

# ANNUAL REPORT FOR THE KAILAKURI SUBCENTRE OF THE T.H.C.P. IN THE JUBILEE YEAR 2000

The Kailakuri Subcentre of the Thanarbaid Health Care Centre (THCC) houses the Diabetes and TB Programmes.

The Centre was established in 1996 for the Diabetes programme with donations for that programme. The Kailakuri Diabetes Rehabilitation Programme is growing very quickly (see The Crisis and Challenge of the Diabetic Epidemic in Rural Bangladesh) and is scheduled to separate completely from the THCP as a separate Non Government Organisation (NGO) as soon as the patients are ready to take it over - hopefully in the year 2005. The property and buildings belong to the Programme and will go with it. Already it is run by the patients' committee and staff employed by that committee. The TB Programme is a part of the National TB Programme under the Damien Foundation which has given the TB staff their specific training.

## Kailakuri Subcentre Statistics 2000

Total No. of Registered Patients – 332 (23% increase)  
   Diabetes-237 (71%) (39%increase)  
   TB.- 95 (29%) (4%decrease)

Total No. of Outpatient Visits - 4897 (46% increase)  
   Diabetes - 3200 (65%) (57% increase)  
   TB. - 1697 (35%) (30% increase)  
     average no. of outpatient visits per month - 408 (Diabetes 267, TB. 141)  
     average no. of outpatient visits per day - 13 (Diabetes 9, TB. 4 )

Total No. of Inpatient Admissions - 296 (15% increase)  
   Diabetes - 256 (86%) ( 7% increase)  
   TB. - 20 ( 7%) (18% increase)  
   Other - 20 (7%)  
     (Patients with both Diabetes and TB. - 9 ( 3% ) )

Total No. of Staff- 27 (50% increase)  
     Diabetes Programme - 24 (89%)  
     TB. Programme - 3 (11%)  
     (Staff who are diabetic patients - 17 (71% of Diabetes Programme staff) )  
             Muslim 74%, Mandi 22%, Borman4%.  
             Male 81%, Female 19%.

## TB. PROGRAMME STATISTICS, 2000

<u>Total No. of Patients Treated</u>	95
Continued from 1999 —	38
Started in 2000 —	57
Completed – 40	} 55
Defaulted - 8	
Died - 5	
Transferred - 2	
Continuing into 2001	40
(All 5 deaths were due to TB.)	

Total Patient Analysis:

Category 1 - 69%, Category 2 - (retreatment) 10%,  
Category 3 - (sputum negative or non-pulmonary) 21  
87% followed treatment regularly  
9% of TB. patients also had Diabetes 5%  
of patients treated died  
8% of patients defaulted  
41 % of patients live within 2 miles of the Clinic and 45% within 5 miles.  
47% were under age 30 (16% under age 15)  
Male 72%, Female 28%  
Muslim 52%, Mandi 36% o, Borman 12%.

Sputums Tested - 1014

New patients - 885 (87%) (16%positive)  
Follow-up-129 (13%) (5%positive)

No. of Patients Admitted - 31

Kailakuri - 20 (65%) (45% of these were diabetic)  
Jalchotra Damien Foundation TB-Hospital - 11 (35%)

**Outcome of TB. Treatment in Sputum Positive Patients (Category I and Category 2)**

(12 month period during which treatment started)

	<u>5/3/96 - 4/3/97</u>	<u>5/3/97 - 4/3/98</u>	<u>5/3/98 -4/3/99</u>	<u>5/3/99 - 4/3/2000</u>
Total No Patients	43	44	36	52
Completed	78%	88%	86%	85%
Defaulted	11% o	7%	3%	8%
Died	11%	5%	11%	7%

(sputum negative and transfer out patients are excluded)

**DIABETES PROGRAMME**

Attached is the report "The Crisis and the Challenge of the Diabetes Epidemic in Rural Bangladesh" which was presented to the Diabetes Association of Bangladesh. Prevalence estimates are difficult and imprecise and subsequent discussion at the BIRDEM National Diabetes Hospital has revealed some errors. However the estimate of insulin requiring diabetics is probably in the range suggested. The total number of diabetics is probably much greater than suggested.

**APPRECIATION AND GRATITUDE**

On behalf of the patients and the community, we express our sincere thanks to the Damien Foundation, the Diabetes Association of Bangladesh and all friends who have given their generous support to these Programmes.

