

World Vision Relief & Development, Inc.

WVRD/Nigeria FY92
MIDTERM EVALUATION REPORT
OGBOMOSO CHILD SURVIVAL PROJECT
December 30, 1994

Grant No.: FAO-0500-A-00-2042-00

Beginning Date: August 31, 1992
Ending Date: September 30, 1995

Submitted to:

PVO Child Survival Grant Program
Office of Private and Voluntary Cooperation
Bureau for Food for Peace and Voluntary Assistance
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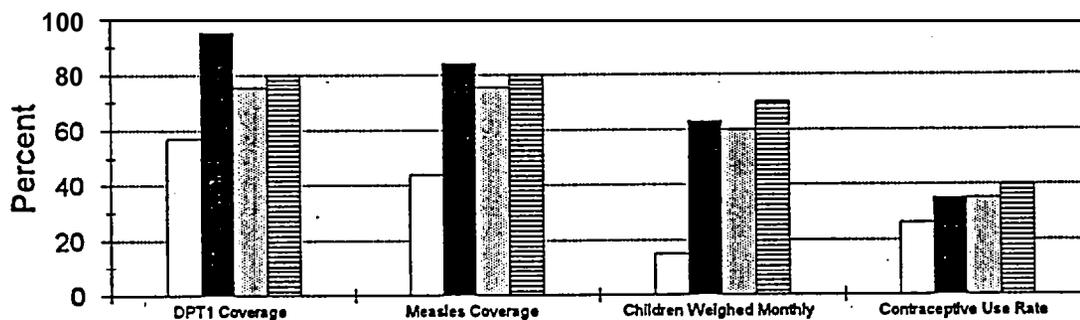
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Ogbomosho Child Survival Project

Mid-Term Evaluation; December 5-16, 1994
Orire and Ogo Oluwa **LGAs**, Oyo State Nigeria

Achievements Versus Objectives

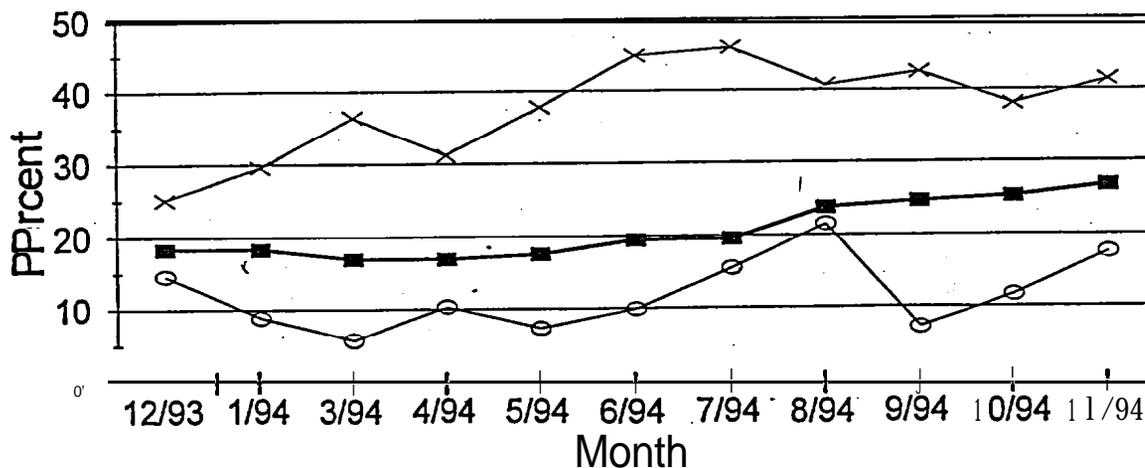
Ogbomoso South Child Survival Project



Baseline
 11/94 Achievement
 1994 Benchmark
 1995 Target

Growth Monitoring, Children 0-23 Mos.

Ogbomoso South CSP, Orire LGA



* % Weighed ⊖ % Losing Weight ■ % Malnourished

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Evaluation Report

This report was compiled by Evaluation Team Members under the general guidance of the Team Leader. Debriefings were held with the World Vision Project Staff in Ogbomosho, the Management Committee of the Baptist Medical Center, and USAID Lagos. The report was finalized in Lagos on December 16, 1994, and draft copies provided to the Project Manager, the team members, and USAID.

**Stanley O. Foster MD, MPH
Team Leader**

Acknowledgement

The evaluation team thanks the Ogbomosho project staff, their village based colleagues, and others who shared their time and perspectives. In a country where most health services have collapsed, you are providing quality services to the most needy. You have earned our respect and admiration. It is our sincere hope that this report will open new ways for you to increase your effectiveness.

**Thanks and God Bless You All
Hezekiah, Stan, Daniel, Susan, and Tom**

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Acronyms

BMC	Baptist Medical Center, Ogbomosho
CDC	Community Development Committee
CS-VIII	USAID's Child Survival Grant Program - Cycle 8
DIP	Detailed Implementation Plan for Child Survival Grant
DPT	Diphtheria, Pertussis, Tetanus Vaccine
EOP	End of Project
EPI	Expanded Program on Immunization
EPIInfo	Software Package for Data Analysis
GM	Growth Monitoring
GOBI	Growth Monitoring, Oral Rehydration, Breastfeeding, & Immunization
HIS	Health Information Systems
IGA	Income Generating Activity
LGA	Local Government Area
MOH	Ministry of Health
NANGO	National Association of Non-Governmental Organizations in Health
NCCCD	Nigerian Combatting Childhood Communicable Disease Project
NNT	Neonatal Tetanus
NPs	Nutrition Promotors
ORS	Oral Rehydration Salts
ORT	Oral Rehydration Therapy (for treatment of diarrhea)
PHN	Public Health Nutritionist
PVO	Private Voluntary Agency
RTH	Road to Health Cards (for recording weights and immunization)
sss	Sugar-Salt Solution
TBA	Traditional Birth Attendants
TB	Tuberculosis
TT	Tetanus Toxoid
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VHC	Village Health Committee
WCBA	Women of Child Bearing Age
WV	World Vision
WVRD	World Vision Relief and Development
VHPs	Village Health Posts
VHWs	Village Health Workers

**OGBOMOSHO CHILD SURVIVAL PROJECT-WORLD VISION, USAID
EVALUATION EXECUTIVE SUMMARY -DECEMBER 16, 1994**

- The Ogbomosho Child Survival Project provides primary health care services to a population of 68,000 living in two recently created, poor rural LGAs, Oyo State, Nigeria.
- The project, predominantly funded by a child survival grant from USAID, is being implemented by World Vision in coordination with Baptist Medical Center, Ogbomosho.
- The cancellation of democratic elections in 1993 has produced political and economic chaos; most government health services have been disrupted by strikes, lack of funding, and rapid inflation and are non-functional.
- The Ogbomosho Child Survival Project, first funded in 1988, was extended and expanded in 1992. The project, scheduled to end in September 1995, provides village based immunization, nutrition, family planning, and treatment of illness (malaria and diarrhea) utilizing Village Health Workers, Traditional Birth Attendants, and Nutrition Promoters.
- The World Vision staff supports the village based services through training, supervision, and monthly outreach team visits. These visits are used for weighing and counseling, immunization, health education, distribution of contraceptives, supervision and continuing education.
- A mid-term evaluation was carried out from December 5-16, 1994.
- The team, through a review of records, interviews, and field visits, documented an excellent program providing quality services at or near the End of Project Levels. Of special mention are the 11,461 training contacts during FY 94, the high levels of immunization coverage, and the distribution of condoms and foaming tablets.
- While coverage is high and quality good to excellent, malnutrition rates, a proxy indicator of mortality, are increasing at a time, they usually fall. This, the team believes, is indicative of the worsening economic status among the rural poor. The Ogbomosho Project is providing a safety net to a severely stressed rural population.
- The evaluation documented a number of areas, technical and operational, which potentially could significantly increase effectiveness and efficiency.
- Priority areas for project attention outlined in the attached recommendations include: 1) increased efforts to empower village based volunteers and committees, 2) technical reviews of prevention programs directed at pregnant women, and treatment practices for malaria and pneumonia, and 3) streamlining of the health information system.
- Considering the situation in the country, the ability of this project to provide quality services in high coverage merits recognition, commendation, and financial support.
- Evaluation findings were discussed with the World Vision Project Staff, The Management Committee of the Baptist Medical Center, and USAID Lagos.

I. Background

The Ogbomosho Child Survival Project in Oyo State is funded by the United States Agency for International Development (USAID), Bureau for Food and Humanitarian Assistance, Office of Private Voluntary Assistance through a PVO Child Survival Grant to World Vision Relief and Development (WVRD). Phase 1 of the project, October 1, 1988 to September 30, 1992, provided services to Ogbomosho South (now Ogo Oluwa Local Government Area (LGA)). Phase II expanded the project to include Orire LGA and extended the project from October 1, 1992 to September 30, 1995.

