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Facilitated Access to Health Facilities for Treatment of Illnesses: Experiences of the Ultra-poor Households in the CFPR/TUP Programme

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Research and Evaluation Division
BRAC Centre, 75 Mohakhali, Dhaka 1212, Bangladesh
E-mail: research@brac.net, Web: www.brac.net/research
Telephone: 880-02-9881265, 8824180-87

For more details about the report please contact: ahmed.sm@brac.net

ABSTRACT

This study explored the management of illnesses requiring treatment at health facilities within past one year by the ultra-poor households in the northern part of the country, and to see whether this differed between ultra poor households with and without CFPR/TUP intervention to any substantial degree. Data from the follow-up survey in 2005 were used in this analysis. Similar trend in management of the illnesses between the intervention and the control households was observed. Hospitalization was required for only 10% of the study population in past one year. Hospitalization was mostly required for illnesses of the gastrointestinal tract such as diarrhoea and dysentery among those under fifteen years of age. That the intervention could increase the use of available facilities in the public sector is shown by greater use of *Upazila* Health Complex by the intervention households. Active role of BRAC community health volunteers (SSs) in this is revealed by greater proportion of them accompanying the patients to health facilities compared to the control area. Very few diagnostic investigations were done before admission in the hospitals. The mean cost of treatment was comparatively less for the intervention households due to reduced service charges by the SS, free consultation, lab tests and medicine at cost prices at BRAC health centres, financial help provided through 'emergency revolving fund' kept at the field office which is later replenished from locally mobilised fund. The implications of these in the context of reducing 'health shock' for the ultra-poor households are discussed.

INTRODUCTION

Microfinance/microcredit programmes of the Non-Government Organisations (NGOs) is documented as an effective and powerful poverty alleviating instrument in Bangladesh (Husain *et al.* 1998, Chowdhury and Bhuiya 2004). These programs extend small loans to poor people, mainly women, for income-generating self-employment and allow them to achieve a better quality of life (Zaman 2000, Hussain *et al.* 1998, Mustafa *et al.* 1996, Rahman 1995). Health interventions supplement its core activities and the success of BRAC micro-credit programme as a health intervention tool is emphasized in the literature (Pitt *et al.* 2003, Bhuiya and Chowdhury, 2002, Nanda 1999, Schuler and Hashemi 1994). This is so because enhancing disadvantaged populations' ability to access quality healthcare at low cost has a potential poverty-alleviating effect. It acts through mitigation of the income-erosion consequences of ill-health (Sen 2003, Hulme 2003). There is also increasing evidence that availability of financial services for the poor households in the form of microcredit/microfinance is also a critical contextual factor with strong impact on the achievement of the MDGs, specifically the overarching target of halving extreme poverty and hunger by 2015 (Littlefield *et al.* 2003).

However, it is now well recognised that regular micro-credit based poverty-alleviation interventions may not be properly suited to the livelihood patterns of the 'ultra-poor'¹ and may in fact have actively excluded them for structural reasons (Halder, and Mosley, 2004). These include various demand-side factors such as poor initial endowment of the household, opportunity costs for attending meetings and income-earning activities, absence of adult male member in the household, and supply side factors such as screening out the potentially risky clients by the programmes (Halder and Mosley 2004, Rahman and Razzaque 2000). This has encouraged BRAC² to test innovative approaches for the extreme poor in recent years (Matin 2002). Experiences gained from working with this population groups in recent years were used to develop a grants-based, customized integrated intervention including health intervention (for mitigating the income-erosion effect of illness) for the ultra-poor named "*Challenging the Frontiers of Poverty Reduction/Targeting Ultra-Poor, targeting social constraints*" (henceforth CFPR/TUP). For details of the programme and the baseline survey conducted prior to its commencement, see BRAC and Aga Khan Foundation, Canada (2004). The current working paper reports on management of illnesses (requiring hospitalization within past one year) by the ultra-poor households, following the end of the first cycle of intervention (July 2002 to December 2003).

¹ **Ultra-poor:** The poorest section among the population with few or no asset base, highly vulnerable to any shock (e.g., natural disaster, death of the main income-earner etc.), and mainly depends on wage-labour for survival. A household labelled as 'ultra-poor', has the following characteristics in any combination: 1) household's land-holding <10 decimals or landless; 2) female headed household and households with divorced/abandoned/widowed women; 3) adult women in the household does manual labour outside homestead for survival; 4) households where male income-earner is physically not able to work regularly; 5) households where children of school going age have to do manual labour; 6) households having negligible assets beyond the homestead they live in. They constitute about 36% of the population in Bangladesh (UNDP 2003).

