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# Health and Poverty in the Gambia

A background report  
to the National Poverty  
Reduction Strategy Paper

Africa Region  
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# Abbreviations and Acronyms

AFPRC	Armed Forces Provisional Ruling Council
ALOS	Average length of stay
ANC	Antenatal care
ARI	Acute respiratory infection
BFCI	Baby Friendly Community Initiative
BHF	Basic health facility
BI	Bamako Initiative
BOR	Bed occupancy rate
CACs	Catchment Area Community Coordinators
CBO	Community based organization
CHN	Community health nurse
CHW	Community health worker
CFR	Case fatality rate
CNR	Case notification rate
CPR	Contraceptive prevalence rate
CRD	Central River Division
CSN	Community nurses
DHT	Divisional health management team
DOSFE	Department of State for Finance and Economic Affairs
DOSH	Department of State for Health and Social Welfare
DOTS	Directly observed therapy, short-course
DRF	Drug Revolving Fund
EPI	Expanded Program on Immunization
GDP	Gross domestic product
HIPC	Heavily indebted poor country
HMIS	Health Management Information System
HNP	Health, Nutrition, and Population
IEC	Information, Education, and Communication
IMCI	Integrated management of childhood illnesses
IMR	Infant mortality rate
INP	Inpatients

KMC	Kanifing Municipality
LRD	Lower River Division
MCH	Maternal and child health
MDGs	Millennium Development Goals
MMR	Maternal mortality ratio
NBD	North Bank Division
NBD-E	North Bank Division–East
NBD-W	North Bank Division–West
NGO	Non-governmental organization
NHA	National Health Accounts
OPD	Outpatients
ORS	Oral rehydration solution
ORT	Oral rehydration therapy
PER	Public Expenditure Review
PHC	Primary health care
PPP	Purchasing power parity
PRSP	Poverty Reduction Strategy Paper
RHS	Major (Rural) Health Center
RVH	Royal Victoria Hospital
SSA	Sub-Saharan Africa
TB	Tuberculosis
TBA	Traditional birth attendant
TFR	Total fertility rate
TT	Tetanus Toxoid
U5MR	Under-5 mortality rate
URD	Upper River Division
VHS	Village health services
VHW	Village Health Worker
WD	Western Division
WHO	World Health Organization

# Key Health Indicators for the Gambia

<b>National Level Indicators</b>	<b>2000</b>	<b>MDG Target for 2015</b>
<b>Health Outcomes for Children Under-5</b>		
Infant mortality rate (per 1,000 live births)	92%	61
Under-5 mortality rate (per 1,000 live births)	110%	73
Low birth weight	12%	
Stunting	25%	
Wasting	9%	
Underweight	20%	
Exclusive breastfeeding for children under-3 months	36%	
Prevalence of ARI	8%	
Prevalence of malaria	15%	
Prevalence of diarrhea	22%	
<b>Health Outcomes for Women of Reproductive Age</b>		
Maternal mortality ratio (per 100,000 live births)	1100 (adjusted 1995) 703 (MM Study 2001)	262
Prevalence of anemia among pregnant women (percent)	73%	
Annual STD incidence (new cases per 1,000 antenatal cases)	28%	
<b>Health Outcomes for Adults</b>		
Prevalence of HIV/AIDS (15–49 year old)	1.95%	
Annual incidence of tuberculosis (per 100,000 population)	118	
Annual incidence of malaria (per 100,000 population)		
<b>Demographics</b>		
Total population	1.3 million	
Annual population growth rate	3.5% (1980–99) 2.9% (1998–99)	
Life expectancy at birth (years)	53	
Dependency Ratio	93%	
TFR (births per woman)	5.6	
Current use of modern contraceptive methods	9%	
	14% (MM Study 2001)	
<b>Health Interventions</b>		
Fully immunized children under 1	74%	
Sleeping under treated bed net ( under 5)	35%	
Anti-malarial drugs received by malaria cases ( under 5)	56%	
Use of ORS by diarrhea cases (under 5)	33%	

ARI cases received treatment in rural areas (under 5)	64%
Women using antenatal care services with skilled attendant	91%
Tetanus Toxoid coverage among pregnant women	77%
Births attended by a skilled health personnel	55%
TB cases detected under DOTS	75%
TB treatment success rate (percent)	80%

### Health Systems

Physicians (per 1,000 population)	0.2
expatriates	91%
employed by public sector	81%
Nurses and midwives (per 1,000 population)	0.8
employed by public sector	80%
Village health workers (per 1,000 population)	0.3
Population per major health center	185,000
Population per Minor health center	30,000
Average distance to basic health facility for rural population (km)	7.5
Hospital beds to population (per 1,000 population)	1.0
Outpatient visits at public facilities (per capita)	0.7
Inpatient visits at public facilities	8%

### Health Expenditures

Health spending as percent of GDP	3.4%
Public share of total health spending	74%
Per capita health expenditure (US\$)	12
Household spending for health as percent of total health expenditure	26%
Household spending for health as percent of household expenditure	5%

### Macroeconomic

GNP per capita (US\$)	330
GNP per capita (PPP US\$)	1,550
Annual GDP growth rate (1998–99)	6.4%
Annual GDP per capita growth rate (1998–99)	3.4%
Exchange rate (1 US\$ to dalasi)	17.7

### Disaggregated Level Indicators

IMR	Ratio of poor (LRD, CRD, or URD)/rich (Banjul) for IMR	1.6
MMR	Ratio of rural/urban for MMR	1.9
Stunting	Ratio of poor/rich for stunting among children under 5	1.7
Breastfed	Ratio of poor/rich for exclusive breastfeeding for children under 4 months	0.7
Anemia	Ratio of rural/urban malnutrition among pregnant women	1.8
TFR	Ratio of poor/rich for TFR	1.6
CPR	Ratio of poor/rich for CPR	0.5
Bednet	Ratio of poor/Rich for use of treated bednet	1.3
Antimalarial	Ratio of poor/rich for use of antimalarial drugs	0.8
ORS	Ratio of poor/rich for use of ORS among children with diarrhea	0.9
ARI Treatment	Ratio of poor/rich for use of treatment for ARI	0.7
DOTS	Ratio of poor/rich for TB cases detected by DOTS	?
HIV/AIDS	Ratio of poor/rich on HIV/AIDS knowledge	0.2
Delivery	Ratio of poor/rich for births attended by skilled health personnel	0.4
Doctor Visit	Ratio of poor/rich visiting doctor when ill	0.8
CHN	Ratio of URD/NBE for CHN to 1,000 population	0.4
Health Budget	Ratio of poor CRD and URD)/other for HH budget share for health	2.5

# Executive Summary

## Introduction

**T**he performance of Gambia's health sectors is relatively good especially when compared with SSA standards on child health indicators. However, there is some evidence of decline in the rate-of-improvement in child health. The overall life expectancy in the Gambia is lower than in non-African countries of comparable income but is better than the SSA average. The Gambia's under-5 mortality rate has declined from 350 per live births in 1960 to 128 per live births in 2000—one of the largest declines observed in the SSA region. However, its IMR still remains considerably higher than Ghana and Senegal, the best performers in the West African region. Immunization coverage rates have remained steadily over 80 percent over the last 10 years. The country seems to be on track to achieve the Millennium Development Goals for child health.

In the past 10 years, however, the decline in IMR has slowed substantially. While it declined by more than 30 percent in the 1980s, the decline was only 15 percent in the 1990s. In addition, the gains in child survival are not uniformly distributed across the country's regions. Regions with the highest proportion

of households living below poverty (LRD, CRD, and URD) have significantly higher rates of child mortality than the regions that are relatively better off. The main causes of child deaths remain preventable: The five most prevalent causes of child death in Gambia are observed to be malaria, upper-respiratory tract infection/pneumonia, premature and pre-term births, birth asphyxia, and neonatal sepsis. Further improvements in child survival will require sustaining past gains and renewing efforts to tackle the remaining causes of mortality that are not amenable to immunization efforts. Focus on the poorest regions is also likely to accelerate a positive trend toward reaching the Millennium Development Goals.

## Malnutrition

Malnutrition remains a major problem underlying the high levels of child mortality. Twenty-five percent of under-5 children are stunted and 20 percent are underweight for their age, almost comparable to the whole SSA average. Little improvement has been observed in these indicators over time. In addition, significant differences are observable in the percentage of children stunted or underweight according to household income and region of

residence. High occurrences of Vitamin A deficiency and micronutrients deficiencies remain other areas of concern. Maternal and reproductive health remain key priority areas for action and achieving the maternal mortality target will require substantial acceleration of the current trend.

Although the indicator is very difficult to measure, in the past 10 years the Gambia has most likely experienced some decline in maternal mortality. However, its maternal mortality ratio (MMR) remains high compared to most SSA countries. Data show that MMR is particularly high in rural areas, especially in the Eastern division where it is estimated to be twice that in the capital city Banjul. The foremost causes of maternal mortality include hemorrhage, infections, and eclampsia. Malaria among pregnant women also contributes to maternal mortality as well as nutritional deficiencies. Iron deficiency and subsequent anemia is highly prevalent and among the worst in the SSA region: 75 percent of pregnant women and 56 percent of lactating women are anemic. High mortality rates are also driven by a relatively high level of fertility: The total fertility rate for Gambian woman is 5.6. Yet the Gambia has already well initiated its demographic transition and this fertility level is one of the lowest in the West Africa region. Neighboring Mali's TFR, for example, is 6.7 children per woman. Holding the current TFR trend constant, the Gambia will not reach replacement level fertility before 2015. Poor regions (CRD and LRD) and poor households experience significantly higher levels of fertility than average. Richer households seem to have undergone a shift toward a low level of fertility but the TFR of the lowest income quintile remains very high at almost twice the TFR of the highest income quintile.

## Demographic transition

The demographic transition has been initiated, but population is nonetheless to grow rapidly

over the next few years. High fertility and young population age structure has also fueled population growth that may soon surpass the economic growth rate. The Gambia's population was 1.3 million and the population dependency ratio remains high and will continue to be for at least the next 10 years. In spite of the demographic transition in the Gambia, fertility has decreased somewhat slower than in other countries, such as Ghana. The recent decline in fertility is strongly associated with urbanization. Decreasing rates of breastfeeding and low use of contraception are still contributing to large family sizes.

While malaria remains the most prevalent communicable disease, HIV and associated TB could threaten past health gains if not contained. Along with neighboring Senegal, the Gambia has maintained a relatively low prevalence of HIV/AIDS at about 1.95 of the adult population. Yet because of its epidemic potential, HIV/AIDS is a rising threat to past health achievements. Neighboring countries such as Burkina Faso (HIV prevalence 7 percent) and Cote d'Ivoire (9 percent) are already experiencing generalized epidemics. There is also a reported rising prevalence among Gambia's vulnerable groups.

Tuberculosis is also a growing concern. After an initial decline in the early 1990s, the number of diagnosed TB cases per year has doubled from 1992 to 1998. The CNR reached 118 per 100,000 by 2000. Finally, malaria remains an endemic problem and has been reported by Gambian hospitals as the leading cause of mortality among children and adults. Service-related data suggest a slow decline in malaria-related morbidity and mortality over the years, but the reliability of these data is difficult to assess.

## Household spending

Household spending for health affects the poor disproportionately. Household spending for



health accounts for about 5 percent of total household expenditure on average, comparable to other developing countries. But significant variations can be found across the country. In the poorest regions such as the CRD (US\$0.78 per capita) and URD divisions (US\$1.18 per capita), per capita out-of-pocket spending is lower than average (US\$1.69) in absolute terms, yet is higher as a proportion of household income than in other divisions, reaching as high as 12 percent of total household expenditures among some groups. Households using traditional healers and private providers spend relatively higher amounts on average than those using other providers.

Limited information is available to examine the pockets of vulnerability in the Gambia, the characteristics of the households facing high health expenditures, and the means (formal and informal) through which these households cover these health expenditures. The study could not identify the segments of the population that cannot afford services and may consequently fall into further poverty with catastrophic illnesses. This is a priority area for future analytical work.

Household health behaviors are evolving but need further changes to respond to current causes of high mortality among children and women. Most of the reasons for poor nutritional status among children in the Gambia are related to household practices, including low levels of or lack of exclusive breastfeeding for infants under 6 months and inappropriate weaning practices. Low levels of exclusive breastfeeding and appropriate weaning practices are found among all groups: The poor/rich ratio for exclusive breastfeeding is 0.7).

The slowing decline in infant and child mortality can also be traced to insufficient levels of home-based child health care interventions such as nutrition, oral rehydration therapy (about 33 percent in use among children under 5), and anti-malarial drugs and use of impregnated bed nets (about 35 percent in use among children under 5) for which community based

actions and sustained behavioral change might be necessary. Current coverage for these interventions is still too low, especially in poor regions and among poor households. The ORT use among children with diarrhea is particularly poor in CRD.

On the other hand, the Gambian immunization program has been one of the most effective interventions in creating high demand for services and serving the needs of the poor. Coverage is still over 80 percent. Unlike all other countries of West and Central Africa region, immunization services appear very progressive in the Gambia as coverage among the underprivileged is better than among the privileged. Recent reports also signal a worrying decline in immunization coverage mainly attributable to supply problems.

However, the immunization success has not been translated into sustained coverage with other important child health interventions. Use of curative services for children (i.e., treatment for ARI, diarrhea, malaria, etc.) is, for example, still very low, particularly in the poor regions and among the poor households. Supply-side reasons can also be evoked here as this division apparently has the least developed infrastructure and therefore the worst access of the population to basic health services.

Yet differences in service use among various socio-economic groups also highlight the problems linked to households' inability to afford basic health services for children. Use of services for ARI and malaria treatment and use of bed nets are significantly higher among higher-income households, than among lower-income households. In the current context of widespread implementation of formal and informal user fees, appropriate pricing of services—including high levels of subsidy for children's services—will need particular attention. Divisional variations in maternal and child health suggest that targeted approaches may be necessary to improve the health status of the poor.

The past decrease in fertility cannot be strongly traced to the use of contraception by

Gambian women because, although increasing slowly, it remains very low (9 percent use modern methods). Efforts to improve maternal services have been largely successful as the utilization rates for antenatal care services is one of the highest in the West and Central Africa region at 91 percent. Yet poorer women use ANC services to a lesser extent than richer women. Use of antenatal care has also not translated into higher use of attended delivery services which still remains relatively low (55 percent). The women among the lower-income groups were significantly more likely to deliver at home or by a TBA (only 31 percent of women among the poorest 20 percent had attended deliveries) as compared to the higher income households, who were more likely to deliver under the care of a skilled health provider (81 percent). Supply factors contribute to this situation. The division of the URD with poorest access to primary health care services and health manpower reports the lowest proportion of deliveries attended by a skilled provider.

Proximate determinants of fertility are mostly poor: length of exclusive breastfeeding (36 percent); CPR (9 percent); and age at marriage. On the HIV/AIDS control front, data show amazingly low levels of knowledge among women, particularly the poorest.

Use of traditional healers was reported only in 5 percent of illness episodes with relatively higher use in poorer regions such as LRD. However, not much is known about the quality and the type of services provided by traditional healers. The CRD ranks last both in terms of child health outcomes and levels of household health behavior. CRD is also a region with poor road infrastructure suggesting that a combination of poorer access due to roads and the poor knowledge of the households interact negatively to produce poorer health outcomes.

These findings confirm the importance of focusing on programs that influence household behavior targeted at the divisions with the

worst indicators. Improving knowledge, attitude, and practice of appropriate child-feeding practices, hygienic practices, recognition of danger signs during pregnancy and for various childhood illness combined with appropriate and timely care of illness may lead to substantial improvement in health outcomes.

## **Community-based approaches**

Community based approaches have shown that it is possible to improve household behaviors and practices. To address the issues of poor demand for services and development of household health care practices, community-based programs have been developed in the Gambia over the last few years with some level of success. The premise of these approaches was that health education and community-based programs addressing household knowledge, attitude, and practices are likely to trigger changes in health for women and children. The “Baby Friendly Community Initiative” successfully increased the percent of children exclusively breastfed up to 6 months of age to almost 60 percent and positively influenced other weaning practices. Gambia plans to expand these community-based approaches to reduce the level of childhood malnutrition. Another community-based approach, the “Bamako Initiative program” also demonstrated good results in terms of building partnerships with communities to develop community-based health care and reinforce accountability of the health services toward users. Yet the local management capacity has been undermined by drug supply problems that need to be solved at national level.

Evidence of geographical and income disparities reinforce the argument for developing community-based services. The experiences of the Baby Friendly Community and Bamako initiatives provide platforms to build upon. Yet impact on outcomes will require strengthening and expanding these approaches both geograph-

ically (i.e., covering the rural communities) and in scope. Enriching these experiences with broader programs of direct support to income protection and generation and literacy enhancement is likely to indirectly benefit the poor and to improve health for women and children.

## Geographical access

Geographical access to services is good overall, but access to community-based services and emergency obstetric care needs to be expanded in the rural areas. The Gambian health care system is constituted of both a modern system and a traditional medicine network. The primary mechanism of delivery is through the public sector (hospitals, health centers, and community-based PHC system). The private-for-profit sector and the non-governmental organizations (NGOs) comprise a relatively smaller proportion of the health care delivery system. The basic health care services are provided through 35 health centers and health “trekking” posts providing community-based PHC. At the tertiary level, the Gambia has 10 hospitals, three of which are in the public sector.

The number of health centers is probably insufficient, even relative to the small and dense population of the Gambia. There are disparities in the proportions of the population-to-health center ratio. Community-based health programs, which have proven to be effective, are also not covering the whole country. When private providers are included in this analysis, the worst population-to-health centre ratio is to be found in URD and NBD-W. Village health services covered all villages in LRD and NBD-W while URD had the worst coverage. To correct this imbalance, however, the public sector infrastructure has invested in health centers mostly in the poorer divisions over the past few years. Hence it seems that the public sector investments for Gambian basic health facilities have corresponded to the distribution of poverty and health needs.

Overall the access of the population to basic health services is generally good with the exception of some pockets mainly in the URD and NBD. For most of the rural population, access to services is not seen as a problem. Most households (85 percent), live within one-hour travel time (7.5 kilometers) of a facility.<sup>1</sup> The divisions where travel time to health services exceeds 30 minutes—such as in the NBD, CRD, LRD, and URD—are nonetheless poorer and report poorer health outcomes.

The analysis suggests that physical access is not a major obstacle for the use of services. Access to public and private primary care facilities is relatively high even in poor areas with lower levels of health outcomes. Yet some areas have need for improvement. First, there seems to be a strong link between physical access and performance of services, suggesting that access could be further improved in those regions. Because the ratio of services-to-population is still low, there is a margin for action in terms of investing in new health centers and VHS. Second, the access to emergency obstetrical care still appears to be insufficient, with the bulk of hospital services being concentrated in the major cities. Technical capacity needs to be strengthened at the major health centers that are the initial referral point for immediate care and for obstetrical emergencies. The Gambia appears to be well equipped in terms of hospital beds with 1.21 beds per 1,000 population, slightly above the regional average of the SSA region (1.1 beds per 1,000 population), yet below the average of other countries with similar income (1.3 beds per 1,000 population). But problems lie essentially in the skewed distribution of these beds throughout the country, with an insufficient number of beds especially for emergency obstetric care outside of the main cities. Hospital bed capacity needs to be re-distributed to correspond with the population, including decentralization of the major health centers, with special attention given to making obstetrical beds available.

