two serious things which must be rectified immediately generating awareness and through proper procedures.

APPENDIX: TABLES AND DIAGRAMS

All the tables and diagrams containing data collected from the survey are arranged below *aspect wise* to facilitate comparative studies between the two villages. Both villages had 85 families surveyed and as such by that respect they are numerically directly comparable in most categories.

Family Structure



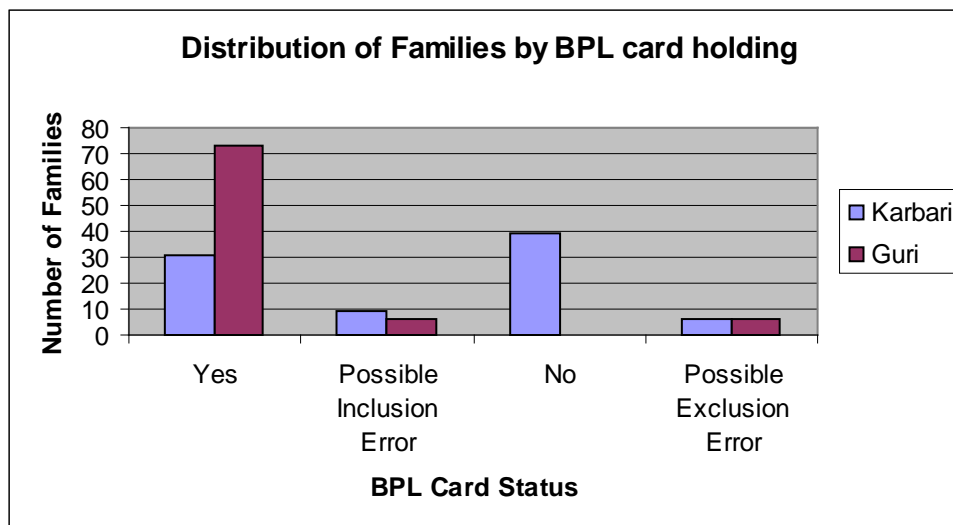
Agricultural Land Owned (in Acres)

Agricultural Land Owned (shared holding in brackets)	0	0+ to 5	5 to 9	9 to 13	13+
Guri	6	34(18)	25 (20)	9 (6)	11 (11)
Karbari	33	51(1)	1		

Type of Irrigation Used

Irrigation Type (Number of cases where method is secondary is noted in bracket)	None (that is rainfed)	Well	Canal	Tubewell	Other
Guri	35	38 (8)	1	4	1(6) (7)
Karbari	20	6(1)	16(1)	9(2)	

BPL Card Status of Families



Possession of Health Insurance

Health Insurance	None	Central Government	State Government)	Other
Karbari	52	21	0	12
Guri	22		63	

Education Status of Heads and their Children

I. Karbari

Level of Education	Illiterate	Ineligible to go to Anganwadi	Going to Anganwadi	Eligible but not going to Anganwadi	Primary School (1 to 4)	Middle School (5 to 8)	High School (10)	Inter (12)	Graduate and Beyond
Number of Heads	39	NA	NA	NA	10	24	8	2	2
Number of Children*	19	9	6	4	48	45	22	2	12

II. Guri

Level of Education	Illiterate	Ineligible to go to Anganwadi	Going to Anganwadi	Eligible but not going to Anganwadi	Primary School (1 to 4)	Middle School (5 to 8)	High School (10)	Inter (12)	Graduate and Beyond
Number of Heads	85	NA	NA	NA	0	0	0	0	0
Number of Children*	57	11	0	19	36	30	10	4	0

* Children here indicates all those between 3 years to 25 years old- that is who are in the age group of people who ought to be going to institutions from Anganwadi to Post Graduate Institutes.

Structure of Animal Shed Used

Animal Shed (Indicate secondary cases in brackets)	None, Animals out in the open	None, Integrated with Household	Yes, Separate and Permanent	Yes, Separate and Semi-Permanent
Karbari	17(1)	3	25	
Guri	5	8{4}		72

45 households had animals in Karbari.

