

# A.I.D. EVALUATION SUMMARY PART I

(BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS)

ISN 77386

A. REPORTING A.I.D. UNIT: USAID/Bangladesh  
 (Mission or AID/W Office)

B. WAS EVALUATION SCHEDULED IN CURRENT FY ANNUAL EVALUATION PLAN?  yes  slipped  ad hoc

C. EVALUATION TIMING: Interim  final  ex post  other

(ES# ) Eval. Plan Submission Date: FY 91 Q 4 PD-ABE-213  
XD

D. ACTIVITY OR ACTIVITIES EVALUATED (List the following information for project(s) or program(s) evaluated; if not applicable, list title and date of the evaluation report)

Project #	Project/Program Title (or title & date of evaluation report)	First PRGAG or equivalent (FY)	Most recent PACD (mo/yr)	Planned LOP Cost ('000)	Amount Obligated to Date ('000)
388-0073	Urban Volunteer Program Final Evaluation, August 1991	FY 1987	3/92	4,500	4,000

IDENTIFICATION DATA

E. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

Action(s) Required

Name of officer responsible for Action

Date Action to be Completed

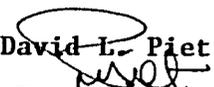
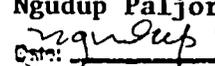
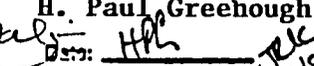
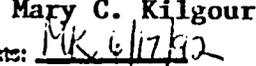
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(Attach extra sheet if necessary)

ACTIONS

F. DATE OF MISSION OR AID/W OFFICE REVIEW OF EVALUATION: mo \_\_\_ day \_\_\_ yr \_\_\_ N/A on-going

G. APPROVALS OF EVALUATION SUMMARY AND ACTION DECISIONS:

Signature Typed Name	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Mission or AID/W Office Director
 David L. Piet		 Ngudup Paljor	 H. Paul Greehough	 Mary C. Kilgour
Date: _____		Date: _____	Date: <u>5/18/92</u>	Date: <u>6/17/92</u>

APPROVALS

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## H. EVALUATION ABSTRACT (do not exceed the space provided)

The evaluation team found that the UVP has achieved the objectives of both the service and research aspects as specified by the CA and its subsequent amendments. The service component has developed a strong infrastructure, high quality training curricula and training/education materials. The 450 volunteers appear generally effective in providing education and referral in four PHC interventions (diarrheal disease treatment, nutrition, immunization, family planning). The evaluation team especially noted the energy and dedication of the volunteer corps as demonstrated by the longevity of service. The research aspect of the UVP has also established an impressive infrastructure. The Urban Surveillance System has collected and evaluated considerable demographic data. The recently completed 4-Cell Study shows that the volunteers do make a difference, particularly in those interventions which rely on referrals (i.e., immunization and family planning).

The evaluation team recommends that funding for the UVP be continued. In the research aspect, greater emphasis should be placed on operations research. It is important in the next phase to determine the optimal mix of services that a volunteer can and should deliver. While demographic and epidemiological surveillance should continue, the impact of the UVP would be determined by means of cross sectional surveys using randomly selected matched pairs. In the service element, new interventions (e.g., first aid antenatal care, ARI) should be introduced for those volunteers that are able and willing to increase the services they provide. In addition, the UVP should develop a better monitoring system, based on a limited number of key, intermediate indicators that the volunteers and field supervisors could utilize. The team also suggested that women's empowerment activities (e.g., literacy, income generation, savings groups, legal rights) be included for the volunteers who can and do serve as female leaders and role models in the community. Finally, more should be done to document and disseminate the lessons learned in the UVP. This is especially important as the UVP develops a broader funding base to sustain the effort in the future.

## I. EVALUATION COSTS

1. Evaluation Team		Contract Number <u>OR</u> TDY Person Days	Contract Cost <u>OR</u> TDY Cost (US\$)	Source of Funds
Name	Affiliation			
David Pyle	JSI	35 days		
Melinda Wilson	consultant	18 days		PD&S
Nilufar Ahmad	consultant	18 days	\$35,786 (IQC)	

2. Mission/Office Professional  
Staff Person-Days (estimate) 10 person days

3. Borrower/Grantees Professional  
Staff Person-Days (estimate) 10 person days

# A.I.D. EVALUATION SUMMARY PART II

## J. SUMMARY OF EVALUATION FINDINGS, CONCLUSIONS AND RECOMMENDATIONS (Try not to exceed the 3 pages provided)

Address the following items:

- Purpose of activity(ies) evaluated
- Purpose of evaluation and Methodology used
- Findings and conclusions (relate to questions)
- Principal recommendations
- Lessons learned

Mission or Office: Pop & Health/Dhaka Date this summary prepared: 10 October 1991  
Title and Date of Full Evaluation Report: Final Evaluation - Urban Volunteer Program (August 1991)

ICDDR,B's Urban Volunteer Program (UVP) has completed a decade of service and research in the slums of Dhaka. USAID/Dhaka has been involved for half this period, initiating its support in 1986. The objectives of the UVP have focused on developing a demonstration urban PHC project utilizing volunteer women and conducting service-related research to determine its effectiveness.

The original Cooperative Agreement envisaged an extremely large service delivery effort reaching 95% of the under five slum population of Dhaka and associated research. In addition, the UVP was to expand operations to Chittagong and Khulna before project completion in 1991. Both the ICDDR,B and USAID soon agreed that such an enormous service delivery project was not in either of their interests. Consequently, the scope of the project was altered in the late 1980s. The effort was scaled down to a half million population and eliminated expansion to the other two major cities. In 1990, a second amendment to the CA further consolidated the service component of the UVP (so that it covered a population of approximately 75,000) to facilitate research which had previously received less attention. A sophisticated surveillance system was established and put in place to collect demographic, epidemiological and service-related data.

This evaluation is being carried out as the five-year UVP Cooperative Agreement comes to an end. The Scope of Work requests the evaluation team to do two things. One is to look back and assess the UVP's success in achieving its objectives of developing a demonstration model for the urban slums utilizing women volunteers and of developing a surveillance system to determine project impact and provide demographic and epidemiological data. The second is to look ahead, to determine whether a follow-on project is warranted, and, if so, recommend how the effort might be most effective.

A three-person team conducted the UVP evaluation. The team leader was experienced in the delivery of PHC services at the community level. He was supported by an operations research specialist and a women's development expert. The team spent three weeks in Bangladesh (28 July - 17 August 1991). The methodology employed included a review of project reports, documents and materials. In addition, the team interviewed project staff from Project Director to the Heads of the Research and Service Branches to the field supervisors. The team visited all three Project Field Offices and a number of slums where they met field workers and talked with volunteers and community members to ascertain project effectiveness. The team also met with representatives from the government (MOHFW-PHC and DMC), donor community (UNICEF, World Bank, Ford Foundation) and a number of the NGOs providing services in the Dhaka slums.

Findings: The overall assessment of the evaluation team is that the UVP has achieved the objectives in both the service and research aspects as spelled out in the CA and its subsequent amendments. In the Service Component, the Service Branch has developed over the course of the five-year project a strong infrastructure, developing numerous high quality training curricula, training materials, and educational materials. They also provide impressive supportive supervision, quality control in health education, and effective monitoring. The result is a corps of 450 women volunteers operating in parts of five thanas that appear to be very effective in providing quality education and referral in four PHC interventions (diarrheal disease treatment, nutrition, immunization and family planning).

The team was most impressed by the energy, hard work and dedication of the women volunteers. After observing and discussing project activities with almost thirty volunteers, the evaluators determined that the UVP had succeeded in developing an effective demonstration model for the delivery of simple PHC interventions by female volunteers in the slums of Dhaka. The data on the length of service of the volunteers was particularly noteworthy - average years of service was 5.7 and the percentage with four or more years of service was over 83%. Dropout rates were negligible; there were even waiting lists to become volunteers. This contrasts with the experience with rural volunteers in Bangladesh and elsewhere and suggests that volunteerism in the urban context can provide a valuable reservoir of talent that can be applied to providing a basic level of health care in slum areas. There is now a wealth of information and lessons learned that can be disseminated to assist other groups and agencies operating or planning to initiate health service delivery in the urban slums of Dhaka. This can be of enormous help in the formulation of an urban health strategy in the country.

In terms of the Research Component, the evaluation team found the infrastructure very impressive. Most of the credit for this goes to the team that has been in place for approximately one year. The UVP has met all the expected outputs specified in Amendment II of the CA. The Urban Surveillance System (USS) is in place to collect demographic data, evaluate the volunteer model, and monitor anthropometric status of the under five population. With its 4-Cell Study, the USS has provided an excellent and valuable baseline on the health and living conditions within the slum and squatter settlements of Dhaka. The 4-Cell study pointed out that the volunteers do make a difference, and the residents of the slums where the UVP was implemented demonstrated somewhat higher knowledge and practice in many of the target interventions. This was particularly true in the case of family planning and immunization, two interventions that relied on referrals. It is hypothesized that the women volunteers were responsible for this performance since they functioned as "gate-keepers", helping the slum women to overcome their reticence and barriers to utilize the facilities. This is an exciting area for further research. Most of the other small independent studies conducted in the UVP area over the 5-year project were considered to be of limited value and relevance to the objectives of the UVP. Finally, the Ford Foundation-supported Women's Empowerment Pilot Project (WEPP) would have been more valuable if it had included more project volunteers instead of being carried out separately from the normal UVP activities.

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Principal Recommendations: The evaluation team recommends that a follow-on project be funded to continue and expand the important work initiated in the UVP. A series of recommendations are provided to guide in the design and strengthening of the follow-on project. Research activities are given primary attention. It is strongly recommended that operations research efforts should receive the greatest attention in the research component in the years to come. To ensure that the research is appropriate and of the highest quality, it is recommended that the project conduct a descriptive problem analysis, establish a research agenda steering committee as well as a research review committee. Of utmost importance are field studies to determine the optimal mix of services which can be effectively delivered by an urban volunteer and to identify factors which contribute to the sustainability of an active volunteer. In addition, the demographic and epidemiological surveillance activities would be continued, perhaps on a somewhat reduced or modified scale. To determine health intervention impacts, the evaluation team suggested that cross sectional surveys using randomly selected matched pairs be used.

In the service component, the evaluation team strongly supports the maintenance of a demonstration service site and continuation of the Service Branch as it is required to operate the field interventions that the Research Branch will study with its operations research. The Service Branch will have increased importance as new interventions (e.g., first aid, ANC, ARI) are added and tested. It is also suggested that a monitoring system be designed, introduced and tested that would track intermediate indicators (coverage of the major interventions). The women's empowerment activities should also be integrated into the volunteer program since the volunteers have demonstrated that they serve as leaders and change agents in their respective communities.

In the area of dissemination/TA, priority should be given to documenting the lessons learned and approaches used in the UVP to date and in the future to ensure that all interested parties (government, NGOs and donors) benefit from the UVP's experience. The project and the Centre should place special emphasis in the future on efforts to collaborate as an equal partner in the development and design of an urban health strategy and structure for Dhaka and the other urban centers of Bangladesh.

K. ATTACHMENTS (List attachments submitted with this Evaluation Summary; always attach copy of full evaluation report, even if one was submitted earlier)

ATTACHMENTS

Copy of Full Evaluation Report

L. COMMENTS BY MISSION, AID/W OFFICE AND BORROWER/GRANTEE

MISSION COMMENTS ON FULL REPORT

The Mission feels the report provided useful recommendations that address key project issues. Action has begun on most of the evaluation recommendations. Others will be dealt with and expanded upon as UVP is incorporated into the Family Planning and Health Services Project (388-0071) supplement in 1994.

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# A.I.D. EVALUATION SUMMARY

E. ACTION DECISIONS APPROVED BY MISSION OR AID/V OFFICE DIRECTOR	Name of Officer responsible for Action	Date Action to be Completed
Action(s) Required		
1. Establish a research agenda focusing on issues of greatest public health significance for the urban poor population.	Project Director/ Scientific Team	Ongoing/Complete research agenda by June 1992
2. Operations Research should be the primary focus of the project's research activities.	Project Director/ Scientific Team	Ongoing/capacity building in the process to be completed by August 1992
3. The project should document its past activities/lessons learned including analyses of existing data.	Project Director/ Scientific Team	Ongoing/Complete by August 1992
4. Demographic and epidemiologic surveillance system should be maintained, and its information analyzed and disseminated.	Project Director/ Scientific Team	Ongoing/First report out by June 1992
5. The Project should maintain demonstration site to refine the current volunteer model and/or develop an integrated and sustainable primary health care service delivery system for the urban poor.	Project Director/ Scientific Team/ USAID	June 1992
6. Women's empowerment activities/reproductive health/social intervention aspects should be developed and integrated into the development of the health service delivery system.	Project Director/ Scientific Team/ USAID	June 1992
7. TA/Dissemination Capacity Building.	Project Director	June 1992
8. Collaborative efforts with other partners in urban health should be developed and strengthened including relevant BDG entities.	Project Director	Ongoing

XD-ABE-213-A

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**FINAL EVALUATION**

**URBAN VOLUNTEER PROGRAM (388-0073)**

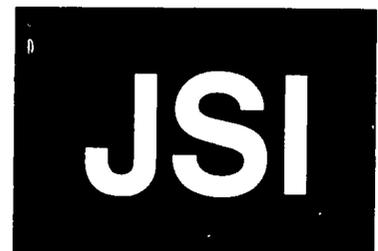
**International Center for Diarrheal Disease Research,  
Bangladesh**

by

**David F. Pyle, Ph.D., Team Leader  
Melinda Wilson, Ph.D., Operations Research Specialist  
Nilufar Ahmad, Women's Development Specialist**

**August 1991**

**This report was prepared for USAID/Dhaka under IQC Number  
PDC-5929-I-00-01-9-00.**



**JOHN SNOW, INC.**

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## ACKNOWLEDGEMENT

The success or failure of any evaluation depends on several factors, none more important than the cooperation and honest input of the project staff. We would like to sincerely thank the UVP managers for their total support during this evaluation. The role model was provided by the Project Director who was always available to respond to the team's questions. We enjoyed and appreciated the evening at his house, a particularly nice break from the intensity of report writing. The time and frankness of Dr. Abdullah Baqui, Head of the Research Branch, were invaluable to the team gaining a full appreciation of what had been accomplished by the research component of the UVP and what might be done in the future. Dr. Anjuman Ara, the Head of the Service Branch, was most helpful in explaining the intervention strategy and project's field infrastructure.

Special mention must be made of the staff of the UVP, under the direction of Jatindranath Sarkar, and the ICDDR,B. The former's inputting of materials and responding to the team's multiple requests for printouts of draft versions of the report went way beyond normal courtesy. The willingness of the Centre's drivers to cart the team around the slums was much appreciated. We couldn't have completed the job in the time allotted without them.

The team will take away from this assignment memories of a highly committed corps of volunteers who impressed us with their hard work, dedication and capacity to serve their communities. The team has learned a tremendous amount about the problems of working in depressing urban slums and about the potential of women to provide some answers. The volunteers gave us hope, not only for Dhaka, but also for other cities of Bangladesh and maybe even the world.

Finally, the team greatly appreciates the direction and support provided by Sheryl Keller, the Project Officer at USAID/ Dhaka and her staff. Siril's efficient appointment making ability and general support "made it happen". Sheryl's interest in the project and her belief that the UVP has something important to contribute have played a major role in the success of the effort. As she departs Dhaka for her assignment in support of the long suffering people in Cambodia, she leaves behind a proud legacy in the form of a strong UVP.

## GLOSSARY

ANC	Ante-Natal Care
ARI	Acute Respiratory Infection
BADC	Belgian Agency for Development Cooperation
BVWA	Bangladesh Volunteer Women's Association
CA	Cooperative Agreement
CBD	Community Based Distribution
CHC	Community Health Coordinator
CLF	Catastrophic Loan Fund
CO	Community Organizer
CWFP	Concerned Women for Family Planning
DMC	Dhaka Municipal Corporation
EPI	Expanded Program of Immunization
FP	Family Planning
FRO	Field Research Officer
FS	Field Supervisor
ICDDR,B	International Centre for Diarrheal Disease Research, Bangladesh
IEC	Information, Education and Communication
IGA	Income Generating Activities
IMR	Infant Mortality Rate
JHU	Johns Hopkins University
JSI	John Snow, Inc.
KAP	Knowledge, Attitude and Practice
MCH	Maternal and Child Health
MLGRD	Ministry of Local Government and Rural Development
MOHFW	Ministry of Health and Family Welfare
MUAC	Mid Upper-Arm Circumference
NGO	Non Governmental Organization
NRC	Nutrition Rehabilitation Center
ODA	Overseas Development Agency
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PHC	Primary Health Care
PRICOR	Primary Health Care Operations Research
RCSS	Research Cluster Surveillance System
SES	Socio-Economic Status
UHEP	Urban Health Extension Project
USAID	United states Agency for International Development
UVP	Urban Volunteer Program
WEPP	Women's Empowerment Pilot Project

## EXECUTIVE SUMMARY

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Principal Recommendations: The evaluation team recommends that a follow-on project be funded to continue and expand the important work initiated in the UVP. A series of recommendations are provided to guide in the design and strengthening of the follow-on project. Research activities are given primary attention. It is strongly recommended that operations research efforts should receive the greatest attention in the research component in the years to come. To ensure that the research is appropriate and of the highest quality, it is recommended that the project conduct a descriptive problem analysis, establish

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In the area of dissemination/TA, priority should be given to documenting the lessons learned and approaches used in the UVP to date and in the future to ensure that all interested parties (government, NGOs and donors) benefit from the UVP's experience. The project and the Centre should place special emphasis in the future on efforts to collaborate as an equal partner in the development and design of an urban health strategy and structure for Dhaka and the other urban centers of Bangladesh.

## I. INTRODUCTION

At the request of USAID/Dhaka, JSI carried out the final evaluation of the Urban Volunteer Program (UVP), 388-0073. The UVP Project dates back to the early 1980s; USAID/Dhaka funding through a Cooperative Agreement (CA) was introduced in 1986. The project has two primary objectives: The first is to provide selected basic Child Survival interventions to slum residents of Dhaka; and the second is to conduct service-related research to identify health needs in the Dhaka slums and to determine the effectiveness of the volunteer model.

### A. Scope of Work

The Scope of Work (Attachment I), developed by USAID/Dhaka, requested the evaluation team to review the entire project and determine whether the UVP has achieved the objectives spelled out in the original CA and subsequent amendments. USAID also requested the team to look ahead and comment on the future, specifically the appropriateness of the follow-on project proposal.