## Health manpower

With one physician per 5,000 people and one nurse per 1,300 people, the Gambia fares less well than countries in other regions of the world with comparable income (one physician per 2,000 people). Its situation is nonetheless enviable compared to sub-Saharan Africa with an average of one physician per 10,000 people. Despite this relatively better situation, however, the health manpower issue is the current Achilles' heel of the system.

With no training facilities within the Gambia until recently, 91 percent of all the physicians working in the Gambia are expatriates supported by donors and the government.<sup>2</sup>

The sustainability of the approach is a concern. The recent development of a Gambian medical college is likely to increase the number of qualified Gambian physicians. Yet time will be needed to get a steady flow of physicians trained, and the government will have to rely on transient solutions in the short term. Also the training of medical staff is only a first step. As foreign-trained Gambian medical doctors often do not return to work in the Gambia, the success of the program is likely to be jeopardized if the working and earning environment is not attractive enough to retain native doctors, who may be taken by attractive global labor market conditions. To illustrate, there is only one Gambian obstetrician/gynecologist in the country today.

The situation with nurses and midwives similar: The Gambia trains its own nurses and midwives, yet the retention of staff has been poor, due to the huge attraction of the international market. However, the total annual output of both the state registered nurses and state enrolled nursing schools cannot adequately meet the nursing needs just of Royal Victoria Hospital alone. The number of nurses in the public sector has been decreasing over the last years from 784 in 1998 to 655 in 2001. In addition, staff crowd the urban areas and hospitals, leading to large disparities between divi-

sions. Geographical disparities are significant. Within the country, the URD reports the lowest health manpower to population ratio, with one physician for 10,000 people while the NBD-E has one per 25,000.

In an attempt to address the issue of staff shortage, the Gambian health system has introduced training programs for auxiliary workers. The workers are trained at a somewhat lower level than nurses and midwives but are capable of offering some key services to children and women at primary and community services level. Traditional birth attendants and community health workers have been trained as part of the community-based PHC programs.

Improving staff training and retention will need a strong and intensive program that will need to be financed appropriately. There is a clear need for actions along three main strategic lines: First, because of the difficulty of training and retaining highly qualified staff, programs training intermediately qualified staff such as auxiliary midwives and assistant nurses, particularly community nurses (CSN), should be developed and their use maximized. Second, financial and non-financial incentives will have to be revisited to motivate health staff to join postings outside the main cities in larger numbers. Finally, innovative ways of financing staff could be developed—such as performance-based contracting and part-time work in the public sector—to allow highly qualified staff to optimize their remuneration.

Human resource policy and planning capacity are urgently needed in the Ministry of Health. No policies on recruitment, promotion, training, supervision, and remuneration now exist. Staff morale and motivation remain poor, as little recognition is offered for their good work; neither are hardship or travel allowances given to those serving in rural underserved areas or to those providing outreach services. The Gambia may want to revisit the work they did in the mid-1990s on staff retention and motivation when they received technical advice on the need for meritocracy in

promotions and in training, transparency in assignment, and housing for staff.

Finally, any health manpower planning has to take a systemic approach to the health systems when considering the need for trained health manpower in both public and private sectors. There are no clear-cut policies on private sector provision of health services.

## Drug shortages

Despite significant levels of funding, drug shortages keep undermining the functioning of peripheral services. Private pharmacies are highly concentrated in urban areas. Drugs provided by licensed pharmacists or health professionals are therefore only available in major urban settings and/or from public sector or co-managed (IMCI) facilities in the public sector. There is little or no collaboration between the private and the public sector. Public spending on drugs averages US\$0.4 per capita, which can be considered an acceptable level of financing of essential drugs at primary and secondary care level. Yet drug shortages are rampant in the country, despite a remarkable effort to provide drugs for the poorer regions. Several factors explain this situation. First, a large proportion of the funding for essential drugs flows into the large urban hospitals. Second, there is little effort to prioritize the “most” essential drugs from among an extensive list of more than 200 essential drugs. Third, the national procurement and distribution system is still weak as it is experiencing severe management problems with stock and financial accounting. This translates into difficulties for peripheral facilities to acquire drugs even when they have cash (“cash and carry” system). Finally, the overall cost recovery system, which represents less than 15 percent of the total expenditures on drugs, is still highly centralized. This prevents the peripheral units from using it to introduce the demand-side drive that would better link needs to quanti-

ties purchased at the central level. Efforts are underway to improve this situation. This will likely require revisiting the drug distribution and storage system, focusing the subsidies on a more limited number of essential drugs for the health centers and expanding the possibility for health facilities to fully retain the proceeds of user fees and use a cash and carry system to acquire essential drugs.

## Health facilities

Health service use of public sector health facilities is high relative to regional levels and health services’ production is quite largely oriented toward serving the needs of children, yet the high use of hospital OPD suggests that major efficiency gains could be obtained by shifting activities to the health center level. Although slightly below levels of countries with similar income,<sup>3</sup> the use of public sector health facilities is overall very high in the Gambia when compared to countries in the SSA and Western Africa region. The rate of OPD visits was estimated to be 0.7 person per year for the public services, significantly higher than the 0.2 to 0.4 visits per person per year observed in most of the countries in the West Africa region. Inpatient admissions account for 8 percent of the population. This is lower than reports from SSA and from the other countries of comparable income, which report an admission rate of 12 percent. One main concern for policymakers currently is the high proportion of OPD visits in hospitals over health centers, even for the most basic services. This negatively affects the technical efficiency of the sector. However, this extensive use of hospitals over health centers may be attributed to some extent to the lack of health centers in urban areas. For example, Royal Victoria Hospital, which includes Polyclinic in Banjul, continues to provide basic health services for the fixed and mobile population of Banjul city. One option to improve the financing arrangement could be to support

the hospitals' creation of basic health services delivery windows in the form of health centers.

Communicable diseases are the major reason for consulting health services among Gambians. Malaria, skin problems, diarrhea, and lower respiratory tract infection are the most frequently encountered illnesses in the public sector health facilities. A large proportion of services produced by the public facilities of the country is for children under 5. The focus on children under 5 has been comparable to what other well performing countries in the region have been able to achieve.

A positive relationship was noted among easy access to PHC, manpower, and health outcomes. The LRD, which also has the easiest access to PHC, reported the highest proportion of users of public sector OPD. The URD, which has the worst access to basic health services and health manpower, reported the highest proportion of inpatient admissions. This highlights the importance of providing early treatment and easy access to PHC and manpower to improve health outputs.

The households with a better income level were more likely to use doctors, and the relatively lower income households were more likely to use other health workers such as the CHWs. Not much economical difference was noted among the users of public providers or traditional healers. Over the years the trend has shifted in favor of public providers with an apparent increase in use of public services among the poor.

Among those using public services, economic disparities were noted. Higher income households were more likely to use public facilities compared to relatively poorer households. This is a concern to the Gambian government because the poor are either not using services or are using services from unqualified providers.

### **Quality and continuity of services**

Recurrent problems in ensuring the quality and continuity of services contribute to their lack

of impact. The health care system too often fails to identify risk cases and to provide timely and appropriate care and referral. URD, the division that has the least access to PHC and health manpower, also reports the fewest deliveries attended by skilled personnel. The quality of services offered at the health facilities is highly variable. Major health centers still lack appropriate obstetrical care, and patients have to travel long distances to the few hospitals to receive such services.

Recent steps have been taken by the government to improve resource allocation for health and to address disease among the poor. The sections below show that although improvements have been made in health care delivery, further emphasis is required to intervene on behalf of the poor and vulnerable. The cost-effectiveness and efficiency of most of these services are unknown and the pricing strategies and mechanisms need further assessment.

Differences among regions highlight the need for improving physical access (including transport to referral care) and availability of community nurses in the poorest regions. The highest prevalence of poverty is in LRD and URD with more than 50 percent of households living below poverty levels. The Western division, the most densely populated division with probably the fastest population growth rate, reports the lowest distribution of public sector health clinics. The URD and the NBD-W, the relatively poorer divisions, report the lowest access to any basic health facilities (public and private included). The URD in particular reports the lowest distribution of any health manpower (physicians and nurses) and calls for improved access and availability to community nurses.

### **Public sector financing**

Public sector financing of health has grown over the years but has mainly favored investment in tertiary care leaving critical recurrent

salary and non-salary costs of primary and secondary care unfunded. The Gambia's total health expenditure is quite low at about 3.4 percent of GDP for 1998/99. On a per capita basis, total health expenditure is nearly US\$11.80 (or PPP\$51). Although the government's contributions to health resources has increased in the past decade, especially since 1998, the overall government budget allocation is still low in comparison to other countries of similar income. Yet public spending in the SSA region is on average about US\$8.7 (74 percent of total health expenditures), slightly over what most governments spend on health in the West and Central Africa region. The public sector of the Gambia allocated an average of 11 percent of their government budget share, or about 2.5 percent of GDP in 1998/99.

In recent years, the per capita public spending on health has increased substantially. This increase has mainly favored investment in the public sector and to a lesser extent non-recurrent salary expenditure. Almost all of the development investment funds are contributed by the external donors, favoring hospitals at the expense of PHC. Consequently, the quality of services and the availability of primary and secondary care to the population remain poor. In recent years, steps have been taken to allocate more resources toward primary and secondary health care. Of the recurrent expenditure in 1998/99, 50 percent was allocated toward non-salary items, including medicines, operations, maintenance, and overseas treatment. Twenty-five percent of total recurrent expenditures was allocated to medicines and the other 25 percent was allocated for transport, maintenance, and miscellaneous. Within the PHC system, some essential recurrent costs (such as cost of transport) appear severely under-funded and the allocation to human resources has stalled over the last 10 years. The public sector health budgets for operations have also declined both in real terms and in terms of budget share over the years.

Although in recent years public sector health care resources have been re-allocated for drugs, little attention is given to resource needs for outreach services such as fuel, vehicle maintenance, and incentives/per diems for staff. The overall salary levels of Gambians in the public sector remain low, and little increase has been received since the mid-1990s. This is a critical area of concern as this affects the morale of workers and reduces their standard of living over time. Salaries represent a moderate proportion of the recurrent budget for the public sector in health (50 percent).

In the Gambia the public sector contributes toward a high proportion (74 percent) of the total health expenditures. This may be due, however, to underestimating the household spending on health: common in most countries in the SSA region. A large proportion of the countries' expenditures are contributed by the households. The Gambia health system relies heavily on the external partners. On a per capita basis, the public sector directly allocates about US\$5.40, and the external partners contribute another US\$3.30. The external partners have increased their contribution several fold over the past years, and recently, more has been received in the form of loans rather than grants. About 30 percent of the public sector health budget was allocated for capital investment in 1998/99, and almost all of which was contributed by the external partners. The Gambian government contributed almost half (46 percent), external partners contributed 28 percent, and households contributed 26 percent of the total health expenditure share in 1998/99. In recent years, external partners have increased their support for the health sector. A National Health Accounts (NHA) study may be undertaken to verify the public-private mix in health care financing. Finally, the lack of a financing mechanism, especially for the coverage of catastrophic illnesses, limits the access of the population to quality health services.

## Conclusion

Building on past strengths, the Gambia is equipped to face the challenges of reaching the MDGs. The Gambia still demonstrates high levels of reproductive and child ailments linked to poor nutritional status and communicable diseases that will need to be addressed for future progress. To respond to these problems the Gambia is not without assets. The government can count on a record of strong health programs with the priority of preventing and treating communicable diseases. The high immunization coverage for under-5 children and pregnant women is an indication of the effectiveness of priority public health programs. Tuberculosis treatments are up-to-date, malaria vector control programs exist, and iodine deficiency is being addressed through promotion of iodized salts. Demand for certain key maternal health services such as antenatal care has been high over the last years. The staffing norms of minor health centers have been revised to include an at-risk nurse midwife (midwives with additional obstetric skills) to increase access to maternal health services.

The current health system also has some notable strengths. The Ministry of Health has long emphasized the provision of appropriate, equitable, and accessible health care to the population. Community-based PHC programs are already a part of the Gambian health care system and some of the determinants of poor nutrition among children are being addressed through the Baby Friendly Community Initiative. Strengthening and expanding such programs are part of the Ministry's five-year plan. There is already a strong network of community workers who are trained and placed closer to their clients. The nurse/midwife cadre seem to have remained the backbone of the health care system despite changes at the top. Several facilities for higher education exist for nurses, midwives, and public health officers. The number of health workers has also

increased recently with the introduction of a school of medicine.

Reaching the Millennium Development Goals will require a renewed emphasis on changing household-level practices, a functional primary health care system, a referral system, and community-based approaches. After achieving a high immunization coverage rate, addressing other causes of childhood mortality—such as malnutrition, malaria, ARI and diarrhea—remains a challenge. Improvement will involve strengthening community-based approaches to modify household awareness and practices such as appropriate feeding practices, use of insecticide-treated bed nets, proper hand-washing behaviors, use of oral rehydration therapy for diarrhea, and prompt care seeking for certain illnesses. Much can be learned from the successful experiences with improving household behaviors within and outside Gambia. For example, Tanzania's social marketing program for insecticide-treated bed nets may provide important guidance to increase the bed net use in Gambia. Special efforts should be launched to increase the coverage and impact of the Baby Friendly Community Initiative on breastfeeding practices.

Reducing maternal mortality due to obstetrical conditions remains a challenge and will require alternative programmatic strategies especially concerning the poor transport facilities and shortage of qualified human resources in the remote rural areas. Since poor maternal nutrition (almost 73 percent of pregnant women are anemic) may contribute to some pregnancy complications, community-based nutrition programs should be instituted. Changing social norms and behavior toward birth-spacing and use of contraception may also contribute to reduction of maternal and child mortality. The data also suggest that there is an urgent need to improve the quality of services as maternal mortality remains high despite the fact that 90 percent of women make at least one antenatal visit. Standardized



service delivery protocols should be developed for each level of service delivery in both the public and private sectors.

To face these challenges, the government will have to elaborate strategies to respond to some key identified weaknesses in the functioning of the Gambian health sector. The first point of referral—the major health center—currently lacks resources and appropriate staff, hampering the delivery of appropriate emergency obstetrical care essential to cutting maternal mortality. Referral systems are to be given priority and significantly strengthened for appropriate and timely attention to emergency cases, particularly those needing obstetrical care. This will require developing appropriate mechanisms to ensure the availability of competent and trained staff 24 hours a day. New recruitment, incentives schemes, and/or contractual arrangements need to be urgently developed to ensure the presence of staff in referral centers.

There is also a need to allocate sufficient resources for the maintenance of the primary care infrastructure. Funds are required for the maintenance and operations of vehicles for outreach services, fundamental for the effectiveness of the PHC. The government's commitment is also required to develop and sustain good standards of services by training community health workers and traditional birth attendants and recruiting physicians and nurses with appropriate training for rural areas and for communicable health concerns. IEC programs are required to improve the access of the population to appropriate and timely knowledge, especially for the population at high risk, namely, the under-served. In addition, to effectively reduce both TFR and to halt the rise in prevalence of HIV/AIDS, efforts should be made to involve the youth to promote more responsible sexual behavior among their peers.

Some weaknesses in the financing system will also need to be addressed. A significant shift in resource allocation is needed to align

public financing flows with expressed priorities of the government. This will imply systematically allocating incremental funds—whether from external sources or from internal revenue through the debt relief process—to community-based, primary and secondary services. Addressing the major technical inefficiencies linked to providing OPD care through large hospitals will require significant political will. One way would be to refocus hospital activities on inpatient services and referral care, closing general OPD services. Another would be to develop pricing mechanisms that encourage use of primary centers and limit the use of large hospitals for OPD. Reallocation of personnel from hospitals to health centers, financial incentives to health personnel, and the development of contractual approaches are also among the options to be considered. The issue of recurrent drug shortages should also be addressed. Creating an independent central medical store that operates on a cash-and-carry basis could be an avenue worth exploring.

Capacity development will also be required to translate policy into plans, then to execute those plans, and to monitor and evaluate health programs with a readiness to make changes. Special attention would need to be given to decentralized units. The Divisional Health Teams need to be able to manage more of their resources if they are going to be more effective. There is currently limited data analysis and feedback provided to service providers and to program implementers. Critical data for decisionmaking regarding national health accounts, including private sector expenditures and unit cost information for facilities, are lacking. There is insufficient knowledge of financing sources, flows, and use of funds to make relevant decisions with regard to future financing strategies. In particular, little is known about household (private sector) contributions toward health, or about risk pooling institutions. Development of more systematic

data analysis will be necessary. It is highly recommended that the Gambia undertakes a national health accounts study, which can be conducted in collaboration with other household studies such as those generated from the Central Bureau of Statistics. The government needs to assess health care spending for the country, through private and public contributions, and to assess which segments of the population require public subsidies.

Health care spending, including public spending, is low overall by international standards, suggesting the need for the government to assess if it is adequately meeting the underlying health needs of the population. Pricing and exemption policies are required specifically regarding drug purchase, supply, and disbursement. Although much of the population uses the services of the private providers, little information is available about them and further investigation would be required to envision mechanisms of collaboration between the public and the private services.

Community-based programs would need to be increasingly developed and supported financially. A strategy that the government may want to support is the further development of community-based health outreach programs. The Gambia has initiated such programs in the

past decade, with a focus on MCH services. Overall, these community-based health programs have shown success in improving some indicators such as exclusive breastfeeding communities. However, the community-based programs need to be strengthened by building capacity at village level. Currently the government's involvement at the community level is limited, both financially and managerially because of the decentralization of the health ministry's decisionmaking regarding the health sector. The latter has often been associated with a disengagement of the government from community-based activities. Greater involvement is required on the part of the community, and further dissemination of information is required for the population at large, with particular emphasis on underprivileged areas. Finally, strengthening resource mobilization and capacity and integrating community-based activities remain major needs for the system.

An additional strategy is to seek assistance from NGOs, CBOs, and private providers, especially to access the population of the remote and underserved rural areas and to carry out behavioral changes. This could be achieved through collaborated efforts among the community, NGOs, and the private sector.

# Introduction

**A** new framework for action has been developed to enhance the impact of governmental actions and development assistance on poverty levels. This approach encourages countries to prepare poverty reduction strategies that serve as a basis for external assistance and debt relief. Country-specific Poverty Reduction Strategy Papers (PRSPs) have been based on wide consultations with civil and analytical work investigating the failures of programs to reach the poor and vulnerable. PRSPs should articulate a medium-term reform agenda and a corresponding expenditure framework and record specific progress and outcome indicators to guide implementation and assess results. Debt relief creates the opportunity for additional spending on the social sectors, including health.

Yet early experience with the SSA countries eligible for debt relief, heavily indebted poor countries (HIPC), has shown that the knowledge and analytical basis for making the case for health sector spending is often weak. This lack of a sufficiently developed analytical basis also jeopardizes the identification of appropriate investments and reforms that would improve the health of the poor.

In 2000 and 2001 the Gambia has engaged in the process of preparing its PRSP. This

process has led the government of Gambia to launch critical analytical and sector work to underpin its renewed strategies for poverty reduction. Building on years of sector reform and records of sustained progress on health outcomes, the health sector has been particularly engaged in this process, using this opportunity to deepen its understanding of health and poverty issues in the Gambia and revisit its strategies in light of the new poverty reduction framework. This document represents the product of this analysis and policy dialogue and sets the basis for action in a mid-term and long term vision for the health sector's development.