Dr. Edric Baker.  
Medical Officer in Charge

# THE CRISIS AND CHALLENGE OF THE DIABETES EPIDEMIC IN RURAL BANGLADESH

**Report on the Kailakuri Diabetes Rehabilitation Programme of the Thanarbaid Health Care Centre, [T.H.C.C.] presented for the Diabetes Association of Bangladesh and the Annual Report of the T.H.C.C.**

**"No diabetes patient in this country will die from lack of treatment because of being too poor to afford it!"** (Prof. Ibrahim<sup>1</sup>, very forceful personal communication, 1984)

## Needs and Numbers

**Bangladesh** has a population of 130 million. If 1 % of the population is diabetic needing insulin<sup>2</sup>, then the **insulin-needing population** is **about** 13 lac (1.3 million). Worldwide, diabetes numbers are increasing in what is now called the diabetes epidemic. **The crux of the challenge is how to provide adequate care for enormous numbers of patients.** Obviously the highest priority must be to enable patients to keep their diabetes in basic control. This means diagnosis, teaching, motivation, supervision, and provision of insulin, tablets, and the means of monitoring - **at lowest possible cost.**

The prime role of health care is to provide care for those most needing it, namely the poor, who are the overwhelming majority. This is what the **Kailakuri Diabetes Rehabilitation Programme** (K.K.D.R.P.) of the T.H.C.C, does, **providing a model which should be studied.**

---

<sup>1</sup> **Prof. Ibrahim** was the founder of the Diabetes Association of Bangladesh and the BIRDEM Hospital. (BIRDEM i.e. The Bangladesh Institute for Research into Diabetes, Endocrine and Metabolic Diseases. BIRDEM Hospital is non-governmental and is the Diabetic Hospital of Bangladesh). With enormous labour he set up an excellent diabetic centre which received international acclaim and he was awarded the honour of National Professor by the President of Bangladesh. The BIRDEM Hospital has thousands of registered diabetic patients and must be one of the worlds largest and best diabetic institutions. It was Prof. Ibrahim's above communication which eventually led to the establishment of the K.K.D.R.P.

<sup>2</sup> Research in **diabetes prevalence in Bangladesh** done by the BIRDEM Hospital indicates a prevalence in the 30 to 64 year age group of about 4% in rural areas and 8% in urban areas (which is increasing). Experience shows that most of these patients need insulin. If the urban population is about 25% and the rural population 75% (as suggested by census figures) and the 30 to 64 year age group is about 30%, then we find the diabetic prevalence to be about 1.5% of the total population (the majority of diabetics are expected to be in this age group). If 70% of these need insulin, then they amount to 1 % of the total population.

## **The Kailakuri Diabetes Rehabilitation Programme (K.K.D.R.P.) of the Thanarbaid Health Care Centre (T.H.C.C.)**

The Thanarbaid Health Care Centre is a village health programme plus health centre of the Church of Bangladesh Social Development Programmes (C.O.B.S.D.P. Reg No DSW/ R155). The diabetes programme, together with the TB programme (under the Damien Foundation and the National TB Programme), is centered at the Kailakuri Subcentre, 2 miles north of Thanarbaid. The location is a **difficultly accessible** rural area in the far north of Tangail District, in the Modhupur Thana. It is about 12 miles from each of the three towns of Jamalpur, Muktagacha and Modhupur in the districts of Jamalpur, Mymensingh and Tangail (about 39% of patients come from Jamalpur Thana, 28% from Muktagacha Thana and 26% from Modhupur Thana).

Other centres for the treatment and supervision of diabetes in the central northern part of Bangladesh are minimal or non-existent and ineffectual, especially for the poor. Such clinics as exist (including those that are branches of the Diabetes Association of Bangladesh [D.A.B.]) are too costly for most patients and do not generally achieve satisfactory diabetic control. The service of the K.K.D.R.P. is economically accessible to the poor and achieves good diabetic control in most patients. However it is administratively weak and has only one part-time graduate doctor. It is becoming increasingly pressed with patient numbers.

### **Increase in Patient Nos of the K.K.D.R.P.**

<u>Year</u>	<u>No. of Patients</u>	<u>% Increase</u>
1995	33	
1996	47	42%
1997	66	40%
1998	123	86%
1999	160	28%
2000	213	37%

### **Staff Numbers**

Total staff = 25 (clinical workers, office staff, field staff, cooks and gardeners).

60% of the staff are diabetic. The staff are supervised by a graduate doctor (who also supervises the TB programme and the T.H.C.C.).

### **K.K.D.R.P. Statistics for the Year 2000**

Total No of Patients Treated = 237

(There were 77 new patients, 13 transfers, 3 defaults and 8 deaths<sup>3</sup>)

No of Patients on Treatment at end of 2000 = 213

(increase of 37% from previous year)

---

<sup>3</sup> Three (38%) of the deaths were diabetes related (hypo-glycemia 1, diabetic coma 2). These amount to 1.3% of patients treated.



## **The Kailakuri Diabetes Programme Model**

### Key Features.

Low cost, simplicity, well-trained local staff (mostly diabetic patients) under medical supervision, high motivation, good results.

### Low Costs

It is the provision of free and subsidised insulin for the poor by the D.A.B.- BIRDEM Hospital that makes the K.K.D.R.P. possible.

Costs are kept down by:

1. employing on low salaries, uncertificated but well trained local staff (of lower educational level), under medical supervision.
2. avoiding non-essential investigations and medications.
3. as far as possible using cheaper rather than expensive medications.

\* The programme is run from simple village buildings on unregistered land.

The total programme running cost for the year 2000 was about Tk.11 lac (Tk 1,100,000), about Tk 460 per patient.

