バングラデシュ
リウマチ熱・リウマチ性心疾患
計画打合せ調査団報告書

1990年9月

国際協力事業団
医療協力部

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序　　文

当事業団は、昭和54年２月から昭和61年２月まで７年間にわたり、バングラデシュ国に対し「循環器病対策プロジェクト」を実施した。この成果を踏まえて同国政府は我が国に対し、循環器病の主な原因のひとつであるリウマチ熱・リウマチ性心疾患を抑制するための技術協力を要請してきた。

この要請を受けて当事業団は、事前調査及び２度にわたる長期調査を通じ、技術協力実施の可能性を調査し、また協力の内容及び実施計画等についてバングラデシュ政府関係機関と協議を行った。これらの結果をもとに昭和63年７月実施協議調査団を派遣、同調査団とバングラデシュ側との間で討議議事録（Ｒ／Ｄ）を署名し、本件協力を開始、同年11月にはリーダー他２名の長期専門家を派遣、その後さらに２名を派遣し、今日に至っている。

本プロジェクトは上記のとおり協力開始から２年を経過しているが、このほど、プロジェクトの一層の進捗と、将来におけるバングラデシュ側による自主的なプロジェクト運営を可能ならしめるべく、プロジェクト実施体制の整備について先方と協議することを目的として、国立循環器病センター名誉総長曲直部壽夫博士を団長とした計画打合せ調査団を派遣することとなった。

本報告書は、同調査団の調査結果を取りまとめたものである。ここに本件調査に当たりご協力いただいた関係各位に対し、深甚なる謝意を表するとともに、今後も引き続き本プロジェクトに対するご支援、ご協力をお願い申し上げる次第である。

平成２年９月

国際協力事業団
医療協力部
部長　曽我紘一

目　　次

1. 計画打合せ調査団派遣

1－1 調査団派遣の経緯と目的

リウマチ熱・リウマチ性心疾患（ＲＦ／ＲＨＤ）抑制パイロットプロジェクトは、１９８８年１１月に協力を開始、１９９０年８月現在、リーダー以下合計５人の長期専門家を派遣して協力を実施している。

本プロジェクトにおいては、専門家のカウンターパートを、センターに隣接する循環器病センター（ＮＩＣＶＤ）の医師を兼任させる形で配置し、技術移転を進めてきている。しかしながら、これらの医師は一人一人が多くの患者を抱えていることから、臨床の業務に多くの時間を取られがちとなっている。こうした状況に当たり、プロジェクトの一層の進捗を計り、かつ将来的に本プロジェクトが「バ」側独自の力により円滑かつ効果的に運営されるべきことを考慮すると、プロジェクト専任のカウンターパートが配置されることが不可欠であるとして、現地日本大使館、ＪＩＣＡ事務所及びプロジェクト派遣専門家チームが、「バ」側に対し事態の改善を求めてきた。しかしながら、この要求に対する「バ」側の対応は鈍いものであった。

本調査団は、こうした現地の事情を背景として、「バ」側に対してプロジェクトの一層の進捗と、将来的なプロジェクト実施体制の確立のための効果的かつ具体的な措置を求めることを主な目的として派遣されたものである。

1－2 調査団構成

団　長（総　　括）	曲直部　壽　夫	国立循環器病センター 名誉総長
団　員（小児循環器）	大　國　真　彦	日本大学医学部附属板橋病院 院長
団　員（協力企画）	我　妻　　堯	国立病院医療センター国際医療協力部 部長
団　員（疫　　学）	堀　部　　博	愛知医科大学 衛生学教授
団　員（業務調整）	青　木　利　道	国際協力事業団医療協力部医療協力課 課長代理

1－3　調査日程

月日(曜)	旅　　程	調　査　活　動　内　容
8. 16(木)	(曲直部団長) 大阪――バンコク (堀部団員) 名古屋―バンコク (大國、我妻、 青木各団員) 東京―― バンコク	移動(バンコク泊)
17(金)	バンコク――ダッカ	ＪＩＣＡ事務所、専門家チームとの打合せ。
18(土)		プロジェクト・センター視察。 Planning Commissionとの協議(Mr.K.F.Rahman) Dr.A.Rahman保健大臣表敬。 Mr.S.Hasan Ahmed保健省次官との協議。 Prof.M.A.T.Siddique保健総局長との協議。
19(日)		Mr.E.A.Chowdhury ERD次官との協議。 プロジェクト・カウンターパートとの協議(Prof.A. Zafar, Dr.S.Haque他) 専門家との打合せ。 在「バ」国日本大使表敬。
20(月) 21(火)	 ダッカ――バンコク	National Cooridinating Commitee開催。ミニッツ署名 ＪＩＣＡ事務所報告。 移動
22(水)	(曲直部団長、 堀部団員) バンコク―― 大阪 (大國、我妻、 青木各団員) バンコク―― 東京	帰国

1－4　主な面談者

1) ICVD, RF/RHD

Prof.Abu Zafar	Director-cum-Professor
Dr.M.A.Rouf	Deputy Project Director, RF/RHD
	Asst.Professor of Microbiology
Dr.Razia S.M.	Asst.Professor of Cardiology, RF/RHD
Dr.Monwar Hossain	Asst.Professor of Cardiology, RF/RHD
Dr.K.S.Haque	Professor of Cardiology, NICVD
Dr.S.R.Khan	Professor of Cardiology, NICVD
Dr.N.A.Khan	Professor of Cardiology, NICVD

2) Ministry of Finance

Mr.E.A.Chowdhury	Secretary, External Resources Division
Mr.Md Nasim	Deputy Secretary, External Resources Division

3) Ministry of Health and Family Welfare

Dr.Azizur Rahman	Minister
Mr.S.Hasan Ahmed	Secretary
Mr.K.M.Hosain	Additional Secretary
Prof.M.A.T.Siddique	Director General, Directorate of Health Service
Mr.M.Rahman	Joint Secretary

4) Planning Commission

Mr.K.F.Rahman	Member
Mr.S.Moqbal Hosain	Division Chief

5) 在バングラデシュ日本国大使館

井口武夫	大使
伊藤哲朗	公使
野田亮二	二等書記官

6) RF/RHD派遣専門家

吉武克宏	循環器病対策／リーダー
大鵜健男	業務調整
渡慶次重美	疫学
鈴木一代	医療機器保守
久野豊	臨床検査
山田俊彦	臨床検査（短期派遣）

7) ＪＩＣＡバングラデシュ事務所

松　澤　憲　夫　　所長

梅　崎　　裕　　所員

2. 要　　約

本プロジェクトは、専門家のカウンターパートとして隣接するＩＣＶＤの医師を兼任させる形をとっているが、実際にはこれらの医師は臨床に多くの時間を取られがちであるため、プロジェクトの一層の進捗及び将来における本プロジェクトの「バ」側による円滑な運営の実現を図るため、日本側は事態の改善を要求してきた。

このような状況の下に、本調査団は「バ」国を訪問、保健・家族福祉省大臣、同次官、同保健総局長、プランニング・コミッション・メンバー、大蔵省ＥＲＤ次官等、「バ」側政府関係者と協議を行った。

これらの一連の協議を踏まえて、８月２０日、ナショナル・コーディネーション・コミティーが保健・家族福祉省で開催され、会議の場で専任のプロジェクト・ダイレクターの早期任命等、早急にプロジェクトの実施体制をまとめる方向で合意が得られ、同日夕、保健・家族福祉省のSiddique 保健総局長と曲直部団長との間でミニッツが署名された。（付属資料1.参照）

3. 「バ」側との協議経過

3－1　「バ」側の対応

(1) 前述の日程により「バ」側の各関係者と協議を行なった。これら一連の協議における「バ」側の対応は次のとおりである。

① プロジェクトをＮＩＣＶＤから切り離して、保健・家族計画省の管轄下に置くことを了承した。具体的には、同省の保健総局長であるProf.M.A.T.Siddiqueの直接管轄下に置くことになった。

② 専任のプロジェクト・ダイレクターを任命する。

誰を任命するかについては、調査団の滞在中には明らかにされなかったが、デピュティー・ダイレクターとしてDr.M.A.Rouf が任命された。

③　上記①及び②を実現するためには、今後プロジェクト・プロフォルマ（ＰＰ）の改訂が必要であるが、そのために日本側と保健総局長とが協力してそれに当たることを「バ」側が了承した。

(2)　関係各機関の対応は次のとおりである。

①　プランニング・コミッション

Mr.Kazi Fazlur Rahman

素人の立場から見ると、ＮＩＣＶＤの治療よりも公衆衛生的な要素が強いから、ＮＩＣＶＤから分離して、別な長を置いた方が良いと思う。前所長のProf.Malikがすべてを取りしきっていた段階では実施が可能と思われたが、現実には難しい点があった。PPの改訂にも協力する。

②　保健・家族福祉省

ⓐ　Dr.Azizur Rahman 保健・家族福祉相

ＮＩＣＶＤとプロジェクトとを分離して、プロジェクトに別なダイレクターを置くことを了承する。保健総局の管轄下に置くことについても問題ない。

ⓑ　Mr.Hassan Ahmed 次官

プロジェクトを分けることも、専任の医師をダイレクターにすることも反対ではない。自分は、本件以外に多くの案件を抱えており、これだけに時間をかけるわけにいかないので、このような問題を持ち込まないで欲しい。

ⓒ　Prof.M.A.T. Siddique 保健総局長

日本側の申し入れ事項は、大臣と次官が了承していれば特に問題ないとの態度を表明した。

③　大蔵省ＥＲＤ（ External Resources Division ）

Mr.Enam Ahmed Chowdhury

これまでプロジェクトをＮＩＣＶＤから切り離して保健・家族福祉省の管轄下に置くことに強く反対していたが、今回はまったく反対することなく、表敬訪問的な話で終わった。また、切り離した後のＮＩＣＶＤとの緊密な連係の維持を図るために、NICVDのダイレクターをプロジェクトのアドバイザーとすることにも賛成した。

④　ＮＩＣＶＤ

Prof.Abu Zafar

これまでプロジェクトをＮＩＣＶＤから切り離して保健・家族福祉省の管轄下に置くことに強く反対していたが、今回は保健・家族福祉相表敬の席で同意。また、現在赴任中の専門家の任期延長の手続きを迅速に行うようにとの我が方要請も了承した。

3－2　National Coordination Committee での協議

Mr. K. M. Hossain 保健・家族福祉省次官（Additional）を議長として開催された。

最初に双方の出席者の紹介が行われ、次いで曲直部団長が、計画打合せ調査団の来訪目的及びこれまでの「バ」側との協議の概要について説明を行った。続いてプロジェクトの進行状況についての概要説明があり、さらに来年度の実行計画の説明が行われたが、その中で「バ」側から活動を4地域に拡大する計画である旨の説明があったため、我が方から、活動の拡張を含めて詳細な実行計画については、専門家チーム・リーダーと新たに任命されるプロジェクト・ダイレクターとの協議に委ねるべきであると指摘した。

ＰＰの改訂、プロジェクトとＮＩＣＶＤとの切り離し、専任のプロジェクト・ダイレクター任命等に関する協議では、これまでに行なわれた各関係者との協議のとおりに、日本側の申し入れに基づく内容で賛成が得られた。

4.　各協力分野の活動状況

4－1　循環器病対策

(1)　調査結果

1）現在までのプロジェクト・チームの成果

本プロジェクトに関するレポートが、調査団訪問時までにほぼ出来上がった。いくつかの注目すべき成果が示されている。

学校検診では3村１２学校で2,４５７名の小児が検診を受け、リウマチ性またはリウマチ性心疾患としてセンターに送られたのが４２例、1.７％であった。「バ」国における就学率がかなり低いことを考えると、この数字は驚くほど高い値である。

また3村の家庭訪問が行なわれ、2,５１４例の小児の検診の結果１０８例、4.３％がセンターに送られている。

センターに送られたものの中でリウマチ熱の検出率がどの程度かと見ると、期間中に各方面から送られた９０８例中正常は１５６例、１７％、先天性心疾患が3例、3.３％で、大部分がリウマチ性またはその疑いとされたところをみると、「バ」国小児におけるリウマチ熱の発見率は1.３～2.５％程度と考えられる。

日本においてリウマチ熱が多くみられていた昭和３０年代において、心臓検診でリウマチ性心臓病の発見率が0.２％であったことより見ると、この数字はきわめて高いものであり、本プロジェクトの重要性を示す。

2) ＮＩＣＶＤ視察

８月１９日午前にZafar教授の案内で、曲直部団長と共にＮICVD を視察した。NICＶＤは患者も多く、訪問時にも最新の人工心肺を用いて心房中隔欠損症の開心手術を行なっていた。日本の援助の効果は、かなりの成果を上げていると考えられる。

3) 学校・住民検診の視察

８月２０日、堀部団員、渡慶次専門家とともに、ダムライ村の診療所を訪問し、専門医１名、ヘルス・アシスタント３名と共に、患家３軒と学校１校を訪問し、住民の生活状況、医師の診察状況、学校の状況などを視察した。

医師のフォローアップの熱意などはなかなかのものであったが、診察レベルには今後指導すべき課題があると考えられた。

(2) 「バ」国の医療体制について

「バ」国の政府関係者、医師との面談を通じて次のような問題点があることが感じられた。

1) 予防医学への熱意

「バ」国の現状より、医療体制は専ら治療医学に向けられ、予防医学には向けられていない。しかし、この方面に関心を持つ医師も出始めているようである。

2) メディカル・レコード・システムの不備

一部外来の診療録がないとか、入院カルテの整理など、メディカル・レコード・システムの不備が目についた。本プロジェクト遂行上一層の改善が望まれる。

3) 医師のプライマリーケア技術について

医師の診断能力、特に基本的な聴診、視診技術に課題が多い。これは医学教育システムの問題と考えられた。

(3) プロジェクトの今後

我が国においても、昭和２０年代にはリウマチ性心臓病が予防可能であると考えている医師はきわめて少なかった。しかし我が国においては、社会経済条件の改善、リウマチ熱に関する知識の普及が学会などで考えられたこと、心臓検診システムが普及したことなどにより、現在ではリウマチ性心臓病の予防に完全に成功している。

「バ」国においても本プロジェクトの遂行により、リウマチ性心臓病の疫学的状況を把握し、予防に関する知識を普及することにより、次第に予防実績を上げ得るものと考えられる。

困難な状況の中で、「バ」国の現状を明らかにし、予防の実践を遂行している現地チームの努力にあらためて敬意を払うものである。

4－2　疫　　学

1）目　　的

本リウマチ熱及びリウマチ性心疾患抑制パイロット・プロジェクトにおける疫学分野の活動の目的は次のように要約される。

① バングラデシュ共和国の本プロジェクト・パイロット地域における咽頭痛、連鎖状球菌性咽頭炎、リウマチ熱及びリウマチ性心疾患の頻度と分布を明らかにする。

② これら疾患の一般的な動向、すなわち一定の期間内における頻度の変化を明らかにして、特別な予防対策の効果を判定するための基準とする。

③ 一定期間特別な予防対策を一定地域に実施した後、これら疾患のその後の頻度と分布を明らかにして、特別な対策をしていない地域の動向を考慮したうえ、その効果を評価する。

2）現在までの活動状況

① 疫学研修：

このリウマチ熱及びリウマチ性心疾患パイロット・プロジェクトの活動は、日本側及びバングラデシュ側の疫学関係者の研修から始まった。本プロジェクトの性格から、疫学的活動が重要な役割を占めるので、プロジェクトの成功のためには、特に疫学の分野に専門担当者が存在することが望まれる。

幸いにも日本側では、リウマチ熱及びリウマチ性心疾患の予防に熱心な小児科医をチーム・リーダーとし、若い保健学博士を疫学専門家として派遣した。後者は派遣に先立ち国立循環器病センター研究所疫学部において疫学研修を受け、疫学分野における活動の中心的役割を果たしている。

バングラデシュ側からは、２名の心臓病専門医がプロジェクトの一環として来日し、国立循環器病センター研究所疫学部において疫学を主とする研修を受け、現在バングラデシュ側の疫学分野の担当者として重要な役割を果たしている。

現地においては、日本側及びバングラデシュ側のスタッフにより、新しく採用した１０人のヘルスアシスタントとダムライ地区の現地スタッフ３人の２週間の教育研修を実施した。また５人の医師に対して１週間の研修教育を行なった。これらの研修を受けた医師及びヘルスアシスタントが疫学調査の第１線の働き手となっている。

② 意識調査

a）外来患者：

ダッカの国立循環器病研究所及びシシュウ（Shishu）病院の外来に通院している50人のリウマチ熱及びリウマチ性心疾患の患者について、病状・リウマチ熱及びリウマチ性心疾患についての知識・社会経済条件などについて主治医が面接調査を行った。

リウマチ熱及びリウマチ性心疾患の知識が不十分なこと、予防のための一層の教育・説明の必要性が明らかとなった。

b) 医　　師：

ダッカ地区の全医師の１０％（１６２人）を無作為抽出して、リウマチ熱及びリウマチ性心疾患の病因・診断・治療・予防についての２０の質問が行われたが、回収率は２５.３％にとどまった。リウマチ熱及びリウマチ性心疾患に関する専門的知識が不十分であることが明らかとなった。

c) 住　　民：

一般住民については、ダッカ市の３地域とダムライの３地域について１０％の無作為抽出を行って、面接によりリウマチ熱及びリウマチ性心疾患についての質問をし、これまで4地域の４６９人について面接が完了した。

これらの意識調査の結果は、今後の一般的な知識の向上およびリウマチ熱及びリウマチ性心疾患予防対策の一環としての教育活動の効果を判定する基礎になるものである。

③ 人口調査：

咽頭痛、連鎖状球菌性咽頭炎、リウマチ熱及びリウマチ性心疾患の頻度を明らかにするためには、一定調査対象地域の人口ことに５歳から１５歳の小児の数が把握される必要がある。これら疾患の頻度及び分布を表すための分母となるものだからである。

１９９１年に国勢調査が計画されているが、バングラデシュ共和国における国勢調査の実態ことにその精度については資料がないので、正確を期するため本プロジェクトのパイロット地区について家庭訪問調査が計画され実施されている。

調査の対象となっているダッカ及びダムライ地区の一定地域に住むすべての家の家族の全構成員の氏名・性別・年齢・概略の収入・発育（身長・体重の測定）・健康状態など一定の調査表を作成し、家庭訪問によって登録・調査を進めつつある。

調査地区：　ダッカ市内　―ダモンジ（Dhammondi）地区……多くは富裕
モハマドプル（Mohammadpur）地区
タジガオン（Tajgaon）……多くは貧しい
ダムライ地域―ダミライ（Dhamirai）地区
スチパラ（Sutipara）地区
サノラ（Sanora）地区　　３地区共農村

一軒一軒の家の入り口の鴨居にあたるところに番号をマジックマーカーで記し、調査表との照合ができるようにしている。

このような人口基礎調査はこのプロジェクトのために特に雇用したヘルスアシスタン

トが大いに活躍している。天候も洪水も厭うことなく調査が進行しており、予想以上の成果を上げている。ダッカ市内の２地域及びダムライ地区の２地域についての調査が終了し、残る２地域の調査が進行している。

児童の発育調査は、リウマチ熱及びリウマチ性心疾患の発生が児童の栄養状態に関係していることが考えられるので、今後のこれら疾患の予防対策をたてる上に基礎資料となることが期待される。

④　り病調査

学校生徒についての全員調査と家庭訪問調査の２本立てで、一定の調査表を作成して咽頭炎・リウマチ熱・リウマチ性心疾患の患者の登録を進めている。疫学調査に直接参加している日本側及びバングラデシュ側の医師ならびにヘルスアシスタントによって診察し、疑わしい症例は近くのセンター病院またはダッカの国立循環器病研究所（National Institute of Cardiovascular Disease, Dhaka）において精密検査を加えて診断を確定し治療している。

ダッカ市内の調査成績：

ダッカ市内の３地区の無作為抽出した８校の５歳から１５歳の５０１１人とダムライ地域の３地区の１２校の全校の児童２４５７人について調査を進めている。リウマチ熱及びリウマチ性心疾患が疑われる児童にダッカの国立循環器病研究所に来るように指示してもやってこないことが多い。

ダッカ市の学校調査の場合、４校の５歳から１５歳３４６４人（男児２１７２人、女児１２９２人）のうちリウマチ熱の疑いで病院へ紹介されたのが１５１人、１７人が脱落し、３人が確実例（千人対0.９）、２８人が疑似症例となった。リウマチ性心疾患については４８人が病院へ紹介され、１８人は脱落し、１１人は確実例（千人対3.２）、２例が疑似症例という結果が得られている。月収２０００タカ未満の家庭の児童の有病率はそれ以上の収入の家庭の児童の約２倍であった。ちなみに６例は先天性心疾患であった。（なおこの数字はDr. Razia S. Mahmud から得た最近発表の表から５歳～１５歳の分を抜き出したものである）

家庭訪問調査は、２地区で完了し１地区では分析中であるが、３８２６家族５歳から１８歳の子供が２９３７人、その中から４８人の咽頭痛、１６８人のリウマチ熱及びリウマチ性心疾患の疑いで病院へ紹介された。これは確定診断の集計が終わっていない。

ダムライ地域の調査成績：

３地区の１２の学校の児童２４５７人のうち、咽頭痛５人、リウマチ熱及びリウマチ性心疾患の疑いでヘルスアシスタントによって病院を紹介されたのは４２人であった。これらは尚確定診断を必要とするものである。

家庭訪問調査は３４６７家族児童数２５１４人のうち、咽頭痛が１０８人、リウマチ熱及びリウマチ性心疾患の疑いが１０９人であった。いずれの調査も確定診断の結果集計待ちである。

⑤　病院患者登録

ダッカの国立循環器病研究所及びシシュウ病院の患者を登録し、２１８人についてリウマチ熱の再発防止のためのペニシリン筋注療法を始めている。

3）疫学分野における問題点

①　リウマチ熱の１次予防：

リウマチ熱及びリウマチ性心疾患の予防は、連鎖状球菌性咽頭炎の段階における適切な治療にかかっており、直ちに開始する必要がある。一般に連鎖状球菌性咽頭炎の患者はプライマリケア最前線のヘルスセンターで治療するのが実際的である。国際保健機関の専門委員会にはペニシリン（Benzathine penicillin）の筋注を第一選択としており、この点については議論の余地はない。しかしながらバングラデシュにおけるヘルスセンターの現状は、その多くに医師・看護婦を欠き、そのまま日常的にペニシリンを筋注することは望ましくない。

その理由はペニシリンによるアナフィラキシーショックは遅かれ早かれ必ず発生するものであり、ヘルスセンターにはそれに対処する用意がないことである。国際保健機関の専門委員会の報告では「大した問題ではない」としており、事実年少者では頻度が低いが、ある国では３０００人ほどの２次予防のための毎月のペニシリン筋注でこの数年間に３人の即死者、１３人のアナフィラキシーショックを起こしている。

小児に対するワクチン接種はバングラデシュ共和国においても全国的に実施されているが、これは地域の中核病院を中心に進められている。このシステムは２次予防の場合には応用可能と考えられる。

ヘルスセンターにおいて連鎖状球菌性咽頭炎患者にすぐにでもできることは、経口的にペニシリンなどを投与することであろう。現在ヘルスセンターにはサルファ剤が最低限の１１種類の薬品に含まれているが、これに経口ペニシリンを追加したらどうか。この場合でも、指示された通りにペニシリンを服用しないとか、ほかの目的や人に使用するなどの問題はある程度予測される。

② 疫学調査について：

疫学調査には多大の人的・物的資源が注がれているが、この活動はリウマチ熱及びリウマチ性心疾患の予防対象地域が拡大されてもそれに応じて疫学調査規模を拡大する必要はない。疫学調査は前述の目的にそって最小限にとどめれば良い。重点の1つは調査精度の向上である。