Since the Gambia PRSP covers the full range of poverty reduction strategies and policies for the country, sector-specific issues and related strategies and policies are only summarized in the document. This HNP country status report serves therefore to be a background reference for the PRSP itself and capture more comprehensively the understanding of current status and policies in the health sector. This status report also differs from other sector strategy reports by its poverty orientation. This reports aims at

- identifying key HNP issues for the poor in the Gambia;

**Table 1.1: Topics addressed in health, nutrition and population country status reports**

Health
Trends and equity in outcomes
Out-of-pocket expenditures
Household caring practices and health seeking behavior
Health sector performance: efficiency and equity
Macroeconomic context and public financing of health
Critical factors outside the health sector
Policy implications for sector development

- analyzing how the Gambian HNP sector is currently tackling these issues;
- assessing to what extent the health interventions and services have been reaching the poor;
- proposing key strategies to increase access to a basic package of key health services by the poor; and
- identifying key policy and strategy issues to be resolved in the short term in preparation and support for a long-term poverty reduction/health improvement approach.

The scope of this country status report will embrace the topics listed in Table 1.1.

The report is divided into seven sections:

1. The section on health outcomes aims at describing the recent status of the country in terms of health outcomes including basic health outcome indicators with comparisons of time series and of regional perspective as well as patterns of health outcomes in relation to poverty levels.
2. The section on household spending will describe the pattern of out-of pocket spending in relation to income and types of services used.
3. The section on household factors and behaviors will describe the household's knowledge of appropriate feeding of infants, their use of preventive health care, and basic services of curative care for child and maternal health care.
4. The section on HNP Sector Performance and poverty aims at assessing the performance of the health sector with a focus

on the impact on health status of the poor. Performance of the sector was analyzed using indicators of coverage with key health interventions (country wide and disaggregated by economic or geographic groups). In introducing the equity dimension into analyses of the health system, we broke down the dimensions of the supply of health services into four dimensions: geographical access, human resources availability, drug availability, production of services and continuity/quality. For each of these dimensions, we used both quantitative and qualitative data to help us understand where the gaps are in the health system's ability to effectively cover the poor, and generate good health outcomes.

5. The section on public expenditures describes the trends in public health spending, the share of recurrent versus capital expenditure in health, the contribution of donors to overall public health spending, and allocation of public health spending across different levels of the health care delivery system.
6. This section on factors outside the health sector describes the other sectors such as education, water, and sanitation whose performance may affect health outcomes.
7. This section on policy recommendations discusses the strengths and weaknesses of the current system and recommends areas to focus on.

This report used information gathered from interviews and databases maintained by the Ministry, such as the HIS, donors, household-based and facility-based surveys, and reports produced on the Gambia. Surveys referred to for this report include the Multi-cluster Child Household Survey (MICS) (2000); the National Household Poverty Survey (NHPS) (1998); the Maternal Mortality Study (1990, 2002); the Nutrition Survey (2000); the National Anthropometric Exit Survey (2000); the Household Education and Health Survey

(NEHS) (1993); the Contraceptive Prevalence Survey (CPS) (1990); the Health Infrastructure Mapping Survey (1999); the EPI Coverage Survey (2000); and the Population Census (1973, 1983, and 1993). Other reports consulted include the *Public Expenditure Report* (Government of the Gambia, 2001); the *Health Infrastructure Mapping Report* (1999); the

*Updating of the Situation of Children and Women in the Gambia* report (UNICEF, 2001). The *World Development Report* (World Bank), the *World Health Report* (WHO); and *Human Development Report* (UNDP) were consulted as annual reports. Data was also retrieved from websites maintained by the World Bank, WHO, UNICEF, and others.

# Health, Nutrition, and Population Outcomes in the Gambia

## Introduction

**T**hough the Gambia compares quite favorably with its neighboring countries in terms of health outcomes, it is still a long way from reducing its high child-malnutrition rate (20 percent stunting), and child mortality rate to reach MDGs in 2015. The rate of decline in child mortality has slowed down recently, and no significant improvement is observed in child malnutrition rates in the last decade. Besides the stagnating health outcomes, major inequities are observed according to geographical region and household wealth. Thus the health programs face major challenges in accelerating the improvement of different health outcomes with special focus on disadvantaged groups. This section provides an overview of health outcomes in the Gambia over time and in relation to international experience. It also discusses the disparities that can be found between regions and between socio-economic groups in the country.

Life expectancy in the Gambia increased modestly from 49 years in 1990 to 53 years (52 years for males and 55 years for females) in 1999. Though it is below the average of other low-income countries (59 years), it compares favorably with the SSA average (47 years). By

2020, life expectancy in the Gambia is projected to be merely 57 years (an increase of about 5 years from 2000), which Ghana achieved in 1999.

The Gambia has made some progress in improving health outcomes over the last few years. The Gambia's infant mortality rate and under-5 mortality rate are below average for the SSA region and slightly below the borderline of other countries with comparable income levels (refer to Table 2.1 and Figures 1.1–1.2). Achievements in terms of reductions in mortality and improved child health place the Gambia among the high performers of the West Africa region along with Ghana and Senegal. However, this experience is not shared equally within the country, as there are wide regional and urban/rural variations in child mortality and morbidity indicators. Within the Gambia, the lowest life expectancy was reported in the LRD and URD, the divisions with the highest proportion of the extremely poor. Substantial reductions in mortality are still needed to reach the levels of the other countries of similar incomes in other regions of the world (refer to Table 2.2).

The Gambia seems also to have done less well in regard to women's health. For reproductive health, the Gambia's indicators remain

**Table 2.1 Health and population indicators among selected SSA countries, 1999**

Country	Population (million) 1999	Population growth (percent) 1980–1999	Under 5 mortality rate (per 1,000 live births) 1999	Infant mortality rate (per 1,000 live births) 1999	HIV prevalence of all adults (percent) 1999	Life expectancy at birth (years) 1999	Reported MMR (per 100,000 live births) 1990–99	Adjusted MMR (per 100,000 live Births) 1995
The Gambia	1.3	3.5	110	92	1.95	53	1050*	1100
Burkina Faso	11.0	2.4	210	105	6.44	45	...	1400
Benin	6.1	3.0	145	87	2.45	53	500	880
Ghana	18.8	2.9	109	57	3.6	58	210	590
Mauritania	2.6	2.7	142	88	0.52	54	550	870
Nigeria	123.9	2.9	151	83	5.06	47	700	1100
Cote d'Ivoire	15.5	3.4	180	111	10.76	46	600	1200
Togo	4.6	2.9	143	77	5.98	49	480	980
Guinea-Bissau	1.2	2.1	235	139	2.6	44	910	910
Guinea-Conakry	7.3	2.6	167	96	2.54	46	670	1200
Mali	10.6	2.5	223	120	2.03	43	580	630
Sierra Leone	4.9	2.2	283	168	2.99	37	...	2100
Senegal	9.3	2.7	124	67	1.77	52	560	1200
SSA	643	2.8	161	99	8.38	47	...	...

Sources: WHO: *World Health Report 2000* and World Bank: *World Development Report 2001*.

\* The Maternal Mortality Study of 2001 in the Gambia reports MMR to be 703 per 100,000 live births.

comparable to the poor performers in sub-Saharan Africa and are generally among the other countries with comparable income levels (refer to Figure 1.3). Maternal mortality ratios are difficult to measure and the confidence interval of the measurement is usually quite broad, but there is evidence that it has declined over the years, though the rate of decline has been extremely slow. Wide variations are also evident among reproductive health indicators, suggesting inequity in health outcomes within the country.

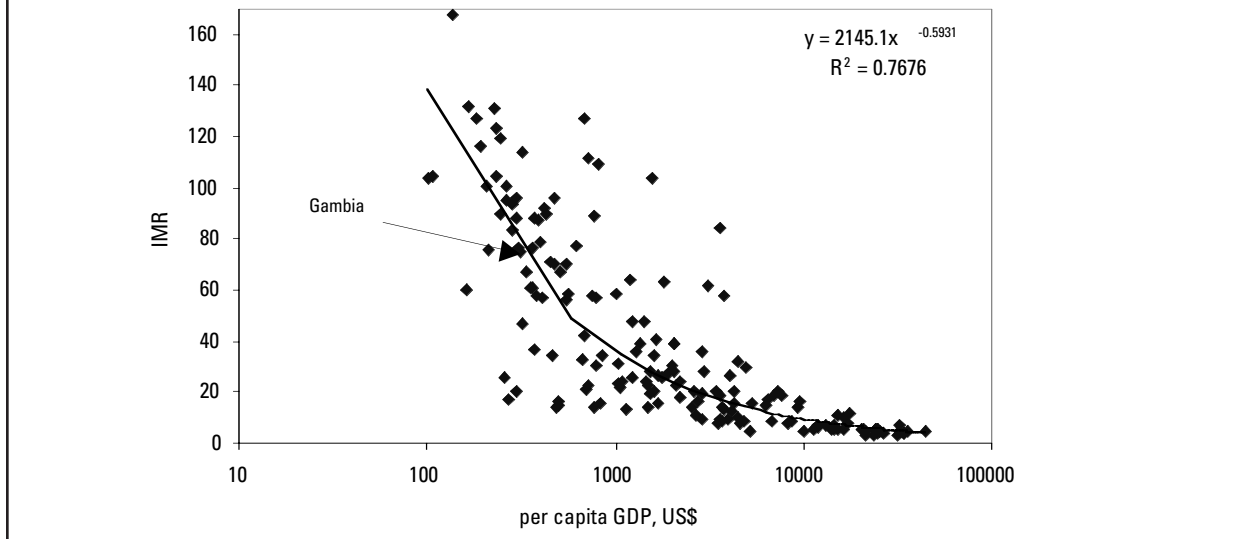
Another emerging health concern faced by the Gambia is the HIV/AIDS epidemic although the HIV prevalence is still very low, at around 2 percent of the adult population. The prevalence of HIV/AIDS in the SSA in 1999 was over 8 percent. Countries, such as Kenya, have shown drastic changes in population and health indicators due to HIV/AIDS: declines in the labor force age group, increases in the IMR, and declines in the life expectancy by as much as 15 percent in just one decade. Immediate attention is therefore required to

**Table 1.2: Projections of some key health indicators, 2000-2020**

Health Indicators	2000-05	2005-10	2010-15	2015-20
Life Expectancy at Birth (years)	53	53	55	57
Life Expectancy at 15 years	47	46	46	47
Total Fertility Rate (births per woman)	5.1	4.6	4.0	3.4
Infant Mortality Rate (per 1,000 live births)	70	63	54	45
Under-5 Mortality Rate (per 1,000 live births)	110	98	81	65
Adjusted Maternal Mortality Ratio per 100,000 live births (1995)	1,100			

Source: *World Development Indicators*, World Bank, 2002.

**Figure 1.1: The Gambia and global trends in infant mortality**



Source: World Development Indicators, World Bank, Washington, D.C., 2001

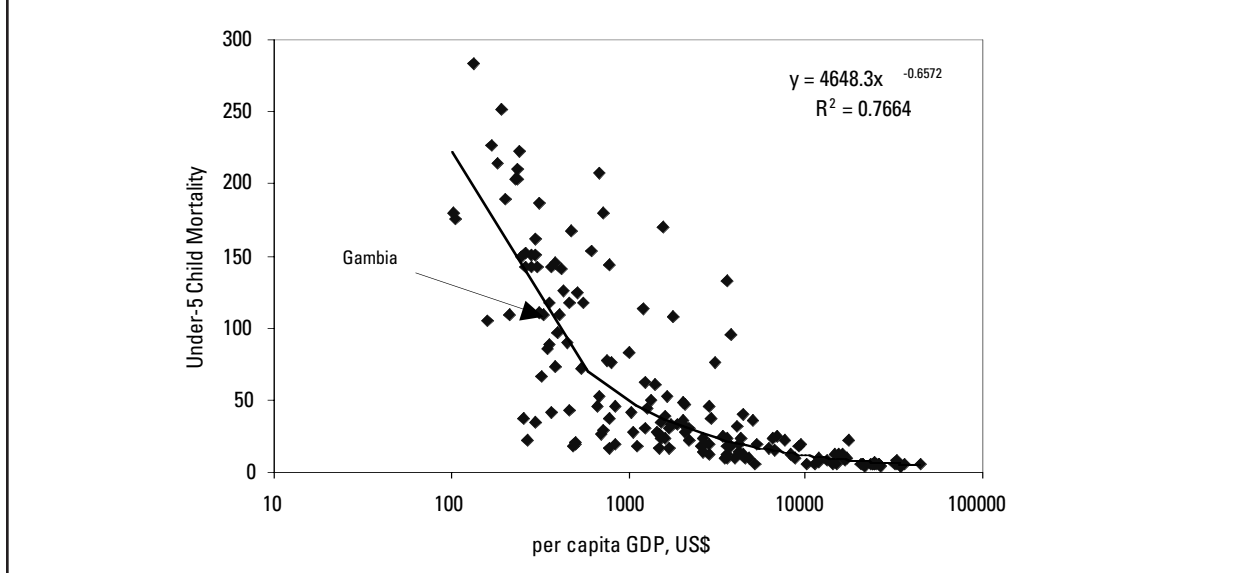
prevent the wide spread of such emerging diseases in the Gambia, and to avoid adverse repercussions on both child and adult health.

### Infant and under-5 mortality

Infant and under-5 mortality rates have steadily decreased over time but at a slower pace

during the last 10 years. The Gambia’s child health outcomes have steadily improved over the years, raising the regional performance status of the Gambia from “poor” to “very good.” The country’s IMR was one of the highest in the sub-Saharan Africa region in the 1980s, close to that of Guinea and Guinea-Bissau and about 1.7 times higher than Ghana (which has the lowest IMR in Table 2.1). But

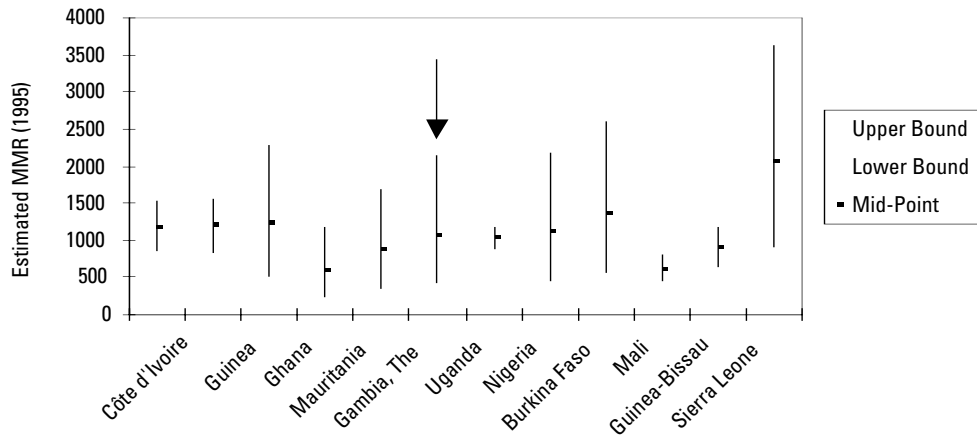
**Figure 1.2: Global trends in under-5 mortality**



Source: World Development Indicators, World Bank, Washington, D.C., 2001



**Figure 1.3: Estimated maternal mortality ratios for selected countries in the SSA, 1995**



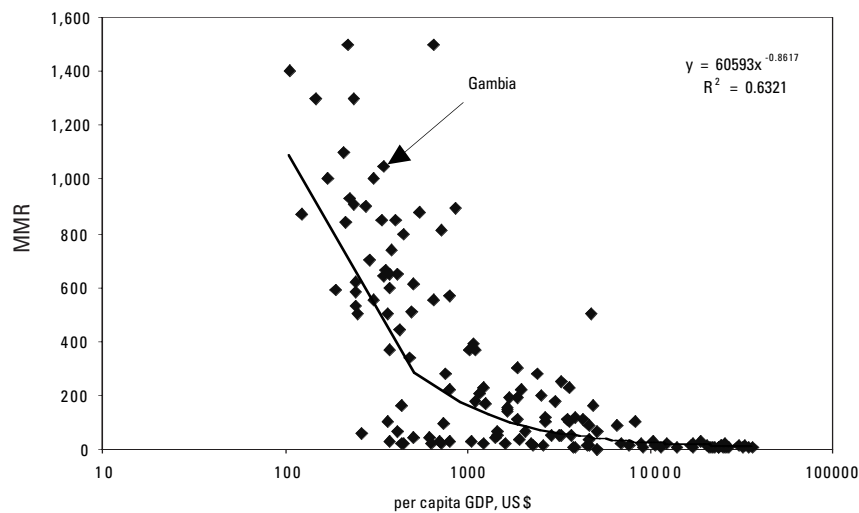
Source: Hill, Kenneth, Carla AbouZahr and Tessa Wardlaw, 2001. "Estimates of Maternal Mortality for 1995," *Bulletin of the World Health Organization*, 2001, 79 (3), World Health Organization.

Note: Upper bound refers to the higher uncertainty level of MMR, lower bound refers to the lower uncertainty level of MMR, and the mid-point refers to the point estimate of MMR. The countries have been presented by their GNI per capita in US\$, with Cote d'Ivoire as highest, and Sierra Leone as lowest.

when compared to the other countries in the region, the Gambia had the largest decline in IMR and U5MR between 1980–99. This trend was similar to the trend in neighboring Guinea and, by 1999, IMR in the Gambia had largely improved but still remained much higher than Ghana whose progress had also been steady.

(The Gambia is now at about 1.6 times Ghana level.) Overall, child mortality in the Gambia declined dramatically in the past 30 years, with a large fall in deaths due to lower incidence of immunizeable diseases<sup>4</sup> including measles. This decline has been recently slowing down however. Significant declines in IMR and

**Figure 1.4: Global trends in maternal mortality**



Source: *World Development Indicators*, World Bank, Washington, D.C., 2001

Note: Recent Maternal Mortality Study of 2001 in the Gambia reports MMR to be 703 per 100,000 live births. Even with the new data, the Gambia MMR lies above the average for the other countries with comparable income.

**Table 1.3: Infant mortality rate by selected countries in Sub-Saharan Africa between 1980–1999**

Country Name	Years		1980–99	Rank (1=lowest)		Relative to Ghana	
	1980	1999	% change	1980	1999	1980	1999
Gambia, The	159	92	42	7	3	1.7	1.6
Senegal	117	67	43	4	2	1.3	1.2
Ghana	94	57	39	1	1	1.0	1.0
Guinea	151	96	36	6	6	1.6	1.7
Mali	184	120	35	9	9	2.0	2.1
Mauritania	120	88	27	4	4	1.3	1.5
Guinea-Bissau	169	127	25	8	10	1.8	2.2
Benin	116	87	24	3	4	1.2	1.5
Togo	100	77	23	2	3	1.1	1.3
Burkina Faso	134	105	22	5	7	1.4	1.8
Nigeria	99	83	16	2	4	1.1	1.5
Sierra Leone	190	168	12	9	11	2.0	2.9
Cote d'Ivoire	108	111	–3	3	8	1.2	1.9

Source: *World Development Indicators*, World Bank, 2002

Note: Ghana had the lowest IMR in 1980 compared to the selected countries of SSA given in the Table. Therefore, Ghana was selected as the reference country.

U5MR were observed until 1990 (see Figure 2.1) but the trends show a less steep decrease during 1990–99 (see Figure 2.1). On the basis of this slowing current trend, the Gambia could encounter difficulties in reaching its MDG targets. Hence, further progress in decreasing IMR and U5MR will require not only sustaining the current progress by maintaining past efforts but also by developing innovative ways to effectively address the remaining causes of mortality (see Figure 2.1.2).

