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CHILD SURVIVAL IMPLEMENTATION REPORT
BUREAU FOR AFRICA

SEPTEMBER 1989



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EXECUTIVE SUMMARY

Kenya and Burundi have already reached the Agency's Child Survival (CS) target, an infant mortality rate (IMR) of 75/1,000 live births. An additional six countries may achieve this target by 1995.

Both the CS Emphasis Countries and the ACSI-CCCD Countries have shown notable progress in immunization coverage. By 1995 seven of 16 countries should meet the 80 per cent coverage target; an additional three may meet that target. The likelihood of achieving this objective can be increased through continued long-term assistance which is sensitive to absorptive capacity and emphasizes continued monitoring of achievement and concerted donor coordination.

Lesotho has already reported achieving 100 per cent access to oral rehydration salts. By 1995 five more of the 16 countries may reach that target. Kenya and Lesotho have exceeded the goal of 45 per cent use of oral rehydration therapy (ORT) and by 1990 Malawi will achieve it. By 1995 four more countries are expected to meet the ORT use target. The likelihood of greater achievement in ORT use depends on increased health education efforts, continued training of health care workers and mothers in effective case management and prevention, supervision and monitoring of progress including knowledge, attitude and practice studies to determine constraints to greater use of ORT.

The Africa Bureau has initiated a number of efforts to promote the integration of nutrition activities in on-going CS programs. Despite the progress noted in increasing to 16 per cent the proportion of funds obligated for nutrition interventions, nutrition has been inadequately addressed to date in both Emphasis and ACSI-CCCD countries.

The major strain of malaria in Africa, Plasmodium falciparum, has developed increasing resistance to chloroquine and other affordable drugs in all but four countries of tropical Africa. As resistance has developed, both the number of cases of malaria and the mortality have increased. Because of the seriousness of this problem the Bureau plans to convene an expert panel to make recommendations about additional approaches.

Health education, child spacing services and outreach programs that focus on high risk characteristics, especially short birth intervals, may reduce the IMR. Six of the 16 priority countries have developed high risk birth components.

Sustainability of CS programs continues to be a top priority in the Bureau. Activities have stressed the development of health information systems, institutionalization of training and management techniques, health care financing and policy reform.

The planned obligation level of \$54 million for African CS activities in FY 1989 will bring the total support for these programs since 1981 to more than \$180 million.

I. INTRODUCTION

A larger proportion of children die in Africa than in any other region of the world. In 1988, 21 million children were born in sub-Saharan Africa. An estimated 4.3 million of these children will die before their fifth birthday, an under five mortality rate of 200 deaths per 1,000 live births. Over half of these deaths occur in the first year of life, an estimated infant mortality rate (IMR) of 108 per 1,000 live births. Improving child survival (CS) in Africa is therefore the greatest challenge to meeting the Agency's worldwide CS goal of reducing infant mortality to 75/1,000 live births.

The African profile is characteristically one of high infant mortality, high population growth and low economic growth. Over the past 25 years the IMR for sub-Saharan Africa has decreased 34 percent from 165/1,000 live births to 108/1,000 live births, Figure 1. Despite this trend the actual number of under five deaths in Africa is increasing. This discordance between falling rates and increasing deaths is attributable to population growth.

The Africa Bureau has vigorously implemented the Agency's CS strategy. In fact, the Bureau began its CS program in 1981 with the Africa Child Survival Initiative-Combating Childhood Communicable Diseases (ACSI-CCCD) Project and predated the Agency's development of a formal CS strategy in 1986. The Bureau approved an Africa-specific action plan in 1987 which established the following goals to direct the implementation of the action plan:

1. Reduce the IMR to less than 75/1,000 live births per year.
2. Immunize 80% of children under 5 years of age.
3. Assure wide access to appropriate and correct case management of diarrheal disease episodes for children under 5 years of age.
4. Provide access to voluntary family planning information and birth spacing methods for 50% of couples.
5. Reduce the percentage of children under 80% weight for height to less than 10%.
6. Provide access to an appropriate antimalarial treatment for at least 80% of children under 5 years of age consulting for fever/malaria.

The Bureau has major investments in child survival in sixteen countries. Eight are CS Emphasis Countries: Kenya, Mali, Malawi, Niger, Nigeria, Senegal, Sudan and Zaire. Ten countries participate in ACSI-CCCD: Burundi, Central African Republic (CAR), Cote d'Ivoire, Guinea, Lesotho, Liberia, Nigeria,

Swaziland, Togo and Zaire. Nigeria and Zaire are common to both groups. These 16 countries represent 61 per cent of the population in sub-Saharan Africa (excluding Angola, Ethiopia and South Africa).

II. PROGRESS IN CHILD SURVIVAL

Major contributors to the high infant and child mortality in Africa are diarrhea, malaria, malnutrition, respiratory infections, and vaccine preventable diseases such as measles and tetanus. For example, a health survey conducted in an A.I.D.-assisted project in Senegal in 1982 revealed that the following causes of death for children under five years of age accounted for 68 per cent of deaths:

diarrhea	24%
respiratory infections	23%
malaria	9%
measles	7%
tetanus	5%.

Data from five other CS Emphasis Countries (Kenya, Malawi, Niger, Nigeria and Sudan) reveal the same diseases though the proportion may differ.

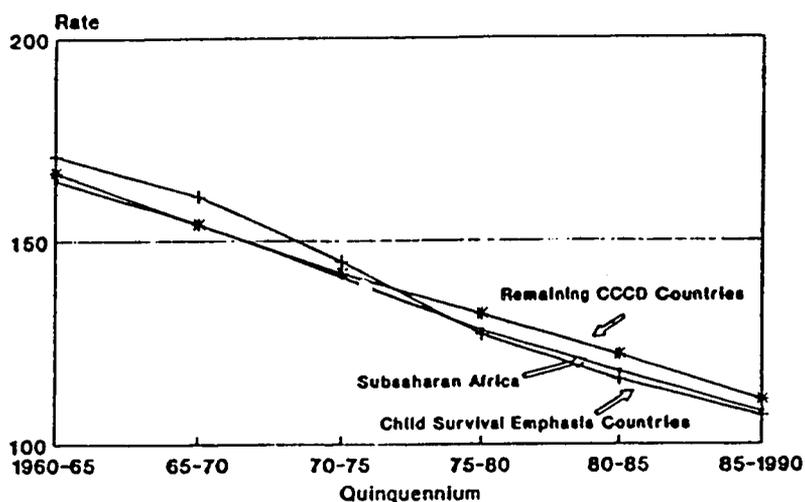
Close birth intervals are another major contributor to infant mortality. The risk of death for children born less than 24 months apart is 67-385 per cent greater than that for children born more than 48 months apart*.

These major causes of death and disease are being targeted through CS programs in immunization, oral rehydration therapy (ORT) for diarrhea, nutrition, child spacing for women subject to high risk births and chemotherapy for malaria. Some countries have added water and sanitation activities as part of diarrheal disease control programs. Programs for acute respiratory disease are just beginning in countries where immunization programs have attained and maintained a high level of immunization coverage.

Environmental and socioeconomic factors also affect infant and child mortality. In areas of political unrest or civil war (e.g., southern Sudan), systems to deliver available CS technologies break down. In such situations under five mortality

* Demographic and Health Surveys: Botswana, Burundi, Ghana, Liberia, Mali, Senegal, Togo, Uganda and Zimbabwe.

FIGURE 1.
TRENDS IN INFANT MORTALITY RATES
IN SELECTED GROUPS OF AFRICAN COUNTRIES



Source: United Nations, 1988
World Population Prospects Center For International Health Information, ISTI, 8/1/89

rates greater than 500 deaths per 1,000 births are not uncommon. Among the socioeconomic factors, poverty, illiteracy and inflation have been identified as major contributing factors to excess under five mortality. Food production and distribution are also essential to adequate improvements in child health.

A. INFANT MORTALITY RATES

Similar to the trend for sub-Saharan Africa as a whole, the IMR for the eight CS Emphasis Countries (Figure 1.) has declined 37 per cent from 171/1,000 live births to 107/1,000 live births for the periods 1960-65 and 1985-90 respectively. For the eight non-CS Emphasis, ACSI-CCCD Countries, the IMR has declined 34 per cent from 167/1,000 live births to 111/1,000 live births for the same periods (Table 1.).

TABLE 1. INFANT MORTALITY RATES OVER TIME
(Deaths per 1,000 live births, population weighted)

	60-65	65-70	70-75	75-80	80-85	85-90
Sub-Saharan Africa*	165	154	141	128	118	108
CS Emphasis Coun.	171	161	145	127	116	107
8 ACSI-CCCD Coun.	167	154	142	132	122	111
Rest of S-S AFR.	157	146	136	128	119	109

Source: World Population Prospects: 1988

*Note: Excluding Angola, Ethiopia and South Africa

An analysis of the trend lines for infant mortality estimates which of the 16 CS Emphasis/ACSI-CCCD Countries might achieve the Agency's target of 75/1,000 live births by 1995. Kenya has already achieved this target. Another five countries- Cote d'Ivoire, Lesotho, Liberia, Togo and Zaire- may achieve an IMR of 75/1,000 by 1995 (Table 2.).

Burundi and Senegal may also move into this latter group. The Demographic and Health Survey (DHS) found lower rates than those reported in Figures 3. & 4., i.e. in Burundi in 1987, DHS found 75/1,000 live births and in Senegal in 1986, 86/1,000 live births for the period 1981-86.

In summary, Kenya and Burundi have already reached the Agency's CS target, an IMR of 75/1,000 live births. An additional six countries (Cote d'Ivoire, Lesotho, Liberia, Senegal, Togo and Zaire) have the possibility of achieving this target by 1995.

B. IMMUNIZATIONS

Access and Coverage

The Bureau has reviewed the progress of immunization programs over several years among the eight CS Emphasis Countries and the additional eight countries participating in the ACSI-CCCD Project. Measles and DPT 3 coverage were selected as markers to estimate access to immunizations and achieved fully immunized levels, respectively. Tables 3. & 4. present a comparison of the data reported by WHO on these 16 countries.

From these tables certain conclusions may be drawn. The majority of the 16 countries have made progress in immunization coverage as shown by the upward trend lines in Figures 6.- 8. Measles coverage has increased in seven of the eight emphasis countries and in nine of the ten ACSI-CCCD countries. Five of the 16 countries have a measles coverage rate of 70 per cent or more. Six of the 16 countries have a DPT-3 coverage rate of 59 per cent or more.

Despite this progress only Kenya, Malawi and Swaziland will probably reach and maintain the Agency's target of 80 per cent vaccination coverage by 1990 (Table 2.). By 1995 Senegal, Burundi and Cote d'Ivoire may also attain the target.

The reasons the Agency's goal will not be met in all of the 16 countries are many. The most important is that strengthening the infrastructure of a national immunization program takes time. Time is required for host country structures to efficiently begin to use donor aid to keep up with the growth rate and the ever increasing numbers of new susceptibles born each year and to sustain activities without the infusion of massive amounts of external assistance.

TABLE 2. INFANT MORTALITY, IMMUNIZATION AND ORT RATES IN CHILD SURVIVAL EMPHASIS AND ACSI-CCCD COUNTRIES, PROBABILITY OF ATTAINING AGENCY TARGETS

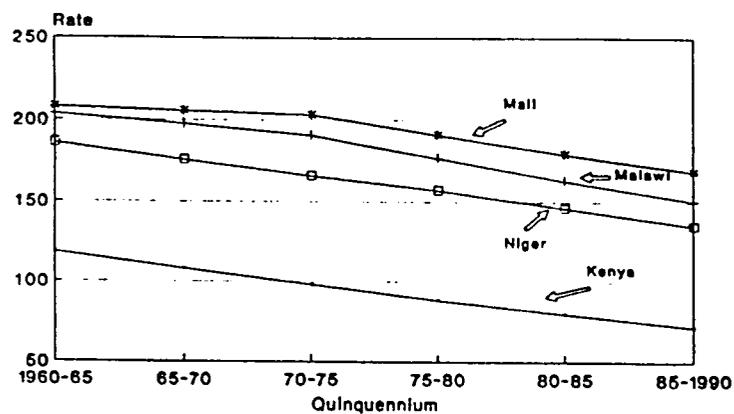
COUNTRY	IMR's		IMMUNIZATION COVERAGE RATES				ORAL REHYDRATION THERAPY					
	IMR ^a	GOAL	MEASLES	DPT3	GOAL		ORS ACCESS	GOAL		ORT USE RATE	GOAL	
		IMR=75 1995 ^b			80% COVERAGE 1990 ^b 1995 ^b	100% ACCESS 1990 ^b 1995 ^b		45% USE 1990 ^b 1995 ^b				
KENYA	72	Y	75 ^c	88 ^c	prob	Y	93	pos	Y	62	Y	Y
MALAWI	150	N	78 ^d	82 ^d	prob	Y	43	N	pos	42	prob	Y
MALI	169	N	8	6	N	U	20	N	U	3	N	U
NIGER	135	N	19	5	N	U	9	N	U	24	U	pos
NIGERIA	105	U	34 ^e	30 ^e	N	U	25	N	pos	20	U	pos
SENEGAL	128	U	70	53	pos	prob	7	N	U	9	N	U
SUDAN	108	U	22	29	N	U	38	N	U	25	U	pos
ZAIRE	98	pos	41 ^e	39 ^e	N	pos	24	N	U	10	N	U
BURUNDI	112	U	60 ^e	65 ^e	pos	prob	60	pos	prob	30	U	pos
CAR	132	N	40 ^e	31 ^e	U	pos	30	N	U	15	N	U
COTE d'IVOIRE	96	pos	24 ^e	25 ^e	pos	prob	10	N	U	4	N	U
GUINEA	147	N	11 ^e	7 ^e	N	U	6	N	U	1	N	U
LESOTHO	100	pos	79	71	prob	Y	100	Y	Y	68	Y	Y
LIBERIA	87	pos	41 ^e	22 ^e	U	U	8	N	U	9	N	U
SWAZILAND	118	U	74	74	prob	Y	—	N	U	4	N	U
TOGO	94	pos	53 ^e	59 ^e	U	pos	56	pos	prob	9	N	U

- a = Infant mortality rate = # of infant deaths/1,000 live births from U.N. 1988, World Pop. Prospects.
b = Bureau assessment of likelihood that sustained levels indicated will be achieved. (NO, Unlikely, Possible, Probable, Yes).
c = Demographic and Health Survey: Kenya 1989, age 12-23 mo assuming children reported, w/ immunization = same rates as children w/cards.
d = USAID report of national EPI survey, Joint UNICEF/Gov't of Italy Evaluation 1988.
e = ACSI-CCCD 1988 Report, vaccine doses < 1 divided by live births.

