

パキスタン国
母子保健プロジェクト
計画打合せ調査団報告書

平成9年6月

国際協力事業団
医療協力部

序 文

パキスタン・イスラム共和国の母子保健プロジェクトは、平成8年6月15日から5年間の協力期間で、同国保健省・パキスタン医科学研究所（PIMS）において、乳幼児死亡率を下げることをめざし、無償資金協力で建設される母子保健センターでの同国の小児専門医療施設の充実と医療従事者の養成を行うべく、技術移転活動を実施しているものです。

本プロジェクトは、平成8年開始以来、10カ月が経過し、上記技術移転の活動が軌道に乗りつつあり、国際協力事業団は、本プロジェクト派遣中の専門家の活動状況、同国側の対応等の現状を確認し、プロジェクト実施上の問題点の把握と今後の対応策について両国双方で協議することとし、平成9年4月2日から4月10日までの日程で、国立国際医療センター総長鴨下重彦氏を団長として、計画打合せ調査団を派遣しました。本報告書は、その調査結果を取りまとめたものです。

ここに、本調査にご協力を賜りました関係各位に深甚なる感謝の意を表しますとともに、プロジェクトの効果的な実施のために、今後ともご指導、ご鞭撻をお願い申し上げます。

平成9年6月

国際協力事業団

医療協力部長 福原 毅文



PIMSの施設を視察する調査団
(前列中央より右へ、鴨下団長、与那嶺団員、喜多団員)



PIMSの施設を視察する調査団



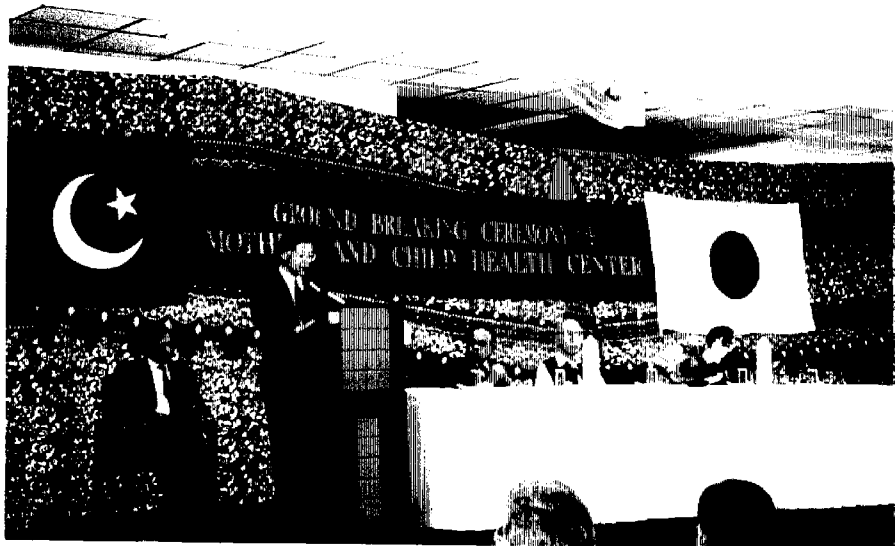
Attock地区、Kanyal村での妊婦グループインタビュー



イスラマバード首都圏地区家庭訪問調査

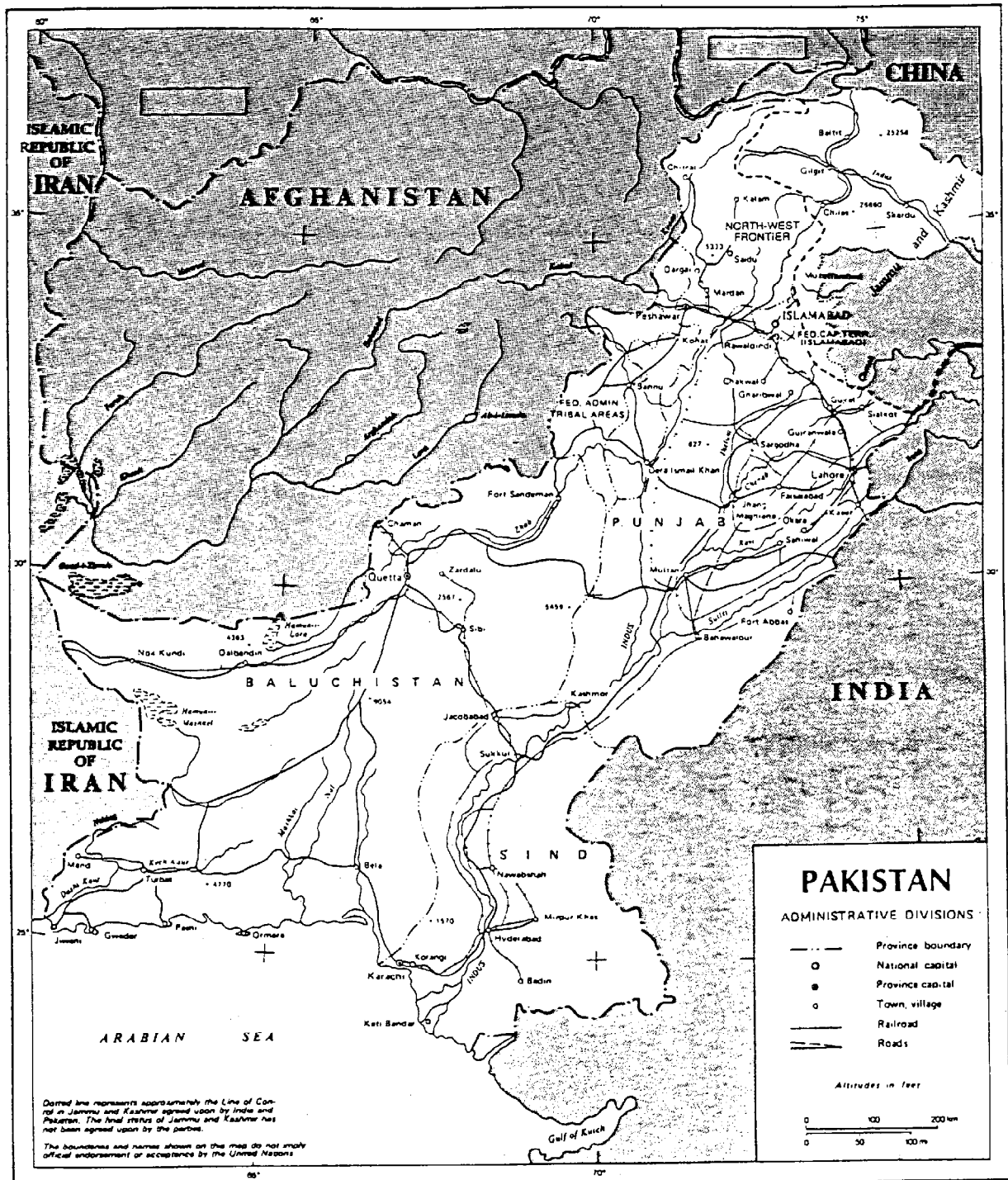


ミニッツのサイン風景



無償資金協力による母子保健センターの起工式典

地図：パキスタン・イスラム共和国



地図出所) UNDP, Development Cooperation: Pakistan 1993 Report

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1 . 計画打合せ調査団派遣

1 - 1 調査団派遣の経緯と目的

本件プロジェクトは1996年6月の開始以来(調査団派遣時点までに)10カ月が経過し、3名の長期専門家(チーフアドバイザー、看護助産、業務調整)、6名の短期専門家の派遣、2名のカウンターパート研修員の受入れ、車両、医療機材、事務機器等の機材供与を実施してきた。

これまでの活動としては、パキスタン・イスラム共和国(以下、パキスタン)側カウンターパートと週定例会議を設け緊密な協力のもと、短期専門家派遣による公衆衛生、社会学、栄養学の視点からの協力方針の形成、広報ならびにパキスタン側母子保健専門家の意見を得るための3回にわたるワークショップの開催、妊産婦死亡に関するベースラインサーベイ等を行ってきた。

今回の調査団はプロジェクト開始後初めての派遣で、これまでのプロジェクトの活動内容と進捗状況を確認し、当初計画と活動の整合性の観点からレビューし、課題や問題点を把握するとともに、それらの調査結果をもとに今後の(とりわけ1997年度の)活動内容の見直しと調整を行い、日本、パキスタン双方でこれを確認することを目的として派遣された。

1 - 2 調査団の構成

	担当	氏名	所属
団長	総括	鴨下 重彦	国立国際医療センター総長
団員	母子保健	喜多 悦子	国立国際医療センター国際医療協力局派遣協力課長
団員	看護	与那嶺辰美	国立国際医療センター病院看護部看護婦長
団員	協力計画	北原 恭子	JICA医療協力部医療協力第一課職員

1 - 3 調査日程

1997年4月2日～1997年4月10日（9日間）

日順	月 日	曜日	移 動 お よ び 業 務
1	4月2日	水	成田発（16:55） バンコック着（21:35）（TG673）
2	4月3日	木	バンコック発（14:45） イスラマバード着（20:55）（PK895）
3	4月4日	金	08:30 パキスタン医科学研究所（PIMS）総長表敬 09:00 プロジェクト合同調整委員会 14:00 JICA事務所打合せ 15:00 川上大使表敬
4	4月5日	土	09:00 PIMS施設視察 10:00 母子保健センター（無償資金協力）起工式 12:00 ミニッツ署名 15:00 日本人専門家チームとの打合せ
5	4月6日	日	休日
6	4月7日	月	09:00 大蔵省経済局（援助窓口）表敬 10:00 イスラマバード首都圏地区（ICT）家庭訪問調査視察
7	4月8日	火	09:00 Attock地区Kanyal村の妊婦グループインタビュー参加
8	4月9日	水	09:00 JICA事務所報告 10:00 保健省表敬 イスラマバード発（15:30） カラチ着（17:15）（PK369） カラチ発（19:50）（MH191）
9	4月10日	木	クアラルンプール着（07:15）（MH191） クアラルンプール発（09:20） 成田着（17:00）（MH092）

1 - 4 調査・打合せの概要

4月4日、合同調整委員会を開催し、プロジェクト開始からの活動実績、日本・パキスタン双方の投入実績・計画、1997～98年の活動計画等について協議した。

翌5日午後、同委員会での協議内容を取りまとめたミニッツに署名を行った（附属資料 ）。ミニッツに記載した事項は以下のとおりである。

(1) 概括

(2) 1996-97年活動実績

- ・週定例会議の開催
- ・ワークショップの開催
- ・調査計画の策定
- ・イスラマバード首都圏地区（Islamabad Capital Territory：ICT）\ Punjab州Attock、北西辺境州Nowsheraの3地区での保健医療施設調査

- ・レファラルレベル施設における妊産婦死亡症例調査
- ・ICT 7500戸の家庭訪問調査
- ・綿密調査：栄養調査、グループインタビュー

(3) 投入

- ・日本側
 - 1996-97年実績：長期専門家3名、短期専門家6名の派遣、機材供与（車両、事務機器、医療機材等）、研修員2名の受入れ
 - 1997-98年計画：長期専門家5名、短期専門家6名の派遣、機材供与、研修員3名の受入れ
- ・パキスタン側
 - カウンターパートの配置、事務要員等の提供、プロジェクト事務所の提供、車両の提供、調査の実施、ワークショップの開催、他の病院との連携、NGO、他のドナー機関との連携

(4) 1997-98年活動計画

- ・Punjab州Attock、北西辺境州Nowsheraでの家庭訪問調査
- ・レファラルレベル施設における妊産婦死亡症例調査の完了
- ・前年度調査に基づく母性保健のQualitative Study
- ・母子の栄養に関する調査
- ・The National Institute of Family and Reproductive Healthの設立準備
- ・UNDP、WHO等国連機関との共催ワークショップの開催
- ・カンボディア母子保健プロジェクト視察

(5) 問題点

- ・PC-1承認手続きに時間を要したための全体計画の遅延
- ・供与機材の到着の遅れ(6) 調査団からの提言
- ・信頼性の高いベースラインデータ入手のためのフィールド調査の早期完了
- ・プロジェクト後半の実行計画策定のための調査結果の分析・統合
- ・持続可能で現実的な妊産婦死亡率(MMR)の登録システムの開発
- ・母子保健センタースタッフのリクルート開始
- ・現実的で費用のかからないレファラルシステム・モデルの構築
- ・政策立案者への母性保健の重要性の喚起

同日午後、日本人専門家チームとの内部打合せを行ったが、その際話し合われた主な事項は

次のとおりである。

- ・昨年度供与機材の調達が遅延が調査に影響を与えたため、1997年度については前広に計画・手続きを進めることとする。
- ・調査は今後の研修プログラムを策定するための過程であり、可能な限り早期に完了し、その結果を検討、分析する作業に移る。
- ・プロジェクトの責任者である Prof. Mushtaq A. Khan が1998年1月に定年を迎えるが、その後のプロジェクト責任者の人選はプロジェクトの活動に影響を与えることから、動向を注意深く見守る必要がある。

4月7日、8日の2日間はICTとPunjab州Attockの村を訪問し、前者では家庭訪問調査を、後者では妊産婦を対象としたグループインタビューの様態とBasic Health Unit (BH U) を視察した。

なお、4月5日午前に無償資金協力による母子保健センターの起工式が開催され、出席した。川上大使、パキスタンの大蔵大臣によるスピーチも行われ、翌日の新聞に取りあげられた(附属資料)。建設サイトも視察したが、1998年3月のセンター完成をめざし、基礎工事はすでに相当程度進行していた。

2 . 要 約

本調査団は、1997年4月2日から10日の間、パキスタンの首都イスラマバードおよび首都圏内外の同プロジェクトサイトを訪問し、同国およびわが国の関係者との意見交換およびプロジェクトの実態を視察し、以下の所見を得た。

- (1) パキスタンでは、なお、不明な部分が多いものの、大多数の分娩は自宅でTraditional Birth Attendant (T B A) とよばれる専門的研修を受けていない女性に介助されている。
- (2) パキスタン政府は、非都市部の女性への保健サービスを向上させるためにLady Health Visitor (L H V) とよばれる地域から選ばれた女性保健ワーカーの養成に精力を注いでいる。
- (3) 地域保健サービスの拠点であるべき Basic Health Unit (B H U) や Rural Health Center (R H C) は物理的に存在するが、機能的には活発でなく、地方中核病院や大都市の教育病院などとのレファラル体制も機能していないこと。
- (4) プロジェクトは、パキスタンの女性の健康と福祉の増進を上位目標に、「包括的な母性保健サービス体制を整備することにより、(どこで行われても)安全な分娩を保証し得る」ことを直接の目標にイスラマバード首都圏地区 (I C T)、Punjab州 Attock、北西辺境州 (North-West Frontier Province : N W F P) Nowshera を活動対象地区として、1996年6月より開始された。
- (5) プロジェクトは人材養成に重点を置くが、当初に予定している母性保健の実状調査を通じて、必要な基礎データ収集とその入手システムを確立することおよびパキスタン側の問題認知をめざしている。
- (6) プロジェクトの人材養成は、同時に、わが国の無償資金協力によりパキスタン医科学研究所 (Pakistan Institute of Medical Science : P I M S) 構内に新設予定の母子保健センターの竣工後に、中央レベルの研修を開始する予定である。
- (7) 同母子保健センターは、パキスタンの包括的母性保健サービス機関(としての人材育成、診療、研究など)の中心となる Institute of Family and Reproductive Health として確立されることをめざしている。

(8) プロジェクトは、PIMS内の小児病院（無償資金協力にて建設後、1987～92年の間技術協力の）の2室を拠点に、パキスタン側カウンターパートと密接に連携して、第1年度の計画を、ほぼ、順調に進めていること。

(9) 第1年度の日本側投入は以下のとおりである。

長期専門家派遣3名 - チーフアドバイザー

看護専門家

調整員

短期専門家派遣5名 - 公衆衛生

栄養学 2名

WID

社会学

機材 - 携行機材および供与機材

ただし、供与機材は現地調達などの手順に不備があり、
調査団訪問時までには到着していない。

現地業務費および啓蒙活動普及費

また、第1年度のわが国での研修員受入れは「母性」2名であったが、他の予定者は研修訪日
日が調査活動に支障を来すための延期であった。

(10) パキスタン側投入は以下のようである。

プロジェクト事務所などの提供

カウンターパート

8名 - プロジェクトディレクター（小児科教授）

ジョイントディレクター（小児病院院長）

研修担当者（小児科医）

母性（産婦人科医） 2名

栄養担当（小児科医）

疫学者

看護専門家 2名

(11) 第1年度（実質期間9カ月）の成果は以下のようである（詳細は附属資料 参照）。

1) プロジェクト開始直後の1996年6月16日以来、日本人専門家とそのカウンターパートは
毎週定例会議をもち、プロジェクト進行に対する意見交換を行っている。この会議でまと

まった事項は、JICA現地事務所、パキスタン中央政府および州保健省など関係機関に伝達している。

- 2) プロジェクトでは、州政府関係者や地域関係者を交え、適宜、月例検討会を行っている。
- 3) プロジェクトは第1年度に3回のワークショップを開催した。
- 4) プロジェクトは、第1年度に、活動対象地区のうち、ICTの家庭7,500戸と、全3対象地区の地域中核病院5とプライマリーヘルスケア(PHC)レベル保健医療施設82に対して、以下の調査を施行もしくは施行中である。

Maternal and Under 5-Year-Old Childhood Mortality Survey

Household Characteristics

Maternal Mortality Information

Child Death Inquiry

Health Services Utilization Record

(12) これらの調査結果は分析されていないが、以下の所見が中間報告された。

- 1) 地域のほとんどの施設には、基礎的な母子保健設備は設置されている。
- 2) 女性の受診数/日は、BHUでは16～30、RHCでは38～47である。
- 3) BHU、RHCでの分娩はほとんどない。
- 4) これらのPHCレベルの保健施設では、スタッフが決められた時間に存在していないことが多かった。
- 5) また、これらの施設に勤務する者のために設置されている宿泊施設はあまり利用されていない。
- 6) 対象地区の人口は約150万で、調査により、1996年、155の妊産婦死亡が確認されたため、推定MMRは250となる。
- 7) 地域での妊産婦死亡の判明した原因は、

出血	20
子癇	6
敗血症	3

のほか
大半の126名の詳細は不明である。
- 8) 一方、レファラルレベル施設で判明した妊産婦死亡14名のうち4名は、いわゆるニアミスで、死亡した10名のうち、農村部からの紹介は3名、また、レファラされるまでの期間は1～10日であった。
- 9) レファラルレベル施設での妊産婦死亡の原因は、

出血	1
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敗血症 6
子 癩 1
術後不全 1
激症肝炎 1 であった。

- (13) 研修に関しては、プロジェクト形成時の議論以降、具体的な対応は行われていないが、いかなる職種に、どの程度の期間、どのようなカリキュラムが効果的であるかは、上記調査活動を通じて検討されている。
- (14) 無償資金協力による母子保健センターの建設は、調査団訪問時にいわゆる地鎮祭 (Earth Breaking Ceremony) が行われた。
- (15) 第 1 年度の日本側専門家の派遣、リクルートはおおむね順調であるが、今後、新たに必要となるであろう分野 (助産婦、保健婦、女性産科医、病院管理など) につき対応が必要と思われる。
- (16) 実地のプロジェクト活動の責任者であり、また、これまでの経過においても、最も主要なカウンターパートである Prof. Mushtaq A. Khan が 1998 年 1 月に定年を迎えるとされるが、その後の対応につき検討を要すると思われる。

3 . プロジェクトの背景

3 - 1 プロジェクト形成の経過

本プロジェクトは、1980年代から1990年代初頭にわたり、パキスタンの医学研究と診療の中心的施設をめざすパキスタン医科学研究所（PIMS）内の小児病院、看護大学などに対し行われた、わが国の無償資金協力や技術協力の終了後の高度小児病院プロジェクト要請に始まる。