As required in the grant agreement, a Mid-Term Evaluation was carried out December 5-16, 1994 in accordance with USAID's Mid-Term Evaluation Guidelines for CS-VIII Projects dated July 15, 1994. Members of the evaluation team and their attachments are listed on page i.

II. Project Chronology and Documentation

The Ogbomosho Project is well documented in the reports listed below, the quarterly reports, and the project's computerized information system.

**5189 Ogbomosho South Baseline Survey - Pauline Riak
7189 Detailed Implementation Plan - Phase 1
10/89 First Annual Report - Phase 1
11/90 Mid-Term Evaluation - Phase 1
11/91 Third Annual Report - Phase 1
12/91 Extension/Expansion Proposal - Phase 2
12/92 Sustainability Assessment Final Evaluation - Phase 1
12/92 Knowledge and Practice Survey Final Evaluation - Phase 1
4/93 Knowledge and Practice Baseline Survey - Phase 2
4/93 Detailed Implementation Plan - Phase 2
10/93 First Annual Report - Phase 2**

III. Political and Economic Situation in Nigeria

In evaluating this project, four non-project issues need to be understood.

1. Economic

Since the fall in oil prices in 1983, the Nigerian economy has declined. Per-capita income has fallen from \$1,000 to \$300. Inflation is currently estimated at 400% per annum. Health expenditures have decreased in 1981 Naira from 265 million to 28 million, a decrease of 90% and a mere 10% of the 1981 expenditure.

2. Creation of New States and LGAs

In 1991, responsibility for government services including primary health care was decentralized to the LGA level. The number of LGAs rose from 304 to 589. The original project area, Ogbomosho South, was reconstituted as Ogo Oluwa LGA. The new project covers 3 of 10 health districts of the newly created Orire LGA. Both of these LGAs are rural, poor, and bereft of basic infrastructure including electricity, water, and paved roads. Many LGA health staff positions are vacant.

3. Political

The annulment of the democratic elections of 1993 and the continuation of military rule has led to major disruption of both government and commercial services. The government health sector was on strike for three consecutive months in 1994. Most government hospitals are closed and government services minimally functional. National immunization coverage, for example, has fallen from 75% to less than 30%.

4. Decertification

Based on the annulment of the democratic elections and issues related to narcotics, the Nigerian Government was decertified as eligible for US technical assistance and funding. USAID humanitarian assistance is limited to PVOs and the private sector. Other external funding has also decreased.

IV. Project Goals and Objectives

Goal

The goal of the project is to reduce infant and child mortality due to diarrheal diseases, vaccine preventable diseases, frequent child bearing, malnutrition and malaria by supporting and strengthening the community and local Ministry of Health (MOH) system capability.

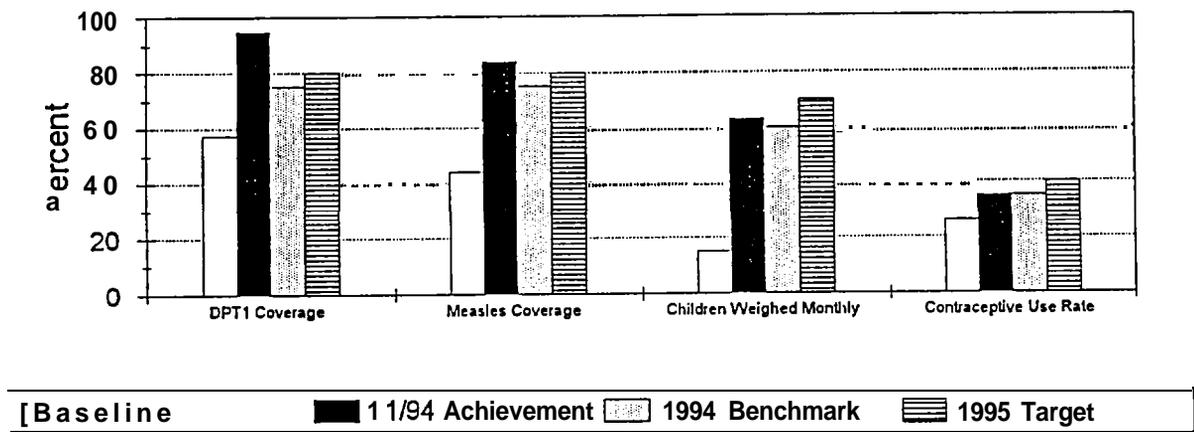
Objectives

The Detailed Implementation Plan (DIP) lists a large number of objectives relating to knowledge, practices, coverage, and impact. Objectives most relevant to child survival, their End of Project (EOP) September 1995 targets, and current status are listed on the next page on Table 1.

TABLE 1 - OBJECTIVES TO BE ACHIEVED BY 1995 (*Old & New LGAs Combined)			
ACTIVITY	1995 EOP TARGET	BASELINE 11/92*	STATUS 11/94
Immunization	80% Coverage BCG	57%	99%
	80% Coverage DPT1	57%	95%
	80% Coverage DPT3	49%	94%
	80% Coverage Measles	44%	84%
	80% Fully Immunized	42%	75%
	80% TT Cov. Women with children <2	18%	91%
Diarrhea	70% of Mothers Competent in ORT Usage	26%	49%
	60% of Diarrheal Episodes Treated with ORT	40%	48%
Nutrition	60% mothers breastfeed within 1 hour	16%	
	60% mothers breastfeed within 8 hours	60%	
	60% mothers will exclusively breastfeed for 4 months	22%	
	90% mothers will introduce supplementary foods between 4 & 6 months	57%	
	80% mothers supplement infant diets with protein calorie rich food by 6 months	90%	
	70% of children 0-23 months will be weighed monthly	15%	42%
Maternal Health	60% of women will know at least one method of contraception	57%	
	40% of women with children <2 will be using modern contraceptive method	47%	35%
	90% births will be by attended by a trained person, e.g., Traditional Birth Attendant (TBA)	53%	82%
Malaria	90% of pregnant mothers will receive treatment and prophylaxis with an appropriate drug	76%	82%
	90% of children with fever receive treatment with antimalarial drug	94%	67%

In a country where most health services have stopped due to the political and economic crisis, the Ogbomosho Project is effectively implementing its child survival program. The project has already exceeded some of its EOP objectives. Figure 1 compares the baseline levels, the current achievement level, the mid-term benchmark target, and the EOP objective.

Achievements versus Objectives Ogbomosho South Child Survival Project



In crisis times such as are currently being experienced by Nigeria, PVOs such as the World Vision Ogbomosho Project are providing an important safety net. The results shown above would be excellent even in the best of times. Their achievement in today's Nigeria is miraculous.

V. Project Strategies

The Ogbomosho Project evolved out of a May 1989 baseline study by Riak which identified major factors contributing to high under five mortality. Written at a time that UNICEF was promoting GOBI-FFF (Growth Monitoring, Oral Rehydration, Breast Feeding, Immunization, Food Supplementation, Family Planning, and Female Education), the Ogbomosho Project, being a child survival project, adopted the health components - GOBI plus family planning.

The project is village-based and includes the formation of Village Health Committees (VHC), subsequently renamed the Community Development Committees (CDCs), and the identification and training of three cadres of workers: Village Health Workers (VHWs), Traditional Birth Attendants (TBAs), and Nutrition Promoters (NPs). Each village or cluster of villages is visited on a monthly basis by one of four project mobile teams to: 1) liaise and support village-based activities, 2) provide health education, 3) supervise growth monitoring and associated health education, 4) administer immunizations, and 5) carry out monitoring and supervision.

VI. Methods of Mid-Term Evaluation

- Project documents were reviewed (See Section II - Project Chronology and Documentation)
- Meetings were held with LGA Chairmen, members of the caretaker committee, and senior health personnel in Ogo Oluwa and Orire LGAs
- Five villages were randomly selected from each of three strata: Phase 1 Ogo Oluwa LGA villages scheduled for outreach visits; Phase II Orire villages scheduled for outreach visits; the remaining villages not scheduled for outreach visits during the period of the evaluation.
- Selected villages were visited to meet with CDCs, VHWs, TBAs, and NPs, and to observe, where operational, outreach activities including growth monitoring, immunization, and family planning.
- Project information system data were reviewed
- Baptist Medical Center (BMC) was visited to review records of pediatric admissions.
- The evaluation team debriefed with the BMC Management Committee, World Vision Project Staff, and USAID Lagos.