Whereas gains have been made in vaccinating preventable diseases and addressing causes of mortality among children 1–4, the remaining causes of child mortality will require different approaches both in terms of prevention and management of illnesses, focusing on causes of infant mortality. According to information available, the top five causes of child death are malaria (37 percent), upper respiratory tract infection/pneumonia (13 percent), premature and pre-term birth (9 percent), birth asphyxia (8 percent) and septicemia and neonatal sepsis (8 percent).<sup>5</sup> All are still preventable. Addressing malaria, respiratory infections, and neonatal complications should therefore be a priority toward reducing child

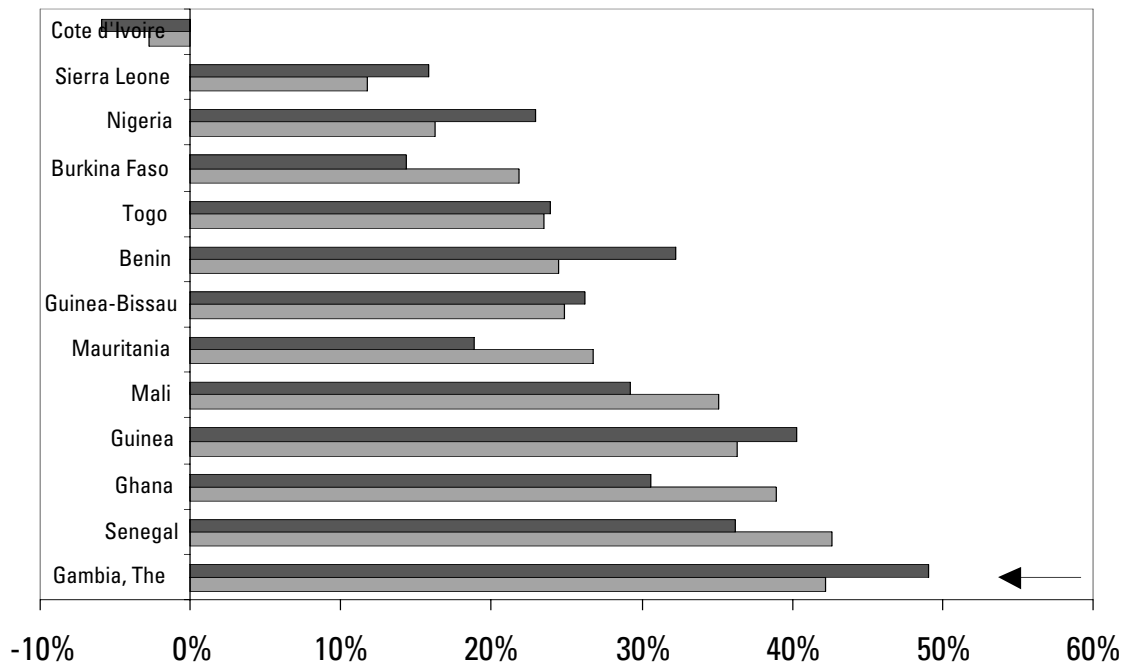
mortality and paving the way for health improvement in the next 10 years.

In order to grasp the current dynamic of child mortality in the Gambia, it is important to understand that the magnitude of decline in child mortality has not been consistent across the country. Relatively higher rates of infant mortality are reported in rural areas and in divisions with a larger proportion of the population living below poverty levels.<sup>6</sup> The divisions (NBD, LRD, CRD, and URD) that display the highest levels of poverty have an IMR that appear significantly higher (over 100), as shown in Table 1.3 and Figure 1.5.

## Child malnutrition

Although lower than in some countries in West Africa, child malnutrition remains a critical issue.<sup>8</sup> According to available information, child nutrition status in the Gambia has shown little change over the years. Comparative data are only available for 1996 and 2000, but the data suggest that child malnutrition remains high. Among newborns, 12 percent were low birth weight<sup>9</sup> in 2000.<sup>10</sup> Nineteen percent of children under 5 were stunted (low height for

**Figure 1.5: Change in infant and under-5 child mortality rate by selected countries of Sub-Saharan Africa, between 1980 and 1999 (percent)**



Source: *World Development Indicators*, World Bank, 2002

Notes: A positive change indicates a decline in mortality rate between 1980–99. A negative change as seen in Cote d'Ivoire indicates a rise in IMR and U-5MR between 1980–99. The top bar indicates under-5 mortality rate change, and the bottom bar indicates infant mortality rate change.

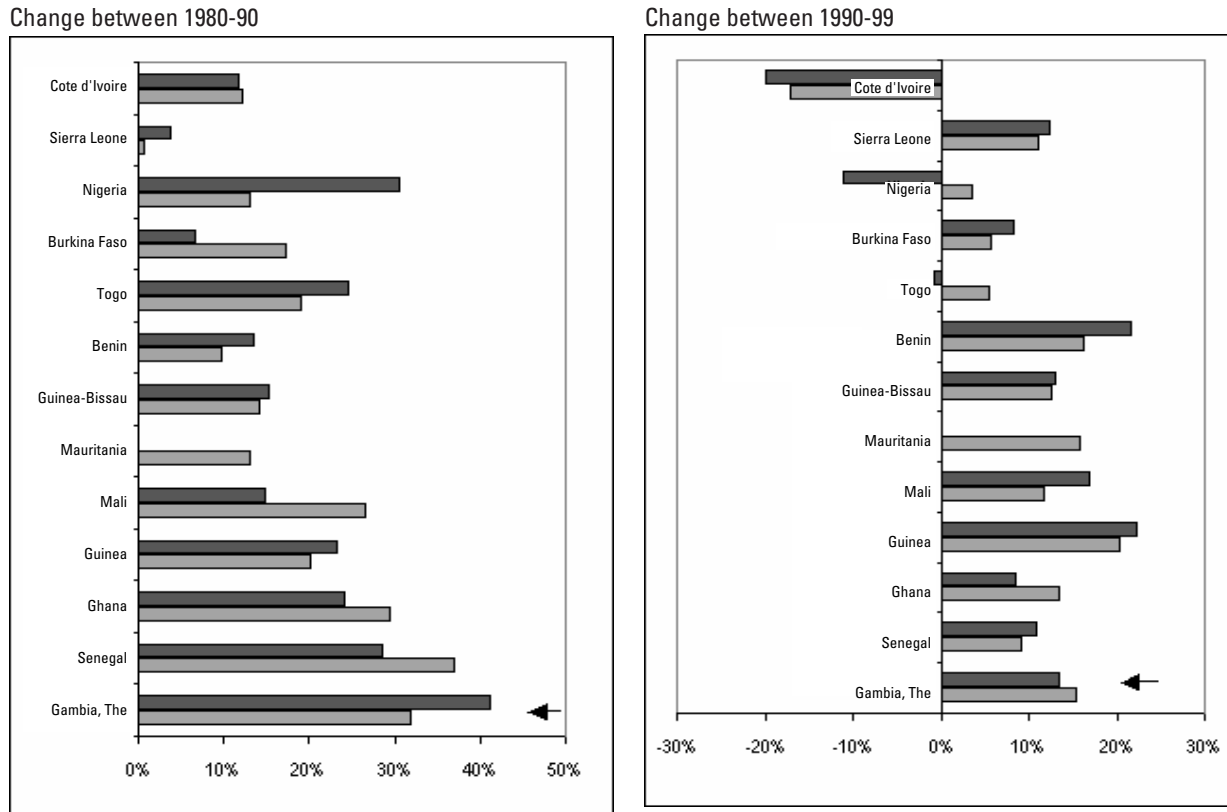
age) in 2000. Ten percent of children under 5 were wasted,<sup>11</sup> and 16 percent of children under 5 were reported as underweight. In comparison to neighboring countries, and to those of similar income status, Gambia is below average (see Figure 3.1). Although the decline has been slow and difficult to track, child nutrition status improved in the past decade. For example, the prevalence of stunted and underweight children under 5 may have declined between 1996 and 2000 from 23 to 19 percent and from 21 to 17 percent respectively. However prevalence of wasting remained at 8 percent between the two survey periods.

This improvement in child nutrition status was not equally distributed across regions and income groups, however. The lower income quintiles reported greater prevalence of low birth weight (15 percent) compared to the

higher income quintiles (11 percent). The CRD-North and the URD had the highest proportion of LBW in the country (over 20 percent). Food availability remains a problem. Although poverty levels have declined in the country since 1989, food shortage levels remained the same in the rural areas. The prevalence of stunting among children under 5 is significantly higher in rural areas (22 percent) than in urban areas (13 percent).<sup>12</sup> Gender differentials also existed in child stunting in favor of girls: 21 percent boys and 18 percent girls. The highest prevalence of wasting was seen among children between the ages of 6 to 23 months.

A strong correlation is seen between prevalence of stunting and wasting and regional poverty profile (see Figure 3.2). The CRD, with the highest proportion of extremely poor households in the country, had the highest

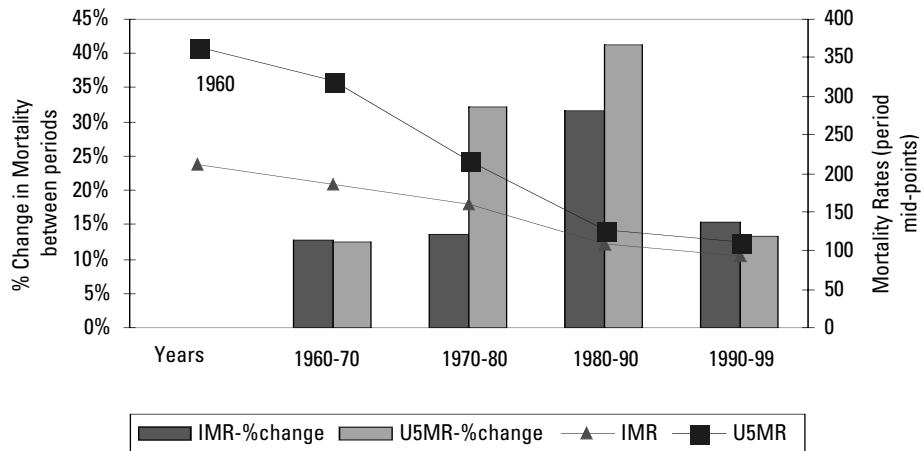
**Figures 1.6 and 1.7: Change in infant and under-5 child mortality rate by selected countries of Sub-Saharan Africa, between 1980–1990 and 1990–1999 (percent)**



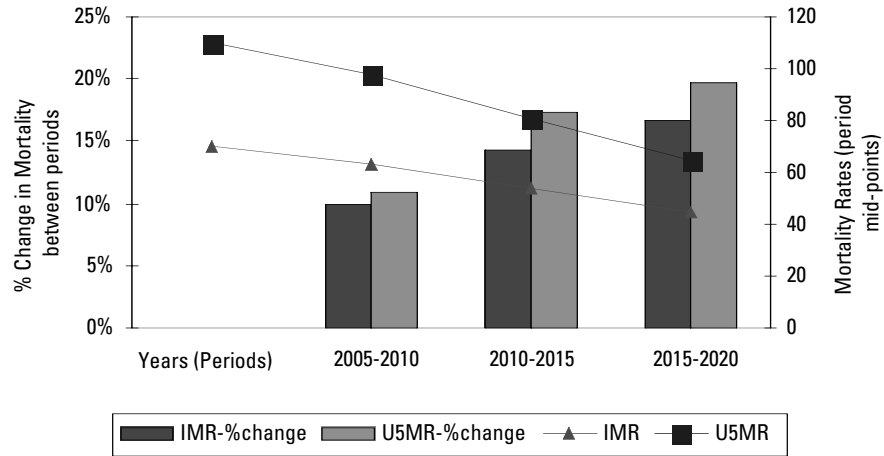
Source: World Development Indicators, World Bank, 2002

Notes: A positive change indicates a decline in mortality rate between the periods of analysis. A negative change as seen in Cote d'Ivoire indicates a rise in IMR and U-5MR between the period of analysis. The top bar indicates under-5 mortality rate change, and the bottom bar indicates infant mortality rate change.

**Figure 1.8: The Gambia, trends in infant and child mortality, 1970–1999**



Source: World Development Indicators, World Bank, 2002

**Figure 1.9: The Gambia, future projections of infant and child mortality, 2000–2020**


Source: World Development Indicators, World Bank, 2002

Note: Forecasts do not reflect the revised IMR of 92 per 1,000 live births for 1999.

prevalence of stunting and wasting.<sup>13</sup> Figure 3.3 substantiates this result through the relationship between divisional poverty and wasting.<sup>14</sup> An economic differential in the patterns of stunted and underweight children is also noted between households (see Figure 3.4). The lower income households, as compared to the relatively higher income households, reported the highest rates of stunting and wasting. Twice as many poor girls were likely to be severely stunted as non-poor girls.<sup>15</sup> Overall there appears to be a clear difference in nutri-

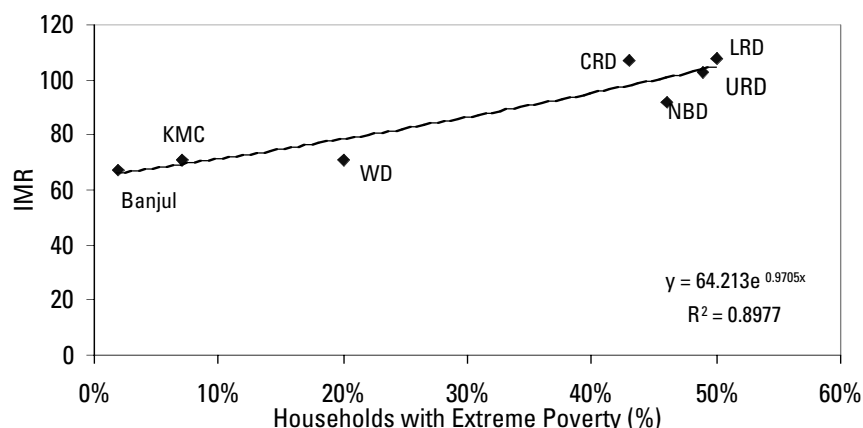
tional status between the 40 percent richest and the 60 percent poorest households. The mother's education had an inverse relationship with stunted and underweight children (see Figure 3.5). The higher the maternal education status, the lower the prevalence of child malnutrition. This, however, was not the situation for wasting, which exhibited a stronger relationship with the divisional characteristics (such as economic shocks) rather than with the household characteristics.<sup>16,17</sup>

**Table 1.4: The Gambia, divisional disparities<sup>7</sup> in child health indicators, 1993**

Administrative Division	Banjul	Western Kanifing	Western Brikama	LRD M'Konko	NBD Kerewan	CRD Kuntaur	CRD Jan'Bureh	URD Basse	Gambia
Per capita income (Current Dalasi, 1992)	7,106	5,150	2,346	?	2,097	1,950	2,070	1,817	2,989
Infant Mortality Rate	67	71	90	108	92	92	107	103	92
Ratio of Divisional IMR compared to Banjul	1.0	1.1	1.3	1.6	1.4	1.4	1.6	1.5	
Probability of child dying before age 2 years per 1,000	114	150	172	239	197	226	221	256	202

Sources: Population Census 1993, Secretariat of the National Population Commission; UNDP Human Development Report 1997. All data are for 1993 except income data, which is for 1992.

**Figure 1.10: The Gambia, household extreme poverty and IMR, 1993**



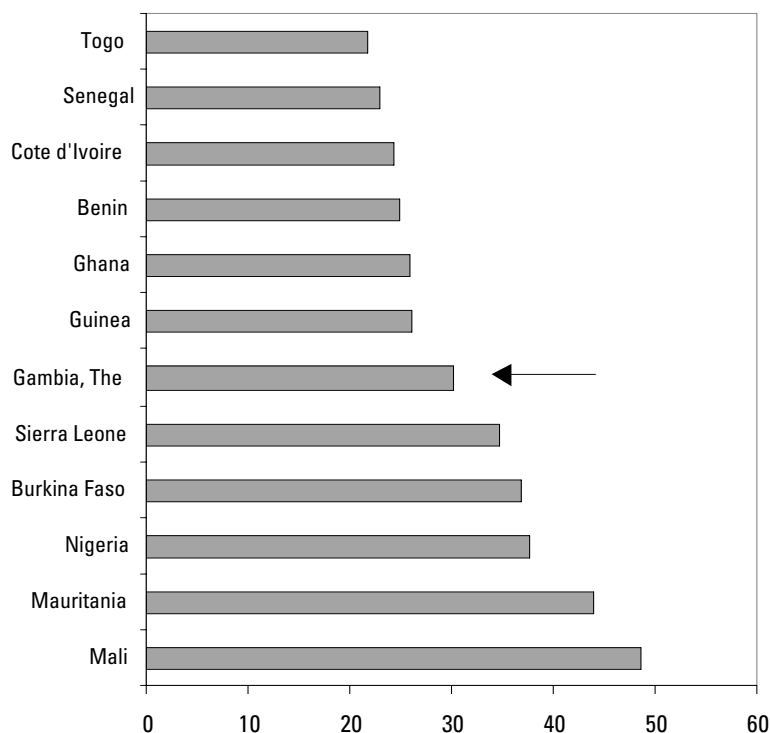
Sources: Population Census 1993, Secretariat of the National Population Commission; *UNDP Human Development Report 1997*. All data are for 1993 except income data, which is for 1992.

### Communicable diseases

Child illnesses are still dominated by communicable diseases. Communicable diseases

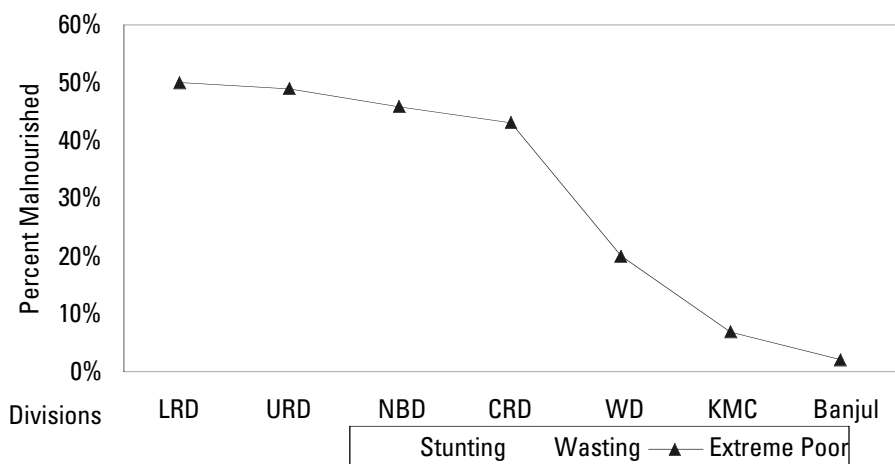
account for a high proportion of the illnesses in the Gambia, particularly among children. Trend data are not available on incidence of childhood illness, but recent household data

**Figure 3.1: The Gambia, stunting of children under 5 in selected countries in SSA, percent in 1999**



Source: *World Development Indicators*, World Bank, 2002  
 Note: Data are for the latest year between 1990–99.