² BRAC is a microcredit-based non-governmental development organization (NGO) working with the twin objectives of alleviation of poverty and empowerment of the poor. For details, see <http://www.brac.net>

MATERIALS AND METHODS

THE INTERVENTION

Launched in 2002, the first phase of the CFPR/TUP intervention covered all the 21 sub-districts (*Upazilas*) of the three purposively selected famine/flood prone districts (Rangpur, Kurigram, Nilphamari) in northern Bangladesh. From previous poverty mapping, these districts were found to have the highest concentration of extreme poor households in the country (BIDS, 2000).

Initially, villages under *Upazilas* with high concentration of poor households were selected by the programme based on local level knowledge of BRAC field staff. The 'ultra-poor' households were identified by villagers in Participatory Wealth Ranking exercises, verified later in a brief household survey by BRAC field staff against programme set targeting criteria which included both inclusion and exclusion criteria (Table A). The exclusion criteria were mandatory so as to ensure that the households who have been bypassed by all types of development inputs till date are included in the intervention. The selection was cross-checked by senior staff through on-site evaluation, yielding a final list of households (for intervention) from all programme villages under the three districts (Matin, and Halder, 2004).

Table A. Programme set targeting criteria for selecting ultra-poor households

Inclusion criteria (household selected if satisfies at least two)	Exclusion criteria (household excluded if)
Owens less than 10 decimals of land (including homestead land)	Any member of the household has current participation in a micro-credit providing NGO
No productive assets	Any member of the household receives benefit from Government programmes
No adult working man in the household	No physically able adult woman in the household who can put in labour towards the asset transferred
Adult woman selling labour or begging	
Children of school-going age selling labour	

Once selected, the women members of the ultra-poor households were provided with two or more income-generating enterprise options including poultry rearing, livestock, vegetables farming, horticulture nursery and non-farm activities. These were provided as grants along with specialized health and other supports, delivered over a cycle of 18 months (BRAC, 2001).

Experiences have shown that the poor, especially the 'ultra-poor', are often not able to take full advantage of officially free services provided under existing essential health care (EHC) package (maternal health, family planning, communicable disease control, child health and basic curative care) at primary facilities (BRAC, 2001). Reasons identified include lack of access to information (on available services), lack of health awareness ('unfelt need'), lack of opportunity ('exclusion' from social and health institutions) and inability to pay (income poverty). The health component tailored specifically to overcome these barriers and thus served as a safety net against the income-erosion effect of illness.

The details of the CFPR/TUP programme inputs and the health component are shown in Table B and Table C respectively.

Table B. The CFPR/TUP programme components (delivered over a cycle of 18 months) with rationale (BRAC 2004)

Component	Rationale
Integrated targeting methodologies	Effective targeting of the extreme poor
Income generating asset transfer [range: Taka 3,000-9,000 (US\$ 50-150)]	Build economic asset base
Income generation skill training and regular refreshers (e.g., poultry/livestock rearing, vegetable cultivation, shoe-making etc.)	Ensure good return from asset transferred
Technical follow-up of enterprise operations	Ensure good return from asset transferred
Provision of all support inputs for the enterprise	Ensure good return from asset transferred
Monthly stipends for subsistence [range: Taka 10 (US\$ 0.17) daily for 12-15 months]	Reduce opportunity cost of asset operations
Health support	Reduce costly morbidity
Social development (e.g., social awareness and confidence building, legal awareness, social action on early marriage/dowry etc.)	Knowledge and awareness of rights and justice
Mobilization of local elite for support (pro-poor advocacy through seminar, workshop, and popular theatre)	Create an enabling environment

Table C. Health support under the CFPR/TUP programme with rationale (BRAC 2004)