VII. Project Findings

1. Inputs and Outputs

Inputs

- 41 weighing scales provided**
- 43 health posts provided with drugs**
- 29,368 condoms, 29,384 foaming tablets, and 299 cycles of pills distributed**
- 51 TBAs provided with delivery kits**
- 1,400 farmers provided soy bean seeds**

Outputs (FY 1994 - October 1, 1993 through September 30, 1994)

- 11,461 training contacts carried out**
- 68 of 103 CDCs currently functioning**
- 5,162 mothers reached with health messages**
- 628 new family planning acceptors**
- 4 Income Generating Activities (IGAs) established**
- 25 wells dug and lined with cement**

2. Relevance to Child Survival

The major causes of infant and child mortality in the project area are: 1) malaria and its complications of febrile convulsions, anemia, and cerebral malaria; 2) diarrheal diseases with associated dehydration and malnutrition; 3) acute respiratory infections (pneumonia, measles, pertussis); 4) undernutrition; and 5) trauma. These deaths result from the synergistic interaction of socio-economic, disease and health care factors (Table 2). As indicated in the table, the project is addressing a large number of the most important risks.

Of special concern is the increase in cerebral malaria admitted to the BMC both in terms of absolute numbers (32 in 1990, 31 in 1991, and 57 in 1992) and as a percent of total malaria cases (15.8% in 1990, 26.5% in 1991, and 47.5% in 1992). 1993 and 1994 data are being tabulated. This increase in frequently fatal cerebral malaria may relate to decreased availability or affordability of drugs, use of poor quality drugs, or increasing drug resistance (See Recommendations 8 and 9).

TABLE 2: RISK FACTORS CONTRIBUTING TO EXCESS UNDER-FIVE MORTALITY
INTERVENTIONS ADDRESSING RISK FACTORS

SECTOR	RISK FACTOR	INTERVENTION
Education	Lack of Basic Education for Mothers	
Economic	Poverty	Decreased medical & death costs
		Income Generatina Schemes
Sanitation	Lack of Safe Water	Wells
	Lack of Hand Washing	Health Education
	Lack of Safe Excreta Disposal	Health Education re Latrines
Ill Timed Pregnancy	Pregnancies Too Early, Quick, Many, Late	Family Planning & Health Education
Maternal Health	Lack of Prenatal Care, FeFolate, TT	Prenatal Care
	Malaria in Pregnancy	Chemoprophylaxis
	Lack of Attended Delivery	TBA Training and Delivery Kits
Nutrition	Lack of Adequate Diet in Pregnancy	Health Education on Diet
	Lack of Immediate Breastfeeding	Encourage Immediate Breastfeeding
	Lack of Exclusive Breastfeeding 0-4 months	Encourage Exclusive Breastfeeding
	Inadequate Supplementation by 6 months	Encourage appropriate supplementation
	Lack of Protein	Soy bean seed distribution and Education
	Malnutrition secondary to measles	Measles Immunization
	Faltering	Weighing and counselling
	Marasmus and Kwashiorkor	Referral to Baptist Medical Center
Immunization	Neonatal Tetanus	Tetanus toxoid to women of child bearing age
	TB, Diphtheria, Pertussis, Tetanus	BCG, DPT X3, Polio x 4
	Measles	Measles vaccine at 9 months
Illness	Malaria	Treatment of fever with chloroquine and antipyretics
	Pneumonia	
	Diarrhea	Treatment with ORT, food, and fluids

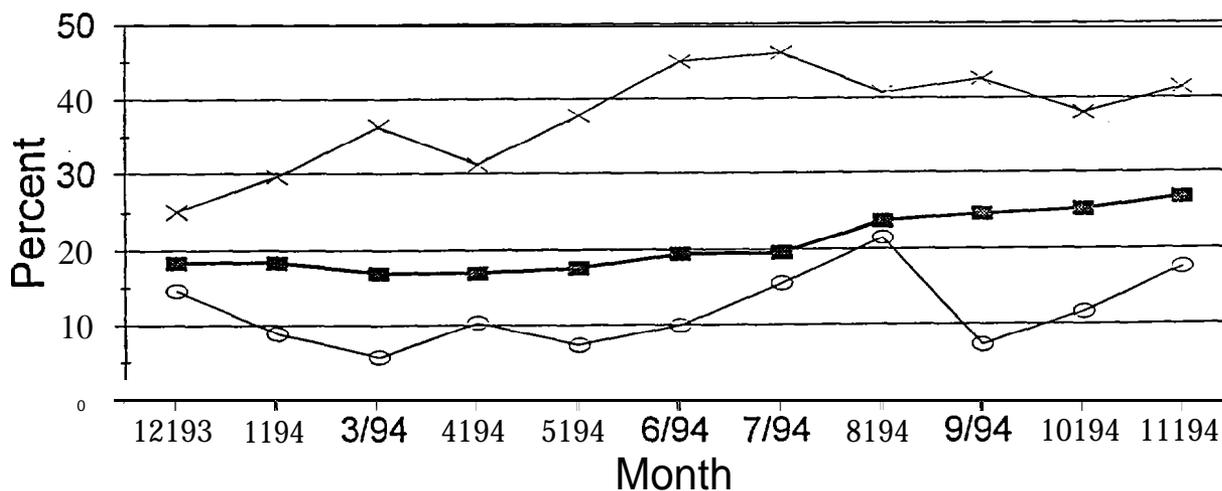
3. Effectiveness

Effectiveness requires that the interventions listed above be administered correctly (See Section 5.6 - Improving Quality) to at-risk populations at the appropriate time. Coverage does not ensure effectiveness, e.g., providing foaming tablets to a women already pregnant. There are four approaches to assessing effectiveness of child survival programs.

- a. **Measurement of mortality** - Child survival programs are designed to increase survival, i.e., decrease mortality. Mortality measurement requires enumeration of all births, deaths, and migration. Such enumeration is not possible with resources available to the current project.
- b. **Nutritional status** - There is a linear relationship between the log of mortality and nutritional status (Pelletier in The Journal of Nutrition, 1994, October Supplement, 124:S2047-S2071). Improvements in nutritional status provide a proxy indicator of decreased mortality risk. However, as seen in Figure 2 below and further detailed in Appendix 1, nutritional data recorded by the project show an increase in rates of malnutrition in a season when nutritional improvement is expected (September through November). This appears to correlate with increasing inflation and decreased purchasing power at the village level.

Growth Monitoring, Children 0-23 Mos.

Ogbomoso South CSP, Orire LGA



* % Weighed o % Losing Weight ■ % Malnourished

- c. Surveillance of diseases and conditions preventable by program interventions provides a measure of program effectiveness. Data from the BMC, possibly biased by economically related decreasing admissions, and anecdotal data in the field show a decrease in diseases preventable by immunization, especially measles. As indicated above, there has been a proportionate increase in severe malaria.**
- d. High coverage of an at-risk population with a service verified as technically correct and of known effectiveness is strongly suggestive of impact. The delivery of immunization in high coverage, which was found by the evaluation team to be technically excellent, is strongly predictive of effectiveness. The team was not, however, able to assess the effectiveness of the diarrheal disease or family planning components.**

4. Relevance to Development

a. Community barriers to meeting basic needs

Due to the economic and political situation in the country, almost all Nigerian families are facing increasing difficulty in meeting the basic needs for food, shelter, and health care. The two project areas, because of their poverty and ruralness, are particularly at risk.

The main community barriers identified are economic, cultural, and religious. The project sites lie in the savannah belt, where the main source of income is subsistence agriculture. Crops grown are mainly corn, cassava, and yam; the major market crop is tomatoes. Farm sizes are inadequately small. Farming operations rely on manual labor (< \$1/day); thus it is difficult for the inhabitants to generate sufficient income to meet basic needs. To worsen the situation, the current politico-economic crisis has made all household and farming costs (equipment, seed, fertilizer, transportation) very expensive. Storage is rudimentary and wastage rates are high.

Resulting poverty has prevented many people from seeking health care or has led them to seek care for their children from doubtful sources, e.g., drug peddlers who sell fake and expired drugs at prices cheaper than those at the project's health posts.

Feeding practices contribute to the barriers to good health. Providing water at birth and delaying breastfeeding increase the risk of infection and breastfeeding failure. Traditional weaning foods are low in calories and protein. Feeding eggs and meat to children is considered a taboo (to prevent such children from becoming thieves). Eating of fruits, even when available, is uncommon. Diet consists primarily of starchy foods, such as cassava and yam.

Land disputes and chieftaincy problems have separated communities and thus prevented the optimum logistically appropriate siting of village health posts (VHPs). It is also cultural "that a prophet is never honored in his own town", so is the case for VHWs and TBAs. Thus the potential of these workers is not being fully realized.

Religious factors also act as community barriers. Certain belief groups prohibit the use of injections and drugs for treatment of illness. Other groups consider illness the will of the supernatural.

b. Efforts to increase access of families to project benefits.