**Figure 3.2: The Gambia, malnutrition status among children under 5 years by divisions**

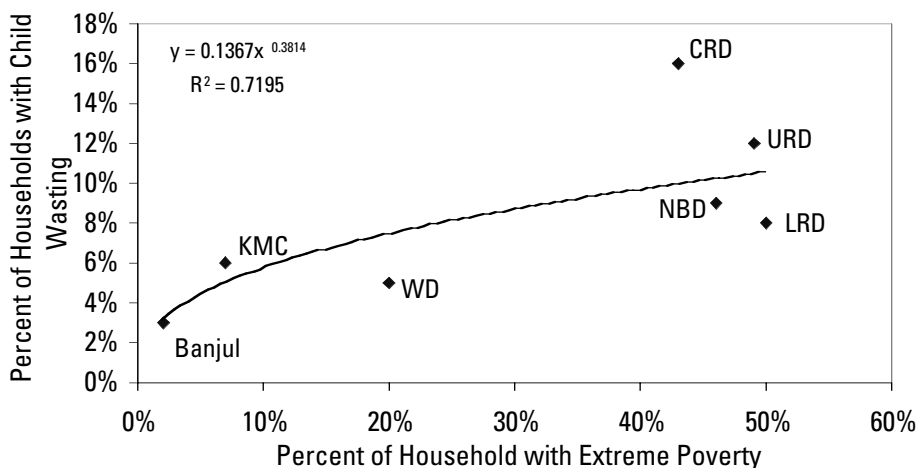


Sources: For nutrition status source is MICS, 2000; for poverty status source is Poverty Survey, 1998.

report a substantial proportion of children under five were sick with ARI (8 percent) diarrhea (22 percent), fever (15 percent), and other illnesses (47 percent) within the two weeks before the survey.<sup>18</sup> All these illnesses, especially diarrhea and ARI, were more likely to occur in households below poverty levels (see Table 3). The households with less-educated mothers

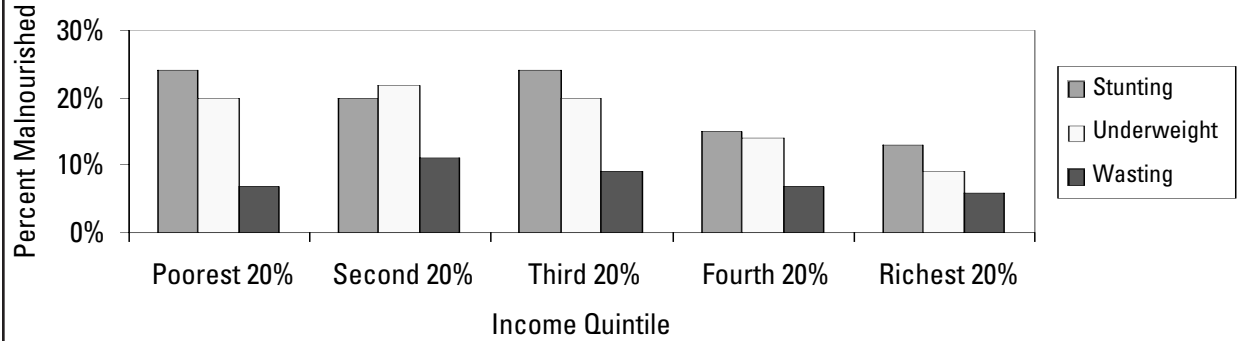
were more likely to report children sick with ARI, diarrhea, and other illness, but the prevalence of fever was not influenced by the education status of mothers (see Figure 4). Certain geographical areas had relatively higher prevalence of illness, especially among the CRD-North (for diarrhea), WD and LRD (for malaria), and NBD (for ARI).

**Figure 3.3: The Gambia, divisional poverty and wasting among children under 5 years**



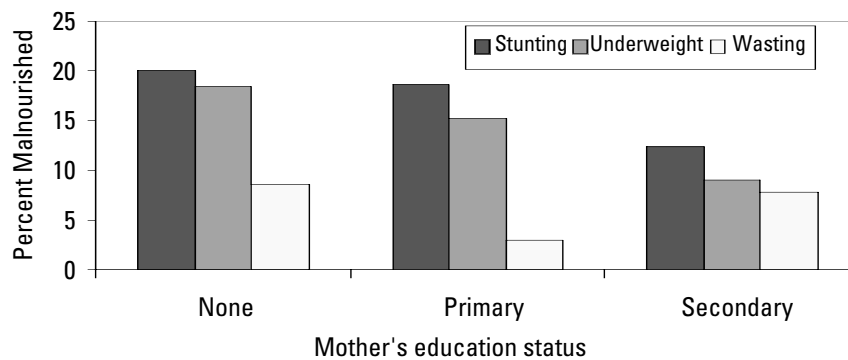
Sources: MICS, 2000 and Poverty Survey, 1998.

**Figure 3.4: The Gambia, malnutrition status among children under 5 years by household income quintile**



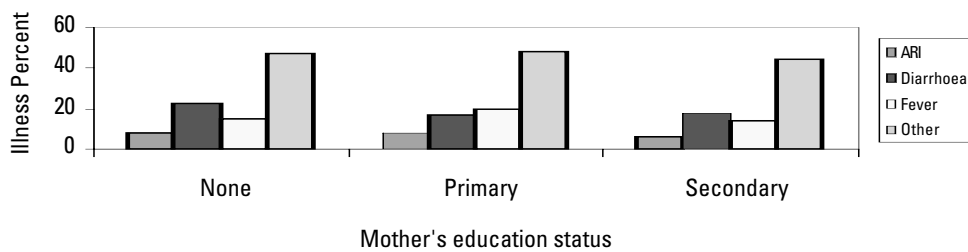
Source: MICS, 2000

**Figure 3.5: The Gambia, malnutrition among children under 5 years by mother's education status**



Source: MICS, 2000

**Figure 4: The Gambia, prevalence of illness among children under 5 years by mothers' education status**



Source: MICS, 2000



**Table 3: The Gambia, prevalence of illness among children under 5 years by household income quintile**

Household wealth status	Prevalence of illness among children under 5			
	Diarrhea	ARI	Fever	Other
<i>Income quintile:</i>				
Poorest 20%	23%	9%	16%	50%
Second	22%	8%	16%	45%
Third	25%	11%	13%	53%
Fourth	20%	6%	16%	44%
Richest 20%	16%	4%	13%	41%
National	22%	8%	15%	47%
<i>Ratio:</i>				
Rich-poor ratio	0.70	0.44	0.81	0.82
Poor-rich ratio	1.44	2.25	1.23	1.22
<i>Percentage difference in prevalence between lower income quintiles in comparison to richest quintile:</i>				
Poorest quintile more likely than richest	44%	125%	23%	22%
Second quintile more likely than richest	38%	100%	23%	10%
Third quintile more likely than richest	56%	175%	0%	29%
Fourth quintile more likely than richest	25%	50%	23%	7%

Source: MICS, 2000

**Table 4: The Gambia, reported maternal mortality ratio by region, 1990**

Location	Divisions	Maternal deaths per 100,000 live births
Rural/Urban	National	1050
	Rural	1170
	Urban (Banjul & Kombo)	600
	<i>Ratio of Rural to Urban</i>	<i>1.9</i>
Regional	Eastern Region	1340
	Western Region	1080
	Central Region	820
	<i>Ratio of Eastern to Central</i>	<i>1.6</i>
Access to PHC	Non-PHC villages	1600
	PHC villages	890
	<i>Ratio of Non-PHC village to PHC village</i>	<i>1.8</i>

Source: Maternal Mortality Study, 1990

Note: Eastern regions include LRD, CRD and URD, and western region includes NBD and WD.

## Maternal and reproductive health

Maternal and reproductive health issues remain a very high priority on the agenda. The Gambia's maternal mortality ratio remains high: in 1990, the MMR was reported as 1,050 per 100,000 live births (the adjusted rate was 1,110 per 100,000 live births in 1995). This was a significant reduction since 1983 when MMR was reported as 3,000 per 100,000 live births. More recently, the Maternal Mortality Study of 2002 reported MMR to be 703 per

100,000 live births suggesting potential improvement. However, large margins of error in computing this indicator make its validity difficult to assess.

Despite these likely improvements, the Gambia seems to still have a very high MMR, a level comparable to other West African countries (see Table 1.1 and Figure 1.3). The Gambia's MMR is relatively high among the other countries with comparable income levels, and these figures have been a cause of worry to policymakers for some time (see Figure 1.4).

Despite reported reductions at the national level, wide variations also exist in MMR throughout the country. The MMR in rural Gambia is estimated to be almost double that of the urban area and MMR in the Eastern division is significantly higher than the Central division (see Table 4). Areas with an easy access to PHC facilities reported a MMR half that of areas with little access to PHC facilities, suggesting that access to services impacts the reductions of MMR.

Most causes of maternal mortality in the Gambia are preventable. Among the top causes of maternal deaths are eclampsia (18 percent), sepsis (12 percent), ante-partum hemorrhage (10 percent), and post-partum hemorrhage (10 percent). Most of these causes can be addressed by providing adequate attention to high-risk cases, by improving MCH service access, and by appropriate and timely referral and treatment of obstetric complications.

Malnutrition is also affecting Gambian women to a large extent. A higher prevalence of malnutrition is found among rural women (20 percent) than among urban women (11 percent).<sup>19</sup> Anemia is also widely prevalent among pregnant and lactating women (73 percent of pregnant women and 56 percent of lactating women).<sup>20</sup> The anemia rate among pregnant women in the Gambia is comparable to most West African countries but is much higher than the other SSA countries (average of 45 percent), and other countries with comparable incomes (average of 69 percent). Other micronutrient deficiencies are also widespread: vitamin A deficiency, for example, was found among 34 percent of pregnant women.<sup>21</sup> Nutrition and health education programs can deal with this problem through anemia screening and prevention (including issuing iron and folate supplements) and provision of other food supplements.

Based on the current trends in maternal and reproductive health, the Gambia will encounter difficulties in reaching the maternal mortality target of the MDG. Renewed atten-

tion to these issues will require the government to strengthen its approach to address this issue: it must prioritize programs and allocate resources toward activities and services to improve the MMR.

## Population growth

The Gambia has initiated its demographic transition, but rapid population growth and high dependency will continue to affect household welfare. In June 2002, the Gambia had an estimated population of 1.4 million. Being the smallest country in continental Sub-Saharan Africa (SSA), this figure translates into a population density of 125 per square kilometer, about four and a half times the population density of SSA as a whole. The 1983–93 intercensal annual rate of population growth (obtained by comparing the data of the first two population censuses) was estimated at 4.2 percent. This rate, which is very high and led to a doubling of the population in 17 years, was caused by rapidly declining mortality and sustained high fertility but also in part by heavy immigration from neighboring countries. Despite a possible recent slowing of immigration movements into the Gambia and the onset of fertility decline after the 1993 Census, the rate of population growth remains high. Estimates have been revised and placed at around 3.5 percent per year, which would lead to a doubling of the population in less than 20 years. This estimate of 3.5 percent is based in part on an analysis of the age structure of the Gambian population from the 1993 Census. The 10–25 age group is very large (31 percent of the total population) compared to 22 percent in a typical SSA country. Moreover, data from the Polio National Immunization Days (NIDs) campaign (collected nationwide at the district level) also give some weight to this current estimate. Estimates of the population growth at 3.2 or even 3 percent made by the Central Statistical Department (CSD) are prob-

ably too low since they assume a zero migratory balance and a much sharper drop in fertility. However, the current annual rate of population growth will not be known with any degree of certainty until the data from the 2003 census become available.

Urbanization of the population is at 32 percent. The Gambian population is very young and this will be the major challenge to development since it will require important human capital investments in health, education, job creation, and social protection. Almost 48 percent of the population in 2000 was either under 15 (43 percent) or above 60 years (5 percent), although, by 2020 the proportion under 15 or above 60 is likely to decline to 43 percent (see Table 6.1, Figures 5.1 and 5.2). Moreover, the dependency ratio (i.e., the number of children below age 15 divided by the number of adults 15–64), which is estimated at .90, is not conducive to the rapid accumulation of savings at the household level in 2000. As a result of the slow declining fertility and the improving mortality rates and longevity, reduction in the total dependency ratio is not likely to be seen until 2015.

Clearly, a more rapid decline in fertility will be needed to facilitate the human capital investments both at the macro and micro (households) levels. Progress achieved with infant and childhood mortality (the infant mortality rate is estimated at 92 deaths per 1,000 live births) has helped trigger fertility decline. The total fertility rate is estimated at 5.4 children per woman, slightly above the average for the sub-Saharan Africa (5.3),<sup>22</sup> yet lower than in some countries of West Africa such as Mali, Burkina Faso, and Niger. Yet while the decline in TFR between 1980–99 has been about 20 percent on average in the SSA, the Gambia experienced a decline of only 15 percent, somewhat below that of the other comparable income countries in the region (see Figure 6). With the projected current rate of decline in total fertility (TFR is estimated to be 5.1 for 2000–05 and 3.4 for 2015–20), the

Gambia will not reach replacement level fertility until 2030. This slow decline in fertility can be associated with slow progress in areas such as legalizing the minimum age of marriage, promoting contraceptive use, providing access to family planning services, encouraging education of women, supporting women's labor force participation, and promoting breastfeeding (exclusive breastfeeding of babies under three months is still at only 36 percent).

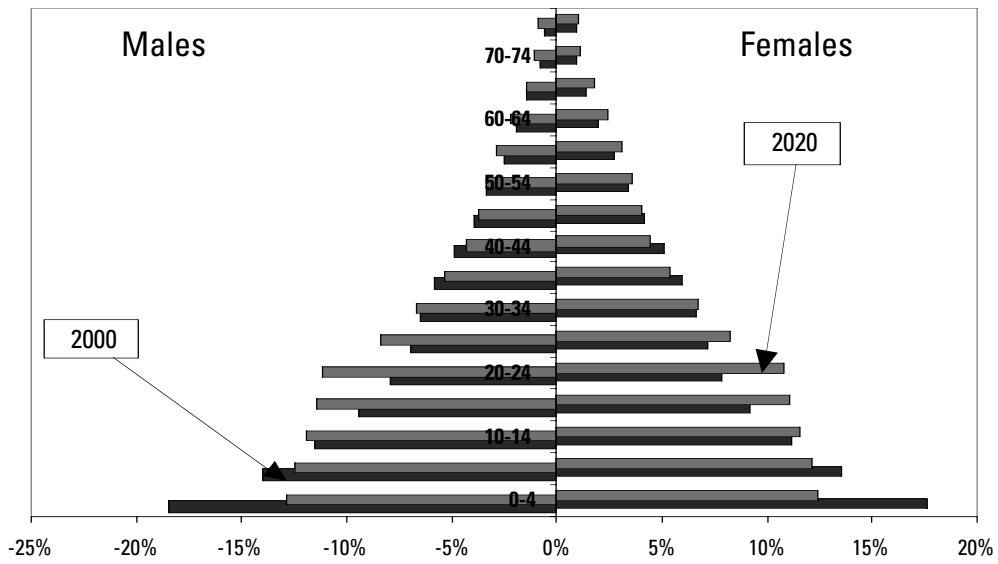
Within the Gambia, the highest levels of TFR are reported by the CRD and LRD, both having a relatively higher proportion of population living in poverty (see Table 6.2).<sup>23</sup> Fertility also remains significantly higher among the extremely poor households, with a TFR that was 1.6 times higher than the TFR of the non-poor households.<sup>24</sup> The national average household size is six nationally with six to seven household members in rural areas and four to five members in urban areas. At least 55 percent overall households (63 percent in rural, and 48 percent in urban areas) had a child who was under 5 years old.

Figures 7.1 to 7.3 show the historical changes (1980 to 1999) in some of the determinants of population control and their relationship to the total fertility rate in the Gambia. In Figure 7.1, the historical trend line shows that as survival of infants increased, fewer children were born. Figure 7.2 shows an inverse relationship between female literacy and fertility. Figure 7.3 shows that urbanization and modernization had a similar effect with a very strong inverse relationship between urbanization and fertility levels.

### **Other health issues: AIDS and TB**

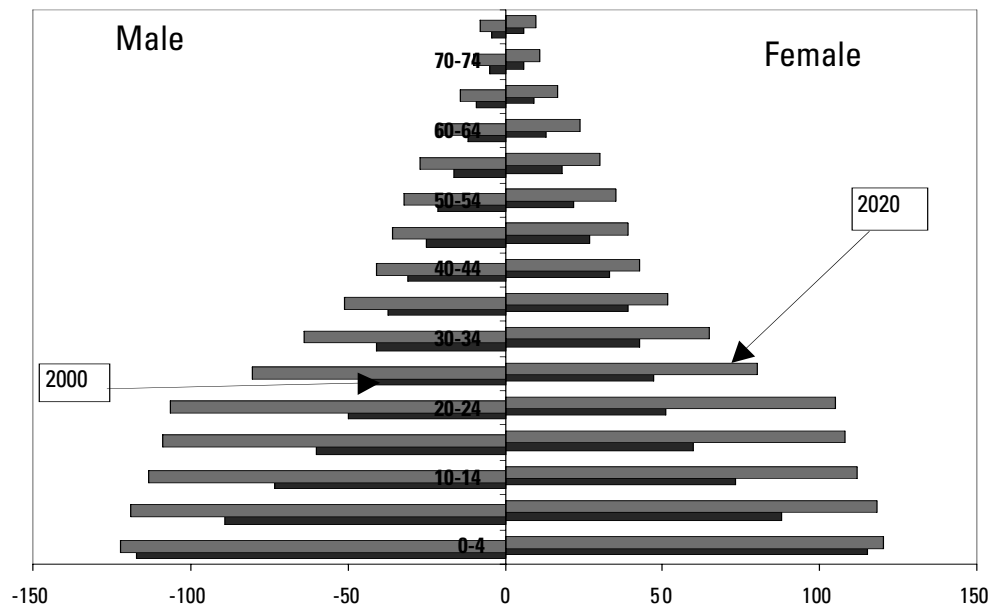
Adult mortality has been on the decline with female mortality decreasing from 432 per thousand in 1990 to 349 per 1,000 in 1999 (or by 19 percent over the past decade), and male mortality decreasing from 530 per 1,000 in 1990 to 411 per 1,000 in 1999 (or by 22 per-

**Figure 5.1: The Gambia, population pyramid for 2000 and 2020 (percent)**



Source: World Development Indicators, World Bank, 2002.

**Figure 5.2: The Gambia, population pyramid for 2000 and 2020 (000s)**



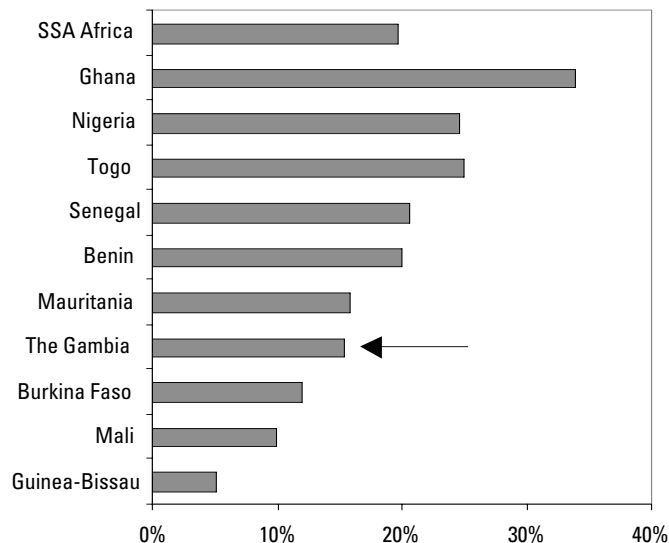
Source: World Development Indicators, World Bank, 2002.

