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## Costs of utilizing healthcare services in Chakaria, a rural area in Bangladesh

An overwhelming majority of the population in Bangladesh lives below the poverty threshold limiting their access to critical healthcare and other basic needs. Episodes of illness and ill health may result in substantial medical expenses and trigger impoverishment of households. Cost of healthcare services may deter or delay patients, especially the poor, from seeking appropriate care. Affordability or perceived costs of care are significant factors influencing healthcare behaviour such as choice of the provider and time of care.

The private non-physician healthcare sector is the most common source of curative care. The large informal private sector in Bangladesh consists of many different types of partially qualified and unqualified practitioners, providing care of low quality. Irrespective of their inadequate treatment practices, the informal healthcare practitioners are quite popular among a wide cross section of the rural population. The perceived costs associated with the different healthcare options are probably important factors determining healthcare seeking behaviour. Thus it is important to examine the economic consequences of healthcare utilization in rural Bangladesh.



A village doctor in Chakaria

Patients waiting at a pharmacy in Chakaria

## Study Details

A community survey was conducted in Chakaria, a rural upazila near the south-eastern coast of Bangladesh, during February 2007. The survey collected information on costs incurred for an episode of ‘recent illness’ defined as ill health experienced by the respondents within fourteen days prior to the survey. Information was collected from a randomly selected sample of 1,000 households. Approximately 89% of the households reported illness of at least one member within 14 days prior to the survey. When there were multiple sick persons in a household, a member was randomly selected for data collection. Information related to illness was successfully collected from 767 respondents. However, not all had sought care from a healthcare provider. From the 360 (46.9%) who had sought care, information related to the details of treatment costs was available for 342 respondents. The survey included information on socio-economic characteristics of the households, the symptoms of illness, type of healthcare provider contacted for care, cost incurred for healthcare sought from various types of providers, healthcare costs for medicine, diagnostics, transport, fees and loss of workdays for illness.

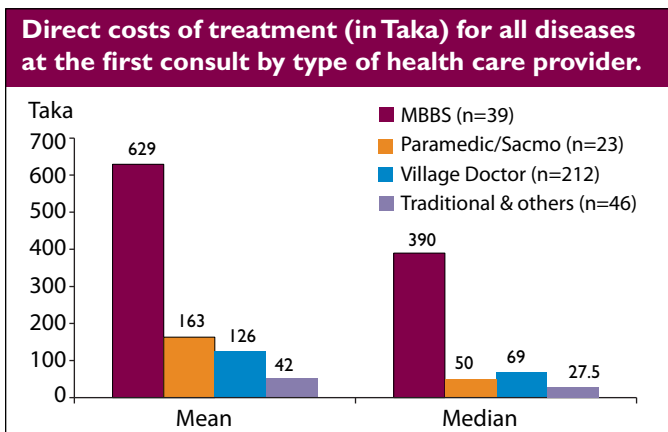
## Cost of treatment: formal vs. informal healthcare providers

Survey findings show that the total amount spent by the respondents was largest for care sought from MBBS physicians for the episode of illness reported in the survey. The village doctors’ share in the total amount spent was quite substantial.

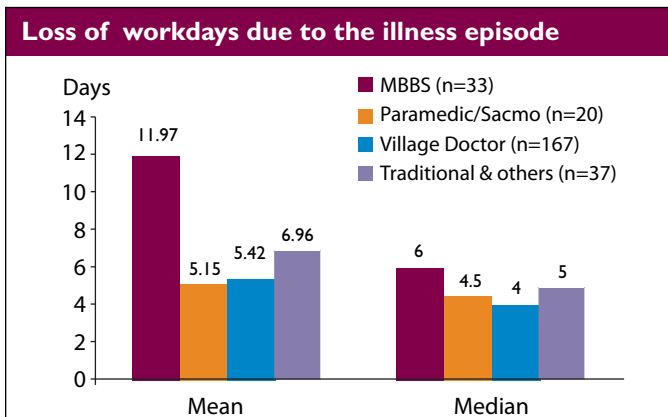
Share of different providers in the total amount spent.		
Type of provider	Share in total amount (in Taka) <sup>1</sup>	%
MBBS	42,334	52.7
SACMO/Paramedic <sup>2</sup>	3,734	4.7
Village doctor	28,659	35.8
Traditional healers and others	5,434	6.8
Total	80,161	100

<sup>1</sup> 1 USD= Taka 70  
<sup>2</sup> SACMO= Sub Assistant Community Medical Officer

The per capita direct cost (which includes fees, transport) for healthcare sought is substantially higher for a qualified MBBS provider than other healthcare providers in the informal sector.



The indirect costs represent the loss of earnings associated with workdays lost due to illness. The number of workdays lost, as reported by the respondent, was multiplied by the minimum wage estimates to calculate the loss of earnings due to illness. The prevailing minimum daily wage rate was Tk. 150 in Chakaria at the time of the survey.<sup>1</sup> Although differences in wages by gender are quite significant in Bangladesh, the calculations for indirect costs did not include the differences in daily wage rates by gender. The average number of workdays lost was nearly 1.5 times more for respondents being treated by an MBBS practitioner than any other type of practitioner. The differences in indirect costs were less in magnitude than the differences seen for direct costs. The differences in direct and indirect costs of treatment were found to differ significantly by type of healthcare provider.



<sup>1</sup>The average daily wage rate in Chittagong division was reported as Taka 125; and the national average was Taka 96 for 2006.

The finding that the number of workdays lost was more for respondents seeking care from an MBBS indicates that the severity of illness determines the source of care, i.e. people would prefer to consult an MBBS doctor if the illness is perceived to be serious. The suggested preference for qualified practitioners is also supported by the findings of the qualitative study where people expressed their preference for qualified healthcare providers for more severe illnesses.