リウマチ熱の有病率、年間新発生率、再発率、リウマチ性心疾患の有病率、新発生率、悪化率などをできるだけ正確に把握したい。これらの経時的変化を通して予防対策の評価が可能になり、フィードバックすることにより対策の問題点を解決し、費用効果を高めることができる。

まず一定地域の人口を把握するにあたり、家に番号をつけ大きく入り口に書いて置くことは大変良い考えである。番号の二重登録とか、家の新築・撤去、転入・転出などの問題をどう扱うか明確にして置く必要がある。これらは流れる川のように定まらないので、一定時点をとればよい。

学校調査の場合には、就学率が問題となる。現在リウマチ熱及びリウマチ性心疾患の学校調査と家庭訪問調査が別途に集計されているが、地域・地区について一本化することが望まれる。そのうえで関心があればミッションスクールのように各地から集まってくる学校集団にも注目したらよい。

咽頭痛ことに連鎖状球菌性咽頭炎の頻度は重要な指標になるが、このような急性のものは時点有病率だけでなく、期間有病率あるいは頻度を明らかにする要がある。期間としては1月から1年である。期間が短いと記憶は正確だが症例数あるいは頻度が少なく、期間が長いと記憶が不正確となるが例数あるいは頻度は多くなる。このあたりも研究課題の1つである。

調査の実施にあたってはヘルスアシスタントが大活躍しており、現地調査や集計作業をこなしており、予想以上の成果を上げる原動力となっている。今後もヘルスアシスタントを含めた人事管理、その仕事の精度管理、望ましい水準の維持が課題となろう。今回の現地視察において、このリウマチ熱及びリウマチ性心疾患パイロットプロジェクトのための疫学分野の活動はすばらしく、強い感銘を受けた。

しかしながら本プロジェクトの性格上、ヘルスアシスタントに頼りすぎることは疫学調査精度に悪影響を及ぼすので、医師・疫学者との密接な連携と適切な指導が必要である。現在日本側が小児科医・疫学専門家・臨床検査技師を揃えているが、バングラデシュ側はやや受身の感がある。今後技術移転を進め、積極的にこのプロジェクトを自ら推進できる体制を作る必要がある。

4－3　医療機器保守

(1)　業務の現状

4月に昭和63年度機材の据え付けが完了し、間もなく元年度機材が搬入されることにより、ラボラトリーの設備がほぼ完全に揃うことになる。

当分野の指導に当たっている鈴木専門家の業務は現在のところ、本プロジェクトの機材に関しては、搬入時の据え付け・調整の指導が主なものであり、修理・保守の面の指導に関しては、隣接のＮＩＣＶＤの機材について行っている。修理作業を効率的に行うために、ラボラトリーの１室を機器修理室とし、故障機器を搬入してカウンターパートに修理を指導している。

同専門家によれば、現在手持ちの修理器具で大部分の故障機材が修理可能と思われ、自分の任期中に、ＮＩＣＶＤにあるすべての故障機器を修理し、その技術をカウンターパートに移転したいとしている。ただし、その際にかなりのスペアパーツが必要であり、日本側のサポートが必要とのことである。

(2)　カウンターパートの状況

カウンターパートとして指導しているMr. Parbesは、本プロジェクトとＮＩＣＶＤとの兼任であるが、ほとんど常時鈴木専門家の指導下に、機器の修理・点検等を行っているとのことである。

鈴木専門家によれば、Mr. Parbesは電子工学専門学校の卒業で、以前は精密機器の会社で機器の整備を担当していた経歴を持つ。基礎がしっかりしているため、これまで医療機器の修理の経験が無いにもかかわらず、機械の動作理論を教え、現在の機械の状況を教えると、ほぼ自力で修理ができるレベルにあるとのことである。今後、指導を続けていけば、かなりの技術を身につけることができる能力を持っていると期待される。

4－4　臨床検査（本項は、調査団とほぼ同時期に赴任した山田専門家が執筆）

(1)－1　研究・検査部門の室割と動線

正面玄関から入って左側が検査部門となっている。手前より高度研究室、試料分離・保存室、血清検査室、細菌検査室、血液検査室、暗室、スタッフ室、培地調整室、洗浄室となり、いずれも外廊下からの入室及び室間の移動が可能な内廊下が備わっている。このため、検体の流れ及びスタッフの動線がスムーズに行なわれている。また内廊下で将来の機器増設が可能である。

(1)－2　空調の状態

冷房及び除湿器が設置されており、機材の保守、管理及び試料の取り扱いに好ましい環境といえる。しかし、外廊下との出入口のドアに隙間があり、乾季において外部から砂塵

流入の可能性がある。このためカーテンを設置して予防措置を取っている。試料取り扱い上ドアは機器の搬入時以外は閉鎖すべきであろう。さらに、密閉することも考慮される必要がある。

(1)−3 照　　明

採光すべき窓がカーテンにより遮断されているため、薄暗い感じがする。このため、テーブル設置のスタンドの増設が必要と考えられた。

(2)−1 細菌検査

(2)−1−1 検体の採取：

咽頭からの擦過方法が未熟である。とくに舌圧子を用いてないため、満足な採取とは思われない。しかも舌圧子を用いていないため、子供に苦痛を与えることにもなる。また学校が薄暗いため、咽頭、扁桃の観察が充分に行えないので、ペンライトを用いる必要もあろう。

(2)−1−2 分離培養：

血液寒天は現地で作製しているが、無菌的な羊血液の採取が困難なようである。無菌的採血の習熟が急務である。さらに、平板を4分画して分離培養を行っているため、孤立集落を得ることが難しく、せめて1／2分画で行うべきであろう。本来は1検体1枚とすべきである。

(2)−1−3 迅速法：

学童からの咽頭綿棒材料からの迅速法によるA群連鎖球菌の判定は問題である。いわゆる保菌者では10^5CFU／swab以下のことが多く、迅速法の検出限界から困難と考えられる。このため、迅速法は咽頭炎を疑う症例（外来患者及び家庭訪問時の症例）に限定すべきである。他は直接分離培養のみとすべきであろう。

(2)−1−4 菌株の保存：

分離された菌株は今後の薬剤感受性試験TorM型別のため凍結保存すべきであり、将来の研究のためにも二重に保存する必要がある。なお、保存にはHeart infusion brothに培養後血液を数滴加えることで長期保存が可能となる。

(2)−2 血清診断法

(2)−2−1 採　　血：

患者については採血をある程度の頻度で実施しているが、follow upの血清が保存されていない。また血清保存のバイアルとして、不用となったガランビンを洗浄後用いているため、雑菌の混入の可能性があり、保存後の検査Dataへの影響が心配である。

(2)−2−2 抗体価測定：

現在、Latex法によるASOの判定は半定量法のみであり、しかも200U以上を異常

と判定している。少なくとも学童では全例２００U以上を示すため、定量法に変更すべきであろう。（今のままではＲＦの過剰診断の可能性が高い。）

年齢別、地域別、季節別血清抗体価の分布と、いわゆる正常値（年齢別）の設定が急務である。

(2)—2—3 血清の保存：

無菌処理されたバイアルを用い凍結保存すべきであり、菌株同様、将来の研究材料として、二重に保存すべきである。

(2)—2—4 その他：

ＡＳＯのみならず、ＡＤＮ－Ｂ、ＡＳＰなど、他の抗体価測定を合わせ実施する必要がある。（ＬＡ－２００の早期設置により血清検体処理能力が向上する。）

(2)—3 その他の検査

(2)—3—1 血液検査：

ＲＢＣ、ＷＢＣ、Ｈｂ、Ｈｔが用手法で測定されていた。用手法では誤差が多いため、ＷＢＣはＣＲＰ測定で、貧血検査は個人並びに地域の栄養状態を把握するために重要であるが、当分の間はHbまたはHtのみにすべきと思われた（人力不足のため）。

(2)—3—2 尿検査：

溶連菌感染と急性腎炎の関係も重要であるため、学童検診で尿検査が実施されている。

蛋白、糖、pHのみであるが、潜血反応も加える必要があろう。異常所見のあるものは、沈渣の検査も重要である。

実際に１００名の学童から２名の急性腎炎と思われる所見が訪問中に認められた。このため速やかな再検査と治療指針、指導要領も準備しておく必要がある。

(2)—3—3 生化学検査：

ＧＯＴ、ＧＰＴなどの肝機能検査も行われているが現地での精度管理が充分でなく、ゆとりがあれば精度管理目的での実施が好ましい。ＮＩＣＶＤの検査室と分業できるものであり、業務を拡張する必要は当分の間はないと思われる。

(3) フィールド活動と検査体制

家庭訪問、学校検診、患者管理などで細菌、血清材料が無計画に検査室に持ち込まれると、検査計画が混乱し、成績管理にも影響が出てくる可能性がある。特に細菌検査は、判定に数日を要するため、学校検診は週の始めに限定して実施すべきであろう。連日の実施は好ましくない。

血清検査は測定日を決め、なるべく一度に処理することが好ましい。

(4) 検査体制と人材

(4)—1 検査部門のフルタイム要員はDr. Roufと日本側久野専門家の２名である。この他、

ＮＩＣＶＤの協力でDr. KhanとMr. Tehelが必要に応じてカウンターパートとして検査室に出向いている。

機器が設置された後は、技術移転の一層の促進のため、フルタイムの技師の増員が望まれる。それまでの間はＮＩＣＶＤとの強い協調関係が必要である。

(4)--2　Dr. Rouf について

フルタイムで着任したDr. Rouf は前任であったPG Hospital における重鎮であり、教育研究のベテラン助教授である。

しかも、日本で２度の研修を受けた経験があり、日本的感覚を有した有望な人材である。

日常検査の運営並びに将来の研究計画に対し、日本側、バングラデシュ側双方からの積極的な支援を期待している。

(5)　ま と め

本プロジェクトの活動は、検査部門の活動の本格化に伴い飛躍的に進歩することが期待される。精度管理の確立、技術移転、正常値の確定が、初期の課題であろう。

5.　総　括　と　提　言

本プロジェクトはバングラデシュ国にとっては国家的レベルにおいて極めて重要課題であることは言を俟たない。しかるに本プロジェクト発足以来、我が国よりリーダー以下合計５名の長期専門家を派遣して協力を実施してきているが、「バ」国側よりの積極的なプロジェクト遂行への熱意が当初の段階においてあまり強く感じられず、その後徐々に高まりを見せつつあるものの、先に同国において実施された首都ダッカ市における循環器病センター・プロジェクトへの協力の姿勢と比して、「バ」国が示す態度に若干の差異が見られる現状にある。これらを分析すれば次のような事項が挙げられる。

1. 本プロジェクトは全く基礎的な分野であり、これに取り組むには地味な努力が要求され、一般の医師で関心を持つ者が少ないこと。
2. 一方、先のプロジェクトは臨床的な分野であり、華やかさがあり、医師個人の経済面にも深く関係するので、すべてに医師の関心を深めたこと。
3. 本プロジェクトは、「バ」国を始めすべての途上国に共通の問題として、国内においてこの分野に関する専門家が少ないこと。
4. したがって「バ」国における本プロジェクトの遂行には「バ」国側自体における有能な

指導者の存在の必要なこと。

5. 事前調査の段階において、この指導者として循環器病センターのダイレクターであったDr.Malikが存在していたこと。

6. 昨年末、Dr.Malikの定年退官に伴い、新ダイレクターに任命されたDr.Zafarの下で人事の異動が行なわれたこと。

現地日本大使・公使を始め、現地ＪＩＣＡ事務所長ら関係各位のご努力により、「バ」国側が漸く事の重要性を認識するに至る姿勢を示してきたことは喜ぶべきことであるが、今後も引き続き事態の推移を見守るべきであろう。

途上国への医療協力は相手側の自助自立を援助するものであり、この観点からすれば、かなりの気の長い対応も必要であるかもしれないが、プロジェクトの実施には限られた期間が設定されている以上、何らかの決断と対応が必要であることはいうまでもない。この点、「バ」側の今後の対応によってはプロジェクトの実施計画についての慎重な検討が日本側にも必要となるであろう。

例えば4年間の協力期間が過ぎた時点で、協力期間の延長を「バ」国側から要求されても、現地への専門家の派遣は慎重に行ない、「バ」国カウンターパート養成のために研修員の国内受け入れを実施して、先ず「バ」国側の受け皿を固めることを優先するなども検討に値しよう。

本プロジェクトのこれまでの経緯を振り返ると、医療協力プロジェクトのＲ／Ｄ締結に当たっては、相手側に強力なリーダーシップを有するいわゆるKey Personの存在を確認することがきわめて重要であり、Key Personの存在の不確実な場合においては、プロジェクトのＲ／Ｄ締結は慎重に検討するべきことが、医療協力の効率を高めるための取るべき１つの手段とも考える。

付属資料(1)

8月20日署名

ミ　　ニ　　ッ　　ツ

MINUTES OF MEETINGS
BETWEEN THE JAPANESE CONSULTATION TEAM
AND
BANGLADESH GOVERNMENT AUTHORITIES
ON

THE IMPLEMENTATION OF THE
PILOT PROJECT ON CONTROL OF RHEUMATIC FEVER
AND RHEUMATIC HEART DISEASE IN
BANGLADESH.

The Japanese Consultation Team (hereinafter referred to as " the Team ") headed by Dr. H. Manabe and organized by Japan International Cooperation Agency (JICA) visited the People's Republic of Bangladesh from August 17, to August 21, 1990 concerning the Project on Control of Rheumatic Fever and Rheumatic Diseases in Bangladesh (hereinafter referred to as " the Project ").

The Team held a series of discussions and exchanged views with the Bangladesh Government Authorities for the purpose of evaluating and reviewing the achievement of the Project and solving the problems of the Project from the view point of the desirable implementation of the Project. The results of the discussions are referred to in the document attached hereto .

August 20, 1990 DHAKA.

DR. H. MANABE
LEADER
The Consultation Team
Japan International
Cooperation Agency.

PROF. M.A.T. SIDDIQUE,
Director General of Health
Services,
Government of the People's
Republic of Bangladesh.

THE PARTICIPANTS

JAPANESE SIDE

THE JAPANESE CONSULTATION TEAM.

1.	DR. HISAO MANABE	TEAM LEADER
2.	DR. MASAHIKO OKUNI	MEMBER
3.	DR. TAKASHI WAGATSUMA	MEMBER
4.	DR. HIROSHI HORIBE	MEMBER
5.	DR. TOSHIHIKO YAMADA	MEMBER
6.	MR. TOSHIMICHI AOKI	MEMBER

THE JICA EXPERT TEAM.

1.	DR. KATSUHIRO YOSHITAKE	TEAM LEADER
2.	MR. TAKEO OSHIMA	COORDINATOR
3.	DR.(MS.) SHIGEMI TOKESHI	EXPERT
4.	MR. KAZUSHIRO SUZUKI	EXPERT
5.	MR. YUTAKA KUNO	EXPERT

THE JAPANESE EMBASSY:

1.	MR. TETSUO ITO	MINISTER
2.	MR. RYOJI NODA	SECOND SECRETARY.

THE JICA BANGLADESH OFFICE.

1.	MR. NORIO MATSUZAWA	RESIDENT REPRESENTATIVE
2.	MR. HIROSHI UMEZAKI	DEPUTY RESIDENT REPRESENTATIVE.

20/8/90

BANGLADESH SIDE.

1.	MR. KAZI FAZLUR RAHMAN	MEMBER, PLANNING COMMISSION.
2.	MR. ENAM AHMED CHOWDHURY	SECRETARY, EXTERNAL RESOURCES DIVISION, MINISTRY OF FINANCE.
3.	MR. S. HASAN AHMED	SECRETARY, MINISTRY OF HEALTH AND FAMILY WELFARE (MOHFW).
4.	MR. K.M. HOSSAIN	ADDITIONAL SECRETARY, MOHFW.
5.	MR. MOTIUR RAHMAN	JOINT SECRETARY, MOHFW.
6.	PROF. M.A.T.SIDDIQUE	DIRECTOR GENERAL, DIRECTORATE OF HEALTH SERVICES, MOHFW.
7.	MR. MD. NASIM	DEPUTY SECRETARY, ERD.
8.		PROJECT DIRECTOR, RF/RHD PROJECT.
9.	PROF. ABU ZAFAR	DIRECTOR-CUM-PROFESSOR, NICVD.
10.	DR. MIAN ABDUR ROUF	ASSISTANT PROFESSOR, RF/RHD PROJECT.
11.	DR. RAZIA SULTANA MAHMUD	ASSISTANT PROFESSOR, RF/RHD PROJECT.
12.	DR. MONWAR HOSSAIN	ASSISTANT PROFESSOR, RF/RHD PROJECT.
13.	DR. MANZOOR HOSSAIN.	DHAKA SHISHU HOSPITAL.

21/8/90

Based on the discussions between the Secretary of Ministry of Health and Family Welfare and Japanese Ambassador on August 1, 1990, the Team and the Government of People's Republic of Bangladesh agreed as follows :

(1) The New Project Director on full time basis should be appointed as a counterpart for the Team Leader of JICA experts as soon as as possible.

(2) Other points on the Project Proforma should be revised in line with the proposal contained in the JICA Resident Representative letter No.GEN-268/90 dated August 8, 1990 and in consultation with the Director General of Health Services, JICA's Team Leader and the Project Director of the said Pilot Project.

20/8/90

付属資料 (2)

8月8日付

ＪＩＣＡ事務所長書簡

(JAPAN INTERNATIONAL COOPERATION AGENCY)
PLOT NO. NW (C) 1, ROAD NO. 62/63
GULSHAN, DHAKA-1212
BANGLADESH.
PHONE : 604285, 600062

GEN-268/90 August 8, 1990

Mr. Enam Ahmed Chowdhury
Secretary
External Resources Division (ERD)
Ministry of Finance
Government of Bangladesh
Dhaka

Dear Mr. Chowdhury,

It is my pleasure to submit herewith the Japanese proposal in respect of the Pilot Project on Control of Rheumatic Fever and Rheumatic Heart Diseases in Bangladesh (hereinafter referred to as "the Project"). This Proposal was made through the discussions in the Advisory Committee Meeting to the above mentioned project and concerned authorities in Japan.

More than one and a half years have passed since the Project was started on November 1, 1988. The Japan International Cooperation Agency (JICA) has dispatched to Bangladesh four long term experts and one coordinator to transfer the technology for the Project. Also, the Project center, where various equipment is being installed, was donated to the Government of Bangladesh for smooth and effective implementation of the Project based on the Record of Discussions signed on August 3, 1988.

In this conneotion, The Japanese Consultation Mission headed by Dr. H. MANABE, the chairman of the Advisory Committee to the Project and the President Emeritus of the National Center of the Cardiovascular Diseases in Japan, organized by JICA, is expected to visit the People's Republic of Bangladesh from August 17, 1990 to August 21, 1990.

During its stay in Dhaka, Bangladesh, the Mission will have a series of discussions with Bangladesh authorities concerned and Japanese Expert Team in order to solve the problems on the project from a view point of the desirable implementation of the Project.

I would, therefore, like to request you kindly to take necessary action for the above mentioned proposal before arrival of the Mission.

Your prompt and best consideration to this will be highly appreciated.

With best regards.

Yours sincerely,

(NORIO MATSUZAWA)
Resident Representative

Encl: As above.

C.C.To:

1. Mr. Kazi Fazlur Rahman
   Member
   Planning Commission
   Government of Bangladesh
   Dhaka

2. Mr. S. Hasan Ahmed
   Secretary
   Ministry of Health and Family Welfare
   Government of Bangladesh
   Dhaka

3. Mr. Syed Moqbal Hossain
   Division Chief (Health)
   Planning Commission
   Government of Bangladesh
   Dhaka

4. Mr. Md. Nasim
   Deputy Secretary
   External Resources Division
   Ministry of Finance
   Government of Bangladesh
   Dhaka

5. Prof. M. A. T. Siddique
   Director General
   Directorate of Health Services
   Ministry of Health and Family Welfare
   Government of Bangladesh
   Dhaka

6. Prof. Abu Zafar
(Project Director, RF/RHD Project)
Director-cum-Professor
National Institute of Cardiovascular Diseases
Ministry of Health and Family Welfare
Government of Bangladesh
Dhaka

7. Mr. T. Ito
Minister
Embassy of Japan
Dhaka

8. Dr. K. Yoshitake
Team Leader
RF/RHD Project
Dhaka

PROPOSAL TO THE GOVERNMENT OF BANGLADESH IN RESPECT OF THE PILOT PROJECT ON CONTROL OF RHEUMATIC FEVER AND RHEUMATIC HEART DISEASES IN BANGLADESH

1. Since the very beginning of inauguration of the project activities in November, 1988, very few full time counterparts to the Japanese experts has been provided to work with them by the Government of Bangladesh. As a result the very objectives of transferring the technology in respect of prevention and control of rheumatic fever and rheumatic heart disease has not been fulfilled. Moreover the execution of the project objective has been facing a serious setback.

2. JICA is paying close attention to this problems and is considering the possibility of withholding of all new projects to Bangladesh in the field of medicine and health, unless this situation shows substantial improvement.

3. It is also difficult for the Japanese side to accept the view of the Bangladesh side that the project will be expanded to the National level when a satisfactory result is obtained during the progress of the project, because the present project cannot show any progress unless the Bangladesh side participates more actively in this project.

Therefore JICA would like to request the Bangladesh side to take immediate actions to improve the financial and human resources situation to bring the project up to the level of a National project.

4. Because of the following reasons, it is recommended that the Project be placed under the direct supervision of the Director General of Health Services, Ministry of Health and Family Welfare (MOHFW).

1) All employees of the NICVD are too busy in their clinical practice and have no time to participate in the project.

2) To accomplish the objectives of the project, that is to apply the results obtained from the project to health administration, it would be more convenient and appropriate for the project to be under the direct supervision of Director General of Health Services.

3) One of the main purpose of the Control of RF/RHD is its prevention. Therefore close cooperation with the Bureau of Health Education of MOHFW in the field of Information, Education and Communication to the village people is required.

5. In order to assure effective and fruitful implementation of the Project and smooth management of the Project center, JICA proposes that the Project Proforma be revised as follows:

1) To specify in the Project Proforma that the Project is to be implemented by collaboration of JICA experts and Bangladesh counterparts based on the technical cooperation program of the Japanese Government.

2) To specify clearly in the Project Proforma that the Project center was constructed to propel the Project and that it is to be co-managed by the JICA experts and Bangladesh counterparts.

3) To appropriate the necessary budget for management and maintenance of the Project center.

4) To establish the following committees for smooth and effective implementation of the Project in addition to the National Coodination Committee.

(a) Steering Committee

i) Functions
- To formulate Monthly Work Plan of the Project in line of the Annual Work Plan,
- To review overall progress of the Project as well as achievements of the the above mentioned Monthly Work Plan,
- To review and exchange views on major issues arrising from or in connection with the project.

ii) Composition

BANGLADESH SIDE
- ~~Joint Secretary~~ Director General, Health Service
  Ministry of Health and Family Welfare
  to act as Chairman of the Committee.
- Project Director
  to act as Member Secretary of the Committee.
- Chiefs of each section

JAPANESE SIDE
- Team Leader of JICA Experts
- Coordinator of RF/RHD Project
- JICA Experts

(b) General Meeting

General Meeting of the Project should be held as and when necessary to exchange views on any matter concerning the Project among the Project personnel.

5) To specify that the Project Director should be in full service for the Project as a counterpart of the Team Leader.
It should be stressed that a doctor who is to be appointed as the Project Director has the following qualifications:
(a) to have a strong interest in the objectives of the project.
(b) to be able to supervise the execution of the Project.
(c) to be able to negotiate with other institutions and government officials to obtain necessary cooperation/ arrangement for the implementation of the Project.
(d) to have enough experience and knowledge in a field of rheumatic fever and rheumatic heart disease research including the publication of reserch papers.