看護教育、小児病院への技術協力プロジェクト終了後、パキスタン政府は、既存の小児病院の拡充を目的とした新生児医療と三次産婦人科医療を主体とする高度母子保健センターを要請した。これに対して、日本側は1992年6月を最初として、以後2年間に、数次の調査団や数カ月間の母子保健専門家を送り、パキスタンの母子保健の現状を把握するとともに要請案の妥当性を検討し、また、両国の関係者を含む協議を繰り返し、首都イスラマバードという、同国では比較的恵まれた一地域のための高度先進医療支援ではなく、より広い範囲の地域住民に裨益する母性保健サービスの向上をめざしたプロジェクトとして技術協力と無償資金協力をあわせ行うことを合意するに至った（1995年9～10月事前協議調査団）。

これを受けて、わが国は改めて長期調査（1995年11～12月）を行い、また、プロジェクト関係者による数十回にわたる検討を経て、本プロジェクトの討議議事録（Record of Discussion：R/D、1996年3月合意）に添付された詳細なProject Design Matrix（PDM）が作成された。この背景となったパキスタンの保健医療状況は以下のようなものである。

すでに、本プロジェクト形成時の報告書にも記載されているが、パキスタンの保健衛生状況は、例えばアフリカサブサハラ諸国などからなる最悪のグループからは脱却しているが、いくつかの特徴がある。すなわち乳児死亡率（Infant Mortality Rate：IMR）は1960年の148から1991年には94に、また、さらに最近では（1992年）86に低下しているとされるが（UNICEFによれば1995年になお95）同時期の同国の経済発展に照らしあわせてみると、その改善程度はふさわしくない。同様に、5歳未満時死亡率（Under 5 Mortality Rate：U5MR）も1960年の221から1991年には134とサブサハラアフリカ諸国（200以上）に比べるとかなり改善されたが、同じイスラム国家のインドネシア（同期間に215から86）や、最近まで鎖国ともいえる状況にあったヴィエトナム（同期間に219から52）や、現在も外部との公的接触が制限されているミャンマー（同期間に237から117）に比べると改善は芳しくない。

この間、粗死亡率（Crude Death Rate：CDR）は23（1960年）から11（1991年）、また、粗出生率（Crude Birth Rate：CBR）は49から42、妊孕率（Total Fertility Rate：TFR）は7.0から5.7へと、いずれもある程度の減少は示しているが、妊産婦死亡率（Maternal Mortality Rate：MMR）はなお500以上あるいは詳細は不明ともされており、さらに、全国レベルの正確な登録や統計は存在しないが、低体重児の出生頻度が高いとの推測などから妊産婦への医療、保

護が十分でないことも明らかである。

さらに、プロジェクト形成当時のパキスタンは、L L D Cを含め平均110前後の数字をとる女性の対男性平均余命比（女性は男性の平均余命の約10%長生き）が100（男女の平均余命がほぼ同じ）であり、ネパールの98、バングラデシュの99に次いで女性の平均余命が短いという、数少ない国でもあった。

特に、国民の2/3以上が居住する農村部では、今日でも女兒の就学、女性の就業が歓迎されない習慣も存続しており、保健医療への関与を考えるうえでも、常にこれらの社会状況を認識しておかねばならないことも、一面、このプロジェクトの意義を強める要素と考えられた。

保健医療サービスは、これも途上国一般の現象でもあるが、都市と農村部の格差が大きい。第7次国家5カ年計画（1988）以来、P H Cを中心とする第一次保健医療サービスを行うB H U、母子保健センター、また、R H Cを農村部に設置し、地域病院を第二次医療施設、それ以上の専門医療を州または教育病院が担当する全国的な医療サービス網を整備しつつあるが、さまざまな理由で、これらのドナーの意向を強く受けたレファラル体制は機能しているとはいえない。

特に農村部をみると、第6次、第7次国家5カ年計画でB H U、R H Cという建物は設置されたものの、電気、水の供給のないところが多く、機器、消耗品の不足もあって、地域住民の需要に見合うサービスが提供できているとはいえない。

しかし、長期調査などを通じて、日本側は、このような第一次保健医療施設が十分機能していない真の原因は、設備面よりも人的要素にあることを指摘した。すなわち医師、保健婦、看護婦など、上級医療スタッフは都市部上流階級出身者が多く、これらの人々は農村部への長期赴任を好まず、一方、伝統的社会である農村部のみならず、パキスタンでは女性への保健医療は女性でなければ不可能な部分があり、しかも現在でも、特に若い未婚の女性が親族男性の付き添いなく居住地域外で活動することは歓迎されておらず、さらに他人の身体に触れるような仕事を好まない習慣もあるなど、保健分野の女性就労へのバリエーションが高いことも理解できた。

このような状況から、実際、都市近辺のB H U、R H Cなどでは、たとえ勤務者がいても、実働時間は午前8、9時ごろから午後2時ごろに限られていることが多く、何時、何が起こるか分からない医療事情には対応し得ていない。

パキスタンでも首都イスラマバードや、カラチ、ラホールなどの大都市では、先進国と同様の高度医療を行う私的施設もあるが、その恩恵を受けられるのは限られた少数富裕者に過ぎず、農村 - 都市部、都市部の富裕層と貧困者という二重構造のアンバランスがあることは、他の途上国と同様であった。

人材の点では、上述のように、特に直接住民にかかわって保健教育を行うのに必要な女性スタッフの量的・質的不備が、国家の基本的保健政策でもあるP H Cの浸透を困難にしている最大の原因となっていた。

1991年のパキスタンの保健医療従事者総数（医師、歯科医師、看護婦、助産婦、Lady Health Worker（LHW））は約9万5,000名を数えるが、その内訳をみると医師が5万5,572名で全体の58%を占める。これは人口10万対47（日本は人口10万対171）という絶対量の不足と同時に、保健医療にかかわる人材の極端なアンバランスを示しており（同時期のわが国では登録医師総数<21万1,797名>に対し、看護婦<約83万4,000名>と医師数の約4倍）パキスタンの看護婦は医師数のわずか1/3の1万8,150名であり、助産婦（1万6,299名）やLady Health Visitor（LHV、3,463名）を加えても、医師数の2/3強に止まっている。

さらに、ほとんどの看護婦が都会の治療目的の病院に勤務していることを考えると、基本的な国家保健計画として推進されてきたはずのPHC分野、特に農村部の公衆衛生にかかわる人材の不足が著しい状態が続いた。

このような状態を改善するために開始されたのがLHVの養成で、初等、中等教育を終えた地域の女性を1年間教育し、居住地区の保健活動に従事する任務をもつが、1991年当時の総数は3,500名弱に過ぎない。また、毎年約1,000名の看護婦が養成されているが、結婚、出産を機会に退職するものが多いこと、また特に男性患者の看護に対する伝統的・社会的制約もあって、定着率・稼働率は低く、特に農村部での保健医療分野に従事する女性スタッフは著しく不足している。一方、計17の医科大学の年間卒業生数は3,500名を超えるが、これらの医師も農村部での就労を希望しないために、地方では慢性的保健医療人材の不足が続いている。

さらに深刻な問題は保健医療分野の管理体制といえる。途上国の多くの施設では、事務的・経理的管理をはじめ各種の機器、消耗品、医薬品の物品管理、精度管理はきわめて不備である。

就学、就業にみられる男女の不平等とあわせて、これらの状況が人口の70%以上を占める農村部居住者、特に女性への保健医療サービスを著しく損なっているのがパキスタンの状況であったといえる。

疾病構造、死亡原因をみると、途上国の常として、小児では下痢性疾患と肺炎、気管支炎などの呼吸器疾患が、また成人男性では事故、高齢者は心臓病ならびにガンなど、先進国と同様の疾患が目立つが、特徴的な点は、妊娠可能年齢の女性における高い妊娠分娩合併症があげられており、ここでも女性への保健医療サービスの不備が現れている。

また、保健医療上の統計的数字の不正確さも、実態を不明朗にしている原因である。例えばPHCのひとつとして、下痢性疾患による脱水対策としての経口補水塩（Oral Rehydration Salt：ORS）の使用頻度は85%程度と推定されている（1991年）が、正確に調整し、投与できる母親の数はかなり下回り、統計に現れた数字と現状には違いがあるほか、人口統計でも異なる機関から異なる数字が報告されている。

プロジェクト形成当時、母性と関係する重要な国家レベルの保健医療問題として高い人口増加率があった。1991年の総人口は1億2,150万で、1947年の独立時よりほぼ4倍に増大しているが、

実際には、生活水準がある程度向上し近代医学の手段が導入された過去 20 年間の増加が特に著しい。すなわち、かつての「多産多死」の時代から、死亡率は低下したが出生率はなお高い水準にとどまっている「多産少死」の時代へさしかかったための急激な人口増加により、1991 年当時、15 歳未満世代が総人口の 50%にも達している。現在の人口増加率 3.2%が持続するならば、この世代が生殖年代に入る数年後には、さらに急激な人口増が予測されていた。

本プロジェクトは、パキスタンのこのような状況を背景に、長期調査、両国関係者間の検討を繰り返した後に形成されたものである。

本プロジェクトは、「女性の健康と福祉の促進」を上位目標として、高い妊産婦死亡と罹患率、短い女性の平均余命、母胎に関すると考えられる高い早期新生児死亡への取り組みとして立案された。また、世界的にみても、これまで母親に対する介入プログラムはあまり行われてこなかったことから、本プロジェクトは、母子保健のなかでも母親に焦点を絞り、しかも真のターゲットとしては地域/地方の母親、女性とするプロジェクトをめざし、自宅、RHC などの地域保健施設あるいは地方中核都市の病院または大都会の医療施設など、どこで出産が行われようとも、正常分娩は安全で清潔に行われること、妊娠中の異常のできる限り早期発見への取り組みなどを目的とした。

また、プロジェクトは拠点を PIMS 内に置くが、活動地域はパキスタン 4 州のうち、総人口の約 2/3 を占める Punjab 州と北西辺境州への裨益性をめざすため、両国関係者の検討により、プロジェクトの実践活動対象地区としてイスラマバード首都圏地区 (ICT) Punjab 州 Attock 地区、北西辺境州 Nowshera 地区も選定された。なお、無償資金協力による建設予定の PIMS 母子保健センターは、本プロジェクトの研修の中核として位置づけられている。

なお、技術協力プロジェクトが先行し、無償資金協力により拠点となる研修施設が建設される形の開発協力としては、カンボディアの同様の協力に続くものである。

3 - 2 プロジェクトの基本方針と PDM

本プロジェクトは、真に地域住民の需要に合致し、その効果がパキスタンの女性の健康状態に益することをめざして、R/D 締結以前に、以下の基本方針が双方で合意されている。

(1) プロジェクトのオーナーシップはパキスタン側にあること。

これまでの開発協力では、しばしば、ドナーの意向を強く反映した非現実的なプロジェクトが存在する。本プロジェクトでは計画立案段階から、受入国、特に地方の意向を尊重するため、パキスタン側にオーナーシップがあることを繰り返し伝達し、地方の関与を求めている。

(2) 既存の保健システムを尊重強化し新しいものを追加しない。

前述(1)同様、経済社会的に発展しているドナー先進国で行われている体制を導入しても成功しない。本プロジェクトでは、パキスタンの既存の体制のなかから、LHVなど、すでに効果的であり、かつ、本プロジェクトの目的に合うと考えられる制度の強化をめざしている。

(3) 活動は各種医療従事者のトレーニングを主体とするが、最終目的は農村部など、これまで保健医療サービスが届きにくかった地域住民への裨益性である。

保健医療は、社会活動の一分野であることから、本プロジェクトでは、双方に医師、看護婦、助産婦などの医療者のみならず、公衆衛生、社会学、栄養学の専門家との連携を行う。

(4) 母子保健センターの建設前2年間と完成後の3年間で2期と考え、活動内容を検討する。

これまでのわが国の技術協力プロジェクトは、無償資金協力などで建設された、あるいは拠点となる医療施設を定めて開始された。本プロジェクトは、前半では、地域の実態調査を通じて、パキスタンのカウンターパートおよび地域の人々が自ら、何が問題かを理解することを通じて、必要な研修コースを立案し、後半では、新設される母子保健センターでの実践的研修に引き継ぐ態勢を想定している。

(5) 本プロジェクトは、形成段階からWHO、UNICEF、World Bankなどの国連機関、他援助機関と意見交換を繰り返し、また、将来も連携を保つ予定である。先進国や国際機関などのドナーが、ばらばらに活動する弊害を避けるために、本プロジェクトでは、長期調査や各種調査団派遣時にも諸ドナーと意見交換し、同様趣旨の協力であっても重複がないよう、かつ、補完的であるための調整を行ってきた。

これらの基本方針に基づき、繰り返し、パキスタンの自主性・自立性を促し、まず、プロジェクトの趣旨については同国関係者のみならず、各ドナーの理解を求めてきた。特に後述PDMについてはWHOのFamily/Reproductive Healthから、将来の母性保健への協力の標準となし得るものとして評価されている。

PDMは詳細であるが、その骨子は以下のようにまとめられる。すなわち、包括的な母性保健サービスの確立を通じて妊産婦の死亡率と罹病率の改善を図ることである。第1年度に予定されている共同調査は、プロジェクト関係者のみならず、政策決定者がパキスタンの女性の健康状態、特に母性保健の実態を把握し、必要な対策を立案するための手段のひとつとして、また、パキスタン側関係者が自ら必要かつ効果的な人材養成プログラムを立案するための過程として位置づけられている。

各種の会議やワークショップは、本プロジェクトが最も重要とする両国関係者の共通認識を確認する場として設定されている。

PDMで使用されているMMRについて特に注意を喚起したい。Maternal deathは、WHOにより「妊娠中または分娩後42日以内の妊婦または産婦の死亡」と定義されるが、国際疾病死因分類(ICD)第9版以降、「直接的産科死因」として、妊娠、分娩、産褥期などの妊娠に関連する産科的合併症や行われた産科手技、手抜き診療や誤診療、もしくはこれらに由来する事態による死とし、「間接的産科死因」として、妊娠前もしくは妊娠中に発症した疾患で、直接には産科要因ではないが、妊娠により悪化したものを区別している。

一般には、MMRは、ある1年間の「出生」と「死産」を加えた年間出産数(または出生数)を母数に、同期間の「妊産婦死亡数」を分子として算出(し10万または1万倍)されるが、パキスタンのように、これらの因子のすべてに正確さが備わっていない場合、5年間というプロジェクト期間中に、真のMMRの低下達成をめざすよりは、正確な登録制度の確立をめざし、将来にわたっての継続的改善の基礎を形成することを意図すべきかと考える。

その他、調査には、WHOなどのcluster samplingを用い、KABP(Knowledge, Attitude, Belief, Practice)調査、Sisterhood調査などの手段が動員されている。

4 . 暫定実施計画の進捗状況

プロジェクトは、1996年3月24日のR/Dを受けて、

チーフアドバイザー	仲佐 保	国立国際医療センター国際協力局派遣協力課
看護専門家	宇田山明子	国立国際医療センター国際協力局派遣協力課
調整員	成瀬 章	

の赴任を受け、同年6月14日より開始された。

通例の技術協力プロジェクトとは異なり、拠点施設をもたないことから、わが国の無償資金協力で建設され(1982～83年)、その後、技術協力プロジェクトが行われ(1986～91年)、また、本プロジェクトのパキスタン側責任者がかつての院長であったパキスタン医科学研究所(PIMS)小児病院内に仮事務所を設置した。

プロジェクト形成時から、パキスタン側は以下のメンバーの運営委員会を形成している。

プロジェクトディレクター	Prof. Mushtaq A. Khan
中央政府保健省局長	
Punjab 州保健省局長	
北西辺境州保健省局長	
イスラマバード首都圏地区(ICT)地区保健担当者	
Attock 地区保健担当者	
Nowshera 地区保健担当者	
PIMS 小児病院院長	
同 小児病院研修責任者	
同 小児病院小児科医(栄養担当)	
同 総合病院産科部長	
同 総合病院産科医	

以下に、初年度(1996年度)の主な活動を述べる。

4 - 1 定例会議の実施

定例週会議(第1、2、3日曜日 - イスラム圏のため金・土曜日が休日)は、Project Director (Prof. Mushtaq A. Khan)を議長として、パキスタン側カウンターパート7名(産婦人科医3名、小児科医1名、栄養学<小児科医>1名、看護婦2名)および日本人専門家(長期3名・チーフアドバイザー、看護専門家、調整員の計3名、派遣中の短期専門家)によって運営されることとなった。

本会議は、当プロジェクトのワーキンググループともいえ、活動に対するすべての内容は当会

議で検討され承認のうえ、実践にうつされる。

週定例会議は、12月30日を除いて毎週開催され、基本方針のひとつであるパキスタン側のオーナーシップ、主体的参画を推進する助けになるとともに実際のプロジェクトの諸業務の進捗にも非常に有益であると、双方の関係者はコメントしている。

その他、プロジェクト活動の対象地区として選定されているICT、Attock（Punjab州）、Nowshera（北西辺境州）の各地区のDistrict Health Officer（DHO）、地域関係者を含む月例会議（第4日曜日）や中央政府、州政府保健医療関係者を含む運営委員会の開催は原則として8、11、2月に、さらに日本からの調査団の訪問時などを利用した不定期の年単位会議も決定された。

ワーキンググループの最初の仕事として、第1年度の活動に関する以下のようなグランドデザインが作成された。

1996年6～9月	調査計画作成
10月	プレテストおよびインタビューアー研修
11月～1997年1月	家庭調査実施
1997年2月以降	データインプット開始
3月以降	調査結果分析開始

ワークショップ3回予定

この計画に従い、直ちに、各種調査表（附属資料 Annex 3～6参照）作成が始まった。このためには、公衆衛生、栄養学などの短期専門家の派遣が要請され、1996年9月ごろには、各種調査表の原案が作成された。

10月にはフィールド調査のためのメンバーが雇用され、研修とチーム編成などが行われた。

11月にはプレテストを開始、適宜、定例週、月会議などで検討が加えられたが、予知どおりのプロジェクトの展開といえる。

結局、1997年3月までに、レファラルレベル病院、地方中核病院などと約120のPHCレベル医療施設の調査は、ほぼ順調であり、最大の難関でもある家庭調査もすでに2,500戸が完了している。

4 - 2 医学・公衆衛生・社会学・栄養学分野の現地活動計画の作成

1996年8月に公衆衛生専門家1名、栄養学専門家2名、社会学専門家2名（うち、1名はWID分野）が、ほぼ、同時にパキスタンに派遣され、プロジェクトの対象地域を実際に訪問し、簡単な調査を行うとともに、それぞれのカウンターパートらと意見交換を行った。

これらを通じて、双方関係者の意向が明らかとなった。また、現地で両国の各関連分野の専門家が協議することにより、今後のプロジェクトの進行に対する認識が共有され、あわせて、本プロジェクトにおける各専門家の役割とめざすべき方向も明確となり、少なくとも、第1年度の活

動方針は統合的・協同的に形成されたといえる。

4 - 3 調査活動

調査は各分野にまたがるが、その活動内容の協議に際して、次の4点の方針が両国の関係者で確認された。

- (1) 広範囲な一般的ベースラインサーベイではなく、妊産婦死亡に焦点を絞った調査を行うこと。
- (2) 調査の目的はいかなるプログラムを実施できるか、どのような指標がよいのか、具体的な実践活動案を導き出すものであること。
- (3) (地域住民らを含む) 参加的手法を導入することにより、調査活動自体が、すでに、母性保健サービス改善への介入 (Intervention) となること。
- (4) 十分検討して調査のプロトコールを作成し、結果とその分析が国際的評価に耐えるものとする。

実際の調査活動としては、女性が妊娠、分娩にかかわる事態で死に至る過程について、家庭から各レベルの医療サービスと医療施設および最終レファラル病院までの全経過のどこに問題があり、何が避け得る要因であったか、また、介入プログラムとして、実現の可能性があるのかどうかを知ることを目的に、以下のような調査が計画され実施されている。

(1) ICTの7,500戸の家庭訪問調査

地域における妊産婦および乳幼児の死亡率と死因の推定、妊娠中の健康管理ならびに栄養に関する知識・態度・行動、保健医療サービスの利用等について明らかにするため、農村部の既婚女性7,500人 (ICTの121村から無作為に、78クラスターを無作為抽出) を対象に質問紙を用いた面接法により調査を行っている。実際の家庭訪問調査は、28人のインタビュアー (看護婦・LHV) と10人のスーパーバイザー (医師) に対する8日間のトレーニングに続いて、1997年3月より開始されている。