Originally, the evaluation was scheduled for March 1991. Because of the Gulf War and the subsequent evacuation of USAID personnel from Dhaka, the evaluation was delayed until July 1991. The team conducted its evaluation between 28 July and 17 August 1991. The four-month delay meant that the follow-on urban health project (referred to as the Urban Health Extension Project - UHEP) was designed prior to the evaluation of the UVP itself. Therefore, instead of the UVP evaluation being utilized to determine the shape of the UHEP, the evaluation team was asked to determine if a follow-on project was justified and, if so, approve, modify or suggest changes in the UHEP proposal.

USAID/Dhaka requested that a three-person team be assembled to conduct the evaluation. The team was to consist of a team leader experienced in community-based primary health care (PHC) service delivery, a social scientist with a background in Primary Health Care (PHC) Operations Research, and a Bangladeshi specialist in women's issues.

The team leader was Dr. David F. Pyle, Senior Associate of John Snow, Inc. (JSI), who has over 20 years experience in community-based programming research, design and evaluation. The Operation Research expert was Dr. Melinda Wilson, Senior Associate of JSI for the Africa Region based in Nairobi, who has been working in service delivery and related operations research for the past 20 years. Nilufar Ahmad has studied and taught in the U.S. and has experience in women's development and family planning program design and evaluation in Bangladesh.

### B. Evaluation Methodology

As specified in the Scope of Work, the evaluation team was to make qualitative and quantitative assessments as to the UVP's effectiveness. To accomplish this, the team reviewed a large volume of UVP documents

(Attachment II). These included the original Cooperative Agreement and its two amendments, annual and semi-annual reports, study protocols, and research reports. In addition, The UVP Director provided the evaluation team with all financial statements covering the five-year effort, data collection forms and the educational materials used by the volunteers.

To establish the background and current status of the project, the evaluation team interviewed UVP personnel at all levels, from the Director to the Heads of the Research and Service Branches to the Field Research Officers and Interviewers to the Community Health Coordinators to the Field Supervisors. Special attention was accorded the volunteers to determine their knowledge, participation and effectiveness. The team members had the opportunity to meet with and discuss project activities with 29 volunteers. Most of these were visited in the homes, while a portion of them participated in a focus group session which was held to learn about the volunteers backgrounds, activities and motivation.

The evaluation team interviewed knowledgeable officials in the Community Health Division (CHD) and elsewhere in the ICDDR,B to learn their impressions about the UVP. The team also met with government officials in the Ministry of Health (PHC Directorate) and the Dhaka Municipal Corporation. Discussions were held with the Project Officer at USAID/Dhaka and donor agencies involved and interested in urban health issues (e.g., UNICEF, The World Bank, ODA, The Ford Foundation, The Asia Foundation). Finally, the team held a meeting with eight of the Non-Governmental Organizations (NGOs) who are working in some of the same catchment areas as UVP and are collaborating in the effort to improve child health and nutrition. The names of the people interviewed is provided in Attachment III.

Lastly, the evaluation team had the opportunity to make site visits to all three UVP Field Offices. Team members discussed project activities with the Community Health Coordinators (CHCs) and their staff. The research component was explained by the Field Research Officers and their team of Field Interviewers. The service aspect of the project was described by the CHCs who pointed out the volunteers catchment areas on maps of the territory covered by their Field Office. The evaluation team then split up and visited the slum areas, including both research and non-research clusters, interviewing volunteers and mothers in their catchment areas about the Child Survival interventions. The Field Supervisors described how the volunteers are supervised and supported. While in the field, the evaluation team had an opportunity to meet mappers and training supervisors who were carrying out their regular duties.

### C. Report Format

The UVP Evaluation Report is divided into four chapters. Following this introductory chapter, Chapter II describes the background of the UVP. This includes sections on the urban situation in Bangladesh, the health status among the vulnerable population in the slums of Dhaka and a summary of UVP activities since it started in 1981 and since USAID/Dhaka became involved in 1986.

Chapter III is devoted to the team's findings, and a discussion of the current status of the Urban Volunteer Project. This Chapter is divided into three sections: 1) Services, 2) Research, and 3) Administration. The Service section begins with a description of the structure of the project and how it functions, followed by an outline of the services and interventions provided by the UVP. Sub-sections on training, monitoring and supervision, information/education/communications (IEC), volunteerism, and dissemination make up the remainder of the Chapter.

The second section of Chapter III focuses on the research component. Here again, the section is introduced by a description of how the research effort in the UVP is organized. This is followed by a detailed discussion of the surveillance effort, beginning with the Research Cluster Surveillance System (RCSS) and continuing through to the current Urban Surveillance System (USS). The Four-Cell Study and its findings are also outlined. The Chapter finishes with a discussion of the other research efforts carried out by the UVP and the Women's Empowerment Pilot Project (WEPP).

Section three of Chapter III discusses the administration of the Urban Volunteers Program. Special attention is given to the project's structure and management. The budget and project finances are detailed, including how the funds are divided between the service and research activities. The important issue of collaboration within the Center and with donors, NGOs, and the government is also raised.

Chapter IV is devoted to Future Considerations and Recommendations. Based on its findings, the team reviewed the proposal for the follow-on UHEP, detailing any endorsements, modifications, or changes deemed necessary.

## II. BACKGROUND

Traditionally, Bangladesh has been thought of as having a rural population, with 85 to 90 percent of the population residing in the countryside and in villages. As a result, almost all the attention of the development community has been directed at rural problems. It is only recently that policy makers in Bangladesh have come to appreciate that the urban population is growing at an extremely rapid pace and demands serious consideration. This Chapter will briefly review the urbanization process in Bangladesh and the health and nutrition situation in the country's principal metropolis, Dhaka. The history of the Urban Volunteer Program's attempt to address the health-related problems in the slums of Dhaka is reviewed, from its inception in 1981 to USAID/Dhaka's involvement in the mid-1980s, including the various revisions in the UVP Collaborative Agreement. This interpretation will set the stage for the UVP evaluation findings to be discussed in Chapter III.

### A. Urbanization in Bangladesh

The unplanned and uncontrolled growth of urban centers in Bangladesh is certainly one of the most important and far reaching demographic trends in the country today. The Centre for Urban Studies at the University of Dhaka estimates that in 1990, the urban population of Bangladesh was 22 million (in over 500 urban centers), or approximately 20 percent of the country's total population of 108 million.<sup>1</sup>

The rapid rural to urban migration has resulted largely from "push" factors (e.g., the shortage of land, lack of employment opportunities, the erosion and disappearance of land, natural catastrophes). The vast majority of newcomers to the metropolitan areas like Dhaka are destitute. And the problem is growing worse. The annual growth rate in urbanization continues an upward trend, from 3.75 percent in the 1950s to 6.62 percent in the 1960's and 70's to almost 11 percent in the most recent decade. At the current rate of increase, the urban population of Bangladesh in the year 2000 is predicted to be between 35-40 million, or double what it is today. By the turn of the century, Dhaka will have gone from today's estimated 7 million inhabitants to 9-10 million. If we look ahead a little further to 2010, one-third of the country will live in urban centers.

While the problems associated with rapid urbanization are felt throughout Bangladesh, Dhaka has emerged as a worst-case scenario. Approximately half of Dhaka's population are reported to live in slums and squatter settlements, and half of these are classified as "hardcore" poor. Housing in these areas typically consist of bamboo, reeds, grasses or rags. Each unit averages about 50 square feet for a family of five or six. The average density in these marginal areas has been calculated at 655 persons per acre. Many of the slums are located in low-lying areas which are devastated by monsoons and floods.

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<sup>1</sup>These are estimates. The data from the 1991 census are still being analyzed.

It is not surprising that the Population Crisis Committee has ranked Dhaka among the five worst metropolises in the world for general living conditions. In terms of public health services, Dhaka has the dubious distinction of standing third from the bottom.

## B. The Health Situation in Dhaka

The residents of the slums and squatter settlements of Dhaka are faced with a totally unsatisfactory environmental situation. Because the municipality rarely provides utility services on land that they consider to be unlawfully occupied, the vast majority of these residents do not have access to pure drinking water or proper sanitation facilities.

Since little attention has been paid to the health and nutrition situation of these urban poor, the information available is sporadic and scanty. It is generally agreed that the indicators among the urban poor are deplorable and are well below the national rates. Two studies from the latter half of the 1980s report infant mortality rates (IMR) in Dhaka of 152 and 180 per 1000 live births. This is 30 to 55 percent higher than the already high national IMR. Child mortality rates (between the ages of one and four) was reported in 1987 to be 114 per 1000, almost 10 times the national average.

Morbidity rates in the urban slums are equally discouraging. It is estimated that a third of the population in the urban poor community is sick at any one time. It is not surprising that the poor environmental conditions and poor personal hygiene lead to a high rate of infection with communicable diseases (e.g., scabies, diarrhea, respiratory tract infections, intestinal parasites, typhoid).

The extreme poverty of the urban slum dwellers and squatters results in high levels of malnutrition. One study showed that 63 percent of the children of lower income groups suffered from nutritional stunting or chronic malnutrition. Eleven percent of the urban poor children were found to be suffering from wasting or acute malnutrition.

Not only do the urban poor, especially the under five population which amounts to approximately half a million, have the most serious health and nutrition situation, but they also have least access to health facilities. The private practitioners are not within the economic range of the poor. The public facilities are few and far between. The Ministry of Health's efforts to establish a Primary Health Care system has been devoted entirely to the rural countryside. Most of the public health care facilities in the cities provide curative care and are dominated by sophisticated hospitals. Even the existing facilities are not available to the poor, who are discouraged by overcrowding, lack of attention, time and cost of transportation, and charges which are frequently demanded.

Not only is there no public health system existing in Dhaka, but there is also no policy or strategy which identifies who is responsible for the provision of services to the 14 thanas and 75 wards. There exists question as to whether the Ministry of Health and Family Welfare (MOHFW) or the Ministry

of Local Government and Rural Development (MLGRD), through the Dhaka Municipal Corporation (DMC), should develop and sustain health facilities within Dhaka. In the meantime, the MOHFW maintains 22 dispensaries with full-time medical officers in charge while the DMC has 20 dispensaries which are open only part-time. These static facilities provide primarily curative services. To make matters worse, a health official admitted that these facilities were not established with the benefit of the poor in mind; they are not easily accessible to the vast majority of the slum dwellers.

The greatest source of health care for the residents of the slums is a very large NGO effort. For many years NGOs involved in family planning were restricted to urban centers. This established the NGOs' presence in the cities and has made them a major factor in the provision of maternal-child health (MCH) and primary health care (PHC) to the slum dwellers. However, the quantity and quality of services provided by the NGOs vary widely. Moreover, it is observed that in some slums several NGOs are active, providing duplicative and overlapping services; in other equally needy areas, not a single NGO is active and the poor population is left without any health care.

### C. History of UVP

The life of the UVP can be divided into three phases. Phase I is the early years (1981-85); Phase II is the first three years of the USAID/Dhaka-supported effort (1986-89); and Phase III (1990-present), with a minor restructuring while maintaining the project's original goals and objectives.

1. Phase I (1981-85) - In 1981, the ICDDR,B began recruiting and training women volunteers in the use of ORS packets. Volunteer selection criteria were not spelled out and respective service catchment areas were not delineated. Everything was done on an ad hoc basis.

By 1983, a formal training curriculum was introduced. Several seminal studies were conducted to identify health practices which effectively reduce the incidence of diarrheal disease and the effectiveness of community-based health education attempting to influence these behaviors. This expanded the role of volunteers into health education and hygiene.

2. Phase II (1986-89) - USAID/Dhaka began its support of the effort which became known as the Urban Volunteer Program in 1986. Volunteer activity remained scattered, varied and unquantified, but anecdotal evidence suggested that there was considerable potential in the use of women volunteers as primary health care providers in the urban slums.

The goals and objectives of the UVP, as originally stated in the Cooperative Agreement, signed in September 1986, were extremely ambitious. The goal was defined as reducing infant/child mortality and morbidity in the approximately one million infants and children living in the slum areas of Dhaka by means of child survival interventions. The Program Description section of the CA mentioned that based on the Dhaka experience, guidelines and objectives were to be established for extension of the project to Chittagong (in late 1987) and Khulna (in 1989).

The objectives of the original CA were heavily weighted in favor of service delivery. To reach 95 percent of the under five target population in the Dhaka slums (estimated to be approximately 1 million) an estimated 2,000 women living in the slums were to be trained and cover 350 families each. The volunteers were to be trained in the following interventions: instructions in the treatment of diarrheal diseases, distribution of oral rehydration solution (ORS), nutrition education, promotion of backyard gardens (through the distribution of vegetable seeds), distribution of vitamin A capsules, promotion of basic childhood immunization and referral, improvement in hygienic practices, distribution of "neem" soap, motivation and refer family planning acceptors, and establishment of 10 nutrition education (i.e., rehabilitation) and three diarrheal treatment centers.

Each objective was accompanied by a target or targets, expressed in terms of numbers of children of mothers to be reached and/or a percentage reduction in prevalence. Some were unreasonable, such as the coverage of 95 percent of the infants and children. This included many peri-urban and rural areas surrounding Dhaka. Others were more realistic (e.g., 40 percent immunization coverage).

The original CA also included an objective to conduct service-related research and data collection activities in selected areas of the Dhaka slums to document prevalence, incidence and factors relating to the development and prevention of diarrhea, scabies, nutritional blindness and malnutrition. The research component was to evaluate the effectiveness of the volunteer model and to collect service-related statistics for evaluation and reporting purposes.

3. Phase III (1989-Present) - Such a large service delivery project was unique at ICDDR,B, which is primarily a research institution. In addition, USAID grew less interested in funding a large health care service project that had little chance of being sustained. Early in 1989, the project was modified in several ways. First, it was scaled-down so that the project objectives were more attainable within the life of the UVP. Secondly, greater emphasis was placed on the research component.

Amendment I maintained the provision for the recruitment, training, supervision and logistical support for 1,500-2,000 volunteers, but the target population of the UVP Project focused attention on approximately half a million people, or 75,000-100,000 families (average of 50 families per volunteer) in the slums of urban and peri-urban Dhaka. The interventions remained virtually the same, concentrating on diarrheal disease, nutrition, immunization and family planning. Expansion to Chittagong and Khulna was deleted.

The reduced size of the target population allowed the UVP to strengthen, standardize and evaluate the model. As part of this effort, Amendment I specified how the project was to test the effectiveness of the volunteer model through mapping of the project area, identification of target population and location of volunteers, quantification of volunteer service delivery, and collection of baseline data on morbidity, mortality and health practices.

Determining model effectiveness continued to be problematic. Developing the service delivery model on such a large scale delayed the collection of baseline data. A consultant was hired to assess the future of UVP. He recommended that the service delivery aspect of the UVP be contracted to provide a critical mass where the research activities could more easily be conducted.

Personnel changes occurred in early 1990, and the UVP was restructured. Under a new Project Director, heads of the Service and Research Branches were appointed. In October 1990, Amendment II to the CA was signed. While UVP's general goals and objectives remaining unaltered, it was agreed to reduce the widely diffused area in which the volunteers operated (to the Urban Surveillance System or USS area), the number of volunteers (to 450) and the population covered (to approximately 75,000). With the service component already well developed, activities during the last year and a half of the project were to concentrate more on catching up on the backlog in the research component. Amendment II detailed the research agenda and described the research activities to be carried out.

As will be described in greater detail in the Research Section of Chapter III, a sophisticated surveillance system was established to collect demographic, epidemiological and service-related data in volunteer and non-volunteer clusters. Delays in the collection of baseline data ruled out the originally planned quasi-experimental design to evaluate the effectiveness of the volunteer model in favor of a one-time cross-sectional comparison of project and non-project intervention areas.

#### D. UVP Funding

Funding in the amount of \$4.5 million was agreed to in the Cooperative Agreement. Half a million dollars of this was programmed to Johns Hopkins University (JHU) for technical assistance. JHU has been responsible for providing the Project Director and consultant services (e.g., demographer to help develop the four-cell study).

The UVP has received additional funding from the Belgian Agency for Development Cooperation (BADC). The total allocated amount of this grant to the UVP totals \$545,000. The percentage of the grant received by the project varies year to year, but for the last several years has been between 50% and 66%. The UVP must negotiate the amount each year with the management of the Centre.

Ford Foundation funds (approximately \$50,000 over an 18-month period) were sanctioned specifically to support the WEPP activities of the UVP and are described in the Research Section of Chapter III and Appendix XV.

### III. FINDINGS

The overall assessment of the evaluation team is that the UVP has made outstanding progress in fulfilling the objectives spelled out in the original CA and its two amendments. This chapter reviews the findings of the team, focusing on the service component, research activities and project administration in separate sub-sections.

#### A. Service Component

As described in Chapter II, the UVP in the first several years under USAID support was an extremely large service (almost NGO) project, training some 1,800 volunteers and having approximately 1,500 volunteers operating in the field. This original design was inappropriate for a "demonstration project" and for the ICDDR,B which is a research institute, not a service delivery agency. The coverage and expansion (to Chittagong and Khulna) were totally unrealistic and unattainable. With the change of project directors at USAID/Dhaka and new leadership in the UVP, the size of the service delivery component was greatly reduced. At present, 450 UVP volunteers are working in parts of five thanas: Demra, Kotwali, Lalbagh, Mohammadpur, Sutrapur. A map showing the five thanas where the UVP is functioning and the NGOs active in each is provided as Attachment IV. This sub-section will describe and review the team's findings regarding the project's infrastructure, service interventions, training activities, monitoring and supervision, IEC, volunteerism, dissemination and collaboration.

The evaluation team has found that the UVP has proven very convincingly that female volunteers work effectively in an urban setting like Dhaka. The Four-Cell Study has quantified the difference in knowledge and practice among the population served by the UVP volunteers in several of their interventions. What follows in this Chapter is a description of the current status of the service and research components of the UVP.

##### 1. Infrastructure

As shown in the UVP organization chart (Attachment V), the Service component of the UVP is directed by the Head of the Service Branch who reports to the Project Director. The entire Service Branch, from the Head to the corps of volunteers, consists of women. At the central project office, there are three trainers and two teachers; the former providing the pre-service (basic) training to the volunteers, refresher training, and follow-up activities to identify the need for refresher training, while the latter are former volunteers who visit the volunteers and provide retraining on the spot. Now the six training staff teams operate from the three field offices, two in each.

Since November 1990, field operations have been controlled by three Field Offices (Lalbagh, Mohammadpur, Sutrapur), each directed by a Community Health Coordinator (CHCs). The CHCs hold Masters degrees in social science and are responsible for the management of the office and the training, supervision and support of the Field Supervisors (FSs) and volunteers under their control.