Recent studies have classified healthcare payments above 10% of income as ‘catastrophic’ for households, assuming that above this threshold, payments are likely to cause cuts to food consumption, debt and impoverishment. As information on household income was not available, the estimates of minimum wages prevailing in Chakaria at the time of the survey were used to calculate monthly income. In the study, treatment costs above the threshold of Taka 450 (10% of monthly income at minimum wages) represents costs that were classified as catastrophic costs for Chakaria. The average direct costs involved for an MBBS is much more than Taka 450, the threshold defined as representing catastrophic costs. Thus, cost of treatment is an important deterrent of access to qualified healthcare providers. If gender differentials were incorporated, the threshold of catastrophic costs for females would have been lower and the cost of healthcare would have been more of a burden for the females.



A village pharmacy

Only 8% of the patients who had sought care had consulted a second healthcare provider. The per capita cost for a second consultation was signifi-

cantly higher for an MBBS practitioner than all other types of practitioners. However, the difference in cost of treatment for the second consult by type of physician was not significant.

### Cost of treatment for different components of healthcare

Survey findings show that costs of medicine constitute a major proportion of healthcare expenditure for all types of practitioners (46.3% MBBS; 76% for SACMO, 78.6% village doctor and 74% for traditional healers, of total cost). The practitioners other than the MBBS charge only a negligible amount as service fees. The higher fees involved in visiting an MBBS doctor may result in a higher perception of costs involved amongst the community members and may act as a deterrent for seeking healthcare from qualified physicians. The cost of transport involved for an MBBS is much higher, implying that the distance (and costs) involved is more, and is a barrier to access. Furthermore, informal healthcare providers are closer in proximity and the existing number serving in the community is quite substantial, thus influencing people’s healthcare seeking behavior.

Breakdown of direct costs for first consult						
Type of health-care provider		Fees	Transport	Drugs	Diag-nostics	X-ray
MBBS	Mean	102	67	291	.7	13
	N	37	37	36	36	38
SACMO	Mean	9	11	124	12.17	0
	N	23	23	23	23	23
Village Doctor	Mean	11	6.4	99	1.3	0
	N	219	224	219	222	223
Traditional and others	Mean	12	7.4	28	0	0
	N	49	49	49	49	49

For the second consultation, costs of drugs constitute a major proportion of healthcare expenditure for all types of practitioners except for MBBS practitioners (costs for diagnostics were higher) when average costs are considered. The substantial cost for diagnostics observed for an MBBS was the result of the sizeable cost incurred by a patient.

### Difference in cost by type of disease

The differences in cost for the first consult and loss of workdays differed significantly by type of disease. The per capita cost of treatment and per capita loss of workdays for respiratory tract diseases, infectious diseases, kidney and urinary tract diseases, and hepatobiliary diseases were quite significant. If indirect costs are included, the per capita cost of treatment for all types of diseases is considerable. Indirect costs of illnesses (income losses) particularly for prolonged illnesses were quite significant and the economic burden was more than direct costs. As a substantial number of respondents were suffering from viral fever at the time of the survey, the total costs incurred for cold and fever were considerable. Similarly for gastro-intestinal, musculo-skeletal and diarrhoeal diseases, the total costs incurred by the survey population were considerable, although per capita costs were not substantial.

### Differences in costs by socioeconomic status (SES)

The cost of healthcare incurred for different types of physicians did not differ significantly by socioeconomic status. Interestingly, quite a few in the higher SES group sought care from the informal healthcare providers, however, qualified MBBS physicians were

consulted more by the higher SES group. The per capita healthcare cost for the poorest quintile was substantial, indicating that costs incurred for healthcare is regressive and places an unfair burden on the poorest households.

### Differences in costs by gender

The costs incurred for healthcare were in general less for females than their male counterparts for all types of healthcare providers. However, the difference in costs was not found to be significant.

An important finding was that the majority of households who sought care incurred a substantial burden of healthcare costs. In the survey it was observed that 40% of those who did not seek treatment said that it was because they did not have the money to consult a healthcare provider. Survey findings reveal that the costs incurred for healthcare sought from an MBBS was substantially higher than any other type of informal health care provider. The informal HCPs are perceived as a cheaper option as they make adjustments in payments on the basis of ability to pay and prescribe or provide a partial dose of a drug. Survey findings suggest that cost of treatment is a major factor determining the choice of healthcare provider.

Costs incurred by type of disease					
Diseases	Per capita cost first consult	Lost workdays	Per capita cost second consult	Per capita overall costs	Total direct cost for survey population
Hepatobiliary	640	20.3	185	3812.8	1,920
Neurological	135.6	4.38	150	814	2,199
Kidney and urinary tract	1202	31.67	-	5952.5	2,404
Cardiovascular	273.6	5.11	297	1073	2,736
Diarrhoeal	185.89	3.3	-	680.9	3,346
Gastro-intestinal	141.93	4.61	143.8	865.4	4,695
Eye	126.8	4.33	-	776.3	634
Musculo-skeletal	163.5	6.57	445.8	1230.1	5,380
Skin and soft tissue	71.6	5.58	-	908.6	573
Respiratory tract	452.5	7.3	660	1629	12,841
Infectious	318.5	8.07	7575	2694	19,290
Cold/fever	123.5	4.6	242.9	824.7	21,609

Per capita overall cost (Col 5)= Col 2+Col 3\*150+Probability of seeking care from second healthcare provider\*Col4

# Village doctors in Chakaria: Their characteristics and treatment practices

Village doctors, the un-regulated, informal, often 'less-than fully-qualified' practitioners are a major provider of health care in Bangladesh. Findings from a recent study in Chakaria revealed that the village doctors, a subgroup of the Informal Healthcare Providers who are practicing allopathic medicine, were reported to have provided 65% of the healthcare sought for illness episodes occurring within 14 days prior to the survey. Evidence from the study indicate that there were significant deficiencies in the treatment practices of the village doctors. Their inadequacy of knowledge and advice deprive patients of relevant, safe, effective and quality care. A survey revealed an excessive number of prescribed drugs by the village doctors, suggestive of over and inappropriate prescriptions. The policy implications of the above findings cannot be ignored. Since village doctors are a crucial contributor in the provision of health care in Bangladesh, they need to be trained within the healthcare system to avoid harmful practices and promote safe, effective and quality care.