**Table 6.1: The Gambia, demographic indicators estimated for 2000 to 2020**

Demographic indicators	2000	2005	2010	2015	2020
Population (000s)	1,286	1,451	1,608	1,769	1,924
Population change since 2000 (%)		13	25	38	50
Urban (%)	32				
Population by age groups					
# Children under 5 years	232	232	234	242	242
%	18%	16%	15%	14%	13%
# Youth under 15 years	555	631	679	691	704
%	43%	43%	42%	39%	37%
# Women of childbearing age (15-49)	300	334	376	436	492
%	23%	23%	23%	25%	26%
# Labor force participation (15-60)	665	744	843	979	1103
%	52%	51%	52%	55%	57%
# Elderly above 60 years	64	76	86	100	115
%	5%	5%	5%	6%	6%
Dependency Ratio (%)					
Total (under 15 and over 60 years)	93	95	91	81	74
Youth only (under 15 years)	83	85	81	71	64
Elderly only (over 60 years)	10	10	10	10	10
Elderly as % of total dependents	10%	11%	11%	13%	14%
<b>Demographic indicators</b>	<b>2000-05</b>	<b>2005-10</b>	<b>2010-15</b>	<b>2015-20</b>	
Population growth rate (%) <sup>a</sup>	2.4	2.1	1.9	1.7	
Crude birth rate (per 1,000 population)	37	33	31	28	
Crude death rate (per 1,000 population)	13	13	12	11	
Total fertility rate (births per woman)	5.1	4.6	4.0	3.4	

Source: World Development Indicators, World Bank, 2002

a. Population growth rates are estimated without making any assumptions for changes in proportions of expatriates living in the country. All rates are estimated for five-year periods, e.g., 2000–05 and so forth. "Adjusted" refers to the methodology developed by WHO/UNICEF to correct for underestimates (for a variety of reasons) of survey-based, vital registration-based, or administrative records derived MMRs (maternal mortality ratio is predicted number of maternal deaths divided by number of live births). Maternal mortality is usually defined as death occurring while the woman is pregnant or within forty-two days of termination of pregnancy, WHO. (UN estimates, 1995).

**Figure 6: Change in total fertility rate by selected countries in Sub-Saharan Africa between 1980 and 1999 (percent)**

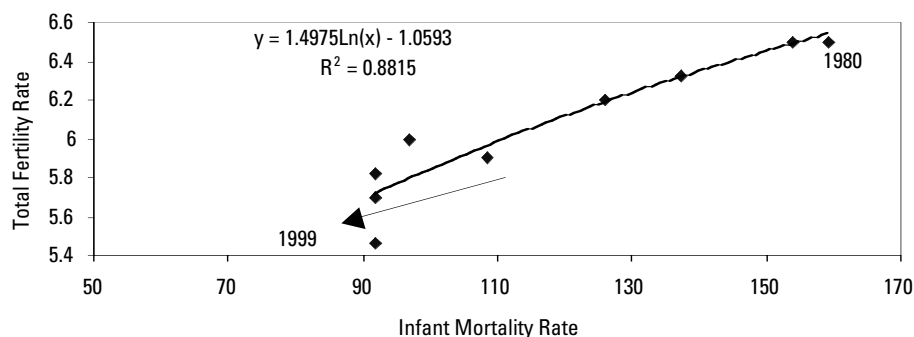
Source: World Development Indicators, World Bank, 2002.

**Table 6.2: The Gambia, divisional disparities in population indicators, 1993**

Administrative Division	Banjul	Western Kanifing	Western Brikama	LRD M'Konko	NBD Kerewan	CRD Kuntaur	CRD Jan'Bureh	URD Basse	Gambia
Population 1993 <sup>1</sup>	42,326	228,214	234,917	65,146	156,462	67,774	88,247	155,059	1,038,145
Annual Pop. Growth Rate (%) <sup>1</sup>	10.4	8.4	5.5	1.7	3.4	1.6	2.6	3.4	4.2
Life expectancy <sup>2</sup>	58	54	50	45	48	47	46	45	52
Crude Birth Rate <sup>1</sup>	44	47	47	50	52	56	51	56	51
Total Fertility Rate <sup>1</sup>	4.6	4.7	5.9	7.0	6.8	7.3	6.5	6.6	6.0

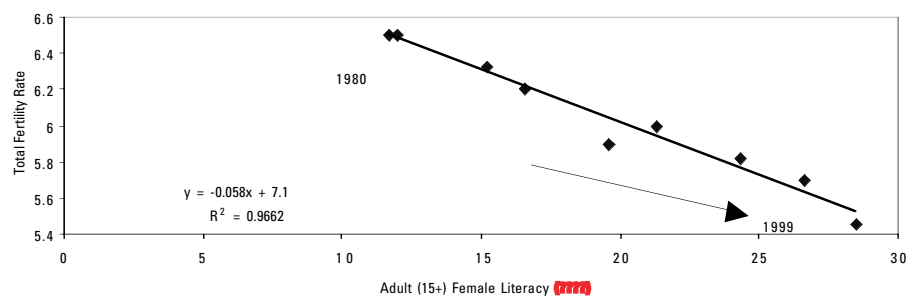
Sources: (1) Population Census 1993, Secretariat of the National Population Commission; (2) UNDP *Human Development Report* 1997. All data is for 1993 except income data, which is for 1992.

**Figure 7.1: The Gambia, relationship between infant mortality rate and total fertility rate for 1980 to 1999**

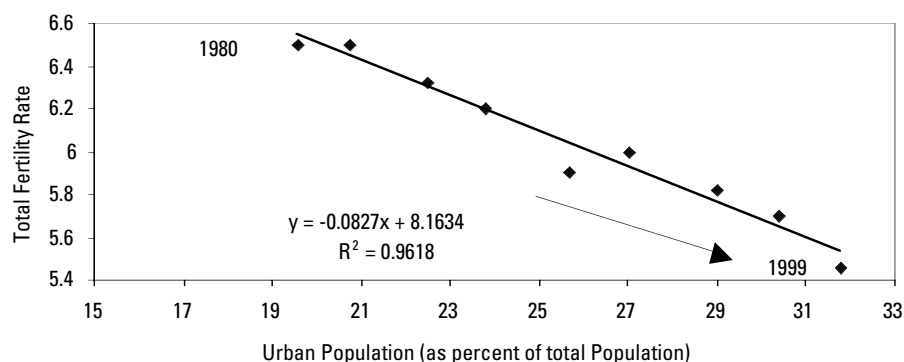


Source: *World Development Indicators*, World Bank, 2002.

**Figure 7.2: The Gambia, relationship between adult female literacy and total fertility rate for 1980 and 1999**



Source: *World Development Indicators*, World Bank, 2002.

**Figure 7.3: The Gambia, relationship between urbanization and total fertility rate for 1980 and 1999**

Source: World Development Indicators, World Bank, 2002.

cent over the past decade). Data on the specific causes of adult mortality are not available overall, but there are indications that certain diseases dominate the public health agenda.

One of the primary concerns among adult health is the growth of HIV/AIDS, especially among vulnerable populations including women of reproductive age. The first case of HIV was diagnosed in the country in 1986. Since then, the epidemic has followed a slow but steady increase. A rapid and dangerous shift has also occurred from HIV-2 to HIV-1, the strain of the virus that is more pathogenic and infectious. Currently, the national prevalence among pregnant women (a proxy for the adults in the age group 15–49) is estimated at 1.2 percent for HIV-1 and 0.9 percent for HIV-2. However, these national figures mask important regional disparities: the regions of Sibanor and Basse are currently the most infected in the country, with HIV-1 prevalence rates of 3 percent and 1.3 percent, respectively. In recent years the Gambia reports an increasing growth in HIV/AIDS among the vulnerable groups. Sexual tourism and heavy migratory movements also do fuel the epidemic.

Wide gender disparities existed as the prevalence of infected adult women was 2.2 percent, as compared to 0.9 percent among the adult men. Although, the rates are much below that reported in SSA, this is still a matter of concern

as rapid expansion of HIV/AIDS could reverse health achievements in the Gambia. Neighboring Senegal reports an HIV/AIDS prevalence of about 1.77 percent in 1999, but other countries in West Africa such as Cote d'Ivoire (9 percent) or Burkina Faso (7 percent) are already facing a generalized epidemic.

The emerging HIV/AIDS epidemic is a major threat that could soon unravel all achievements in the health sector as well as in the other development sectors in the Gambia. Despite the Gambian government's policy shift in November 2001 when President A. J. J. Jammeh officially acknowledged the serious threat posed by the HIV/AIDS epidemic, many quarters of the Gambian society are still in denial of the epidemic: the majority of Gambians do not feel threatened and/or believe the infection is brought in mainly by foreigners. In addition, most Gambians experience tremendous difficulties to personally confront the disease and consequently advance from awareness and knowledge about HIV to voluntary testing and behavior change. In fact, the epidemic continues to spread rapidly in some regions (for example, a five-fold rise in the HIV-1 prevalence occurred in Sibanor between May 2000 and August 2001). Consequently, the devastation and suffering caused by the virus will soon become severe at the household level (as already demonstrated by evidence gathered on the ground).

The first interventions to stem the HIV/AIDS epidemic in the Gambia were limited and mostly conducted on a pilot basis. Thereafter the Gambia embarked on a much larger and ambitious program, namely the HIV/AIDS Rapid Response Project (HARRP) adopted in 2001 and funded by the World Bank. This intervention is predicated on a multi-sectoral response to the epidemic as well as a very large-scale mobilization of the civil society, the NGOs, and communities. The finalization of the National HIV/AIDS Strategic Plan should also facilitate the organization of an overall coordinated response to stem the epidemic.

At this juncture the utmost priorities in the fight against HIV/AIDS appear to be as follows: (a) a rapid and massive intervention among the high HIV transmitter groups, such as commercial sex workers (CSWs) (good progress has already been made on CSW intervention), truck drivers, and other vulnerable groups; (b) the rapid launching of a social marketing program for male condoms (currently being addressed through the World Bank-funded health project); (c) the control of sexually transmitted infections (STIs) through syndromic management algorithms (adopted by the government of the Gambia); and (d) the management of HIV cases for which guidelines were also recently adopted by the government.

Overall, and more importantly, interventions will also be required to bring the Gambians to confront the epidemic at the individual level to trigger the needed shift from awareness to behavior change. The latter will be facilitated *inter alia* by the promotion of voluntary counseling and testing (VCT), increased promotion and use of condoms, and expanded IEC and behavior communication for change (BCC) campaigns. All these interventions will also need to be strictly monitored and evaluated in order to measure outcomes and make programs more targeted and efficient.

The Gambia reported much higher incidence of TB than that reported by several other countries in the region. Detection has remained

almost stable since 1989, at 115 per 100,000 population and, although a decline was observed in the early 1990s, the rate has once again increased and reached 118 per 100,000 population. Smear positive cases however, declined from 80 to 65 per 100,000 population by 2000. Of the total new cases, 55 percent were reported as smear positive in 2000, compared to 70 percent in 1989. Treatment success was reported as 80 percent, and the DOTS detection was reported as 75 percent in 1990–97. Most resources for the TB program in the Gambia are contributed by external partners. TB drugs are offered at no cost to the public.

Malaria remains an endemic problem in the Gambia and has been reported by hospitals as the leading cause of mortality among children and adults. Malaria control programs have been established, although the population's use of those services is limited, especially in the LRD division. Service-related data suggest a slow decline in malaria-related morbidity and mortality over the years, but it is difficult to say whether these data reflect a real trend or just a change in patterns of service utilization and reporting systems.

Meningococcal meningitis morbidity is a new concern in the country. Although the morbidity pattern has been declining over the years, case fatality is rising (from 10 percent in 1983 to 14 percent in 2000).

Other important nutritional problems are also of concern. The prevalence of goiters is about 16 percent, rating the country at mild to moderate levels. There is also some indication of over-nutrition starting to become a problem among women in the Gambia. According to the National Nutrition Policy (1999), diet-related noncommunicable diseases such as diabetes, hypertension, and obesity are increasing, especially among the urban population. This study also found that 16 percent of urban women were obese compared to only 1 percent of rural women. These findings are indicative of the changing dietary habits and lifestyle among the urban population.<sup>25</sup>



## Household Spending and Community Factors

### Household spending

The total household expenditure per health consultation in a public facility is almost one fourth of that in a private facility (US\$0.50 versus US\$2). However, Gambian households spend significantly higher amounts of money when visiting traditional healers (US\$4). The average annual household expenditure varies from US\$2.50 in the NBD to US\$15.4 in the KMC divisions, with an average of US\$8.16. The household health expenditure is a much higher proportion of total household expenditure in the low income households (5–6 percent) than in the higher income households (2 percent). Further research is required to understand the sources of funding at the household level.

Information on geographical variation of household health expenditure is quite limited in the Gambia. The data presented in this section come from the 1998 National Household Poverty Survey. However, no time-series data are available to assess the time-trends in household spending. Table 5.1 shows that on average, Gambian households spent about 9 dalasi (US\$0.50) per health consultation (includes fees, drugs, and transport) in the public sector, 35 dalasi (US\$2) per consultation in the private

sector, and about 70 dalasi (US\$4) per consultation in the traditional “marabout” healers. Variations in household economic status did not correspondingly show variation in household fees paid for consultation at the public health facilities. Among the private service users, however, the relatively poorer households spent about half of what was spent by the non-poor households. For the “marabout,” the extremely poor households spent about two-thirds of what the non-poor households spent. Interestingly, the “other poor” households spent almost five times more than what the non-poor households spent.

Households in the LRD, the division with the largest proportion of households considered extremely poor, spent on average the lowest amount per capita on health in the country (8 dalasi [US\$0.50]). In this division the largest amounts were spent on traditional medicine, followed by public hospitals. Among the divisions with at least 40 percent households living in extreme poverty (LRD, URD, NBD, and CRD), per capita annual household spending on health was an average of 16 dalasi (US\$1), as compared to the other three areas (Banjul, KMC, and WD), which had a per capita annual household spending on health of about 39 dalasi (US\$2) (see Table 5.2 for annual per

**Table 5.1: The Gambia, average household expenditure on health consultation by economic status and health care provider, dalasi in 1998**

Health Provider	Extremely Poor	Poor	Non-Poor	Average	Ratio of Extremely Poor /Non-Poor
Public	9	10	10	9	0.9
Private	23	23	54	35	0.4
Traditional "marabout" healers	28	192*	40	70	0.7
Average in dalasi	11	17	45	15	0.2
In US\$	0.62	0.96	2.53	0.84	...

Source: 1998 National Household Poverty Survey Report.

Note: Household health expenditures include doctor fees, drug charges, and cost of transportation.

**Table 5.2: The Gambia, annual per capita household health expenditure by type of health facility visited, division, and dalasi in 1998**

Health provider	Banjul	KMC	WD	CRD	NBD	URD	LRD	The Gambia
Healthcenters	17	34	11	8	11	9	6	16
Private clinics	47	94	29	10	30	29	8	54
Public hospital	23	16	17	17	34	39	13	21
Private hospital	18	372	32	4	38	11	5	168
"Marabout"	175	74	22	14	32	17	7	30
Traditional medicine	90	108	10	19	20	26	19	36
Other health personnel	...	108	12	...	1	7	...	26
Average								
Dalasi	40	62	15	13	21	21	8	30
US\$	2.25	3.49	0.84	0.73	1.18	1.18	0.45	1.69

Source: 1998 National Household Poverty Survey Report, Government of The Gambia.

Exchange rate in 2002 was 1US\$=17.775 dalasi.

Note: "Other health personnel" include operators of pharmacies and drug stores.

**Table 5.3: The Gambia, average annual household health expenditure by type of health facility visited and by division, dalasi in 1998**

Health provider	Banjul	KMC	WD	CRD	NBD	URD	LRD	The Gambia	
								Dalasi	US\$
Health centers	66	160	83	55	78	58	26	92	5.18
Private clinics	204	371	115	49	126	121	28	218	12.26
Public hospital	96	69	89	107	166	224	84	109	6.13
Private hospital	167	1884	130	17	162	59	35	843	47.43
"Marabout"	218	368	156	113	167	73	43	141	7.93
Traditional medicine	196	352	69	111	168	68	102	141	7.93
Other health personnel	...	453	39	...	6	51	...	120	6.75
Average									
Dalasi	114	273	92	118	45	84	103	145	
US\$	6.41	15.36	5.18	6.64	2.53	4.73	5.79	8.16	

Source: 1998 National Household Poverty Survey Report, Government of the Gambia.

Exchange rate in 2002 are US\$1=17.775 Dalasi.

Note: "Other health personnel" include operators of pharmacies and drug stores.

capita household health expenditure, and Table 5.3 for annual total household health expenditures by type of health facility and by division).

On average, a given household in the Gambia spent 145 dalasi (US\$8) for annual health expenditure in 1998. This ranged between 45 dalasi among the households in the NBD to 273 dalasi among the households in the KMC-urban division. This represents on average 5 percent of their household expenditures toward health. (Given that the annual GNI per capita for the Gambia is US\$330 (or PPP\$1,550), household spending on health is about average of what is reported in the literature.)

This proportion is variable between regions and between households however; household spending for health ranges between about 2 percent of total household expenditure in most divisions to 5–6 percent in the poorer CRD and URD. Some households are paying as high as 224 dalasi annually for health expenditures or about 12 percent of household expenditure. This higher share of income spent on health by poorer households should be an issue for policymakers.

Additional in-depth assessment will certainly be required to better understand household spending on health and to identify the vulnerable groups that fall into dire poverty or illness due to this heavy cost burden for health. This information will be essential for government policies on pricing and subsidies. Several households, especially those belonging to the poor quintile, live in rural areas as farmers. The seasonal nature of farming, the higher prevalence of endemic diseases in the rural areas, and the poor access to quality health care (due to distance and low affordability) result in households not using health services in the early stages of illness. Eventually these households incur a higher health care cost and whilst facing poorer health, their learning, productivity, and earnings suffer consequently.

Limited information is available on the vulnerability pockets, the characteristics of the households that face high health expenditures, and the means (formal and informal) through which they are able to cover these health expenditures. In addition, the study was unable to assess which segments of the population cannot afford services and therefore fall into further poverty and dire illness. This is a priority area for future analytical work.

## Household and community

Positive household behaviors—use of treated bed nets, appropriate child weaning practices, appropriate hygienic practices, practice of safe sex—have the potential to profoundly improve health outcomes. Appropriated health programs should be instituted to promote these household behaviors, especially among poor and disadvantaged groups. Several community-based programs have been developed in the Gambia over the last few years with some evident level of success in improving household behaviors.

This section explores how Gambian household behavior may contribute to low child health and nutrition status, as well as the poor reproductive health outcomes. Given the large percentage of mortality attributable to malaria, ARI, and malnutrition, household practices in treating these ailments are key indicators of what is required to produce better health outcomes. These include nutritional behaviors, preventive behaviors (such as use of bed nets), and illness treatment behaviors (of symptoms such as fever, cough, and diarrhea). The data in this section show also how the behaviors of households vary widely depending on economic, social, and geographical characteristics. Further progress in decreasing mortality of children and women in the Gambia will require increased attention to factors affecting health at the household level, particularly

regarding home-based care of illnesses and use of preventive services.