(2) ICT、Attock、Nowsheraの3地区の保健医療施設調査

上記3地区の全128保健医療施設から無作為に抽出した81施設 (ICT 16、Nowshera 27、Attock 38) を対象に、1996年9～12月にわたって、妊産婦ケアを行っている施設の割合、これら施設における妊産婦の死亡率と合併症の罹患率、妊産婦ケアに必要な機材・設備の整備および研修の実施状況等を調査した。

(3) イスラマバード周辺の7大病院における妊産婦死亡症例調査

3次レファラル病院における妊産婦死亡とその背景要因を把握するとともに、これら施設における産科救急の実態を明らかにし、効果的なレファラルシステムを提言することを目的にした調査が計画されている。調査内容は、妊産婦死亡例に関する1年間の前向き研究と過去の妊産婦死亡例の調査、さらにPIMSにおけるニアミス症例の検討である。1996年10、11月にプレテストを実施した。

(4) 綿密調査：栄養調査および妊産婦やLHVら保健医療員へのインタビュー

1) 栄養調査

栄養分野では、地域における女性の貧血の改善をテーマとして設定。参加者への栄養教育プログラムの実施可能性およびLHWの栄養性貧血に関する知識・技能・活動などを評価するために、1996年9月にICTの1つの村で活動するLHV16人を対象にセルフチェック方式の栄養調査と教育プログラムを試行した。

2) 妊産婦・LHVらへのグループインタビュー（看護担当）

数量的検討が中心の家庭訪問調査を補うため、妊娠・出産に際しての女性の保健行動と栄養に関する問題点と解決策、家族計画、地域と家庭における女性の地位等について、妊産婦、(妊産婦の)夫と父親、義母と祖母、TBA、LHWとLHV、それぞれを対象にグループインタビューを実施した(1997年2月)。

これらの調査結果は現在分析中であるが、以下の所見が中間報告された。

地域のほとんどの施設には、基礎的な母子保健設備は設置されている。

女性の受診者数/日は、BHUでは16~30、RHCでは38~47である。

BHU、RHCでの分娩はほとんどない。

これらのPHCレベルの保健施設では、スタッフが決められた時間に存在していないことが多かった。

また、これらの施設に勤務する者のために設置されている宿泊施設はあまり利用されていない。

昨年1年間にこれらの施設が把握した妊産婦死亡は155である。対象地区の人口が約150万であることから、推定MMRは250となる。

これら施設で把握された妊産婦死亡の原因は、

出血 20

子癇 6

敗血症 3 のほか、

大半の126名の詳細は不明である。

一方、3次レファラル施設（イスラマバード周辺7大病院）調査では、妊産婦死亡10名と、いわゆるニアミス4名が確認された。死亡10名のうち、農村部から紹介された患者は3名であり、レファラーされるまでの期間は1～10日であった。

レファラル施設での妊産婦死亡の原因は、

出血	1
敗血症	6
子癇	1
術後不全	1
激症肝炎	1

であった。

また、セルフチェックシートを用いた栄養調査と教育プログラムでは、LHWが食行動に関する問題を自ら発見して解決策を話し合うことを効果的に促進した。この方法は、LHWが妊産婦の食行動・栄養問題を理解し状況を改善するうえで、有用な手段となり得ることがわかった。

グループインタビューの結果、地域住民は母体の健康と女子教育が重要であることを一般的には認識するようになってきているが、妊産婦の労働負荷や栄養バランス、妊娠合併症、家族計画等についての認識は不十分であり、特に夫および義母の判断により、妊産婦の保健行動や食行動が制限されていることが示唆された。調査は各分野にわたるが、その活動内容の協議に際して、次の4点の方針が両国の関係者で確認された。

- ・広範囲な一般的ベースラインサーベイではなく、妊産婦死亡に焦点を絞った調査を行うこと。
- ・調査の目的はいかなるプログラムを実施できるか、どのような指標がよいのか、具体的な実践活動案を導き出すものであること。
- ・（地域住民らを含む）参加的手法を導入することにより、調査活動自体がすでに、母性保健サービス改善への介入（Intervention）となること。
- ・十分検討して、調査のプロトコールを作成し、結果とその分析が国際的評価に耐え得るものとする。

4 - 4 ワークショップ

政策決定者を含むパキスタンの母性衛生関係者への広報活動およびパキスタンにおける当該分野の専門家と意見交換し、今後のプロジェクト活動に資するとともに、さらに、これらの専門家の今後の協力を求めるため、下記のように3回のワークショップを開催した。

(1) パキスタンにおける母性保健の状況

1996年7月 参加者：23名

イスラマバードおよびラウルピンディ周辺の3次レファラル病院6施設の産婦人科医より、各病院における妊産婦ケアと分娩、死亡の実態が報告され、当該地域におけるレファラル体制に関する問題点、ならびに調査活動に関する協力について討議が行われた。

(2) 参加的手法による母性保健に関する知識と経験の共有

1996年8月 参加者：24名

家族計画・母子保健に関する地域活動や調査研究に実績のあるUNFPA(国連人口基金)、人口省、大学、NGO関係者らより、パキスタンにおけるこれまでの母性保健活動に関する経験が報告され、相互に情報交換を行った。

(3) 地区病院 District Headquarters Hospital における母性保健の状況

1996年9月 参加者：19名

Nowshera と Attock の地区病院関係者からそれぞれの病院における妊産婦ケアの現状について報告がなされ、今後の改善方策について討議がなされた。

4 - 5 研修

本プロジェクトの中心となる研修に関して、カリキュラムなどの検討は、新たに行われていない。しかし、現在進行中の各種調査を通じて、妊産婦死亡の原因、効果的なプログラムならびにその指標、母子保健センターで行うべき母性保健従事者(主に女性)のトレーニング内容などを検討するための資料を入手し、これらの結果に基づいて、社会的にも継続可能な母性保健体制整備のためのプログラムおよび医療従事者のためのトレーニングプログラムを立案し、新設される母子保健センターを中央レベルの拠点とし、地域中核病院、LHV学校など各レベルで実施することを意図している。

5 . 今後の実施計画

5 - 1 調査活動～妊産婦死亡率・罹患率および

医療供給者に関する基礎データ収集とシステムの確立

パキスタンのみならず、大多数の途上国で信頼すべきMMRは存在しないといっても過言ではない。プロジェクトが行っている調査活動は、本協力の基礎データを得ることとあわせて、今後の活動内容、特に研修カリキュラムに資するための調査と位置づけられているが、限られた地域とはいえ、家庭からレファラルレベルの医療施設までを含む母性保健の全医療サービスレベルを網羅した調査であることから、その成績はパキスタンのコミュニティレベルの初の信頼すべきMMRを得る機会となるであろう。したがって、研修の中心となる母子保健センター建設までの期間を利用して、

社会学的、栄養学的面を含む妊産婦の死亡と罹病の背景調査

妊産婦の死亡と罹病に関する基礎データの収集を完了する必要がある。

また、これらの調査を利用して、

(女性)医師、看護婦、LHV、TBAなど、各種医療供給者についての、KABPなど基礎データの収集

BHU、RHCなどPHCレベルから地域中核病院、大都市教育病院など、各レベルの医療施設における母性保健関係の医療資機材設置などに関する基礎データの収集なども完了もしくは継続することが望ましい。

これらの調査のシステムはプロジェクトのみに益することなく、将来にわたって、パキスタンの登録制度として活用されるよう、地域住民が実践し得るような、簡単で継続性のあるものとして伝達することが望ましい。

5 - 2 研修～人材養成

本プロジェクトの形成のための調査を通じて、6.に述べるようなパキスタンの問題が明らかとなっている。このなかで、日本側が最も深刻な問題として取りあげたのは、各レベルの医療施設にふさわしい知識と経験のある人材がいないことであった。このため、プロジェクトは活動の中心を研修に置いて立案されている。

調査活動は、調査員の研修に始まり、データの集積分析など、各種科学的操作など、現地の人々への各種教育要素を多数含んでいる。これらの機会を利用した人材養成も可能であることを記憶しておく必要がある。

なお、正式な研修カリキュラムは、以下の要因を含むことが望ましい。

出産前(妊婦)検診活動の質的改善を図るもの。

家庭における正常分娩の質の改善を図るもの。

産科救急医療サービスの機能向上を図るもの。

すべてのレベルで母性にかかわる保健医療従事者の研修。

以下に、特に看護、助産婦分野の介入について述べる。

(1) 新母子保健センターの設立

新センター竣工後は、現在のパキスタン医科学研究所(PIMS)総合病院の産科病棟が移動することになるが、同部門は、現在でも、パキスタンでは先進的産婦人科医療を提供しており、それなりに機能している。この状況を考えると、今後、長期派遣される看護/助産婦専門家は、新母子保健センター開設への調整役としての役割を主体とし、管理面や分娩室・手術室および病棟・外来などの技術的協力は部分的であり、短期専門家に委ねたほうが好ましいと思われる。

(2) 新母子保健センター（研修部門）と地方の連携

新母子保健センター設立後に予測される困難は、センターがもつ「病院としての機能」よりもプロジェクトがめざす「研修機関」としての機能をいかに発揮するか、すなわちパキスタンの大多数の分娩が行われている地方との連携をどのようにとっていくかにあるといえる。したがって、長期専門家は、地方に対する研修施設としての連携におけるかかわりを強化するような関係を築き「プログラミング」には健康教育の短期専門家を加えて計画を進めるのがよいと考える。

また、研修部門で重要になるのは研修期間のみならず、むしろ研修を受けた後に、これらの人材が習得した技術、知識をいかに「インプリメントするか」であり、そのためには、一定期間ごとのモニタリングや巡回指導などでのフォローアップや、研修部門担当者が自ら、監督者として頻回に地方に出向き、WMOやLHWと現場を巡る必要がある。

さらに、研修の場を新設母子保健センター内のみに限定しては成果はさほど期待できず、むしろ、新母子保健センターは拠点施設として位置づけ、研修担当者は可能な限り地方との距離を短縮もしくはなくすように行動することを通じて、特に地方の女性受講者が容易に参加できるような体制で研修活動を継続することが効果的と考える。

プロジェクトの研修部門の具体的な地方介入としては、以下のような可能性を考慮する必要がある。

1) 新母子保健センターでの研修は職種別研修とするのではなく(今までの経過では職種名があげられているのみで、内容は後から付け足したように書載されている) 地方に必要な研修内容から詰め、その後、対象となる職種を決めていくのがよい。

- 2) いわゆる P H C レベルの一次医療施設は機能不全に陥っている。その主な原因は「医療スタッフのモラルの低さ」、「医療品の不足」であり、この状況が改善されるためには、州、地域保健局長以上の介入が必要で、現行のプロジェクト規模では無理があり、将来的には、何らかの対応を要することもある。
- 3) 地方のトップレファラル病院 (D H Q) レベルの産科救急体制の必要性は高い。現行プロジェクトの、このレベルへの介入としては研修受講を前提に、基礎的機材の供与と継続した母子保健センターでの技術研修の併用が考えられよう。
- 4) 家庭分娩に関しては、T B A の研修が重要視されており、1982 年からは国家プログラム (Accelerated Health Program : A H P) が行われてきたにもかかわらず、成果はあがっていない。その原因は、トレーナーである L H V の数的不足や質的不備、および研修後のモニタリングの欠如、事後評価など家庭分娩の監督指導へのフォローが徹底していなかったことなどが考えられる。したがって、プロジェクトでも、目的である「安全な分娩」を確保するためには、住民 / 家庭レベルでのシステム化した教育介入も重要となる。
- 5) 妊婦検診に関しては、地方の施設で、現在、W M O や L H V が実施している検診内容は、簡単な問診、貧血・浮腫・血圧・胎向のチェック程度である。わが国では基礎的かつ必須の胎児心音測定ですら、何らかの異常が発見された場合もしくは分娩前だけであり、体重や腹囲・子宮底などの計測は (女性) 医師でも行っておらず、中核医療施設レベルでの妊婦検診の内容は、地域での保健医療スタッフである L H V のそれと大差がない。したがって W M O や L H V の出勤・常在率が悪い地方の一次医療施設の機能改善が期待できない現状では、この成果をどの程度期待できるのか疑問が残る。L H W の業務には、貧血・浮腫・出血などのチェックがあり、研修を受けた T B A であれば胎向のチェックも可能であるが、妊産婦検診の質を真に向上させることを問題とすれば、地方施設での継続的实践は不可能に近いとも思える「最低限のレベルで最大限の妊産婦を対象とした効果的な方法」を考えると、L H W や T B A によるコミュニティでのスクリーニングを通じて、ハイリスク妊産婦への対応を速やかにし、適切な施設にリファーできる体制を確立することが現実的な方法と思われる。
- 6) L H W のアウトリサーチは、現在も存続するパキスタンの習慣 - パルダ (女性隔離) - に対応している。また、彼女たちの存在自体に焦点を当てることによって、住民意識の変容を導くとともに、村落の女性たちのステイタスシンボルのひとつともなり得るが、これらを通じて、その活動機能の向上も期待される。
- 7) 健康教育に関して、L H W はコミュニティで、直接、女性や住民に接していることから、保健サービス面での応用範囲は広い。しかし、現在の活動の大半は家族計画の普及と基礎的な医薬品の配布だけであり、母子保健教育に関しての関与は限られている。プロジェクトを通じて、L H W レベルの「機能強化」を図り、また、数的にも「マンパワー確保」に努める

ならば、母子保健教育の普及とモニタリング活動をあわせ行うことを通じて「母子に関する包括的健康問題の改善」ならびに「女性自身の健康への自立」につながることも期待できる。

5 - 3 (双方向の)レファラル体制の確立～家庭から最終レファラル施設まで

途上国への医療協力では、レファラルという言葉が、やや、安易に用いられている。本プロジェクトでは、母性 - 出産という、本来ならば、大多数が正常に経過する妊娠分娩を対象としているが、単に保健医療面の理由のみならず、社会的・文化的理由もあって、わが国など先進国に比し、高い頻度で異常が生じることを改善することをめざしている。したがって、

正常な妊娠の過程と清潔で安全な分娩の介助のあり方

家庭や地域でできる(正常)妊娠と分娩のケア

異常の検出

PHCレベル医療施設で行うべき母性サービス

レファラル政策に関する合意と効果的な実施のあり方

母性に関する必須医療機材の供給

住民教育による母性保健への意識と行動の改善

など、住民と住民の日常的に直接かかわる保健医療者の意識改革をめざす介入が必要であろう。調査活動の結果から、効果的な介入項目が明らかになることを期待したい。

5 - 4 The National Institute of Family and Reproductive Health の設立

包括的母性保健サービスのコア施設

並行して進められている無償資金協力によるPIMS母子保健センター建設は、一定レベルの産(婦)人科サービスが可能な医療施設ではあるが、本プロジェクトでは、あくまで研修の場と位置づけられる。

本プロジェクトが意図する地方住民への裨益性は、同センター竣工後に大きく発展する可能性を秘めるが、先行する技術協力では、どのレベルの保健医療スタッフに、どんな実践的研修を、どのように行うかという研修計画を、日本・パキスタン双方の関係者が構築すべき期間ともいえる。現在行われている各種調査も、したがって、その基礎的資料となるものである。

同センターが担うべき機能としては、以下のような項目が考えられる。

母子保健センターおよび関連医療施設の管理に関するシステム開発。

効果的な母性保健の研修ならびに医療サービスの提供。

母性保健に関する施設管理、研修、保健医療サービスのモニターならびにその評価。

国際レベルに比するPHCレベルの研究。

5 - 5 第2年度の実施計画

初年度(1996年度)実践された計画を踏まえ、第2年度に行うべき活動を以下のように提言したい。

(1) 各種調査の継続と分析

- 1) 初年度にイスラマバード首都圏地区(ICT)において実施された家庭訪問調査を、第2年度にはPunjab州Attockと北西辺境州Nowshera地区において実施し、ICTに限らず、広い地域での母性保健に関する状況を把握する。
- 2) 3次レファラル医療施設における調査活動は第2年度以降も継続し、その量を増すとともに質的信頼性を深める。
- 3) 栄養調査を含む綿密調査は、初年度の調査結果を分析、検討したうえで、各レベルの研修プログラムへのインプットが可能となるような結果が得られるよう、デザインした調査活動としてさらに展開する。

(2) 調査に基づいたパイロット地域における小規模介入プログラムの実施と中間評価

本プロジェクトは、あくまで母性保健サービスの量的・質的改善を図り、どこで行われようとも、安全にお産が行えることをめざしている。各種調査活動は、それ自体が一種の介入であり、聞き取りを通じて、知識や簡単な技術の伝達は行われていることは事実である。しかし、調査活動は、あくまで効果的な研修カリキュラム作成や実践的介入のための過程であり、可能な限り、介入はできるだけ早急に行う必要がある。

(3) 新しい母子保健センターの運営に関する検討

新センター竣工後にその組織や管理機構もしくは業務内容が検討されるのではなく、第2年度中に、日本・パキスタン両国で合意したプロジェクトの目的に合致するセンターの業務内容や中心となる人材の決定および必要な研修を終了しておく必要がある。この際、新センターがPIMSの1診療施設として位置づけられないために、日本・パキスタン双方の高いレベルの関与が必要であろう。

(4) ワークショップなど広報活動

すでに、WHOなどとの共催でReproductive Healthに関するワークショップなどが予定されているが、州レベルなどでも広報活動が必要である。

6 . 協力実施上の留意点、問題点

6 - 1 パキスタン側の問題

(1) 意識改革

大多数の国民が、なお、妊娠分娩がある種のタブーのようにみなされることも多い伝統的社会である農村に居住している、イスラム国家における母性への介入をめざす本プロジェクトはきわめてチャレンジングである。反面、女性への働きかけが、きわめて困難な最近までの同国の社会環境が、急激に変化することは期待されない以上、実践の段階で多くの難問が生じることが予測される。

プロジェクト形成までの4年間は、両国関係者が認識の違いを理解したうえで、プロジェクトの目的を共有するための期間として有用であったといえる。しかし、連綿と続いているパキスタンの伝統的社会、特に地域での慣習が一足飛びに、プロジェクトにより変化し得ないであろうことは容易に理解できる。

パキスタンには、保健医療の立派な計画はいくつもあるが、その実施状況はきわめて悪い(後述)。また、レファラル施設として、最も地域に近い第二次的施設であるDHQ病院をはじめ、いずれも母性に関する医療のレベルは高くない。これらのことはパキスタンのMMR(の高さあるいは不明さ)に反映しているが、同時に、女性、母親および家族たちも、何が妊娠の正常な過程であり、何が異常の兆候かについての知識が乏しく、社会全体としても女性の健康に対する配慮、意識は、なお低い。すなわち、しばしば他の途上国でも経験することであるが、本来、大多数の妊娠や分娩は安全であるという概念が欠落しており、いわゆるreproductive processで女性が健康を損ねたり、生命を失うこと、あるいは生まれた子供の何人かが死ぬことに対して疑問がもたれない状況であるともいえる。

このような問題意識の欠如した環境では、個々の女性やその家族、また、社会がその認識をもつに至るまでには、問題が認識され、対策が講じられるまでに比べられないほど長い期間が必要である。本プロジェクトは、この過程を調査活動を通じて行おうとしており、すでに地域によっては、かなり意識改革がみられているといえる。

しかしながら、さらにこれらの最大の難関、いわば潜在的意識の問題を克服するには、プロジェクトにかかわるメンバーが日常的な接触をも通じて、常に同じメッセージを言葉と態度で伝達し続けることが必要であろう。

(2) 政治的安定と治安

本プロジェクトと密接に関係をもつ無償資金協力(パキスタン医科学研究所(PIMS)母子保健センター建設)に関するパキスタン側の承認手続きが、前政権の不安定さと行政機構変

化のあおりをうけて、長時間を要した経過がある。また、途上国の常として、政権交代がプロジェクトに影響する可能性を払拭できない可能性など、政治的不安定がプロジェクトの円滑な運営に影響を及ぼすことがある。

特に P I M S が保健省直轄となり、総長の任命が為政者の意向を反映すればするほど、長い経過を経て形成されたプロジェクトの趣旨や目的を理解しない関係者が増えることにもなり、また、現在のパキスタン側プロジェクトディレクターの来年早々の定年引退など人的構成に対する不安定さがある。