A village doctor/pharmacist in Chakaria

This report is based on data collected from the existing non-physician healthcare providers (HCPs) known as informal HCPs, practising allopathic medicine in all of the unions of Chakaria Upazila during February 2007. The village doctors, a subgroup of the informal HCPs, are mainly unqualified or partially qualified, unregulated or unlicensed practitioners practicing in the private sector. Of the 328 informal HCPs, 92% (302 in number) were practitio-

ners providing services from a private setting, and are commonly known as village doctors. The remaining 26 HCPs were engaged in employment in the public and NGO sectors. This brief focuses on the village doctors in the private sector as they operate on their own without supervision and their practices have considerable impact on the health of the population.

## Demographics and Education

Among the 328 informal HCPs, 94.5% were male and 5.5% were female. It was found that the informal HCPs are approximately evenly distributed by 5-year age groups from 25 to 54 years with the greatest number (18.3%) from the 25-29 year group. At ages above 55 and below 25, the numbers decrease. The mean and median ages of the village doctors were found to be 39 years and 38 years.

The majority of the informal HCPs (89.3%) included in the survey were educated in the general educational system. Only 6.7% of the HCPs attended madrasas, schools with more emphasis on religious education and less on modern subjects, and approximately 4% of the HCPs were exposed to both systems. All of the HCPs had at least a seventh grade of schooling, and 66% of them were educated up to the 12th grade or more. More male HCPs had at least a 12th grade of schooling (65%) compared to female (33%) village doctors.

## Training and pathway to profession

Most village doctors (96%) had no government accredited certification in the system of medicine they were practicing. The majority (88%) had non-accredited certification of different durations. Only

5.3% of the village doctors were trained as paramedics or paraprofessionals (from ICDDR,B and Gonoshasthya Kendra sources) and 2.6% had some training in pharmacy.

Approximately, seventy four percent of village doctors received some sort of short duration training on various topics related to health. Of them, nearly half had received training from the government and half from non-government organizations and private institutions.

The most common training received by village doctors were on:

- Diarrhoea
- Malaria
- Acute Respiratory Infection (ARI)
- Integrated Management of Childhood Illness (IMCI)
- AIDS
- Tuberculosis
- Safe motherhood

Most village doctors became healthcare providers through attending courses or training, through experience as a trainee in a drugstore, by serving as an assistant in a doctor's chamber or to a village doctor, and from family tradition.



A village pharmacy/village doctor's chamber

How village doctors began practicing/ became village doctors	
Process	%
Trainee in Pharmacy	21.6
Assistant in Doctor's chamber	20.8
Assistant of village doctor	9.7
Attending training	42.4
Family tradition	4.3
Self / through practice	0.4
Selling medicine	0.4
Government job	0.4
Total	100.0
N	302

### Clinical settings of village doctors

**Setting and hygiene:** The most commonly mentioned places of practice of village doctors were personal chambers, pharmacies, and provider's and patient's residences. Findings from the survey indicated that approximately 98% of the healthcare settings had usable water supply. However, only 1.3% had tap water facilities and approximately 96% had tube-wells as their regular source of water. Only 38.7% of the clinical settings had lavatories (modern, ring slabs) with the majority having no such facility.

Places of practice	%
Personal chamber & pharmacy	75.3
Personal chamber	12.6
Pharmacy	4.1
Govt. hospital and Private clinic	0.8
Home and pharmacy	1.3
Home of the provider	4.3
Visits to patient's home	1.0
Satellite clinic	0.3
No fixed place	0.3
Total	100.0
N	302

**Availability of equipment:** The majority of the village doctors reported having the most common equipment needed for examining patients. These included a thermometer (96%), stethoscope (92%), blood pressure machine (89%), examination table (87%), scissors (84%), and artery forceps (75%). Only 22% and 9% reported that they had weighing machines

for adults and children, respectively, in their chambers.

**Privacy:** It was observed that in approximately one-fifth of the cases (21.5%), the patients could be seen from outside the chamber and in 52.7% of the cases the conversation with the provider could be heard by others. In 46.4% of the cases, other people were present in the chamber, and in 45.7% of the cases, other patients were present in the chamber during the examination of a patient. Evidence from the survey suggests that the lack of privacy for the patients in clinical settings of village doctors compromise patient confidentiality.

Condition of privacy	%
Patient seen from outside	21.5
Conversation heard from outside	52.7
Other patients present in chamber during examination	45.7
Presence of others in the chamber	46.4
N	302

### Payment for services of village doctors

The study findings showed that the majority of the village doctors (62.2%) accepted payment for the consultation they provided. When the village doctors were asked for information on what they did when a patient was unable to pay cash for their services, approximately 15.2% of them responded that they allowed the patients to defer payment, 30.1% accepted any form of payment, and 16.2% said that in such cases they exempted the patients from paying. Only 2 (.7%) of the village doctors were unwilling to provide an answer implying that they probably do not provide treatment for patients who are unable to pay.

The study attempted to find whether the village doctors were earning income by dispensing medicine to the patients. The survey findings suggested that the majority of the village doctors sell medicine (81.5%) and 81.1% percent admitted to owning a drug store. When asked for information about what they did when a patient was unable to pay for the

medicine, the majority (79.1%) responded that they provided the medicine on credit. It may be reasonable to assume that most of the village doctors probably had financial motivation in dispensing medicine.