Cleaning Frequency of Animal Shed

Cleaning Animal Shed	NONE	More than once daily	Once daily	More than once weekly	Once weekly	Infrequent
Karbari		6	20	2		
Guri	3	69				

Animal Faeces Disposal Means

Deposition of Animal faeces	NONE	In Garbage dumping place	Used as Manure	Sold
Guri		0	85	0
Karbari	4	15	21	5

Treatment of Animals

Animal Treatment (Karbari)	Done	Not Done	Irregular
Public	13	21	
Private and Quacks	11		

Animal Treatment (Guri)	Done	Not Done	Irregular
Public	21	31	9
Private and Quacks	17		7

Garbage Disposal Means

Garbage Disposal Technique (Number of households using the same technique for plastic noted in brackets)	NONE	In Garbage dumping place	Burnt)	Used as Manure	Other Disposal Means
Karbari		11(10)	67 (75)	5	2
Guri	7	5(9)	13(13)	60 (56)	

Source of Water (Any source used as secondary source mentioned in brackets)

Water Source	Tubewell/ Handpump	Well	Canal	Tank with tap
Karbari	40 (5)	3	31	11(4)
Guri	57	28		

Regularity of Water Supply

Regularity of Water Supply	2 hours in the day, 2 hours in the evening	24 hours barring major problems	Regular but seasonal problems	Irregular
Karbari	31	22	23	9
Guri		71	14	

Measure taken to clean Drinking Water (Secondary Measures Noted in Brackets)

Measure Taken to Clean Drinking Water	NONE	Boil	Use Alum	Add Bleach/Chlorine Tablets	Strain Through Cloth	Use water filter (ceramic/ sand/ composite etc.)	Use electronic water filter
Karbari	46	11	0	1	15 (1)	10	1
Guri	19	(2)			66		

Toilet Facility

Toilet Facility	NONE	Pour Flush	Flush
Guri	85		
Karbari	7	63	15

Toilet Cleaning Frequency

Toilet Cleaning Frequency	Daily	More than once in a week	Once a week	Less than once a week but cleaned	NONE
Karbari	56	14	9	2	4
Guri					85

Storage of Cooked Food

Storage of cooked food	Not Stored (in brackets the cases of leftover fed to animals are noted)	Consumed within a day, stored in fridge/ kept in water	Consumed within a day, not properly stored or no convincing answer	Consumed over a period greater than one day, stored in fridge/ kept in water	Consumed over a period greater than one day, not properly stored or no convincing answer
Karbari	23 (45)	56	2	2	2
Guri	4	73			8

Measures taken to protect food from flies except covering it. Secondary measures are noted in brackets.

Protection from Flies	NONE (No covering gets an automatic mark here)	Flea net	Rubbing floor with Phenyl	Using Spray	No Additional mechanisms used apart from covering food.
Guri					85
Karbari	14	11(1)	10 (2)	8	42

Prevention against mosquitoes. Secondary measures indicated in brackets.

Prevention against Mosquitoes	Net (Mosquito)	Coils or Electronic Mechanism (e.g. All-Out)	Natural Remedies (burning neem leaves)	Window Net	NOTHING (Just letting the fan circulate also count here)
Guri	2		39		44
Karbari	12(5)	39	2	3	29

Cooking Mechanism with Secondary Options in Brackets

Food Cooked on	Stove	Chullah	Open Fire	Gas
Guri		85		
Karbari	3(9)	41 (20)	1	40 (7)

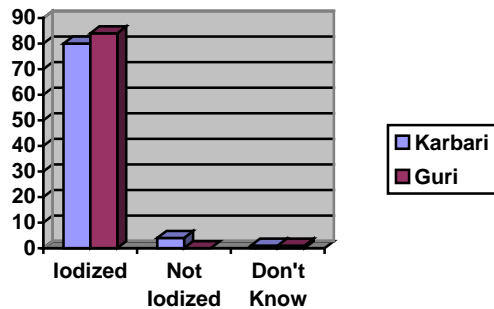
Presence of Chimney with brackets noting the presence of chullah.

Presence of Chimney	Yes	No
Karbari	31 (22)	54 (39)
Guri		85(85)