Community Development Committees (CDCs) were initiated and formed with the involvement of the villagers. The CDC is a powerful institution for social mobilization for use of the health posts, discouraging the purchase of drugs from peddlers, and for infant immunization. The committee nominated the persons to be VHWs, TBAs, and NPs and provides their transport to training courses. The CDC also assists families through making available quality drugs for use in the village.

Training of village based workers is improving the availability and quality of care at the village level. This was well demonstrated by the response of a TBA to three questions about her job:

"What are your responsibilities as a TBA?"

- "Examine pregnant women
- Know lie of fetus
- Know age of pregnancy and delivery date
- Detect complications like anemia"

"What patients do you refer?"

- "History of hemorrhage
- Dizziness
- Edema
- Severe anemia
- Abnormal lie"

"What are the important things to do during delivery?"

- "Cut and clean finger nails
- Use plastic gloves (provided by project)
- Use clean plastic sheet under mother
- Use clean cutting instrument (razor blade)
- Use antiseptic"

In view of the breakdown of the public sector and the absence of a viable private sector in rural areas, the VHWs, TBAs, and NPs are the only quality source of care

in many project villages.

Other project activities that are improving the health care of the people is the establishment of Village Health Posts (VHPs), the initial provision of drugs to stock the VHPs, the provision of contraceptives, and the delivery of immunization.

A unique and important contribution of the project is the supply of soy seeds, linkage of farmers to instruction in agricultural techniques, and nutrition education in the use of soy as a protein supplement additive to traditional foods.

In a world where Growth Monitoring (GM) has become a time-consuming ritual with limited, if any, impact on health, the Ogbomosho Project is using GM to promote improved nutrition. Under twos are weighed monthly and 2-5s quarterly. Two groups of children are identified as at risk and in need of special attention: 1) those whose weight remains the same ("static weight") or decreases ("weight loss") from the previous weighing; and 2) children falling below the lower curve (3rd percentile) on the weight for age chart. Mothers of these children are queried as to possible causes of the weight decline such as untreated illness and counseled on best use of available foods including soy supplementation. Severe malnutrition cases, kwashiorkor and marasmus, are referred to the Kersey Children's Home - a nutritional rehabilitation home of the BMC.

c. Efforts to foster self reliance and enable families to better address their health needs.

CDC members are nominated and elected by the community. Provided the committee continues to assume responsibility for issues that they feel are important, such as the supply of drugs, empowerment and self reliance can continue. This initial involvement of villagers in the creation of the health post and the selection of workers for training were important steps in that direction.

The lack of incentives for the VHWs is a potential obstacle to self reliance. The project's efforts to develop income generating schemes to provide income for these workers, if successful, will be very important.

Perhaps the biggest challenge to self reliance is the perceived preeminent role of the monthly visits of the outreach teams. All teams observed gave priority in time allocation to team delivery of the services over support to the delivery of these service by village based resources (See Recommendations 2 and 18).

5.1 Project Design

The project area is limited to the Ogo Oluwa LGA and three of ten health districts in Orire LGA. All communities within these boundaries are served, excluding those

covered by the BMC's community outreach program and a few, which, for religious reasons, will not participate in project activities. The project focuses primarily on children under five years and women of child bearing age (WCBA) and has set measurable objectives of outputs and outcomes to measure progress in reaching these groups (See Section IV - Project Goals and Objectives).

Project management has been willing to change its strategies as needed in response to new information, changes in working conditions, and identification of new needs. For example, an intervention to prevent the transmission of guinea worm was added when cases were identified in several project villages. Another example is the project's decision to reinstate immunization sessions in Ogo Oluwa LGA when it became clear that the government could not fulfill its commitments due to lack of personnel and financial resources and strikes.

5.2 Management and Use of Data

The project is collecting a lot of information, some of which it has used in an effective way to monitor its progress and guide decision making. The results of information collected are shared with project staff and used to identify program weaknesses for improvement. The project developed an immunization reckoner, which indicates to project workers the earliest date a child of given age should receive a particular vaccine. This has eliminated the problem of early administration of vaccines which had earlier been identified.

Achievements and lessons learned have likewise been well documented and shared with WV headquarters, with A.I.D., and at a number of international forums. Sharing of data at community level, however, has been limited.

All project beneficiaries are registered, and their immunization and nutritional status are updated monthly following outreach sessions. A computerized system has been developed, whereby a list of all children and WCBA in a village, along with lists of malnourished children and those children and WCBA requiring immunizations, are produced and sent with the outreach teams in their monthly visits to each village. This system has reduced missed opportunities for immunization and has targeted mothers of malnourished children for counselling.

While the outreach staff are able to use the information on the lists to target their services, the computerized Health Information System (HIS) has essentially replaced the analysis of data at the village level, an essential element critical to sustainability. One finds, for example, that the mothers who receive counselling at an outreach session are those whose children were identified by the computer program as having faltering growth and are listed on the printout from the analysis of the previous month's or earlier data. Children losing weight since their previous weighing, occasionally several months back, are not identified at the outreach

sessions.

The community-based registers are unnecessarily detailed and poorly understood by village-based staff. The data recorded by community-level workers is not used. Village-based staff, CDCs, and communities are not an integral part of the information system in terms of collection, analysis, or use.

The central processing of project data, while essential for project monitoring, was found to be a disincentive in terms of strengthening sustainable village based skills in weighing children, identifying children not growing well, and counseling mothers. The team recommends the discontinuation of computerized printouts during community visits and that priority be shifted to strengthening village workers' skills in weighing, recording, and interpreting data, and the counseling of mothers. (See Recommendations 3 and 4).

5.3 Community Education and Social Promotion

Baseline data were used to identify shortcomings in the knowledge and practices of mothers and to guide the development of key educational messages as well as certain strategies such as the promotion of soy beans for improving nutrition.

The primary strategy for delivering project services--monthly outreach sessions to each community--combines equal emphases on health promotion and service provision. All sessions include immunizations, growth monitoring, antenatal care, distribution of family planning supplies, and cooking demonstrations on the service provision side, as well as health education, counselling, and meetings with CDCs on the promotion/mobilization side. Given that there are virtually no other health services available, the balance is appropriate.

The project provides information, education, and communications using health talks, story telling, songs, food and sugar-salt solution (SSS) demonstrations, and videos. Supervision by WV staff of the VHWs and TBAs, who are responsible for much of the health education, as well as monthly refresher courses with these workers, help to ensure that messages are both correct and consistent.

A variety of posters, the UNICEF booklet "Facts for Life" translated into Yoruba, treatment guides in Yoruba developed by the BMC and adapted by the project for use by VHWs, and project programs from the VHW and TBA swearing-in ceremonies containing health messages have all been distributed. No pretesting of these materials was done by the project, although the posters, which are produced at the national level, are pretested in different parts of the country. The value of all these materials is limited to those who can read and further in some cases (e.g. posters) to those who can read English.

The project has been creative in its approach to community education, judging by the variety of methods used. Mothers at outreach sessions have learned and sing enthusiastically songs about family planning, prevention of malaria, immunization, etc. Exit interviews by the evaluation team showed that the majority of mothers could correctly interpret their child's growth chart, knew what immunizations their children still needed and when they should return, and knew the proper formula and procedure for administering SSS.

5.4 Human Resources for Child Survival

The project has 18 technical staff (the project manager, a doctor; the HIS coordinator; three public health nurses; two nutritionists; a community health officer; two community health supervisors; and eight community health aides) and 12 support staff (a finance/administration manager, data analyst, accounts clerk, secretary, storekeeper, messenger, cleaner, night guard, and four driver/mechanics). This staff is more than adequate to meet the managerial, technical, and operational needs of the project.

In addition to the paid WV staff, there are 204 VHWs, 52 TBAs, and 303 NPs trained by the project who work on a voluntary basis. The VHWs are multi-purpose workers responsible for case-management of malaria, diarrhea, and other minor ailments; growth monitoring; health education; and social mobilization. TBAs and nutrition promoters concentrate on single interventions. Their workload varies from village to village.

The VHWs, TBAs, and NPs received initial training lasting three weeks, two weeks, and one week, respectively. The VHWs and TBAs are expected to attend one-day refresher training sessions each month. A needs assessment was carried out at the inception of the project to determine training needs and course content for the different categories of worker. A series of quality assurance checklists have been developed to guide supervision and to identify weaknesses in service provision. Topics for refresher training are based on these observations of worker's performance in the field, knowledge levels of mothers, and any questions or problems raised by the workers themselves. The project provided 11,461 training contacts in FY 94, as shown in Table 3.