The survey findings indicate that a majority of the village doctors (95%) recommend diagnostic services such as radiology, and laboratory tests for the patients. However, only a minority (4.6%) of the village doctors had any share in the ownership or proprietorship of diagnostic facilities, and therefore the majority of the providers apparently did not have any direct financial motivation in recommending diagnostic tests for patients as owners or shareholders.

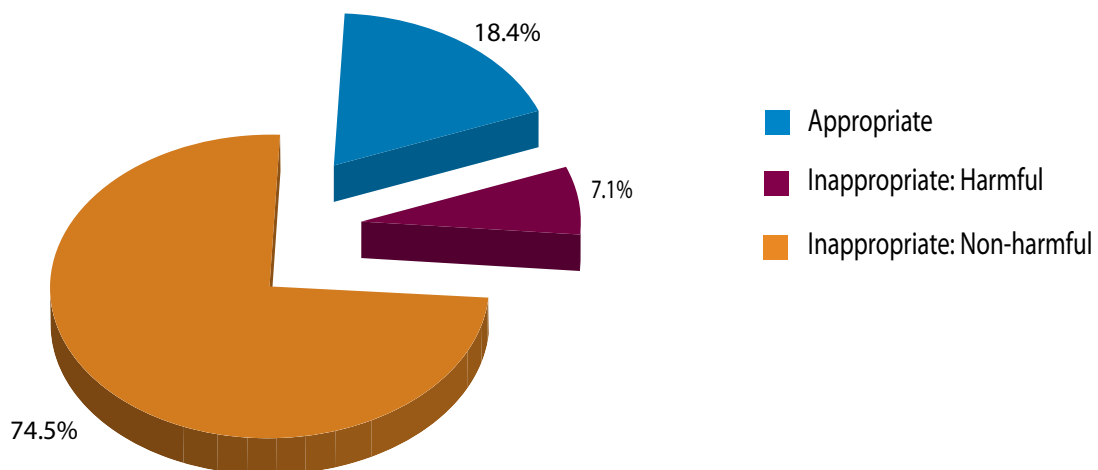
### Quality of treatment provided by village doctors

Village doctors treat patients with various health complaints. It was revealed that the majority of them treated patients with pneumonia (95.4%), diarrhoea (98.7%), amoebic dysentery (98.0%), blood dysentery (97%), viral fever (97.4%), hypertension (71.5%), ANC/PNC and delivery related issues (51.3%) and reproductive health problems (62.9%) and injuries from accident (89%). Many of them also treated patients with tuberculosis, diabetes, goiter, rickets, and drowning accidents.

The exit interviews of 236 patients provided information required to evaluate practices of the village doctors in the treatment of the common cold, pneumonia and diarrhoea. The survey findings revealed that only 40.7% of the 27 drugs prescribed for pneumonia, 17 (15%) of the 113 drugs prescribed for cold and fever and 8 (14.3%) of the 56 drugs prescribed for diarrhoea were considered to be in the category of appropriate choices of drugs as recommended by the treatment guidelines of WHO, UNICEF and the Government of Bangladesh. For all three diseases combined, it was found that 81.6% of the drugs prescribed were inappropriate. Of these, 7.1% were harmful.

Example of types of drugs prescribed for pneumonia: The findings indicated that none of the 9 patients who had symptoms suggestive of pneumonia (fast breathing, cough or difficulty breathing, chest in drawing, presence of stridor) were prescribed with only the appropriate choice of drugs. These drugs were prescribed in conjunction with drugs classified as inappropriate. Thus, none of the patients were treated in complete compliance with the standard treatment guidelines of WHO, UNICEF, and the GOB. In addition, 4 (44.4%) of the pneumonia patients were prescribed drugs that were categorized as harmful. This finding of the prescription of appropriate and inappropriate drugs combined is typical of the treatments prescribed for

Appropriateness of treatment practices by village doctors





diseases as well. Of the 58 patients diagnosed with cold and fever, 6 (10.4%) received drugs categorized as harmful. For diarrhoea, 3 out of 22 had received drugs that were harmful. None of the patients diagnosed with pneumonia, cold and fever or diarrhoea had been prescribed with only the drugs categorized as appropriate.

The excessive number of drugs prescribed for the different ailments indicated that over prescription of unnecessary and inappropriate drugs is prevalent in the study sample. The adverse consequences of inappropriate drug use is serious and may result in increasing microbial resistance and adverse drug reactions. Study findings suggest that there is a significant gap in adherence to appropriate treatment in compliance with the standard guidelines for the diseases mentioned.

## Conclusion

In summary, we observe that:

- Village doctors are widely sought and quite

popular with the villagers.

- The practice of harmful and inappropriate use of drugs is widely prevalent among informal HCPs.
- Village doctors often practice in environments hygienically unsuitable to be medical facilities.

It seems that the role and wide prevalence of village doctors in healthcare will not go away soon, mainly because of their accessibility to the poor in terms of their proximity and the flexibility of payment of services they offer. Additionally, the formally trained medical workforce (MBBS doctors, nurses, etc.) are not available in sufficient numbers to meet the needs of the people, even if their services were to be made affordable. There is also a lack of enforcement of laws with regard to the rules of medical practice, qualifications of practicing healthcare providers, and regulations and prescription of drugs. Interventions are needed to reduce the harm done by village doctors, monitor their practices and possibly increase the good they are doing.



Village doctor examining patient

# Villagers' perceptions about illnesses and healthcare providers in Chakaria, Bangladesh

This research brief focuses on the perceptions of villagers about illnesses and the role of healthcare providers especially village doctors in Chakaria, a rural area in Bangladesh. The findings are based on data collected during 2007 from male and female respondents. The community identified convulsion as the most severe illness among newborns, jaundice as the most severe illness among children and adolescents, and ulcer as the most severe illness for adults. Stroke was perceived as the most severe illness for the elderly. The study revealed that the village doctors are very popular among the villagers for reasons of being conveniently available with drugs and low cost. The villagers, on the other hand, consult qualified physicians for life threatening or severe conditions. As a whole, villagers relate type of healthcare providers to specific diseases/conditions.