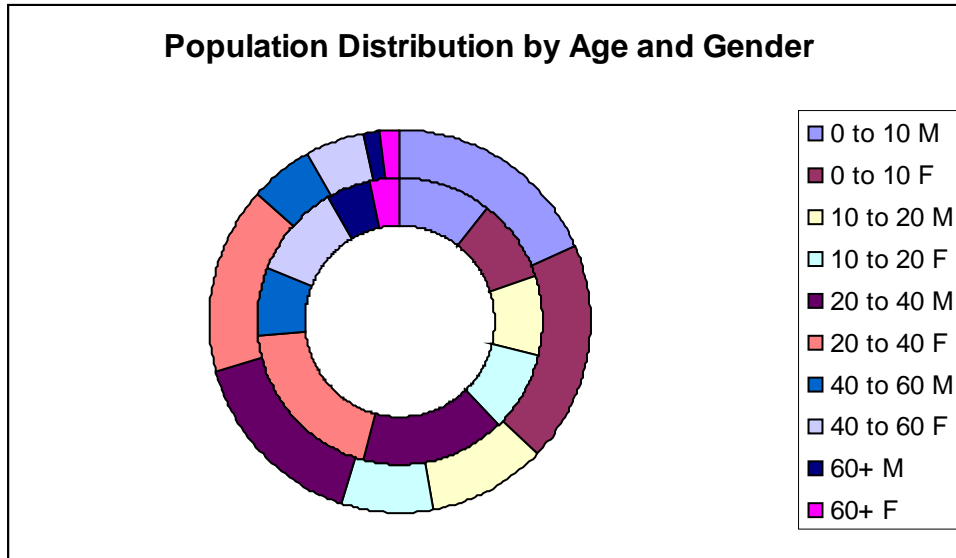
Type of Kitchen used (Cases with Chullah) {Cases with no Chimney}

Cooking Place	Separate Kitchen	Integrated Kitchen with Room	Outside in an enclosure	Outside in the open
Guri	3	77 (77) {77}		5
Karbari	64	3	13	5

Type of Salt Used

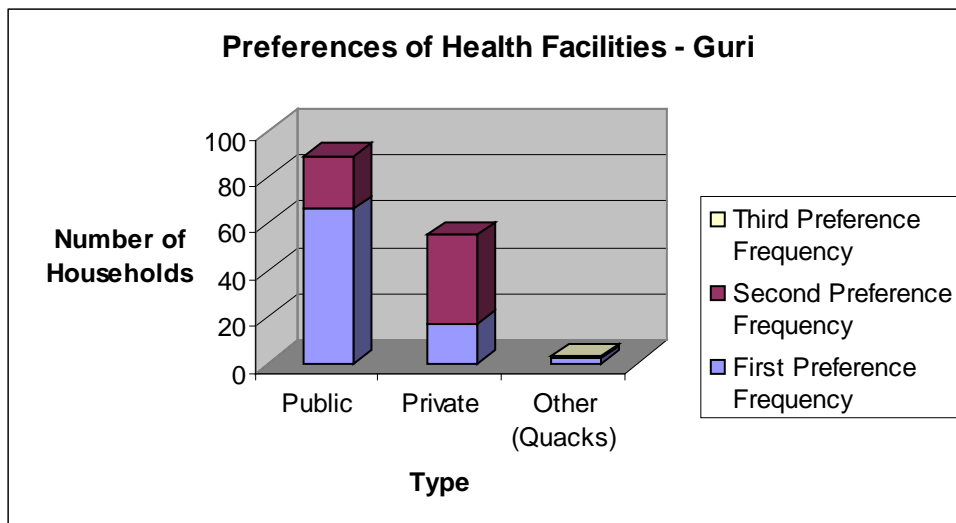
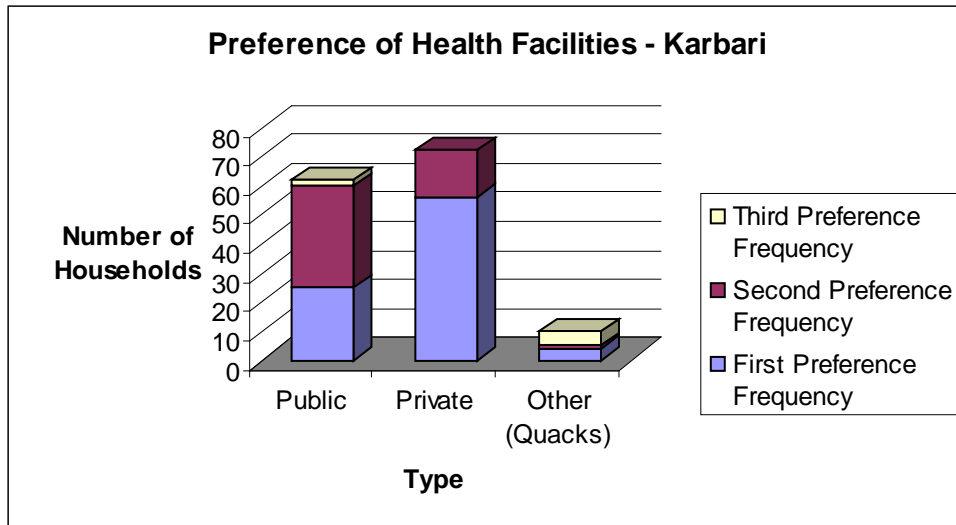


Population Distribution by Age and Gender



The inner doughnut shows data related to Karbari, the outer doughnut shows data related to Guri.