TABLE 3. OGBOMOSHO CHILD SURVIVAL TRAINING CONTACTS AND CONTENT, FY-94

TARGET	SUBJECT	QTR 1	QTR 2	QTR 3	QTR 4	TOTAL
Mothers	EPI	738		1364		2101
	Infant Nutrition	826	955			1781
	Diarrhea	675			1301	1976
	Malaria			1095		1095
	CS Video				1177	1177
	Spacing		822			822
	Nutrition in Preg				1162	1162
VHW/TBA	Breastfeeding	73				73
	Child Nutrition	75				75
	Child Spacing	92				92
	Nutrition in Preg				67	67
	EPI		124			124
	AIDS		77			77
	CS Video				81	81
VHWs	Initial 3 Wk		44			44
	Diarrhea		94			94
TBAs	Initial 2 Wk		52			52
	Danger Signs			47		47
	Newborn Care			25		25
Nut Promotors	Initial 5 days		303			303
Drivers	Defensive Driving		30			30
Project Management	Management		9		14	23
	Information			8		8
	Human Resources				8	8
Baptist MC	Breastfeeding			52		52
	Cold Chain	37				37
LGA	Cold Chain	34				34
Total						11461

Training methodologies (guided discussions and practical sessions, with pre- and post-tests) are appropriate, as are the duration of trainings, given the responsibilities given to the workers.

The intended counterparts of the project staff were the local government health staff, but the participation of these staff has been erratic (See Section 5.10- Assessment of Counterpart Relationships).

5.5 Supplies and Materials for Local Staff

Educational materials distributed are as described in section 5.3. Other supplies and materials given to the volunteer workers at the successful completion of their training are as follows:

- For VHWs, a treatment guide; a first stock of drugs for the village health post (VHP) consisting of chloroquine, multivitamins, folic acid, paracetamol, aspirin, sulphadimidine, mebendazole, benzyl benzoate, gentian violet, and chlorpheniramine); a weighing scale; registers; a T-shirt; a bag; and an identity card. The Orire LGA has supplied each VHP with an ORS kit.**
- For TBAs, a delivery kit containing mackintosh, rubber gloves, razor blades, soap, and ligatures; a T-shirt; a bag; and an identity card.**
- For nutrition promoters, soy beans for cooking, an apron, and a scarf.**

The supplies and materials are valued by the volunteers and are appropriate for the jobs they are expected to perform. TBAs and VHWs are supposed to replenish expendable items and drugs using funds obtained from the sale of drugs and charges for delivery. With current levels of inflation, such funds have been insufficient to maintain adequate stocks of all drugs.

5.6 Improving Quality (Training, Continuing Education, and Supervision)

As shown in Table 3, the Ogbomosho project has carried out an extensive well-planned training strategy providing an estimated 11,461 training contacts over the last 12 months, over 1,200 per month. Training has been identified as a program priority and is executed in a strategic way addressing the specific needs of all partners involved in the operation.

Training, however, does not ensure quality performance. Independent assessments of quality (training needs assessments), supervision, and continuing education are needed to ensure that the performance is meeting the high standards set by the project (See recommendation 4).

Immunization logistics, mobilization, screening, vaccine administration, recording, and monitoring was excellent. The team leader, who has 25 years of EPI experience in Nigeria, identified it as among the best he had ever seen.

Health education as carried out by the project teams was focused, interactive, and of very high quality. Channels of communication included story telling, songs, demonstrations, role playing and videos.

VHW and NP quality was variable. While observed weighings always used a balanced scale, reading and recording of weights were frequently, as determined by evaluation team reweighings, off by as much as 0.5 kg. Systematic efforts to monitor VHW weighing were not observed nor were the priority tasks of supervision and continuing education during team visits readily apparent. Observed food demonstrations by some of the NPs were excellent.

A high priority for villagers is the availability of adequate quantities of essential drugs. Most of the VHPs visited by the evaluation team had adequate supplies of the essential drugs promoted by the project. In those posts which were out of stock, the main reason was inadequate funds to replenish the supplies. This is largely related to the high rate of inflation. Because the maintenance of a drug revolving fund requires transparency to maintain village trust, project auditing should give priority to upgrading the capacity of the VHWs to keep villagers aware of fund activities and CDCs to monitor these funds.

There are three technical areas that could potentially increase program effectiveness: 1) providing Iron Folate (FeFolate) to pregnant women, 2) increasing the emphasis being provided to diarrhea prevention, and 3) addition of VHW diagnosis and treatment of pneumonia (See Recommendations 10, 11, 12, 13).

5.7 Monitoring

Project monitoring was evaluated at three levels (community, outreach team, and project) with attention to need, understandability, accuracy, and use.

a. Community

VHWs have been provided large, complicated registers, which they neither understand nor use. Priority on recording in the registers has diverted attention away from appropriate use of weights, e.g., accurate weighing and recording and immediate counseling of mothers. Road to Health (RTH) cards were frequently collected for post-session recording and were not providing immediate feedback.

Village-based record keeping should be limited to that which can be used at the village level, specifically 3 types of data: 1) the identification of malnourished

children and the use of data to counsel mothers, 2) the sharing with the CDC and community the status of the nutrition program in the village (the number weighed, the number gaining weight, and the number not gaining weight), and 3) the identification of infants and WCBA in need of immunization (See Recommendations 3 and 7). The separation of cards of those gaining weight and those not gaining weight into two piles would provide immediate feedback to villagers on the current status of nutrition promotion.

Village collection of data needs to be limited to that needed and used such as a set of household cards or register listing household births by date, deaths, and immunizations. Alternatively, a simple exercise book listing all births occurring each month and their immunization on a separate page could help ensure 100% coverage.

b. Outreach Team

Outreach teams have become dependent on central monitoring. Their priorities lie with the collection of data at one monthly visit, its delivery to the HIS unit, and the return of the print out identifying those in need of immunization and counselling as the determinant of what is to be done at the next visit. Appropriate priority is not being given to empowering the village workers to collect and use data, a prerequisite to sustainability. The evaluation team recommends that the use of the computer sheet be discontinued. Data for central monitoring would be collected quarterly during a meeting in which village and project staff sit down together to review and discuss all charts as part of a quarterly review of program progress. Data necessary for monitoring could be collected at this time.

c. Project monitoring

The evaluation team found project data to be extensive and used. Data collection is in excess of that needed. It is recommended that the project obtain the services of a consultant to identify information needs and use at each level starting at the community, moving on to the teams, and finally to the project (See Recommendations 5 and 15). It is the conclusion of the evaluation team that such a consultancy would significantly decrease the work involved and increase the use of data in the daily management of the project. Ideas to be considered in this review are provided in Appendix 2. Note: This appendix is not a recommendation but a study piece to expand the thinking of project staff beyond the normal lines of data collection, analysis and use.

The centralization of data has been driven by project and donor needs for decision making and accountability. While this is appropriate and necessary, it is essential that the needs of data for project monitoring not be confused with the priorities for data collection and use at the community level.

5.8 Use of Central Funding

The project receives ongoing administrative and technical support from the WV national office in Ghana, the West Africa Subregional Office in Dakar, and World Vision Relief and Development (WVRD) offices in Monrovia (CA) and Washington D.C. World Vision provides matching funds (26 percent of the total project budget) from private contributions; provides assistance with the preparation and submission to USAID of financial and narrative reports; provides feedback on such reports and assistance with technical, financial, and/or legal issues; arranges periodic auditing of project accounts; regularly provides technical materials and information; identifies and prepares contracts for consultants; and provides training (in baseline survey methodology, USAID grant compliance, management, human resource development, and finance).

The assistance seems to have been useful and appropriate in terms of frequency and the needs of the staff. The primary difficulty in guaranteeing timely support has been the lack of a regular, reliable means of communication between the support offices and the project. While the office is equipped with phone, fax, and telex facilities, none can be counted on consistently. Courier is the most reliable means of communication.

Central funding from USAID provided for administrative monitoring and technical support of the project, as described above, includes \$74,207 in indirect costs and an additional \$375,793 from the grant to headquarters. As of November 30, 1994, \$36,999 of the indirect costs and \$175,209 of the headquarters grant had been spent. See Appendix 3 for Headquarters and WVRD/Nigeria pipeline analyses.