これらの影響を防ぐためには、日本側関係機関が密接な意思疎通を図り、プロジェクトの円滑な遂行のために必要な後方支援を行う必要がある。

また、パキスタンの治安は決して安定しているとはいえない。特に、女性への働きかけが、なお、十分、受け入れられていないような地域への進出には慎重な判断が必要であり、プロジェクト関係者の日常生活を含め、治安に関する情報収集と可能な対策を講じ続ける必要がある。

(3) P H C レベル保健医療施設の活動

B H U、R H C などの一次医療施設の機能不全が、パキスタンの P H C の効果的な運用の最大の問題であるが、その原因のひとつには医療スタッフ、特に中心となるべき医師のモラルの低さがある。

また、診療に必要な薬剤の欠如も深刻であるが、これには真の薬剤不足、管理不備および流通上の問題がある。

これらの問題は、直接、本プロジェクトとかわからないともいえるが、母性という分野に関して、モデル地区の P H C 施設への必要資材の補給と医師などスタッフへの知識技術支援を通じた改革も検討する必要がある。

6 - 2 日本側の問題

(1) 機材整備

不要の経費を節減するため、主要な機材の現地調達を図ったところ、両国の手順上の不備から、初年度に間に合わず、結局、調査活動に最低限必要な物品は、J I C A 現地事務所と現地業者から借り入れるという事態を来している。

長期専門家派遣後、直ちに、調査活動を開始する計画であったこともあって、やむを得ないながら、今後の機材整備は時間的余裕をもって計画する必要がある。

(2) 人材確保

プロジェクトの期間を通じて、開発協力、看護/助産婦、栄養、疫学、社会学およびWIDなど、必要な人材のリクルートは可能と考えられる。しかし、今後の展開と、効果的な発展を考えれば、現地の習慣や言葉に習熟しフィールド活動を行い得る助産婦もしくは保健婦、および各レベルの研修カリキュラム開発にかかわれる教育分野の専門家の派遣が必要であろう。

(3) 専門家の生活環境

かなり西欧化が浸透しつつあるとはいえ、首都イスラマバードやかつての首都カラチ、または長い歴史をもつ商業都市ラホールなどの外国人居住区など、一部を除くと、パキスタンの大半は、なお、伝統的社会にあるといえる。特に、プロジェクトが最終目的としている農村部では電気と車がなければ、ほとんど中世そのものの生活が継続している。

羊の群を追う人々、時にバッファローが混じり、時期によっては養蜂業者がテントを張るなかで、人々は馬車で移動し、時間も緩やかに流れていく。

これらの地域では、元来、外部者、特に男性が女性(の諸問題)にかかわることを受け入れてこなかった。固有の文化を損なうことなく、かつ、女性の健康と福祉を向上させるという開発計画を実践することの困難さとあわせて、都市部でもあまり女性の社会活動が許容されていない環境と、しばしば発生する銃撃戦や暴発事故、テロ活動など破壊的行為の発生を考えれば、専門家とその家族の生活に対する配慮が必要であろう。

附属資料

ミニッツ

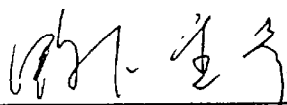
関連記事

MINUTES OF DISCUSSIONS
BETWEEN THE JAPANESE CONSULTATION TEAM
AND
THE AUTHORITIES CONCERNED OF
THE ISLAMIC REPUBLIC OF PAKISTAN
ON THE JAPANESE PROJECT-TYPE TECHNICAL COOPERATION
FOR THE MATERNAL AND CHILD HEALTH PROJECT IN PAKISTAN

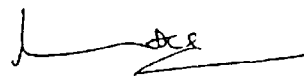
The Japanese Consultation Team (*hereinafter referred to as "the Team"*) assigned by the Japan International Cooperation Agency (*hereinafter referred to as "JICA"*) and headed by Prof. Shigehiko Kamoshita, President of International Medical Center of Japan, visited the Islamic Republic of Pakistan from April 3 to April 9, 1997 for the purpose of consulting the activities concerning the Japanese Project-Type Technical Cooperation for the Maternal and Child Health Project in Pakistan (*hereinafter referred to as "the Project"*), and discussing the future implementation plan of the Project.

During its stay, the Team exchanged and had a series of discussions with officials from the Ministry of Health, other Pakistan authorities, and MCH project team.

As a result of the discussions, both sides agreed to recommend the matters referred to in the document attached herewith to their respective Governments.



Prof. Shigehiko Kamoshita,
Leader, Consultation Team,
JICA, Japan



Prof. Mushtaq A. Khan
Project Director
Maternal and Child Health Project
in Pakistan

THE ATTACHED DOCUMENT

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I. Overview :

Each year half a million women die due to pregnancy related causes. One women death every minute day & night in the world. Ninety nine percent of these deaths are in developing countries. Pakistan is among the countries, which have unacceptably high maternal and infant mortality rate from any global standards.

Social, community/cultural bearers to such health care are some of the many causes of high maternal and infant morbidity and mortality in our community. Women especially pregnant women suffer even at primary care level due to lack of availability of properly trained/skilled health workers in the community and that is the beginning of the problem.

Proper role of referral hospital although very well defined, does not seem to be working effectively. So in general, overall obstetric services available in Pakistan expected to give adequate treatment to pregnant women at primary, secondary and tertiary care are insufficient and inadequate due to multi-factorial reasons.

Available data for various sources in Pakistan shows a wide range of maternal mortality from 200 - 800 per 100,000 live births. A limited data is available from the project target area i.e., ICT, Attock and Nowshera districts.

This is a need for collection of baseline and in-depth data from these areas. So that practical, low cost and sustainable services and interventions can be planned. After interventions and implementation of the project the impact should be measured using indicators to evaluate the programmes.

II . Activities in 1996-1997 :

1 . Weekly meeting (Refer to Annex 1)

Regular weekly meetings have been held through whole period of the project to facilitate project planning and to promote mutual understanding between Japanese experts and Pakistan counterparts. Participants are following ;

Pakistani Counterparts :

Prof. Mushtaq A. Khan (*Project Director*)
Dr. Javed Chaudhary (*Joint Executive Director , Children's Hospital*)
Prof. Ghazala Mahmood (*Consultant Surgeon and Head of the Department of Gynae/Obs, PIMS*)
Dr. Sayyada Batool Mazhar (*Associate Surgeon of Gynae/Obs, PIMS*)
Madam Mumtaz (*Nursing Superintendent*)
Dr. S. A. Qazi (*Associate Physician, Nutritionist, Children's Hospital*)
Dr. Gul N. Rehman (*Training Coordinator, Children's Hospital*)
Dr. Sofia N. Sheikh (*Research Physician*)
Ms. Neelofer Ghani (*Staff Nurse*)

Japanese Experts :

Dr. Tamotsu Nakasa (*Chief Advisor*)
Ms. Akiko Udayama (*Nursing Supervisor*)
Mr. Akira Naruse (*Project Coordinator*)
Short Term Japanese Experts



2. Workshops (Refer to Annex 2)

The following three workshops were held to exchange opinions concerning about the maternal health situation in Pakistan and to develop the plan of studies.

- a) Workshop on exchanging opinion concerning about maternal health situation in Pakistan
- b) Workshop on sharing the knowledge & experience about maternal health through participatory method
- c) Workshop on maternal health situation in District Headquarters Hospital (DHQ)

3. Plans of studies :

Based on repeated and continuous discussion, plan of studies were adopted to start the study activities of first year. Later on, each study was modified to adapt actual situation

a) Referral level Hospital Mortality / Morbidity Study :

Objectives :

- To see the pattern of pregnancy related illnesses among mothers attending the OPD/Admissions in big referral level Govt. hospitals in Rawalpindi / Islamabad.
- To evaluate the obstetric work load and number / type of deliveries conducted in these hospitals.
- To find the number of maternal deaths and estimate M.M.R.
- To Ascertain the "The causes and risk factors for maternal deaths" occurring in these hospitals.

b) Basic level or F.L.H.F. (Front Line Health Facility) Morbidity / Mortality Survey :

Objectives :

- To find the percentage of female patients and their pattern of illnesses seen at basic health facilities of project area.
- To asses the obstetric training status of various level of health workers attending to female patients in these health facilities.
- To evaluate the capacity of these health facilities for dealing with obstetric cases.
- To Ascertain the referral facilities availability and their utilization.

c) KABP survey of community health care providers :

Objectives :

- To find the KABP (*Knowledge, Attitude, Belief and Practice*) about obstetric care among TBAs and LHWs working in the project area villages.
- To evaluate the number of deliveries and related complications managed by these TBAs and LHWs.

d) M.M.R. Household Survey :

Objectives :

- To Estimate the M.M.R. in the project area (*I.C.T., Nowshera & Attock districts*) through "sisterhood method".
- To ascertain the perceived causes of these maternal deaths in the community.
- To find the KABP among mothers regarding nutrition and health care during pregnancies.
- To evaluate the use of Family planning options.

4. Health Facility Survey (Outline of Protocol)

a) Objectives :

- To know proportion of health facilities providing maternal care.
- To know the status of maternal morbidity and mortality in these facilities.
- To know the condition of provided equipment for maternal care in these facilities.
- To know the status of maternal health training at various levels of workers in these facilities.

b) Significance :

- High maternal morbidity and mortality rate is a serious problem in Pakistan.
- Low utilizing rate of government health facilities by most women.
- Delayed approach to the health facilities.
- Poor knowledge, skills and experience of the health care providers in the government health facilities.

c) Design :

A cross-sectional descriptive study.

d) Subjects : (Selection criteria and sampling design)

Referral level facilities in Attock, Islamabad and Nowshera districts ;

District Headquarters Hospitals (DHQ),

Tehsil Headquarters Hospitals,

Rural Health Centers

Random selection of Basic Health Units and MCH Centers in the above districts.

e) Variables :

Maternal care equipment, Transportation/Communication services,

Maternal care practices, Obstetric care,

Qualifications/Training of health professionals, Levels of obstetric care providers

Number of OPD attendants, Pattern of disease burden

f) Sample Size and Power :

Twenty percent of facilities offer obstetric care (*expected proportion 0.20*) with 90 % confidence interval for observations. Total width of confidence interval is 0.15.

g) Hypothesis and analytic approach :

The hypothesis is that less than 20 % of the facilities offer "reasonable/comprehensive" maternal health care. The health facilities will be analyzed for service offered availability of trained professional, availability of obstetric equipment, availability of referral.

h) Summary of Health Facility Survey (Refer to Annex 3)

Survey was conducted by Dr. Gul, Ms. Gul Fareen, Ms. Neelofer, Ms. Udayama, and Dr. Nakasa from September 4th to December 11th.

- Out of 128 health facilities in three districts, total 81 health facilities, which are 16 in ICT, 27 in Nowshera, NWFP, 38 in Attock, Punjab, were surveyed and interviewed using different type of questionnaire for the medical doctors, LHVs (*Lady Health Visitors*) and other health professionals. Analysis is under process.

- **Observations**

- Basic infrastructure for maternal and child health services are available in most of facilities.
- Average number of female OPD visitors are 16-30 in BHUs and 38-47 in RHCs.
- Delivery cases at these health facilities (*RHC and BHU*) are very rare.
- At the time of visit, the absence of health care providers at their duty station was observed due to some unknown reasons.
- Utilization of available staff accommodations in health facilities (*RHC and BHU*) by doctors and LHVs is quite low.
- There were 155 in surveyed areas of 1.5 million population last year. (*This number is equivalent to approximate 250 per 100,000 live births*).
- Main causes of deaths are hemorrhage and eclampsia.

Hemorrhage	20
Eclampsia	6
Sepsis	3
Others and unknown	126

5. Referral Level Hospital Survey (*Refer to Annex 4*)

a) Introduction :

Some Facts :

- 150 million pregnancies in the world.
- 600,000 women die from child birth and related causes in the world, and more than 90% of these deaths occur in developing countries.
- Two to nine maternal deaths per 100,000 live births in developed countries against 300 to 1,000 in developing countries.
- Risk of dying is 200 times more in developing countries.

Pakistan :

- In Pakistan 500 maternal deaths per 100,000 live births according to UN Population Division, which means that 20,000 women die every year relating pregnancy.
- UNICEF quotes the rate of 5.9 per 1,000 live births during 1982-1990.
- According to various studies in Karachi 2.8 (*Kachi Abadies, MIMS 1989-1992*), 6.3 in 5 districts of Balochistan and 4.3 in rural NWFP.

b) Objectives :

- To ascertain the quantum of maternal deaths in the selected referral level/tertiary care hospitals of Islamabad and Rawalpindi.
- To assess the contributing factors of maternal deaths in the selected referral level/tertiary care hospitals.
- To assess the availability of emergency or essential obstetric care at the referral facilities for the

management of complications.

- To recommend an effective referral system assuring rapid transfer of women with complications between each level of care.

c) Design :

- A one year prospective study including all pregnant women dying at the hospitals during the survey.
- Retrospective analysis of maternal deaths.
- Verbal autopsy from relatives.
- Nearmiss case study at PIMS.

d) Institutions Concerned :

The study will be conducted in the following seven hospitals of Islamabad and Rawalpindi:

- Pakistan Institute of Medical Sciences (*PIMS*), Islamabad
- Federal Government Services Hospital (*FGSH*), Islamabad
- Capital Development Authority (*CDA*) Hospital, Islamabad
- Rawalpindi General Hospital (*RGH*), Rawalpindi
- District Headquarters (*DHQ*) Hospital, Rawalpindi
- Cantonment General Hospital (*CGH*), Rawalpindi
- Holy Family Hospital (*HFH*), Rawalpindi

e) Method :

- Identification of cases
- Collect complete information from the referral level hospitals.
- Collect complete information from the community.
- Review of the cases
- Statistical analysis of the data.

f) Summary of the Pretest of Referral Level Hospital Survey

- In the preliminary study, 14 cases of maternal mortality & morbidity were identified. Out of which 10 were death and 4 were nearmiss cases.
- These cases were from PIMS, DHQ Hospital and FGSH.
- The study of 10 cases showed 4 were referred from home, 3 from private clinics, 3 from Tehsil or DHQ Hospital. Only 3 were referred from rural areas.
- The causes of 10 deaths were ; Haemorrhage 1, Septicemia 6, Eclampsia 1, post-operative 1, and fulminant hepatic failure 1.
- Out of 10 maternal mortality cases 9 women were married. Out of 10 cases 2 were Nullipara, 2 were grandmultipara, 5 were multipara and information about 1 case was unknown.
- The educational status showed that 4 women were educated, 3 did not have any schooling and for 3 we could not get the schooling information. Out of 10, Quran was taught to 4.
- Nine women were house-wives and 1 was government servant. The husband's occupations were ; 4 had private jobs, 1 was laborer, 1 was property dealer, 1 government servant and 1 was unemployed. About 2 cases the information was unavailable.
- 5 women had antenatal care. 4 of them were seen by General Practitioners (*GPs*), 1 was seen by a LHV. Out of these, 3 patients had 1-3 visits, 2 had 4-10 visits and information about 2 was unknown.

- Nine patients stayed at hospital for less than 7 days, 1 stayed for 40 days.
- Only 2 patients were known to receive TT vaccine, 3 cases were not given TT vaccine and about 5 the information was unknown.
- Four cases were delivered by Resident Staff, 2 by LHVs, 1 by a TBA and 1 by General Practitioner. About 2 patients we could not get the information.
- Six babies were born dead, 1 patient died undelivered and 2 patients had miscarriage. About 1 patient we could not get the information.
- Duration of symptoms varied from 1 day to more than 10 days before they were referred from the home or clinic, to the tertiary care facility.

6 . Household Survey (Maternal and Under 5 Mortality Survey)

(Refer to Annex 6 and 7)

a) Objective :

To provide an estimate of maternal and under 5 mortality rate in the district of Islamabad.

b) Significance :

It provides a baseline data before the implementation of the Project.

c) Method :

The interviewers visit households and collect information on questionnaire in the selected clusters. In case of a maternal or a child death reported, an inquiry into the in-depth causes of death will also be completed. *(Refer to Annex)*

The initial questionnaire applied in pretest for OPD patients in Children's Hospital, PIMS, was revised before the training of interviewers. 10 supervisors who are doctors and 28 interviewers who are nurses or LHVs participated 8-days training course including two field training in the non-selected villages in ICT. 78 clusters in 48 villages out of 121 villages in ICT were selected using random sampling method. After training supervisors and interviewers, the actual household survey started 25th of March.

7 . In-depth study in the community

A. Nutrition :

a) Objectives

- To assess feasibility of a nutrition education program involving participatory approach.
- To know Lady Health Worker's KABP about nutritional anemia and their activity in the village.
- To identify KABP on nutritional anemia among pregnant women in the village.

b) Initial plan and it's modification :

Initial plan was prepared, under the title of "Anemia the 'zero' program in the community", and modified for the field work of LHWs. It consisted of three points.

- Planning : developing materials
- Implementation : implementing nutrition education with developing materials
- Assess impact of educational method,



c) **Development of procedure, development and pretesting of the instruments and materials :**

- Data collection Instruments for participants were developed.
- Data collection instruments were translated in Urdu and pretested. They were modified accordingly in consultation with other field workers.
- Materials for facilitators/researchers were developed
- Making "self check diet sheet"
- Characteristics of self-check sheet
- Key-foods
- Guide for focus group discussion for facilitator
- A schedule of program and procedure were developed

d) **Summary (Refer to Annex 7)**

A nutrition education programme was implemented in a village of ICT from September 14th to 18th, 1996. Total 16 LHWs participated in this programme including the evaluation and impact assessment.

The program proved to be feasible because LHWs were much interested in the program, especially filling in the "self-check sheet" and discuss about their own problems of dietary behavior by themselves. Through the programme the LHWs could understand that the eating behavior depends upon result from self-check sheet. These experiences might be of help to improve LHWs communication skills through they can understand the problems of pregnant/lactating women in the village.

B. Focus group discussion (Nursing Section) :

a) **Objectives :**

- To develop a refresh training programme on maternal health education for LHV and LHWs through participatory approach in the National Institute for Reproductive and Family Health.
- To identify problems and issues regarding living conditions and status of women's nutrition and health care practices during pregnancy among women in the community, using qualitative methods.
- To find KABP of LHV, LHW, TBAs and family members in the community.

b) **Schedule :**

Name of Discussion	Date	Discussion Group
Focus group discussion	February , 18 th	10 LHWs and 1 LHV
Focus group discussion	April , 8 th	8 lactating and pregnant women
Focus group discussion	April (last week)	8 mother-in laws and grand mothers
Focus group discussion	May (2 nd week)	8 husbands and fathers
Focus group discussion	May (4 th week)	8 TBAs

c) **Focus Group Discussion with Lady Health Workers (LHWs) :**

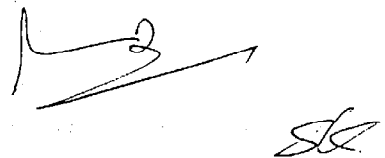
Theme on discussion :

- Status of women in general in the community and household .
- Position in the family about family issues regarding health and nutrition .
- Pregnancy issues ; choice, nutrition, health care, delivery option, work status, gender issues.

- Problems regarding to pregnancy, child birth and child rearing practices .
- Family planning .
- How should these problems be solved .

