CHILD SURVIVAL IN SUB-SAHARAN AFRICA

TAKING STOCK

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ABBREVIATIONS AND ACRONYMS

ARI	Acute respiratory infection
BCC	Behavior change communication
CA	Cooperating agency
CDC	Centers for Disease Control and Prevention
CHAM	Churches Medical Association of Malawi
CHAZ	Churches Medical Association of Zambia
CHW	Community health worker
CSHA	Child Survival and Health Account
CSHGP	Child Survival and Health Grants Program
DALY	Disability-adjusted life year
DHS	Demographic and Health Survey
DTP	Diphtheria, tetanus, pertussis
GAVI	Global Alliance for Vaccines and Immunization
HIPC	Highly Indebted Poor Countries
HPN	Health, population, and nutrition
HR	Human resource
HRH	Human resources for health
ICC	Inter-Agency Coordinating Committee
IMCI	Integrated management of childhood illnesses
IMR	Infant mortality rate
IPT	Intermittent preventive treatment
IRA	Iron deficiency anemia
ITN	Insecticide-treated bednet
MBB	Marginal Budgeting for Bottlenecks
MDGs	Millennium Development Goals
MICS	Multiple Indicator Cluster Surveys
NGO	Nongovernmental organization
PVO	Private voluntary organization
QI	Quality improvement
RAP	Rapid assessment procedure
RBM	Roll Back Malaria
SARA	Support for Analysis and Research in Africa (project)
STI	Sexually transmitted infection
SWAps	Sector Wide Approaches
USAID	U.S. Agency for International Development
WHO	World Health Organization
WHO/AFRO	World Health Organization Regional Office for Africa

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Martita Marx, child survival advisor for the SARA project, designed and led the review process for SARA, interviewing the key informants, synthesizing data and drafting this report. Carmen Coles furnished invaluable technical, administrative and data management support. Suzanne Prysor-Jones provided guidance throughout the review process. Carrie Johnson, Randolph Augustin and Nancy McKay advised the study team on issues of USAID funding. The team also thanks the numerous colleagues at AED who provided comments and direction in finalizing this paper. Renuka Bery, Wendy Hammond, Rebecca Nigmann, Elisabeth Sommerfelt, H.J. Lee Bennett, and Raymond Lambert, assisted the team in writing, editing, and designing this document.

Of course, the SARA team, not the individuals mentioned above, is responsible for any errors or omissions in this report.

I. EXECUTIVE SUMMARY

The high number of children under five years of age dying each year in Africa is appalling, particularly in view of the dramatic progress in the rest of the world. While the number of under-five deaths outside of Africa between 1960 and 2000 fell from 18.1 million to 6.4 million (65%) annually, under-five deaths in Africa increased from 2.3 million to 4.5 million (96%). With the technology to address the principal causes of child death now available at modest cost and being applied successfully in other regions, the situation in Africa represents a devastating commentary on the failure of African countries and the global community to address this basic humanitarian issue. The situation presents a moral challenge to the world.

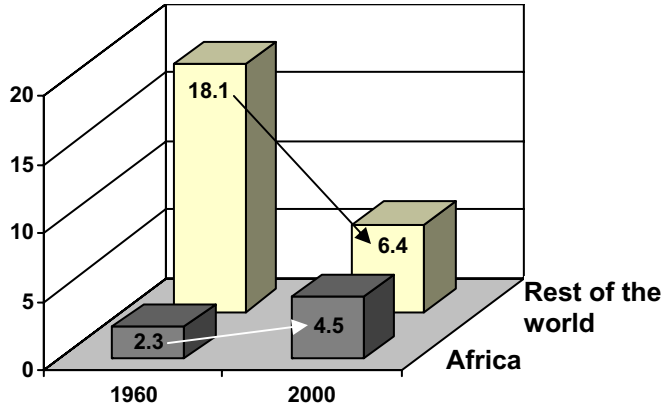
USAID has an opportunity to lead a second child survival revolution, re-establishing its leadership and commitment to the global fight to save children's lives. USAID can increasingly be a leading force for more effective programs and ultimately better child health in Africa.

A. Purpose of This Study

In 2000 the nations of the world met in New York and agreed to Millennium Development Goals (MDGs), a set of worldwide goals for economic and social development, including maternal and child health. Many countries, and indeed many regions of the world, have enjoyed significant progress in reaching those goals. With respect to achieveing child health goals, Africa is being left behind.

Graph 1

Number of Under-Five Deaths Double in Africa, While Decreasing in the Rest of the World (in millions)



To understand better the growing gap between Africa and the world, the USAID's Bureau for Africa commissioned its Support for Analysis and Research in Africa (SARA) Project to undertake this analysis of child health trends and USAID programming in sub-Saharan African countries.[1] The purpose of the review was to identify how USAID could improve the effectiveness of its contribution to improving child health in Africa. In conducting this study, the SARA team reviewed mortality patterns and health intervention coverage data in Africa. In 13 countries, the team interviewed Mission health officers and other child health experts about USAID child survival investments and programming approaches, program results, constraints, and enabling factors.

[1] Many factors—such as poverty, poor governance, the HIV and AIDS crisis, the human resource crisis in health care delivery, and extremely low levels of adult female literacy—contribute to the health crisis of African children. Those topics were beyond the scope of this study.

B. Key Findings and Lessons Learned

Section III presents the SARA team's findings on patterns of child-related mortality in sub-Saharan Africa; the extent of child health intervention coverage; and USAID programming, partnerships, funding, and program constraints. Key findings and lessons learned are summarized here.

The mortality situation of young children in sub-Saharan Africa reveals a crisis that needs to be addressed urgently.

- Sub-Saharan Africa's under-five mortality rate is 75 percent greater than other regions in the world. With 10 percent of the world's population, Africa provides 20 percent of the world's live births and 41 percent of under-five deaths.
- Although sub-Saharan African countries have achieved a small reduction in the under-five mortality rate, the much greater rate of population growth means that the total number of under-five deaths continues to grow.
- Thirty-six of the 42 countries with the highest mortality rates in the world are in sub-Saharan Africa.
- Six countries account for one-half (54%) the deaths in Africa.
- Neonatal deaths contribute to about 50 percent of infant mortality in Africa. Maternal mortality rates are also staggering and contribute to the high neonatal death rates.

Low-cost interventions could reduce under-five mortality dramatically, but coverage rates are woefully inadequate to achieve those results. A variety of child health interventions have been introduced, but more often than not they reach only a minority of the under-five population. Performance varies widely by country and by intervention. In some countries, progress achieved in the early 1980s and 1990s has not been sustained, and coverage rates have regressed. Some others have achieved improved coverage, particularly where USAID or another donor emphasized a particular intervention (such as polio vaccinations, Vitamin A supplementation, exclusive breastfeeding, or integrated management of childhood illnesses [IMCI]). For some interventions, such as routine vaccination coverage and oral rehydration therapy (ORT) use, stagnant coverage rates highlight waning interest.

The waning interest in child survival of USAID and other donors has been a major factor, albeit far from the only one, in explaining the weak programmatic response of African governments. Reduced donor interest in child health has contributed to a loss of vision, energy, and program efforts for child survival at the country level. Diminished interest in child survival is reflected in shrinking financial resources and inconsistent donor support. The way aid is administered—the allocation of resources based on criteria other than need, the earmarking of resources in ways that do not reflect country health priorities, inadequate donor coordination—limits donors' and recipient countries' ability to use resources effectively.

Progress in some sub-Saharan African countries demonstrates that reduced child mortality and high coverage for child health interventions are possible. Positive results in several countries facing enormous obstacles prompted the SARA team to assess whether programming differences were observable in countries with lower mortality rates or a greater decline in child death rates.

- Eleven sub-Saharan countries have achieved under-five mortality rates less than 100 per 1,000 live births.
- Five countries achieved reductions in under-five mortality rates of more than 15 percent during the past decade.
- Several countries have achieved high coverage rates for specific child health interventions: Vitamin A (11 countries), exclusive breastfeeding (Rwanda, Uganda), insecticide treated nets (Eritrea), ORT (Zambia, Kenya), and ARI treatment (Zambia, Tanzania).

USAID programs in countries with higher intervention coverage rates and lower and improving mortality rates tend to have programs aimed specifically at child survival. Those programs often share these strengths:

- A clear USAID objective to reduce under-five mortality nationwide.
- Programming at scale of a sufficient number and range of health interventions and delivery approaches to address the epidemiologic profile and country capacity to implement effective programs. The countries with best outcomes implemented a greater number of interventions.
- More intensive and effective approaches to strengthening health service delivery. Focus on specific child survival interventions must be linked to improving routine health service delivery. Ensuring adequate and stable supply of key inputs and essential drugs, more precise policy targets, use of information, and motivation of personnel are critical and need to go beyond small-scale efforts.
- Programming for effective community outreach and mobilization. To achieve full potential for mortality impact, improved public and private sector services need to be complemented by three "Cs": community outreach, community mobilization, and communication efforts at scale. Programs with these elements have better results.
- Use of effective and broad-scale communication approaches. Communication efforts have made major contributions to effective programs but do not appear to be a priority for most USAID Mission programs. Missions with strong and comprehensive communication approaches have made greater progress.
- Effective use of data. Country programs that take data use seriously—where the various country stakeholders make continual use of data to assess problems and measure results—have better program results.

These characteristics were found in only about half of the Mission programs.

Programs in countries with lower coverage rates for interventions and higher, stagnant, or increasing mortality rates tended to share the following weaknesses:

- Perceived low priority for child survival objectives. Funding cuts, low per-child funding, and the perception that child survival is no longer an Agency priority

have led many USAID health officers to have diminished program expectations, reducing the scope and intensity of actions to reduce child mortality.

- Disconnected approaches. Missing in these countries is the concept of a package of interventions to meet the countries' epidemiological child health profile and a package of delivery strategies necessary to implement the interventions. Country programs may acknowledge the need for communications or community mobilization and outreach, for example, but programming efforts are weak.
- Inadequate attention to broader health system deficiencies. Systems improvements, sorely needed, are often watered down, poorly conceptualized, and not strategically linked with other donor efforts or system-wide reform.

Inadequate attention is given to some of the most effective child health interventions. Newer interventions such as Hib vaccination and neonatal interventions are virtually non-existent. Traditional interventions such as ORT, treatment of acute respiratory infections, and promotion of exclusive breastfeeding seem to have lost their momentum and are weakly implemented unless Missions highlight them specifically. Some interventions, such as water, sanitation, and hygiene, are inadequately linked to Mission child survival frameworks.

Government leadership in child health is critical. Successful outcomes were achieved more frequently where the government assumed ownership and leadership in child health.

Child health outcomes were better where donors, NGOs, and other stakeholders worked together intensively and operationally. Partnerships with a focus with a common agenda to lower child mortality permit countries to maximize impact of available resources. In many countries, donors compete, and stakeholders work independently, contributing to significant gaps, inefficiencies, and redundancies in programming.

The human resource (HR) situation in Africa, a critical factor affecting health service delivery and health outcomes, is weakly addressed by USAID and the donor community. The HIV/AIDS pandemic has exacerbated human resource shortages in the health sector and made it extremely difficult to launch and sustain effective child health services. Furthermore, the lack of systematic approaches to HR is evidenced by inefficient short-term training, uncoordinated actions to strengthen basic training of health professionals, and largely ineffective motivation and performance monitoring. Some countries have attempted to find fresh and creative solutions to supervision, motivation, and follow-up, but others perpetuate ineffective approaches or pay lip service to these elements.

Few USAID Missions or other donors support efforts to improve or expand private provision of health care. Despite the substantial amount of care for children sought from private providers, donors tend to focus largely on government provision. Without efforts to reach this important group of care providers, progress toward reaching the MDGs will be limited.

The following USAID child survival management procedures contribute to less effective programs:

- Lack of child survival programming and reporting requirements. Without a requirement for goal-directed programming, Missions have great latitude to design programs as they want. USAID country programs do not report uniformly on child survival. Therefore USAID/Washington has limited ability to assess performance of interventions and strategies and more effectively allocate resources.
- Procurement processes that slow down implementation and contribute to programming gaps. Burdensome procurement processes, whether executed in the field or in Washington, reduce the effective period of implementation and contribute to gaps in programming between the end of one project and the start of its successor.
- Personnel policies that do not sufficiently strengthen the staffing needed to design and implement programs**.** Personnel approaches have reduced staffing levels and emphasized hiring junior officers. Technical and programmatic updates of country program staff are not as effective or efficient as they should be. The personnel system does not reward them for qualities essential to move programs forward in Africa,[2] and tour of duty policies negatively impact program consistency.
- Lack of close collaboration between Mission-funded programs and centrally funded NGO grants. Centrally funded Child Survival and Health Grants Program grants are frequently not integrated with Mission programs, lessening their impact on child health.
- Lack of integration with complementary programs. Potential synergy is lost because child survival programs are often undertaken independently of efforts to improve maternal health, raise female literacy, address HIV and AIDS, and other programs that are highly complementary.
- Weak emphasis on program experience exchange**.** Many imaginative and creative program design, implementation, and problem-solving approaches are used in USAID and other donor child health country programs. Few mechanisms exist to identify good models systematically, and little concrete support is given to Mission staff or key country counterparts to share such experience in a timely and effective way.

C. Recommendations to USAID

The SARA study team synthesized the observations from the data review and interviews and identified the recommendations below. Section IV expands on these recommendations in more detail and Annex F suggests actions USAID can take to implement them.

Accord high priority to child survival programs providing leadership to revitalize the focus on Africa. USAID should conduct the necessary advocacy at all levels both internally and externally to increase resources and attention to child health in Africa. The

[2] These qualities include implementing programs creatively, developing operational partnerships, and mobilizing additional resources.

Agency should engage Mission officers and other key partners in a dialogue about revitalizing child survival. Their insights and experiences have great potential to improve the effectiveness of child health programming.

Actively pursue advocacy to increase African government commitment to child health. Experience suggests that assistance from the Mission Director, the U.S. Ambassador to the country, and other senior officials can be helpful. The Gates Foundation-supported Child Survival Partnership appears to offer a new and useful approach to encourage African leaders to give greater attention to this issue.

Improve program design, reporting, and coordination mechanisms and standards. Specific steps might include:

- Require each Mission to define a child mortality reduction plan
- Develop and require reporting against a consistent set of child survival indicators
- Utilize more systematic and performance-based criteria for resource allocation
- Establish mechanisms to link Child Survival and Health Grants Program grants explicitly to the country's child survival strategy. (See Recommendations in Section IV.)

Scale up selected interventions with child mortality reduction potential, especially those focused on neonatal deaths. Hib vaccination requires increased investment, as do a number of traditional interventions such as ORT, treatment of acute respiratory infections, and promotion of exclusive breastfeeding. Other interventions, such as water, sanitation, and hygiene, need to be linked to Mission child survival strategies.

Ensure sufficient support for systems improvements, community outreach and mobilization, and effective and sustainable communication strategies. USAID should do small-scale pilot projects only when it is prepared, if the project is highly successful, to scale up the size of its interventions and partner with other donors to achieve national impact. To realize these projects' full potential, however, the concept of "community outreach and mobilization" needs to be clarified, and programming needs to include both large mobilization campaigns and community health worker strategies taken to scale.

Establish operational partnerships with other donors, NGOs, and other key stakeholders to achieve common child survival objectives. USAID support alone cannot solve problems in Africa. Partnerships are necessary to access and use resources more effectively and efficiently to address child health. USAID should build requirements for these partnerships into programming at country level and advocate for them globally.

Raise the private sector to the top of USAID and other donor agendas. Given the significant use of private providers in sub-Saharan Africa, attention to this sector is critical to improve the appropriateness and quality of their care for children. At the same time, increased attention should be given to strengthening African governments' role in policy, regulation, standard setting, and monitoring the system.

Develop an explicit strategy to address critical HR issues. Working with other donors, USAID should:

- Address priorities in basic and short-term training of health professionals in child health
- Develop cost-effective strategies to motivate and retain health personnel.

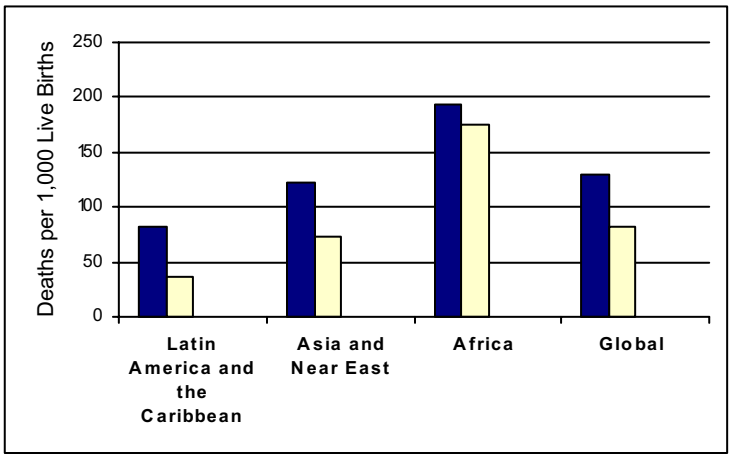
Take concrete steps to address internal management procedures that negatively affect child health programming. Key management areas include reducing procurement bottlenecks to effective programs and strengthening HPN officer leadership and continuity.

II. OBJECTIVES AND STUDY APPROACH

Considerable progress has been made over the past several decades in lowering infant and child mortality. Worldwide, between 1980 and 2000, under-five mortality declined from 15 million to 10.8 million deaths per year, 4.5 million of which occurred annually in Africa. But progress has not been uniform throughout the world. Mortality rates in the Asia/Near East and Latin America/Caribbean regions declined by 41 and 55 percent respectively, yet in Africa the mortality rate decreased by only 10 percent. In fact, in some African countries child mortality rates actually increased.

Graph 2

Global Reductions in Under-Five Mortality, 1980–2000



Source: UNICEF Time Series Data and *State of the World's Children*, 2002

To understand better why mortality rates in sub-Saharan Africa have been slow to change and to identify ways in which USAID and other donors might better contribute to reducing child mortality, USAID's Bureau for Africa commissioned the Support for Analysis and Research in Africa (SARA) project to review child mortality and basic child health indicator trends in sub-Saharan Africa. With a view to improving USAID child survival programming and guiding future USAID investments in child health, SARA also was asked to analyze child health funding trends in the 25 countries receiving USAID funding between 1999 and 2004, and to carry out a qualitative review of USAID child survival programs in 13 focus countries. These 13 countries account for 2.4 million under-five deaths (52%) in Africa. The SARA project collected and analyzed data between September 2003 and July 2004 and presented its preliminary findings to the Bureau for Africa in February/March 2004.

The SARA team reviewed:

- Child health outcomes in Africa—under-five mortality, infant mortality, and neonatal mortality
- The pattern of USAID investments for child survival over the past six years

Objectives and Study Approach

- Country-level child health intervention indicators such as vaccination coverage, exclusive breastfeeding rates, and ORT use
- The pattern of USAID Mission programming approaches for child survival
- Constraints, enabling factors, issues, and future prospects for USAID contribution to improved child health in Africa
- Programmatic approaches that seemed to have had the most impact and the lessons learned.

Mortality and child health intervention coverage data were obtained from Demographic and Health Surveys (DHS), UNICEF's *State of the World's Children*, and Multiple Indicator Cluster Surveys (MICS). USAID funding information was obtained from USAID/Washington for the Child Survival Health Account (CSHA) and for the Child Survival and Health Grants Program (CSHGP) for 1999–2004. Data on programming approaches, constraints, and lessons learned were obtained through telephone interviews with Mission health officers and in-person interviews with USAID and cooperating agency child health experts in Washington. (See Annex E for key points from these interviews.) These interviews were complemented by a review of program documentation. Data were not available for all countries for all years, or for each category of information. Table 1 summarizes the countries included in each aspect of the study, as well as the source from which data was obtained. The study approach is described in detail in Annex A.

This study does not make causal attributions. Under the best of circumstances, establishing causality between donor interventions and health outcomes is extremely difficult. The "design" was not experimental and the study did not define or collect information on other key variables such as country poverty levels and levels of education. Moreover, this review relied primarily on qualitative interview data and examined USAID programs in countries where many other donors also support child health efforts. Singling out USAID for its contribution to outcomes was impossible. Child-specific health interventions are only one set (albeit a very important set) of contributors to under-five mortality reduction. Mortality patterns may already have been on downward or upward trends. Furthermore, a more complete picture of causality would require examining other health and social service inputs such as birth spacing, maternal health interventions, and education. Finally, USAID country program information reflects answers from one individual at one point in time and therefore may not paint a complete programmatic picture.

Table 1

Taking Data Sources and Countries Covered

Child Survival Data Analysis	Number of Countries	Primary Data Source	Names of Countries
Child Health Program Information	13 "focus" countries	Interviews, data collection sheets, and existing reports	Benin, Eritrea, Ethiopia, Ghana, Guinea, Madagascar, Malawi, Mali, Nigeria, Senegal, Tanzania, Uganda, Zambia
Child Health Intervention Coverage	20 countries[3]	Demographic and Health Surveys supplemented by Multiple Indicator Cluster Surveys (MICS)	All 13 countries listed above plus Burkina Faso, Cameroon, Côte d'Ivoire, Kenya, Niger, Rwanda, Zimbabwe
USAID Child Survival Funding	25 countries	USAID Child Survival and Health Account (CSHA) Analysis	Angola, Benin, Burkina Faso, Burundi, Democratic Republic of the Congo, Eritrea, Ethiopia, Ghana, Guinea, Kenya, Liberia, Madagascar, Malawi, Mali, Mozambique, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, South Africa, Tanzania, Uganda, and Zambia
Mortality changes between two points in time	29 countries	Demographic and Health Surveys supplemented by UNICEF's State of the World's Children and MICS	All 25 countries listed above, and Cameroon, Côte d'Ivoire, Niger, and Zimbabwe
Mortality: under-five mortality, infant mortality	46 countries	State of the World's Children 2004	All countries in sub-Saharan Africa.

Despite these limitations, the participatory process undertaken for the review and USAID's aggressive use of the study's preliminary findings and recommendations have already generated changes in approaches used by design teams and in child survival programming in USAID/Washington. A number of Africa missions also report having introduced changes as a result of the briefing paper and discussions about it.

The remainder of this report is organized into two primary sections: Findings and Recommendations.

[3] Since Ethiopia only has one completed DHS survey, only 19 countries were used when comparing data during two points in time.

III. FINDINGS

This section of the report describes the status of USAID child survival programming in sub-Saharan Africa, pulls together information from varying sources of data, and organizes the findings into the following thematic areas:

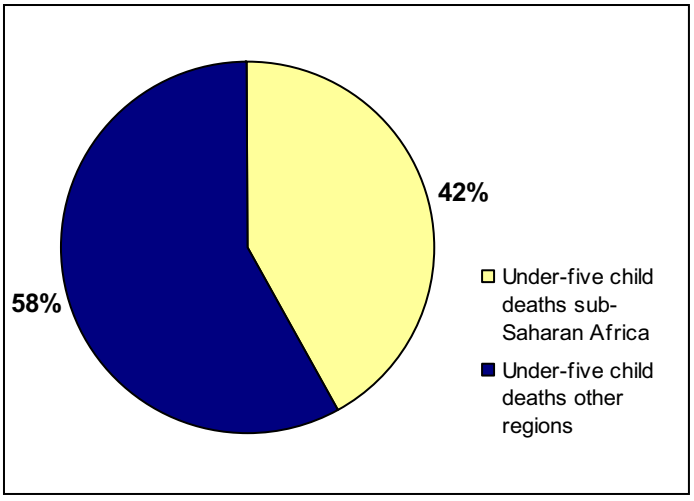
- Patterns of child-related mortality
- Population-level coverage of child survival approaches
- USAID program approaches
- Government commitment to child health
- Other partners for child health
- USAID child survival funding
- Constraints to effective programming

A. Patterns of Child-Related Mortality in Africa

In the past 40 years, child mortality rates have fallen by 50 percent around the world. Despite these gains more than 10 million children still die every year before the age of five. [4] Almost half of these deaths (42%) are in Africa, a continent with only 20 percent of the world's live births.[5] Correspondingly, Africa's infant mortality and neonatal death rates are also among the highest in the world. Most of these children die from preventable and treatable diseases.

Graph 3

Distribution of Under-Five Deaths in Sub-Saharan Africa and Other Regions, 2002



In the developing world, the greatest number of deaths at any age occurs in children under the age of five because as a child matures, he or she is more able to survive disease challenges. In Africa, 1 in 3 mothers will experience the death of a newborn,[6] whereas less than 1 in 100 mothers will do so in North America. The rates of under-five mortality in Africa are staggering: in some countries one-quarter to one-third of children die before reaching the age of five. Within the under-five age group, there are specific periods of increased vulnerability. For example, the first year of life contributes to approximately 60 percent of under-five mortality, of which the first 24 hours of life is the most vulnerable period, followed by the first week and then the first month. The neonatal mortality rate in sub-Saharan Africa is approximately 45 deaths per 1,000 live

[4] Mortality figures presented in this review may vary slightly from one part of the discussion to the next because of varying sources of data.
[5] UNICEF, *State of the World's Children*, 2004.
[6] Save the Children, *State of the World's Newborns*, 2001.

births, and this rate has changed little over the past 30 years.[7] Thus, understanding the overall mortality picture of children in various age sub-groups in Africa is important for choosing appropriate interventions.

1. Under-five Mortality

Africa has the worst under-five mortality rates in the world.

- It contributes 4.6 million deaths to the worldwide figure of 10.9 million deaths.[8]
- Of the 40 countries worldwide with the highest child mortality rates, 33 are in sub-Saharan Africa
- Four countries (Nigeria, Democratic Republic of the Congo, Ethiopia, and Tanzania) account for close to half (45 percent) of all child deaths in Africa.
- Three countries in Africa (Sierra Leone, Niger, and Angola) have the highest under-five mortality rates in the world. In these countries approximately 25 percent of children die before reaching the age of five.
- Nearly one-fourth of sub-Saharan African countries have under-five mortality rates of over 200 per 1,000 live births.
- The average under-five death rate in Africa—174 deaths per 1,000 live births—is 25 times the rate in the United States.[9]
- Neonatal deaths contribute to almost half of infant mortality.

a. Mortality rates

Under-five mortality rates vary considerably within the sub-Saharan region. A staggering number of countries have very high rates of under-five mortality. As Table 2 indicates, in 11 countries in Africa, at least one in five children dies before age five. In another 14 countries, at least one in seven children dies.

[7] WHO/AFRO, *Africa's Newborns: The Forgotten Children*, 2002.
[8] UNICEF, *State of the World's Children*, 2004 (2002 Under-five death data)
[9] Ibid.

Table 2

Under-Five Mortality Rates and Total Number of Deaths in Sub-Saharan African Countries, 2002[10]

Ranked in order of highest mortality rate to lowest mortality rate

(Number of deaths of children under five years of age per 1,000 live births.)

* Indicates one of the 13 focus countries

Under-Five Mortality Rate World Rank	Country	Under-Five Mortality Rate (2002)	Total Deaths (2002)	Under-Five Mortality Rate World Rank	Country	Under-Five Mortality Rate (2002)	Total Deaths (2002)
1	Sierra Leone	284	68,000	**26**	Equatorial Guinea	152	3,000
2	Niger	265	170,000	**27**	Swaziland	149	6,000
3	Angola	260	181,000	**29**	Uganda*	141	180,000
5	Liberia	235	38,000	**29**	Togo	141	26,00
6	Somalia	225	112,000	**31**	Senegal*	138	51,000
7	Mali*	222	140,000	**33**	Madagascar*	136	96,000
8	Guinea-Bissau	211	15,000	**34**	Gambia	126	6,000
9	Burkina Faso	207	125,000	**37**	Zimbabwe	123	51,000
10	Dem. Rep. Congo	205	532,000	**39**	Kenya	122	126,000
11	Chad	200	81,000	**40**	Sao Tome and Principe	118	1,000
12	Mozambique	197	151,000	**41**	Botswana	110	6,000
13	Zambia*	192	87,000	**43**	Congo	108	17,000
14	Burundi	190	55,000	**47**	Ghana*	100	66,000
15	Malawi*	183	97,000	**50**	Sudan	94	103,000
15	Nigeria*	183	872,000	**54**	Gabon	91	4,000
15	Rwanda	183	66,000	**56**	Eritrea*	89	14,000
19	Central African Republic	180	26,000	**57**	Lesotho	87	5,000
20	Côte d'Ivoire	176	103,000	**58**	Comoros	79	2,000
21	Ethiopia*	171	504,000	**68**	Namibia	67	4,000
22	Guinea*	169	61,000	**70**	South Africa	65	66,000
23	Cameroon	166	93,000	**90**	Cape Verde	38	-
24	Tanzania*	165	236,000	**130**	Mauritius	19	-
25	Benin*	156	4,300	**137**	Seychelles	16	-

On the more positive end of the spectrum, however, nearly one-quarter of African countries have rates less than 100 deaths per 1,000 live births. These countries' rates are 3 to 18 times lower than the countries with the highest mortality rates.

[10] Ibid.

b. Total under-five deaths

Analyzing child mortality trends by rates alone, however, is not sufficient. For a more complete picture of under-five mortality in Africa, total number of deaths per country must also be considered. Table 3 rank orders sub-Saharan African countries by total number of deaths. As would be expected, countries with the largest populations have the greatest number of deaths while countries with smaller populations have the lowest numbers of deaths.[11] Looking at the toll of mortality in Africa from this point of view paints an alarming picture. In total, 14 countries contribute to 75 percent of the total number of under-five deaths of children in sub-Saharan Africa. Furthermore, in each of four countries (Nigeria, Democratic Republic of the Congo, Ethiopia, and Tanzania), under-five deaths exceed 200,000 per year, accounting for 45 percent of the total number of these deaths in sub-Saharan Africa. Nigeria alone accounts for nearly 900,000 deaths of children annually.

[11] Black, Robert et al., "Where and Why are 10 Million Children Dying Every Year?" *The Lancet*, Vol. 361, June 28, 2003, p. 2227.

Table 3

Under-five Mortality Rates and Total Number of Deaths in Sub-Saharan African Countries, 2002[12]

Ranked in order of highest total deaths to lowest total deaths

(Number of deaths of children under five years of age per 1,000 live births.)

* Indicates one of the 13 focus countries

Under-Five Mortality Rate World Rank	Country	Under-Five Mortality Rate (2002)	Total Deaths (2002)	Under-Five Mortality Rate World Rank	Country	Under-Five Mortality Rate (2002)	Total Deaths (2002
15	Nigeria*	183	872,000	22	Guinea*	169	61,000
10	Dem. Rep. Congo	205	532,000	14	Burundi	190	55,000
21	Ethiopia*	171	504,000	37	Zimbabwe	123	51,000
24	Tanzania*	165	236,000	31	Senegal*	138	51,000
3	Angola	260	181,000	5	Liberia	235	38,000
29	Uganda*	141	180,000	29	Togo	141	26,000
2	Niger	265	170,000	19	Central African Republic	180	26,000
12	Mozambique	197	151,000	43	Congo	108	17,000
7	Mali*	222	140,000	8	Guinea-Bissau	211	15,000
39	Kenya	122	126,000	56	Eritrea*	89	14,000
9	Burkina Faso	207	125,000	27	Swaziland	149	6,000
6	Somalia	225	112,000	34	Gambia	126	6,000
20	Côte d'Ivoire	176	103,000	41	Botswana	110	6,000
50	Sudan	94	103,000	57	Lesotho	87	5,000
15	Malawi*	183	97,000	25	Benin*	156	4,300
33	Madagascar*	136	96,000	54	Gabon	91	4,000
23	Cameroon	166	93,000	68	Namibia	67	4,000
13	Zambia*	192	87,000	26	Equatorial Guinea	152	3000
11	Chad	200	81,000	58	Comoros	79	2,000
1	Sierra Leone	284	68,000	40	Sao Tome and Principe	118	1,000
15	Rwanda	183	66,000	90	Cape Verde	38	-
47	Ghana*	100	66,000	130	Mauritius	19	-
70	South Africa	65	66,000	137	Seychelles	16	-

[12] UNICEF, *State of the World's Children*, 2004.

c. Changes in under-five mortality

Looked at regionally, death rates in Africa are higher than any other part of the world. Moreover, as Table 4 shows, the gap is widening. Over the 1990–2000 time period, under-five mortality in sub-Saharan Africa declined 3 percent, only a fraction of the decline achieved in other regions.

Table 4

Under-Five Mortality Rates, 1990 and 2000[13]

Regions	U-5 Death Rate 1990	U-5 Death Rate 2000	Absolute Decline in U-5 Death Rate	Percentage Decline in U-5 Death Rate, 1990–2000
Africa	181	175	6	3%
South Asia	128	100	28	22%
East Asia and the Pacific	58	44	14	24%
Latin America and the Caribbean	53	37	16	30%
Industrialized Countries	9	6	3	32%
Worldwide	93	83	10	11%

When analyzing changes in under-five mortality rates in a sub-set of USAID-supported countries,[14] almost half the countries showed either no change or increases in mortality rates (Table 5). Although in some cases, extreme decreases or increases in rates force one to question the quality of data, the percentage increase and decrease can be used to illustrate general trends in mortality over time.

[13] UNICEF, *Infant and Under Five Mortality*, 2001. http://www.unicef.org/specialsession/about/sgreport-pdf/01_InfantAndUnder-FiveMortality_D7341Insert_English.pdf [accessed March 25, 2004].

[14] A subset of 29 countries was used for this study. All 25 countries funded by USAID (1999–2004) were included as well as four additional countries with two completed DHS surveys.

Table 5

Rates of Change in Under-Five Mortality between Two Recent Surveys
Ranked from greatest reduction in mortality to greatest increase in mortality[15]

Rank	Country and Dates of DHS Surveys	Under-Five Mortality		Percentage Change
		1st Survey	2nd Survey	
1	Eritrea (1995-2002)	136	93	-32%
2	Guinea (1992-1999)	229	177	-23%
3	Malawi (1992-2000)	234	189	-19%
4	Sudan (1997*-2002*)	115	94	-18%
5	Zambia (1996-2001)	197	165	-16%
6	Niger (1992-1998)	318	274	-14%
7	Angola (1997*-2002*)	292	260	-11%
8	Madagascar (1997-2000**)	159	142	-10%
9	Ghana (1993-1998)	119	107	-10%
10	Sierra Leone (1997*-2002*)	316	284	-10%
11	Senegal (1992**-2000**)	157	145.3	-7%
12	Ethiopia (1997*-2000)	175	166	-5%
13	Benin (1996-2001)	167	160	-4%
14	Mali (1995/1996-2001)	238	229	-4%
15	Burundi (1997*-2002*)	187	183	-2%
16	Mozambique (1997-2002*)	200	197	-2%
17	Liberia (1990*-2000*)	235	235	0%
18	Dem. Rep. Congo (1997*-2002*)	207	205	1%
19	Uganda (1995-2000/01)	147	151	3%
20	Somalia (1997*-2002*)	211	225	6%
21	Tanzania (1996-1999)	137	147	7%
22	South Africa (1998-2002*)	59.4	65	9%
23	Kenya (1993-1998)	96	112	17%
24	Burkina Faso (1993-1998/1999)	187	219	17%
25	Cameroon (1991-1998)	126	151	20%
26	Côte d'Ivoire (1994-1998/99)	150	181	21%
27	Rwanda (1992-2000)	151	196	30%
28	Zimbabwe (1994-1999)	77	102	32%
29	Nigeria (1999-2003)	140	203	45%

*Where DHS data for two points in time were not available, data from UNICEF's *State of the World's Children* or MICS were used.

Four of the 13 focus countries (Eritrea, Guinea, Malawi, and Zambia) reduced their under-five mortality rates by more than 15 percent. Eritrea reduced its under-five mortality rate by 32 percent. Preliminary data from the most recent 2003 DHS survey in Madagascar show a decline of 41 percent.

[15] This table includes the 25 countries that received USAID funding between 1999–2004, plus four additional countries: Cameroon, Côte D'Ivoire, Niger, and Zimbabwe.

2. *Infant Mortality*

Infant mortality—deaths in infants under the age of 12 months— accounts for about 60 percent of deaths in the under-five age group. Many interventions are needed to reach children less than one year of age to prevent these child deaths. The trends and patterns of infant mortality in countries generally mimic the trends in the under-five age group; the same countries with high under-five mortality have high infant mortality. Nevertheless, we briefly summarize infant mortality patterns.

Infant mortality rates (IMR) in sub-Saharan Africa average 106 deaths per 1,000 live births—a rate significantly greater than the other major geographic areas of the developing world (Table 6).

Table 6

Infant Mortality Rates in Selected Geographic Regions, 2002

Regions of the World	IMR – 2002[16]
Africa	106
South Asia	70
East Asia/ Pacific	33
Latin America/ Caribbean	27
Industrialized countries	5
World	56

Almost half of sub-Saharan countries had infant mortality rates greater than 100 per 1,000 live births (Table 7). The highest rates occurred in the same four countries (Sierra Leone, Liberia, Niger, and Angola) that had the highest under-five mortality rates. On the sub-Saharan continent (excluding the small islands), Eritrea and South Africa have the lowest infant mortality rates.[17]

As with under-five mortality, 14 sub-Saharan countries reduced their infant mortality. Eritrea surpassed all other countries with a 33 percent reduction in infant mortality, though preliminary results from the 2003 Madagascar DHS indicate reduction of 40 percent. Three countries reduced rates by over 20 percent and eight by 10 percent or less. In seven other countries, IMR increased by 18 percent or more.

[16] UNICEF, *State of the World's Children*, 2004.

[17] To fully understand country trends, regional disaggregation of data would be needed. This study concentrates on national-level trends.

Table 7

Infant Mortality Rates, Neonatal Mortality Rates, Maternal Mortality Rates, Total Fertility Rates, and Contraceptive Prevalence Rates in Sub-Saharan African Countries

Rank[a]	Country	Infant Mortality Rate 2002[b]	Neonatal Mortality Rate 1995–2000[c]	Maternal Mortality Rate (Deaths per 100,000 births) 1995[d]	Total Fertility Rate[e]	Contraceptive Prevalence Rate Total Methods 1995–2001[f]	Contraceptive Prevalence Rate Modern Methods 1995–2001[g]
1	Sierra Leone	165	NA	2000	6.3	NA	NA
3	Liberia	157	68 x	760	6.6	NA	NA
4	Niger	156	44	1600	7.4	8	5
5	Angola	154	NA	1700	6.9	NA	NA
7	Guinea-Bissau	130	NA	1100	5.8	NA	NA
8	Congo, Democratic Republic of the	129	NA	990	7.0	8	3
9	Mozambique	125	54	1000	5.6	6	5
10	Mali	122	57 +	1200	7	7	5
12	Chad	117	44	1100	6.6	4	1
13	Central African Republic	115	42	1100	5.1	15	3
14	Ethiopia	114	49	850	5.9	8	6
14	Burundi	114	35 x	1000	6.5	NA	NA
16	Malawi	114	42 +	1800	6.3	21	26
17	Nigeria	110	48 +	800	5.8	15	9
19	Guinea	109	48	740	5.5	6	4
19	Zambia	108	37	750	6.1	26	14
20	Burkina Faso	107		1000	6.8	12	5
21	Swaziland	106	0	370	5.9	21	19
22	Tanzania	104	40	1500	5.6	25	17
23	Côte d'Ivoire	102	42	690	5.2	15	7
25	Equatorial Guinea	101	0	880	5.9	NA	NA
27	Rwanda	96	39 x	1400	5.8	13	4
29	Cameroon	95	37	730	5.1	15	3
30	Benin	93	38	850	6.3	16.3	3
31	Gambia	91	40	540	5.9	15	7
34	Madagascar	84	40	550	5.8	19	10
36	Uganda	82	33	880	6.9	23	18
37	Congo	81	0	510	6.3	NA	NA
38	Botswana	80	22x	100	3.9	42	41
39	Togo	79	41	570	5.8	24	7
39	Senegal	79	37	690	5.2	11	8
43	Kenya	78	28	1000	4.4	39	32
45	Zimbabwe	76	29	1100	4.0	54	50
47	Sao Tome and Principe	75	0	NA	NA	NA	NA
53	Lesotho	64	0	550	4.3	23	19
53	Sudan	64	44x	590	4.9	10	7
56	Gabon	60	0	420	4.3	33	12
57	Comoros	59	38	480	6.8	21	11

60	Ghana	57	30	540	4.3	22	13
62	Namibia	55	32	300	5.0	29	26
67	South Africa	52	11 *	230	2.9	56	55
71	Eritrea	47	25	630	6.0	8	4
93	Cape Verde	29	0	150	4.0	53	46
127	Mauritius	17	17	24	2.0	75	60
144	Seychelles	12	0	NA	NA	NA	NA

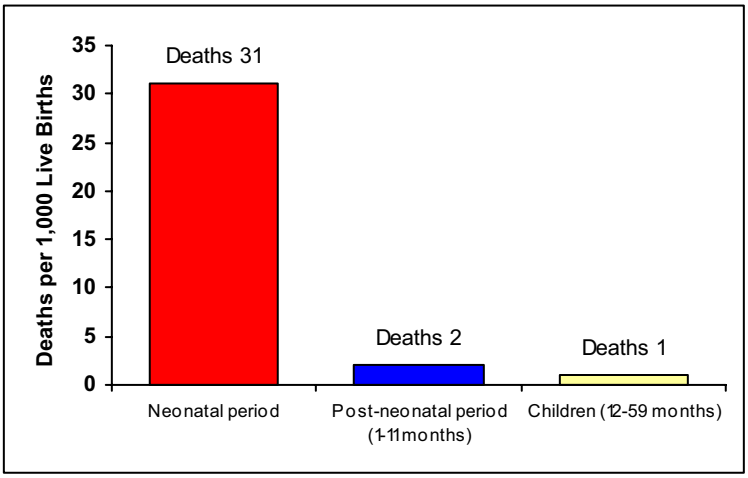
[a] UNICEF, *State of the World's Children*, 2004.
[b] UNICEF, *State of the World's Children*, 2004.
[c] Save the Children, *State of the World's Newborns*, 2001.
x - indicates that the data were collected outside the time period specified.
+ - data are from the most recent DHS survey.
* - data are from R. Patterson. Unpublished data based on 27 hospital-based sites during 2000.
[d] WHO,UNICEF, and UNFPA, Maternal Mortality in 2000, 2004.
[e] Population Reference Bureau. Women of Our World, 2002.
[f] Population Reference Bureau. Women of Our World, 2002 The percentage of currently married or "in union" women of reproductive age (15-49) who are currently using any form of contraception. "Total" use includes modern and traditional methods.
[g] Population Reference Bureau. Women of Our World, 2002 The percentage of currently married or "in union" women of reproductive age (15-49) who are currently using any form of contraception. "Modern" methods include clinic and supply methods such as the pill, injectables, implants, IUD, condom,, and sterilization.

3. Neonatal Mortality

The neonatal period is the most fragile period in a child's first five years of life—a child's risk of dying in the first month of life is 30 times greater than the average monthly risk over the next 59 months.[18] More than two-thirds of infant deaths (0–11 months) occur in the first month of life, or the neonatal period,[19] and two-thirds of these deaths occur in the first week of life.

Graph 4

Average Number of Deaths per Month in Each Period of a Child's Life



Despite dramatic reductions in deaths of children between the ages of one month and five years in many countries, limited progress has been made in reducing deaths that occur during the first four weeks of life. Worldwide an estimated four million babies die annually before reaching one

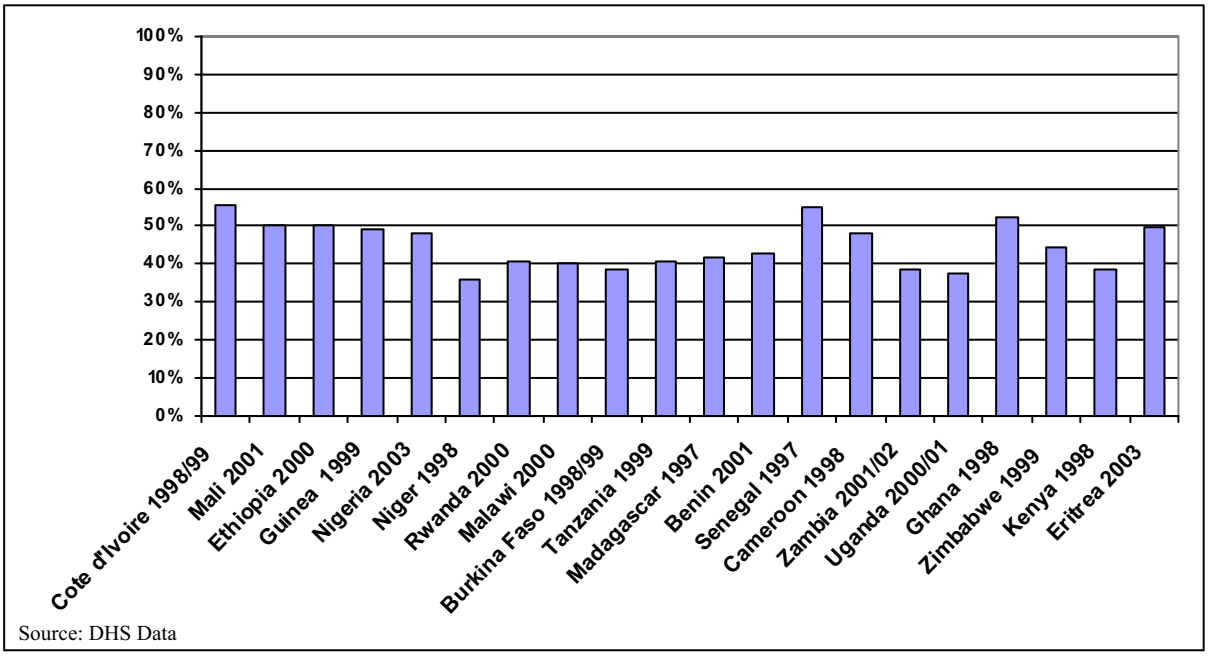
[18] Based on Save the Children, *State of the World's Newborns*, 2001.
[19] Black, Robert et al., "Where and Why are 10 Million Children Dying Every Year?" *The Lancet*, Vol. 361, June 28, 2003, p. 2227.

month of age (98 percent in the developing world).[20] Regional disparities are huge: a mother in West Africa is 30 times more likely to lose an infant in the first month of life than a mother in Western Europe or North America.[21]

In general, neonatal mortality rates have increased or stayed the same over the past 12 years in sub-Saharan Africa—35 to 55 percent of all infant deaths. Graph 5 shows neonatal mortality as a portion of infant mortality in USAID-assisted countries. Nine USAID-assisted countries experienced some modest improvements in neonatal mortality. To achieve the Millennium Development Goal of reducing child deaths by two-thirds, neonatal mortality must decline by 50 percent.

Graph 5

Neonatal Mortality as a Percentage of Infant Mortality in Selected Sub-Saharan African Countries, 1997–2003



Source: DHS Data

4. Maternal Mortality

Newborn survival is inextricably linked to maternal nutrition, health, and care. A mother's death doubles or even triples the risk that children under age five will also die.[22] A newborn whose mother dies in childbirth is 3 to 10 times more likely to die before his or her second birthday.[23] Thus any review of child survival must include some comment on maternal deaths.

[20] Save the Children, *State of the World's Newborns*, 2001, p.7.
[21] Ibid.
[22] Kurtz, K.M. and Johnson-Welch, C., *Gender Bias in Health Care Among Children 0-5 Years: Opportunities for Child Survival Programs.* Arlington, VA: BASICS, 1997, p. 18.
[23] Save the Children, *Children Having Children: State of the World's Mothers*, May 2004.

Findings – Child-Related Mortality

Nearly half of maternal deaths worldwide occur in sub-Saharan Africa, which has the highest maternal mortality ratio in the world—approximately 1,000 maternal deaths for every 100,000 live births. An African woman's lifetime risk of dying from pregnancy and childbirth-related conditions is 1 in 14. Adolescent pregnancy, low contraceptive prevalence (13%), and high fertility (estimated at 5.6 children per woman) increase this lifetime risk of maternal death. Table 7 summarizes the data on maternal mortality, total fertility, and contraceptive prevalence rates for sub-Saharan African nations.

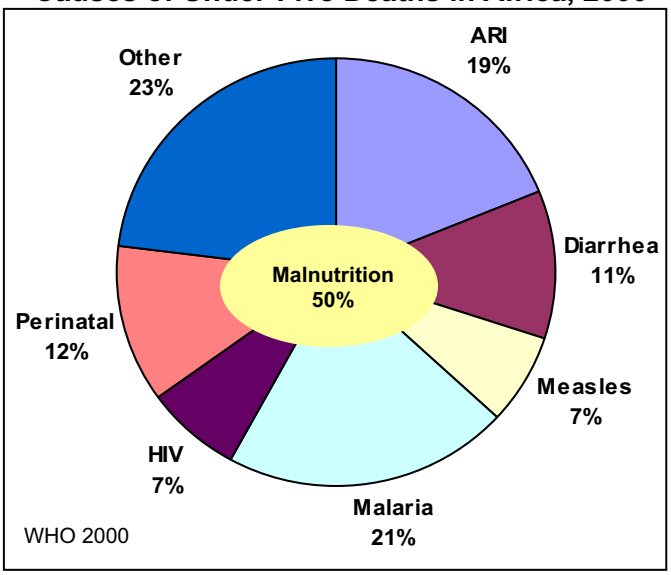
Table 7 also shows that these regional figures mask considerable differences between and within countries. For example, the maternal mortality ratio is estimated to be 300 in Namibia and 1,100 in Chad. Among 1,000 women who give birth in Niger, 233 are 15–19 years old compared with 86 in this age group in Senegal. This grim picture of maternal health must be addressed to reach Millennium Development Goals.

B. Child Health Intervention Coverage

The predominant causes of infant and under-five deaths in sub-Saharan Africa continue to be malaria (21%), pneumonia (19%), neonatal illnesses (12%), and diarrhea (11%). Malnutrition underlies as much as 50 percent of under-five deaths. HIV/AIDS, while contributing significantly to adult mortality, is not an important determinant of under-five mortality in most countries. In some countries, however, AIDS contributes to more than 10 percent of children's deaths, including Botswana, Kenya, Rwanda, South Africa, and Zimbabwe.[24]

Graph 6

Causes of Under-Five Deaths in Africa, 2000



Understanding the causes of death helps to target interventions to reduce mortality. Determining the causes of death is difficult because vital registration systems are weak or non-existent in most developing countries, so cause of death information usually comes from special studies or surveys. Though such information on causes of death may not be completely accurate, it can serve to guide programming decisions to reduce child mortality.

Experts estimate that two-thirds of all under-five deaths could be prevented by simple, proven, cost-effective interventions. *The Lancet* recently summarized state-of-the-art information regarding interventions that effectively treat the five major causes of death for children under-five and can be feasibly implemented on a national scale. *The Lancet* articles estimate that universal application of these interventions could reduce under-five mortality by 63 percent.[25]

The key interventions identified as effective in reducing child mortality organized by category of intervention include:

- Vaccinations for preventable diseases: diphtheria, tetanus, pertussis (DTP), polio[26], measles, *Haemophilus influenzae* b vaccine
- Nutrition interventions: excusive breastfeeding <6 months, complementary feeding, vitamin A, iron fortification/other supplements (zinc)

[24] Black, Robert et al., "Where and Why are 10 Million Children Dying Every Year?" The Lancet, Vol. 361, June 28, 2003, p. 2223.
[25] Jones, Gareth et al., "How Many Child Deaths Can We Prevent This Year?" The Lancet, Vol. 362, July 5, 2003, p. 65.
[26] Vaccinations for DTP and polio were not included in *The Lancet* series, but are included in this review as they do affect mortality and also prevent permanent disabilities.

Findings – Intervention Coverage

- Appropriate treatment of major childhood diseases: ORT, antibiotics for dysentery, ARI-related antibiotics for pneumonia (where applicable, IMCI is used as a proxy for these interventions)
- Malaria prevention and treatment: insecticide-treated bednets (ITNs), antimalarials for fever, antimalarial intermittent preventive treatment in pregnancy (IPT)
- Water and sanitation interventions: clean water, proper sanitation, hygiene improvement
- Newborn health and care: Tetanus toxoid, clean delivery, antibiotics for neonatal sepsis, newborn resuscitation, antenatal steroids, newborn temperature management and/or antibiotics for premature rupture, Nevirapine, and replacement feeding.

Interventions targeted at reducing maternal mortality and lowering fertility also reduce child mortality, particularly in neonates. Among the most important interventions are those that increase the use of modern contraception and those targeted at pregnant women, including emergency obstetric care. It is beyond the scope of this paper to present information on these. Suffice it to say that divorcing programs that improve maternal health from those that improve child health reduces the effectiveness of both.

A major question resulting from the analysis of mortality is: "Are these interventions being implemented in Africa and if so, to what extent?" To answer this question, and assess progress in sub-Saharan Africa, the SARA team synthesized existing information primarily from DHS and UNICEF to determine how far or close countries have come to achieving needed[27] population coverage rates for these key interventions. In the 1980s and early 1990s, many African countries improved coverage in several key intervention areas, but current information indicates that much of Africa has lost ground. The following discussion, organized by major intervention categories, briefly summarizes effective interventions and the status of intervention coverage in the 19 African countries for which data from two DHS surveys were available. The next section summarizes current USAID programming efforts in each intervention area.

1. Vaccinations

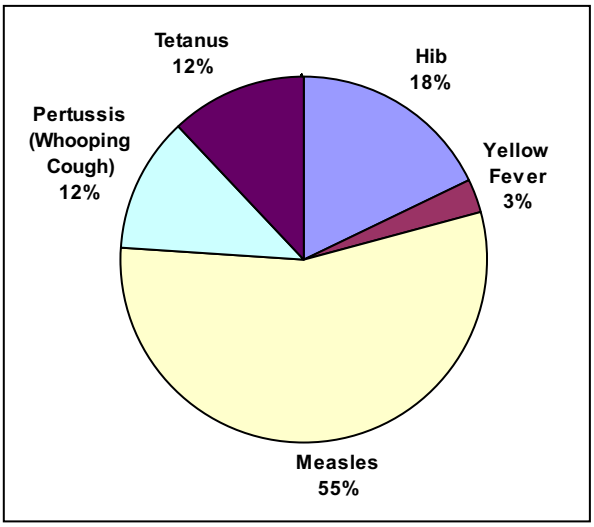
Diseases preventable by vaccines contribute to childhood morbidity, handicaps (as in polio), and in some cases mortality. Measles, in particular, contributes to a great portion of the mortality associated with acute respiratory infections. Additionally these diseases undermine the child's overall resistance to other diseases. Vaccines are delivered either through routine health service systems or through special campaigns that mobilize the population to bring their children to health facilities or other locations once or twice a year to receive vaccinations. The routine approach has been used predominantly with Diphtheria, Tetanus, and Pertussis (DTP) vaccinations, as this combined vaccine requires

[27] Universal coverage (100%) is not needed for most intervention areas to significantly reduce mortality. Target or desired coverage rates vary for different interventions. For example, 80 percent coverage is the target for most vaccinations.

three doses to achieve immunity. The campaign approach has been used in some countries to boost coverage rates.

Graph 7

Causes of Vaccine-Preventable Diseases in Africa



Overall, immunization coverage trends in Africa were marked by high levels of performance in the early 1990s as a remnant of the USAID-sponsored "twin engines" to reduce childhood mortality and the UNICEF-sponsored push to achieve Universal Childhood Immunization (UCI) by 1990. However, Africa as a region reached 58 percent coverage rather than the goal of 80 percent.[28] During the mid-to-late 1990s, routine immunization coverage improved in a few countries, declined in many countries, and stagnated in others. Various studies and Expanded Program of Immunizations (EPI) reviews have attributed this situation to of the following factors:

- The financial support for routine immunization available during previous years was withdrawn by donors.
- The introduction of health sector reform in many countries integrated and decentralized immunization management and services often without the human and financial resources needed to maintain or improve services.
- The efforts to eradicate polio, some believe, have reduced the emphasis on other vaccine-preventable diseases.

Trends in immunization coverage can be described by examining some common performance indicators:

- *DTP1 coverage* (the first dose of diphtheria-tetanus-pertussis vaccine) is a proxy of access to immunization services
- *DTP3 coverage* (the third and final dose of DTP vaccine) indicates completion of the immunization schedule and is a measure of the health system's ability to reach children multiple times with vaccines
- *Measles coverage* measures protection against measles with a primary dose of vaccine—the presence of large-scale measles vaccination campaigns that provide "supplemental" doses sometimes inflates routine measles coverage when campaign doses are inadvertently added
- *Drop-out rates* (the disparity in coverage between early and later doses of vaccine, usually comparing DTP1 and DPT3) is a measure of client satisfaction with services.

[28] WHO, *Vaccine Preventable Diseases Monitoring System 2003*, pp. 9–10.

- *Other indicators*—USAID, WHO, and others sometimes use the ability of countries to maintain high levels of coverage for three years or more and the percentage of districts in a given country achieving DTP3 coverage.

a. DTP coverage

According to WHO/AFRO data[29], for the 46 countries in the AFRO region, DTP3 coverage from 1993 through 2002 ranged from 49 to 60 percent, falling to the lowest levels in 1998–1999 and picking up slightly in 2000–2002, when levels ranged from 55 percent to 60 percent. Measles coverage showed an almost identical trend, remaining within four percentage points of DTP3 coverage for each respective year. Because WHO did not require countries to submit data on DTP1 routinely until 2000, insufficient information exists to examine DTP1 trends or DTP13 drop-out rates.

Data from the 19 countries for which two DHS surveys were conducted in the past 12 years[30] show that DTP1 coverage increased in 7 countries, while it dropped in 11 countries. DTP1 coverage exceeded 70 percent in 12 countries in the first "round" of surveys and the same was true for 15 countries in the second round (Table 8).

[29] WHO/AFRO uses annual administrative data for coverage estimates.
[30] With an interval between the two surveys of approximately five years.

Table 8

DTP 3 Coverage in the First Year of Life in Selected Sub-Saharan African Countries

Ranked in order from country with greatest to lowest 2nd survey coverage rate

Rank	Country	1st Survey	2nd Survey	Change in Percentage Points
1	Rwanda (1992-2000)	91%	85%	-6
2	Eritrea (1995-2002)	42%	79.1%	37.1
3	Zimbabwe (1994-1999)	80%	78%	-2
4	Malawi (1992-2000)	83%	78%	-5
5	Tanzania (1996-1999)	82%	77%	-5
6	Kenya (1993-1998)	85%	76%	-9
7	Zambia (1996-2001)	80%	74%	-6
8	Benin (1996 -2001)	64.1%	68.5%	6
9	Ghana (1993-1998)	57%	68%	11
10	Madagascar (1997- 2000*)	45.7%	54.7%	9
11	Côte d'Ivoire (1994-1998/1999)	41%	54%	13
12	Senegal (1996* -2000*)	61%	51.8%	-9.2
13	Cameroon (1991-1998)	42%	46%	4
14	Guinea (1992-1999)	29%	43%	14
15	Uganda (1995-2000/2001)	54%	42%	-12
16	Burkina Faso (1993-1998)	33%	35%	2
17	Mali (1995/1996-2001)	28%	33%	5
18	Niger (1999-2003)	17%	22%	5
19	Nigeria (1999-2003)	25%	20.6%	-4.4
20	Ethiopia (2000)		18.1%	

Source: Demographic and Health Surveys

* MICS data

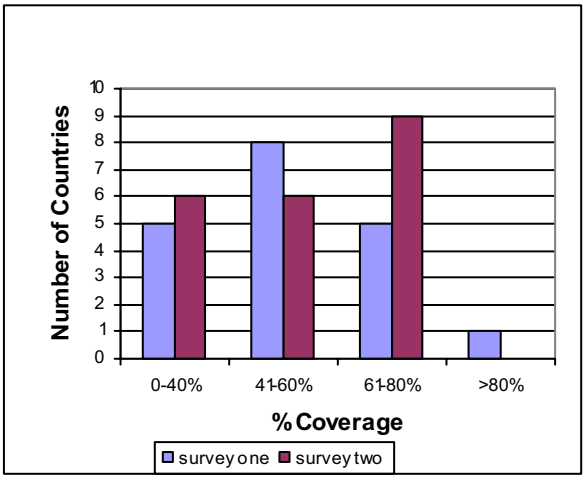
For DTP3, coverage increased by about 5 percent or more in 8 countries and decreased by about 5 percent in 11 countries. In some populous countries such as Nigeria, even though the coverage rate decreased minimally (4.4 percent), it means that an extremely high number of children are unprotected (many millions in Nigeria). Graph 8 demonstrates the changes in DTP3 coverage among the countries with data available from two surveys approximately five years apart. This analysis shows that the low performers remain unchanged but that more countries are now grouped in the 61–80 percent coverage than in the mid-1990s.

While DTP1 coverage exceeds 70 percent in most of these countries, indicating relatively high levels of access, dissatisfaction with or difficulty accessing services continues to be a problem. In the first round of DHS surveys, 17 of 19 countries had DTP drop-out rates that exceeded the 10 percent limit recommended by WHO (average 19 percent). Drop-out rates remained almost identical in the second round of the DHS (Graph 8). Close to one-fifth of those who begin the vaccination schedule do not complete it, limiting the

effectiveness of the doses that they have received and of immunization on a larger population scale.

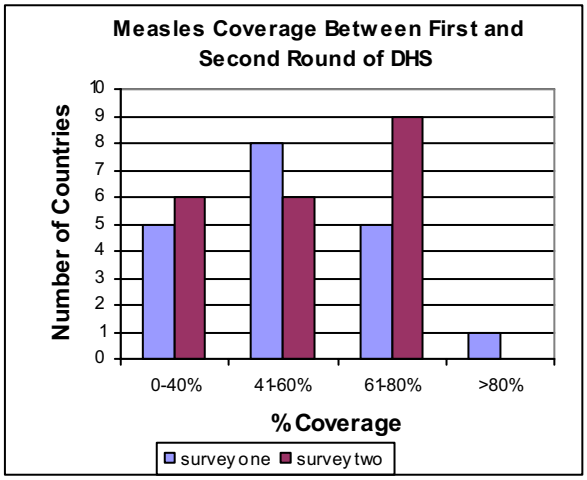
Graph 8

DPT 3 Coverage Change Between Most Recent Two DHS Surveys



Graph 9

Measles Coverage Change Between Most Recent Two DHS Surveys



b. Measles coverage

Measles, the leading cause of vaccine-preventable deaths, is responsible for 7 percent of under-five deaths in Africa. Measles is easily transmitted from child to child through respiratory pathways. While not all measles cases lead to death, a child growing up in the developing world has a 300 times greater chance of dying from measles than a child growing up in the industrialized world.[31] Moreover, acute respiratory infections (ARI) and diarrhea—complications of measles—force a child to fight multiple infections simultaneously.

The measles vaccine effectively prevents the spread of measles; however, measles vaccination coverage in sub-Saharan Africa (58%) is the lowest in the world.[32] Since measles is highly contagious, vaccination coverage greater than 90 percent creates "herd immunity" and further prevents the spread of the disease.[33] WHO reports that the cases of measles in Africa have dropped 56 percent and deaths have dropped 77 percent since 1990.[34] Nevertheless, coverage is far from adequate. Only three sub-Saharan countries (Botswana, Gambia and Seychelles) have successfully reached the 90 percent target and Central African Republic and Mali have barely achieved 40 percent coverage.[35]

[31] UNICEF, Child Info. "Measles," http://www.childinfo.org/eddb/measles/ [accessed August 1, 2004].
[32] UNICEF, *State of the World's Children*, 2004.
[33] UNICEF, Child Info. "Measles," http://www.childinfo.org/eddb/measles/ [accessed August 1, 2004].
[34] WHO, *Evaluation a Mi-Parcours du Plan Stratégique 2001-2005 du PEV de la Région Africaine*, p 8.
[35] UNICEF, *State of the World's Children*, 2004.

Table 9

Measles Coverage in Selected African Countries, 1992–2003

Ranked in order from country with greatest to lowest second survey rate

Rank	Country	1st Survey Rate	2nd Survey Rate	Percentage Point Change from First Survey
1	Rwanda (1992-2000)	86%	80%	-6
2	Eritrea (1995-2003)	51.3%	75.5%	24.2
3	Zimbabwe (1994-1999)	74%	71%	-3
4	Kenya (1993-1998)	76.3%	70.7%	-5.6
5	Zambia (1992-1996)	75%	70%	-5
6	Tanzania (1996-1999)	68%	69%	1
7	Malawi (1992-2000)	70%	64%	-6
8	Ghana (1993-1998)	51%	60.9%	9.9
9	Benin (1996-2001)	56.8%	55.9%	-0.9
10	Senegal (1996*-2000*)	51%	49%	-2
11	Madagascar (1997-2000*)	39%	46%	7
12	Guinea (1992-1999)	42.3%	44.2%	1.9
13	Cameroon (1991-1998)	44%	43%	-1
14	Uganda (1995-2000/01)	45%	42%	-3
15	Côte d'Ivoire (1994-1998/1999)	48%	37%	-11
16	Mali (1995/1996-2001)	35%	36%	1
17	Ethiopia (2000)		35.5%	
18	Nigeria (1999-2003)	30%	32%	2
19	Burkina Faso (1993-1998)	37%	32%	-5
20	Niger (1999-2003)	20%	27%	7

Source: Demographic and Health Surveys (DHS)
*MICS data

DHS data on measles coverage[36] further reveal that only 5 countries of the 20 analyzed here had vaccination rates over 70 percent (Table 9). Of these five countries, only Eritrea increased vaccination coverage; the others experienced an average decrease of five percentage points. Overall, only four countries increased coverage by 5 percent or more, the other 14 remained relatively stagnant or decreased by more than 5 percent. The greatest decrease in coverage occurred in Côte D'Ivoire (11%). Drop-out rates are similar to those observed for DTP (Graph 9).

The low coverage rates across sub-Saharan Africa led to the creation of the worldwide Measles Initiative in 2001. Led by the American Red Cross, the U.S. Centers for Disease Control (CDC), UNICEF, the United Nations Foundation, and WHO, the initiative's goal is to vaccinate 200 million children in 36 developing countries by December 2005. The Measles Initiative works through targeted mass campaigns and hopes to begin a global campaign to eradicate measles, similar to the polio eradication campaign.

[36] In DHS surveys that occurred prior to 2001, measles coverage data do not reflect results from recent campaigns. Thus, the figures above may underestimate coverage in some countries.

The Measles Initiative has rekindled the long-standing debate regarding the pros and cons of the campaign versus the routine immunization approaches. Given the difficulty that sub-Saharan Africa countries have experienced in achieving and sustaining acceptable coverage rates, perhaps both approaches are needed and the debate should shift to how best to achieve complementarity between them.

c. Vaccination coverage for other diseases

Three other vaccines can significantly reduce morbidity (*Haemophilus influenzae* type b [Hib], hepatitis B, and yellow fever) and contribute to mortality reduction. Most developing countries do not have extensive programs to vaccinate for Hib, hepatitis B, and yellow fever.