### Simplicity

Simplicity is essential for low cost and so that actions can be easily understood by low educational level staff and patients. The diet is simplified (for most patients restricting only carbohydrates) and is well understood and followed by most patients. Diabetes control monitoring is by urine rather than blood testing. A simple marker system is used for individual diet sheets, and a stroke system for recording urine test results and insulin doses so that both illiterate and literate patients can understand. Patient record-keeping is also simple and all in Bengali.

### Diagnosis

The diagnosis of serious diabetes is usually simple. If a patient has marked polyuria (excessive urine passing) and polydipsia (drinking enormous amounts of fluids), together with weakness and wasting despite excessive eating, and a strongly positive urine test for sugar, then the diagnosis is diabetes. Patients are sent to BIRDEM Hospital for confirmation and to commence treatment. (Blood tests are not done at Kailakuri because of cost and because blood-sticks are not consistently available. Diabetic precoma patients are successfully treated following a simplified schedule obtained from BIRDEM Hospital). The cost and management of travel to Dhaka are a major problem. (DAB district branch centres are not yet within the price range of the poor and not yet sufficiently reliable to work with).

### Teaching, Motivation, and Supervision

Staff and patients are of similar educational level, locality and economic status, and both staff and patients are highly motivated. Lower educational level workers are easily motivated and identify with the patients. Most of the staff are themselves diabetic patients. All staff attend a weekly training session conducted by the doctor and are regularly supervised by the doctor. All new patients are admitted for teaching and training. They then return monthly for treatment and supervision. The doctor conducts weekly meetings with the staff to review outpatients seen or to be seen during the week.

### Empowerment

Patient committees ensure patient involvement and give patients control over the Programme. A Constitution has been determined by the patients and preparations are underway for them to take over the Programme in five years time.

### Results

86% of the patients were well controlled, according to urine test monitoring.

### Crisis and Urgency

If about 1 % of the population is insulin-requiring diabetic, then with the four nearby thanas (Jamalpur, Muktagacha, Modhupur and Shorishabari) presenting a population of 1,705,000, then an **insulin-requiring population of about 17,000** is expected. If satisfactory alternative facilities are not established, as rural road communications improve the unserved 11,459,000 population of four districts (Jamalpur, Tangail, Mymensingh and Sepur) threatens a daunting possible **insulin-requiring population of 115,000. If appropriate planning is not undertaken immediately, then such meagre services as exist will be swamped and destroyed.**

It is essential that planning be undertaken and arrangements made, and the prime responsibility lies with the D.A.B.

### Possible Actions

1. The D.A.B. establish and supervise diabetes control centres that achieve satisfactory diabetic control and are cost-accessible to the poor in the districts of the area (probably based on the Kailakuri model).
2. The D.A.B. or some national or international organisation take over the Kailakuri project and extend it to the surrounding thanas and districts.
3. National or international N.G.O.s set up diabetic services (probably based on the Kailakuri model) in the surrounding thanas and districts.

### Conclusion

With the enlarging of the diabetic epidemic, urgent action is needed. **The Kailakuri Diabetes Rehabilitation Programme should be studied as a possible model for diabetic care for the poor in Bangladesh.** So far there has been no attempt to do this.

**The K.K.D.R.P. should be granted a special status with the D.A.B. and BIRDEM Hospital.** (This has already been done but it needs to be extended). Visits should be made from BIRDEM to the Kailakuri Centre. Methods should be determined to reduce the number of Dhaka trips required, to provide low cost hostel facilities for patients needing to go to Dhaka, and to help the Programme to further simplify, streamline and increase the efficiency of its administration. Every effort should be made to **avoid increasing the running costs of the Kailakuri Programme.**

We express the deep thanks of the patients to the D.A.B. and the BIRDEM Hospital (especially the Social Welfare Department), and to all friends and partners who give their generous support.

This report is submitted to the D.A.B., the C.O.B.S.D.P. and to supporting organisations and donors. Copies are also sent to Dhaka Rotary, BRAG, Gonoshasthyo Kendra, Damien Foundation and V.H.S.S.

**STATEMENT OF ACCOUNTS FOR THE KAILAKURI SUBCENTRE  
FOR THE YEAR 2000**

**In Thousands of Taka**

<u><b>Income</b></u>		<u><b>Expenditure</b></u>	
Opening Balance	1,91	Staff Pay	3,88
Donations	5,54	Insulin	1,50
Patient Fees	55	Other Medicines, Syringes etc.	78
Miscellaneous	5	Inpatient Feeding	2,00
Loans	4	Medical Equipment	4
	-----	Supplies and Equipment	8
	12,88	Stationary	15
		Gardening	10
		Firewood	14
		Lamps and Kerosene	10
		Bedding	3
		Furniture and Fixtures	3
		Land Purchase	2
		Building and Maintenance	40
		Cycle and Repairs	17
		Travel and Conveyance	69
		Poor Patient Transfers	10
		Loans Refunded	1,50
		Miscellaneous	7
		Closing Balance	1,10
			-----
			<b>12,88 Taka</b>

**Actual Income: 6,14,000 Taka**

**Actual Expenditure: 10,28,000 Taka**