Source of data: WHO Programme Reports:WHO/EPI/MISC/89.2, 1/89,also 1/88 & 1/87; WHO/CDD/89.31.

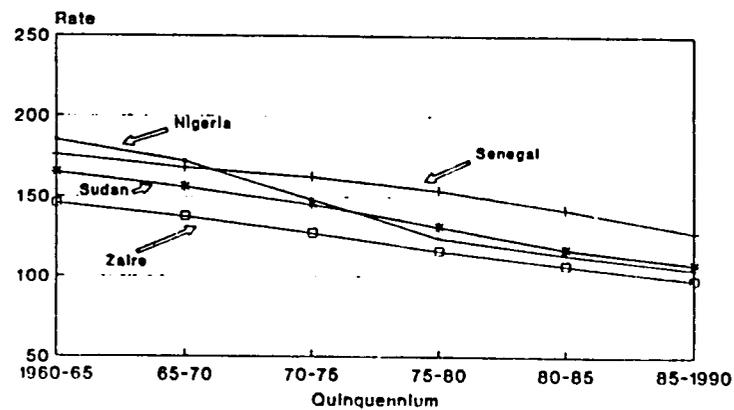
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FIGURE 2.
INFANT MORTALITY RATES IN SELECTED
CHILD SURVIVAL EMPHASIS COUNTRIES
IN AFRICA



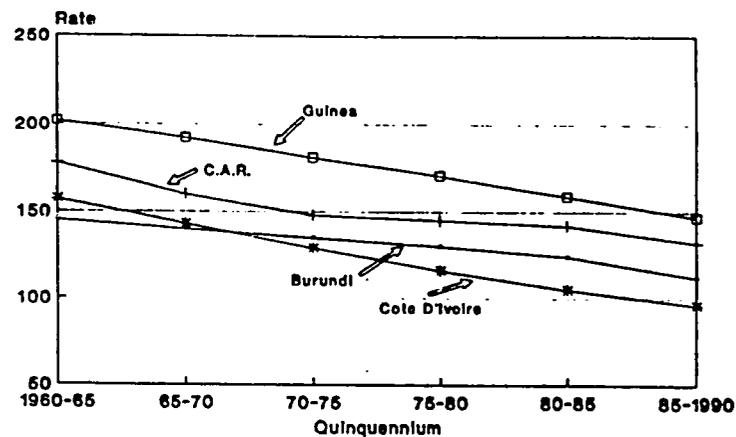
Source: United Nations, 1988
World Population Prospects Center For International Health Information, ISTI, 8/1/89

FIGURE 3.
INFANT MORTALITY RATES IN SELECTED
CHILD SURVIVAL EMPHASIS COUNTRIES
IN AFRICA



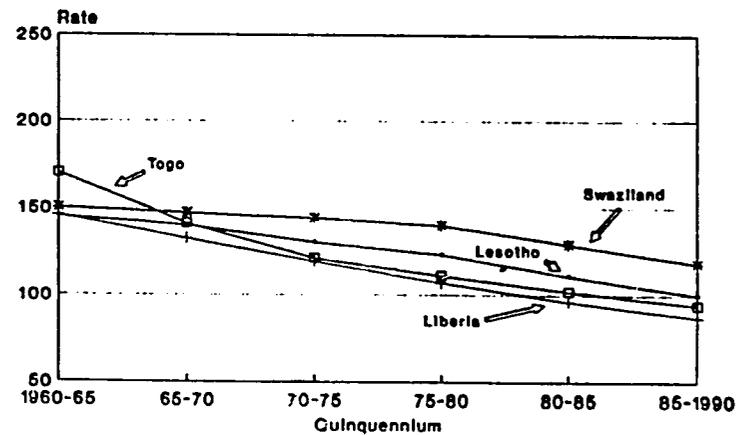
Source: United Nations, 1988
World Population Prospects Center For International Health Information, ISTI, 8/1/89

FIGURE 4.
INFANT MORTALITY RATES IN
SELECTED CCCD COUNTRIES



Source: United Nations, 1988
World Population Prospects Center For International Health Information, ISTI, 8/1/89

FIGURE 5.
INFANT MORTALITY RATES IN
SELECTED CCCD COUNTRIES



Source: United Nations, 1988
World Population Prospects Center For International Health Information, ISTI, 8/1/89

Table 3. Africa - Child Survival Emphasis Countries:
Comparison of Vaccine Coverage Data Over Time

Country	Coverage Rates by Antigen by Year									
	Measles Coverage Rates					DPT 3 Coverage Rates				
	1983	1985	1986	1987	1988	1983	1985	1986	1987	1988
Kenya	55%	63%	65%	60%(s)	75%* (89)	58%	70%	72%	75%(s)	88%* (89)
Malawi	67%	51%	66%	60%	78%**	71%	52%	70%	55%	82%**
Mali			5%	8%				3%	6%	
Niger	19% (81)					6% (81)		5%		
Nigeria***	17% (84)	9%	17%	24%	34%****	5% (84)	9%	16%	21%	30%****
Senegal		40%	42%*	70%(s)			54%	18%*	53%(s)	
Sudan	2%	6%	11%	22%		3%	8%	14%	29%	
Zaire***	29%	41%	39%	39%	44%****	16%	37%	32%	36%	39%****

* = DHS for age 12-23 months, assuming children reported with immunizations have same rates as children with immunization cards.
 ** = USAID report of national EPI survey, Joint UNICEF/Gov't of Italy Evaluation, 1988.
 *** = Also ACSI-CCOD Country.
 **** = ACSI-CCOD reports, vaccine doses < 1 divided by live births.

Source: WHO/EPI Reports, EPI/MISC/89.2, Jan 89; also Jan 88 & Jan 87

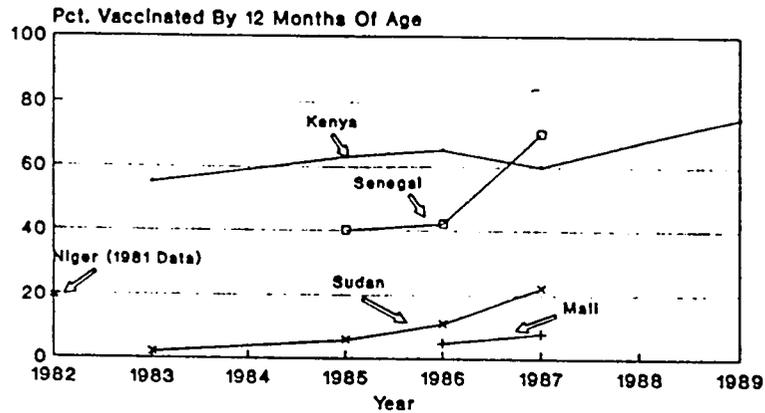
Table 4. Africa Child Survival Initiative - CCOD Project Countries:
Comparison of Vaccine Coverage Data Over Time

Country	Coverage Rates by Antigen by Year									
	Measles Coverage Rates					DPT 3 Coverage Rates				
	1983	1985	1986	1987	1988	1983	1985	1986	1987	1988
Burundi	45%		42%	55%	60%*	27%		65%	70%	65%*
CAR	16% (82)			17%	40%*	14% (82)		20%*	22%	31%*
Cote d'Ivoire		30%*	25%*	85%(s)	24%*		25%*	30%	71%(s)	25%*
Guinea		1%*	9%	10%*	11%*			2%	10%*	7%*
Lesotho	73%		73%(s)		79%(s)	55%		82%(s)		77%(s)
Liberia		23%*	39%	40%	41%*	23%		15%(s)	19%	22%*
Swaziland	41%	49%	66%	74%(s)		49%	61%	73%	74%(s)	
Togo		21%*	30%*	48%(s)	53%*		18%*	23%	41%(s)	59%*

* = ACSI-CCOD reports, vaccine doses < 1 divided by live births.
 (s) = Survey data.

Source: WHO/EPI Reports, EPI/MISC/89.2, Jan 89; also Jan 88 & Jan 87

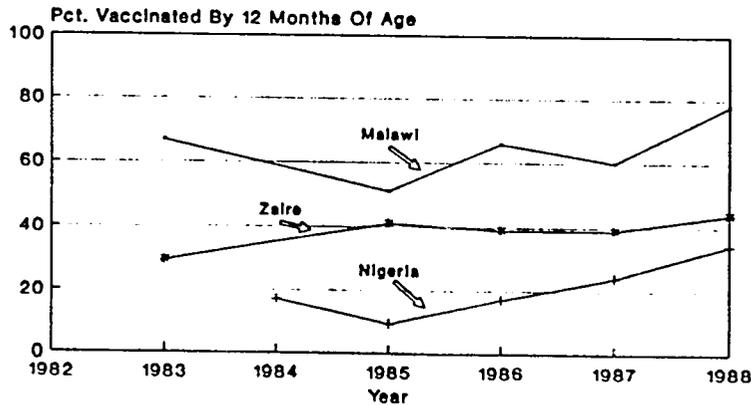
FIGURE 6.
MEASLES VACCINATION COVERAGE RATES IN
SELECTED CHILD SURVIVAL EMPHASIS
COUNTRIES IN AFRICA



Sources: WHO, EPI/MISC/89.2
 Kenya, 1989 and Senegal, 1986 -
 DHS (Mothers • Cards)

CIHI, ISTI, 8/1/89

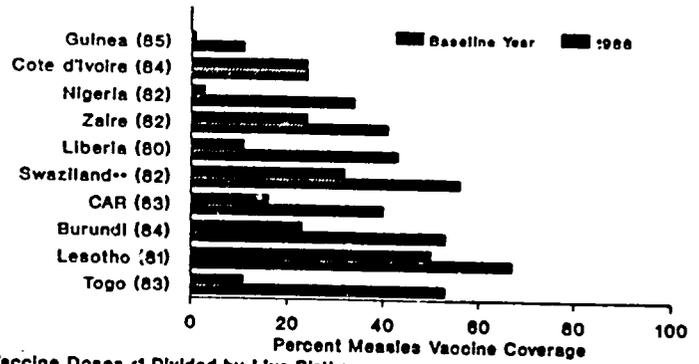
FIGURE 7.
MEASLES VACCINATION COVERAGE RATES IN
CHILD SURVIVAL EMPHASIS COUNTRIES ALSO
PARTICIPATING IN THE CCCD PROGRAM



Sources: WHO, EPI/MISC/89.2
 Zaire, Nigeria, '88 - USAID/CCCD Reports
 Malawi, 1988 - EPI Eval. cited by USAID

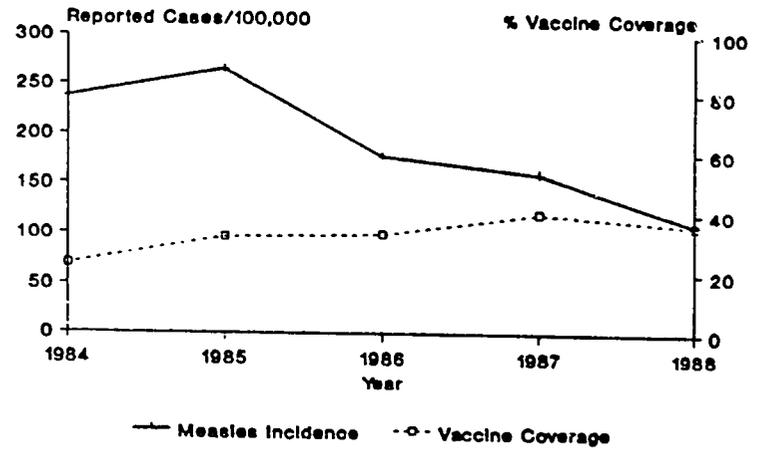
CIHI, ISTI, 8/1/89

FIGURE 8.
AFRICA CHILD SURVIVAL INITIATIVE
COMBATting CHILDHOOD COMMUNICABLE DISEASES
Measles Vaccine Coverage*
Ten African Countries
Baseline Year and 1988



*Vaccine Doses ÷ 1 Divided by Live Births
 ** 1987 Data

FIGURE 9.
Measles Incidence and Coverage
Nine CCCD Countries* - 1984-1988



* Excludes Nigeria

Five of the eight CS Emphasis Countries in sub-Saharan Africa (Mali, Niger, Nigeria, Sudan and Zaire) face tremendous logistical and cold chain problems because of geographic and climatic conditions. Nigeria and Sudan are making slow but steady and significant progress. Immunization levels in Zaire appear to have plateaued in recent years but that may be partially due to reporting errors in 1985. With implementation in 1988 of EPI services in 67 per cent of health zones and attention to technical and management weaknesses, coverage rates are expected to improve, though slowly since the newer zones have less infrastructure on which to build. In addition, USAID/Zaire has initiated systems analysis to identify CS service delivery problems and operations research to find and implement solutions to these problems. Mali and Niger are strengthening primary health care (PHC) infrastructure upon which to build immunization programs. Progress continues to be slow because of limited absorptive capacity caused by limited human and financial resources and political/policy constraints. It is unlikely that either country will achieve the Agency's coverage goals by 1995.