Summary of Discussion :

- Community people are aware of the importance of girl's education for social development and improve maternal conditions.
- Educated women are aware of their talent and skills.
- Most urban families discuss their domestic issues among them. However, final decision is still made by the male members of the family.
- Decision maker of child birth is husband. Usually people desire a boy at first. If only girls are born or none , husband and in-laws blame a wife (*daughter-in-law*). Because people believe that only God knows the distinction of baby's sex , and it depends on mother's behavior .
- Almost people have no awareness on balance diet for pregnant women, especially in an illiterate case. Usually meat and fruit is special food there and they can eat it once a month (*week*). A woman who is independent can take some more fruit which her husband get it from the market for her. Because mother-in-law comes to interfere young couple in the house , even if husband brings it secretly .
- After delivery women are given special diet like Choori of Desi , Ghee , Halwa , Chicken Soup . However they can't eat Chappati during 4 ~ 5 days . Because people believe if they have it , some harm transmitted to babies by breast feeding .
- Usually husbands disagree Family Planning. So wives prevent conceptions secretly. Injection is popular there .
- Some women choose delivery at their parents' house . And some are at husband's house , then their mothers come to take postnatal care for them . Because if some troubles happen regarding child birth , husband's family blame wife (*daughter-in-law*) and also their parents .
- For 40 days after delivery , baby boy's birth is secret to outside and female are stopped to come inside in front of the gate because people think others jealous it. Moreover they hang a green leave as a mark for those women who don't have any child to enter their house because it is not a good sign for mother & child.
- Pregnant women have to continue housework and fieldwork because mothers-in-law don't permit them to take a rest.
- Usually mothers-in-law decide delivery option , they don't accept daughter-in-law's request .
- Some pregnant women hesitate to go to Hospital because they think the male doctor will conduct their delivery. These days some women go to antenatal check up at hospital alone or accompanying by mothers-in-law. However almost family choose home delivery. The main reason of choosing home delivery is economic matter, and convenient because of their other children at home. The payment for TBA is cheaper than hospital delivery. Because it costs transportation fee and doctor's fee. So poor family can't take them to hospital. If any pregnant woman has fits or convulsions they take them to Dargah instead of any medical center because they believe that she will be cured by Taaweez Ganda. Mothers who are educated have awareness about rearing and education of children , also her own maternity care . So one of solution of these issue is girl's education . Still more , LHWs should approach husbands and in-laws to change their behavior. Even if it is difficult way and a time consuming job.



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III. Inputs

1. Japanese side

a) 1996-97 :

1) Dispatch of Japanese experts :

Three long term Japanese experts were dispatched in 1996 Japanese Fiscal Year (*hereinafter referred to as "FY"*) including Chief advisor and the Coordinator. Six short term experts were dispatched in 1996 FY in the field of Public Health, Social science, and Nutrition.

Long term experts

Chief advisor (1) Dr. Tamotsu Nakasa
Coordinator (1) Mr. Akira Naruse
Nursing supervisor (1) Ms. Akiko Udayama

Short term experts

Nutrition (3) Prof. Miyuki Adachi
Ms. Misa Nishida (*2 times*)

Social Science/
Anthropology (2)

Mr. Kan Sato
Ms. Yukiko Oda

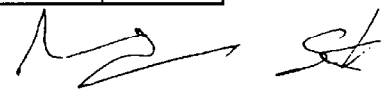
Public Health (1) Dr. Masami Fujita

2) Provision of equipment

Around thirty million Japanese yen has been allocated in the Fiscal Year of 1996 for the purchase of procurement in order to implement the project. However the delivery of the equipment was behind the schedule.

Request of Equipment : 1996 - 1997

	Item	Type	Number
1	Vehicles for surveys		3
2	Computer (A & U)		10
3	Printer		6
4	Copier machine with accessory	Heavy duties	2
5	Softwares for computer		10 sets
6	Laptop computer for survey		2
7	CTG monitor		1
8	Microscope		1
9	Portable USG with linear scan		1
10	Monitor (<i>Operation theater</i>)		1
11	Vacuum extractor		1
12	Printing machine		1
13	Over Head Projector (<i>OHP</i>)		3
14	Slide projector		2
15	Video camera		1
16	Tape recorder and player		3
17	Slide processor		



3) Counterparts training in Japan

Two counterparts of Obstetric and Gynecology (*Prof. Ghazala and Dr. Batool*) had their training in Japan 1996 FY.

b) 1997-1998

1) Dispatch of Japanese experts

Five long term Japanese experts will be dispatched in 1997 Japanese Fiscal Year (*hereinafter referred to as "FY"*). Other relevant short term experts will be also dispatched in 1997 FY in the field of Maternal and child health, Nursing, Public Health, Social science, and Nutrition.

Long term experts

Chief advisor	Dr. Tamotsu Nakasa	1
Coordinator	Mr. Akira Naruse	1
Nursing supervisor	Successor to Akiko Udayama	1
Nutrition	Nutrition Program	1
Public Health	Epidemiology, Data analysis	1

Short term experts

Nutrition	Nutrition program	1
Social Science/Anthropology	Qualitative studies	1
Public Health	Epidemiology, Data analysis	1
Nursing	Maternal Education	1
Pediatrics	Neonatal	1
Obstetrics/Gynecology	Maternal health	1

2) Provision of equipment :

As the budget of 1997 FY, around thirty million Japanese yen will be allocated for the purchase of equipment.

Request of Equipment : 1997 - 1998

	Item	Type	Number
1	Vehicles for training	Microbus	1
2	Computer (A & U)		8
3	Printer		8
4	Copier machine with accessory	Heavy duties	1
5	USG Apparatus	High quality	1
6	Anesthesia Apparatus		2
7	Oxygen concentrator	For DHQ Hospital	2
8	Doppler	For DHQ Hospital	2
9	Portable USG with linear scan	For DHQ Hospital	2
10	Monitor (Operation theater)		1
11	Digital Video Camera		1
12	Scanner for computer		1
13	Over Head Projector (OHP)		2
14	Slide projector		2
15	Gloves dryers		1
16	Jackson Testing bag for ventilator		2
17	Cart for dressing		8

3) Counterparts training in Japan

Three counterparts will be sent to Japan.

Health administration	1
Hospital management	1
Nursing supervision	1

2. Pakistani side

a) Counterparts :

Project Director	1
Manager of training	1
Obstetric/Gynaecology	1
Paediatrics	1
Public Health	1
Nursing	1
Nutrition	1
Sociology/anthropology	1
Local Coordinator in each districts (DHOs)	3

b) Provision of Personnel :

Office Assistant	1
Driver	1
Supporting Staff	1

c) Provision of Spaces :

Office for the project	2
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d) Provision of Transportation :

Vehicle & Drivers	1
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e) Conducting Studies :

- a) Health Facility Survey
- b) Referral Level Hospital Survey
- c) Household Survey
- d) In-depth Studies

f) Workshops :

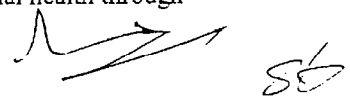
- a) Workshop to exchange opinion concerning maternal health situation in Pakistan.
- b) Workshop on sharing the knowledge and experience about maternal health through participatory method.
- c) Workshop to discuss the maternal health situation in DHQ hospitals.

g) Collaboration with other institutions :

- a) Pakistan Institute of Medical Sciences (PIMS), Islamabad
- b) Federal Government Services Hospital (FGSH), Islamabad
- c) CDA Hospital, Islamabad
- d) Rawalpindi General Hospital (RGH), Rawalpindi
- e) DHQ Hospital, Rawalpindi
- f) Cantonment General Hospital (CGH), Rawalpindi
- g) Holy Family Hospital (HFH), Rawalpindi

h) Collaboration with NGOs and other Donor Agencies :

Workshop on sharing the knowledge and experience about maternal health through participatory method.



IV. Activities in 1997-1998 :

a) Household survey completion :

Following the household survey in Islamabad Capital Territory two more survey will be conducted in ;

District Attock (*Punjab*)
District Nowshera (*NWFP*)

b) Referral level hospital survey completion :

By the end of 1997

c) Qualitative Study for Maternal Health :

Based upon the first year's qualitative study including other studies will be planned and conducted.

d) Conducting study on the nutrition of mothers and children :

e) Preparation for National Institute of Family and Reproductive Health :

As new building construction will be completed in July 1998, we shall start working on Organizational Plans and various activities in National Institute of Family and Reproductive Health.

f) Reproductive health workshop :

The National Reproductive Health Workshop is planned by support of UNDP , WHO and other UN agencies such as UNICEF and UNFPA.

g) Visit to MCH Project in Cambodia :

A visit to similar MCH Project in Cambodia supported by JICA will be arranged.

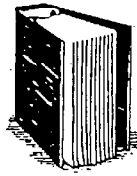
V. Constraints :

- The prolonged process of the approval of the PC-1, resulted in the delay of comprehensive planning.
- Delay of delivery of proposed equipment such as vehicles and copy machines for survey.

VI. Recommendations from the Japanese Consultation Team :

1. To complete the field survey to obtained the reliable baseline data in time.
2. In order to develop practical plan in later half of the project period, analyze and consolidate the results of the surveys.
3. To develop sustainable and practical collaboration system of registration of MM/MR with community of the project's target areas.
4. To develop preliminary training courses at central/district/Tehsil levels.
5. To launch recruitment of staff for MCH/RH center, including training of management/maintenance.
6. To design a practical and inexpensive model of referral system in one of target areas of the Project..
7. To request policy-makers to be aware of significance of maternal health care.





ANNEXTURES

- Annex 1 ----- Weekly Meeting Points
- Annex 2 ----- Minutes of Workshop
- Annex 3 ----- Health Facility Survey
- Annex 4 ----- Referral Level Hospital Survey
(Research Protocol)
- Annex 5 ----- Maternal & Infant Mortality Survey
(Research Protocol)
- Annex 6 ----- Maternal & Infant Mortality Survey
(Detailed Design)
- Annex 7 ----- Brief Report on Nutritional
Education Programme

Annex 1

WEEKLY MEETING'S POINTS

- June 16th, 1996 (First Official Meeting)
 1. Introductory Address
 2. Introduction of the Participants
 3. Explanation of Project Type Technical Cooperation
 4. Summary of Project Design Matrix
 5. Tentative Schedule of the First Year

- June 23rd, 1996
 1. New estimate of Maternal Mortality Rate
 2. Objectives of the Project
 3. Strategy

- June 30th, 1996 (Monthly Meeting)
 1. Maternal Mortality & Morbidity data of PIMS
 2. Nursing & Reproductive Health Section Survey Plan

- July 07th, 1996
 1. Work Plan of Surveys
 2. Plans of Maternal Mortality & Morbidity survey in Referral Level Hospitals
 3. Introduction of Basic Health Facility Mortality & Morbidity Survey

- July 14th, 1996 :
 1. Basic Health Facility Morbidity / Mortality survey

- July 21st, 1996 :
 1. Examination of FLHF Morbidity / Mortality Survey.
 2. Progress of referral levels Hospital Morbidity / Mortality Survey.

- July 28th, 1996 :
 1. Basic Health Facility Morbidity / Mortality Survey
 2. Explanation of Safe Motherhood needs Assessment (WHO)
 3. Introduction of Dr. Fujita (Epidemiologist)

- August 04th, 1996 (Work Shop)

Objective of the Workshop :
To exchange opinion concerning maternal health situation in Pakistan

- August 11th, 1996 :
 1. Pretest of the Health Facility Survey (Questionnaire)
 2. Referral Level hospital Survey
 3. Introduction of Japanese Experts i.e. ;
Ms. Misa Nishida, Prof. Miyuki Adachi, Ms. Yukiko Oda

- August 18th, 1996 :
 1. Design of Survey for Maternal Health
 2. Plans of Studies (Nutrition Survey)

- August 25th, 1996 (Workshop) :

Objectives of the Workshop :
Workshop on Sharing the knowledge & Experience about Maternal Health Through Participatory Method.

- September 01st, 1996 :
 1. Progress of Survey Preparation
 2. Special Comments on MCH Project (Prof. Samia Janjua)
- September 08th, 1996 :
 1. Progress of Referral Level Hospital Survey (Detailed)
- September 15th, 1996 :
 1. Implementation Plan of Health Facility Survey
 2. Situation of DHQ Hospitals in Nowshera & Attock
 3. Progress of Referral Level Hospital Survey Preparation
- September 22nd, 1996 :
 1. Progress of Referral Level Hospital Survey
- September 29th, 1996 (Workshop) :

Objective of the Workshop :
To Discuss the Maternal Health Situation in DHQ Hospitals
- October 06th, 1996 :
 1. Pretest of the Referral Level Hospital Survey
- October 13th, 1996 :
 1. Assessment of Nutrition Education Programme
- October 20th, 1996 :
 1. Issue in Measuring the Maternal Morbidity
- October 27th, 1996 :
 1. Presentation of the model of MCH Center
 2. Progress of Health Facilities Survey
- November 03rd, 1996 :
 1. Progress of Referral Level Hospital Survey's Questionnaire
- November 10th, 1996 :
 1. NGO's Activities in NWFP & Punjab
- November 17th, 1996 :
 1. Progress of Referral Level Hospital Survey
- November 24th, 1996 :
 1. General Discussion
- December 02nd, 1996 :
 1. Household Survey
- December 09th, 1996 :
 1. The Plans of Actual Referral Level Hospital Survey
- December 16th, 1996 :
 1. General Discussion

- December 21st, 1996 (Monthly Meeting)
 - 1 . Activities of 1996
 - 2 . General Plan of Next Year (i.e. 1997)
 - 3 . General Discussion
- December 23rd, 1996
 - 1 . Referral Level Hospital Survey (*RLHS*) Protocol
- January 13th, 1997
 - 1 . PROTOCOL of Referral Level Hospital Survey
- January 20th, 1997
 - 1 . PROTOCOL of Referral Level Hospital Survey
 - 2 . Progress of Household Survey
- January 27th, 1997
 - 1 . The Summary Report on Six months Activity
 - 2 . The Draft Plan of In-depth Study for Maternal Education/Training Programme for LHVs and LHWs
 - 3 . PROTOCOL of Referral Level Hospital Survey
- February 17th, 1997
 - 1 . Progress & Preparation of Household Survey
 - 2 . Plan of Focus Group Discussion
- February 24th, 1997
 - 1 . Progress of Household Survey
- March 03rd, 1997
 - 1 . Maternal Mortality & Nearmiss Cases
 - 2 . Progress of Household Survey & Preparation
- March 10th, 1997
 - 1 . Report of Focus Group Discussion in Village Kanyal
 - 2 . Report of National Maternal & Child Health/Family Planning Congress on "Reproductive Health" 5-6th March, 1996, Lahore, Pakistan
NGOs Conference
- March 17th, 1997 :
 - 1 . Introduction of Supervisors and Interviewers of Household Survey
- March 26th, 1997 :
 - 1 . Implementation of Household Survey
 - 2 . Introduction/Schedule of Japanese Consultation Mission

Annex 2-A

MINUTES OF THE WORKSHOP On Sunday the 04th of August, 1996

Time : 10 : 00 a.m. to 12 : 00 p.m.
Venue : WHO Regional Training Center, Ground Floor,
The Children's Hospital, Pakistan Institute of Medical Sciences,
G-8/3, Islamabad.

Subject : **WORKSHOP ON EXCHANGING OPINION CONCERNING ABOUT MATERNAL
HEALTH SITUATION IN PAKISTAN**

Participants :

Pakistani Counterparts : *Prof. Mushtaq A. Khan (Project Director)*
Dr. Javed Chaudhary (Joint Executive Director)
Dr. S. A. Qazi (Associate Physician, Children's Hospital),
Dr. N. Gul Rehman (Training Coordinator),
Dr. Sayyada Batool Mazhar (Head of Department of Obstetrics & Gynaecology, PIMS)
Madam Mumtaz (Nursing Superintendent)
Miss Gul Fareen (Staff Nurse)

Japanese Experts : *Dr. Tamotsu Nakasa (Chief Advisor)*
Mr. Akira Naruse (Project Coordinator)
Dr. Masami Fujita (Epidemiologist)
Miss Akiko Udayama (Nursing Supervisor)

Obstetricians From:
Different Institutions of Rawalpindi / Islamabad. *Prof. Saad Rana (Holy Family Hospital, Rawalpindi)*
Prof. Ghazala Mahmood (Rawalpindi General Hospital, Rawalpindi)
Dr. Nabia Tariq (Cantonment General Hospital, Rawalpindi)
Dr. Samia Janjua (Retired Professor)
Dr. Rehana Hameed (Federal Government Services Hospital, Islamabad)
Dr. Nasreen Saud (District Headquarters Hospital, Rawalpindi)
Dr. Shubnum Raja (C.D.A. Hospital, Islamabad)

Participants from Health Departments : *Dr. Raza Zaidi (Deputy Coordinator, D.H.O. Office, Islamabad.)*
Dr. Shams ud Din (District Coordinator, D.D.H.O. Attock)
Rep. Director General Health, Punjab

Welcome Address / Objectives of the Workshop By Prof. Mushtaq A. Khan :

Prof. Mushtaq A. Khan welcomed all the participants and after introduction he highlighted the objectives of the workshop and the MCH Project. He described the two components of the Maternal & Child Health Project. i.e.;

- (a) *Grant and Aid in Building*
- (b) *Technical Cooperation*

The Objectives of the Workshop are ;

- (a) *To explain MCH Project supported by the Government of Japan.*
- (b) *To exchange opinion concerning about the maternal health situation in Pakistan.*
- (c) *To discuss the measurements to ascertain the causes and risk factors for maternal deaths occurring in big hospitals.*

He told that this project is funded and supported by Government of Japan (JICA). After the welcome address, Prof. Mushtaq asked Prof. Saad Rana to chair the Workshop.

Prof. Saad Rana (Chairman) :

As a chairman Prof. Saad Rana asked all the participants to present their ideas, views and studies. First of all he asked Dr. Tamotsu Nakasa (Chief Advisor) to present the overall goal and the objectives of the MCH Project.

3 . Explanation of Technical Cooperation by Japan in MCH Project By Dr. Tamotsu Nakasa :

Dr. Tamotsu Nakasa, the Chief Advisor of the MCH Project explained the Technical Cooperation by the Government of Japan (i.e., JICA, *Japanese International Cooperation Agency*). He also explained :

- (1) The overall goal is " To promote women's health and social welfare through improving the maternal and child health services ".
- (2) Project Objective is " To develop and improve the maternal and child health services which can broadly contribute to the people in rural areas with special emphasis on training for the safe motherhood. Especially, To secure safe delivery through comprehensive maternal health services.
- (3) The activities of the project will be :
 - (a) *To train health professionals.*
 - (b) *To develop a functional and mutual referral system for maternal and child health services in the selected districts.*
 - (c) *Top conduct surveys of above mentioned activities in various areas, at any time of the project.*

(4) Plans of Studies are :

- (a) *Referral level Hospital Morbidity / Mortality Study.*
- (b) *Basic level of F.L.H.F. Morbidity / Mortality Survey.*
- (c) *KABP survey of community health care providers.*
- (d) *M.M.R. Household Survey.*

Presentation By Consultant Obstetricians :

Prof. Ghazala Mahmood :

Prof. Ghazala Mahmood from Rawalpindi General Hospital, Rawalpindi, presented her ideas and views about maternal morbidity / mortality. She emphasized to focus on the rural areas, the establishment of a proper referral system, and to obtain the base line data. She also described that the hospital should be made a baby friendly hospital, but it has to be a mother friendly hospital first.

Dr. Rehana Hameed :

Prof. Rehana Hameed from Federal Government Services Hospital, Islamabad, presented the Maternal Morbidity / Mortality data of last five years from her hospital. i.e. ;

Year	Total Number of Births	Total number of Deaths	Booked Cases	Non-Booked Cases
1991	9470 births	2 deaths	01	01
1992	9112 births	6 deaths	01	05
1993	7667 births	2 deaths	-	02
1994	8092 births	5 deaths	-	05
1995	8085 births	5 deaths	-	05
<i>Total</i>	<i>42426 births</i>	<i>20 deaths</i>	<i>02</i>	<i>18</i>

Death Rate = 0.6 deaths / 1000 births

Dr. Samia Janjua :

Dr. Samia Janjua presented a very detailed maternal morbidity and mortality data from different hospitals of Pakistan. According to her study, from 1975-1984 there were 17460 births, and 30 deaths from which 6 cases were booked. So the death rate was 1.7 deaths / 100,000 births. The highest death rate was calculated in Sheikh Zayed Hospital, Larkana, i.e., 67.1 deaths / 1000 births. The causes of the death were " No Antenatal Care ", and the poor condition of the patients when presented to the hospital. There may be some hidden / unidentified causes of deaths which are not known due to some reasons.

Dr. Nasreen Saud :

Dr. Nasreen Saud, Head of Department of Obstetrics & Gynaecology in District Headquarters Hospital, Rawalpindi. She presented data from her hospital. i.e. :

Year	Total Number of Births	Total Number of Deaths
1993	1906	04
1994	2069	06
1995	2240	02
<i>Total</i>	<i>6215</i>	<i>12</i>

In their hospital the causes of deaths were rupture eclampsia and peripheral problems. While in referral cases patients usually face financial and transportation problems.