5.9 PVO's Use of Technical Support

The types of external technical assistance received to date by the project through consultant visits, workshops, and conferences are as follows:

Consultant Visits/Training

- a. Training in WHO/EPI 30 cluster sample survey methodology (Nov. 1993)
- b. Monitoring/evaluation training for senior and junior staff (Feb./April 1993)
- c. Computer training for HIS Coordinator and Accountant (Feb.-April 1993)
- d. Family planning training for one PHN (May 1993)
- e. Food consumption and nutrition survey (July 1993)
- f. Analysis of ten composite dishes for energy, protein, and mineral content

Workshops, Conferences, and Seminars

- a. Finance and operations workshop (Feb. 1993); 5 days
- b. Community health conference (Feb. 1993); 5 days
- c. Sterilization and immunization techniques (July 1993); 1 day

- d. Control of Malaria for Child Survival workshop (Sept. 1993); 5 days
- e. USAID grant compliance workshop (Nov. 1993); 5 days
- f. World Vision West Africa health strategy consultative meeting (Dec. 1993); 5 days
- g. Strengthening Indigenous Nigerian Organizations for Self Help workshop (Dec. 1993); 3 days
- h. WV Global Consultation and International Symposium (Jan./Feb. 1994); 3 weeks
- i. Interpersonal communication workshop (May 1994); 3 days
- j. Human Resources Development and Training workshop (Aug. 1994); 2 weeks
- k. Vitamin A deficiency workshop (Sept. 1994); 3 days
- l. Conference on Onchocerciasis Operational Research (Oct. 1994); 4 days
- m. PVO Worldwide Conference on Community Impact (Oct. 1994); 5 days

In addition to these sources of technical assistance, the project has received a number of useful technical papers and books from World Vision and the Child Survival Support Program at Johns Hopkins. All have had a positive effect on refining project strategies and meeting objectives. Needs for additional technical support in the next six months include installation and training in the use of WV SunSystem financial accounting software and HIS/Epi Info training.

5.10 Assessment of Counterpart Relationships

The principal counterparts in the project are the BMC in Ogbomosho and the government health staff at LGA and state levels. Memorandums of Agreement between World Vision and these counterparts were signed prior to the project's initiation and detailed the roles and responsibilities of each of the project's partners. Dialogue between project and counterpart staff has been open and consistent, particularly with BMC.

The BMC provides accommodation on the hospital compound for the project's office, provides electricity and backup generator power to the office, seconded one staff member (a Community Health Supervisor), and provides technical assistance as requested. The hospital has also provided resource persons for various training workshops which project staff have attended. The project in turn renovated the office building and will transfer the building, its furnishings and equipment, including cold chain equipment and one of the project vehicles, to the hospital at the project's conclusion.

According to the Memorandum of Agreement, project and local government health staff were intended to "actively collaborate...in implementing the project." On the part of the LGAs, this collaboration was to include providing staff to assist at outreach sessions, to supervise the activities of the VHWs and TBAs, and to mobilize and train communities. Orire LGA, in addition, agreed to provide

200,000 Naira to support the project and help ensure its sustainability. The Oyo State Ministry of Health was to participate in the general monitoring and supervision of the project, provide vaccines, ORS sachets, and family planning supplies, and provide staff to assist in training and other activities as needed.

For a variety of reasons, government participation has not reached expected levels. Two of the PHNs were seconded by the Oyo State MOH and the MOH provides the vaccines (but not the ORS or family planning supplies) used by the project. Training sessions have been organized by the project for LGA staff and made use of government resource persons. Occasionally, government staff accompany the project outreach team, but this participation has been minimal. In fact, in Ogo Oluwa LGA, where the project had initially left immunization services entirely in the hands of the government, all immunization stopped. After it was recognized that the LGA was unable to take over, the project reinstated services in May 1994. Improved coordination with LGAs should be initiated (See Recommendation 14).

The BMC has acquired considerable experience in managing its own community outreach program and has the technical and managerial capacity needed to operate effective child survival activities. While they would be willing to continue providing services in areas currently covered by WV, their primary constraint is a lack of financial resources. The local governments do not currently have the logistical, managerial, financial, or technical resources to provide regular, effective services. Both Ogo Oluwa and Orire LGAs are now training staff to supplement those already in place.

5.11 Referral Relationships

The primary referral care sites used by the project are the BMC and Kersey Children's Home, BMC's nutrition rehabilitation center. Both are based in Ogbomoso, provide high quality services, and are reasonably accessible to the communities in the project area. The project assists in transporting patients to the BMC when cases are identified during the outreach teams' rounds and subsidizes the cost of the treatment of patients referred to BMCs Kersey Children's Home for nutrition rehabilitation.

Dialogue between the BMC and WV is facilitated by the fact that the BMC is the principal project counterpart and the project office is based at the hospital. The project's VHWs act as the link between BMC and the project to ensure that continuity of care is adequate.

5.12 PVO/NGO Networking

WV is an active member of the Nigerian Association of Non-Governmental Organizations on Health (NANGO), to which a variety of other PVOs working in

child survival belong, and chairs NANGOH's Committee on Food and Nutrition. Networking has also occurred with UNICEF, NCCCD, and Family Health Services (the latter two of which are USAID-funded projects). This networking has given the project access to a variety of sources of technical assistance, as well as a variety of educational and training materials.

Project staff have also attended a number of international conferences, some of which have focussed specifically on lessons learned in child survival.

5.13 Budget Management

The management of the project's budget has been conducted in a responsible and competent manner. An audit in July 1994 confirmed that the project's accounts were well-kept in accordance with WV and A.I.D. accounting procedures. The project's monthly reporting to WVRD headquarters has been both timely and accurate.

Few major budget shifts, other than the purchase of an additional computer, have occurred. This purchase was made necessary when one of the project's computers broke down and replacement parts could not be found.

Excluding indirect costs, the project had spent a total of \$268,197 out of a total project budget of \$512,562 as of November 30, 1994. This accounts for approximately 52 percent of the total budget. Of the field budget to date, the project has spent roughly 67 percent. The primary reasons for this underspending are as follows:

- i) Decertification of Nigeria by the U.S. Government in April 1994, which restricted the use of USAID funds.

Uncertainty over funding caused the project to reduce expenditures during the uncertain period from April until September 1994. The strain in relations between the governments of Nigeria and the U.S. also resulted in a restriction of travel to the country through November and the postponement of the midterm evaluation from August until December.

- ii) Devaluation of the local currency relative to the dollar (from a budgeted exchange rate of 20 Naira to the dollar to a current rate of around 80 Naira to the dollar, down only recently from a high of over 100)

This has enabled the project to purchase local goods at relatively cheaper prices than planned, though inflation has reduced this effect somewhat. The devaluation has had a more pronounced effect on the rate of expenditures in the personnel area, as the Naira-based salaries have not been revised since

January, 1994.

- iii) A strike by banks in the country prevented the project from accessing its funds and slowed project activities**

Even staff salaries were not able to be paid for a time.

It is likely that the project funds will be underspent at the end of the project. At the current average rate of expenditure (roughly \$8,000 per month) and excluding the cost of evaluations, there will be a surplus at the end of September 1995 of approximately \$137,000. This analysis is dependent, however, on the stabilization of both the rate of exchange and the rate of inflation, neither of which is given. A 1 year no cost extension should be considered (See Recommendation 17).

As the majority of the project's benchmarks for the second year have been surpassed, even with lower rates of expenditure than originally planned, it is expected that the project will be able to achieve its end-of-project objectives within the limits of the remaining budget.

6. Sustainability

The Ogbomosho Project was designed with the expectation that benefits could be sustained through a gradual transfer of responsibilities to the LGA. Initial attempts to initiate this process in Phase one areas (Ogo Oluwa) met with failure and necessitated the resumption of full responsibility for services by World Vision. Most government health services are currently non-functional. In Ogo Oluwa, lack of interest, resources, and personnel have almost totally curtailed government health services. In Orire, an understaffed motivated core is providing minimal services. Unless there is a major change in the level of government services, benefits will not be maintained by LGAs.

The BMC, an institution established in 1907, is currently providing a wide range of inpatient and outpatient services. Services are being provided by a well trained and dedicated staff. Decreases in external funding have forced the hospital to finance its services through patient fees.

While committed morally and professionally to community medicine, BMC does not have the resources needed to take over the Ogbomosho Child Survival Project. It does, however, have the vision and commitment, provided resources can be identified.

Based on the stewardship of the World Vision Project, a 6-12 months no-cost extension is possible. Provided funding can be assured, a planned integration of the World Vision Project as a community outreach of the BMC should be

considered. Funding sources to be explored include a service fee for the Road to Health Card which would cover part of immunization costs, a performance based contract with Orire LGA for LGA-wide delivery of EPI, and USAID's private sector Child Survival and Family Planning Projects (See Recommendation 18).