## Child health

A substantial proportion of population still practice some of the harmful traditional health practices. The illiteracy rate is 71 percent. Some of the reasons for malnutrition in the Gambia are (i) lack of exclusive breastfeeding for newborns; (ii) inappropriate weaning practices for toddlers; (iii) high prevalence of child morbidity; and (iv) stagnating rural food poverty. Very few mothers (36 percent) practice exclusive breastfeeding of babies under 3 months. Exclusive breastfeeding has shown to be highly protective of diarrhea and respiratory infections related to infant deaths. Appropriate weaning is also still a major issue. Exclusive breastfeeding and weaning practices are less frequent among lower income households (less than 30 percent among the bottom 40 percent income quintile, compared to 45 percent among the top 20 percent income quintile) and among the less educated households (about 30 percent among households that are illiterate or with primary education compared to 59 percent among households with secondary education). Geographical differences are also found, as exclusive breastfeeding was very low in NBD and LRD.<sup>26</sup>

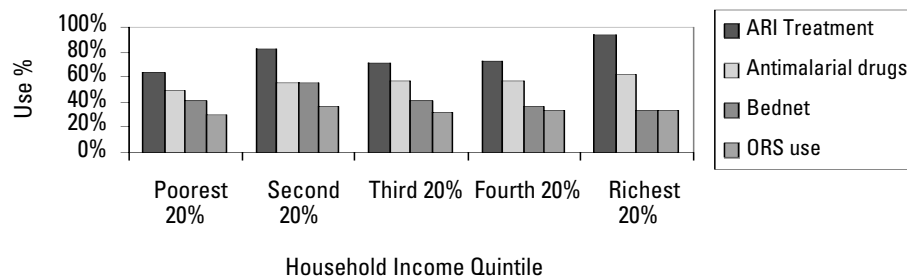
Increasing exclusive breastfeeding rates with appropriate communication and household-based actions has been shown to be possible in the villages of the project area of the Baby Friendly Community Initiative. The project succeeded in increasing the rate of exclusive breastfeeding of babies under 4 months. These communities were able to improve exclusive breastfeeding coverage to almost 60 percent (from almost 0 percent).

The use of appropriate home based care is also still quite low as exemplified by the figures pertaining to the use of ORT, anti-malarial drugs, and bed nets. Only 33 percent of those

children under 5 reporting diarrhea received ORS in 2000. Fifty percent of them received adequate feeding or liquids during their diarrhea episodes. In the same way, 56 percent of those children reporting fever received appropriate anti-malarial drugs. Only 42 percent of children under 5 slept under a bed net, and 35 percent of children under 5 slept under a treated bed net during the previous night of the survey. Given the large contribution of malaria to under-5 mortality, addressing this gap in use of home based technologies emerges as a priority for action.

Relatively higher levels of inappropriate home based practices are evident among the rural households and among the poorer divisions. For example, the CRD-North division, which reported the highest prevalence of diarrhea, also reported the lowest use of ORS. The other poorer divisions, such as the LRD and NBD, were the least likely (40 percent) to give children anti-malarial drugs. Household economic variations lead to worse situations, such as 50 percent of under-5 children from the poorest income quintile, compared to 62 percent of the under-5 children from the highest income quintile received anti-malarial drugs. A small income disparity was also found in the ORT users, as 30 percent of the poorest income quintile as compared to 34 percent of the highest income quintile used ORT. The use of bed nets and anti-malarial drugs, but not ORT use, were highly influenced by household income (see Figure 8).

On the other hand, the Gambia has sustained successful efforts at increasing the use of some key preventive services among children under 2 in recent years, doing it in a significantly pro-poor manner. The measles vaccination coverage was 88 percent in 1990, with 90 percent coverage among 12- to 23-year-old children from the poorest income quintile, and 87 percent coverage among children from the higher income quintile. The EPI program appears very effective, and so far the interventions succeeded in creating demand and meet-

**Figure 8: The Gambia, household behavior in response to child illness by household income quintile**

Source: MICS, 2000

ing the needs of the even the poorest and most remote groups. Recent reports suggest however that immunization coverage may have declined recently, potentially due to supply factors such as aging cold chain and transport problems. Outbreaks have been reported for measles, cholera and meningitis.

Use of curative health services for child illnesses shows a somewhat less successful pattern than for immunization. Service use types and levels for children with illness are different between the urban and the rural areas. Appropriate treatment for ARI was for example received by only 63 percent of rural children, as compared to 94 percent of urban children.

Poor regions such as CRD-North reported the lowest proportion of sick children receiving appropriate ARI treatment. Mother's education was shown to strongly influence the use of services.

The type of health facility used was also influenced by the household's economic status. The poor generally were more likely to visit public health facilities than private health facilities and were more likely to visit nurses and other health workers than doctors<sup>27</sup> (see Table 7.1). Among those children receiving treatment for ARI, the less educated, the poor, and the rural households used health centers and MCH services (56 percent) or did not consult at a

**Table 7.1: The Gambia, utilization of health services by household income index, 1993 and 1998**

	Utilization of health services by household income status (percent)					
	1993			1998		
Percent of households reporting illness and using health services	Extremely poor	Poor	Non-poor	Extremely poor	Poor	Non-poor
Reporting illness/injury	15	14	13	—	—	—
Type of health service utilized among those reporting illness/injury:						
Public	76	73	66	86	89	84
Private	24	27	34	14	11	16
Type of health personnel visited among those reporting illness/injury:						
Doctors	21	21	31	24	28	30
Nurse/midwife	75	77	65	52	50	50
Other health worker	-	-	-	17	18	12
Traditional Healer	4	2	4	6	3	7
Total interviewed (numbers)	3,251	3,287	9,623	7,962	2,810	4,839

Source: Household Education and Health Survey Report, 1993; National Household Poverty Survey Report, 1998.

Note: "Other health personnel" include operators of pharmacies and drug stores.

**Table 7.2: The Gambia, worst indicators of child health by division**

Child health indicators	LRD	URD	NBD	CRD-N	WD
<i>Economic outcome:</i>					
Poverty (greatest percent of extremely poor)	X	X			
<i>Health Outcome:</i>					
IMR (highest rate)	X			X	
LBW (highest prevalence)		X		X	
Malnutrition (highest prevalence)				X	
Fever (highest incidence)	X				X
Diarrhea (highest incidence)				X	
ARI (highest incidence)			X		
Other Illness (highest incidence)				X	
<i>Household Behavior:</i>					
Exclusive Breastfeeding (lowest prevalence)	X		X		
Appropriate Feeding during illness (lowest)			X	X	
ORS use (lowest)				X	
ARI Treatment (lowest)				X	
Anti-malarial drugs (lowest)	X		X	X	
<b>Total Rating</b>	<b>5</b>	<b>2</b>	<b>4</b>	<b>9</b>	<b>1</b>

Source: MICS, 2000

Note: An X designates the worst indicator. Total ratings are between 1 (best), and 9 (worst).

health facility (44 percent). Almost 90 percent of patients in the higher income quintile consulted a health provider, a large proportion of which were based in a hospital.

Finally, Table 7.2 shows how the worst child health behavior and outcome indicators were reported by the CRD-North division, which has a high proportion of the extremely poor households (43 percent), but is not necessarily the poorest division. The information therefore suggests that poverty is not necessarily the only factor adversely affecting child health status in the Gambia and that other non-income related factors such as household knowledge, attitude, and practice are also strong determinants.

## Maternal and reproductive health

Women's health conditions are also influenced as much by traditional practices as they are by poor access to services. The use of contraception by Gambian women, although increasing, remains very low. The modern-method contraceptive prevalence rate (CPR) is currently at 9 percent.<sup>28</sup> Although more Gambian couples

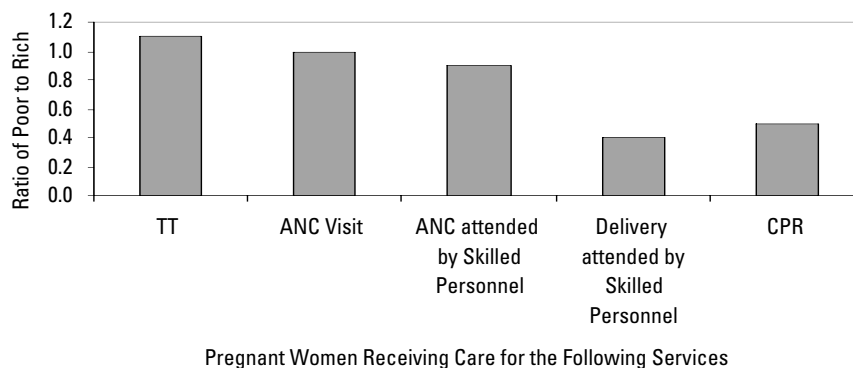
want to space their children, the CPR is increasing at a rather slow pace (about half a percentage point per year). This places the Gambia among the low performing SSA countries for this indicator, although its CPR is fairly high by regional standards.<sup>29</sup> Therefore, specific efforts will be needed in the following areas: expansion of the family planning program; improvement in the method mix (making available a larger choice of methods); and design of innovative delivery strategies (through social marketing—to be introduced soon in the Gambia—and community based distribution). In light of these requirements, efforts to implement the National Population Policy, which was adopted in 1993, appear to be modest and rather ineffective. Furthermore, the adoption by the Gambia of the full Cairo agenda had somewhat diluted the initial focus on family planning. The need for family planning should be reinstated in order to better serve Gambian couples who want to space their children and also to avoid the risk of increased levels of induced abortion with detrimental consequences for mothers. These new strategic directions will also be needed if the

**Table 8: The Gambia, women's health indicators by household income quintile**

Household wealth status	Pregnant women receiving care for				CPR
	TT vaccine	ANC Visits	ANC with skilled attendant	Delivery w/ skilled attendant	
<i>Income Quintile:</i>					
Poorest 20%	78%	98%	87%	31%	6%
Second	75%	98%	92%	52%	9%
Third	82%	97%	93%	51%	7%
Fourth	80%	95%	89%	62%	12%
Richest 20%	72%	93%	92%	81%	13%
National	77%	96%	91%	55%	9%
<i>Ratio:</i>					
Rich-poor ratio	0.92	0.95	1.06	2.61	2.17
Poor-rich 5atio	1.08	1.05	0.95	0.38	0.46
Percentage difference in prevalence between lower income quintiles in comparison to richest quintile <sup>1</sup> :					
Poorest quintile more (less) likely than richest	8%	5%	-5%	-62%	-54%
Second quintile more (less) likely than richest	4%	5%	0%	-36%	-31%
Third quintile more (less) likely than richest	14%	4%	1%	-37%	-46%
Fourth quintile more (less) likely than richest	11%	2%	-3%	-23%	-8%

Source: MICS, 2000

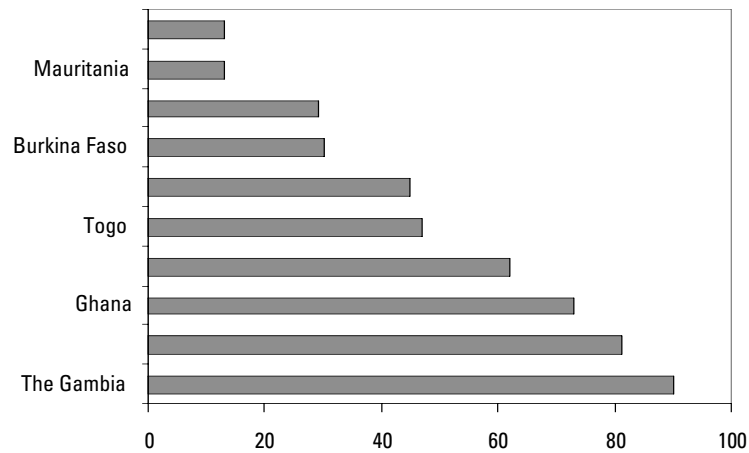
Note: (1) a negative sign indicates less likely; a positive number indicates more likely.

**Figure 9.1: The Gambia, women's health service use by households economic status, 2000**

Source: MICS, 2000

Notes: See Table 8. A ratio of above 1 indicates the bottom 20 percent quintile is better off than the top 20 percent quintile. A ratio of under 1 indicates the top 20 percent quintile are better off than the bottom 20 percent quintile. A ratio of 1 indicates equal rating for the bottom and the top 20 percent quintile groups.

**Figure 9.2: The Gambia, women's tetanus toxoid (2 plus) coverage among pregnant women in comparison to other selected countries in the SSA region, percent in 2000**



Source: WHO Vaccine Preventable Diseases: Monitoring System, 2000 Global Summary, Department of Vaccines and Biological, World Health Organization, 2001

Note: Sources of data differ between Table 8 and Figure 9.2. Figure 9.2 reflects government reporting while Table 8 reports from a nationally representative household survey.

Gambia is to fulfill the Millennium Development Goals (MDGs).

Contraceptive prevalence rates were at 9 percent for modern methods and 0.3 percent for traditional methods in 1999 (MICS). Yet progress—albeit slow—can be observed. A recent Maternal Mortality Study (2002) suggests an increase in CPR to 13 percent for modern methods and to 4 percent for traditional methods. Among the modern methods, the pill and Depo-Provera injections were the most popular.<sup>30</sup>

One of Gambia's objectives in the health sector has long been to have women use improved maternal health services. This strategy has been overall successful at raising the use of some services above SSA average. For example, 90 percent of pregnant women received some antenatal care, while the average for Africa is closer to 60 percent. Associated tetanus toxoid (TT) vaccine coverage is also one of the highest in the region (see Figure 9.2).<sup>31</sup> Nonetheless, constraints and disparities still exist. The urban areas, for example, report about five ANC visits per pregnancy, as compared to three visits per pregnancy in rural areas. On the other hand,

little disparity is found by income groups for tetanus toxoid.

Births attended by skilled staff have also increased in the country, although the rates still remains low. More urban dwellers have deliveries attended by skilled staff than rural women.<sup>32</sup> Once again, the poor URD and the CRD-North had the lowest proportion of deliveries attended by skilled personnel (see Table 8 and Figure 9.1). Financial difference among households are also noted in the use of assisted deliveries. Traditional birth and home deliveries are more common among the poor while births under the care of nurses/midwives and at health facilities are more common among the higher income quintile. The results indicate the possibility that trained staff may not be easily available to the poorest segments of the population because of their poor access to or inadequate knowledge of appropriate care.

## HIV/AIDS and household behavior

The prevalence of HIV/AIDS is increasing in the country and modifying household behavior is likely to be one of the keys to reducing the



underlying risk. Reducing the spread of the epidemic requires focusing on improving household knowledge, life skills, and safe behavior to maintain a low prevalence. A study in 2000 showed that only 12 percent of women between the ages of 15 and 49 had sufficient knowledge about HIV/AIDS transmission, a very low proportion even by African standards.<sup>33</sup> The relatively poorer households appear at a disadvantage in terms of health information as only 3 percent of households in the lowest income quintile had sufficient knowledge as compared to 19 percent of households in the top income quintile. Women's education plays a significant role in gaining appropriate knowledge and taking appropriate steps regarding prevention of HIV/AIDS. Sufficient knowledge of HIV/AIDS was found among only 7 percent of illiterate households as compared to 26 percent of households with secondary education. Regarding testing behaviors, very few of the poor and the less-educated households were tested for HIV/AIDS as compared to the higher income and the more educated households.

Low consumption of iodized salt is a big problem in the Gambia. Merely 9 percent of Gambian households, compared to 60 percent for the SSA region, report such consumption. In addition, only 7 percent of households reported using iodized salt of 15+ PPM. In 1996, 20 percent of households consumed iodized salt. More rural households consumed iodized salt (10 percent) than urban households (5 percent).<sup>34</sup> This was especially evident in areas closer to the Senegal border where iodized salt was easily accessible.

Gambian households appear to often use services from traditional healers and on the average spend a substantial amount on these health care providers. Yet, at this time, not much information is available on these traditional providers regarding the type of services they deliver and their potential role in providing essential health interventions for children and women. The quality of services offered by

the traditional healers has not been evaluated and are suspect to be highly variable. The households' demand for traditional healers may be indicative of the closeness of these providers to households (likely located in the villages), or of the households' strong faith in such services. Most households with variable incomes, especially in the rural areas, are also likely to be attracted to traditional healers because they allow payment for services either in kind or over time whereas the modern health care services do not. Further assessment of the situation could help policymakers define the role of these providers within the health delivery system.

### **Community influences on health actions**

The Gambia initially introduced primary health care in the 1980s. Since the early 1990s the country has further strengthened its community-based health care system. The Bamako Initiative (BI) was one such strategy introduced in 1993. The initiative was foremost developed in the Gambisara Dispensary in the URD division and the Farafeni Major Health Center in the NBD-E—the two divisions with the most underserved population. The initiative has so far covered several villages and will extend to other parts of the Gambia over the next years.

### **Bamako Initiative**

The primary objective of the BI was to improve the health status of women and children by improving access to health care at the community level in two ways: increasing the accountability of the health sector toward the population it served and strengthening the community's capacity in management, supervision, and coordination of the health programs. The initiative hoped to improve the availability of drugs and to ration their use. The BI also

encouraged local financing and management of health facility operational costs.

Both qualitative (1996) and quantitative (1997) evaluations of the BI programs in the Gambia showed positive impacts from the initiative and some objectives that were not achieved. The main achievement of the program was the strengthening of the BI community's capacity to manage and coordinate the health programs. The communities were able to improve and manage the community-financing scheme: those communities, which started the "cash and carry" and community-managed drug revolving funds became more aware of and involved in the contribution toward health care operational costs. The financial participation improved generally in all BI facilities. The average cost recovery in BI facilities was 44 percent as compared to 33 percent in non-BI facilities.

The community's involvement in the management improved the health delivery capacity. Overall the catchment area community coordinators (CACs) contributed to the community "self-help" activities by building residences for the health staff, building extra rooms for the maternal and child health services, and raising funds to support the day-to-day management of the health center activities.

The Gambian BI program was unsuccessful, however, in improving the availability of drugs at the health centers. The lack of success was attributed to the authority not being given to the communities to revise their pricing, exemption, and drug purchasing policies. The communities were also unable to influence the Ministry to increase their contribution toward the operation of the health facilities. The drug availability at the health facilities therefore remained poor. Most BI communities did not proceed to the "cash and carry" phase and those that introduced the "cash and carry" phase—Gambisara, Kerewan (NBD), and Kwinella—were not permitted by the Ministry to modify the pricing and exemption policies. In addition the catchment area communities

were not delegated authority to purchase drugs from sources other than the public drug supply (central medical stores) and thereby suffered from the dysfunctioning of this entity.

### **Baby Friendly Community Initiative**

Another program introduced in 1995 in the Gambia was the Baby Friendly Community Initiative (BFCI). The purpose of this program was to improve the nutrition status of women and children through community-based nutrition interventions. Although the Baby Friendly Community Initiative followed a similar approach to the Baby Friendly Hospital Initiative, it went beyond breastfeeding to also encourage maternal nutrition, complementary feeding, environmental sanitation, and personal hygiene. The program was first piloted in the LRD, which had the worst nutritional indicators. The aim of the project at the time was to improve nutritional status through community-based interventions. In each of the community initiatives, voluntary village support groups were established, composed of five women, including traditional birth attendants, and two men, all of whom were nominated by their communities to implement and monitor the project.

The first intervention focused on improving exclusive breastfeeding practices. The targets were set to raise exclusive breastfeeding practices in the first six months of life to 25 percent and to have 90 percent of normal deliveries initiate breastfeeding in the first hour after birth. Although breastfeeding is practiced in the Gambia, exclusive breastfeeding is not widely practiced and mothers tend to introduce complementary feeding in the first three months of life. Because many of these households are farming, women are unable to take time out for breastfeeding, especially during the harvesting season. There is little incentive (culturally, socially, or economically) to change practices. The BFCI successfully overcame some of

the barriers to optimal infant feeding, and the practices of exclusive breastfeeding improved in these villages. The survey results show that in 1989 exclusive breastfeeding was 0 percent, while the anthropometric baseline of 1998 reported 17 percent, and the MICS survey of 2000 reported 35 percent. The BFCI communities reported higher exclusive breastfeeding practices: 80 percent for the first four months from birth and 60 percent for the first six months from birth (from an unpublished evaluation of the BFCI after five years of program implementation).