Under the three CHCs, there are a total of 18 Field Supervisors assigned to the Field Offices. All the FSs have been promoted from the ranks of the volunteers. They have to have had at least six years of education. Each FS has approximately 25 volunteers and visits each volunteer every two weeks to reinforce training, maintain morale, identify and solve problems, collect data, and distribute supplies.

The most important people in the UVP infrastructure and the central players in the project are the volunteers themselves. A full description of the volunteers is provided in the sub-section below on Volunteerism. Each volunteer covers between 25 and 50 households. The volunteer educates the families, especially the mothers, within her catchment area on the four interventions (ORT, nutrition, immunization, family planning), referring those family members who are seriously ill and require more expert attention. A full job description for the volunteers can be found in Attachment VI.

## 2. Interventions

The original CA listed a number of interventions that the volunteers were to provide to the households in their catchment areas. The volunteers are primarily involved in promotive and referral activities. These activities include: treatment of diarrheal disease and distribution of ORS; reduction of vitamin A deficiency, nutrition education, distribution of vegetable seeds, and distribution of vitamin A capsules; education on the need for immunization and referral; hygiene education and distribution of neem soap; motivation of family planning and, on a limited trial basis, distribution of contraceptive pills and condoms; and rehabilitation.

The basic package of interventions over the five-year course of the UVP has been modified slightly. The establishment of backyard gardens in an urban environment was found to be impracticable and seed distribution was wisely abandoned. Vitamin A capsule distribution was also stopped when the government initiated its own distribution program. Neem soap at one point was distributed periodically to all households participating in the UVP, but reports of misuse and high costs brought this practice to a halt. Consequently, it is now distributed only if seriously needed. Finally, no attempt was ever made to have the volunteers distribute contraceptives. This was primarily because the Concerned Women for Family Planning (CWFP) were active in most of the catchment areas and had an active Community Based Distribution (CBD) program. Therefore, the basic interventions that make up the UVP come down to four: diarrheal prevention and treatment (ORT), nutrition, immunization and family planning.

There has been a conscious effort from the very beginning of the UVP not to overload the volunteers. The story of the community-based worker collapsing under the weight of a large number of interventions is all too familiar to anyone experienced in PHC programming. However, the evaluation team's discussions with a representative group of volunteers revealed that they were eager to add more interventions to their responsibilities. The volunteers are very ready, most willing and probably able to do more than they are at present. As will be discussed, to date there has been no effort in the

UVP to test the optimal intervention mix which the volunteers are able to deliver to determine if they could do more.

The volunteers want to offer more services to the households they serve. At present, they only have one real service or product to deliver; the ORS packets. After several years covering the same topics and reviewing the same messages with the same materials, the volunteers sense that there are diminishing returns for their efforts. They very well could be right. The volunteers and mothers with whom the team had an opportunity to interact exhibited a sort of intervention fatigue factor. From what the evaluation team was able to ascertain, a high percentage of the volunteers are capable of absorbing and assuming additional interventions and more service delivery responsibilities.

The referral service is also very significant and a vital part of the UVP. In most cases, the patients are referred to the nearest government or NGO facility. According to the Quarterly Report on Service Output, April-June 1991, verified referrals are greatest for immunization (almost 2 per quarter/volunteer), followed by family planning (1/quarter/volunteer), with diarrhea cases to the ICDDR,B Hospital coming next (.76/quarter/volunteer), and lowest for Nutrition Rehabilitation Centers(NRC's)(.33/quarter/volunteer). The volunteers see their ability to refer families from their catchment areas to a center where they can receive help as being crucial to her credibility. Prevention and promotion means little if a person wanting or needing a service cannot get it.

A question was raised about the value of maintaining the NRCs which are comparatively expensive, considering the number of children they serve on site. The evaluation team found that they are very important in giving the volunteers backup and support for their nutrition work. Without someplace to refer a severely malnourished child, there would be little reason for the volunteers to continue their nutrition activities.

The evaluation team were satisfied with the performance of the volunteers in most of their intervention activities. However, there were two points which the team felt should be clarified. First, according to the guidelines for the NRC, the nutritional criteria for admission is an arm circumference less than 115 mm or a weight/height less than 80 percent of standard. However, neither the FSS or volunteers are trained in or required to take anthropometric measurements. The NRC follow-up worker visits each suspected malnourished child and measures by means of the Mid-Upper Arm Circumference (MUAC). Second, several volunteers mentioned that they included traditional (i.e., withdrawal) and natural (i.e., rhythm) methods of contraception in their family planning motivation. There is no evidence that they were instructed adequately enough in these methods to be able to answer intelligently a mother's question or counsel her properly.

### 3. Training

All the volunteers are given comprehensive basic health training, particularly in the four aforementioned intervention areas. Every year, there is one 12-day training session in the central office - 10 days for Basic Health and two days for Calendar training. The training staff of the UVP consists of three staff (three trainers and two teachers) who are employed full-time for volunteer training. They impart the Basic Health training in the central office and the Revision training in the Field Offices. Both old and new volunteers are trained in batches (20 volunteers in each batch). Every four months, there is a four day Revision training session conducted in the field offices (10 volunteers per batch). All the training sessions are conducted for four hours (8:30AM to 12:30PM) each day.

For the half day of training, the volunteer receives Taka 30 (Taka 20 stipend + Taka 10 transportation) each day.<sup>2</sup> If transportation is provided, she gets Taka 20. She also gets refreshments worth between Taka 5 to 7.

The trainers use different methods for training, including lectures, group discussions, role plays, demonstrations, videos and film shows, and practical sessions (e.g., visits to the Centre hospital and an NRC).

Trainers use training manuals specifically prepared for the volunteers. They also use flip charts (specially designed for illiterates) and a family planning wheel.

The volunteers are trained to record their monthly activities in a picture calendar, designed for illiterate and semi-literates. The calendar was recently revised to make it easier for the volunteers to use it. The use of the symbol calendar is described more completely in the following sub-section. There are three components - service, health education and referral. The household members are divided by gender and age (below 1 year, 1 to 5 years, above 5 years).

The UVP volunteers participating in the rice and glucose ORS research study are not given training on all types of ORS preparation. Those volunteers who are assigned rice ORS are only trained in its preparation; the glucose ORS volunteers trained only in glucose ORS. The general volunteers are trained in both types of ORS preparation.

At the end of each training session, the trainers conduct a field follow-up. There is a separate form for each intervention and the trainer observes the health education session of each volunteer to see whether the volunteer needs more training. The trainer and teacher review the forms and decide which volunteer needs retraining. The teacher retrains the volunteer in the field, showing her how to conduct health education sessions. Later, all these follow-up forms will be sent to the Research Branch for analysis and to identify needs for new training materials or new training methodology.

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<sup>2</sup>At current rate \$1 = approximately Taka 37.

#### 4. Monitoring and Supervision

The bulk of the supervision of the field operations in the UVP is done by the 18 FSs and the three CHCs. FSs visit the volunteers once every two weeks. During these visits, the FSs check the volunteers' calendar and help with data collection, observe the volunteers during health education sessions, help to improve their performance, and give ORS packets to the volunteers. FSs also visit catchment households for spot checks.

FSs meet weekly with their CHCs in their respective Field Offices. During this meeting, the FSs discuss the problems in the field, and together they identify solutions. They also submit different records (i.e., volunteers' symbol calendars, their own activity forms, volunteers' cluster information, ORS distribution by the FSs, WEPP training evaluation, distribution of neem soap and effectiveness of neem soap forms). They also collect ORS supplies for their volunteers.

The CHCs visit both FSs and volunteers for quality control. Every month each CHC visits at least 10 percent of the volunteers under each FS to check the maintenance of the FS's schedule, the distribution of ORS packets, and the quality of interaction between the FS and volunteers. During these visits, the CHCs use standardized quality assurance forms to evaluate these visits. The CHCs also visit two clients from each volunteer, checking ORS distribution and the quality of health education provided by the volunteers. The Head of the Services Branch also visits the field for random spot checks. She visits catchment households, volunteers, FSs and CHCs.

The symbol calendars (Attachment VII) are the only service monitoring device that is utilized by the intervention component of the UVP. Input indicators (e.g., number of ORS packets distributed, number of education sessions given by intervention, number of referrals by intervention) are included. The team verified that the referral number represented the number of person who had actually completed referral visits. However, the team noted that neither intermediate (i.e., coverage) nor impact (i.e., births or deaths) indicators were collected.

#### 5. Information, Education, and Communication (IEC)

A wealth of educational materials have been developed for the UVP volunteers to use in the course of their promotional activities. The volunteer is given a packet of IEC materials after she completes her initial training. This includes flip charts on diarrhea and nutrition and flash cards. Each volunteer also receives a family planning wheel which helps her promote the benefits of a small family and spaced births and explains the different contraceptive options available to couples.

The messages that are promoted by the volunteers, by intervention, are:

Diarrhea: Definition, causes, spread, danger, control and prevention, home management.

- Dehydration: Definition, assessment and management of different degrees of dehydration.

- ORS: Definition, preparation of glucose and rice ORS (demonstration and practice), administration and preservation.
- Diet: During and after diarrhea, importance of continuing to breastfeed during diarrhea.
- Common Complication of Diarrhea: How to identify, when and where to refer.

Nutrition: Role of nutrition in daily life.

- Balanced diet: Components and importance
- Diet of a newborn: Promotion of effective breastfeeding.
- Weaning: Definition, what types of food to give, how to prepare and feed.
- Vitamin A Deficiency: Symptoms and prevention, source of natural vitamin A.
- Malnutrition: Causes and identification, referral.
- Diet of Pregnant and Lactating Mothers: Value of low cost locally available food.

Immunization

- Six Immunizable Diseases: Symptoms, causes, spread.
- Prevention: Side-effects from vaccines.
- Immunization of Women during Child-Bearing Age.

Family Planning

- Advantage and disadvantage of small family and large family.
- Temporary and permanent methods (modern).
- Common social/religious problems.
- When and where to refer.

The evaluation team found the IEC effort was generally satisfactory. The only concern identified was the potential for message and volunteer/client fatigue over time. Of course, in a highly fluid population such as the slum and squatter settlements, it is likely that new residents will move into the volunteer's catchment area on a regular basis who require education on the basic four interventions.

6. Volunteerism

Each member of the evaluation team was independently impressed by the volunteers they came into contact with during the UVP evaluation. All 29 volunteers interviewed during the evaluation were, without exception, dedicated, bright and hard working. The UVP has developed a set of volunteer selection criteria which seem to enable them to identify excellent candidates. The criteria are:

- self motivated
- respected member of the community
- willingness and ability to learn and teach others
- willingness and ability to collect basic service data
- one year minimum residence in the UVP target slum
- female at least 18 years old
- housewife with no more than 2 children

According to study of the current 450 volunteers in the UVP, it is possible to learn more about the volunteers:

Average Age	31.9
Currently Married/Divorced/Widowed (%)	65.8/12.7/13.2
Average Number of Children	2.4
Unemployed/Low Grade Service Provider (%)	52/20.2
No Education (%)	38
Can Read and Write (%)	53.1
Dropout (%) <sup>3</sup>	2.8
Average Number of Years as Volunteer	5.7
Volunteers with >3 Years Service (%)	83.8

The longevity and commitment of the volunteers surprised the evaluation team, which had less than positive experience with rural programs utilizing volunteers in a number of developing countries. There was no reason to expect the volunteers to perform better in an urban setting. The team discovered that, in fact, volunteerism in an urban environment is a very different matter. It is difficult to identify why the UVP volunteers have worked so well for so long. For one thing, there is the very good training and supervision/support provided by the UVP. But this does not seem to explain the difference entirely since a large number of the original 1,800 trained volunteers continued to work even when the UVP was operating in an ad hoc manner and had infrequent contact with them. The only identifiable incentives the volunteers receive is a canvas book bag they are given after they complete training and an identity card.

Discussions with a number of volunteers and people familiar with urban programming suggests that the UVP has, almost unknowingly, tapped into a unexpected source of energy. In villages, women have an identity; it is a relatively small community and they have families and friends. Moreover, the women have well defined roles - fetching water, collecting firewood, planting/harvesting the fields. On the other hand, in the urban slum, the women typically has no identity; she is an anonymous being in a sea of people. In addition, she no longer must devote hours to her chores since water is nearby, firewood is purchased, and the fields do not exist. Without a job, she has little reason for existing. When given the opportunity to receive training and be associated with a reputable group (like the ICDDR,B), she is thrilled. Not only does she add to her knowledge base and does not have to pay for training, but she also receives a little stipend while she is being trained. But more than that, she now has an identity and a role. She is respected in the community as a health "expert". Her self-esteem is given a much needed boost. This may explain why there are waiting lists of women who want to become volunteers (15 in one Field Office; 20 in another).

The anecdotal stories the volunteers tell attest to their desire to serve and their feeling of pride. One woman told of how during training she lied to her father about where she was going. Now he is very proud of her. Another related how during curfew, one of her families were stopped by the police on

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<sup>3</sup> Figure for August 1990 through January 1991. Out of 463 volunteers, 11 moved out of the target slum and 2 died.

their way to the hospital; the volunteer got them through by showing her UVP identity card. The volunteers now belong to something, have an identity and a little power. These are of incalculable value when living in a desperately poor slum in a huge city like Dhaka.

A focus group meeting with nine volunteers and individual meetings with 20 volunteers during the evaluation team's field visits show their tremendous energy and motivation. One volunteer said:

"UVP made me what I am today. I was an ignorant and illiterate housewife and never went outside my own household. Now I have knowledge about health, nutrition, ORS, family planning, and I impart this knowledge to other people. I can now go anywhere by myself. I accompany women of my slum (who are afraid to go by themselves) to different health facilities, and when I show my UVP identification card, we are treated very well. I am a respected member of my community; people come to me for help. Even my husband and mother-in-law listen to my advice!"

Almost all (over 90%) of the volunteers said that the best thing about being a volunteer is to be able to help other people in need and to have higher social status in the community. They acquired knowledge themselves and pass it on to others, perhaps contributing a little to saving human lives. People seek their help, even in the middle of the night. If a child has diarrhea, the volunteer prepares ORS and gives it to the child. If needed, she will stay with the child all night long. When needed, she will refer patients to a hospital and sometimes accompany them.

All the volunteers remember some incidence where their presence and knowledge made a big difference. Two mentioned cases of local children having convulsions. The parents thought that they were possessed, and brought the local religious leaders to drive out the evil spirit. The volunteers recognized the symptoms of tetanus that they were taught during training and insisted that the children be taken to the hospital. Both children survived. Even though these may not actually have been tetanus cases, the volunteers were given credit for saving the childrens' lives.

The volunteers remarked that the training that helped them and the community the most is the knowledge of diarrhea prevention, treatment and referral. They say that the incidence of diarrhea has decreased and death due to diarrhea is reduced because of their knowledge about treatment and referral.

According to the volunteers, their nutrition and immunization knowledge has helped the community. Now the mothers know how to prepare low-cost balanced meals and the types of food that are essential for children (e.g., breastfeeding, natural sources of vitamin A, protein, iron). The volunteers are proud that most children in their community are immunized due to their effort. Many parents are superstitious and would not allow their children to be measured (height and weight) and be immunized. The volunteers had to work long and hard to get these children immunized.

The volunteers maintained that the main interest of the community mothers is family planning. The mothers wanted to know about advantages and disadvantages of different methods (especially side-effects, as they have heard horror stories about side-effects). They particularly wanted someone to take them to the service centers, because they do not know where or when to go or their husbands will not allow them to go alone and they are ashamed to talk about family planning to strangers.

The volunteers said that even men from the community come to them for help even about family planning. The volunteers do not feel bad about talking to men now, as they now realize that imparting basic health knowledge on anybody is vital and not something to be embarrassed about.

One volunteer described herself as a 'gate-keeper' of knowledge and health facilities for the community mothers. The volunteers feel bad when they cannot help a community member in need. They say that they do not have enough knowledge of anti-natal care (ANC), acute respiratory infections, birth-attendant training and first-aid. They felt if they received more training in ANC, ARI, first-aid and traditional birth attendant training, they would be a better help to the community.

The volunteers feel that they need more recognition and support from UVP management. A little amount of honorarium in recognition of their work would be helpful. As most of them come from very poor backgrounds, their husbands and mothers-in-law resent activities without any income generation. The husbands and in-laws will be more cooperative if there is some recognition of the volunteers' work. They also would like to get uniforms, help with their children's education, and staff clinic benefits at ICDDR,B.

The evaluation team also talked to the community members and leaders and everybody felt that the volunteers are doing a great service to the community. They are trusted by the community members because they are not outsiders. They can get ORS packets from the volunteer, and she shows them how to prepare it. The volunteer accompanies the community members to hospitals, EPI camps and other service centers. The community felt that the volunteers could be given more training and be even more helpful towards the community.

## 7. Dissemination

According to the most recent amendment to the CA, the UVP is expected to disseminate its lessons and findings to the NGOs, government and donors that are active in urban health. To date, the project has done little dissemination. No lessons have been documented. Very recently, the project has put together two compilations, one on the service component and the other on the research activities. These consist of a large number of documents which describe and explain different pieces of each component. They are helpful for anyone attempting to understand the UVP, or someone interested in familiarizing himself or herself with the service or research component. However, they are neither complete or adequate, and in some cases information is repeated.

The Four-Cell Comparison Study has only just been completed. The project expects to disseminate both study findings and other information on the UVP as it now exists and operates in an urban Health Workshop scheduled for October.

### 8. Collaboration

In the service delivery sites, the UVP has a policy of collaborating with the NGO operating in areas in which the project is active. The map (Attachment IV) indicates which NGOs are working in each thana of Dhaka.<sup>4</sup> The UVP has an explicit guideline never to duplicate a service or interfere in any way with the other NGO(s) activities. Instead, the UVP makes use of the NGO's services such as immunization, vitamin A distribution or contraception distribution. The UVP educates their target population on the need for the service and refers them to the NGO in the area which is providing that service. The evaluation team heard no complaint about the project from agencies functioning in UVP target clusters.

The donors (World Bank, UNICEF, Ford Foundation), the government (MOHFW-PHC Directorate and DMC) and NGOs all know of the UVP and have a generally positive view of its achievements. Despite the lack of dissemination, several donors expressed their interest in funding future activities, especially the behavioral/ operations/epidemiological research aspect. As a group, they are much less interested in the demographic and quasi-experimental research efforts which are seen as the Centre's bias and strength.

