

**PATTERN OF MEDICAL CARE FOR DIARRHEAL PATIENTS  
IN DACCA URBAN AREA**

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PATTERN OF MEDICAL CARE FOR DIABETICAL PATIENTS  
IN DACCA URBAN AREA

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## INTRODUCTION

The Cholera Research Laboratory (CRL) operates under a bilateral project agreement between the government of Bangladesh and the United States of America. Research activities of CRL center on the inter-relationships between diarrheal disease, nutrition, fertility and their environmental determinants. CRL issues two types of papers: scientific reports and working papers which demonstrate the type of research activity currently in progress at CRL. The views expressed in these papers are those of authors and do not necessarily represent views of the Cholera Research Laboratory. They should not be quoted without the permission of the authors.

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ABSTRACT

This study was conducted during 1974, '75 and '76. It was our interest to find out how people utilise the medical facilities available in the urban area, the types of people they consult and the amount spent per patient before coming to the Cholera Research Laboratory (CRL) for treatment.

Among the cholera patients, 73.7% came directly to CRL without consulting anyone. Homeopaths were fairly commonly consulted for treating cholera in children but adults consulted qualified physicians frequently. Shigellosis cases were treated more commonly outside (58%) than cholera (26.3%).

According to priority, tablets, mixtures, and capsules were prescribed for these patients. Only 2.3% of patients were treated with saline before coming to CRL though most of them were infused saline in CRL.

The average cost for treating a diarrhoea case was Tk.12.50 for those who sought treatment outside. Including all those who did not seek treatment outside, it was Tk.4.70 only. The amount spent by people of different income groups was proportional to their income though apparently it was higher for higher income groups.

As only 3.7% of the diarrheal patients attended the free city hospitals (other than C.R.H.), these do not appear to be attractive to the people in general. The qualified physicians have to compete with the cheap homeopaths, pharmacists, quacks and the existing attitude in delivering their scientific allopathic medical care to the people.

## INTRODUCTION

Medical facilities are limited in Bangladesh. Most of the hospitals, medical institutions and pharmacies are located in the urban areas where only nine percent of the total population of the country resides. There are both qualified physicians and non-qualified quacks available in all areas of Dacca city. The people can either use the free hospitals run by the Government or they can consult any private practitioner. The attitude and the ability of the urban people in availing of the medical facilities for treating diarrheal illness are not known. To understand the pattern of medical care the city people undertake before coming to the CRL for treatment of diarrheal illness, we initiated the following investigation in 1974. The Cholera Research Laboratory is the principal facility in Dacca for treatment of diarrheal illness, although diarrhea cases are treated by as many as seven large hospitals in Dacca.

## METHODOLOGY

We based our study on CRL indoor and outdoor department (OID) patients. The patients were selected on the basis of (a) willingness to cooperate, (b) staying within the metropolitan area, (c) had been admitted in the CRL ward or treated in the OID,

(d) had a rectal swab (R.S.) taken for culture and (e) the detailed information being available from the patient or his/her attendant. There were 776 male and 869 female diarrheal cases in the study of whom 1,588 were selected from the indoor and 57 from OPD from October, 1974 through December, 1976. The patients were questioned about the medical care they received before coming to the ORL, which included the types of hospitals and physicians they consulted, the types of medicines used and the amount spent for the doctors and medicines. The monthly income of each family was also recorded. The interviews were conducted by trained field workers and uniform questionnaires were filled in within some hours of their arrival to the hospital. Standard ORL techniques were used for isolation of pathogens from the rectal swabs. The culture results were later incorporated in the questionnaire form.

#### RESULTS

Table 1 shows the age and sex of cholera, shigellosis and non-specific diarrhea cases interviewed. The total number of cases interviewed was 1,645 out of which there were 1,044 cholera, 112 shigella and 489 non-specific diarrhea cases. The age and sex distribution were nearly identical to the distribution of the population in general. Of patients interviewed, 47% were male and 53% female.