7. Recurrent Costs and Cost Recovery Mechanisms

The project is operating in an area in which virtually no other preventive and promotive health services are being provided. In such an environment, and given the considerable inputs and high levels of coverage that have been achieved, the project's operating costs of around \$8,000 per month can be considered to be reasonable. Several efforts have been made by the project to keep such costs low and to make the project as efficient as possible. These include the following:

- i) Initial training sessions for VHWs and TBAs were held concurrently in order to reduce travel and rental costs. Similarly, VHWs and TBAs now meet together at a central location for monthly refresher training sessions.**
- ii) The monthly outreach sessions include multiple interventions (e.g. growth monitoring, immunizations, distribution of family planning supplies, health education, etc.) and also serve as the opportunity for WV staff to supervise the community-based health workers. A single outreach session often brings together several villages, thus reducing the total number of village visits that need to be made.**
- iii) Before conducting an outreach clinic, a computerized roster of all women and children needing services is sent ahead of time so that targeted beneficiaries can be waiting for project staff. The list also gives the project an accurate estimate of the amount of vaccines needed and thus assists in reducing vaccine losses.**
- iv) Procurement is done directly with sellers, rather than using middle-men or contractors, who charge as much as 20 percent commission on the purchase price.**
- v) The project has hired only drivers who are experienced mechanics as well in order to reduce the need to spend unnecessary time and money taking vehicles to shops for maintenance and repairs.**
- vi) The project uses video films produced by UNICEF and Family Health Services. These films have been previously pre-tested by these organizations and found appropriate for use in the project area. Therefore, the project did not have to spend money producing its own films for the dissemination of health messages.**

Despite efforts to reduce costs, many budget line items are still not likely to be sustainable at current levels. These include the salaries for the project's 18 technical staff and costs associated with the project's 16 outreach sessions per week, including transport, vehicle maintenance, and drugs/supplies. Options to reduce costs of outreach activities need to be tested (See Recommendation 16).

Neither of the local governments appear to be in a position, in terms of finances, logistical and management capacity, or levels of priority, to assume the recurrent costs at present levels. Initially, both LGAs signed agreements to provide a variety of inputs to assist in carrying out project activities and to cover a portion of costs. While some costs have been covered by the LGAs-- occasional provision of training venues, and the supplying of all VHWs in Orire LGA with ORS kits--they have not reached levels described in the agreements.

LGAs are sending local residents for health training, indicating a willingness to provide necessary human inputs, and hopefully the financial ones to support them. But it is clear that LGAs do not have the resources needed to sustain the benefits of the project.

As for the communities themselves, most have shown evidence of being willing to pay for part of the costs of preventive health services. In several villages, mothers and/or CDC members make monthly contributions to a village fund for providing compensation to volunteer health workers or covering their transport costs. Community members pay for drugs received from the VHPs. In some areas, mothers are charged a nominal fee for deliveries attended by the project's TBAs, to be used as compensation for the TBA or to supplement the village account used to replenish drug supplies. Communities have provided the buildings and furniture for VHPs; many have dug wells which are later fitted with concrete rings supplied by the project.

The primary cost-recovery mechanism implemented by the project is the revolving drug scheme at the VHP. An initial stock of essential drugs was supplied by World Vision. The drugs are sold to community members in need, and the funds received used to purchase more drugs.

VIII. Conclusions and Recommendations

- In a country where most health services have stopped, the Ogbomosho Child Survival Project has expanded its geographic area and population coverage from one to two LGAs; has increased coverage of basic immunization, nutrition, and family planning services; and is beginning to demonstrate health impact. Of equal importance is the increasing empowerment of communities in the provision of preventive and curative services.

Recommendation 1: *The Evaluation Team unanimously commends all involved in the Child Survival Project (mothers; **VHWs, TBAs, NPs and CDCs;** and the **project staff**) for their excellent work in bringing Primary Health Care to a needy population of 68,000. Special commendation is given to the **dedication, commitment, technical expertise, and leadership** of the Project Manager, Dr. **OmoOlorun Olupona.***

- **While the initial strategy of entrusting the community with responsibility for selection of the CDC, VHWs, TBAs, and NPs; and the identification, repair, and furnishing of the health post created a community sense of ownership, over time the project focus has shifted from the village to the mobile outreach teams. On the arrival of the team, the CDC and village worker's role is marginalized rather than developed and supported.**

Recommendation 2: *World Vision **project staff** hold a one day retreat to find ways to alter village operations to focus on increasing the **visibility, importance, quality, and prestige** of the village based workers.*

- **The nutrition component of the program is contributing to substantial sustained development. Advocacy and counseling for feeding in pregnancy, immediate and exclusive breastfeeding (for 4 months), supplementation of diet with protein-calorie-vitamin A rich foods by 6 months, weighing and counseling (better terminology than growth monitoring) are technically sound and are, where being implemented correctly, improving nutrition. The distribution of soy seeds, education on their cultivation, and their use as a protein supplement to traditional foods is a brilliant and innovative developmental approach to address endemic protein deficiency. Three factors are, however, limiting the potential of the nutrition intervention: 1) lack of quality control in the essential elements of VHW weighing, recording and counseling; 2) the take over of the outreach sessions by the outreach teams as opposed to supporting the local workers; and 3) the centralization of data analysis at the central office.**

Recommendation 3: ***VHWs'** nutrition responsibilities be simplified to weighing, recording the weight on the **child's** chart, and giving immediate feedback to mothers. Village monitoring be limited to the number of children weighed, the **number** gaining weight, and the number not gaining weight.*

Recommendation 4: *Field teams be provided training in supportavision (preferable to supervision) to ensure as a first **priority** VHW quality weighing, recording the weight on the **child's** card, and counseling the mother on appropriate feeding practices. In this training, priority needs to be given to strategies to empower village based staff. It is also recommended that mechanisms be explored to provide visible fpicture sign board) community feedback on the community status on **nutrition, immunization, and drug expenses.***

*Recommendation 5: Central monitoring of nutritional data be limited to quarterly reviews of growth charts in the field with the **VHWs, TBAs, and NPs**; the discussion of these findings with those involved; and the collection of data for central project monitoring. Distribution of computer printouts to the field should be discontinued.*

- **Immunization coverage and quality are meeting the End of Project (EOP) targets. The quality of the EPI in terms of cold chain, sterilization, screening, and vaccine administration is excellent. Documentation of high coverage, field documentation of quality, and sentinel surveillance provides evidence of decreased disease incidence and of program impact.**

Recommendation 6. All those involved in immunization at the community and project be commended for their excellent performance. Central monitoring of immunization should be limited to quarterly reviews of immunization with village based staff with recording of essential information for project monitoring.

Recommendation 7: Consideration be given to the development of strategy to monitor immunization at the village level.

- **Malaria and its complications of cerebral malaria, febrile convulsions, and severe anemia is the number one killer of children in the project area. Malaria infection with placental parasitemia is a major contributor to low birth weight in first and second pregnancies. There is no evidence to ensure that the current treatment of malaria, chloroquine, is effective in a country with well documented increasing Plasmodium falciparum chloroquine resistance. Data from Malawi and also from Ilorin have shown the ineffectiveness of the currently recommended drugs of prophylaxis, chloroquine at first visit and Daraprim at second visit.**

*Recommendation 8: **Project** obtain the services of a consultant to carry out a two week in-vivo test of chloroquine sensitivity in parasitemic pre-school children.*

*Recommendation 9: **Project** solicit the assistance of the Nigerian Malaria Society in reviewing its current strategy for malaria prophylaxis in pregnant **y**.*

- **Diarrhea is a major contributor to childhood morbidity, malnutrition, and mortality. The prime strategy of the project to address this issue is the use of Oral Rehydration Therapy in the form of SSS or ORS. As such a strategy is only effective against 30-60% of diarrheas, and as effectiveness is not readily apparent to the family, increased priority needs to be given to diarrhea prevention strategies including: measles vaccination, provision of safe water, hand washing, and environmental sanitation.**

*Recommendation 10: The **project** through continuing education of village based and **project** staff increase priority being given to diarrhea prevention.*

*Recommendation 11: **Project** continue to support community efforts to improve the **availability** of safe water. The **project** is encouraged to seek additional funding from village leaders and external agencies.*

- **Acute Respiratory Infection (pneumonia) has been identified as a major cause of morbidity and mortality. Entrusting VHWs with counting respirations, identification of chest indrawing, and dispensing of cotrimoxazole will provide an important service and will in all probability increase the prestige of the VHW.**

*Recommendation 12: **Project** institute on a **trial** basis the addition of pneumonia treatment to a selected group of VHWs to determine their ability to detect and treat pneumonia and to judiciously use cotrimoxazole.*

- **Maternal health is an essential component of any child survival program. Two potential areas for strengthening would include allowing the VHWs or TBAs to resupply oral pills after the initial examination and prescription by a nurse. Second, pregnant women are not receiving Iron Folate, important to addressing anemia of pregnancy.**

*Recommendation 13: **Project** seek the assistance of the MotherCare **Project** to assess opportunities for improved maternal care with available resources.*