6) To specify clearly in the Project Proforma the designation and number of posts to be created to work in the Project.

7) To specify the responsibilities of each personnel to be assigned to work in the Project.

8) To specify in the Project Proforma that the prior approval by the Project Director to be taken before transfer of the Project personnel.

9) To specify clearly in the Project Proforma the role of NICVD as a close collaborating Institution to the extent of maintaining existing co-operative relations required for implementaion of the Project programme. For this purpose Director of NICVD may be appointed as Advisor to the Project.

10) To specify clearly in the Project Proforma the roles of the following medical institutions related to the Project:
(a) Shishu Hospital
(b) IPGMR
(c) Dhaka Medical College and Hospital
(d) Sir Salimullah Medical college and Mitford Hospital
(d) Other related Medical Colleges and Hospitals including Khulna General Hospital.

11) To specify that the Project Proforma shall be revised on the discussions of the National Cordination Committee meeting.

6. Until the Project Proforma is revised, doctors and other personnel of NICVD and other institutions especially trained in Japan and required to execute the Project schedule, should be deputed to this Project to work on full time basis.

7. After approval of the revised Project Proforma all deputed doctors and other personnel who are presently working to execute this Project under local arrangement should be absorbed against newly created posts so as to utilize their aquired knowledge and experience to execute this Project.

8. It should be stressed that at least one full-time doctor, who is able to participate exclusively in the execution of the Project, and to negotiate with the Government of Bangladesh as Project Director and as a counterpart of the Leader of the JICA expert Team, is urgently necessary.

It should be mentioned again about the qualifications of the counterpart of The Team Leader, stated in section 5, 5) above.

9. The Project Director should assign one full time counterpart for each JICA experts.

10. Since the construction of the Project center has been completed, it is requested to revised the Project Proforma to submit a budget necessary for the maintenance of the center, as stated on section 5, 3).

Until the revision is finalized, the necessary expense for the maintenance of the center should be paid by the MOHFW.

付属資料(3)

プロジェクト進捗状況表

プロジェクト進捗状況表

プロジェクト名：バングラデシュ・リウマチ熱・リウマチ性心疾患抑制パイロットプロジェクト

暦年			1988	1989	1990	1991	1992		
協力期間 調査団			88.11.1 ―実施 88.7		―計画 90.8		92.10.31		
専門家派遣	長期専門家	リーダー／循環器病	88.11.2	吉武克宏			90.11.2		
		業務調整	88.11.2	大嶋健男			90.11.2		
		疫学	88.11.2	渡慶次重美			90.11.2		
		医療機器		89.9.16	鈴木一代		91.9.15		
		臨床検査			90.3.28	久野豊	92.03.27		
	短期専門家	計画立案調整	7.11―8.10大嶋						
		医療機材	7.11―7.20長尾						
		機材計画	7.11―7.20山田						
		疫学	7.28―8.5 堀部						
		疫学	7.28―8.10渡慶次						
		建築		古川 ①―②― ③―		①3.4 ～3.11 ②4.22～4.29 ③9.23～9.29			
		建築		井上 ①― ②―		①3.13～3.22 ②12.21 ～12.29			
		建築		渡邊12.18 ―12.25					
		協力計画		安田3.4 ―3.11					
		視聴覚教育		内海3.2 ―3.8					
		機材据付			3.26―4.25小林				
		機材据付			3.26―4.25渡辺				
		技術協力			5.2 ―5.9 鈴木				
		協力計画			5.2 ―5.9 青木				
		運営計画			6.6 ―6.13我妻				
		協力計画			6.4 ―6.13斉藤				
カウンターパート受入れ	疫学		3.24―6.19 Dr.M.Hossain						
	疫学		4.10―8.2 Ms.Razia.S.M.						
	細菌学		4.7 ―7.12 Dr.M.A.Rouf						
	臨床病理学		4.3 ―8.2 Dr.A.K.Khan						
	血清学				11.8 ―4.3 Mr.Md.A.Taher				
	保健教育				1.31 ―3.23 Mr.Nur M.				
	循環器病学				3.8 ―7.17 Mr.A.K.M.Mohibullah				
機材供与	◎サイト到着時期 金額はダッカCIF 主要機材名 □現地調達時期			□ 89.2 6,065千ﾀｶ 自動発電装置、 車両、空調設備、 ﾊﾟｿｺﾝ、他	◎89.6／ 8,404千円 ASO ｽﾗｲﾄﾞﾗﾃｯｸｽ、他 ◎89.9／38,935千円 高速遠心機、各種実験台、ﾌﾞﾚﾊﾌﾞ冷凍庫、冷蔵庫、他 □90.2／ 5,234千ﾀｶ 車両、試薬、医薬品、他 ◎90.4／ 2,508千円、試薬類				
その他	プロジェクト基盤整備事業			――	53,436千円				

付属資料(4)

プログレス・レポート

PROGRESS REPORT

November, 1988-June, 1990

PILOT PROJECT ON CONTROL OF RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE IN BANGLADESH

MINISTRY OF HEALTH AND FAMILY PLANNING
GOVERNMENT OF THE PEOPLE'S REPUBLIC
OF BANGLADESH

AND

GOVERNMENT OF JAPAN

JAPAN INTERNATIONAL COOPERATION AGENCY

(JICA)

PROGRESS REPORT

November.1988-June,1990

Sponsored by :
JAPAN INTERNATIONAL COOPERATION AGENCY
DHAKA, BANGLADESH.
AUGUST, 1990

Edited by :
DR. K. YOSHITAKE

FOREWARD

Rheumatic heart disease is one of the major health problems of Bangladesh. For prevention and control of Rheumatic Fever (RF) and Rheumatic Heart Disease (RHD), Government of Bangladesh has started a pilot Project for control and prevention of Rheumatic Fever (RF) and Rheumatic Heart Disease (RHD) in National Institute of Cardiovascular Diseases, Dhaka in collaboration with Government of Japan through Japan International Cooperation Agency (JICA).

Now it appears that this Project lacked manpower planning from the time of inception. Any need for change of the project profile needs consultation, mutual understanding and agreement on both sides at appropriate level.

The doctors of Bangladesh and Japan with the help of paramedics have made considerable progress in the project and the project has gained a momentum.

16.8.90

Prof. Abu Zafar
Director, N.I.C.V.D. &
Project Director (ex-Officio)
Pilot Project for prevention & control of
Rheumatic fever and Rheumatic Heart Disease.

PREFACE

I wish to take this opportunity to express my appreciation of the efforts of all those who worked devotedly towards implementation of this programme inspite of many burning problems. But I should mention here that this project is planned on mutual understanding and agreement reached between the Government of Japan and the Government of Bangladesh after discussions and exchanging of views. It has been decided to implement this project based on the principles of the Colombo Plan Technical Cooperation Scheme. This is an international commitment and we should adhere to these principles in implementing this project.

Success of such project mostly depends upon dynamic managerial and organising skill which can be achieved through full and whole hearted participation and cooperation of the parties concerned.

I sincerely hope that we should be able to solve the problems that confronted us through our mutual understanding, concerted efforts and whole hearted cooperation. If we are able to implement this project successfully people of Japan will be very much happy to learn that their contribution for helping the people of Bangladesh are utilized rightly and also existing ties between two brotherly countries will grow further.

K. Yoshitake

(Dr. K. Yoshitake)

TEAM LEADER OF JAPANESE EXPERTS

CONTENTS

CONTRIBUTORS OF THE REPORT

1.	Dr. Katsuhiro Yoshitake	Team Leader of Japanese Experts of RF/RHD project.
2.	Dr. Shigemi Tokeshi	Expert on Epidemiology
3.	Mr. Takeo Oshima	Coordinator
4.	Mr. Kazushiro Suzuki	Expert on Medical Equipment
5.	Mr. Yutaka Kuno	Expert on Clinical Pathololgy
6.	Prof. Abu Zafar	Director, NICVD & Project Director (Ex-Officio) RF/RHD Project.
7.	Prof. KMHS Sirajul Haque	Professor of Cardiology, NICVD.
8.	Dr. Abdul Kadir Khan	Associate Professor of Bio- chemistry, NICVD.
9.	Dr. Manzoor Hussain	Associate Professor of Pediatrics,Dhaka Shishu Hospital.
10.	Dr. Mian Abdur Rouf	Assistant Professor of Microbiology, IPGM&R
11.	Dr. Monwar Hossain	Assistant Professor of Cardiology Sir Salimullah Medical College & Mitford Hospital.
12.	Dr. Razia Sultana Mahmud	Assistant Professor of Cardiology,NICVD.
13.	Dr. Shamsul Haque	Assistant Registrar, NICVD.
14.	Dr. Md. Qumrul Jalil	Assistant Registrar, NICVD.
15.	Dr. Md. Iqbal Hossain	Resident medical Officer, Dhamrai Upazila Health Complex, Dhaka
16.	Dr. Md. Shahed Arzu	Medical Officer, NICVD.
17.	Mr. Nur Mohammad	Assistant Chief, Health Education Bureau, Director General of Health Services.
18.	Mr. Md.Mustafa Salim Khan	Project Offficer, RF/RHD Project.
19.	Mr. Md.Abu Taher	Chief Technician, NICVD.

1. INTRODUCTION

Pilot Project for Preventation and Control of Rheumatic Fever and Rheumatic Heart Disease has been launched under the technical cooperation of Japan International Cooperation Agency responding to the request of the Government of Bangladesh on 1st November, 1988.

Implementation of the RF/RHD Project has been taken up by the doctors of Japan and Bangladesh during the period of last twenty two months.

Performances were reviewed and problems were sorted out with researchers of the project.

II. BACKGROUND

Rheumatic fever is an inflammatory syndrome related to the beta-haemolytic group A streptococcal infection. Characteristically it tends to recur. The name rheumatic fever emphasizes involvement of the joints, but is the involvement of the heart which makes it important. Attacks of RF may affect the heart, causing damage to the heart valves and lead to high morbidity and mortality. RF and RHD are very common in Bangladesh as well as in other developing countries, These are more common among the people of low income group. Many of them do not have access to proper medical facilities because of their poverty and ignorance. Shortage of facilities also prevent them from receiving adequate treatment.

RF and RHD are preventable diseases and have already been eradicated from the developed countries. In Bangladesh, the cost of prevention for an affected child is approximately Taka 300 per year, but the treatment of damaged heart valve requires about Taka 300,000. Therefore, prevention of RF and RHD will not only decrease morbidity and mortality in the children but also be economically beneficial.

In the 1970s, a WHO collaborative research project demonstrated the feasibility of RF and RHD prevention programmes in developing countries. In 1984, the WHO intensified its activities in this field and in collaboration with the International Society and Federation of Cardiology (ISFC) initiated a service-oriented global programme for secondary prevention of RF and RHD. The programme is now in operation in sixteen developing countries.

In Bangladesh, there is no organized body to cope with the issues of RF and RHD. So, there has been a plan to launch a pilot project (with foreign assistance) in some selected areas for prevention of RF and RHD.

The Government of Japan has agreed to extend technical cooperation including provision of the foreign exchange component and training to the project personnel in Japan and Bangladesh. In this respect a Record of Discussion was signed between the Government of Japan and the Government of the Peoples' Republic of Bangladesh, through the JICA and the National Institute of Cardiovascular Diseases Dhaka, on the 3rd of August. 1988.

III. PROSPECTUS

1. GENERAL OBJECTIVES

1. To reduce the incidence of RF and its cardiac sequelae by early treatment of streptococcal sore throat and adopting secondary preventive measures in susceptible patients.
2. To establish a national policy for simple, cheap and convenient control and prevention of RF and RHD throughout the country.

2. SPECIFIC OBJECTIVES

1. To detect and treat the cases of streptococcal sore throat and RF in the 5-20 years age group.
2. To conduct the epidimiological study of streptococcal sore throat, RF and RHD.
3. To conduct the sero-immunological and bacteriological study of streptococcal sore throat, RF and RHD.
4. To provide health education to the general public, school teachers, students, religious leaders and health personnel.

3. PROJECT ACTIVITIES

1. School surveillance and house to house surveillance at the project sites in order to carry out epidemiological study and to collect specimens for laboratory study and research.
2. Primary and secondary prevention of RF/RHD by supplying Penicillin to each health Insitutions/complexes involved in the project activities
3. Laboratory study and research about the pathophysiology of RF/RHD.
4. Circulation of questionnaire to ascertatin the standards of consciousness of the general mass.
5. Education and motivation of general mass in respect to the preventive measures of RF/RHD.
6. Registration of all RF/RHD patients of project areas of Regional centres and also centrally in the project centre.
7. Conduction of training courses for the doctors and Health Assistants from time to time.
8. Establishment of National and Regional Centres as per the following phase:

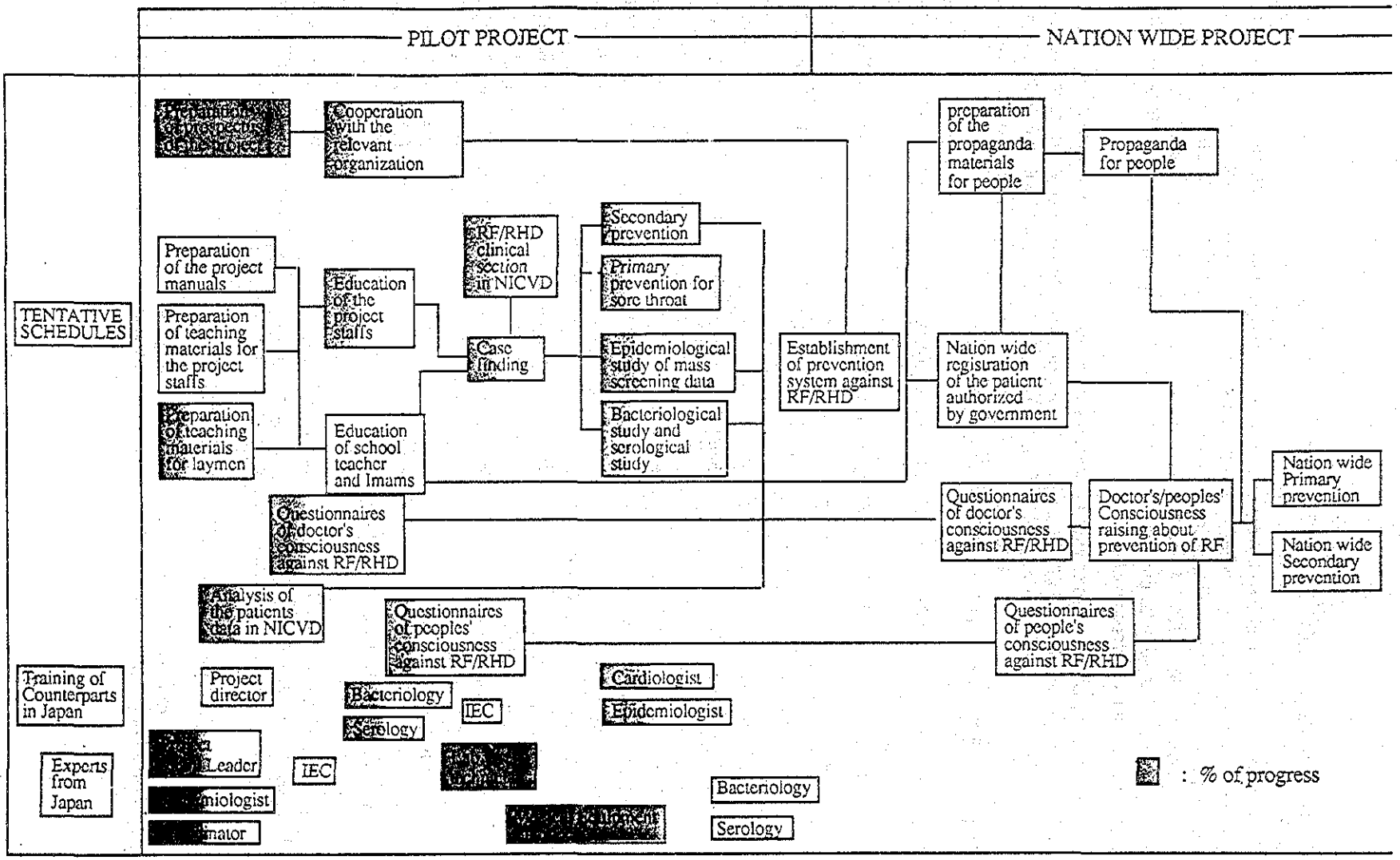
1st Year (1988-89)	National Centre near NICVD in Dhaka.
2nd year (1989-90):	1. Sylhet Medical College, Regional centre.
	2. Rajshahi Medical College, Regional centre.
3rd year (1990-91)	1. Chittagong Medical College, Regional centre.
	2. Rangpur Medical College, Regional Centre.
4th year (1991-92)	1. Mymensingh Medical college, Regional Centre.
	2. Sher-e-Bangla Medical College, Barisal,Regional centre.
	3. Khulna General Hospital, Regional centre.

4. WORK SCHEDULE

To assist in the implementation of the project and to monitor progress of the project activities a work plan was developed (please see flow chart of the project.Table III). It includes the planned activities for the years 1988,1989 and 1991 and so forth. Training of Bangladeshi counterparts in Japan and the availablity of experts from Japan has also been mentioned in the flow chart. Many of the planned activities could not be implemented in time, the reasons for which have been discussed elsewhere (section VIII: Project Management) .

Table III

FLOW CHART OF THE PROJECT



IV. COOPERATION FROM EXPERTS

The experts are dispatched for the project type technical cooperation programme in compliance with the agreement based upon the Record of Discussion signed between Recepient country and Japan.The Recepient country provides the land, building, local staff etc.; on the other hand the Government of Japan provides experts, material, training of local counterparts in Japan, and a combination of these elements is used to create an integrated project so as to provide training, experiments, education, research, diffusion and advice of techniques etc. in there respective field.

Government of Japan also dispatch experts on short term basis as and when required to do some special works for a particular project. In the RF/RHD project the Govt. of Japan has provided the local costs of construction of the project center and the Electromedical equipments required for diagnostic/ Research laboratory.Similarly Architects for building design,installation; Experts for laboratory equipment and Audio Visual experts for Health Education are required to be dispatched from Japan.

The following long term and short term experts have so far been dispatched form Japan for this project:

Table IV LIST OF THE EXPERTS DISPATCHED FROM JAPAN

NAME	DESIGNATION	DURATION OF STAY
LONG TERM EXPERTS		
(1) Dr. Katsuhiro Yositake	Team leader, Cardiologist	02.11. 1988 to 02.11.1990
(2) Dr. Shigemi Tokeshi	Epidemiologist	02.11. 1988 to 02.11.1990
(3) Mr. Takeo Oshima	Coordinator	02.11. 1988 to 02.11.1990
(4) Mr. Kazushiro Suzuki	Medical Equipment Eng.	16.09. 1989 to 15.09.1991
(5) Mr. Yutaka Kuno	Clinical pathologist	28.03. 1990 to 28.03.1992
2. SHORT TERM EXPERTS		
(1) Mr. Seiji Utsumi	Audio Visual Specialist	02.03. 1989 to 08.03.1989
(2) Mr. Yoichi Furukawa	Architect	04.03 1989 to 11.03.1989
(3) Mr Tatsuoh Yasuda	Cooperation Planning	04.03. 1989 to 11.03.1989
(4) Mr. Takashi Inoue	Architect	13.03. 1989 to 22.03.1989
(5) Mr. Yoichi Furukawa	Architect	22.04. 1989 to 29.04 1989
(6) Mr. Yoicni furukawa	Architect	23.09. 1989 to 29.04.1989
(7) Mr. Hideo Watanabe	Architect	18.12. 1989 to 25.12.1989
(8) Mr. Takashi Inoue	Architect	21.12. 1989 to 29.12.1989
(9) Mr. Nobue Kobayashi	Installation Expert	26. 03 1990 to 25.04.1990
(10) Mr. Yoshiie Watanabe	Installation Expert	26.03. 1990 to 25.04.1990

V. COUNTERPART TRAINING IN JAPAN

As a part of the government sponsored technical cooperation, Japan has been providing training opportunities to the personnel of recepient countries. The main objective of such training is to provide specialized training who

will be selected to participate in the project type Technical cooperation, so as to contribute their knowledge to implement the project. In the counterpart training within the category of individual training, the counterparts in the countries which receive Japanese Experts, project cooperation, developement survey etc, are admitted to Japan for training, to increase the effectiveness of these technical cooperation programme.

Keeping the view of the above objectives the following Bangladeshi counterparts have received training in different fields with the understanding that their training would be fully utilized in implementing the RF/RHD project programmes.

Table V LIST OF TRAINED COUNTERPARTS

	NAME	TRAINING FIELD	DESIGNATION	TRAINING PERIOD
1.	Dr. Monwar Hossain	Epidemiology	Medical officer NICVD.	24-3-88 to 19.6.88
2.	Dr. Mian Abdur Rouf	Bacteriology	Assistant Professor IPGM & R	07-4-89 to 12-7-89
3.	Dr. M.A. Kader Khan	Clinical pathology	Associate Professor NICVD	10-4-89 to 2.8.89
4.	Dr. Razia Sultana Mahmud	Epidemiology	Assistant Resistrar, NICVD	10.4.89 to 2.8.89
5.	Mr. Md. Abu Taher	Serology	Chief Laboratory Technician	8-11-89 to 3-4-90
6.	Mr. Nur Mohammad	Health Education	Asstt. Chief, Health-Education Bureau	31.1.90 to 23.3.90
7.	Dr.A.K.M.Mohibullah	Cardiology	Medical Officer NICVD	08.3.90 to 17.7.90

VI. CONSTRUCTION OF THE PROJECT CENTRE

As per the Record of Discussion signed on 3rd of August, 1988, between the Government of Japan and Bangladesh, it was agreed that in order to assure smooth and timely implementation of the RF/RHD project, the Government of Japan will take necessary measures in accordance with the laws and regulation in force in Japan through Japan International Cooperation Agency (JICA) to supplement a portion of local cost for construction work of Project center.

Subsequently both sides observed that the National Institute of Cardiovascular Diseases and Hospital could not spare any suitable space from their existing building to use as the Project Center for RF/RHD project. Moreover the Bangladesh government's own resources could not be made available for immediate construction of new building for the project. Therefore Japan Internatinal Cooperation Agency (JICA) agreed to construct a new building for use as the Project Center.

After detailed discussion among the Japanese Survey Team, Representatives of Planning Commission, Ministry of Health and Family Planning, PWD (Public Works Deparment), Architects and ERD (External Resources Division), it has been decided and agreed upon to construct the diagnostic research laboratory and office for the project in the southern side of the existing National Institute of Cardiovascular Diseases (Shahid Suhrawardy Hospital complex building). Accordingly a Record of Discussion was signed by the Government of Japan and the concerned authorities of Bangladesh on the 16th of August, 1988 for construction of the proposed building.

After several discussions between the Japanese and Bangladesh architects the plan of building was drawn and approved. The construction work started on 25th of March, 1989. During construction of the building (after completion of most of the works) the Chief Architect of PWD raised objection stating that the front portion of the building should be raised and front portion of the building should be redesigned to make it similar to that of existing government buildings of Sher-e-Bangla Nagar area.

Despite argument from the Project Director that the plan of the building has been drawn and finally approved after several meetings between the concerned authorities, the Chief Architect of P.W.D. stressed the need of bringing the design of the building as per the existing government buildings of the area. The plan was revised accordingly and the height of the front portion of the building was raised.

The construction work of the building was completed and it was handed over to the JICA on 28th of December, 1989. After completion of some remaining works the building was finally handed over to the Bangladesh government (Public Works Department) on 25th of March, 1990.