Hib Vaccine

Haemophilus influenzae type b (Hib) causes pneumonia and meningitis. Without vaccination, Hib can cause bacterial meningitis and other bacterial diseases among children under age five. WHO estimates that between 100,000 and 300,000 children die each year from meningitis, pneumonia, and other infections caused by Hib.[37]According to the CDC, approximately 60 percent of cases occur among children under 18 months of age. Meningitis not only may lead to death, but also can result in hearing impairment or neurological disabilities. Hib vaccine could potentially save 4 percent of all under-five deaths if implemented at scale throughout the world.[38]

Currently less than 1 percent of children in countries with the greatest number of under-five deaths have access to the Hib vaccine.[39] In 2003, fewer than 10 countries in sub-Saharan Africa included the Hib vaccine in their national immunization program.

Hepatitis B

Individuals become infected with hepatitis B during childhood, but die from complications (cirrhosis of the liver/cancer) during adulthood. Hepatitis B vaccine is 95 percent effective in preventing complications that result in death. Many of the poorest countries in Africa cannot afford the vaccine. According to WHO, 22 countries have introduced hepatitis B vaccines into their vaccination programs. Although vaccination coverage rates are 60 percent or higher in 15 of the 20 countries reporting to WHO, only 25 percent of all one-year-olds are vaccinated against hepatitis B throughout Africa.

Yellow Fever

Yellow fever is not endemic in all of Africa. Nevertheless, close to half-billion individuals from over 33 countries in sub-Saharan Africa are at risk for becoming ill with yellow fever. Three percent of preventable child deaths can be attributed to yellow

[37] WHO, *Evaluation a Mi-Parcours du Plan Stratégique 2001-2005 du PEV de la Région Africaine*, p. 9.
[38] Jones, Gareth et al. "How Many Child Deaths Can We Prevent This Year?" *The Lancet*, Vol. 362, July 5, 2003, p. 67.
[39] Ibid.

fever.[40] Where it is endemic, it significantly affects morbidity and some mortality. No effective treatment for yellow fever currently exists so vaccination is considered the most effective way to prevent outbreaks. One vaccination will protect an individual for at least 10 years.

Seventeen African nations include yellow-fever vaccination in routine national immunization programs. However, coverage within countries is low (the average coverage rates for the 15 countries reporting to WHO is only 50 percent). To achieve "herd immunity," at least 80 percent of the population must be vaccinated.[41] Current figures show that in Africa, only 18 percent of children under one year are vaccinated against yellow fever.

2. Nutrition

Malnutrition is a contributing factor to approximately one-half[42] the under-five mortality in Africa, and the major cause of disability-adjusted life years (DALYs) lost in the world.[43] Inadequately nourished children suffer delayed motor development, stunting or early growth retardation, increased risk of infection, and/or death. Growth faltering begins early and by 12 months, most damage has been done. Overall, an estimated one-third of all African children are stunted, with low height for age, reflecting chronic nutrition deprivation, but in several countries more than one-half of children under five are chronically malnourished. Unlike other regions of the world, Africa (include East, Southern, and West Africa) is the only region in the world where there has been an increase in the number of malnourished children over the past 20 years.

Three practices to improve nutritional status—exclusive breastfeeding for the first six months of life, appropriate complementary feeding, and micronutrient supplementation—are critical to ensuring children's health and development and to protecting them from disease, especially from diarrhea, acute respiratory infections, and the life-threatening effects of malaria.

a. Exclusive breastfeeding

Exclusive breastfeeding builds an infant's immune system and provides all essential nutrients needed for appropriate growth and development for the first six months of infant life. Studies show that exclusive breastfeeding protects against diarrhea and acute respiratory and skin infections, and reduces the likelihood of HIV transmission when compared with non-exclusive breastfeeding. Exclusive breastfeeding initiated immediately after birth significantly improves the neonate's chances for survival.

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[40] The Measles Initiative, "Fast Facts: Causes of Vaccine-Preventable Child Deaths, WHO/AFRO 2000," http://www.measlesinitiative.org/facts2.asp [accessed July 14, 2004].
[41] GAVI, "Disease Information: Yellow Fever," http://www.vaccinealliance.org/home/General_Information/Immunization_informa/Diseases_Vaccines/yellowf_2.php [accessed July 30, 2004].
[42] WHO, *Vaccine Preventable Diseases Monitoring System 2003*, p. R-31.
[43] WHO, *World Health Report, Reducing Risks, Promoting Healthy Life*, 2002,pp. 220-232.

Findings – Intervention Coverage

The indicators used to measure exclusive breastfeeding include the timely initiation of breastfeeding and the exclusive breastfeeding rate. These are defined as follows:

- Timely initiation = the number of infants 0–12 months put to the breast within one hour of birth
- Exclusive breastfeeding rate (EBR) = the number of infants from 0– < 6 months who are exclusively breastfed during the previous 24 hours per total number of infants 0–< 6 months.

These standard indicators are based on WHO definitions, and are used in DHS and rapid assessment procedure (RAP) surveys.[44]

Data on the timing of breastfeeding initiation are not reported universally by USAID Missions but are collected in the DHS. Experts in the field note that immediate initiation is not the norm in Africa. DHS studies report timely initiation rates ranging from a low of about 19 percent of infants in Togo (1998) to a high of 71 percent in Malawi (2000). Some African countries, including Benin, Ghana, Kenya, Madagascar, Malawi, Mali, Niger, Nigeria, Rwanda, Senegal, Tanzania, Zambia, and Zimbabwe, have reported increased rates of timely breastfeeding initiation between successive rounds of DHS. Based on program experience, when efforts are focused on changing this behavior, positive results are clearly possible. LINKAGES data show that initiation of breastfeeding within the first hour of birth increased over a 21-month period (2000–2001) from 34 percent to 69 percent in Madagascar.[45] In Ghana timely initiation increased from 32 percent in 1998 (DHS) to 62 percent in 2001 (RAP).

Exclusive breastfeeding rates in sub-Saharan Africa average 28 percent[46] (Graph 10). Rates range from 84 percent in Rwanda, to less than 5 percent in Kenya, Niger, Republic of Congo, and Sierra Leone. Nine countries—Burundi, Cape Verde, Eritrea, Ethiopia, Madagascar, Malawi, Sao Tome and Principe, Rwanda, and Uganda—had exclusive breastfeeding rates greater than 50 percent.[47]

Exclusive breastfeeding rates have improved in a number of countries. Particularly high rates of improvement can be seen in countries where USAID has focused on establishing exclusive breastfeeding. Rates have increased by over 20 percent in a number of USAID-supported countries, including Benin, Ghana, Malawi, and Zambia.[48] High rates of improvement have also been reported in regions of other countries where USAID projects have worked. For example, exclusive breastfeeding increased by 27 percentage points in BASICS program areas and by 37 percentage points in LINKAGES-covered areas of Madagascar.

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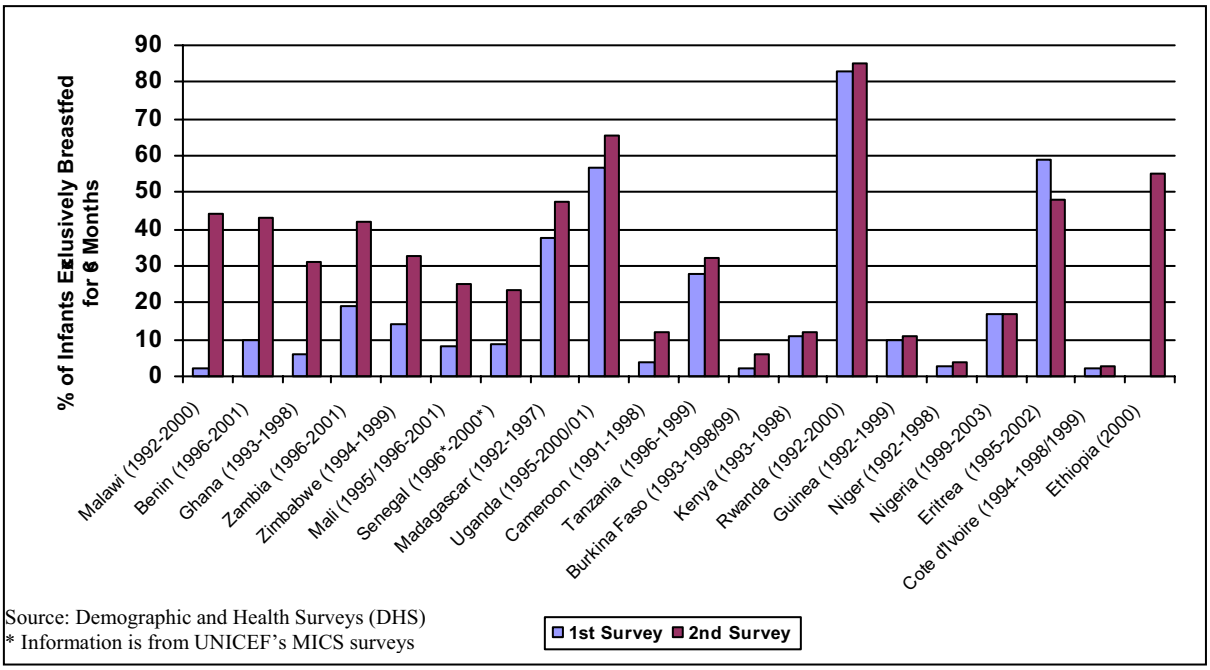
[44] USAID's LINKAGES project has had a special mandate to promote optimal feeding practices for child survival, growth, and development at scale. It conducts more frequent surveys so data are more available in the countries it supports.
[45] LINKAGES, *Experience LINKAGES: Results*, April 2003, p. 3.
[46] UNICEF, *State of the World's Children*, 2004.
[47] Ibid.
[48] DHS – two most recent surveys.

Graph 10

Exclusive Breastfeeding Rate in Selected African Countries

Ranked in order of greatest increase in rate



Source: Demographic and Health Surveys (DHS)
* Information is from UNICEF's MICS surveys

b. Complementary feeding

While exclusive breastfeeding practices are essential for the first six months of life, breast milk alone does not provide enough nutrients for infants older than six months. After six months, semi-solid and solid foods are needed to supplement breast milk so children receive sufficient energy and essential nutrients. Many foods given to infants during this time period frequently lack sufficient nutrients. The onset of malnutrition usually coincides with the weaning period, when foods are introduced in addition to breast milk.

While the benefits of appropriate complementary feeding are well-known, documentation of successful interventions is less common than with breastfeeding promotion. Lack of simple and meaningful indicators for measuring complementary feeding has meant that there is limited global information on progress in improving this essential nutrition practice. Research is now underway to fill this gap by developing and testing appropriate complementary feeding indicators.

Program efforts focusing on improving complementary feeding on a national scale are rare but there is renewed interest in this area with last year's launch of the WHO/UNICEF Global Infant and Young Child Feeding Strategy and dissemination of the Guiding Principles for Appropriate Complementary Feeding. These guiding principles, based initially on work by SARA and LINKAGES, define optimal complementary feeding practices in a way that can be adapted easily for national program implementation.

c. Micronutrients

Micronutrients, such as iodine, vitamin A, iron, and zinc, strengthen the immune system and ensure that children are able to adequately fight off infectious diseases and to grow and develop properly. Micronutrient deficiencies contribute significantly to mortality and morbidity, and physical and mental development problems. For example, iodine deficiencies are the leading cause of mental development disorders. Recent efforts to iodize salt in the world's poorest countries have greatly reduced these disorders.

Micronutrient supplementation is one of the most common strategies employed in Africa to prevent micronutrient deficiency disorders. Dietary diversity and food fortification are other important strategies for improving micronutrient intakes of vulnerable populations. Efforts to fortify locally produced staple foods and sugar in Africa lag behind the progress achieved in other regions of the world. However, fortification efforts are increasing dramatically through the GAIN Initiative, which has awarded grants to Côte d'Ivoire, Mali, and South Africa for fortifying foods with iron, the B vitamins, and folate.[49] CIDA and UNICEF have focused on iodizing salt in several countries; USAID's MOST project is fortifying sugar with vitamin A in Zambia; cooking oil is fortified in Ghana and Unilever has fortified margarine in some countries; other countries fortify wheat and maize. The coverage reported below focuses on supplementation efforts for vitamin A, iron, and zinc.

Vitamin A

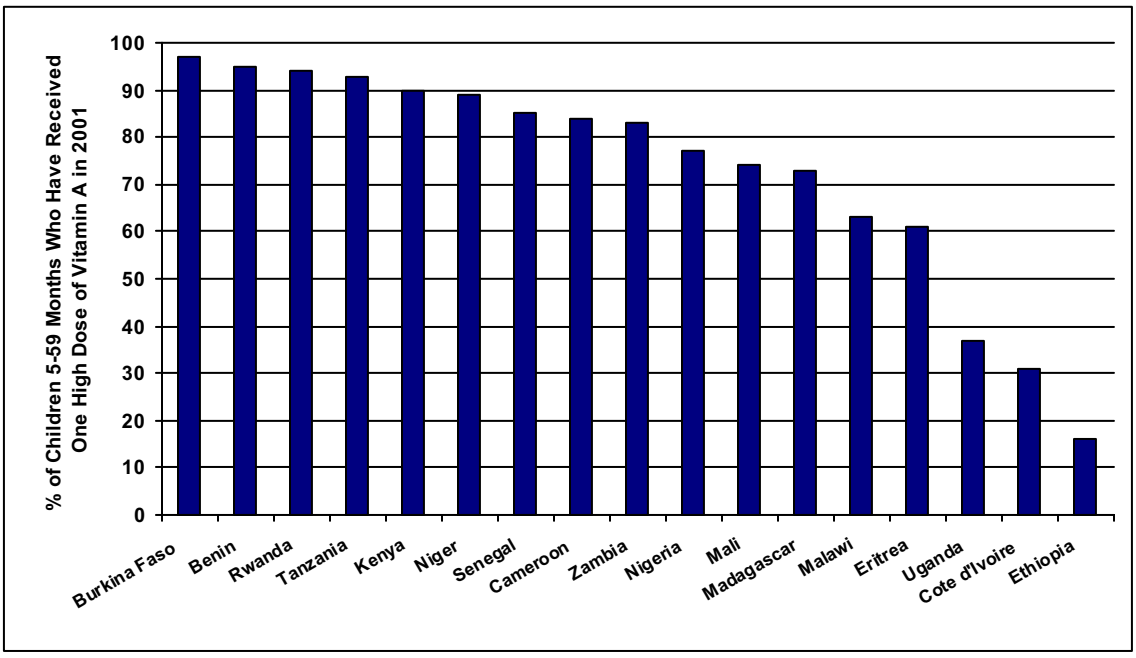
Vitamin A strengthens an infant's immune system and provides protection against blindness. Twenty to 66 percent of children under five in East and Southern Africa are vitamin A deficient, and figures in West Africa are similar. Intake of vitamin A supplements is associated with a 23 percent reduction in under-five mortality. Recent studies show that benefits also accrue to the newborn. A randomized controlled trial conducted by Helen Keller International in Tamil Nadu, India, revealed that supplementing newborn infants with vitamin A was associated with a 22 percent reduction in mortality during the first six months of life on low birth weight babies.[50] While more studies are needed to document the effectiveness of supplementation on the newborn, vitamin A supplementation is clearly a key intervention for children under five.

Data show that vitamin A coverage is the most extensive of all key child survival interventions, averaging 75 percent across sub-Saharan Africa. A small subset of countries (Benin, Burkina Faso, Ghana, Guinea, Kenya, Rwanda, and Tanzania) had rates over 90 percent. Uganda and Côte d'Ivoire had rates lower than 40 percent and Ethiopia achieved just over 15 percent coverage (Graph 11).

[49] Personal communication with Project Director of MOST, August 2004.
[50] Aguayo, Victor, "Impact of Supplementing newborn infants with Vitamin A on early infant mortality: community based randomized trial in southern India," *Nutrition News for Africa*, HKI, August 2003, p.1.

Graph 11

Vitamin A Coverage for Selected African Countries
Ranked in order of greatest coverage in 2001
as reported in UNICEF's State of the World's Children, 2004



Iron and Zinc

Globally, one-third of children under five suffer from iron deficiency anemia (IDA), which is the most common of all micronutrient deficiencies. IDA in pregnant women leads to premature births, low birth weight, and even death; in children, IDA slows cognitive development.[51] Zinc deficiencies also impair the cognitive development of children; however, these deficiencies can also lead to increased and prolonged episodes of diarrhea, skin lesions, low appetite, and slow sexual development in males.[52] Adequate zinc intake improves overall immune function.

Supplementation and fortification programs for iron and zinc have yet to be developed or fully implemented. Adequate vitamin A intake can be achieved by one supplement every six months, while sufficient iron and zinc require more frequent supplementation. New approaches to fortifying foods are currently underway to improve the delivery and intake of these micronutrients. Zinc supplements are also a new WHO recommendation for treatment during diarrhea.

[51] Hill, Zelee, Kirkwood, Betty, et al., *Family and Community Practices that Promote Child Survival, Growth and Development: A Review of the Evidence*, London School of Hygiene and Tropical Medicine, World Health Organization, 2004, p. 44.
[52] Ibid, p. 45.

3. *Appropriate Treatment of Diarrhea, Acute Respiratory Infections, and Malaria*

The illnesses contributing to the highest proportion of under-five deaths in Africa are diarrhea, acute respiratory infections (ARI), and malaria. Although effective and low-cost interventions have reduced the mortality associated with diarrhea and ARI, these diseases still cause 30 percent of under-five deaths in Africa. One in five under-five deaths can be attributed to malaria. Indeed, in malaria-endemic areas, children may have both malaria and pneumonia or both malaria and diarrhea. Mortality in children with more than one of these diseases is substantially higher than in children with only one disease.[53]

A host of environmental and behavioral risk factors in Africa contribute to children's vulnerability to disease and death, such as the availability of sufficient water, good waste disposal and hygiene practices, exclusive breastfeeding and adequate complementary feeding after six months of age, nutritional intake of micronutrients, sufficient birth spacing, and vaccinations. However, to reduce under-five mortality, appropriately treating the major diseases that affect children is as important as preventive interventions.

a. Diarrhea

During the past 30 years, under-five deaths due to diarrhea worldwide have declined 36 percent. Since 1978, deaths throughout the world have fallen from 4.5 million to 1.5 million deaths annually.[54] This significant reduction is largely due to improvements in the treatment of diarrhea, especially oral rehydration therapy (ORT). In 2000, diarrhea accounted for 11 percent of under-five deaths in sub-Saharan Africa. While mortality from diarrhea has been reduced, the incidence of diarrhea remains largely unchanged. WHO estimates that 90 percent of diarrhea is caused by inadequate sanitation, insufficient water supply, and poor hygiene. Globally much more emphasis has been placed on the appropriate treatment of diarrhea than on water, sanitation, and hygiene interventions.

Exclusive breastfeeding before age six months can contribute to a seven-fold reduction in deaths due to diarrhea in this age group.[55] Mortality from diarrhea also can be reduced by continued breastfeeding and/or feeding during diarrhea, increased feeding after the episode, and appropriate treatment of dysentery (bloody stools) with antibiotics. Improper use of antibiotics for non-dysenteric diarrhea wastes scarce resources, is ineffective medically, and diverts the parents' attention from the need for rehydration and feeding. Finally, to further reduce mortality associated with diarrhea, new WHO/UNICEF guidelines recommend zinc supplementation for 10–14 days during diarrhea.[56] Zinc supplementation reduces the severity and duration of the diarrheal episode and reduces future episodes in the following 4–6 months.

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[53] WHO/UNICEF Joint Statement on Management of Pneumonia in Community Settings, May 2004, p. 4.
[54] WHO/UNICEF Joint Statement on the Management of Acute Diarrhea, May 2004, p.1.
[55] Black, Robert, et al. "Where and Why Are 10 Million Children Dying Every Year?" *The Lancet*, Vol. 361, June 28, 2003. p. 2227.
[56] Draft: WHO/UNICEF Joint Statement on the Management of Acute Diarrhea, January 2004, p. 1.

Trends in appropriate treatment of diarrhea can be assessed by analyzing performance indicators that relate to three different aspects of treatment: ORT, continued feeding during diarrhea, and appropriate use of antibiotics. The specific indicators reported most commonly by Missions include:

- ORT use for the last episode of diarrhea. The changing ORT definition makes trend analysis difficult.[57] The measure most often used is the percentage of children aged 6–59 months who had a case of diarrhea in the last two weeks and received ORT.
- Sales of ORS or ORS packets distributed. This is a proxy measure for use of ORT.

Less commonly reported on are the following indicators:

- Appropriate treatment of diarrhea. Two indicators are used: 1) Percentage of health providers correctly applying the norms and procedures related to diarrhea treatment (including antibiotics for dysentery but not for other diarrhea). This indicator is reflected in the IMCI algorithm. It is generally obtained in the DHS and through health facility surveys. 2) Percentage of mothers whose children suffered from diarrhea, sought treatment, and gave the prescribed treatment.
- Continued feeding during diarrhea. When continued feeding was defined as an essential component of diarrhea treatment, DHS collected and Missions reported on this indicator. Missions do not routinely report on feeding.
- Zinc supplementation. Estimates presently are not collected through surveys.

Because ORT use is the most commonly used indicator, it is used here to estimate trends in appropriate treatment for diarrhea. Exclusive breastfeeding coverage has been discussed above.

Since 1990, experts estimate that one million children's lives have been saved every year through ORT use.[58] Globally, an estimated 69 percent of diarrhea cases in children under age five were treated with ORT;[59] however, across sub-Saharan Africa the average rate is estimated at 24 percent.[60] Twenty-five of the 35 African countries for which UNICEF reported ORT data in 2004 had rates lower than 30 percent. DHS survey results in 19

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[57] Use of oral rehydration therapy (ORT) has been measured differently over time, making trend analysis difficult. It refers in different places to the following:

- Use of pre-packaged (ORS) solution containing sodium chloride, potassium, glucose, and citrate/bicarbonate salts to be dissolved in potable water.
- Use of recommended home solution (RHS): A solution made up of salt, sugar or carbohydrate, and water made at home. Individuals must accurately measure ingredients for the solution to be effective.
- Increased fluids: Intake of increased ORS/RHS or increased use of fluids. This figure may inflate actual total use of fluids or it may indicate that mothers have changed the "culture" of treatment for diarrhea by increasing overall fluid intake with additional food intake.

[58] UNICEF Child Info Database, "Diarrhoeal Disease: Progress to Date" http://www.childinfo.org/eddb/Diarrhoea/progress.htm [accessed August 1, 2004].

[59] Hill, Zelee, Kirkwood, Betty, et al. *Family and Community Practices that Promote Child Survival, Growth and Development: A Review of the Evidence*, London School of Hygiene and Tropical Medicine, World Health Organization, 2004, p. 71.

[60] UNICEF defines the oral rehydration rate as percentage of children (0–4 years) with diarrhea in the last two weeks who received increased fluids and continued feeding during the episode.

countries report average ORT rates (including both oral rehydration solution and recommended home solution) slightly higher than UNICEF estimates (38%). Both indicate a considerable gap in the correct home management of diarrhea (Table 10).

Table 10

ORS/RHS/Increased Fluids
Coverage in Selected Sub-Saharan African Countries, 1990–2002
Ranked in order from country with greatest to lowest change in ORS/RHS rate

Rank	Country	ORS/RHS DHS 1	ORS/RHS DHS 2	ORS/RHS Change in Percentage Points	ORS/RHS & Increased Fluids DHS 1	ORS/RHS & Increased Fluids DHS 2	Increased Fluids Change in Percentage Points
1	Kenya (1992-1998)	31.60%	68.70%	37.1	57.40%	82%	24.60
2	Nigeria (1990-1999)	27.40%	51.20%	23.8	34%	73.80%	39.8
3	Eritrea (1995-2002)	37.60%	55.70%	18.1	56.40%	68.40%	12.0
4	Senegal (1992/1993-1997)	16%	67.30%	16.0	46.90%	67.30%	20.4
5	Guinea (1992-1999)	24.50%	39.90%	15.4	58%	69.30%	11.3
6	Mali (1995/1996-2001)	15.90%	29.80%	13.9	45%	65.70%	20.7
7	Côte d'Ivoire (1994-1998/1999)	17.80%	28.90%	11.1	51.90%	66.10%	14.2
8	Niger (1992-1998)	16.70%	26.80%	10.1	23.50%	67%	43.5
9	Ethiopia (2000)		19.10%			43.50%	
10	Tanzania (1996-1999)	50.40%	54.90%	4.5	73.70%	67.80%	-5.9
11	Burkina Faso (1992/1993-1999)	15.40%	18.20%	2.8	43.10%	46.80%	3.7
12	Benin (1996-2001)	32%	34%	2.0	56.70%	55.10%	-1.6
13	Cameroon (1991-1998)	32.70%	33.80%	1.1	65.90%	73.10%	7.2
14	Madagascar (1992-1997)	25.30%	23%	-1.9	61.20%	65.70%	4.5
15	Zambia (1996-2001)	56.50%	53.20%	-3.3	75.40%	66.90%	-8.5
16	Ghana (1993-1998)	37.10%	31.70%	-5.4	45.60%	67.90%	22.3
17	Uganda (1995-2000/2001)	49.10%	43.20%	-5.9	67.20%	53.10%	-14.1
18	Zimbabwe (1994-1999)	79.50%	69.20%	-10.3	86.20%	79.70%	-6.6
19	Malawi (1992-2000)	63.20%	47.90%	-15.3	73.30%	62.10%	-11.2
20	Rwanda (1992-2000)	35.70%	19.50%	-16.2	46.90%	65.70%	18.8

Table 10 shows coverage rates for both ORS/RHS (white cells) and for ORS/RHS plus increased fluids (grey cells). The rates for ORT/RHS are still very low in most of Africa. These rates decreased in seven countries between the two DHS survey periods. The greatest decreases were in Rwanda (16%) and Malawi (15%). These decreases illustrate the need for child health programs to maintain focus on appropriate fluid intake during diarrhea.

A few countries have continued to maintain relatively high ORT use rates. When looking at overall fluid intake (grey cells), 16 countries show rates over 60 percent. Four of these are over 70 percent. These figures show that ORT use increased in 12 countries with Eritrea, Guinea, Kenya, Nigeria, and Senegal experiencing increases over 15 percentage

points. As mentioned in footnote 56, these figures may give an over-optimistic view of appropriate fluid replacement.

To fully reduce mortality related to diarrhea, countries must not only achieve adequate coverage for ORT, but also adopt the other measures of appropriate treatment (feeding, antibiotics for dysentery, zinc). Estimates of these aspects of diarrhea treatment are more difficult to measure and are not reported as consistently as ORT rates.

b. Acute respiratory infections (ARI)/pneumonia

Pneumonia remains the biggest single killer of children under five worldwide[61]—responsible for 19 percent of under-five deaths in sub-Saharan Africa.[62] Death from pneumonia can easily be averted if children who have developed serious signs and symptoms receive effective antibiotic treatment promptly. Not all children who have a cough need to be treated with antibiotics. As such it is critical that mothers, caregivers, and health care workers recognize danger signs of more serious infections and provide immediate care. Timely treatment with antibiotics can prevent deaths. Therefore, educating mothers and/or caregivers to recognize symptoms and seek treatment from a health facility or in the community in a timely manner is a critical first step in preventing mortality from ARI. Preventive measures are also important in reducing the incidence and severity of respiratory illnesses. These include pertussis and measles vaccination and improved nutrition, especially breastfeeding and micronutrient supplementation.

Adequate measurement of appropriate treatment for ARI is more complex than other child health interventions and encompasses four critical steps: 1) caregiver adequately recognizes the severity of the respiratory disease episode, 2) caregiver takes child to the health care provider, 3) provider recognizes the severity of the disease and correctly treats it, and 4) caregiver/child fully comply with the correct treatment. Failure at any one of these intersects can result in the child's death.

DHS data measure whether the mother reports a cough or rapid breathing in her child and if so, whether she takes the child for treatment. Health facility surveys usually assess whether or not health care providers follow correct protocols. However, these data are not available for many countries or for all regions within a given country. The indicator Missions commonly report is the care-seeking behavior of mothers for cough or rapid breathing of their children during the two weeks prior to interview. This does not allow us to assess whether the treatment given was appropriate nor the level of compliance by caregivers.

[61] Draft: WHO/UNICEF Joint Statement on Management of Pneumonia in Community Settings.
[62] SARA project, "Child Health Data Background for discussing USAID/AFR/SD options for child survival interventions," PowerPoint presentation data sourced from WHO.

Table 11

Care-Seeking Patterns for ARI in Selected African Countries[63]

Care-Seeking Rates for ARI	Number of Countries n=20	Names of Countries
Countries with rates over 40%	7	Eritrea, Kenya, Mali, Tanzania, Uganda, Zambia, Zimbabwe
Countries with rates under 25%	4	Burkina Faso, Ethiopia, Niger, Rwanda
Countries with improvement in rates	7	Benin, Burkina Faso, Eritrea, Guinea, Kenya, Mali, Niger
Countries with decreasing rates	12	Cameroon, Côte D'Ivoire, Ghana, Madagascar, Malawi, Nigeria, Rwanda, Senegal, Tanzania, Uganda, Zambia, Zimbabwe

Studies in many countries show that a large proportion of children are not taken to health providers. They are treated at home or by the informal sector. A study in Guinea showed that of children who died, 61 percent had not been taken to a formal health provider.[64] UNICEF data show that the average care-seeking rate in sub-Saharan Africa is 43 percent.[65] Rates range from 75 percent in Gambia and South Africa to less than 20 percent in Ethiopia and Rwanda. The percentage of mothers and/or caregivers seeking appropriate care for acute respiratory infections remains low in most of Africa. Nevertheless the care-seeking rates are over 50 percent in five countries. DHS data show that rates improved in seven countries and declined in 12 (Annex B).

Early recognition of danger signs by mothers and caregivers, however, is not sufficient to reduce mortality. Health providers must also correctly diagnose and treat pneumonia. A number of studies demonstrate that in many cases, children taken to health care facilities do not receive appropriate treatment. Integrated Management of Childhood Illnesses (IMCI) programs help train health workers to correctly identify and treat all childhood illnesses, including ARI. One study in Tanzania demonstrated that in districts where IMCI had been implemented, most children suffering from ARI received antibiotics (75%), compared to 40 percent in districts where IMCI was not implemented. While IMCI has improved the ability of health workers to effectively diagnose and treat ARI, the proportion of health workers trained is still low in most countries. Implementing community-based ARI treatment is also necessary to reduce ARI mortality.

[63] Demographic and Health Surveys, 1992–2003.
[64] Draft: WHO/UNICEF Joint Statement on Management of Pneumonia in Community Settings, p. 2.
[65] UNICEF, *State of the World's Children*, 2004.

c. Malaria

Africa accounts for more than 90 percent of the world's malaria deaths. One in five child deaths in sub-Saharan Africa can be attributed to malaria. In addition to child deaths, malaria contributes to 35 percent of low birth weight cases and an estimated 5 percent of neonatal mortality.[66] Childhood deaths due to cerebral malaria peak during the ages of three to five.

Recent reports indicate that drug resistance, population movement, climate change, and inadequate health services[67] have increased malaria prevalence and incidence in most African regions. Despite these factors, effective preventive and treatment interventions exist to significantly lower mortality and morbidity from malaria. The Roll Back Malaria (RBM) effort and the Global Fund have accepted the challenge to ensure these interventions reach Africa's malarious regions.

The Roll Back Malaria Global Partnership, which began in 1998, is an initiative to halve the incidence of malaria by 2010. RBM has identified four strategies to prevent and treat malaria effectively:

1) promote the use of insecticide-treated bednets (ITNs)
2) provide prompt access to effective treatment
3) prevent and control malaria during pregnancy through intermittent preventive treatment (IPT)
4) address malaria in emergency and epidemic situations.[68]

By coordinating efforts across countries and disseminating information, RBM hopes to maximize global resources to ensure adequate coverage of all interventions. To achieve the RBM targets, African heads of state signed the Abuja Declaration, which requires countries to develop strategic plans and mobilize resources to lower malaria morbidity and mortality. Through partnerships and the coordinated RBM strategies, it is hoped that these interventions will reach those in need and reduce the incidence of malaria mortality and morbidity throughout the continent.[69]

USAID has long-supported initiatives to prevent and treat malaria. Since the 1960s USAID has provided assistance for the research and development of malaria vaccine. More recently USAID, in partnership with the CDC, the Maternal and Neonatal Health Program, the Rational Pharmaceutical Management plus Program of Management Sciences for Health, and WHO, is providing technical assistance for the RBM initiative. USAID's NetMark project is working with the commercial sector to create sustainable ITN markets throughout Africa.

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[66] Tinker, Anne and Ransom, Elizabeth. *Healthy Mothers and Healthy Newborns: The Vital Link*. Population Reference Bureau, March 2002, p 3.
[67] Hill, Zelee, Kirkwood, Betty, et al. *Family and Community Practices that Promote Child Survival, Growth and Development: A Review of the Evidence*, London School of Hygiene and Tropical Medicine, World Health Organization, 2004, p. 59.
[68] Roll Back Malaria, http://rbm.who.int/docs/rbm_brochure.htm [accessed June 30, 2004].
[69] USAID. *Malaria Control Programs in Africa*, 2004, p 1.

Findings – Intervention Coverage

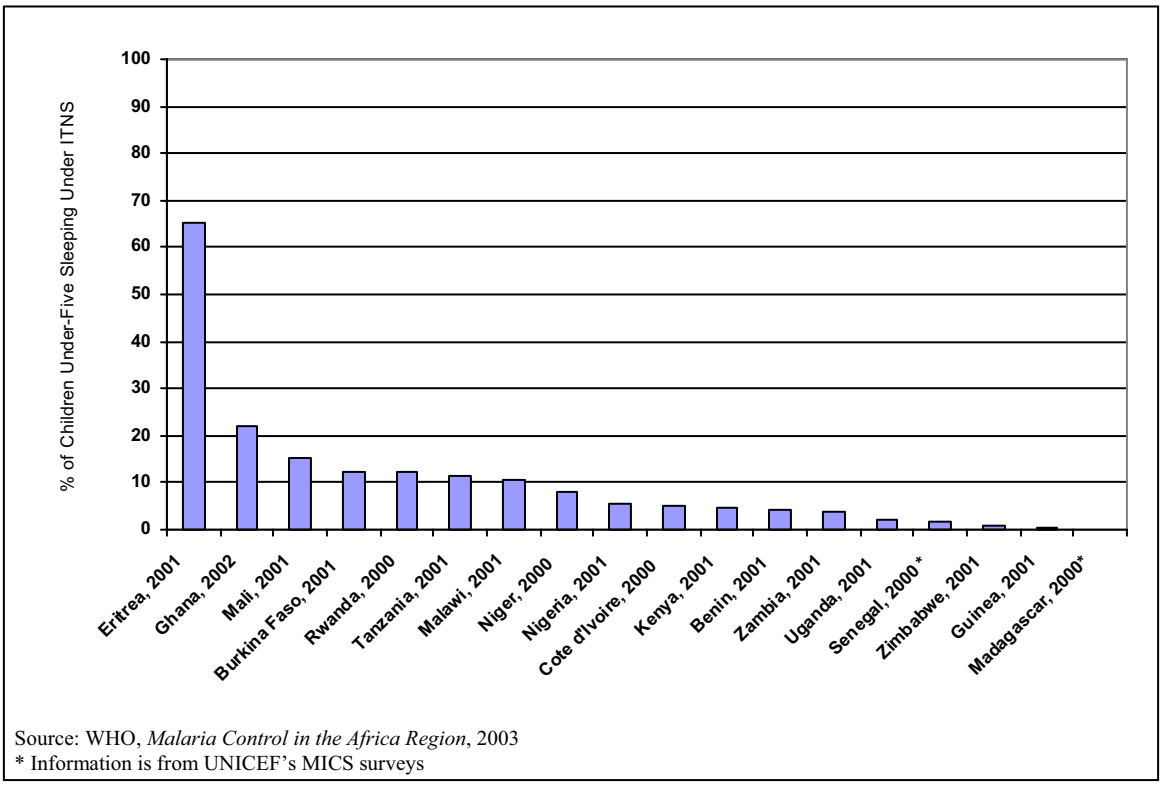
Indicators to measure coverage for these interventions have been incorporated into DHS surveys only recently. Because of this, coverage figures are not yet available for two points in time for all countries or for all interventions. The most widely available indicators that estimate coverage of malaria services are the percentage of children under five sleeping under treated nets, IPT, and treatment for fever.

ITN Coverage

ITNs have the potential to reduce malaria deaths by 20 percent; however, ITN use only averages 2 percent in sub-Saharan Africa.[70] Rates, nevertheless, vary by country. Only six countries have rates over 10 percent (Graph 12). Over half of Eritrea's children under five sleep under ITNs, followed by Ghana (22%) and Mali (15%). Guinea and Madagascar have coverage rates below 1 percent.

Graph 12

ITN Coverage for Children Under Five



Source: WHO, *Malaria Control in the Africa Region*, 2003
* Information is from UNICEF's MICS surveys

ITN coverage can be expanded effectively through mass social marketing campaigns and health education. However, nets remain expensive for the poorest population segments. Effective advocacy to reduce taxes and tariffs has helped lower the prices of ITNs in

[70] WHO/UNICEF. *Africa Malaria Report*, Roll Back Malaria, http://www.rbm.who.int/amd2003/amr2003/summary.htm [accessed July 01, 2004].

almost 20 countries.[71] Subsidies, although difficult to implement, contribute to increases in ITN coverage, though re-treatment of nets continues to challenge many countries.

Intermittent Preventive Treatment for Pregnant Women

Access to prompt and appropriate malaria treatment for pregnant women and children reduces mortality significantly. Preventing and controlling malaria during pregnancy is a priority of the RBM program and of USAID. Pregnant women with malaria have a higher proportion of low birth weight babies who in turn are more susceptible to illness and death. Intermittent preventive treatment (IPT) involves treating pregnant women with sulfadoxine pyrimethamine (SP) on a periodic basis. IPT reduces the risk of maternal anemia, placental parasitaemia, and low birth weight.[72] RBM estimates that 10 years ago, less than 5 percent of women in sub-Saharan Africa had access to IPT. Now, since most women in sub-Saharan Africa attend at least one antenatal visit during pregnancy, IPT can reach pregnant women through antenatal clinics. And recently several countries in Africa have started nationwide programs to improve IPT coverage, but data are still limited and coverage is low. Management issues in implementing IPT present an urgent challenge.

Appropriate Treatment for Fever

ITNs and IPT are not sufficient to reduce under-five malaria mortality. Children living in endemic zones should be treated at the onset of a high fever with appropriate antimalarial drugs. Thus, recognizing fever as a symptom needing immediate attention is critical. However, many children do not receive immediate treatment and as a result, face serious health consequences and death. Only 50 percent of children under five with fever were treated with antimalarials according to data from 28 African countries. The highest treatment rates occurred in Cameroon (63%), while Eritrea, Ethiopia, Rwanda, and Somalia all had treatment rates below 20 percent.[73] Mothers or caregivers often seek treatment from ambulant drug sellers or shop keepers, who sometimes sell fake drugs and/provide incorrect dosage information. RBM and its partners hope to train such vendors to correctly treat children with malaria. New and improved pre-packaging of antimalarial drugs also helps to ensure patients receive adequate doses and complete treatment. Drug resistance to chloroquine and sulfadoxine-pyrimethane (SP) is forcing countries to explore other treatment options. Several countries have changed their malaria treatment policies, opting for more effective (and more expensive) drugs and encouraging combination therapy to slow resistance.[74]

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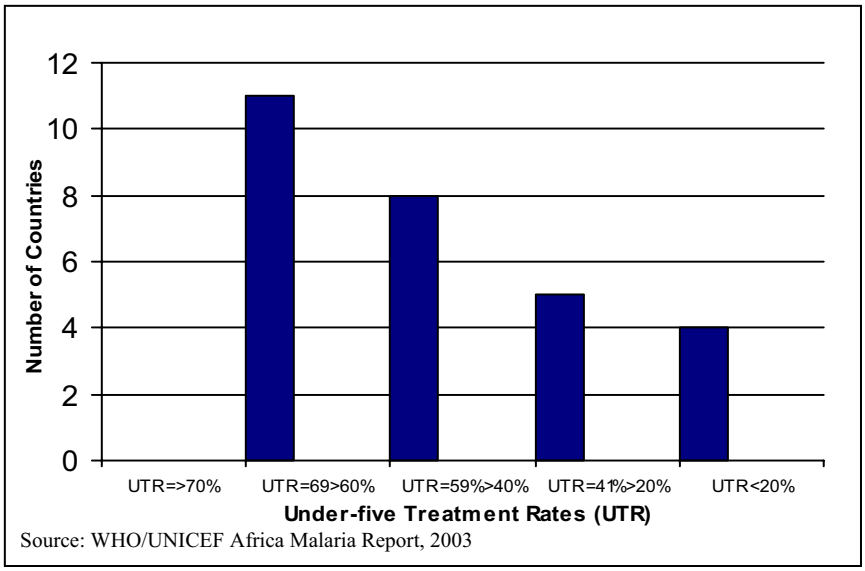
[71] Roll Back Malaria, *Malaria in Africa*, p.2 http://rbm.who.int/cmc_upload/0/000/015/370/RBMInfosheet_3.pdf [accessed June 13, 2004].
[72] Roll Back Malaria, *Children and Malaria* p.2, http://rbm.who.int/cmc_upload/0/000/015/367/RBMInfosheet_6.pdf [accessed June 13, 2004].
[73] World Health Organization. *Africa Malaria Report*, Roll Back Malaria, Table 5, http://www.rbm.who.int/amd2003/amr2003/amr_toc.htm [accessed July 14, 2004].
[74] Roll Back Malaria. *Malaria in Africa* p.2, http://rbm.who.int/cmc_upload/0/000/015/370/RBMInfosheet_3.pdf [accessed June, 13, 2004].

Graph 13

Percent of Children Under Five with High Fever Treated with Antimalarials in Sub-Saharan Africa



Source: WHO/UNICEF Africa Malaria Report, 2003

4. Water, Sanitation, and Hygiene

Eighty-eight percent of diarrhea cases are caused by inadequate water supplies, poor hygiene, and limited access to sanitation facilities.[75] Without addressing these issues, children in Africa will continue to have repeated episodes of diarrhea, depleted nutritional status, susceptibility to other diseases, and premature death. Unfortunately, water, sanitation, and hygiene efforts are usually separate from child survival efforts both in concept and in practice. While these differ from traditional child survival interventions, an integrated strategy can lead to improved practices that strengthen disease prevention programs.

Families' access to sufficient quantities of safe water and proper hygiene practices such as handwashing and safe feces disposal are critical to reducing diarrhea. Furthermore, a review of 150 studies conducted on the association between health and the environment, showed that in over half, sanitation (proper disposal of feces and other hygiene practices) was positively correlated with health.[76]

a. Water supply

Access to potable water remains a major challenge in Africa. More than one-half of all Africans do not have access to an adequate water supply.[77] Access to safe water varies

[75] Black, Robert, et al., "Where and Why Are 10 Million Children Dying Every Year?" *The Lancet*, Vol. 361, June 28, 2003. p. 2227.
[76] Heller, Leo, "Environmental Determinants of Infectious and Parasitic Diseases," *Mem Inst O. Cruz,* Rio, Vol. 93, 1998.
[77] United Nations Environmental Health Program, "Vital Water Graphics," 2002, http://www.unep.org/vitalwater/18.htm [accessed on July 12, 2004].

greatly between urban and rural areas in sub-Saharan Africa. Over half the 42 sub-Saharan African countries had 80 percent of their urban populations using improved drinking water sources,[78] but only 44 percent in rural areas. Only five countries had over 80 percent of their rural population drinking from improved water sources.

A majority of the world's population obtains water from three sources: pipes, wells, and surface water (rivers, lakes, etc.). Piped water is considered the "safest" because it is usually protected from contamination sources. Water from covered wells is also considered potable. However, water from uncovered wells, wells built too close to latrines, and surface sources is considered unsafe because it can be easily contaminated. In the 20 USAID-supported countries for which there are data, use of piped water averages 30 percent. Côte d'Ivoire has the highest percentage of its population using piped water (over 50%), a rate almost achieved by Senegal and Zimbabwe. In contrast, seven countries had less than 20 percent coverage of piped water (Burkina Faso, Eritrea, Ethiopia, Madagascar, Niger, Nigeria, and Uganda). Three countries (Benin, Mali, and Rwanda) increased their population's access to piped water by more than 10 percent. Piped water coverage decreased slightly in six countries (Table 12).

On average, well water was used most (47%) followed by piped water (29%) and surface water (20%). Table 12 shows that well water use is highest where access to piped water is the lowest and vice versa. For example, Burkina Faso, Ethiopia, Madagascar, Niger, and Uganda, with less than 20 percent piped water coverage have well water use rates over 60 percent. Many countries where well-use rates are below 30 percent have high rates of surface water use. Rwanda and Uganda reduced surface water use by over 20 percent, while significantly improving their well water and piped water usage.

[78] UNICEF, *State of the World's Children*, 2004.

Table 12

Population Use of Varying Sources of Water in Selected African Countries
Ranked by coverage of piped water in latest DHS survey

Country	Piped Water		Well Water		Surface Water	
	2nd DHS Survey	Percentage Point Change from 1st Survey	2nd DHS Survey	Percentage Point Change from 1st Survey	2nd DHS Survey	Percentage Point Change from 1st Survey
Côte d'Ivoire 1998/99	50.1	3.6	42.4	0.6	7.3	-4.1
Senegal 1997	49.4	2.5	46.8	-1.7	1.7	-1.0
Zimbabwe 1999	48.2	5.0	51.5	4.1	0	-9.2
Benin 2001	44.0	12.1	38.5	-6.8	12.1	-3.1
Ghana 1998	39.8	4.4	33.2	2.5	25.4	-6.7
Tanzania 1999	37.5	0.6	38.4	9.6	23.3	-9.9
Cameroon 1998	36.7	3.2	26.2	-1.8	35.5	-0.2
Rwanda 2000	34.6	12.1	9.8	8.9	55.1	-20.6
Kenya 1998	34.2	1.6	19.5	-1.6	42.7	2.0
Zambia 2001/02	32.2	-2.1	48.0	0.2	19.6	3.0
Mali 2001	27.4	11.9	66.6	-12.8	5.6	0.9
Malawi 2000	23.3	-1.9	65.7	6.9	10.9	-4.9
Guinea 1999	21.1	-3.8	43.4	7.6	34.0	-3.6
Niger 1998	18.0	2.8	71.5	-4.9	3.1	0.3
Ethiopia 2000	17.5	17.5	82.4	82.4	0	0
Madagascar	17.2	-7.1	23.7	20.1	58.5	-6.0
Nigeria 2003	17.2	0.3	52.5	7.1	22.1	-5.7
Eritrea 2003	16.3	-5.5	34.5	2.5	10.7	-25.7
Burkina Faso 1998/99	14.1	-2.5	79.8	2.8	4.8	0.7
Uganda 2000/01	10.8	3.8.0	66.0	26.7	21.7	-31.2

Accessibility to water sources also plays a role in proper hygiene practices. The time it takes for someone to reach a water source (piped water or a covered well) is often used as an indicator of how accessible water is for families. According to the DHS surveys from 20 countries, 50 percent of the population was within 15 minutes of a potable water source. Côte d'Ivoire and Senegal have the highest percentage (over 70%) of their population within 15 minutes of a potable water source, while Ethiopia, Ghana, and Rwanda all had less than 30 percent of their population within 15 minutes of a water source. In over half the countries the percentage of the population who lived within 15 minutes of a water source declined.[79] Côte d'Ivoire's access worsened the most (13%).

b. Sanitation/Latrines

In the 1980s many donors supported building latrines in both urban and rural areas with modest success—especially in rural areas where demand was extremely low. Studies

[79] Benin and Guinea did not have data available from the first DHS.

demonstrate average child mortality reductions of 55 percent[80] in areas with improved access to latrines. Access to sanitation is usually measured by availability of flush toilets, pit latrines, or nothing. In Africa, rural access to sanitation is low (43%), urban access is higher (up to 73%), but is still some of the lowest coverage in the world.[81]

Most countries have very limited access to flush toilets. More specifically, in USAID-supported countries with DHS data, Zimbabwe's population had the greatest access to a flush toilet (37%), while the average for these countries is estimated to be 7 percent. Cameroon, Rwanda, Tanzania, and Uganda all had high pit latrine coverage (over 80%). Eritrea ranked last (under 10%). More than 60 percent of people in five countries (Benin, Burkina Faso, Eritrea, Ethiopia, and Niger) use no facility at all. Most countries saw little or no change in the way their populations dispose of feces.

Table 13

Percentage of Population Using Type of Toilet Facility in Selected Sub-Saharan African Countries

Ranked by use of flush toilet

Country	Flush Toilet	Pit Toilet Latrine	No Facility
Zimbabwe 1999	37.1	38.0	24.6
Zambia 2001/02	15.7	54.5	29.6
Nigeria 2003	14.6	56.5	23.7
Kenya 1998	11.8	72.8	14.8
Senegal 1997	11.6	53.5	34.6
Côte d'Ivoire 1998/99	11.3	54.1	34.4
Eritrea 2003	9.1	6.8	74.3
Ghana 1998	7.8	71.6	20.5
Cameroon 1998	6.8	81.7	11.0
Mali 2001	5.5	71.0	23.3
Malawi 2000	2.9	78.5	18.5
Benin 2001	2.6	29.6	67.0
Madagascar 1997	2.3	37.2	60.5
Guinea 1999	2.3	17.2	41.4
Uganda 2000/01	1.7	80.7	16.7
Tanzania 1999	1.5	86.5	12.0
Rwanda 2000	1.2	94.6	4.0
Niger 1998	1.0	17.5	80.8
Burkina Faso 1998/99	0.7	23.9	74.9
Ethiopia 2000	0.3	17.7	81.9

[80] Hill, Zelee, Kirkwood, Betty, et al., *Family and Community Practices that Promote Child Survival, Growth and Development. A Review of the Evidence,* London School of Hygiene and Tropical Medicine, World Health Organization, 2004, p. 55.
[81] UNICEF, *State of the World's Children*, 2004.

c. Hygiene practices

Proper hygiene practices prevent diarrhea. Efforts to improve hygiene practices include proper removal of feces, particularly those of infants and children under five, and appropriate handwashing. Studies show that proper disposal of infant feces is not culturally understood in most countries. Children don't wear diapers or use potties, and therefore soil their own and their mothers' clothes and bedclothes. These practices contribute to the spread of disease and are reinforced by the unavailability of needed products (diapers and potties) and infrastructure (latrines, toilets, water), cultural inhibitions related to infant feces, a higher incidence of disease in this age group, and the lack of programs that focus on this issue.

Proper handwashing helps prevent the transmission of fecal pathogens to children and other family members. Studies have shown that handwashing can reduce incidence of diarrhea by as much as 47 percent.[82]

Unfortunately studies show low compliance rates for disposing infant feces and handwashing. In Senegal, for example few mothers reported washing their hands before feeding their infants (12%) or after defecation (31%). In Burkina Faso infant feces disposal improved slightly (5%) after a special hygiene program; handwashing did not improve at all.[83] In a Ghana study, only 16 percent of mothers washed their hands after cleaning a soiled child.[84] Yet many studies show that soap, towels, and water are available.

Historic and current efforts to improve water supply, sanitation, and hygiene rely heavily on behavior change programs and infrastructure improvements (provision of water supply, construction of sanitation facilities). New interventions such as point-of-use water purification, like the ones marketed in Madagascar, Malawi, Tanzania, and Zambia, enable families to drink clean water without the heavy infrastructure investments of providing water systems. While expanding these efforts is important, improvements in water purification alone are not enough. More investment is needed in infrastructure development and maintenance to reach both urban and rural areas without access to these services. Water, sanitation, and hygiene efforts must once again become part of an essential package for child survival.

5. Newborn Health

A 2001–2002 study in eight African countries showed that neonatal causes of death included birth asphyxia (40%), prematurity and low birth weight (25%), infections (20%), congenital defects (10%), and acute surgical situations (3%).[85] Experts estimate

[82] Parlato, Ronald," Implementing Hygiene Improvement at Scale." Proposal submitted to USAID, March 2004, p. 3.
[83] Public Private Partnership for the Promotion of Handwashing, Ghana, *Business Plan 2003-2005*, p. 3.
[84] Ibid.
[85] WHO/AFRO, "Africa's Neonatal Morbidity and Mortality Rates are Among the Highest in the World." February 18, 2004.

that 55 percent of newborn deaths can be prevented by cost-effective interventions.[86] However, few are currently being implemented nationwide to target newborns. To prevent newborn deaths, the *Lancet* recommends newborn temperature management, clean delivery, antenatal steroids, and antibiotics to treat infections, tetanus toxoid vaccinations, and newborn resuscitation. Several of these, such as tetanus toxoid, warming the newborn, and clean delivery, are very low cost. A few interventions require access to emergency obstetric care, for example to caesarian sections for complicated births. With the exception of tetanus toxoid coverage, national level indicators of interventions for newborn care are not available for most countries. They have not been collected either by DHS or MICS. The SARA team therefore chose to use as proxy indicators some available indicators which are tied to the health status of the newborn. Three indicators were chosen: mothers receiving two tetanus toxoid vaccinations prior to delivery, the presence of a birth attendant during delivery, and the use of antenatal care. Access to post-natal care for the mother and the newborn infant is an important mechanism to reduce morbidity and mortality. Indicators on this and the other interventions are not widely available.

a. Neonatal tetanus

Estimates vary widely, but show that between 7 and 14 percent of all neonatal deaths can be attributed to neonatal tetanus.[87] A mother who is vaccinated twice during pregnancy is protected up to four years and passes immunity to her child, minimizing risk of death from tetanus by as much as 72 percent.[88] Data from the 46 countries in Africa show tetanus toxoid vaccination coverage increased 9 percent from 1998 to 2002, but stalled at a level of 44 percent (2002-2004).[89] Country-specific data show tetanus rates declining in nine countries.

b. Skilled birth attendants

Forty percent of neonatal deaths occur in the first 24 hours of birth.[90] The presence of a skilled provider at birth is strongly associated with lower neonatal mortality rates. Yet, most births in Africa occur at home. The eight-country study mentioned above showed that 70 percent of births in sub-Saharan Africa take place in the community.[91] Birth attendants can refer difficult deliveries to a health clinic, and encourage immediate initiation of breastfeeding and appropriate warming of the newborn after delivery, all of which help prevent neonatal deaths. If adequately trained, they can also help prevent birth asphyxia, a leading cause of neonatal mortality; facilitate appropriate cord care; assist

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[86] Black, Robert et al., "Where and Why Are 10 Million Children Dying Every Year?" *The Lancet*, Vol. 361, June 28, 2003. p. 2227.
[87] Hill, Zelee, Kirkwood, Betty, et al., *Family and Community Practices that Promote Child Survival, Growth and Development. A Review of the Evidence,* London School of Hygiene and Tropical Medicine, World Health Organization, 2004, p. 97.
[88] Ibid, p. 97.
[89] WHO, *WHO Vaccine-Preventable Diseases: Monitoring System. 2003 Global Summary*. World Health Organization, 2003 p. R-45.
[90] WHO, *Improving Neonatal Health in South-East Asia Region, Report of a Regional Consultation*, September 2002.
[91] WHO/AFRO, *Africa's Neonatal Morbidity and Mortality Rates are Among the Highest in the World*, February 18, 2004.

with supervising antiretroviral (ARV) therapy; and other maternal interventions that would lower maternal and newborn death rates.

In sub-Saharan Africa, however, a skilled attendant is present at less than one-half of all deliveries (42%).[92] Among the 19 countries with two DHS sets, 10 had slightly improved the percentage of births attended by a doctor or trained attendant. Furthermore, some small studies seem to indicate that improvement is less than expected when a skilled attendant is present. This highlights the need for further research to assess the actual practices of these attendants. Ghana, the country with the greatest improvement in neonatal mortality, also slightly improved both tetanus toxoid and skilled birth attendant rates.

c. Antenatal care

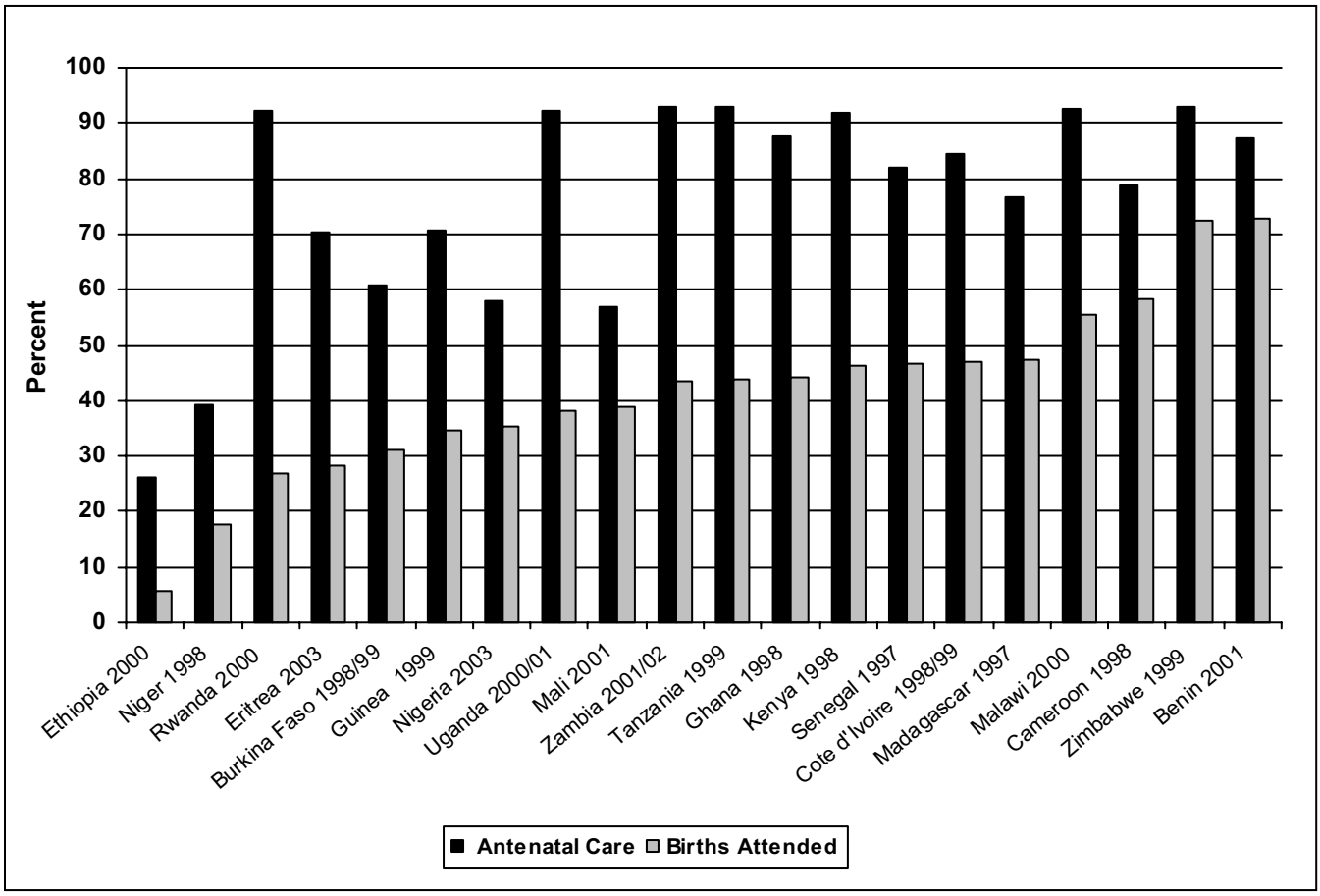
Antenatal care helps newborns get a healthy start. Through antenatal visits, mothers can receive appropriate micronutrient supplementation (iron and/or folate), tetanus vaccinations, IPT treatment, and early detection and management of possible complications and/or mitigating conditions, such as sexually transmitted infections (STIs) and HIV and AIDS. While a majority of women in sub-Saharan Africa consult with a health care provider for at least one antenatal visit (76%), few receive the recommended four visits (42%).[93] Benin, Ghana, Kenya, Tanzania, Zambia, and Zimbabwe all have high visit rates (over 60%), while few pregnant women in Ethiopia, Niger, Rwanda, and Senegal (20%) go to four antenatal visits. Antenatal visits are important, but are not sufficient to reduce mortality rates.

Even for countries with relatively high antenatal care rates, many fewer women have a skilled provider in attendance when delivering their babies. Graph 14 compares the percentage of women who received antenatal care and those who delivered with a skilled attendant. Most pregnant women (over 75%) receive at least some antenatal care in 13 of 20 countries. Fewer than half receive antenatal care in only two countries: Ethiopia (26%) and Niger (39%). In contrast, in only four countries (Benin, Cameroon, Malawi, and Zimbabwe) are more than half the births attended by skilled providers. In Ethiopia and Niger fewer than 20 percent of births are attended by a skilled provider. In the remaining 14 countries, only some deliveries are attended by a skilled provider (27–47%). To reduce maternal and newborn mortality and disability, skilled providers must attend most births. A functioning referral system and facilities with adequate staffing and equipment are also necessary to reduce maternal mortality and improve newborn survival.

[92] UNICEF, *State of the World's Children*, 2004.
[93] Hill, Zelee, Kirkwood, Betty, et al., *Family and Community Practices that Promote Child Survival, Growth and Development: A Review of the Evidence*, London School of Hygiene and Tropical Medicine, World Health Organization, 2004, p. 97.

Graph 14

Percent of Pregnant Women Attending at Least One Antenatal Visit Compared to Those Receiving Assistance During Delivery



Promising practices to improve the quality of care provided to mothers and newborns need to be taken to scale to have a significant impact on maternal and newborn survival outcomes. An integrated framework of maternal and newborn care is needed to ensure that mother and baby both receive essential health and nutrition services cost-effectively. Substantial declines in neonatal mortality are required to achieve the child survival Millennium Development Goal (reduce by two-thirds under-five mortality between 1990 and 2015).

6. Summary

This review of DHS, MICS, and UNICEF data reveals that adequate coverage of effective interventions is still far from being achieved. Data across Africa indicate that many interventions do not reach a significant portion of the under-five population. Moreover, where progress was made in the 1980s and early 1990s, it has not been sustained and coverage rates have actually decreased in many countries, although some countries improved their coverage rates in some intervention areas. The interventions

demonstrating higher coverage were vitamin A and, in some countries, exclusive breastfeeding. In general, the countries with higher rates and improvement in coverage appeared to be those where USAID or other donors had emphasized a particular intervention. In some areas, such as vaccination coverage, stagnant and declining coverage rates highlight waning interest, which suggests an association between intensity of effort and results. Coverage data for some intervention areas, such as post-natal care or complementary feeding, are not available. These and other child and health indicators are presented in summary form in Annex B and in individual country profiles in Annex D. Program implementation in these intervention areas will be discussed in more detail in the following section.

C. Child Survival Programming in USAID Missions

Experience and research have demonstrated the effectiveness of many interventions in reducing child mortality, yet much less is known about the implementation status of these interventions. Clearly the coverage data summarized in the previous sections indicate serious problems in reaching African children with these interventions. One study objective was to determine the pattern of and rationale for USAID programming for these child health interventions. The intent of assessing USAID support was to identify gaps in current programming, priorities for the future, and the next steps USAID might take to address these priorities.

The study team collected qualitative program-related data from 13 countries currently receiving USAID assistance. Child health programming varied among these Missions with respect to their objectives, the child health interventions[94] implemented at scale, and the delivery strategies used.[95]

1. Country Program Objectives—Expected Outcomes

All USAID country programs had a *general* goal to reduce child mortality, but only half had a *specific*, clearly articulated national mortality reduction objective. Of the six high-performing countries, five had a specific mortality objective. Two lower-performing countries, Nigeria and Mali, had precise mortality objectives that were defined only recently. The remaining six programs had other objectives such as improving access or improving quality of care. Mortality reduction was a distant objective and not considered within the Mission's "manageable interest." In general, USAID programs in countries showing the greatest decreases in child mortality put the mortality reduction objective up front and strategically chose interventions based on the disease burden of their countries to achieve this objective.

2. Child Health Interventions Implemented at Scale

The SARA team documented USAID's level of implementation at scale[96] of the 22 interventions presented in *The Lancet*.

[94] For this review the SARA team uses the *Lancet* definition of "child health interventions" and "delivery strategies":
Intervention—a biological agent or an action intended to reduce mortality or morbidity among children
Delivery strategy—the approach(es) used to reach the children or mothers with the needed interventions
[95] Jones, Gareth et al., "How Many Child Deaths Can We Prevent This Year?" *The Lancet*, Vol. 362, July 5, 2003, p. 65.
[96] For this review, scale is defined as interventions or approaches designed to reach at least one-half the population of a given country.

Table 14

Effective Child Survival Interventions Implemented at Scale by USAID Missions in 13 Sub-Saharan Countries

Category of Child Survival Intervention (# of interventions in each category)	Child Survival Interventions	Number of Missions Implementing at Scale
Vaccinations (2)	Measles/DPT3 and polio	12/11
	Hib	0
Nutrition-related (4)	Vitamin A	11
	Exclusive breastfeeding	7
	Complementary feeding	0
	Micronutrient supplementation or fortification	6
Malaria (3)	Insecticide treated bednets	11
	Antimalarial treatment	7
	IPT treatment	7
Treatment of diarrhea and ARI (3)	IMCI (proxy for appropriate ARI and diarrhea treatment)	10
Neonatal (7)	Tetanus toxoid	4
	Clean delivery, newborn resuscitation, warming, nevirapine	3
	Antibiotics for sepsis, antenatal steroids	0
Water/Sanitation (3)	Water—purification only	5
	Sanitation	1
	Hygiene	3
TOTAL number of interventions (22)		

Analysis of Table 14 shows that Missions are more likely to support some interventions over others. (See Table 21 for country details.) The most supported interventions are often:

- Product-related, susceptible to mass marketing, or only require one encounter, e.g., vitamin A, treated bednets, water purification tablets, vaccines
- Have become accepted practices—ORT, ARI, IMCI, DTP, and measles vaccinations
- Are receiving a special push from the donor community—ITNs, micronutrients, exclusive breastfeeding, measles vaccinations.

Many Mission officers would like to support more interventions than they do but cited lack of resources. Broadly speaking the interventions with little or no USAID support include:

- Newer interventions: Most Missions do not yet support at scale newer micronutrient supplements or vaccines such as Hib.

- Water and sanitation: These require investments in infrastructure so generally are not part of USAID strategies. However, five countries reported promoting a water purification product through existing social marketing efforts.[97]
- Neonatal health interventions: These receive negligible support from USAID despite the alarming picture of maternal and neonatal mortality in Africa. Some Missions do support tetanus toxoid vaccinations and some Missions support other small-scale newborn efforts.
- Some nutrition interventions: Complementary feeding interventions, although often promoted along with EBF programs, are implemented on a much smaller scale due to their difficulties and costs. Few countries report micronutrient food fortification programs due to the lack of uniform products and marketing systems.[98]

In summary, while caution should always be exercised with respect to suggesting causality, four of the six countries with the "best" mortality rates or greatest mortality reductions also have clearly defined child survival objectives and implement a more comprehensive range of child survival interventions at scale. USAID programs have used very different combinations of interventions to contribute to mortality reduction (Table 14).[99] However, to reach the Millennium Development Goals, countries will need to implement interventions that match the causality of their child mortality. This review suggests that re-invigorating programs to implement a sufficient range of effective interventions at scale will lead to better coverage and contribute to important child mortality reductions.