Component	Rationale
Essential Health Care (EHC)* package, installation of sanitary latrines and tube-wells free of cost	Developing health awareness, change 'unfelt need' to 'felt need' and control disease transmission
Consumer information package on locally available health services	To overcome information barrier
Identity Card for facilitated access to health services	To overcome barrier due to social exclusion and promote use of formal health services
Financial assistance for costly morbidity (e.g., illness requiring in-patient treatment or costly lab tests) from fund mobilized by programme and community	To overcome financial barrier
Intensive supervision and assistance from community health volunteers (CHVs) and health staff to avail services; developing referral network for severe illnesses	To optimize opportunity cost of accessing and attending healthcare services

*health and nutrition education, child immunization, pregnancy care, basic curative care for common illnesses at cost prices (or free of cost if unable to pay), and delivery of DOTS (Directly Observed Treatment, Short course) for TB (Tuberculosis) patients

SAMPLING

For the baseline survey conducted during July-September 2002, one-third of the programme villages under each *Upazila* were selected by systematic random sampling i.e., every third village was selected from a list of all villages in a particular *Upazila* (ref). Sample size calculation found this proportion of villages to yield adequate number of households for studying most of the variables of interest requiring a precision of ± 5 percentage units for 95% confidence interval (e.g., immunization status of children < 2 yrs). Thus, all ultra-poor households in these villages receiving asset grants and other intervention inputs in 2002 comprised our 'intervention' households (n=2788). Approximately an equal number of 'control' households (n=2838) were recruited by simple random sampling from the pool of ultra-poor households in the same villages not receiving intervention inputs (due to exclusion criteria) from the CFPR/TUP programme. A follow-up survey of these baseline households

was done during July-September 2005 after the completion of the 18-month intervention cycle and a grace period of about 18 months. The response rate at follow-up was 98%, the few drop outs were due to attrition from death and migration. Data from the follow-up survey in 2005 related to illnesses requiring hospitalization in the past one year were used in this analysis.

DATA COLLECTION

Data were collected for those who required admission in static health facilities for treatment of illness. The referral period for data collection was past one year. Pre-tested structured questionnaires were used in face-to-face interview for data collection, following informed consent of the respondent. Demographic and socioeconomic data were furnished by household head (who may or may not be the TUP member herself) while data on chronic illnesses requiring hospitalization were furnished by the TUP member herself.

VARIABLES

The background variables in the study included the *age*, *sex* (male or female), *household headship* (male or female), *formal schooling* (completed years of schooling), *main occupation of the household head* and household socioeconomic status (SES). The SES was measured by *self-rated poverty status*. *Main Occupation* was defined as the activity in which the household head spends the major part of the working day. *Poverty status* was determined by eliciting the perception of the household head about the economic capacity of the household to provide at least two square meals a day for all its members in the past one year. This self-assessment tool has been found to be a valid indicator of household socioeconomic stratification in rural Bangladesh (Sen 2001). Thus, households were categorized as being in "chronic deficit" (running in deficit most of the year), "occasional deficit" (running episodic or seasonal deficit) or "non-deficit" (running in a state of break-even or having a small surplus).

Data on illnesses requiring hospitalization during the recall period (one year) was elicited by asking the respondents to describe the symptoms of illnesses in her/his own language which were classified later into "types" of illnesses with a pre-tested coding system used in BRAC for morbidity studies and cross-checked by a physician (first author). This exercise yielded a *morbidity profile* of the patients. Information regarding *duration of illness*, *place of hospitalization*, *investigations* and *operation* were collected with respect to this specific illness. Finally, *total cost of treatment* comprising direct (admission fee, lab tests, physician's fee, medicine) and indirect costs (transport, food, and others) was collected and the *source of expenditure* on illness was recorded.

Over the last decades, subjective evaluation of health has been found to be a valid, reliable and cost-effective means of health assessment. Lessons learned over the years show that, on average, 'the patient (or individual) point of view is valid' and also, 'even very brief measures can be used to measure differences in health across groups or patients' (Ware 1990) and also a simple global question asking patients to rate their overall health status on a scale from 'excellent to very poor' can provide a useful summary of how patients perceive their overall health status and a powerful predictor of clinical outcome and mortality (Fayers and Sprangers 2002). We used two such questions to elicit *perceived self-health* of the respondents.

ANALYSIS OF DATA

Data were analysed using SPSS ver 11.5. Bivariate analysis was done to characterise differences between the intervention and the control groups.