Dr. Shabnum Raja :

Dr. Shubnum Raja is Head of Department of Obstetrics & Gynaecology in C.D.A. Hospital, Islamabad. She presented her hospital's data related to Maternal Morbidity & Mortality, from Jan 1994 to June 1996. According to her study the total number of deliveries were 3,000. While 4 of them were major pregnancies. There were 2 maternal death cases. The complications mostly faced, were Medical, Anesthetic and surgical. There were some unidentified hidden problems too.

Dr. S. Batool Mazhar

Dr. S. Batool Mazhar, Head of Department of Obstetrics & Gynaecology in Pakistan Institute of Medical Sciences, Islamabad, presented data collected from P.I.M.S., hospital records, from July 1993 to June 1996.

Year	Total Number of Deliveries	Total Number of Deaths
July 1993 to June 1994	949	7
July 1994 to June 1995	1547	7
July 1995 to June 1996	1272	8
<i>Total deaths during 3 years</i>	<i>3768</i>	<i>22</i>

- Maternal Mortality Rate :

583 deaths / 100,000 births (5.8 deaths / 1,000 births)

Over estimated rate because of the serious condition of the patients on presentation.

Out of 22 deaths only 3 cases (14%) were booked and 19 cases (84%) were non booked.

Presentation :

Eight patients presented in shock, five with eclampsia, and four with bleeding.

Causes of Deaths :

Seven died due to shock (septic, hypovolemic), five due to CVA, and two due to pulmonary Embolism.

Mode of Referral to P.I.M.S. :

Dai	5
Govt. Hospital	4
Pvt Hospital	3
Self Referral	7
Booked	3

Dr. Fujita (Epidemiologist) :

Dr. Fujita (Epidemiologist) appreciated the presentation of studies by consultants obstetricians. He also describe the need of ;

- Careful collection of data and information
- Learn from past experiences

Combined Suggestions to Improve Maternal Health :

- All the participants agreed upon the need to establish a good and proper referral system.
- Transport for a proper referral should be available.
- The health workers (LHVs, LHWs) should be residing in or near the health facility where they are appointed.
- The health facilities should also provide home delivery service, because in rural areas most families want to have delivery at their residence. It was suggested that the LHVs should visit to homes and deliver the woman at home when needed.
- Latest data related to maternal morbidity & mortality should be obtained.
- Basic health facility data should be obtained regarding reproductive health facilities.
- Modern medical equipment should be provided to all health facilities.
- Health care providers (LHVs, TBAs) and household surveys should be conducted to collect useful information.
- Data which will be obtained from surveys in ICT, Attock and Nowshehra districts should be compared.
- Adequate training should be given to all the health worker to increase their efficiency.
- All the health staff should be properly monitored / supervised.
- Proper record of all the patients should be kept.

Concluding Remarks :

Prof. Mushtaq A. Khan told the participants about the progress of the MCH project. He said that his team is conducting a survey in all the health facilities of ICT, Attock and Nowshehra districts. At the end he thanked all the participants for attending the workshop and spend some their precious time for this noble cause.

Signed By :

- Prof. Mushtaq A. Khan (Project Director)
- Dr. Tamotsu Nakasa (Chief Advisor)

Anex 2-B

Minutes of the Workshop On Sunday the 25th of August, 1996

Time : 10 : 00 a.m. to 12 : 00 noon
Venue : WHO Regional Training Institute,
Ground Floor, The Children's Hospital, P.I.M.S.
Islamabad.

SUBJECT : Workshop on Sharing the Knowledge & Experience about Maternal Health through Participatory Method

PARTICIPANTS OF THE WORKSHOP :

Pakistani Counterparts : Prof. Mushtaq A. Khan (Project Director)
Dr. Javed Chaudhary (Joint Executive Director)
Prof. Ghazala Mahmood (Consultant Surgeon, Head of Department Gy/Ob, PIMS)
Dr. S. Batool Mazhar (Associate Surgeon, Gy/Ob, PIMS)
Dr. Shamim Ahmed Qazi (Associate Physician)
Dr. Gul N. Rehman (Training Coordinator)
Dr. Salma Ayoko Tokonaga (Medical Officer)
Madam Mumtaz (Nursing Superintendent)
Ms. Gul Freen (Staff Nurse)
Ms. Athar Sayed (Social Scientist)
Ms. Afia Khan (Social Scientist)

Japanese Expert : Dr. Tamotsu Nakasa (Chief Advisor)
Mr. Akira Naruse (Project Coordinator)
Ms. Akiko Udayma (Nursing Expert)
Ms. Misa Nishida (Nutritionist)
Ms. Yukiko Oda (Social Scientist)
Mr. Kan Sato (Social Scientist)

Invited Participants : Dr. Farzana Bari (Quaid-e-Azam University, Islamabad)
Dr. Khalida Manzoor (NIPS, Islamabad)
Dr. Zeba Sattar (Population Council, Islamabad)
Ms. Tahira Abdullah (UNFPA, Islamabad)
Dr. Attiqua Hameed (Sukhi Ghar, Rawalpindi)
Dr. Sarah Saldar (Peshawar University, Peshawar)
Dr. Zaitoon Qazi (Ministry of Population, Islamabad)

1) Welcome Address & the Objectives of the Workshop :

Prof. Mushtaq a. Khan (Project Director) welcomed the participants to the workshop and briefly introduced the Mother & Child Health (MCH) Project in Pakistan and its objectives. After introduction, he requested the guest speakers to present their studies and share their knowledge and experience in this regard and to give What ever comments or suggestions they feel necessary.

2) Presentation By the Participants :

DR. KHALIDA MANZOOR is a senior fellow at National Institute of Population Studies, (NIPS), Islamabad. She talked from her own experience of reviewing the functioning of TBAs. She emphasized the point that even though TBAs had been trained they were generally not able to perform relatively simple medical procedures. She also pointed out that for uneducated and rural women (and men, for the matter) pregnancy is regarded as a normal state of being. They do not feel that it requires any extra medical check-ups. She quoted figures that out of all women (in the field she worked in) that utilized the Family Welfare Centers, only 55 % used it for check-ups during pregnancy.

Some of the factors that promote the use of health facilities are the close proximity of the facility from peoples' homes, trust in the doctors, attitude of medical staff, availability of medicines at that health facility, the services

provided and the awareness about prenatal care. Fatalism was cited as one of the factors that might hinder the use of these facilities.

Dr. Khalida suggested that focus groups should be conducted amongst TBAs, women of reproductive age, husbands and obstetricians respectively.

MS. TAHIRA ABDULLAH from UNFPA, questioned the premises that the MCH Project is based on. She stressed upon the point that while concentrating on "mother's Health", a woman's health in general should not be ignored. She suggested a revision of the terms of reference, i.e., from MCH to reproductive health care.

PROF. MUSHTAQ A. KHAN later informed the participants that the hospital will be named as, "National Institute of Family and Reproductive Health".

DR. ZAITOON QAZI is in charge of reproductive health services in Federal Government Services Hospital, Islamabad. She provided various statistics on the health facilities of Sind province and the results of an evaluation of Asiatic Development Bank funded activities carried out there. She informed the participants that the access to the BHUs was improved to 56 % after the said project was completed. She pointed out some of the factors due to which the BHUs might be functioning poorly and one of these was that the BHU staff was transferred/changed too frequently. The staff also complained that they were not consulted while the various projects were designed, or else they would have provided some useful suggestions for the running of the BHUs. Family Welfare Centers provided better training and health education than the BHUs. Dr. Zaitoon also suggested that the focus groups should be conducted with the staffs of the various health facilities, TBAs and traditional healers.

DR. ZEBA SATTAR from Population Council, Islamabad, differed from Ms. Tahira Abdullah on the subject of the basic premises of the MCH Project. She felt that since the project was based in Pakistan, it should be based upon the priorities of the people of the country. She pointed out that providing the services was not the only answer, if the public is not ready to avail it. She agreed with Dr. Khalida's remarks that women of Pakistan do not regard pregnancy as a state in which one needs to visit any health facility, unless absolutely necessary. She also said that with the increasing cost of living, even men have had to consider family planning as a logical step.

DR. SARAH SAFDAR is head of Department of Social works, in Peshawar University, Peshawar. She provided a general review of the LHWs evaluation that her team carried out in NWFP. She commented that only 20 % of the women in Nowshera district visited health facilities for prenatal care and 98 % delivered at home. It was told that the inhibitive attitudes among people of Nowshera towards availing health facilities was influenced to some extent by the religious institutions at Akora Khattak.

DR. FARZANA BARI from Quaid-e-Azam University, Islamabad, raised concern over the dependence on the already existing infra-structure (BHUs, RHCs, etc.) to establish the referral system, since these health facilities are not functioning anyway. They might be misused in a number of ways or they might not be used at all.

DR. ATTIQUA HAMEED is Doctor Incharge of Sukhi Ghar (Family Planning & Reproductive Health Center). She also pointed out that the lack of proper referral system causes many problems. She also commented that a woman using a health facility was influenced by the male members of the family, specially her husband and by religious teachings.

PROF. MUSHTAQ A. KHAN (Project Director) added to the discussion that even though Primary Health Care has been recently stressed upon, it requires the setting up of secondary and tertiary units as well. The establishment of the MCH Center would act as a tertiary care facility and a training center for health workers in the three target districts. He acknowledged the need for improving the supervision of health facilities. Dr. Farzana Bari added that since the MCH Project, funded by the Japanese, would be using the already existing health facilities set up by the government, it would apply some pressure on the government to make sure that they are run properly.

MR. SATO KAN is a short term Social Scientist from Japan, emphasized that JICA wanted to reach the people in the community, not just to provide a facility. He suggested that the already existing community health committees may be used for this purpose. This type of social organization could be instrumental in providing women of reproductive age information about their health care.

MS. YUKIKO ODA is also a short term Social Scientist reinforced Ms. Tahira Abdullah's point of paying due attention to a "woman's Health", not just a "mother's Health".

PROF. GHAZALA MAHMOOD is a professor of Gynaecology in PIMS. She informed that 50 % of all women are not of reproductive age and that their ailments can not and should not be ignored in this project.

3) Concluding Remarks :

PROF. MUSHTAQ A. KHAN (*Project Director*) and DR. TAMOTSU NAKASA (*Chief Advisor*) concluded the discussion by thanking the participants for taking time out to attend the workshop.

Signed By :

- Prof. Mushtaq A. Khan
- Dr. Tamotsu Nakasa

Annex 2-C

MINUTES of the Monthly Meeting Sunday the 29th of September, 1996

Time : 10:00 a.m. to 12:00 noon
Venue : WHO Regional Training Center, Ground Floor,
The Children's Hospital, PIMS, G-8/3,
Islamabad

Subject : To Discuss the Maternal Health Situation in DHQ Hospitals

Pakistani Counterparts :

*Prof. Mushtaq A. Khan (Project Director)
Dr. Javed Chaudhary (Joint Executive Director)
Dr. S. A. Qazi (Consultant Physician)
Dr. Gul N. Rehman (Training Coordinator)
Prof. Ghazala Mahmood (Head of department of Obstetric/Gynaecology)
Dr. S. Balool Mazhar (Obstetrician/Gynaecologist)
Dr. Sofia N. Sheikh (Gynaecologist)
Madam Mumtaz (Nursing Superintendent)
Ms. Athar Sayed (Social Scientist)
Ms. Gul Freen (Staff Nurse)*

Japanese Experts :

*Dr. Tamotsu Nakasa (Chief Advisor)
Mr. Akira Naruse (Project Coordinator)
Ms. Misa Nashida (Nutritionist)
Ms. Akiko Udayama (Nursing Supervisor)*

Other Participants :

*Dr. Sarfraz Afridi (DHO, Nowshera)
Mr. Hafiz Saeed (ADHO, Nowshera)
Major M. Yaqoob Khan (M. S. DHQ Hospital, Nowshera)
Dr. Ghayyur Alam (DHO, Attock)
Dr. Ranjha (DHO, Rawalpindi)*

Welcome / Introductory Address (Prof. Mushtaq A. Khan, Chairman) :

Prof. Mushtaq A. Khan (Project Director) welcomed the participants in the monthly meeting of MCH Project, and emphasized the objectives of this monthly meeting. The objective of the monthly meeting was to " *Discuss the Situation of Maternal Health in the DHQ Hospital of Nowshera & Attock* ". After that he asked the participants to present their ideas, views and studies.

Major M. Yaqoob Khan (M. S. DHQ Hospital, Nowshera) :

Major M. Yaqoob Khan told the participants that Nowshera is also a big district of Peshawar, with 6 RHCs, 30 BHUs, 10 Dispensaries, 3 Civil Hospitals, 2 MCH Centers and One DHQ Hospital. But such a big hospital of the district is facing many serious problems. No Anesthetic is available in the DHQ Hospital. There is also lack of new instruments for Operation theater, there is no post for Pathologist, Only three nurses are working there. Another big problem is that budget of the hospital is very limited and is inadequate to fulfill the needs of the hospital.

He suggested that such an important health center of the district should be provided more adequate facilities, so that the people of the catchment area of the district can be properly benefited by all the facilities. He emphasized on the need to increase the hospital staff which is very less. Specialists and consultants should be appointed there. He also suggested that the districts should be run by the District Administration.

Dr. Sarfraz Afridi (DHO, Nowshera) :

Dr. Sarfraz Afridi told the participants about the problems & difficulties in the health facilities of district Nowshera. He told that Doctors & LHVs are getting acceptable salaries, residence and other facilities but they do not work there or if posted they do not live there. He suggested that new hospitals should be constructed, because DHQ

hospital is over loaded because of inadequate facilities and lack of staff. It is the only hospital of district level and i cannot fulfill the needs of the people. He told that if P. M.'s public health Program is implemented properly then it car get good community data & results.

Comments from Prof. Mushtaq A. Khan (Chairman) :

Prof. Mushtaq A. Khan suggested that the DHQ hospitals should be provided with more staff and adequate facilities. The staff of other health facilities should be trained, the informatory material should be distributed in the health workers and community people. He encouraged the health staff that the MCH Project team will help them to improve their service.

Signed By :

- Prof. Mushtaq A. Khan
- Dr. Tamotsu Nakasa

Annex 3

Conducted Health Facility Survey

Islamabad Capital Territory : ICT

Date	Studied Health Facility (Islamabad Capital Territory : ICT)
4/9/1996	BHU Sohan
10/9/1996	BHU Jagiot, BHU Pind Begwal
12/9/1996	DHQ Hospital (Nowshera)
14/9/1996	RHC Barakhau, BHU Phul Gran
16/9/1996	DHQ Hospital (Attock)
17/9/1996	BHU Rawat, BHUGagri
18/9/1996	BHU Schadra
19/9/1996	BHU Tumair
23/9/1996	BHU Bumber Tarar, BHU Bohker
24/9/1996	BHU Shah Allah Ditta
25/9/1996	BHU Jhang Saydian, BHU Chirah
26/9/1996	RHC Sihara
28/9/1996	RHC Tarai

Nowshera, NWFP

Date	Studied Health Facility (Nowshera, NWFP)
7/10/1996	RHC Khair Abad, BHU Jahngira, BHU Shaidu
8/10/1996	BHU Kahi, Civil Hospital Nizam Pur
9/10/1996	BHU Inzari, BHU Mama Khel
14/10/1996	RHC Pir Piai, BHU Aza Khel
17/10/1996	BHU Tara Jaba, BHU Akbar Pura
21/10/1996	BHU Badrashi, Civil Hospital Ziarat Kaka Sahib
4/11/1996	Civil Hospital Pabbi, MCHC Pishongri
6/11/1996	RHC Akora Khattak, BHU Mania
7/11/1996	MCHC Nowshera Kalan, RHC Kheski
9/11/1996	MCHC Nowshera Kalan
11/11/1996	RHC Manki Shelif, BHU Katti Khel
13/11/1996	RHC Dag Ismail, BHU Soin Khak
14/11/1996	BHU Misri Banda, BHU Mughal Kai

Attock, Punjab

Date	Studied Health Facility (Attock, Punjab)
18/11/1996	MCHC Attock, BHU Sarwala, BHU Haji Shah
20/11/1996	BHU Kamra, MCHC Hazro, BHU Bangi
21/11/1996	BHU Haroon, BHU Hameed, BHU Jalalia
25/11/1996	THQ Hazro, RHC Rangoon, BHU Ghurgushki, BHU Khudda, BHU Shamsabad
27/11/1996	THQ Fateh Jang, BHU Kanyal, BHU Pourmiana BHU Shahia, BHU Khudda
28/11/1996	BHU Aurangabad, BHU Kisran, BHU Kot Fathe Khan
30/11/1996	THQ Pindi Gheb, RHC Maghian, BHU Dhurnal
1/12/1996	BHU Basal, BHU Bhatiot, BHU Kot Fateh Khan
2/12/1996	RHC Bahtar, BHU Dhairi Rai Ditta
3/12/1997	THQ Jand, RHC Chabb
5/12/1996	BHU Dhaknair, BHU Kharpa, BHU Jabba
8/12/1996	BHU Khagwani, BHU Boliwanwal, RHC Domel BHU Akhori
11/12/1996	BHU Akhori, RHC Domel

Health Facility Surveyed

	ICT	ATTOCK	NOWSHERA	TOTAL
District Headquarters Hospital	---	1	1	2 / 2
Tehsil Headquarters/ Civil Hospital	---	5	3	8 / 8
Rural Health Centers	3	5	6	14 / 14
Basic Health Units	13	56	29	54 / 98
Mother & Child Health Center	---	3	3	4 / 6
Total Facilities	16	70	42	128
Total Surveyed	16	38	27	81

Annex 4

Referral Level Hospital Survey

RESEARCH PROTOCOL

Researchers :

Prof. Ghazala Mahmood	Prof. Mushtaq A. Khan
Dr. S. Batool Mazhar	Dr. Tamotsu Nakasa
Dr. Sofia N. Sheikh	Dr. S. A. Qazi
	Dr. Gul N. Rehman

Introduction & Significance :

Every year almost 600,000 women on earth die from carrying life. The maternal mortality differs from country to country, the difference being the widest between the rich and the poor countries. More than 150 million women become pregnant in developing countries each year and estimated 500,000 of these women die from pregnancy related causes. According to World Bank report, in our part of the world a woman runs a 200 times higher risk of death as compared to industrial countries¹. This difference in maternal mortality shows a greater disparity than any other public health indicator. Thus for example the overall risk to women dying from pregnancy related causes expressed as a life time chance of maternal death has been estimated to be as high as 1 in 21 in certain areas of Africa, compared to only 1 in 9,850 for a woman in Europe. In the developed countries there are 2 to 9 maternal deaths per 100,000 live births, but in developing countries the figures range from 300 to 1,000 or more².

Although reliable population based data are lacking, estimated rate of maternal mortality is high in Pakistan. It is however evident that maternal mortality rate in Pakistan has declined over time, as suggested by declining sex ratio and population. For example Sex Ratio in Pakistan in 1901 census was 118 males per 100 females which has declined to 111 in the 1981 census. The overall maternal mortality rate in the world in 1988 was 370. In the industrial countries 26, while in the developing countries it was 420. For Asia 380³ and Pakistan 500⁴ per 100,000 live births. While maternal mortality rate in the world in 1990 was 430, Industrial countries 17, South East Asia 610 and Pakistan 340⁵.

The maternal mortality ration in Pakistan is still not reliably quantified and estimate range from 190 to 1,700 deaths per 100,000 live births. The UN Population Division uses a figure of 500 per 100,000 live births. At this figure around 20,000 women die in child birth every year. The UNICEF's estimated maternal mortality ratio (*usually referred as maternal mortality rate*) for Pakistan during the 1980 to 1990 period was 5 per 1,000 live births. Thus Pakistan's rate is closer to the average of 5.9 per 1,000 live births for the least developed countries of the developed world. In 1996 World Bank report the maternal mortality rate for Pakistan is not mentioned. During 1989 - 1992 Maternal and Infant Mortality Survey (MIMS) was conducted in three different region of Pakistan. The maternal mortality rates in Six Kachi Abadis of Karachi city was 2.8, five districts of Balochistan 6.3 and in Hazara division NWFP (*rural*) 4.3 per 1,000 live births.