[97] Respondents indicated that promoting these products began as a response to cholera outbreaks, but the products have since been recognized for their broader usefulness and are promoted widely.
[98] Zambia reports a very successful national vitamin A fortification effort.
[99] For example, Zambia focused on vitamin A, exclusive breastfeeding, water purification, malaria nets and malaria drug policy change. Eritrea focused on improving care for diarrhea, ARI, and malaria and on vaccination coverage. Malawi focused on correct malaria drugs, mosquito nets, water purification, reproductive health, and access to essential drugs. Ghana focused on breastfeeding, mosquito nets, vaccination coverage, and vitamin A. The interventions were different in each country, but all countries reduced child mortality.

Table 15

Number of Child Survival Interventions Implemented by USAID Missions at Scale and Countries Rank Ordered by Mortality Performance

N=13 countries

Countries Ranked by Mortality Performance (lowest mortality or greatest change in mortality)	Number of CS Interventions Implemented at Scale	Names of Countries Implementing Interventions at Scale
"Best" Eritrea, Madagascar, Malawi, Ghana, Guinea, Zambia	10-15	Madagascar, Zambia, Eritrea
"Middle" Ethiopia, Senegal, Benin, Mali	7-9	Benin, Ethiopia, Ghana, Mali, Senegal, Malawi
"Low" Nigeria, Uganda, Tanzania	4-6	Nigeria, Guinea, Tanzania, Uganda

N.B. Sudan, Niger, and Mozambique were also in the top 10 countries with reduced mortality rates but were not part of the 13-country review.

3. Delivery Strategies Used

Countries and donors use a variety of strategies to reach mothers and children with these interventions. But as the *Lancet* articles note, the application and effectiveness of strategies to reach and sustain coverage of child health interventions are not well documented. Moreover, professional consensus is lacking around definitions, a conceptual framework, or the effectiveness of particular delivery approaches.

For this review, the SARA team used the following framework to describe the primary delivery strategies/approaches used by USAID Missions:

- Policy support
- Health services delivery improvements
- Communication
- Community outreach and community mobilization.

USAID Missions vary in their use of these strategies. Some Missions support a number of strategies while others support few. Some are more frequently supported than others. Policy reform[100] and training health workers were the approaches most used, followed by community mobilization (Table 16). Missions ranged from supporting a low of two approaches (Mali) to a high of 12 approaches (Zambia) with Ethiopia, Ghana, and Madagascar each supporting 10. (See Table 22 for details.) Missions also vary in the extent of their support for each: some efforts are quite limited while others are more extensive and intensive. The scope of this review did not permit an in-depth look at these strategies.

[100] Because policy reform is intensive, each policy area was counted as an approach.

Table 16

Program Delivery Approaches Used by USAID Missions

Program Approaches	Number of Missions
Policy support	10
Health systems service delivery improvements	
▪ Product management	8
▪ Information use	7
▪ Quality improvement ─ Personnel motivation	7
─ Training	10
Communication	8
Community outreach and mobilization	9

a. Policy support

Correct policies implemented by governments are essential to promoting child health. Many countries have policies that impede actions to reduce mortality. For example, as drug resistance has increased in Africa, policies that support effective antimalarials are needed to reduce malaria-related child mortality. Some experts believe that Malawi's policy shift to effective antimalarials was key to reducing under-five mortality.

All USAID country health officers engage in some level of policy dialogue and work toward policy reform. The type of policy work ranges from health sector reform issues to disease and intervention-related issues. An example of a health sector policy that many health officers have influenced is establishing or changing Essential Drugs Lists. Single-use syringes for injection safety is an example of an intervention-specific policy. Another example of a policy needed for a specific intervention is the elimination of tariffs for insecticide treated nets. Where intervention areas had clearly defined policies (such as essential nutrition actions, malaria, immunization), HPN officers made more explicit and concerted efforts to change policies.

b. "Systems" improvements

Public sector health services delivery systems in Africa are weak: facilities are poorly stocked with medicines, essential supplies, and equipment; personnel are absent or provide inadequate care; patient care records are poorly kept and not used for planning or management. The problems in African health systems are too big for one donor to solve. However, to address some of these weaknesses, many USAID Missions support delivery systems improvements and reform. These efforts include support for improving health information systems, management and quality of logistic and pharmaceutical supply, service delivery quality and/or supportive supervision, and health services financing.

Table 17 lists the strategies supported by Missions, all of which are relatively small in scale.

Table 17

Systems Improvements Implemented by Selected USAID Missions

Systems Improvements	No. of Countries	Country Names
Pharmaceutical and supply quality and management	8	Eritrea, Ethiopia, Ghana, Madagascar, Malawi, Nigeria, Senegal, Zambia
Health information systems	7	Eritrea, Ethiopia, Guinea, Madagascar, Malawi, Uganda, Zambia
Service delivery / QI / supportive supervision	7	Guinea, Madagascar, Malawi, Tanzania, Uganda, Zambia
Financing		Small-scale efforts only
Short term training	10	Benin, Eritrea, Ethiopia, Ghana, Guinea, Madagascar, Malawi, Nigeria, Uganda, Zambia
Pre-service training	6	Eritrea, Ethiopia, Ghana, Guinea, Madagascar, Zambia

Most respondents considered the following three areas of systems improvements critical.

Management and Quality of Logistic and Pharmaceutical Supply
Without needed products at all levels of health facilities, service delivery cannot and will not improve greatly. Improving the supply chain (including quality of products), therefore, is essential. The Eritrean Ministry of Health chose supply delivery as its primary vehicle for improving services. The USAID health officer posited that Eritrea's success in some measure was due to facilities at all levels being well-stocked with essential drugs and supplies. Other countries have focused less intensively on supply management, but have also had success.

Missions in Ghana and Zambia, for example, worked strategically with other partners, such as the Japanese, to get products to health facilities. In immunization, USAID has supported technical assistance while the Japanese have funded equipment and UNICEF has supplied vaccines. Several Missions work on strengthening the application of Essential Drugs Lists, inventory control procedures, and drug quality issues. Health officers recognize that supply issues are very complex and that they affect many aspects of service delivery. In Madagascar, the health officer noted that multiple varieties of refrigerators used for the cold chain makes maintaining and acquiring replacement parts a challenge and ultimately affects the success of vaccination efforts.

Health Information Systems
Both Washington-based and Mission key informants underscored that getting country officials to use both survey and routine data was important for planning and managing

effective programs to reach children. Many provided examples of using data to identify gaps and problems in care delivery, design interventions, and assess subsequent performance. HPN officers and key informants perceive that use of data is critical at two levels. First, engaging country officials in data use at the central level increases country ownership of health issues and improves health system performance. Second, data use at the local operational level to establish targets, monitor performance, and solve problems has led to improved program results. These two aspects of data use are key to its contribution to performance improvement.

Several USAID Missions support innovative approaches to improve data use. Nigeria has extensively used multiple surveys to inform its program design. Zambia has worked comprehensively on reforming the health information system at the central and health facility levels. The country has reduced the number of forms, simplified collection procedures, eliminated redundancy, and worked with district officials to use health facility data to monitor and encourage performance improvements. Madagascar has involved the community in using data. Communities set their own health targets and then review their own statistics. They hold celebrations when targets are achieved. (See Box.) Several Missions (Eritrea, Ethiopia, Madagascar, Mali, Nigeria, and Zambia) actively use situation analysis to inform their project planning.

Using Data in Health Facilities

In Zambia, data are used locally and nationally to identify and resolve problems. The same data are used at the central level to allocate resources to districts. The Mission supported developing a uniform reporting mechanism for both finances and performance that consolidated 20 different information systems and established clear district and national performance and financial milestones. District officers were trained in financial and health planning linked to simplified data collection, analysis, and use. Quarterly performance data are used to identify high and low performing districts. Approaches are then developed to improve performance in struggling districts.

Using Data in the Community

In Madagascar, key people (e.g., mayors) and local organizations (e.g., schools) use health information to set community health targets and measure performance. Quick surveys in local communities measure progress and community participants organize awards and festivals when they reach their targets. Communities that reach these targets are designated as "Champion Communities," setting a benchmark for others.

Service Delivery/Supportive Supervision

Public sector health services personnel, their motivation, and performance are affected by civil service systems, which are extremely weak in Africa. (This is described in greater

detail in Section G.) Addressing civil service reform is a critical area in need of long-term solutions in Africa. USAID Missions do not yet, on the whole, address this larger issue.

In the interim, short-term strategies are essential to provide non-remunerative ways of motivating health personnel. Many Missions focus on skills improvement, usually short-term training and improved supervision systems. Short-term training has long been emphasized in donor support, but critical to improved performance in service delivery are effective follow-up, motivational, and problem-solving approaches.

This study identified some training and supervision approaches that have successfully motivated personnel to perform better. Uganda motivates health staff to improve services by awarding the Yellow Star to facilities achieving certain performance targets. Madagascar provides training on pay days and establishes links between communities and health providers to inspire better service provision. Zambia posts monthly performance data prominently in district health facilities and uses these data to compare facility service statistics quarterly. Visually demonstrating successful service delivery inspires health facility staff to provide better services. Some Missions support curriculum and other reforms in schools of medicine, nursing, and midwifery to obtain more long-term improvements in personnel performance. Performance-based financing in health also is being tested in some developing countries.[101]

Missions are also exploring other kinds of incentives to motivate health workers. In Ghana, the Mission supports the government's program to provide housing, a motor bike, and a radio for a new category of health worker. Several countries outside Africa have instituted a "Living University," using successful facilities as models for others.

In summary, these strategies to improve delivery systems—logistics management, HIS, and QI methods—should be linked to one another to optimize overall performance. Yet, the weakness of each sub-system often compounds the problems in the others.

A few countries have made more progress in implementing systems improvements that have contributed to reform at scale. These Missions have strategically worked with the government and with other donors to define how their small efforts might contribute to system-wide changes. A few innovative health officers in countries with less progress have facilitated exchange visits to other countries with more successful efforts to learn from their experiences. Clearly, with the vastness of need, there is urgency to evaluate these strategies more systematically and share successful experiences among countries.

c. Communication

Effective communication or behavior change communication (BCC) strategies, when implemented at scale, contribute significantly to national mortality outcomes. In the early 1980s, health programs in developing nations began to recognize that comprehensive demand creation strategies were equal in importance to supply strategies (better quantity and quality of service delivery) to improved health outcomes. The original child survival

[101] Hecht, Robert, Batson, Amie, and Brenzel, Logan, "Making Health Care Accountable," *Finance and Development,* March 2004, pp. 16–19.

programs in Gambia, Honduras, and Ecuador are still acknowledged for effective communication efforts that helped reduce child mortality. Most USAID Missions now support some BCC in their child health programs, but few support comprehensive communication efforts and even fewer focus on sustaining these efforts.

Ghana, Madagascar, Zambia, and northern Nigeria do support more comprehensive BCC efforts that use quite creative approaches including workshops for local journalists, "ghost writing" articles for the print media to jump start interest in health, regular and frequent messages broadcast or printed in local media, and traditional theater. Madagascar in particular has strategically and creatively linked comprehensive demand creation strategies—including community mobilization, discussed below—to health services delivery improvement strategies with impressive results. In most other countries communication efforts are under-funded and less creative, focused mainly on small health education units in Ministries of Health whose vision often is limited to developing leaflets or pamphlets, or alternatively with advertising social mobilization campaigns. Often communication strategies are considered as expendable parts of programs.

Therefore it seems that despite past lessons, most current BCC efforts are still structured as short-term approaches. Only rarely have local institutions been created or strengthened to continue health communication efforts when project financing ends. Zambia was the only Mission that reported supporting a nascent local NGO to carry out BCC activities. Another exception has been establishing or strengthening social marketing organizations for marketing bednets, ORS, water purification tablets, etc. However, the vision of social marketing organizations, while essential, is usually limited to specific products rather than to the overall demand creation for child health referred to here. The great potential for communication efforts has yet to be realized in most African countries.

d. Community mobilization and community outreach

In Africa a significant proportion of mothers do not take their sick children to *any* health provider. Furthermore, their concepts of disease prevention, transmission, and treatment are often erroneous. Thus, strategies that focus on health facilities to the exclusion of community work will fail to reach mortality objectives. Services must be delivered beyond fixed facilities.

Implementing comprehensive communication approaches is one way to reach families and the extended community; two others are community mobilization and community-outreach/home-based care. Community mobilization seeks stakeholder involvement and commitment or mobilizes parents to bring their children to receive services. Community outreach extends services and education to hard-to-reach areas.

USAID child health programs tend to do one or the other with limited scope. For example, outreach programs traditionally have community health workers (CHWs) delivering a certain product, services, or information, or NGOs implementing small, isolated efforts in remote areas. Community outreach is recognized as a needed element in health care, but its delivery through CHWs is complicated by issues of pay/volunteerism, levels of education, and cultural acceptability. More recently, malaria

and IMCI programs are focusing on community-based efforts as a necessary complement to facility-based approaches, but these efforts still lack clarity.

Community mobilization as a concept has been used more for campaigns than as a routine and sustained mechanism for engaging broader communities in their overall health care. Thus, the best-known community mobilization efforts are once or twice yearly vaccination campaigns. Almost all countries have such campaigns and have successfully mobilized both the health community to provide the services and caregivers to bring their children. Many countries have used vaccination campaigns as opportunities to deliver other products such as vitamin A or services such as growth monitoring or re-treating bed nets. In general, the coverage results have been positive. The criticism of campaigns is that they do not strengthen, and in fact may hinder, routine delivery systems. Furthermore, such campaigns are conceived as point-in-time efforts and not linked conceptually to routine delivery so when they are discontinued, coverage rates fall.

Several countries are initiating broader community mobilization and outreach efforts. Madagascar has a comprehensive program that integrates strengthening health facility delivery with broad-based communication and community mobilization and outreach. (See Box.) Madagascar mobilizes communities for vaccination campaigns and other services, and mobilizes key stakeholders and communities to demand quality services from health providers. Nigeria has engaged local participants in its vast array of data collection efforts to identify need and involved them in planning solutions. Ghana has created a new category of paid health worker to reach out to communities and mobilized communities to pay for their housing. Most Missions, however, continue with smaller efforts.

The Madagascar Experience

Effective health services, communications and community mobilization/outreach in tandem to achieve impact at scale

Madagascar provides a "best case" example of child health programming:

- Mutually defined goals
- Using evidence for advocacy
- Program continuity since 1995
- Commitment to scale—looking at quality trade-off
- Careful selection of interventions and delivery strategies
- Partnering at all levels with joint funding
- Rapid expansion of delivery strategies
- Leadership at all levels—government, stakeholders, USAID, cooperating agencies (CAs), other donors

Critical to the effort is the communications approach that has:

- A goal to change community child health norms
- Agreement on message content among all stakeholders
- Few and simple messages
- Messages focused on "doable actions" rather than knowledge
- A message style selected by end users
- An interface with health facilities
- A "buzz factor" to keep people interested

Community outreach and mobilization is strategic and comprehensive and includes:

- Identifying, coordinating, and building stakeholder capacity
- Involving stakeholders, especially community mayors, in understanding their data and establishing community targets
- Conducting community surveys to document progress—feeding results back to community stakeholders
- Using existing community structures
- Establishing interfaces between stakeholder groups (child-to-child and child-to-community)
- Involving 18,000 community mobilization volunteers
- Integrating and mutually reinforcing activities
- Creating specific links between communities and the health system
- Rewarding communities for child health achievements—"Champion Communities"

In summary, this review highlights the great potential contribution to mortality reduction of community mobilization and extension of services to communities. Elements of each have been used well in many places. But few experiences, particularly of community

outreach, have gone to scale and a gulf exists between potential and reality. Where scale has existed in the form of campaigns, many in the health community have reacted negatively. Many people do not realize that "campaigns" versus "routine systems" probably is not an either/or proposition: both may be needed over the long term to reduce child mortality. Where outreach programs exist, Missions should consider whether they can be expanded nationally and share successes with going to scale.

Furthermore, lack of clarity regarding what these terms (community mobilization, community outreach) mean, lack of community outreach experiences at scale, lack of data to show effectiveness, and implementation complexities contribute to confusion regarding programming methods and objectives. This situation argues for more precision in terminology, better documentation of experiences, and greater commitment to scale up approaches that hold promise.

4. Summary of Child Health Programming

The review of mortality and coverage data revealed wide disparities among countries: some had significantly better statistics than others—mortality rates were lower or had decreased significantly and coverage rates were better for many indicators. The SARA team explored whether programming differences existed in Missions between better and worse performing countries. A review of programming patterns, in fact, showed some programming differences. Table 18 briefly illustrates that countries with better outcomes generally had the following specific programming characteristics that distinguished them:

- a specific objective to reduce under-five mortality
- implementation of the highest number of child health interventions at scale
- a greater number and more intensive approaches to strengthen health systems
- stronger community mobilization efforts
- more comprehensive communication approaches
- greater emphasis on local use of health data.

Table 18

Mission Programming Characteristics Associated with Better Mortality Results

Program Characteristics of High Performers	Number of Countries	Names of Countries
MORTALITY REDUCTION Countries with "best" mortality performance (greatest reduction) In rank order	6	Eritrea, Guinea, Malawi, Zambia, Madagascar, Ghana
PROGRAMMING Missions with clearly articulated mortality objective	7	Eritrea, Ethiopia*, Ghana, Madagascar, Mali*, Nigeria*, Zambia
Missions with highest number (10-15) of child survival interventions being implemented at scale	4	Eritrea, Ghana, Madagascar, Zambia
Missions with communication and community mobilization at scale	6	Eritrea**, Ethiopia, Ghana, Madagascar, Mali, Zambia
Missions with three or more systems delivery strategies	4	Eritrea, Madagascar, Malawi, Zambia
Programs with greater emphasis on data use	5	Eritrea, Ethiopia, Madagascar, Nigeria, Zambia

*Strategies developed in the last two years

**Community mobilization in Eritrea is an intrinsic characteristic of the government and not a specific program delivery strategy

This review suggests that having a specific and clear objective to reduce child mortality is important, as are well-designed programs that implement a sufficient number of child interventions at scale to correspond to the country's disease profile.

The patterns observed in this review of programs suggest that USAID/Washington and Missions should look at their overall programming to assess whether or not goals are specific; the number, type, and scale of interventions are adequate; and the delivery strategies are sufficient to reduce mortality in their countries.

As will be discussed in the following sections, the high-performing Missions tended to work in countries where the government had a commitment to child health, and where the donors and other partners worked with the government to support a common child health agenda. Consistent donor support is necessary, especially in Africa where the lack of recurrent cost financing makes it difficult to sustain programs.

D. Government Leadership, Commitment, and Partnerships

Information collected for this study supported the widely held view that where governments show ownership and leadership in child health, health programs move forward more quickly and donors are more able to focus their support strategically. Several of the countries that were the focus of this study stand out for their commitment and leadership in child health. Eritrea, Ghana, Malawi, and Zambia actively engage in child health strategies and perhaps as a result, have moved child health forward. More recently, health officials in Madagascar have taken more leadership in solving their country's health concerns. In several countries, Heads of State support child health efforts by visibly participating in Child Health Days.

Ownership and leadership are qualities associated with successes not only at the central level, but also at regional and district levels of government. In Zambia, for example, where decentralization efforts have successfully given more autonomy and control to local authorities, districts where health officers exhibit strong leadership have been associated with better program results.

The countries with greater commitment to child health appear to share a number of characteristics. In these countries, the ministry of health engages actively in child health issues, uses country data, and directs the donors toward a common goal. The minister of health is more likely to have at least some training in public health. In several countries, ministries of finance or planning also participate in the dialogue and more readily allocate resources to child health. USAID health officers have better collaborative relationships with counterparts in these countries. Donor technical staff may advise country officials on technical approaches, but it is the country officials (ministry of health and others) who determine the strategies. Countries with such commitment have demonstrated the highest reductions in or lowest levels of under-five mortality. (See Table 19.)

In contrast, countries with less commitment to child health are typified by ministries where the support for child health lacks strong champions and lacks consistent support throughout the organization. In some cases the minister of health is supportive, but faces opposition from the minister of finance. Often commitment varies by a particular sub-division of the ministry of health. For example, ministries or governments may support efforts to address HIV/AIDS but not child health, as in Uganda.

Support for initiatives related to child health appears to have been weakened in many countries at the central level because of decentralization. Decentralization has contributed to a reduction in force at the central level of ministries. For example, several HPN officers report the presence of only one government official in the central ministry responsible for child health for the entire country. The Supplement to the IMCI Analytic Review corroborates this, noting that the lack of a focal point for strategic planning, management, and coordination of child health activities has seriously undermined child the capacity for central planning and review of health interventions.[102]

[102] Picazo, Oscar et al., *Child Health Financing and Cost-Effectiveness: Supplement to the Report on the Analytic Review of IMCI*, p. 10.

Findings – Government Role

In quite a few countries, USAID health officers find little or no commitment to child health from their counterparts. Ministry staff are not available for planning and review; funds are not available to support recurring costs; programs efforts are stalled or move at glacial pace. Budget and line item commitment for specific child-related necessities (for example, vaccines, essential drugs, supervision, and follow up of training) is miniscule or absent.

The lack of financial commitment to child health is, of course, part of a larger problem of poverty. However, while all sub-Saharan African countries are resource poor, some contribute lower proportions of their budgets to health than others. For example, in Ethiopia, the public expenditure on health is $2.80 per capita, the lowest in Africa. In Tanzania, public resources for child health are also quite limited. This lack of resources and general commitment translates into difficulty moving programs forward. In countries with weak commitment to child health, the field is wide open to more competitiveness among donors.

USAID Mission health officers attempt to coordinate with ministry of health officials. In some countries they also work quite closely with ministries of finance or planning, or engage ministries of education. HPN officers and cooperating agency staff in several countries organized informational events with members of parliament and involved local government authorities in mobilizing resources and reaching new communities. Some HPN officers frequently visit districts and project sites reporting that the visits gave them a better feel for both issues and implementation opportunities. While time consuming, they reported that these efforts showed clear results in more effective programming and implementation.

E. Donors and Other Partners

USAID resources alone are insufficient to help countries reduce child mortality in African countries. Strategic and operational partnerships among at least four different groups—governments, donors, a broad range of NGOs, and other stakeholder groups—permit countries to scale up programs to address child health issues. Operational partnerships mean going beyond information sharing to mobilizing resources and developing a common agenda. Partnerships with the government have been discussed above. The following describes the importance of partnerships with donors, NGOs and other stakeholder groups.

1. Donor Partnerships

Because no individual donor has the resources to meet the child health needs of an entire country, partnering is necessary to achieve desired results. Thus, it is no surprise that the SARA team found that effective, operational partnerships among donors appeared related to improved child health outcomes, especially when they included joint planning and funding of a common agenda (Table 19). Joint planning forced countries to make difficult choices among interventions and approaches. Closer and more effective partnerships were more apparent in countries with government leadership. They were also more evident in intervention areas that have mandated partnership (polio, measles, malaria, HIV/AIDS). Partnerships also were stronger in countries where donor representatives, including USAID officers, had a strategic vision for child health.

Numerous examples of operational partnerships were identified. For example, key donors in Mali now agree on and jointly support an overall child health approach: UNICEF and USAID support different geographic regions in Mali with the same basic program approach. In Ghana, Guinea, and Zambia, different donors support specific programmatic elements: USAID supports technical assistance in routine immunization, the Japanese provide the cold chain equipment, and UNICEF supplies the vaccines. In Eritrea donors work together to support the Eritrean government's plan to lower child mortality. In Zambia donors sit together at the table with the government to develop and fund child health programs. Health officers report that an especially effective way of partnering is in technical working groups. HPN advocacy with country donor partners as well as other groups, though time-consuming, often led to significant programming results (Ghana, Madagascar, and Zambia).

In more than half of the countries, surveyed donors engage in information sharing but not in such strategic partnerships. "Local" partnerships among donors, USAID-funded projects such as BASICS, and NGOs may exist in specific regions of a country or for specific activities. In these countries donors met for pro forma Inter-Agency Coordinating Committee (ICC) meetings but did not engage operationally in joint planning or funding. In countries with less country leadership, competing donor priorities, different funding styles, and weaker leadership prevent effective collaboration. This significantly reduces potential child health program results.

2. NGO Partnerships

International and local NGOs make important contributions to health in many African nations. In others their potential has not been tapped fully. Countries vary greatly with respect to their NGO profile. Some have significant presence of international NGOs while in others, local NGOs are strong and active with fewer international NGOs.

International NGOs such as Save the Children Federation, CARE, or ADRA, tend to be headquartered outside the country and often, because of their specific humanitarian objectives, work in remote and isolated areas or with otherwise neglected populations. Many also work in areas other than health care. The presence of international NGOs varies greatly by country: for example, Eritrea has none[103] while Ethiopia has many. The USAID/Washington-funded Child Survival and Health Grants Program, discussed in section F, provides considerable support to these NGOs to implement child health programs in many sub-Saharan countries.

Character and presence of local NGOs also vary tremendously from country to country. Local NGOs tend to be smaller entities with nascent management skills. In some countries, however, local NGOs are important partners in health care delivery. This is particularly true of faith-based NGOs which are present in several African countries and deliver health services in hospitals and health care clinics, especially in East, Central, and Southern Africa. In Zambia, for example, these are organized formally into the Churches Medical Association of Zambia (CHAZ) and deliver a substantial portion of health care in the country. In other countries local NGOs are not as plentiful or well-organized, but are recognized for their contribution to health service delivery in their more local contexts.

Non-health local NGOs also contribute to important health-related activities. Some of these provide social marketing of needed health-related products such as bednets, oral rehydration salts, and vitamin A; address HIV/AIDS-related issues such as voluntary counseling and testing, orphan care, or caring for AIDS patients; implement health communication approaches; conduct research in health care delivery; and build professional groups and associations. USAID health programs often partner with and strengthen such local NGOs.

How USAID Missions use these groups to advance child health programs varies widely from country to country. In Guinea and Nigeria, NGOs are seen as vital partners in the Mission's child health strategy. In Nigeria, for example, USAID supports 150–200 local NGOs across its child health portfolio. In Ethiopia, the Mission works closely with NGOs as the government sector is unable to reach most of the country. NGO networks in some countries, such as the Church Health Associations of Malawi and Zambia (CHAM and CHAZ) and the Voluntary Health Sector Program in Tanzania, provide a substantial portion of health services. They are involved in and contribute to the dialogue among donors, USAID, and other partners. In Zambia, USAID has strengthened CHAZ so it can make sub-grants to community-based NGOs. Madagascar has forged strong partnerships

[103] Eritrea asked all NGOs to leave the country in 2001 for political reasons.

among health districts and local and international NGOs to accomplish district-level health objectives.

In some countries HPN officers may recognize and value NGOs for their local contributions, but do not involve them as strategic colleagues to the overall child survival program. In other countries Missions support networking of NGOs and meet with them frequently to plan and review child health programs. The management effort required for work with this diversity and number of groups often deters officers from pursuing these strategic relationships.

In addition Missions that fund coordinated activities in both the NGO sector and the government often have to serve as broker/communicator between them. In many countries, for example, the ministry of health and the NGO community co-exist warily, both at central and district levels. HPN officers report that on the one hand, ministry staff acknowledge the contribution of NGOs to health care services. On the other hand, and especially when NGOs receive grants from donors, NGOs are considered competitors for the same "pot of money." The government of Eritrea, for example, has banned NGOs so it could control all child health resources. At the district level, without structured collaborative mechanisms, these two groups often operate independently of one another.

Many HPN officers are aware that NGOs could offer more strategic input to child health, but do not see the mechanisms to make this happen. The majority do not consider most NGOs as strategic partners in a joint plan to address child mortality except for small isolated and circumscribed settings.

3. Partnerships with Other Stakeholder Groups

Involving major stakeholders at central, local, and community levels is an activity that many HPN officers take very seriously. In Madagascar, stakeholder analysis identified the full range of important groups and their potential roles, and enlisted their participation in the common child health strategy. Mayors of communities, school teachers, and other community stakeholders are actively engaged. The child-to-child, child-to-community, and champion community approaches in Madagascar have mobilized communities to take ownership of their own health care. Coupled with the other program characteristics mentioned above, the SARA team hypothesizes that broad and active stakeholder partnership has contributed to the remarkable reduction in under-five mortality in Madagascar reported in preliminary 2003 DHS data.

In other countries, HPN officers have worked with a more limited set of partners. Key Mission partners have included the media, universities, training and research institutions, major employers, private provider groups, and local community groups. Enlisting key stakeholders in planning and implementation has contributed significantly to improved results in Ghana (training institutions, income generation organizations), Guinea (employers), Nigeria (parliament), and Tanzania (teachers, agricultural workers, politicians). The synergy generated through collaborative processes with stakeholders could probably be enhanced further if Missions were to more rigorously and

systematically use techniques such as stakeholder analysis to identify a broader range of partners.

In summary, USAID interviewees indicated that program results are better when there is strong government leadership and effective operational partnerships among the principal donors, the NGO community, and other stakeholders. Table 19 shows that for the six countries (out of the 13 focus countries) with the best "mortality performance," there was a high level of collaboration with different partner groups. This finding suggests that Missions should continue or strengthen their collaboration with partners to more effectively reach child health objectives.

Table 19

Under-Five Mortality, USAID Country Strategies, Partnerships, and Ministry of Health Leadership

Countries with the Lowest Rates or Greatest Reduction in 0–4 Child Mortality	Countries with a Clearly Defined National USAID CS Strategy	Countries with Ministry of Health Leadership	Countries with Strong Donor Partnerships	Countries with Strong NGO Partnerships	Countries with Stronger Stakeholder Partnerships
Eritrea	Eritrea	Eritrea	Eritrea		
Ghana	Ghana	Ghana	Ghana		
Madagascar	Madagascar	Madagascar	Madagascar	Madagascar	Madagascar
Guinea			Guinea	Guinea	Guinea
Malawi		Malawi		Malawi	
Zambia	Zambia	Zambia	Zambia	Zambia	Zambia
	Mali*		Mali*		
	Ethiopia*		Ethiopia*	Ethiopia*	

*Strategies developed in the last two years

Table 20

Overview of Country Mission CS Program and Country Characteristics[1]

▲ = USAID National Support/Lowest under-five mortality rate/ Greatest reduction in under-five mortality rate/Greatest coverage of key interventions/Greatest improvement in coverage of key interventions
□ = USAID Selective support
● = USAID Limited support

Country Characteristics	Benin	Eritrea	Ethiopia	Ghana	Guinea	Madagascar	Malawi	Mali	Nigeria	Senegal	Tanzania	Uganda	Zambia	Total ▲
Child Health Indicators														
Lowest under-five mortality rates (<100 Deaths per 1000 live bir		▲		▲		▲								3
Greatest reduction in under-five mortality (>10%)[4]		▲		▲	▲	▲[5]	▲						▲	6
Greatest coverage of key interventions[6]	▲	▲		▲			▲				▲		▲	6
Greatest improvement in coverage of key interventi	▲	▲	[8]	▲	▲			▲		▲				6
Program Characteristics														
Clearly articulated mortality objective		▲	▲	▲		▲		▲	□				▲	6
Greatest Number of Key Interventions at Scale > 10		▲		▲		▲							▲	4
Situation analysis		▲	▲	▲	▲	▲		▲	▲				▲	8
Partnerships														
Government leadership	▲	▲		▲		▲	▲						▲	6
Donors	▲	▲	▲	▲		▲		▲[3]		▲			▲	8
NGOs	▲		▲	▲	▲	▲			▲	□	▲		▲	8
Other Stakeholders						▲			□				□	1
Total ▲&□[9]	**5**	**9**	**4**	**10**	**4**	**9**	**3**	**4**	**2**	**2**	**2**	**0**	**8**	

[1] Data were collected through interviews with Mission health officers - October 2003-January 2004. In some cases data were not clear. As such, this table should be reviewed by Missions for accuracy and changes should be reported to USAID/AFR/SD.
[2] National coverage achieved by joint planning and partnering with other international organization
[3] Data from DHS surveys 1992-2003
[4] For Ethiopia Date taken from State of the World's Children for 1997 and DHS for year 2000.
[5] Preliminary data from 2003 - 2004 DHS demonstrate a 41% reduction in U5 mortality

[6] Moderate to high coverage in two or more of the following categories: Vaccinations, Nutrition, Infectious Diseases, Newborn Care. For the purposes of this scale: moderate to high coverage includes: Vaccinations: DPT3 = coverage>60%, Measles = coverage>

[7] At least a moderate change in two or more of the following categories: Vaccinations, Nutrition, Infectious Diseases, Newborn Care. For the purposes of this scale: moderate change includes: Assistance during delivery = coverage>50% .Vaccinations: DPT3
[8] Ethiopia only has one complete DHS, therefore it was not included in this analysis.
[9] Total and sub-total reflect unweighted sums of all cells within the category

Table 21

Child Survival Interventions Implemented by USAID Missions[1]

▲ = USAID > 50% population (Nationwide)
□ = USAID ≤ 50% population
± = USAID does not support, but other donors support

Interventions	Benin	Eritrea	Ethiopia	Ghana	Guinea	Madagascar	Malawi	Mali	Nigeria	Senegal	Tanzania	Uganda	Zambia	Total ▲s[5]
EPI														
DPT3	□ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	□ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	11
Polio/Measles	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	□ [2]	▲ [2]	12
Hib				±			±			±		±	±	
Nutrition														
Vitamin A	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	□ [2]	▲ [2]	▲ [2]	□ [2]	▲ [2]	▲ [2]	▲ [2]	11
Exclusive Breastfeeding	▲	▲ [2,3]	▲	▲ [2]	□ [2]	▲ [2]	□ [2]	□ [2]		▲		□ [2]	▲	7
Complementary feeding	□	□ [2,3]	□	□ [2]	□ [2]	□ [2]	□ [2]	□ [2]		□		□ [2]	□	0
Fortification or Supplementation	▲	▲ [2]	▲ [2]	▲ [2]	□ [2]	±	±	□ [2]				▲	▲	6
Malaria														
Treated bednets	▲ [2]	▲ [2]		▲ [2]	□ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	11
Anti-malarials for fever	□ [2]	▲ [2]	▲ [2]	□ [2]		▲ [2]	□ [2]	▲ [2]	□ [2]	▲ [2]		▲ [2]	▲ [2]	7
IPT	□	▲		□ [2]		▲ [2]	□ [2]	▲ [2]	□ [2]	▲ [2]	▲ [2]	▲ [2]	▲ [2]	7
Childhood Diseases														
IMCI - ORT/Antibiotics for dysentery/ARI	▲ [2]	▲ [2]	▲ [2]	▲	▲ [2]	▲ [2]	▲ [2]	▲ [2]		▲		□ [2]	▲ [2]	10
Newborn Health Care														
Tetanus toxoid				□ [2]	□ [2]	▲ [2]	▲ [2]	▲ [2]		□			▲ [2]	4
Clean delivery	□	□		□ [2]	□ [2]	±	▲ [2]	±		□		□ [2]	□ [2]	1
Antibiotics for neonatal sepsis				□ [2]	□ [2]	±	±			□			□ [2]	0
Newborn resuscitation	▲	□		□ [2]	□ [2]	±	±			□			□ [2]	1
Antenatal steroids				□ [2]	□ [2]		±							0
Newborn temperature	▲	□		□ [2]	□ [2]		±			□			□ [2]	1
Nevirapine/replacement feeding		±	□	□ [2]	□ [2]	▲ [2]	±				□ [2]	□ [2]	□	1
Water/Sanitation														
Water (purification)		□ [4]	▲ [3]			▲	▲				▲		▲	5
Sanitation		□ [4]				▲ [2]	□ [2]							1
Hygiene (Behavior Change Communication)		▲		▲	▲	□	□ [2]			±				3
Total ▲s[5]	**8**	**10**	**9**	**8**	**4**	**12**	**7**	**8**	**4**	**8**	**6**	**6**	**11**	

[1] Data were collected through 1) interviews with Mission health officers; 2) data collection sheets sent to Missions; 3) *USAID Malaria Programs in Africa 1998-2003*. April 2004. Washington: USAID/AFR/SD; 4) *Health and Family Planning Overiview*. July 2002. USAID/AFR/SD. In some cases data did conflict. As such, this table should be reviewed by Missions for accuracy and changes should be reported to USAID/AFR/SD.

[2] Other international organization also provides support

[3] Through IMCI only

[4] Support during natural disasters

[5] Total = Number of national scale interventions by country and by intervention areas

** IMCI should include support and training for effective treatment of pneumonia, diarrhea, and malaria

Table 22

USAID Child Health Program Delivery Strategies Implemented by Country Missions[1]

▲ = USAID Major support
□ = USAID Selective support
● = USAID Limited support

USAID Mission CH Strategies	Benin	Eritrea	Ethiopia	Ghana	Guinea	Madagascar	Malawi	Mali	Nigeria[4]	Senegal	Tanzania	Uganda	Zambia	Total ▲&□[5]
USAID National Policy Focus														
Immunizations	▲		▲	▲	▲	▲					▲	▲	▲	8
IMCI	▲	▲	▲			▲				▲				5
Nutrition	▲		▲	▲		▲			▲	▲		▲	▲	8
Malaria	▲	▲		▲		▲	▲		□	▲	▲	▲	▲	10
Neonatal	▲			▲						●	▲			3
Water (treatment product)						▲	▲						▲	3
Pharmaceuticals (other than malaria)		▲	▲			▲			□				▲	5
Delivery approaches or general policy	▲			▲			▲		□		▲	▲		6
Sub-total	6	3	4	5	1	6	3	0	4	3	4	4	5	
Systems Improvements														
HMIS		□	□		□	□	□					□	□	7
Pharmaceutical and supply quality and management		□	□	□		□	□		□	□			□	8
Quality improvement/supportive supervision		□			□	□	□				□	□	□	7
Financing health services			●	●	●	●	●		●	●		●		
Sub-total	0	3	2	1	2	3	3	0	1	1	1	2	3	
Human Resources Related														
HR assessment or management														
Training -- short term or in-service	▲	▲	▲	▲	□	▲	□		□			□	□	10
Training -- pre-service		□	□	□	□	▲							□	6
Work with private providers (non-social marketing)				●	●	●	●		●	●	●	□	●	1
Sub-total	1	2	2	2	2	2	1	0	1	0	0	2	2	
Communications and Community Approaches														
Communications- innovative or at scale			▲	▲	□	▲	●	▲[2]	□	□			▲	8
Community mobilization/outreach		▲	▲	▲	□	▲	●	▲[2]	□	□			▲	9
Sub-total	0	1	2	2	2	2	0	2	2	2	0	0		
Total ▲&□[5]	7	9	10	10	7	13	7	2	8	6	5	8	10	

[1] Data were collected through interviews with Mission health officers - October 2003-January 2004. In some cases data were not clear. As such, this table should be reviewed by Missions for accuracy and changes should be reported to USAID/AFR/SD.
[2] National coverage achieved by joint planning and partnering with other international organization
[3] Collaboration with one donor only
[4] Because Nigeria is so large, the Mission works only in selected states
[5] Total and sub-total reflect unweighted sums of all cells within the category

F. Child Survival Funding

Since the mid-1980s USAID and other donors have invested significant resources to assist African countries address some longstanding causes of infant and child death. The level of USAID child survival funding during the last decade has declined, however, reflecting stringent budget limitations and the rise of new priorities, especially HIV/AIDS. This section is divided into six parts:

- Sources of USAID child health funding
- Child Survival and Health Account (CSHA) funding overview for Africa and in 25 USAID-assisted countries 1999–2004
- CSHA funding trends in the 13 focus countries
- Other USAID child health funding: Child Survival and Health Grants Program (CSHGP)
- Relationship among USAID child survival funding, population, and child mortality
- Other partner resources.

1. Sources of USAID Child Health Funding

USAID financial support for child health activities comes from several funding accounts and mechanisms. The most important are the Congressionally-earmarked Child Survival and Health Account (CSHA), also called the Child Survival and Health Program Fund, and the PL 480 Title II Program.

USAID/Washington allocates resources from the CSHA to Missions and to Washington Central and Regional Bureaus. Most Mission-funded child health activities in Africa are funded from the CSHA account. African countries also benefit from CSHA funds that support child health programs carried out by private voluntary organizations (PVOs)/ nongovernmental organizations (NGOs) under the Child Survival and Health Grants Program (CSHGP). Finally, CSHA resources support a variety of centrally funded projects such as ARCH, BASICS, CHANGE, LINKAGES, SARA, and others. Funding trends of child health activities in Africa through Missions and PVOs are discussed further below.[104]

The Title II food assistance program also supports maternal and child health activities in many countries, including but not limited to targeted feeding programs and emergency relief, through PVOs. This review focuses on the two largest USAID child survival funding sources for Africa—CSHA support to Missions and the CSHGP—and briefly discusses other donor contributions to child health.[105]

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[104] Because centrally funded projects tend to receive funds from other accounts as well as CSHA, to support activities beyond child health and to serve multiple regions, data on their child health expenditures in Africa are not readily available and are not included in this report.

[105] Ideally, the entire financial picture of child survival funding would be examined: government contributions, external donor support, and private sector expenditures to analyze the relationships between child health funding and program outputs and outcomes. Country expenditures for child health would be considered on a per capita basis and data would be disaggregated to reflect a country's internal geographic distribution of monies. Such complex analysis was not within the scope of this study. Nevertheless,

2. USAID CSHA Funding Overview—Total Funding for Africa and in 25 USAID-Supported Countries

The CSHA account for Mission funding is separated into three distinct categories: polio, micronutrients, and "primary causes." This review very briefly summarizes all three categories but focuses on the latter—the main category used to finance Mission child health programs. After an overview of funding for sub-Saharan Africa in the 25 countries that received such funding between 1999 and 2004, a more detailed analysis of 13 countries is presented.

Table 23 shows the changes in CSHA levels for Africa over the past six years.[106] Total CSHA funding for Africa declined from $106.4 million in 1999 to $78.3 million in 2004, a 26 percent reduction. Primary causes funding has declined less, but has been more erratic, shifting by as much as 21 percent from one year to the next. Funding reductions have obvious deleterious effects on programs. Perhaps less obvious, erratic funding levels can also create problems for program planners and managers who may need to alter plans to reflect those variations.

Table 23

CSHA Funding in Sub-Saharan Africa, 1999–2004
25 countries plus Africa regional offices and bureau
(US$ 000)

	1999	2000	2001	2002	2003	2004	Avg.
Primary Causes Funding [107]	67,368	71,400	56,302	63,900	56,528	60,059	62,593
Total Child Survival Funding (primary causes plus polio and micronutrients)	106,391	91,740	81,246	88,210	79,339	78,289	87,536

Table 24 provides data on the 25 sub-Saharan countries that received any USAID child survival funds in 1999 and 2004, and ranks them from those receiving the greatest increases in funding to those with the greatest decreases in funding. Thirteen countries had funding declines, most of them substantial; ten of 13 declined by 42 percent or more.

Six of the 12 countries with funding increases could be considered "post-conflict" or "transitioning" countries and had significant increases: Sudan (1200%), Democratic

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information about USAID child survival funding can provide some insight into programming history and options for the future. Within USAID, it would again be desirable to have a tally of resources from all sources that contribute to child health: malaria, immunization, nutrition, etc. However, such data are not readily available in a format that allows aggregation. The authors believe that CSHA and CSHGP provide a reasonable proxy for the overall level of USAID support to child survival in Africa.

[106] Funding from 1999–2004 actually covers a six-year period.

[107] Annex C shows primary cause funding each year from 1999-2004 for all 25 countries.

Republic of Congo (200%), Angola (100%), Rwanda (100%), Liberia (76%), and Nigeria (28%). Guinea, Madagascar, Malawi, Zambia, Tanzania,[108] and Ethiopia also experienced some increase in funding. Regional offices experienced major funding decreases (75–80%).

Table 24

Percent Change in CSHA Primary Causes Funding, 1999–2004
Ranked by greatest increase to greatest decrease in funding

Rank	Country	FY 1999 Primary Causes (US $000)	FY 2004 Primary Causes (US $000)	% Change 1999–2004	Notes
1	Sudan	500	6,500	1200%	Funding began in 2001
2	Malawi	255	1,800	606%	
3	DROC	1,800	5,400	200%	
4	Rwanda	499	1,000	100%	
5	Angola	600	1,200	100%	
6	Liberia	682	1,200	76%	
7	Zambia	2,750	4,000	45%	
8	Madagascar	1,820	2,350	29%	
9	Nigeria	2,351	3,000	28%	
10	Guinea	1,780	1,950	10%	
11	Tanzania	2,400	2,500	4%	
12	Ethiopia	4,121	4,150	1%	
13	Mali	2,825	2,800	-1%	
14	Ghana	2,878	2,400	-17%	Funding began in 2002
15	Senegal	3,000	2,150	-28%	
16	Uganda	3,441	2,000	-42%	Funding began in 2003
17	South Africa	3,550	2,000	-44%	
18	Burundi	400	200	-50%	
19	Kenya	2,062	1,000	-52%	
20	Mozambique	6,250	3,000	-52%	
21	Benin	2,300	1,000	-57%	
22	Sierra Leone	234	100	-57%	
23	Eritrea	4,649	1,400	-70%	
24	Somalia	900	100	-89%	
25	Burkina Faso	625	0	-100%	Program terminated in 2000
	Regional				
	REDSO/E	3,952	1,000	-75%	
	WARP	3,485	700	-80%	
	Africa Regional/SD	8,393	5,159	-39%	
	TOTAL	67,368	60,059	-11%	Only includes countries that were funded in 1999

[108] Tanzania was initially allocated only $500,000 for primary causes in 2004, a decrease in funding of close to 80 percent. However, as a result of effective advocacy on the part of AFR/SD, Tanzania received an additional $2 million.

3. USAID CSHA Funding Trends—13 USAID-Supported Focus Countries

The SARA team examined primary cause CSHA funding in more detail for the 13 focus countries, including:

- Total funding
- Trends over time
- Expenditures per child
- Earmarking

a. Total CSHA funding—13 countries

Table 25 shows that between 1999 and 2004, USAID Missions in the 13 focus countries received $198.9 million ($33.1M/year) for child survival from the CSHA. The amount per country for this six-year time period averaged $15.3 million, ranging from a low of $7.8 million in Malawi to a high of $24.4 million in Zambia. The average level of funding/country/year was $2.6 million. The total annual death toll for children under five in these 13 countries is approximately 2.4 million.

Table 25

Cumulative CS Primary Cause Funding in 13 Focus Countries, 1999–2004

Ranked from most to least funding

Countries	Funding ($ US Millions)
Zambia	24.4
Nigeria	21.4
Mali	19.3
Ethiopia	17.9
Ghana	17.7
Eritrea	14.9
Tanzania	14.3
Uganda	14.0
Madagascar	13.3
Senegal	12.9
Guinea	11.6
Benin	9.3
Malawi	7.8
Total	198.9

b. Trends over time—13 countries

CSHA funding for primary causes in the 13 focus countries, like total CSHA funding for Africa, is trending downwards. Funding in those countries fell from $34.7 million ($2.7M/country) in 1999 to $29.5 million ($2.3M/country) in 2004, a 15 percent decline. This average decline hides the wide disparity among countries.

The data show that child survival programs in some countries almost ceased. Eritrea, Benin, and Uganda had the greatest funding reductions. In Eritrea the Mission officer is concerned about losing the coverage gains made thus far. Benin and Uganda have reduced the scope of their child health programs and coverage rates have improved minimally if at all.

Table 26 compares 1999 and 2004 CSHA funding to the same 13 countries. The table also shows that several countries (e.g., Guinea, Madagascar, Malawi, Nigeria, and Zambia) have experienced significant increases in funding. However, the large percentage increases reflect the small base from which they started.

These data suggest a number of issues to USAID decision makers. For example, can USAID maintain credible child survival programs in countries with these reduced funding levels? Will USAID's severe reduction in funding (70%) for Eritrea inhibit that country's ability to maintain its child survival gains? How should countries respond to the fluctuations in funding levels?[109]

Table 26

CSHA Primary Cause Funding for Six Years, 1999 and 2004—13 Focus Countries

Countries	1999 (US $000)	2004 (US $000)	Change (US $000)	Change (%)
Malawi	255	1,800	1,545	606%
Zambia	2,750	4,000	1,250	45%
Madagascar	1,820	2,350	530	29%
Nigeria	2,351	3,000	649	28%
Guinea	1,780	1,950	170	10%
Tanzania	2,400	2,500	100	4%
Ethiopia	4,121	4,150	29	1%
Mali	2,825	2,800	-25	-1%
Ghana	2,878	2,400	-478	-17%
Senegal	3,000	2,150	-850	-28%
Uganda	3,441	2,000	-1,441	-42%
Benin	2,300	1,000	-1,300	-57%
Eritrea	4,649	1,400	-3,249	-70%
Totals	34,570	29,552	-5,018	-15%
Averages	**2,659**	**2,273**	**-386**	**-15%**

[109] Illustrative of the funding crisis and a "worst case" example is Tanzania, one of the countries with the highest total number of under-five deaths (one-quarter of a million deaths of children under the age of five). Tanzania, before the recent 2004 increase in allocation, had the greatest funding reduction (77 percent) of any of the 13 countries, had the lowest average per capita funding of any of the 13 countries, and initially was allocated only $0.5 million in 2004—the lowest amount of child survival USAID funding for any sub-Saharan country. While the funding increase merits applause, the case illustrates the funding crises suffered by many countries.

c. CSHA expenditures per under-five child—13 countries

Expenditures per child are, for many purposes, more informative than figures for total expenditures per country. Table 27 provides USAID CSHA funding data divided by number of under-fives in each country.

Table 27

Average Annual CSHA Primary Causes Funding Per Child in 13 African Countries 1999–2004

Ranked by average annual funding

Country Rank by Total CSHA Funding	Countries	Average annual funding (US $000)	Average Under-five Population (1999–2004)[110]	Average Annual CSHA Funding Per Child ($US)	Country Rank by Funding Per Child
1	Zambia	4,070	1,497,974	2.33	2
2	Nigeria	3,572	21,791,066	0.16	13
3	Mali	3,221	2,129,553	1.52	3
4	Ethiopia	2,987	11,079,554	0.27	11
5	Ghana	2,956	2,273,156	1.11	7
6	Eritrea	2,477	754,470	3.30	1
7	Tanzania	2,398	5,889,313	0.30	11
8	Uganda	2,329	4,207,584	0.48	10
9	Madagascar	2,236	2,493,854	0.77	8
10	Senegal	2,151	1,436,240	1.32	4
11	Guinea	1,941	1,548,807	1.24	6
12	Benin	1,557	1,244,777	1.25	5
13	Malawi	1,260	2,074,672	0.60	9
	Total		58,421,020	0.57[111]	

Table 27 shows that annual CSHA funding per under-five child ranges from $3.30 in Eritrea to $0.16 in Nigeria. The average expenditure per under-five child in the 13 countries is $0.57. The dramatic differences between the ranking of countries by total CSHA funding (column on the far left) and the ranking of countries by funding per child (column on the far right) suggests that population size is not a dominant determinant of

[110] Dividing the total country funding over the six years by the 2004 population would have yielded inaccurate results. Thus, to estimate funding per under-five child, the SARA team divided the funding in each year of the six-year period by the reported population in that year, and then averaged the results. Average population is presented here only to give the reader an idea of the current under-five population in each country. Population data obtained from U.S. Census Bureau, International Data Base.

[111] This figure is a weighted average (i.e., not a simple average of the country figures).

budget allocations. The data presented in Table 27 suggest that countries with larger populations tend to receive less funding per capita or per under-five child. For example, the four countries with the largest under-five populations—Nigeria, Ethiopia, Tanzania, and Uganda—all received less than $1 per under-five child. Nigeria is second in overall funding, but lowest in funding per under-five child. Eritrea, sixth in terms of overall CSHA funding, receives 42 percent more per capita than Zambia, the country with the next highest expenditure per child.

Table 28 groups the 13 countries into three categories based on the level of USAID funding per under-five child. It shows the six countries that received less than $1 per under-five child (the four countries just mentioned plus Madagascar and Mali) represent more than 81 percent of the total under-five population in the 13 countries, but received only 48 percent of USAID funds. The seven countries that received more than $1 per under-five child (the middle and upper groups combined) received 52 percent of the funds and represent only about 19 percent of the target population.

Table 28

Average Annual USAID CSHA Funding/Capita, 1999–2004

13 focus countries

Average Annual Per Capita Expenditures	Countries (in order of most to least funding/capita)	Total and percent of Under-Five Population by Group	Percentage of Total Funds
Highest Funding $2.00–$3.30	Eritrea, Zambia	2,252,444 3.9%	19%
Mid-level Funding $1.00–$1.99	Mali, Benin, Senegal, Guinea, Ghana	8,632,533 14.8%	33%
Lowest Funding $0.14–$0.99	Madagascar, Mali, Uganda, Ethiopia, Tanzania, Nigeria	47,536,043 81.4%	48%

Table 29 shows that the number of interventions being implemented at scale is positively related to the level of per capita USAID funds: three of the countries with the highest levels of USAID per capita funding (Zambia, Ghana, and Eritrea) implement among the highest number of interventions. However, outliers (Mali, Guinea, and Senegal) exist where this relationship does not pertain. Some countries with lower levels of funding such as Madagascar, which received less than $1.00 per capita in USAID funds, and Ethiopia, which received only $0.22 per capita, are able to implement a large number of interventions despite their more limited resources. This aggregate analysis suggests that USAID Missions should reassess more systematically what they can accomplish with their resources and by partnering with others.

Table 29

USAID CS Funding Compared to CS Interventions Implemented at Scale by USAID Missions

Rank ordered from highest to lowest per child funding, 2002*

Rank	Country	Under-Five Population (2002)**	USAID Primary Causes Funds ($000) (2002)***	Total USAID CSHA Funds per Under-Five Child (2002)	Total # CS Interventions at scale
1	Eritrea	759,820	2,300	3.03	10
2	Zambia	1,755,205	4,300	2.00	11
3	Mali	2,155,179	3,600	1.67	8
4	Ghana	2,626,955	3,500	1.33	15
5	Guinea	1,564,702	2,000	1.28	5
6	Senegal	1,687,608	2,100	1.24	8
7	Benin	1,259,592	1,550	1.23	9
8	Madagascar	2,947,528	2,500	0.85	12
9	Malawi	2,100,358	1,200	0.57	7
10	Uganda	4,939,361	2,200	0.45	7
11	Tanzania	5,957,005	2,400	0.40	6
12	Ethiopia	11,152,750	2,417	0.22	9
13	Nigeria	22,028,830	3,550	0.16	4

* UNICEF, *State of the World's Children*, 2004.
** U.S. Census Bureau, International Data Base (IDB), http://www.census.gov/ipc/www/idbnew.html [accessed April 1, 2004].
*** USAID New Obligating Authority (NOA) and Sector Control Sheets (1999–2004).

d. Earmarking—13 countries

Resource allocation for child health is an extremely complicated process that reflects Congressional earmarking and decisions internal to USAID. Earmarking can be helpful in providing and guarding resources for critical health needs as it did for child health in the 1980s. More recently, funding earmarks for HIV/AIDS, malaria, and micronutrients have moved those efforts forward.

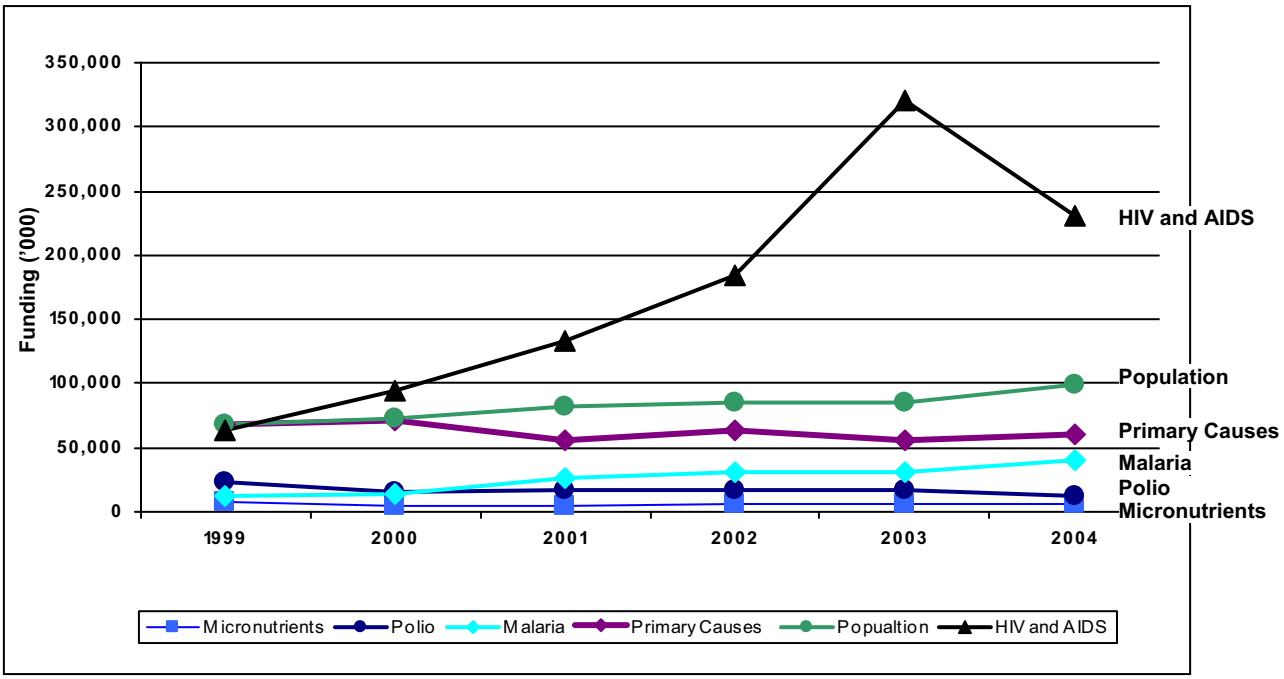
Congressional earmarks are a major, many would argue dominant, factor in USAID health programming. From 1999 to 2004 as child survival funding declined, USAID funding for HIV/AIDS in sub-Saharan Africa increased (over 260%). Funding for population activities rose (46%) and funding for malaria increased significantly as it became a new focus in Africa. Graph 15 presents the overall trend lines and Annex C presents the USAID health funding profiles for each of the 13 focus countries in this review.

Earmarking can have unintended negative effects. For example, Congress' earmarking of health funds for child health and for disease-specific activities (e.g., polio, malaria, and HIV/AIDS) can only be used to support activities in those areas. Since earmarks for

specific health problems are independent from decisions about the level of USAID resources going to each country, the disease-specific earmarks may not match a country's health problems. Almost all interview respondents noted that earmarks greatly complicate Mission efforts to respond to their country's disease profile and health priorities. For example, in 1999 and 2004, funding earmarked for polio in Ethiopia accounted for almost half of all USAID child health funds (40%), even though polio was not a health problem there. Senegal, another example, has an HIV prevalence of close to 1 percent, an infant mortality rate of approximately 70 (according to the 2000 DHS), and a maternal mortality rate of 540, yet much of the Mission's operating budget is currently for HIV/AIDS (40%)[112]. While not focused specifically on Africa, the supplement to the Analytic Review of IMCI confirmed that financing for HIV and AIDS far exceeded funding for child health even in low-prevalence countries.[113]

Graph 15

Health Program Funding in Sub-Saharan Africa, 1999-2004



The multiplicity of earmarks also complicates programming. One interviewee cited 10 different earmarks when programming the Mission's health portfolio. Timing is also an issue; when earmarked funds become available rapidly—even when the shifts in priorities are reasonable from a health perspective—both Missions and countries experience undue management pressure to respond hastily with programs.

[112] Source: e-mail correspondence from HPN officer in Senegal

[113] Picazo, Oscar et al., *Child Health Financing and Cost-Effectiveness: Supplement to the Report on the Analytic Review of IMCI*, p. 2.

The availability of rapidly increased funding for a single issue such as HIV/AIDS creates huge new demands on USAID, NGO, contractor, and host country health professionals. Zambia, for example, experienced enormous funding increases for HIV/AIDS (429%) and malaria (300%). When this occurs, new activities need to be designed quickly, and ongoing activities are likely to lose staff and financial resources. Scarce Mission management and technical resources are diverted into programming these new resources. The rapid shift in priorities can also confuse host country officials and health professionals with whom the Mission may have spent years to convince and prepare for a program no longer in favor. This diminishes USAID's credibility and creates tensions that make further collaboration more difficult.

Some HPN officers have found opportunities to program earmarked funds in ways that maximize overall health sector performance. More flexibility within sub-earmarks, ability to match funding with country needs and objectives, and more resources for child health in Africa would all significantly improve country programming. While USAID must respond to new emergencies like HIV and AIDS, resource shifts should consider the existing and planned efforts of the host country and other donors within the context of the national health profile.

4. Other USAID Resources for Child Health—Child Survival and Health Grants Program

To encourage and strengthen NGO programs in child health, Congress mandated in 1985 that USAID create a mechanism to enhance PVOs' participation in reducing infant, child, and maternal mortality in developing countries. Thus, USAID created the Child Survival and Health Grants Program (CSHGP) managed in Washington by the Bureau for Global Health. Worldwide, the program finances more than 340 child survival projects in 44 countries; more than 35 PVOs participate. Grants range in duration from three to five years.

Most countries received three or four grants each for an estimated total of $80 million ($11.4M/year) during this time period. Graph 16 shows the relationship between CSHGP and CSHA funds. Of the 13 focus countries, Ethiopia and Malawi had the greatest number (seven grants each) and total amounts. Annex C presents the annual funding figures from both of these sources for the period 1999–2004.

Table 30

Child Survival Health Account (CSHA) Funding and Child Survival and Health Grants Program (CSHGP) Funding, All Sub-Saharan African Countries Receiving CSHGP Grants, 1999–2004

Ranked by CSHGP funding

Country	Total CSHGP Funds (1999–2004) US ($000)	Total CSHA Primary Causes Funding (1999–2004) US ($000)	Total Country CS Funding[114] (CSHGP and CSHA Funds) (1999–2004) US ($000)	CSHGP Funds as a % of Total Country CS Funding
Focus Countries				
Malawi	6,571	7,561	14,132	46%
Ethiopia	5,404	17,919	23,323	23%
Madagascar	4,129	13,413	17,542	24%
Mali	4,115	19,325	23,440	18%
Senegal	3,863	12,908	16,771	23%
Guinea	3,526	11,648	15,174	30%
Zambia	3,394	24,420	27,814	12%
Uganda	3,072	13,976	17,048	18%
Ghana	2,436	17,738	20,174	12%
Benin	1,551	9,342	10,893	14%
Tanzania	1,340	14,390	15,730	9%
Eritrea	0	14,859	14,859	0%
Nigeria	0	21,431	21,431	0%
Sub-total	39,401	200,294	239,695	16%
Non-focus countries				
Mozambique	8,304	23,222	31,526	26%
Rwanda	6,545	5,996	12,541	52%
Kenya	5,438	8,512	13,950	39%
South Africa	4,598	14,225	18,823	24%
Cameroon	2,342	0	2,342	N/A
Congo	1,040	29,128	30,168	3%
Sierra Leone	1,586	334	1,920	83%
Burkina Faso	1,417	625	2,042	69%
Niger	294	0	294	N/A
Angola	1,109	8,287	9,396	12%
Sub-total	32,673	90,329	123,002	27%
Total	**72,074**	**290,623**	**362,697**	**20%**

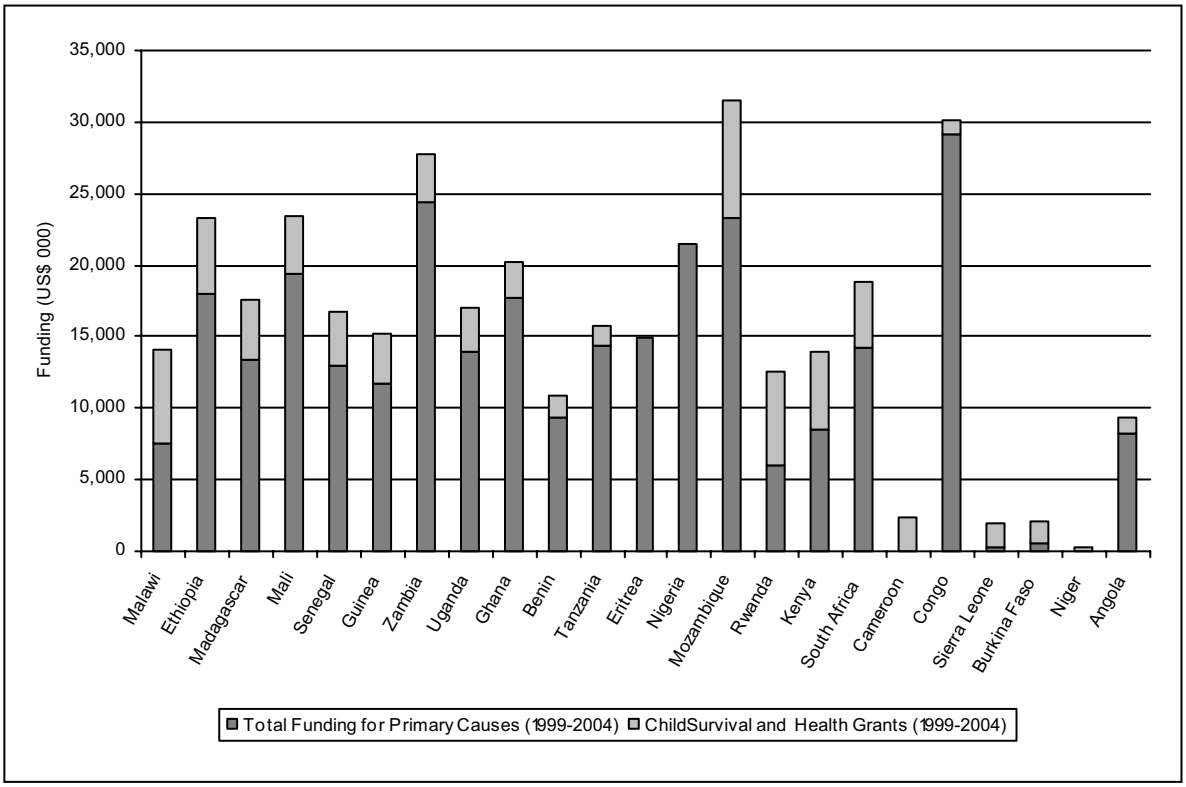
[114] Excluding centrally funded projects

Findings – Funding

Table 30 and Graph 16 illustrate that CSHGP funds are important resources for child health in many USAID-supported African countries. Overall the CSHGP accounts for one-fifth of total country child survival funding in 23 sub-Saharan countries receiving such funding between 1999 and 2004.[115] Indeed, in some years in some countries, more funding came from the CSHGP than from CSHA primary causes funding. In countries in conflict, CSHGP monies are often the only source of USAID support for child health. Even in countries with higher levels of CSHA funding, child survival grants contribute significantly to child health. The graph below illustrates the relationship between the CSGHP and the CSHA funding for all sub-Saharan countries receiving such funding during the time period.