Some of the donors also have reservations about the possibility of any project at ICDDR,B participating as an "equal partner" in the development of an urban health strategy and system for Dhaka and Bangladesh. Again, there is an image problem. However, there is a great deal that the UVP can contribute as the MOHFW begins to develop an urban health policy and program. For the first time, urban health was mentioned specifically in the draft of the health chapter of the Fourth Five Year Plan. Meanwhile, the World Bank in its Fourth Population and Health Project (to begin early 1992) has allocated approximately \$2 million (out of a total of \$606 million) for urban health. There are several steps required before an urban health program becomes a reality in Bangladesh. For example, in Dhaka the entire city must be mapped, showing NGOs, government facilities and private sector activity. There is also a need to determine which government entity has the statutory responsibility for the provision of PHC in the municipal areas of the country, the MOHFW or the DMC through the MLGRD. Then, an urban health care strategy and system must be developed. Based on its experience, the UVP has a tremendous amount to offer to this process.

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<sup>4</sup> The list of NGOs does not seem to be complete. For example, four of seven NGOs receiving support under the Asia Foundation's community-based population project are not included. It would also have been helpful to have indicated the location of the MOHFW and DMC static health facilities on the same map.

## B. Research Component

The UVP has maintained a research component since the original CA was signed in 1986. In a project Status Assessment prepared in June 1990, it was reported that a great deal of demographic, epidemiologic and socioeconomic data has been collected by the project over the previous three and a half years, but much of those data were yet to be analyzed. This prompted Amendment II. In the process, a new Project Director was appointed and the project was restructured, with a Research Branch being formed and a head being named.

Amendment II specified a series of explicit research goals and expected outputs which are provided in Attachment VIII. The research related findings presented in this evaluation report focus strictly on the project expectations presented in Amendment II, which was a restatement of what should have been done before. The UVP became particularly concerned with sustainability and research was to be a means to identify what improvements the UVP had made and to identify how the service delivery could be improved. There was a closed interrelatedness between service and research.

The ICDDR,B is to be commended for recognizing the need to deal with the backlog in the research aspect of the project. In not quite one year, the project has met all of the expected outputs specified in the CA amendment. The new project staff have clearly produced in excess of normal performance standards to achieve the ambitious expectations. The research component has now caught up with the service aspect, allowing the UVP as a whole to be completed on time. The findings from the evaluation of the UVP research activities outline some of the successes achieved and some of the problems inherent in the fulfillment of the expected research outputs.

### 1. Infrastructure

A system is now firmly in place for successful data collection and analysis. Position descriptions with specific tasks were prepared and are being adhered to by project staff. The well trained staff includes the project Research Head, three senior level Research Investigators (one of whom works about half time on research activities), eight Field Research Officers (FROs) - seven assigned to the three field offices and one assigned to the polio study. In addition, there are 26 Interviewers in total (with 18 assigned to the USS) 12 conducting demographic surveillance and the health service indicator surveillance, six assigned to anthropometric surveillance, another six involved in the polio study, and two working on data collection for the rice based ORS comparison study. The Data Management Division is well organized and capably staffed with one Analyst Programmer, one Computer Programmer, a Data Management Supervisor, a Data Management Officer, two Senior Data Management Assistants, eight Junior Management Assistants, and three Data Entry Technicians. At each stage of data collection and reporting, quality assurance checks are done by assigned staff. The UVP organogram (Attachment V) graphically presents the structure of the Research Branch.

The research system is complemented by the strong service delivery infrastructure developed by the Service Branch. There are three well

organized and highly active field offices, each headed by a Community Health Coordinator, having an average of six Field Supervisors, who in turn routinely support approximately 25 volunteers. Volunteers record services delivered on a monthly calendar, which FSs collect at the end of the month. There is evidence gathered from discussions with the volunteers, FSs and household members that the FSs do conduct spot checks to verify the service delivery reports. These spot checks, coupled with the absence of meeting targets (no target setting) are reasonable evidence that reporting is basically accurate. The calendars provide the basis for monthly service statistics. Additionally the Service Branch has added a quality control measure by initiating a periodic performance assessment, through systematic observation of volunteers on the delivery of health education messages and sessions.

The evaluation team noted that there is little evidence of feedback from the research branch to the service branch. There is no systematic mechanism for feedback from the Research Branch's results or findings back to any element of the Service Branch. For the most part, results (i.e. service output indicators) are kept within the upper levels of the Research Branch and are used for further planning for research design. This may be explained by the fact that much of the research was designed so that the analyses would be compatible with other major research efforts of the Centre and so that results could be compared with the results of other studies. Many of the UVP researchers have been involved in research which does not directly link with a service monitoring system.

## 2. Research Agenda

The Research Branch has done an admirable job of achieving the expected project outputs. With severe time constraints, the UVP research team carried out a research agenda that had existed, in principle, since the beginning of the project but had not been systematically addressed. In addition, a number of studies were inherited from the previous project period. Some of these projects were completed, and others were replaced or discarded. Also, due to time and resource constraints imposed by other studies, there was no opportunity to examine the UVP model components, to evaluate these, or to examine what might be a better or optimal model.

Within the last year, the Research Branch has undertaken an ambitious research agenda. Drawing what it could from research designed and implemented prior to the latest amendment, the agenda has been substantially strengthened in a short period of time in terms of design, related staff training and supervision, data collection, data quality assurance and analyses.

A number of studies and other research-related activities, in various stages of implementation, were ongoing when the new team assumed responsibility in 1990. Some of the study designs were sketchy, a large amount of data collection was incomplete, analyses plans were incomplete, and little data were analyzed. The new staff did an excellent job of reviewing what existed, extrapolating useful components, extensively revising those, identifying gaps, and preparing plans for bridging them. The following are brief descriptions of what has been done in three different research efforts: Surveillance Activities, Evaluation and Baseline Activities and Other

Research. Taken together, they fully respond to all the expected outputs as specified in Amendment II (Attachment VIII).

### 3. Surveillance Activities (The Urban Surveillance System - USS)

The Urban Surveillance System (USS), representative of Dhaka's urban slums, replaced the non-representative surveillance system known as the Research Cluster Surveillance System (RCSS) in its entirety. The USS system is securely in place. Senior level expertise is evident throughout the design and documentation of every aspect of the USS. Careful mapping and enumeration of the sample clusters, a multistage probability sample, practical data collection instruments, data quality assurance procedures, and compatibility of analyses procedures all confirm this evidence.

Mapping has been completed for all intervention and non-intervention clusters. Appendix IX is a sample cluster map. A census was taken of each household and a list of family members is maintained by the FS.

The three components of the USS are: Demographic Surveillance, Health Service Indicator Surveillance, and Anthropometric Surveillance. A Socioeconomic Status Survey, conducted annually, complements the USS.

1) Demographic Surveillance: The demographic surveillance system is the basis of the USS. Attachment X is a copy of the Demographic Surveillance Form which is updated quarterly. It was designed to address the lack of reliable slum-specific data and to contribute as one component to the evaluation of the volunteer model. Specific objectives are to:

- provide valid estimates of the population parameters (fertility, mortality, morbidity, and malnutrition rates, etc.) of a probability sample of the Dhaka urban slum population;
- provide a mechanism for testing of various hypothesis on population parameter rates and trends;
- provide sampling and baseline data for various types of health related studies;
- provide a population base to evaluate the effectiveness of various MCH and family planning interventions;
- find ways to improve the system and to identify appropriate data collection systems for similar settings;
- provide technical assistance to other agencies active in urban health, including the Government of Bangladesh (GOB) and other NGOs to use the USS findings and training capability to strengthen the national family planning programs; and

- implement a relational data model for storage and maintenance of large and complex data which will allow easy access and efficient linkages.

The sample size was calculated to detect a 2% difference in infant mortality rates over a three-year period with a 95% confidence interval. Based on the recent recommendation of a consultant, UVP plans to expand the sample size from the current 5,500 households to 7,500, an increase of 36.4% .

The vital demographic events presently included in the 90 day visitation cycle are:

- changes in marital status
- changes in relationship to head of household
- changes in pregnancy status
- changes in breastfeeding status
- changes in years of education
- changes in occupation
- additions to household
- formation of new households
- deactivation of individuals in the household
- deactivation of household

Variables surveyed (Attachment XI) for the above events include:

- |                                  |                                  |
|----------------------------------|----------------------------------|
| - Reasons for Migration          | - Religion                       |
| - Source/Destination of Migrants | - Sex                            |
| - Relation to Head               | - Result of Pregnancy Outcome    |
| - of Household                   | - Place of Pregnancy Outcome     |
| - Marital Status                 | - Attendant of Pregnancy Outcome |
| - Birthplace or                  | - Place of Death                 |
| Place of Residence               | - Doctor Attending Death         |
| One Year Back                    |                                  |

The evaluation team recognizes the value of the demographic surveillance as a contribution for increased understanding of urban global trends, for demographic comparisons of areas (both rural and urban) within Bangladesh, and for the contribution it can make to better understanding the demographic patterns, pregnancy outcome patterns, and breastfeeding status changes in the UVP catchment area.

2) Health Service Indicator Surveillance: Attached to the demographic surveillance system, is the health service indicator surveillance. It parallels the demographic surveillance system in data collection, data treatment, and analysis plan. During the same visit to the household, the FRO or Interviewer collects data on demographic events and for the health service indicator surveillance by completing a quarterly survey questionnaire (Attachment XII).

The questionnaire is administered for:

- \* all children in the household under five years of age for:
  - diarrhea episode recall within last two weeks, type of diarrhea, and type and quantity of ORT given
  - three-month measles recall
  - two-week eye problem recall
  - three-month recall of receiving Vitamin A
  - two-week recall for scabies
- \* all children in the household 0-24 months for:
  - immunization coverage
- \* all currently married women between 13-49 years of age for:
  - contraceptive use by type of method
- \* all persons interviewed about volunteer activities for:
  - Diarrhea
  - Nutrition
  - Immunization
  - Family Planning
  - other

The evaluation team found the Verbal Autopsy activity particularly interesting. A sample form is provided as Attachment XIII.

### 3) Anthropometric Surveillance

In a separate round of data collection from the demographic surveillance and the health service indicator surveillance system, but using the same sample and same 90-day cycle, anthropometric surveillance is conducted. Data are treated similarly to the other two data sets, and become part of the same analysis procedure. Attachment XIV is a copy of the Anthropometric Measurement Form.

Three types of growth measurements are made for all children under five years: weight, height and mid-upper arm circumference. The Research Investigator responsible for Nutrition Investigations, points out that the three measurements are necessary to detect stunting and wasting with weight and to utilize indicators with sensitivity and specificity to detect morbidity and mortality. These data will be matched with breastfeeding and other nutritional data to determine which factors are responsible for stunting and wasting.

The evaluation team has noted that in comparison to the proportionately large effort in terms of time and money spent on anthropometric surveillance for research purposes, there is no parallel effort in service delivery. The volunteers and field supervisors do not incorporate any type of growth monitoring into their service delivery model. The evaluation team questions whether an operations research study might be conducted to determine what growth monitoring activities might be included for the volunteers or field

supervisors, and whether or not the activity is any more advantageous than looking ("eyeballing") at a child and referring those who appear in poor nutritional condition.

Several other questions arise. As part of the criteria for admittance to the NRCs (described in the service delivery section of this document), certain nutritional status determinants must be established. The volunteers refer children to the NRCs, based on recognition of a child who looks severely malnourished. The research protocol is not set up for nutritional surveillance which would include referral for those meeting NRC admission criteria, and advice for mothers of malnourished children. Instead, anthropometric surveillance has been chosen, presumably to fit in with the USS as a whole for data collection, treatment, and analysis, and to protect the integrity of what is referred to in the USS as the experimental design. Although the team sympathizes with the research mandate which specifies the need to establish health service intervention and non-intervention areas for evaluating the impact of health service interventions, it questions the ethics of strictly anthropometric surveillance for the sake of comparing intervention and non-intervention areas.

The team holds similar concerns regarding the use of surveillance given the sample and quasi-experimental design for contraception, diarrhea treatments, measles episodes, and vaccination coverage. This issue is further discussed below.

The team questions the appropriateness of attaching the health service indicator surveillance variables and the anthropometric surveillance system to the same sampling, data collection, and data analysis plan as demographic surveillance. However, the team appreciates the value of relating socio-demographic characteristics to mothers knowledge and practice and to volunteer performance, and the team believes that there may be ways to do this without too much disruption to the present design which are discussed in the Chapter of Future Considerations and Recommendations.

#### 4. Evaluation and Baseline Activities

(USS Registration, USS Phase II Survey, and Sample Volunteer Cluster Survey, A Four-Cell Comparison to Evaluate the Effectiveness of the Urban Volunteer Programs's Health Service Delivery System)

The Research Branch has done an excellent job of establishing a baseline for demographic surveillance, mothers' knowledge and practice regarding family planning, prevention and control of diarrhea, nutrition, and immunization, and for selected health status indicators.

Using a high level of effort and expertise similar to the USS description above, the Research Branch has established a reliable baseline for the project. Findings from The Four-cell Comparison to Evaluate the Effectiveness of the Urban Volunteer Program's Health Service Delivery System constitute a comprehensive baseline for project activities.

In addition to its use as a comparative evaluation, the survey greatly enriches baseline information. The survey was designed to compare infant and

childhood feeding practices, mothers' knowledge in the areas of diarrhea prevention and treatment, childhood immunization, nutrition and family planning, and to compare selected health status indicators and health practices such as diarrhea prevalence rate, ORT utilization rate, and contraceptive use prevalence in areas with urban volunteer services and in areas without volunteer services.

The Four-Cell Study demonstrated that the volunteers do make a difference. The most significant impact was found in the family planning and immunization interventions in clusters in which the UVP and UVP plus NGOs were active. Improved performance (although not significant) was also noted in the other two interventions.

Based on the results from the four-cell comparison, the following observations were made by the evaluation team:

- A summary of the results and findings by the investigators would be useful for planning services and additional research.
- Since there were few significant differences reported overall among the areas with outreach workers, it may be possible to simplify the study design for future evaluation purposes by limiting it to matched pairs - UVP only and no clear intervention areas. UVP already has the enumeration and mapping available to do this, keeping a representative, but smaller sample for each group.
- The study pointed out the usefulness of outreach workers. This reinforces the need for coordination with NGOs and Government regarding the coverage of Dhaka slums with outreach workers.
- The study pointed out the potential for modifying the present service delivery model to possibly include a focus on new migrants, distributing vitamin A, tracking children for immunizations and continuing with the prevention and treatment of diarrhea.

The evaluation team found the study useful as an evaluation tool and very useful as a thorough baseline.

Having now established the value of the volunteers and having completed the time-consuming Four-Cell Comparison Study, it is appropriate for the UVP to test what the optimal mix of services they are able to handle. Until recently, the UVP has operated under the assumption that its service delivery model is all that can be expected from urban slum women volunteers. The evaluation team questions this assumption and discusses this issue further in the final chapter of the report.

##### 5. Limitations to Research Design

In accordance with Expected Output A of Amendment II of the CA, experimental and control areas within the slums of Dhaka were determined as part of the activities under the USS. Mapping, census, and baseline determination of socio-demographic characteristics, health and family planning indicators, and a system for surveillance have been implemented.

Mapping and sampling were completed in late 1989. The USS is comprised of a stratified, multi-stage representative sample of the UVP target population. The ultimate sampling units are clusters of about 30 households. The original plan called for a randomized block design to be superimposed on the selected clusters to determine intervention and non intervention clusters. Due to several field conditions this was ultimately determined not feasible for the health service indicator surveillance component. The clusters were again stratified by NGO activity and randomly assigned to intervention and non-intervention clusters. The sample size was calculated to determine a 2% difference in infant mortality rates over a three year period, with a 95% confidence interval. Considerable time and effort was clearly devoted in the attempt to assure the integrity of the quasi-experimental design. The evaluation team commends this effort.

The evaluation team agrees that the mapping exercise and enumeration of the UVP research clusters is necessary and valuable for present and planned research and monitoring activities. However, we question the feasibility of demarcating non-intervention areas as conducted. The team believes, based on what has been learned to date through the USS, that non-intervention areas could be better defined without great difficulty. The team also believes that modified intervention/non-intervention areas should be maintained for certain purposes, one being demographic surveillance. The team does question the usefulness of the existing experimental design as it attributes health status and health practice differences between intervention and non-intervention areas to the activities of the volunteer in such high density and highly mobile populations, and the numerous activities of NGOs identified and not identified for sampling purposes. There are several reasons for this:

\* Passive Contacts from Outside Cluster - Based on visits to 20 cluster areas in two of the three field office jurisdictions, and on discussions with household members and volunteers, it was found that household members in non-intervention areas seek services from volunteers in both intervention cluster areas and from volunteers from non USS clusters. Volunteers do not restrict their activities to their USS demarcated catchment areas. They give advice to mothers as they see fit regardless of catchment area, and in non-intervention cluster areas. Volunteers report high numbers of passive contacts, or contacts with people from outside the volunteer's catchment area. For example, in the month of June 1991 in the Mohammedpur area, the total number of patients treated for diarrhea from within the catchment areas was 861, while the total number treated from outside the catchment area was 2,539.

\* Closeness of Non-Intervention Clusters - Based on visits to clusters and review of the mapped intervention and non-intervention cluster locations, the team believes that in a number of instances, the close proximity (in some cases from one side of a three foot wide path to the other) of intervention and non-intervention clusters compromises the validity of the quasi-experimental design, particularly given the previous findings.

\* Proximity of Static Facility - Although difficult to determine the direct impact of static service facilities on USS clusters, the team concludes that depending upon the level and scope of activities delivered at static

sites and the proximity of static sites to USS clusters, the impact of these sites may be confounding. The mapping exercise included the location of static sites, so there is the possibility of examining this issue, and making necessary changes to accommodate it in the cluster sample without an inordinate effort or taken into account during analysis.

\* Length of Volunteer Service - To a lesser degree there is concern on the part of the team that there is considerable variation in the length of service of volunteers in the USS clusters, ranging from two months to ten years, and that amount of time spent per week on UVP activities by volunteers reportedly ranges from 1-12 hours. These variables may also be confounding.

\* Intervention by Researchers - The evaluation team also questions the impact of the field researchers on the quasi-experimental design, particularly for the non-demographic variables. Some of the interviewers report that when they find a child who has not been vaccinated according to schedule they encourage the mother to take the child for immunization. Others report that they do not intervene. The same type of exchange is true in cases of malnutrition, those inquiring about family planning, diarrhea, and skin diseases. As would be expected, the data collectors intervene (refer and report to the CHC) upon discovering a very sick child or adult. There are problems common to prospective surveillance for health related conditions; the contamination issue if researchers intervene, and the ethical issue if they do not. It appears to the evaluation team, an effort should be made to limit the surveillance, if control areas are to be maintained, to demographic and health variables which do not raise ethical questions. This is further discussed in the recommendations section in this document.