Preferences over types of treatment facilities.



Reasons for not attending public facilities (multiple responses possible)

Reasons for Public not being first preference (Reasons for switching in brackets)	Distance	Waiting Time Too Long	Absence of Personnel	Poor Quality of Health Care	Other
Karbari	51	37	20	30	4
Guri	5(1)	1	3	12	(5)

Reasons for denial of healthcare (if denied) on the last visit

	Not Denied	Finance	Inadequate Skills of Healthcare Provider	Timing Problems	Did not know where to go	Misbehaving health personnel
Guri	59	7	8	4	6	1
Karbari	57	11	5	5	3	4

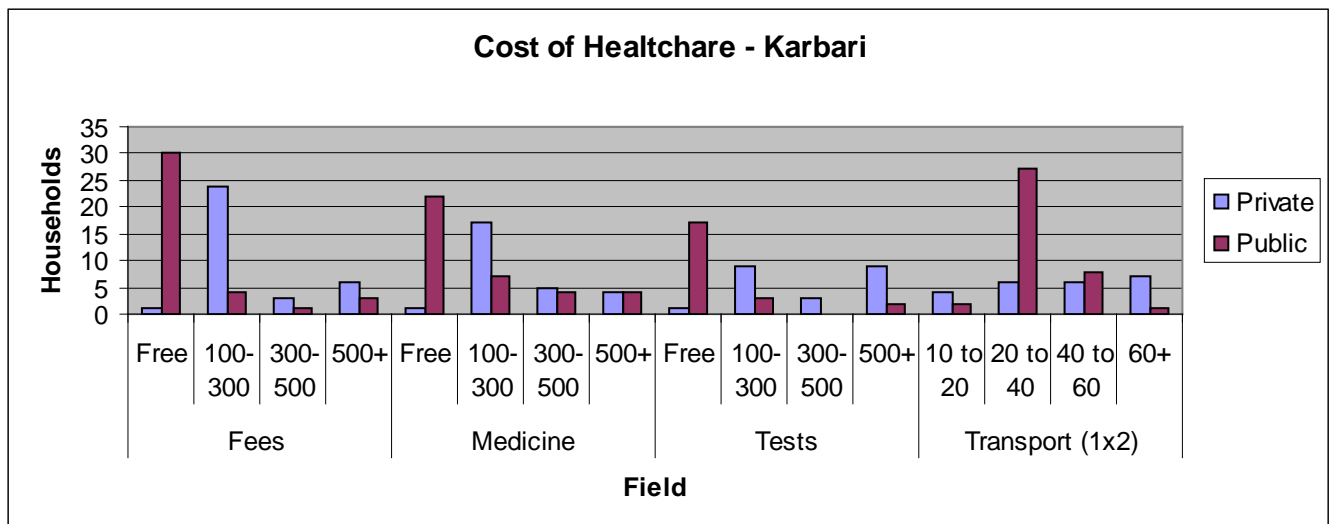
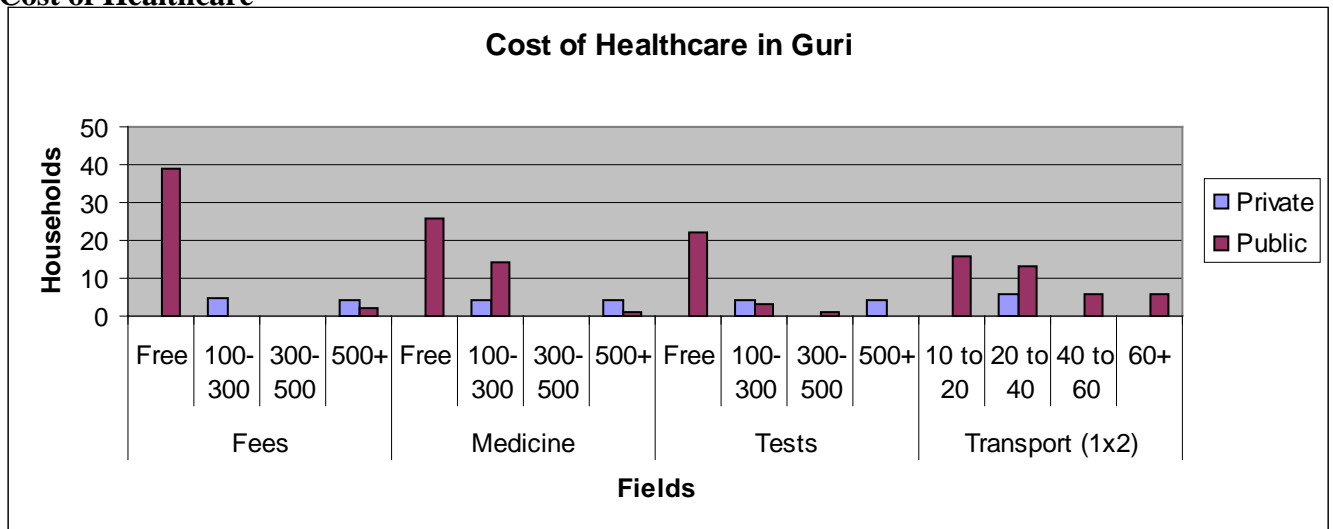
Medicine Provision