Graph 16

Total Funding for Primary Causes, 1999–2004 vs. Child Survival and Health Grant (CSHGP), 1999–2004



Despite the prominence of CSHGP funding, most Missions report weak linkages with the CSHGP in their countries. Only Ethiopia and Guinea use these grants specifically to support the Mission's health strategy or reach child mortality reduction objectives. In Guinea, the bilateral child survival efforts are very closely coordinated and matched with the grants to NGOs whose contribution is considered essential to child health

[115] Child survival funding is defined here as total primary causes funding and total CSHGP funding between 1999 and 2004.

accomplishments. In other countries NGOs receive grants to address service provision in isolated areas but are not considered strategic partners, and the grants operate quite independently of Mission efforts. In a number of countries successful grants that have made significant contributions to child health have not received renewed funding. These types of USAID funding allocation and program decisions contribute negatively to NGO child health activities' ability to go to scale and become sustainable.[116]

5. Relationship among USAID Funding, Population, and Mortality Figures

The SARA team explored whether USAID country funding levels are correlated to levels of mortality or to numbers of the under-five population. Table 31 provides the data for these variables in 2002 for the 13 focus countries.[117] The data show no apparent or consistent relationship between under-five mortality and funding allocations in these countries. Some countries with high rates of mortality or high total deaths receive relatively "high" per capita funding (Mali, Zambia, Guinea), but others with equally high levels of mortality receive considerably lower levels of funding (Malawi, Nigeria, Ethiopia, Tanzania).

[116] Picazo, Oscar et al., *Child Health Financing and Cost-Effectiveness: Supplement to the Report on the Analytic Review of IMCI*, p. 6.
[117] The SARA team chose 2002 after it analyzed the six-year average funding figures and discovered that this year was a good proxy for the average funding for the six-year period (1999–2004).

Table 31

USAID Primary Cause Funding Levels Compared to Under-Five Population, Under-Five Mortality Rates, and Total Deaths in 13 Selected Sub-Saharan African Countries, 2002

Ranked by under-five mortality rate

Country	Under-Five Population (2002)**	Under-Five Mortality Rate (2002)*	Total Deaths (2002)*	Total Deaths Rank Order	USAID Primary Causes Funds ($000) (2002)***	Total USAID funds per Under-Five Child (2002)	Rank Order of Per Capita Funding (Highest to Lowest)
Mali	2,155,179	222	140,000	5	3,600	1.67	3
Zambia	1,755,205	192	93,000	7	4,300	2.00	2
Malawi	2,100,358	183	96,000	6	1,200	0.57	9
Nigeria	22,028,830	183	872,000	1	3,550	0.16	13
Ethiopia	11,152,750	171	504,000	2	2,417	0.22	12
Guinea	1,564,702	169	61,000	9	2,000	1.28	5
Tanzania	5,957,005	165	236,00	3	2,400	0.40	11
Benin	1,259,592	156	43,000	11	1,550	1.23	7
Madagascar	2,947,528	136	96,000	6	2,500	0.85	8
Uganda	4,939,361	141	180,000	4	2,200	0.45	10
Senegal	1,687,608	138	51,000	10	2,100	1.24	6
Ghana	2,626,955	100	66,000	8	3,500	1.33	4
Eritrea	759,820	86	4,000	12	2,300	3.03	1

* UNICEF, *State of the World's Children*, 2004.
** U.S. Census Bureau, International Data Base (IDB), http://www.census.gov/ipc/www/idbnew.html [accessed April 1, 2004].
*** USAID New Obligating Authority (NOA) and Sector Control Sheets (1999-2004).

Obviously, factors other than the mortality rate, total deaths, and the size of the under-five population go into USAID decision-making about resource allocations. For example, Nigeria's relatively low per capita funding level may reflect the fact that it receives oil revenue and that its child mortality problem is so large that it could easily absorb the entire USAID child health budget for sub-Saharan Africa. Some very small countries (e.g., Eritrea, Benin, and Guinea) may require higher funding/capita levels because the size of USAID intervention programs is such that they cannot achieve the economies of scale of programs in their larger neighbors. While these and other factors rightly influence resource allocation decisions, USAID should also periodically review the relationship between funding and mortality rates to consider this variable in allocation decisions explicitly.

Many factors influence performance on child survival indicators. Interestingly, in general, those countries that enjoyed increased USAID funding (or fewer cuts in funding) have maintained or improved their child mortality rates. (See Table 32.) For example, of the 13 focus countries, those that significantly reduced infant and child mortality over the past 10 years (Guinea, Madagascar, Malawi, and Zambia) are among those that received

the largest percentage increase in USAID child survival funding.[118] One outlier, Eritrea, experienced the greatest mortality reduction (even with a 70 percent funding decline), but had the highest per capita USAID expenditure on child health of any sub-Saharan country.

Table 32

Changes in USAID Funding and Changes in Mortality between 1999 and 2004

25 African countries ranked by change in USAID child survival funding

Rank	Country/Program*	% Change in Funding	% Change in Infant Mortality
1	Sudan	1200%	-18%
2	Malawi*	606%	-19%
3	DROC	200%	1%
4	Rwanda	100%	30%
5	Angola	100%	-11%
6	Liberia	76%	0%
8	Zambia*	45%	-16%
9	Madagascar*	29%	-10%
10	Nigeria*	28%	45%
11	Guinea*	10%	-23%
12	Tanzania*	4%	7%
13	Ethiopia*	1%	-5%
14	Mali*	-1%	-4%
15	Ghana*	-17%	-10%
16	Senegal*	-28%	-10%
17	Uganda*	-42%	3%
18	South Africa	-44%	9%
7	Burundi	-50%	-2%
19	Kenya	-52%	17%
20	Mozambique	-52%	-2%
21	Benin*	-57%	-4%
22	Sierra Leone	-57%	-10%
23	Eritrea*	-70%	-32%
24	Somalia	-89%	6%
25	Burkina Faso	NA	17%

* 13 Focus Countries

Questions of economic growth and political stability are often dominant factors in explaining changes in health status, influencing the ability of the government, USAID, and other donors to implement programs. Other donor contributions (not factored into this analysis) also influence outcomes. Notwithstanding these caveats, the data suggest that changes in USAID child survival funding, modest as the amounts seem, may influence the child mortality results achieved.

[118] USAID funding is clearly only one of several factors that affect progress on infant and child mortality. Guinea and Zambia, for example, are among the sub-Saharan Africa countries that have the highest total per capita spending on health.

6. Other Partner Resources and Donor Collaboration

Although this study's scope did not permit determining the amount of funding available for child health from other donor partners,[119] interview responses suggest these sources are important for child health programs, as is donor collaboration to achieve common objectives. The Supplement to the Report on the Analytic Review of IMCI[120] indicated general weakening of support for "dedicated" funding of child health interventions from approximately FY94 to FY00. Among six major donors, two showed declining resources for child health and the others seemed to lose their programmatic focus on child health and/or began supporting broader sector-wide approaches. The analytic review additionally pointed out that fragmentation of traditional disease-focused interventions and centralization of donor child health funds also reduced country-level resources. These factors underscore the need for coordination and partnerships to use existing resources more effectively at the country level. As noted in Section E, several country health officers gave examples of particularly effective programs that resulted when the host government assumed a leadership role and the donors collaborated to exploit their respective areas of strength. Co-funding of mutually defined programs contributed to more efficient and effective use of resources. Without African government leadership, donor politics can have an extremely negative impact on the effective availability of resources for child health.

Support for child health in sub-Saharan Africa is also potentially available through other funding streams (Highly Indebted Poor Countries [HIPC], Sector Wide Approaches [SWAps]), programmatic efforts (such as the Global Fund, The Global Alliance for Vaccines and Immunizations [GAVI], and Roll Back Malaria [RBM]), or "in kind" and financial support offered by partners such as WHO/AFRO. The private sector—especially large employer groups—is another potential resource for child health. Conceptually sector-wide programs should permit sufficient allocation to child health, but in practice child health programs are often given short shrift. Seeking to mobilize these resources, while essential, requires much health officer skill and management time.

The SARA team's interviews suggest that HPN officers are often aware of and seek to exploit opportunities to mobilize additional resources for child health. A number of HPN officers reported that they participate in joint programming activities with other donors. In Zambia, the Mission participated in basket funding that allowed USAID to have a seat at the table and advocate effectively for child health. The Madagascar program works with the World Bank and UNICEF in its new Marginal Budgeting for Bottlenecks (MBB) effort. Some Missions work actively with WHO/AFRO in IMCI or vaccination efforts. USAID Missions in Guinea, Nigeria, and Zambia have engaged private sector partners (e.g., ALCOA) in selected child health efforts. However, in most countries, HPN officers currently play a limited role in wider resource mobilization efforts for child health.

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[119] As donors use a considerable array of definitions, categories, and funding cycles, comparisons of donor funding often face a variety of methodological problems.

[120] Picazo, Oscar et al., *Child Health Financing and Cost-Effectiveness: Supplement to the Report on the Analytic Review of IMCI*, p.2.

7. Summary on USAID Funding of Child Survival

USAID and other donor funding for child survival decreased in Africa during the 1999–2004 period while health conditions in many countries worsened. The need for additional resources is clear. The decrease in funding seems to reflect, in part, the greater priority given to HIV/AIDS, polio, and malaria, although each contributes to child health. Earmarking and year-to-year funding variations further complicated USAID Mission programming for child survival. This review suggests the Missions that had clear goals and expectations and coordinated intensively with partners achieved better results. The financial data suggest that USAID might give greater consideration to mortality rates and total deaths in making resource allocation decisions for child health.

G. Program Constraints

Key informants from both Missions and Washington identified four major factors constraining the implementation of USAID country child health programs:

- the low priority given to child health by major donors
- the funding crisis in child health
- the human health resource crisis in Africa
- internal management challenges within USAID.

1. Priority of Child Health

In the 1980s child survival was the cornerstone of USAID child health programs and worldwide actions focused on reducing child mortality. Today child health is barely on country and donor radar screens. Africa in particular has suffered from this waning interest, contributing to the unacceptable situation described earlier in which one-tenth to one-third of African children die before they reach the age of one year. The Abuja Declaration and the establishment of the Millennium Development Goals alone have not been sufficient to jump start African nations into concerted action to reduce mortality.

a. Global interest in child survival

During the last two years, the low interest in child survival has led key child health leaders to create the Child Survival Partnership at the global level and the U.S. Coalition for Child Survival in the United States. These groups now are engaged in serious advocacy to stimulate new financing and focus on child health. Notably, the Gates Foundation is supporting some long-term staff positions to ensure the Partnership's continuity. The Partnership is mobilizing increased resources and commitments from donor partners and advocating for increased focus on approaches to reduce child mortality. Developing a common agenda among these partners would reduce competing donor priorities at country level. The U.S. Coalition is working with United States-based partners to gain commitment from Congress to increase resource flows for child health.

b. Country commitment to child health

This review highlighted the strong link between successful child health programs and ownership of and commitment to child health on the part of African leaders (Eritrea, Ghana, and Zambia). However, in many countries there is little or no commitment to child health on the part of governments, which translates into weak support for child health programs. In these countries USAID health officers have great difficulty moving programs forward.

c. USAID commitment to child survival

Child survival is no longer seen as an Agency priority. Missions frequently support other health issues rather than strategically addressing child mortality. Throughout this review, respondents recalled the days of Peter McPherson and the "twin engines." McPherson's mandate to place child survival at the top of USAID's priorities led to the first child survival revolution and had significant impact on the global reduction in infant mortality. USAID health officers describe a situation of searching for dollars to be able to

implement even modest program efforts. They cannot make their voices heard for child health. Better-endowed or successful Mission child health programs worry that the gains made in the last few years will be lost as they experience funding reductions in their programs.

The term "child survival" means many things to many people. As originally conceived, the term referred to a clear action plan to reduce child mortality. As USAID priorities shifted it has come to mean a funding source for general child health, a general category for helping children, or a mechanism to help other programs. For example, child survival monies have been used as the engine to drive support for HIV and AIDS, malaria, polio, measles, and health reform. As a result of this ambiguity, child survival now is considered a catchall rather than a strategic vision.

This equivocal concept of the term "child survival" was reflected in the way Mission officers described their child survival programs. Many review respondents said they had child survival programs, but a closer look at additional information revealed that these Missions lacked a clear child survival strategy. In other Missions, respondents claimed not to have a child survival plan, but closer analysis revealed evidence of a very clear child survival strategy.

2. The Funding Crisis in Child Health

Adequate resources are vital to achieve child survival results at scale. Unquestionably, the level of resources available for child health in Africa does not correspond to the enormity of need. As detailed in Section F, diminished USAID (and other donor) resources, earmarking constraints, and poor country-level coordination of internal USAID and partner resources seriously affect child health programming. Reduced and rapidly shifting funding levels in child survival as well as other areas of health complicates Mission programming and in-country responses. As noted in Section F, USAID bilateral funding for HIV and AIDS in sub-Saharan Africa increased by over 350 percent during the same period when primary cause child survival funding decreased 15 percent. Both field and Washington-based respondents believe that the Agency needs a turn-around, placing a clear priority on child health and survival. However, also needed are actions at the country level to better coordinate available resources.

3. Critical Challenges in Human Resources for Health

A critical factor affecting the delivery of health services and therefore health outcomes in Africa is the crisis in human resources for health (HRH). Country HPN officers and Washington-based key informants universally stated in the review that the HRH situation in Africa, in addition to the child survival funding crisis, is the chief barrier to delivering services and effective interventions. Qualified health professionals are often unavailable where they are needed. Decentralization efforts have added to the crisis because capacity building usually has not been intrinsic to the process. The quality of care that health workers provide is often poor. If health efforts are to be scaled up, then qualified providers are required where people need the care. The key areas identified by the SARA

team include undertaking a more systematic diagnosis/approach to the HRH crisis, addressing key issues in short-term and basic training for child health of health professionals, and engaging the private sector.

a. Situation analysis

The causes of the HRH crisis are multiple. For example, the HIV epidemic has decimated the ranks of health professionals in many countries. In most countries professionals migrate within Africa and to the "North." Structural adjustment and its concomitants are also perceived to have had distorting effects on manpower availability. Key informants mentioned a host of factors contributing to the HR crisis:

- The depletion of health professionals by the HIV and AIDS epidemic
- Rural-urban inequities in staff deployment
- Internal and external migration of health professionals
- Inadequate civil service structures
- Non-existent or weak career ladders
- Low worker morale related to poor incentives, including poor remuneration
- Legal barriers to professional practice that limit services rendered
- Poor management of public sector health human resources, such as deployment and categories of personnel
- Lack of management capacity for delivering services
- Poor quality of basic health professional education
- Disparity between the population's need and the education and skills learned
- Lack of viable, sustainable continuing education approaches.

Donors have tended to shy away from systematically tackling human resource issues such as staff recruitment, retention, deployment, and quality of services because these issues seem daunting. While civil service reform is indeed too large for donor health programs, USAID and other donors have begun to support some focused initiatives. At the country level, WHO/AFRO and some USAID health programs have begun to address elements of the crisis.

In Ethiopia, the USAID Mission is supporting efforts to improve teaching methods and curricula in medical schools. WHO/AFRO is implementing a major initiative in its IMCI program to introduce correct child treatment concepts into pre-service curricula of all medical schools in Africa. Ethiopia and Ghana have created a new level of health worker to situate and keep health workers in rural areas. In Zambia, USAID has worked at the policy level to change legal practices so that mid-level professionals can offer needed services. Uganda's Yellow Star system of rewarding health facilities for their performance on pre-determined standards helps motivate health workers to improve service quality. Madagascar and other countries have used paycheck distribution days as an opportunity to provide continuing education courses, thereby reducing travel costs for staff and establishing a more sustainable approach to in-service education. USAID has also co-hosted a workshop to determine the feasibility of strengthening schools of public health to improve health management skills in sub-Saharan Africa. While each of these efforts is meritorious, a more strategic look at each country's key needs and selection of interventions are needed.

b. Short-term training and pre-service training

Presently USAID and other donors invest substantial resources (millions of dollars) in short-term training to improve health service delivery, communication approaches, and health management.[121] A few Missions have begun to take the position that frequent, seemingly endless rounds of short-term training are an ineffective and inefficient way to instill needed skills. (See Box.) Instead, they argue for reform of basic clinical education of physicians and other health workers to reduce and rationalize the need for short-term training.

These Missions are now supporting improvements in pre-service training. Most seem to have taken measures to enhance curricula in child health. As noted, partners such as WHO are also beginning to address the basic clinical education of physicians and other health providers in selected countries in matters of public health concern. A few USAID Missions have tried to influence training programs to incorporate practical experience into their teaching methods. Eritrea, Ethiopia, Ghana, and Madagascar have improved curricula and Eritrea, Ethiopia, and Ghana are improving teaching methods. Other programs highlight management skills particularly with the advent of decentralization policies in nearly all countries. Even though pre-service health professional education is a long-term issue, these actors believe that it is more cost-effective than short-term training as currently conducted to improve skills and performance of health personnel.

[121] Picazo, Oscar and Huddart, Jenny, *The Health Sector Human Resource Crisis in Africa: An Issues Paper*. February. Washington: USAID/AFR/SD, pp.16–17, 2003.

Short-term Training Shortcomings

Donor resources for training are substantial but poorly coordinated. For example, a study showed that donors spent over $4.5 million in Malawi for training activities in one year. Most of this training was short term. Extrapolating this amount to other countries gives an idea of the sizeable investments made in training. The current picture of donor-supported, short-term training reveals a number of shortcomings. Such training

- Does not reach all health care providers
- Is not integrated into a coherent continuing education system
- Does not usually help strengthen local or regional institutions (because cooperating agencies or outside consultants supply it)
- Often provides no follow up to ensure that learned skills are applied and is not linked with a broader system of quality improvement
- Does not always build on prior learning or provide ongoing methods to update skills
- Disrupts service provision (because it is usually off-site)
- Focuses on technical information and disease rather than management and administrative skills such as planning, finance, administration, or human resources
- Is often knowledge based rather than action based
- Contributes to system "dislocations" (duplication, gaps, targeting of the same people for multiple courses, competing donor per diem schemes) because it is rarely coordinated among donors.

What is missing in current USAID and donor support to training is a systems approach to identifying priority actions and coordinating with one another. A coordinated donor approach to improve both pre-service and in-service training in critical child health issues will reduce duplication and fill critical gaps and contribute greatly to long-term improvements in Africa's human resource situation.

c. Engaging the private sector in the delivery of appropriate child health services

Care-seeking studies in Africa have shown widespread use of private service and commodity providers (traditional and professional practitioners, drug sellers, and community-based organizations and workers). These practitioners often provide services of poor quality and tend to over-prescribe high-priced and/or ineffective treatments. Furthermore they often ignore preventive care. However, with the exception of social marketing efforts and work with NGOs in selected countries, USAID and other donors currently focus mostly on public providers. The USAID Missions in Uganda, Nigeria, and Kenya have developed and implemented approaches to training private sector providers in correct treatment of major childhood diseases. Very few other Missions reported working on strategies to reach private sector providers of services. Other donors'

efforts to reach the private sector are also weak or non-existent. This sector is more difficult to reach for several reasons. First, the groups must be disaggregated: working with the informal sector, traditional practitioners, or vendors is different than working with highly trained medical practitioners. Because few are organized into formal groups, it is harder to develop approaches to reach them. However, without finding ways to significantly engage the private sector, many children will continue to receive poor quality or inappropriate treatment for the major child killers of malaria, pneumonia, and diarrhea.

Critical to the discussion of private sector delivery of services is increased attention to the changing role of the public sector and the development of functional public-private partnerships. Many argue that the public sector should be less engaged in direct service delivery and more active in contracting out, capacity building, policy development, standard-setting, regulation, and monitoring of the service quality, i.e. it should strengthen its role as guarantor of the public's health. This is especially true in countries where studies show significant use of private providers. USAID and other donors should support public-private partnership development more purposively as they seek to assist African countries meet their health crises.

4. Internal USAID Management Constraints

Respondents to the interviews identified a series of USAID management challenges to the effective development and delivery of child health programs. These issues fall into the following categories:

- Programming requirements for child health
- Procurement
- Personnel
- Experience transfer.

a. Programming requirements

USAID requires no specific objectives or approaches for child survival programming, as shown by the variability of child health efforts observed in this review. First, project designs do not have to meet a minimal set of programming requirements that correspond to child mortality reduction objectives. Yet the Agency has specific requirements and tools for other health programs, e.g., reproductive health, malaria, HIV and AIDS.

Second, resources are not allocated according to set criteria. This absence is evident in the great variability in both total and per capita funding levels for countries as summarized in Section F. The Agency's recent reallocation of population funding based on population density and other criteria gave Africa additional funding. Such strategies do not exist for child survival.

Third, the reporting required by USAID across countries for child health programs makes it difficult to measure program efforts systematically. No USAID program is required to report regularly on a complete set of core child health indicators, program scope, or implementation process. For most coverage indicators, DHS surveys collect the relevant

information, but Missions only report on a subset of these. For example, the country annual reports, evaluations, and country studies examined as the first step in this review did not present data in a consistent way. It was difficult to determine percentage of population covered by USAID programs, number and location of interventions, nature of operational partnerships, the precise nature of program components, successful approaches, or population-level outcomes. Such reporting done more systematically would enable USAID to compare program effectiveness and allocate resources more appropriately.

Finally, because the Child Survival and Health Grants Program is not specifically linked to Mission child health strategies, it is not used effectively to reach mortality objectives in most countries. As noted in Section F only two countries in the review (Ethiopia and Guinea) explicitly connect the Child Survival Grants Program and the Missions' child health strategies. In other countries HPN officers perceived these grants to be "doing good things," but the grants operated somewhat independently of Mission efforts.

b. Procurement issues

Interviewees identified several procurement-related barriers to effective child survival programming. Contract award and start-up processes may fulfill Contracts Office requirements but do not respond to country-level technical and implementation necessities. Procurement procedures are often lengthy, cumbersome, and inefficient. Requirements often delay start-up for as long as two years. With about one year for the usual "wind-down" phase, "real" project implementation is limited to two to three years at best. Thus, the five-year funding cycle—which is really only two to three years of implementation—is too short to attain sustainable change. Many believe USAID should consider extending the project cycle to 10 years (in two five-year renewable periods) to allow adequate time for project implementation and sustainable impact.

Procurement processes also contribute to gaps between the end of old projects and beginning of new ones. Missions sometimes find bridge funding to extend activities but cannot always resolve critical gaps between projects. Such is the current situation in the very successful USAID child survival program in Madagascar. Programming and outcomes suffer as a result. Catch-up takes much longer than desired, negatively impacting not only the program but the relationship with country and donor counterparts.

Another problem related to procurement is the plethora of cooperative agreements, contracts, and grants. CAs with specific technical expertise provide recognized, valuable technical assistance to Missions. However, this review heard from some respondents that USAID's Bureau for Global Health manages an estimated 120 health projects implemented by numerous agencies, many of them with overlapping mandates. When projects from other Bureaus are added, the total number of health-related projects or activities is staggering.

Respondents indicate that this situation makes coordination, cooperation, and collaboration difficult and poses enormous management challenges for USAID officers. Mission officers deal with numerous procurements and often have little time for

important technical and partnering work. In fact, management concerns have led many Missions to fund major bilateral grants or contracts rather than to work with multiple centrally funded projects. This Mission response then generates its own challenge—bilateral projects do not always have the full array of technical expertise required by the Mission and therefore need to access this expertise from centrally funded projects. But, restrictions associated with these centrally funded projects can inhibit this technical transfer to Missions and their bilateral and NGO partners. Moreover, overlapping mandates beg the question of efficient or effective use of funds and foster unhealthy competition. Finally, the array of organizations and grants/contracts in effect dilutes available leadership. Competent technical professionals are scattered thinly across all these projects and institutions, making it difficult to access them as needed.

c. Personnel issues: HPN officer leadership and continuity

USAID's technical leadership in health is often recognized. Many other donors at the country level do not have the expertise brought to the table by USAID HPN officers and their cooperating agency colleagues. This review identified several leadership and staffing areas that need strengthening. Agency hiring policy and practice of the past decade has reduced significantly the numbers of technical staff in both Missions and Washington. Furthermore, it has emphasized hiring junior level entry staff with little experience. Thus, in a number of cases fewer and less seasoned staff face challenges in designing and implementing complex field programs. The need for support for these junior staff is greater than the capacity currently available from senior staff in Washington and Missions.

Other issues include lack of institutional incentives or rewards for officers to "think outside the box," an attribute sorely needed in complex African country situations. Furthermore, they are not rewarded for creative implementation approaches, for resource mobilization from partners, or for mortality or program performance of their programs.

Finally, HPN officers report that personnel and program policies and practices regarding tours of duty sometimes undermine program consistency. Often there is little or no overlap between new officers arriving at post and departing officers. The impact of this is aggravated by the fact that there is no system for institutional memory to guide newly arrived officers. This, plus lack of programming guidelines for transitions, sometimes leads to new officers significantly changing existing programs. On the other hand, some unsuccessful programs continue too long because "turn-off" mechanisms are weak and may be further weakened by extended tours of duty of officers managing these programs.

d. Strategic information and experience transfer

HPN officers report that they, other partner representatives, and country officials often get caught up in day-to-day management issues and may not see potential solutions to their difficulties or challenges. With the information overload of the past two decades and the management burden of reduced staffing and multiple procurements, keeping HPN officers up to date on programmatic and technical issues is not always possible. Moreover, information about successful experience is not always effectively disseminated. (See Box for some creative program approaches identified in this review.)

Many country programs struggle with implementation issues and seem "stuck" in less effective solutions that yield few results. Some Missions have supported exchanges between their countries and countries with successful program areas both for their own staff and for country representatives. Because of exposure to different ideas, participation in these experiences was often critical to moving the agenda forward more quickly. Institutional encouragement in the way of financing or time for such experience transfer is weak.

While many management obstacles may appear impervious to solution, a number of the constraints highlighted by respondents in this review could be susceptible to change. Needed is the political will and action of leaders to work together to develop practical approaches to overcoming them. Thereby these leaders would contribute greatly to the effectiveness of USAID country programs.

Creative Approaches to Child Health Programming of Potential Value for Sharing Across Countries

Ghana: Creating a "new" level of health worker to reach the underserved
The Community-based Health Planning and Services (CHPS) program has created a "new" level of health worker, called the community health officer, to reach underserved areas. To motivate and retain these health workers, they receive a community-built house, radio, and motorbike to assist with mobilization, health education, and basic service delivery. CHPS zones will be the targets of integrated child survival and family planning interventions.

Guinea: Developing a multisectoral approach to health education
USAID supports the Global Development Alliance in Guinea to partner with the Chamber of Mines and the aluminum company ALCOA to help employers raise awareness about HIV and AIDS within their organizations. The Mission hopes to expand this program in the near future to include malaria control activities.

Nigeria: Using data to conduct broad advocacy and shape health strategy
Data collected from over 40 assessments have been used to design and improve program strategies. For example: 1) a nutrition survey—the first in 30 years—led to a national nutrition policy; and 2) a northern region assessment of USAID and other donor interventions to see "what worked" engaged the community to examine its own problems and advocate with community decision makers for solutions.

Using these data, the Mission has helped raise awareness of basic health issues with a range of groups. For example, the Mission invited 60 female political leaders of 27 different parties to inform them about the current state of child survival, family planning reproductive health, and AIDS. Data were also presented to key members of the National Assembly to encourage changes in national health policy.

Senegal: Supporting innovative decentralization and cutting-edge community ARI efforts

USAID is helping decentralized community health programs to identify community needs, train health workers on planning and budgeting, and implement matching grant programs. Community-based treatment of acute respiratory infections (ARI) is a major component of these efforts. The Mission is also in the vanguard of developing strategies to improve newborn health; a national neonatal strategy will be developed within the year to scale up community-based peri- and neonatal interventions.

Zambia: Implementing creative sustainable communication approaches

The Mission's weekly "write-ups" on pressing health issues appeared in major newspapers and were broadcast over the television and radio with Zambian bylines. Print and broadcast journalists were invited to attend workshops and seminars on how to promote behavior change effectively, and journalists who successfully championed health issues in their publications received awards. The Mission also helped create a local NGO to plan and implement health communication approaches.

Nigeria and Zambia: Creative Mission selection of cooperating agency staff

The Nigeria Mission created strong partnerships with all ethnic groups and requires new projects to hire local technical expertise from all ethnic groups and geographic areas. Ninety-nine percent of USAID-assisted project staff is local, drawn from all states. This helps create local ownership in different ethnic areas of donor-supported efforts.

In Zambia, on the other hand, project staff come from several countries, which gives the program an international flavor.

IV. RECOMMENDATIONS FOR PROGRAMMING IN CHILD SURVIVAL

USAID has an opportunity to lead a second child survival revolution by redefining its role in and commitment to the global fight to save children's lives. To do this USAID will have to take bold steps to refocus efforts to reduce child mortality despite challenges, plan and implement more effective approaches, increase budget levels, and use resources more efficiently so that child health programs will achieve better results. Advocacy to the highest levels has already begun with the advent of the Child Survival Partnership and the U.S. Coalition for Child Survival. But champions are needed in USAID, Congress, other donor agencies, and the countries themselves to achieve child mortality reduction in Africa.

USAID and other donor agencies should explore ways to incorporate the observations of this study into both ongoing and new child survival programs in Africa. The net effect of adopting and adapting these recommendations should be more effective programs and ultimately better child health. The recommendations are organized into the following thematic areas and operational suggestions for each are provided in Annex F:

- Effective programming approaches to reduce child mortality
- Increasing African government commitment to child health
- Operational partnerships to achieve scale
- Approaches to address critical human resource challenges
- Advocacy for child survival resources and programming
- Internal USAID policy, programming, and management challenges.

A. Programming Approaches Linked to Mortality Reduction

Adopt programming approaches correlated with child mortality reduction and require child health programs in sub-Saharan Africa to have:

- Stated and clear child mortality reduction objectives
- A mandate to achieve scale
- Defined and clarified critical policy changes needed to move child health forward
- Program designs that include the following:
  - Sufficient range of child health interventions to respond to country disease profiles
  - Child health programs that support approaches to improve service delivery in both health facilities and in the community.
  - A comprehensive and sustainable communication (BCC) strategy
  - Effective use of data at both the national and local level.

Recommendations

Go beyond support of small pilot efforts and support taking known effective interventions to scale
This should include revitalizing traditional child survival interventions, taking initiative on newer ones, and especially, taking concerted action to reduce neonatal and maternal mortality.

B. Operational Partnerships to Achieve Scale and Impact Mortality

USAID should provide incentives and encouragement to all country programs to establish or strengthen effective operational partnerships with key stakeholder groups.
Since USAID resources are limited, it is essential that Mission officers work jointly with other partners to reduce child mortality. Partners need to go beyond information sharing and develop a common agenda so they can work together to scale up both geographically and programmatically. Headquarters of all donor agencies should foster such collaboration.

Broaden and strengthen USAID government relationships with ministries of health, other ministries, and local government authorities.
HPN officers should seek to identify, establish, or strengthen relationships with governments at all levels and engage key government representatives who affect resource allocation in health. They also should seek opportunities to link with members of parliament and other relevant ministries such as education or agriculture. With decentralization, establishing partnerships with local government authorities such as governors or mayors is important.

Encourage operational donor partnerships.
Mission health officers should seek to establish or strengthen mechanisms to promote technical working groups, strategic and joint planning exercises, joint field visits, and joint funding of programs to achieve MDGs. They should find ways to develop a common agenda to reduce child mortality. HPN officers should maintain regular contact with key donors, even in the absence of operational partnerships, to keep future opportunities open for closer collaboration.

Donor agency headquarters should promote collaborative relationships by sharing information on timing of new health programs or strategy changes, mandating common agendas, and co-funding program activities.

Establish more strategic relationships with NGOs.
Because each country's international NGO profile varies greatly, Mission programs should examine NGO child health operations. Missions with close NGO linkages should share "best practices" with Missions that don't have such relationships.

- USAID/Washington and Missions should seek ways to strengthen the potential strategic contribution of the Child Survival and Health Grants Program to Mission agendas for child health.

- With respect to local NGOs, USAID missions should strengthen networks of organizations currently providing a substantial amount of health care, such as the Church Health Associations of Malawi and Zambia (CHAM and CHAZ) and the Voluntary Health Sector Program in Tanzania.

- To extend the reach of child health programs and enhance sustainability of child health efforts, Missions should strengthen local NGOs that either do or can substantially contribute to child health programs such as social marketing firms, media groups, communication-related NGOs, and research establishments.

Develop and broaden partnerships with an increased number of stakeholder groups.

- USAID/Washington should encourage Missions to involve a broader range of key stakeholders in child health issues at central and local levels to achieve the MDGs. This should entail a general stakeholder analysis to identify the range of important groups and their potential roles; identification of mechanisms to involve them in situation analysis, planning, and developing a common agenda; and enlistment of their participation in a common strategy.

- Missions that have begun to work with partners, such as the media, universities, training and research institutions, major employers, private provider groups, and local community leaders, should be encouraged to seek efficient and effective ways to expand these efforts.

C. Increased African Government Commitment to Child Health

Missions should encourage country commitment to child health.

Because government ownership and commitment to child health seem to be linked to achievement of mortality objectives, USAID and other donors should pursue ways to strengthen or create such country commitment. For example, USAID and other partners could seek to put MDG achievement high on the agenda of annual Minister of Health meetings. They could organize high-profile, multi-partner visits (such as those in Ethiopia and Cambodia) and cross-ministry and cross-country meetings to draw the attention of high-level decision makers in both the public and private sectors to country mortality data. They should engage officials in defining strategies to address the mortality picture of their countries. Many opportunities for such advocacy exist when major partners begin new country programs. USAID should identify and seize these opportunities in a timely manner.

Country-level advocacy should be undertaken with country-based donor partners, NGOs, major employers, universities, and the media, whose participation can also contribute to improving mortality outcomes.

D. Addressing Critical Human Resource Challenges in Health

USAID/Washington should increase advocacy with other donors to put the human resources issue firmly on the policy agenda. USAID should also support systematic country-level diagnoses of human resources in health in collaboration with other partners.

USAID and other donors should take immediate steps to identify and expand efforts to address the human resource crisis in Africa and support reforms that would lead to lasting changes. USAID and other donors should assess the situation, define priorities, and support focused initiatives that would contribute significantly to human resources for health (HRH) reform in the context of a national human resource strategy/ civil service reform.

Address priorities in short-term and basic training of health professionals.

- **Rationalize short-term training approaches**
  USAID should rationalize and make approaches to pre-service training more cost-effective. USAID should seek to incorporate short-term training into continuing education approaches to make them more sustainable.

- **Identify and support priority actions in pre-service training / basic clinical education**
  USAID should develop a more strategic approach to improving the aspects of basic training of health professionals that impact on child health. This should serve to reduce duplication on the one hand and address large gaps in existing donor support on the other.

- **Advocate with other donors to join forces**
  USAID should advocate with other donors to join forces to make more effective use of joint resources in HRH. Missions should coordinate support for improvements with other donors, especially WHO.

Develop and implement more cost effective strategies to motivate and retain health personnel to improve quality of care.

- **Abandon impractical and ineffective approaches to supervision**
  Missions should assess whether the supervision systems currently supported are in fact contributing to improved service delivery. Successful systems should be continued or expanded. Missions should discontinue support for systems that are impractical, unsustainable, ineffective, or too labor intensive to implement at scale.

- **Document and disseminate successful scaled-up strategies for supportive supervision and innovative quality improvement approaches**
  Cases of effective scaled-up approaches of supportive supervision and QI exist in sub-Saharan Africa. These cases and their critical elements should be documented and disseminated effectively among USAID Missions and other key partners in Africa.

- **Disseminate experiences about effective non-remunerative ways of motivating health workers**
  Other kinds of incentives also may motivate health workers. A variety of examples exist in African countries. Their cost-effectiveness should be documented and lessons learned disseminated quickly and efficiently.

Improve the delivery of child health services by private providers.

- **Prioritize strategy development to reach private providers**
  To address the absence of efforts to reach private providers of care, USAID should increase its advocacy with other donors to give this issue higher priority. As a first step, Missions should begin to document the extent and nature of the use of private providers for child health care. These situation analyses would identify the specific providers (e.g., drug sellers, patent medicine vendors, and professional providers) that should be targeted for interventions.

- **Explore and evaluate alternative ways to reach key groups of private providers**
  Before proceeding with broad-scale interventions, Missions should begin experimenting with and evaluating approaches to reach private providers. Each country should be required to develop a strategy to reach private providers based on country evidence and developed with full stakeholder involvement. Lessons learned should be disseminated regularly and quickly to all Missions in Africa.

- **Challenge governments to amplify their role as guarantor of the public health and reduce their role as provider of services to all**
  In countries with high use of private providers for child health, USAID and other donors should re-assess the emphasis of their support to country governments' health service delivery. Given the limitations of African governments, donors should help refocus resources on "stewardship" through public-private partnerships (including policy development, regulation, standard setting, contracting, monitoring, and capacity development) and reduce direct service provision. Supporting the development of government's role as guarantor of the public's health should be an important objective of Mission officers. The already high use of private providers of child health services in many countries and the limited resources of African governments warrant this paradigm shift.

E. Advocacy for Child Survival Resources and Programming

USAID/Washington should strengthen its global, country-level, and internal advocacy for child health.

To achieve greater impact, international, national, and internal political visibility of child survival is critical to renew commitment and mobilize more resources for child health.

Recommendations

- **Strengthen advocacy at the global level**
  USAID should support the Child Survival Partnership and the U.S. Coalition for Child Survival to develop a common child survival agenda among partners in order to reduce competing donor priorities at country level. USAID should strengthen its advocacy for child health with its major partners by sending its own representatives to key meetings rather than sending cooperating agency staff to represent them. USAID/Washington can also strengthen advocacy by looking for specific joint funding opportunities for child health.

- **Increase country advocacy**
  When countries are committed to child health, they appear to improve mortality objectives. USAID should identify and seize these opportunities to engage government partners in a timely manner. (See Recommendation C for more detail.)

- **Increase advocacy within USAID**
  USAID staff working in child health must advocate at the highest levels of the Agency and State Department, including the administrator and assistant administrators, Mission directors, and ambassadors, for resource allocation for child health at global and country levels. Because adequate resources are vital to achieve child survival results at scale, the Agency needs to place a clear priority on child health and survival. As mentioned above, child survival programs will continue to be sidelined unless the USAID administration renews its commitment.

  USAID has the potential to be more strategic in its relationships with Congress, to advocate more effectively within the Agency, and to help HPN officers mobilize resources. Successful experiences should be shared across countries. Coupled with a decision to make child health an Agency priority, these actions will increase significantly available country resources for child health. Fewer earmarks, determining if it is possible to link earmark proportions to be consistent with country program needs and objectives, and more resources for child health in Africa would significantly improve the ability of programming effectively for child health.

F. USAID Child Health Policy and Programming

USAID should make specific changes in its child health policy and programming to increase impact on child health.
The Agency should develop or make public a clear child survival strategy adaptable to regional and country circumstances to guide Missions in developing and implementing their child survival programs. The Agency should then follow through with programming, financial, and staffing changes to show that child survival is a top priority and highlight this decision at all levels—especially with top leaders in Missions, Bureaus, and embassies, and with other donors. USAID should develop an Agency-wide and Africa-specific action plan to guide Missions in reducing child mortality.

- **Implement minimum requirements for country child survival strategies**
  An Agency-wide strategy will ensure that every Mission develops a well-defined child mortality reduction plan and that project designs meet a minimal set of programming requirements. (See Recommendation A.)

- **Require standardized child health reporting directly related to mortality reduction and intervention processes**
  Specific reporting requirements for all country programs that include core indicators for coverage, program scope, and implementation process will enable USAID to compare program effectiveness and allocate resources appropriately. Project impact and how well projects are implemented should be tracked.

- **Allocate resources according to set criteria**
  The Agency's recent reallocation of population funding based on population density and other criteria gave additional resources to Africa. A similar approach could be taken for child survival, for example, prioritizing resources based on the proportion of child deaths by country. A "big-country" strategy is not sufficient in Africa, where many small countries have staggering child death rates.

- **Establish explicit mechanisms to link all child survival grants to country child survival strategies**
  This would allow Missions to maximize results from this valuable resource.

G. Internal USAID Management Procedures Affecting Child Health Programming

USAID should make specific changes in its management procedures to increase impact on child health.

The key areas where changes in management procedures would improve project performance include procurement, personnel, and experience and information exchange. These challenges are interrelated and the issues overlap. Many problems that surfaced in this review can be resolved with determined action. The payoff would be significant in terms of improved project design, implementation, and results.

- **Address critical procurement issues**
  Systematically addressing critical procurement concerns rather than developing a patchwork of solutions would benefit not only child health, but also all development efforts. An overarching strategy for a more effective and efficient procurement process would be ideal. "Re-inventing government" resulted in some positive changes. But USAID itself should address some specific procurement issues. Three key recommendations are:
  - Simplify contract procedures and reduce management units so professionals can concentrate on programs and partnering

Recommendations

- Encourage the Bureau for Global Health and the relevant geographic Bureaus to develop a long-term vision and shorter-term strategy to pull the child survival CAs into a well-organized, collaborative mechanism and address some of the specific issues raised in the review
- Encourage USAID to consider extending the project cycle to 10 years (in two five-year renewable periods) to allow adequate time for project implementation

- **Strengthen HPN officer leadership and continuity**
  USAID should take this opportunity to develop more effective ways to strengthen HPN officer hiring and update skills that go beyond the SOTA course. The Agency should work with personnel systems to develop a systematic mechanism to reward vision and creativity, as well as an approach to assure better program continuity. For example, USAID could "reward" HPN officers for the following:
  - Resource mobilization
  - Effective program implementation
  - Vision and creativity
  - Overcoming management and implementation hurdles

- **Strengthen experience and information exchange**
  USAID should encourage and finance exchanges of experience to give key country representatives and HPN officers ideas for addressing program challenges in new ways. Participants must be strategically selected and visits carefully designed. These exchanges can help establish and reinforce a vision for achieving reductions in child mortality by stimulating creativity, new ideas, and real program improvements. USAID should also seek ways to disseminate critical program information in more user-friendly ways and support sub-regional meetings or experience exchanges between HPN officers to promote experience transfer.

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Annex A

Study Approach and Data Collection Instruments

Study Approach and Data Collection Instruments

This study collected and organized information on past and current USAID Mission child survival activities and related those activities to progress in reducing child mortality. The objective was to identify lessons learned that could help guide future USAID investments in child health. The SARA team reviewed:

- Child health outcomes in Africa—under-five, infant, and neonatal mortality
- Country-level child health intervention indicators such as vaccination coverage, exclusive breastfeeding rates, and ORT use
- Programmatic approaches that seemed to have had the most impact and the lessons learned
- Pattern of USAID Mission programming approaches for child survival
- Pattern of USAID investments for child survival over the past five years
- Complementarity of child survival funds with other USAID/PHN and partner funding
- Constraints, enabling factors, issues, and future prospects for USAID contribution to improved child health in Africa.

The investigators organized the study into four thematic areas:

- patterns of mortality
- population-level coverage of child survival approaches
- USAID program approaches
- USAID child survival funding.

The number of countries covered in each thematic area varied because of the different sources of data for each. For example, the researchers examined mortality rates for all sub-Saharan countries using data from *State of the World's Children*. However, the remainder of the review focused on 25 sub-Saharan countries receiving USAID child survival funding. Mortality rate changes, child health intervention coverage data, and USAID child survival funding were assessed for all countries with available Demographic and Health Survey (DHS) information. Finally, USAID requested an in–depth review of child survival programs in 13 countries[1] Table A-1 summarizes the thematic areas, sources of data, and numbers of countries covered in each.

[1] Benin, Eritrea, Ethiopia, Ghana, Guinea, Madagascar, Malawi, Mali, Nigeria, Senegal, Tanzania, Uganda, and Zambia

Table A-1

Taking Data Sources and Countries Covered

Child Survival Data Analysis	Number of Countries	Primary Data Source	Names of Countries
Child Health Program Information	13 "focus" countries	Interviews, data collection sheet and existing reports	Benin, Eritrea, Ethiopia, Ghana, Guinea, Madagascar, Malawi, Mali, Nigeria, Senegal, Tanzania, Uganda, Zambia
Child Health Intervention Coverage	20 countries[2]	Demographic and Health Surveys supplemented by Micro Indicator Cluster Surveys (MICS)	All 13 countries listed above plus Burkina Faso, Cameroon, Côte d'Ivoire, Kenya, Niger, Rwanda, Zimbabwe
USAID Child Survival Funding	25 countries	USAID Child Survival and Health Account (CSHA) Analysis	Angola, Benin, Burkina Faso, Burundi, Democratic Republic of the Congo, Eritrea, Ethiopia, Ghana, Guinea, Kenya, Liberia, Madagascar, Malawi, Mali, Mozambique, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, South Africa, Tanzania, Uganda, and Zambia
Mortality changes between two points in time	29 countries	Demographic and Health Surveys supplemented by UNICEF's *State if the World's Children* and Micro Indicator Cluster Surveys (MICS)	All 25 countries listed above, plus Cameroon, Côte d'Ivoire, Niger, and Zimbabwe.
Mortality: under-five and infant mortality	46 countries	*State of the World's Children* 2004	All countries in sub-Saharan Africa.

Given travel and time limitations, the study approach consisted of a review of existing data and documents and interviews with key informants in selected Missions and in Washington. The following describes the data collection approach and limitations for each major component of the review.

1. Mortality and Child Health Intervention Coverage

Investigators reviewed the most current information on under-five, infant, and neonatal mortality for all sub-Saharan countries. The study team also analyzed mortality changes between two points in time for USAID-supported countries. The investigators assessed the population-level coverage for child survival intervention indicators for all USAID-supported countries where such data existed. The team assessed changes in coverage in all countries where data for two points in time were available.

[2] Since Ethiopia only has one completed DHS survey, only 19 countries were used when comparing data during two points in time.

Data Collection Approaches—Mortality and Coverage

- Reviewed available reports and evaluations of child survival projects in 13 countries
- Reviewed under-five, infant, and neonatal mortality indicators in DHS, *State of the World's Children*, 2004, and MICS for sub-Saharan countries for which DHS data were unavailable
- Reviewed the coverage indicators for child survival interventions in the two most recent DHS, supplemented by MICS and UNICEF for countries where DHS data were unavailable

The child survival intervention coverage indicators used were those that are available for the greatest number of countries, e.g. DPT3 and measles coverage and use of ORT. Some more recent indicators such as IPT (intermittent preventive treatment) for malaria in pregnancy and coverage indicators for neonatal interventions are not widely available.

Limitations in analyzing mortality and coverage data

- Few countries had DHS data for the same two points in time.
- Some countries did not have a second DHS survey making trend analysis impossible for those countries
- Mortality data in the DHS actually reflect the mortality pattern of the five years prior to the surveys
- Many countries did not have a recent DHS survey
- Data represent the whole country, yet many USAID programs only cover parts of the country. Time did not permit disaggregating DHS data by sub-national regions.
- The data quality of DHS surveys is generally considered to be high. However, some surveys may have lower data quality.

2. Program Approaches

Program documentation and interviews with Mission and Washington-based key informants were used to gather information on Mission programming approaches, perceived successes and constraints, issues faced, lessons learned, and suggestions for future approaches in child survival.

Data Collection Methods—Program Approaches

- Reviewed available reports and evaluations of child survival projects in 13 countries
- Sent questionnaire to USAID health officers in 20 African countries to identify child survival interventions being implemented in those countries
- Interviewed USAID HPN officers in 13 countries
- Interviewed 23 Washington-based key informants.

The investigators reviewed annual reports, strategic plans, and evaluation or study reports for the 13 focus countries to identify child health outcomes, successful programming approaches, and constraints. Reports were obtained from Mission, cooperating agency, and international donor websites, and USAID's Development Experience Clearinghouse (DEC). Relevant program-related information was difficult to garner through these existing reports and, with a few exceptions, did not assist this study. Therefore, key informant interviews were added to gather this information.

Three separate interview and data collection protocols were developed, reviewed, tested, and revised. The first form listed major interventions known to reduce child mortality and was e-mailed to Missions.[3] Health officers were asked to indicate which and to what extent various interventions were being implemented, to describe the approaches used to deliver the interventions, and to identify interventions other donors were implementing. The forms were not fully or accurately completed, so the forms only served to identify the interventions each Mission was implementing.

The second form, a semi-structured questionnaire, contained questions designed to elicit detailed information on each Mission's child health strategy, its expected outcomes, approaches to scaling up, successes and constraints, and partner coordination. Mission health officers were interviewed by telephone using this questionnaire.

The third protocol was an open-ended questionnaire designed to identify factors associated with successful child health programs, constraints, and strategies to move child health forward in Africa. The respective interview protocols were sent to the 13 Missions and 23 Washington-based key informants several days prior to the scheduled interview that lasted between one and two hours. Each interview was tape recorded and transcribed. Each interviewee reviewed the interview transcript and key points for accuracy.

Limitations of program-related data

- Consistent program-related data relevant for this type of "meta-analysis" are not available in existing reports and evaluations. First, easily determining the total universe of reports for a given country is impossible. Second, although USAID has many reporting requirements for Missions and for projects, a consistent format does not exist even within report subcategories. Annual reports from

[3] For the purposes of this study effective child health interventions were grouped and defined as follows:

- Vaccinations for vaccine preventable diseases (measles, polio, DPT, *Haemophilus influenzae* type b (Hib)
- Nutrition: Excusive breastfeeding for the first 6 months, complementary feeding, Vitamin A, Iron fortification/other supplements
- Treatment of major childhood diseases: ORT, antibiotics for dysentery, ARI-related antibiotics for pneumonia
- Malaria: insecticide treated bed nets (ITNs), antimalarials for fever, antimalarial intermittent preventive treatment in pregnancy (IPT)
- Newborn health and care: Tetanus toxoid, clean delivery, antibiotics for neonatal sepsis, newborn resuscitation, antenatal steroids, newborn temperature management and/or antibiotics for premature rupture, Nevirapine, and replacement feeding
- Water and sanitation: water, sanitation, hygiene

Missions, reports from cooperating agencies, evaluations, and studies all vary in presenting information. These reports, though useful for individual projects, Missions, and implementing or managing staff, cannot be compared. The last page of this Annex describes the specific problems found in accessing information through existing reports.

- Information was obtained through telephone interviews. No field visits were conducted. The range of topics and length of the interview made it difficult to cover all topics in all sites with equal depth.
- Generally only one representative of the Mission program was interviewed; therefore, responses may have been colored by the officer's length of time at post, experience or interest in child health, the time of day, the length of the interview, and other factors.
- Program characteristics varied greatly from one country to the next making comparisons and statements about "what worked" and "what didn't" difficult.
- Sorting out program focus on appropriate management of diarrhea and ARI was difficult in countries implementing IMCI as these interventions are components of IMCI and not distinctly identified.
- Open-ended questions make comparisons difficult, yet this format captured important information.
- Looking at one or two points in time does not permit consideration of more complex time-related factors. For example, anecdotal reports indicate that several countries with seemingly poor program designs had "better" designed programs in the recent past. Likewise some countries with historically inadequate programs have just embarked on more focused and intense child survival efforts.

3. USAID Financing

The study investigators consulted experts familiar with USAID financial data. These experts assisted in determining the content and display of the data most appropriate for this study. USAID Child Survival and Health Account (CSHA) funding information for "primary causes" in Africa between 1999 and 2004 for 25 countries receiving any CSHA funding during this period was used. Additionally annual funding data for the Child Survival and Health Grants Program (CSHGP) were reviewed.

Data Collection Approaches—USAID Funding

- Analyzed USAID child survival funding data provided by USAID/Washington for 25 countries 1999–2004
- Analyzed Child Survival and Health Grants Program funding provided by USAID/Washington for all sub-Saharan countries for which available 1999–2004

Limitations of the financing information

- The only financial data within the scope of this review were from the USAID Child Survival and Health Accounts and from the CSHGP.

- These data vary from year to year because categories and definitions change, e.g., malaria funding may be included one year and excluded the next.
- It was outside of the scope of this study to review other USAID financial data related to child health (e.g. PL480, Global Bureau projects, etc.). Thus estimating total USAID support for child health in any given country was not possible.
- Financial data for other donors' contributions to child health in countries are not available.
- This study did not estimate the costs versus the benefits of investing in various child health interventions and whether the investments are proper given these costs and benefits. Nevertheless, countries should consider potential costs and benefits as they design programs.
- Other relevant data on out-of-pocket expenditures, or government spending on health or child health are available only in aggregate form from WHO. These data combine total government expenditures for health with total donor expenditures for health. Therefore identifying government expenditures—a proxy for government commitment—for health or child health was impossible.

Other social and economic variables (such as poverty and educational levels) affect health outcomes, but are outside this study's scope. Country officials and development experts do need to consider the relative investments in health, education, agriculture, trade, infrastructure, and other programs.

4. Forming conclusions and recommendations

This study could not make causal attributions. The "design" was not experimental and the study did not define or collect information on other key independent variables such as country poverty levels. Moreover, this review only examined USAID programs in countries where many other donors also support child health efforts. Outcomes cannot be attributed to USAID alone. Child-specific health interventions are only one set of contributors to under-five mortality reduction. To understand causality, other health and social service inputs would have to be examined such as birth spacing, maternal health interventions, and education.

This report examines varying sources of data to provide information that may be used by USAID for future programming. Despite the limitations, information gathered through this exercise can still be valuable for programming. Trends in mortality and coverage have been synthesized, program elements that appear correlated with more successful outcomes have been identified, insights offered by experienced health officials are important to consider, and issues that need addressing have surfaced from this review. These raise important questions for USAID to consider as it seeks to improve the impact of its child survival program.

Observations Regarding Using Evaluations, Reports, R4s for documenting Child Survival Interventions

To initiate this child survival review, the SARA team gathered and reviewed USAID country documents from a variety of sources. The team found a number of factors that limited the usefulness of the document review. If USAID hopes to make country child survival reporting more systematic and useful for program review and funding decisions, the following observations may help. In general, from existing documents:

- One cannot tell where USAID projects or activities are located in a particular country, giving little sense of a strategic approach to health or child survival:
  - % of population
  - % of districts/regions (7 districts: out of how many?)(is anyone else doing something similar elsewhere?)
  - % within a district or region
  - why certain interventions are chosen.

- Documents frequently do not specify the child health situation in the country and the relationship of activities/interventions to the health situation.

- It is difficult or impossible to detect the geographical location of USAID activities viz. other donors or the proportion of the country that is covered by the activities.

- Numerous "actors" and "donors" are involved in a myriad of activities spread all over a particular country's map but no simple way exists to find out who is working where in what.

- From project, evaluation, and study documentation, it is difficult to determine how USAID decides where and in what to work relative to everyone else who is also working in a given country.

- It is not possible to determine the amount of child survival monies directed to specific interventions (*Lancet* list) or to delivery approaches (e.g., private vs. public, logistics, pre-service training)

- It is very difficult to tell which child survival (*Lancet*) interventions are being carried out, by whom, and where.

- It is very difficult to link "outcomes" to USAID (for example, in Malawi, mortality has fallen but project documentation does not discuss this); in fact, the biggest success stories may be where USAID has joined with other donor(s) to tackle a health issue together—this is not evident in documents.

- Accomplishments cited in evaluations are frequently very local (focused on activity manager or "project" targets) and therefore, it is hard to extricate general lessons for programming or funding.

- Accomplishments in reports often are stated in non-quantifiable terms, for example:
  - Strong relationships established
  - Access and coverage improved
  - Improved quality
  - Capacity strengthened
  - X no of people trained (but it is not always possible to determine the different categories of training in a given country).

- Accomplishments that are quantified frequently do relate to targets, but it is hard to relate these results to outcomes in the nation as a whole.

- There are no indicators consistently presented across countries.

- Most frequently, projects or activities are described in terms of process or approach, but these processes often are not clearly defined, e.g.:
  - "provision of quality"
  - "training"

- In cases where DHS or other sources of data document substantial nationwide improvements (or otherwise) in child health indicators, it is difficult or impossible to determine why the strategies used have "worked" or not.

- It is difficult to determine which approaches are used to deliver the interventions or to decipher why they were chosen or how effective they have been and why.

- It is difficult to document total sources of USAID child survival funding (PL480,ESF, FSA, PVC).

- Few reports analyze the "why" of project results—good or bad. This makes it difficult to learn form and disseminate good or bad experiences and lessons learned.

Table 1-Chart #1

"Lancet" Child Survival Activities or Components being Implemented in Your Country—Chart 1 of 3 consecutive charts

(See sample chart and follow instructions below)

Chart #1	Geographic	Area	Components or approaches	Donors Participating Implementing Similar interventions	Population coverage Coverage of intervention with additional donors, additional partners
CS Interventions from Lancet Articles	**USAID National or country-wide** **Mark with an X**	**USAID Smaller scale (est. % of total country population covered)**	**Please specify:** **Training, Supervision, Other quality, MIS,** **Supply-related, logistics** **Policy or planning,** **Communications: IEC/social marketing, BCC** **Community outreach/mobilization** **Other system strengthening**	**Please specify all relevant, e.g.:** **- SIDA** **- UNICEF** **- DfID** **- etc.**	**Specify:** **1. Type of component** **2. Scale of activity--% of total population covered)** **3. Same or different geographic area than USAID**
EPI related					
*Measles					
Polio					
DPT					
*Hib					
Nutrition/micronutrients (excludes zinc)					
*Exclusive BF 0-6 mo					
*Complementary Feeding					
*Vitamin A					
Iron fortification / suppl.					

*Child survival interventions with Level 1 (sufficient) evidence and Level 2 (limited) evidence of effect on reducing mortality from the major causes of under-5 deaths

Table 1-Chart #2

"Lancet" Child Survival Activities or Components being Implemented in Your Country—Chart #2 of 3 consecutive charts
(See sample chart and follow instructions below)

Chart #2	**Geographic**	**Area**	**Components or approaches**	**Donors Participating**	**Donor Approach and % of Pop Covered**
CS Interventions from Lancet Articles	**USAID National or country-wide** **Mark with an X**	**USAID Smaller scale (est. % of total country population covered)**	**Please specify:** **Training, Supervision, Other quality,** **MIS,** **Supply-related, logistics** **Policy or planning,** **Communications: IEC/social marketing, BCC** **Community outreach/mobilization** **Other system strengthening**	**Please specify all relevant, e.g.:** **- SIDA** **- UNICEF** **- DfID** **- etc.**	**Specify:** **1. Type of approach** **2. Scale of activity--% of total population covered)** **3. Same or different geographic area than USAID**
Malaria					
*Treated Bed nets 0-16					
*Anti-malarials for fever					
*Anti-malarial intermittent preventive treatment in pregnancy					
Major Childhood diseases					
*ORT					
*Antibiotics for dysentery					
*ARI related – antibiotics for pneumonia					
*IMCI (which includes ORT, ARI)					

*Child survival interventions with Level 1 (sufficient) evidence and Level 2 (limited) evidence of effect on reducing mortality from the major causes of under-5 deaths

Table 1-Chart #3

"Lancet" Child Survival Activities or Components being Implemented in Your Country—Chart #3 of 3 consecutive charts

(See sample chart and follow instructions below)

Chart #3	**Geographic**	**Area**	**Components or approaches**	**Donors Participating**	**Donor Approach and % of Pop Covered**
CS Interventions from Lancet Articles	**USAID National or country-wide** **Mark with an X**	**USAID Smaller scale (est. % of total country population covered)**	**Please specify:** **Training, Supervision, Other quality,** **MIS,** **Supply-related, logistics** **Policy or planning,** **Communications: IEC/social marketing, BCC** **Community outreach/mobilization** **Other system strengthening**	**Please specify all relevant, e.g.:** **- SIDA** **- UNICEF** **- DfID** **- etc.**	**Specify:** **1. Type of approach** **2. Scale of activity--% of total population covered)** **3. Same or different geographic area than USAID**
Newborn health and care					
*Tetanus toxoid					
*Clean delivery					
*Antibiotics for neonatal sepsis					
*Newborn resuscitation					
*Antenatal steroids					
*Newborn temperature management and/or antibiotics for premature rupture					
*Nevirapine & replacement feeding					
Water/Sanitation					
*Water					
*Sanitation					
*Hygiene					

*Child survival interventions with Level 1 (sufficient) evidence and Level 2 (limited) evidence of effect on reducing mortality from the major causes of under-5 deaths

Instructions for completing Table 1:

- **Please look at the attached Sample Table 1 for reference—USAID information and Donor information requested is similar**

- **Please note that the "child survival" activities/interventions listed are those taken from the June 2003 Lancet articles and may not be within USAID's current definition of "child survival". Nevertheless, we would like you to note all "LANCET" interventions. THANKS!!**

- Please check with an "X" **all** current child survival related activities on the list being undertaken ***on a nationwide or country-wide scale regardless of funding source***, type of agreement or delivery mode (DA,CS, PL480; field support, PVC etc). Write **"none" or NA** in blanks that do not pertain.

- Please cite all current child survival related activities on the list being undertaken ***in more localized or smaller geographic areas*** and **estimate the total percentage** of the country's population covered by the activity ***regardless of funding source***, type of agreement or delivery mode (DA,CS, PL480; field support, PVC etc). Write **"none" or NA** in blanks that do not pertain.

- **Please do not exclude activities which now may not be "labeled" child survival but which in fact have an impact on under five mortality such as:**
  - Safe motherhood or maternal care
  - Newborn care
  - Water, sanitation, hygiene
  - Malaria
  - Other infectious disease (NOT HIV/AIDS)

- Please enumerate the primary "components or approaches" being used to carry out the above interventions (see sub-heading in column 4). Full descriptions are not wanted or needed – just categories as listed and demonstrated in the examples.

- Please list other donors or NGOs with non-USAID resources that are supporting activities in the relevant "*Lancet*" category. Write **"none" or NA** in blanks that do not pertain.

- Please cite these donors or NGOs' 1) major approach using same categories as column #4; 2) % of population covered and, 3) whether the area covered is the **same** or **different** from USAID's coverage.

(SAMPLE TABLE 1)

Chart #1	Geographic	Area	Components or approaches	All Donors Participating	Donor Approach and Estimated % of Pop Covered
CS Interventions from Lancet Articles	**USAID National or country-wide** **Mark with an X**	**USAID Smaller scale (est. % of total country population covered)**	**Please specify:** **Training, Supervision, Other quality,** **MIS** **Supply-related, logistics** **Policy or planning,** **Commun.: IEC/social M/Advocacy** **Community outreach/mobilization** **Other system strengthening**	**Please specify all relevant, e.g.:** **- SIDA** **- UNICEF** **- DfID** **- etc.**	**Specify:** **1. Type of approach (same categories)** **2. Scale of activity--% of total population covered)** **3. Same or different geographic area than USAID**
EPI related					
***Measles**	X	NA	Logistics Training Social marketing	UNICEF WHO	IEC : 100% Dis. surveillance: 100%
Polio	none	none	NA	WHO/AFRO	Vaccines, training, logistics: 100%
DPT	none	none	NA	UNICEF (with USAID funding)	Vaccines, IEC, training: 100%
***Hib**	NA	2 districts 4%	Laboratory support	WHO	Training: 4%--SAME area
Malaria					
*Treated Bed nets 0-16	X	NA	BN distribution Mass media IEC NMCP: Policy change	WHO	Disease surveillance: 100%
*Anti-malarials for fever	NA	5districts- 20%	CHW training MOH policy, planning, training	SAVE	CHW training: 6 districts-30%—DIFFERENT area
*Anti-malarial intermittent preventive treatment in pregnancy	NA	5 districts 20%	MOH policy Logistics IEC	RBM—Gates and French	IPT- Dis. surveillance, training HW SAME 5 districts
Nutrition					
Vitamin A	NA	10distircts-30%	Supply, training, mass media	UNICEF	11 districts: supply, training, mass media-DIFFERENT
Water/Sanitation					
*Water	none	none	NA	World Bank	Urban water systems 40%
*Sanitation	none	none	NA	None	NA
*Hygiene	NA	5 districts-20%	Training; Supply: Clorinex bottles	SIDA	Social marketing &IEC hygiene practices: 20%SAME

HEALTH OFFICER INTERVIEW GUIDE

CHILD HEALTH PORTFOLIO CHARACTERISTICS:

1. Please review the indicators chart (with map) for accuracy and the above funding chart for accuracy for your CS, RH, and HIV/AIDS programs from the Child Survival Health Account (the Child Survival component in the attached chart includes ID and malaria funding)

2. Are you receiving CS support from the global bureau or from other US Government sources? (e.g. CS grants programs, field support, OFDA, Title II). Please cite and estimate funding amount.

Other USAID projects with other funding for Major CS activities	*Global Bureau/Project*	*Estimated (ball park) LOP amount in millions of other CS funding if known*
SAMPLE: Post partum Hemorrhage	Global Health: PRIME	$.5 mil

3. Does the country have an overall child survival strategy, and if so, how does USAID fit into it? Does the Mission have a country CS strategy and how does this serve as a basis for programming or collaboration with other donors? What kind of policy dialogue on CH has occurred between USAID, the government, and other donors?

4. Please describe briefly your child health portfolio, its focus, approach and evolution: how did you get to where the program is today? (Probe for use of DHS, other research results, issues identification, development of approach and focus, advocacy, funding picture —etc.)

5. What kind of nationwide outcomes do you anticipate from your CS portfolio?

6. Do you support any specific projects, programs or activities related to newborn care or safe motherhood? Please specify.

7. What are the most important system issues in child health and does your CS portfolio address these in a specific way? Please explain.

8. Please give a ballpark estimate for the % of your child survival portfolio dedicated to the following: (probe for rationale for balance)

APPROACH	*ESTIMATED PERCENTAGE*
Community-based	
Facility -based	
System-wide based e.g. MIS, or logistics	

9. Please give a "ballpark" estimate of the % of your child survival portfolio dedicated to the following communications approaches (probe for rationale):

APPROACH	*ESTIMATED PERCENTAGE*
Policy and or stakeholder advocacy	
Interpersonal communication or IEC	
Social marketing or mass communication	

10. Please give a "ballpark" estimate for how much of your child survival health portfolio is dedicated to (probe for rationale):

SECTOR	*ESTIMATED PERCENTAGE*
Public sector	
NGOs	
Non-NGO private sector—"medical care" providers	
Non-NGO private sector- other (such as SM firms)	

11. Of the major child survival actions the Mission is implementing, which have been the most effective in:

- ***reaching the broadest segment of the population (why?)***
- ***achieving nationwide child survival impact (Why?)***

12. What have been the major accomplishments in CS? Why?

"SCALED UP" PROGRAMS

13. Are there any CS efforts that have been successful in a more limited geographic area that you are considering taking to scale? Explain which and why.