Quality

What is not demonstrated by the graphs is the significant improvement in quality that is being obtained through bilateral and multilateral technical assistance. Data from ACSI-CCCD countries show significant improvements in quality: correct temperature storage for vaccines increased from 60 to 80 per cent in project areas; use of a sterile needle and syringe for each injection increased from 50 to 90 per cent. In 9 of 10 ACSI-CCCD countries (excluding Nigeria) measles immunization coverage by 12 months of age has increased from 8 per cent in 1984 to 35 per cent in 1988. At the same time reported measles incidence has fallen from 237 cases per 100,000 to 109 cases per 100,000, a decrease of 54 per cent (Figure 9.). These improvements in quality have tremendous impact on the major objectives of child survival: the reduction in disease and the saving of lives.

Impact of Campaigns

National accelerated campaigns were implemented in four ACSI-CCCD countries in 1988: C.A.R., Liberia, Nigeria and Togo. Coverage rates increased as a result. However, in countries using a single campaign strategy, e.g. Cote d'Ivoire and Nigeria, coverage rates declined in the succeeding months or year. In Liberia where annual vaccination weeks are carried out, coverage levels have been maintained. To counteract the potential problem of drop-off after a campaign, strategies are being developed to increase postcampaign coverage through vaccination at every contact with the health system and follow-up campaigns at the local level.

Summary

Both the CS Emphasis Countries and the ACSI-CCCD Countries have shown notable progress in immunization coverage. Based on trends it appears that seven of 16 will probably meet the 80 per cent coverage target by 1995. An additional three could possibly meet that target by 1995 should all factors operate favorably. The likelihood of these countries achieving this objective can be increased through continued long-term assistance which is sensitive to the absorptive capacity and emphasizes continued monitoring of achievement and concerted donor coordination with DANIDA (Danish Aid), Rotary International and UNICEF.

C. ORAL REHYDRATION THERAPY (ORT)

Access and Coverage

The Bureau has reviewed the progress of ORT programs over several years among the eight CS Emphasis Countries and the additional eight ACSI-CCCD Countries. Tables 5. & 6. present a comparison of data reported by WHO for the 16 countries on indicators of ORT. The Agency's goals are the following: 100 per cent of the population with reasonable access to a provider of oral rehydration salts (ORS) who is trained in its use and 45 per cent of diarrheal cases within the past two weeks treated with ORT.

Burundi, C.A.R., Lesotho, Kenya, Malawi and Nigeria have made significant progress at improving access to ORS (Figures 10.-13.). Cote d'Ivoire, Niger and Togo reveal upward trends in access to ORS. In Malawi, Swaziland and Togo, 100 per cent of health facilities report using ORS. In Burundi, Cote d'Ivoire, Liberia and Zaire the proportion of facilities using ORS ranges from 54 to 77 per cent. Burundi has initiated national ORS production bringing to five the number of ACSI-CCCD countries with this capability.

By 1995 three of eight CS Emphasis Countries could achieve 100 per cent access to ORS plus two additional ACSI-CCCD countries (Table 2.). However, 100 per cent access is unrealistic for countries like Mali, Niger, Sudan and Zaire where the communications and transportation infrastructure are extremely limited.

Significant improvements in the use of ORT can be noted for Kenya, Malawi, Niger and Sudan among the CS Emphasis Countries and for Burundi, Lesotho and Togo among the ACSI-CCCD Countries (Figures 14.-17.). Kenya and Lesotho now report surpassing the goal of 45 per cent use of ORT; Malawi probably will achieve that goal by 1990. It is possible that three other CS Emphasis Countries and one other ACSI-CCCD Country could achieve 45 per cent ORT use by 1995 (Table 2.).

Table 5. Africa Child Survival Emphasis Countries:
Comparison of ORS Access and ORT Use Rates Over Time

CS Emphasis Countries	ORS Access Rate				ORS Use Rate				ORT Use Rate			
	1984	1985	1986	1987	1984	1985	1986	1987	1985	1986	1987	1989
Kenya		40.0%		92.8%		3.0%	14.5%	26.0%	3.0%	23.0%	26.0%	61.8%*
Malawi		23.4%		43.3%		2.3%	9.9%		2.3%	9.9%	42.0%	
Mali		20.0%				2.0%		2.2%	2.0%		2.7%	
Niger		4.4%		8.9%		0.6%			0.6%		24.1%	
Nigeria**	2.1%	15.0%	25.0%		1.5%	5.0%	7.0%	10.5%	10.0%	18.0%	20.0%	
Senegal		25.7%		7.3%		2.6%	3.0%		2.6%	6.6%*	9.0%	
Sudan	5.5%	7.5%	38.5%		1.2%	5.0%	7.7%	23.1%	12.5%	8.1%	25.0%	
Zaire**	12.0%	45.0%	48.0%	23.8%		1.1%	10.0%		30.6%	18.0%	10.0%	

* Demographic & Health Survey

** Also ACSI-CCCD Countries

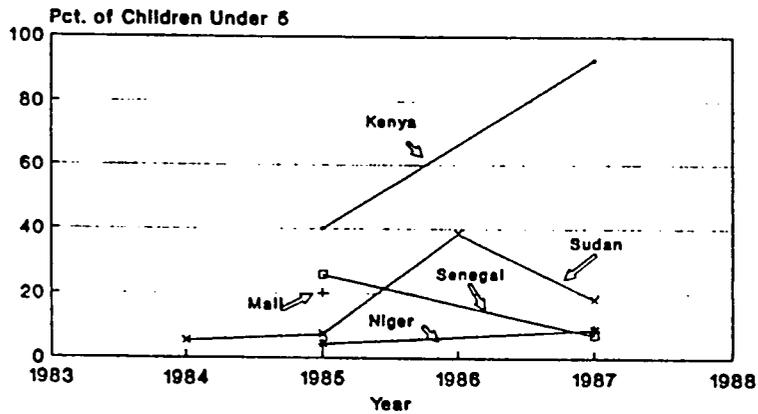
Source: WHO Program Reports for Control of Diarrheal Diseases, WHO/CDD/89.31.

Table 6. Africa Child Survival Initiative-Combating Childhood Communicable Diseases:
Comparison of ORS Access and Use and ORT Use Rates Over Time

ACSI-CCCD Countries	ORS Access Rate				ORS Use Rate				ORT Use Rate			
	1984	1985	1986	1987	1984	1985	1986	1987	1985	1986	1987	1989
Burundi	5.0%	29.8%		60.0%	1.3%	6.6%	9.0%	29.5%	6.6%	9.0%	29.5%	
CAR			10.0%	30.0%		5.6%		14.6%	5.6%		14.6%	
Cote d'Ivoire		10.0%		16.3%		4.3%			4.3%			
Guinea		6.0%	9.5%	6.0%		0.6%	1.0%		0.6%	1.0%		
Lesotho	21.0% (82)	100.0%				10.3%	6.2%	27.0%	10.3%	6.2%	68.0%	
Liberia		13.4%		8.5%		1.3%	6.0%	6.0%	1.3%	6.0%	9.0%	
Swaziland							4.0%					
Togo		52.3%	56.0%			5.2%	7.6%	8.1%	5.2%	8.7%	9.0%	

Source: WHO Program Reports for Control of Diarrheal Diseases, WHO/CDD/89.31.

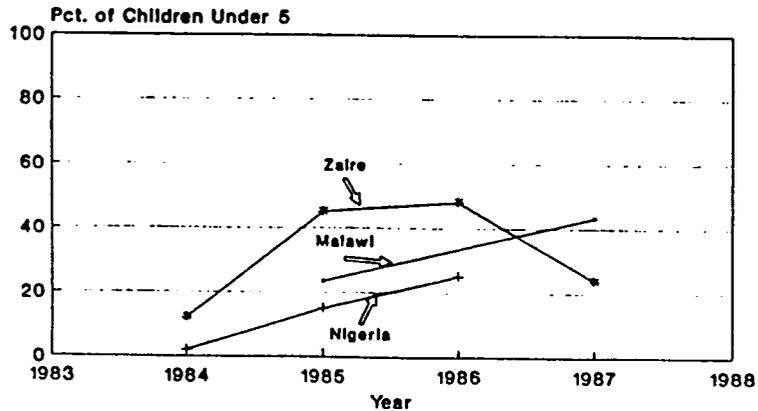
FIGURE 10.
ORS ACCESS RATES IN SELECTED
CHILD SURVIVAL EMPHASIS COUNTRIES
IN AFRICA



Source: Annual Reports of the
 World Health Organization
 Diarrhoeal Disease Programme

CIHI, ISTI, 8/1/89

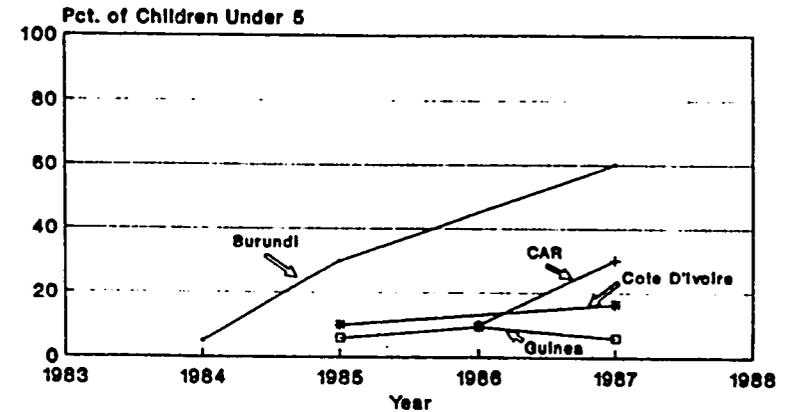
FIGURE 11.
ORS ACCESS RATES IN
CHILD SURVIVAL EMPHASIS COUNTRIES
ALSO PARTICIPATING IN THE CCD PROGRAM



Source: Annual Reports of the
 World Health Organization
 Diarrhoeal Disease Programme

CIHI, ISTI, 8/1/89

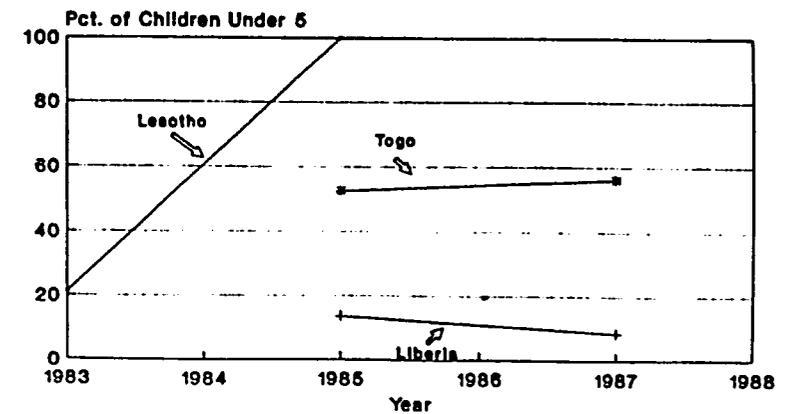
FIGURE 12.
ORS ACCESS RATES IN SELECTED
ACSI-CCCD COUNTRIES
IN AFRICA



Source: Annual Reports of the
 World Health Organization
 Diarrhoeal Disease Programme

CIHI, ISTI, 8/1/89

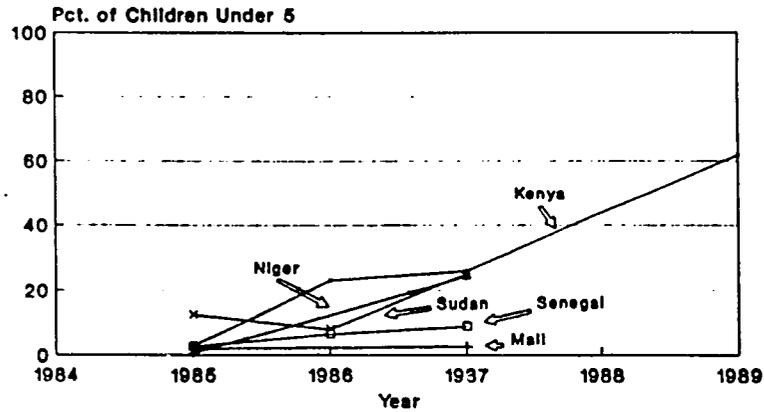
FIGURE 13.
ORS ACCESS RATES IN SELECTED
ACSI-CCCD COUNTRIES
IN AFRICA



Source: Annual Reports of the
 World Health Organization
 Diarrhoeal Disease Programme

CIHI, ISTI, 8/1/89

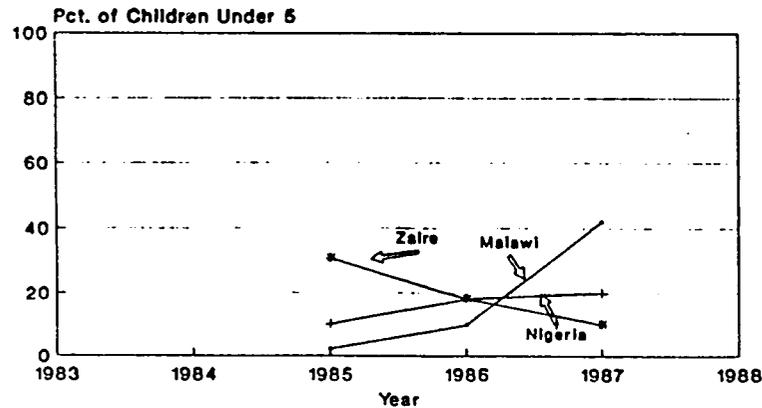
FIGURE 14.
ORT USE RATES IN SELECTED
CHILD SURVIVAL EMPHASIS COUNTRIES
IN AFRICA



Source: WHO Program Reports for the Control of Diarrhoeal Disease
Senegal '86, Mali '87, Kenya '89 - DHS