Villagers in a marketplace in Chakaria

## Study methods

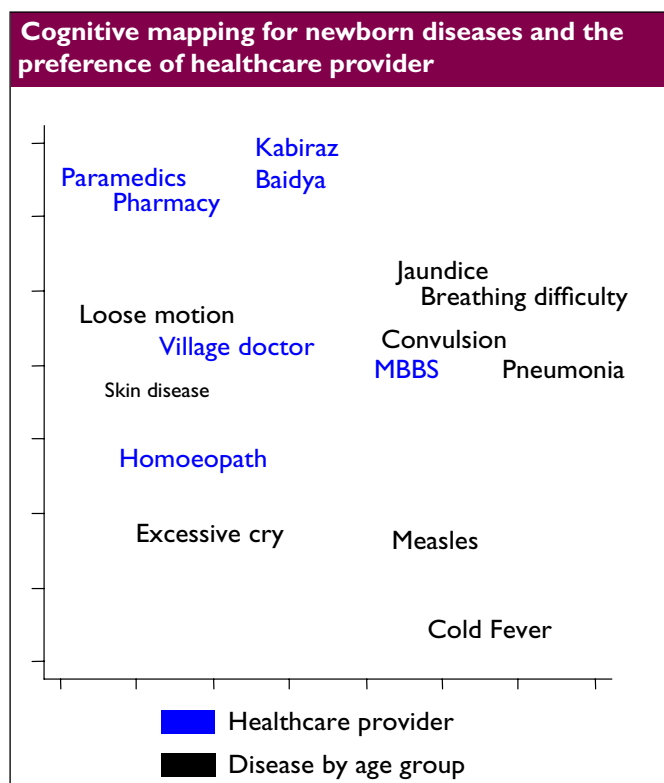
Focus Group Discussions (FGD), in-depth interviews, free listing and pile sorting among selected villagers from three groups of villages which were close, not too close and distant from Chakaria headquarters were carried out. Union parishad chairman

and members were also interviewed. Attempts were made to identify the 10 most common diseases for different age groups with their level of severity, type of healthcare care providers considered relevant for treating various illnesses, and reasons for preferring certain healthcare providers.

## Findings: Common illnesses in the community

The following table shows that the respondents identified jaundice as one of the severe illnesses for the younger age group, including newborns, children and adolescents. Convulsion was identified as the most severe illness for newborns. Pneumonia was considered as a severe illness for both newborns and children. Asthma was a severe illness for the comparatively older age group, that is, adults and the elderly. For the adults, stomach ulcer was considered as the most severe illness and for the elderly, stroke/cardiovascular illness was mentioned as the most severe disease. Rickets was identified as the second most severe illness for children. Malaria was among the most severe illnesses of the adolescents.

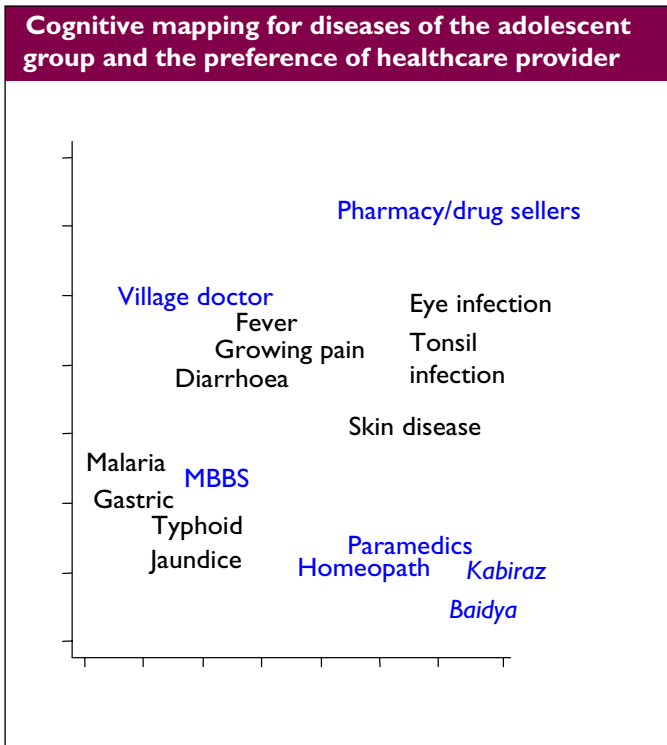
Common illnesses of individuals from different age groups					
Three most severe illnesses					
	Newborn	Children	Adolescent	Adult	Elderly
1	Convulsion	Jaundice	Jaundice	Ulcer	Stroke
2	Pneumonia	Rickets	Malaria	Asthma	Paralysis
3	Jaundice	Pneumonia	Gastric	Diabetes	Asthma



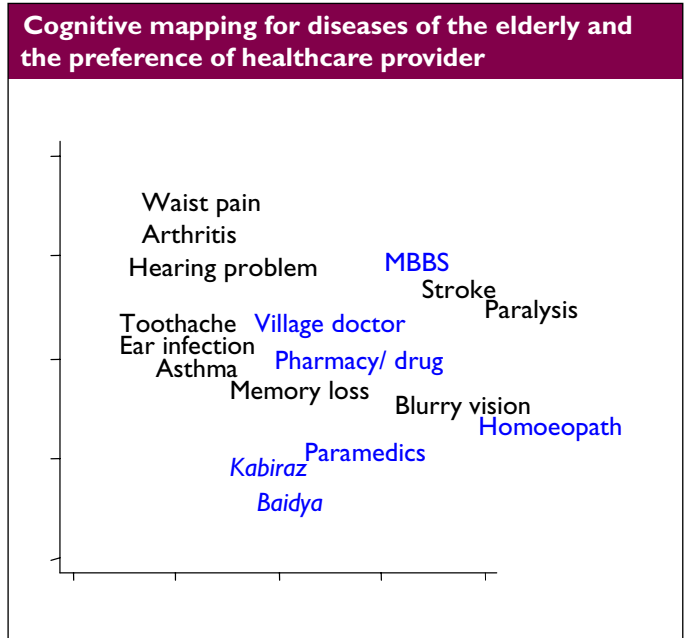
## Health seeking behaviour and role of informal healthcare providers