14. What do you believe were/are the essential ingredients (factors contributing to) of successfully "scaling up"?

15. What have been the key negative issues or barriers to "scaling up" of either existing large-scale activities or in "pilot" projects in the planning stages of scaling up?

16. Are there <u>other</u> important barriers (constraints or negative factors) or reasons for lack of progress in expanding coverage/improving outcomes in child survival and how would you overcome these?

17. If you could do one or two things differently to achieve greater impact in child health, what would be at the top of your list? Please comment.

COORDINATION AND COLLABORATION

18. What have been some effective mechanisms you have used to collaborate with other donors in CS? What has not worked?

19. What mechanisms have you used with NGOs to get increased CS impact to a broader population segment? (comment on specific successful or unsuccessful NGO collaboration mechanisms)Can you think of other creative ways to optimize these resources?

20. Describe specific successful or unsuccessful mechanisms for USAID Cooperating Agency collaboration and cooperation to achieve country-wide CS impact.

21. Please comment on stakeholder/country commitment to health (budget allocation, staff or space allocation, program planning, program review, seat at the table, dialogue, etc.) Is there a focal point for child health? Describe.

POSSIBLE SUBSTITUTE OR ADDITIONAL QUESTIONS:

22. To what extent do human capacity problems undermine your program's capacity to deliver? What actions do you see as feasible approaches to address or circumvent these?

23. If your country has decentralization, what are the major issues and what do you see as feasible alternatives to address these or to move forward?

24. Have you seen any viable practical approaches to work with private providers of health care on a large scale?(Have you found a strategy that works with private sector providers of health services?)

25. In your view, what are the essential ingredients for achieving nationwide impact in CS? for example, is there an essential set of CS interventions? Is partnering geographically with other donors on a coordinated set of specific CS actions necessary? Etc.

26. If you were able to rearrange the way your current CS resources do you believe there would be a better way to use your existing resources to achieve nationwide CS impact?

27. What are some good ways of linking to larger resources (HIPIC, GFATM, RBM, HIV/AIDS, Budget support) Should we shift programming CS $ given GF, GAVI, etc?

28. Do you use any specific approaches to work across sectors for child health(schools, agriculture, media, economics etc)that you believe enhance CS outcomes ?

Sub-Saharan Africa – Child Survival: Taking Stock
Key Informant Questionnaire

Respondent:

Key Questions:

1. ***In your opinion what field approaches (give examples of missions in sub-Saharan Africa if possible) have worked best to achieve nationwide CS impact (give examples of major accomplishments)? Why?*** *(probe for strategic vision, breadth and appropriateness and number of interventions and approaches chosen, functional relationships with other donors/partners, etc.)*

2. ***If you had the liberty to design an effort that would contain "essential child survival actions" sufficient to achieve nationwide impact in a given country, what would these essential components be?***

3. ***What do you see as the major issues/constraints to achieving nationwide CS impact?*** *(probe for lack of vision, implementation issues such as decentralization, human resource capacity, lack of functional coordination with other donors, management and leadership)*

4. ***In your experience what strategies have worked or do you think would work to overcome the constraints you have mentioned?***

5. ***Which African missions have been able to successfully "scale-up" and why? In your opinion what were the necessary ingredients?***

6. ***How do you think USAID Missions can better utilize their funds to achieve CS impact at the country level? (What is the best way to achieve nationwide impact?) For example:***
   - ***to scale up***
   - ***to address problems/constraints noted***
   - ***to create operational strategic planning mechanisms with other donors***
   - ***to piggy-back/take advantage of resource flows in other health areas***
   - ***other ideas***

7. ***How do you think USAID should spread its limited CS resources across African countries and why?*** *(probe for success following success, focusing on a few countries – what would be the selection process---,focusing on the greatest need, spreading a few activities across countries, etc.)*

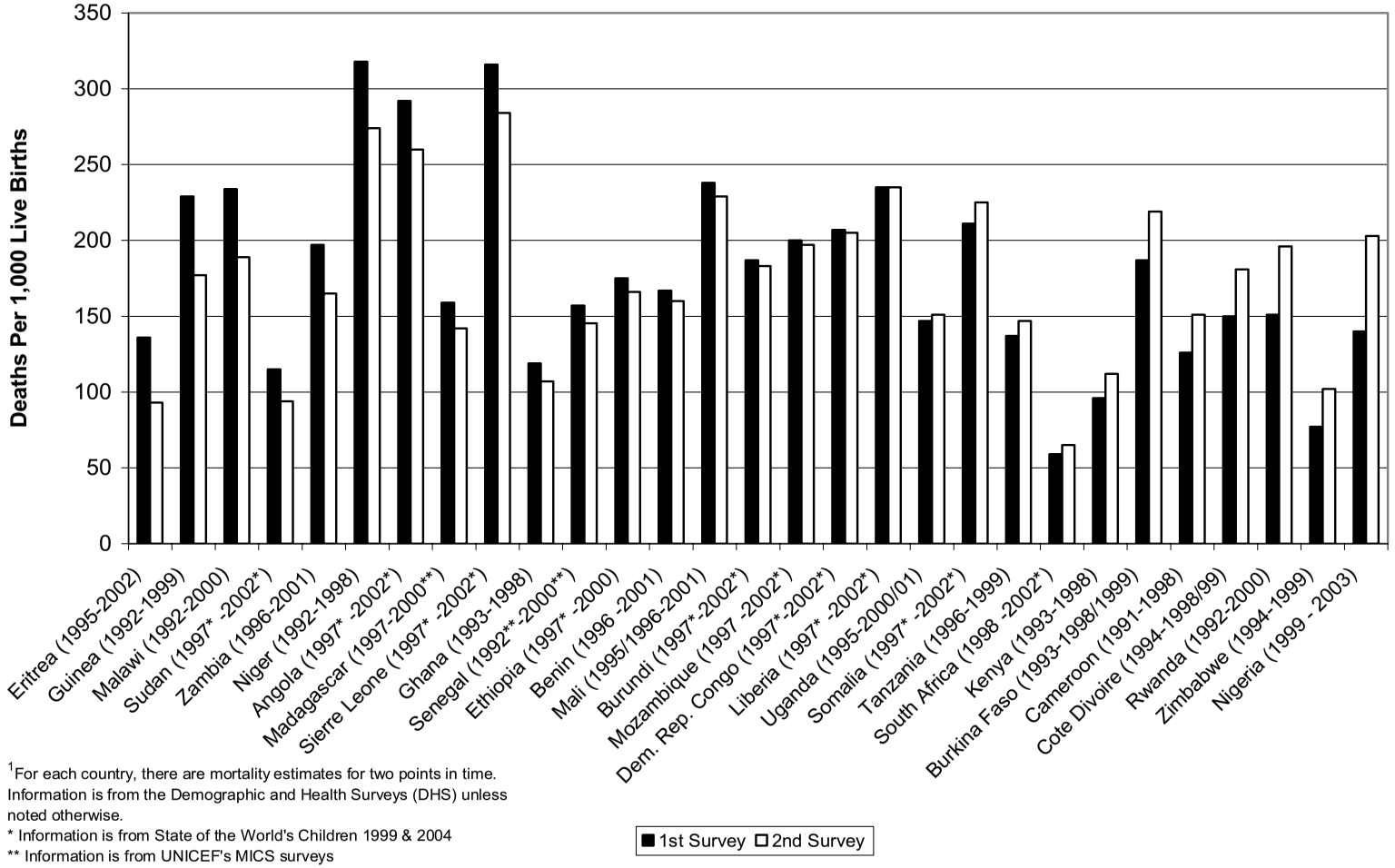
Annex B

Trends in Health Indicators

- **Under 5 Mortality**
  - ***Countries with decreasing under-five mortality rates***
  - ***Countries with increasing under-five mortality rates***
- **Infant Mortality**
- **DTP 3 Coverage**
- **Measles Vaccine Coverage**
- **Vitamin A Coverage**
- **Exclusive Breastfeeding Rates**
- **ARI Treatment**
- **ORS/RHS/Increased Fluids**
- **ITN Coverage**
- **Coverage Rates: Interventions for Children Under 5 Years of Age, by Region, 2000**

Under 5 Mortality in Selected Sub-Saharan African Countries

Ranked in Order of Greatest Percentage Decrease in Mortality Rate[1]



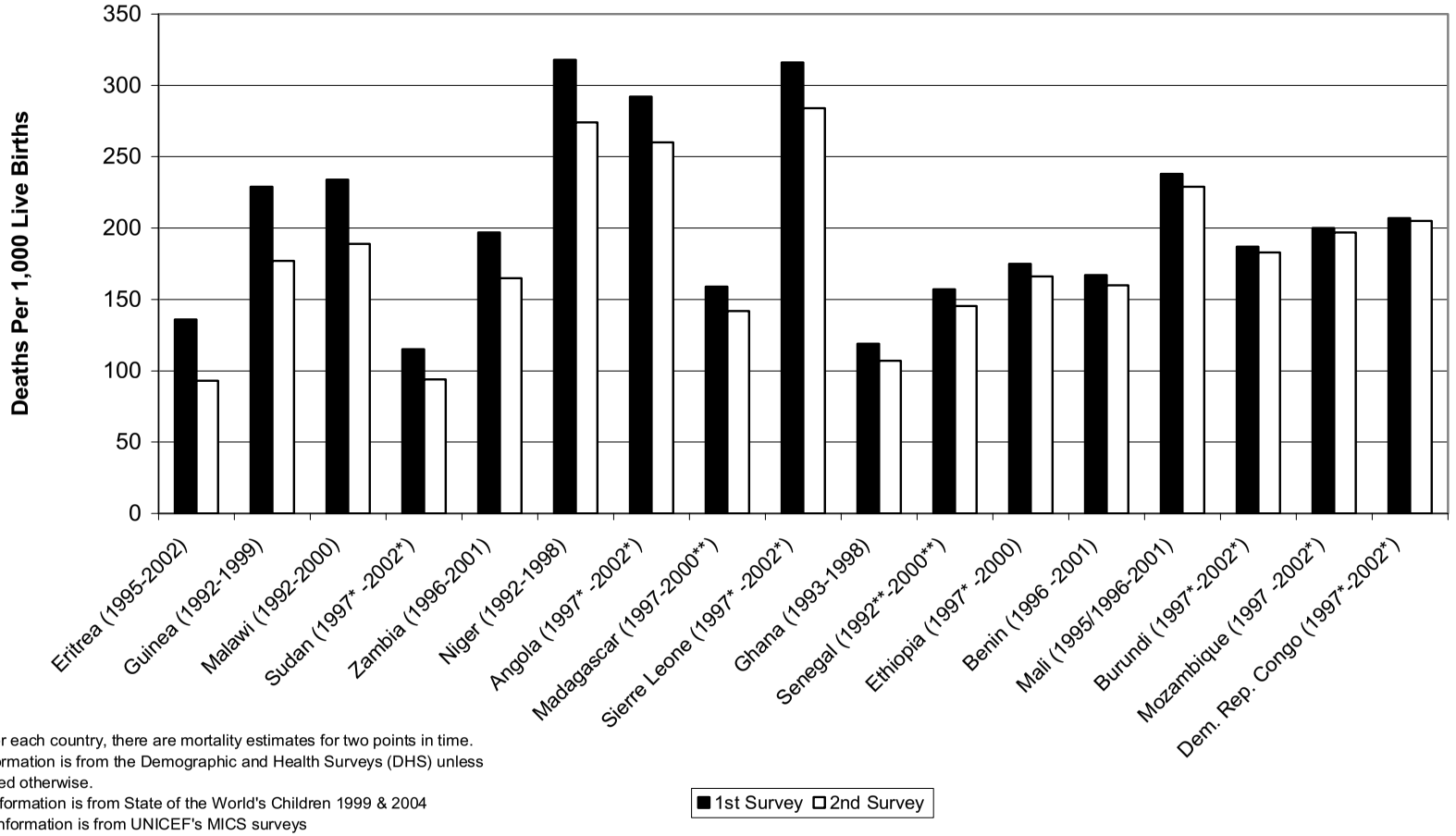
[1]For each country, there are mortality estimates for two points in time. Information is from the Demographic and Health Surveys (DHS) unless noted otherwise.

* Information is from State of the World's Children 1999 & 2004

** Information is from UNICEF's MICS surveys

Selected Sub-Saharan African Countries with Decreasing Under 5 Mortality Rates

Ranked in Order of Greatest Percentage Decrease in Mortality Rate[1]



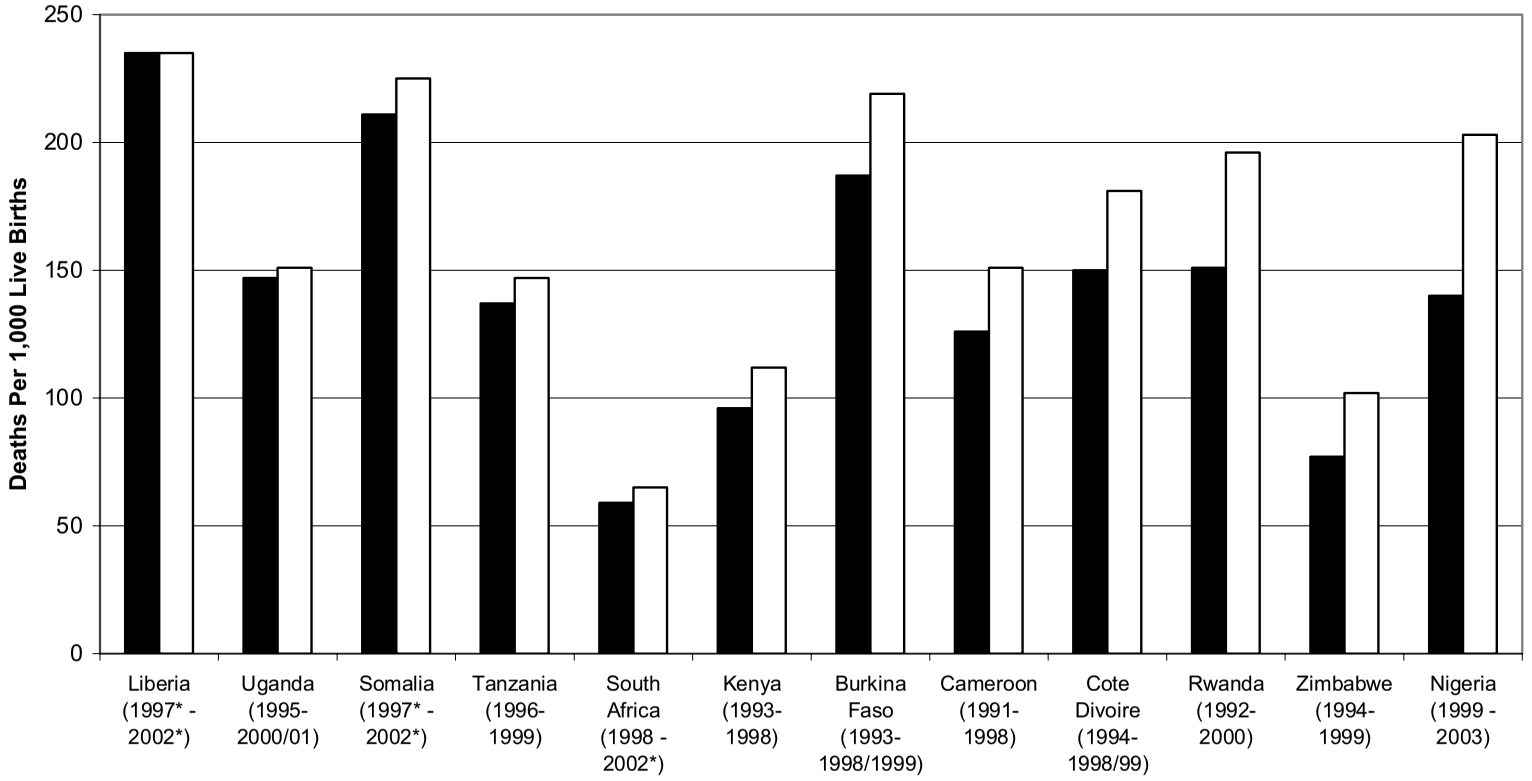
[1]For each country, there are mortality estimates for two points in time. Information is from the Demographic and Health Surveys (DHS) unless noted otherwise.

* Information is from State of the World's Children 1999 & 2004

** Information is from UNICEF's MICS surveys

Selected Sub-Saharan African Countries with Stagnant or Increasing Under 5 Mortality Rates

Ranked in Order of Greatest Percentage Increase in Mortality Rate[1]



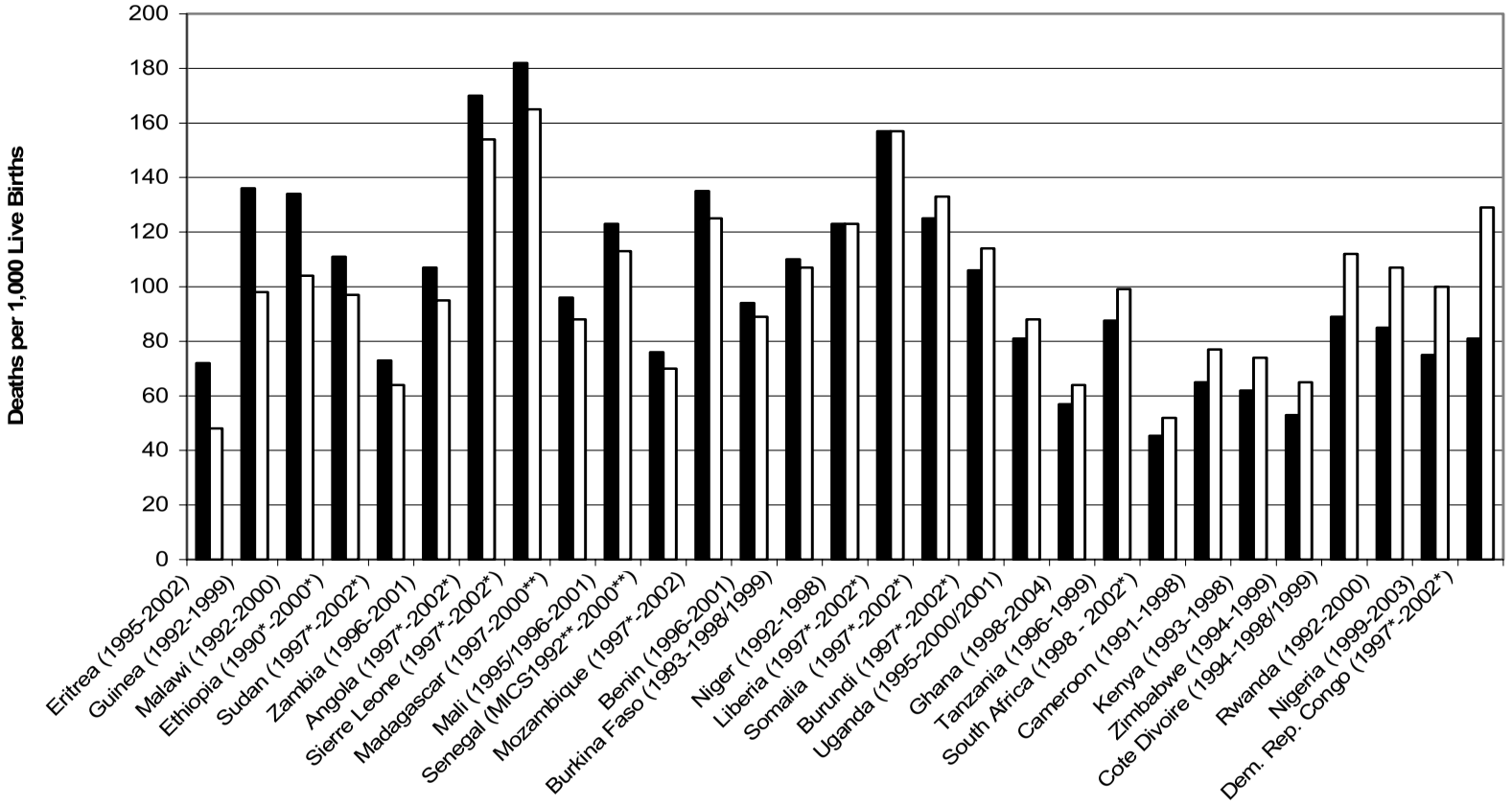
[1]For each country, there are mortality estimates for two points in time. Information is from the Demographic and Health Surveys (DHS) unless noted otherwise.

* Information is from State of the World's Children 1999 & 2004

** Information is from UNICEF's MICS surveys

Infant Mortality in Selected African Countries

Ranked in Order of Greatest Percentage Decrease in Mortality Rate[1]



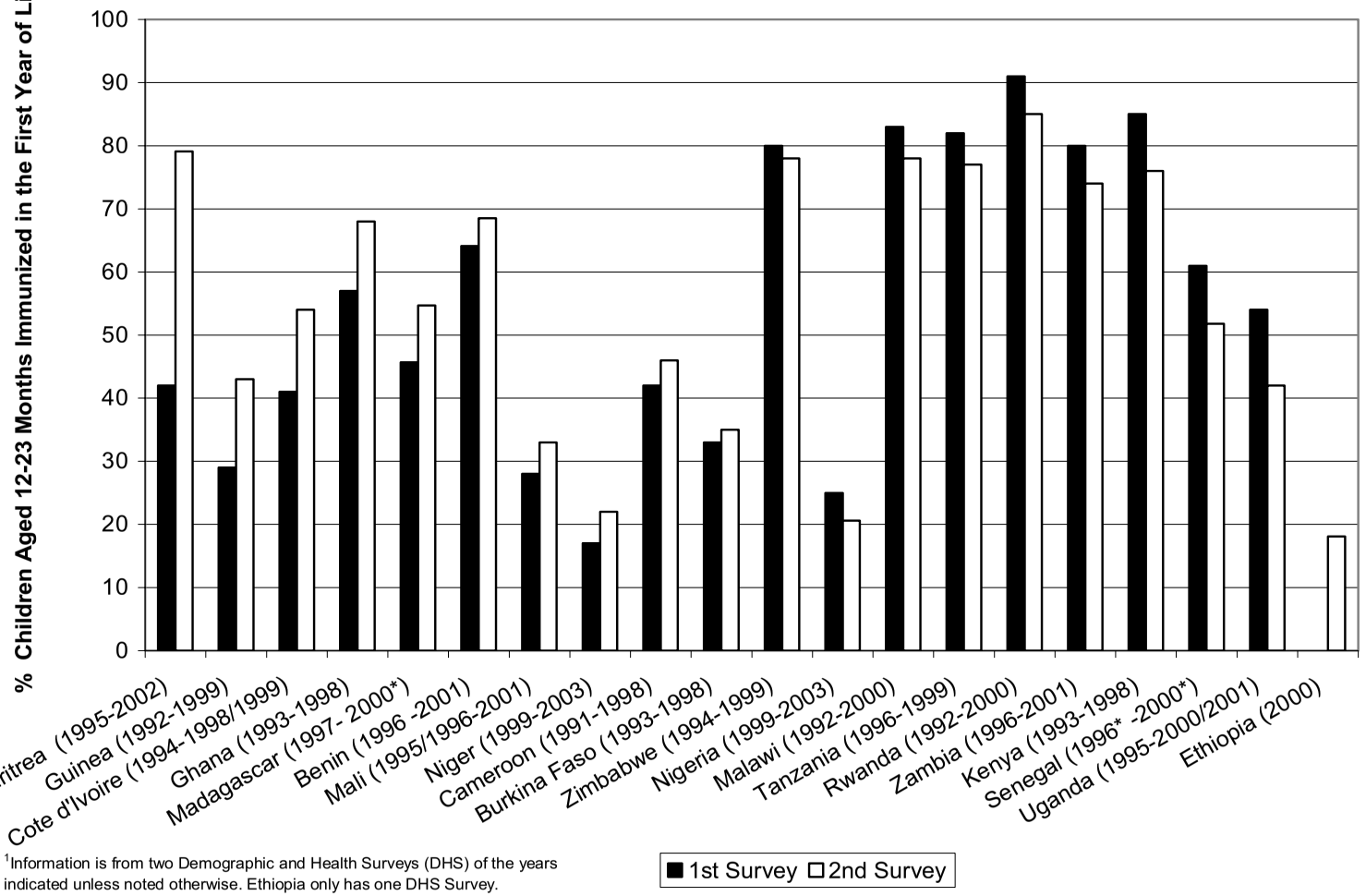
[1]For each country, there are mortality estimates for two points in time. Information is from the Demographic and Health Surveys (DHS) unless noted otherwise.

* Information is from State of the World's Children 1999 & 2004

** Information is from UNICEF's MICS surveys

DPT 3 Coverage for Selected African Countries[1]

Ranked in Order of Greatest Increase in Coverage

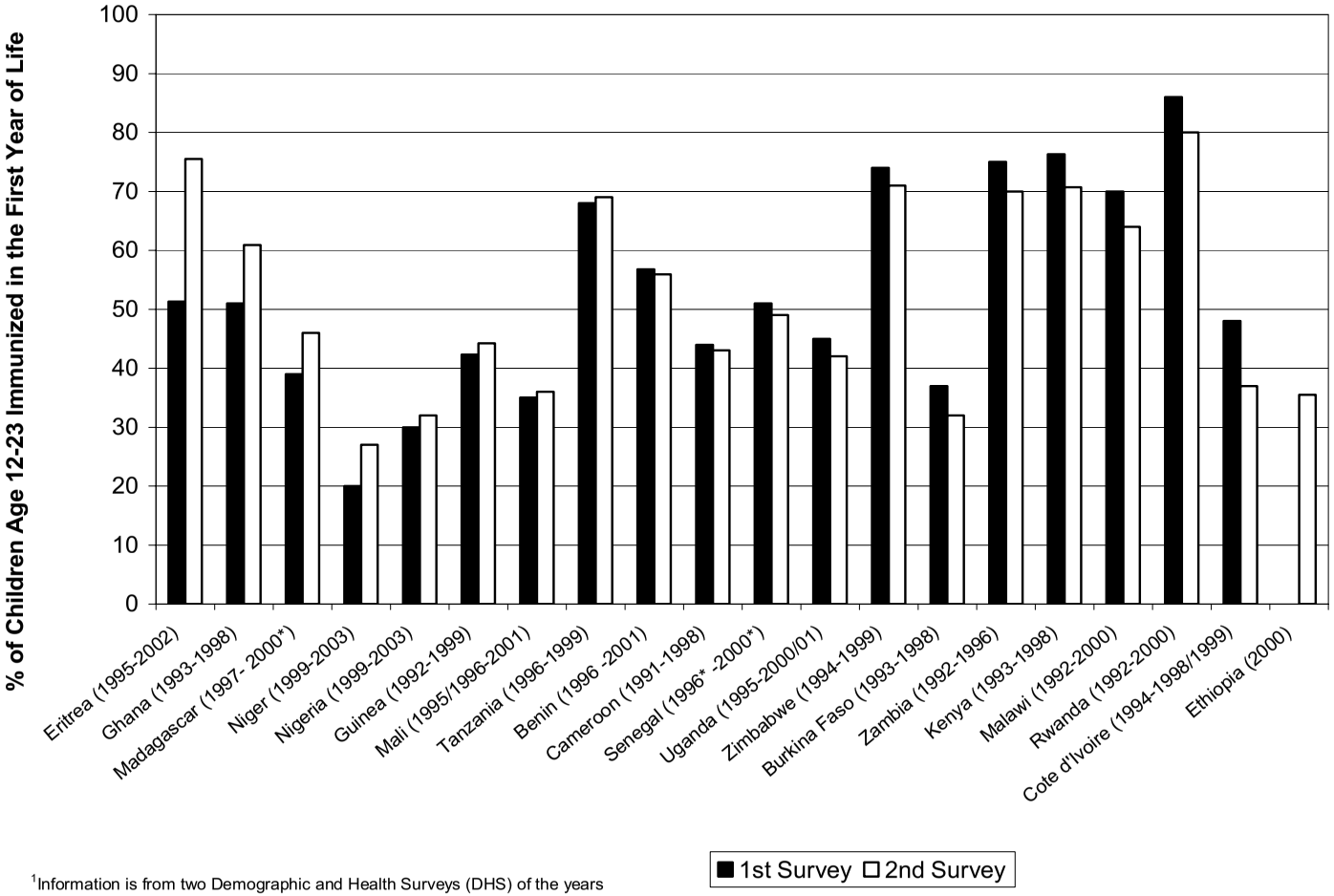


[1]Information is from two Demographic and Health Surveys (DHS) of the years indicated unless noted otherwise. Ethiopia only has one DHS Survey.

* Information is from UNICEF's MICS surveys

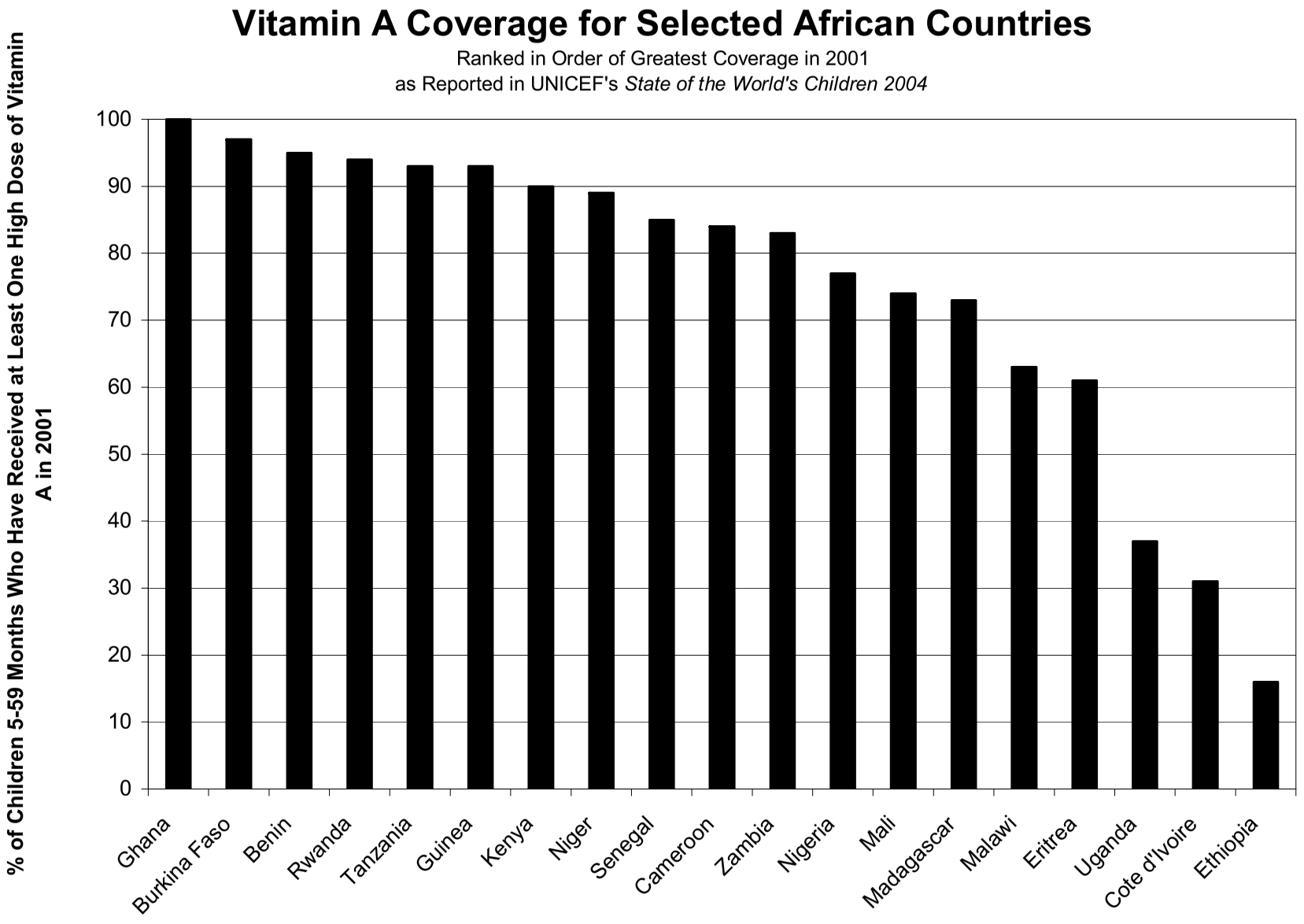
Measles Vaccination Rate in Selected African Countries[1]

Ranked in Order of Greatest Increase in Rate



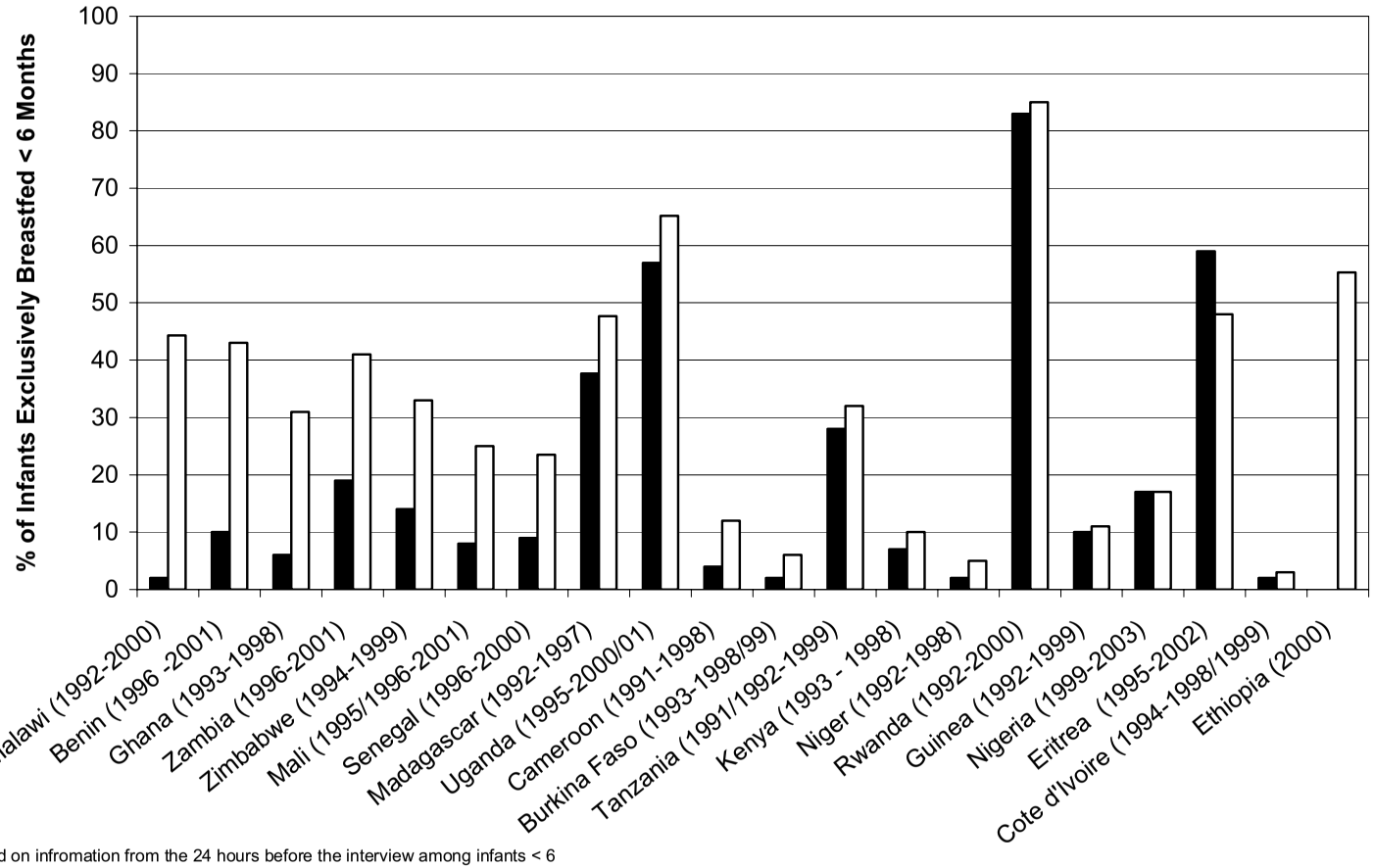
[1]Information is from two Demographic and Health Surveys (DHS) of the years indicated unless noted otherwise. Ethiopia only has one DHS Survey.

* Information is from UNICEF's MICS surveys


Vitamin A Coverage for Selected African Countries
Ranked in Order of Greatest Coverage in 2001
as Reported in UNICEF's State of the World's Children 2004
% of Children 5-59 Months Who Have Received at Least One High Dose of Vitamin A in 2001
100
90
80
70
60
50
40
30
20
10
0
Ghana
Burkina Faso
Benin
Rwanda
Tanzania
Guinea
Kenya
Niger
Senegal
Cameroon
Zambia
Nigeria
Mali
Madagascar
Malawi
Eritrea
Uganda
Cote d'Ivoire
Ethiopia

Exclusive Breastfeeding Rate in Selected African Countries[1]

Ranked in Order of Greatest Increase in Rate [2]



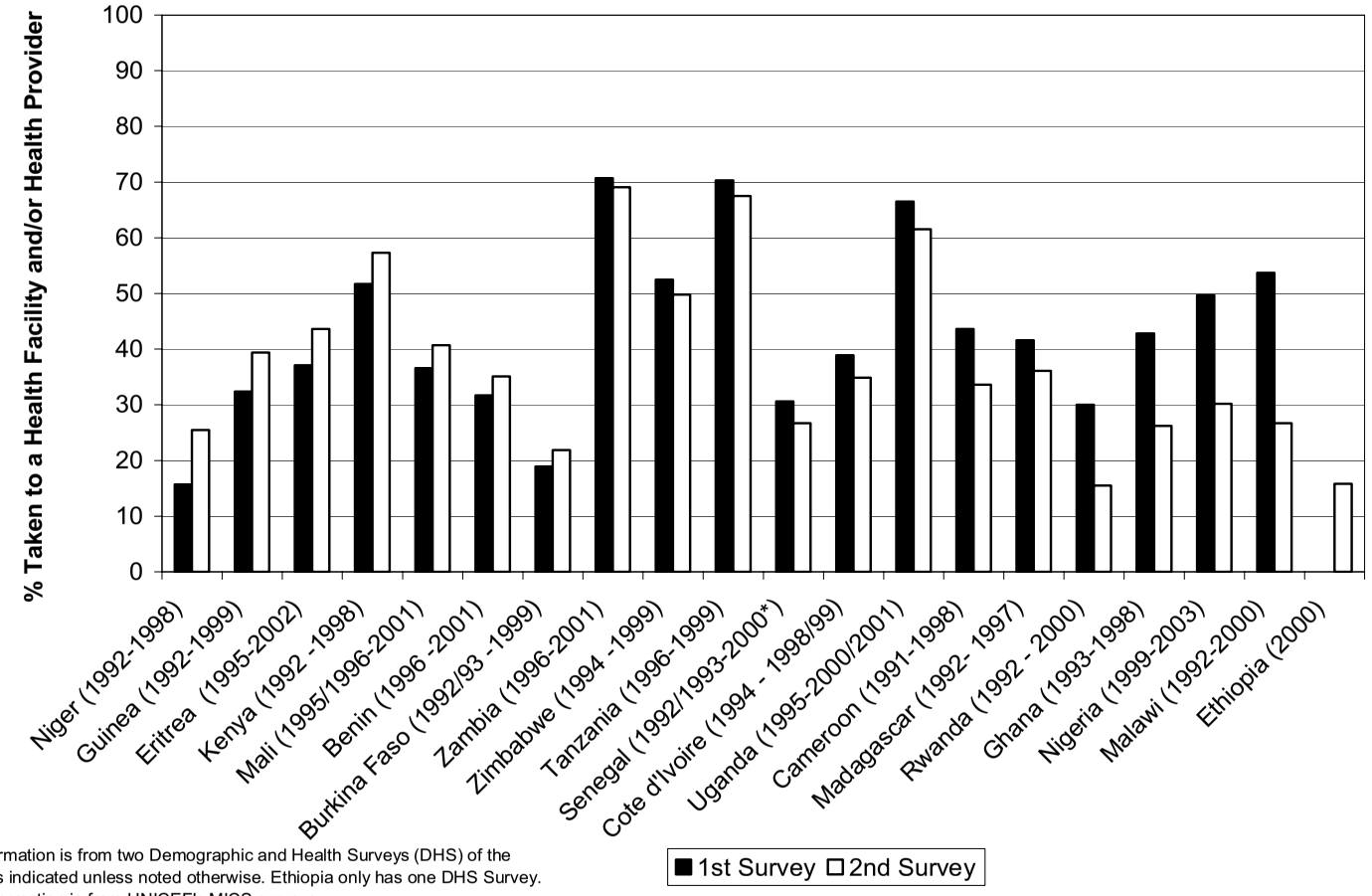
[1]Based on infromation from the 24 hours before the interview among infants < 6 months at the time of the survey

[2]Information is from the two most recent Demographic and Health Surveys (DHS) unless noted otherwise.Ethiopia only has one completed DHS Survey.

* Information is from UNICEF's MICS surveys

ARI Treatment in Selected African Countries[1]

Among young children with Acute Respiratory Illness (ARI) in the two weeks preceeding the survey, the percentage who were taken to a health facility and/or health provider, in order of greatest percentage increase.

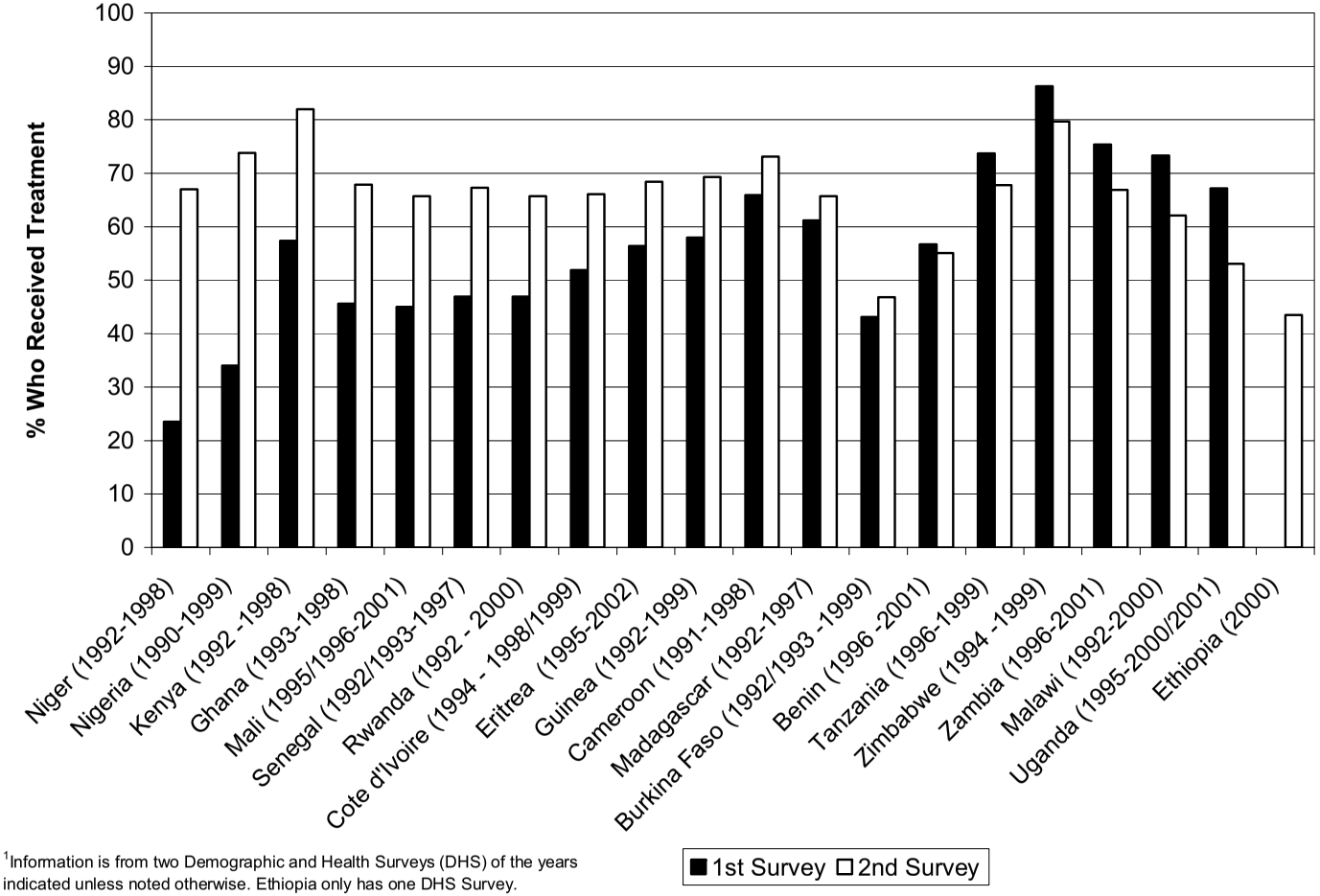


[1]Information is from two Demographic and Health Surveys (DHS) of the years indicated unless noted otherwise. Ethiopia only has one DHS Survey.

* Information is from UNICEF's MICS surveys

ORS/RHS and/or Increased Fluid Use in Selected African Countries[1]

Among young children with diarrhea in the two weeks preceeding the survey, the percentage who received Oral Rehydration Solution (ORS), Recommended Home Solution (RHS), and/or increased amount of fluids, in order of greatest increase in use.

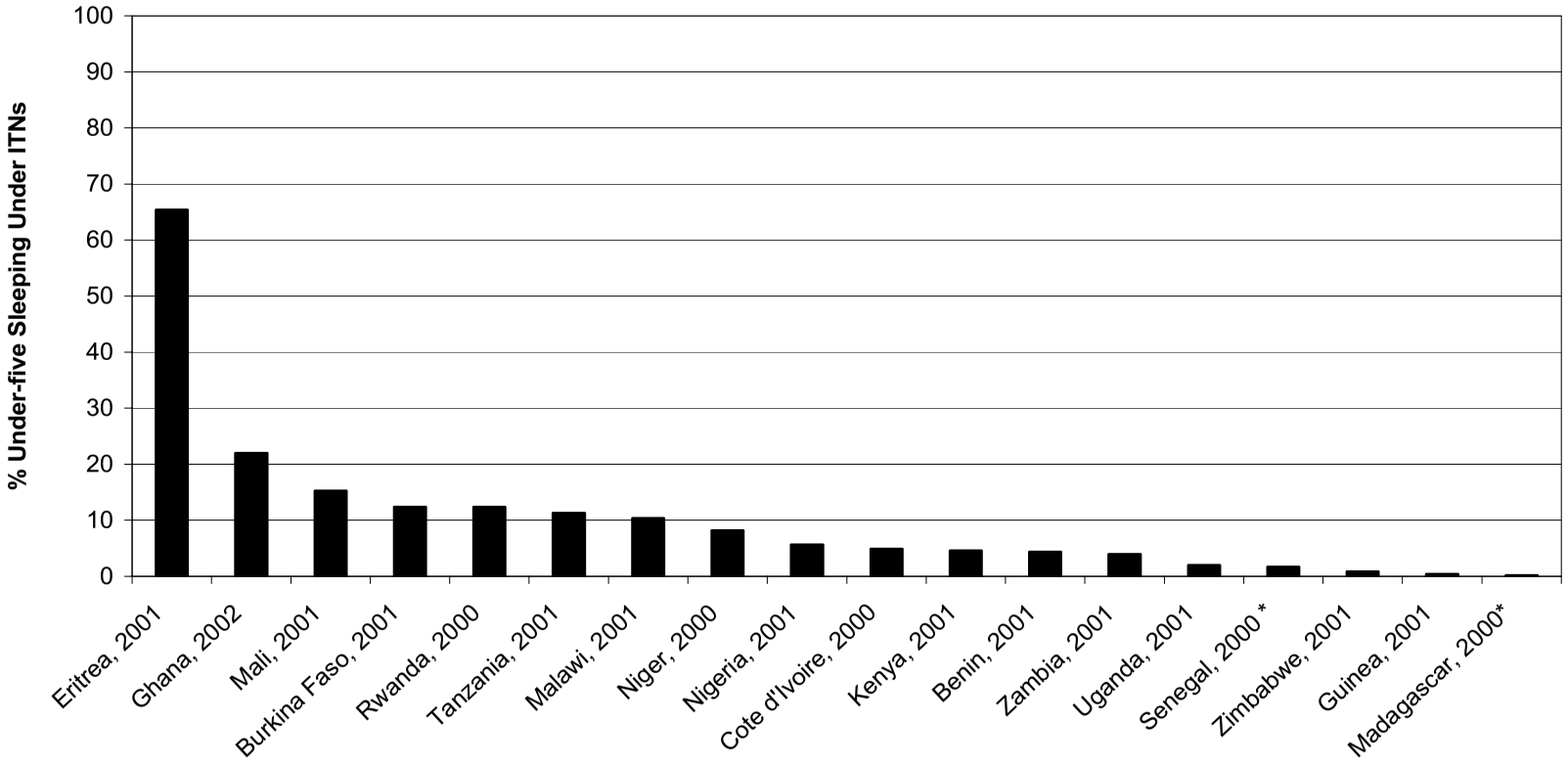


[1]Information is from two Demographic and Health Surveys (DHS) of the years indicated unless noted otherwise. Ethiopia only has one DHS Survey.

ITN Coverage Children Under 5 for Selected African Countries

Ranked in Order of Greatest Coverage

Source: Malaria Control in the Africa Region, WHO 2003



* Information is from UNICEF's MICS surveys

Coverage Rates: Interventions for Children Under 5 Years of Age, by Region, 2002

U5 Intervention Coverage (except as indicated)	Sub-Saharan Africa	Latin America and the Caribbean	East Asia and Pacific	South Asia	Industrialized Countries	Average World
Vaccinations						
DPT 3 coverage in the first year of life	60%*	91%*	72%*	71%$^{+}$	95%$^{+}$	79%*
Measles coverage in the first year of life	58%$^{+}$	91%$^{+}$	80%$^{+}$	67%$^{+}$	90%$^{+}$	75%$^{+}$
Nutrition						
Exclusive breastfeeding < 6 mo.	28%$^{+}$	38%$^{+}$	54%$^{+}$	36%$^{+}$	NA	39%$^{+}$
Vitamin A coverage for children 5-59 mo.	75%$^{+}$	NA	NA	46%$^{+}$	NA	59%$^{+}$
Appropriate Treatment of Diarrhea, Acute Respiratory Infections, and Malaria						
% receiving ORT for treatment of diarrhea	24%$^{+}$	19%$^{+}$	25%$^{+}$	NA	NA	25%$^{+}$
% taken to a health care provider for acute respiratory infections	43%$^{+}$	NA	NA	58%$^{+}$	NA	54%$^{+}$
% sleeping under an ITN	2%$^{+}$	NA	NA	NA	NA	NA
% with high fever receiving treatment with antimalarials	50%$^{\sim}$	NA	NA	NA	NA	NA
Water, Sanitation, and Hygiene						
% of population using improved drinking water sources	83%$^{+}$ (Urban) 44%$^{+}$ (Rural)	94%$^{+}$ (Urban) 66%$^{+}$ (Rural)	93%$^{+}$ (Urban) 67%$^{+}$ (Rural)	94%$^{+}$ (Urban) 80%$^{+}$ (Rural)	100%$^{+}$ (Urban) 100%$^{+}$ (Rural)	95%$^{+}$ (Urban) 71%$^{+}$ (Rural)
% of population using adequate sanitation facilities	73%$^{+}$ (Urban) 43%$^{+}$ (Rural)	86%$^{+}$ (Urban) 52%$^{+}$ (Rural)	73%$^{+}$ (Urban) 35%$^{+}$ (Rural)	67%$^{+}$ (Urban) 22%$^{+}$ (Rural)	100%$^{+}$ (Urban) 100%$^{+}$ (Rural)	85%$^{+}$ (Urban) 40%$^{+}$ (Rural)
Maternal-Newborn Health						
% of pregnant women who received two or more doses of tetanus toxoid	44%*	40%*	22%*	75%$^{+}$	NA	53%*
Skilled birth attendant at delivery (doctors, nurses, or midwives)	42%$^{+}$	82%$^{+}$	73%$^{+}$	35%$^{+}$	99%$^{+}$	58%$^{+}$
% of women aged 15- 49 years who received antenatal care at least once during their pregnancy	66%$^{+}$	85%$^{+}$	87%$^{+}$	54%$^{+}$	NA	70%$^{+}$

*WHO, *Vaccine Preventable Diseases Monitoring System 2003* (Regions are defined differently than State of the World's Children, 2004) ;$^{+}$UNICEF, *State of the World's Children*, 2004;$^{\sim}$WHO/UNICEF, *Africa Malaria Report*, 2003

Annex C

USAID Child Survival Funding in Sub-Saharan Africa 1999-2004

- **Overview of USAID Funding for Primary Causes by Country in Sub-Saharan Africa 1999-2004**
- **Child Survival and Health Grants Program and Child Survival and Health Accounts Primary Causes Funding by Country 1999-2004**

Overview of Funding for Primary Causes Child Survival 1999-2004

Number	Country	FY 1999* Primary Causes	FY 2000 Primary Causes	FY 2001 Primary Causes	FY 2002 Primary Causes	FY 2003 Primary Causes	FY 2004 Primary Causes
1	Angola	600.00	2,435.00	1,427.00	1,375.00	1,250.00	1,200.00
2	Benin	2,300.00	1,837.00	1,505.00	1,550.00	1,150.00	1,000.00
3	Burkina Faso	625.00		-	-	-	
4	Burundi	-	-	-	400.00	350.00	200.00
5	DROC	1,800.00	4,680.00	5,550.00	6,395.00	5,303.00	5,400.00
6	Eritrea	4,649.00	2,210.00	2,300.00	2,300.00	2,000.00	1,400.00
7	Ethiopia	4,121.00	3,300.00	781.00	2,417.00	3,150.00	4,150.00
8	Ghana	2,878.00	3,050.00	3,210.00	3,500.00	2,700.00	2,400.00
9	Guinea	1,780.00	2,210.00	1,708.00	2,000.00	2,000.00	1,950.00
10	Kenya	2,062.00	1,820.00	1,080.00	1,300.00	1,250.00	1,000.00
11	Liberia	682.00	750.00	850.00	1,100.00	1,300.00	1,200.00
12	Madagascar	1,820.00	2,500.00	2,225.00	2,500.00	2,018.00	2,350.00
13	Malawi	255.00	1,850.00	1,256.00	1,200.00	1,200.00	1,800.00
14	Mali	2,825.00	3,600.00	3,400.00	3,600.00	3,100.00	2,800.00
15	Mozambique	6,250.00	3,900.00	3,372.00	3,400.00	3,300.00	3,000.00
16	Nigeria	2,351.00	5,600.00	3,930.00	3,550.00	3,000.00	3,000.00
17	Rwanda	499.00	630.00	1,167.00	1,300.00	1,400.00	1,000.00
18	Senegal	3,000.00	2,150.00	1,433.00	2,100.00	2,075.00	2,150.00
19	Sierra Leone	-	-	-	-	234.00	100.00
20	Somalia	900.00	-	-	500.00	100.00	100.00
21	South Africa	3,550.00	2,200.00	2,175.00	2,000.00	2,300.00	2,000.00
22	Sudan	-	-	-	500.00	200.00	6,500.00
23	Tanzania	2,400.00	2,700.00	2,500.00	2,400.00	1,890.00	2,500.00
24	Uganda	3,441.00	2,300.00	1,976.00	2,200.00	2,059.00	2,000.00
25	Zambia	2,750.00	5,000.00	3,820.00	4,300.00	4,550.00	4,000.00
Sub-Totals		51,538.00	54,722.00	45,665.00	51,887.00	47,879.00	53,200.00
REDSO/E		3,952.00	2,600.00	1,290.00	1,550.00	800.00	1,000.00
WARP		3,485.00	2,000.00	2,000.00	913.00	750.00	700.00
Africa Regional/SD		8,393.00	12,078.00	10,637.00	9,550.00	6,829.60	5,159.38
Sub-total		15,830.00	16,678.00	13,927.00	12,013.00	8,379.60	6,859.38
TOTAL		**67,368.00**	**71,400.00**	**56,302.00**	**63,900.00**	**56,258.60**	**60,059.38**

*Total CS includes Child Survival (96,891) and Other Health (9,500).
Since the EAC for the above codes was $5.603 million less than the control level, those countries which did not tie to the control levels were plussed up (or decreased, in the case of REDSO) proportionately, based on the coding that had been done.

Child Survival and Health Grants Program and Child Survival and Health Account Primary Causes Funding by Year, 1999-2004								
Country	**Years**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**Totals**
Benin	CSHGP	266,666.60	266,666.60	266,666.60	-	375,800.20	375,800.20	1,551,600.20
	CSHA	2,300,000.00	1,837,000.00	1,505,000.00	1,550,000.00	1,150,000.00	1,000,000.00	9,342,000.00
	Total	2,566,666.60	2,103,666.60	1,771,666.60	1,550,000.00	1,525,800.20	1,375,800.20	10,893,600.20
	Percent	0.12	0.15	0.18	-	0.33	0.38	0.17
Eritrea - No CSHGP GRANTS	CSHA Total	4,649,000.00	2,210,000.00	2,300,000.00	2,300,000.00	2,000,000.00	1,400,000.00	14,859,000.00
Ethiopia	CSHGP	607,203.00	881,274.60	1,214,624.60	900,434.93	900,434.93	900,434.93	5,404,407.00
	CSHA	4,121,000.00	3,300,000.00	781,000.00	2,417,000.00	3,150,000.00	4,150,000.00	17,919,000.00
	Total	4,728,203.00	4,181,274.60	1,995,624.60	3,317,434.93	4,050,434.93	5,050,434.93	23,323,407.00
	Percent	0.15	0.27	1.56	0.37	0.29	0.22	0.30
Ghana	CSHGP	266,666.60	266,666.60	675,630.60	408,964.00	408,964.00	408,964.00	2,435,855.80
	CSHA	2,878,000.00	3,050,000.00	3,210,000.00	3,500,000.00	2,700,000.00	2,400,000.00	17,738,000.00
	Total	3,144,666.60	3,316,666.60	3,885,630.60	3,908,964.00	3,108,964.00	2,808,964.00	20,173,855.80
	Percent	0.09	0.09	0.21	0.12	0.15	0.17	0.14
Guniea	CSGHP	266,618.80	558,598.60	558,598.60	891,933.60	625,314.80	625,314.80	3,526,379.20
	CSHA	1,780,000.00	2,210,000.00	1,708,000.00	2,000,000.00	2,000,000.00	1,950,000.00	11,648,000.00
	Total	2,046,618.80	2,768,598.60	2,266,598.60	2,891,933.60	2,625,314.80	2,575,314.80	15,174,379.20
	Percent	0.15	0.25	0.33	0.45	0.31	0.32	0.30
Madagascar	CSGHP	558,562.00	558,562.00	558,562.00	900,049.20	776,410.40	776,410.40	4,128,556.00
	CSHA	1,820,000.00	2,500,000.00	2,225,000.00	2,500,000.00	2,018,000.00	2,350,000.00	13,413,000.00
	Total	2,378,562.00	3,058,562.00	2,783,562.00	3,400,049.20	2,794,410.40	3,126,410.40	17,541,556.00
	Percent	0.31	0.22	0.25	0.36	0.38	0.33	0.31
Malawi	CSGHP	1,680,951.00	933,310.40	933,310.40	1,378,478.00	933,310.40	711,833.80	6,571,194.00
	CSHA	255,000.00	1,850,000.00	1,256,000.00	1,200,000.00	1,200,000.00	1,800,000.00	7,561,000.00
	Total	1,935,951.00	2,783,310.40	2,189,310.40	2,578,478.00	2,133,310.40	2,511,833.80	14,132,194.00
	Percent	6.59	0.50	0.74	1.15	0.78	0.40	0.87
Mali	CSGHP	782,401.00	557,080.60	902,179.80	902,179.80	625,775.60	345,099.20	4,114,716.00
	CSHA	2,825,000.00	3,600,000.00	3,400,000.00	3,600,000.00	3,100,000.00	2,800,000.00	19,325,000.00
	Total	3,607,401.00	4,157,080.60	4,302,179.80	4,502,179.80	3,725,775.60	3,145,099.20	23,439,716.00
	Percent	0.28	0.15	0.27	0.25	0.20	0.12	0.21
Nigeria - No CSHGP GRANTS	CSHA	2,351.00	5,600.00	3,930.00	3,550.00	3,000.00	3,000.00	21,431.00
Senegal	CSGHP	545,321.60	545,321.60	545,321.60	886,210.60	670,555.00	670,555.00	3,863,285.40
	CSHA	3,000,000.00	2,150,000.00	1,433,000.00	2,100,000.00	2,075,000.00	2,150,000.00	12,908,000.00
	Total	3,545,321.60	2,695,321.60	1,978,321.60	2,986,210.60	2,745,555.00	2,820,555.00	16,771,285.40
	Percent	0.18	0.25	0.38	0.42	0.32	0.31	0.30
Tanzania	CSGHP	535,368.80	535,368.80	268,768.80	-	-	-	1,339,506.40
	CSHA	2,400,000.00	2,700,000.00	2,500,000.00	2,400,000.00	1,890,000.00	2,500,000.00	14,390,000.00
	Total	2,935,368.80	3,235,368.80	2,768,768.80	2,400,000.00	1,890,000.00	2,500,000.00	15,729,506.40
	Percent	0.22	0.20	0.11	-	-	-	0.09
Uganda	CSGHP	784,030.80	784,030.80	276,746.00	276,746.00	613,521.80	336,775.80	3,071,851.20
	CSHA	3,441,000.00	2,300,000.00	1,976,000.00	2,200,000.00	2,059,000.00	2,000,000.00	13,976,000.00
	Total	4,225,030.80	3,084,030.80	2,252,746.00	2,476,746.00	2,672,521.80	2,336,775.80	17,047,851.20
	Percent	0.23	0.34	0.14	0.13	0.30	0.17	0.22
Zambia	CSGHP	722,753.00	481,444.20	266,726.40	640,919.20	640,919.20	640,919.20	3,393,681.20
	CSHA	2,750,000.00	5,000,000.00	3,820,000.00	4,300,000.00	4,550,000.00	4,000,000.00	24,420,000.00
	Total	3,472,753.00	5,481,444.20	4,086,726.40	4,940,919.20	5,190,919.20	4,640,919.20	27,813,681.20
	Percent	0.26	0.10	0.07	0.15	0.14	0.16	0.14

Annex D

Country Profiles

Benin

I. Background

Total Population	7.0 Million[a]
Total Number of Districts	34[b]

www.lonelyplanet.com/mapshells/ africa/benin/benin.htm

Basic Health Indicators	DHS (1996)	DHS (2001)
Infant Mortality	94	89
Under-Five Mortality	167	160
Maternal Mortality Rate (WHO/UNICEF/UNFPA)	850	
Maternal Mortality Rate (DHS)		NA
Stunting	25	31
Underweight Children	29	23
Total Fertility Rate	6.0	5.6
HIV/AIDS Prevalence*	2%*	3.6%*
Neonatal Mortality	38.2	38.4
% of Infant Deaths During Neonatal Period	40%	43%

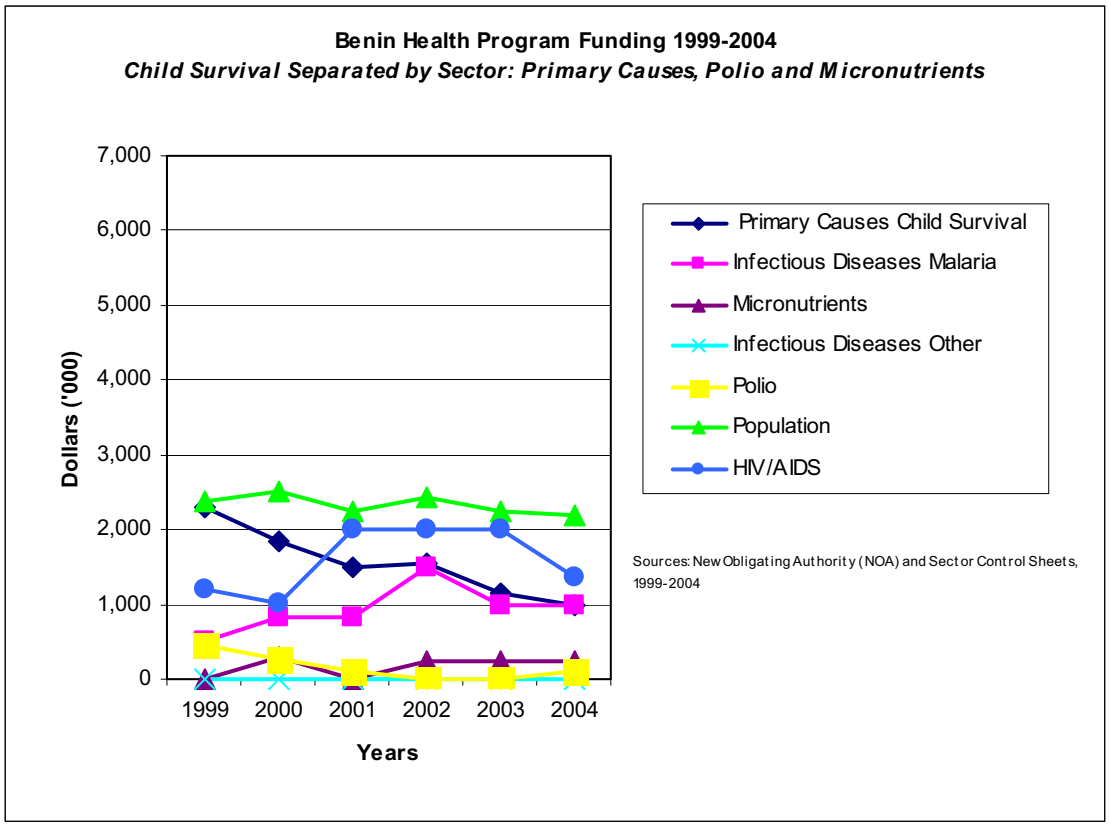
a. Bureau of the Census, International Data Base – Total Midyear Population 2003
b. IMCI-Country Meeting for IMCI Focal Persons Report, May 2003
*UNAIDS – 2002
**Malaria Control in the African Region, WHO 2003
*** FY2003 Annual Report

Coverage Indicators	DHS (1996)	DHS (2001)
DPT3	674.1	68.5%
Measles	56.8%	55.9%
Hib	N/A	N/A
Vitamin A Coverage (UNICEF, 2001)	N/A	95%
ORT Use Rate (ORS,RHS, Increased Liquids)	56.7%	55.1%
ORT Use Rate (ORS, RHS)	32%	34%
Antenatal Care (at least 1 visit)	79.9%	88.4%
Antenatal Care (2+ visits)	76.2%	83.1%
Antenatal Care (4+ visits)	53.7%	61.6%
Births Attended Rates by a Health Professional	64%	72.9%
Births Attended Rates by a Health Professional or Birth Attendant	69.6%	75.4%
Proportion under five sleeping under ITNs**	N/A	4.4%
Proportion of pregnant women sleeping under ITNs**	N/A	36.9%
Proportion of under five with fever/malaria receiving correct treatment within 24 hours of onset of fever in communities surveyed in 2001**	N/A	18.5%
Proportion of morbidity inpatients attributed to malaria under five in selected health facilities **	N/A	46.5%
EBF Under 6 Months	10%	43%
Contraceptive Prevalence Rate	3	7
TT Vaccination	49.9%	50.1%
ARI	31.7%	42%
Condom Use With Last non-Regular Partner		
-Males	N/A	N/A
-Females	N/A	N/A
Number of clients seen at VCT Centers***		0**
USAID assisted community and home-based care programs***		0**
Number of VCT Centers with USAID Assistance***		0**
Number of USAID supported health facilities offering PMTCT Services***	N/A	0**
Number of women who attended PMTCT sites for a new pregnancy in last 12 months***	N/A	0**

DATA NOTES:

Infant Mortality Rate: The estimated annual number of deaths of infants under 12 months in a given year per 1,000 live births in that same year.
Under Five Mortality Rate: Annual number of deaths that occur in children 0-4 years old per 1000 births (five year period preceding DHS).
Maternal Mortality Ratio (DHS): The estimated number of women who die as a result of pregnancy or childbirth per 100,000 live births, arrived mostly through "direct sisterhood method." The use of information reported by a sibling is to expand the sample size and to compensate for the lack of vital registration system.
Maternal Mortality Ratio (WHO/UNICEF/UNFPA, 2000): Maternal deaths per 100,000 live births.
Stunting: Percentage of children under five whose height-for-age is below minus-two standard deviations from the median of the reference population**.**
Underweight children: Percentage of children under five whose weight-for – age is below minus-two standard deviations from the median of the reference point. 1999 data is for children under 3 years.
Total Fertility Rate: The number of children a woman between the ages 15-49 would have during her lifetime if she were to bear children at the currently observed rates.
HIV/AIDS Prevalence Rate: The estimated number of adults (ages 15-49) living with HIV/AIDS at the end of 1999 divided by the 1999 population (ages 15-49).
Neonatal Mortality: The probability of dying within the first month of life, expressed as deaths per 1,000 live births (five years preceding the survey).
Percent of Infant Deaths During Neonatal Period: The percent of infant deaths that occur during the first month of life.
DPT 3 Vaccination Rate: Percentage of children 12-23 months who were immunized in the first year of life.
Measles Vaccination Rate: Percentage of children 12-23 months who have received one dose of MCV (fully immunized against measles) in the first year pf life.
Vitamin A Coverage: Percentage of children age 5-59 months who received at least one high dose of Vitamin A in 2001.
ORT use Rate (ORT, RHS, increased fluids): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS), or increased fluids. 1996 data is for three years preceding the survey.
ORT Use Rate (ORT, RHS): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS). 1996 data is for three years preceding the survey.
Number of antenatal care visits and stage of pregnancy: Percent distribution of live births in the five years preceding the survey by number of antenatal care visits. 1996 data is for three years preceding the survey.
Births Attended by Health Professional: Percentage of births/deliveries that occur with the assistance of any trained health professional during the five-year preceding the survey. May include doctors, trained nurses, midwife or other health professionals. 1996 data is for three years preceding the survey.
Births Attended by Health Professional or Birth Attendant: Percentage of births/deliveries that occur with the assistance of any trained health professional during the five-year preceding the survey. May include doctors, trained nurses, midwife, other health professionals or village health workers. 1996 data is for three years preceding the survey.
Under 5 Use of Bednets: Percentage of children under 5 years that slept under an insecticide-treated mosquito net during the night preceding the survey.
Exclusive Breast Feeding: Percentage if children under 6 months who are exclusively breastfeed. Exclusive breastfeeding is defined as providing no food or liquid other than breast milk to the child during the 24-hour period before the survey.
Contraceptive Prevalence Rate (Married Women: Percentage of all married women ages 15-49 currently using modern method of contraception. Modern methods include oral contraceptives, IUDs injectables, female and male sterilization, all emergency contraception and barrier methods (diaphragm, foam, jelly, male and female condom).
Tetanus Toxoid Vaccination: Percent distribution of live births in the last five years preceding the survey by number of tetanus toxoid injections given to the mother during pregnancy, according to selected background characteristics. 1996 data is for three years preceding the survey.
ARI Treatment – Children Under 5: Percentage of children under five years who were taken to a health facility for treatment of an acute respiratory infection (ARI) which is associated with cough, rapid breathing and a high fever, during the two weeks preceding the survey, and who were treated with specific remedies.
Condom Use With Last Non-Regular Partner – The percent of respondents who say they had sex with a non-marital, non-cohabitating partner, of those who had sex with such a partner in the last 12 months. Data was taken from the Population, Health, and Nutrition Results Reporting, p. 52 and not directly from the DHS. In the report, data was obtained from national surveys, DHS, or other surveys, so it is not clear if these numbers came directly from the DHS.