CIHI, ISTI, 8/1/89

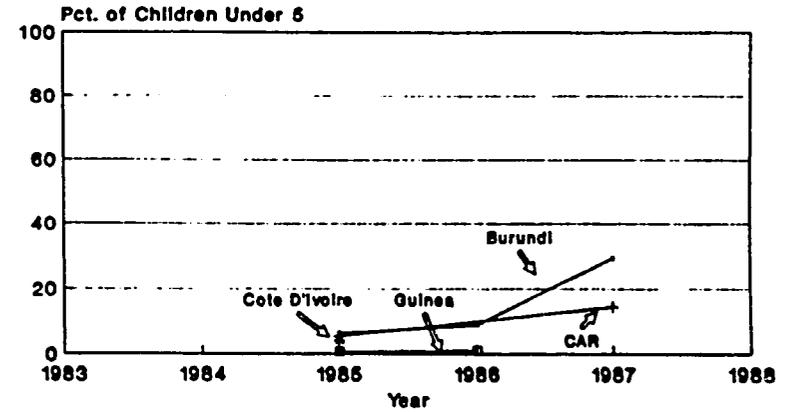
FIGURE 15.
ORT USE RATES IN
CHILD SURVIVAL EMPHASIS COUNTRIES
ALSO PARTICIPATING IN THE CCCD PROGRAM



Source: Annual Reports of the World Health Organization Diarrhoeal Disease Programme

CIHI, ISTI, 8/1/89

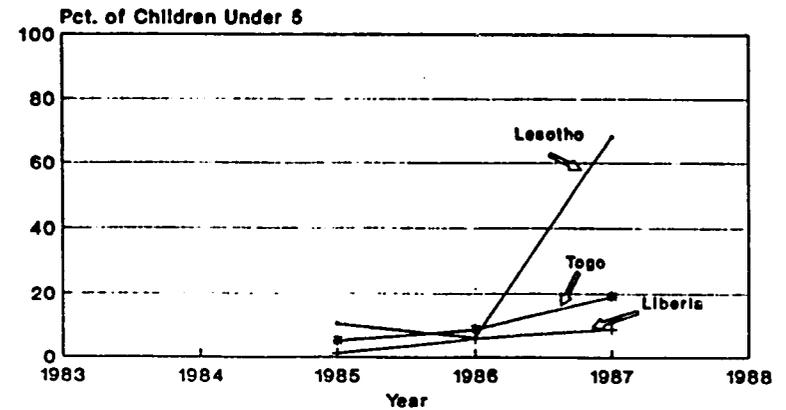
FIGURE 16.
ORT USE RATES IN SELECTED
ACSI-CCCD COUNTRIES
IN AFRICA



Source: Annual Reports of the WHO Diarrhoeal Disease Programme
Burundi '87 - DHS

CIHI, ISTI, 8/1/89

FIGURE 17.
ORT USE RATES IN SELECTED
ACSI-CCCD COUNTRIES
IN AFRICA



Source: Annual Reports of the World Health Organization Diarrhoeal Disease Programme

CIHI, ISTI, 8/1/89

Quality

Use of ORT in health facilities has improved the quality of care and reduced mortality. Table 7. summarizes data from Kamuzu Hospital in Malawi highlighting a dramatic reduction in mortality from diarrhea that has accompanied the increasingly appropriate use of ORT. In addition, the use of intravenous fluids and antibiotics has decreased substantially. In Mali and Senegal recent health facility surveys assessed the impact of training over 1,000 health workers in each country in basic ORT skills. In most cases observed, advice on ORT was appropriately given. Correct classification and treatment choices were made in over 85 per cent of cases. Similar findings were evident in Swaziland and Togo during training needs assessments. In Zaire the quality of outpatient management of diarrhea is improving. Of 52,134 diarrhea cases seen at sentinel posts, 38,078 (73 per cent) received ORS.

TABLE 7. IMPACT OF ORT AT KAMUZU HOSPITAL
AMONG PEDIATRIC PATIENTS, LILONGWE, MALAWI

<u>INDICATOR</u>	<u>PRE-ORT</u>	<u>POST-ORT (% CHANGE)</u>
%Pediatric Admissions Diarrhea	14%	7% (-50%)
%Mild Mod Diarrhea Receiving IVs	78%	26% (-67%)
%Mild Mod Diarrhea Receiving ORT Only	21%	69% (+70%)
Diarrhea Deaths per 1000 Admissions	12.9	7.9 (-25%)
Hospital Diarrheal Admission Costs	93,894 K	64,016K (-32%)

Despite these gains significant problems remain in health worker performance. The surveys in Mali and Senegal found that dehydration status is often not systematically investigated. Mothers receive little advice on feeding a sick child, on preventing diarrhea or on when to return to a health facility. The quantity of liquid that should be given to a severely dehydrated child is not routinely administered and even moderately dehydrated children are seldom kept under surveillance. Surveys in Swaziland and Togo noted similar results. Operations research in Zaire revealed that all of the mothers surveyed had been instructed by health workers to give ORS or SSS but only 26 per cent of them were taught how to prepare the solution. These are topics to be addressed through continuing education sessions and supervision visits.

Progress in ORT at the community level, i.e. increasing fluid intake (home fluids, homemade salt and sugar solution [SSS] or ORS or modifying home treatment practices) has been

disappointing. For example, surveys in Lesotho and Nigeria assessed the knowledge and capability of mothers trained in the preparation of a SSS at home. Figure 18. illustrates that less than 40 percent of mothers who had heard of SSS were able to mix it correctly under observation (for both countries). The operations research in Zaire determined that over 90 per cent of mothers knew of the SSS but only 28 per cent knew the correct recipe.

Health Education

As Figure 19. shows it is possible to modify home practices. The Togolese Health Education Service, with the technical assistance of a Peace Corps Volunteer, trained nine groups of village volunteers to provide health education through such techniques as story telling and dramas. After 2-4 months of education, survey data showed an increase in helpful home treatment practices and a decrease in harmful ones. Using the results of this study, two- person health education teams have been trained and posted to each of the country's 21 prefectures.

FIGURE 18.
Salt and Sugar Concentrations
Home Made SSS - Lesotho 1988

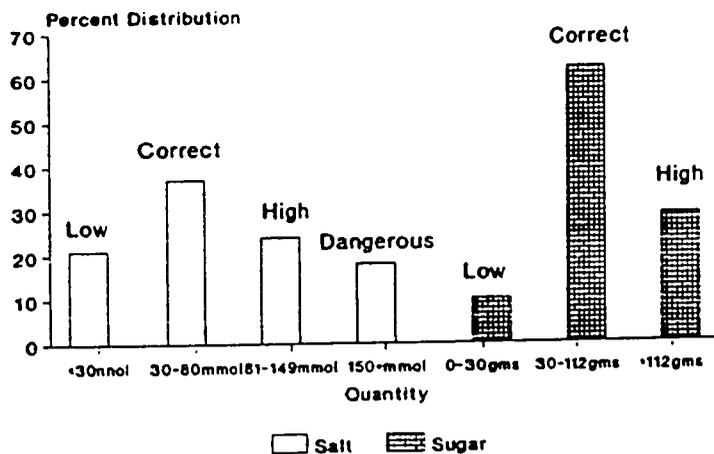
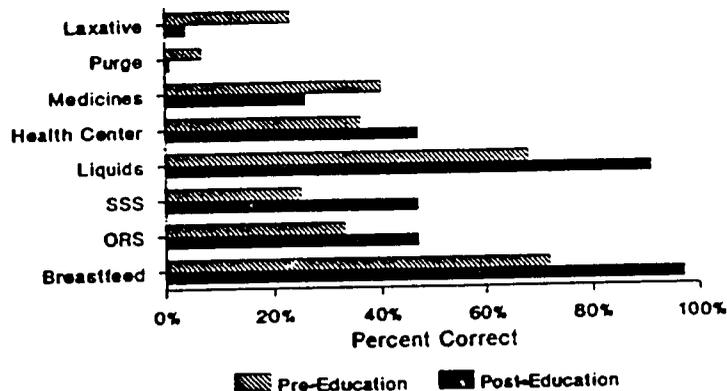


FIGURE 19.
Community Diarrhea Treatment Practices:
Pre- and Post-Health Education
Nine Villages in Togo



Such data demonstrate the importance of community participation which is increasingly being recognized. For example, C.A.R. has developed a national plan for community mobilization and 322 health workers have been trained in health education techniques.

Through the A.I.D.-funded HEALTHCOM project, national capabilities in market research and media, especially radio, are being directed at promoting child survival at the community level in Lesotho, Malawi, Nigeria and Zaire. In addition, the African

Regional Health Education Center (ARHEC) at Ibadan, Nigeria is training health educators and program managers from five ACSI-CCCD anglophone countries in health education planning and implementation. ARHEC is also assisting the School of Public Health in Kinshasa, Zaire to establish a francophone health education course.

Summary

Lesotho has already reported achieving 100 per cent access to ORS. At best, five more of the 16 countries may reach the target of 100 per cent access by 1995. Kenya and Lesotho have exceeded the goal of 45 per cent use of ORT and Malawi will achieve this goal by 1990. Four more countries are expected to meet the target of 45 per cent use levels by 1995. The likelihood of greater achievement in ORT use depends on increased health education efforts, continued training of health care workers and mothers in effective case management and prevention, supervision and monitoring of progress including knowledge, attitude and practice studies to determine constraints to greater use of ORT.

D. NUTRITION

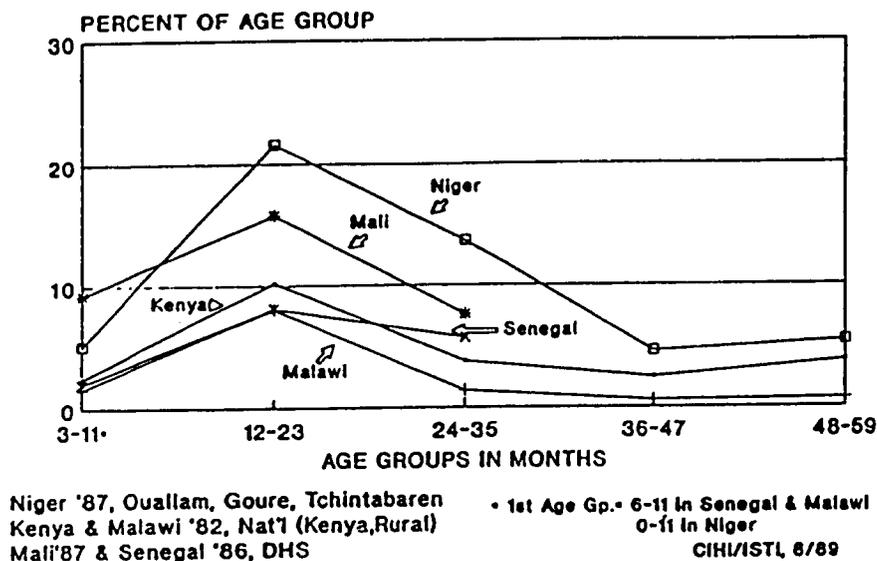
Malnourished children are twenty times more likely to die than well nourished children. Malnutrition underlies more than half of childhood deaths. Without an effective nutrition program, the CS initiatives will fall short of the targets. The Bureau's CS Strategy emphasizes breastfeeding, improved feeding practices, dietary management of diarrhea, growth monitoring/promotion, targeted feeding programs, and Vitamin A interventions where appropriate.

The extent of the problem of malnutrition is illustrated by the following: In Senegal, 22 per cent of children are more than two standard deviations (SD) below the international standard of weight for age; in Sudan 16 per cent of children are less than 80th percentile weight for height (2 SD's).* Figure 20. demonstrates that malnutrition peaks in the 12-23 month old age group emphasizing the importance of breastfeeding and appropriate weaning practices.

To better document existing programs and to track progress of new nutrition interventions, the Bureau has initiated a nutrition monitoring system. It tracks, by country, the Bureau's nutrition activities that are scattered across multiple sectors and permits periodic reevaluation of nutrition related needs and trends. Through the monitoring system, the Bureau, with the help of a Technical Advisory Group, is assessing the successes and/or gaps in these individual country nutrition activities and is

* In the normal distribution only 2.5 per cent are expected to be 2 SD's below the norm.

FIGURE 20.
NUTRITIONAL STATUS IN AFRICA
Malnutrition Defined As 2 SD's Below
The NCHS Standard For Weight For Height



preparing a Nutrition Action Plan to assist missions Africa-wide in planning and programming nutrition activities.

On a regional basis, REDSO/West Africa sponsored the development of nutrition program guidelines to help missions in West and Central Africa develop their own nutrition program strategies. USAID/Niger has developed a detailed nutrition strategy and has requested a Technical Advisor in Child Survival (TACS) to fill the position of Nutrition Advisor in the Ministry of Health (MOH). Similarly, USAID/Bamako will place a long-term advisor to promote IEC activities in nutrition and other child survival interventions.

Improved food availability and food consumption are both inextricably tied to improved nutritional status, involving factors such as distribution of benefits from agricultural development and nutritional effects of crop seasonality. As the relationship between agricultural development, improved food consumption and improved nutritional status is neither direct nor simple, the Bureau is developing guidelines for USAID health and agriculture officers on how to promote and include meaningful food consumption and nutrition consideration in agricultural programs.

The Nutrition Communication Project (NCP) is working in Mali, Niger, Sudan, Swaziland and elsewhere. NCP is assisting missions to develop individualized country programs and PVO's to develop and produce nutrition education materials and programs. In addition, REDSO/WCA and the Bureau have funded a communications workshop in Cote d'Ivoire which will emphasize integration of health center based nutrition education with radio and print media

for MOH nutrition and communication staff from participating Sahelian countries.

In Mali the NCP will assist the MOH in conducting research on infant feeding practices and in defining a communication/education strategy. Technical assistance will conduct training to develop and implement simple procedures for growth monitoring and counseling. In Niger and Sudan, NCP has trained MOH staff on rapid ethnographic assessment of infant/child feeding practices. Results from this community research will be used to design nutrition education messages and develop creative materials on feeding practices. In Swaziland, NCP will assist the MOH and UNICEF to continue promotion of adequate feeding of infants and young children through development of a communication strategy, materials and training.

Operations Research

The Bureau is supporting operations research (OR) on growth monitoring/promotion (GM/P) activities in Togo and Zaire to test the appropriateness in different African settings of GM/P as a tool which highlights, for both health workers and mothers, the crucial importance of consistent, sustained growth throughout the infancy and early childhood. In Togo the Primary Health Care Operations Research Project (PRICOR) is assisting Catholic Relief Services in a research activity on growth monitoring. In Mali, the MOH and UNDP are implementing a USAID-funded GM/P and nutrition surveillance project in selected field sites.