The team does acknowledge that it should be possible to compare the effects of active outreach service versus passive service for selected surveillance variables, particularly if attention is paid to the above concerns. Furthermore, the existence of the infrastructure and the investment in it warrants continuation.

The Four-Cell Comparison to Evaluate the Effectiveness of the Urban Volunteer Program's Health Service Delivery System fulfilled the objective of Output D of CA Amendment II. Although the Research Branch went beyond the scope of work for this output, it appears to the team that a matched pair cross-sectional study as suggested in Amendment II would have been a cost-effective method of evaluating program effectiveness. The team also recognizes that it would be relatively simple to conduct future evaluations using the method suggested in the expected outputs for future evaluation purposes, especially given the results and findings from the four-cell study.

The team has pointed out the potential usefulness of examining the use of clinics and other static sites as suggested in the expected output. This, to date has not been done, but could be with relatively minimal effort.

## 6. Other Research

As mentioned, over the course of the five-year project a number of discrete studies were attached to the UVP. While some provide helpful data,

most of these studies did not fit within the framework of the project. There is a real question why many of these studies were conducted under the UVP banner. They consumed project human and financial resources and did not help the project achieve its stated objective of developing a demonstration model. This is a danger of being attached to a research facility. Some of the independent studies carried out under the UVP are:

**\* Personnel, Training, and Services**

This valuable data set provides the UVP volunteers' personnel profile which can be used as control variables of volunteer characteristics for evaluation purposes, and for operations research. The volunteer roster is updated regularly and the profile is prepared on an annual basis.

**\* Service Calendar**

A service calendar has been revised and well tested and is in use as the primary service delivery reporting tool for volunteer activities. Monthly service output summary statistics are generated based on these data. There is presently little feedback of results to the Field Supervisors or the volunteers. The results are not used effectively for monitoring activities at the field level or for determining levels of activity. Presently, the service output information is used primarily for reporting purposes to the funding agency. Service information has important potential for monitoring activities and for task related operations research.

**\* Nutrition Rehabilitation Center Related Research**

An evaluation was conducted between November and April 1991. Findings suggest that NRCs have impact on nutritional rehabilitation of malnourished children. Further analysis may be required to detect the nature and degree of impact.

**\* Weaning Food Protocol**

A case control study was carried out to compare the impact of providing food supplements as compared to weaning education to a small number (150) of 6 to 9 month old in a Dhaka slum. The results of the study show that supplemental foods have an impact on maintaining nutritional status of the supplemented children. It would be interesting to study a third group of 6 to 9 month olds receiving both supplements and weaning education for comparison. Related planned research includes trace element supplementation and effects on growth and morbidity.

**\* Oral Rehydration Therapy**

A cross sectional survey for comparing correct utilization and sustained use of packet rice ORS versus standard packet glucose ORS by urban slum mothers. The study is underway, and findings are expected to be very useful given the superior effectiveness of rice ORS as an intervention for children with acute diarrhea. Follow-up studies are expected.

### \* **Breastfeeding Cessation**

A case control study has been completed to identify factors contributing to breastfeeding cessation in an urban slum population. Data are being analyzed and preliminary data indicate that bottle feeding is an emerging problem in Dhaka.

### \* **The Effectiveness of Trivalent Oral Polio Vaccine in Children with Gastroenteritis**

The field work of this study is in progress and is expected to be completed by April 1992. The purpose of the protocol is to study the effect of acute watery diarrhea on the efficacy of Trivalent Oral Polio Vaccine by administering the vaccine to a cohort of children during an episode of acute watery diarrhea and measuring seroconversion rates to the 3 poliovirus serotype after 1st and 3rd doses. This study is no doubt of great value to rural and urban children alike. The need to use UVP researchers and other resources and the particular relevance to urban slums is not apparent to the evaluation team.

### 7. Women's Empowerment Pilot Project (WEPP)

The original UVP CA specified that one of the objectives of the project was to empower the volunteers by means of literacy training, skills development and income generating opportunities. In 1988, some of the poorest volunteers (27) were given skills development, other volunteers (90) underwent literacy training and 128 received legal rights orientation. In 1990, The Ford Foundation funded a 16-month pilot effort to empower the volunteers through group formation.

A description of WEPP activities is provided as Attachment XV. The evaluation team could establish no linkage between the UVP and WEPP. It appears that WEPP has deviated from its original objective of empowering the UVP volunteers. Its objective now seems to be giving poor urban women opportunities and choices to improve their lives. In the first groups, volunteers were 30 percent of the WEPP participants, whereas in the current phase, less than 10 percent of the participants are volunteers.

### C. PROJECT ADMINISTRATION

Within the last year and a half, the administration of the UVP has been streamlined and strengthened. Of particular note are project management and finances.

#### 1. Project Management

A number of positive actions were taken by the new Project Director when he arrived the scene in the spring of 1990. To begin with he consolidated UVP field activities, reducing coverage and eliminating most of the peri-urban and all the rural sites. Instead of operating in 12 thanas, the UVP concentrated its energies in five.

Several of the services were changed as well. Reductions in population coverage resulted in considerable savings in the number of ORS packets that had to be distributed. In addition, neem soap distribution was drastically reduced. In the first six months of 1990, the volunteers passed out neem soap to every household in the UVP's 12 thana catchment area. A considerable amount of misuse of the soap was noted and a more restrictive distribution policy was introduced. Neem soap was given to only those with serious cases of scabies. This saved the project approximately \$10,000.

The UVP also benefitted from the decentralization into three Field Offices and the formation of the Service and Research Branches with their respective heads. By delegating authority, the Project Director is able to concentrate his energies on managing the project and on larger strategic issues. The participatory style of management introduced by the Project Director required some getting used to by the project staff but appears to have improved project effectiveness.

The UVP made a concerted effort to find positions for over 700 volunteers from areas that were excluded when the services delivery component was scaled down and consolidated. Training in the Family Planning Social Marketing Project was offered to all retrenched volunteers; approximately 50 took advantage of this offer. In addition, another 70 volunteers were given permanent jobs in the ICDDR,B hospital. The project wrote letters to NGOs working in the areas where the retrenched volunteers reside, informing them that these women with a health education training and experience were available. The press of project work has not permitted the Service Branch to follow-up to find out what has happened to these volunteers.

## 2. Project Finances

In addition to the savings from the reduced neem soap distribution mentioned above, the constriction of the UVP service delivery area led to other savings. For example, 21 Field supervisors and 13 Field Teachers were retrenched; this reduced project costs by \$32,000 a year.

Two Diarrhea Treatment Centers located in rural areas, where the UVP had previously been active, were transferred to NGOs. In addition, a local German-funded NGO assumed control of one NRC in a peri-urban area no longer served by the UVP. Another \$8,000 was saved by this move.

By decentralizing field operations, the Project Director realized considerable savings in transportation costs. Previously, all field staff worked out of the project office at the Centre and all volunteers had to come to the Centre for their training.

When one compares expenditures during the first six months of 1990 with the same period in 1991, the retrenchment of the UVP Project saved approximately \$90,000. This means that the project will have sufficient funds to continue on a no-cost extension for several months after the scheduled estimated completion date of 30 September 1991. Through the end of June 1991, the UVP had expended \$3.2 million of the budgeted \$4 million.

#### IV. FUTURE CONSIDERATIONS AND RECOMMENDATIONS

Based on a thorough evaluation of the UVP and the findings as detailed in Chapter III, the evaluation team strongly recommends that there should be a follow-on project. The UVP has developed an exemplary urban volunteer model and accompanying research structure. Much remains to be done in the way of dissemination, coordination and technical assistance to ensure that the service delivery model developed by the UVP is applied and used in urban health service programs in Bangladesh. In addition, there is much urgently needed research which can be done through the research infrastructure developed by UVP. What the UVP has achieved to date holds great potential for the urban slums of Bangladesh and beyond; it provides a unique opportunity both to learn and teach other what can improve the health status of the vulnerable target population in the slums.

The team has reviewed the proposal for the follow-on activity, referred to as the Urban Health Extension Project (UHEP), and the recommendations that follow are made in reference to it. The recommendations are divided into three categories: research, service delivery and dissemination/technical assistance. The team's suggestions will support, amplify, modify or question the major points of the UHEP proposal. In general, it will be noted that the evaluation team concurs with the strategy and plans for the next phase.

##### A. Research Component

The evaluation team finds many of its suggestions regarding research for the future included in the UHEP proposal. The recommendations presented in this sub-section spell out in greater detail UHEP research ideas and approaches. The team is confident that all of the research recommendations presented herein fit comfortably within the research objectives spelled out in the UHEP proposal. The points which are of greatest concern to the evaluation team are an analysis of the problem, a steering committee, a research review committee, operations research opportunities and research priorities.

##### 1. Conduct a Descriptive Problem Analysis

Although there are relatively few conclusive findings on health problems, patterns, health related behavior, demographic trends, enabling factors contributing to good health practices, and effective service delivery strategies, there is a considerable amount of experience and anecdotal evidence to be drawn from the urban health experience. Obvious health problems and adverse environmental conditions are referred to throughout reports and proposals referring to urban health. A systematic problem analysis, drawing from document reviews and information gathered from current service providers (primarily NGOs) should be conducted. All levels of service providers should contribute opinions and experiences. The problem analysis findings should be used as a basis for establishing a cohesive and systematic research agenda for the UHEP.

## 2. Establish a Committee to Determine Research Agenda

The UHEP proposal calls for the formation of an Urban Health Advisory Committee. It would have representatives from the government, NGOs, donor agencies, multilateral agencies, and academic institutions. It is proposed that this group would meet quarterly to identify programmatic urban health service research priorities.

The evaluation team endorses this idea with only minor modifications. The suggested composition is appropriate, ensuring that research conducted by the UHEP is appropriate and relevant to all interested parties. This effort will reinforce the project's objective to collaborate closely with those actively involved in improving the urban health situation.

It is recommended that the committee assist in the development of an overall research agenda and related strategies (e.g. research particular to urban purposes, decision based, etc.) to be reviewed on an annual basis. Using the findings from the problem analysis, the committee will determine research priorities.

In the Dissemination/Technical Assistance sub-section, there is a recommendation that a coalition of organizations concerned with urban health problems be formed to assist in the development of an urban health strategy and design an urban health system. This so-called Urban Health Coalition would be made up of many of the same agencies represented in the research committee. It is possible that the research committee could be comprised of selected members of the coalition.

## 3. Establish a UHEP Research Review Committee

The UHEP proposal describes the formation of an Urban Health Task Force. This ICDDR,B body would meet monthly and be made of Centre multidisciplinary scientists and include representatives of the same agencies represented in the advisory committee described above.

The evaluation team supports this suggestion in principle. However, it recommends that outsiders be invited only as special reviewers or experts on special issues regarding specific proposals. This committee would have the mandate to review in detail individual research proposals. The core members would include some of the members from the steering committee, would be complimented by rotating members from within ICDDR,B as required by the type of study reviewed. The review committee would be responsible for assuring that studies implemented adhere to the research agenda, research priorities, established strategies, and that the study design and analysis plan is appropriate and feasible. It is expected that such a mechanism will ensure that only the most relevant, appropriate and feasible studies are conducted in the UHEP, thus precluding some of extraneous and non-urban health-related studies that were found in the UVP.

There is a long-established Research Review Committee at ICDDR,B. Studies will, of course, continue to be channeled through this committee.

#### 4. Suggested Operations Research Studies

Having been consumed with designing and establishing the USS, the UVP has had little chance to develop and conduct operations research studies. The UHEP proposal stresses the need to place an emphasis on applied research in the follow-on project. What is recommended below are some suggestions on what the operations research on the UVP aspect of the UHEP might include.

The evaluation team has determined that the UVP model has been tested in one way, that is, does it make a difference in terms of selected health indicators of mothers knowledge, practice, and utilization of services. What has not been examined to date is the effectiveness of the model itself in terms of what might make up the best or optimal model. It should be pointed out that this was not part of the UVP's scope of work, but it presents a very interesting and worthy operations research question. Now that it has been established that outreach workers are effective in urban settings, examination of the model should be the immediate focus of UHEP's research activities in the next phase. There is no suggestion that research activities be limited to this.

The evaluation team recognizes the unique position and great potential the follow-on UHEP has for providing valuable lessons regarding the effectiveness and sustainability of an urban health volunteer program. As discussed in the findings section of this evaluation, much has already been learned.

However, in terms of a volunteer model there is much more to be explored. It is recommended that an operations research study be conducted as a priority to examine the model to discover:

- an optimal mix of services which can be effectively delivered and sustained using urban volunteers. The study should be designed to answer the following questions; What tasks are urban volunteers willing and able to do in terms of service delivery? What tasks are most likely to be effective in improving the health and wellbeing of urban slum infants, children, and their mothers? In what order and magnitude are tasks modified or added to a volunteer's agenda? What are the related socio-demographic characteristics of volunteers who effectively deliver incrementally modified or additional services? How best might urban volunteers work with government or NGO field workers?
- factors contributing to the sustainability of an active volunteer. What type, order, and length of training is required to prepare an effective volunteer? What type, venue and frequency of supervision is adequate for the support of a volunteer? For which mix of tasks? What are the minimum mix of indicators required for an effective service delivery monitoring system? What capabilities are required for the volunteers and

supervisors to utilize the monitoring system? What are enabling factors contributing to volunteer longevity of service? How do they enhance client satisfaction?

Upon completion of the examination of the model and alternate permutations of the model, a cost-effective study should be conducted of the sub-components of the model to inform those interested in replicating the effort what costs might be involved.

Other operations research studies should be developed, based on the findings of the problem analysis and the recommendations of the steering committee.

The evaluation team endorses the UHEP proposal to hire an operations research expert as a member of the research team. This is essential if the project is to conduct the large number of OR studies that is proposed. For the Research Branch of the UHEP to function effectively, its head will have to be familiar with OR and OR techniques so that s/he can effectively lead the effort which will rely heavily on operations research. Thus, if the head of the branch is not familiar with or experienced in OR, s/he should undergo short-term training in OR.

#### 5. Other Research Activities

While operations research would be the focus of the UHEP research effort, other research will be carried out. The evaluation team sees a need to continue with some of the demographic and epidemiological data collection. The USS is a valuable and impressive structure which can continue to provide excellent information of health conditions on the urban slums.

The anthropometric data collection should be terminated. This effort duplicates efforts by Helen Keller International (HKI) which maintains a nutrition surveillance system inclusive of urban slums. HKI collects nutritional status data on a large sample of under five children from low income areas of Dhaka every two months. The UHEP should utilize the HKI data for its purposes; this will eliminate the ethical problems arising in the non-intervention areas discussed in the previous chapter. Growth monitoring by the volunteers (using the MUAC) should be introduced into the service component as discussed below.

Certainly, it will be possible, as the UHEP proposal suggests, to carry out comparative studies between the Matlab Project, the MCH-FP Extension Project and the UHEP. But the evaluation team suggests that this should not become an unbearable burden on the project and preclude it from conducting the essential operations research studies that will guide the future of the UVP effort.

The evaluation team recommends the committee be responsible for deciding these and other similar issues:

- A scaling back and modification of the demographic surveillance, with the addition of selected, one round, epidemiological indicators (e.g. prevalence of acute respiratory infections, percent of pregnant urban slum women who are at risk, etc.). The committee should review the demographic variables which are now part of the USS, determine their usefulness in relation to the research agenda and priorities (verbal autopsy may be very useful, while doctor attending death may not be);
- Elimination of the prospective health service indicators for purpose of detecting differences between intervention and non-intervention groups. This would be replaced by inclusion of the above indicators in the service delivery monitoring system with a periodic cross-sectional survey using randomly selected matched pairs (modify the USS sample for this purpose) of urban volunteer areas and non-intervention areas (the non-intervention area sample can be greatly strengthened based on USS experience) to verify service statistics and to periodically evaluate the effectiveness of the health service interventions;
- Addition of descriptive and analytical epidemiological studies to better understand morbidity, mortality, and disease patterns in the Dhaka slums. Suggested priority topics include maternal, perinatal, and infant morbidity and mortality, and acute respiratory illness.

Depending upon the recommendations of the advisory steering committee, there is considerable scope for the other types of analytical research.

## B. SERVICE COMPONENT

The evaluation team strongly supports the UHEP proposal in the retention of the Health Delivery Demonstration Model or the service component of the UVP. As documented in the Findings chapter, this aspect of the UVP has demonstrated that it will be vital to the success of the UHEP. It will be the basis for the operational research activities that will lead the project in its next phase. The evaluation team has a series of recommendations based on its findings and a review of the UHEP proposal. They involve leadership of the service component, size of demonstration model, name, documentation, intervention mix, management information, empowerment activities and program fine-tuning.

### 1. Leadership

The UHEP proposal identifies the Project Director as being responsible for the service component of the project. The evaluation team recommends that for the demonstration activities to remain strong and for the model to continue to be worthy of study and replication, it deserves and requires the full-time attention of a service delivery director, as the Research Branch has and should continue to have and as the Service Branch Currently has. For this reason, it is recommended that the current structure be maintained, with a

separate head for service component. Strong leadership in the service aspect will be especially important during the first year of the UHEP when operations research activities will be initiated and new interventions and activities for the volunteers will be tested.

## 2. Size of Demonstration Model

The size of the demonstration model is not mentioned in the UHEP proposal. The evaluation team recommends that it be maintained at present strength (i.e., 450 volunteers). Anything smaller would not be credible as an urban health model. It will not be possible to carry out operations research unless there is a strong and decent size operation.

## 3. Name

While the evaluation team appreciates the value of developing a new Cooperative Agreement with a new title to distinguish from its predecessor, it is recommended that the service delivery component continue to be referred to as the UVP. The UVP is known to those interested and involved in urban health and any change at this time would be confusing. The name recognition is particularly important in the dissemination activities that are discussed below.

## 4. Documentation

The Service Branch has collected a number of papers describing various aspects of its work. More can and should be done to document the lessons learned in the service component of the UVP. This will be an important part of the dissemination/technical assistance effort, providing those interested in delivering health service in the urban slums of Bangladesh with UVP's experience. This will allow others to reduce their investment in such things as training and education materials development and learn about effective ways to utilize volunteers in the slum and squatter settlements.

## 5. Intervention Mix

The UHEP proposal mentions nothing about the activities of the service Branch in the next phase. The evaluation team has identified several things that the service component could do in conjunction with the research effort. The first is the testing of the volunteers' capacity to add new interventions to the four they currently deliver. The volunteers themselves talk about wanting and being able to absorb new responsibilities. Some of the suggested activities include nutritional screening (use of MUAC), first aid (initial treatment and referral), ANC (at risk identification and referral), contraceptive supply (depot holder) and ARI (diagnosis and referral).