Regional maternal mortality ratios for Sub Saharan Africa range from 270 to 760 per 100,000 live births (*WHO 1991 a*). A few population based studies under taken in Africa have found MMR varying from 86 per 100,000 in Machakos, Kenya (*Voorhoeve, 1984*) to 2,362 per 100,000 in the Gambia (*Greenwood, 1987*). The maternal mortality in Tanzania (*1992*) was 241 per 100,000 live births.

An attempt to reduce the high maternal mortality involves identification of the contributory factors and interventions measures to deal with the problems. The Interventions like TBA training / refresher courses, intensive community education, ante natal check-ups in local areas, free obstetric flying squad service, better linkage between formal and informal health services, home maternal death condolence camps and improvement of obstetric care in hospital, offered free for deserving cases play major roles in reducing maternal mortality. In Faisalabad, the third largest city of Pakistan the TBA training courses reduced the maternal mortality from 10.1 per 1,000 live births in 1977 to 1.9 per 1,000 live births in 1987. Similarly a five year study of 215 maternal deaths was done from 1989 to 1993. The maternal mortality during that period was 0.77 per 1,000 live births. It is well documented in literature that once a serious complication has occurred, emergency obstetric care can stop a women progressing to a death or

nearmiss death event thus reducing case fatality for life threatening complications. Focusing on severe morbidity could have the very important methodological advantage of providing information with the least observation bias and thus with improved validity. Hence we have decided to use nearmiss death event as a control.

A maternal death review in referral level hospital can increase awareness among health professionals about the factors in the facilities and the communities which can be avoided. Actions can be planned to address the avoidable factors related to maternal mortality and so reduce maternal mortalities. The collected data can be used to sensitise the planner/policy maker to ultimately help allocate more budget for maternal health.

Objectives :

In Pakistan, as in most of the other developing countries, there is deficiency of data on maternal mortality. The objectives of this referral level hospital survey are ;

1. To ascertain the quantum of maternal mortality in the selected referral level/tertiary care hospitals of Islamabad and Rawalpindi.
2. To assess the contributing factors of maternal mortality in the selected referral level/tertiary care hospitals.
3. To assess the availability of emergency or essential obstetric care at the referral facilities for the management of complications
4. To give recommendations for an effective referral system to assure rapid transfer of women with complications between each level of care.

Definitions :

- Maternal death⁶ is defined as "Loss of a woman while she is pregnant or within 42 days of termination of her pregnancy irrespective of the duration and site of pregnancy from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes".
- Direct deaths⁶ are those resulting from obstetric complications of the pregnancy state (pregnancy, labour and puerperium, or from a chain of events resulting from any of the above.
- Indirect deaths⁶ are those resulting from previously existing disease or disease that developed during pregnancy and which was not due to obstetric causes, but which was aggravated by the physiologic effects of pregnancy.
- A Nearmiss case will be defined by the consultant incharge of the gynae and obstetric department of each of the study hospitals as a severe life threatening maternal morbidity case. The inclusion criteria for identification of nearmiss cases will include the following ;

- 1) Imminent Eclampsia
- 2) Puerperal Sepsis
- 3) Induced Septic Abortion
- 4) Ectopic Pregnancy
- 5) Obstructed Labour
- 6) Ruptured Uterus
- 7) Acute Ante-partum Haemorrhage with shock
- 8) Post-partum Haemorrhage
- 9) Acute medical & surgical conditions in pregnancies
- 10) All cases admitted in ICU

Design :

- A hospital based prospective study including all pregnant women dying in the study hospitals in one Year.
- Retrospective analysis of prospectively collected hospital based maternal mortality data.
- Verbal autopsy of the cases using information from individuals in the community to build up a picture of events. It will be a community based survey to assess the responsible factors for the maternal deaths.
- The General history of the nearmiss cases from all study hospitals excluding treatment chart and the community survey.

Setting :

The study will be conducted in the following hospitals of Islamabad and Rawalpindi:

1. P.I.M.S. 2. F.G.S.H. 3. R.G.H. 4. H.F.H.
5. D.H.Q. 6. C.D.A. 7. C.G.H.

Method :

1. Identification of cases :

- The consultant of the gynae and obstetric department of a particular hospital will help in identification of the cases. A local co-ordinator at the registrar level will be designated by the consultant of every hospital for this purpose.
- Inclusion Criteria : The cases to be selected for this survey will be all cases admitted through emergency of that hospital and identified after admission as a mortality or nearmiss case by the consultant incharge. The cases will be of two types :
 - a) maternal mortality cases
 - b) near-miss cases
- Exclusion Criteria :
 - 1) Cases with missing or incomplete addresses will not be included in the study.
 - 2) Any mortality case not disclosed by the gynae consultant / coordinator of the study hospital will not be included in the study.

2. Getting complete information for the referral level hospital questionnaire :

This will be done by the research physician with the help of :

- a) Patient hospital record/Ante natal record
- b) Interview of the doctors of gynae and obstetrics department involved in the management of the patients
- c) Doctor of the other department involved in the management of the patient.
- d) Ward sister or midwife

3. Getting complete information for the community questionnaire :

For this purpose, the patient's residence will be visited by the research physicians and the questionnaire filled in after discussion with her relatives or if necessary any involved community health personal will be interviewed. The cause of death, symptoms before arriving at facility, general health during pregnancy, antenatal care and avoidable factors if any would be asked from one of the deceased close relatives.

4. Review of the cases :

The collected cases will be analysed in the internal review committee meetings by Prof. Ghazala Mahmood, Dr. S. Batool Mazhar and Dr. Sofia N. Sheikh at PIMS.

5. Input of the data into the computer :

The data collected will be entered into the computer as each case is completed. It will be analysed under the package of Epi Info 6.

Annex 5
Maternal Mortality Survey Research Protocol
Islamabad Capital Territory (ICT)
(Rural Area)

Introduction :

In the developing countries, maternal health has been a very neglected area. Indicative of this situation has been a very high maternal mortality ranging from 260 - 1060 in these countries. More than half a million maternal deaths occur globally, of which 99 % occur in the developing countries¹. A number of international conferences on population, development and health in the last decade have called for reduction of maternal mortality by half of 1990 by year 2000¹. WHO had urged developing countries to produce reliable estimates of maternal mortality by 1995². However, maternal mortality is difficult to measure and the baseline information available in developing countries is not very reliable. The potential sources of data on maternal mortality are vital registration systems, health facility and health services records and population based studies. Information about several things is needed to ascertain a maternal death, which is why it is difficult to measure the maternal mortality at national level. First, information about deaths of women of reproductive age (15-49 years) is required ; second, cause of death ; and third, whether the woman is pregnant or was pregnant in the previous six weeks (42 days). Few developing countries count births, deaths and even less register cause of death. Listing pregnancy status on cause of death is rare.

Pakistan is one of the developing countries with reported high maternal mortality rates, although the maternal mortality rates and ratios are still not reliably quantified in Pakistan. United Nations figures cite a ratio of 500 per 100,000³. Revised WHO/UNICEF estimates are 340 per 100,000¹. Surveys done by Aga Khan University in different provinces of Pakistan assessed maternal mortality rates to be 280 in Katchi Abadis of Karachi city, 630 in five districts of Balochistan and 430 in Hazara Division, NWFP⁴. No reliable estimates are available for Islamabad Capital Territory (ICT).

Prospective population studies need to be very large and expensive in order to provide reliable results because maternal death is a less common event⁵⁻⁷. Recent efforts to assess maternal mortality have been through retrospective surveys. Three approaches have been used to collect this information.

1) The Reproductive Age Mortality Survey (RAMOS) is the gold standard for measuring maternal mortality in the absence of vital registration. These are complex, time consuming and expensive. Only ten developing countries¹ have been able to do these surveys at national level¹, including Ethiopia⁸ and Egypt⁹. In this respondents in selected household about recent adult female deaths (some pre-defined period) and whether those deaths are asked related to pregnancy or child birth.

2) Second approach is to ask respondents about adult female deaths in other households which were related to pregnancy or child birth. The interviewers then visit those households and interview affected household members¹⁰.

3) The most cost-effective way is the sisterhood method because smaller sample sizes are required. The disadvantage of the method is that it doesn't provide current estimates¹ and it may underestimate the maternal mortality^{1,2}. In this approach adult household members are asked about maternal deaths among their sisters. This approach was developed in 1987 at London School of Hygiene & Tropical Medicines (LSHTM), after a large number of developing country researchers had problems with measuring maternal mortality directly¹¹.

Results using sisterhood method for assessing maternal mortality have now been reported a number of places like Bolivia¹², Djibouti¹³, Tanzania¹⁴, Bangladesh⁵ and Benin. This method provides survivorship information by precisely defining a population i.e., sisters. Sibs usually remain in contact with each other through out life, and one surviving sibling of the family can provide information about other sisters. This minimizes the number of households to be visited to collect information, especially in areas where fertility is high. Primary, this approach asks respondents to report the number of their sisters who reached reproductive age (or were ever married) and how many of these sisters died of maternal causes.

An indirect and a direct estimate can be made by using sisterhood method. The indirect method can be made by asking four simple questions ;

- a) Number of sisters who have reached age 15 (or were ever married).
- b) The number of those sisters who are still alive.
- c) The number who have died.
- d) The number of deceased sisters that died of maternal causes.

In the indirect method data are collected in terms of aggregate experience of all of their sisters i.e., no information on individual sisters is needed or asked. The objective of indirect method is to use the proportion of sisters who died to estimate a life time risk of maternal mortality. If information on fertility is available for an appropriate period then maternal mortality ratio can be estimated. There are three assumptions associated with this estimate¹¹ ; a) The sisters of respondent are representative of women exposed to the risk of maternal death. b) The age distribution of siblings of the respondents is known and the average age of the sisters is the same as respondents. c) The distribution of maternal deaths by age is known.

Direct method estimation is a more detailed procedure and provides more complete reporting of events¹². It is referred to as direct, because there are no assumptions or models used to estimate maternal mortality. This method asks for individual-level data on surviving sisters and deceased sisters. All brothers and sisters of the respondent are listed by age chronologically and then information about each of the following is obtained; a) Survivor ship of each b) Ages of surviving siblings c) The ages and years ago of death of deceased siblings d) For each deceased, if the death was due to maternal causes.

As for the district of Islamabad, no reliable maternal mortality estimates are available, it is proposed to conduct a survey using sisterhood method. The objective of this study is to provide a reasonable assessment of maternal mortality.

Objective of Study :

To provide a reasonable estimate of maternal mortality in the district of Islamabad.

Significance of the study :

It will provide a baseline maternal mortality rate before the implementation of the Maternal & Child Health Project funded by JICA. Together with the tertiary level maternal mortality audit /survey, it will provide us valuable information to launch interventions aimed at reduction of maternal mortality.

Definitions :

1. The lifetime risk is the number of maternal deaths 1,000 women will experience by the end of the reproductive life span. In theory, the lifetime risk is a cohort measure but by necessity is usually calculated with period measure or approximated by multiplying the rate of maternal deaths to women 15-49 (*the maternal mortality rate*) for a single year by the length of reproductive period.
2. The maternal mortality ratio is the ratio of the number of maternal deaths per 100,000 live births for some time period.

Data analysis :

Data will be analyzed initially using SPSS/PC+ and EPI INFO-6 programs for statistical analysis. In the later stages of data analyses, however, the information on maternal deaths from other two districts (Attock and Nowshera) would be combined. The aggregation of data from all regions is possible after matching on characteristics of the region which have an effect on maternal and childhood mortality.

Analysis Plan

The data will be analyzed in the following way:

1. Frequency tables will be generated for all the variables providing prevalence levels.
2. The following rates, ratios and indices will be computed:

- Average household size
- Sex ratio
- Age and sex distribution
- Dependency ratio
- In and out-migration rates
- Housing and environmental characteristics
- Economic status indicators
- Literacy rates, ever-married women 15-49
- Literacy rates, husbands of ever-married women 15-49
- Distribution of households by language spoken
- Current pregnancy rate

- Contraceptive prevalence rates
- Crude Birth Rate
- General Fertility Rate
- Total Fertility Rate
- Maternal Mortality Rate
- Maternal Mortality Ratio
- Stillbirth Rate
- Perinatal Mortality Rate
- Infant Mortality Rate
- 1-4 year old Mortality rate
- Under Five Mortality Rate
- Cause Specific Childhood Mortality Rates

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Maternal mortality rates will be computed by characteristics of the women and households. A few sample tables are given below:

Women Characteristic	Number of Deaths	Maternal mortality rate	Confidence Interval
<u>Education:</u> None Primary (1-5 yrs) Secondary (6-9 yrs) Post- Secondary (≥10 yrs) <u>Occupation of Husband</u> Unskilled worker Skilled worker Professional Others <u>Ante-natal Care</u> (> 1 visit) Yes No Unknown			
<u>Parity:</u> 1 2-3 5+			

Household Characteristic	Number of Deaths	Maternal Mortality Rate	Confidence Interval
<u>Socio Economic Status*</u> Low Middle High			

* as determined by the ownership of household items

Maternal deaths by direct and indirect obstetric causes:

DIRECT OBSTETRIC CAUSES

Causes of death	Number of deaths	Percentage
Abortion Hemorrhage Toxemia of pregnancy Ruptured uterus Puerperal sepsis Pregnancy related but cause Undetermined Others Total		

INDIRECT OBSTETRIC CAUSES

Causes of death	# deaths	Percentage
Infectious hepatitis Tuberculosis Anaemia Cardio-vascular disease Tetanus Others		

HEALTH SYSTEM CHARACTERISTICS

Characteristic	Crude birth Rate of	Crude death rate	Infant mortality rate	Maternal mortality rate
Availability of medical care Yes No				
Accessibility to medical care Yes No				

Appropriate cross-tabulations will be carried out after the frequency distribution have been obtained.

FIELD STAFF.

Field Manager should have a Bachelors in Social Sciences or related field, with significant experience in field surveys or community work. He will be oriented in survey methodology and field management. Reporting to the Study Coordinator, he will be directly responsible for logistic arrangements including transport, problem-solving and decision-making on routine and emergency matters, quality assurance and progress of work, and for maintaining the team-spirit and morale of field workers.

Team Supervisors (TS) would be matured females with bachelors degree in social sciences and experience in conducting surveys. The responsibility of the Team Supervisor will be to ensure quality and accuracy of the data collected by the interviewers, and to conduct short re-interviews on at least 2% of the households surveyed in a day. They will carry out final field-editing of questionnaires, The will report to the Field Manager.

Interviewers would be females Lady Health Workers or Lady Health Visitors with intermediate or above preferably with some experience in interviewing/ survey work. Reporting to their Team Supervisor, their responsibility will be to collect accurate, precise and valid information from their assigned households. Reporting to the Team Supervisor, they will screen for infant/child and adult female deaths in the sampled clusters, and will conduct verbal autopsies on reported deaths.

Field Strategy

The field work in area would require the following major steps:

1. **Ground Work:** Establishing rapport with the local leaders, Health personnel, Social Welfare, Local Bodies and Education departments, and the local administration; Identification of local volunteers for guidance and coordination.
Responsibility: Study Coordinator and Field Manager.
2. **Logistics** viz. transport, maps etc.
Responsibility: MCH Project Japanese Expert and Field Manager.
3. **Training:** The field personnel will be required to attend a six day intensive training in survey methodology and questionnaires. The training will include field visits to non-sample villages for practical experience.
Responsibility: Study Coordinator and Field Manager

4. **Field Survey:** All households in the sampled area would be interviewed through Form I (Household Characteristics), one for each household, and Form II (pregnancy History), one for each ever-married woman of less than 50 years of age.
Responsibility: Household Interviewers/Field Manager

About 2% of the households interviewed in each sample cluster will be re-interviewed on selected variables after the cluster has been completed by a team. The completed questionnaires will be sent un-edited to the Study Coordinator within three days of completion. This procedure of post-enumeration quality check (PEQC) will be carried out by a team different from the one doing the initial survey.
Responsibility: Field Manager

All adult female deaths reported will be further investigated through Form III (Maternal Mortality Assessment), and all other deaths reported during past year, through Form IV.
Responsibility: Study Interviewer

5. **Health Services Assessment:** During the survey, information on available health services will be collected from the district health office, NGOs, local leaders, and other government departments.
Responsibility: Field Manager

6. **Supervision and Monitoring:** Constant supervision and monitoring of all field activities, editing, and data entry operations will be done by the Study Coordinators. The in-built methods of quality control will be done through:

- 1) concurrent cross checks of the data collected by the interviewers (re-interviews), in a sample of questionnaires;
- 2) field-editing of all questionnaires and scrutiny of random samples of questionnaires;
- 3) post-enumeration quality check of a random sample of questionnaires after the survey is completed in cluster;
- 4) check up of the final editing of the questionnaire by the research team;
- 5) double entry of each questionnaire by separate operators, and consistency checks to detect and correct data entry errors;

It is expected that, at the end of the exercise, the information collected would be sufficiently reliable and appropriate to assess the current situation and to plan a comprehensive maternal and child health care programme for the province.

GENERAL GUIDELINES FOR FIELD PERSONNEL

1. All field personnel will receive training in interview techniques and format of the questionnaires.
2. The teams will be assigned to specific clusters (selected at random, prior to survey). All team members will abide by the decisions of the Team Supervisor, and any disputes will be referred only to the Field Manager. Each team will be required to complete an average of 40-50 households per working day.
3. Any local escort provided by the village elders/administration will accompany the field teams where advised by them.
4. Interviewers will work individually once inside the residential structure housing the families. Two interviewers may enter the household together, if they desire so, but they will interview separate families within the structure or household. Performance of each field personnel would be evaluated daily on an individual basis.
5. Team Supervisors will re-interview 6-8 households per working day for quality check. They will supervise all interviewers for quality and quantity of work, and will field-edit the questionnaires. At the end of each day, they will complete the listing and progress forms.
6. The Field Manager and the Study Coordinators will devise weekly schedules. They will also complete weekly progress reports.
7. Working hours will normally be 8 a.m. to 5 p.m., six days a week. The vehicles will leave by 7:45 a.m. and any interviewer failing to make it by that time on two consecutive days will be dropped out of the survey team. The teams will be required to get back to the station before sunset.

Annex 6

Maternal Mortality Survey Detailed Design

Islamabad Capital Territory (ICT)

(Rural area)

To be measured :	M.M.R. I.M.R.
Site :	ICT (rural areas)
Period :	Jan - Dec 1997
Sample size :	7500, respondents or ever married women in the household
Budget :	Annex - 1
Questionnaire & Translation :	Annex
Pretest :	Hospital mothers Community Mothers
Modify Questionnaire :	
Personal :	Coordinator Over all Field Assistant : 1 Supervisors : 10 Interviewer : 20

Selection of Household :

Cluster Sampling

- Every house with ever married women starting from the right side house of the main mosque of the village. Keep going right (one interviewer).
- Starting from the right side house of the small mosque of the village. Keep going right (2nd interviewer).

Selection of the Personal :

DHS and DHO ICT/RWP for LHWs/CHWs and supervisors.

Copy Questionnaire :

Other administrative arrangements :

Acquire Data collection material

Training and practicals in the field arrangement

Survey team, (2 interviewers + supervisors)

Give Survey material, questionnaire and allocate clusters

Date of survey

Material, folders, pens, pencils, stationaries, paper boards

Questionnaire, Guidelines for questionnaire

"Overall Planning Sheet" :

Survey Team No.	Interviewer Name	Supervisor Name	Cluster No.	Vehicle No.	Driver
1	1. 2.				
2	1. 2.				
3	1. 2.				
4	1. 2.				
5	1. 2.				
6	1. 2.				
7	1. 2.				
8	1. 2.				
9	1. 2.				
10	1. 2.				

Daily Chart :

Date : _____

Survey Team	Interviewer Name	Supervisor Name	Cluster No.	Vehicle No.	Driver	Coordinator Visiting
1	1.					
	2.					
2	1.					
	2.					
3	1.					
	2.					
4	1.					
	2.					
5	1.					
	2.					
6	1.					
	2.					
7	1.					
	2.					
8	1.					
	2.					
9	1.					
	2.					
10	1.					
	2.					