RESULTS

SELF-HEALTH

We begin with the assessment of self-health by individual women respondents who are also the participants in the CFPR/TUP programme. Majority of the women (56%) assessed their current health status as 'good', from both the groups (Table 1). However, only around one-third of the women (around 32%) perceived their health to be better than past year. When self-health was decomposed according to self-rated poverty status, an association between perceived good health (current and during last one year) and improved poverty status was observed among both the groups (Table 2).

Table 1. Assessment of self-health by woman member of the CFPR/TUP programme %

	Ultra-poor Households	
	Intervention	Comparison
Self-rated current health status		
Good	56.4	56.4
Fair	20.6	20.0
Not good/bad	23.1	23.6
Self-rated health transition from last year		
Better	35.4	28.1
Unchanged	30.1	33.9
Worse	34.5	38.0
N	2459	2980

Table 2. Assessment of self-health by woman member of the CFPR/TUP programme by poverty status in last one year %

	Ultra-poor Households			
	Intervention		Comparison	
	Chronic deficit	Occasional /no deficit	Chronic deficit	Occasional /no deficit
Self-rated current health status				
Good	41.9	53.2	34.7	50.3
Fair	19.2	22.1	23.7	23.5
Not good/bad	39.0	24.6	41.5	26.2
Self-rated health transition from last year				
Better	19.2	33.4	18.1	26.7
Unchanged	37.2	29.8	30.3	31.0
Worse	43.6	36.8	51.6	42.2
N	172	836	337	374

MORBIDITY PREVALENCE AND DETERMINANTS

Prevalence of morbidity requiring hospitalization was found to be around 10% in both the groups (Table 3). The prevalence was higher among children and adolescents and it decreased with age in both the groups. Greater morbidity prevalence was associated with sex of the patient (two-times more if female) as well as sex of the household head (more if male), formal schooling of household head (more if schooling is >5 years), self-rated poverty status (more if from chronically deficit household) and location (more if from Nilphamari district) irrespective

of household groups. No consistent relationship was found with the occupation of the household head.

Table 3. Prevalence of illness (requiring hospitalization in last one year) among study population by selected background characteristics %

	Ultra-poor Households			
	Intervention		Comparison	
All	11.0		10.4	
N	2503		3063	
Age (years)	%	N	%	N
< 5	100.0	23	100.0	39
5 - 14	100.0	37	95.2	100.0
15 - 49	9.9	1606	9.2	2029
50 - 59	7.6	422	7.4	459
> 60	6.0	415	4.0	494
Sex				
Male	7.7	1381	6.9	2202
Female	15.2	1122	19.5	861
Household headship				
Male	12.4	1403	11.5	2273
Female	9.3	1100	7.5	790
Formal schooling of household head (years)				
None	10.6	2169	10.0	2408
1 - 5	13.3	240	11.5	451
>5	22.2	54	14.6	144
Main occupation of household head				
Wage-labour	10.7	1257	11.2	1869
Self-employment	17.2	268	8.6	442
Domestic chores	2.4	42	5.4	130
Others	10.1	934	10.6	616
Self-rated poverty status of household*				
Chronic deficit	6.8	324	4.9	820
Occasional deficit	3.9	1259	3.4	1533
No deficit	4.3	747	3.2	498
Location of household				
Rangpur	10.5	772	8.9	910
Nilphamari	14.7	818	13.7	926
Kurigram	8.2	913	9.1	1227

*based on food security

Table 4. Profile of illness (requiring treatment at health facilities in last one year) among study population by sex %

	Ultra-poor Households					
	Intervention			Comparison		
	M	F	All	M	F	All
Morbidity profile*						
Fever	14.2	9.4	11.2	9.2	6.0	7.5
Gastrointestinal illnesses	48.1	48.9	48.6	44.1	58.3	51.6
Body aches/rheumatism	22.6	40.6	33.7	19.7	29.8	25.0
Respiratory tract illnesses	14.2	4.7	8.3	17.1	10.1	13.4
Generalized weakness	8.5	14.7	12.3	7.9	9.5	8.8
Skin/eye/ENT illnesses	9.4	4.1	6.2	8.6	4.2	6.3
Reproductive tract/pregnancy related illnesses	0.9	10.0	6.5	2.0	10.1	6.3
Others	27.5	31.9	29.9	35.5	28.6	31.9
N	106	170	276	152	168	320