It is suggested that the interventions be added one at a time to those volunteers who are willing to do more. It is suggested that for each new intervention, the volunteer be given a pin or badge signifying a higher "rank". This would add to her respect and feeling of self-esteem as well as providing greater service to the target population in her assigned area. The

ability of the volunteers to absorb additional interventions is the focus of one of the major operation research efforts, the optimal mix of services.

#### 6. Management Information

The evaluation team recommends that in addition to the existing input indicators, a simplified monitoring system based on a limited set of key intermediate indicators be introduced and tested as one of the operations research efforts in the service delivery component. One indicator for each intervention should be identified and tracked by the volunteers with the support of the FSs.

The evaluation team feels that giving the volunteers some appropriate indicators to monitor will help focus her attention on project objectives and upgrade the effectiveness of the service delivery activities. Some examples of the key intermediate indicators are as follows:

- % of children between 9 and 15 months fully immunized;
- % of children having an episode of diarrhea treated with  
ORT;
- % of eligible couples contracepting;
- % of children 6-60 months having received vitamin A capsule.

A new indicator should be added for any new intervention added to package. In addition, the volunteers should track births and death under five in their catchment areas.

#### 7. Empowering Activities

It is recommended that in the next phase women's empowerment activities which were tested in WEPP be introduced and integrated into the UVP volunteer corps. The activities included would be literacy, legal rights, income generation, savings group formation. This would be one of the operation research studies under the sustainability topic, attempting to identify enabling factors that account for and promote long-term volunteer service.

The volunteers are already leaders in their communities, and empowerment activities can play a powerful role in bringing about substantive change in the volunteers' and their neighbors' lives. Special efforts can be made in investigating more creative employment activities (e.g., training, apprenticeship and employment in the fast growing garment industry as machine operators, pattern cutters, specialized sowers). Training and education materials will have to be developed and short training modules developed. The volunteers and their supervisors feel that this aspect of volunteer activity may be as important and contribute as much to the success of the UVP demonstration model as the health interventions; it should be tested to determine if this is the case.

It is also suggested that the existing WEPP groups that are currently functioning effectively should be spun-off to existing local NGO(s). In addition, in the future any volunteer participating in a special UHEP research

project (e.g., polio study, rice vs. glucose ORS) over and above their normal volunteer's role should be compensated for their time and effort.

### 8. Program Fine-Tuning

There are several relatively small points that were noted during the evaluation that should be addressed in the next phase to improve the quality of the service component. They include a thorough training of the volunteers in traditional as well as natural methods of family planning to ensure that they understand the effectiveness and limitations of all methods and can answer questions and counsel the women in their catchment areas correctly. The evaluation team also suggests that the volunteers be formally introduced to the community leaders (e.g., ward commissioners) and referral facilities closest to their areas. This will enable the volunteers to perform their duties more effectively.

## C. DISSEMINATION/TECHNICAL ASSISTANCE

The importance of documenting the lessons learned in both the research and service components is featured in the UHEP proposal. Its importance has already been referred to in the sub-section on the service delivery component above. The important issues to be considered include leadership of the effort, the strategy employed, and collaboration.

### 1. Leadership

The UHEP proposal mentions that a person with an IEC background will be hired to be responsible for the dissemination activities. The evaluation team is not clear on the appropriateness of this. Instead, it is suggested that the Project Director take responsibility for this vitally important function. It is appropriate that the UHEP director collaborate closely and on a regular basis with those involved in urban health matters in the government, donor/multilateral agencies and NGOs. To successfully carry out this function, the Project Director should be an experienced PHC manager with a good understanding and appreciation for research (especially operations research) and community-based service delivery. S/he should have experience in grant writing and skill in communicating with high level government and donor officials.

### 2. Strategy

The UHEP proposal outlines a few activities that will be undertaken in the dissemination efforts in the next phase. These include workshops/forums/seminars as well as study tours. It also mentions the formation of the Urban Health Advisory Committee which would meet regularly to discuss urban health activities. In addition to these activities, the UHEP and the leader of the dissemination component should devote considerable time and energy to taking decision makers from the Centre, government, donors, and NGOs to the demonstration sites. This should be done on an individual basis. Those that should receive escorted tours include the director of the ICDDR,B, the new Associate Director of the CHD, the director of the Extension Project,

the Director of PHC for the MOHFW, the Chief Health Officer for the DMC, technical experts and representatives of the bilateral donor agencies, health officers from the multilateral donor agencies, and heads/technical programmers of the involved NGOs. This is one of the most effective way to disseminate what it is that the UVP has to offer and to stimulate requests for technical assistance. This is an appropriate role for the Project Director to play. This becomes all the more important considering the need for the UHEP to develop alternative sources of funding.

### 3. Collaboration

The UHEP proposal mentions that the project will collaborate with others in the development of an urban health program for Dhaka and other cities of Bangladesh. The evaluation team supports this role. It is essential that the UHEP make a special effort to strengthen its working relationship with the government (MOH-PHC and DMC), donors and NGOs. While the Centre is inappropriate to lead the effort to develop an urban health strategy and system, it is totally appropriate for the UHEP to play a catalytic role. The next phase can and should be the initiator and advocate/motivator behind the effort. No one has more experience and knowledge of how the urban slums function and how to make an impact than the UVP. For example, if the health facilities (public and private) and areas of NGO activity have to be mapped, no one is better equipped than the Centre to do it with their mappers and experience in five thanas of the city.

As in the case of dissemination, the UHEP Project Director should lead the collaboration effort. S/he the one most familiar with all aspects of the UHEP, and can identify what technical assistance the project is able to provide. There are a number of agencies that have expressed interest in funding the UVP especially service-related research. Through effective dissemination and collaboration, the UHEP should be able to generate the resources required to keep the urban health demonstration and research activities going for the foreseeable future.

**ATTACHMENTS**

Scope of Work

The evaluation team will address the following questions:

A. To what extent has the project succeeded in developing a demonstration model for the delivery of maternal-child health interventions in the urban slums of Bangladesh using women slum dwellers trained as volunteers?

B. To what extent has the project succeeded in its mandate to conduct research demonstrating the effectiveness of this model?

C. Based on available data and field observations, what if any evidence is there that the volunteer model is effective in delivering MCH interventions?

D. What are the key elements of the UVP "model", and what implications do these have for replication of the model within other health care programs?

E. Comment on each of the following specific intervention areas with respect to the effectiveness of volunteers both as demonstrated to date and likely future effectiveness; make appropriate recommendations for each:

- diarrheal disease prevention and treatment: health education, ORS distribution, referrals to health facilities.
- immunization: teaching and referral.
- nutrition: education and referral; distribution of Vitamin A and vegetable seeds; use of arm circumference for monitoring and identification/referral of high risk children.
- hygiene: neem soap distribution, health education.
- family planning: teaching, motivation, and referral.

F. Volunteer activities may also be divided into the functional categories of (1) direct service provision (Vitamin A, neem soap, ORS distribution); (2) health education; and (3) referral to other services (immunization, family planning, clinics and hospitals etc). Comment on the performance of volunteers in each of these functional areas. Based on the UVP experience to date, what if any evidence is there that volunteers can be effective in each of these three roles? Why or why not? Make appropriate recommendations, eg is it effective and realistic to use volunteers for all of these functions, or should the scope expected of them be narrowed? Are additional inputs (training, other) needed to improve effectiveness in one or more areas?

G. Examine the Urban Slum Surveillance (USS) system and comment on its potential for demonstrating morbidity/mortality impact of service interventions over time, and its potential for epidemiological and other service-related research.

H. Examine the role UVP has played with respect to other agencies involved in urban health care. To what degree has the project assisted other agencies in improving MCH services to the urban poor through dissemination of project findings, technical assistance, general advocacy, coordination of activities, and/or sharing of project materials etc? What is

the future potential for the project's making such contributions to urban health care in Bangladesh?

I. Make specific recommendations regarding design of a follow-on project or projects, if any, taking into account project achievements to date, any unique comparative advantage that has been developed within the UVP, the relative priorities and constraints of the ICDDR,B and USAID, and potential to attract other funding sources in the future.

#### IV. Methodology

The evaluation is scheduled for February 1991. It will be conducted in Dhaka, Bangladesh and will take an estimated three weeks, inclusive of preparation of a draft report prior to leaving Dhaka.

The evaluation team is to employ both quantitative and qualitative assessments in answering the questions outlined above. Specifically, the evaluation will be based upon the following:

A. Quantitative indicators: UVP service statistics and related project data; cross-sectional data collected from volunteer and non-volunteer clusters.

B. Direct observation of of UVP service delivery; visits to the USS areas to observe data collection and review of USS methodology.

C. Interviews with UVP staff, USAID, ICDDR,B, UNICEF, other NGOs and organizations active in urban health care.

D. Review of the following: 1988 External Review of the ICDDR,B Community Health Division; UVP Progress Reports, internal evaluation of the UVP immunization strategy, and and other internal project documents.

#### V. Team Composition, Qualifications

The evaluation team will be composed of two individuals:

1 social scientist: experience in MCH operations research in the LDC context; Ph.D. or M.D. with MPH;

1 program specialist: extensive LDC experience with community-based maternal-child health care; MPH.

#### VI. Reporting Requirements

The team will submit a draft report to USAID before departing from Dhaka. A final report is due within four weeks of receipt of USAID comments.

The report is to be no more than 50 pages in length and preceded by an executive summary which highlights evaluation findings and lists specific recommendations.

In addition to the evaluation report, the evaluation team is to complete and submit the USAID Project Evaluation Summary (PES), format for which will be provided to the team.

## ATTACHMENT II

### List of Documents Reviewed

- Bangladesh Bureau of Statistics, Preliminary Report, Population Census 1991 (July 1991).
- Government of Bangladesh, Fourth Five-Year Plan (Health and Population & Family Planning Sections), Dhaka, Planning Commission.
- Huq, M., Near Miracle in Bangladesh (Dhaka: University Press, 1991).
- ICDDR,B, Annual Report 1990.
- ICDDR,B, 1991 Work Plan (March 1991).
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- ICDDR,B, Strategic Plan for 1990-1994 (March 1991).
- Khan, A., Urban Health Care in Bangladesh: Situation Analysis, (Dhaka: Centre for Urban Studies, University of Dhaka, undated).
- Menken, J. et al, Report of the Social Science Advisory Council, ICDDR, B (July 1990).
- Silimperi, D., Urban Immunization Services: targeting the Urban Poor (Dhaka: ICDDR,B, October 1989) - paper presented at EPI, Global Advisory Group, Tokyo, 16-20 October 1989.
- Silimperi, D., Urban Volunteer Program: Flood Outreach 1988 (Dhaka: UVP, undated).
- Silimperi, D., Urban Volunteer Program, Presentation to ICDDR,B Program Committee, Board of Trustees (May 1988).
- UVP, Annual Report - 1987 (March).
- UVP, Annual Report - 1988 (March).
- UVP, Annual Report - 1989 (December).
- UVP, Biannual Report, January-June 1990.
- UVP, Biannual Report, July-December 1990.
- UVP, Presentation to Program Committee, Board of Trustees (24 November 1990).
- UVP, Urban Health Extension Project (UHEP) Proposal (10 March 1991).
- UVP, The Volunteer Profile (June 1991).

USAID/Dhaka, Cooperative Agreement (30 September 1986).

USAID/Dhaka, Cooperative Agreement, Amendment No. One (16 February 1989).

USAID/Dhaka, Cooperative Agreement, Amendment No. Two (11 October 1990).

Wright, G., Urban Volunteer Program: Transition Planning (July 1990).

ATTACHMENT III

Persons Interviewed

Name	Organization/ Address	Designation
<b>Donors</b> -----		
Claudia Ford	Asia Foundation	Population Program Manager
Taufiqur Rahman	"	Deputy Pop. Prog. Manager
James L. Ross	Ford Foundation	Program Officer
Julian Lob-levyt	O.D.A.	Program Officer-Health
Kamal Islam	UNICEF	Program Officer-Health
Philip R.S. Gowers	World Bank	MCH Specialist
Mary Kilgour	USAID	Director/USAID
William Goldman	"	Director - OPH
Alan Foose	"	Deputy Director - OPH
Charles Lerman	"	Demographer - OPH
Sheryl Keller	"	Program Officer - OPH
 <b>NGO-Government Organization (NGO)</b> -----		
Mufaweza Khan	Concerned Women for Family Planning (CWFP)	Executive Director
Sultana Khanam	Save the Children Fund(UK)	Medical Director
Jean Long	CONCERN	Health Coordinator
Rubina Sultana	BWHC	Community Supervisor
Mizanur Rahman	FPAB	Deputy Director
Abdur Rouf	FPSTC	Chief Executive
A.S.A. Masud	World Vision	Health Program Coordinator
P.K. Roy	World Vision	Asst. Health Prog. Coordinator
Paul Mishree	New Life Centre	Accountant
A.A.R.M. Faruque	Nari Maitri	Medical Officer
S.N. Mitra	Mitra & Associates	Executive Director
F. H. Abed	BRAC	Executive Director
 <b>Government of Bangladesh</b> -----		
Shamsul Islam	MOHFW	Director/PHC
Ashraf Uddin	DMC	Chief Health Officer

**Persons Interviewed (cont'd)**

<b>Name</b>	<b>Organization/ Address</b>	<b>Designation</b>
<b>ICDDR,B Central Office</b> -----		
Demissie Habtee	ICDDR,B	Director
Zahid Hossain	ICDDR,B/CHD	Associate Scientist/CHD
A.K.M. Siddique	ICDDR,B/CHD	Senior Scientist/CHD
Rushikesh Maru	ICDDR,B/MCH-FP Extension	Operation Research Scientist
John G. Haaga	ICDDR,B/MCH-FP Extension	Director
Graham Wright	ICDDR,B	Consultant
Ngudup Paljor	ICDDR,B/UVF	Director
Abdullah H. Baqui	ICDDR,B/UVF	Head, Research Branch
F. Anjuman Ara	ICDDR,B/UVF	Head, Service Branch
S. Mizan Siddiqi	ICDDR,B/UVF	Research Investigator
Selina Amin	ICDDR,B/UVF	Research Investigator
Jatindra N. Sarker	ICDDR,B/UVF	Manager, Project Office
Jahanara Khatun	ICDDR,B/UVF	CHC/WEPP
Muhammad Ishaque	ICDDR,B/UVF	WEPP Assistant

**WOMEN EMPOWERMENT PILOT PROJECT**

<u><b>Name</b></u>	<u><b>Designation</b></u>
Ms. Rabeya Begum	Production Supervisor
Ms. Hena Begum	Production Supervisor
Ms. Luthfunnessa	Production Supervisor
Ms. Bilkish Khan	Community Organizer
Ms. Salima Khurshid	Community Organizer
Ms. Farida Islam	Community Organizer
Ms. Saida Akhter	Community Organizer
Ms. Masuma Akhter	Community Organizer
Ms. Rahima Khatun	Community Organizer
Ms. Shamima Bdgum	Community Organizer
Ms. Nanda Das	Community Organizer

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## UVP SUTRAPUR FIELD OFFICE

<u>Name</u>	<u>Designation</u>
Ms. Mahmuda Khatun	Community Health Coordinator
Ms. Sufia Nurani	Field Research Officer
Ms. Naseema Kareem	Field Research Officer
Ms. Kanij Fatema	Interviewer
Ms. Momtaz Begum	Interviewer
Ms. Kalpana Rani Ghosh	Interviewer
Ms. Nasrin Akhter	Interviewer
Ms. Meherun Nessa	Interviewer
Ms. Mahmuda Faruque	Interviewer
Ms. Nasima Khanam	Interviewer
Ms. Meghla Islam	Trainer
Ms. Sultana Begum	Class Teacher
Ms. Maksuda Begum	Field Supervisor
Ms. Nasima Begum	Field Supervisor
Ms. Rashida Begum	Field Supervisor
Ms. Momtaz Begum	Field Supervisor
Ms. Nurjahan Begum	Field Supervisor
Ms. Rina Akhter	Field Supervisor
Ms. Chhaya Rani	Field Supervisor
Ms. Arju Begum	Field Supervisor
Ms. Rahima Haque	Field Supervisor
Ms. Mahmuda Zaman	Field Supervisor
Ms. Alikjan Begum	Volunteer
Ms. Momtaz Begum	Volunteer
Ms. Nilu Sarkar	Volunteer
Ms. Laksmi Bala	Volunteer

## UVP LALBAGH FIELD OFFICE

<u>Name</u>	<u>Designation</u>
Ms. Khodeza Khatun	Community Health Coordinator
Ms. Laila Bilkis Banu	Field Research Officer
Ms. Nilufar Begum	Field Research Officer
Ms. Hosneara Begum	Interviewer
Ms. Jaeda Khanam	Interviewer
Ms. Nazia Zaman	Interviewer
Ms. Shahin Akhter	Interviewer
Ms. Saida Nilufa	Interviewer
Ms. Shamim ara Jahan	Trainer
Ms. Caroline Datta	Aide Nurse
Ms. Rokeya Begum	Field Supervisor
Ms. Rowshan Ara Jesmin	Field Supervisor
Ms. Hiron Nessa	Field Supervisor
Ms. Khaleda Khanam	Field Supervisor
Ms. Baby Begum	Volunteer
Ms. Shakila Akhtar	Volunteer
Ms. Abeda Sultana	Volunteer
Ms. Taslima Begum	Volunteer
Ms. Maleka Begum	Volunteer
Ms. Qulsum Begum	Volunteer
Ms. Laila Banu	Volunteer
Ms. Zobeda Begum	Volunteer
Ms. Rukhsana Begum	Volunteer