Cognitive maps based on pile sorting exercises were constructed to explore the patterns and linkages of providers and illnesses. The first diagram demonstrates that for the newborns, the respondents grouped MBBS doctors with jaundice, breathing difficulty, convulsion and pneumonia. Loose motion and skin disease were grouped with village doctors whereas excessive crying was grouped with homoeopathic doctors. For the newborn category, there was a tendency of grouping MBBS doctors with the most severe diseases and village doctors with the not so severe diseases. The paramedics, pharmacy helpers, kabiraz and baidyas were clustered together and these healthcare providers were not associated with any specific disease. Measles, cold and fever of neonates were not grouped with any healthcare provider. It was found that the grouping of healthcare providers varied for childhood diseases. Participants grouped MBBS doctors as well as village doctors with jaundice and cold, even though jaundice was perceived to be the most severe disease for this age group. Homoeopaths were grouped with pneumonia and diarrhoea. Fungal infection and measles were grouped with drug sellers. Again, the paramedics, kabiraz and baidya were grouped together and were not attached to any specific disease. No preferences were indicated for fever, oral ulcer and rickets.

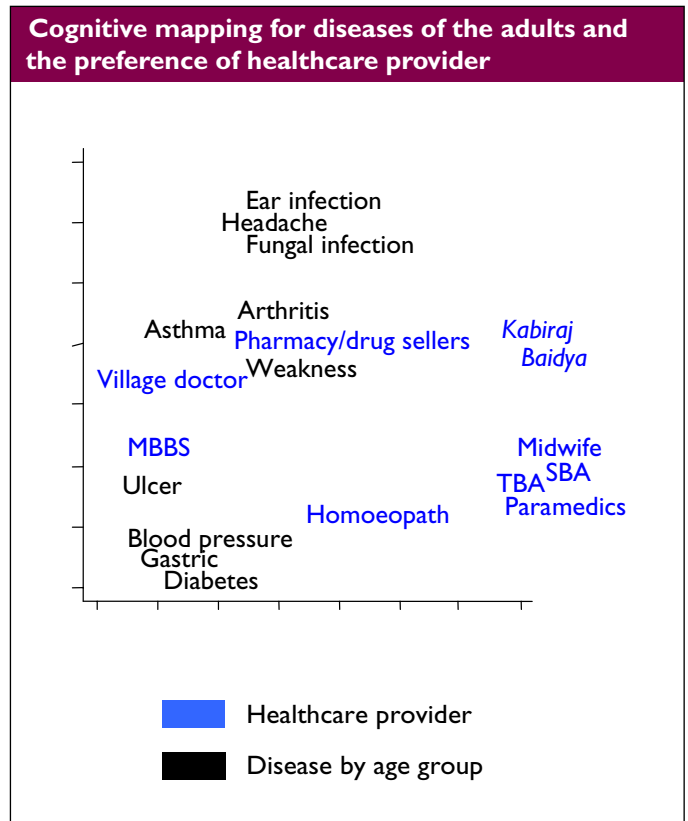
The second diagram displays cognitive mapping for diseases of the adolescent group and the preference for healthcare providers. For this group, MBBS doctors were grouped with malaria, gastric problems, typhoid and jaundice. These are perceived to be the most severe diseases for this age group and thus would require more qualified healthcare providers. On the other hand, village doctors were grouped with the less severe diseases such as fever and pain. Skin diseases, eye infection, tonsillitis and diarrhoea were not grouped with any provider. In order to validate the claim that the villagers decision regarding selection of providers varied according to the age and perception of severity of a particular illness, two more pile sorting exercises were conducted to explore the preference for healthcare providers



Stroke and paralysis, perceived to be the most severe diseases for the elderly, were grouped with MBBS doctors. Toothache, ear infection, asthma and memory loss were grouped with village doctors and drug sellers. Lower back pain, arthritis, and hearing problems for this age group were not grouped with any of the healthcare providers.



for diseases of the adults and the elderly. The results demonstrate that the diseases of the adults such as arthritis, asthma and weakness were grouped with the drug sellers/pharmacies. Ulcer, considered a severe illness, was grouped with the MBBS doctors. High blood pressure, gastric problems, diabetes, ear infection, headache and fungal infection were not grouped with any of the healthcare providers as these diseases were perceived to be untreatable.



Village women at home in Chakaria

## Reasons for choosing village doctors

The previous diagrams demonstrated that both male and female members of the community were quite knowledgeable about the locations of the healthcare providers in the area. Male participants of FGDs were concerned about the fees of the healthcare providers whereas female participants emphasized on the availability of the providers. Generally, the participants in the FGDs preferred the informal healthcare providers, especially village doctors. FGD participants chose a village doctor for several reasons:

- He is available throughout the day
- He is willing to visit the patient at home
- In an emergency he would refer the patients to an appropriate facility
- The consultancy fee is low
- He is well behaved
- Patients can get the medicine and the treatment from the same place
- The prescription is adjusted according to the money available to the patient.