PRICOR has conducted a systems analysis of growth monitoring activities in Zaire to examine its usefulness as a child survival intervention. Findings suggest that the technical tasks of weighing and recording are working well. Of 300 observed weighings, 95 per cent of weights were interpreted and 93 per cent recorded correctly. Ninety-five per cent of scales were functioning and growth card supplies were adequate in 75 per cent of health centers. However, observations revealed that while health workers informed 70 per cent of the mothers if a child had gained weight, they were reluctant to comment if a child was growing poorly (only 45 per cent informed the mother). These results suggest that programs may be judged ineffective because health workers fail to perform an essential activity, e.g. informing mothers when a child's growth is faltering and instructing them how to promote growth.

The systems analysis in Zaire has led to small OR studies to strengthen particular elements of GM/P, including supervision and information systems. A Bureau-funded study is being carried out by the Zaire School of Public Health to test different models of organizing growth monitoring sessions to determine which one maximizes time spent with the mother and her comprehension of her child's nutritional status.

Vitamin A

WHO (1987) listed Malawi, Mali, Niger, Nigeria and Sudan among the countries which have "significant" Vitamin A deficiency problems. Burundi, Kenya and Rwanda are included among countries with high probability of a "significant" problem in at least part of the country. Vitamin A activities under PVO auspices are being undertaken in Kenya, Malawi, Mali, Mozambique, Niger, Nigeria, Senegal and Sudan.

Current research points to the link between Vitamin A and measles. Measles is an important risk factor for the development of severe vitamin A deficiency and blindness in Africa. Similarly Vitamin A status at the time of measles infection seems to be critical to outcome. An operations research activity of the ACSI-CCCD Project in Togo will examine the Vitamin A/measles relationship. The literature also gives evidence of an association between Vitamin A deficiency and diarrhea as well as respiratory disease.

Breastfeeding

Breastfeeding impacts on all of the major child survival intervention areas. Breastfeeding provides life-protecting immunological substances (immunization); continued breastfeeding is the best treatment during diarrhea (oral rehydration); exclusive breastfeeding will provide all of an infant's food and fluid needs for the first 4 to 6 months of life (nutrition) and breastfeeding promotes infertility in the first months postpartum (child spacing).

Decreases in initiation, exclusivity and/or duration of breastfeeding have occurred in Africa over the last decade. These declines, frequently concentrated in urban and periurban areas, occur for multiple, interrelated reasons which include hospital/health worker practices, mothers' traditional beliefs and practices, separation from supportive extended families, a widespread belief that breastfeeding and working are incompatible and the availability and marketing of breastmilk substitutes. In Africa, most breastfeeding promotion has consisted of small nutrition education components of PVO activities or diarrheal disease control programs. In addition, the Wellstart Lactation Management Training Program has trained multidisciplinary teams of health professionals from Nigeria, Kenya and Swaziland. Much remains to be done to assure the substantial inclusion of breastfeeding across all child survival sectors.

Targeted Feeding

While the Bureau is committed to targeted food aid to vulnerable groups, there is a downward trend in PL 480 project

food aid in Africa. Reasons include increased transport costs and policy decisions of some U.S. PVO's previously involved in MCH/feeding programs to concentrate on different aspects of development activities. Thus, at a time of increased need for targeted MCH/feeding programs, programs are closing down. There is an urgent need to explore new ways to identify and track the size, characteristics and location of groups most needing targeted feeding; to collaborate with the PVO community to develop workable, creative programs; and to encourage missions to seek out new approaches, including private sector initiatives, for long-term development objectives and as a safety-net for groups most disadvantaged by on-going structural adjustment policies supported by A.I.D.

Summary

The Africa Bureau has initiated a number of efforts to promote the integration of nutrition activities in on-going CS programs as well as to encourage nutrition planning and nutrition strategy development. Despite the progress noted, nutrition interventions have been inadequately addressed to date in most Emphasis and ACSI-CCCD Countries and both AID/W and the REDSO's must continue to assist the missions to promote, plan and financially support nutrition activities.

E. MALARIA

Malaria in the under five age group is a leading cause of morbidity and mortality in Africa. In Mali it is the leading cause of childhood mortality. Over the last decade, the major strain of malaria in Africa, Plasmodium falciparum, has developed increasing resistance to chloroquine and other affordable drugs; new cost/effective methods of treatment have not been sufficiently developed for public health use. Chloroquine resistance has now been confirmed in all countries in tropical Africa except Guinea-Bissau, Equatorial Guinea, Mauritania and Somalia (Figure 21.). (Lesotho is not a malarious area.) As resistance has developed, both the number of cases and the mortality have markedly increased (Figure 22.).

Thirteen of the 16 CS Emphasis and ACSI-CCCD Countries have malaria activities focusing on chemoprophylaxis of high risk groups, presumptive treatment of fever, drug sensitivity surveillance systems and operations research. Drug sensitivity studies have been carried out in eight of the nine malarious ACSI-CCCD Countries. In addition to regular training and surveillance, national malaria policies are reviewed annually in ACSI-CCCD Countries and national policies have been approved in eight of nine countries. Malaria treatment modules are being added to PHC training programs.

To monitor and evaluate treatment practices supervisory checklists are being used in five of the 16 countries. Facility

FIGURE 21.

Spread of Chloroquine Resistant
Plasmodium falciparum
Malaria in Africa, 1978 - 1989

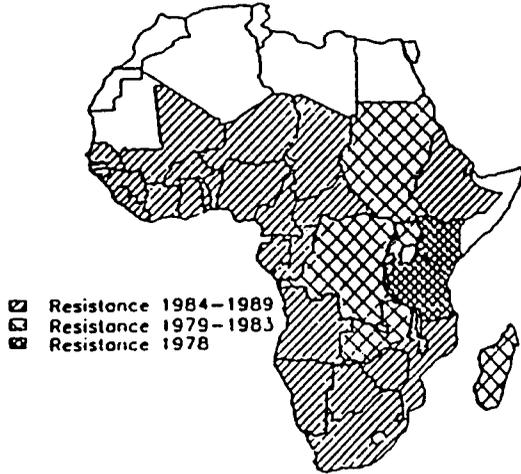
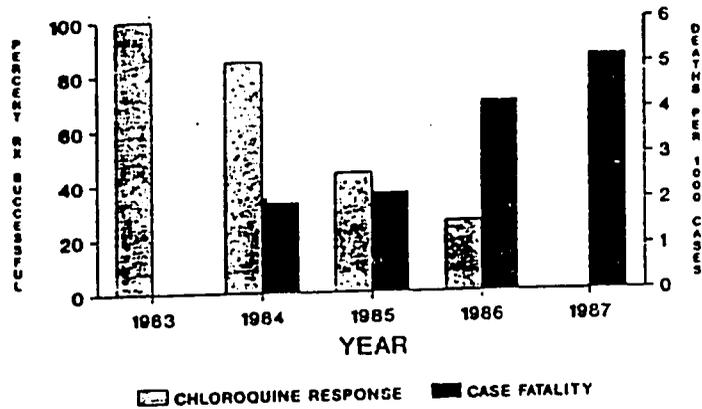


FIGURE 22.

PLASMODIUM FALCIPARUM - ZAIRE
IN-VIVO RESPONSE TO CHLOROQUINE
MALARIA CASE FATALITY RATE



surveys and training needs assessments determine health worker practices. In Togo more than 50 per cent of health workers and in Guinea and Zaire more than 70 per cent prescribe oral antimalarial drugs. However, in Guinea only 16 per cent prescribe the correct dose.

Inadequate dosages, either by prescription of the health worker/pharmacist or by ineffective drugs contribute to the increasing problem of resistance. In Togo almost half of the cases of fever are treated with drugs purchased at pharmacies; thus chemists are being targeted for information about policy changes recommending 25mg/kg of chloroquine instead of 10mg/kg. In Nigeria 60 per cent of the chloroquine sold was determined to be either fake or adulterated.

Because of the seriousness of these problems, malaria has been the subject of more operations research studies than any other intervention in the ACSI-CCCD Project. Research in Malawi has shown that infants born to mothers with placental parasitemia have an average of a 125 gram lower birth weight than infants born to nonparasitemic mothers. In Malawi and Zaire ongoing studies are testing alternative regimens of malaria treatment/prophylaxis in pregnant women. In Malawi chloroquine prophylaxis did not decrease placental parasitemia as compared to standard clinic care. In contrast, mefloquine has produced over 95 per cent clearance of malarial parasites.

Summary

The major strain of malaria in Africa, Plasmodium falciparum, has developed increasing resistance to chloroquine and

other affordable drugs in all but four countries of tropical Africa. As resistance has developed, both the number of cases of malaria and the mortality have increased. Activities have concentrated on chemoprophylaxis of high risk groups, presumptive treatment of fever, drug sensitivity surveillance systems and OR. But this is not enough; more research will be required to spearhead new approaches for the future as indicated on p. 32.

F. HIGH RISK BIRTHS

"High risk births" occur to pregnant women who are over age 35 or under age 20, who are delivering their fifth child or whose last pregnancy terminated less than 24 months previously. Births to women with short birth intervals (less than 24 months) result in a 67-384 per cent greater risk of death before one year of age. For example, data from the 1986 DHS in Liberia show that infants born less than two years after a previous birth are almost three times more likely to die in infancy than those born at least four years after a previous birth (Figure 23.).

These birth interval differentials appear to be larger than those found in the World Fertility Surveys, suggesting that declines in IMR's during the past decade have been concentrated among low risk births. Thus more attention should be focused on these high risk births.

Health education, child spacing services and outreach programs that focus on these high risk characteristics are categorized as CS programs since special attention to such factors may reduce the IMR by as much as 25 per cent (based on U.S. data). Recognizing this, Kenya, Mali, Niger and Zaire have directed selected project efforts toward this intervention. In addition, USAID projects in Liberia and Swaziland have included high risk birth components, though not as part of the ACSI-CCCD Project.

Summary

Health education, child spacing services and outreach programs that focus on high risk characteristics, especially short birth intervals, may reduce the IMR. Six of the 16 priority countries have developed high risk birth components.

G. SUSTAINABILITY

Improvements in child survival are important not only in the area of social justice, but to economic development and political stability. Development of sustainable health services is a slow process requiring a long-term commitment for governments and collaborating partners such as Rotary International, UNICEF WHO, World Bank.

Sustainability of CS programs continues to be a top priority in the Bureau. Factors which are stressed include development of health information systems (HIS) to provide data for programmatic decisions, monitoring and evaluation; institutionalization of training and management techniques; implementation of health care financing and policy reform.

Health Information Systems

The development of national systems of data collection, collation and analysis will enable decision makers to quantify health problems and health risks, establish priorities, focus interventions on target groups and monitor the effectiveness of interventions. HIS's have been developed in 10 of the 16 countries. Sentinel surveillance is being established in C.A.R., Guinea, Liberia, Swaziland and Zaire. Lag times between collection of data and availability for use have been reduced from years (often three or more) to months in Lesotho and Togo. Feedback bulletins are being published in Lesotho, Liberia, Nigeria and Zaire.

Institutionalization

The transfer of training skills to Africans in Nigeria and Zaire for training other Africans was illustrated in Section C. ORT, under Health Education. Another example is the training in computers of staff from five francophone countries at the Zaire School of Public Health. Africans trained for the in vivo testing of Plasmodium falciparum for drug sensitivity have also provided training and consultation to other countries. In addition, training needs assessments have been conducted in eight of 16 countries to determine how to improve preparation of trainers and trainees for implementation of selected CS interventions.

Supervision and management practices also influence the sustainability of CS programs. Ten of the 16 countries have supervisory check lists for one or more CS interventions and six report regular supervisory visits. The ACSI-CCCD Project organized a management seminar for senior policy makers from Burundi, C.A.R., Cote d'Ivoire, Guinea, Senegal and Zaire. Several country programs are training midlevel managers. However, adequate staff and resources to assure program sustainability are not available in all of the 16 Emphasis and ACSI-CCCD Countries.

Often, technically sound, sustainable child survival strategies have not been integrated or institutionalized in national organizational structures and budgets. Four of 16 countries report integrating all CS interventions into the PHC or regional health system. Four of ten ACSI-CCCD countries reported integrating immunization programs and three of ten, diarrheal

disease programs into the PHC system. To facilitate institutionalization, CS priorities and objectives should be established in all countries and national level dialogue should be carried out, at least annually, emphasizing workplans and program implementation.

Health Care Financing

In most African countries economic conditions have deteriorated over the decade of the 1980's placing severe strain on government budgets. Faced with this economic reality and the desire to address basic health needs, governments must consider ways not only to increase revenues, but also to reallocate existing revenues to health services that are the most effective in reducing premature mortality and unnecessary morbidity. Health financing is a key element in an integrated strategy to sustain the outcomes and benefits of such services. Some type of cost recovery is in place in 12 of the 16 countries. The remaining four, Burundi, C.A.R., Lesotho and Mali, are involved in various studies/policy dialogues to establish cost recovery systems.

Establishing the cost/benefits of CS interventions can be an important policy tool. The savings in establishing an ORT Unit at Queen Elizabeth Hospital in Maseru, Lesotho was over \$15,000 resulting in a reduction of diarrhea inpatient costs from \$76 to \$47 per capita. It was estimated that \$4,369 additional savings could be realized should the Unit extend its operating hours to nights and weekends during the peak diarrhea season. As a result of the study the Unit has extended its hours.

A study of costs in Kenyatta National Hospital in Nairobi, Kenya has led to policy reform and privatization of the hospital and to the design by USAID of a health financing policy reform activity that will impact on health and CS. Building on a study of ten of the best health zones and follow-on financial management studies, Zaire has requested a long-term health financing advisor to further reforms. In Nigeria a new health sector policy reform program has been designed to encourage a shift in control of public sector PHC services central and regional levels to local government authorities/communities and to shift emphasis from curative to preventive services at the primary level. USAID/Senegal has a TACS to assist in the development of financing reforms in the health sector. Cameroon and C.A.R. are considering a similar action.