VII. INSTALLATION OF MACHINERIES AND EQUIPMENT

The laboratory machineries and testing equipments arrived in the Project Center in September, 1989. On completion of construction of Project Center and after officially handing it over to the authorities of the government of Bangladesh on 25th of March, 1990, installation of these machineries and equipment started with the help of two Japanese Experts exclusively deputed for this purpose as per following installation schedule.

INSTALLATION PERIOD : 28th March,1990 to 17th of April,1990.

INSTALLATION ENGINEERS

(a)	Bangladeshi Engineers	Mr. Parvez Ahmed
		Mr. Md. Ashraf Hossain
(b)	Japanese Experts :	Mr. Kazushiro Suzuki
		Mr. Nobue Kobayashi
		Mr. Yoshiie Watanbe
COOPERATION :		Facility Concern (Local Agent)

PARTICULARS OF LABORATORY MACHINES AND TESTING EQUIPMENT INSTALLED (REFER TO THE FLOOR PLAN OF LABORATORY OF RF/RHD PROJECT CENTER)

I. LABORATORY 2.

(1)	Prefab Freezer	SANYO	S24N-I.OSF
(2)	Prefab Refrigerator	SANYO	S24S-1. OSF
(3)	Laboratory Side Table	YAMATO	EFE-303R
(4)	High Speed Centrifuge	HITACHI	CT5DI.

2. LABORATORY 3.

(1)	Laboratory Centre Table	YAMATO	ECG3-305R
(2)	Laboratory Side Table	YAMATO	EFE-307R
(3)	Laboratory Side Table	YAMATO	EFA-137R
(4)	Medical Refrigerator	SANYO	MPR-510
(5)	Medical Refrigerator	SANYO	MPR-210
(6)	Incubator	SAKURA	IF-3B
(7)	Micro Plate Washer	IKEMOTO	S TYPE
(8)	Dehumidifier	SANYO	SDH-253B

3. LABORATORY 4.

(1)	Laboratory Centre Table	YAMATO	ECG3-305R
(2)	Laboratory Side Table	YAMATO	EFE-307R

(3)	Laboratory Side Table	YAMATO	EFA-137R
4)	Water Bath	YAMATO	BX-31
5)	Filtering Apparatus	IKEMOTO	50-1051A
6)	pH Meter	TOHWA	HM-5S
7)	Anaerobic Jar	TOMY	JK-1
8)	Dehumidifier	SANYO	SDH-253B
4. LABORATORY 5.			
(1)	Laboratory Side Table	YAMATO	EFE-307R
(2)	Laboratory Side Table	YAMATO	EFA-127R
(3)	Binocular Microscope	OLYMPUS	CHS-223F3 + CH2-DO
(4)	Spectrophotometer	HITACHI	U-1000
5)	Dehumidifier	SANYO	SDH-253B
5. DARK ROOM			
1)	Sink Unit	YAMATO	USR2-190
2)	laboratory Side Table	YAMATO	UFE-307R
3)	Electric Processor of making a slide film	POLAROID	POLAROID
4)	Slide mounter	POLAROID	
5)	Copy Stand for slide	POLAROID	POLA COPY 35
6)	Slide Projector	ELMO	AS-3000A
7)	Slide Projector	ELMO	S-300
8)	Over-head Projector	ELMO	HP-2450LV
6. STAFF ROOM			
1)	VHS/PAL video Cassette Editing Recorder	JVC	BR-8600E
2)	Editing Control Unit	JVC	RM-86U
3)	Monitoring TV	JVC	TM-15OPSN
4)	21 inch TV Monitor	JVC	C-210HM
7. SERVICE ROOM			
1)	Sink Unit	YAMATO	SAS-240

2)	Laboratory Side Table	YAMATO	EFA-137R
3)	Hotting Stirrer	ADVANTEC	TH-351
4)	Electric Balance	METTLER	PN-100
5)	Auto still	YAMATO	WG-23

8. WASHING & STERILIZING ROOM

1)	Sink Unit	YAMATO	SS-260
2)	Auto Clave	SAKURA	ASV-3024
3)	Hot Air Sterilizer	SAKURA	HE-21

9. ELECTRIC & MECHANICAL ROOM

1)	Natural Gas Generator	CATAPILLAR	85 KVA
2)	Automatic Voltage regulator	YAMABISHI	75 KVA

The following equipment have not yet been installed.
A work plan for installation of the equipment is under preparation.

Planning schedule of floor layout:

A. Laboratory 1 (Refer to Figure-1)

1) Electrocardiograph	FUKUDADENSHI	FX-121
2) Long-Term Cardiograph	FUKUDADENSHI	SCM-400
3) Holter Recorder	FUKUDADENSHI	SR-40

B. Clinical Activity 1 (Refer to Figure-2)

1) Electrocardiograph	FUKUDADENSHI	FX-121

C. Lecture & Conference room (Refer to Figure-3)

OBSERVATIONS AND CONCLUSIONS

The Japanese medical equipment expert has already surveyed most of medical equipment installed in NICVD. It has been observed that most of the equipment are not in good condition because majority of the operators do not know how to operate and maintain the equipment. There is also an acute shortage of efficient medical equipment engineer in Bangladesh.

Therefore,a plan has been developed to transfer the technology gradually to the Bangladeshi Counterpart. Sufficient repairing tool and instruments are also not available. A workshop has already been established at the Center to improve the efficiency of the concerned engineers and also to assist the NICVD in repairing their unserviceable medical equipment through a repairing workplan **See Figure- VII 1,2,3,4**

Figure VII-1 FLOOR LAYOUT OF LABORATORY 1

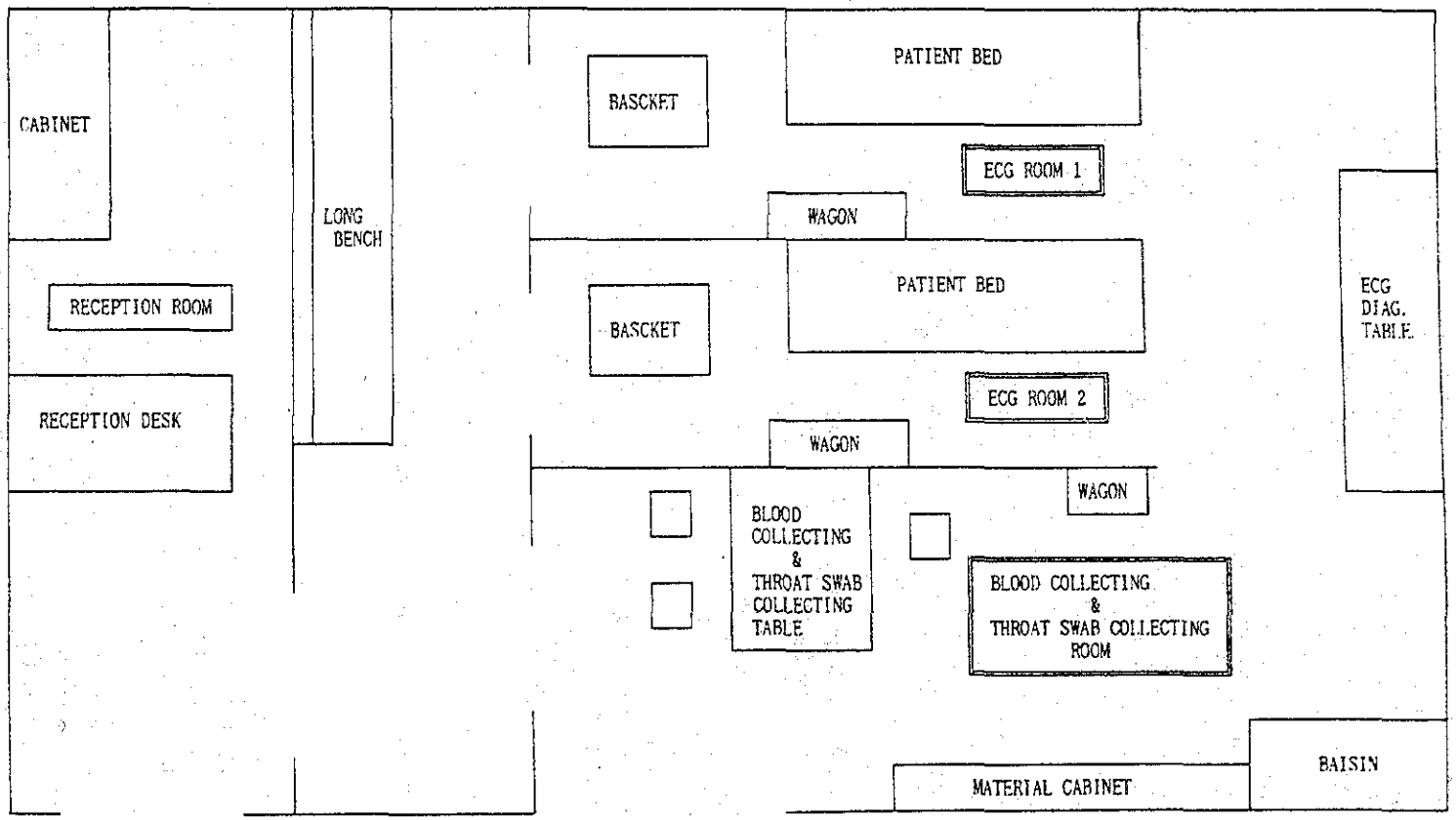


Figure VII-2 FLOOR LAYOUT OF CLINICAL ACTIVITY 1

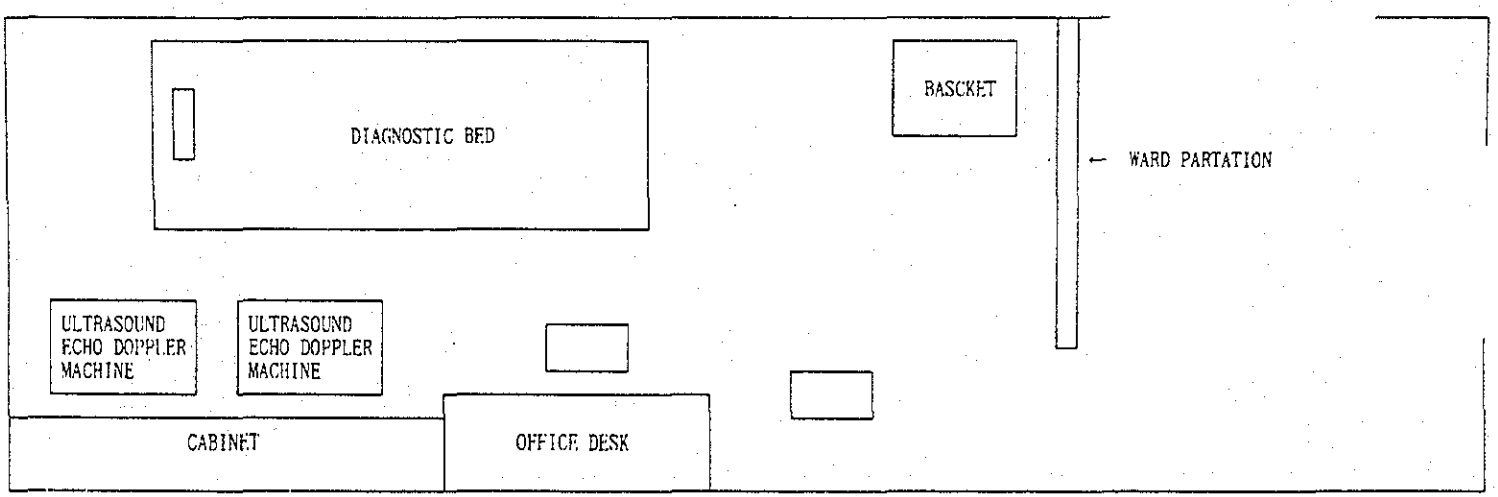


Figure VII-3 FLOOR LAYOUT OF LECTIRE & CONFERENCE ROOM

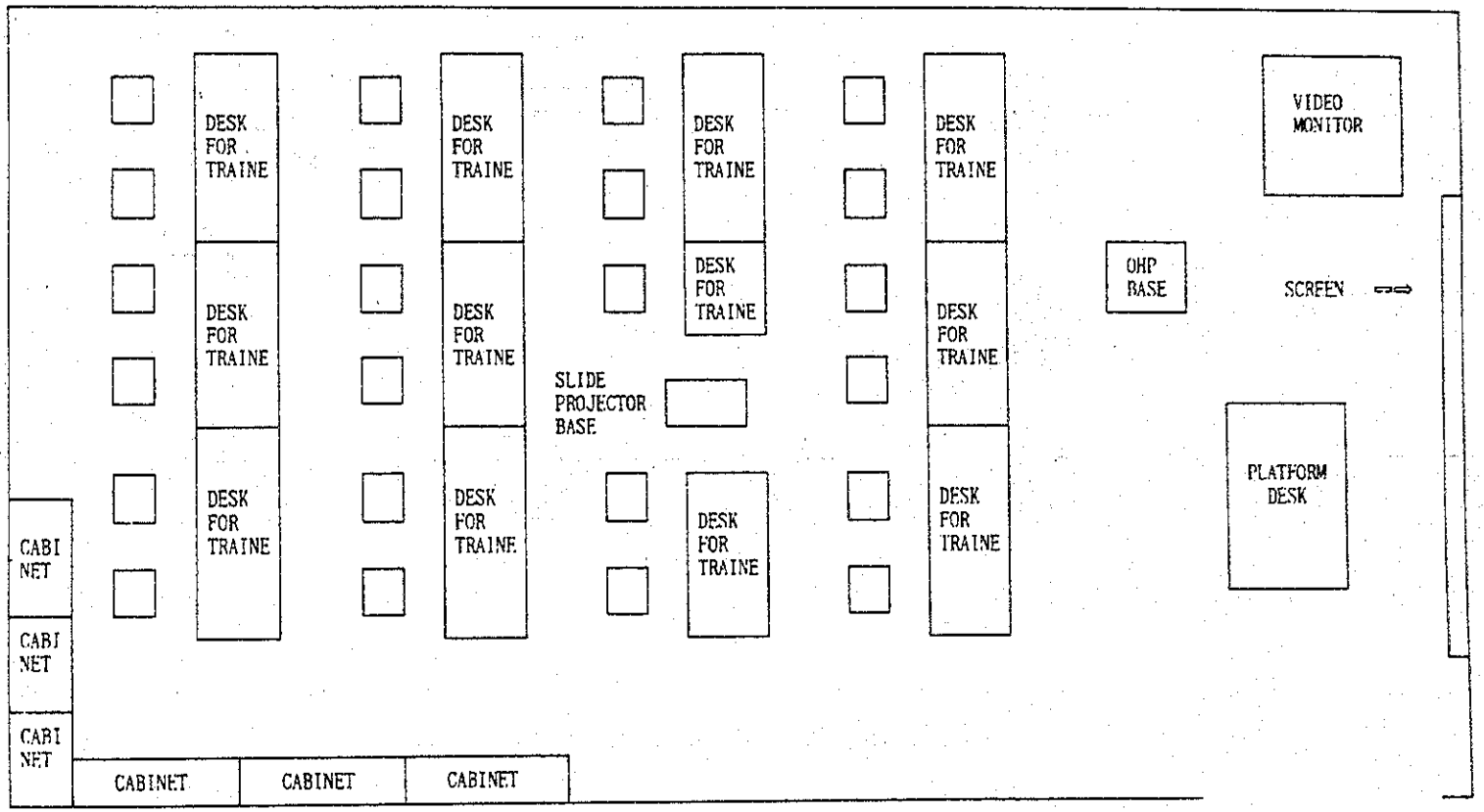
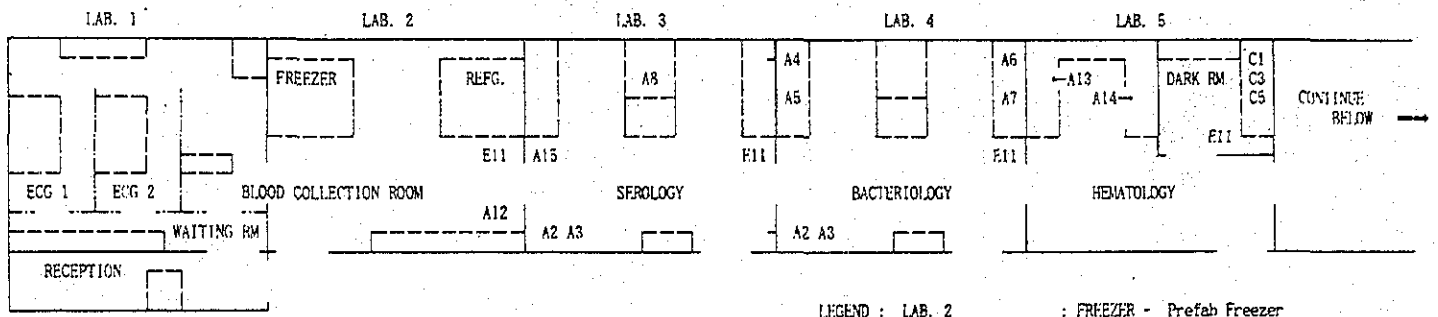
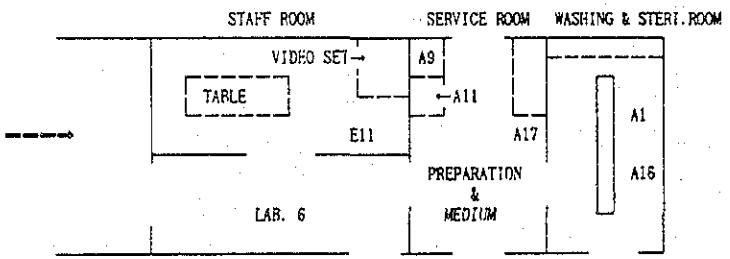


Figure VII-4 FLOOR LAYOUT OF RF/RHD PROJECT CENTRE LABORATORY

APRIL 1990





LEGEND :

LAB. 2 :
- FREEZER - Prefab Freezer
- REFG. - Prefab Refrigerator
- A12 - High Speed Centrifuge
- E11 - Dehumidifier

LAB. 3 :
- A2 - Medical Refregerator (230 ℓ)
- A3 - Medical Refregerator (470 ℓ)
- A8 - Micro Plate Washer
- A15 - Incubator
- E11 - Dehumidifier

LAB. 4 :
- A2 - Medical Refregerator (230 ℓ)
- A3 - Medical Refregerator (470 ℓ)
- A4 - Water Bath
- A5 - Filtering Aparatus
- A6 - pH Meter
- A7 - Anaerovic Jar
- E11 - Dehumidifier

LAB. 5 :
- A13 - Binocular Microscope
- A14 - Spectrophoto meter
- E11 - Dehumidifier

DARK RM :
- C1 - Electric Processor
- C3 - Copy stand for slide
- C5 - Slide Projector

SERVICE RM :
- A9 - Hotting Stirrer
- A11 - Electric Balance
- A17 - Auto Still

WASHING & STEAR. RM :
- A1 - Auto Clave
- A16 - Hot Air Sterilizer

VIII. ACTIVITIES IN THE PROJECT: NOV, 1988-JUNE, 1990

Inspite of a lot of difficulties the members of the project team have tried their level best to proceed with the programme of the project even then the progress of the project appears to be poor. But whatever has been achieved is the net result of the best possible efforts of all the members of the project.

1. EDUCATION AND TRAINING OF THE PROJECT STAFF

The staff of the project were trained for proper implementation of the project. Training was provided by the personnel, experienced in particular subjects. Two training courses were arranged, one for the doctors and the other for the field level staff.

TRAINING COURSE FOR FIELD LEVEL STAFF:

The course was conducted for two weeks from 1.7.89 to 12.7.89. There were 13 participants; ten Health Assistants (recruited for the project), one Health Inspector and two Assistant Health Inspectors of Dhamrai Upazila Health complex. Contents of the course were as followed:

1) **Pre-evalualtion:**

The test was for one hour. There were 15 multiple choice questions and 35 questions to be answered as 'yes' or 'No'. The test was conducted to evaluate the basic knowledge of the participants. Marks obtained in the test were compared with those of post evaluation test to find out the efficiency of the course.

2) **Theoritical lectures:**

These lectures were arranged to give the trainees ideas about anatomy and physiology of heart; signs, symptoms and treatment of sore throat; signs, symptoms, treatment and preventation of rheumatic fever and rheumatic heart disease. In order to orient the participants with different health care delivery systems, lectures were also delivered on the primary health care, EPI and the MCH programme in Bangladesh.

3) **Practical demonstration:**

The field level staff will be required to identify patients, give penicillin injection and collect throat swab from the patients. So there were demonstration of cases in both NICVD and Dhaka Shishu Hospital and demonstration of the techinque of collection of throat swab and injection techinques.

4) **Practical training for filling up of different forms:**

The health assistants will be required to fill different forms during school survey and house to house survey. So initially there were demonstrations about how to fill up forms to be used in different surveys. The forms included a)-Population catalogue b)-House to house survey form c)-School survey form d)-Referral Card e)-Weekly report form f)-Questionnaire about consciousness of general people.

5) Field visits:

The participants were taken to the places they would work in future namely Dhamrai and Mohammadpur of Dhaka city.The idea of such a visit was to acquaint them with the project site and to learn to fill up different forms by themselves.

6) Miscellaneous Classes:

Lectures on general health education, general considerations of heart diseases and functions of Health Assistants were also included in the course. This exposed them to different jobs they have to undertake during implementation of the project.

7) Post evaluation test:

At the end of two-week course, a post evalutaion test was conducted to evaluate the efficacy of the course. All the participants came out successful and the average marks obtained by them this time was 83.1% as compared to 30.9% in the pre-evaluation test. Same questions were in this test as in the pre-evaluation test.

8) Certificate giving ceremony:

After completion of the course, a certificate giving ceremony was arranged. Honourable Minister in charge of Ministry of Health and Family Planning gave away the certificates to the particpants of the course.

TRAINING COURSE FOR DOCTORS:

A training course was arranged for the junior doctors who would work for the project. This training would help them in their clinical activities and implementing the project at field levels. The course duration was one week from July 29, 1989 to August 3, 1989. Five doctors participated in the course. They were:

1) Dr. Nazir Hossain, Medical Officer, NICVD
2) Dr. Md. Masudur Rahman, Assistant Registrar, NICVD
3) Dr. Md. Iqbal Hossain, RMO, Dhamrail Upazila Health complex
4) Dr. Md. Mustafa Zaman, RMO, Savar Upazila Health Complex
5) Dr. Kausar Parveen, Medical Officer, Central School Health Clinic, Sher-e Bangla Nagar

Dr. Nazir and Dr. Masud were trained to work in the field of Dhaka city and to look after the patients attending the out patient clinic for RF/RHD at NICVD. Dr. Mustafa Zaman is a qualified epidemiologist. He was trained to help in epidemiological work of the project. Dr. Kauser Parveen was trained with an idea to help in carrying out school survey in different schools of Dhaka city.

The course included

1) **Theoritical lectures:**

Lectures were arranged on the global status and the epidemiology of RF/RHD, diagnosis pathogenesis, prophylaxis and treatment of RF/RHD. The lectures gave the participants ideas about the situation of RF/RHD in Bangladesh compared to other countries. Their knowledge about various clinico-pathological aspects of RF/FHD were also refreshed.

2) **Demonstration of X-rays, ECG, Echo Cardiography and Cardiac catheterization:**

The participants were shown different ECG, X-ray, and Echocardiography findings typical for the patients of RF/RHD. This would help them in diagnosis of patients of RF/RHD. Procedures for cardiac catheterization and role of catheterization in selecting patients for surgery was explained to them.

3) **Visit to ICU, CCU of NICVD and Dhaka Shishu Hospital:**

The participants were taken to the Intensive Care Unit and the Coronary Care Units of National Institute of Cardiovascular Diseases, Dhaka, to inform them about the patients management system in these units. They were also exposed to various modern equipment used in these units. Visit to Dhaka Shishu Hospital was arranged to show to the doctors cases of acute rheumatic fever. This was arranged becuase only few patients of acute rheumatic fever visit NICVD.