Field Work :

- Decide Agent
- Meeting Point
- Departure Time
- Team Time Table
- Coordinator visit time table (*inform only in the morning about visit*)
- On reaching the field, whom to inform & to mosque molvi
- Day's report
- Provide feed back next morning
- and solve problems
- Monitoring by field supervisor
- Monitoring by Coordinator
- Data collector → Interviewer
- Data Entry → Compilation

- 1) Plan Survey
- 2) Prepare to coordinate survey
- 3) Coordinator / supervise survey
- 4) Compile data
- 5) Data Entry
- 6) Analyze data
- 7) Rates and limit of precision
- 8) Interpret results
- 9) Report Writing

Material Needed :

- White & coloured (green, yellow, pink), pages for questionnaire
- Pencils, clip boards, waterproof bags, calculators, staplers, large envelopes per cluster
- Transportation, lodging, per diem, field schedule of when survey team will visit.
- Official clearance of survey area and letter of permission with each survey team.

Training :

- Large room, smaller room
- black board, chalks
- flip charts
- Over head Projector
- Transparencies of the questionnaire and translation

Budget :

- Stationary
- Printing / photocopy
- Clerical work, typing / photocopying
- Training facility
- Coordinator / Trainer 1 - 2
- Surveyors 20
- Supervisors 20
- Per diem
- Lodging
- Vehicles for transportation
- Petrol
(Funding by MCH/JICA)

Translate Questionnaire & other form of Survey :

Each question in the questionnaire will be reviewed and decided how to word it that it will be clearly understood by the local people. The questionnaire will be translated into the national/local language well understood and used by the women in the area to be surveyed.

Instruction to surveyors will also be translated if the surveyors do not feel comfortable/confident with the understanding English instructions. This translation will be checked by some other person other than translators "back translate" it orally into the original language. If the translation is accurate, then "back translation" should be consistent with each other and with the original.

After translation, questions by questions explanation will be proposed to correspond to questionnaire. Stating that the survey is sponsored by MOH or referring to government institution may be reported so it will be avoided : as much as possible by the survey team introduce the survey as concerned with maternal & child health management rather than stating the survey to be from government and government health facility, since caretakers often hesitate to maintain traditional healers health survey ; surveyors should prompt for traditional healers but not for other providers. If pretest shows that prompting is biasing the result this instruction will be deleted.

Community based Practitioners :

Who receive training or supervision through health system.

Private Practitioners :

- 1) Government health workers doing practice in the same facility (included in government H. F.)
- 2) Government health workers doing practice after office in different private clinics.
- 3) Non-Government Hospital/clinics -- (*private physicians*).

Pretest Survey forms and Revise them :

At least on month before the survey, the questionnaire will be pretested in a small sample of household in area similar to that in which the real survey will be done. Translation version of the questionnaire will be used , will help to identify the problem before the survey.

The pretest will take about 4 days including time for explanation and classroom practice (with other methods) before going out to conduct interview. About 2-3 interviewers will be needed for the pretest. There may be individuals who are likely to be chosen as supervisors for the real survey.

For proposal for the pretest, staff and copies of the questionnaire for each pretest interviewer to use the classroom practice and to come with at least 30 women in the community. For classroom practice one copy of each questionnaire should be enough for each interviewer.

In addition to pretest the questionnaire, pretest any other survey forms which will be used in the real survey e.g., test single cluster summary, single cluster tally sheets, by compiling the data from the pretest.

After the pretest interviewers will be asked for their opinions on any needed revision in the wording of the questions or use of answers, codes, data collected and forms will be checked for any inconsistencies.

Any revisions that seem to be necessary as a result of the pretesting will be incorporated into the questionnaire and other survey forms prior to the training period.

As a result of the pretest we will be able to ;

- Further adopt the questionnaire as necessary based on the local experiences.
- Identify common problems and solutions to high light in training.

Estimated time required for the survey, based on the average time required to go to a house and conduct an interview.

Suggested Schedule for Pretest A G E N D A

Day - 1 :

Time

09:00 a.m. - 10:00 a.m.	Introduction of Individuals	Senior Researcher
	Introduction, briefing on the survey	~
10:00 a.m. - 10:30 a.m.	Read the Questionnaire	~
10:30 a.m. - 11:00 a.m.	TEA	
11:00 a.m. - 12:30 p.m.	White Section :	
	Household clustration + ever married women	~
	Question by question explanation	
	Demonstration & role play	
12:30 p.m. - 02:00 p.m.	Red Section	
	Maternal mortality information	~
	Question by question explanation	
	Demonstration & role play	

Day - 2 :

08:30 a.m. - 10:00 a.m.	Yellow Section	
	Infant mortality information	~
	Question by question explanation	
	Demonstration & role play	
10:00 a.m. - 11:00 a.m.	Explanation, Exercise on deciding which section to use	~
11:00 a.m. - 11:30 a.m.	TEA	
11:30 a.m. - 12:00 noon	Explanation of household schedule for pretest (i.e., when to go, how to choose)	~

Day - 3 :

09:00 a.m. - 01:00 p.m.	Interview in the community (One of the village in ICT)
01:00 p.m. - 02:00 p.m.	Renew & Discussion Correct the questionnaire Identify Problem

Day - 4 :

09:00 a.m. - 10:00 a.m.	Discussion of interview and questionnaire questions on any change
10:00 a.m. - 10:30 a.m.	TEA
10:30 a.m. - 12:30 p.m.	Finalize the questionnaire
12:30 p.m. - 02:00 p.m.	Finalize schedule for Survey, Sampling & Training

Selection of Communities, where cluster will be located :

The survey will be carried out in ICT rural area. The survey method used will be a "cluster sampling" technique. A cluster will be a randomly selected population group of size likely to include a specified number of (ever married) women.

The cluster sampling will be a 2 stage process involving ;

- First, selecting community in which clusters will be located i.e., village of ICT area.
- Second, Weather these communities i.e., the village households with ever married women.

For statistical reliability, It is best to survey at 30 cluster from the total area. Increasing the number of cluster to measure the 30 clusters will greatly result in greater precision as the variability between clusters will decrease if more clusters are surveyed.

Since the survey will be carried out in ICT rural area and the population is scattered e.g., in small rural communities . It may actually easier to do 75 clusters than 100 households as the sample size from our study is 7500 ever married women. With 75 clusters with 100 ever married women it will of a size that can be covered by a survey team in one day.

Probability proportionate to size :

Communities when clusters will be located will be selected according to "probability proportionate to size".

Randomly selected village : 75
list by population size :
Smallest village H/H size : Clusters

This means that communities with population of equal size should have an equal chance of being selected to contain a cluster. Communities with large population should have a proportionately greater chance of being a cluster the smaller community.

List of all the communities in the area to be surveyed along with their population size, then without regard to the location of the communities.

- 11) $\frac{\text{Communities total population}}{\text{No of cluster}} = \text{Sampling interval}$
- 12) Random number
- 13) Village with 3334 population

Maternal & Infant Mortality

Household Survey

Cluster No : _____ Name of the Village : _____

Date : _____ Surveyor : _____

ASK AT EVERY HOUSHLD, RECORD ANSWER BELOW

W 1 : Are there any women between 15-49 years of age, living in this household ?
YES : Y , NO : N

W 2 : How many children less than 5 years of age live in this household ?
(Record the number of children less than 5 years of age)

Use a column for every household.

Household Serial No																				
W1 : Household with women of 15-49 years of age																				
W2 : Number of children <5 years of age																				

Household Serial No																				
W1 : Household with women of 15-49 years of age																				
W2 : Number of children <5 years of age																				

Household Serial No																				
W1 : Household with women of 15-49 years of age																				
W2 : Number of children <5 years of age																				

Household Serial No																				
W1 : Household with women of 15-49 years of age																				
W2 : Number of children <5 years of age																				

Household with women 15-49 years to revisit :

- 1)
- 2)
- 3)
- 4)

Household with children < 5 years to revisit :

- 1)
- 2)
- 3)
- 4)

For determining the maternal mortality in the study areas, sisterhood method will be used. For childhood deaths and pregnancy history of ever married women of reproductive age (15-49 years) will be used.

Data will be generated through household interviews conducted by trained female interviewer. The questionnaire consists of 5 components.

Form - 1 : Is designed to collect information on age, sex, composition of the household, births, deaths and migration during past five years and environmental/Socio-economic characteristics of the household.

Form - 2 : Inquiry into pregnancy histories of last from year of all married women below 55 years of age.

Form -3 & 4 : Relates to verbal autopsy of women who have died in the reproductive age group and child under five years of age respectively. Forms pertaining to verbal autopsy will be used to ascertain deaths and indirect cases of deaths.

Form - 5 : Will be used for collecting information about quality of available health services in the area for each village. A village statistics form will be comprising of information on physical health facility infrastructure available to village and distance to the nearest health facility.

Sampling Strategy :

The survey will provide representative survey for the ICT, therefore it will provide the information required to develop specific interventions (for purposes of planning, implementing, monitoring and evaluation of health care infrastructure in the area). It is expected that the result of the survey would provide good working estimates for the agencies involved in the health related activities.

It is informed that different studies varies distinctly. However, different planning agencies are using the prevalence of maternal mortality death rate of 500 women per 100,000 live births. Using this ratio, the sample size requirements for developing reliable estimates for Islamabad rural population almost comes to cover the entire rural female population of 15-19 years age. However, keeping in view the availability of logistics and resource availability and the standard established for large size population, it is proposed that 48 sample villages be covered. For sisterhood approach, all eligible women of child bearing age 15-49 years will be covered. Cluster sampling technique will be adopted in this survey. Each sample cluster will be comprised about 100 adjacent households. One cluster will be selected randomly for coverage.

Survey planned for ICT :

Study Site : The maternal & childhood mortality survey is a cross-sectional and retrospective study, data will be data will be generated through interviews. It is designed to determine the maternal and infant mortality ratio/ratios for several clusters scattered over Islamabad Capital Territory rural area, the daily work will be carried out during April 1997, through household interviews conducted by trained interviewers.

The survey will also attempt to ascertain causes of maternal & childhood deaths and related health care problems and barriers to medical care. The study will determine the maternal morbidity ratio (*per 1000 live births*), maternal mortality ratio (*per 1000 women 15-49 years of age*), infant mortality ratio (*per 1000 live births*). It will also generate crude birth ratio (CBR), total fertility ratio and migration ratio for sample village.

Work Plan :

field personal : the study coordinator and co-coordinator will be responsible for overall conduct of the field work. They will be assisted by district field manager/supervisor appointed for duration of survey for three months. He will assist in actually carrying out the survey in the field.

The following personnel will be required to interview 7500 household spread over several clusters in the ICT area.

1) District Field Manager / Supervisor (male)	1
2) Team Supervisor (male & female)	10
3) Household interviewers	20
4) Drivers / Guide	10

The above personnel would work in 10 teams, each having their own transport, supervised by supervisor. Each team will thus comprise of a team supervisor, an interviewer and a driver.

All team members will be required to attend a six days training in survey methodology & questionnaire. The training will be organized at The Children's Hospital, PIMS, Islamabad. The training will include two full days work in the field.

Annex 7

Brief Report on Preliminary Survey of Nutritional education Program for Lady Health Workers

Actual procedure

Day 1, 14 September 1996 Venue: RHC Bhara kahu

(A) Explanation of procedures to LHWs and first focus group discussion

Procedure of the program was explained briefly by Dr. Gul N. Rehman (Schedule of program :developed materials for facilitator/conductor). After that a focus group discussion was conducted by Dr. Gul N. Rehman based on focus group discussion guide to know LHWs' KABP about anemia and foods. A total of 14 LHWs from different areas of ICT attended. And five resource persons attended as observers.

(B) Pre-Course Evaluation by Participants.

Pre-course questionnaire was distributed amongst the participants to know their expectation of this program and the prevailing food behaviors amongst the rural women after the background information was provided.

(C) Explanation about making map and listing available foods in the village.

The LHWs already knew about drawing map of their catchment area as part of their routine job. We only explained to indicate the shops i.e. food shops in their respective areas to acquire available foods in the village, and also explained about making list of available foods, usually people can get from their village and the other areas i.e. Islamabad or Bharakahu.

Day 2, 15 September 1996 Venue: RHC Bhara kahu

(D) Making map individually

The LHWs made the marked and field map of their village and developed list of available foods.

Day 3, 16 September 1996 Venue: RHC Bhara kahu

(E) Discussing about map by LHWs

The LHWs explained and showed their maps, location of the shops etc. were discussed and highlighted with each LHW. The prepared list of available foods in their respective villages, indicating the food groups i.e. energy, iron, vitamins and minerals were shown and submitted by LHWs.

(F) Explanation about "key-foods"

Ms. Athar SAYED (Assistant) explained about "key-foods" briefly depend on materials of program for facilitator/conductor we developed.

(G) Exercise "let's select key-foods to prevent/reduce anemia in the village"

For this exercise, we had prepared to flannel graph(flannel cloth and food sticker). Each LHW was asked to come up and display the iron rich foods and food groups i.e. foods as source of energy, foods as source of protein, foods containing vitamins and minerals. This was done to know about their knowledge about food and nutrition to prevent/improve anemia and to select "key-foods" for teaching pregnant and lactating women.

(H) Explanation about how to fill in "self-check sheet"

After distribution "self-check sheet" to all participants, Dr. Gul explained the process of filling "self-check diet sheet". One of the LHWs was requested to come up and her "self-check diet sheet" was filled to demonstrate to LHWs on filling of the sheet. This "self-check diet sheet" consisted of 5 parts, i.e. 1) name of dish who ate during 24hours, 2)each food.....

(I) Interview to each other using self-check sheet

After explanation from Dr. Gul and practical demonstration, the LHWs were asked to fill their own "self-check diet sheet" by interviewing each other. For this exercise, they used prepared "self-check sheet" and chart of food groups. To assess their understanding of "self-check diet sheet" and to know the limitation and shortcomings own dietary behavior, they were asked to exchange the "self-check diet sheets" and identify dietary shortcomings regarding combination of food groups. They interviewed each other and exchange their views for their dietary behavior.

Day 4, 17 September 1996 Venue: Village Mera Begwal

(J) Village work(1): Explanation about research methods

In the village, a part of the questionnaire regarding KABP, process of home visiting, interview and anthropometry were explained by Dr. Gul, to the participants of the course. Each participant was asked to first demonstrate the anthropometric skills and then measure weight, height and mid-upper arm circumference of mothers.

(K) Interview to Pregnant Women in the village

In implementation stage of nutrition education, LHWs were asked to visit homes, interview pregnant women in the village using self-check sheet and a questionnaire about nutritional anemia. Anthropometry of mothers was conducted and socio-demographic condition of homes was assessed. Only 9 out of 14 LHWs participated in the field activity. They interviewed the four available pregnant mothers in the village.

Day 5, 18 September 1996 Venue: RHC Bhara kahu

(L) Second Focus group discussion

In order to know LHWs comprehension of the use of "self-check diet sheet" the participants were asked to identify problems in each others filling in "self-check diet sheet" on dietary behavior especially the identification of "key-foods" to prevent/improve nutritional anemia. In this focus group discussion the main topic was KABP among LHWs and pregnant women in the village to find out their understanding of nutritional anemia at the end of this course.

(M) Post-Course Evaluation by Participants

A questionnaire was prepared to evaluate as to how much LHWs have retained from the course and how they interpret the new ideas.

(N) After program: Visited RHC Bharakahu and Mera Begowal

After this, we analyzed and evaluate the effect and problems faced during this process.

Assessment of the program

We assessed feasibility of this program through evaluating pilot study as well as a preliminary survey. We came to know about LHWs' KABP about nutritional anemia through focus group discussion (FGD), response for pre-evaluation and exercise in this program. Feasibility of this objective was ascertained from LHW's response from exercise and "post-course questionnaire". At post-course questionnaire, we asked them "What is effectiveness of the self-check diet sheet for pregnant/lactating mothers".

To assess feasibility of program, we got information from

- FGD on last day of program
- Post course questionnaire
- Observation from LHWs' response to exercise
- Interview to resource person and after course discussion with LHWs.

Results

1) Feasibility of a nutrition education program for LHWs.

(a) Successful aspects and effects

<u>Status of participation :</u>	satisfactory
1 st day	14 of 20 LHWs from area of surrounding RHC Bharakahu of ICT came to attend the course.
2 nd day	unknown (Making map individually at their own place)
3 rd day	16 LHWs
4 th day	9 LHWs
5 th day	15 LHWs

Understanding of the persons concerned:

The ADHO attended and supported the whole process of this survey (Include activity of after program)

Validity of theme and components of program:

(1) Needs and interest for "self-check sheet" by participants: Exist

Respondent for post-course questionnaire from all of participants(LHWs) are generally favorable. We asked them "What is effectiveness of the self-check diet sheet for pregnant/lactating women?" One of them answered "with this sheet we can know what a women eats during a day and after her diet consists of three food groups or not." Another participants answered "with help of self-check sheet, we can easily know whether three groups of foods are included in a given meal and we can also tell mothers about their nutrition requirements. This sheet is very helpful to

know the food groups" "With self-check sheet we can easily explain to mothers about the food groups and which food belong to which groups". LHWs were also able to identify eating behavior regarding food groups through interviewing each other using this Self-Check Sheet. Their meals consisting of three dietary groups per day were very few. Although their food intake of yellow group looked enough, some of them might be taking too much. The tendency of red group food intake is very low and green group intake was variable.

(2) Making map to recognize available foods in their village :

The LHWs were already aware of how to draw the map, as it was part of their routine job. All of them agreed that drawing such a map helped them recognize available foods in their village. When this was asked in post-course questionnaire one of them wrote "with making of map where the shops were located and what things people could get easily from village and what thing they needed to get from outside the market. We also came to know about the foods grown in the field(farms) and the things grown in the home gardens.

(3) Selecting program component :

Our selection of component of the program was rational. We faced difficult decision regarding to number of component and the time taken by the LHWs to understand complete the schedule in limited time of five days. In our initial plan, LHWs had to complete four steps given below to make effective "self-check sheet" of key-foods to prevent/improve anemia for better delivery in our village.:

1. To make sure food availability within the household through demonstration of 24 hours recall food intake research method and it's outcome.
2. To make available food list in the village through
 - 1) making map to know the location and to recognize available food in their catchment area.
 - 2) making crop calendar to know seasonal variation of available food in their catchment area.
3. To select "Key-Foods" through discussion based on result of 1.2. and put "Key-Foods" into three food groups differentiated by color.
4. Exercise conducted about "key-foods" to enhance LHWs' knowledge regarding iron rich foods and food groups.

"Key-foods" must have a substantial content of Iron, Protein, Vitamin C, Folic acid to prevent/improve anemia. The knowledge of LHWs was enhanced about the utility and importance of these key-foods, in order to enable them to promote them in pregnant/lactating mothers. So, we make sure LHWs' knowledge about foods and anemia, it can be promoted to prevent/improve anemia among LHWs themselves and pregnant/lactating women in the village. But duration of this program was limited. We were able to conducted 2-2) and 4 in above mentioned planning process in this 5 days program. That is why we couldn't implement other steps. The whole process was to be completed in five days. If more time was available, more could be done to increase the LHWs knowledge.

Problems :

Setting and methods :

a) First focus group discussion:

Facilitator pointed problem about setting. In order to get better information, the atmosphere should be more relaxed. For example, instead of chairs the facilitators and participants should sit together on floor and eat or drink something. Presence of male members of the RHC might have biased some responses. Conducting the focus groups in the community instead of RHC would have been ideal. Anthropometry how to fill in questionnaire takes time so more time could have resulted imported data.

b) According to LHWs' knowledge about food groups :

Self-check sheet : LHWs had problems comprehending the food groups by color. Some couldn't understand how to fill in self-check sheet and how to assess their eating behavior through it. They couldn't group the foods well. A table of food group with different foods helped, but foods not in the table were difficult to group by color. The interview developing self check sheet took nearly an hour and mothers felt uncomfortable and lost attention. Reasons are:

1. LHWs were not very familiar with the questionnaire.
2. Questionnaire was not in booklet form, it was in the form of different sheets and the LHWs had to shuffle the sheets.

c) LHWs' KABP on nutritional anemia :

We got interesting information on LHWs' knowledge, attitude and dietary behavior on nutritional anemia.

First focus group discussion:

We were able to get many information about LHWs' knowledge about nutritional anemia and Food taboos in ICT area.