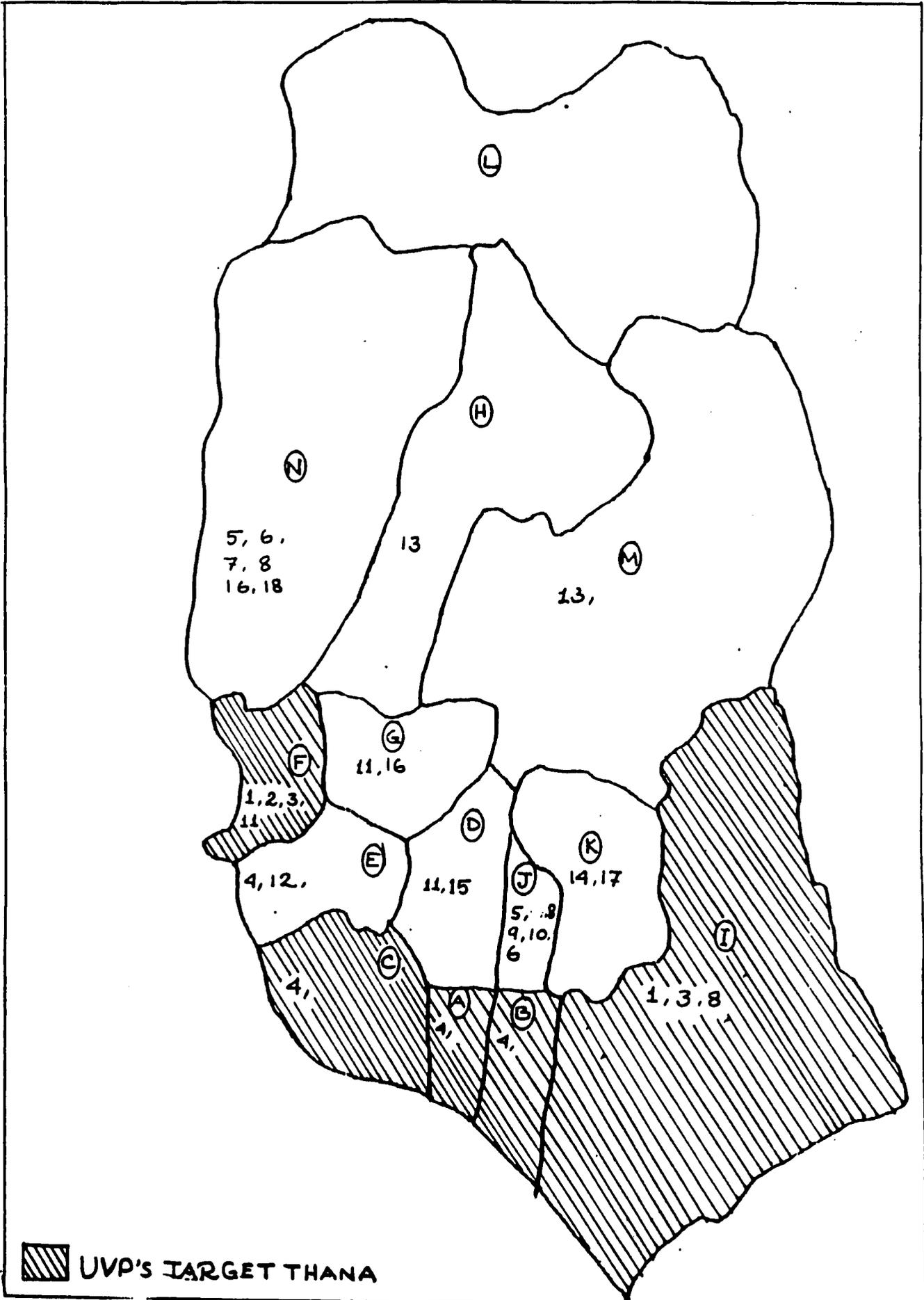
**UVP MOHAMMADPUR FIELD OFFICE**

<u>Name</u>	<u>Designation</u>
Ms. Hazera Nazrul	Community Health Coordinator
Ms. Shahida Khanam	Field Research Officer
Ms. Raquiba A. Jahan	Field Research Officer
Ms. Sanjida Nasrin	Field Research Officer
Ms. Suraiya Parvin	Interviewer
Ms. Florence Gomez	Interviewer
Ms. Umme Salma	Interviewer
Ms. Rehana Khanam	Interviewer
Ms. Monowara Begum	Interviewer
Ms. Akhtara Begum	Interviewer
Ms. Afsari Begum	Interviewer
Ms. Rafia Hasina	Interviewer
Ms. Shahina Momtaz	Interviewer
Ms. Monowar jahan	Trainer
Ms. Ferdousi Begum	Class Teacher
Ms. Anowara Begum	Field Supervisor
Ms. Aleya Begum	Field Supervisor
Ms. Ferdousi Begum	Field Supervisor
Ms. Farida Begum	Field Supervisor
Ms. Ozufa Begum	Volunteer
Ms. Noor Jahan	Volunteer
Ms. Tanzia Begum	Volunteer
Ms. Monowara Begum	Volunteer
Ms. Asma Khatun	Volunteer
Ms. Anowara Begum	Volunteer

ATTACHMENT IV

Dhaka Map

DHAKA METROPOLITAN AREA : NGO ACTIVITY



REFERENCE:

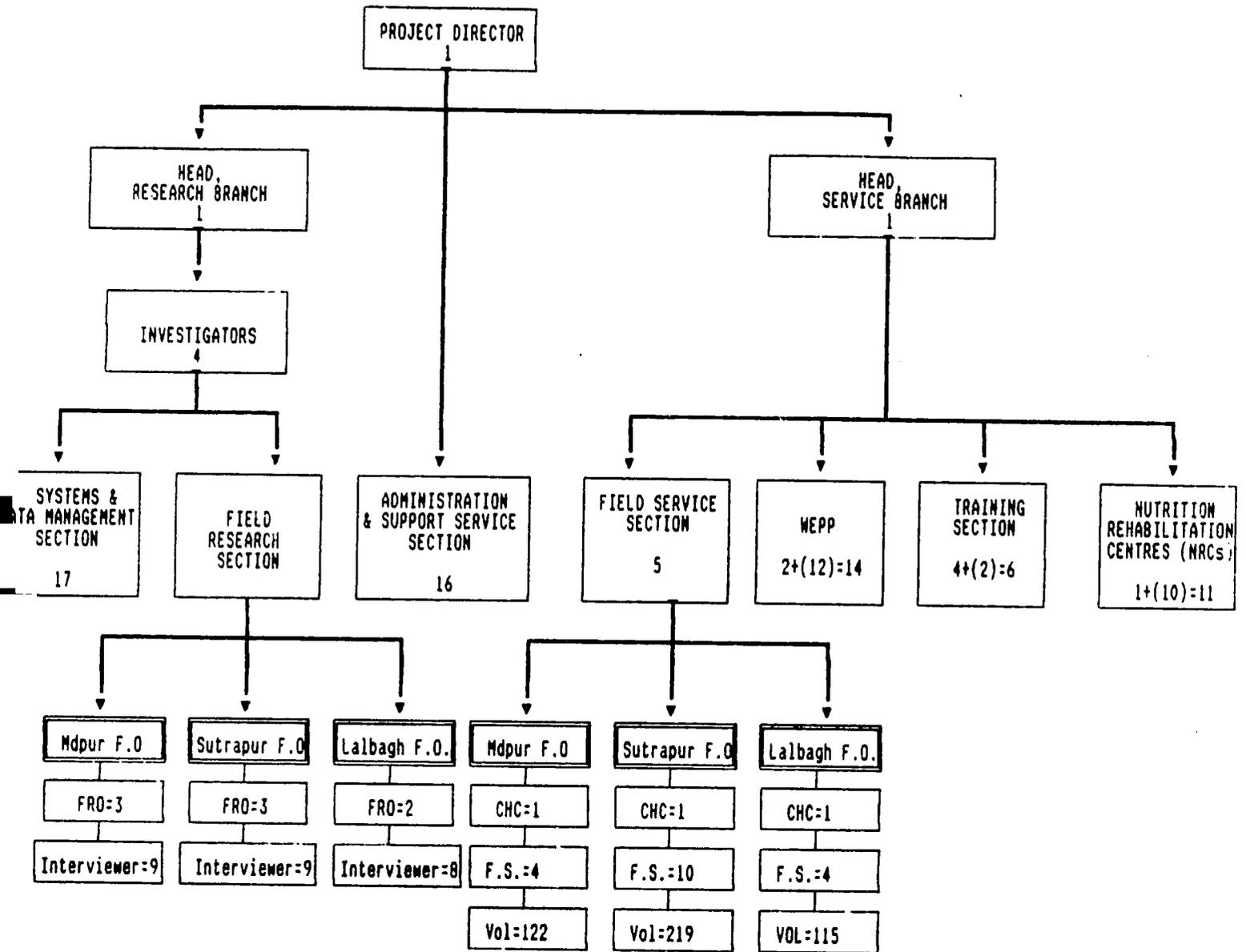
THANA	<u>Name of NGO</u>
A. KOTWALI	1. WORLD VISION
B. SUTRAPUR	2. NEW LIFE CENTRE
C. LALBAGH	3. FAMILY PLANNING SERVICES & TRAINING CENTRE
D. RAMNA	4. CONCERNED WOMEN FOR FAMILY PLANNING
E. DHANMONDI	5. BANGLADESH WOMEN'S HEALTH COALITION
F. MOHAMMADPUR	6. RADDA BARNEN
G. TEJGAON	7. GONO SHAJJO SANGSTA
H. CANTONMENT	8. CONCERN
I. DEMRA	9. NARI MAITRI
J. MOTIJHEEL	10. ABA KHAN COMMUNITY HEALTH PROJECT
K. SABUJBAGH	11. COMMUNITY HEALTH CARE PROJECT
L. UTTARA	12. MANOBIK SHAJJO SANGSTA
M. GULSHAN	13. UNITY THROUGH POPULATION SERVICES
N. MIRPUR	14. FAMILY PLANNING ASSOCIATION OF BANGLADESH
<u>TOTAL</u>	15. DHAKKIN KAMALAPUR MOHILA SANGSTA (VIT-A)
	16. JUBA JIBAN ADVANCEMENT COMMITTEE (VIT-A)
	17. NANDIPARA SAMAJ KALYAN MOHILA SAMITY (VIT-A)
	18. ASSOCIATION FOR FAMILY DEVELOPMENT (VIT-A)

ATTACHMENT V

UVP Organization Chart

August, 1991

**Urban Volunteer Program (UVP)**



\* Number in brackets are project related personnel who are not included in the regular ICDDR,B category; many of them have been promoted from the ranks of the community volunteers.

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## UVP General Volunteer Job Description

All volunteer work is targeted at slum mothers and children under 5 years of age.

1. To provide preventive health education and basic primary health education to bustee mothers in the areas of diarrhoeal disease, childhood immunizable diseases, nutrition, and family planning .

Specific topics to include:

- a) Personal hygiene, water and waste sanitation, and food hygiene. (as taught by the previous UVP Water & Sanitation Project)
- b) Causes of diarrheal disease and methods of prevention.
- c) Recognition of serious signs and symptoms of diarrheal disease (dehydration), and appropriate home treatment including home preparation and use of ORS, lobon-gur, and cereal-based ORS.
- d) Basic nutrition concepts regarding overall nutritional habits, weaning foods, breast-feeding.
- e) Recognition of vitamin deficiencies (especially vitamin A deficiency) and malnourishment.
- f) Causes of the malnutrition and vitamin deficiencies and methods of prevention.
- g) Basic information about the 6 immunizable diseases and where to get immunizations.
- h) Family planning information and where to get services.
- i) Skin hygiene and how to use neem soap.

2. To provide preventive health education to bustee children in the same general areas of health care as noted for mothers.

Specific tasks to include:

- a) Personal hygiene, water and waste sanitation, and food hygiene.
- b) Causes of diarrheal disease and methods of prevention.

- c) Basic nutrition concepts regarding overall nutritional habits, weaning foods, breast-feeding.
- d) Causes of the malnutrition and vitamin deficiencies and methods of prevention.
- e) Basic information about the 6 immunizable diseases and where to get immunizations.
- f) Skin hygiene and how to use neem soap.

3. To provide the following selective interventions:

- a) Distribute ORS and teach lobon-gur preparation to those with diarrheal disease.
- b) Distribute vitamin A capsules to those with signs symptoms of vitamin A deficiency.
- c) Distribute neem soap to those with complaints or signs consistent with scabies or other minor skin irritations.
- d) Distribute vegetable seeds to those families with malnourished or vitamin deficient members.

4. To motivate and make referrals to appropriate medical facilities for the following:

- a) Immunizations for children < 2 years of age and women.
- b) Family planning.
- c) Malnutrition (to UVP's community-based Nutrition Rehabilitation Centers or other appropriate facilities for nutritional problems.)
- d) Diarrhoeal disease (to UVP's community-based Diarrhoea Centers or other appropriate facilities for severe diarrhoeal disease.)
- e) To make general medical referrals to intermediate or tertiary care centers as appropriate and necessary.

5. To foster improved community awareness of preventive health and selective child survival interventions for the catchment families which the volunteer serves.



Age												
Below 1 year of age												
1 to 5 years												
More than 5 years												

**INFORMATION ON THE VOLUNTEER**

Volunteer's signature: ----- Vol. code No. -----  
 Thana : ----- Thana code No. -----  
 Name of the ward : ----- Ward code No: -----  
 Starting date for filling this calendar (Date/Month/Year): -----  
 How many packets of ORS in hand: -----  
 How many packets of ORS received from FS. today: -----

**INFORMATION REGARDING VOLUNTEER'S SERVICE**

How many received active service: -----  
 How many received passive service: -----  
 How many from catchment area: -----  
 How many outside the catchment area: -----

Signature of the field supervisor: ----- Code No: ---  
 Date of calendar collection (Date/Month/Year): -----

## ATTACHMENT VIII

### Research Goals and Expected Outputs - UVP CA Amendment II

#### Goals

- A) To evaluate the effectiveness of community-based volunteers in providing preventive and promotive health services to urban slum population; and to identify from this experience implications for replication of the volunteer model.
- B) To develop a sustainable urban slum field infrastructure to conduct ongoing operations, demographic and epidemiological research for the purpose of determining urban health and family planning priorities and field-testing urban community based MCH-FP interventions.
- C) To serve as a technical resource to agencies active in urban health and family planning, including NGOs, multilaterals and Government agencies.

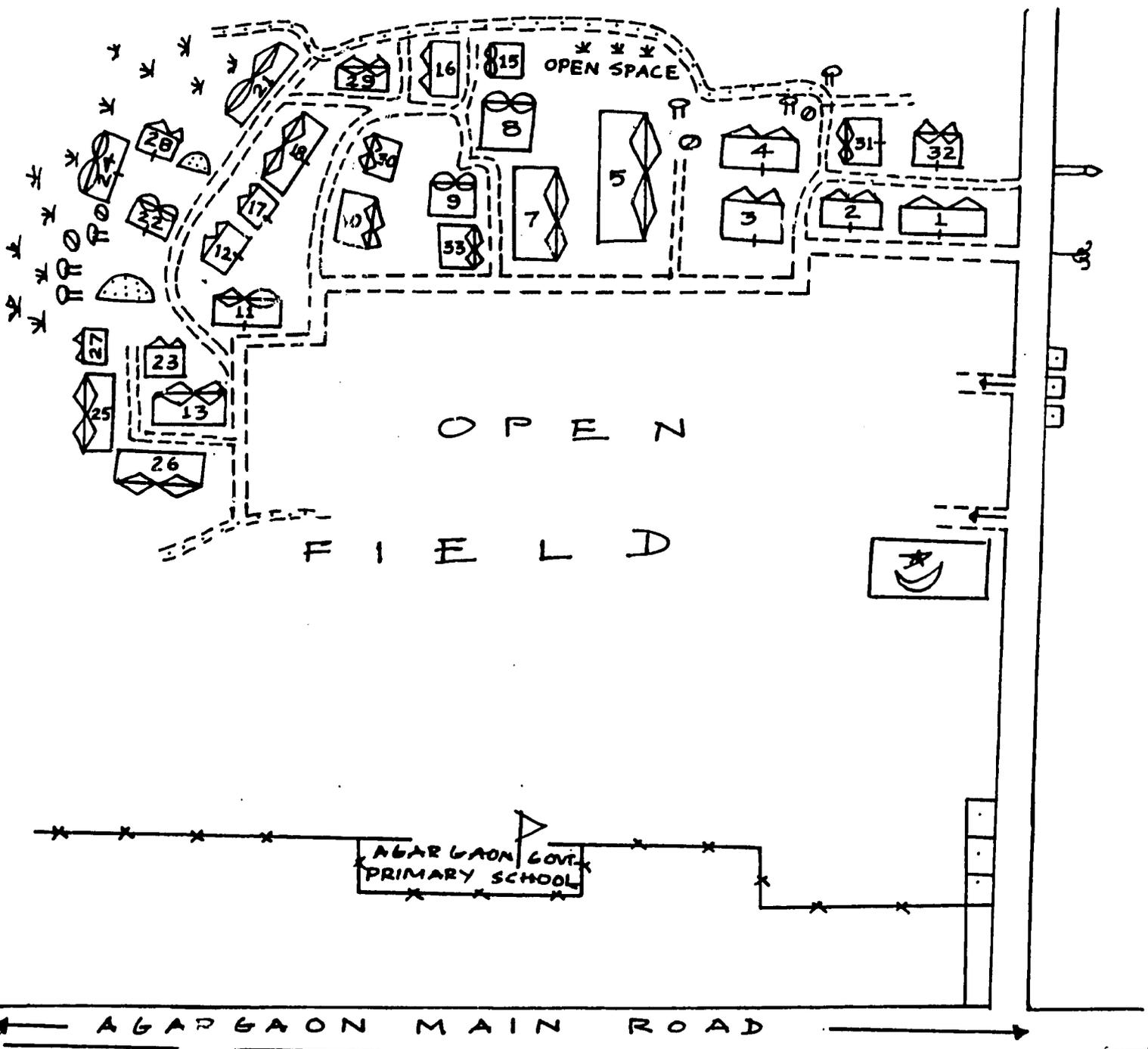
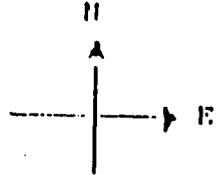
#### Expected Outputs

- A. Development of experimental and control research areas within the slums of Dhaka, with complete mapping/census of these areas, baseline socio-demographic, health and family planning indicators, and a system for periodic data collection to monitor changes.
- B. Development and field-testing of a model for the use of volunteers in the delivery of MCH-FP services to the urban poor, including: volunteer selection criteria; volunteer training materials, techniques and curricula; modalities of supervision; record-keeping and service statistic systems suitable for use by illiterate volunteers; volunteer to client ratios; volunteer to supervisor ratios.
- C. Establishment of quantifiable measures of service delivery: number/ages of service recipients; hours/week worked by volunteers; interventions delivered.
- D. Collection of the following data from matched volunteer and non-volunteer areas to be used in evaluating program effectiveness: prevalence of diarrheal disease, prevalence of scabies and other skin infections, knowledge of diarrheal disease and treatment (ORS), immunization coverage, contraceptive prevalence rate, prevalence of nightblindness, receipt of vitamin A capsules, knowledge and practice regarding hygiene and nutrition, and use of clinics and other static health facilities.
- E. Dissemination of relevant findings to other agencies (NGOs, Government, other donors) active in urban health care. To this end, the project will sponsor at least one major health workshop before the end of the project period.