TABLE I

## AGE AND SEX OF PATIENTS INTERVIEWED (1974 - 1976)

Age	Male				Female				Gr. Total	Total Percent
	Cholera	Shigella	Others	Total	Cholera	Shigella	Others	Total		
0-4	87	18	93	198	71	22	64	157	355	21.5
5-9	131	11	30	172	101	3	23	127	299	18.2
10-19	115	5	24	144	96	7	29	132	276	16.8
20-49	107	15	80	202	280	21	110	411	613	37.3
50+	34	5	21	60	22	5	15	42	102	6.2
TOTAL	474	54	248	776	570	58	241	869	1645	100.0
PER-CENT	28.8	3.3	15.0	47.2	34.7	3.5	14.7	52.8	100.0	

Table 2 shows the places or persons from whom medical care was sought for cholera cases before coming to the CML ward. Overall 26.3% of cases sought medical advice from some medical or allied personnel prior to coming to the CML. Among those, seeking care elsewhere, 3.7% of the cases were either treated by or taken to hospitals, 33.9% to qualified physicians, 20.8% to pharmacists,



TABLE 2

OUTSIDE CONSULTATIONS FOR CHOLERA

Age/Sex	Hospitalized	Physician	Pharmacy	Kabiraj	Homeopath	Quack	Other	Multiple Consult	Consulted		Not Consulted						
									No.	%	No.	%					
0-4 M	4	7	7	1	10	2	4	1	34	38.2	55	61.8					
F	-	5	6	-	7	1	1	1	19	27.1	51	72.9					
M+F	4	12	13	1	17	3	5	2	53	33.3	106	66.7					
5-9 M	-	9	6	1	14	3	4	1	36	27.3	96	72.7					
F	1	8	5	1	3	1	1	2	18	18.0	82	82.0					
M+F	1	17	11	2	17	4	5	3	54	23.3	178	76.7					
10-19 M	-	11	7	-	5	6	-	3	26	23.6	84	76.4					
F	1	10	7	-	2	3	4	2	25	25.0	75	75.0					
M+F	1	21	14	-	7	9	4	5	51	24.3	159	75.7					
20-49 M	-	11	3	-	6	2	2	2	22	21.4	81	78.6					
F	3	31	15	1	10	13	7	1	79	38.7	204	72.0					
M+F	3	42	18	1	16	15	9	3	101	35.4	285	73.8					
50+ M	-	3	3	1	2	1	1	-	11	32.3	23	67.7					
F	2	1	1	-	-	-	-	-	4	18.2	18	81.8					
M+F	2	4	4	1	2	1	1	-	15	26.8	41	73.2					
Total M	4	41	26	3	37	14	11	7	129	27.6	339	72.4					
F	7	55	34	2	22	18	13	6	145	25.2	430	74.8					
M+F	11	96	60	5	59	32	24	13	274	26.3	769	73.7					
									%	3.7	33.9	20.8	1.8	20.4	11.4	8.4	4.7

1.8% to "Kabirajs", 20.4% to homeopaths, 11% to non-qualified allopathic medical practitioners (quacks) and 8.4% to all other non-allopathic medical practitioners. The other cases directly came to ORL without consulting anyone. Children up to the age of nine were commonly taken to homeopaths for treating choleric diarrhea. For patients of the age groups 10 and over, physicians were consulted more often than other types of consultants. In 20.8% of the cases, pharmacists, and 11.4% of the cases "quacks" were consulted for treatment of cholera cases. The percentage of total consultation were alike except for the patients of ages between 50-59. In this group, the percentage seeking consultation (17.6%) was less than the average (26.3%). The rate of consultation outside ORL was less for females (58.8%) than for males (67.5%). Over four percent of the people consulted more than one source.