4) **Epidemiological Survey methods and filling up of forms:**

As the project is mainly dependent on epidemiological surveys, lectures were arranged on methods of epidemiological survey. The participants learned about methods, practically how to fill up different forms essential for the survey. The training course was rounded off with concluding lectures by the Director, National Institute of Cardiovascular Diseases, Dhaka.

2. COOPERATION FROM OTHER ORGANIZATION:

All possible steps were taken to involve other city hospitals where RF/RHD patients are available in order to expand the project programmes. But unfortunately, due to shortage of manpower it was not possible to involve them in the programme except for Dhaka Shishu Hospital.

PROJECT ACTIVITIES OF DHAKA SHISHU HOSPITAL

1) ACTIVITIES

The Dhaka Shishu Hospital is collaborating with the RF/RHD Control Project since 1988. The major activities include, a prospective study on the diagnosis, clinical profile and prevention of RF, diagnosis and treatment of streptococcal sore throat, review of the echocardiographic findings of RF and RHD cases and dissemination of the study findings. In addition, the Hospital provides follow-up services to the rheumatic fever patients, prophylactic medication and records the relevant information.

A prospective study was undertaken from March 1988 to evaluate the provisional diagnosis of active rheumatic fever, clinical profile and acceptability of secondary prevention regimen. As reflected from the findings, the severe form of the disease compounded with irregular or no prophylaxis, poor living conditions, poor medical facilities and lack of awareness of the poor ultimately contributing to the disability, mortality and costs of the community. About 50 patients attend this project in a year for diagnosis and treatment to active rheumatic fever.

Streptococcal sore-throat (sequelae of which is rheumatic fever and rheumatic heart disease) is given due attention in the Project. From April 10, 1989 through July 5, 1989 a pilot study was undertaken to make rapid diagnosis of the streptococcal sore-throat cases and provide treatment on urgent basis. The evaluation report of Strep-ID test on 50 sore-throat cases will be published soon.

Echocardiographic findings of 150 rheumatic fever and rheumatic heart disease patients are under evaluation.

Rheumatic fever is a preventable disease. So for control and prevention of rheumatic fever, the general practitioners who provide medical care to the majority of the patients should receive up-to-date information about its diagnosis , treatment, and prevention. The data of the above studies were presented in different seminars and congress, and a few review articles were published in different journals.

Following services are provided at the Dhaka Shishu Hospital on a routine basis:

a) Follow-up of rheumatic fever and rheumatic heart disease patients.

b) Supply of prophylactic injection.

c) Documentation of records.

2) PAPERS PUBLISHED OR PRESENTED:

a) Early treatment of streptococcal sore throat to prevent initial attack of rheumatic fever. Bangladesh Journal of Child Health 1990; 14(1): 24-27.

b) Rheumatic fever: Sources of diagnostic error. Bangladesh Private Medical Practitioner Journal 1990; 1(1): 35-39.

c) Active rheumatic fever and rheumatic heart disease in Dhaka Shishu Hospital. National Congress of Cardiology, Dhaka 1989.

3) CONCLUSION

If the services are of good quality, convenient and free, the patients from the low income group will comply with long-term follow-up and prophylactic treatment. Thus, in addition to making the provision for free service, provision for full time doctor, medicine and diagnostic facilities are essential.

At this point in time the Dhaka Shishu Hospital cannot make provision for full time medical officer. It would be useful if one full time doctor could be appointed on behalf of the project. There is also the need for adequate supply of logistics.

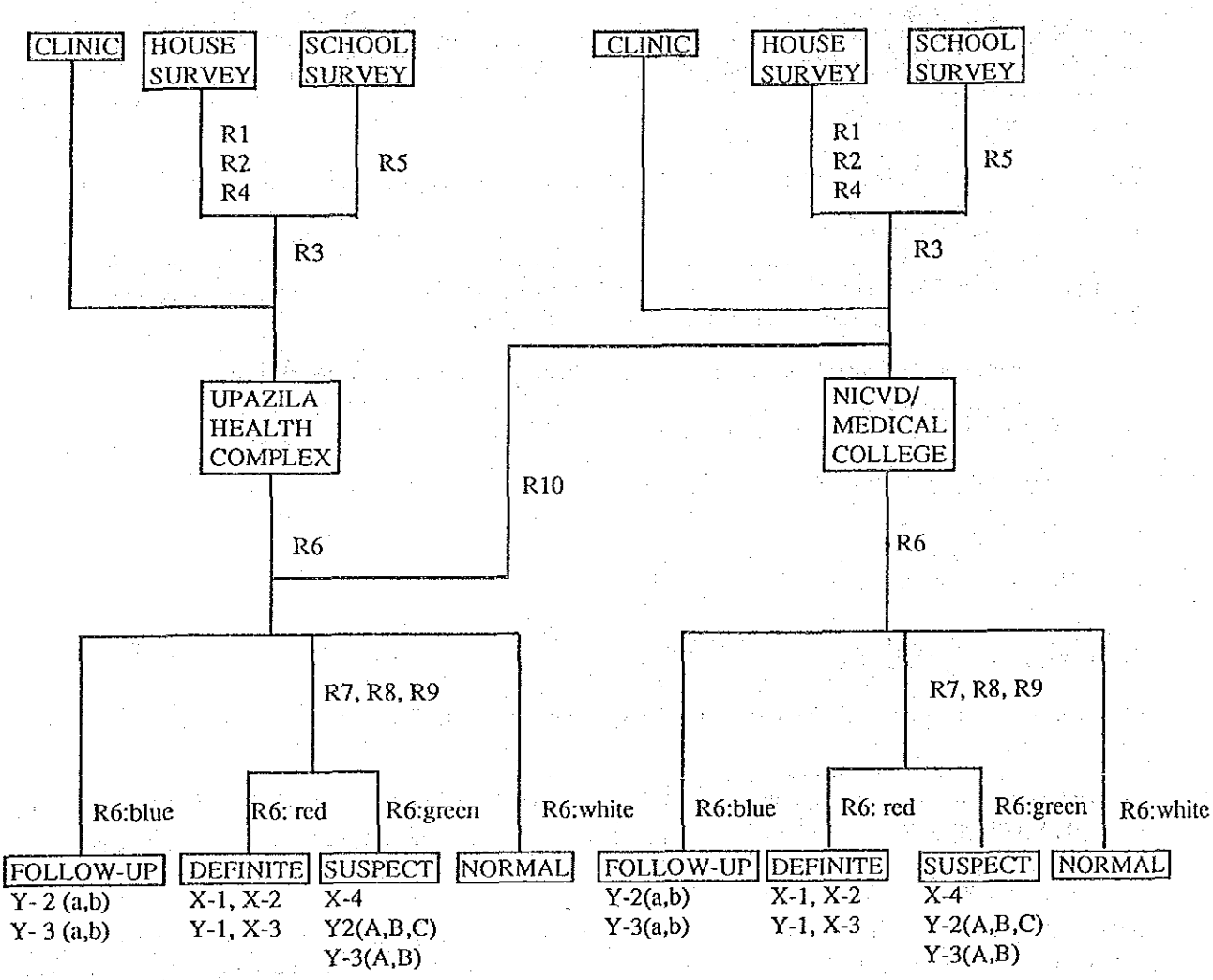
3. EPIDEMIOLOGICAL STUDY

The epidemiological study under the project is divided into three parts, namely (1) the questionnaire study, (2) the field survey for finding RF/RHD cases, and (3) the laboratory study.

The patient follow-up and recording systen are shown in table: VIII-1.

Table: VIII-1

PATIENT FOLLOW-UP AND RECORDING SYSTEM FOR CONTROL & PREVENTION OF RF/RHD



R1 : POPULATION CATALOG FORM
R2 : HOUSE TO HOUSE SURVEY FORM
R3 : REFERRAL CARD
R4 : QUESTIONNAIRE OF CONSCIOUSNESS OF PUBLIC PEOPLE
R5 : SCHOOL SURVEY FORM
R6 : EXAMINATION CARD
R7 : PATIENT RECORD
R8 : REGISTRATION CARD
R9 : PATIENT BOOK
R10 : REFERRAL LETTER

RF/RHD PROJECT 1989

Following are the summary of these studies and an account of the progress as of 30th June 1990.

1) The Questionnaire Study:

The study with two questionnaire have already been completed. Following are the details:

1-1.The study of RF/RHD Patients at the Outpatient Departments of NICVD and Dhaka Shishu Hospital:

This study examined the distribution of patients with RF/RHD and the levels of awareness among the patients regarding RF/RHD. In addition, basic data on the patients with RF/RHD attending the outpatient departments of the NICVD and the Dhaka Shishu Hospital was obtained. Fifty patients with RF/RHD attending the outpatient departments of the NICVD and the Dhaka Shishu Hospital were studied. The attending doctor conducted the interview of each patient. The questionnaire consisted of the following issues:

Basic information : Sex, age, occupation. address etc.

Clinical information: Past history of RF, diagnosis and clinical complaint etc.

Health information : Knowledge regarding RF/RHD etc.

Socio-economic information: Type of house, monthly income, family size etc.

It was evident that the majority of the patients lack health education and are ignorant. The physicians should be more alert in providing adequate health education to the patients regarding RF prophylaxis and referring to the appropriate centres.

The results were presented at the III World Congress of Paediatric Cardiology in Bangokok on November 29, 1989.

1-2. The doctor's consciousness study

The study of the doctor's consciousness about RF/RHD was conducted by issuing questionnaire to them. In July-August 1989, 162 doctors of Dhaka district were selected by a 10% random sampling method. More than 20 questions were asked to ascertain the doctors consciousness about the etiology, symptoms, treatment and prevention of RF/RHD. Only 40 doctors (25.3%) responded to the questionnaire. The text book type of questions were answered correctly. However, the doctors demonstrated poor knowlege about the practical diagnosis and treatment.

In general, the consciousness of the doctors about RF/RHD is limited. Despite having a good textbook and clinical knowledge, they demonstrated a lack of practical clinical skills. The results were presented at the National Congress of November 11, 1989.

1-3. The consciousness of the general people

The consciousness of the general people is being studied by using a questionnaire. The interviewees were selected on the basis of a 10% random sampling method in the 3 residential areas of Dhaka city (Dhanmondi high income group, Mohammadpur middle income group, Agargaon slum area) and the 3 unions of Dhamrai upazila.

The questions included knowledge regarding RF/RHD, attitude towards an attack of sore throat and access to the mass media.

So far, a total of 469 people have been interviewed in 4 areas of Dhaka and Dhamrai. The data input process has been initiated, but the data has not yet been analysed.

2. Field survey of case findings of RF / RHD

2- 1. Implementation plan

Two field areas were selected for the pilot project, namely the urban area in Dhaka city and the rural area at Dhamrai upazila. In the Dhaka city (1) one residential area of high income group (Dhammondi), (2) one residential area of midddle income group (Mohammadpur) and (3) one slum area of low income high density group (Agargaon); and at Dhamrai, the Dhamirai, Sutipara and Sanora unions were selected for the survey.

2- 2. Methodology

The survey was conducted using the "house to house visit survey" and "school Surveillance" method. Ten health assistants, whoreceived special training regarding referring the suspected cases of sore throat. RF and RHD were involved in conducting the study.

Following were the criteria for referring the patients by the health assistants :

- sore throat: the child has sore throat with fever (pharyngitis)
- RF: the child has suffered or is suffering from pain in big joints (lasting for at least one week or painful swelling of big joints
- RHD: the child has shortness of breath on exertion, oedema,haemoptysis or heart murmer.

2- 2- 1. School surveillance

There are various categories of school in Dhaka city. Many of these schools (and their students) do not have a direct relationship with the socio-economic condition of the locality. From Dhanmondi and Mohammadpur areas 8 schools were selected using random sampling method.

At Dhamrai upazila survey was carried out in all the schools located in the three selected unions. Health assistants were to cover the entire study area.

Interview forms consisting of questions on basic information (age, sex, income, type of house, height, weight, arm circumferance etc.) and referral information were filled up by the above health assistants along with doctors from NICVD or from Dhamrai health complex. Suspected cases of sore throat, RF and RHD were referred to NICVD or Dhamrai health complex hospital for examination, confirmation of diagnosis and treatment.

2- 2- 2 House to house visit survey

The health assistants visited each house and completed "population catalogue form " for basic population data and "house to house visit survey form"(based on the school surveillance form.)All children of 5-15 years age group were included in the survey.The suspected cases were referred to the NICVD or Dhamrai Health Complex Hospital for confermation of diagnosis and starting treatment.

2- 3. Results

The statistical analysis for the survey has not been completed yet. The progress of the survey as of 30th June are presented below.

2- 3-1 School survey in Dhaka city

A total of 5011 school children of 5-18 years age group were included in the survey. Fifty two children with arthralgia/arthritis and 48 with cardiac signs & symptoms were refered to the OPD in NICVD. Of the 52 children referred for arthralgia/arthritis 19 did not report to the OPD. 30 had"suspected RF" and 3 had "definite RF" .Of the 48 children referred for cardiac signs & symtoms, 32 did not report, only one had "definite RHD". Prevalence of RF/RHD is 3.4 per thousand school children. Criteria for diagnosis and definition of "suspected RF", "definite RF" and "definite RHD" has been described in Page 65 ANNEX 2.

2- 3- 2. House to house visit survey in Dhaka city

The house to house survey for the Mohammadpur residential area and Agargaon slum area has been completed. A few more months will be required to complete survey in the third area, Dhanmondi Residential area and to computerize and analyze the survey data. A close examination of these refered cases has not been completd

Table: VIII-2 The number of cases referred by the health assistants.

area	No. of house	5-15 yrs	normal	sore throat	Referred cases by Health Assistants
Mohammadpur	2763	2161	1988	42	131
Agargaon slum	417	309	289	2	18
Dhanmondi	446	467	444	4	19
Total	3826	2937	2721	48	168

2-3-3. School survey in the 3 unions of Dhamrai Upazila

The survey in the 12 schools of 3 unions of Dhamrai upazila has been completed. Table VIII-3 shows the number of referred cases. A close examination of the referred cases has not been completed.

Table: VIII-3 The number of cases referred by the health assistants

Name of Union	No. of school	No. of Children	Normal	Sore throat	Referred cases by Health Assistants
Dhamrai	3	1036	1021	2	13
Sutipara	4	863	859	1	23
Sanora	5	558	547	2	6
Total	12	2457	2427	5	42

2-3-4 House to house visit survey in the 3 unions of Dhamrai

Out of the 3 unions where the survey was planned to be conducted,survey has been completed in 2 unions (Dhamrai and Sutipara) and partially completed in the other union. Table : VIII-4 shows the number of referred cases.A close examination of referred cases has not been completed.

Table : VIII-4 The number of cases referred by the health assistants

Name of Union	No. of house	No. of Children	normal	sore throat	Referred cases by Health Assistants
Dhamrai	1716	1641	1554	9	78
Sutipara	1063	825	797	2	30
Sanora	688	48	47	0	1
Total	3467	2514	2398	11	108

3. Epidemiological and laboratory study

3-1. The study of sore throat

A total of 113 patients have been studied at the OPD of the NICVD and Dhaka Shishu Hospital to investigate the relationship between the pattern of clinical manifestation and laboratory findings (throat culture, strept ID).

Due to the lack of positive cases the study could not confirm a statistically significant relationship between the pattern of clinical menifestation and the results of throat culture and strept ID test.

The percentage of positive throat culture was low (12.3%). There has been a plan to continue the study and collect additional samples.

3-2. The study of urine, strep ID test in the school Children

In order to investigate the relationship between infection with group A beta-haemolytic streptococcal and the normal subject 494 school children were studied for urine pH, protein and glucose, and the strep ID.

In all the 494 school children the urine glucose level was normal. Following are the brief results.

Table : VIII-5 The distribution of pH value in urine

PH value	frequencey (%)
5	291 (59.4)
6	77 (15.7)
7	68 (13.9)
8	45 (9.2)
9	9 (1.8)
not done	4 (0.8)
Total	494 (100.0)

Table : VIII-6 The protein positive urine

protein value (mg/dl)	frequency (%)
0	477 (96.6)
30	13 (2.6)
not done	4 (0.8)
Total	494 (100.0)

Table : VIII-7 The results of strep ID test

reaction	frequency (%)
nagative	417 (84.4)
trace	39 (7.9)
positive	30 (6.1)
not done	8 (1.6)
Total	494(100.0)

The number of subjects were too small to evaluate the results. The study will continue in the future.

4. CLINICAL SECTION.

INTRODUCTION.

Cardiovascular disease is one of the major health problems in Bangladesh. In view of these, the Government of Bangladesh with the co-operation of Government of Japan has set up a 110 beded National Institute of Cardiovascular Diseases (NICVD) at Shaheed Suhrawardy Hospital complex, Sher-e-Bangla Nagar, Dhaka. The Institute came into being on 1st July 1978 and started its full fledged function from December, 1980. The Principal function of NICVD is prevention, control and treatment of cardiovascular diseases in Bangladesh.

For prevention and control of Rheumatic fever (RF) and Rheumatic Heart Disease (RHD) Government of Bangladesh in collaboration with the Government of Japan through Japan International Co-operation Agency (JICA), has established the centre for control and prevention of Rheumatic Fever (RF) & Rheumatic Heart Diseases (RHD) in NICVD, Dhaka in November, 1988. Since then, RF and RHD clinic attached to the NICVD has been functioning.

FUNCTIONS OF RF AND RHD CLINICAL SECTION:

1. Detect and treat cases of streptococcal sore throat and acute rheumatic fever in children. Known cases of RF/RHD belonging to other age groups are also using this OPD services. (See Annex I.)
2. Fill up the clinical examination card accurately for future reference, follow up and preparation of scientific paper.
3. Administer penicillin to patients with streptococcal sore throat (primary prevention) and patients with RF and RHD (secondary prevention).

RESULTS:

A total of 908 children attending RF/RHD OPD from November 1988 through June 1990 were investigated of which 478 (53%) were male and 430 (47%) were female. Thus the male attendance was slightly higher than the female. (see Table : VIII-8)

Category of Patients:

Two hundred and twelve (23,3%) patients had definite rheumatic fever. Three hundred (33%) cases had suspected rheumatic fever. Thirty three (3.6%) cases had rheumatic heart disease. One hundred and fifty six (17%) cases were excluded after careful check up as they were not suffering from RF/RHD and 204 (22.5%) children were kept for observation and advised to follow up every 3 months interval as they had raised ASO titre without a major and some doubtful minor manifestations. Three patients presented with congenital heart disease (Table VIII-9)

Analysis of symptoms and signs:

Majority of the patients 687 (75.7%) gave the history of poly-arthralgia with or without sore throat, of them 300 (33%) had raised ASO titre with fever. This three hundred patients were recognised as post streptococcal arthralgia or suspected RF. The incidence of Arthritis was 173 (19.1%) but most of these patients gave the history of arthritis in the past. Two cases of acute arthritis were detected and advised hospitalistation. One patient gave the history of swelling of knee and ankle joints after recurrent attacks of dysentery. Carditis was observed in 4 (4.4%) cases. No case of chorea, subcutanous nodules or erythema marginatum were found in this series.

TYPES OF VULVULAR LESION:

Mitral valve was most commonly involved. Mitral regurgitation was the commonest lesion (45.5%). Next common lesion was Mitral Stenosis (27.3%). Five cases were found with multivalvular involvement, of them 3 patients (9.1%) had MS with AS and 2 (6.06%) had MS with AR. (Table VIII– 10).

Criteria for diagnosing RF is based on revised Jones criteria (1965)

Criteria for suspected RF: polyarthralgia with fever, high ASO titre and raised ESR are regarded as post streptococcal arthralgia or suspected RF.

Criteria of RHD : diagnosis done on clinical manifestation and laboratory investigations including ECG, chest X-ray and echocardiography.

TABLE : VIII-8 : SEX DISTRIBUTION OF THE CHILDREN REFFERED TO OPD

MALE	:	478	(53%)
FEMALE	:	430	(47%)
TOTAL	:	908	(100%)

TABLE: VIII-9 CATEGORY OF CHILDREN REFFERED

DEFINITE RF	:	212	(23.3%)
SUSPECTED RF	:	300	(33.0%)
NO. OF RHD	:	33	(3.6%)
"FOLLOW UP"	:	204	(22.5%)
CONGENITAL HEART DISEASE	:	3	(3.3%)
NORMAL	:	156	(17.0%)

TABLE : VIII-10 TYPE OF VALVULAR LESION :

		No.	
MS	:	9	(27.3%)
MR	:	15	(45.5%)
AS	:	2	(6.06%)
AR	:	2	(6.06%)
MS and AS	:	3	(9.1%)
MS and AR	:	2	(6.06%)
TOTAL	:	33	(100%)

TABLE : VIII-11 AGE AND SEX DISTRIBUTION OF RHD PATIENTS

AGE	MALE	FEMALE	TOTAL	
5-7 yrs	3	1	4	(12.0%)
8-10 yrs	0	5	15	(15.0%)
$\geq$ 11 yrs	11	13	24	(73.0%)
TOTAL	14	19	33	(100%)

5. PRIMARY AND SECONDARY PROPHYLAXIS

PRIMARY PROPHYLAXIS:

Primary prevention of Rheumatic Fever may be under taken by injection Benzathine Penicillin or taking tablet penicillin orally. Awareness of parents, school teachers, school health officers may be increased. So that they

become aware of the fact that sore throat in children need medical checkup to diagnose streptococcal sore throat and this condition requires adequate treatment. Educational materials for mass education is under preparation.

SECONDARY PROPHYLAXIS:

Secondary prevention has been started in NICVD RF/RHD OPD (out patient department) and Dhaka Shishu Hospital with supply of Inj. Pencillin from the project. So far 218 patients have received secondary prophylaxis in NICVD OPD.

6. PRESENTATION OF SCIENTIFIC PAPERS

Several papers have been presented in various national and international congress. Title of the paper presented (as of 30 July 1990), name of the congress, date and name of the presenter are as follows:

1. Characteristics of rheumatic fever and rheumatic heart disease patients: observations at an outpatient clinic
   1. National congress of Cardiology in Bangladesh , Nov.11 to 12 . 1989: DR. M. HOSSAIN
   2. III World congress of Pediatric cardiology in Bangkok , Nov. 26 to Dec.1, 1989: DR. M. HOSSAIN

2. Consciousness of physicians regarding prevention of rheumatic fever(RF) and rheumatic heart disease (RHD) in BANGLADESH.

   National congress of cardiology in Bangladesh, Nov. 11 to 12. 1989: DR. K. YOSHITAKE

3. Pilot project on control and prevention of rheumatic fever and rheumatic heart disease in Bangaldesh

   Bangaldesh Paediatric Association, March 15 to 17, 1990: DR. K. YOSHITAKE

4. Prevalence of rheumatic fever and reheumatic heart disease in 5-15 years school children of Dhaka city: A study of 3576 school children.

   Bangladesh Paediatric Association Congress, March 15 to 17 ,1990: DR. RAZIA. S. MAHMUD.

5. Active rheumatic fever & rheumatic heart disease in Dhaka Shishu hospital.

   National Congress of Cardiology, Nov.11 to 12, 1989: DR. MANZOOR HUSSAIN

IX. LABORATORY ACTIVITIES AND RESEARCH

1. OPERATION OF LABORATIORY

At present only 2 to 3 categories of clinical tests can be done in the Laboratory & Diagnostic Center of RF/RHD project installed under Japanese technical cooperation. Some more electro-medical equipment will be installed within September, 1990.

The following electro-medical equipment have been installed in the Center. Local counterpart will be trained on the operating procedures of equipment.