Revolving drug funds in Liberia have generated revenues to maintain a steady supply of essential drugs at the community level although the lack of foreign exchange at the national level to restock the National Drug Service remains a constraint. In Guinea revenue from the sale of vaccination cards, ORS and chloroquine will be used for local recurrent costs.

Policy Reform

Since 1982, a significant share of the Bureau's resources, both food and nonfood, have been devoted to reforming economic and sectoral policies in sub-Saharan Africa. A recent joint World Bank/UNDP report^a compared the performance of reforming countries with that of nonreforming countries. It concluded that over the long-term perspective of 15-20 years "there is evidence that the combination of reforms and added assistance has led to higher agricultural growth, faster export growth, stronger GDP growth, and larger investment . . ." in reform oriented countries.

During economic reform countries may devalue currency, liberalize the pricing structure for agricultural products, reduce imported goods and services, change the selection of crops from food to cash crops and reduce public sector budgets and employment. Evidence during the first half of the 80's indicated that the combination of years of economic decline, the time period necessary to break that free-fall and often only tentative reform efforts led to worsening of the quality of life for the poor impacting most heavily on the under five population.^b The decreased availability of food was worsened by cutting resources for health and educational programs. Though recent studies such as the World Bank/UNDP's reflect more experience and present more optimistic views, there is a need to monitor consumption and nutrition parameters during the process of structural adjustment to assure adequate nutrition in vulnerable groups.

A.I.D. is supporting a number of studies in Africa on structural adjustment and sectoral policy reform primarily as it affects the agricultural sector. Few studies have attempted to assess nutritional status occurring concurrent with and subsequent to policy reform. Monitoring nutritional status during policy reform is of high priority for the future.

Niger and Togo are implementing policy reform in the health sector through health sector grants. Evaluations are scheduled during FY 1990 to determine the progress to date. Kenya has just obligated \$10 million nonproject assistance (NPA) for health financing reforms. Senegal is considering a similar project for FY 1991. Nigeria has just obligated \$36 million NPA for PHC policy reforms as described above.

Summary

Sustainability of CS programs continues to be a top priority in the Bureau. Activities have stressed the development of health information systems, institutionalization of training and management techniques, health care financing and policy reform.

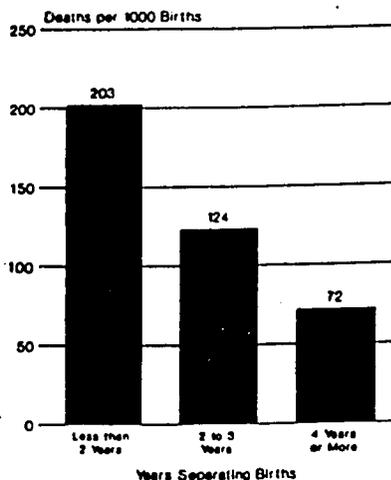
^a World Bank/UNDP, 1989: Africa's Adjustment and Growth in the 1980's.

^b UNICEF, 1987: ADJUSTMENT WITH A HUMAN FACE, Chapter 5. "Country Experience with Adjustment" by G.A. Corina and F. Stewart.

FIGURE 23.

LIBERIA

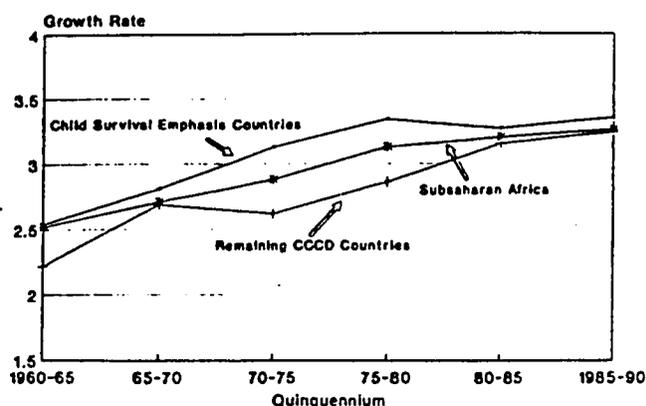
BIRTHSPACING and INFANT MORTALITY



Liberia DHS 1985

FIGURE 24.

TRENDS IN GROWTH RATES IN SELECTED GROUPS OF AFRICAN COUNTRIES



Source: United Nations, 1988
World Population Prospects Center For International Health Information, ISTI, 8/1/89

III. CONSTRAINTS TO CHILD SURVIVAL

Three constraints which are significantly threatening the current progress being made in child survival are high population growth rates, drug-resistant malaria and AIDS.

1. The population growth rate of sub-Saharan Africa increased almost 30 per cent over the last 25 years, from 2.52 per cent for 1960-65 to 3.26 per cent for 1985-90 (Figure 24.). Like that of sub-Saharan Africa, the population growth rate of the eight CS Emphasis Countries during the same period has increased from 2.54 to 3.35 per cent, almost a 32 per cent increase. Likewise, the growth rate of the eight ACSI-CCCD countries which are not CS Emphasis Countries has increased from 2.22 to 3.24 per cent, an increase of 46 per cent. The estimated population of the region in the year 2000 will be 700 million people. Clearly, the population growth rates are more rapid than those of the economies.

Over the last five years African governments have increasingly recognized the importance of slowing population growth in order to achieve economic development and political stability. Population policies are being developed, child spacing services are being expanded, and contraceptive utilization rates, although low, are increasing. There are population programs in 11 of the 16 countries reviewed in this paper. These activities are especially important given the population growth rates and the continuing programs in child survival.

2. Over the last decade, the major strain of malaria in Africa, Plasmodium falciparum, has developed increasing resistance to chloroquine and other affordable drugs. As resistance has spread westward in Africa, Figure 21, both the number of cases and the mortality have dramatically increased, Figure 22. Research continues in an attempt to find economical and effective preventive measures.

3. The third major problem is HIV infection (AIDS). In central, eastern and southern Africa increasing percentages of pregnant women are being identified as infected. This carries with it a significant risk of perinatal infection and early infant death. For example, in Lilongwe, Malawi a recent serosurvey found that 9.5 per cent of pregnant women are infected with HIV. Thus HIV-attributable infant mortality is estimated to be increasing overall infant mortality from 2-16 per cent. This impact has the potential of eliminating any progress made by the child survival programs described above.

As HIV transmission in Africa is primarily transmitted heterosexually, lowering rates of transmission will require a major change in sexual practices. Many African governments are giving high priority to this area. Cooperative laboratories in Kinshasa, Zaire and Abidjan, Cote d'Ivoire, with technical assistance from the Centers for Disease Control and the National Institute of Health, are making major progress in understanding the disease and in identifying approaches to limiting transmission.

IV. FUTURE OF CHILD SURVIVAL IN AFRICA

Funding

The planned obligation level of \$54 million for African CS activities in FY 1989 will bring the total support for these programs since 1981 to more than \$180 million (1981-1984 includes only funding of the ACSI-CCCD Project). Table 8. and Figure 25. reveal a consistently increasing trend in CS funding in the Bureau from FY 1985 through FY 1989. During the same period funding for CS activities in the eight CS Emphasis Countries has increased from 23 to 60 per cent of the Africa-wide CS support. Clearly FY

FIGURE 25.

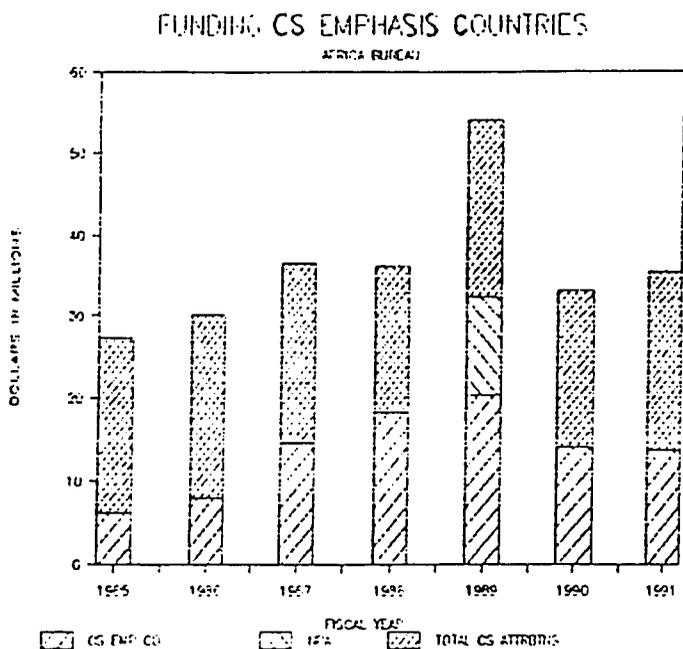


TABLE 8.

AFRICA BUREAU, CS ATTRIBUTIONS OVER TIME, IN '000's

FY	CS EMPH COUNTRIES	PER CENT OF TOTAL	TOTAL
1985	\$6,154	23 %	\$27,242
1986	\$8,090	27 %	\$30,203
1987	\$14,586	40 %	\$36,651
1988	\$18,261	50 %	\$36,346
1989	\$32,571 abc	60 %	\$54,037
1990	\$14,110 d	42 %	\$33,250
1991	\$13,710 d	39 %	\$35,525
TOTALS	\$107,482	42	\$253,254

a = Includes FVA/PVC CS GRANTS.
 b = Excludes OYB, Sudan because of Brooke Amendment Sanctions.
 c = Includes \$12,240,000 NPA for Nigeria.
 d = Includes Sudan planning levels.

TABLE 9. DISTRIBUTION OF OBLIGATIONS AMONG THE CHILD SURVIVAL INTERVENTIONS

YEAR	PER CENT CHILD SURVIVAL INTERVENTIONS				
	ORT	EPI	NUTR	HRB	OCS
1985	36	34	8	3	19
1986	28	40	6	4	22
1987	23	26	9	11	31
1988	26	27	6	14	27
1989	24	24	16	11	25

HRB = High Risk Births; OCS = Other CS Activities

1989 is unusual because of two factors: \$12 million CS attribution from nonproject assistance in Nigeria and prohibition against obligations in Sudan. FY 1990-91 figures, as opposed to those for FY 1989, do not include estimations for the FVA/PVC CS grants which have contributed since 1985 \$2.5 to 4.7 million additional funds per year for CS activities implemented by PVO's. The planning levels for Sudan, however, are included in the FY 1990-91 data. Should the phase out in Sudan because of Section 513 be completed, FY 1990-91 CS planning levels would be \$2 and \$1 million less for those years respectively (Annex A, Table IV.).

In previous years the Bureau noted that funding for nutrition interventions was low, 6-9 per cent of the total CS funding. Since 1987 we have steadily increased the emphasis on and have sought additional funds for nutrition activities. Table 9. and Figure 26. demonstrate that we have succeeded; funding for nutrition activities amounts to 16 per cent of the FY 1989 obligations, up from a low of only 6 per cent in 1986 (Annex A, Table I.).

Table 10 summarizes the past and projected funding levels for the Africa Bureau in the health and child survival sectors. Greater detail may be found in the appended Annexes A & B.

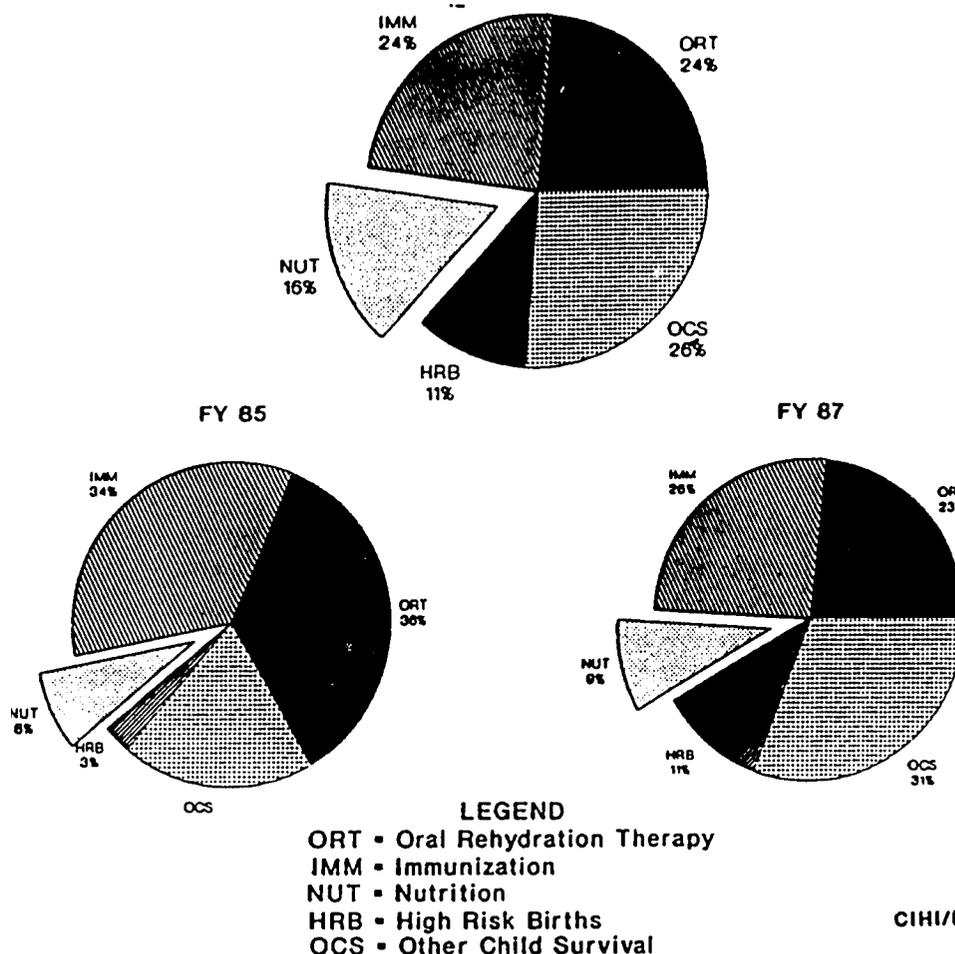
TABLE 10. AFRICA BUREAU, HEALTH AND CHILD SURVIVAL FUNDING LEVELS, FY 1985-1991

Category	FY 1985	FY 1986	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991
CS	\$23,775	\$25,393	\$33,891	\$33,875	\$41,797*	\$33,250	\$35,525
Health	36,660	25,760	17,861	13,206	33,685**	25,436	17,543
AIDS		1,000	2,900	5,529	6,365	6,520	6,535
SUBTOTAL	\$60,435	\$52,153	\$54,652	\$52,610	\$81,847	\$65,206	\$59,603
FVA/PVC	3,467	4,810	2,760	2,472	4,740	2,500	2,500
TOTALS	\$63,902	\$56,963	\$57,412	\$55,082	\$86,607	\$67,706	\$62,103

* excluding \$12,240,000, Nigeria PHC Sector Grant.