ATTACHMENT IX

USS CLUSTER MAP

THANA : MDHAMMADPUR      DOSTEE I : -1 P.i  
STRATUM : 05      CLUSTER : 04      DATE : 05-08-91  
CLUSTER ADDRESS : AGARGAON JAM-E-MOSQUE  
MAPPER : NUSHA YAMINA CHOUDHURY



ATTACHMENT X

Printing date : 24/04/91

URBAN VOLUNTEER PROGRAM, ICDDR,B  
URBAN SURVEILLANCE SYSTEM (USS)

Stratum #: Cluster #:  
Structure #: Household #:

Head of Household : ( )

Religion : New Religion :  
Round # : EV\_Date :

Baseline demographic info	History of Events	Resp. S_No: _____ Rnd.#: _____ DOV: _____					Resp. S_No: _____ Rnd.#: _____ DOV: _____					Resp. S_No: _____ Rnd.#: _____ DOV: _____					Resp. S_No: _____ Rnd.#: _____ DOV: _____								
		P	EV	EV_Date	#1	#2	#3	P	EV	EV_Date	#1	#2	#3	P	EV	EV_Date	#1	#2	#3	P	EV	EV_Date	#1	#2	#3
		S_No: P_no: Name: DOB: Sex: Rel_HH: M_S_No: P_S_No: H_S_No: M_Stat: PBP: PBP_DT: B_Plc: Y_Plc: Educ: Ocup: E_Typ: E_DT:																							
S_No: P_no: Name: DOB: Sex: Rel_HH: M_S_No: P_S_No: H_S_No: M_Stat: PBP: PBP_DT: B_Plc: Y_Plc: Educ: Ocup: E_Typ: E_DT:																									
S_No: P_no: Name: DOB: Sex: Rel_HH: M_S_No: P_S_No: H_S_No: M_Stat: PBP: PBP_DT: B_Plc: Y_Plc: Educ: Ocup: E_Typ: E_DT:																									
S_No: P_no: Name: DOB: Sex: Rel_HH: M_S_No: P_S_No: H_S_No: M_Stat: PBP: PBP_DT: B_Plc: Y_Plc: Educ: Ocup: E_Typ: E_DT:																									

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URBAN VOLUNTEER PROGRAM

URBAN SURVEILLANCE SYSTEM  
SOCIO-ECONOMIC STATUS

DATE :      
(ddmmyy)

INTERVIEWER:

STRATUM #  CLUSTER #  STRUCTURE #  HOUSEHOLD #  HH SL.#

1. OCCUPANCY			2. OTHER LAND OWNERSHIP			3. CONSTRUCTION Type Roof Wall			4. # ROOMS <input type="text"/>		6. ELECTRICITY	
House	Land		City	Vill		Jhupri	1	1	5. ADULT # /ROOM <input type="text"/>	No	0	
Owned 1	Self	1	No 0	0	Jhupri	1	1	Yes 1				
Rented 2	Railway	2	Yes 1	1	Bamboo	2	2	7. LEGAL	No	0		
Other 7	Govt.	3			Wood	3	3		Yes 1			
	Private	4			Tin	4	4		No 0			
	Other	7			Pucca	5	5		Yes 1			
					Other	7	7					

8. ASSETS TV Radio Watch Cycle Almirah Table Khat R'shaw Poultry Livestock

No	0	0	0	0	0	0	0	0	0	0	0
Yes	1	1	1	1	1	1	1	1	1	1	1
										NO.	NO.

9. WATER Source Drinking Cooking			10. LATRINE Type Adult Children (>= 5yrs) (<5yrs)				11. FUEL Type	
Tap	1	1	Connected with sewerage	1	1	Gas	1	
Tubewell/pump	2	2	With septic tank	2	2	Kerosene	2	
Pond/river	3	3	Pit (has ring)	3	3	Firewood	3	
Well	4	4	Dughole	4	4	Cow-dung	4	
Other	7	7	Hanging (open)	5	5	Garbage/	5	
			No fixed site	6	6	Misc. scraps		
			Others	7	7	Other	7	
			No child <5 yrs	-	6			
Shared by:			Shared by:					
Family members	1	1	Family members	1	1			
Community people	2	2	Community people	2	2			
Source outside community	3	3						
			# families sharing	<input type="text"/>	<input type="text"/>			
			# latrine for multiple latrine sites	<input type="text"/>	<input type="text"/>			

12. INCOME, EXPENDITURES AND SAVINGS

Expenditures :	Borrow :
a. Housing : _____ (tk/mon)	Amount borrowed during last month : _____ (tk)
b. Food : _____ (tk/day)	Is this a typical or usual amount 0 N 1 Y
c. Clothing : _____ (tk/yr)	Saving :
d. Education : _____ (tk/mon)	Amount saved during last month : _____ (tk)
e. Health care : _____ (tk/yr)	Is this a typical or usual amount 0 N 1 Y
f. Other : _____ (tk/mon)	Sold :
	Sold any fixed asset in last month: 0 N 1 Y
	Amount received for sale : _____ (tk)

Income: Average total household income: \_\_\_\_\_ (tk/day) \_\_\_\_\_ (tk/mon)

Is this a typical or usual income for your household 0 N 1 Y

ATTACHMENT XI

DATA CODING STRUCTURE  
AND CODE PLAN

**US EVENT CODING STRUCTURE**

P = Presence of individual

0 = No  
1 = Yes

<u>Event Type(EV)</u>	<u>Date</u>	<u># 1</u>	<u># 2</u>	<u># 3</u>	<u>Event Type</u>	<u>Date</u>	<u># 1</u>	<u># 2</u>					
<b>1. AMENDMENTS</b>					<b>6. EDUCATION AND OCCUPATION CHANGE</b>								
Household correction	11	DOV	-	-	-	Change in education	61	DEV	Years of schooling	-			
Member correction	12	DOV	-	-	-	Change in occupation	62	DEV	Occupation	-			
<b>2. NEW ENTRIES INTO HOUSEHOLD</b>					<b>7. EXIT FROM THE HOUSEHOLD</b>								
Baseline enumeration	20	DEV	-	-	-	Migration out	71	DEV	Destination(#7)	Reason(#6)			
Member inclusion	21	DEV	-	-	-	Internal migration out	72	DEV	-	Reason(#6)			
Birth	22	DEV	-	-	-	Split out	73	DEV	-	-			
Immigration	23	DEV	Source(#7)	Reason(#6)	-	Death	74	DEV	Place(#11)	Doctor(#12)			
Internal migration in	24	DEV	-	Reason(#6)	-	Member exclusion	76	DOV	-	-			
Split-in	25	DEV	-	-	-	<b>8. CHANGE IN RELATIONSHIPS</b>							
Remigrate-in	26	DEV	Source(#7)	Reason(#6)	-	Mother's sl.#	81	DEV	M_S_No.	-			
<b>3. MARITAL STATUS CHANGE</b>					Father's sl.#					82	DEV	F_S_No.	-
Never married	30	-	-	-	-	Husband's sl.#	83	DEV	H_S_No.	-			
Married	31	DEV	-	-	-	Relation to head	84	DEV	Rel_RH(#3)	-			
Divorced	32	DEV	-	-	-								
Widowed	33	DEV	-	-	-								
Separated	34	DEV	-	-	-								
Deserted	35	DEV	-	-	-								
Remission	36	DEV	-	-	-								
Polygamously married	37	DEV	-	-	-								
<b>4. PREGNANCY STATUS CHANGE</b>													
Not pregnant	40	DEV	-	-	-								
Pregnancy occurrence	41	DEV	-	-	-								
Pregnancy outcome	42	DEV	Result(#8)	Place(#9)	Attendant(#10)	Note: (#s shown beside Data #1, #2, #3 in braces indicate the sl. # of US registration and							
Unknown	49	DEV	-	-	-								
<b>5. BREASTFEED STATUS CHANGE</b>													
Breastmilk only	50	DEV	-	-	-								
Breastmilk + water(no bottle)	51	DEV	-	-	-								
Breastmilk+liquid (no bottle)	52	DEV	-	-	-								
Breastmilk+bottle feeding	53	DEV	-	-	-								
Breastmilk+food (semi solid/ solid)	54	DEV	-	-	-								
Breastmilk+food+bottle feeding	55	DEV	-	-	-								
Bottle feeding+food	56	DEV	-	-	-								
Bottle feeding only	57	DEV	-	-	-								
Food only	58	DEV	-	-	-								
Unknown	59	DEV	-	-	-								

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UCS Registration and Event Codes .

1. Religion

- 1----Islam
- 2----Hindu
- 3----Other

2. Sex

- 1----Male
- 2----Female

3. Relation to Head:

- 00----No relation to head
- 01----Self: this person is the head
- 02----Spouse of head
- 03----Son or daughter of head
- 04----Mother or Father of head
- 05----Brother or sister of head
- 06----Brother or sister of parent of head
- 07----Grandfather or grandmother of head
- 08----Grandson of or granddaughter of head
- 09----Brother or sister of spouse of head
- 10----Mother or father of spouse of head
- 11----Step-father or step-mother of head
- 12----Step-son or step-daughter of head
- 13----Adopted son or daughter of head
- 77----All other relationships not listed above
- 99----Unknown

4. Marital Status:

- 30----Never married
- 31----Married (active marital relationship with spouse)
- 32----Divorced (formally divorced from spouse - no marital relationship with any spouse)
- 33----Widowed (the only spouse died - no marital relationship with any spouse)
- 34----Separated (no active marital relationship with any spouse but has communication with spouse for last two months)
- 35----Deserted (no active marital relationship with any spouse and has no communication with spouse for last two months)
- 36----Reunion (active marital relationship after remaining separated or deserted)
- 37----Polygamously married (a male person has more than one active marital relationship and the wives live in the same household)

5. Birth Place/Place of Residence one year back:

- 1----Same slum (bustee) as now living in
- 2----Outside current slum (bustee) but in another slum in Dhaka city.
- 3----In Dhaka city but not in a slum
- 4----In an urban area other than Dhaka city
- 5----In a rural area
- 6----Outside Bangladesh
- 9----Unknown

6. Reasons for Migration:

**Economic reasons**

- 11----Economic crisis: loss of house/land/employment
- 12----Seek job/earning opportunities
- 13----Transfer of job (for those already employed)
- 14----Move near job site (for the new employments)
- 15----Other job-related reasons (business, proprietorship, etc.)

**Environmental reasons**

- 21----Forced to vacate residence due to flood
- 22----Forced to vacate residence due to river erosion
- 23----Forced to vacate residence due to other natural crisis/environmental reasons

**Personal/family reasons**

- 31----Marriage
- 32----Divorce
- 33----Widowhood
- 34----Separation/being deserted
- 36----Reunion
- 37----Dependent
- 38----Study
- 39----Medical treatment
- 40----Join family/return home
- 41----Adoption
- 42----Family feud/split
- 43----Give birth
- 44----Vagabond/floating migrant

**Sociopolitical reasons**

- 51----Social factors (social adjustment problems, better living, etc.)
- 52----Brought by relatives
- 53----Forced to vacate the residence due to displacement
- 54----Communal riots
- 77----Other reasons not listed
- 99----Unknown

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**7. Source/Destination of Migrants:**

- 1----Same slum as now living in
- 2----Outside current slum but in another slum in Dhaka city
- 3----In Dhaka city but not in a slum
- 4----In an urban area other than Dhaka city
- 5----In a rural area
- 6----Outside Bangladesh
- 9----Unknown

**8. Result of Pregnancy Outcome:**

- 01----Induced miscarriage
- 02----Spontaneous miscarriage
- 03----Single still birth
- 04----Twin still birth
- 05----Triple still birth
- 06----Single live birth
- 07----Twin birth, one live and other stillborn
- 08----Triple birth, one live and others stillborn
- 09----Twin birth, both live
- 10----Triple birth, two live and one stillborn
- 11----Triple birth, all live

**9. Place of Pregnancy Outcome:**

- 1----House, own
- 2----House, parents', brothers', sisters'
- 3----House, all others'
- 4----Maternity center/health clinic/hospital
- 7----Other places
- 9----No information

**10. Attendant of Pregnancy Outcome:**

- 0----No attendant
- 1----Untrained attendant - relatives, neighbors, etc.
- 2----Untrained TBA
- 3----Trained TBA
- 4----Paramedic/midwife/nurse
- 5----Medical doctor (physician)
- 7----Others
- 9----Unknown

**11. Place of Death:**

- 1----House, own
- 2----House, parents', brothers', sisters'
- 3----House, all others'
- 4----Treatment center/health clinic/hospital
- 7----Other places
- 9----No information

**12. Doctor Attending Death:**

- 0----Not consulted
- 1----Licensed allopath (Medical physician/paramedic)
- 2----Polli Chikitsok (trained medical practitioner)
- 3----Quack allopath (uncertified allopath physician)
- 4----Homeopath
- 5----Kabiraj/ayurvedi
- 7----Others
- 9----Unknown







## ATTACHMENT XV

### Women's Empowerment Pilot Project (WEPP)

The WEPP was funded by The Ford Foundation in 1990 as a 16-month study to determine the impact of various empowerment interventions on the lives of slum women. It was carried out under the UVP.

Since its inception in 1981, the UVP has been trying to assist the volunteers with some income generating opportunities. Past assistance efforts include:

Bangladesh Volunteer Women's Association (BVWA): UVP volunteers formed this group in 1985. It was registered with the Women's Affairs Directorate (WAD) of the Government in 1986. Approximately 300 volunteers and 37 FSS became members. One Welfare Fund worth Taka 50,000 was created from WAD contributions and interest-free loans of Taka 1,000 each was given to 50 volunteers for income generating activity (IGA). The BVWA was required by the WAD to distribute vitamin A and vegetable seeds. Vitamin A was never distributed due to a lack of supply. In a review conducted in 1989, many loan recipients were found to be defaulters. As a result, strict regulations were introduced and the amount of a loan was increased to Taka 2,000. The loan fund was discontinued in 1990 with a balance of Taka 38,000.

Catastrophe Loan Fund (CLF): This fund, worth Taka 1,50,000, was created in 1987 from a French donor's contribution, and loans of Taka 500 each were given to 340 distressed volunteers. The CLF was closed in December 1990, with a balance of Taka 1,17,000.

Volunteer Welfare Fund: This fund, with a value of Taka 2,50,000, was created in 1988 with visitors' contributions. During the UVP contraction in October 1990, each of the 660 deactivated volunteers was given a grant of Taka 500.

Employment: Every year since 1984, 50 to 75 volunteers were employed in the ICDDR,B hospital as trainees at a salary of Taka 1,000 per month with other benefits such as meals, conveyance and uniforms. This program was discontinued in July 1991 when an evaluation found that the volunteers were merely being used as low cost labor and were receiving no training or educational benefit. However, the Hospital discovered the value of the volunteers as laborers and continued to employ 51 of them as regular employees. Another, temporary employment opportunity for the volunteers exists in the NRCs which hires five volunteers (one permanent supervisor and four temporary helpers) at each facility every year. These volunteers earn a monthly salary of between Taka 600 and 1200 plus other benefits. All hospital and NRC trainees are selected on the basis written and verbal tests.

When USAID/Dhaka started funding the UVP in 1986, one of the objectives of the CA was to empower the volunteers by means of skill development, literacy training and income generating opportunities. The women's empowerment program has been conducted in two phases:

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Phase I: In 1988, a consultant was asked to identify some empowerment measures, and in June 1989, a facilitator was hired to implement those measures. For the empowerment activities, women with monthly family incomes of less than Taka 2,000 and women from female-headed households were given preference.

In the skills development aspect, 27 women from Mohammadpur area were given four months of training by IDEAS International in handicrafts skills. In exchange, the ICDDR,B trained IDEAS workers on health education. IDEAS also provided marketing support for one year. A production center was established, and volunteers were required to work for 8 hours a day, 6 days a week. But the volunteers failed to earn the standard Taka 600 a month over the period of July 1989 to June 1990.

In the literacy training component of the empowerment process 90 volunteers were selected from three target thanas to participate. This was organized between September 1989 to March 1990.

Finally, 128 volunteers received training in the legal system, family law, property and inheritance, contract and landlord-tenant relationships, citizens rights, mediation and legal procedures from Ain-O-Shalish Kendra (ASK) between February and October 1990. The volunteers were not paid for any of these trainings, although they did receive a nominal conveyance fee.

Phase II: In June 1990, WEPP, a 16-month pilot project, was initiated within the UVP with funding from The Ford Foundation. The primary objective of WEPP was to empower the volunteers through group formation. The UVP had learned from previous experience that such efforts failed without strong group support. It was decided that one group will consist of 15 participants with three equal subgroups under it. There would be 3 subgroup leaders and one group leader selected by group members. Since not enough volunteers were found in one area to form a group of 15, it was decided to include the catchment mothers. WEPP also focused on adolescent girls, teaching them about reproductive health.

Thirteen WEPP staff were recruited, including one coordinator and one assistant to work in the UVP office. In the field, nine community organizers or COs (seven volunteers), two production supervisors (one volunteer) to train and monitor the groups. In addition, nine FSS monitor the training program.

WEPP consists of three components - training, production and research. The COs are given two months of training and sent to field. They help form groups consisting of 15 participants. Each CO forms a group and trains them for two months on literacy, legal rights, savings and IGA. An additional one month of training is given to adolescent girls on reproductive health. Lessons are conducted for two hours every day, six days a week.

From these trained groups, six members are selected and given four months of handicraft training by IDEAS. IDEAS provides raw materials and equipments and pays wages based on piece rates. The production workers work for eight hours a day, six days a week.

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The WEPP research has several elements to it. Baseline information on socioeconomic status (SES) and knowledge-attitude- practice (KAP) were collected at the beginning of each group training. A Reproductive Health Curriculum was designed on the basis of a focus group study of urban poor adolescent girls in July 1990. A study on the nature and incidence of violence in urban slums was conducted in 1991. The last two studies were conducted by a local consulting group.

The information on WEPP covering June 1990 to April 1991 shows the following outcome:

	Women (21-35)	Girls (12-20)
Target	540	180
Trained (including dropout)	388 (72%)	140 (78%)
No. of Dropouts	49	16
No. of Current Participants	339	124
No. All Correct Answers - Pre-test	51	36
- Post-test	337	104
Percentage of participants with increased knowledge	90.2	91.2
Currently training	100	50

The saving groups generated the following amounts:

- Mohammadpur - 117 participants	Tk. 9,290 (79 per person)
- Lalbagh - 64 "	Tk. 5,325 (83 " )
- Sutrapur - 158 "	Tk. 5,850 (37 " )

Thirty participants were trained in handicrafts - 22 of them are working in two production centers. Their average income is Taka 1,114 per month. In Mohammadpur, they have generated a savings of Taka 2,200 (100 per person).

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