These findings indicate that cost of treatment, availability of the provider and their behaviour towards the patients are important factors that determine popularity of the providers. The above is also supported from findings of the in-depth interviews, where a village doctor mentioned that he has been practicing homoeopathic and allopathic treatment and has received 7 years of training from a local renowned homoeopath doctor. He usually treats common diseases like the common cold, skin diseases, problems during urination and defecation, newborn pneumonia, typhoid, diabetes, paralysis, leucorrhoea, gonorrhoea, sinusitis, dysentery, etc. He collects medicine from different medicine shops and medical representatives of pharmaceutical companies. Usually he does not receive any fees for his treatment, only the price of the medicine. If the patient does not have the ability to pay for the medicine then he exempts the patient from paying. Similarly, another participant talked about a *kabiraz* (herbalist) who lacked any formal training or education but inherited her livelihood from her mother

who came to know about a medicine in a dream. After her mother's death, the herbalist started practicing to help the poor sick people who benefitted from her mother's treatment. "I usually prescribe for hydrocele, hernia, crying child, pneumonia, cough, asthma, etc. giving herbal medicine made by myself. I generally charge 25 Taka (30 US cents) as fees but do not accept payment from those who are extremely poor. Many of my patients pay fees in instalments or in kind." All the elected representatives of the local government agreed that informal healthcare providers are the only option for the poor people. In their opinion, this is because they are more accessible, are available at convenient times and they cost less and if required, they sell drugs and in partial doses. "Rich people can go to the district hospital or faraway places if it is necessary but the poor have no choice. They have to go to the village doctor whether the treatment is appropriate or not." In the in-depth interviews of the Union *Parishad* chairman and members, they mentioned that they do not have any power to control the informal health sector. They rarely complain to the high government officials against the providers. However, they mentioned that they would like to have some authority over the village doctors so that they are made accountable to the villagers.

## Implications

It is apparent that the village doctors are very popular among the villagers for the obvious reasons of being conveniently available with drugs and low cost. It was indicated that the villagers preferred different types of providers for different health problems. The qualitative analysis sheds light on the health seeking behaviour of the community. The villagers think of MBBS doctors when it comes to acute life threatening conditions such as convulsions and pneumonia of newborns. For conditions like loose motion and skin disease, they think of village doctors. The people's representatives have no role in the governance of the healthcare providers; however, they are interested to play a role if there is an opportunity. The perception of the villagers about major diseases was quite consistent with the epidemiological scenario of Bangladesh in general and rural areas in particular.

## Payment for serving the poor through vouchers increases utilization of safe motherhood services in Chakaria, Bangladesh

In an attempt to increase the utilization of safe motherhood services among the poor, a performance based payment system for skilled birth attendants was introduced in six unions of Chakaria Upazila from January 2006. The services were provided by 11 skilled birth attendants (SBA) trained by Gonoshasthya Kendro in a three month long residential training and subsequently on the job training by ICDDR,B physicians through application of problem solving techniques once every month since 1999. Services other than deliveries provided by the SBAs were delivered from seven village health posts established and managed by the community. Pregnant women were required to enroll in the programme by purchasing a pregnancy card for Taka 10 and ANC, PNC and delivery services from the SBAs costing Taka 10, 10, and 200 respectively. Village health committees made provisions for free cards for the poor who were identified by the committee. Around 15%-20% of the women receiving services from the SBAs would receive the services free of charge. Despite this availability of free services for the poor, examination of community based data always revealed a big gap between the better-off and poor, with the better-off using the services far more than the poorer women. Discussions about this inequality in the use of services were held in many participatory workshops with the community members and members of the project staff. Despite these discussions and continuation of the free services for the poor, the situation of inequality did not improve. As an organizational response to correct this inequality, ICDDR,B established a new relation with the SBAs in early 2006. The new relationship made SBAs independent of ICDDR,B employment with the provision that they would be reimbursed for the services they provide to the women from the lowest two asset quintiles as identified through the Health and Demographic Surveillance System (HDSS).



A skilled birth attendant doing an ANC checkup in Chakaria

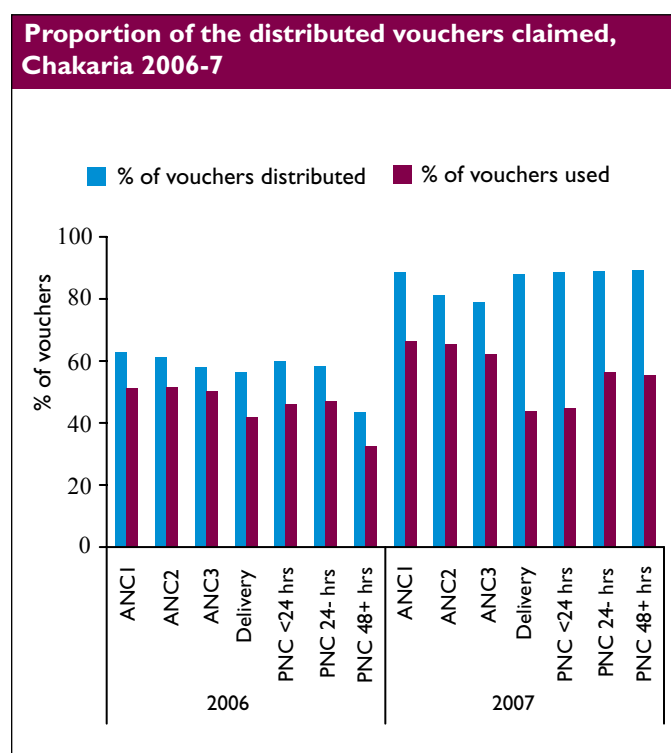
Pregnant women were identified by the SBAs and they were paid Taka 30 for every pregnant woman they enlisted. Using the household asset information obtained by the SBAs, women from the lowest two asset quintiles were identified and ICDDR,B field staff distributed the vouchers (ANC – Taka 20, PNC – Taka 50, delivery by SBA – Taka 300, tear repair – Taka 200, PNC within 24 hours – Taka 40, referral – Taka 330) to pregnant women belonging to the lowest two asset quintiles. SBAs were free to charge for services they provided to the women from the better-off households.