** including Kenya Health Financing Sector Grant; excluding Nigeria PHC Sector Grant, \$23,760,000.

FIGURE 26. CHILD SURVIVAL INTERVENTIONS, AFRICA
FY 89



New Project Initiatives

In FY 1990 and 1991 eight new child survival projects will be initiated. Burkina Faso, Liberia and Sudan plan new starts for FY 1990. Benin, Mozambique, Senegal, Togo and the Bureau plan new starts for FY 1991.

Programmatic: Immunizations

As immunization programs mature and refine surveillance techniques we begin to see changes in the epidemiology of the diseases. During the past year Burundi, Lesotho and Swaziland experienced outbreaks of measles among schoolage children despite high levels of coverage among these relatively rural populations. In contrast, highly urbanized areas in Nigeria and Zaire see 20-33 per cent of measles cases prior to 9 months of age, the recommended age for measles vaccination. In fact, 27 per cent of deaths due to measles in Zaire occur among infants under 9 months of age.

Such changes have implications for the future. Countries, e.g. Kenya and Malawi, with relatively high levels of immunization

coverage must be alert to changing disease patterns and may need to initiate vaccination of primary school children and selectively target low coverage areas. Countries with large urban areas may need to consider the use of strains of measles vaccine which are effective at 6 months of age.

Evaluation of low vaccination coverage rates in the face of active vaccination programs have identified the following as major factors: low utilization of available health services, frequent missed opportunities (nonvaccination of susceptibles attending health facilities) and high drop-out rates from first vaccination to completely vaccinated status. Improved utilization of health services may require improved access, e.g. liaison with the private sector, longer or evening clinic hours, improved clinic services, etc. Burundi and Togo are implementing focused programs to minimize missed opportunities, e.g. systematic vaccination of school girls with tetanus toxoid (Burundi) and vaccination of eligible children and women of reproductive age at every health facility contact (Togo). Ethnographic research is needed to determine the reasons for high drop out rates so education and outreach programs can be developed to promote completion of vaccinations.

ORT

The likelihood of greater achievement in ORT use depends on continued training and supervision of health care workers; increased education of mothers in prevention and effective case management; knowledge, attitude and practice studies to determine the constraints to greater use of ORT and monitoring of progress. With more countries making greater political commitment to child survival in general and to the Control of Diarrheal Disease programs in specific, progress will be more likely. In addition, ORT will be promoted by applied research to develop more effective home fluid strategies, including cereal-based fluids, and more effective methods to increase utilization of rehydrating fluids. To assist Missions to improve performance in ORT the Bureau plans to emphasize dietary management of diarrheal disease, including promotion of appropriate hygiene, sanitation, breastfeeding and weaning practices.

Nutrition

In continuing to emphasize nutrition, the Bureau will complete the current phase of the nutrition monitoring and information system; explore the feasibility of merging this system with the Child Survival Reporting System and Mission ABS reporting to decrease mission reporting requirements; incorporate the Nutrition Action Plan into an overall Public Health Strategy for the 90's. The Bureau will promote use of Nutrition in Agriculture Guidelines by field HPN and agriculture officers. We will also assist USAID's to assess the nutritional problems of the country's children and to incorporate appropriate nutrition activities as components of on-going health/CS projects, Action Plans, CDSS's, PID's and PP's.

The design of ACSI II will include dietary management of diarrheal disease in ORT programs, exclusive breastfeeding for the first 4 to 6 months and appropriate feeding during and after diarrhea. We will continue support for applied research on diarrhea-related nutrition issues and assure inclusion of breastfeeding promotion activities in all current CS activities based on breastfeeding's role in immunization, ORT, nutrition and child spacing.

Malaria

Because of the seriousness of malaria in Africa, the Bureau plans to convene an expert panel to review and make recommendations about additional approaches to the problem. The likelihood of developing a vaccine for child protection appears increasingly remote. The future trends in the prevention of malaria are more likely to turn to new approaches to vector control, behavioral changes, environmental interventions at the community level and perhaps attempts to alter the habits of the mosquitoes. Malaria programs just make the best use of current knowledge and resources. The new approaches or revisits to old approaches are likely to be scientifically less sophisticated in the short-term, but more sustainable at the community level.

High Risk Births

More outreach programs need to be developed to reach the women who are having high risk births. Innovative ways to address this problem will be examined during the design of ACSI II. Combined outreach for vaccination dropouts, ORT/dietary management of diarrhea and high risk births should be tested.

Sustainability

The ACSI II design will concentrate on management information and surveillance systems. It must address critical management and training issues that focus on empowering Africans for these capacities. To further efforts in health financing, the Bureau hopes to place health economists as regional advisors in REDSO's and in AFR/TR/HPN.

Because of evidence about social costs of economic reform, the World Bank, another key organization promoting structural adjustment, has initiated emergency social programs to compensate for the "short-term" cost of reforms. UNICEF has published a book entitled ADJUSTMENT WITH A HUMAN FACE to address the problems created by efforts to improve the economic growth picture in the developing world.

The Bureau will assist USAID's to include in structural adjustment and policy reform programs or studies, parameters to measure the effect on nutrition. Research on this subject is a high priority for the Bureau to protect the most vulnerable during the period of reform.

Attaining Child Survival Goals

Sudan is subject to the provisions of the Brooke Amendment and of Section 513 of the Foreign Assistance Act. Despite these constraints the Africa Bureau will continue to assist Sudan in whatever way possible.

Next year a review of the achievements in CS for FY 1990 will likely show that Kenya and Lesotho will have achieved the CS goals for immunizations and ORT on a national level. These countries are leading the way in Africanization of activities. Kenya is also a leader, demonstrating that, as programs mature a shift to non- project assistance is plausible.

Conclusion

Congressional support for child survival through the Development Fund for Africa is important for long-term development. Currently the Bureau is developing an African Child Survival Initiative for the 1990's. This will involve a major increase in cooperative planning and implementation by African governments and cooperating multilateral, bilateral and PVO partners.

Although the challenges and constraints are many, seven areas of progress during the 1980's give great hope for child survival in Africa in the future:

1. Increasing priority being given by African governments to child spacing and reducing population growth rates.
2. Increasing recognition of the importance of and use of data to establish priorities, set objectives and targets, monitor implementation, document progress, and identify problems for solution.
3. Recognition of the importance of decentralized management to effective management and implementation of child survival programs.
4. Growing recognition of quality and its prerequisites- on-the-job training and supervision- for effective implementation of child survival strategies.
5. Increasing recognition on the use of cost sharing mechanisms to ensure the availability of health care.
6. Growing commitment to improve the capability of mothers and communities to provide basic preventive and curative care.
7. Increasing emphasis on prevention.

ANNEX A: TABLE I. AFRICA BUREAU
FY 1989 CS ATTRIBUTIONS BY INTERVENTION in '000's

CATEGORY	ORT	IMM	NUTR	HRB	OCS	TCS	OTHER	NOTES
TOTAL. AFRICA BUREAU								
NON-CCCD*	\$2,568.0	\$2,343.0	\$4,532.0	\$3,945.0	\$7,622.0	\$21,010.0	\$37,720.0	CIHI, 9/20/8
CCCD	\$6,201.4	\$5,319.7	\$1,100.7	\$106.7	\$3,436.3	\$16,166.6	\$2,330.1	Table II
FVA	\$1,360.9	\$1,117.9	\$1,289.2	\$383.0	\$469.0	\$4,820.0	\$120.0	Table III
TOTAL	\$10,130.3	\$8,780.6	\$6,921.9	\$4,435.7	\$11,527.3	\$41,796.6	\$40,170.1	
CS EMPHASIS COUNTRIES								
AFR	\$3,335.4	\$2,663.4	\$2,189.6	\$1,599.1	\$6,993.2	\$17,600.9	\$18,132.7	Table IV
FVA	\$692.5	\$639.5	\$776.0	\$283.0	\$339.0	\$2,730.0		Table III
SUBTOTAL	\$4,027.9	\$3,302.9	\$2,965.6	\$1,882.1	\$7,332.2	\$20,330.9	\$18,132.7	

LEGEND: ORT = Oral Rehydration Therapy
IMM = Immunizations
NUTR = Nutrition
HRB = High Risk Births
OCS = Other Child Survival, includes health care financing, malaria, water and sanitation
TCS = Total Child Survival
CIHI = Center for Int'l Health Information

* CORRECTIONS TO CIHI/PPC DATA RUN, 9/26/89

CATEGORY	ORT	IMM	NUTR	HRB	OCS	TCS	TOTAL HLTH	HIV/AIDS
TOTAL. AFRICA BUREAU								
CIHI/AC	\$9,100.0	\$10,079.0	\$5,444.0	\$4,128.0	\$13,387.0	\$42,738.0	\$31,880.0	\$6,365.0
-Sudan	\$700.0	\$2,450.0	\$0.0	\$0.0	\$350.0	\$3,500.0	\$525.0	
-CCCD	\$5,632.0	\$5,286.0	\$312.0	\$150.0	\$6,015.0	\$18,228.0		
NON-CCCD*	\$2,568.0	\$2,343.0	\$4,532.0	\$3,345.0	\$7,622.0	\$21,010.0	\$31,355.0	\$6,365.0
CCCD	\$6,201.4	\$5,319.7	\$1,100.7	\$106.7	\$3,436.3	\$16,166.6	\$2,330.1	
REVISED CIHI	\$8,769.4	\$7,662.7	\$5,632.7	\$4,053.7	\$11,056.3	\$37,176.6	\$33,685.1	\$6,365.0
FVA	\$1,360.9	\$1,117.9	\$1,289.2	\$383.0	\$469.0	\$4,820.0		\$120.0
TOTAL	\$10,130.3	\$8,780.6	\$6,921.9	\$4,435.7	\$11,527.3	\$41,796.6	\$33,685.1	\$6,485.0

CENTER FOR INTERNATIONAL HEALTH INFORMATION
 USAID HEALTH INFORMATION SYSTEM
 DATA ANALYSIS FROM PPC SYSTEM - FROM THE 9/15 DOWNLOAD
 BUREAU LEVEL INFORMATION FY89 - FY91
 AFR COUNTRIES - ALL APPROPRIATIONS

	ORT	IMM	NUT	BSP	OCS	TOTAL CS	TOTAL HEALTH	TOTAL AIDS	TOTAL OTHER	TOT
=====										
FISCAL YEAR 1989 (PPC AC FORMAT):	9100	10079	5444	4128	13999	42752	31867	6365	2500614	2581
FISCAL YEAR 1989 (PPC AC/SI CALC):	8897	9375	5162	3521	28515	55471	33664	6365	2486098	2581
=====										
DIFFERENCE (AC - AC/SI CODES):	202	703	282	607	-14515	-12719	-1796	0	14515	
=====										
FISCAL YEAR 1990 (PPC AC FORMAT):	8366	7463	2800	3505	11115	33250	25436	6520	2222391	2287
FISCAL YEAR 1990 (PPC AC/SI CALC):	7743	6442	2444	2089	17789	36509	28851	6520	2215716	2287
=====										
DIFFERENCE (AC - AC/SI CODES):	622	1020	356	1416	-6674	-3259	-3414	0	6674	
=====										
FISCAL YEAR 1991 (PPC AC FORMAT):	8047	6519	5192	3775	11991	35525	17543	6535	2030535	2090
FISCAL YEAR 1991 (PPC AC/SI CALC):	7409	5758	4610	2942	19518	40238	20357	6535	2023008	2090
=====										
DIFFERENCE (AC - AC/SI CODES):	637	760	582	833	-7527	-4713	-2813	0	7527	

NOTES:

- (1) THE CHILD SURVIVAL PORTION OF ACT CODE HEMH HAS BEEN DIVIDED EQUALLY BETWEEN NUT AND BSP
- (2) ONLY THE CHILD SURVIVAL PORTION OF THE ACT CODE AGMP HAS BEEN ADDED TO OCS
- (3) BY DIRECTION FROM PPC, ARI IS CALCULATED AS 100% CHILD SURVIVAL
- (4) BY DIRECTION FROM PPC, AIDS IS NOT CALCULATED AGAINST THE CHILD SURVIVAL SI CODE

CIHI DEFINITIONS

PPC AC FORMAT*	PPC AC/SI CODE
ORT: HEDD x 100%	HEDD x CHS% of Total FY Funding
IMM: HEIM x 100%	HEIM x CHS% of Total FY Funding
NUT: [(HEBF+HEGM+HEVA) x 100%] + [(HEMH x CHS% x 50%)+(AGMP x CHS% x 50%)]	(HEBF+HEGM+HEVA+1/2 HEMH+1/2 AGMP) x CHS% of Total FY Funding
HRB: (HECS x 100%) + (HEMH x CHS% x 50%)	(HECS + 1/2 HEMH) x CHS% of Total FY Funding
OCS: (HERI x 100%) + [(HEMA + HESD + HEVC + NRWH) x CHS%]	(CHS% x Total FY Funding) - (ORT + IMM + NUT + HRM)

* Used by AFR/TR/HPN as basis for corrections re Sudan and CCCD Project. See Annex A, Table 1.