II. Health Program Spending



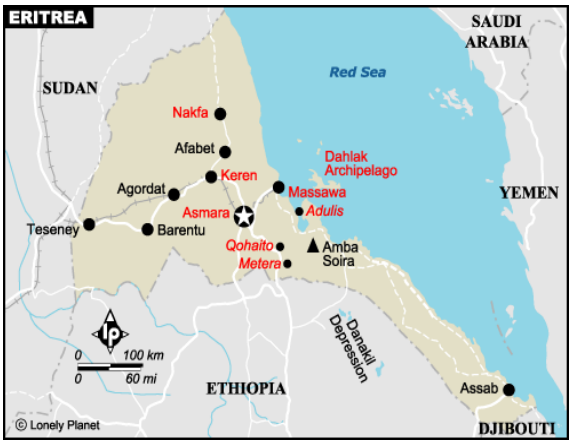
Benin Health Program Funding ('000)									
Years	TOTAL ALL ACCOUNTS	Child Survival			Infectious Diseases		HIV/AIDS	Population	Total Spent on Health (Including Other Health)
		Primary Causes	Polio	Micronutrients	Malaria	TB & Other			
1999	15,738	2,300	463	0	500	0	1,200	2,375	6,838
2000	13,884	1,837	263	300	830	0	1,025	2,500	6,955
2001	13881	1,505	100	0	828	0	2,005	2238	6,676
2002	16,725	1,550	0	250	1,500	0	2,005	2,438	7,743
2003	14,521	1,150	0	250	1,000	0	2,000	2238	6,638
2004	14,521	1,000	100	250	1,000	0	1,350	2200	5,900

Total Expenditure on Health as a percentage of GDP 3.2%
General Government expenditure on health as percentage of total general government expenditure 6.3%

Eritrea

I. Background

Total Population	4,447,307[a]
Total Number of Districts	6[b]



www.lonelyplanet.com/mapshells/ africa/eritrea/eritrea.htm

Basic Health Indicators	DHS (1995)	DHS (2002)
Infant Mortality Rate	72	48
Under Five Mortality Rate	136	93
Maternal Mortality Rate (WHO/UNICEF/UNFPA, 2000)	630	
Maternal Mortality Rate (DHS)	998	
Stunting	38.4	33
Underweight Children	44	38
Total Fertility Rate	6.1	4.8
HIV/AIDS Prevalence *		2.8%*
Neonatal Mortality	35	24
% of Infant Deaths During Neonatal Period	52%	50%

a. Bureau of the Census, International Data Base – Total Midyear Population 2003
b. Malaria Control in the African Region, WHO 2003
*UNAIDS – 2002
** FY2003 Annual Report

Coverage Rates	DHS (1995)	DHS (2002)
DPT 3	42%	79%
Measles	51%	75.5%
Hib	N/A	N/A
Vitamin A Coverage (UNICEF, 2001)	N/A	61%
ORT Use Rate (ORS, RHS, Increased Liquids)	56.4%	68.4%
ORT Use Rate (ORS, RHS)	37.6%	55.7%
Proportion under five sleeping under ITNs, 2001[b]	N/A	65.4%
Proportion of pregnant women sleeping under ITNs, 2001[b]	N/A	N/A
Proportion of under five with fever/malaria receiving correct treatment within 24 hours of onset of fever in communities surveyed in 2001[b]	N/A	7.2%
Proportion of morbidity inpatients attributed to malaria under five in selected health facilities, 2001 [b]	N/A	6.3%
Contraceptive Prevalence Rate (married women)	3.1	5.8
TT Coverage Rate at least two	23%	34.6%
% Pregnant Women to antenatal Care 1 visit	49%	70.4%
% Pregnant Women to antenatal Care 2 visits	43%	65.1%
% Pregnant Women to antenatal Care 4 visits	27%	40.9%
Births Attended Rates by a health professional	20.6	28.3%
Births Attended Rates by a Health Professional or a Birth Attendant	74.4%	71.6%
EBF under 6 months	59%	48%
ARI	37.1%	43.6
Condom Use with Last Non-Regular Partner		
- -males	N/A	N/A
- - females	N/A	N/A
Number of Clients Seen at VCT Centers **	N/A	N/A
USAID assisted community and home-based care programs**	N/A	N/A
Number of VCT Centers with USAID Assistance**	N/A	1
Number of USAID supported health facilities offering PMTCT Services**	N/A	N/A

DATA NOTES:

Infant Mortality Rate: The estimated annual number of deaths of infants under 12 months in a given year per 1,000 live births in that same year.
Under Five Mortality Rate: Annual number of deaths that occur in children 0-4 years old per 1000 births (five year period preceding DHS).
Maternal Mortality Ratio (DHS): The estimated number of women who die as a result of pregnancy or childbirth per 100,000 live births, arrived mostly through "direct sisterhood method." The use of information reported by a sibling is to expand the sample size and to compensate for the lack of vital registration system.
Maternal Mortality Ratio (WHO/UNICEF/UNFPA, 2000): Maternal deaths per 100,000 live births.
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Underweight children: Percentage of children under five whose weight-for – age is below minus-two standard deviations from the median of the reference point.
Total Fertility Rate: The number of children a woman between the ages 15-49 would have during her lifetime if she were to bear children at the currently observed rates.
HIV/AIDS Prevalence Rate: The estimated number of adults (ages 15-49) living with HIV/AIDS at the end of 1999 divided by the 1999 population (ages 15-49).
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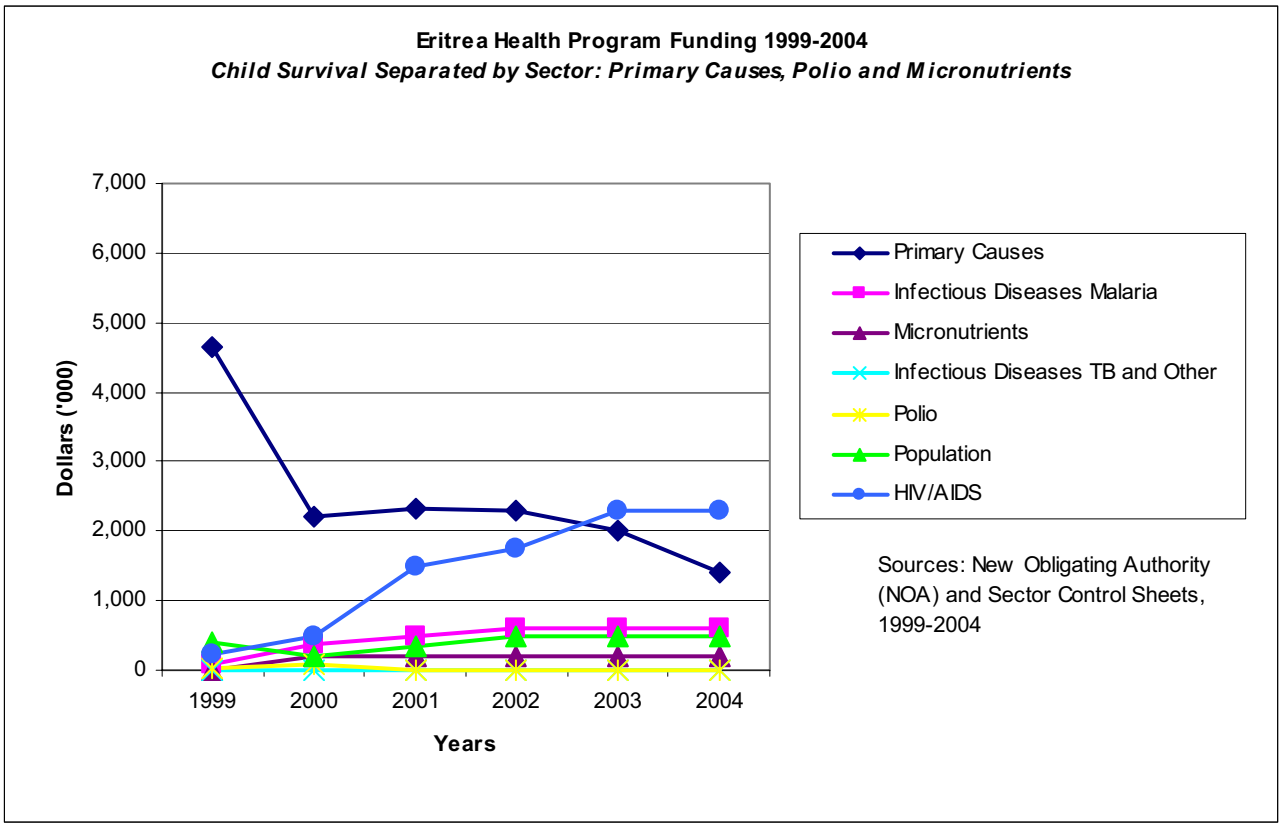
Condom Use With Last Non-Regular Partner – The percent of respondents who say they had sex with a non-marital, non-cohabitating partner, of those who had sex with such a partner in the last 12 months. Data was taken from the Population, Health, and Nutrition Results Reporting, p. 52 and not directly from the DHS. In the report, data was obtained from national surveys, DHS, or other surveys, so it is not clear if these numbers came directly from the DHS.

II. Health Program Spending



Eritrea Health Program Funding ('000)									
Years	TOTAL ALL ACCOUNTS	Child Survival			Infectious Diseases		HIV/AIDS	Population	Total Spent (Including Other Health)
		Primary Causes	Polio	Micronutrients	Malaria	TB & Other			
1999	10,000	4,649	43	0	100	0	217	400	5,409
2000	8,827	2,210	90	200	385	0	500	200	4,333
2001	10,119	2,320	0	200	499	0	1,497	345	4,861
2002	10,908	2,300	0	200	600	0	1,750	500	5,350
2003	9,860	2,000	0	200	600	0	2,300	500	5,600
2004	6,290	1,400	0	200	600	0	2,300	500	5,000

Total Expenditure on health as a percentage of GDP: 4.3%
General government expenditure on health as a percentage of total general government expenditure: 4.0%

Ethiopia

I. Background

Total Population	66,557,553[a]
Total Number of Districts	587[b]

www.lonelyplanet.com/mapshells/ africa/ethiopia/ethiopia.htm

Basic Health Indicators	DHS+	DHS (2000)
Infant Mortality (UNICEF, DHS)	111	97
Under Five Mortality (UNICEF, DHS)	175	166.2
Maternal Mortality Rate (WHO/UNICEF, UNFPA,2000)	N/A	850
Maternal Mortality Rate (DHS)	N/A	871
Stunting	N/A	51.5
Underweight Children	N/A	42.7
Total Fertility Rate	N/A	5.9
HIV/AIDS Prevalence *	9 (1997) *	6 (2001)*
Neonatal Mortality Rate	N/A	48.7
% of Infant Deaths During Neonatal Period	N/A	50.2%

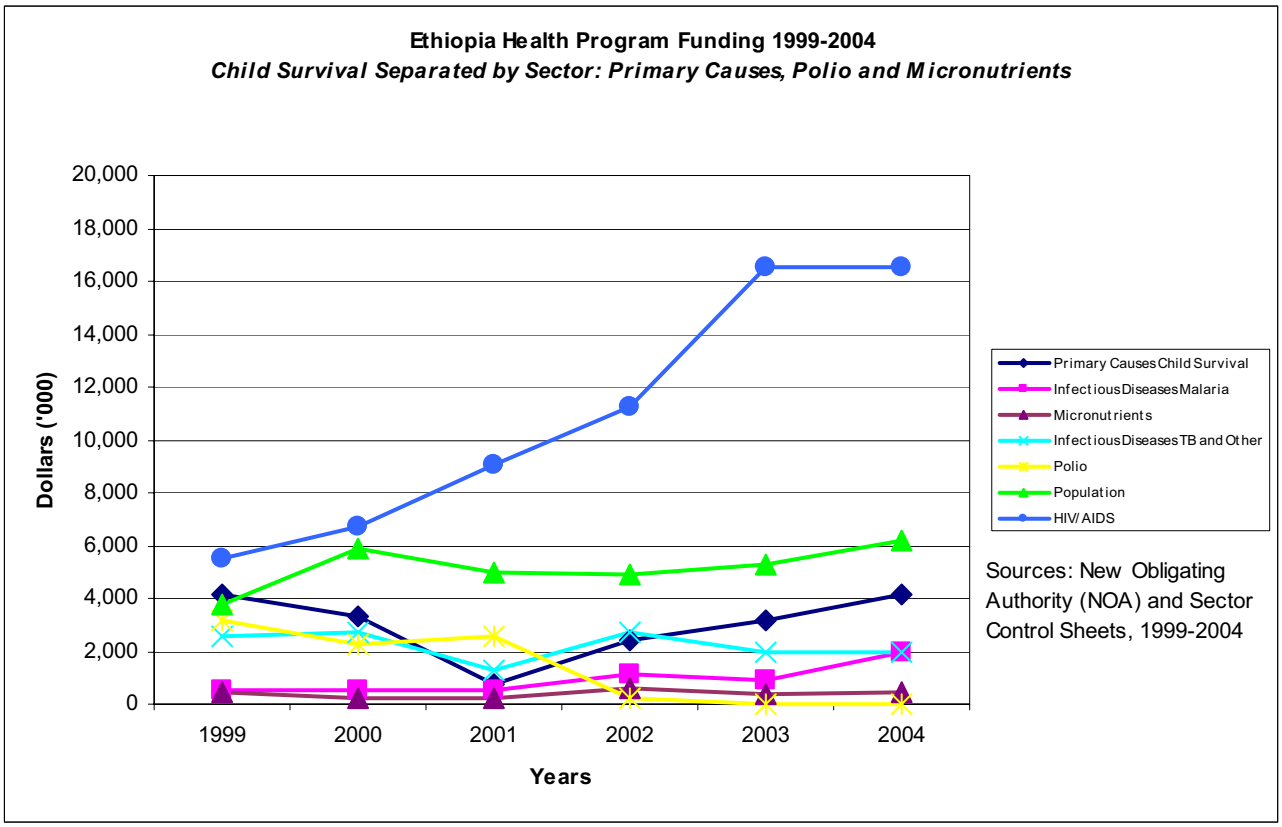
a. Bureau of the Census, International Data Base – Total Midyear Population 2003
b. Malaria Control in the African Region, WHO 2003
+ DHS available for one year only. Other sources will be used to gather data prior to 2000.
*Population, Health and Nutrition Results Reporting, USAID, May 2003
** FY2002 Annual Report
*** FY2003 Annual Report

Coverage Rates		DHS (2000)
DPT 3	N/A	18.1%
Measles	N/A	35.5%
Hib	N/A	N/A
Vitamin A Coverage (UNICEF)	N/A	16%
ORT Use Rate (ORS, RHS, Increased Fluids)	N/A	43.5%
ORT Use Rate (ORS, RHS)	N/A	19.1%
Under 5 use of ITNs	N/A	NA
Proportion under five sleeping under ITNs[b]	N/A	NA
Proportion of pregnant women sleeping under ITNs[b]	N/A	..5%
Proportion of under five with fever/malaria receiving correct treatment within 24 hours of onset of fever in communities surveyed in 2001[b]	N/A	30.4%
Proportion of morbidity inpatients attributed to malaria under five in selected health facilities [b]	N/A	39.8%
Contraceptive Prevalence Rate (married women)	3% (1990)	6%
TT Coverage Rate (at least two doses)		17.2%
% Pregnant Women to antenatal Care 1 visit		26.8%
% Pregnant Women to antenatal Care 2 visits		20.8%
% Pregnant Women to antenatal Care 4 visits		10.4%
Births Attended Rates by a Health Professional		5.6%
Births Attended Rates by a Health Professional or Birth Attendant		36.1%
EBF under 6 months		55.3%
ARI Treatment		15.8%
Condom Use with Last Non-Regular Partner		
-- males		30.3%
-- females		13.4%
Number of Clients Seen at VCT Centers***	N/A	926
USAID Assisted community and home-based care programs***	N/A	7
Number of VCT Centers with USAID Assistance***	N/A	21
Number of USAID supported health facilities offering PMTCT Services***	N/A	0
Number of women who attended PMTCT sites for a new pregnancy in last 12 months***	N/A	0

DATA NOTES:

Infant Mortality Rate: The estimated annual number of deaths of infants under 12 months in a given year per 1,000 live births in that same year.
Under Five Mortality Rate: Annual number of deaths that occur in children 0-4 years old per 1000 births (five year period preceding DHS).
Maternal Mortality Ratio (DHS): The estimated number of women who die as a result of pregnancy or childbirth per 100,000 live births, arrived mostly through "direct sisterhood method." The use of information reported by a sibling is to expand the sample size and to compensate for the lack of vital registration system.
Maternal Mortality Ratio (WHO/UNICEF/UNFPA, 2000): Maternal deaths per 100,000 live births.
Stunting: Percentage of children under five whose height-for-age is below minus-two standard deviations from the median of the reference population**.**
Underweight children: Percentage of children under five whose weight-for – age is below minus-two standard deviations from the median of the reference point.
Total Fertility Rate: The number of children a woman between the ages 15-49 would have during her lifetime if she were to bear children at the currently observed rates.
HIV/AIDS Prevalence Rate: The estimated number of adults (ages 15-49) living with HIV/AIDS at the end of 1999 divided by the 1999 population (ages 15-49).
Neonatal Mortality: The probability of dying within the first month of life, expressed as deaths per 1,000 live births (five years preceding the survey).
Percent of Infant Deaths During Neonatal Period: The percent of infant deaths that occur during the first month of life.
DPT 3 Vaccination Rate: Percentage of children 12-23 months who were immunized in the first year of life.
Measles Vaccination Rate: Percentage of children 12-23 months who have received one dose of MCV (fully immunized against measles) in the first year pf life.
Vitamin A Coverage: Percentage of children age 5-59 months who received at least one high dose of Vitamin A in 2001.
ORT use Rate (ORT, RHS, increased fluids): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS), or increased fluids.
ORT Use Rate (ORT, RHS): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS).
Under 5 Use of Bednets: Percentage of children under 5 years that slept under a net during the night preceding the survey.
Contraceptive Prevalence Rate (married women): Percentage of married women ages 15-49 currently using modern method of contraception. Modern methods include oral contraceptives, IUDs injectables, female and male sterilization, all emergency contraception and barrier methods (diaphragm, foam, jelly, male and female condom).
Tetanus Toxoid Vaccination: Percent distribution of live births in the last five years preceding the survey by number of tetanus toxoid injections given to the mother during pregnancy, according to selected background characteristics.
Number of antenatal care visits and stage of pregnancy: Percent distribution of live births in the five years preceding the survey by number of antenatal care visits.
Births Attended by Health Professional: Percentage of births/deliveries that occur with the assistance of any trained health professional during the five-year preceding the survey. May include doctors, trained nurses, midwife or other health professionals.
Births Attended by Health Professional or Birth Attendant: Percentage of births/deliveries that occur with the assistance of any trained health professional during the five-year preceding the survey. May include doctors, trained nurses, midwife, other health professionals or village health workers.
Exclusive Breast feeding: Percentage if children under 6 months who are exclusively breastfeed. Exclusive breastfeeding is defined as providing no food or liquid other than breast milk to the child during the 24-hour period before the survey.
ARI Treatment – Children Under 5: Percentage of children under five years who were taken to a health facility for treatment of an acute respiratory infection (ARI) which is associated with cough, rapid breathing and a high fever, during the two weeks preceding the survey, and who were treated with specific remedies.
Condom Use With Last Non-Regular Partner – The percent of respondents who say they had sex with a non-marital, non-cohabitating partner, of those who had sex with such a partner in the last 12 months. Data was taken from the Population, Health, and Nutrition Results Reporting, p. 52 and not directly from the DHS.

II. Health Program Spending



Ethiopia Health Program Funding ('000)									
Years	TOTAL ALL ACCOUNTS	Child Survival			Infectious Diseases		HIV/AIDS	Population	Total Spent
		Primary Causes & CS Additive	Polio	Micronutrients	Malaria	TB & Other			
1999	39,915	4,121	3,169	435	500	2,550	5,540	3,750	20,065
2000	39,738	3,300	2,300	200	500	2,750	6,700	5,900	21,650
2001	40,647	781	2,600	220	499	1,306	9,078	4950	19,434
2002	43,257	2,417	200	600	1,100	2,750	11,250	4,940	23,257
2003	44,645	3,150	0	400	900	1,975	16,500	5,305	28,230
2004	52,763	4,150	0	450	2,000	2,000	16,500	6,200	31,300

Total Expenditure on Health as a percentage of GDP 4.6%[b]
General Government expenditure on health as percentage of total general government expenditure 5.5%[b]

Ghana

I. Background

Total Population	20,467,747[a]
Total Number of Districts	110[b]

www.lonelyplanet.com/mapshells/africa/ghana/ghana.htm

Basic Health Indicators	DHS (1993)	DHS (1998)
Infant Mortality	66	56
Under Five Mortality	119	107
Maternal Mortality Rate (WHO/UNICEF/UNFPA)	540	
Maternal Mortality DHS		N/A
Stunting	26	26
Underweight Children	11	13
Total Fertility Rate	5.2	4.4
HIV/AIDS Prevalence *		3*
Neonatal Mortality Rate	40.9	29.7
% of Infant Deaths During Neonatal Period	67%	45%

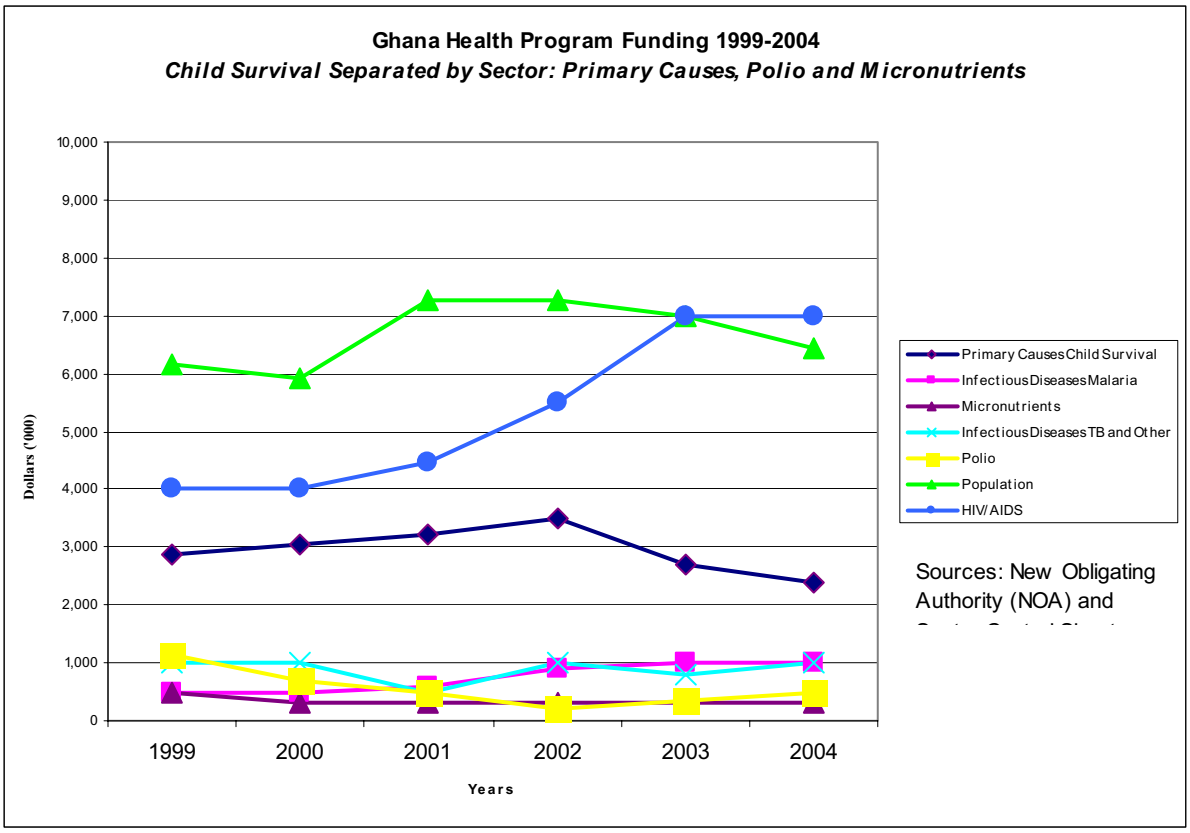
Coverage Indicators	DHS (1993)	DHS (1998)
- - DPT 3	57%	68%
- - Measles	51%	60.9%
- - Hib	N/A	N/A
Vitamin A Coverage (UNICEF)	N/A	100%
ORT Use Rate (ORS, RHS, Increased Liquids)	45.6%	67.9%
ORT Use Rate (ORS, RHS)	37.1%	31.7%
Proportion under five sleeping under ITNs, 2001, 2002[b]	9.1%	22%
Proportion of pregnant women sleeping under ITNs, 2001[b]	7.8	22%
Proportion of under five with fever/malaria receiving correct treatment within 24 hours of onset of fever in communities surveyed in 2001[b]	N/A	22.1%
Proportion of morbidity inpatients attributed to malaria under five in selected health facilities, 2001 [b]	N/A	45.4%
Contraceptive Prevalence Rate (married women)	10%	13%
TT Coverage Rate at least two	51.2%	51.6%
% Pregnant Women to antenatal Care 1 visit	85.6%	87.6%
% Pregnant Women to antenatal Care 2 visits	80.8%	82.5%
% Pregnant Women to antenatal Care 4 visits	58.8%	62.3%
Births Attended Rates by a health professional	43.8%	44.3%
Births Attended Rates by a health professional or birth attendant	74.5%	86.4%
EBF under 6 months	6%	31%
ARI	42.8%	26.2%
Condom Use with Last Non-Regular Partner		
-- males		N/A
-- females		N/A
Number of Clients Seen at VCT Centers**	N/A	2477***
USAID Assisted community and home-based care programs**	N/A	0
Number of VCT Centers with USAID Assistance**	N/A	3***
Number of USAID supported health facilities offering PMTCT Services**	N/A	2***
Number of women who attended PMTCT sites for a new pregnancy in last 12 months**	N/A	2,800***

Bureau of the Census, International Data Base – Total Midyear Population 2003
b. Malaria Control in the African Region, WHO 2003
*UNAIDS – 2002
** FY2003 Annual Report

DATA NOTES:

Infant Mortality Rate: The estimated annual number of deaths of infants under 12 months in a given year per 1,000 live births in that same year.
Under Five Mortality Rate: Annual number of deaths that occur in children 0-4 years old per 1000 births (five year period preceding DHS).
Maternal Mortality Ratio (DHS): The estimated number of women who die as a result of pregnancy or childbirth per 100,000 live births, arrived mostly through "direct sisterhood method." The use of information reported by a sibling is to expand the sample size and to compensate for the lack of vital registration system.
Maternal Mortality Ratio (WHO/UNICEF/UNFPA, 2000): Maternal deaths per 100,000 live births.
Stunting: Percentage of children under five whose height-for-age is below minus-two standard deviations from the median of the reference population**.**
Underweight children: Percentage of children under five whose weight-for – age is below minus-two standard deviations from the median of the reference point.
Total Fertility Rate: The number of children a woman between the ages 15-49 would have during her lifetime if she were to bear children at the currently observed rates.
HIV/AIDS Prevalence Rate: The estimated number of adults (ages 15-49) living with HIV/AIDS at the end of 1999 divided by the 1999 population (ages 15-49).
Neonatal Mortality: The probability of dying within the first month of life, expressed as deaths per 1,000 live births (five years preceding the survey).
Percent of Infant Deaths During Neonatal Period: The percent of infant deaths that occur during the first month of life.
DPT 3 Vaccination Rate: Percentage of children 12-23 months who were immunized in the first year of life.
Measles Vaccination Rate: Percentage of children 12-23 months who have received one dose of MCV (fully immunized against measles) in the first year pf life.
Vitamin A Coverage: Percentage of children age 5-59 months who received at least one high dose of Vitamin A in 2001.
ORT use Rate (ORT, RHS, increased fluids): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS), or increased fluids. 1993 data are for three years preceding the survey.
ORT Use Rate (ORT, RHS): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS). 1993 data are for three years preceding the survey.
Contraceptive Prevalence Rate (married women): Percentage of married women ages 15-49 currently using modern method of contraception. Modern methods include oral contraceptives, IUDs injectables, female and male sterilization, all emergency contraception and barrier methods (diaphragm, foam, jelly, male and female condom).
Tetanus Toxoid Vaccination: Percent distribution of live births in the last five years preceding the survey by number of tetanus toxoid injections given to the mother during pregnancy, according to selected background characteristics. 1993 data are for three years preceding the survey.
Number of antenatal care visits and stage of pregnancy: Percent distribution of live births in the five years preceding the survey by number of antenatal care visits.
Births Attended by Health Professional: Percentage of births/deliveries that occur with the assistance of any trained health professional during the five-year preceding the survey. May include doctors, trained nurses, midwife or other health professionals.
Births Attended by Health Professional or Birth Attendant: Percentage of births/deliveries that occur with the assistance of any trained health professional during the five-year preceding the survey. May include doctors, trained nurses, midwife, other health professionals or village health workers.
Exclusive Breast Feeding: Percentage if children under 6 months who are exclusively breastfeed. Exclusive breastfeeding is defined as providing no food or liquid other than breast milk to the child during the 24-hour period before the survey.
ARI Treatment – Children Under 5: Percentage of children under five years who were taken to a health facility for treatment of an acute respiratory infection (ARI) which is associated with cough, rapid breathing and a high fever, during the two weeks preceding the survey, and who were treated with specific remedies. 1993 data are for three years preceding the survey.
Condom Use With Last Non-Regular Partner – The percent of respondents who say they had sex with a non-marital, non-cohabitating partner, of those who had sex with such a partner in the last 12 months. Data was taken from the Population, Health, and Nutrition Results Reporting, p. 52 and not directly from the DHS.

II. Health Program Spending



Ghana Health Program Funding ('000)									
Years	Total ALL ACCOUNTS	Child Survival			Infectious Diseases		HIV/AIDS	Population	Total Spent
		Primary Causes & CS Additive	Polio	Micronutrients	Malaria	TB & Other			
1999	39,871	2,878	1,154	471	500	1,000	4,000	6,175	16,178
2000	37,601	3,050	700	300	500	1,000	4,000	5,900	16,150
2001	35277	3,210	500	300	599	499	4,454	7255	16,817
2002	34,618	3,500	200	300	900	1,000	5,500	7,255	18,655
2003	36,575	2,700	350	300	1,000	800	7,000	7,000	19,150
2004	33,499	2,400	500	300	1,000	1,000	7,000	6,420	18,620

Total expenditure on health as a percentage of GDP: 4.2%[b]
General government expenditure on health as a percentage of total general government expenditure: 7.9%[b]

Guinea

I. Background

Total Population	9,030,220[a]
Total Number of Districts	38[b]

www.lonelyplanet.com/mapimages/africa/guinea/guinea.gif

Basic Health Indicators	DHS (1992)+	DHS (1999)
Infant Mortality	136	98
Under Five Mortality	229	177
Maternal Mortality Rate (WHO/UNICEF/UNFPA, 2000)		740
Maternal Mortality Rate (DHS)	666	659
Stunting	N/A	26.1.%
Underweight Children	N/A	23.2%
Total Fertility Rate	N/A	5.9
HIV/AIDS Prevalence*	N/A	1.5*
Neonatal Mortality Rate	75.7	48.4
% of Infant Deaths During Neonatal Period	49%	49.4%

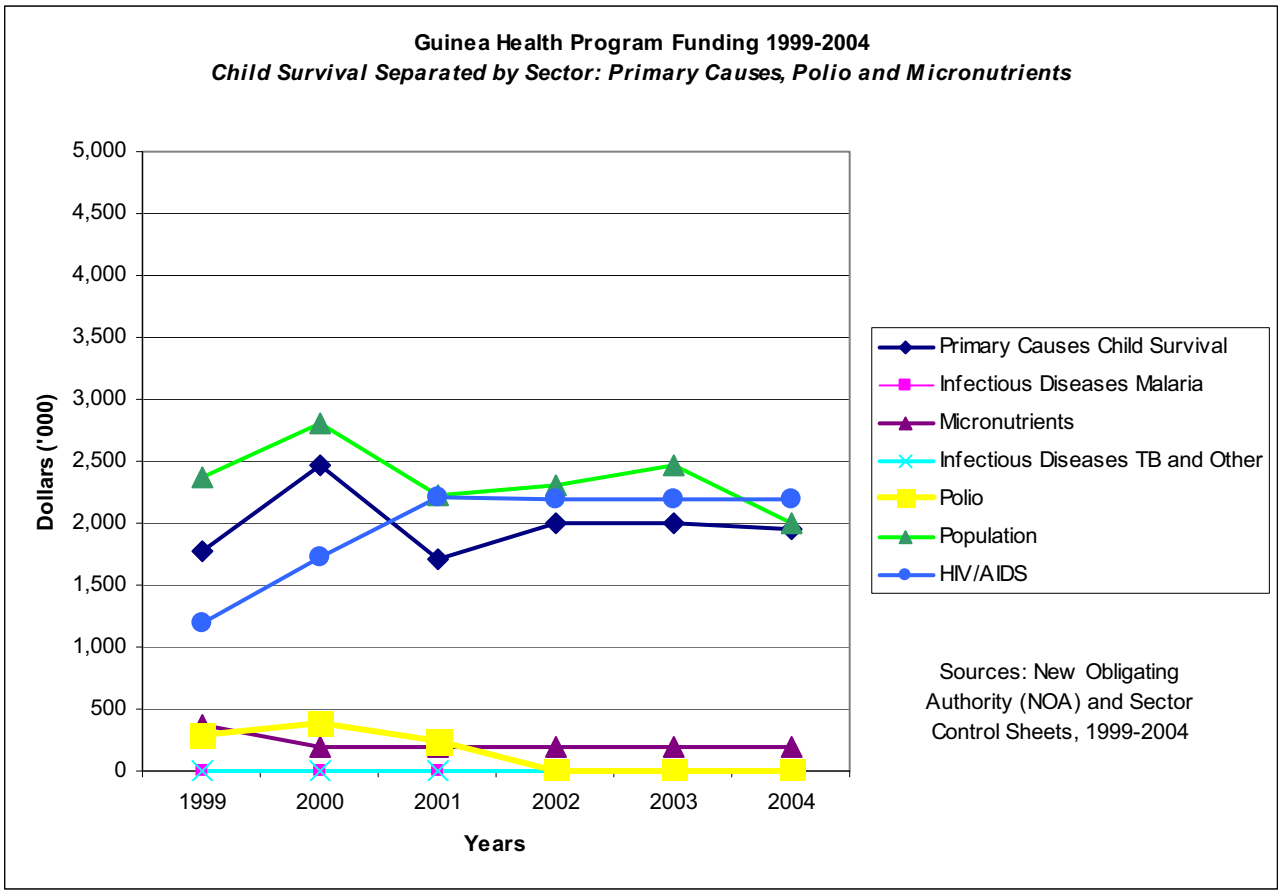
a. Bureau of the Census, International Data Base – Total Midyear Population 2003
b. Malaria Control in the African Region, WHO 2003
+ 1992 data is not complete
*UNAIDS – 2002
** FY2003 Annual Report

Coverage Indicators	DHS (1992)	DHS (1999)
DPT 3	29%	43.0%
Measles	42.3%	44.2%
Hib		N/A
Polio		95.0% (2002)
Vitamin A Coverage (UNICEF, 2001)		93%
ORT Use Rate (ORS, RHS, Increased Fluids)	58%	69.3%
ORT Use Rate (ORS, RHS)	24.5%	39.9%
Proportion under five sleeping under ITNs, 2000 and 2001[b]	0.4%	0.4%
Proportion of pregnant women sleeping under ITNs, 2000 and 2001[b]	0.0%	2.7%
Proportion of under five with fever/malaria receiving correct treatment within 24 hours of onset of fever in communities surveyed in 2001[b]		22.3%
Proportion of morbidity in patients attributed to malaria under five in selected health facilities, 2000 and 2001 [b]		34.8%
Contraceptive Prevalence Rate (married women)	1.0%	4.0%
TT Coverage Rate (at least two doses)	39.2%	59.4%
% Pregnant Women to antenatal Care 1 visit	43.7%	70.1%
% Pregnant Women to antenatal Care 2 visits	39.3%	66.6%
% Pregnant Women to antenatal Care 4 visits	24.5	46.3%
Births Attended Rates by a Health Professional	30.5%	34.8%
Births Attended Rates by a Health Professional or Birth Attendant	35.8%	54.8%
EBF under 6 months	10%	11.0%
ARI	N/A	39.4%
Condom Use with Last Non-Regular Partner	N/A	
-- males	N/A	27.0%
-- females	N/A	17.6%
Number of Clients Seen at VCT Centers***	N/A	0**
USAID Assisted community and home-based care programs***	N/A	0**
Number of VCT Centers with USAID Assistance***	N/A	0**
Number of USAID supported health facilities offering PMTCT Services***	N/A	0**
Number of women who attended PMTCT sites for a new pregnancy in last 12 months***	N/A	0**

DATA NOTES:

Infant Mortality Rate: The estimated annual number of deaths of infants under 12 months in a given year per 1,000 live births in that same year.
Under Five Mortality Rate: Annual number of deaths that occur in children 0-4 years old per 1000 births (five year period preceding DHS).
Maternal Mortality Ratio (DHS): The estimated number of women who die as a result of pregnancy or childbirth per 100,000 live births, arrived mostly through "direct sisterhood method." The use of information reported by a sibling is to expand the sample size and to compensate for the lack of vital registration system.
Maternal Mortality Ratio (WHO/UNICEF/UNFPA, 2000): Maternal deaths per 100,000 live births.
Stunting: Percentage of children under five whose height-for-age is below minus-two standard deviations from the median of the reference population.
Underweight children: Percentage of children under five whose weight-for – age is below minus-two standard deviations from the median of the reference point.
Total Fertility Rate: The number of children a woman between the ages 15-49 would have during her lifetime if she were to bear children at the currently observed rates.
HIV/AIDS Prevalence Rate: The estimated number of adults (ages 15-49) living with HIV/AIDS at the end of 1999 divided by the 1999 population (ages 15-49).
Neonatal Mortality: The probability of dying within the first month of life, expressed as deaths per 1,000 live births (five years preceding the survey).
Percent of Infant Deaths During Neonatal Period: The percent of infant deaths that occur during the first month of life.
DPT 3 Vaccination Rate: Percentage of children 12-23 months who were immunized in the first year of life.
Measles Vaccination Rate: Percentage of children 12-23 months who have received one dose of MCV (fully immunized against measles) in the first year pf life.
Vitamin A Coverage: Percentage of children age 5-59 months who received at least one high dose of Vitamin A in 2001.
ORT use Rate (ORT, RHS, increased fluids): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS), or increased fluids.
ORT Use Rate (ORT, RHS): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS).
Contraceptive Prevalence Rate (married women): Percentage of married women ages 15-49 currently using modern method of contraception. Modern methods include oral contraceptives, IUDs injectables, female and male sterilization, all emergency contraception and barrier methods (diaphragm, foam, jelly, male and female condom).
Tetanus Toxoid Vaccination: Percent distribution of live births in the last five years preceding the survey by number of tetanus toxoid injections given to the mother during pregnancy, according to selected background characteristics.
Number of antenatal care visits and stage of pregnancy: Percent distribution of live births in the five years preceding the survey by number of antenatal care visits.
Births Attended by Health Professional: Percentage of births/deliveries that occur with the assistance of any trained health professional during the five-year preceding the survey. May include doctors, trained nurses, midwife or other health professionals.
Births Attended by Health Professional or Birth Attendant: Percentage of births/deliveries that occur with the assistance of any trained health professional during the five-year preceding the survey. May include doctors, trained nurses, midwife, other health professionals or village health workers.
Exclusive Breast Feeding: Percentage if children under 6 months who are exclusively breastfeed. Exclusive breastfeeding is defined as providing no food or liquid other than breast milk to the child during the 24-hour period before the survey.
ARI Treatment – Children Under 5: Percentage of children under five years who were taken to a health facility for treatment of an acute respiratory infection (ARI) which is associated with cough, rapid breathing and a high fever, during the two weeks preceding the survey, and who were treated with specific remedies.
Condom Use With Last Non-Regular Partner – The percent of respondents who say they had sex with a non-marital, non-cohabitating partner, of those who had sex with such a partner in the last 12 months. Data was taken from the Population, Health, and Nutrition Results Reporting, p. 52 and not directly from the DHS. For Guinea, this value represents the percentage of males and females reporting use of condom at last sexual encounter with any person (cohabitating or not) other than the spouse of the individual surveyed.

II. Health Funding Program



Guinea Health Program Funding ('000)									
Years	TOTAL ALL ACCOUNTS	Child Survival			Infectious Diseases		HIV/AIDS	Population	Total Spent
		Primary Causes & CS Additive	Polio	Micronutrients	Malaria	TB & Other			
1999	17,161	1,780	292	378	0	0	1,200	2,375	6,025
2000	18,564	2,460	390	200	0	0	1,725	2,800	7,725
2001	18,522	1,708	250	200	0	0	2,202	2,230	6,590
2002	22,142	2,000	0	200	0	0	2,200	2,300	6,700
2003	21,632	2,000	0	200	0	0	2,200	2,460	6,860
2004	18,427	1,950	0	200	0	0	2,200	2,000	6,350

Total expenditure on health as a percentage of GDP: 6.3%[b]

General government expenditure on health as a percentage of total general government expenditure: 10.8.%[b]

Madagascar

I. Background

Total Population	16,979,744[a]
Total Number of Districts	111[b]

http://www.lonelyplanet.com/mapshells/africa/madagascar/madagascar.htm

Basic Health Indicators	DHS (1992)	DHS (1997)
Infant Mortality	93	96
Under Five Mortality	163	159
Maternal Mortality Rate (WHO/UNICEF, UNFPA, 2000)		550
Maternal Mortality Rate (DHS)		488
Stunting	51	48
Underweight Children	39	40
Total Fertility Rate	6.1	6
HIV/AIDS Prevalence *		0.3*
Neonatal Mortality Rate	39.2	40.4
% of Infant Deaths During Neonatal Period	42%	42%

** DHS Survey 1997/2001 (PHN Results Reporting, p 76)
a. Bureau of the Census, International Data Base – Total Midyear Population 2003
b. Malaria Control in the African Region, WHO 2003
*UNAIDS – 2002
**FY2003 Annual Report

Coverage Rates	DHS (1992)	DHS (1997)
DPT 3	45.7%	54.7%
Measles	39%	46%
Hib	N/A	N/A
Vitamin A Coverage (UNICEF, 2001)	N/A	73%
ORT Use Rate (ORS,RHS, Increased Liquids)	60.5%	65.7%
ORT Use Rate (ORS, RHS)	25.6%	23.4%
Under 5 use of Bednets	N/A	30
Proportion under five sleeping under ITNs[b]	N/A	N/A
Proportion of pregnant women sleeping under ITNs[b]	N/A	N/A
Proportion of under five with fever/malaria receiving correct treatment within 24 hours of onset of fever in communities surveyed in 2001[b]	N/A	N/A
Proportion of morbidity in patients attributed to malaria under five in selected health facilities, [b]	N/A	N/A
Contraceptive Prevalence Rate (married women)	5%	10%
TT Coverage Rate (Two Doses or More)	43.1%	35.3%
% Pregnant Women to antenatal Care 1 visit	84.5%	81.9%
% Pregnant Women to antenatal Care 2 visits	79%	76.6%
% Pregnant Women to antenatal Care 4 visits	40.9%	39.7%
Births Attended Rates by a Health Professional	56.5	47.3%
Births Attended Rates by a Health Professional or Birth Attendant	87.3	86.5%
EBF under 6 months	10/18.5	47.7
ARI	48.4	36.1
Condom Use With Last non -Regular Partner		
Condom Use In		
--Males	N/A	N/A
--Females	N/A	N/A
Number of clients seen at VCT Centers **	N/A	0
USAID assisted community and home-based care programs**`	N/A	0
Number of VCT Centers with USAID Assistance**	N/A	0
Number of USAID supported health facilities offering PMTCT Services**	N/A	0
Number of women who attended PMTCT sites for a new pregnancy in last 12 months**	N/A	0

DATA NOTES:

Infant Mortality Rate: The estimated annual number of deaths of infants under 12 months in a given year per 1,000 live births in that same year.

Under Five Mortality Rate: Annual number of deaths that occur in children 0-4 years old per 1000 births (five year period preceding DHS).

Maternal Mortality Ratio (DHS): The estimated number of women who die as a result of pregnancy or childbirth per 100,000 live births, arrived mostly through "direct sisterhood method." The use of information reported by a sibling is to expand the sample size and to compensate for the lack of vital registration system.

Maternal Mortality Ratio (WHO/UNICEF/UNFPA, 2000): Maternal deaths per 100,000 live births.

Stunting: Percentage of children under five whose height-for-age is below minus-two standard deviations from the median of the reference population**.**

Underweight children: Percentage of children under five whose weight-for – age is below minus-two standard deviations from the median of the reference point.

Total Fertility Rate: The number of children a woman between the ages 15-49 would have during her lifetime if she were to bear children at the currently observed rates.

HIV/AIDS Prevalence Rate: The estimated number of adults (ages 15-49) living with HIV/AIDS at the end of 1999 divided by the 1999 population (ages 15-49).

Neonatal Mortality: The probability of dying within the first month of life, expressed as deaths per 1,000 live births (five years preceding the survey).

Percent of Infant Deaths During Neonatal Period: The percent of infant deaths that occur during the first month of life.

DPT 3 Vaccination Rate: Percentage of children 12-23 months who were immunized in the first year of life.

Measles Vaccination Rate: Percentage of children 12-23 months who have received one dose of MCV (fully immunized against measles) in the first year pf life.

Vitamin A Coverage: Percentage of children age 5-59 months who received at least one high dose of Vitamin A in 2001.

ORT use Rate (ORT, RHS, increased fluids): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS), or increased fluids. 1993 data are for three years preceding the survey. Data are for three years preceding the survey.

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Contraceptive Prevalence Rate (married women): Percentage of married women ages 15-49 currently using modern method of contraception. Modern methods include oral contraceptives, IUDs injectables, female and male sterilization, all emergency contraception and barrier methods (diaphragm, foam, jelly, male and female condom).

Tetanus Toxoid Vaccination: Percent distribution of live births in the last five years preceding the survey by number of tetanus toxoid injections given to the mother during pregnancy, according to selected background characteristics. 1993 data are for three years preceding the survey. Data for three years preceding the survey.

Number of antenatal care visits and stage of pregnancy: Percent distribution of live births in the five years preceding the survey by number of antenatal care visits. Data are for three years preceding the survey.

Births Attended by Health Professional: Percentage of births/deliveries that occur with the assistance of any trained health professional during the five-year preceding the survey. May include doctors, trained nurses, midwife or other health professionals. Data are for three years preceding the survey.

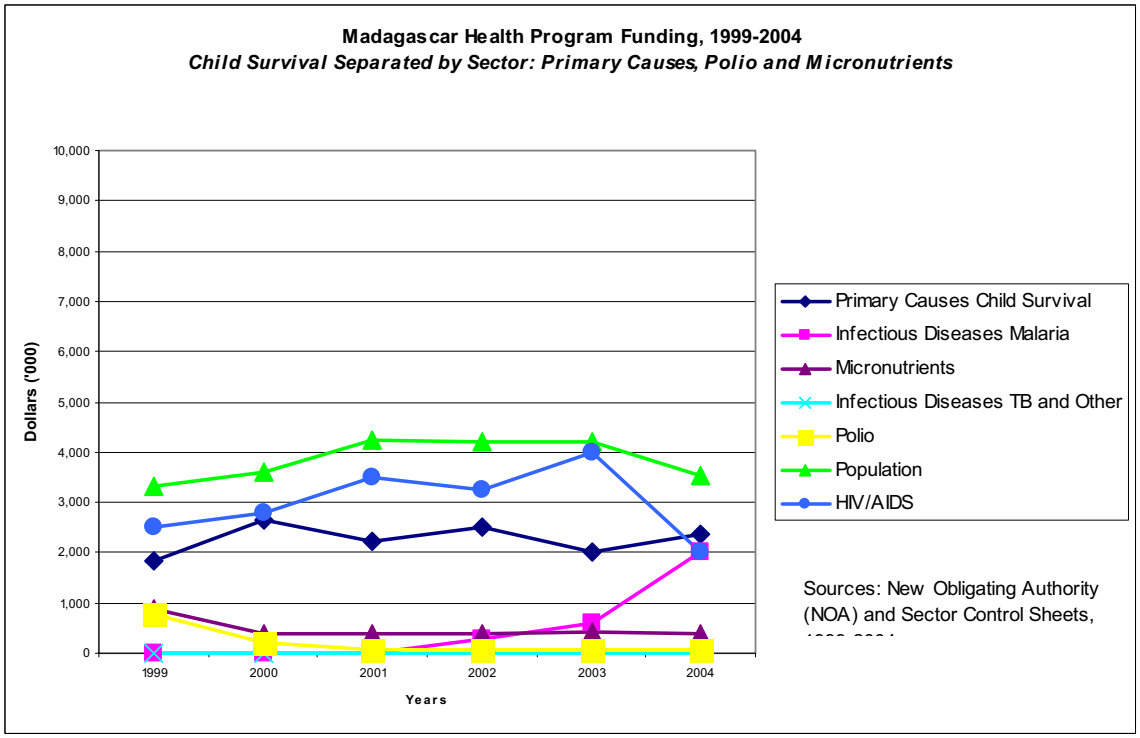
Births Attended by Health Professional or Birth Attendant: Percentage of births/deliveries that occur with the assistance of any trained health professional during the five-year preceding the survey. May include doctors, trained nurses, midwife, other health professionals or village health workers.

Exclusive Breast Feeding: Percentage if children under 6 months who are exclusively breastfeed. Exclusive breastfeeding is defined as providing no food or liquid other than breast milk to the child during the 24-hour period before the survey.

ARI Treatment – Children Under 5: Percentage of children under five years who were taken to a health facility for treatment of an acute respiratory infection (ARI) which is associated with cough, rapid breathing and a high fever, during the two weeks preceding the survey, and who were treated with specific remedies. 1993 data are for three years preceding the survey.

Condom Use With Last Non-Regular Partner – The percent of respondents who say they had sex with a non-marital, non-cohabitating partner, of those who had sex with such a partner in the last 12 months. Data was taken from the Population, Health, and Nutrition Results Reporting, p. 52 and not directly from the DHS.

II. Health Program Spending



Madagascar Health Program Funding ('000)									
Years	TOTAL ALL ACCOUNTS	Child Survival			Infectious Diseases		HIV/AIDS	Population	Total Spent
		Primary Causes & CS Additive	Polio	Micronutrients	Malaria	TB & Other			
1999	15,926	1,821	781	900	0	0	2,499	3,325	9,326
2000	16,966	2,650	200	400	0	0	2,800	3,600	9,650
2001	19368	2,225	75	400	0	0	3,486	4237	10,423
2002	19,265	2,500	75	400	300	0	3,252	4,200	10,727
2003	18,897	2,010	75	408	600	0	4,003	4,200	11,296
2004	19,521	2,350	75	400	2,000	0	2,000	3,540	10,365

Total expenditure on health as a percentage of GDP:3.5% [b]

General government expenditure on health as a percentage of total general government expenditure:15.1% [b]

Malawi

I. Background

Total Population	11,651,239[a]
Total Number of Districts	26[b]

www.lonelyplanet.com/mapshells/africa/malawi/malawi.htm

Basic Health Indicators	DHS 1992	DHS 2000
Infant Mortality	134	104
Under Five Mortality	234	189
Maternal Mortality Rate (WHO/UNICEF/UNFPA, 2000)		1800
Maternal Mortality Rate (DHS)		1120
Stunting	49	49
Underweight Children	27	25
Total Fertility Rate	6.7	6.3
HIV/AIDS Prevalence *		15%

a. Bureau of the Census, International Data Base – Total Midyear Population 2003
b. Malaria Control in the African Region, WHO 2003
*UNAIDS – 2002
** FY2002 Annual Report
*** FY2003 Annual Report

Coverage Rates	DHS (1992)	DHS (2000)
DPT 3	83%	78%
Measles	70%	64%
Hib	N/A	N/A
Vitamin A Coverage (UNICEF, 2001)	N/A	63%
ORT Use Rate (ORS, RHS, Increased Liquids)	73.3%	62.1%
ORT Use Rate (ORS, RHS)	63.2%	47.9%
Proportion under five sleeping under ITNs (RBM 2001)[b]	N/A	10.4%
Proportion of pregnant women sleeping under ITNs (RBM 2001) [b]	N/A	4.9%
Proportion of under five with fever/malaria receiving correct treatment within 24 hours of onset of fever in communities surveyed in 2001 (RBM) [b]	N/A	46.0%
Proportion of morbidity inpatients attributed to malaria under five in selected health facilities (RBM 2001)[b]	N/A	41.0%
Contraceptive Prevalence Rate (married women)	7%	26%
TT Coverage Rate (at least two doses)	72.5.%	61%
% Pregnant Women to antenatal Care 1 visit	90.5%	94.4%
% Pregnant Women to antenatal Care 2 visits	88.5%	90.6%
% Pregnant Women to antenatal Care 4 visits	62.6%	56%
Births Attended Rates by a Health Professional	54.9%	55.6%
Births Attended Rates by a Health Professional or Birth Attendant	71.3%	72.4%
EBF under 6 months	2%	44.3%
ARI	53.7%	26.7%
Condom Use with Last Non-Regular Partner		
--males		38.9%
--females		28.7%
Number of Clients Seen at VCT Centers***	N/A	49,142*
USAID Assisted community and home-based care programs***	N/A	7*
Number of VCT Centers with USAID Assistance***	N/A	3*
Number of USAID supported health facilities offering PMTCT Services***	N/A	0*
Number of women who attended PMTCT sites for a new pregnancy in last 12 months***	N/A	0*

DATA NOTES:

Infant Mortality Rate: The estimated annual number of deaths of infants under 12 months in a given year per 1,000 live births in that same year.
Under Five Mortality Rate: Annual number of deaths that occur in children 0-4 years old per 1000 births (five year period preceding DHS).
Maternal Mortality Ratio (DHS): The estimated number of women who die as a result of pregnancy or childbirth per 100,000 live births, arrived mostly through "direct sisterhood method." The use of information reported by a sibling is to expand the sample size and to compensate for the lack of vital registration system.
Maternal Mortality Ratio (WHO/UNICEF/UNFPA, 2000): Maternal deaths per 100,000 live births.
Stunting: Percentage of children under five whose height-for-age is below minus-two standard deviations from the median of the reference population.
Underweight children: Percentage of children under five whose weight-for – age is below minus-two standard deviations from the median of the reference point.
Total Fertility Rate: The number of children a woman between the ages 15-49 would have during her lifetime if she were to bear children at the currently observed rates.
HIV/AIDS Prevalence Rate: The estimated number of adults (ages 15-49) living with HIV/AIDS at the end of 1999 divided by the 1999 population (ages 15-49).
Neonatal Mortality: The probability of dying within the first month of life, expressed as deaths per 1,000 live births (five years preceding the survey).
Percent of Infant Deaths During Neonatal Period: The percent of infant deaths that occur during the first month of life.
DPT 3 Vaccination Rate: Percentage of children 12-23 months who were immunized in the first year of life.
Measles Vaccination Rate: Percentage of children 12-23 months who have received one dose of MCV (fully immunized against measles) in the first year pf life.
Vitamin A Coverage: Percentage of children age 5-59 months who received at least one high dose of Vitamin A in 2001.
ORT use Rate (ORT, RHS, increased fluids): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS), or increased fluids.
ORT Use Rate (ORT, RHS): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS).
Under 5 Use of Bednets: Percentage of children under 5 years that slept under a net during the night preceding the survey.
Contraceptive Prevalence Rate Married Women: Percentage of married women ages 15-49 currently using modern method of contraception. Modern methods include oral contraceptives, IUDs injectables, female and male sterilization, all emergency contraception and barrier methods (diaphragm, foam, jelly, male and female condom).
Tetanus Toxoid Vaccination: Percent distribution of live births in the last five years preceding the survey by number of tetanus toxoid injections given to the mother during pregnancy, according to selected background characteristics.
Number of antenatal care visits and stage of pregnancy: Percent distribution of live births in the five years preceding the survey by number of antenatal care visits.
Births Attended by Health Professional: Percentage of births/deliveries that occur with the assistance of any trained health professional during the five-year preceding the survey. May include doctors, trained nurses, midwife or other health professionals.
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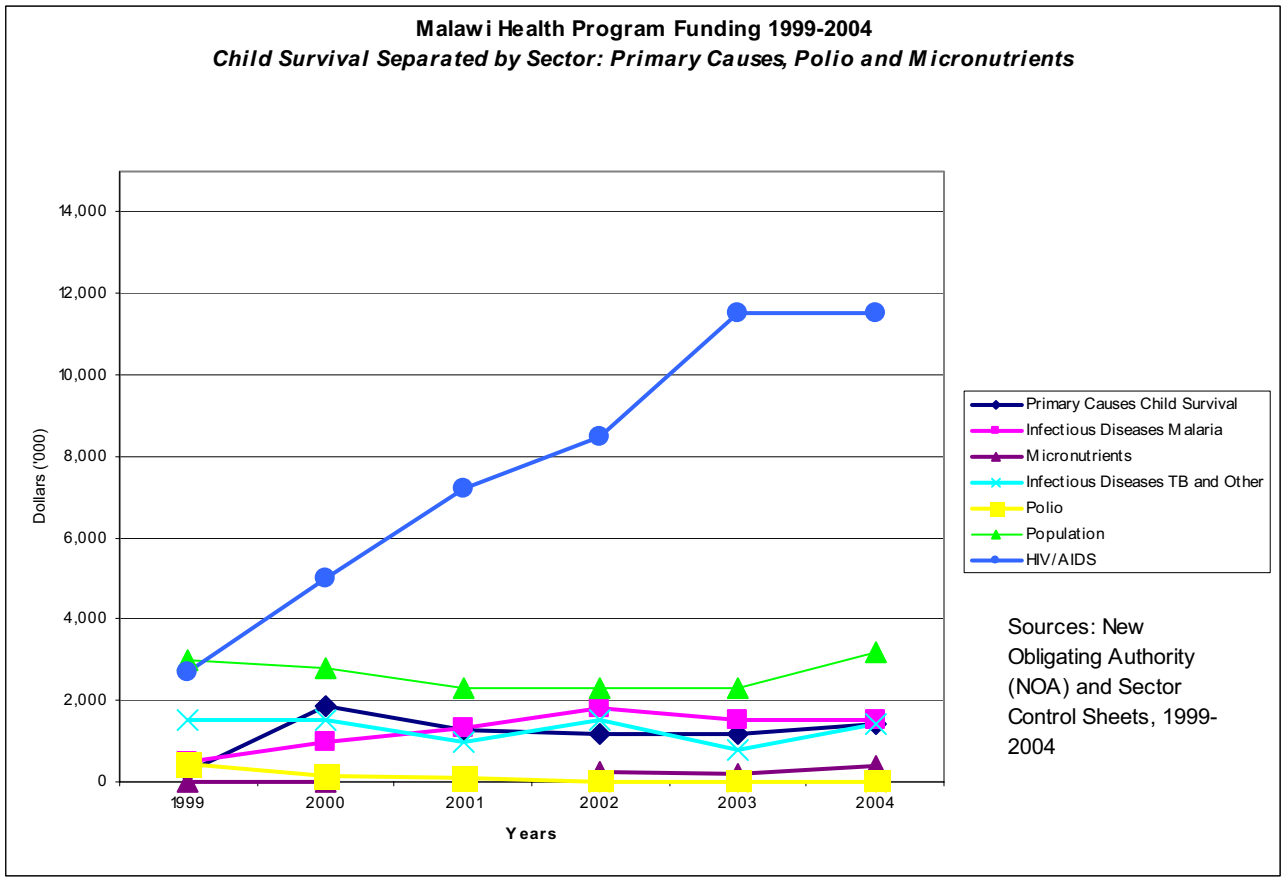
Exclusive Breast Feeding: Percentage if children under 6 months who are exclusively breastfeed. Exclusive breastfeeding is defined as providing no food or liquid other than breast milk to the child during the 24-hour period before the survey.
ARI Treatment – Children Under 5: Percentage of children under five years who were taken to a health facility for treatment of an acute respiratory infection (ARI) which is associated with cough, rapid breathing and a high fever, during the two weeks preceding the survey, and who were treated with specific remedies.
Condom Use With Last Non-Regular Partner – The percent of respondents who say they had sex with a non-marital, non-cohabitating partner, of those who had sex with such a partner in the last 12 months. Data was taken from the Population, Health, and Nutrition Results Reporting, p. 52 and not directly from the DHS.