*multiple response considered

MORBIDITY PROFILE

The most common illness for which the patients were hospitalized was gastrointestinal illnesses (50%) such as diarrhoea and dysentery, hyperacidity and other digestive disorders (Table 4). The next common illness was related to pain and aches in the body/rheumatism (around 30%). No difference was seen between the two groups of households. Interestingly, body aches/rheumatism and Generalized weakness were much more common among the women (around 35%) compared to men (around 21%), in both the groups. On the other hand, fever and illnesses related to skin, eye, ENT was more among men (12% and 9% respectively) compared to women (7% and 4%), independent of household groups (Table 4). When disaggregated by age, gastrointestinal illnesses was most commonly found to be concentrated among those under fifteen years of age (60-70%) while respiratory illnesses among the under-fives (30-50%), in both areas (Table 5). Also, the elderly (≥ 60 years) who were hospitalized suffered mostly from body aches/rheumatism and respiratory illnesses.

Table 5. Profile of illness (requiring treatment at health facilities in last one year) among study population by age groups %

	Intervention				
	<5 yrs	5-14 yrs	15-49 yrs	50-59 yrs	≥60 yrs
Fever	4.3	18.9	11.3	9.4	8.0
Gastrointestinal illnesses	69.6	62.2	42.8	62.5	28.0
Body aches/rheumatism	4.3	16.2	39.0	46.9	36.0
Respiratory tract illnesses	30.4	5.4	3.8	15.6	12.0
Generalized weakness	4.3	8.1	14.5	18.8	4.0
Skin/eye/ENT illnesses	8.7	8.1	4.4	12.5	4.0
Reproductive tract/ pregnancy related illnesses	0.0	2.7	10.1	0.0	4.0
Others	21.7	24.3	28.3	15.6	48.0
N	23	37	159	32	25
	Comparison				
Fever	33.3	2.5	3.2	0.0	20.0
Gastrointestinal illnesses	74.4	90.0	44.4	29.4	35.0
Body aches/rheumatism	2.6	10.0	29.9	32.4	40.0
Respiratory tract illnesses	51.3	7.5	7.0	8.8	20.0
Generalized weakness	2.6	5.0	10.7	2.9	20.0
Skin/eye/ENT illnesses	5.1	2.5	6.4	5.9	15.0
Reproductive tract/ pregnancy related illnesses	0.0	2.5	9.1	5.9	0.0
Others	15.4	20.0	38.0	41.2	15.0
N	39	40	187	34	20

MANAGEMENT OF ILLNESS

Most of the patients requiring treatment in the hospital suffered from illnesses of less than a week's duration (59%) (Table 6). Patients were mostly accompanied by relatives/neighbours (less in the intervention group) and parents (around 28%) mostly; Only in 17% of cases they were accompanied by spouses. In the intervention group, BRAC health workers (SS, PO) accompanied around 20% of the patients compared to only 6% in case of the comparison group.

Table 6. Duration of illness (requiring treatment at health facilities in last one year) among study population and person accompanying the patient to health facilities %

	Ultra-poor Households	
	Intervention	Comparison
Duration of illness		
Less than one week	59.1	59.7
One to two weeks	19.2	18.4
More than two weeks	21.7	21.9
Person accompanying patient		
Relative/neighbour	30.4	40.3
Parents	28.3	28.8
Spouse	16.3	18.1
BRAC Health worker	19.6	6.3
Brother/sister	6.9	9.7
Others	14.8	11.4
N	276	320

Majority of the patients were admitted in the *Upazila* Health Complex (UHC) Hospital (around 58%) followed by the District Hospital (around 29%) (Table 7). A gender difference

was seen when proportionately more men were admitted in the UHFWC and more women in the UHC, in both groups. However, no difference in admission was observed in case of District hospitals. While majority of the elderly patients were admitted in the district hospitals in the comparison group, the majority in intervention group were admitted in the UHC hospital.

Patients with GI illnesses were mostly admitted in the UHFWC followed by the UHC and District hospitals in the intervention group (Table 8). On the other hand, patients with respiratory tract illnesses from the comparison group were mostly admitted in the UHFWC and those with GI illnesses were mostly admitted in the UHCs. Patients with Skin/Eye /ENT illnesses relied mostly on the specialised hospitals and private clinics/doctors, in both groups.