Medicine Provision	Doctor	Chemist	Combination of Doctor and Chemist	Medicine Purchased
Guri	48	27	10	81
Karbari	19	57	9	80

Reasons for Non Purchase of Medicine

Financial Problems	Could not find all medicines	Intentional
4		
4	1	

Cost of Healthcare



*Fees refer to visitation fees and other hospital charges excluding medicines, test and fee to make a prescription
1x2 should be read as 1 person traveling both ways.*

Incidence of Bribes

Village	Bribes
Guri	4
Karbari	6

Awareness of Healthcare Benefit Plans compared to possession of health insurance

Healthcare cost benefit due to government scheme	Yes	No	Don't Know	Health Insurance	None	Central Government	State Government)	Other
Guri	35	12	38		22		63	
Karbari	19	53	13		52	21	0	12

Waiting Time

Karbari	0 to 30 min	30 to 60 min	1 to 2 hrs	2+ hrs
Public	13	6	19	38
Private	3	3	4	3
Guri				
Public	31	18	25	11
Private	6			

Not everyone availed public health facilities in Karbari- Private Frequencies (and all subsequent private data) are reported wherever obtained from.

Staff Experience

Karbari	Very Good	Good	Moderate	Bad	Very Bad
Public	10	45	7	6	6
Private	4	7	3		
Guri					
Public		43	23	10	9
Private		7			

Doctor Experience

Karbari	Very Good	Good	Moderate	Bad	Very Bad
Public	9	45	8	10	4
Private	4	14	4		
Guri					
Public		44	22	11	8
Private		4			

Cleanliness

Karbari	Very Good	Good	Moderate	Bad	Very Bad
Public	12	46	12	5	1
Private	8	14			
Guri					
Public	6	44	15	8	12
Private	2	5	1		