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TABLE II. CS ATTRIBUTIONS, ACSI-CCCD PROJECT, 1989, IN '000's

COUNTRY	TOTAL	ORT	IMM	NUTR	HRB	OCS	TCS	OTHER
I. ACSI-CCCD BUY-IN's								
A. Child Survival Emphasis Countries								
MALAWI	\$235.5					\$235.5	\$235.5	
NIGERIA								
HEALTHCOH	\$200.0	\$30.0	\$140.0	\$10.0	\$4.0	\$10.0	\$194.0	\$5.0
UNICEF,LSGA,PSC	\$1,925.0	\$577.5	\$577.5	\$192.5		\$269.5	\$1,617.0	\$308.0
ZAIRE	\$1,000.0	\$200.0	\$500.0			\$100.0	\$800.0	\$200.0
A. SUBTOTAL	\$3,360.5	\$807.5	\$1,217.5	\$202.5	\$4.0	\$615.0	\$2,846.5	\$514.0
B. Other ACSI-CCCD Countries								
BURUNDI	\$400.0	\$120.0	\$180.0			\$50.0	\$350.0	\$40.0
CAR	\$559.1	\$111.8	\$335.5			\$28.0	\$475.2	\$83.9
GUINEA	\$515.0	\$184.5	\$338.3			\$51.5	\$584.3	\$30.8
TOGO	\$550.0	\$130.0	\$325.0	\$22.5		\$55.0	\$552.5	\$97.5
B. SUBTOTAL	\$2,224.1	\$546.3	\$1,178.7	\$22.5	\$0.0	\$214.5	\$1,912.0	\$252.1
I. TOTAL	\$5,584.6	\$1,353.8	\$2,396.2	\$225.0	\$4.0	\$829.5	\$4,818.5	\$766.1

Activities in OTHER:

a = HIV/AIDS

n = Health Care Financing

m = Malaria

TABLE II. CS ATTRIBUTIONS, ACSI-CCCD PROJECT, 1989, IN '000's

COUNTRY	TOTAL	ORT	IMM	NUTR	HRB	OCS	ICS	OTHER
II. ACSI-CCCD PASS THRU'S/REPROGRAMMING, NON-CCCD								
A. Child Survival Emphatic Countries								
MALI	\$500.0	\$500.0					\$500.0	
PRITECH REG.	\$349.9	\$349.9					\$349.9	
NUTRITION	\$50.0			\$50.0			\$50.0	
TACS	\$492.0		\$233.8	\$89.2	\$103.6	\$55.4	\$492.0	
NIGER	\$310.0	\$310.0					\$310.0	
PRITECH REG.	\$217.1	\$217.1					\$217.1	
SENEGAL-TACS	\$532.5	\$53.3	\$79.9	\$21.3	\$1.1	\$117.2	\$272.6	\$259.9
PRITECH REG.	\$69.6	\$69.6					\$69.6	
ZAIRE-PRICOR	\$200.0			\$200.0			\$200.0	
A. SUBTOTAL	\$2,711.1	\$1,499.9	\$313.6	\$360.5	\$104.7	\$172.6	\$2,451.3	\$259.9
B. Other Countries								
BURKINA	\$225.0	\$100.0		\$125.0			\$225.0	
CHAD	\$100.0	\$100.0					\$100.0	
CAMEROON	\$315.5	\$297.0	\$18.5				\$315.5	
GAMBIA	\$100.0	\$100.0					\$100.0	
TOGO-PRICOR	\$75.0			\$75.0			\$75.0	
REGIONAL	\$691.6	\$316.4	\$70.0	\$305.2			\$691.6	
B. SUBTOTAL	\$1,507.1	\$913.4	\$88.5	\$505.2	\$0.0	\$0.0	\$1,507.1	\$0.0
II. TOTAL	\$4,218.2	\$2,413.3	\$402.1	\$865.7	\$104.7	\$172.6	\$3,958.4	\$259.9
91 GRAND TOTAL	\$9,802.8	\$3,767.1	\$2,799.4	\$1,100.7	\$109.7	\$1,002.0	\$8,776.8	\$1,026.0
CCCD BALANCE	\$8,694.0	\$2,434.3	\$2,521.3			\$2,434.3	\$7,399.9	\$1,304.1

Activities in OTHER:

h = Health Care Financing

m = Malaria

TABLE III. AFRICA BUREAU
CS ATTRIBUTIONS, FVA/PVC CS GRANTS, 1989, IN '000's

COUNTRY	TOTAL	ORT	IMM	NUTR	HRB	OCS	TCS	OTHER
CS EMPHASIS COUNTRIES								
MALAWI	\$1,130.0	\$252.5	\$229.5	\$286.0	\$113.0	\$249.0	\$1,130.0	
CARE	\$600.0	\$120.0	\$150.0	\$180.0	\$60.0	\$90.0	\$600.0	
IEF	\$530.0	\$132.5	\$79.5	\$106.0	\$53.0	\$159.0	\$530.0	
NIGERIA	\$400.0	\$80.0	\$80.0	\$100.0	\$80.0	\$60.0	\$400.0	
SUDAN	\$1,200.0	\$360.0	\$330.0	\$390.0	\$90.0	\$30.0	\$1,200.0	
CARE	\$600.0	\$180.0	\$150.0	\$210.0	\$60.0		\$600.0	
SAVE	\$600.0	\$180.0	\$180.0	\$180.0	\$30.0	\$30.0	\$600.0	
SUBTOTAL	\$2,730.0	\$592.5	\$639.5	\$775.0	\$283.0	\$339.0	\$2,730.0	
OTHER COUNTRIES								
BURKINA	\$1,000.0	\$300.0	\$200.0	\$300.0	\$100.0	\$100.0	\$1,000.0	
MAURITANIA	\$410.0	\$98.4	\$98.4	\$213.2			\$410.0	
UGANDA	\$600.0	\$270.0	\$180.0			\$30.0	\$480.0	\$120.0
SUBTOTAL	\$2,010.0	\$668.4	\$478.4	\$513.2	\$100.0	\$130.0	\$1,890.0	\$120.0
GRAND TOTAL	\$4,740.0	\$1,360.9	\$1,117.9	\$1,288.2	\$383.0	\$469.0	\$4,620.0	\$120.0

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TABLE IV. CS ATTRIBUTIONS, CS EMPHASIS COUNTRIES, 1989, IN '000's

COUNTRY	ORT	IMM	NUTR	HRB	OCS	TCS	OTHER HLTH	AIDS
KENYA	\$774.0	\$670.0	\$256.0	\$323.0	\$65.0	\$2,088.0	\$10,892.0	
MALAWI	\$256.0	\$102.0			\$2,783.0	\$3,141.0	\$2,679.0	\$256.0
CCCD					\$235.5 m	\$235.5		
MALI	\$15.0	\$15.0	\$102.0	\$87.0	\$630.0	\$849.0		
PRITECH	\$849.9					\$849.9		
TACS	\$0.0	\$234.0	\$89.0	\$104.0	\$55.0	\$482.0		
NUTRICOM			\$50.0			\$50.0		
NIGERIA								
CCCD	\$607.5	\$717.5	\$202.5	\$4.0	\$279.5	\$1,811.0	\$308.0 hm	\$6.0
NIGER	\$58.0	\$115.0	\$230.0			\$403.0	\$929.0	\$183.0
PRITECH	\$527.1					\$527.1		
SENEGAL	\$400.0	\$200.0	\$400.0		\$1,000.0	\$2,000.0		\$100.0
PRITECH	\$69.6					\$69.6		
TACS	\$53.3	\$79.9	\$21.3	\$1.1	\$117.2	\$272.8	\$259.7 h	
SUDAN								
ZAIRE	\$125.0	\$250.0	\$539.0	\$1,080.0	\$1,728.0	\$3,822.0	\$1,964.0	\$356.0
CCCD	\$200.0	\$500.0			\$100.0	\$800.0	\$200.0 hm	
PRICOR			\$200.0			\$200.0		
SUBTOTAL	\$3,935.4	\$2,883.4	\$2,189.8	\$1,599.1	\$6,993.2	\$17,600.9	\$17,231.7	\$901.0

m = Malaria

h = Health Care Financing

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TABLE IV. CS ATTRIBUTIONS, CS EMPHASIS COUNTRIES, 1990, IN '000's

COUNTRY	ORT	IMM	NUTR	HRE	OCS	TCS	OTHER HLTH	AIDS
KENYA	\$897.0	\$793.0	\$402.0	\$506.0	\$63.0	\$2,661.0	\$601.0	\$200.0
MALAWI	\$330.0	\$276.0			\$1,210.0	\$1,816.0	\$1,425.0	\$290.0
MALI	\$335.0	\$50.0	\$279.0	\$204.0	\$1,366.0	\$2,234.0	\$6.0	
NIGER						\$0.0	\$113.0	\$80.0
NIGERIA	\$997.0	\$1,027.0			\$997.0	\$3,021.0		\$183.0
SENEGAL						\$0.0		\$50.0
SUDAN	\$471.0	\$471.0		\$471.0	\$471.0	\$1,884.0	\$250.0	
ZAIRE	\$375.0	\$650.0	\$337.0	\$52.0	\$1,080.0	\$2,494.0	\$869.0	\$1,030.0
SUBTOTAL	\$3,405.0	\$3,267.0	\$1,018.0	\$1,233.0	\$5,187.0	*** \$14,110.0	\$3,264.0	\$1,833.0

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TABLE IV. CS ATTRIBUTIONS, CS EMPHASIS COUNTRIES, 1991, IN '000's

COUNTRY	ORT	IMM	NUTR	HRE	OCS	TCS	OTHER HLTH	AIDS
KENYA	\$755.0	\$526.0	\$390.0	\$483.0	\$51.0	\$2,205.0	\$546.0	\$200.0
MALAWI	\$340.0	\$281.0			\$1,425.0	\$2,046.0	\$1,652.0	\$300.0
MALI	\$98.0	\$98.0	\$363.0	\$220.0	\$1,158.0	\$1,937.0		
NIGER	\$215.0	\$115.0	\$260.0		\$60.0	\$650.0	\$772.0	\$150.0
NIGERIA						\$0.0		\$183.0
SENEGAL	\$500.0	\$400.0	\$400.0	\$100.0	\$500.0	\$1,900.0		\$100.0
SUDAN	\$250.0	\$250.0		\$250.0	\$250.0	\$1,000.0	\$250.0	
ZAIRE	\$725.0	\$1,250.0	\$563.0	\$87.0	\$1,347.0	\$3,972.0	\$1,252.0	\$1,050.0
SUBTOTAL	\$2,983.0	\$2,920.0	\$1,976.0	\$1,140.0	\$4,791.0	*** \$13,710.0	\$4,472.0	\$1,983.0

AFRICA BUREAU: DETAILS OF FUNDING
CHILD SURVIVAL AND HEALTH, NON-CHILD SURVIVAL
FY 85-91

<u>BUREAU:</u> <u>ACCOUNT</u>	<u>FY 85</u> <u>ACTUAL</u>	<u>FY 86</u> <u>ACTUAL</u>	<u>FY 87</u> <u>ACTUAL</u>	<u>FY 88</u> <u>ACTUAL</u>	<u>FY 89</u> <u>ACTUAL</u>	<u>FY 90</u> <u>PLANNED</u>	<u>FY 91</u> <u>C.P.</u>
<u>CHILD SURVIVAL</u>							
AFR:							
HE	15,782	18,643	14,639	376	490	500	0
DFA	0	0	0	33,499	40,807	33,250	35,525
NPA	0	0	0	0	12,240	0	0
Sahel	3,721	2,750	4,370	0	0	0	0
ARDN	772	0	398	0	0	0	0
CSF	<u>3,500</u>	<u>4,000</u>	<u>14,484</u>	<u>0</u>	<u>500</u>	<u>0</u>	<u>0</u>
SUBTOTAL AFR	23,775	25,393	33,891	33,875	54,037	33,750	35,525
FVA:							
CS	<u>3,467</u>	<u>4,810</u>	<u>2,760</u>	<u>2,472</u>	<u>4,740</u>	<u>2,500(E)</u>	<u>2,500(E)</u>
SUBTOTAL CS in AFR	27,242	30,203	36,651	36,347	58,777	36,250	38,025
<u>HEALTH, NON CHILD SURVIVAL</u>							
AFR:							
HE	31,026	18,153	12,880	1,020	2,760	250	0
DFA	0	0	0	12,186	30,925	25,436	17,543
NPA	0	0	0	0	23,760	0	0
POP	0	500	0	0	0	0	0
ARDN	514	0	0	0	0	0	0
Sahel	<u>5,120</u>	<u>7,107</u>	<u>4,981</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Subtotal AFR HE/NON CS	36,660	25,760	17,861	13,206	57,445	25,686	17,543
TOTAL CS/HE	63,902	55,963	54,512	49,553	116,222	61,936	55,568
<u>HEALTH & CS</u>							
Central S&T	1,720	2,500	3,083	1,926	3,000(E)	3,000(E)	3,000(E)
OFDA	<u>19,650</u>	<u>12,011</u>	<u>2,460</u>	<u>5,264</u>	<u>2,525(E)</u>	<u>2,500(E)</u>	<u>2,500(E)</u>
Subtotal	<u>21,370</u>	<u>14,511</u>	<u>5,543</u>	<u>7,190</u>	<u>5,525</u>	<u>5,500</u>	<u>5,500</u>
Grand Total (All Sources, excluding AIDS)	85,272	70,474	60,055	56,743	121,747	67,436	61,068
AFR BUREAU TOTALS							
HE & CS	60,435	51,153	51,752	47,081	111,482	59,436	53,068
AIDS	<u>0</u>	<u>1,000</u>	<u>2,900</u>	<u>5,529</u>	<u>6,365</u>	<u>6,520</u>	<u>6,535</u>
AFR TOTAL	60,435	52,153	54,652	52,610	117,847	65,956	59,603

CIHI, ISTI, 9/20/89

MAMicka:AFR/TR/HPN: 9/25/89: 0084S