Table 7. Management of illness (requiring treatment at health facilities in last one year) among study population by sex and age %

Place of hospitalization	Ultra-poor Households					
	Intervention			Comparison		
	M	F	All	M	F	All
Union Health and Family Welfare Centre (UHFWC)	5.7	3.5	4.3	3.9	0.6	2.2
Upazila Health Complex (UHC)	59.4	62.4	61.2	52.0	60.1	56.3
District Hospital	25.5	27.1	26.4	33.6	32.1	32.8
Others	9.4	7.1	8.0	10.5	7.1	8.8
N	106	170	276	152	168	320

Place of hospitalization	Intervention				
	<5 yrs	5-14 yrs	15-49 yrs	50-59 yrs	≥60 yrs
	Union Health and Family Welfare Centre (UHFWC)	4.3	5.4	1.9	12.5
Upazila Health Complex (UHC)	56.5	67.6	61.6	53.1	64.0
District Hospital	21.7	13.5	30.2	31.3	20.0
Others	17.4	13.5	6.3	3.1	8.0
N	23	37	159	32	25

Place of hospitalization	Comparison				
	<5 yrs	5-14 yrs	15-49 yrs	50-59 yrs	≥60 yrs
	Union Health and Family Welfare Centre (UHFWC)	2.6	2.5	1.6	2.9
Upazila Health Complex (UHC)	53.8	60.0	55.6	70.6	35.0
District Hospital	25.6	32.5	34.2	26.5	45.0
Others	17.9	5.0	8.6	0.0	15.0
N	39	40	187	34	20

Table 8. Management of illness (requiring treatment at health facilities in last one year) among study population by morbidity profile %

	Place of Hospitalization			
	UHFWC	UHC	Dist. Hosp.	Others
	Intervention			
Fever	16.7	10.7	13.7	4.5
Gastrointestinal illnesses	91.7	52.7	37.0	31.8
Body aches/rheumatism	33.3	33.1	31.5	45.5
Respiratory tract illnesses	8.3	7.1	9.6	13.6
Generalized weakness	8.3	11.2	19.2	0.0
Skin/eye/ENT illnesses	8.3	3.6	6.8	22.7
Reproductive tract/ pregnancy related illnesses	0.0	7.1	5.5	9.1
Others	8.3	26.6	37.0	13.6
N	12	169	73	22
	Comparison			
Fever	0.0	6.7	7.6	14.3
Gastrointestinal illnesses	14.3	67.8	33.3	25.0
Body aches/rheumatism	28.6	22.8	31.4	14.3
Respiratory tract illnesses	71.4	12.8	12.4	7.1
Generalized weakness	0.0	9.4	9.5	3.6
Skin/eye/ENT illnesses	0.0	3.3	6.7	25.0
Reproductive tract/ pregnancy related illnesses	0.0	4.4	9.5	7.1
Others	14.3	26.1	38.1	50.0
N	7	180	105	28

Interestingly, in majority of cases no diagnostic investigation (around 60%) was done before admission (Table 9). Routine tests of stool, urine, blood were done only in around 15-20% of patients. On average, around 9% of the patients required operation, the proportion being marginally higher among the comparison group. In the Intervention group, the proportion of patients operated was three times more among the better-off households compared to the chronic deficit households. No such difference was seen in case of the comparison group. The patients were highly satisfied with the treatment received at the hospitals.

COST OF TREATMENT

The mean cost of treatment was significantly higher in the comparison group (Table 10). The proportion spending less than Tk 2000 was more for those from the intervention group while the proportion spending more than Tk 2000 was more for those from the comparison group. Major part of this expenditure was financed by self in both groups, but BRAC was an important source (19%) for the intervention group. The contribution of credit for expenditure on illness was found very less, especially for the intervention group (7%) compared to the Comparison group (11%).

Table 9. Investigations and operations done for treatment of illness (requiring treatment at health facilities in last one year) among study population %

	Ultra-poor Households					
	Intervention			Comparison		
Investigations done						
No test done		62.0			57.2	
X-ray		17.8			22.5	
Blood		18.8			17.2	
Urine		13.8			12.8	
Stool		10.9			12.8	
Cough		5.4			5.3	
Others		5.2			4.9	
	M	F	All	M	F	All
Operation done	9.4	6.5	7.6	9.9	10.1	10.0
N	106	170	276	152	168	320
	Self-rated poverty status of household					
	Chronic deficit	Occasional /No deficit	Chronic deficit	Occasional /No deficit		
Operation done	4.5	14.8	12.5	11.8		
N	22	81	40	68		
Satisfaction with treatment received	91.7			89.1		
N	276			320		