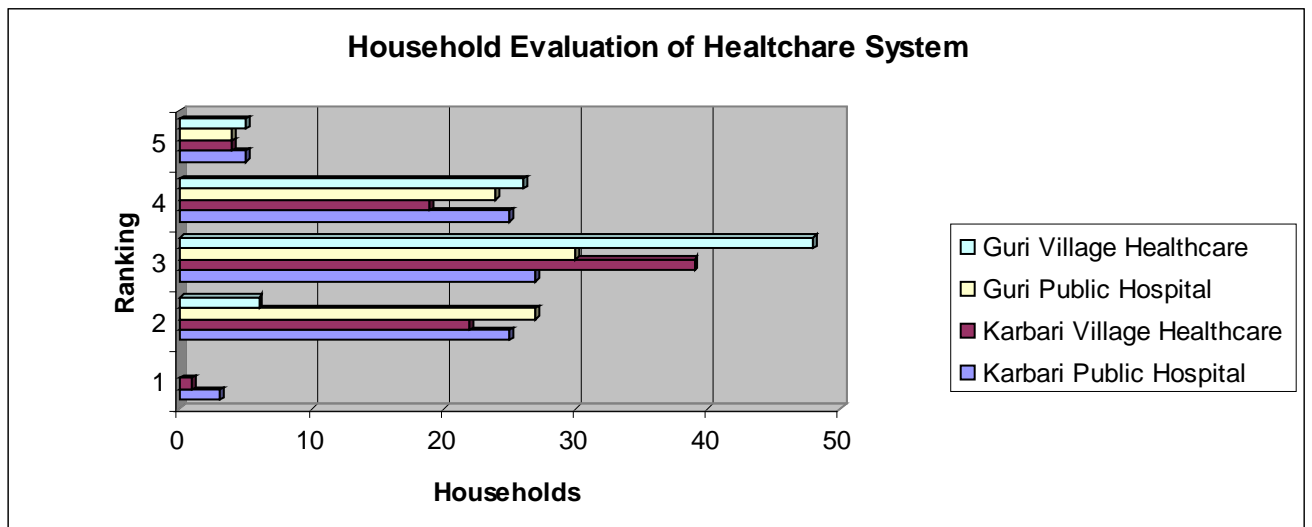
Waiting Room Experience

Karbari	Very Good	Good	Moderate	Bad	Very Bad
Public	12	46	9	6	3
Private	3	17	1	1	
Guri					
Public	1	38	18	7	21
Private		3			

Reasons for Mistreatment (if yes), Multiple responses possible.

Mistreatment	Gender	Age	Nature or Magnitude of Illness	Financial/ Social Class Reasons
Karbari	1		3	8
Guri				5

Household evaluation of health system.



On the basis of ranking, 1 being the best and 5 being the worst.

Miscellaneous Health Data in relation to education of the head.

Education Level of the Head (Karbari)	Illiterate	Primary School	Middle School	High School and Above
Major Diseases Present (No of households)	5	2	2	7
Diseases Treated (No of households)	5	2	1	7
Hospital deliveries	5	4	6	7
Proper immunization of child	3	5	6	7
Guri				
Major Diseases Present (No of households)	16			
Diseases Treated (No of households)	14			
Hospital deliveries	9			
Proper immunization of child	0			

Diseases treated refer to the number of Major diseases treated. Data of the first two rows are based on a special disease enquiry part of the questionnaire- diseases excluded are common cold and infrequent stomach upset. Bodily injuries (e.g. broken foot) are included in the list.

Data of the last two columns are based on observations reported from enquiring about these facts from a random sample (1/3rd) of the total number of household surveyed. These questions were not explicitly included in the questionnaires and were asked for the sake of gaining further insight into the health practices of the villagers.

REFERENCES

1. Questionnaires used in the National Family Health Survey (latest round) obtained from www.nfhsindia.org
2. Fact Sheet (State-wise) and Summary of Findings stating the major findings of NFHS-3 obtained from www.nfhsindia.org
3. Questionnaires used in WHO World Health Survey 2003 obtained from www.who.int
4. Results of the WHO World Health Survey 2003 in particular Health Systems Performance Assessment India, 2003 obtained from www.who.int
5. Mavalankar, Satia and Sharma- "Micro-Level Planning Methodology for Primary Health Care Services", Indian Institute of Management Ahmedabad, Research and Publication Department, 1992
6. Mavalankar, Satia and Sharma- "Strengthening Primary Health Care Services: Insights from Qualitative Research in West India", Indian Institute of Management Ahmedabad, Research and Publication Department, 1993
7. Das Gupta- "Public health in India: an overview", Policy Research Working Paper Series from the World Bank, 2005
8. Lokshin and Raballion- "Searching for the economic gradient in self-assessed health", Policy Research Working Paper Series from the World Bank, 2006
9. Chander Shekhar and F. Ram- "Ranking and Mapping of Districts in India: Based on Some Socio-economic and Demographic Indicators" Published Report, International Institute for Population Sciences, Mumbai (India), 2006
10. Chakrabarti and Chaudhuri- "Antenatal and maternal health care utilization: evidence from northeastern states of India", Applied Economics, 2007
11. Ramani- "Playing in Invisible Markets: Innovations in the Market for Toilets to Harness the Economic Power of the Poor", UNU-MERIT Working Paper Series from United Nations University, Maastricht Economic and social Research and training centre on Innovation and Technology, 2008
12. Varuni, Chandrakanth, Nagraj and Srikanthmurthy, "Groundwater contamination due to pollution and effects on human and animal health in India.", Conference Papers from University of Agricultural Sciences, Bangalore, Department of Agricultural Economics, 2006
13. Bhandari and Dutta, "Health Infrastructure in Rural India", India Infrastructure Report, 2007
14. Bhat and Jain, "Analysis of Public Expenditure on Health using State Level Data", 2004
15. Pandey, Shankar, Rawat and Gupta, "Socio-Economic Factors and Delivery Practices in an Urban Slum of District Nainital, Uttaranchal", Indian Journal of Community Medicine, 2007
16. Singh, "Burden of Disability in a Chandigarh Village", Indian Journal of Community Medicine, 2008