Table 3 shows the persons or places consulted for shigellosis cases. Among those who sought treatment of shigellosis, three percent of the patients were taken to hospitals, 41.4% to qualified physicians, 31.0% to Pharmacists, 4.3% to "Kabirajs", 13.1% to homeopaths, 3.0% to "quacks" and 4.3% to all other. In all, 58% of the patients consulted someone and 42% did not consult anyone. Nearly three percent

TABLE 3

## OUTSIDE CONSULTATIONS FOR SHIGELLA

Age/Sex	Hospitalised	Physician	Pharmacy	Kabiraj	Homeopath	Quack	Others	Multiple Consult	Consulted		Not Consulted	
									No.	%	No.	%
0-4 M	-	6	4	1	3	-	-	-	14	82.4	3	17.6
F	-	5	4	1	4	-	-	-	14	60.9	9	39.1
M+F	-	11	8	2	7	-	-	-	28	70.0	12	30.0
5-9 M	1	2	1	-	1	-	-	-	5	41.7	7	58.3
F	-	-	1	-	-	-	1	-	2	66.7	1	33.3
M+F	1	2	2	-	1	-	1	-	7	46.7	8	53.3
10-19 M	-	-	2	-	-	-	-	-	2	40.0	3	60.0
F	-	1	2	-	1	-	-	-	4	57.1	3	42.9
M+F	-	1	4	-	1	-	-	-	6	50.0	6	50.0
20-49 M	-	8	3	-	-	2	-	1	12	75.0	4	25.0
F	1	4	4	1	-	-	2	1	11	55.0	9	45.0
M+F	1	12	7	1	-	2	2	2	23	63.9	13	36.1
50+ M	-	1	-	-	-	-	-	-	1	20.0	4	80.0
F	-	1	-	-	-	-	-	-	2	33.3	4	67.7
M+F	-	2	-	-	-	-	-	-	2	20.0	8	80.0
Total M	1	17	10	1	4	2	-	1	34	61.8	21	38.2
F	1	11	11	2	5	-	3	1	32	55.0	26	45.0
M+F	2	28	21	3	9	2	3	2	66	58.4	47	41.6
% Hospitalised		3.0	41.4	31.0	4.3	13.1	3.0	4.3	3.0			

of cases visited more than one consultant before coming to the ORL ward. The rate of consultation for patients aged 0-4 was 70; and for other ages, the rates were around average, except among older people, when the rate was lower.

Table 4 shows the consultation pattern for unknown diarrhea cases. From this group, 6.4% of the patients were taken to hospitals, 34.4% to qualified physicians, 24.0% to pharmacists, 3.4% to "Kabirajs", 18.9% to homeopaths, 3.3% to quacks and 9.5% to all other. In all, 47.6% of the patients consulted someone before coming to the ORL ward. The rate of consultation is more or less identical (47.6) in all age groups. The exception was the females aged 20-39 in which only 38.5% sought consultation. Nearly 9% of the patients consulted more than one person.

Table 5 shows the types of medicines prescribed and their rate of use outside ORL for treating different types of diarrhea. Taking medicine does not, however, mean a medical consultation for these cases. Of the drugs used, 15.5% were tablets (Sulfaguanidine), 11% mixtures, 8% capsules (Tetracycline), 7% Pulves, 7% coconut (dab) water, 2.5% amulets, 2.2% saline and 6% other medicines. Over 60% of the patients who used a medicine took more than one. Other medicines included injections, herbs and water blessed by priests, etc.

TABLE 4

## OUTSIDE CONSULTATIONS FOR UNKNOWN DIARRHEA

Age/Sex	Hospitalized	Physician	Pharmacy	Kabiraj	Homeopath	Quack	Others	Multiple consultation	Consulted		Not Consulted	
									No.	%	No.	%
0-4 M	2	22	7	3	16	1	6	9	48	52.2	44	47.8
F	5	13	5	-	13	2	3	5	36	37.5	30	32.5
M+F	7	35	12	3	29	3	9	14	84	53.2	74	46.8
5-9 M	2	5	5	1	1	-	2	-	16	55.2	13	44.8
F	2	3	5	-	3	-	1	-	14	63.7	8	36.3
M+F	4	8	10	1	4	-	3	-	30	58.8	21	41.2
10-19 M	-	2	1	-	4	1	2	-	10	40.0	15	60.0
F	1	3	5	-	1	1	2	1	12	78.6	16	21.4
M+F	1	5	6	-	5	2	4	1	22	41.5	31	58.5
20-49 M	1	18	12	3	2	2	2	3	37	48.0	40	52.0
F	2	17	14	1	7	-	4	1	44	40.0	69	60.0
M+F	3	35	26	4	9	2	6	4	81	42.6	109	57.4
50+ M	1	2	3	1	1	1	-	1	8	40.0	12	60.0
F	-	2	4	-	-	-	2	-	8	47.0	9	53.0
M+F	1	4	7	1	1	1	2	1	16	43.2	21	56.8
Total M	6	49	28	8	24	5	12	13	119	49.0	124	51.0
F	10	38	33	1	24	3	12	7	114	46.3	132	53.7
M+F	16	97	61	9	48	8	24	20	233	47.6	256	52.4
%	6.4	34.4	24.0	3.4	18.9	3.3	9.5	8.9				