Table 10. Cost of treatment for illness (requiring treatment at health facilities in last one year) among study population and source of expenditure %

	Ultra-poor Households	
	Intervention	Comparison
Total Cost of treatment (Taka)		
≤ 250	35.1	31.9
251 – 500	18.1	12.5
501 – 1000	17.0	15.6
1001 – 1500	11.2	8.8
1501 – 2000	6.2	5.6
2001 – 3000	4.7	9.7
3001 – 5000	3.6	8.8
>5000	4.0	7.2
Mean	1105.6	1776.10
Source of expenditure on illness		
Self	51.1	43.1
BRAC	19.2	0.3
Spouse/sons and daughters	13.8	20.6
Friend/neighbour	8.3	18.8
Credit	6.9	11.3
Others		
N	276	320

DISCUSSION

This study explored the management of illnesses requiring treatment at health facilities within past one year, and to see whether this differed between ultra poor households with and without CFPR/TUP intervention to any substantial degree. In general, similar trend in management of illnesses between the two groups was observed. It is interesting to speculate about the possible reasons underlying this secular trend. The control households were recruited from the same neighbourhoods/villages as the intervention households. Contamination of the control group through spill-over effects, especially with respect to curative treatment at public health facilities by removing information and social barriers, could not be ruled out. Other factors like improvement in the responsiveness of public health services possibly set into motion by intensive advocacy work of the intervention (Hossain and Matin, 2004), might have increased the control household's access to health facilities. Qualitative studies could further explore these underlying reasons.

Hospitalization was required for only 10% of the study population in past one year, which can be considered modest, taking account of the disease burden in the community (BRAC and AKF Canada 2004). Hospitalization was mostly required for illnesses of the gastrointestinal tract such as diarrhoea and dysentery among those under fifteen years of age. This raises the issue of preventive intervention in the field of water and sanitation for reducing diarrhoeal illnesses among the rural poor. The CFPR/TUP programme is already working on this and installing latrines and building sanitary latrines for the ultra poor households free of cost (BRAC 2001). The cost for installations is covered by BRAC and fund mobilised from the community through poverty alleviation committee (*Daridra Bimochon Committee*) ---an organisation of the village elites grown out of pro-poor advocacy of CFPR/TUP programme. as a support group for the ultra poor. BRAC also tests water of these tube-wells for the presence of arsenic free-of-cost.

Increased utilization of UHC also points to its importance as a major source of curative in-patient care in the rural areas. That the intervention could increase the use of available facilities in the public sector is shown by greater use of UHCs by the intervention households compared to control households. Active role of BRAC community health volunteers (SSs) in this is revealed by greater proportion of them accompanying the patients to health facilities compared to the control area. It is interesting to note that very few diagnostic investigations were done before admission in the hospitals. If followed appropriately, this could have reduced the requirements for hospitalization substantially.

The mean cost of treatment was comparatively less for the intervention households. This may be due to various programme activities undertaken to overcome financial, informational and socio-cultural barriers for facilitated access to formal health facilities. These include reduced service charges by the SS, free consultation, lab tests and medicine at cost prices at BRAC health centres (*Susasthya*), financial help provided through 'emergency revolving fund' kept at the field office which is later replenished from fund mobilised from local resources and so on (BRAC 2001). In the absence of any risk pooling mechanisms and pre-payment schemes in rural Bangladesh, these facilitating tools can be used for increasing access of the poorest and other similarly disadvantaged groups to formal health facilities for treatment of costly morbidities. This will help to avoid 'catastrophic health expenditure' (Xu *et al.* 2003) and therefore, 'iatrogenic poverty' (Meesen *et al.* 2003).

Implications for programme

- Efforts to improve quality of services at the *Upazila* level (public and private) to minimize the income-erosion effect of illness (especially those requiring hospitalization) and thus reduce 'health shock'
- Ensuring optimum utilization of sanitation facilities by ultra-poor households through participatory awareness building and health education on personal and domestic hygiene
- Aggressive diagnostic investigations at AO level by panel doctors to ensure proper treatment and referral
- Explore innovative ways for risk-pooling and pre-payment schemes to reduce catastrophic health expenditure for the ultra poor households

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