II. Health Program Spending



Malawi Health Program Funding ('000)									
Years	TOTAL ALL ACCOUNTS	Child Survival			Infectious Diseases		HIV/AIDS	Population	Total Spent
		Primary Causes & CS Additive	Polio	Micronutrients	Malaria	TB & Other			
1999	33,085	255	458	0	500	1,500	2,685	3,000	9,560
2000	30,404	1,850	150	0	956	1,500	5,000	2,800	13,056
2001	28,012	1256	75		1,347	987	7,186	2280	13,131
2002	29,369	1,200	-	260	1,800	1,500	8,500	2,280	15,540
2003	26,254	1,200	0	200	1,500	800	11,500	2,280	17,480
2004	31,137	1,400	0	400	1,500	1,400	11,509	3,200	19,409

Total Expenditure on Health as a percentage of GDP 7.6%[b]
General Government expenditure on health as percentage of total general government expenditure 14.6%[b]

Mali

I. Background

Total Population	116,26,279[a]
Total Number of Districts	58[b]

www.lonelyplanet.com/mapshells/africa/mali/mali.htm

Basic Health Indicators	DHS (1995)	DHS (2001)
Infant Mortality	123	113
Under Five Mortality	238	229
Maternal Mortality Ratio (WHO/UNICEF?UNFPA, 2000)		1200
Maternal Mortality Ratio (DHS)		582
Stunting	30%	38%
Underweight Children	40%	33%
Total Fertility Rate	6.7	6.8
HIV/AIDS Prevalence *		1.7*
Neonatal Mortality	60.4	57.1
% of Infant Deaths During Neonatal Period	50%	50%

Coverage Indicators	DHS (1995)	DHS (2001)
DPT 3	28%	33%
Measles	35%	36%
Hib	N/A	N/A
Vitamin A Coverage (UNICEF, 2001)	N/A	74%
ORT Use Rate (ORS, RHS, increased liquids)	45%	65.7%
ORT Use Rate (ORS, RHS, increased liquids)	15.9%	29.8%
Proportion under five sleeping under ITNs, 2000[b]	N/A	15.3%
Proportion of pregnant women sleeping under ITNs, 2000[b]	N/A	19.7%
Proportion of under five with fever/malaria receiving correct treatment within 24 hours of onset of fever in communities surveyed in 2001[b]	N/A	N/A
Proportion of morbidity inpatients attributed to malaria under five in selected health facilities, 2001 [b]	N/A	N/A
Contraceptive Prevalence Rate (married women)	5%	6%
TT Coverage Rate (at least two)	31.7%	32.1%
% Pregnant Women to Antenatal Care 1 visit	45.7%	52.1%
% Pregnant Women to Antenatal Care 2 visit	40.3%	46.7%
% Pregnant Women to Antenatal Care 4 visit	25.8%	29.9%
Births Attended Rates by a Health Professional	38.7%	39.0%
Births Attended rates by a Health Professional or Birth Attendant	59.8%	66.1%
EBF Under 6 Months	14%	25%
ARI Treatment	36.6%	35.6%
Condom Use with Last non-Regular Partner		
- -males	N/A	32.7%
- -females	N/A	14.2%
Number of clients seen at VCT Centers **		1,738***
USAID assisted community and home-based care programs**		0***
Number of VCT Centers with USAID Assistance**		2***
Number of USAID supported health facilities offering PMTCT Services**		N/A
Number of women who attended PMTCT sites		

Bureau of the Census, International Data Base – Total Midyear Population 2003
b. Malaria Control in the African Region, WHO 2003
*UNAIDS – 2002
** FY2002 Annual Report
*** FY2003 Annual Report

DATA NOTES:

Infant Mortality Rate: The estimated annual number of deaths of infants under 12 months in a given year per 1,000 live births in that same year.
Under Five Mortality Rate: Annual number of deaths that occur in children 0-4 years old pre 1,000 births (five year period preceding DHS).
Maternal Mortality Ratio (DHS): The estimated number of women who die as a result of pregnancy or childbirth per 100,000 live births, arrived mostly through 'direct sisterhood method. The use of information reported by a sibling is to expand the sample size and to compensate for the lack of vital registration system.
Maternal Mortality Ratio (WHO/UNICEF/UNFPA, 2000): Maternal deaths per 100,000 live births.
Stunting: Percentage of children under five whose height-for-age is below minus-two standard deviations from the median of the reference population.
Underweight children: Percentage of children under five whose weight-for – age is below minus-two standard deviations from the median of the reference point.
Total Fertility Rate: The number of children a woman between the ages 15-49 would have during her lifetime if she were to bear children at the currently observed rates.
HIV/AIDS Prevalence Rate: The estimated number of adults (ages 15-49) living with HIV/AIDS at the end of 1999 divided by the 1999 population (ages 15-49).
Neonatal Mortality: The probability of dying within the first month of life, expressed as deaths per 1,000 live births (five years preceding the survey).
Percent of Infant Deaths During Neonatal Period: The percent of infant deaths that occur during the first month of life.
DPT 3 Vaccination Rate: Percentage of children 12-23 months who were immunized in the first year of life.
Measles Vaccination Rate: Percentage of children 12-23 months who have received one dose of MCV (fully immunized against measles) in the first year pf life.
Vitamin A Coverage: Percentage of children age 5-59 months who received at least one high dose of Vitamin A in 2001.
ORT USE (ORT, RHS, increased fluids): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS), or increased fluids. 1995 data is for the three years preceding the survey.
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Contraceptive Prevalence Rate (married women): Percentage of married women ages 15-49 currently using modern method of contraception. Modern methods include oral contraceptives, IUDs injectables, female and male sterilization, all emergency contraception and barrier methods (diaphragm, foam, jelly, male and female condom).
Tetanus toxoid vaccination: Percent distribution of live births in the last five years preceding the survey by number of tetanus toxoid injections given to the mother during pregnancy, according to selected background characteristics. 1995 data is for three years preceding the survey.
Number of antenatal care visits and stage of pregnancy: Percent distribution of live births in the five years preceding the survey by number of antenatal care visits. 1995 data is for three years preceding the survey.
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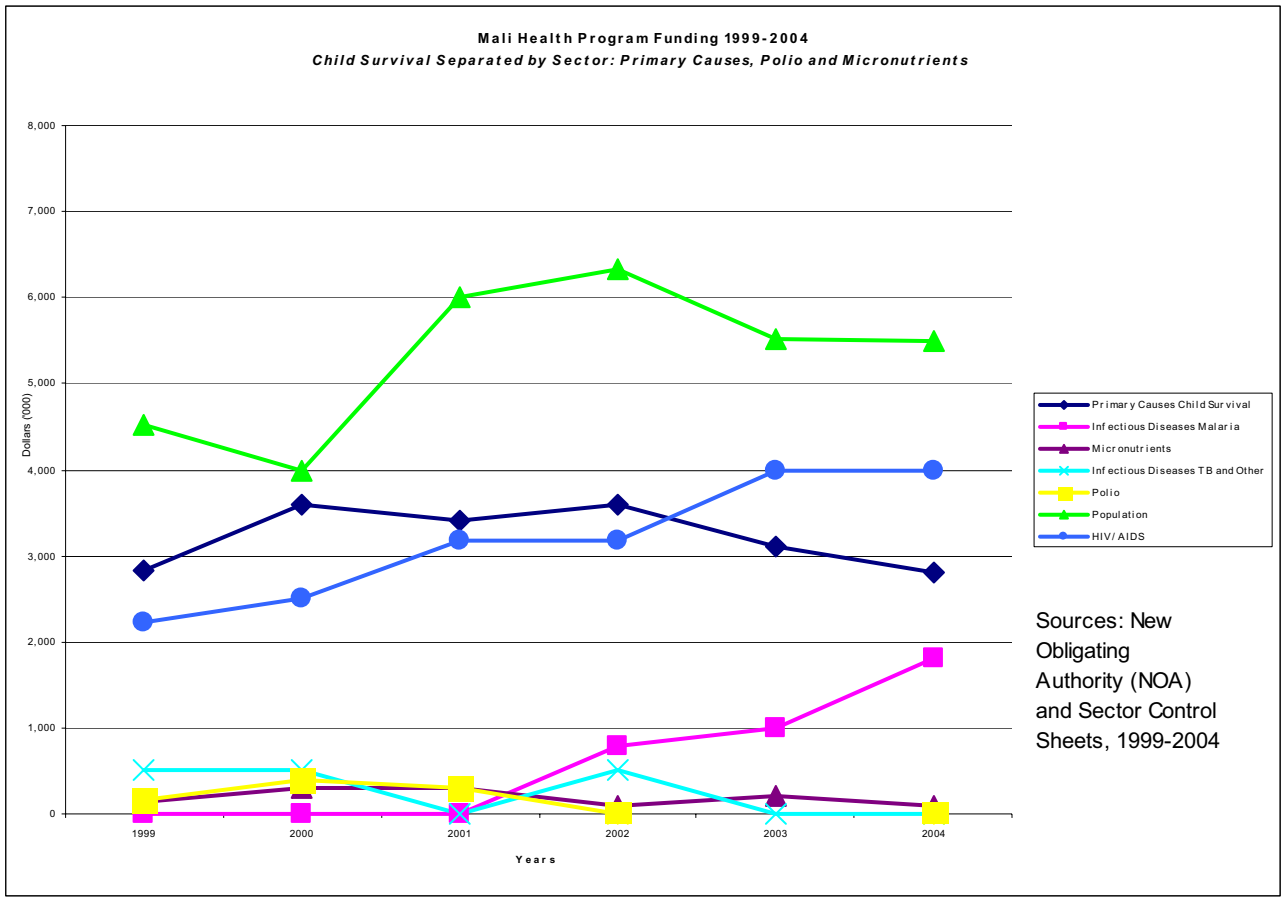
Condom Use With Last Non-Regular Partner – Percentage of respondents who say they had sex with a non-marital, non-cohabitating partner, of those who had sex with such a partner in the last 12 months. Data was taken from the Population, Health, and Nutrition Results Reporting, p. 52 and not directly from the DHS. In the report, data was obtained from national surveys, DHS, or other surveys, so it is not clear if these numbers came directly from the DHS.

II. Health Program Spending



Mali Health Program Funding ('000)									
Years	TOTAL ALL ACCOUNTS	Child Survival			Infectious Diseases		HIV/AIDS	Population	Total Spent
		Primary Causes & CS Additive	Polio	Micronutrients	Malaria	TB & Other			
1999	35,351	2,825	167	150	0	500	2,220	4,530	10,392
2000	35,248	3,600	400	300	0	500	2,500	4,000	11,800
2001	34,487	3,400	300	300	0	0	3,167	5,995	13,162
2002	36,176	3,600	0	100	800	500	3,167	6,321	14,488
2003	35,377	3,100		200	1,000	0	4,000	5,521	13,821
2004	38,596	2,800	0	100	1,800	0	4,000	5,500	14,200

Total expenditure on health as a percentage of GDP: 4.9%[b]
General government expenditure on health as a percentage of total general government expenditure: 8.3%[b]

Senegal

I. Background

Total Population	10,580,307[a]
Total Number of Districts	50[b]

www.lonelyplanet.com/mapshells/africa/senegal/senegal.htm

Basic Health Indicators	DHS (1992)	DHS (1997)
Infant Mortality Rate	76 (1997)	67 [c]
Under Five Mortality Rate	157 (1997)	153 [c]
Maternal Mortality Rate (WHO/UNICEF/UNFPA, 2000)		690
Maternal Mortality Rate (DHS)	555	N/A
Stunting	N/A	25%
Underweight Children	22 %	22%
Total Fertility Rate	6	5.2
HIV/AIDS Prevalence (1997, 2001)*	2%	1%*
Neonatal Mortality Rate	34.9	37.4
% of Infant Deaths During Neonatal Period	51%	56%

Bureau of the Census, International Data Base – Total Midyear Population 2003
b. Malaria Control in the African Region, WHO 2003
c. MICS, 2000
*Population, Health, and Nutrition Results Reporting, USAID, May 2003
** FY2003 Annual Report

Coverage Rates	DHS (1992)	DHS (1997)
DPT 3	61% (1997)	51.8% [c]
Measles	51% (1997)	49% [c]
Hib	N/A	N/A
Vitamin A Coverage (UNICEF, 2001)	N/A	84%
ORT Use Rate (ORS, RHS, Increased Liquids)	46.9%	65.7%
ORT Use Rate (ORS, RHS)	16%	32.7%
Proportion under five sleeping under ITNs, 2000[c]	N/A	1.7%
Proportion of pregnant women sleeping under ITNs[b]	N/A	N/A
Proportion of under five children with fever/malaria who received treatment with an antimalarial, in 2000[c]	N/A	36.2%
Proportion of morbidity inpatients attributed to malaria under five in selected health facilities, 2001 [b]	N/A	28.8%
Contraceptive Prevalence Rate (married women)	5%	8%
TT Coverage Rate (at least two doses)	52.5%	65.6%
% Pregnant Women to antenatal Care 1 visit	75.1.%	83.2%
% Pregnant Women to antenatal Care 2 visits	61.8.%	66.6.%
% Pregnant Women to antenatal Care 4 visits	13.3%	16.6%
Births Attended Rates by a Health Professional	47.2 %	46.6%
Births Attended Rates by a Health Professional or Birth attendant	75.4%	60.2%
EBF under 6 months	5%	10.5%
ARI	30.6% (1997)	26.7% [c]
Condom Use With Last non -Regular Partner		
--males	N/A	47.9%
--females	N/A	16.7%
Number of Clients Seen at VCT Centers**	N/A	2477**
USAID Assisted community and home-based care programs**	N/A	0**
Number of VCT Centers with USAID Assistance**	N/A	3**
Number of USAID supported health facilities offering PMTCT Services**	N/A	0**
Number of women who attended PMTCT sites for a new pregnancy in last 12 months**	N/A	0**

DATA NOTES:

Infant Mortality Rate: The estimated annual number of deaths of infants under 12 months in a given year per 1,000 live births in that same year.
Under Five Mortality Rate: Annual number of deaths that occur in children 0-4 years old per 1000 births (five year period preceding DHS).
Maternal Mortality Ratio (DHS): The estimated number of women who die as a result of pregnancy or childbirth per 100,000 live births, arrived mostly through "direct sisterhood method." The use of information reported by a sibling is to expand the sample size and to compensate for the lack of vital registration system.
Maternal Mortality Ratio (WHO/UNICEF/UNFPA, 2000): Maternal deaths per 100,000 live births.
Stunting: Percentage of children under five whose height-for-age is below minus-two standard deviations from the median of the reference population.
Underweight children: Percentage of children under five whose weight-for – age is below minus-two standard deviations from the median of the reference point.
Total Fertility Rate: The number of children a woman between the ages 15-49 would have during her lifetime if she were to bear children at the currently observed rates.
HIV/AIDS Prevalence Rate: The estimated number of adults (ages 15-49) living with HIV/AIDS at the end of 1999 divided by the 1999 population (ages 15-49).
Neonatal Mortality: The probability of dying within the first month of life, expressed as deaths per 1,000 live births (five years preceding the survey).
Percent of Infant Deaths During Neonatal Period: The percent of infant deaths that occur during the first month of life.
DPT 3 Vaccination Rate: Percentage of children 12-23 months who were immunized in the first year of life.
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Tetanus Toxoid Vaccination: Percent distribution of live births in the last five years preceding the survey by number of tetanus toxoid injections given to the mother during pregnancy, according to selected background characteristics.
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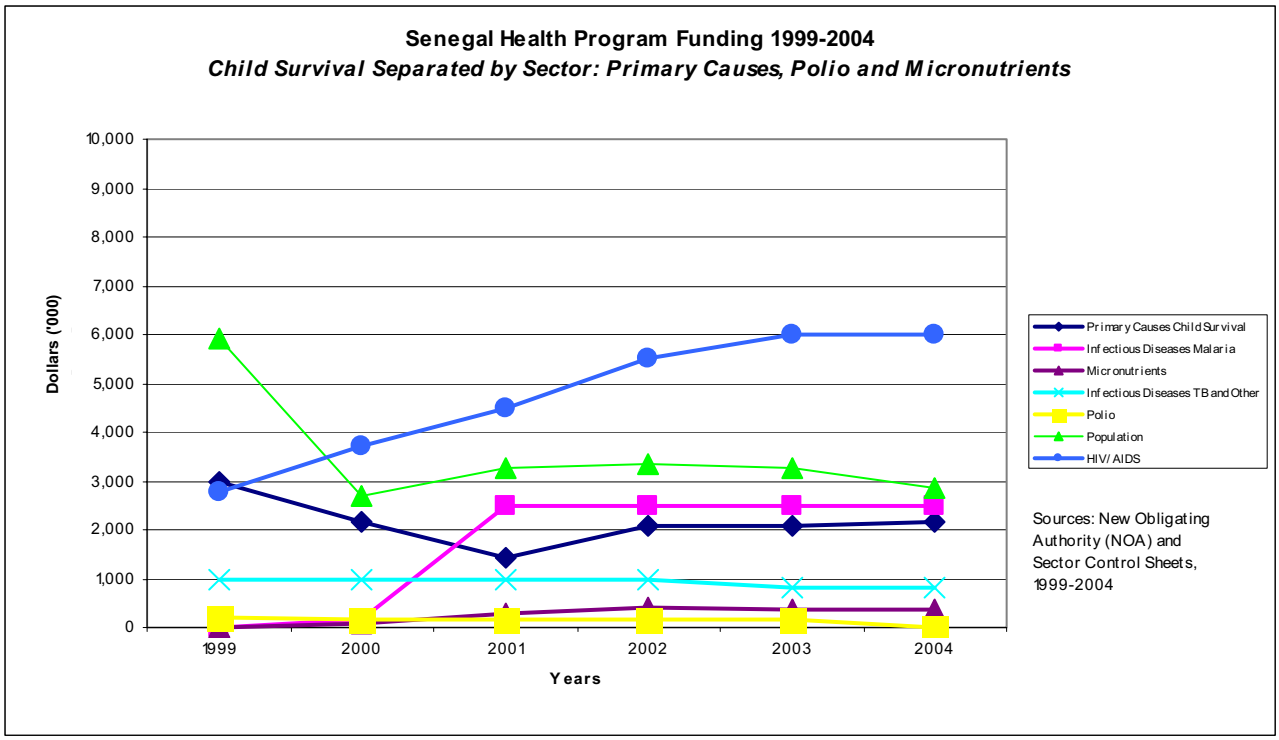
Condom Use With Last Non-Regular Partner – The percent of respondents who say they had sex with a non-marital, non-cohabitating partner, of those who had sex with such a partner in the last 12 months. Data was taken from the Population, Health, and Nutrition Results Reporting, p. 52 and not directly from the DHS. In the report, data was obtained from national surveys, DHS, or other surveys, so it is not clear if these numbers came directly from the DHS.

II. Health Program Spending



Senegal Health Program Funding ('000)									
Years	TOTAL ALL ACCOUNTS	Child Survival			Infectious Diseases		HIV /AIDS	Population	Total Spent (Including Other Health)
		Primary Causes & CS Additive	Polio	Micronutrients	Malaria	TB & Other			
1999	23,224	3,000	207	0	0	1,000	2,774	5,903	12,884
2000	23,553	2,150	150	100	160	1,000	3,700	2,700	9,960
2001	23,241	1,433	150	300	2,494	987	4,502	3 255	13,621
2002	28,955	2,100	150	400	2,500	1,000	5,500	3,355	15,005
2003	28,001	2,075	150	380	2,500	800	6,000	3,262	15,167
2004	27,106	2,150	0	350	2,500	800	6,000	2,875	14,675

Total expenditure on health as a percentage of GDP: 4.6% (World Development Indicators)
General government expenditure on health as a percentage of total general government expenditure: N/A

Tanzania

I. Background

Total Population	35,922,454[a]
Total Number of Districts	123[b]

www.un.org/works/business/tanzania.jpg

Basic Coverage Indicators	DHS (1996)	DHS (1999)
Infant Mortality Rate	87	99
Under Five Mortality Rate	137	147
Maternal Mortality Ratio (WHO/UNICEF/UNFPA, 2001)		1000
Maternal Mortality Ratio (DHS)	529	
Stunting	43%	43%
Underweight Children	29% (1992)	29%
Total Fertility Rate	6.3 (1992)	5.6
HIV/AIDS Prevalence*	9%*	8%*
Neonatal Mortality Rate	31.7	40.4
% of Infant Deaths During Neonatal Period	36%	41%

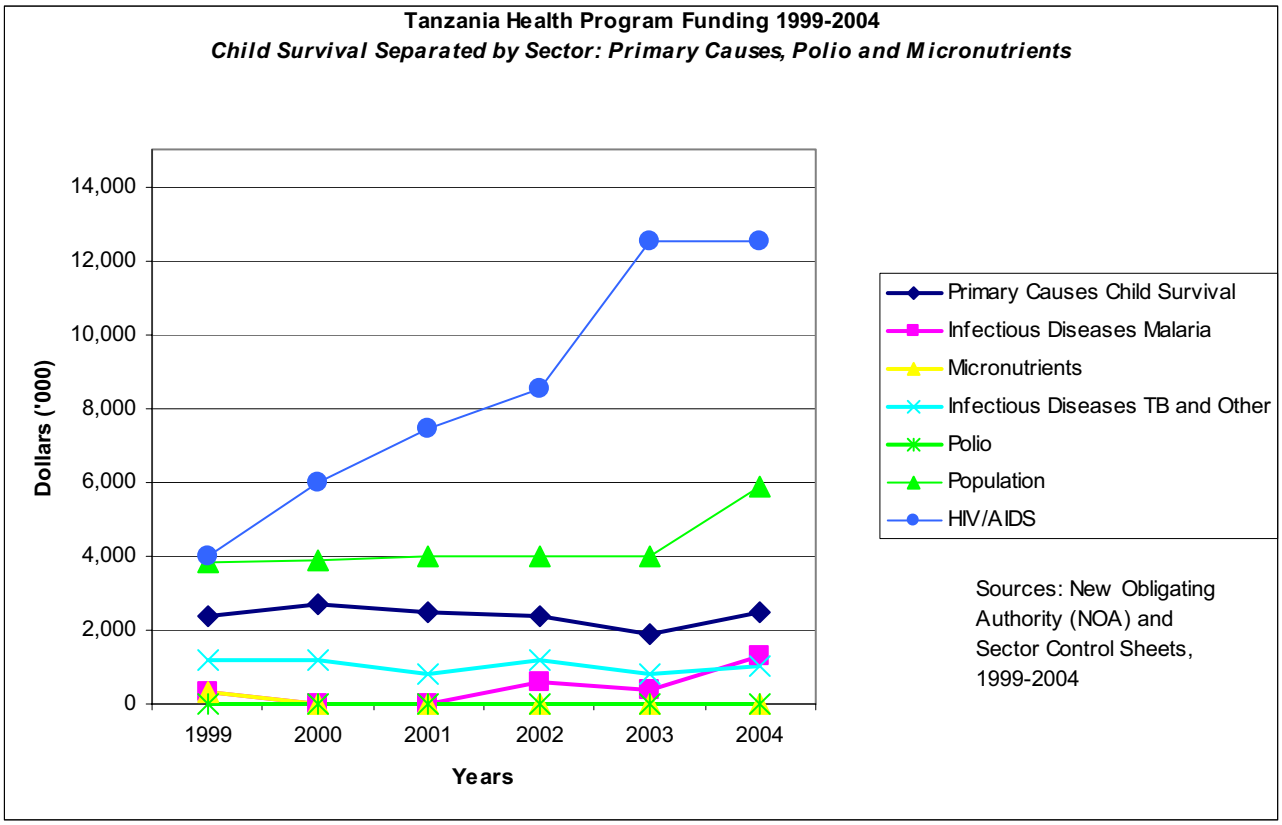
a. Bureau of the Census, International Data Base – Total Midyear Population
b. Malaria Control in the African Region, WHO 2003
*Population, Health and Nutrition Results Reporting, USAID May 200
**FY2003 Annual Report

Coverage Rates	DHS (1996)	DHS (1999)
DPT 3	82%	77%
Measles	68%	69%
Hib	N/A	N/A
Vitamin A Coverage (UNICEF, 2001)	N/A	93%
ORT Use Rate (ORS, RHS, Increased Liquids)	74%	67.8%
ORT Use Rate (ORS, RHS)	50%	54.9%
Proportion under five sleeping under ITNs, 2001[c]	N/A	11.3%
Proportion of pregnant women sleeping under ITNs, 2001[b]	N/A	7.6%
Proportion of under five children with fever/malaria who received treatment with an antimalarial, in 2001[c]	N/A	11.4%
Proportion of morbidity inpatients attributed to malaria under five in selected health facilities, 2001 [b]	N/A	46..0%
Contraceptive Prevalence Rate All Women	7% (1992)	17%
TT Coverage Rate (at least two doses)	74.5%	61.9%
% Pregnant Women to Antenatal Care 1 Visit	93.9% (1992)	95.9%
% Pregnant Women to Antenatal Care 2 Visits	92.9% (1992)	93%
% Pregnant Women to Antenatal Care 4 Visits	69.3% (1992)	69.9%
Births Attended Rates by a Health Professional	46.6%	43.8%
Births Attended Rates by a Health Professional or Birth Attendant	64.3%	61.5%
EBF Under 6 Months	28%	32%
ARI	70%	67.5%
Condom Use With Last non -Regular Partner		
--Males	N/A	33.8%
--Females	N/A	24.1%
Number of Clients Seen at VCT Centers **	N/A	15,987***
USAID Assisted Community and Home-based Care Programs**	N/A	2**
Number of VCT Centers with USAID Assistance**	N/A	7**
Number of USAID Supported Health Facilities Offering PMTCT Services**	N/A	0**
Number of Women Who Attended PMTCT Sites for a New Pregnancy in Last 12 Months**	N/A	0**

DATA NOTES:

Infant Mortality Rate: The estimated annual number of deaths of infants under 12 months in a given year per 1,000 live births in that same year.
Under Five Mortality Rate: Annual number of deaths that occur in children 0-4 years old per 1000 births (five year period preceding DHS).
Maternal Mortality Ratio (WHO/UNICEF/UNFPA, 2000): Maternal deaths per 100,000 live births.
Stunting: Percentage of children under five whose height-for-age is below minus-two standard deviations from the median of the reference population.
Underweight children: Percentage of children under five whose weight-for – age is below minus-two standard deviations from the median of the reference point.
Total Fertility Rate: The number of children a woman between the ages 15-49 would have during her lifetime if she were to bear children at the currently observed rates.
HIV/AIDS Prevalence Rate: The estimated number of adults (ages 15-49) living with HIV/AIDS at the end of 1999 divided by the 1999 population (ages 15-49).
Neonatal Mortality: The probability of dying within the first month of life, expressed as deaths per 1,000 live births (five years preceding the survey).
Percent of Infant Deaths During Neonatal Period: The percent of infant deaths that occur during the first month of life.
DPT 3 Vaccination Rate: Percentage of children 12-23 months who were immunized in the first year of life.
Measles Vaccination Rate: Percentage of children 12-23 months who have received one dose of MCV (fully immunized against measles) in the first year pf life.
Vitamin A Coverage: Percentage of children age 5-59 months who received at least one high dose of Vitamin A in 2001.
ORT use Rate (ORT, RHS, increased fluids): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS), or increased fluids.
ORT Use Rate (ORT, RHS): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS).
Contraceptive Prevalence Rate (married women): Percentage of married women ages 15-49 currently using modern method of contraception. Modern methods include oral contraceptives, IUDs injectables, female and male sterilization, all emergency contraception and barrier methods (diaphragm, foam, jelly, male and female condom).
Tetanus Toxoid Vaccination: Percent distribution of live births in the last five years preceding the survey by number of tetanus toxoid injections given to the mother during pregnancy, according to selected background characteristics.
Number of antenatal care visits and stage of pregnancy: Percent distribution of live births in the five years preceding the survey by number of antenatal care visits.
Births Attended by Health Professional: Percentage of births/deliveries that occur with the assistance of any trained health professional during the five-year preceding the survey. May include doctors, trained nurses, midwife or other health professionals.
Births Attended by Health Professional or Birth Attendant: Percentage of births/deliveries that occur with the assistance of any trained health professional during the five-year preceding the survey. May include doctors, trained nurses, midwife, other health professionals or village health workers.
Exclusive Breast Feeding: Percentage if children under 6 months who are exclusively breastfeed. Exclusive breastfeeding is defined as providing no food or liquid other than breast milk to the child during the 24-hour period before the survey.
ARI Treatment – Children Under 5: Percentage of children under five years who were taken to a health facility for treatment of an acute respiratory infection (ARI) which is associated with cough, rapid breathing and a high fever, during the two weeks preceding the survey, and who were treated with specific remedies.
Condom Use With Last Non-Regular Partner – The percent of respondents who say they had sex with a non-marital, non-cohabitating partner, of those who had sex with such a partner in the last 12 months.

II. Health Program Spending



Tanzania Health Program Funding ('000)									
Years	TOTAL ALL ACCOUNTS	Child Survival			Infectious Diseases		HIV/AIDS	Population	Total Spent
		Primary Causes & CS Additive	Polio	Micronutrients	Malaria	TB & Other			
1999	22,150	2,400	0	300	340	1,200	4,000	3,850	12,090
2000	23,822	2,700	0	0	0	1,200	6,000	3,900	14,600
2001	21,103	2,500	0	0	0	798	7,427	4,000	14,883
2002	24,808	2,400	0	0	600	1,200	8,500	4,000	16,700
2003	31,859	1,890	0	0	400	800	12,500	4,000	19,590
2004	28,200	2,500	0	0	1,300	1,000	12,500	5,900	23,200

Total expenditure on health as a percentage of GDP: 5.9%[b]
General government expenditure on health as a percentage of total general government expenditure: 11.4%[b]

Uganda

I. Background

Total Population	25,632,794[a]
Total Number of Districts	56[b]

www.lonelyplanet.com/mapshells/africa/uganda/uganda.htm

Basic Health Indicators	DHS (1995)	DHS (2001)
Infant Mortality	81	88
Under Five Mortality	147	151
Maternal Mortality Rate (WHO/UNICEF/UNFPA, 2000)		880
Maternal Mortality Rate		505
Stunting	35	46
Underweight Children	26	23
Total Fertility Rate	6.9	6.9
HIV/AIDS Prevalence*	10*	5*
Neonatal Mortality	27	33.2
% of Infant Deaths During Neonatal Period	33%	37.5%

a. Bureau of the Census, International Data Base – Total Midyear Population 2003
b. Malaria Control in the African Region, WHO 2003
*Population, Health and Nutrition Reporting, USAID, May 2003
** FY2003 Annual Report

Coverage Indicators	DHS (1995)	DHS (2001)
DPT 3	54%	42%
Measles	45%	42%
Hib	N/A	N/A
Vitamin A Coverage (UNICEF, 2001)	N/A	37.%
ORT Use Rate (ORS, RHS, Increased Liquids)	67.2%	53.1%
ORT Use Rate (ORS, RHS)	49.1%	43.2%
Proportion under five sleeping under ITNs, 2001[b]	N/A	2.0%
Proportion of pregnant women sleeping under ITNs, 2001[b]	N/A	2.3%
Proportion of under five with fever/malaria receiving correct treatment within 24 hours of onset of fever in communities surveyed in 2001[b]	N/A	7.3%
Proportion of morbidity inpatients attributed to malaria under five in selected health facilities, 2001 [b]	N/A	44.4%
Contraceptive Prevalence Rate All Women	8%	18%
TT Coverage Rate (at least two)	53%	41.7%
% Pregnant Women to antenatal Care 1 visit	90.7%	92.1%
% Pregnant Women to antenatal Care 2 visits	84.3%	84.2%
% Pregnant Women to antenatal Care 4 visits	46.9%	40.2%
Births Attended Rates by a Health Professional	37%	38.2%
Births Attended Rates by a Health Professional or Birth Attendant	53.0%	56.0%
EBF under 6 months	57%	65.2%
ARI	66.5%	61.5%
Condom Use With Last non -Regular Partner		
--Males		58.9%
--Females		37.8%
Number of clients seen at VCT Centers **		89,735**
USAID assisted community and home-based care programs**		86**
Number of VCT Centers with USAID Assistance**		51**
Number of USAID supported health facilities offering PMTCT Services**	N/A	19**
Number of women who attended PMTCT sites for a new pregnancy in last 12 months**	N/A	0**

DATA NOTES CONTINUED

Infant Mortality Rate: The estimated annual number of deaths of infants under 12 months in a given year per 1,000 live births in that same year.
Under Five Mortality Rate: Annual number of deaths that occur in children 0-4 years old per 1000 births (five year period preceding DHS).
Maternal Mortality Ratio (DHS): The estimated number of women who die as a result of pregnancy or childbirth per 100,000 live births, arrived mostly through "direct sisterhood method." he use of information reported by a sibling is to expand the sample size and to compensate for the lack of vital registration system.
Maternal Mortality Ratio (WHO/UNICEF/UNFPA, 2000): Maternal deaths per 100,000 live births.
Stunting: Percentage of children under five whose height-for-age is below minus-two standard deviations from the median of the reference population.
Underweight children: Percentage of children under five whose weight-for – age is below minus-two standard deviations from the median of the reference point. 1999 data is for children under 3 years.
Total Fertility Rate: The number of children a woman between the ages 15-49 would have during her lifetime if she were to bear children at the currently observed rates.
HIV/AIDS Prevalence Rate: The estimated number of adults (ages 15-49) living with HIV/AIDS at the end of 1999 divided by the 1999 population (ages 15-49).
Neonatal Mortality: The probability of dying within the first month of life, expressed as deaths per 1,000 live births (five years preceding the survey).
Percent of Infant Deaths During Neonatal Period: The percent of infant deaths that occur during the first month of life.
DPT 3 Vaccination Rate: Percentage of children 12-23 months who were immunized in the first year of life.
Measles Vaccination Rate: Percentage of children 12-23 months who have received one dose of MCV (fully immunized against measles) in the first year pf life.
Vitamin A Coverage: Percentage of children age 5-59 months who received at least one high dose of Vitamin A in 2001.
ORT use Rate (ORT, RHS, increased fluids): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS), or increased fluids. 1995 data is for three years preceding the survey.
ORT Use Rate (ORT, RHS): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS).
Contraceptive Prevalence Rate (married women): Percentage of married women ages 15-49 currently using modern method of contraception. Modern methods include oral contraceptives, IUDs injectables, female and male sterilization, all emergency contraception and barrier methods (diaphragm, foam, jelly, male and female condom).
Tetanus Toxoid Vaccination: Percent distribution of live births in the last five years preceding the survey by number of tetanus toxoid injections given to the mother during pregnancy, according to selected background characteristics. 1995 data is for three years preceding the survey.
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Births Attended by Health Professional: Percentage of births/deliveries that occur with the assistance of any trained health professional during the five-year preceding the survey. May include doctors, trained nurses, midwife or other health professionals. 1995 data is for three years preceding the survey
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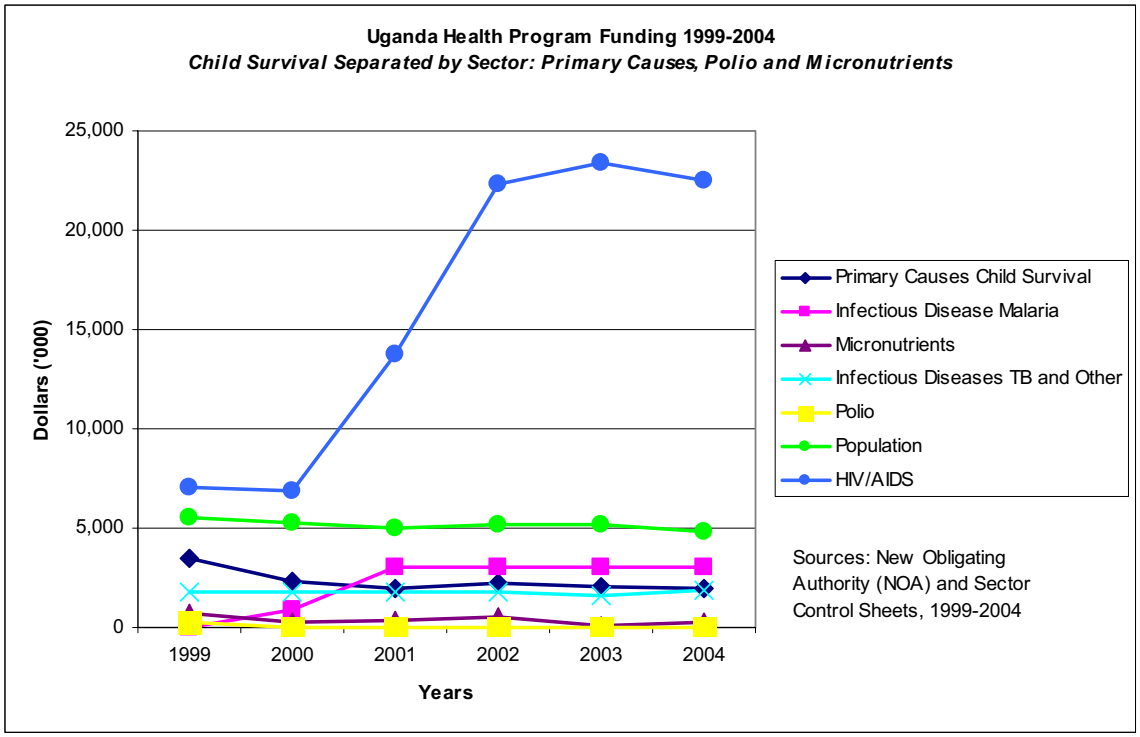
Exclusive Breast Feeding: Percentage if children under 6 months who are exclusively breastfeed. Exclusive breastfeeding is defined as providing no food or liquid other than breast milk to the child during the 24-hour period before the survey.
ARI Treatment – Children Under 5: Percentage of children under five years who were taken to a health facility for treatment of an acute respiratory infection (ARI) which is associated with cough, rapid breathing and a high fever, during the two weeks preceding the survey, and who were treated with specific remedies.
Condom Use With Last Non-Regular Partner – The percent of respondents who say they had sex with a non-marital, non-cohabitating partner, of those who had sex with such a partner in the last 12 months. Data was taken from the Population, Health, and Nutrition Results Reporting, p. 52 and not directly from the DHS. In the report, data was obtained from national surveys, DHS, or other surveys, so it is not clear if these numbers came directly from the DHS.

II. Health Program Spending



Uganda Health Program Funding ('000)									
Years	TOTAL ALL ACCOUNTS	Child Survival			Infectious Diseases		HIV/AIDS	Population	Total Spent
		Primary Causes & CS Additive	Polio	Micronutrients	Malaria	TB & Other			
1999	49,272	3,441	240	702	0	1,750	7,010	5,580	19,940
2000	49,012	2,300	0	300	860	1,750	6,900	5,300	17,410
2001	48878	1,976	0	400	2,993	1,796	13,716	5000	27,536
2002	59,724	2,200	0	500	3,000	1,750	22,350	5,200	35,000
2003	55,709	2,059	0	100	3,000	1,650	23,355	5,200	35,364
2004	61,542	2,000	0	260	3,000	1,900	22,500	4,800	34,460

Total expenditure on health as a percentage of GDP: 3.9%[b]
General government expenditure on health as a percentage of total general government expenditure: 9.5%[b]

Zambia

I. Background

Total Population	10,307,333[a]
Total Number of Districts	72[b]

www.lonelyplanet.com/mapshells/africa/zambia/zambia.htm

Basic Health Indicators	DHS (1996)	DHS (2001/ 2002)
Infant Mortality Rate	107	95
Under Five Mortality Rate	197	165
Maternal Mortality Ratio (WHO/UNICEF/UNFPA)		750
Maternal Mortality Ratio (DHS)		649
Stunting	42%	47%
Underweight Children	25%	24%
Total Fertility Rate	6.5 (1997)	5.9 (2001)
HIV/AIDS Prevalence*	19%*	22%*
Neonatal Mortality Rate	42.5	37.0
% of Infant Deaths During Neonatal Period	40%	32%

a. Bureau of the Census, International Data Base – Total Midyear Population 2003
b. Malaria Control in the African Region, WHO 2003
*Population, Health and Nutrition Results Reporting, USAID, 2003
** FY2003 Annual Report

Coverage Indicators	DHS (1996)	DHS (2001/ 2002)
DPT 3	80%	74%
Measles	75%	70.0%
Hib	N/A	N/A
Vitamin A Coverage (UNICEF, 2001)	N/A	83%
ORT Use Rate (ORS, RHS, Increased Liquids)	75.4%	66.9%
ORT Use Rate (ORS, RHS0	56.5%	53.2%
Proportion under five sleeping under ITNs (RBM 2001)[b]	N/A	4.0%
Proportion of pregnant women sleeping under ITNs (RBM 2001) [b]	N/A	6.2%
Proportion of under five with fever/malaria receiving correct treatment within 24 hours of onset of fever in communities surveyed in 2001 (RBM) [b]	N/A	50.0%
Proportion of morbidity inpatients attributed to malaria under five in selected health facilities (RBM 2001)[b]	N/A	49.8%
Contraceptive Prevalence Rate (married women)	9%	14%
TT Coverage Rate (at least two doses)	36.6%	26.7%
% Pregnant Women to antenatal Care 1 visit	93.9%	93.4%
% Pregnant Women to antenatal Care 2 visits	92%	91.4%
% Pregnant Women to antenatal Care 4 visits	71.3%	71.6%
Births Attended Rates by a Health Professional	46.5%	51.9%
Births Attended Rates by a Health Professional or Birth Attendant	43.4%	43.4%
EBF under 6 months	19%	42%
ARI	70.7%	69.1%
Condom Use With Last non -Regular Partner		
--Males	N/A	44.1.%
--Females	N/A	33.1%
Number of clients seen at VCT Centers **	N/A	97,783**
USAID assisted community and home-based care programs**`	N/A	86**
Number of VCT Centers with USAID Assistance**	N/A	108**
Number of USAID supported health facilities offering PMTCT Services**	N/A	74**
Number of women who attended PMTCT sites for a new pregnancy in last 12 months**	N/A	6,185**

DATA NOTES:

Infant Mortality Rate: The estimated annual number of deaths of infants under 12 months in a given year per 1,000 live births in that same year.
Under Five Mortality Rate: Annual number of deaths that occur in children 0-4 years old per 1000 births (five year period preceding DHS).
Maternal Mortality Ratio (DHS): The estimated number of women who die as a result of pregnancy or childbirth per 100,000 live births, arrived mostly through "direct sisterhood method." he use of information reported by a sibling is to expand the sample size and to compensate for the lack of vital registration system.
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ORT use Rate (ORT, RHS, increased fluids): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS), or increased fluids.
ORT Use Rate (ORT, RHS): Percentage of children under five years who had diarrhea in the two weeks preceding the survey who received (ORT), either an oral rehydration solution (ORS) or a recommended home solution (RHS).
Under 5 Use of Bednets: Percentage of children under 5 years that slept under a net during the night preceding the survey.
Contraceptive Prevalence Rate Married Women: Percentage of married women ages 15-49 currently using modern method of contraception. Modern methods include oral contraceptives, IUDs injectables, female and male sterilization, all emergency contraception and barrier methods (diaphragm, foam, jelly, male and female condom).
Tetanus Toxoid Vaccination: Percent distribution of live births in the last five years preceding the survey by number of tetanus toxoid injections given to the mother during pregnancy, according to selected background characteristics.
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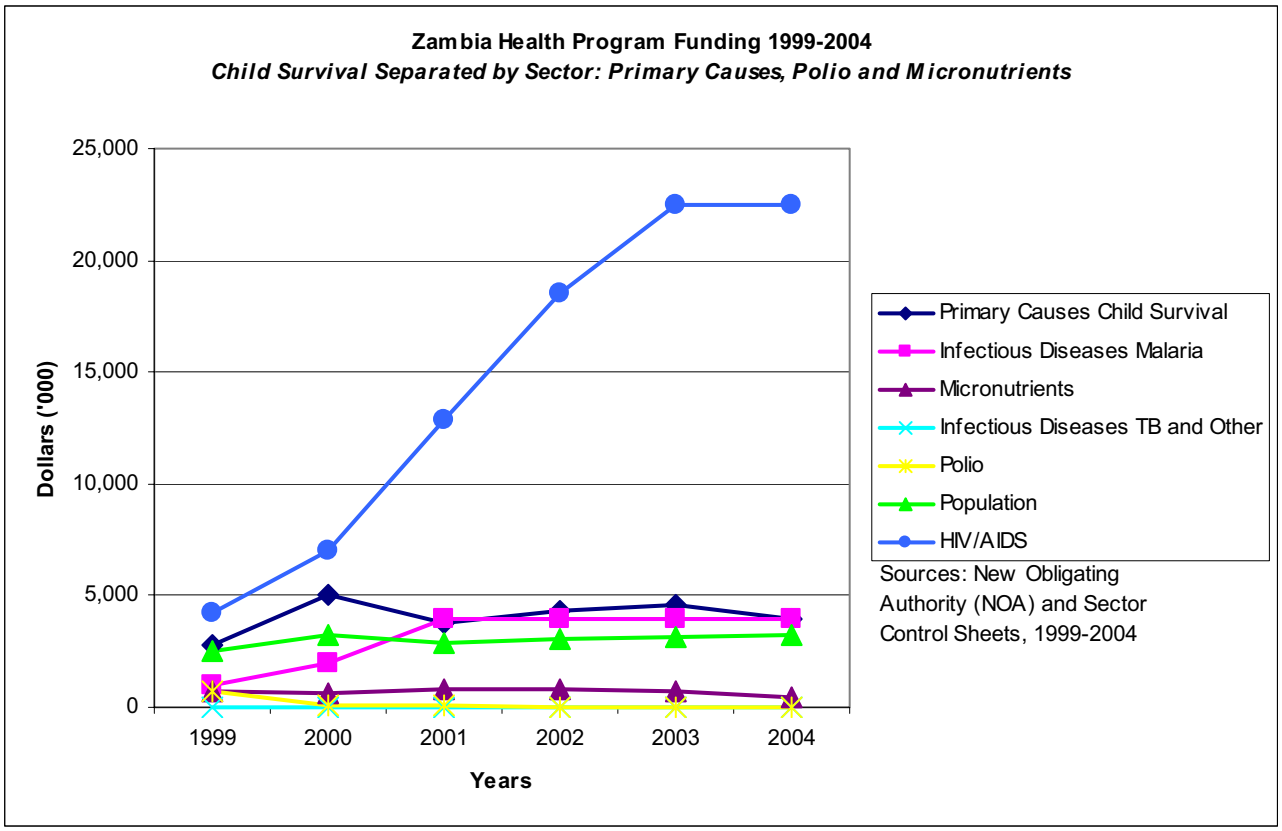
Condom Use With Last Non-Regular Partner – The percent of respondents who say they had sex with a non-marital, non-cohabitating partner, of those who had sex with such a partner in the last 12 months. Data was taken from the Population, Health, and Nutrition Results Reporting, p. 52 and not directly from the DHS. In the report, data was obtained from national surveys, DHS, or other surveys, so it is not clear if these numbers came directly from the DHS.

II. Health Program Spending



Zambia Health Program Funding ('000)									
Years	TOTAL ALL ACCOUNTS	Child Survival			Infectious Diseases		HIV /AIDS	Population	Total Spent (Including Other Health)
		Primary Causes & CS Additive	Polio	Micronutrients	Malaria	TB & Other			
1999	22,691	2,750	682	700	1,000	0	4,250	2,550	12,141
2000	31,228	5,000	100	600	1,935	0	7,000	3,200	18,135
2001	36,793	3,820	80	800	3,991	0	12,882	2,880	24,453
2002	45,522	4,300	0	800	4,000	0	18,500	3,100	30,700
2003	47,772	4,550	0	750	4,000	0	22,500	3,104	34,904
2004	47,677	4,000	0	420	4,000	0	22,500	3,200	34,120

Total Expenditure on Health as a percentage of GDP 5.6%[b]
General Government expenditure on health as percentage of total general government expenditure 11.2%[b]

Annex E

Key Points from Interviews

KEY INFORMANTS

SUB-SAHARAN AFRICA

Benin
Pascal Zinzindohoue
Alicia Dinerstein

Eritrea
Linda Lou Kelley

Ethiopia
Susan Anthony

Ghana
Jan Paehler

Guinea
Neil Woodruff

Madagascar
Wendy Benazerga
Benjamin Andriamitantsoa
Agnes Guyon
Peter Gottert

Malawi
Cheryl Kamin

Mali
Anne Hirschey

Nigeria
Lynn Gorton

Senegal
Felix Awantang

Tanzania
John Dunlop

Uganda
Suzzane McQueen

Zambia
Mohamed Abdirahman
Dyness Kasungami
Robert Clay

WASHINGTON

USAID
Al Bartlett
Dennis Carroll
Karen Cavanaugh
Mary Ettling
Elizabeth Fox
Matt Lynch
John Rogosch
Kenneth Yamashita

Cooperating Agencies
Jean Baker
Malick Diara
Roy Miller
Jack Lesar
Rob Northrup
Vicky Quinn
Mark Rasmuson
Sandra Remancus
Jean Shaikh
Youssef Tawfik
Susan Zimicki

BASICS
Dan Kraushaar
Serigne Diène
Jules Millogo
Beth Plowman
Ian Sliney
Robert Steinglass
Andy Tembon
Emmanuel Wansi

CORE Group/CSTS
Karen Leban
Eric Sarriot

Save the Children
David Oot
Kathryn Bolles
Joseph de Graft Johnson
Eric Starbuck
Eric Swedberg

Pascal Zinzindohoue
Alicia Dinerstein

1. Benin has seen specific improvements in the following indicators:
   - Exclusive breastfeeding rate
   - Increased use of ITNs for children under 5
   - Overall improvement in child health case management in health facilities. This effort was supported by the development and dissemination of national protocols
   - Reduction in child mortality in the region where IMCI and malaria prevention programs were most active.

2. Benin's national strategy works both from the national level down and from the community and district level up.
   - At the national level, the development of protocols and policies (IMCI, development of family health protocols and standards of care, postpartum hemorrhage) helped improve indicators.
   - Other programs were piloted first and then adopted as national policy (Minipac, quality assurance, integrated services, etc.
   - Malaria control and Community IMCI were supported at the national and community level simultaneously.

3. Donor coordination, especially in the implementation of IMCI and malaria control policies and programs, was considered by some to be the best in the region.
   - Coordination worked best when it focused on a specific health issue. For example, the EU was supposed to coordinate overall donor collaboration and their efforts were unsuccessful because there was not a specific area/them on which to focus.

4. Scale-up is most successful when there is MOH buy-in and ownership. Partners are more willing to participate in scale-up activities/programs when they feel as though the materials and approaches belong to the MOH.

5. One needs to allow time for successful implementation of a program at the district level, before implementing on a national level.

6. Human resources capacity problems continue to undermine the public health system.

1. The DHS surveys between 1995 and 2002 show improvements in child health among the fastest experienced by any developing country and coverage rates high compared to other sub-Saharan countries. These include:
   - IMR 72→48/1,000 LB
   - 0-4 mortality 136→93/1,000
   - DPT3/polio 48%→83%
   - Use of ORS for children 56%→68%
   - ITN coverage(2001) 35%
   - Children 0-4 sleeping under 65%
   - ITN-endemic zones (2001)

2. Both the country and USAID have focused on implementing IMCI as the key approach to improving child health. USAID has supported policy development in IMCI and malaria, malaria surveillance; USAID also supports an MoH Health Promotion Unit, health information systems, and pharmaceutical management. Routine immunization is supported through IMCI. Future plans include increased support for Quality Assurance, finance and community IMCI.

3. USAID works closely with other donors to support the Eritrean health sector. Each donor supports areas of strength: USAID= training and technical assistance; World Bank=infrastructure development; WHO/AFRO= IMCI training and policy

4. The key ingredients of this rapid achievement appear to be:
   - Serious government commitment to, enthusiasm for and agenda setting for child health(leaders understand the health needs of communities and don't waste time debating technical approaches)
   - Donor collaboration and cooperation
   - A commitment to supplying health facilities with personnel and essential/basic drugs
   - Minimal corruption
   - Consistency over the years within USAID and consistency within the MoH
   - National objectives and coverage—government opposes pilot projects and projects in selected geographic regions.
   - Nearly non-existent NGO sector—a strategic approach which acknowledges that a primarily NGO strategy cannot achieve coverage of an entire country

5. The mortality reductions cannot be attributed to:
   - Improved water and sanitation—these are still deficient
   - Improved nutrition—malnutrition is extremely high

6. Consolidation of cooperating agency projects/efforts has been very helpful to USAID health program management.

7. If child health resources continue to go down, USAID/Eritrea will not be able to support its contract and would have to "fold up." Child health gains will be lost if funding continues to go down especially in a country like Eritrea where donor contribution is vital.

8. More balance between HIV/AIDS and MCH funding would be more ethical in terms of addressing equally important health objectives.

Susan Anthony

1. Funding: A large amount of funding ($2.0 -2.9 million) is earmarked for Polio which limits programming in other areas of CS (nutrition, IMCI, etc.). While the Polio money is used to strengthen the overall immunization system, Ethiopia was declared clear of the Polio virus in 2001. Ultimately, if the funds were more flexible, the Mission would prefer to re-allocate some of the Polio funds to support its CS programs.

2. One needs to review the factors that determine how much funding is allocated to each country - Ethiopia (pop. 66 million, ranked sixth in the world in number of child deaths) and Madagascar (pop.16 million ranked 26th in the world in number of child deaths) have the same budget for CS programs.

3. A major effort is underway to synchronize child survival and family planning BCC messages throughout the country. Similar to what was done in Madagascar, USAID is offering TA to CAs to work with NGOs to harmonize messages and define common approaches.

4. We hope to replicate the concept of "Champion Communities"(that worked so well in Madagascar) to create incentives for behavior change of both providers and clients.

5. Based on experience in Madagascar and preliminary results in Ethiopia the following key ingredients are necessary for scaling-up:
   - Engaging communities in health through local health committees, etc.
   - Gaining political commitment at the local level
   - Human and financial resources to help support to health initiatives
   - More than the health sector involved in health activities (ex. schools, agricultural extension, politicians, and civil society – very active in Madagascar)

6. Strategic Plan must be able to respond to changing political-socio-economic situation in a country. Although current strategy is only two years old, the Mission is redesigning the strategy to be more responsive to the famine situation. The new strategy aims to develop resilience and surge capacity under the routine system.

7. Based on a situational analysis an additional focus area was added to the new strategic plan: health commodities logistics contraceptives, cold chain, essential drugs.

8. USAID is helping to generate more funding resources at local level to support staff and facilities because fee retention and costing is a major systems-issue.

Jan Paehler

1. The Mission has developed a new strategy which integrates Child Health into an overall health strategy. The main goal of the overall strategy is to increase access to quality health interventions and empower individuals and communities to demand such in the areas of reproductive, child health, and HIV/AIDS

2. The MoH reproductive and child health strategy focuses on reproductive health, neonatal health, infectious diseases, clinical care and adolescent and school health.

3. The Mission has changed 30+ different procurements into four principal procurements.

4. The principal approach will be to strengthen GOG's decentralization and CHPS (Community Health Planning and Services) Program which creates a new level of community health worker below the level of a nurse to bring services closer to the delivery point-==-work in rural or hard to reach areas with several key features:
   - This person is a government employee and not a volunteer
   - A training school is being set up in each region to train these individuals
   - Communities will build a compound in their local community for this worker to live and work
   - The government will provide a motorbike and a Motorola to these workers

5. Immunization has been successful because donors cooperated and gave sufficient funds, essential supplies have been acquired and the logistics system improved sufficiently to get the needed supplies to the delivery points.

6. Key to Ghana's health program has been the active engagement of Ghanaians in policy and planning at all levels. There is national ownership and consensus. For example, the CHPS program is Ghanaian designed.

7. Key has been strong donor and NGO collaboration and coordination with the GOG on health issues. Partners meetings and task forces on technical issues help this process.

8. The availability of unearmarked funds permits program flexibility.

9. Programs that have demonstrated successes in "specific geographic areas" (breastfeeding promotion, malaria program, CHPS,) are taken to scale.

10. IMCI has not been as successful because it is seen as too diffuse.

11. 'Passive' campaign approaches (such as child health weeks) may become routine annual events for certain services that are missed through the "routine" system.

1. USAID's assistance for child health focuses on upper Guinea which constitutes about one fourth of the population- in the poorest part of the country. The main interventions are IMCI, nutrition including vitamin A, EPI-including malaria, FP and some maternal and neonatal health. The Mission-supported approaches include community outreach and mobilization and improving the delivery of health services with the local health authorities in health facilities.

2. Nationally, the Mission supports NIDS including vitamin A distribution, the social marketing of contraceptives and ORS.

3. The 1999 DHS figures do not reflect these intensive efforts. A DHS is being conducted this year. The biggest accomplishments in child health are the community based approach, elimination of polio, the high coverage for vitamin A and improved modern CPR.

4. There are a number of PVOs working in child health in Guinea. The bilateral child survival efforts are very closely coordinated and matched with the Child Survival Grants to PVOs. The PVOs participate in all the health partner coordination meetings and their contribution is considered essential to the accomplishment of the health SOs.

5. Donor coordination and cooperation are quite good. Donors tend to take different geographic areas of the country. Collaboration has improved because of the quality of the leadership in the key donors.

6. The Ministry of Health is collaborative with donors in child health but does not take the lead. There is minimal support of the Ministry from the higher echelons of the government. The exception to this is the National HIV/AIDS Commission which has been separated from the MoH and is chaired by the Prime Minister.

7. Routine EPI coverage has remained stagnant at a fairly low level. This is attributed to the emphasis given to campaigns for achieving coverage. On the other hand, it is felt that without campaigns the vitamin A coverage may drop significantly. This is an unresolved issue.

8. The Mission is undertaking some innovative activities with the Chamber of Mines and ALCOA in malaria and HIV/AIDS

9. If the Mission had more resources for child health, it would intensively invest in the malaria problem. Malaria is considered to be a major contributor to child mortality.

MADAGASCAR

Wendy Benazerga
Benjamin Andriamitantsoa
Agnes Guyon
Peter Gottert

1. Madagascar's USAID Child Health approach fits within the context of the country's "business plan". It is not a "child survival strategy" per se but does include major child survival interventions including EPI, nutrition (ENA including exclusive breastfeeding and vitamin A coverage), IMCI, malaria, water and hygiene and is very "results" oriented.

2. The Mission's health portfolio uses an integrated approach of child health, family planning and nutrition.

3. It also focuses on important system issues, especially:
   - Drug quality and logistics
   - Improving the cold chain
   - Working at the district level to improve:
     - Collection and use of health information for planning and monitoring
     - Supervision and incentives to health workers
   - Improving pre-service education especially
     - Curriculum reform
     - Developing a practicum approach

4. To date the Mission has worked in 20 districts out of the 111 in the country. These comprise about ½ of Madagascar's population. The new strategy will focus on scaling the successes up to the remainder of the country. The World Bank and UNICEF will be major collaborators in this. The World Bank will use the approach supported by USAID.

5. Madagascar has achieved great successes in the 20 districts where USAID has supported the program.

6. The key elements of success in these districts are:
   - Partnerships among all the key players
   - Using a community based approach with the following characteristics:
     - Engaged all the major institutions, organizations and "players"
     - Use of the "champion community"
     - Use of data at the community level with mayors and community groups
     - Celebration of results
     - Use of child→child approaches
     - Use of child→community approaches
   - Working at all levels at the same time—"blanketing" the project area and central level

- Continuity of the key players and institutions—the program ideas remained essentially the same and the key technical staff at the Ministry and within the Mission and JSI remained the same for over 5 years
- Simplification of, agreement on and diffusion of key messages to all levels
- IE&C tools that empowered the mother—especially the child health card and the youth passport
- Simple tools for the health workers
- Focus on "small feasible actions" instead of "knowledge"
- An integrated holistic approach

7. In addition to the above, the key essentials of scaling up from two to 20 districts were:
   - Rolling interventions and actions out
   - Phasing messages
   - Focus on simplicity and feasibility
   - Working with both the community and the health facilities
   - Engaging the communities→leads to community norm change
   - A strong social marketing program
   - Effective partnerships and coordination among the key players
   - Ministry of Health leadership
   - Continuity of approach and of key staff and materials

8. Issues that confront scaling up to the entire country include:
   - Limited resources that require even further program simplification
   - Reducing costs while not losing impact (an issue is the challenge of vitamin A distribution when "NIDS" disappear)
   - Deciding what the "minimum "package" is that will achieve desired results—scaling down what was done in the past but not so much as to dilute the results into oblivion
   - How to cause "spill-over" and cross-fertilization from more intense project areas to less intense areas and from the district level to the central level

9. Getting products out to health facilities and people continues to be a challenge in such a large country with minimal infrastructure. The social marketing program is seen as an innovative way to boost this by empowering community workers with essential products which they will be permitted to sell. The latter point will help as an incentive for these workers. A recent review shows that the cold chain, in particular, is very unwieldy and chaotic with multiple types of equipment and supplies.

10. An innovative way of motivating health workers and training them at the same time was using the days salaried workers came to pick up their pay for short 1-2 day trainings. This way the costs were kept low (no per diem), the trainings were frequent so kept the workers motivated over time. Additional motivators were the champion community festivals, simple health worker tools and the use of data to evaluate progress.

11. USAID/Madagascar would like to add syphilis prevention to its CS portfolio. Up to 14 % of pregnant women are positive for syphilis making a significant contribution to child mortality.

12. Monthly donor coordination meetings have not been the best vehicle for donor collaboration. More structured and purposive meetings would be helpful. The level of coordination has improved with the high quality of new UNICEF and World Bank staff.

13. USAID staff estimate that there is high use (about 50%)of private sector providers. One interesting event to train these providers was “a training” on family planning to which were added the topics of LAM and breast feeding. The training was very well attended and received. However, there was no mechanism for follow-up. There is little focus on private sector providers at the present time.

14. The Mission has been very creative in influencing large resource flows such as HIPIC, GFATM, etc. It also has supported interfaces of HIV and malaria funds with needs such as improving laboratories, expanding social marketing network, messages, etc.

Cheryl Kamin

1. Malawi does not have a national child survival strategy per se but does support selected child survival related interventions in 8 target districts(about 33% of country): IMCI, malaria prevention and treatment (IPT), ORS distribution, water treatment, nutrition.

2. The approaches the Mission uses to implement these strategies include:
   - Facility based systems support: training (of nurses in IMCI), supervision and management strengthening, HMIS, transport management, quality of care, communications, logistics and drug management, drug revolving funds
   - Community based BCC: prevention and recognition of childhood illness and referral
   - National level interventions:
     - Social marketing of ORS, IBN, waterguard
     - Support of District level planning
     - Policy (quality assurance) and research (IPT, malaria resistance)

3. Focus on the "clinical" model of health programs (such as IMCI) often deflects attention from the basics. Donors need to work together with governments to ensure basic equipment and infrastructure needs are addressed first. While these models may have much inherent value, one cannot forget the need for core assistance in the essentials of the system.

4. Even though at least 40% of the care is provided by the private sector (semi-private, faith based clinics), little USAID support goes to these providers.

5. Competing models among Donors and NGOs are a barrier to scaling-up. Donors and NGOs become attached to an idea/approach and are unable to change or adapt the ideas/programs to new situations. As a result, work is stalled and/or collaboration among partners is prevented, which ultimately can lead to limited outcomes.

6. Despite these challenges, there have been some successes in Malawi with donor coordination (different donors have taken different districts to implement health activities, selected donors support different components of a given intervention, they work together on technical coordinating committees. NGO coordination was a specific focus of the Mission the last 5 years but was not that effective.

7. The Mission has a strong focus on system strengthening activities and improving facility based care. As such most "expected outcomes" are oriented to these:
   - Drafted the first quality assurance policy
   - Helping to improve management and supervision at the facility level – supervision is the key to overall improvements in the delivery of care.
   - Improving communication systems
   - Strengthening HMIS systems

- Developed supervisory protocol
  - Trained health staff to recognize the need for prompt treatment of childhood illnesses
  - Supported the development of district health plans

8. There is an urgent need to develop an overarching strategy to deal with the crisis in human capacity. Focus on producing sufficient numbers and types of qualified people, incentive and promotion path, job descriptions, salaries, consistent training, supervision and rational continuing education and the prevention of brain drain are key issues.

9. There is little relationship between the CS grants program and the Mission or its health objectives.

Anne Hirschey

1. Analysis of DHS data showed that Mali was falling behind in major CS indicators. The strategy design team concluded that efforts which concentrate on strengthening MOH systems, but which are not linked to specific CS service delivery objectives, do not accomplish child survival objectives.

2. Therefore, USAID Mali developed a strategic vision for how to improve under 5 mortality which includes:
   - Focus on a set of effective, feasible and scalable CS actions
   - An attempt to assure complementarity of approaches, especially with UNICEF
   - A larger geographic coverage.

3. Developing and maintaining a strategic vision for achieving a limited set of objectives, rather then trying to do "everything" is essential for reaching CS country-level impact.

4. Long term commitment (Mali is first to have a 10 year strategy—2003-2012) with a strategic approach is essential to achieve impact

5. Strategic technical coordination among donors is essential for maximizing resources and achieving child survival impact:
   - Formal coordinating mechanisms among donors in Mali have not accomplished much programmatically, but informal technical working groups have been successful.
   - Vitamin A coverage has improved because partners worked together in strategic planning and to ensure country wide coverage. It is believed that breastfeeding rates increased because donors use the same message and generic approaches (but this needs to be documented).

6. Institutional memory (of USAID health officer and CAs) is a major issue in carrying forth child survival efforts.

7. The USAID procurement process limits the mission's ability to plan collaboratively with partners and can be a hindrance to achieving objectives efficiently. There is a need to share experiences in how to efficiently procure services to implement SOs.

8. It is difficult to deal with USAID cooperating agencies that have different styles, methods, etc. to accomplish the same objectives. Each insists on doing things its way. The Mission Health Office has to take the lead to assure that partner efforts are complementary and not duplicative.

9. In Mali, given low access and utilization rates, it is necessary to look beyond the public health system to deliver services. Hence the mission is putting emphasis on social marketing, community based services, and work with the private sector.

1. Local data that describe the situation and identify problems are essential for engaging communities and stakeholders in the development process. Where baseline information does not exist, it should be gathered. USAID has conducted 40 such assessments in Nigeria portfolio-wide.

2. It is essential for the USAID health officer to understand in depth the political, social, and economic realities in a given country in order to be an effective advocate for child health. The health officer needs to know who all the key "players" are and establish relationships/contacts with them.

3. These key players have included a broad coalition of Nigerians at all levels-key decision makers, politicians, legislators, religious, private commercial sector, traditional groups, NGOs.

4. Intensive advocacy and policy work is essential to gaining political support for program strategies and interventions.

5. Involvement of the community and stakeholders in identifying their own problems through data gathering and analysis is a very effective tool to gain such support. This has been a highlight of the BASICS work in the North.

6. The implementing partners in Nigeria's health program are almost exclusively Nigerian. This has been key to its ability to expand health interventions.

7. The Nigerian health program has been successful in identifying and using numerous opportunities to engage the private commercial sector broadly in health programs.

8. Continuity of USAID Health Officer during transition from old to new strategies and longer assignments in a given country are valuable mechanisms for assuring program effectiveness.

9. Creative Program Interventions in Nigeria:
   - The availability of data to help guide planning of strategies is key: 40 assessments were conducted contributing to the design of the new Mission strategy:
     - Assessments of all programs were conducted– Mission could see its performance in maternal and child health, family planning/reproductive health, basic education, economic growth, agriculture, democracy and governance and HIV/AIDS as well as the general situation in Nigeria relative to each program area.
     - A process engaging the community to look at its own problems, identify them, and then learn how to advocate with community decision makers for solutions to those problems was very successful.

- Conducted a northern assessment: hired all northern Nigerians to look at USAID and other donor interventions in the north to identify what works.
- Used assessment tool for CS that had been used in the Vision Project (available through Jim Griffith), to identify gaps in service delivery and program accordingly.
- A nutrition assessment (first in 30 years) has led to a national nutrition policy.

- Broad-based advocacy work across numerous groups has been a hallmark of the Nigerian program:
  - Invited 60 female political leaders of 27 different parties to inform them about the current state of child survival, family planning/reproductive health and AIDS.
  - Broadly engaged political and private commercial groups in problem identification and programming.
  - Created strong partnerships with all ethnic groups; requiring representation from all groups in management of new project.
  - Worked intensively at the level of the National Assembly to inform them on health issues, particularly HIV/AIDS.
- Involvement of the private commercial sector in health is an important strategy—this has been most successful with HIV/AIDS, but perhaps could be used in child health as well:
  - US Ambassador engaged the American business community in a dialogue on AIDS, which led to the Nigerian President convening a business forum, inviting 150 international and Nigerian businessmen to join the fight against AIDS.
  - A coalition resulted from this forum and is now co-chaired by the president of the country with the head of Chevron/Texaco and NTM Diamond Bank.