- **LGAs have limited resources but are not participating at possible levels. The current blanket request for participation in project activities is not effective. As requested by the LGA Chairman of Orire, there is a need for a joint planned calendar for areas of cooperation in training, outreach, and supervision listing dates, persons, and places. Initially, monthly and subsequently quarterly, jointly written feedback should be provided to the LGA Chairman by the PHC Coordinator and Project Manager.**

*Recommendation 14: **Project** develop with **LGAs** written plan for coordination in training, supervision, and service delivery. Monthly reports of this activity be provided to the **L GA** Chairmen.*

- **The Ogbomosho Project has developed an extensive health information system which is providing quality data for project monitoring and evaluation. It has, however, assumed a priority in excess of that appropriate for management and sustainability.**

*Recommendation 15: **Project** obtain the services of a consultant (NCCCD) to*

identify information needs, to **simplify** procedures for data entry and analysis, and to provide **training** to appropriate personnel. (See Appendix 2)

- **Current program strategies are resource intensive; cost per immunization given is especially high.**

*Recommendation 16: **Project** experiment with alternative outreach strategies such as splitting teams to visit two villages at a **time**, visiting on alternative months, or biannual campaigns in remote rural areas to identify ways to maintain benefits at lower cost.*

- **An analysis of pipeline funding suggests that funds are sufficient to provide a one year no-cost extension of the World Vision Ogbomosho Child Survival Project.**

*Recommendation 17: **Project** request a one year no cost extension of the current **project** to September 30, 1996.*

- **The major challenge to this "world-class" child survival project is to identify strategies and funding to ensure the sustainability of benefits to part or all of the current beneficiary population. Expansion of services to all of Oire LGA should be considered. This will require a thorough review of strategy options to increase efficiency, staffing levels, and salary levels.**

*Recommendation 78: **Project** convene a task force of **project** staff, Baptist Medical Center, LGA, and CDC representatives to explore options to ensure long term sustainability of benefits for the target population.*

- **Project staff, despite their commitment, technical knowledge and esprit de corps, are losing contact with the realities of everyday life at the village level. Recognizing the absolute priority of village based delivery of services to ensure the sustainability of the remarkable benefits that the project has achieved, it is essential for the project to give priority in 1995 to village empowerment.**

*Recommendation 79: Consideration be given to a 2-3 day visit by a member of the **project** staff to each **project** village to get to know the village and its workers, to understand the constraints facing the workers, to assess by house to house survey coverage of the population, and to develop strategies to elevate the status of village-based workers and the CDC. All **project** staff including **office** staff and drivers should be a part of the village visits.*

- **The Ogbomosho project is an excellent project in conceptualization, staffing, and operation. The above 19 recommendations have resulted from an evaluation team's limited exposure to a complex project. These**

recommendations need to be reviewed by project, BMC, LGA, and village based staffs to identify those that, from their perspective, are needed, valid and doable. For recommendations adopted, a table needs to be developed outlining recommendation, individual responsible for its implementation, a target for completion of activities, and a mechanism for quarterly review of recommendation implementation.

*Recommendation 20: The **project** convene a retreat in early February 1995 to review the above recommendations and **identify** those appropriate for adoption. That adoption be accompanied by the assignment of responsibility, the identification of a time frame, and the establishment of a mechanism for monitoring their implementation.*

Appendix 1 - Monitoring of Weight for Age, Ogbomosho Child Survival Project, Orire LGA, Oyo State, Nigeria

O-59 Months	Mo Dec 93	Mo Jan 94	Mo Feb 94	Mo Mar 94	Mo Apr 94	Mo May 94	Mo Jun 94	Mo Jul 94	Mo Aug 94	Mo Sep 94	Mo Ott 94	Mo Nov 94	Total
#Weighed	929	1064		1318	1129	1330	1579	1607	1441	1482	1287	1388	12561
# 1 st Visit	145	146		224	197	184	182	219	112	222	147	124	1611
# Appopr Wt	736	831		1061	917	1075	1222	1258	1042	1086	938	983	9582
% Appopr Wt	79.2	78.1		80.5	81.2	80.8	77.4	78.3	72.3	73.3	72.9	70.8	76.3
# Losing Wt	170	138		116	271	430	567	914	490	215	257	341	3909
% Losing Wt	18.3	13.0		8.8	24.0	32.3	35.9	56.9	34.0	14.5	20.0	24.6	31.1
# New Malnourished	23	36		40	28	18	44	54	74	76	62	49	504
% New Malnourished	2.5	3.4		3.0	2.5	1.4	2.8	3.4	5.1	5.1	4.8	3.5	4.0
# Malnourished	193	233		257	212	255	357	349	399	396	349	405	3405
% Malnourished*	20.8	21.9		19.5	18.8	19.2	22.6	21.7	27.7	26.7	27.1	29.2	27.1
#0-23 months	2500	2500		2500	2500	2500	2500	2500	2500	2500	2500	2500	22500
SO-23 Mos Weighed	628	739		911	779	944	1122	1152	1017	1062	953	1035	8975
%O-23 Mos Weighed	25.1	29.6		36.4	31.2	37.8	44.9	46.1	40.7	42.5	38.1	41.4	39.9
#0-23 Mos Approp Wt	513	604		757	647	779	904	927	776	801	713	759	
%O-23 Mos Approp Wt	81.7	81.7		83.1	83.1	82.5	80.6	80.5	76.3	75.4	74.8	73.3	
# O-23 Losing Wt	92	65		52	80	69	111	439	219	76	111	181	
%O-23 Mos Losing Wt	14.6	8.8		5.7	10.3	7.3	9.9	38.1	21.5	7.2	11.6	17.5	
# New Malnourished	16	25		29	19	13	33	43	44	62	57	65	
% New Malnourished	2.5	3.4		3.2	2.4	1.4	2.9	3.7	4.3	5.8	6.0	6.3	
# Malnourished .	115	135		154	132	165	218	225	241	261	240	276	
% Malnourished .	18.3	18.3		16.9	16.9	17.5	19.4	19.5	23.7	24.6	25.2	26.7	

. = Less than - 2SD below the mean

Appendix 2 -Thoughts on Strengthening the Health Information System

In reviewing and simplifying the current Health Information system, attention should be given to the following principles:

- Each level has its own unique needs for data
- Data should be analyzed and used at level of collection
- Transmission of data should be limited to that needed and used
- Use of data should justify the work involved in its collection

Five levels of the project need to collect and use data. Examples provided are illustrative and are not definitive. (See next page)

Mothers - Is my child gaining weight? If not, what do I need to do?

Village Health Workers - What is the weight of the child? Has the child gained weight since the last visit? Is the child in need of immunization?

Community Development Committee - Are children coming for weighing? Is the level of malnutrition increasing or decreasing? What is the status of drug availability and finances?

Outreach Teams - Do the village based workers know what they are supposed to do? Are they doing it? Are they doing it correctly?

Project - What are the baseline levels of health status and health delivery? How well are project targets being met?

In terms of developing information systems, they need to be built from the bottom utilizing the following questions: What are the essential pieces of information absolutely essential for use at the community level? Do the village based workers understand the importance of the data, the method of collection, and how to use the data? Are they using it correctly? Is village collection of data being supported and monitored? Is it making a difference?

At the other end of the spectrum are the needs for project related information. Much of this data required in the grant is provided through cluster surveys at the beginning and end of the project. Addition of an indicator of health status to these surveys, and, where possible, a matched comparison area is recommended for consideration. Monitoring needs to include selected indicators of utilization, quality, coverage, and impact.

Health information is only as good as the quality of data collection, analysis and use. Training, assessment, checking, and continuing education are all essential. Issues of accuracy, replicability, and validity merit careful attention.

Level-Specific Needs for Information					
Mothers	VHWs, TBAs, NPs	CDC	Indicator Type	Team	Project
Can I improve my child's nutrition?	Can I improve the health of my village?	Can we as a committee make a difference?	Empowerment	Are we empowering village workers?	Are we empowering communities and LGAs?
			Mortality		Proportionate mortality at BMC
Is my child gaining weight?	% weighed # gaining wt # stay or losing	% weighed # gaining wt # not gaining wt	Wt for Age	Quarterly review of nutrition with VHWs, NPs, and CDCs.	Baseline and final survey plus ? comparison area
			Morbidity		Sentinel Surveillance at BMC
			Quality	Assessment and support of VHWs, TBAs, NPs, and CDC activity	Assessment of quality of team performance
Is my child fully immunized?	% children fully immunized at 12 months % Attended Deliv	% children immunized with measles by 12 months	Coverage	Immunization coverage from quarterly reviews	Immunization coverage from HIS and baseline and final surveys
			Utilization	# services provided: EPI, FP	
		Essential Drugs	Availability		Vaccines, Transport