TABLE 5

## RATE OF USE OF MEDICINES PRIOR TO COMING TO CRL BY DIAGNOSIS

	CHOLERA (1044 Cases)		SHIGELLA (112 Cases)		OTHERS (489 Cases)		ALL CASES (1645)	
	No. Use	%	No. Use	%	No. Use	%	No. Use	%
Saline	23	2.20	2	1.79	12	2.45	37	2.25
Glucose	4	0.38	0	0.00	1	0.20	5	0.30
Capsule	72	6.90	16	14.29	49	10.02	137	8.33
Tablet	121	11.59	32	28.57	102	20.86	255	15.50
Mixture	72	6.90	18	16.07	85	17.38	175	10.64
Pulves	61	5.84	10	6.93	48	9.82	119	7.23
Dab	54	5.17	9	7.14	49	10.02	111	6.75
Amulet	19	1.82	2	1.79	20	4.09	41	2.49
Other	35	3.35	8	7.14	55	11.25	98	5.96
None	753	72.13	47	41.96	244	49.90	1044	63.47

Table 6 shows the average cost for treating patients by age. Among the patients those who consulted someone and purchased some drugs, the average cost involved for treating a case outside CRL was Tk.16.5 for cholera, Tk.15.5 for Shigellosis and Tk.18.0 for other diarrhea. These were identical for both male and female. The age-wise expenditure was identical although the cost was higher for people over nine years of age and lower for people less than nine and over 60 years of age.

Table 7 shows the cost of medical care for all diarrheal patients by income. The percentage income spent on treating an episode of diarrhea remained relatively constant regardless of income. The average amount spent for all diarrhea cases who sought treatment before coming to the CRL ward was Tk.7.2, Tk.14.5, and Tk.27.3 by the people from lower to higher income groups. Including those patients who did not or could not be treated outside, these rates were Tk.2.4, 6.1 and 15.3, respectively, per patient of lower to higher income groups.

#### DISCUSSION

We find from this study that 73.7% of cholera cases came directly to the CRL without consulting anyone. This is pro-

COST OF MEDICAL CARE IN TAMA PER PATIENT AMONG THOSE SEEKING TREATMENT  
OUTSIDE CRL BY AGE AND SEX

TABLE 6

Ages	Male				Female				Total						
	Cholera		Shigella		Cholera		Shigella								
	No. Treated	Cost/Patient	No. Treated	Cost/Patient	No. Treated	Cost/Patient	No. Treated	Cost/Patient							
0-4	23	11.4	10	11.1	43	16.8	14.3	19	8.4	13	12.0	25	17.0	13.0	13.8
5-9	31	11.7	2	34.5	9	30.7	16.9	16	10.4	-	-	10	12.4	11.1	14.7
10-19	25	22.3	2	4.0	8	14.5	19.3	23	24.6	4	5.0	10	14.4	19.5	19.3
20-49	21	16.7	6	22.8	26	16.8	17.6	70	19.4	8	20.9	32	19.3	19.5	18.9
50+	10	23.4	1	5.0	6	19.7	21.0	2	14.5	1	20.0	4	26.3	22.0	23.7
<b>Total</b>	<b>108</b>	<b>15.9</b>	<b>23</b>	<b>16.3</b>	<b>92</b>	<b>18.0</b>	<b>16.8</b>	<b>130</b>	<b>17.4</b>	<b>26</b>	<b>14.0</b>	<b>81</b>	<b>17.5</b>	<b>17.1</b>	<b>17.0</b>