SEXPO

Felix Awantang

1. More than 40% of the Mission's health budget is spent in child survival (approx. $6,000,000 annually

2. USAID is the largest donor, with the greatest expertise, in child survival in Senegal, and takes the lead in a number of key technical areas. USAID has separate strategies for EPI, IMCI, Malaria, and Essential Nutrition Actions – these are all included in the MOH 10-year plan.

3. USAID attends all meetings of committees in the different technical child survival areas, and has supported the establishment of a new Child Health Coordinating Committee. This strong USAID role has been key in getting partners to adopt USAID approaches and tools, and is the principle strategy for ensuring scale-up beyond USAID-supported areas (approx. 40% of Districts).

4. Difficulties of communication with the highest levels of the MOH (Cabinet, etc.)have hampered the adoption of policy issues affecting child health, e.g. policies on village relay persons, combination therapy for malaria, use of drugs and contraceptives at community level, etc. USAID deals better with technical Division Chiefs.

5. USAID has taken the lead in helping Senegal operationalize the decentralization of health activities, using some innovative mechanisms, i.e. grants that match resources generated at community level. Issues here are:
   - The government is not fully taking the lead with this initiative, despite USAID efforts, and
   - Many communities are not actually generating funds that can be matched (information from field visit).

6. USAID has started a new Annual Program Statement Mode, whereby PVOs can apply for funding for community malaria and TB interventions.

7. USAID has little role in monitoring or coordinating Child Survival Grants from USAID/Washington.

8. The motivation and deployment of human resources is the biggest constraint to effective implementation of child health in Senegal. Per diems are a big issue and USAID has helped harmonize donor practice.

9. USAID health staff are not involved in HIPC or PRSP discussions

10. USAID participated in the GFATM/TB, but not GFATM/ Malaria proposal. GFATM and World Bank initiatives have dominated MOH time over the last 2 years, disrupting implementation of child health and other initiatives.

11. USAID is undertaking innovative technical interventions, in response to epidemiology of child health in Senegal and national CS goals, e.g. a pilot program to prevent neonatal mortality (which represents over 50% of IMR), and the use of cotrimoxazole for community treatment of ARI.

12. Nutrition is an area of particular success. ENA has been adopted as national strategy and is being scaled up by other donors, especially the World Bank.

13. USAID is also taking the lead in implementing IPT for pregnant women, and promoting the commercial marketing of ITNs.

14. Progress in Family Planning has been slow in Senegal. This is largely a problem of leadership / lack of commitment by MOH. CBD has not been very effective or expanded.

15. USAID has a history of working with the private sector for Family Planning, a next step is to go carefully in involving private providers in child health

16. Division Chiefs and Program coordinators in Senegal have difficulty delegating, which hampers implementation.

17. The Primary Health Care Division is very short of staff. From the field trip, it was clear that the PHC system is quite weak at district / community level (routine supervision, continuing education, village "animation" and problem-solving), which affects all the child survival community programs.

18. Progress in Senegal is sometimes frustratingly slow. It is essential to bring counterparts along and have them take the lead, but it does slow things down.

John Dunlop

1. Tanzania does not have a specific clear strategic child survival approach. Rather it has assisted the Ministry develop its child health strategy and action plan and then provides direct support to aspects of this plan. Implementation has been difficult to monitor.

2. The Mission's focus in health has principally been on reproductive health, antenatal care and infectious disease.

3. The child survival interventions the Mission supports that fall within the Ministry's plan include:
   - NIDS (polio and measles)
   - Vitamin A
   - Malaria and pregnancy

4. Of these the most successful in impact and reach has been NIDS and vitamin A because the donors and MOH support and coordinate the effort and because it works across sectors involving teachers, agricultural workers, politicians, etc.

5. The Mission focuses much of its attention on policy dialogue(malaria drug policy and improving and disseminating standards and guidelines), on public/private partnerships at the district level, quality improvement

6. Donor coordination has been a challenge in Tanzania due to competing personalities and methods of operation. Most donors provide basket funding.

7. The most important constraints to CS in Tanzania include:
   - Lack of a focused child health strategy or focal point
   - Basket funding
   - Poor HMIS systems
   - Poor logistics systems
   - Human resource constraints and no commitment to resolution (IMF related hiring freeze, etc.)
   - Low government commitment (almost everything is supported by donors)

8. An important success in reaching broader population groups has been the Voluntary Sector Health Program (VSHP)

9. Decentralization has been disruptive to the system. While it gives more control to the community, the impact at the Central level and the lack of budgetary controls have been problems.

Suzzane McQueen

1. Uganda does not have a child survival strategy as such but supports a number of child survival related interventions (malaria, vitamin A fortification, EPI) in the 20 districts of Mission focus. The Mission's program is an integrated program of Adolescent health, reproductive health and child health.

2. There are no specific nationwide child survival outcomes anticipated because the Mission works in 20 out of 50+ districts.

3. The key barriers to achieving CS impact include:
   - The lack of available CS funding and dominance of HIV/AIDS funding
   - Human resource capacity at all levels
   - Government commitment to CH (commitment to EPI is strong because it is more focused)

4. The "Yellow Star" program has been a "successful" model for improving the quality of delivery of services.

5. Uganda supports major "systems" approaches: HMIS, Quality of care, policy reform.

6. A recent study of "IMCI trained" and Non-trained facilities showed that there was no difference in the care provided between these two sets of facilities.

7. The key ingredients of successful scaling up include:
   - MOH "buy-in" and leadership
   - Reasonable cost
   - The presence of a support system

8. Barriers to scaling up include:
   - Differing styles and priorities of other donors
   - Leadership and funding availability
   - Low demand and poor quality of services.

9. It is important to look for appropriate interfaces with other sectors/programs to reach objectives more effectively such as:
   - Presidential Initiative—AIDS education in schools
   - Information dissemination
   - Lessons learned from each sector that could be used in other sectors
     - Teacher development (could be used in health
     - Yellow Star (could be used in education)
   - Title 2—income generation
   - National resource management
   - Malaria—democracy and governance
   - Legislative Support—ARV and malaria

- Agriculture and the private sector→food fortification

Mohamed Abdirahman
Dyness Kasungami
Robert Clay

1. Zambia's USAID Child Health program fits within the context of the overall government health plan and addresses the major contributors to child mortality: malaria, diarrheal disease, nutrition, ARI, and immunization. The expected program outcomes include: reducing under-five mortality and indicator changes specifically related to coverage of these childhood diseases. USAID's particular strength is the technical expertise it brings to the table.

2. Zambia's USAID program focuses at the:
   - National level on:
     - Policy work (malaria Rx, EPI ,drug policy ,nutrition, etc)
     - Behavior change/social marketing and child health weeks (vitamin A, chlorin, ITN, oral contraceptives, condoms, deworming)
     - Vitamin A fortification
     - Technical support (EPI,CH)
   - District level on:
     - Clinical training in IMCI
     - Management and supervision
     - Logistics and supplies
     - HMIS
     - Community-based interventions

3. The Zambia USAID health program uniquely combines a strategic systems approach with specific technical targets.

4. The major accomplishments to date in child health have been:
   - Reduction in under five mortality
   - Increased coverage/use of chlorin/ reduced cholera and diarrheal disease
   - Vitamin A coverage
   - Increased CPR

5. The noticeable reduction in child mortality is thought to be due to the achievement of nearly universal vitamin A coverage through the fortification of two main staples and the child health week vitamin A supplementation.

6. Program success is attributable mainly to 1) achievement of national consensus on the issues and strategy both with the government and the major donors, and, 2) the mix and adequacy of the "basket" and "projectized" resources. Thus, there is an unusual spirit of cooperation and collaboration with a common set of goals. The Global Fund resources permit Zambia to scale up many activities. A "lesson learned" has been the importance of government ownership of USAID bilaterals from the design phase.

7. The availability of good uniform information with clearly defined milestones at all levels for both finances and performance (through support of HMIS) has been a major contributor to good strategic planning and implementation. Twenty different information systems were consolidated and emphasis was placed on training District offices on simplified collection, analysis and use. In Zambia these data are being used at all levels.

8. Decentralization has been relatively successful in Zambia because of the emphasis placed on training District officers in financial and health planning and HMIS. A key ingredient was the use of data to identify districts that were high performers and those that were low performers. Approaches were then developed to improve performance in the struggling districts. A major issue was decimation of technical capacity at the central level.

9. Scaling- up has been addressed by a phased approach and by attempting to influence new districts with districts that have been successful in implementing reform. A remaining issue is the "hard-to-reach" areas.

10. Zambia is implementing an innovative and sustainable communications strategy which includes:
    - Support for development and capacity building of local NGOs focused on communications
    - Development of frequent/regular newspaper articles focused on health issues
    - Training and incentives for local journalists to write about health

11. Zambia believes that a key missing ingredient in its health portfolio is focus on maternal and newborn health. The need here is tremendous and influences the ability to achieve improved outcomes in child health.

12. Mission support of capacity building of CHAZ (the Churches Medical Association of Zambia)through a sub-grant program has pushed this significant provider of medical services to focus more on population level achievements.

13. The USAID program has been very creative(but within the legal limits) in taking advantage of Washington-based initiatives (vitamin A, polio, malaria, HIV/AIDS) and in stretching the flexibility of "tied" funds (HPIC, the global fund, etc) to reach overall Zambian and Mission strategic health goals.

14. Key negative barriers and issues in reaching child health goals (besides the overall disease burden, poverty and resultant competition for resources) include:
    - Human resource capacity eroded by AIDS, emigration, low production and retention
    - Stagnation/reduction/earmarking of child health funds and related disparity of funding for HIV/AIDS that seriously distorts health programming

15. A summary of innovations in Zambia include:

- Housing most of the USAID cooperating agencies in one building and requiring coordination
- Donor agreements to fund different components of a single strategy using the strengths of each (Japanese fund cold chain, USAID funds technical support)
- Support of the sub-grant mechanism to community-based NGOs
- Vitamin A fortification of a food staple
- The combination of "basket" and projectized funding—and its level to permit "a seat at the table"
- The comprehensiveness and effectiveness of the HMIS system at all levels
- The success of chlorin as a strategy for water purification
- The support of local NGOs to develop sustainable communication/BCC
- Support for a grants program for innovative ideas (such as CB programs to raise money for needed services for the most poor)
- The level of discussions and focus on human resource issues
- The creative devices used for "basket"(HPIC and other) funds, global fund etc. to achieve and further national health objectives
- The "internationalization" of USAID supported project staff (95%)
- The use of the workplace in HIV/AIDS education can be used as an effective model for child health as well—especially to get men more engaged in health issues.
- The systematic approach to implementing decentralization.

[redacted]

[redacted]

1. Do not know of any country that has achieved nationwide CS impact.

2. Countries that come closest are Madagascar and Ghana

3. Gaining functional country commitment/engagement through systematic effort/advocacy is essential for program success—even when time is lengthy to gain it

4. National level outcomes (high impact/high coverage) should be the explicit goal from the outset

5. Spend the effort to gain donor and partner collaboration/agreement/buy-in harmonizing key elements of approaches

6. IN CS use concept of "essential CS package" that has worked in malaria/nutrition etc focused on what the children are dying from

7. Focus and concentrate; go for simplicity and low cost: what can be sustained in a country

8. Given funding realities, require programmatic intersects from different funding flows to achieve objectives

9. Address problem of inadequate/rotating USAID field staff more comprehensively; SOTA courses are not enough→must use a "system" perspective on the issues related to project development and implementation

10. Incorporate program/formative research into country field programs at all levels

[redacted]

[redacted]

1. Examples of countries that have achieved impact include Ghana, Eritrea and Malawi. Zambia has had more mixed results. I have also heard that Madagascar has achieved broad-scale impact. The key ingredients in Ghana and Eritrea appear to be:
    - Strong vision
    - Strong leadership
    - Government commitment
    - Partners who worked together with the government
    - A coherent program strategy that focused on specific system issues and on specific CS interventions and outcome targets
    - Indicators that were monitored
    - Accountability and placing the resources where they were needed

2. Malawi seems to have had impact because of malaria drug policy or water and sanitation efforts.

3. Essentials to achieving nationwide impact appear to be:
    - Partner coordination in practical and real ways
    - Political commitment and leadership
    - A coherent national strategy that is focused and has all the necessary program elements (see page4)
    - Including a plan for scale-up from the outset
    - A strong community component that is well-planned and executed (page 5)

4. Major constraints to achieving nation-wide impact include:
    - Lack of a child survival strategy—only pieces of what is necessary are being implemented or approach has relied on "fuzzy" systems improvements
    - Reliance on a public sector approach to providing health services when a major proportion of the population in most countries predominantly use the private sector (see bottom of page 5, page 6)
    - Lack of coherent "scaleable" approaches to work with the private sector
    - Inadequate resources—money for child survival
    - Political will
    - Lack of capacity of the public sector
    - Drugs and commodities that are not available in facilities—varying quality and distribution
    - Donors that do not work together

5. USAID (and other donors) should prioritize development of strategies to reach the private sector.

6. The question of appropriate child health information reaching HPN officers and reaching health professionals in host countries needs to be re-examined/addressed.

7. In an era of reduced resources with great needs, consider programming for child survival only in countries that have demonstrated political commitment and the ability to effectively plan and implement programs.

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Key Points:

1. Donor practices and policies are the biggest constraint to achieving child survival impact. Programming priorities and funding allocations are determined by politics rather than need.
    - The donor community's priority is to invest in programs which result in a quick return in their investment.
    - Donors compete against one another which often means that programs that offer the most money to a country will be implemented. Such practices often make it difficult to coordinate among donors to develop a comprehensive "vision" for child health in-country.
    - Donors' fragmented approach to child health lead to investments in bits and pieces of CS interventions, but often fails to examine what is needed throughout the entire system, which undermines impact.
    - It is difficult for countries to advocate for funding in areas where they feel interventions are needed most because they are subject to the whims of donor moods and trends.

2. Programs that have been most effective in achieving nationwide impact have had the support of both the international community and the country governments. In each of these programs, there was a strong commitment by the government to make the technology available throughout the country. Before programs achieve impact, certain processes must be in place (international coordination, national policies, commitment of partners, etc.)
    - ORS Distribution
    - Campaign Approaches for vitamin A distribution
    - Immunization
    - EU Vaccination program

3. The elements of the essential child survival package are well known, but we are still missing the "how." Although the how is known to some, the information is not disseminated to key policy makers within countries. In order to improve child survival programming the "best practices" need to be made available to all actors involved (HPN Officers, high-level policy makers in-country, key decision makers).

4. Regional organizations are one way for countries to identify policy priorities and voice their programming priorities. Donor organizations should invest in these regional organizations. Some successful examples of regional partnerships include:
    - ECOWAS countries banning imports of non-iodized salt
    - East Africa Commonwealth Health Secretariat

5. The earmarked US funding for child survival limits creativity in programming. Moreover, sometimes it is hard to tell how much US funding supports WHO and UNICEF. As such, USAID often does not get credit for a lot of the work the US helps to fund. USAID would have a much stronger voice if they were able to take credit for what they fund that is implemented by these other organizations.

6. Inter-Agency Coordinating Groups are one way to coordinate donors efforts in-country and develop comprehensive child-survival strategic plans. These are much easier said than done because, "he who has the money doesn't feel the need for coordination."

7. Donor policies on salary help contribute to the "brain drain." For programs to be effective, there is a need to bring Africans back to the continent to strengthen, improve and advocate for stronger partnerships and more control over development programs and practices.

8. USAID needs to be more consistent across programs and projects. Funding for programs comes from many different sources and there is no overall child survival strategy. USAID needs to reestablish the country-child survival strategies that were used during the McPherson years. Additionally, they should play a much larger role in coordinating efforts with other bilateral organizations.

9. Additional investments are needed in pre-service training. Short-term trainings often do not achieve the expected outcomes and therefore are not a good approach to training.

10. National policies must be in place in order for an intervention to achieve nationwide coverage. Sometimes it is unclear whether the policy always comes first, or the money to "co-opt" policies is available. Either way, having national policies in place can help facilitate coordination among various implementing partners.

11. While the campaign approach has been effective in increasing coverage, one has to be careful when touting this approach as a "success." Campaigns are not sustainable in their current form. While countries often claim that by implementing campaigns, the overall system will be improved, the reality is system changes. However, there is no way of measuring the system-wide improvements to which campaigns have contributed. Indicators need to be

developed to track system-wide improvements made by campaigns. Countries must maintain the ability to organize both routine services and campaign services, and neither one can be a substitute for the other.

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1. Zambia is an example of a country program that has achieved national level impact in some areas of CS because:
    - It understood and adapted its programming to the specific context of the country (decentralization, SWAPS, history of vertical programs, etc)
    - It focused on the country's health priorities
    - It had a comprehensive vision
    - It successfully used matrix programming and management to focus on health and systems issues simultaneously

2. Mekong Delta Sub-regional Malaria Drug management Program—another example of a successful effort—because:
    - Collected data on drug resistance
    - Collected data on underlying factors contributing to the drug resistance
    - Developed a common vision and strategy based on the above
    - Engaged ALL the partners in the above process

3. The Malaria Program demonstrates the right process for designing/ implementing programs

4. The biggest constraint to achieving CS impact is our narrow vision of the health system—limited to the public sector. Other key constraints include:
    - Service delivery capacity
    - Leadership capacity at all levels—for planning and managing health programs

5. USAID—other donors need to start focusing intensively on these constraints

6. We need to broaden our definition of the health system to include the private delivery of services and develop operational approaches to improve the outcomes of encounters in the private sector

7. Essential CS design components should include:
    - Full exploitation of existing points of contact for services (antenatal care, EPI) to deliver prevention or treatment in areas of interest (IPT, bednets)
    - Investment in the private sector—where people are now going for care—identify and develop approaches to improve what is now transpiring in the private sector
    - Address the demand side (improve knowledge at the household level)

8. Other key ingredients for country programs should include:
    - using a process that engages all the key partners—getting all to "buy in"
    - collecting the data necessary to understand the "problem"

- identifying what has worked to achieve success—the "how"
- Focusing on nationwide public health impact
- developing a common vision for programs using this information.

9. PHN officers should be held accountable for leveraging resources/ identifying interfaces for CS from major funding sources—this could be done through program review process

10. USAID should focus and concentrate its resources where these resources are more likely to make a difference in terms of the public health of the country

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1. To improve Child Survival programs and outcomes a "Child Survival Program Effort Index should be developed (similar to RH) to assess programs and assist in planning.

2. A basic set of CS interventions exist but are not uniformly used; these should be implemented. Missions do not universally have a goal of reducing 0-4 mortality and therefore lack the necessary and sufficient strategic "vision" or program approach (including non-health components) to reach the objective. Use above index to spur them on.

3. The approaches or systems that are supported are often necessary but not sufficient to accomplish the intended objectives. Thus, IMCI focuses on clinical training, but misses other key components; training efforts miss worker incentives; health programs may neglect financing, supplies, communication etc. while focusing on a singular issue

4. Political visibility of child survival both internationally and nationally, is key to achieving more impact. To do this, USAID should:
   - "attach wings" to CS, for example, by using Millennium Development Goals, PSRPs, HPIC and other large mechanisms to make CS visible
   - Make the political payoff visible in countries
   - Advocate both within USAID and to other major donors

5. Using successful models to gain the attention of other countries is working in many situations (AIN, decentralization in Senegal/Benin, etc). It should be "milked" to accomplish more in CS.

6. Capacity building of African institutions is a must and should be supported—but opportunities are missed and the definition of capacity building needs to be revised or clarified.

7. In countries lacking political will or leadership, USAID could and should focus on mobilizing attention, raising awareness of the issues, disseminating experience from other countries and on grooming potential health leaders.

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1. It is difficult to identify countries which have been successful in child survival impact.

2. Senegal under the Bamako Initiative was successful in achieving impact at the national level because all donors and partners implemented the program using the same approach; there was capacity building; a participatory approach was used; and there was national leadership.

3. Benin successfully scaled up IMCI and ITN and choroquine distribution.

4. Essential child survival actions should include prevention, treatment of malaria and ARI, Nutrition, water/sanitation, and immunizations, family planning and HIV/AIDS. These would have to be adapted to a given country's situation so that malaria or HIV/AIDS might be emphasized in one country but not another.

5. The chief constraints to achieving impact include:
   - the human resource crisis
   - lack of information/communication among the key actors
   - a multiplicity of competing problems and programs
   - donors with their own agendas
   - inadequate factoring of costs for the long term
   - difficult to implement community interventions on a national level
   - lack of implementation of participatory approaches in program design and implementation

6. Strategies to overcome some of these constraints include:
   - consolidated work plans among the donors and within the country making it easy to see who is doing what where/ joint planning
   - Leadership (USAID could focus on capacity development of leadership)
   - Partnerships

7. Essentials for scale-up include:
   - Use of a participatory approach
   - An effective communication strategy/ programmatic and institutional
   - USAID involvement in technical discussions
   - Strong monitoring and evaluation
   - Consideration (advocacy for change as needed) of the national policy environment
   - Donor flexibility
     - RFA/RFP process is often cumbersome and lengthy
     - Sometimes work of other donors is not considered
     - Sometimes process is not participatory

8. Missions could achieve more in Child Survival by:
    - Partnering with other donors
    - Looking for ways to create interfaces with different funding sources

9. USAID should use different programming strategies for different types of countries:
    - Needy with little capacity or political crises
    - Higher performing countries

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1. Malaria programs have demonstrated effectiveness in varying degrees (all seem to have some results and several have been quite successful) in numerous African countries Malawi, Tanzania, Zambia, Eritrea, Ghana, Mali, Benin) .

2. Key processes used in malaria programming serve as a model for improving results in Child Survival efforts. The key elements include:
   - Development of a common agenda among donors, partners (NGOS, CAs, etc.)countries—the time was taken to do this (the RBM initiative)
   - The definition of the agenda included the key elements to reduce malaria:
     - prevention and treatment essentials (ITNs, recognition and treatment of fever in children under 5 with correct antimalarials within 24 hours, and IPT for pregnant women) and early recognition and response to epidemics where relevant
     - appropriate policy environment (change in treatment protocols, removal of taxes, protocols for IPT, removal of chloroquine)
     - establishment of targets (ITN coverage, etc)
     - requirement of a "situation analysis" of malaria at the country level prior to intervention definition and operations research during implementation to modify program activities as necessary
     - building of strong, active partnership mechanisms at country level
   - Advocacy at the country level (was unified among donors given the above process) results in countries, donors/partners signing agreements for national strategies.
   - Development of country-specific malaria strategies with the common framework which: a) identify where each country is in the fight against malaria; c) develop a strategic nationwide plan that is financially viable(Pilots programs are often costly→therefore cannot be "scaled up" or become sustainable on a national level); d) determine the policy changes necessary; e) define all the necessary interventions/approaches; f) involve the key donors; and g) identify clear targets for the plan
   - Building partnerships with relevant other health programs: RH, EPI, IMCI to achieve results and improve resource allocation at all levels. Within USAID programs as well (e.g., Tanzania with strong RH program tied malaria intervention to antenatal IPT training; Zambia integrated approach with child survival; Ghana integrated malaria into strong existing communication strategy). Look for areas of complementarity.

3. Key constraints to improving CS results in a given country (and USAID contribution in particular)include:
   - Human resources capacity
   - Lack of vision and strategy at all levels
   - System weaknesses

- USAID processes (no system exists to assure continuity in the face of staff turnover, programming requirements, multiplicity of CAs, etc.)
- Donor and USAID funding flows

4. Link CS efforts with other pools of money, other donor efforts, country strengths, etc.

5. In the rethink of CS (and critical evaluation of IMCI) do not throw the baby out but just the bathwater. Re-configure or re-define IMCI-focus on what it has done best and eliminate what it has not.

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1. Advocacy is essential to get countries/donors “on board” for CS

2. Communication messages need to be specific to child survival and should not adopt messages from other programs without testing.

3. USAID needs to continue to emphasize technical support.

4. Find more effective ways to work with NGOs

5. CS needs to be creative in using HIV/AIDS money more creatively and to explore using the private sector for additional resources.

6. Need to find ways to address the private sector delivery of care

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1. Madagascar is an example of a country that has achieved nationwide impact with child survival related interventions.

2. Polio eradication is an example of national impact where everyone worked towards a common goal.

3. The keys to success in Madagascar were:
   - Reduction and simplification of messages to mothers and health workers
     - Reduced from 150 + to 25
     - Focus on "small doable actions" as opposed to knowledge
     - Asked users to choose "best" materials from among array of choices
   - Harmonization of messages among donors and all users
   - Use of a "child health card" that was easy for mothers to use that integrated above
   - Development of tools for health workers linked to the above card that were simple and easy to use
   - Use of "buzz" materials to create incentives and make it fun and interesting
     - Immunization diplomas
     - Small reminder cards
     - Congratulations cards for new births
     - Family planning invitation cards
   - Strong donor coordination
   - Timing: used windows of opportunity (new strategies, IMCI simplified)
   - Champion Communities (see pages 9, 10)

4. The major constraints to achieving CS impact include:
   - donor perpetuation of complex interventions
   - HIV/AIDS domination of funding stream
   - Lack of focus on sustainable interventions

5. Approaches to overcoming these constraints include:
   - Develop sustainable/simple approach to training and support
   - Focus on innovative sustainable community mobilization to link communities to health services
   - Use of an action oriented simple child health card—taps into a strategic advantage of child survival—ease and willingness of parents to implement given concern for child
   - Champion community model

In the absence of clearly defined objectives in a lot of these countries, where everything is equal, and countries don't have a clear sense of focus in their policies, or they have multiple policies, then the people that are best able to marshal the effort and resources in one particular area, maybe it's child survival, influence the ability of all the rest of them to achieve their strategies.

To do the kind of programming that you're talking about, you need core, unspecified, no strings attached money, where you can say, "Ah, here's an opportunity – let's go for it."

$100,000 dollars of Gates money is probably equal to $1 million of USAID money.

1. Broad scale impact has been achieved mostly through interventions such as EPI, polio, smallpox eradication, ORT, and Vitamin A. The essential characteristics include:
    - Focus: a clearly defined problem that has been given priority
    - Very good evidence
    - Getting the evidence to every one who matters
    - Global and high level country advocates (prime ministers, ministers of finance etc.)
    - Bilaterals or donors with focus investing large resources in the program

2. The success of these programs and other newer initiatives (such as HIV/AIDS) comes, however, at a cost (draining the limited human capacity) to other health priorities. It is a "zero-sum" game.

3. Country priorities in health:
    - Many countries (and some donors) try to "be all things to all men" and therefore accomplish little because of dilution and dissipation; they have too many priorities and cannot do it all
    - Many countries have many little strategies instead of one overall strategy
    - Whichever group is better able to articulate, more nimble and better organized gets the funding and the program

4. Essential components of a CS program include:
    - Leadership—within the USAID mission and within the country
    - Priorities and focus—not trying to do everything
    - Real connection between the public health program and the health reform work
    - The right national policies
    - Ability to see and seize opportunities and capitalize on them
    - Key supplies (the correct ones)at the points of distribution
    - Supervision everywhere with good feedback

5. Knowing when is more important than knowing how: the new Global child survival partnership is focusing on identifying countries which may have a lot of the "pieces" but don't have it all pulled together…and which have a confluence of programming and timing opportunities (new WB loan, new USAID project, PSRP, etc.) to join donors together to be a catalytic force for child health (Cambodia, Ethiopia)

6. The Marginal Budgeting for Bottleneck (MBB) tool is one of the first tools available to link programs and their potential effectiveness with finance. It links achievement of the MDGs with prioritizing and financing those priorities. It raises the discussion about health to the highest levels in the government. It links these objectives to the PSRP, the HIPIC monies, etc.

7. Major resource constraints include the absorptive capacity of government, the insufficient non-wage recurrent budget, paying a living wage to government employees, and the inability of governments to prioritize their efforts.

8. A major gap in working with the health sector has been the lack of focus on the private delivery of services—especially since a major portion of care in most countries is provided by the private sector.

9. To take CS efforts to scale the following are necessary:
    - A good technical team—good technical assistance with very clearly defined functions that don't overlap
    - Sufficient resources
    - Clear counterparts—the right mix of people
    - You don't need the perfect system before you take it to scale
    - Rapid scale-up as soon as there is indication that something works
    - Get started, refine as you implement
    - Good supervision
    - Good networking with the right mix of specific people with good follow-up and support

10. Networking with the right people, including good follow-up is an excellent method to expand effective programs to other countries.

11. USAID could improve many of its bureaucratic processes to have more effective and efficient programs:
    - An overall child health strategy does not exist—instead you have bits and pieces spread throughout different bureaus and missions
    - Multiple central projects (100+)with overlapping mandates waste resources and time on multiple levels and significantly diminish effectiveness and efficiency; they also dissipate human resources by creating unnecessary competition rather than cooperation and diluting the technical expertise available for programs (pages 11,12)

- Multiple funding streams and earmarks (one project alone has 40 funding streams) make it difficult to have coherent strategies focused on need and significantly add to administrative inefficiency and waste
- Programming requirements and rigidity impose many constraints that inhibit the effectiveness of programs (page 8)

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INTERNATIONAL PVOs

1. International PVOs make many important contributions to Child Survival:
    - PVO's often choose to work in areas of a country that have the worst statistics, for example in areas with the worst mortality, the lowest coverage and most difficult access.
    - Their goal is to achieve some equity for areas of the country and peoples who are significantly underserved.
    - Demonstration of how important the community's involvement is to achieving health objectives
    - The use of innovative community-based approaches
    - Increasingly by successfully linking communities with district government counterparts.

2. Perhaps this mission of PVOs needs to be made more explicit. PVOs are often criticized for not reaching broader segments of the population when this has never been their mission. The fact is that they have accomplished much in their small areas of influence. They should be recognized more explicitly for this contribution.

3. At the same time, in most situations, using a predominantly international-NGO-based CS approach is probably not an effective way to reach CS scale.

4. While the goal of PVOs (given the above) is not national scale-up, nevertheless, they could make a more significant contribution to achieving national CS impact if some changes were made in their programming. The most important of these include:
    - Making specific links between the USAID mission CS strategy and the CS Grants strategies in country
    - Focusing more on diffusion of their innovative community approaches
    - Requiring a more strategic long term and outcome oriented approach in their USAID-supported project designs
    - Building documentation and evaluation of outcomes into CS grants
    - USAID should support longer in-country project cycles
    - Fostering PVO networks or other collaborative mechanisms, especially in countries where this process may have already begun
    - Fostering collaboration between PVOs and the donor community, the public sector, other important large organizations (for example, universities); encouraging field partnerships

5. Collaboration among NGOs is difficult because:
    - funding streams seem to foster competition rather than collaboration
    - there are limited funds available for organizing the collaboration

LOCAL NGOS

1. In many countries local NGOS (especially church-based groups) provide a significant amount of health care services. Others are important in related areas such as social marketing or behavior change/communication.
2. When USAID supports these larger groups of NGOs, often the public sector perceives this as competition for their resources.

3. Local NGOs do not have as many issues with competition with each other as international NGOs.

4. USAID –in an environment of limited resources-- should focus on programming in areas of greatest need.

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1. Madagascar is the country that comes to mind of achieving broad impact. The key reasons were:
    - Excellence of the technical and managerial leadership in USAID and the contractor team
    - A brilliant project design
    - Integration of a comprehensive behavior change approach with all aspects of service delivery
    - Internal coherence
    - Messages that were developed from the bottom up
    - Speeding up the implementation process by reducing the number of "hoops"

2. LINKAGES achieved impact in Zambia—but I know less of the reasons why.

3. To achieve impact you need a good design that includes:
    - Adequate cost analysis to reflect realities in country resource levels (human and material)and projections for 5 to 10 years
    - The Lancet interventions chosen to reflect the epidemiology of the country and the most cost-effective combination of interventions
    - Integration of behavior change and service delivery—adequate support of each
    - Work top to bottom—not just at one level

4. Due to limited resources in Africa, however, it would be a good idea for USAID to shift support of health in government to a "steward" model. The job of government would not be to deliver services except to the very poorest of the poor. It would be responsible for disease surveillance and certain "public" health services such as immunizations and it would be responsible to see that services are delivered.

5. Some questions USAID needs to ask itself include:
    - Can it realistically aspire to have national impact in ANY country?
    - Should it really be in the pilot project, situation analysis, collaborative research, think tank or policy and advocacy business instead—a catalyst for change? Should it count on the Bank then to follow it with programs that can be implemented?
    - Should it instead go for national impact on an extremely narrow basis?
    - Should it be a broker to forge relationships or partnerships between private associations in African countries with similar ones in the US?
    - Should it group countries more explicitly into those it helps for political and humanitarian purposes first—and then last, the remaining countries?

6. USAID should also encourage improvements of delivery of services in the private sector through encouraging "sister city" and "sister professional organization" approaches. This would encourage exchanges among equals rather than the typical "development" model. Other ways include supporting an accreditation process, peer standards and the social franchising of pharmacies.

7. USAID should encourage a gradual change in emphasis of the culture of health communication from projectized behavior change to routine incorporation into the media of a country. There are many creative ways to do this.

8. The major constraints facing child survival efforts include:
    - HIV/AIDS funding "sopping up" the money available
    - Diminished human resources for health
    - Impoverished governments

9. Pilot projects are important to elucidate things that work or not but are not really a good basis for scale-up. They should be an input into a larger piece.

10. USAID could better utilize child survival funds to achieve impact by:
    - Improving the management and technical capacity of USAID health officers
    - Instituting approval requirements for child health projects in Africa
    - Consolidating the number of Washington projects in health

[redacted]

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1. Three countries I am familiar with have shown impact in CS related areas: Malawi, Eritrea and Benin.
    - In Malawi child mortality from malaria has been reduced
    - In Eritrea child mortality has been reduced
    - In Benin quality of clinical care has improved

2. The key factors contributing to these successes include:
    - Use of evidence-based decision making to change drug policies (Malawi)
    - Effective leadership (Malawi)
    - Donor coordination between USAID(TA) and the World Bank($) to reach a specific objective (Eritrea)
    - Integration of the commercial sector into the program approach (Malawi)
    - Community mobilization (Eritrea)
    - The use of easy-to-use follow-up aids/job aids after IMCI training (Benin)

3. Inclusion of all of these factors in programs would enhance reaching CS objectives.

4. Essential child survival actions need to focus on prevention of transmission of disease and not just treatment. Included should be ITNs, sanitation, and improved water supply. ARI needs more focus in programs.

5. Evidence based decision making with participation of stakeholders for policies and program interventions is important in all countries in all interventions.

6. There is no "magic bullet" or a cookie cutter approach to child survival interventions. Each country has specific strengths and weaknesses that need to be adapted to country-specific contexts. What worked in one place, might not work in another. When we discuss scaling-up or "models," we need to examine the factors that contributed to success in one setting and adapt them to the new setting. We have to customize interventions more effectively.

7. The chief constraint to CS impact is sustainability affected by lack of revenue and human resource capacity. Both of these issues will have to be addressed
    - improving the capacity of the local government to generate revenue and bringing in the commercial sector
    - establishing a human resource management Masters degrees in country, different levels of workers, ability to receive continuing education credits, job aids etc.)

8. The commercial sector could and should play a more important role for subsidies will continue to be needed for the most disadvantaged.

1. USAID should not have abandoned requirements for annual reporting on key child survival indicators and program activities. Continuing such collection would considerably improve the efficiency of conducting "macro-level" program reviews.

2. "Campaign" approaches have a negative connotation in health programs because they are perceived as doing nothing to "strengthen the routine system." However, the objective of campaigns is NOT to strengthen routine systems but to maximize coverage of selected services. Other interventions should focus on "strengthening routine services." Campaigns are highly effective in improving coverage for selected interventions. We need to revamp our thinking into realizing that some campaigns should be considered "routine."—particularly in Africa where achieving improvement in routine services is quite a long term prospect. Even in the US there are "routine" campaigns for selected services such as Fall flu shots. In fact a number of CS interventions could be "piggy-backed" onto vitamin A campaigns:
    - Deworming
    - Bednet treatment
    - Health education
    - Catch-up vaccinations

3. Key negatives for Child survival impact include:
    - Loss of "vertical" emphases (can't advocate for funding easily without this)
    - The lack of a "spokesperson" for CS (no more Peter McPherson or Jim Grant)
    - Pilot Programs not addressing "going to scale" from outset e.g., IMCI, QAP
    - Focus on NGOS which are too labor intensive and cannot scale up
    - Trend of USAID financing to bilaterals that focus on limited geographical areas
    - Competing priorities and styles of donor partners make collaboration difficult
    - Inexperience of many USAID Health Officers
    - Competition within USAID for different programs, e.g. HIV/AIDS
    - Premature termination of programs-"pulling the plug" without adequate analysis of program's costs and benefits→ leaves very negative impression on the ground

4. Key strategies to address constraints include;
    - Advocacy
        - promote one issue at a time;

    - link high level government officials to high level technical expertise (S→S exchanges, regional conferences)
    - promote strong local partnerships with universities
    - use local experts to make technical and programmatic presentations
  - Support efforts to empower governments to set the agenda
  - Focus on national targets from the outset but implement in a phased approach
  - Do not support pilot projects that are so costly that they could not be scaled up
  - Pre-plan all programs' termination from the beginning

5. Food fortification-while not linked directly to immediate CS outcomes- is an area USAID in which USAID should take leadership because of its potential to provide population-wide benefits.

6. Better ways to invest USAID funding:
  - Invest in logistics systems
  - Institutionalize in-service training—deal with per diem issue
  - Focus less on DHS and more in MIS
  - Incorporate Operations Research into Programming

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1. Successful interventions on a broad scale that come to mind include:
   - Immunizations
   - Indonesia between 1975 and 1990
   - BRAC
   - Diarrhea

2. Some of the characteristics of these that contributed to their success include:
   - Technical expertise (ORT, EPI)
   - Centralized focused effort (Indonesia, EPI)
   - Planning that assured that all the pieces were there to deliver (EPI, Indonesia)
   - A change of the norms and culture (diarrhea->dehydration)
   - Incentives that were meaningful (BRAC workers who got fired when the mothers had not learned)

3. Essential elements to include in a child survival program oriented towards outcomes include:
   - Less focus on the group of interventions than on the capacity to deliver
   - Focus on the system needs to make the facility level work well
   - Deliver the "product" type interventions that are "doable"
   - Support scaleable community efforts

4. The main constraints to achieving impact include:
   - The diversion of funds into the priorities of the moment (HIV/AIDS, IMCI)
   - Small demonstration projects
   - Providing services to hard-to-reach areas—equity
   - Health workers who do better delivering products than educating and communicating with clients
   - Addressing the non-product child survival interventions
     - Nutrition
     - The neonatal period
     - Hygiene
     - Childhood diseases—recognition of danger signs, compliance with Rx
   - Decentralization's impact on technical expertise
   - Predominance of the public sector strategy with service delivery and lack of good private sector interventions

5. Some approaches to address constraints include
   - Sufficient resources
   - Using approaches to changing health professional behavior that go beyond "one shot" training (see discussion)

- Increase focus on sustainable communications approaches
- Don't try to implement standardized approaches
- Begin to look for "channels" to reach the private providers of care (see discussion)

6. Some logical ways to link CS resources to HIV resources would be through CHW, transportation and logistics, and improvement of laboratories.

7. Focus support on approaches that have a chance for success in the local context—do not spread resources across everything

[illegible]

Key Points

1. Ghana, Madagascar, and Zambia have been successful in achieving nationwide CS impact in the area of nutrition, specifically, in substantial increases in timely initiation of breastfeeding and in exclusive breastfeeding. These have been directly related to the LINKAGES effort.

2. The key factors related to these successes include:
   - Focus on action-oriented broad-spectrum (government, NGOs, journalists, communities, national universities) partnerships→local ownership
   - Harmonization of messages among all groups
   - Focus messages and program on small simple doable actions
   - Strong leadership (of the program) to manage the programs—and strong national coordinators
   - Use current monitoring and evaluation results (and small scale qualitative and quantitative studies as needed) to inform/advocate for programs and for scale-up[1]

3. Essentials of a CS program should be centered on:
   - An essential nutrition package (malnutrition contributes to over 60% of under-5 mortality)—we have been successful with EBF but challenges remain with complementary feeding
   - An action oriented approach—knowledge alone is not sufficient
   - The definition of "essential nutrition actions" has focused programs; a similar approach may be helpful in focusing the remainder of child survival—IMCI is a first step
   - IMCI (focus on major childhood diseases)-promote household behavior change, e.g.:
     - Preventive actions (immunizations)
     - Recognition of danger signs and what to do
     - Referrals

4. The major constraints to achieving nationwide CS impact include:
   - Lack of donor cohesion
   - Five year program cycles—need at least 10 years
   - Human resource capacity decimation with HIV/AIDS
   - Too few PH trained people in government

5. Key strategies to overcoming constraints to nationwide results include:
   - effective advocacy at all levels with a broad base of groups and institutions

[1] In Madagascar M&E results were used to attract GF money to expand efforts to two new regions and it is taking significantly less time to plan and implement because the activities are already in place in other regions

- framing the issue in ways that make important groups listen
- Pre-service training—"educate" the professors in schools of medicine, nursing etc. (see response to Q#4 for innovative ideas)
- In-service training: skills-based and sustainable—e.g. short, "sweet", tied to pay days and building on prior trainings, built-in supervision

6. Scaling up is more successful when:
   - there is a decision and mandate from the outset to" scale up"
   - the focus is to achieve impact as quickly as feasible
   - Contiguous or other regions are aware of the successes of the initial program sites
   - Tools and packages are used that can be adapted easily

7. Innovative Ideas
   - Ghana has a program that has shown great results which links mothers' education and micro-credit/ income generation to health efforts.
   - Ethiopia is trying a new type of paid worker in a health extension program. One is assigned per district.
   - Tie in-service training to pay days. Keep it skills based and short. Because these are repeat visits you can build on to previous trainings and build in supervision
   - Frame malnutrition as a macro-economic issue
   - Pre-service education: train the professors and give them the Power Point presentations, transparencies etc.

[illegible]

[illegible]

1. No nationwide CS successes known

2. From the recent past, Madagascar comes the closest. Gambia from long ago

3. "Integration" while accomplishing certain results, has proven to diminish other key CS results on several levels

4. CS efforts that are planned should be NATIONAL—even if implementation is phased

5. Missions need a "grand design" in health—to make sure all of its projects/activities contribute to this—The SO process does not seem to have accomplished this

6. Incorporate an intensive and broad BC component in all CS programs—simplicity important--trying to keep costs down such as in Madagascar—but not watering it down to make approaches ineffective.

7. Make a deliberate effort to get key players on board /accept approaches and messages

8. Use ideas proven to be successful in a number of countries: of "Champion Communities," "Living University" "Yellow Star" etc. countries, communities, health facilities etc both as planned training sites and as motivational to excellence

9. Keep delivery simple: for example, use what's there—(don't create "new" cadres, identify "positive deviants", test potential approaches, etc,)

10. Address the issue of private providers of health services in concrete effective ways

11. Support the creation of functioning country-level NGO networks to reduce supplication of efforts and improve cost-effectiveness—identification and application of "best practices"

12. Be creative and more pro-active re CS— in advocacy, and in requirements for programming (use HIV/AIDS, malaria models)

[redacted]

[redacted]

1. The programs achieving maximum coverage include EPI, water and sanitation, malaria and measles.

2. Interventions need to be sustainable which means inexpensive, client driven and feasible to implement without massive external resources. Some programming approaches which seem to have been effective in this way include The HEARTH model and "positive deviants."

3. The concept of an "essential set of interventions" is useful because it helps focus programming. It has been extremely useful in the nutrition area. Implementing an "essential set" nationwide might actually result in nationwide impact for child mortality.

4. The idea of an "essential set" is difficult to implement in the current environment given the demands and constraints of vertical funding and earmarks. Because of vertical nature it is more difficult to get programming synergies.

5. A "life cycle" or "systems" view is an important programming concept to achieve for maximum child mortality results→ for example, if you deal only with the child and not the mother, only with FP but not child deaths, only with EPI and not nutrition, only with iron supplementation but not bed nets, your results will be limited.

6. THE major constraints to achieving results include:
   - Vertical programming
   - Human resource capacity
   - The lack of "exit strategies" for projects (too little thought put into sustaining activities and impact after projects end)

7. Key to overcoming some of these constraints:
   - Advocacy to gain country commitment (so efforts will be sustained)
   - Is there anything that can be done to deal with vertical programming?
   - Start developing sustainable training strategies—both pre service and in-service as opposed to "one shot" training that comes with every new vertical program or effort
   - Using data locally to show improvements in clients' lives
   - Plan exit strategies from the beginning

8. There is enough experience out there –just have to get it communicated and used:
   - Get global bureaus to communicate more with the field than concentrate so much on communicating with each other

- Develop an efficient and effective mechanism to get new program updates and technical info to the field
- Take a better look and revamp training and updates of HPN officers—NEPS and SOTA courses could be much more effective but what is needed is a more comprehensive and strategic approach to both pre and continuing education of HPN officers

[redacted]

[redacted]

1. Use data to identify problems, develop specific approach and use for advocacy with all stakeholders – true at both national and community levels. Involve leaders with data

2. Focus on both the community and facility levels. If there is substantial use of the private sector you have to address it in your program; need to have an accurate appreciation of how the government network operates

3. True country commitment (government leadership)is essential-

4. Multi-donor support is key—make the effort to garner their collaboration; specifically look at all USG and non-USG potential resources in a given country

5. Assess the NGO network (breadth/pockets of coverage/effectiveness)—USAID can have much influence for collaborative approach. Use information to build strong partnerships and fill gaps in funding and coverage.

6. Link CS efforts with large resource flows→e.g. PMTCT, malaria ; find potential interfaces

7. Focus programs on achieving country level outcomes

8. Consider programming where you get "the biggest bang"—where conditions permit success or need is greatest

9. USAID should remain in "transition countries" even if only for relief or very small scale activities--- because this may open doors more quickly later should the situation change

[illegible]: [illegible]

David Oot
Catherine Bolles
Joseph de Graft Johnson
Eric Starbuck
Eric Swedberg

[illegible]

1. Common features of programs that have achieved nationwide impact include:
   - collaboration of all partners (donors, MOH);
   - national policies and commitment
   - strategic vision to implement on large-scale from the beginning
   - focus on both demand and supply factors needed to succeed
   - use of situational analyses to determine program emphasis—key to effective programs—especially with active participation of the MOH

2. Programs that have been successes include:
   - Family Planning Programs - esp. Kenya where fertility rate was reduced significantly
   - EPI Programs – countries where coverage reached 70 percent
   - Vitamin A Distribution Programs – small cost; widespread coverage
   - Linkages – demonstrated impact at scale
   - Essential Drug programs - some countries improved access to drugs for rural communities.
   - ORS Distribution --Malawi - example of how donor support and collaboration can be a catalyst for widespread coverage.

3. A key concern is not just achieving impact but sustaining it---many countries have achieved impact and then their rates have fallen. Many countries already have national programs in EPI, diarrhea, logistics, so there is not a question of going to scale. The question is how to make these programs function more successfully at scale. We should not always be looking for the opportunities to go to scale.

4. The major constraints to reducing child mortality and to effective CS programming include:
   - Inadequate child survival funding, fragmented approach to Child Survival other bureaucratic constraints: Funding for CS has remained the same over the last five years; there are 74 discrete projects in USAID Office of Health and Nutrition with overlapping mandates.
   - Earmarking of funds and especially five-fold increase of HIV/AIDS funding while CS funding has remained stagnant
   - Lack of child survival champions
   - Inadequate country resources for recurrent costs – More opportunities have to be created to generate resources locally to cover costs. Sustained

supply of drugs, materials, and other ___ operating costs (not just during "projects") is a huge issue in these countries

- Lack of managerial skills in the health system –Public health positions are filled by individuals with medical training but not public health, planning and management training).
- Over medicalization of child health approaches: little funding is provided for demand creation and community mobilization—both are essential for child survival impact in Africa
- NGO country approaches often not integrated into country (or USAID) child health strategy.

5. Some approaches to overcoming these constraints include:
   - The foundation of programs should be situational and systems analyses that ask who is dying, from what and what can be done, what is presently working and not and why. These analyses should be done before designing programs. Generally this will mean focus on malaria, pneumonia, diarrhea and newborn care. Maintain a results approach focused on ____ and underlying causes of under-five mortality.
   - Implement interventions at scale that are both feasible and affordable.
   - Donors must collaborate to be able to achieve impact
   - Strong community based programs that include community mobilization/demand creation
   - Address the supply problem—focus on logistic management improvements
   - Involve the private sector

6. Additional approaches include:
   - Create opportunities to generate and retain local resources for health facilities
   - Build /strengthen public health institutions
   - Create exchanges among successful and weaker country programs to stimulate adoption of effective approaches
   - Encourage NGOS to get more strategically involved in countries (National Strategic Plans)
   - USAID should address the issue of multiple overlapping CAs and projects---> focus on fewer goals and objectives and more funding flexibility

[redacted]

[redacted] :

1. Countries with CS programs that have achieved nationwide impact:
   - Uganda – implemented IMCI training on a national scale because of government commitment/leadership and international donor cooperation
   - Ghana and Zambia -- targeted the private sector in malaria prevention→ approach was "systems" oriented i.e. contained the major approaches necessary for impact

2. To achieve more impact CS should emphasize HH level interventions that teach the mother:
   - How to prevent diseases
   - How and when to seek care

3. USAID should expand significantly its support of improved delivery of health services in the private sector. Support should include:
   - Studies of care seeking behavior to determine where people go for services
   - Identification and scaling up of successful approaches with private providers
   - Development of public private partnerships
   - Segmenting formal and informal providers
   - Explore sustainable strategies: professional associations, newsletters, etc. and other incentives to improve quality of care

4. The roles of the public and private sectors need to be redefined; USAID should be at the vanguard supporting this change:
   - Role of the Government/Public Sector should include:
     - Set national health priorities and provide treatment guidelines
     - Implement limited and selective health programs, especially prevention and services for the "public good"(i.e. immunization programs)
     - Provide national policies for taxes, registration, requirements for licensure, etc
     - Disease surveillance
     - Provide medical services only for the most disenfranchised
     - Provide referral services—for complex disease problems
   - Role of the Private Sector –
     - Provide the bulk of medical services
     - Communication and logistics systems

5. The major constraint to achieving CS impact is the lack of economic and human resources->

- Ineffective advocacy and increased funding for HIV/AIDS and other earmarks have placed CS in a "second class" status. CS now no longer a priority in foreign aid.
- Macro-policy environment –weak economies, lack of economic growth results in fewer resources available for health. It is thus unrealistic to think that the public sector can in the foreseeable future deliver sufficient quantity and quality of services

6. Strategies for Overcoming Constraints:
    - Advocacy: use more creative strategies to increase visibility of child survival issues
    - Assist in changing role of the public sector to what it could do well (see above)
    - Increase support for CS efforts not requiring reliance on facility-based interventions
    - Change emphasis from public sector delivery of services to support for improving the private delivery of services
    - Focus on BCC and the household level

7. Ways to distribute USAID CS resources:
    - USAID should be selective in intensive support for CS: countries with the following characteristics:
    - a serious commitment from the government
    - willing to put resources behind their commitment
    - evidence-based progress
    - politically stable.

Comments refer to South Africa

1. Decentralization was very strong in South Africa. Each region has a very strong government. The central government –not the Ministry of Health- allocates a lump sum grant based on selected criteria, to the provinces that then allocate to the various sectors. If the central government disagrees with how a province allocates its resources, it will intervene. The provincial governments are very strong, however, with much authority.

2. USAID decided to work in one province only, the eastern Cape, which had a large population and very poor health indicators. USAID focused on improving health care delivery- training, drug logistics, personnel management, financial management, community outreach. It also supported vaccination campaigns and other child survival interventions. Training in management systems was the chief focus, however. Training felt somewhat "boring" unit we achieved reaching a critical mass of health workers.

3. One of the key ingredients in USAID/South Africa was having highly qualified technical assistance teams in the cooperating agencies and highly focused parameters of work. This helped manage potentially negative competition among CAs. The South Africans very explicitly did not accept "lower level" consultants. They only wanted the best.

4. Health management should fit into how the government operates as a whole. Child health should be an integral part of the whole development business. Too often health officers are MDs who have great difficulty getting out of their "MD mode" and clinic-based, delivery-based thinking. Interventions need to be more broadly based.

5. The major accomplishment was a much better trained professional cadre of middle to senior level health managers in the public sector. We saw changes in improved revenue management and generation.

6. Because the autonomy of the provinces was so great, high-level officials were politically engaged in the process in a focused way. This made USAID's job easier.

7. There was a very high degree of donor collaboration, especially with DFID, UNICEF and the World Bank. We co-funded many activities or parts of programs.

8. An important aspect of USAID's approach was embedding the TA team in Ministry of Health Offices. At the central level this office focused on policy,

health finance, etc. At the provincial level the team's presence in the MOH contributed to transferring "know how" to the country's staff. It was important to be together day-to-day, side-by-side.

9. USAID should relate its programs more directly to achieving outcomes. It is not clear that USAID does this across the board. It is not clear how our successes in South Africa were linked to health outcomes.

[illegible]

[illegible]

1. No countries have achieved nationwide CS impact.

2. Countries that come the closest are Zambia and maybe Tanzania

3. Key missing ingredient is " the vision": an overall strategy which addresses the major mortality picture and the necessary approaches (not just one component of an approach) to achieve country-wide CS impact; Each needs the following:
   - A 10 year framework
   - Country "buy-in" –spend the effort to get this
   - Donor "buy-in" and functional collaboration to achieve above goal-USAID can't do it alone
   - "fit" with what is already going on; keep it simple and sustainable
   - Use "system" concept to design strategy to achieve objective
   - Incorporation of formative/post-formative research as essential ingredient
   - Use of TIPS or "positive deviants" type of approaches to identify interventions that may have staying power
   - Rational phased plan of implementation with REAL benchmarks (REALISM)

4. Human resources is one of biggest constraints
   - within the public sector need to focus on developing career path (there is none);
   - pre-service education needs more emphasis;
   - developing sustainable permanent system of continuing education rather than the one-shot frequent "trainings" every time a new program emphasis comes around—(which may be linked to career path idea)—one study in the Philippines showed that one year after a training only a handful of those "trained" were still in their positions
   - focus on where people are going for care—most countries probably have a greater proportion of people seeking care from private providers than public—yet we have few approaches to improve service delivery in private sector
   - pay health workers in public sector a just wage—couldn't we use some of our resources to focus on this issue?

5. Need to have a minimum package for CS in all African countries.

6. Select a country (or countries) on which to focus more intense resources and "go for broke" ; use as role model for other countries
   - With reasonable resources (do it with resources and approach which would make it sustainable in the end and useful as a role model)

- Build in South-South type exchanges, observations, participation, visits, etc
- Think beyond “health”
- Use concepts mentioned above

Annex F

Recommendations: Suggestions for Potential USAID Actions in Child Survival

Suggestions for Potential USAID Actions in Child Survival

USAID has the opportunity to implement more effective approaches and use resources more efficiently so child health programs will accomplish better results. The following section operationalizes the recommendations made in the body of the report, providing concrete suggestions for USAID action in each of the spheres that contribute to more effective programs.

1 – Child Survival Programming

- Require that country child survival strategies include
  - A clear mortality objective
  - An appropriate mix of interventions to achieve the objective
  - Focused interventions and systems approaches
  - Scaled-up and broad community mobilization and outreach approaches
  - Effective communication strategies
  - Guidelines for effective and practical use of data by country partners at national and local levels
- Require more rigorous program design (such as a project review checklist)
- Incorporate scale-up guidelines into both field support and bilateral requests for proposals (RFPs) and requests for applications (RFAs)
- Build requirements for the program approaches into project approval processes
- Require that USAID Missions work with the government and other donors to define the intervention areas USAID will support and gain commitment from other donors for specific support
- Assess existing project designs to determine how to achieve scale-up and make other program changes necessary to reach objectives
- Identify and learn from successful sustainable communications and scaled-up community mobilization efforts in other USAID-assisted programs
- Continue to support country stakeholder participation in country situation analyses, Marginal Budgeting for Bottlenecks (MBBs) analysis, evaluations, program-related research, strategy and policy development
- Identify successful approaches to use data at the implementation level and disseminate this information across Missions
- Using malaria or vaccination programs as models to develop a check list of policies needed to move child health programs more quickly to guide HPN officers as needed

2 – Operational Partnerships

- Integrate the expectation of leveraging and partnering with various stakeholder groups into the HPN officer job description
- Establish and support concrete mechanisms that foster joint stakeholder planning, such as technical working groups, task forces, and other ad hoc planning and review meetings
- Advocate for common goals and agendas at country level and at the highest levels of donor leadership (this could lead to improved collaboration rather than competition)
- Advocate within the Agency and with key donors to hire effective leaders as country field representatives
- Encourage HPN officers to look for programming opportunities with partners created by new global initiatives (e.g., MBBs or MDGs) or changes in leadership
- Adopt flexible program designs so changes can be made to foster donor collaboration in such initiatives
- Require Child Survival Grants to fit into country child health strategies and establish regular and ongoing communication mechanisms between Missions and recipients
- Strengthen NGO networks to improve information sharing and capacity of NGOs and facilitate communications among NGOs, USAID, other donors, and governments
- Share successful models of effective partnership building with countries that have weaker approaches
- Assign foreign service nationals (FSNs) to go to key partner and task force meetings
- Encourage HPN officers to assess stakeholder potential more systematically, for example, by undertaking institutional, political and interest mapping, advocacy, and planning
- Develop mechanisms to encourage HPN officers to make frequent field visits

3 – Funding

- Work with Congress through staffers and others to increase funding for child survival and to ensure that earmarks are flexible to allow Missions to respond to country priorities
- Promote Agency information-sharing about other donor funding streams
- Provide updates and guidelines to help HPN officers mobilize resources
- Identify and seek to replicate successful attempts to find synergies and loosen restrictions
- Identify successful country-level partnerships and resource mobilization and share lessons learned with HPN officers in other countries
- Participate in country-level basket funding to increase USAID's influence at the table to advocate for child health
- Hold HPN officers accountable for leveraging resources and identifying interfaces for child survival from major funding sources by making resource mobilization part of the job description and through program planning and review processes

4 – Assessment of Human Resources

- Conduct with key partners overall country assessments of the human resource situation, including
  - Existing manpower numbers, types, and deployment
  - Licensing requirements and professional practice barriers
  - Career structure
  - Internal and external migration
  - Overall labor market
  - Incentive systems and personnel management
  - Relevance and quality of training institutions
  - Continuing education environment
- Identify and quantify critical gaps
- Identify priorities for action and develop strategic action plans
- Engage in policy advocacy to reduce practice barriers to expand the number and type of health care providers

5 – Human Resources Development

Pre-service education

- Develop coordinated strategies and actions with other partners to fill gaps and address barriers in provider education
- Conduct a rapid survey of Mission and WHO efforts in Africa to document efforts to improve pre-service training, identify successful models, and disseminate this information among Missions
- Increase support for schools of public health and health management
- Encourage exchanges such as university-to-university partnerships among public health and management, medical, nursing, or midwifery schools in Africa and with others in the United States (such exchanges are common in other Bureaus within USAID, such as EGAT)

Short-term training

- Conduct a rapid assessment of the types and costs of short-term training supported by USAID, focusing on gaps or redundancies
- Develop a coordinated response with other donors to address the gaps or redundancies
- Strengthen follow-up of training, links with quality improvement, and management training
- Help develop more strategic, regular, and effective approaches to continuing education
- Assess the feasibility of identifying and strengthening local institutions to provide short-term training and play a role in continuing education
- Establish in each country a technical task force (including donors that support training in child health, universities and schools, ministries of health, and other stakeholders) to prepare guidelines for a more coherent and cost-effective approach to continuing education.
- Look outside health for other models of effective short-term training and continuing education
- Investigate continuing education credit systems in other countries and assess the feasibility of adapting them
- Establish a country-level partner task force to explore synchronizing per diem policies

6 – Health Worker Motivation

- Inventory effective approaches to staff motivation used at the country level
- Document costs and practical realities of implementation
- Develop a systematic approach to conducting these assessments
- Abandon support of ineffective approaches
- Examine whether scaling up the most promising approaches is feasible
- Document quickly and share information on the most successful approaches

7– Private Providers

- Support country-level situation analysis of private providers and the context in which they work, examining care-seeking behavior, types of private providers, their skills, and the policy and regulatory environment
- Strengthen advocacy to help governments improve regulations and standards that affect child health
- Support country strategy development to involve private providers in child health
- Work with government, professional associations, and donor partners to support interventions to involve private providers in this national strategy framework
- Explore a range of interventions to improve private provider quality of care (e.g., continuing education, training, negotiation, and persuasion techniques; working with professional associations; disseminating professional journals or bulletins; improving the regulatory framework; and communicating with clients to change patterns of demand for more appropriate services)
- Evaluate carefully the costs and outcomes of these efforts

8 – Advocacy

Global advocacy

- Advocate more effectively and forcefully with other key partners (UNICEF, WHO, World Bank, other bilaterals)
- Support the Child Survival Partnership in its advocacy efforts
- Examine the "successful" strategies used in other health areas such as malaria, polio, measles, and HIV/AIDS programs and use lessons learned to build coalitions, a common agenda, and support
- Expand the debate to the general public by increasing media coverage of child health issues in major magazines and newspapers in the United States, Europe, and Africa
- Require HPN officers to develop specific country agendas and timetables to familiarize congressional delegations (CODELS) with child health issues on visits to Africa
- Conduct regular, frequent, and pointed briefings at Mission director, assistant administrator, partnership, and technical meetings, SOTA courses, and other forums, using dynamic speakers to "impress the crowd"
- Use the MDGs, MBBs, Abuja targets, etc. to make child survival more visible
- Explore ways to make the political payoff visible in countries
- Use successful models to motivate other countries
- Develop and strengthen regional organizations and partnerships to empower African countries to prioritize comprehensive child health strategies

Country advocacy

- Develop a child survival advocacy approach with key country partners (UNICEF, WHO, World Bank, other bilaterals)
- Focus on mobilizing awareness of issues, disseminating experience from other countries, and grooming potential health leaders
- Assess the Ethiopia advocacy experience and replicate this model in other African countries as appropriate in a timely manner
- Assess countries that have assumed ownership of child health and determine whether approaches to garner national leader commitment are transferable to other countries
- Create a small interagency working group to define proximate steps to keep child health solidly on a country's agenda
- Support country leaders to analyze their own country situations using RAPID analysis, DHS, and other existing mechanisms where possible

Internal USAID advocacy

- Advocate for child survival more strategically and intensely with office chiefs, assistant administrators, the administrator, Mission directors, and U.S. country ambassadors
- Link child survival with other development assistance accounts

9 – Establish Program Requirements

- Develop an Agency-wide child survival strategy with minimum but flexible requirements
- Develop criteria for resource allocation that reflect Africa's needs
- Review current annual reports and evaluations to identify key gaps in information related to child mortality reduction for both Washington and Missions
- Use the term "child survival" precisely and strategically rather than to cover multiple purposes
- Determine whether new or previously used tools for child survival programming in Africa would be relevant and useful

10 – Procurements

- Have USAID technical staff foster relationships with other internal units, e.g., Development and Planning (DP), HR, legal, and grants, to accelerate project approval and implementation
- Create a working group to address the proliferation of procurements and simplify the contracting process
- Use the working group to develop specific recommendations to address overlapping projects
- Have both USAID officers and cooperating agency representatives identify which procurement, reporting, and implementation requirements take the most time away from real planning and implementation and recommend mechanisms to address the most critical issues
- Reduce the number of centrally-funded grants and contracts and develop a strategic approach to eliminate gaps and redundancies
- Develop more effective and efficient mechanisms for central projects to support bilateral projects and NGOs
- Extend the five-year project cycle to 10 years with two five-year renewable phases

11 – HPN Officer Recruitment and Skills

Washington should:

- Prioritize the set of skills and experiences described above in selecting new country program HPN officers and key health personnel
- Enlist the Health Sector Council to advocate with HR to upgrade the quality and quantity of HPN officers in Africa
- Realistically assess skills of existing Mission HPN officers and create opportunities to enhance needed skills through workshops, courses, or exchange visits
- Assist Missions in the development of an approach to leaving an "institutional memory" for Mission child health programs when there are staff changes.

Missions should:

- Thoroughly check skills and references of staff for new bilateral grant applications
- Promote program continuity by ensuring overlap between departing and arriving HPN officers
- Require that new HPN officers spend the first three months at post writing a "think piece" that identifies successes, failures, gaps, opportunities, and needed adjustments before planning any programmatic changes
- Ask global and regional Bureaus, other Missions, regional offices, and perhaps contractors (reflecting a variety of expertise to avoid bias) to review this document before any program changes are approved.

Suggested Recruitment Criteria

Review respondents recommended the following skills and experience requirements for recruiting field office HPN officers and other key health personnel:

- field experience from Peace Corps or similar organizations
- experience working with USAID in the field, not only at headquarters
- updated technical and programmatic knowledge and skills
- successful experience negotiating and developing informal relationships with government, partner, donor, and other organizations
- evidence of creative problem solving (identifying program, funding, personnel, and partner opportunities and solutions to overcome bureaucratic hurdles)

12 – Experience Transfer

- Support creative and rapid diffusion of innovations or successful program approaches to other Missions and programs.
- Invest time and resources in communicating effective approaches to both headquarters and field staff
- Establish HPN incentives and rewards (recognition and kudos) for "thinking outside the box" and finding creative solutions
- Establish incentives for HPN officers to "change direction" from plans if and when needed
- Reward and recognize effective project implementation (e.g., Sector Council, HR)
- Develop methods for and finance exchanges between or among countries

  HPN Officers:
  - Identify and use existing forums (e.g., the SOTA course) to transmit pertinent information in creative ways (e.g., videos)
  - Explore the feasibility of more frequent sub-regional SOTA-type exchanges or courses and identify or develop other technical updates for HPN officers
  - Support HPN officer participation in technical task forces
  - Explore opportunities for HPN officers to participate in design and evaluation teams in other African countries
  - Create more interactive training approaches
  - Explore and finance opportunities for FSNs to participate in exchanges and technical and program updates

  Country representatives and partners:
  - Finance more South-to-South exchanges to share experience and adopt new approaches (such exchanges must involve a "critical mass" of well-selected participants)
  - Invest in good planning of well-conceived exchanges to share program successes and innovations. Ensure exchanges go beyond capital cities and beyond meetings
  - Evaluate the impact in the "home" countries
  - Create a small grants program for countries to share innovations or successful program approaches and adapt them to new contexts through existing cooperative agreements, contracts, or grants
  - Establish other operational mechanisms to exchange successful models and innovations

- Develop and implement more effective methods to keep USAID field and headquarters health professionals up to date on program and technical issues and innovations
- Develop approaches to keep country officers abreast of global health and development updates for planning, monitoring, and evaluating programs.