(1) Autoclave
(2) Hot Air Sterilizer
(3) Filtering Apparatus
(4) Anaerobic Jar
(5) Shaking Water Bath
(6) Hotting Stirrrer
(7) Electric Balance
(8) Incubator
9) Refrigerator
(10) Auto Still
(11) High Speed Centrifuge
(12) Micro Plate Washer
(13) Binocular Microscope
(14) Spectrophotometer
(15) P^H meter

4. Future plan

Some more electro-medical equipment will be installed when, clinical tests of RF/RHD can be done:-

2. BACTERIOLOGICAL AND SERO-IMMUNOLOGICAL RESEARCH

INTRODUCTION:

Rheumatic fever and Rheumatic heart disease are important public health hazards in many countries in the world. According to the WHO expert report (1984) incidence of Rheumatic Fever has fallen sharply in the economically developed countries. However, according to the recent evaluation of Rheumatic Fever in middle class families in some economically developed countries, the incidence of streptococcal sore throat which is the risk factor, did not decrease. So, better life-style and higher socio-economic status are not the answer to the problem. It has been observed that the diagnosis of streptococcal infection of upper respiratory tract based on clinical findings is not confirmatory. Streptococcal infection and is its sequelae always require bacteriological and sero-immunological investigations for supporting the clinical diagnosis.

MATERIALS AND METHODS:

Various investigations were used for bacteriological and sero-immunological identification of streptococus β-haemolyticus from clinically suspected sore throat, rheumatic fever and rheumatic heart disease cases. This study continued from August, 1989 to June, 1990. Total number of sample studied were 874. The investigations included throat swab culture. strep-ID test, ASO- Titre and ESR. The age and sex of the subjects were also recorded. (Table IX-1).

RESULTS:

Among a total of 874 subjects,throat swab culture was done in 382, Strep-ID test in 674, ASO titre in 822 and ESR in 642 subjects. The variation in number was due to some technical difficulties.Among the total subjects,390 were male and 484 were female.Eight hundred subjects were within age of 5-15 years and the rest 74 were more than 15 years of age. The throat swab culture showed positive results in 116(30%) subjects ; but Strep-ID list showed positive result in only 18 (2.6%) subjects. ASO titre was raised in 33.09% cases to more than 200 IU/ml ; ESR was found to be more than 10 mm in the 1st hour in 82.2 cases. (Table IX-2-2 and IX-2-3)

Beta-haemolysis was found in the throat swab of 35 subjects in blood agar media. Sub-culture was done from selective colonies, and the streptococcus beta-haemolyticus were grouped by grouping sera.Group "A" was found in 3 subjects (8.75%), group 'B' in no person, group 'C'in 6 (17.14%), group 'G' in 16(45.71%) and Non-groupable in 10 (28.57%) subjects .These group were corelated with ASO-titre and ESR. (Table IX-2-4).

DISCUSSION:

In the screening procedure strep-ID test, Streptococcus group A beta -haemolyticus was found only in 2.6%; cases but in culture 30% cases were found positive. This is because positive culture contains different groups, like 'C' group 'G' group other than the 'A' group .Group 'A' determined by strep-ID test was postive in 8.5.% cases when done from the culture plate; but it was positive in 2.6% when done directly from throat swab because strep-ID test does not give positive result if the number of organisms are less in the sample.

ASO-titre showed better corelation with positive throat swab culture & Strep-ID test than ESR.

It was strangely found that group 'G' is much more prevalent in this country than group 'A'. Group-'A' is in the 4th position in chronological order. First is group 'G' followed by Non groupable group 'C' group 'A' and group 'B' in chronological order.

SUMMARY:

Among a total of 874 samples of selective subjects, 30% showed positive throart swab culture, 2.6% showed strep-ID test positive. ASO -titre showed better corelation with them than with ESR. Thirty five positive cultures were selected and grouped by grouping sera. Group 'A' was found in only 8.57% cases; group 'G' and group 'C' were more prevalent 45.71% and 17.14% respectively in Bangladesh.
A close examination of these referred cases has not been completed.

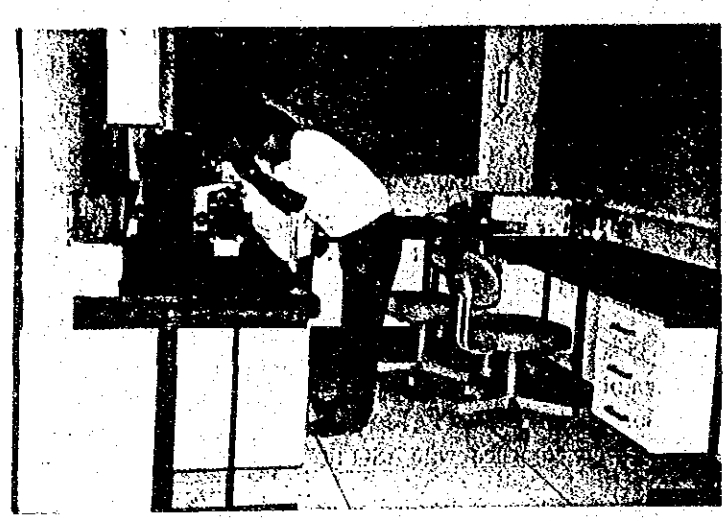
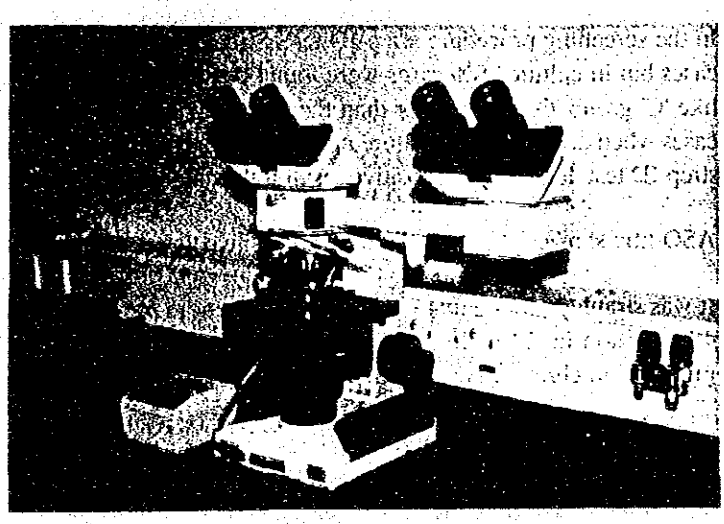


Photo - 1



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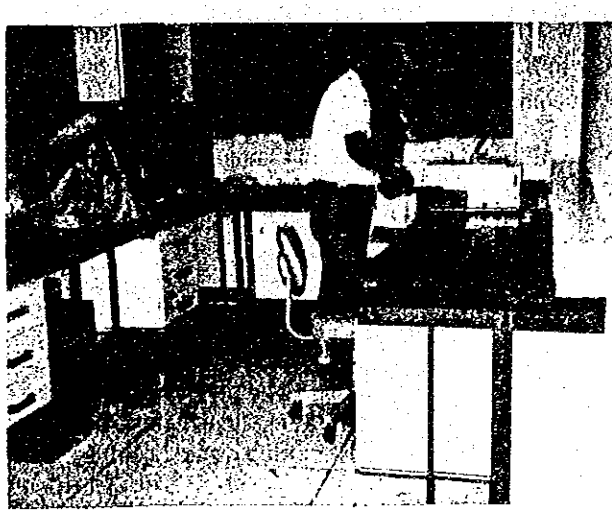

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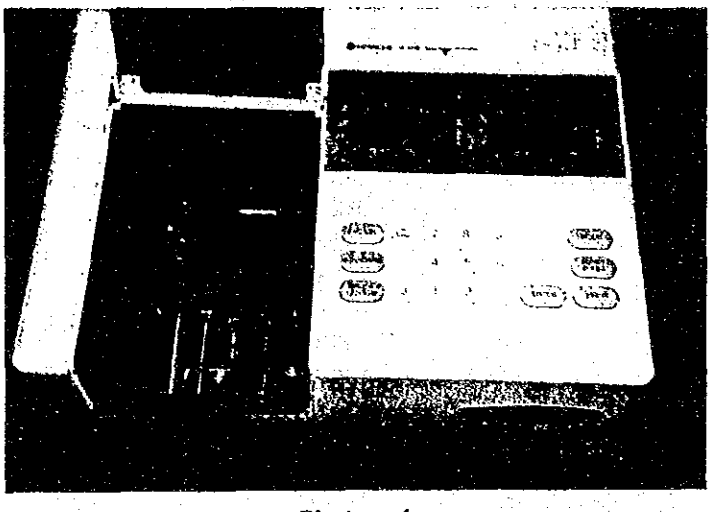

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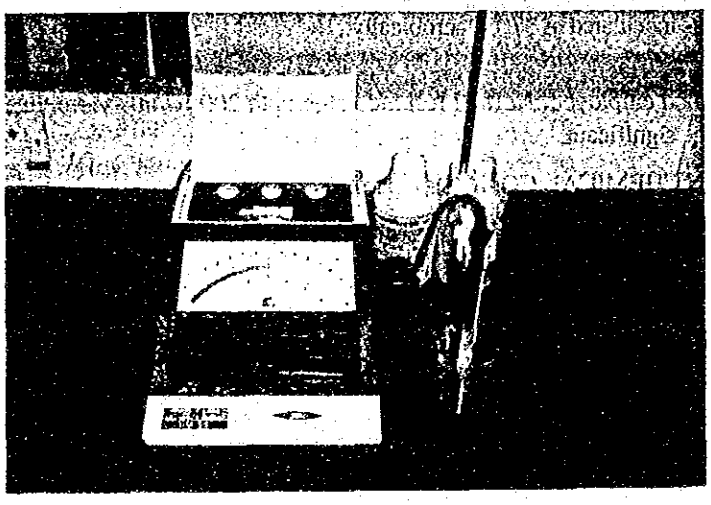

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TABLE IX-1

BRIEF RESULTS OF LABORATORY TESTS.

1.	Total T/S culture	382
	Positive	116 (30%)
	Negative	266 (70%)
2.	Total ASO	822
	> 200 units	272 (33%)
	upto 200 "	550 (67%)
3.	Strep -ID	674
	Positive	18 (2.6%)
	Negative	656 (97.4%)
4.	ESR>	
	10 mm. 1st hr.	642 (82.2%)
	upto 10 mm.-1st hr	139 (17.8%)
5.	Age	874
	5-15 yrs.	800 (91.5%)
	>15 years	74 (8.5%)
6.	Sex ;	
	Male	390 (44.6%)
	Female	484 (53.3%

METHODS USED :

Culture : (1) The T/S disposable swab with Rayon Strip Soaked in transport medium (Ref: culturette Becton Dickenson and Co., USA)

(2) T/S stored at 40°C if culture is delayed

(3) Solid blood agar plate was inoculated at 37 °C aerobically.

A.S.O. : Latex agglutination method employed. Normal resume value upto 200 IU/ml. More than 200 IU is considered to be significant.

(The reagent Ref. EIKEN CHEMICAL CO. LTD.,Japan).

Strep -ID Test : Strep -ID. Kit (Ref. DIA-IATRON CO.LTD.,Japan).

E.S.R : Westergren method-1st hour reading.

TABLE IX-2

MONTH WISE DISTRIBUTION OF LABORATORY TESTS

MONTH	T/S	CULTURE		A. S. O			STREPT-ID			E.S.R		
	Total	(+) β-Strepto	(-) β-Strepto	Total	Upto 200	> 200	Total	(+)	(-)	Total	Upto 10mm	> 10 mm
August 89	42	2	40	102	66	56	102	3	99	100	25	75
Sept 89	-	-	-	96	58	38	96	1	95	97	6	91
Oct. 89	24	6	18	74	41	33	74	1	73	74	15	59
Nov. 89	24	7	17	74	44	30	74	1	73	74	13	61
Dec. 89	18	3	15	43	25	18	13	1	12	33	6	27
Jan. 90	52	34	18	86	35	51	51	2	49	81	15	66
Feb. 90	34	17	17	40	21	19	33	-	33	32	9	23
Mar. 90	18	3	15	43	25	18	13	1	12	33	6	27
Apr. 90	35	12	23	87	54	33	38	1	37	75	15	60
May. 90	51	19	32	89	61	28	57	2	55	84	13	71
June. 90	124	13	111	148	106	42	123	5	118	98	16	82
TOTAL	382	116	266	822	550	272	674	18	656	781	139	642

TABLE IX-3

MONTHWISE DISTRIBUTION OF PATIENTS BY AGE AND SEX

MONTH	TOTAL	AGE			SEX	
		0-4	5-15	>15	Male	Female
August 89	102	1	101	0	25	77
Sept 89	100	2	82	16	52	48
Oct. 89	74	1	70	3	33	40
Nov. 89	74	0	70	4	32	42
Dec. 89	43	0	37	6	15	28
Jan. 90	86	1	73	12	35	51
Feb. 90	40	1	33	6	15	25
Mar. 90	43	0	37	6	15	28
Apr. 90	75	0	72	3	50	25
May. 90	89	0	87	2	38	51
June. 90	148	1	138	9	80	68
TOTAL	874	7	800	67	390	484

TABLE IX-4

GROUPING CO-RELATED WITH OTHER RESULTS

GROUPS	No. (%)	Strept- ID positive	ASO ~ 200I.U	ASO ~400IU	ASO ~600I.U	ASO ~800I.U	ASO >800I.U	ESR <20mm	ESR >20mm
A	3 (8.6%)	3	0	0	2	1	0	3	0
B	0(0)	0	0	0	0	0	0	0	0
C	6(17.1%)	0	0	4	2	0	0	3	3
G	16(45.7%)	0	0	8	6	2	0	7	9
Non-Gr.	10(28.6%)	0	2	7	1	0	0	6	4
TOTAL	35	3	2	19	11	3	0	19	16

X. EDUCATION AND MOTIVATION OF GENERAL PEOPLE

1. GENERAL CONSIDERATION

Health education is essential to solve various health problems in Bangladesh. The sickness and death due to certain diseases are related to ignorance and apathy of people. Lack of knowledge about health and disease, sociocultural prejudices, unhygienic health habits are also quite common.

Like other communicable diseases, the prevalance of Rheumatic fever and Rheumatic heart disease seem to be very high (about 0.7%) in Bangladesh. So the need and importance of organising health education programme in support of prevention and control of both RF and RHD is no doubt important.

The Bureau of Health Education as a collaborative agency provided necessary educational support to each and every ongoing health progamme including the prevention and control of RF and RHD.

Under the existing health infra-structure health education activities at various levels are carried out by the health educators and health workers to encourage behaviour that promotes health, prevents illness and facilitates rehabilitation.

In view of this, health education specialists at various levels play the role of organisers and advisors to various health professions.

The objective of the health education for prevention and control of RF and RHD are as folows:

To inform people about RF; its signs and syptoms and mode of transmission of the disease .

To educate and motivate people to take necessary preventive meausres including care of their children specially when they get sick and inform them to receive available hospital services.

Disseminate health messages on RF & RHD through mass media, radio, TV and newspaper.

To achieve the above objectives the following health education activities were carried out during the 1989-90 preiod.

2. DEVELOPMENT OF TRAINING CURRICULUM AND COURSE

Mr. Utsumi, Development Specialist (Education) Dr. K. Yoshitake, JICA Team Leader and other members worked together to identify educational areas of different health programme. Accordingly serveral discussion sessions were arranged with, EPI, IEM, NIPORT, HEB & IEDCR.

a) **Development of health education messages :**

Health education should reach every segment of the population either literate or illieterate, young or elderly men or women and children of the rural or urban areas. It has got some role in interpersonal communication, group approach, community approach or mass media. Keeping this in mind 20 educational messages were developed on RF & RHD and are likely to be disseminated through the Radio/ TV and News papers.

b) **School health education programmes:**

Educational sessions were arranged in the following schools on prevention and control of RF & RHD:

i. Sher-e- Bangla Nagar Boys & Girls High Schools.

ii. " " " Primary school.

iii. Aramanitola Primary School.

iv. Azimpur Primary school.

c) **Video programmes:**

Video programmes on RF & RHD was considered to be very useful. Necessary steps have been taken to introduce Video programmes in the hospitals. One Bangladesh script was prepared for this purpose. The title of the Video is, "Protect your children from RF & RHD "and the duration of the programme is proposed to be 20 minutes.

d) **Holding of an Exhibition:**

In conection with the observance of World Health Day on 7th april, 1990, an exhibition on RF & RHD was arranged in Bangaldesh Shishu Academy premises which was visited by Honourable Vice President, Honourable Minister of Health and Family Welfare and other distinguished guests and diplomats.

e) The draft copy of a leaflet on RF & RHD has been prepared and pre-tested. It is now being processed for final printing.

f) **Designing of poster:** Initiated designing the draft copy of a poster on RF/RHD

g) Visited Dhamrai Upazila Health complex and had a discussion with U. H. F. P. O and the area health workers. Also visited the Dhamrai project area, visited the houses and conducted discussions with the village people about RF.

h) Prepared an article on prevention & control of rheumatic fever & rheumatic heart disease in Bangladesh which was published in daily news paper " Janata " & Banglar Bani" on 7th April, 1990.

XI. PROJECT MANAGEMENT

1. GENERAL CONSIDERATION

The project management is the key requirement centering on which various inputs are put into operation and reprocessed after reviewing so that the desired output is achieved. So the very success of the project depends mostly upon the efficient management of the project.

In this project this very important task of project management has been assigned to the Director of the NICVD stating that the Director NICVD will act as the Project Director. No separate management establishment was proposed for this project.

As time goes on and as a result of the hard works of Japanese experts and several staffs of Bangladesh the activities of the project have expanded to a great extent. The work load of the Director of NICVD is tough and multifarious. He looks after the project as Ex-Officio Project Director. In the project profile, only one doctor in the rank of Asstt. Professor/Assoc. Prof./ Professor is provided to work in the project in addition to his own duties. However Director, NICVD (Ex-officio Project Director) has arranged to depute one Asstt. Prof. of Cardiology and two Medical officers to work in the project on full time basis under local arrangement. One Professor of Cardiology, one Associate Professor of Cardiology, one Associate Professor of Bio-chemistry are also deputed on part tiem basis by Director NICVD to the project for smooth functioning. But it is not sufficient to meet the increasing demand of work load of the project.

Full-time counterpart has not been avaiable to work with the Team Leader of Japanese Experts to cooperate and share management responsibilities. Consequently the progress of the project implementation schedule has been hampered to the following extent.

2. SETBACK AND DELAY OF THE PROJECT

1) Delay in the preparation of educational materials, project manual and various type of printing materials : Minimum requirement of the printing material were completed by working experts.
2) Standstill in the expansion of the programme to the district level : Although the Government of Bangladesh planned to expand the programme to the district level, this could not be done because of shortage of manpower assigned by the Government.
3) Delay in starting the prevention programme :
   The prevention programme was delayed for more than one year due to lack of manpower.
4) Poor involvenment of of the city hospitals :
   It is important to involve the city hospitals where a lot of patients with RF/RHD report. The main reason for poor involvement is that no doctor from Bangladesh take initiative or share time to visit the hospitals unless they are assigned on full time basis for the project.
5) Poor progress of the research :
   The reason is not only the delay in construction in research center but also due to non assignment of fulltime researchers.
6) Delay of epidemiological study:

Especially the statistical analysis is markedly delayed because of non assignment of a full-time epidemiologist or statisician.

7) Poor progress of health education programme:

No person incharge has been assigned on a full-time basis.

3. PROJECT ORGANIZATION

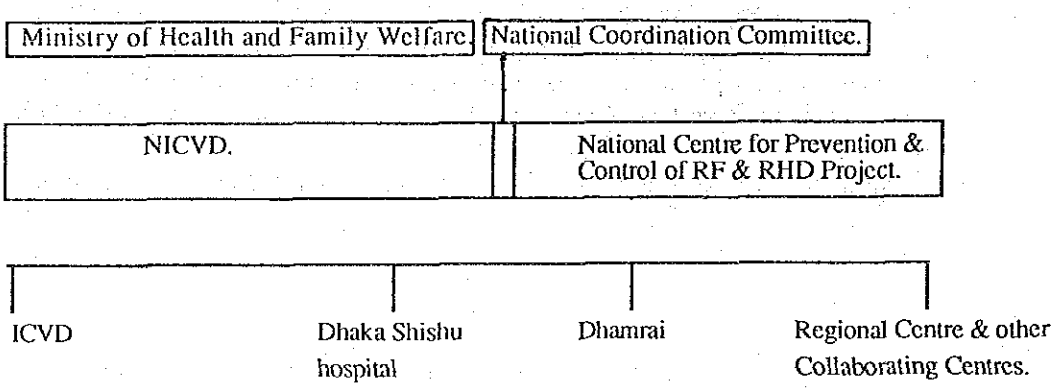
The Pilot Project for control and prevention of Rheumatic Fever (RF) & Rheumatic Heart Disease (RHD) in Bangladesh was initiated by the Government of Bangladesh with the collaboration of the Government of Japan through JICA. The work started after the Joining of Japanese experts headed by Dr. K. Yoshitake from 1st Nov. 1988. Doctors from NICVD has participated in the activities of the prooject in addition to their own duties in the institute. In Aug. 1989 one Assistant prof. of Cardiology. Dr. Razia Sultana Mahmud & subsequently two medical officers joined the project as full time researchers. The Project has been approved by the ECNEC on 12.9. 1989.

CURRENT STATUS OF THE ORGANIZATION

This Project is governed by the Ministry of Health & Family welfare, Govt. of Bangladesh with Director NICVD as the Project Director.

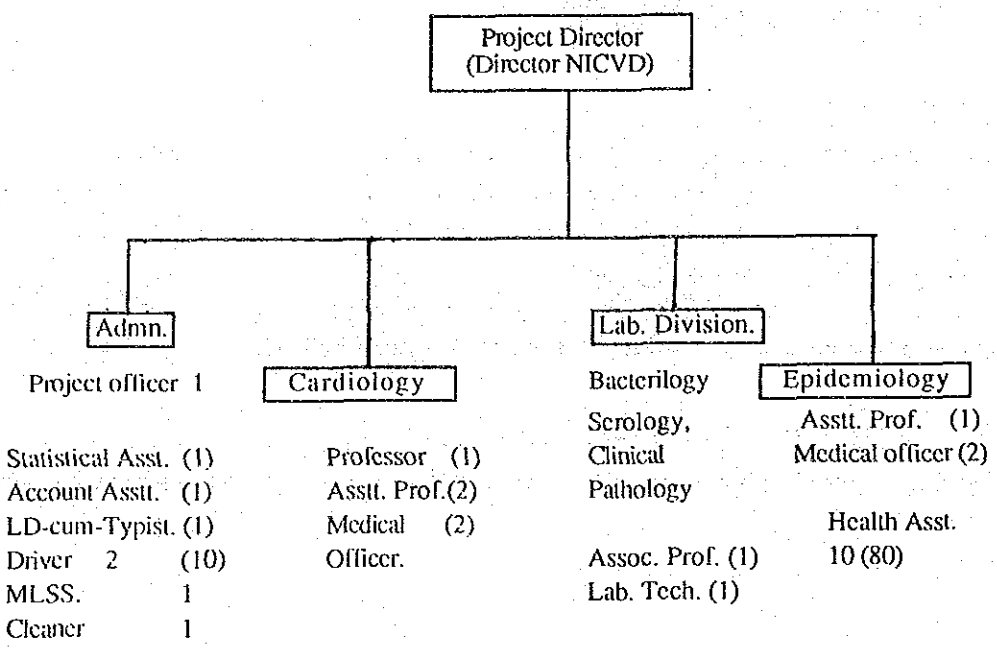
FIGURE XI-1

(ORGANIZATION CHART)



At present the Project is run by the Doctors and other staff of NICVD Under local arrangements.