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COST OF MEDICAL CARE IN DATA FOR DIARRHEAL PATIENTS BY INCOME GROUP (OUTSIDE CRL)

Monthly Income Tk.	Cholera		Shigella		Others		Combined	
	No. of Patients	Cost/ Patients	No. of Patients	Cost/ Patients	No. of Patients	Cost/ Patients	No. of Patients	Cost/ Patients
(200 median) 300 or less Treated	169	9.0	33	6.7	127	5.0	329	7.2
Not Treated	473	-	25	-	149	-	647	-
Total (% treated)	642 (26%)	2.4	58 (54%)	3.8	276 (46%)	2.3	976 (34%)	2.9
(450 median) 301-600 total Treated	101	14.5	22	15.0	82	14.3	205	14.5
Not Treated	196	-	13	-	70	-	279	-
Total (% treated)	297 (34%)	4.9	35 (63%)	9.5	152 (54%)	7.7	484 (42%)	6.1
(700 median) 600 or more Treated	30	33.5	14	13.2	46	27.6	90	27.3
Not Treated	75	-	5	-	15	-	95	-
Total	105 (29%)	9.5	19 (74%)	9.7	61 (75%)	20.8	185 (49%)	13.3

bably due to the acuteness of the onset of cholera rather than an inability of patients to afford treatment elsewhere. The proportion of cholera cases seeking treatment elsewhere in wealthier families was approximately the same as in poor families, and cholera cases and other cases were distributed among the income classes similarly. Homeopaths were consulted fairly commonly for treating cholera in children, and physicians were commonly consulted for treating adult cholera patients. Females, between 20-29, were treated outside more often than males, possibly due to their reluctance to go to a hospital.

The outside consultation of Shigella cases was more common (58%) than cholera cases (26.3%). This may be due to less acuteness of Shigella cases providing longer time for hospitalization. Physicians were consulted more often for male (15.2%) than for female (8.9%), which may be a reflection of social attitudes showing different treatment according to sex. People over 50 were also less commonly treated before attending CRH. This also may be due to the lowering of importance in the family with an increase in age.

In cases of other diarrhea, nearly 48% of the people consulted someone and about 10% of the children were treated by homeopaths. Males were preferably treated by qualified physicians than females.

The types of medicines used outside were interesting. According to priority, patients were prescribed tablets, mixtures, capsules (Tetracycline) and pulves. Only 2.3% of patients were treated with saline before attending CHL though most of them received saline after admission. The chances of receiving saline prior to coming to the hospital were similar for cholera, shigellosis and other types of diarrhea.

The average cost for treating children below 9 was more for male than for female children, but the cost was higher for female than male of the age group 20-29 years. It is interesting to note that the cost for treatment of all diarrheal cases were identical although it was less for children and old people. The average cost for those who sought medical care was only Tk. 12.50; for those who could not or did seek treatment outside it was Tk. 4.70. This amount may be half a day's to one day's wage of a labourer.

While the absolute amount spent on treating a case was directly proportional to the family income, it is interesting to note that the proportion of family income spent on a case was relatively constant regardless of income. While the cost of treating the average case from a family earning Tk. 600 or more per month was 279% higher than the amount spent on an

average case from a family with an income of under Tk. 300/month, wealthier family spent only 8% more in terms of the percentage of family income. This illustrates a very strong economic influence on the availability of medical care. It also indicates that a rather constant proportion of family income is spent on medical care.

In spite of the existence of hospital and qualified physicians in the city, only 10.3% of cholera cases out of 26.3% seeking treatment consulted either hospitals or qualified physicians. For treatment of shigellosis, nearly 26% of patients out of 58% seeking treatment, consulted physicians and hospitals. In case of non-specific diarrrnea, the attitude was similar.

From the attendance (3.7%) of the diarrrheal patients in free city hospitals (other than CRL), it is apparent that the hospital treatment is not popular. The qualified physicians, on the other hand, have to compete with the cheap and easily available homeopaths, quacks, pharmacists and the socio-cultural attitude in delivering their scientific allopathic medical care to the people.