This brief presents the change in the level of utilization of the safe motherhood services among the women from the lowest two asset quintiles since the introduction of the voucher scheme. Some of the operational challenges are also presented.

## Findings

Of the vouchers distributed for various services, the utilization was highest for antenatal care (ANC) services, followed by postnatal care (PNC). The utilization of the vouchers was least for deliveries attended by the SBAs.

of referral data showed a sudden increase in referrals, and especially those to a private clinic reportedly established and owned by the SBAs. Subsequently, the referral fees were renegotiated and a fee for referring to their own facilities was discontinued.



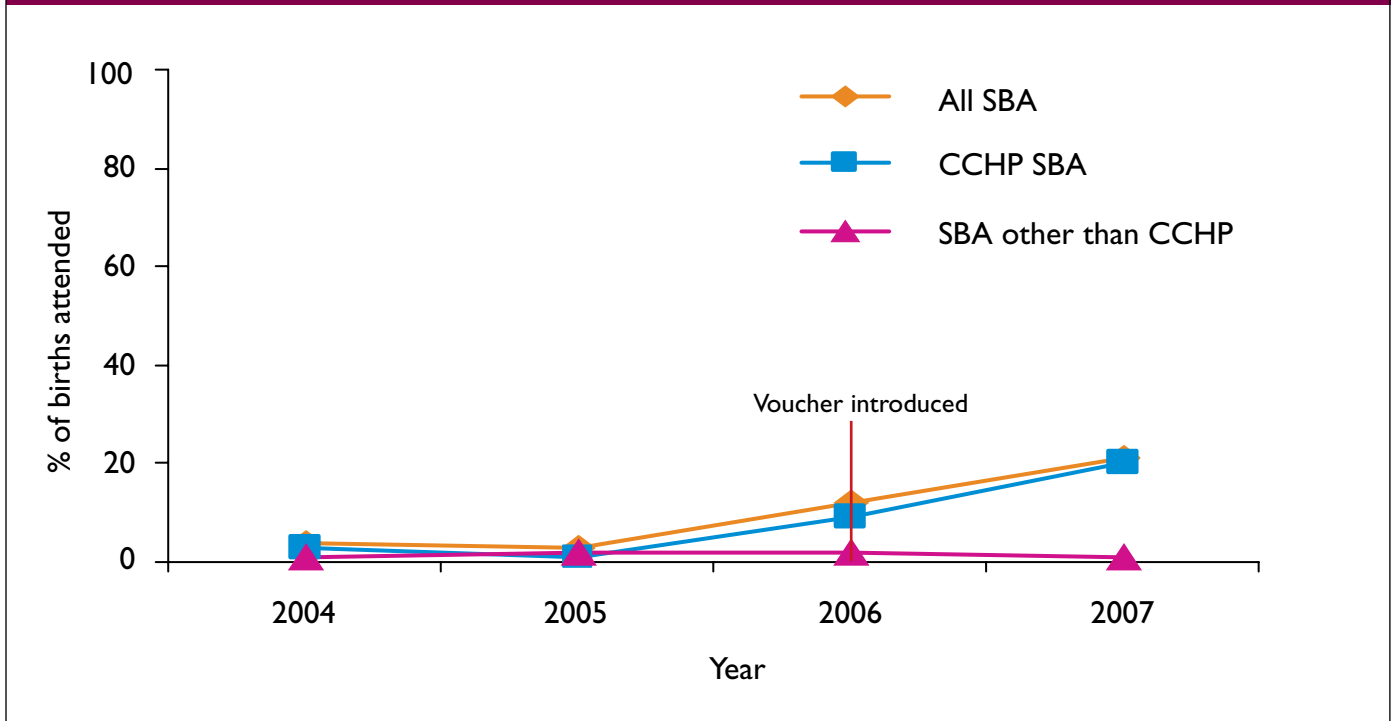
Payment was refused for around 20% of the claims after field verification by the ICDDR,B field staff. The main reasons for rejection included women not acknowledging the services provided claimed by the SBAs and the SBAs not providing ANC and PNC within the agreed time period. A continuous analysis

**Proportion of invalid claims by different safe motherhood services**

Services	Cost of service US\$	Total claims (n)	% Invalid claims
ANC1	0.28	2230	20.0
ANC2	0.28	2261	18.4
ANC3	0.28	2173	18.4
Delivery	4.20	1875	26.6
PNC1 (<24 hours)	0.56	1842	21.9
PNC2 (25-38 hours)	0.72	2043	20.1
PNC3 (49-72 hours)	0.72	1798	18.9
Tear repair	2.90	60	1.7
Referral	4.70	46	13.0
<b>Total</b>	<b>14.64</b>	<b>14,434</b>	<b>20.2</b>

The payment system for providing services to the women from the lowest quintiles increased utilization of services. Further increase of utilization of services was not possible as the number of SBAs was not adequate to serve more women. In addition, deliveries taking place at night were also not attended as much as were deliveries during the day time.

**Proportion of women from lowest two asset quintiles using safe delivery services before and after the introduction of vouchers**



**Lessons learned**

- Payment linked to performance in serving the poor can be implemented to increase utilization of safe delivery services among the poor.
- Performance based payment system has to have a very strong monitoring system to prevent mis-targeting and inappropriate claims.
- Nighttime deliveries at home is a problem area and an enhanced incentive mechanism should be developed to ensure assistance from SBAs.
- Fee for referral may not be enough to ensure referrals to the best available facilities.
- Women receiving vouchers have to be well-informed about the entitlement to services in exchange of the vouchers.

Prepared by Abbas Bhuiya. Source: Iqbal M, Rasheed S, Hanifi SMA, Bhuiya A. 2009 Reaching the poor with performance based payment for safe delivery services in rural Bangladesh. Bulletin von Medicus Mundi Schweiz. 112.

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