FIGURE XI-2
PRESENT ORGANOGRAM



ORGANIZATION TO BE REFORMED

The Ministry of Health & Family Welfare and Director General of Health Services has been requested to depute Doctors for the Project, (See Pages 48,49)

The Joint secretary (Dev), Ministry of Health & Family Welfare has reviewed the Project from time to time regarding its implementation. The problem of the personnel has been identified. According to his advice proposed man power requairements of the project has been prepared by the Project Director (Director NICVD) in agreement with team leader of Japanese experts. (See page 50,51)

Revised Project Profile has been sent to the Ministry of Health & Family Welfare for necessary action on 25th June,1990.

FIGURE XI-3
PROPOSED ORGANOGRAM

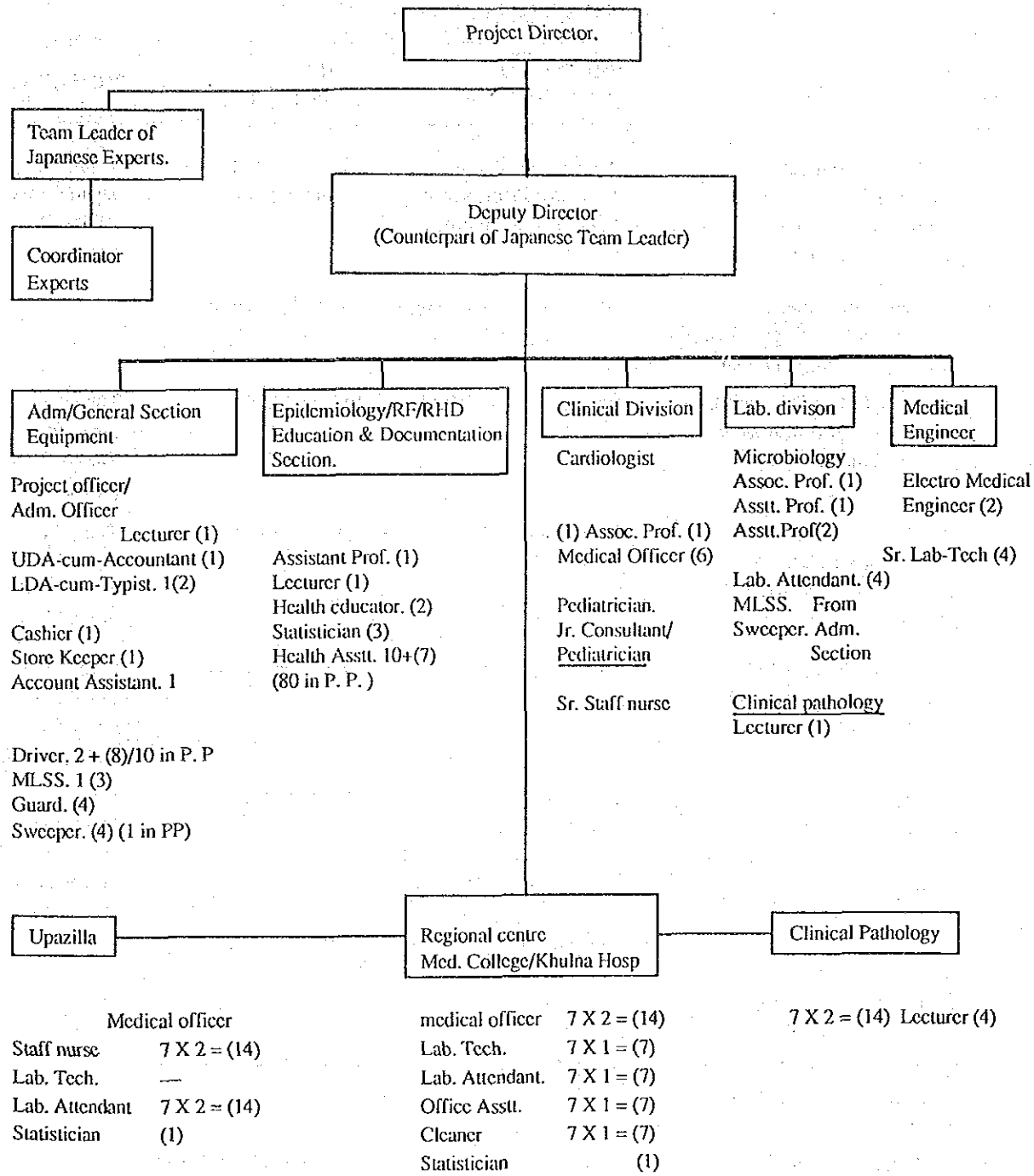


TABLE XI-1

PROPOSED LIST OF STAFF TO BE DEPUTED ON FULL TIME BASIS FOR RF/RHD PROJECT IN NICVD

Sl. NO.	NAME & DESIGNATION	PROPOSED DESIGNATION	JOB DESCRIPTION	REMARKS
1.	Dr. Mian Abdur Rouf Assistant Professor of Microbiology (Bacteriology) IPGM & R, Dhaka.	Against the post of Associate Professor of Microbiology of NICVD Dhaka.	Microbiologist (Bacterilogist)	Trained in Japan for the RF/RHD Project.
2.	Dr. Tahmina Begum, *Sr. Clinical Pathologist, Institute* of Ophthalmology, Dhaka.	Senior clinical Pathologist	Clinical pathology.	
3.	Dr. Razia Sultana Mahmud. Asstt. prof. Of Cardiology, NICVD, Dhaka	Physician / Asstt. Prof.	Epidemiologist	Trained in Japan for The RF/RHD project.
4.	Dr. Monwar Hossain, Asstt, Prof. of Cardiology, Sir Salimullah Medical college, Dhaka.	Physician/ Asstt. Prof.	Epidemiologist	Trained in Japan for the RF/RHD Project.
5.	Dr. A.K.M. Mohibullah, Asstt. Prof of Cardiology, NICVD, Dhaka	Asstt. Prof.	Clinical cardiologist	Received Training in Japan for the RF/RHD.
6.	Dr. Md. Mayejuddin. Lecturer of Pathology, Dhaka Medical college, Dhaka.	Bacterologist	Bacteriological study.	Passed Diploma in Bacterilogy & now waiting for his posting.
7.	Dr.Shafiqul Islam, Medical officer, Gouripur Health Complex Daudkandi, Comilla.	Medical oficer	Epidemiologist	
8.	Dr. Md. Qumrul Jalil, Asstt. Registrar, NICVD, Dhaka.	Asstt. Registrar	Clinical/Applied research.	
9.	Dr. Md. Shahed Arzu, Medical Officer, NICVD, Dhaka.	Medical officer	Clinical/Applied research.	

10. Dr. Md. Iqbal Hossain, Resident Medical officer, Dhamria Upazila Health Complex, Dhamrai, Dhaka.	Medical officer	Clinical /Applied research.	
11. Dr. Md. M. Zaman, Resident Medical officer, Savar Upazila Health complex, Savar, Dhaka.	Medical Officer	Health education.	
12. Mr. Nur Mohammed, Asstt. Chief. Health Education Bureau, Mohakhali.	Assistant Chief	Health education	Received training in Japan for the RF/RHD project
13. Md. Abu Taher, Chief Technician, NICVD, Dhaka.	Project Chief Technician.	Chief Technician	Received training in Japan for the RF/RHD project
14. Md. Hashem uddin Lab. attendent NICVD, Dhaka.		Project MLSS	

Table XI-2

PROPOSED LIST OF STAFF TO BE DEPUTED ON PART TIME BASIS FOR RF/RHD PROJECT IN NICVD

Sl. NO.	NAME & DESIGNATION	PROPOSED DESIGNATION	JOB DESCRIPTION	REMARKS
1.	Prof. KMHS Sirajul Haque, Prof. Of Cardiology (c.c.) NICVD, Dhaka.	Prof. of Cardiology, (Clinical Cardiologist).	Supervision of the clinical activities of RF/RHD.	Already working for Project.
2.	Prof. M. Jalaluddin, Prof. of Cardiology, NICVD, Dhaka.	Prof. of Cardiology, (Clinical Cardiologist).	Clinical activities of RF/RHD Project.	
3.	Dr. Sufia Rahman, Assoc, Prof. of Cardiology, NICVD. Dhaka.	Assoc. Prof. of Cardiology.	To cary out Echocardiographic investigations.	
4.	Dr. Abdul Kadir Khan, Assoc. Prof. of Biochamisty NICVD, Dhaka.	Assoc. Prof. of Biochmistry (Serologist).	Serologist.	Trained in Japan for the RF/RHD Project.

5.	Dr. Shamsul Haque, Asstt. Registrar. NICVD, Dhaka.	Asstt. Registrar.	To perform clinical activity.	
6.	Dr. Masudur Rahman Khan, Asstt. Registrar, NICVD,	Asstt. Registrar.	To perform clinical activity.	
7.	Dr. Manzoor Hussain Assoc. Prof. of Child Health Shishu Hospital, Dhaka.	Assoc. Prof. of Child Health	Clincial study.	He is not a govt. officer. This is for information and not for deputation.
8.	Dr. Inun Afroza Research Asstt. (Pediatrics) IPGM & R, Dhaka	Research Asstt. (Pediatrics).	Clinical study.	----
9.	Mr. Waliullah, Lab. Technician, NICVD, Dhaka.	Lab. Technician.	Laboratory works.	—

Table XI-3

MANPOWER REQUIREMENT OF RF/RHD PROJECT

(TO BE INCLUDED IN THE PP)

FOR NATIONAL CENTRE				FOR REGIONAL CENTRES All Medical Colleges/ District hospital		REMARKS
SL. NO.	NAME OF POST	Existing	To be created	Existing	To be created	
1.	Team Leader (Counterpart of Japanese Team Leader) Professor of Cardiology	Nil	1	Nil	Nil	
2.	**CARDIOLOGY**					
	a. Assistant Professor	Nil	2	Nil	Nil	
	b. Medical Officer	Ni	6	Nil	14 for the Medical Colleges/District hospital 14 for Upazilla Health Complex	
3.	**EPIDEMIOLOGY**					
a.	Associate Professor	Nil	1	Nil	Nil	
b.	Assistant Professor	Nil	1	Nil	Nil	

4. MICROBIOLOGY/SEROLOGY				
a. Associate Professor	Nil	1	Nil	Nil
b. Assistant Professor	Nil	1	Nil	Nil
c. Lecturer	Nil	1	Nil	Nil
5. CLINICAL PATHOLOGY				
a. Lecturer	Nil	1	Nil	Nil
6. Project Officer/administra -tive Officer	1	Nil	Nil	Nil
7. Health Educator	Nil	2	Nil	Nil
8. Pediatrician	Nil	2	Nil	Nil
9. Electro-Medical Engineer	Nil	2	Nil	Nil
10. Staff Nurse (OPD)	Nil	3	Nil	(Upa. Health Complex 7X2=14) 21 (Medical colleges 7X1=7)
11. Statistician	1 (in PP)	2	Nil	2
12. Laboratory Technician	Nil	4 (1 senior Tech.)	Nil	7 for Medical Colleges
13. Laboratory Attendant	Nil	4	Nil	21 (7 for Medical Colleges (14 for Upzilla H.C)
14. a) Account Asstt.	Nil	1	Nil	Nil
b) Account Asstt.	1	Nil	Nil	1X7= for medical Colleges
15. Office Asstt.	1	2	Nil	Nil
16. Cashier	Nil	1	Nil	Nil
17. Store Keeper	Nil	1	Nil	Nil
18. Health Asstt.	80 (in P.P)	Nil	Nil	Nil
19. MLSS	1	3	Nil	1X7 for Medical Colleges
20. Security Guard	Nil	4	Nil	Nil
21. Cleaner	1 (in P.P)	3	Nil	1X7= 7 (for Lab.) of Medical Colleges
22. Driver	2	8 (10 in P.P.)		

XII. BUDGET ALLOCATION

1. BUDGET ALLOCATION FROM JAPAN

The expenditures shownin the report is as per the record of discussion between the Government of Japan and the Governmem of Bangladesh. However, the training of the Bangladeshi counterparts has not been included in the report.

PARTICULARS OF EXPENDITURE WITHIN THE BUDGET ALLOCATION FOR THE YEAR 1988-1989 & 89-90

1. EQUIPMENT FROM JAPAN		TAKA
(a)	ASO slide test etc	19,31,885.17
(b)	1 Cft. Electro-cardiograph etc	89,50,471.49
(c)	Computer	1,20,016.32
(d)	Word processor etc	1,05,700.68
(e)	Air compressor etc	1,59,089.65
(d)	Word processor etc	1,05,77.68
(e)	Air compressor etc	1,05,700.68
(f)	Refrigerator	1,20,016.55
(g)	Stationary and tools	2,75,603.37
(h)	ASO, Slide, CRP, Slide etc	5,76,356.55
(i)	Pipe seal tape etc	2,14,858.39
(j)	Books & Publications	48,725.51
(k)	Disposable cotton swab	17,643.21
	TOTAL:	1,25,20,536.98

2.	EQUIPMENT ON LOCAL PURCHASE	
		TAKA
(a)	Gas Generator	3,61,88.00
(b)	Air Conditioner	15,72,500.00
(c)	Photocopy machine	53,600.00
(d)	Type writer	13,400.00
		21,21,900.00
3.	VEHICLES	
(a)	Pajero jeep -4 Nos.	4,20,000.00
(b)	Motor Cycle -2 Nos.	96,000.00
		5,16,000.00
4.	ATTENDING FOREIGN CONGRESS AND ARRANGING LOCAL SEMINAR	
(a)	Attending foreign congress	74,782.00
(b)	Local training	40,520.00
		1,15,302.00
5.	OFFICE MAINTENANCE	
(a)	Machineries	36,253.00
(b)	Stationaries	3,36,796.75
(c)	Furniture	1,43,500.00
		5,16,549.00
6.	MAINTENANCE OF VEHICLE AND VEHICLE HIRE FOR NON AVAILABILITY OF VEHICLE	
(a)	Vehicle maintenance	1,72,181.00
7.	MANPOWER ESTABLESHMENT	
(a)	Driver	30,689.66
(b)	Office staff	95,340.00

		TAKA
(c)	Health Assistant	1,82,000.00
(d)	Night guards	45,219.00
(e)	Data processing staff	8,347.00
		3,61,595.66
8.	FUEL, OIL ETC	42,152,96
9.	EPIDEMIOLOGICAL STUDY	
(a)	Epidemiological study	3,05,215.94
(b)	Purchase of Computer (IBM)	5,12,100.00
		8,17,315.94
10.	CONSTRUCTION OF BUILDING	75,44,936.87
11.	ELECTRIC, GAS, WATER & SEWARAGE CONNECTION CHARGES	10,52,300.00

TABLE XII SUMMARY OF EXPENDITURE

SL.	Head of Expenditure	Taka value of F. E	Local currency Taka	Total Taka
1.	EQUIPMENT FROM JAPAN	1,25,20,536.98		1,25,20,536.98
2.	DO-LOCAL		21,21,900.00	21,21,900.00
3.	VEHICLES		45,16,000.00	45,16,000.00
4.	ATTENDING FOREIGN CONGRESS & SEMINAR		1,15,302.00	1,15,302.00
5.	OFFICE MAINTENANCE		5,16,549.75	5,16,549.75
6.	MAINTENANCE OF VEHICLE & VEHICLE HIRE		2,23,613.50	2,23,613.50
7.	MANPOWER ESTAB.		3,61,595.66	3,61,595.66
8.	FUEL, OIL ETC		42,152.96	42,152.96
9.	EPIDEMIOLOCICAL STUDY		8,17,315.94	8,17,315.94
10.	CONSTRUCTION OF BUILDING		75,44,936.87	
11.	ELEC, GAS, WATER AND SEW. CONNECTION CHARGES		10,52,300.00	10,512,300.00
	GRAND TOTAL	1,25.20.536.98	1,73,11,666.68	2,98,32,203.66

2. BUDGET ALLOCATION IN BANGLADESH.

BUDGET ALOCATION FOR 1989-90 (UPTO JUNE)

Thirty six Lakhs taka was allocated for the year 1989-90, out of which 20 Lakhs was enmarked for CDST and 16 Lakh for establishement and other expenditure. Taka 6 Lakhs was released to meet the expenditure for the fiscal year 1989-90. Taka 10 Lakh could not be utilized due to delay in implementation of the Programme.

DETAIL BREAK UP OF EXPENDITURE.

(In Lakh Taka)

(1)	Furniture	-	3.80
(2)	Telephone Instalation	-	0.60
(3)	Establishment	-	.50
(4)	Stationery, Office Machine and other contingency.	-	1.10

Total Taka= 6.00 Lakh.

PROBLEM OF THE PROJECT.

Manpower is the main problem for the Project.

MEASURES TAKEN BY THE GOVERNMENT OF BANGLADESH.

1. Appointment of H/A and other staff.
2. Training of H/A in NICVD.
3. House to house Survey and School Survey in Dhamrai upazila.
4. House to house & School Survey in Dhaka city.
5. Submission of paper for deputation of Doctors and other Personnels to Ministry.
6. Handing over of Project building.
7. Submission of papers for revised Project profile to Ministry.
8. Office maintenance:-
    (a) Budget for RF/BHD (Dev.)
    (b) Furniture.
    (c) Installation of Telephene.
    (d) Other official works
9. Communication with concernod authority.
10. Co-ordination between Govt. of Bangladesh & Japan.
11. Treatment of RF/RHD patients
12. Others.

XIII. PROBLEMS IN IMPLEMENTATION OF THE PROJECT

—from the view point of JAPANESE EXPERTS—

1. The Project was not properly designed in the Project Proforma.
2. The Project Director is not assigned to work exclusively for the project.
3. Project personnel are not assigned to work exclusively for the project.
4. Counterpart is not specified clearly to each Japanese expert, especially to the team leader.
5. Job is not specified clearly for each personnel in the project.
6. Responsibilities and duties of the Project Director are not clearly mentioned.
7. System of monitoring the progress of the project at the highest levels is not clearly described.
8. Budget provision is not made sufficiently to meet running and day to day maintenance cost of the project.
9. Record of Discussion for the project agreed mutually between the Government of Japan and the Government of Bangladesh has not been taken into consideration sufficiently at the time of planning of the Project Proforma.

XIV. GUIDELINES FOR DIAGNOSIS AND PROPHYLAXIS OF RHEUMATIC FEVER/RHEUMATIC HEART DISEASE.

The patients are divided into two groups depending on whether they are symptomatic at present or they though are asymptomatic at present but had symptoms in the past. Group 'X' comprised of those who are symptomatic presently or are suffering from Rheumatic heart disease. Group 'Y' consisted of those who had symptoms only in the past. This was done because although some of the patients present with symptoms/signs suggestive of RF in the past, most of the patients recall a history suggestive of RF in the past.

GROUP X

The patients of group-X have again been divided into 4 groups i.e. X1, X2, X3, and X4 groups.

Group-X1 & X2:

These groups include those patients who have features of definite RF as per revised Jone's criteria (1965). Revised Jone's criteria have been followed for diagnosis of RF because it is more specific for diagnosis of the disease as compared to modified Jone's criteria (1956). In the modified Jone's criteria evidence of recent streptococcal infection has been included as a minor manifestation and thus if somebody have one major manifestation like arthritis and two minor manifestations like fever and high ESR (as may be found in various collagen diseases), he /she would be diagnosed as a case of RF. This would render a lot of children to long periods of Penicillin prophylaxis without actually ever suffering from RF. In these two groups (X1 and X2) and all other groups in which patients have present or past history of joint pain with fever (X4, Y1, Y2, Y3,) attempt should be made to exclude other causes of joint pain such as collagen diseases (SLE, Rheumatoid arthritis etc), Tubercular arthritis and malignant diseases because in these conditions also patients will have arthritis, fever, high ESR and there may be fortuitous increase in ASO titre because of coincidental streptococcal infection. But if facilities for excluding there diseases do not exist or the patient cannot bear the expences needed for carrying out investigations to exclude these diseases, the children should be treated as if they were suffering from RF.

It is recommended that patients having RF without carditis (XI) should continue prophylaxis for 5 years or upto the age of 18 years (which one is longer), but patients having RF with carditis (X2) should receive prophylaxis upto a minimum age of 30 years. This regime has been recommended because of the fact that what we are worried about is Rheumatic heart disease. If one suffers from carditis during the first attack of RF, he/ she is likely to develop carditis with every subsequent attack of RF ultimately ending up with severe RHD. On the other hand one who escapes carditis during the initial episode of RF is less likely to get carditis with subsequent attacks and there is little chance of developing RHD. So, in order to protect the heart from additional damage due to recurrent attacks of RF with carditis; it is recommended to continue prophylaxis at least upto the age of 30 years in those patients whose RF is complicated by carditis.

GROUP X3 :

This group include those patients who are having heart murmur of rheumatic origin. Diagnosis of RHD should be based on symptoms, clinical examination, ECG, X-ray and echocardiography. One may have a fortuitous past history of RF; so somebody presenting with heart murmur and having a past history of RF is not necessarily a patient of RHD. Every attempt should be made to differentiate RHD patients from other conditions which cause heart murmur such as congenital heart diseases, any myocardial disease or other conditions such as venous hum, innocent murmur, arteriovenous fistula etc. If facilities do not exist for echocardiographic examination but clinical findings, ECG and X-ray chest suggest RHD, the person should be considered to be suffering from RHD. Patients of this group should continue prophylaxis at least upto the age of 30 years. This is because of the fact that the patients who have already developed RHD are not immune to recurrent attacks of RF and its sequelae i,e, further cardiac damage. It should be specially noted that this prophylactic regime should also be applied to those who have undergone cardiac surgery for RHD.

Group X4 :

In our country and also in India a group of patient have been identified who do not exhibit any of the major manifestations but only have some minor manifestations of Jone's criteria such as arthralgia, fever, high ESR and supportive evidence of antecedent streptococcal infection e.g. raised ASO titre. On the basis of these findings some of the Indian authors recommended to include polyarthralgia as one of the major mainfestations. This is a group who are strongly suspected to be suffering from RF. So our definition of 'Suspected RF' or 'Post streptococcal arthralgia' should be applied to this group and it is recommended to give Penicillin prophylaxis to these patients.

GROUP Y

The Y group i,e, those who had sign/symptoms related to RF in the past have again been divided into three sub-groups depending on their clinical features and laboratory findings.

Group Y1:

The patients are categorized Y1 group if they had clinical features and documented laboratory findings meeting Jone's criteria in the past. They should receive prophylaxis for 5 years or upto the age of 18 years (which ever is longer). But if the child had definite evidence of carditis during an attack of RF in the past they should continue prophylaxis upto the age of 30 years (irrespective of whether they have any heart murmur or not at present).

Group Y2:

This group includes those children who had polyarthritis (joint pain with swelling) with fever in the past but did not have documented laboratory findings to meet the Jone's criteria. The children belonging to groups Y2A and Y2B are strongly suspected to have suffered from RF in the past because of documented high ASO titre or raised ESR. Even those children who did not do any laboratory investigations (group Y2C) should receive prophylaxis to give them the benefit of doubt because if laboratory investigations had been done it would probalby show abnormalities. More emphasis has been laid on raised ESR than high ASO titre. For example, those who had normal ESR with high ASO titre (group Y2b)will not be given penicillin prophylaxis on the assumption that high ASO titre was probably the sequelae of streptococcal infection and not RF. Of course these patients will be followed up for at least 5 years.On the other hand the children who had normal antibody titre and normal ESR (Group Y2c) at the time of arthritis will be excluded because of the fact that probably they did not at all had arthritis or arthritis could be due to causes other than rheumatic fever.

Group Y3 :

Y3 group includes those children who are though suspected to have suffered from rheumatic fever in the past, the level of suspicion is weaker than those of group Y2 because they showed none of the major manifestations suggestive of RF. Minimum requirement for inclusion in this group is past history of arthralgia (lasting for at least 7 days) associated with fever and laboratory evidence of high ESR. Patients with documented high ASO titre at the time of arthralgia (group Y3A) will be given prophylaxis. Benefit of doubt will be given to those who did not have an estimation of ASO titre (group Y3B) because if it would probably be high had it been done. Those who had normal ASO titre (group 2a) or those cases who did not have an estimation of ESR (group Y2b) will only be followed up without giving prophylaxis.

In order to help in ready identification of the patients, examination cards of different colours will be used for patients of different groups. For example, red coloured cards will be used for definite cases of RF/RHD i,e, X1, X2, X3 and Y1 groups; green for suspected case (X4, Y2A, Y2B, Y2C , Y3A and Y3B groups); blue for those cases who did not even have suspected RF yet needs to be followed by (Y2a, Y2b, Y3a and Y3b groups).

XV. CHRONOLOGY OF THE RF/RHD PROJECT'S ACTIVITIES FROM NOVEMBER, 1988 TO JULY,1990

PERIOD		ACTIVITIES
1988		
NOVEMVER	:	
3rd	:	Japanese experts Team comprising of Dr. K. Yoshitake (Team Leader), Dr. S. Tokeshi (Expert of Epidemiology) and Mr. T. Oshima (Co-ordinator) arrived in Dhaka, Bangladesh.
5th	:	Japanese Experts Team met Brig. (Rtd) Abdul Malik, the then Director-cum-Professor of NICVD in his office.
21st	:	RF/RHD project office opened in NICVD
DECEMBER		
7th	:	First meeting of the Steering Committee held and discussed about implementation of the project.
11th -21st	:	Visited some health and medical facilities and related health organization along with the visiting Evaluation Team of Health/Medical project.
17th	:	Attended Heart Workshop organised by NICVD concerning training of doctors about facilities for heart disease patients in rural areas provided by the government.
1989		
JANUARY		
3rd -10th	:	Visited collaborated facilities/organizations of RF/RHD project and requested them to co-operate with its implementation programme.
4th	:	Arranged lunch party comprising of Japanese Experts and NICVD's Doctors and Officers to promote better understanding amongst them (Arranged by Dr. K. Yoshitake, Team Leader of Japanese Experts)
21st	:	Attended Pediatric conference organised by Bangladesh Institute of child health.
25th	:	Visited Sutipara Union of Dhamrai Upazilla (one of the project's area) along with the then Director-cum-Professor of NICVD Prof. A. Malik.
26th	:	Second meeting of the Steering Committee held and discussed about problems of the project.
28th	:	Dr. K. Yoshitake, Team Leader of the Japanese Experts left Dhaka for Japan to attend the JICA's Project Leaders conference in Tokyo.
FEBRUARY		
5th	:	Director of the Bureau of Ministry of Foreign Affairs of Japan visited NICVD.
22nd	:	3rd Meeting of the Steering Committee held and discussed various matters of the project.
27th	:	Started Journal Club once a week.

PERIOD		ACTIVITIES
MARCH		
2nd	:	Mr. Utsumi, JICA's Audio-visual Technical Expert visited project site to observe it alongwith Mr. Nur Mohammad of Bureau of Health Education.
9th	:	Distribution of questionnaire of out patients started in Shishu Hospital.
11th	:	Visited National Institute of Population Research and Training (NIPORT).
13th	:	Visited Geneva Camp where Biharis (Non-Bengalis who opted for Pakistan reside)to observe slum areas of Dhaka city.
24th - 30 th	:	Dr. K. Yoshitake, Team Leader, left Dhaka for Pakistan to attend RF/RHD conference held in Islamabad.
APRIL		
8th	:	Started interview of patients of Shishu Hospital to carry out study on sore throat.
12th	:	Fourth meeting of the Steering Committee held to discuss about progress of the project.
19th	:	Visited Tejgaon slum area (One of the project's site.)
23rd	:	Mr. Furukawa, Short term expert on Architecture , visited construction site of the project centre to observe progress of the construction.
MAY		
5th	:	Opened project office hiring a residentaial building at 5/1 Mohammadpur (opposite NICVD building) because accommodation in NICVD was very small.
2oth	:	Four (4) Editors of Newspapers named Keizai, Sankei, Tokyo and Yamiyuri visited NICVD.
22nd	:	Fifth meeting of the Steering Committee held to discuss about the progress of the decisions of the first joint Steering Committee meeting.
25th	:	Met Secretary, Ministry of Health and Family Planning (MHFP) Mr. S. Hasan Ahmed to brief him about problems of RF/RHD project.
29th	:	Issued advertisement for recruitment of Health Assistants.
JUNE		
14th -16th	:	Held interview of Health Assistants.
29th	:	Started circulation of questionnaire of doctors of Dhaka.
30th	:	Study team of Assistance from Japan visited NICVD.
JULY		
1st	:	Started 2 week long training course of Health Assistants recruited for the project.
14th	:	Arranged closing ceremony of training course of Health Assistants and distribution of certificates to the trainees where Honourable Minister of Health and Family Planning Dr. M.A. Matin and Secretary of Health attended.
26th	:	Members of investigation Team of Medical Equipment from Japan visited NICVD and this project.
29th	:	Started one week long training course of doctors assigned to work in the project.
AUGUST		
5th	:	Started school survey in Dhaka city.
17th	:	Sixth meeting of the Steering Committee held.

PERIOD		ACTIVITIES
SEPTEMBER		
4th	:	Mr. Tabazawa, OECF visited NICVD.
5th	:	Members of the fact finding Mission visited Bangladesh .
16th	:	Met Dr. Azizur Rahman, Minister of Health and Family Planning, for discussion about posting of counterparts for the project
	:	Mr. K. Suzuki, Expert on Medical Equipment arrived Bangladesh to join the project.
19th	:	Seventh meeting of the Steering Committee held.
23rd	:	Mr. Furukawa, Short term Expert on Architecture visited site of ongoing construction of project centre.
24th	:	Attended workshop on Heart Diseases.
25th	:	Dr. Razia Sultana Mahmud joined the project after returning back from Japan on completion of training.
	:	Started house to house survey and circulation of questionnaire to public in Dhaka city.
OCTOBER		
29th	:	Attended public meeting along with the then Director-cum-professor of NICVD Brig. (Rtd). A. Malik to raise public consciousness about RF/RHD in the Upazila Headquarters (Dhaka district project site)
30th	:	Started house to house survey and circulation of questionnaire to general people in Dhamrai upazila.
NOVEMBER		
4th	:	Personnel of ASAHI Television visited Bangaladesh including RF/RHD project covering their report on this project.
11th	:	Presented 3 papers in the National Congress of Cardiology arranged by Bangladesh Cardiac Society in Hotel Sheraton.
26th	:	Two (2) Japanese Experts and 3 counterparts of this project attended III World Congress of Pediatric Cardiology, Bangkok, Thailand, and presented paper. They also visited ASEAN Training Centre for Primary Health Care Development and ASEAN Institute for Health Development established by JICA for exchange of knowledge and know how.
DECEMBER		
6th	:	Met the new Director-cum-Professor of NICVD Prof. Abu Zafar who took over charge after retirement of Brig (Rtd) A. Malik.
19th	:	Mr. Watanabe, Mr. Inoue, Short term Experts on Architecture visited project construction site for inspection of its progress.
27th	:	They conducted final inspection of construction of the project center.
1990		
JANUARY		
10th	:	Shifted project office from hired house to newly constructed project building.
16th	:	Dr. Monwar Hossain and Dr. A. Zaher who had been working in the project transferred to Sir Salimullah Medical College and Chittagong Medical colleges respectively.
20th	:	Dr. K. Yoshitake, Team Leader, left Dhaka for Japan to attend Team Leader's Conference held in Tokyo.

PERIOD		ACTIVITIES
FEBRUARY		
12th	:	Visited Bangladesh University of Engineering and Technology (BUET) and had a discussion about Medical Engineer.
15th	:	President of JICA visited NICVD and the project center.
20th	:	Dr. Shahed Arzoo joined to work in this project on full time basis and Dr. Qumrul Jalil and Dr. Shamsul Haque joinded to work on part time basis.
MARCH		
1st	:	Health Advisory Team and members of Japanese Embasy visited NICVD and project centre.
7th	:	Arranged a lunch party comprising of Prof. Abu Zafar, concemed doctors of NICVD and Health Asistants.
8th	:	Arranged a meeting between Prof. Abu Zafar, Japanese Experts and Health Assistants to sort out the problems of the project.
15th	:	Attended Pediatric conference arranged by Pediatric Association of Bangladesh.
25th	:	Handed over the newly constructed project center to the authorities of Bangaladesh government.
29th	:	Mr. Y. Kuno, Expert of clinical Pathology joined the project.
APRIL		
1st	:	Started installation of Medical Equipment in the Laboratory of the project centre.
3rd	:	Mr. Md. Taher, Senior Laboratory Technician returned back to Bangladesh after completion of training in Japan.
7th	:	Attended ceremony of World Health Day and also arranged exhibition of posters of RF/RHD project in the ceremony.
MAY		
1st	:	Japanese Prime Minister Mr. T. Kaifu visited Bangaldesh.
5th	:	Mr. Suzuki of Ministry of Foreign Affairs of Japan and Mr. Aoki, Deputy Section Chief of Medical Technical section of JICA visited Bangladesh.
15th	:	Mr. Md. Taher, Sr. Lab Tech posted to work on full time basis in the project.
20th	:	Carried out checking of accounts of ICVD and RF/RHD project
28th	:	Started supply of Injection Penicillin to the OPD of NICVD.
JUNE		
6th	:	Dr. Wagatsuma, Mr. Saitou visited to follow up the progress and problems of the project.
7th	:	Started supply of Injection Penicillin in the Dhamrai Upazilla project area.
9th	:	Started urine test of School children and house to house survey in Dhamrai Upazila.
22nd	:	Dr. K.Yoshitake attended Asia/Ocianic International Medical symposium held in Japan.
JULY		
9 th	:	Attended seminar on International Pediatrilogy arranged in co-operation of Shisu Hospital.
10th	:	Dr. K. Yoshitake, Team Leader, attended Heart Camp arranged in Mymensingh.
17th	:	Carried out inspection of facilities of laboratory data collection.

BANGLADESH

RF/RHD CONTROL-PREVENTION

EXAMINATION CARD

ANNEX 1

PILOT PROJECT FOR CONTROL AND PREVENTION OF RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE IN BANGLADESH, 1990

I. PATIENTS' PARTICULARS 1. HOSPITAL/FACILITY ..... 2. EXAMINER ..... SIGNATURE .....

3. SERIAL NO..... 4. DATE OF RECORD...../...../ 5. QUESTIONNAIRE NO ..... 6. POPULATION CATALOGUE NO.....
7. REGISTRATION NO. ..... 8. REFERRED FROM ..... 9. ATTENDING SCHOOL 1☐ no 2☐ yes 10. NAME OF SCHOOL .....
11. NAME ..... 12.SEX ☐ MALE ☐ FEMALE 13.BIRTH DATE...../...../..... 14.AGE.....YRS. .....

II PAST HISTORY

1 IMMUNIZATION

1 ☐measles 2 ☐pertussis 3 ☐tetanus 4 ☐diphtheria 5 ☐ BCG
6 ☐polio 7 ☐ Small pox 8 ☐ others.....
9 ☐not immunized

2 PAST HISTORY OF RF or SUGGESTIVE SIGN & SYMPTOM.

(If the patient had more than one attack then use pen/pencil of different colour for date and sign/symptoms of different attacks.)

A. DATE a. 1st attack...../...../.....b 2nd attack...../...../.....
c. 3rd attack...../...../.....d. 4th attack...../...../.....
B. from the record of i. Hospital.....
ii. Doctor .....
iii. others .....
C. sign & symptom
1☐ arthritis (☤Joint swelling) 2☐ arthralgia (☤Joint swelling)
3☐ carditis 4☐chorea 5☐ subcutaneous nodule
6☐ ASO titre (.....IU/ml) high ☐ normal ☐ not done ☐
7☐ throat culture. positive ☐ negative☐ not done ☐
8☐ fever above 100°F
9☐ ESR (.....mm/hr) high ☐ normal ☐ not done ☐
10☐ CRP (.....ng/dl) high ☐ normal ☐ not done ☐
11☐ other antibody .....high ☐ normal ☐ not done ☐

3 TREATMENT FOR PAST RF OR SUGGESTIVE SIGN & SYMPTOM

1. bed rest 1☐ none 2☐unknown 3☐ yes (from / / to / /)
2. aspirin 1☐ none 2☐unknown 3☐ yes (from / / to / /)
3. penicillin injection
1☐ none 2☐unknown 3☐ yes (from / / to / /)
4. penicillin oral
1☐ none 2☐unknown 3☐ yes (from / / to / /)
5. sterpid 1☐ none 2☐unknown 3☐ yes (from / / to / /)
6. others.....

4 PAST HISTORY OF OTHER DISEASES

1.....Date / /
2.....Date / /
3.....Date / /

III ALLERGY

1☐ none
2☐yes.
sensitive to .....
3 reaction DATE...../...../.....
1☐ skin eruption 4☐ anaphylactic shock
2☐ cough 5☐ others.....
3☐ rhinorrhoea / sneezing .....

IV PRESENTING SIGNS & SYMPTOMS

1 PATIENTS WITH SIGNS & SYMPTOMS

a. MAJOR CRITERIA	b. MINOR CRITERIA
1☐ polyarthritis	1☐ fever above 100°F.
2☐ carditis	2☐ arthralgia
3☐ subcutaneous nodule	3☐ previous history of RF/RHD
4☐ erythema marginatum	4☐ high ESR
5☐ chorea	5☐ positive CRP
	6☐ leucocytosis (≥12,000)
	7☐ prolonged PR interval

c SUPPORTING EVIDENCES

1☐high ASO or another antibody
2☐positive culture for group A streptococcus
3☐history of recent scarlet fever

2 PATIENTS WITH SORE THROAT.

1☐ fever above 100°F 10☐ enlarged cervical lymphnode
2☐hoarseness 11☐ redness of pharynx
3☐ cough 12☐ exudation on pharynx and tonsil
4☐ rhinorrhoea 13☐ petechiae lesion in pharynx
5☐ conjunctivitis 14☐ strawberry tongue
6☐ skin eruption
7☐ skin infection
8☐ tenderness on anterior neck
9☐ shabby erosion on the edge of the nostrils
tonsillar enlargement 1☐ 0° 2☐ 1° 3☐ 2° 4☐ 3°

V CHIEF COMPLAINTS

1☐ fever
2☐ sore throat..
3☐ arthralgia
4☐ previously told to have RF/RHD
5☐past history of arthritis or arthralgia
6☐ heart murmur
7☐ oedema
8☐ shortness of breath
9☐ palpitation
10☐ others.....

VI PHYSICAL FINDINGS

1 weight..... kg 2. height .....cm
3. arm circumference .....cm
4. head circumference .....cm
5. skin fold thickness .....cm.
6. blood pressure ..... mm Hg

CARDIOVASCULAR FINDINGS

7 heart murmur
1☐none
2☐yes 1☐ systolic
2☐ diastolic

8 PAST HISTORY OF HEART SURGERY

1☐none
2☐yes. DATE
3☐ CMC / /
4☐ open valvotomy / valvoplasty / /
5☐ valve replacement / /
6☐ pace - maker / /
7☐ other heart surgery / /

9 OTHER ABNORMAL PHYSICAL FINDINGS

1. .....
2. .....
3. .....
4. .....

VII LABORATORY DATA

1 Date / /
2 RBC ..... /cmm 3 Hb.....g/dl 4 Ht.....%
5 WBC..... /mm³
(*1* neutro.....%, *3* mono.....%, *5* baso.....%
2 lymph.....%, *4* eosino..... % 6. others.....)
6 ESR.....mm /1st Hr, 7CRP.....mg/dl
8 Total protein.....g/dl, 9A/G ratio.....
10 IgG.....mg/ dl, 11 IgA .....mg/dl 12 IgM.....mg/dl
13 ASO..... IU/ml 14 Anti DNase – B.....titre
15 ASK..... titre
16 Other antibody.....
17 Urine protein 1 ☐ +++ 2 ☐ ++ 3 ☐ + 4 ☐ ± 5 ☐ –

18 Throat culture
1 ☐ Streptococcus 2 Positive grouping.....*3* T–typing.....
4 ☐ Other organism.....
.....
5 ☐ negative
6 ☐ not done

19 Strept. ID Test
1 ☐ positive 2 ☐ negative *3* ☐ not done

20 ECG *1*. date / /
2 ☐ normal
3 ☐ border line.....
4 ☐ abnormal .....
5 ☐ not done

21 UCG *1*. date / /
2 ☐ normal
3 ☐ border line.....
4 ☐ abnormal .....
5 ☐ referred to.....
6 ☐ not done

22 CHEST X-RAY / date / /
2 C T R .....%
3 lung congestion 1 ☐ + 2 ☐ –
4 other findings .....
.....
5 ☐ not done

VIII DIAGNOSIS (1)

1 ☐ acute pharyngitis
due to *1* ☐ viral
2 ☐ bacterial (confirmed)
1 ☐ Streptococcus β - hemolyticus
2 ☐ other bacterial
.....
.....
3 ☐ bacterial (not confirmed)

2 DIAGNOSIS (2) (See"Guideline")
1☐ X-1 : acute RF & carditis (definite)
2☐ X-2 : acute RF & carditis (definite)
3☐ X-3 : chronic RHD (definite)
4☐ Y-1 : past history of definite RF
5☐ X-4 : suspected RF
6☐ Y-2 : (☐ A ☐ B ☐ C) : past history of suspected RF
7☐ Y-3 : (☐ A ☐ B) : past history of suspected RF
8☐ Y-2 : (☐ a, ☐ b) : follow - up case : 3 PC * injection
9☐ Y-3 : (☐ a, ☐ b) : follow - up case : 3 PC * injection
10☐ Y-2 : (☐ c, ☐ d) : no follow - up case
11☐ Y-3 : (c) : no follow - up case
* PC : PENICILLIN

IX TREATMENT

1 PENICILLIN INJECTION PLAN

frequency
1 ☐ one injection
2 ☐ every three weekly injection
3 ☐ every four weekly injection

duration
4 ☐ only one injection
5 ☐ up to 18 yrs of age
6 ☐ up to 30 yrs of age
7 ☐ 5 yrs from now
8 ☐ .....yrs from now
9 ☐ forever
10 dosage .....

2 ORAL PENICILLIN / OTHERS
name of drug.....
duration
1☐ 7 days
2☐ 10 days
3☐ up to 18 yrs of age
4☐ up to 30 yrs of age
5☐ 5 yrs from now
6☐ .....yrs from now
7☐ forever
8 dosage .....

X FOLLOW-UP

Write down any sign & symptom related to RF/RHD

1 / / *1*☐no abnormalities 2☐attack of RF 3☐other abnormalities .....
2. / / *1*☐ no abnormalities 2☐ attack of RF *3*☐ other abnormalities .....
3. / / *1*☐ no abnormalities 2☐ attack of RF *3*☐ other abnormalities .....
4. / / *1*☐ no abnormalities 2☐ attack of RF *3*☐ other abnormalities .....
5. / / *1*☐ no abnormalities 2☐ attack of RF *3*☐ other abnormalities .....
6. / / *1*☐ no abnormalities 2☐ attack of RF *3*☐ other abnormalities .....
7. / / *1*☐ no abnormalities 2☐ attack of RF 3☐ other abnormalities .....
8. / / *1*☐no abnormalities 2☐attack of RF *3*☐other abnormalities .....
9. / / *1*☐ no abnormalities 2☐ attack of RF *3*☐ other abnormalities .....
10 / / *1*☐ no abnormalities 2☐ attack of RF *3*☐ other abnormalities .....
11 / / *1*☐ no abnormalities 2☐ attack of RF *3*☐ other abnormalities .....
12 / / *1*☐ no abnormalities 2☐ attack of RF *3*☐ other abnormalities .....
13. / / *1*☐ no abnormalities 2☐ attack of RF *3*☐ other abnormalities .....
14. / / *1*☐ no abnormalities 2☐ attack of RF *3*☐ other abnormalities .....

MINISTRY OF HEALTH AND FAMILY PLANNING,
GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
AND
JAPAN INTERNATIONAL COOPERATION AGENCY,
1988 - 1992

BANGLADESH

RP/RHD CONTROL-PREVENTION

ANNEX - 2

GUIDELINES OF PENICILLIN PROPHYLAXIS AND FOLLOW UP FOR RF & RHD PATIENTS.

X-GROUP : SYMPTOMATIC PATIENT

DIAGNOSIS	DIAGNOSTIC CLUE (should be satisfied)	TO BE INCLUDED	TO BE EXCLUDED	DURATION TO BE GIVEN (minimum requirement)	FOLLOW UP
X-1 Rheumatic fever without carditis	* Revised Jone's Criteria		* Collagen disease * Maligmamt dosease	* Up to 18 yrs of age * 5 yrs from last attack	* Every six month for 5yrs from last dose of prophylaxis
X-2 Rheumatic fever with carditis	* Revised Jone's criteria			* Up to 30 yrs of age or more * 5 yrs from last attack in the case whose attack is after 25 yrs	* Same as X-1
X-3 Rheumatic heart disease	* Heart murmur (confirmed with ECG. UCG. X-Ray and past history of RF)	* Post operative state of Rheumatic valvular disease	* Congenital heart disease * Other diseases which cause heart murmur	* Same as X-2	* Frequency will depend upon the patient's clinical state
X-4 Suspected rheumatic fever	* Arthalgia * Fever * High antibody * High ESR		* Collagen disease * Malignant disease	* Same as X-1	* Same as X-1

Published by
PILOT PROJECT FOR CONTROL AND PREVENTION OF RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE IN BANGLADESH, Feb. 1990

ESR can be replaced by CRP
Antibody: Anti-streptococcal antibodies

Please turn over

GUIDELINES OF PENICILLIN PROPHYLAXIS AND FOLLOW UP FOR RF & RHD PATIENTS.

Y-GROUP : SYMPTOMATIC PATIENT

DIAGNOSIS	DIAGNOSTIC CLUE (should be satisfied)	TO BE INCLUDED	TO BE EXCLUDED	DURATION TO BE GIVEN (minimum requirement)	FOLLOW UP
Y-1 Past history of definite rheumatic fever	* Revised Jone's Criteria		* Collagen disease or others	Up to 18 yrs of age 5 yrs from last attack	* Every six month for 5yrs from last dose of prophylaxis
Y-2 Past history of suspected rheumatic fever	* Polyarthritis (painful joint swelling) * Fever	A. High antibody with ESR not done B. Antibody not done with high ESR C. Antibody not done with ESR not done	a. High antibody with normal ESR b. Normal antibody with high ESR c. Normal antibody with normal ESR d. Antibody not done with normal ESR	* Same as Y-1	* A.B.C. should be followed up same as X-1 * a.b. should be followed up for 5 yrs from the first visit. * c.d.not to be followed up
Y-2 Past history of suspected rheumatic fever	* Pohyarthritis (painful joint swelling) * Fever * High ESR	A. High antibody B. Antibody not done	a. Normal antibody b. ESR not done c. Normal ESR	* Same as Y-2	* a.b. should be followed up for 5 yrs from the first visit * c. not to be followed up

EXAMINATION CARD COLOUR : RED : X-1. X-2 and X-3 Y-1. Blue : Y-2 (a,b). Y-3 (a,b).

Green : X-4, Y-2 (A,B,C). Y-3 (A,B). White : Y-2 (c,d). Y-3 (c)

Any above mentioned patient should report, if they have sore throat with fever, or joint pain with fever, to RF/RHD clinic.

JICA