Overall, the community-based programs in the Gambia have developed approaches that

positively impact the population and could be built upon. Yet the government's involvement remains limited at the community level, both financially and managerially because of the decentralization of the health ministry's decisionmaking process for the management of PHC. Acute drug shortages at the central level also force communities to purchase directly from the private market at higher prices. Community involvement is also limited because poorer groups tend to be excluded from the community-based activities. Finally, resource mobilization and capacity strengthening remain the major challenge of the system.<sup>35</sup>

## The Gambian Health Services System and the Poor

**E**ighty-five percent of the population lives within one-hour travel time (7.5 km) of a health facility. However, access to community-based services and emergency obstetric care need to be expanded in rural areas. The Gambia compares favorably with other SSA countries in terms of availability of manpower (1 physician per 5,000 and one nurse per 1,300) and hospital beds (1.21 beds per 1,000). However, it relies heavily on expatriate physicians and needs to review its human resource policy to build the country's capacity to supply native trained personnel.

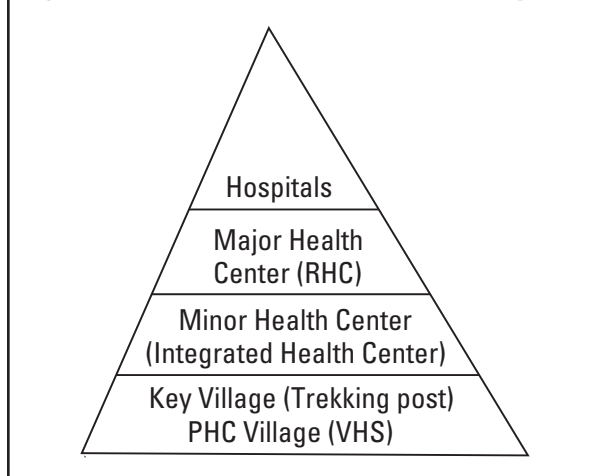
The Gambia's health policies have been specifically expressed over the last few years as pro-poor by focusing its priorities on primary health care, maternal and child health, and reducing the inequity in access to health care. Preventive health care is one of the priorities in the government's health portfolio, including access to community-based services. This section will examine how the Gambian health services and more broadly the Gambian health system responds to the needs of the poor by ensuring physical access, availability of health staff and drugs, and quality and continuity of care to poor regions and poor households in the Gambia.

### Physical accessibility to health services

The Gambia health care system is composed of two large entities—the modern health care system and the traditional medicine network. Not much information is available on the latter and therefore this section will concentrate on the modern health care system. The modern health care delivery system is composed mainly of public sector facilities with a relatively smaller share of private, for-profit, and NGO sectors.

### Organization and structure of health services delivery

Figure 10.1 displays the organizational structure of the Gambian health system. This structure aims at maximizing technical efficiency by corresponding services to the size of the population covered and to the lowest level of technological requirements for a given service. Frequently needed, low-technology services correspond to a small population basis (village), while less frequently needed and higher cost/technology services correspond to a larger population pool. The base of the pyramid is broad because the primary health care services

**Figure 10.1: Structure of the Gambian health system**

are expected to be accessible to the most remote groups/regions in the country. Other services are included in a referral network and encompass less needed and/or more costly services.

The basic health care services are provided through 35 health centers (six major HC and 29 minor HC) and health “trekking” posts. The major health center is the first point of referral for the minor health center. These facilities are also equipped to offer basic obstetrical care, and some minor surgical services. Currently, however, these facilities fail to provide appropriate emergency obstetric care, consequently most obstetrical cases have to be referred to hospitals.

At the next level of the health system lies a network of 29 minor health centers in the public sector equipped to provide the basic essential health care package. At the tertiary level, the Gambia has 10 hospitals, three of which are in the public sector (for public sector facilities, this section only includes the DoSH facilities). The public sector hospitals are managed semi-autonomously.

The management of the public sector health delivery system is under the permanent secretary who is also the head of the board of management at the three public sector hospitals. The director of Health Services in the Ministry of Health is more specifically in charge of the

public sector health centers within the country. Management is centralized under the director of Health Services and deputies. Recently some aspects of management have been decentralized and the divisional health management teams (DHT) are established in all health administrative areas with limited management responsibilities.

Public health centers in the country are probably insufficient in number relative to the small but dense population of the Gambia. But more importantly these health centers are not distributed equitably among the population and large disparities are noted throughout the country. The Ministry of Health has established a norm of 1 major health center per 150,000 people; however, this norm has not been achieved. Average population covered for a major health center is about 185,000, but the range is large: between 300,000 in the Western division and about 70,000 in the LRD.

Similar disparities are seen in the distribution of minor health centers. The Ministries established that 1 minor health center would cover a population of 15,000 in the areas and about 20,000 in urban areas. However, in reality this is not the case. The average minor health center covers a population of about 30,000, ranging between 60,000 in the Western division (this division is also widely covered by the private sector) and about 24,000 in the LRD and CRD. Table 9 provides a distribution of these centers by divisions and Annex Table 2 provides details.

The LRD and the CRD cover at least 50 percent of their population through basic health centers (minor health centers and dispensaries). In all other divisions the coverage is less than 50 percent of their population. The Kanifing municipality (KMC) and the Western division have some of the worst coverage for basic health centers. However, when private providers are included in this analysis, the worst population to health center ratio is to be found in the URD and the NBD-Ws.

**Table 9: The Gambia, access to basic health facility by division**

Division	Population per Minor Health Center and Dispensary	Population per PHC Village	Divisional Population Coverage Basic Health through Facilities (BHF)	Divisional Population Coverage through Village Health Services (VHS)
LRD	23,667	1,109	61%	100%
CRD	25,000	1,966	57%	74%
NBD-E	33,000	2,326	42%	68%
URD	37,000	3,083	36%	48%
NBD-W	42,500	1,328	31%	100%
Western Division	86,250	2,417	23%	...
Kanifing Mun. Area	...	...	7%	...

*Source:* Health Infrastructure Mapping Report, 1999. Source of data from catchment area population of selected health facilities – DPI 2001.

*Notes:* Target population to minor health center ratio is 15,000 in rural areas and 20,000 in greater Banjul; Target population to VHS is 400–1,500. VHS is a strategy adopted to extend access to basic health services. VHS population is also the remaining population beyond 2 km of a minor health center.

VHS include PHC villages and PHC key villages (which includes the Cuban outpatient clinics in the villages).

Referral health facilities include major health centers and hospitals.

See Annex Table 2 for the distribution of health facilities by divisions.

**Table 10: The Gambia, mean travel time in minutes to any type of (closest) health facility by people who had a consultation, by division**

	Banjul	KMC	WD	NBD	LRD	CRD	URD	Total
Travel time (minutes)	10	20	25	32	40	34	47	30

*Source:* 1993-4 Household Education and Health Survey Report

*Note:* The survey measured time to and from a facility. The above table divides this figure in half to estimate the time taken to reach the facilities. This does not include waiting time.

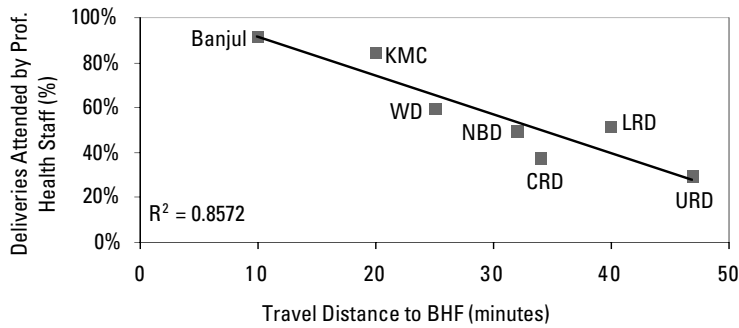
The private sector has about seven small hospitals, each with an average of 20 beds (ranging from 10- to 40-bed hospitals). Three health centers provide first-level referral services, and there are several smaller clinics for which little information is available. In addition to the modern medical services offered, traditional healers are found throughout the country. But no study exists at this point on the number or the quality of services offered by the private sector's modern and traditional health delivery system. Given that a substantial amount of the population uses these services, further assessment will be required.

In addition to the health center network, the community-based Village Health Services (VHS) have been implemented to increase the geographical access of the population to health services. The 396 established Village Health

Services are providing PHC access through village health posts to about 60 percent of the country's population. These services encompass trained village health workers (VHW), traditional birth attendants (TBA), and functional village development committees (VDC). Table 9 reports that among the Village Health Services, the LRD and the NBD-W covered all villages, while the URD had the worst coverage of less than 50 percent of the villages.

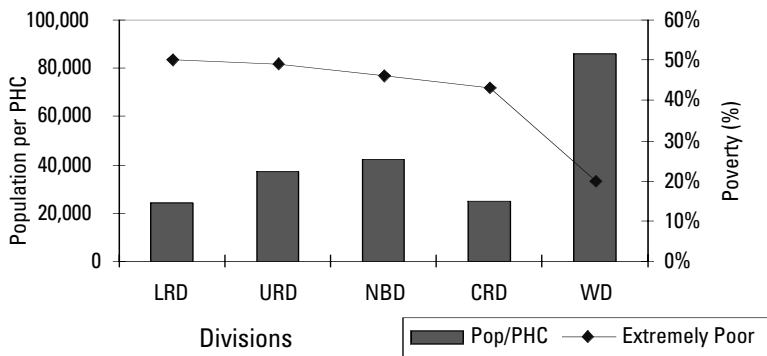
Investments in the public sector infrastructure for health centers have been made mostly in the poorer divisions over the last few years. As Figure 10.3 shows, more PHC facilities were concentrated in the LRD, URD, and CRD—the poorer divisions—relative to the WD. Therefore, it seems that the distribution of public sector investments for Gambian basic health facilities have corresponded with the

**Figure 10.2: The Gambia, deliveries by professional health staff by travel time to health facilities**

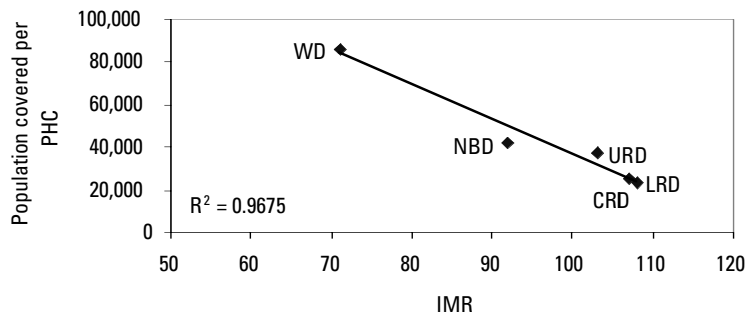


Sources: MICS, 2000 and Mapping, 1999

**Figure 10.3: The Gambia, poverty versus population coverage of basic health facilities by divisions**



**Figure 10.4: The Gambia, relationship between the location of PHC villages and IMR rates by division**



poverty and population health care needs. Figure 10.4 suggests that areas with higher IMR are also areas where more basic health facilities are located, a remarkable effort at focusing investments where the most needs are found. Further analysis is required to assess the use of PHC and their effects on IMR and other health indicators in the long term.

### Health services access and outcomes

Thanks to the establishment of this network, the physical access to services is overall good with the exception of some pockets mainly in the URD and NBD. For most of the rural population, access to services was not seen as a problem. Most households (85 percent), lived within one-hour travel time (within 7.5 km) of a facility.<sup>36</sup> Table 10 shows that the average travel time for a patient to reach a health facility was approximately 30 minutes nationwide, with divisional variations ranging between over 40 minutes in the URD and the LRD and about 10 minutes in Banjul.

The divisions where travel time to health services exceeds 30 minutes, including NBD, CRD, LRD, and URD, were poorer and reported more poor health outcomes. However, considering only the actual travel time to the health facilities may substantially overestimate the geographical access to health facilities. Many areas lack a well connected transport system and the waiting time for transportation (taxi, bus, etc.) may exceed the actual travel time in some communities. Patients might have to wait by the roadside for hours to get transportation. Hence, in these communities the waiting time for transportation and the waiting time to access the health care provider are equally important. The patterns suggest that the divisions with poorer access had worse coverage rates with essential services such as assisted deliveries (see Figure 10.2). Because the URD region reports the worst coverage for health facilities, VHS, and

health manpower, further investigation is required to assess the health needs of the population in this region.

### Hospital beds

The Gambia appears to be very well equipped in terms of hospital beds. It had 1,788 hospital beds in 2001 (or 1.21 beds per 1,000 people), of which 83 percent were in the public sector (only includes DoSH). The number of hospital beds had increased from 1,527 in 1999 (or 1.03 beds per 1,000 people).<sup>37</sup> The hospital bed per 1,000 people ratio in the Gambia was above the regional average for the SSA (1.1 beds per 1,000 people) but was below the average of other countries with similar income (1.3 beds).

Hospitalization beds in the Gambia are mainly found in hospitals, but are also found in the in-patient wards of the public sector health centers. Seventy-three percent of public sector beds are in the hospitals, 23 percent are in the major health centers, and a few are in the minor health centers.<sup>38</sup> The Royal Victoria hospital in Banjul (Western division) is a public hospital with 627 beds. The other two public sector hospitals (located in CRD and NBD) have about 100 beds each.

Problems lie essentially in the unequal distribution of these beds throughout the country. Most hospital beds are concentrated in the major cities like Banjul and are consequently not easily accessible to the rural population. Variations between divisions are dramatic and range from 1.2 hospital beds per 1,000 in the Western division and the CRD to 0.3 hospital beds per 1,000 in the URD in 1999. The NBD-W reports the lowest per capita public sector hospital beds ratio (0.3 beds per 1,000).<sup>39</sup>

This suggests that physical access to care does not appear to be a major obstacle to use of services overall. Access to primary care and public and private facilities is overall quite high even in poor areas with lower levels of health outcomes. Yet some areas for improvement



**Table 11: Ministry of Health employees for 2000**

Staff Category	Numbers	Percent
Central Level:	244	10
Administrators	22	
Operations	140	
Support	82	
Divisional Level:	87	4
Administrators	24	
Operations	12	
Support	51	
Technical Professional Level:	988	41
Physicians	211	
Nurses/MW	655	
PHO	122	
Other Technical Level:	1100	45
VHW	412	
TBA	556	
ATBA	132	
Total	2419	100

Source: Ministry of Health

remain. First, there seems to be a strong link between physical access and performance of services, suggesting that access could be further improved in certain regions. Since the ratio of services to population is low, there is a need for investments in creating new health centers and VHS. Second, the access to emergency obstetrical care appears insufficient with the bulk of hospital services being concentrated in the major cities. Technical capacity needs to be strengthened at the major health centers, the initial referral point for immediate care and for obstetrical emergencies. Hospital bed availability would also need to be re-distributed according to the population, including decentralization to the major health centers with special attention given to making obstetrical beds available.

## Health manpower

Although the Gambia fares less well than countries with comparable economies in other regions of the world, its situation is nonetheless enviable as compared to Sub-Saharan

Africa as a whole. Despite this relatively better situation, however, the health manpower issue is the current weak spot of the system

The Ministry of Health employs almost 2419 persons, 14 percent are administrative staff (see Table 11). Technical staff includes the cadre of physicians, nurses, midwives, public health officers, VHWs and TBAs.

The ratio of health staff to population is about only 1 physician for 5,000 people and 1 nurse or midwife per 1,300 people for the country overall. Although this ratio is much higher than neighboring countries (the regional averages in SSA is only 1 physician per 10,000 people) it is still lower than in non-African countries with comparable economies (one per 2,000 people).

Until 2001, the Gambia did not have any medical colleges, limiting the capacity of the country to produce needed health care manpower. The few local physicians in the country were trained abroad. The Gambia has introduced a school of medicine, and the first group of graduates is expected in 2006. Severe shortage of Gambian doctors led the government to heavily rely on expatriate doctors, who compose 91 percent of the total physicians employed in the public sector (DoSH only). The government is not providing the salary of most of these expatriates but bears the cost of housing and other benefits provided for them.<sup>40</sup> These physicians come for only a short period, creating a high turn-over rate and hampering the sustainability of the system. Improving the capacity for native physicians has also been limited as very few Gambian nationals could be trained. Post-graduation training programs are not regularly offered in the country.

The employment of foreigners nonetheless led to a relatively good level of physician availability. Between 1997 and 2001, the number of medical doctors employed in the public sector increased dramatically. Most of them were foreigners. Of the 211 physicians in the public sector, only 24 were Gambians, the rest were from Cuba, Nigeria, and Egypt.

Out of the 260 physicians present in the country in 2001, 81 percent were employed by the public sector. Overall, 43 percent of the public sector physicians were employed by the government hospitals. Among the Gambian physicians, most were working at the Royal Victoria Hospital in the capital city. The large majority of physicians is therefore concentrated in Banjul in hospital services and rural areas lack medical personnel. Geographical disparities are sharp with, for example, 1 physician per 2,500 people in the NBE division and 1 physician per 10,000 people in the poorer URD. As a consequence, the major health centers in the rural areas lack appropriately trained physicians for basic obstetric/surgical skills at the first referral point. Yet Figures 11.1 to 11.3 show a positive relationship between the availability of physicians and the use of health services for primary health care, suggesting that the supply of doctors also drives demand for health services.

In addition to the lack of Gambian staff training, retaining nursing staff compounds the recurrent staffing shortage problem. Nurses and midwives have been trained in the country for many years now, yet only part of those trained remain in the Gambia as they are attracted by better conditions on the global market. Retention of nurses is a major problem as a large proportion of them are recruited to work in the UK, the USA, and South Africa as they are English speaking, and well trained. The number of nurses and midwives working in the Gambian public sector is estimated to have declined from 784 in 1997 to 655 in 2001 and the nurse attrition rate is estimated to be at least 20 percent. About 90 percent of all nurses and midwives are Gambian, but from 1998 to 2000, an average of only 78 graduates per year were produced by the Gambian nursing schools. The numbers were much lower than required by the public sector (DoSH only) in the country even to fulfill current norms, excluding the needs of the private sector and the hospitals.

Yet nurses and midwives represent the backbone of the system as they provide most of health care services at all levels of the public health sector. Out of a total of 1,015 nurses and midwives, 88 percent (655) were employed by the public sector in 2001. There are three cadres of nurses: the SRN is a professional cadre, while the SEN and CHN are para-professional cadres. Through the Gambian Schools of Nursing and Midwifery, the SRN received a three-year training course, and the SEN and the CHN received a two-year training course. While SRNs and SENs are employed primarily to work in health facilities, CHNs work mainly in the communities and are the trained health manpower closest to the village level. Yet Figure 11.4 shows a positive relationship between the availability of nurses and midwives and the deliveries attended by professional health staff.

The distribution of nurses is uneven within the country. Fifty percent of the nurses in the public sector are concentrated in the Western division, and most (64 percent) are employed in the Royal Victoria Hospital (RVH). Variations between regions are broad between 1 public sector nurse/midwife per 1,300 people in the NBD-E and 1 per 3,400 people in the URD. The CRD reports the lowest CHN to population ratio in the country.

In addition to physicians and nurses, the Gambia has developed a profile of public health officers (health superintendents) who are involved in delivering health promotion, protection services (including environmental sanitation), and the immunization program. Out of 122 public health officers, only 61 (50 percent) are directly involved in these activities. Public health officers received their basic training from a four-year course at the School of Public Health in the Gambia which annually graduated about 11 officers. The URD has the fewest public health officers (1 officer to 30,000 people). These public health professionals are an asset to the Gambian health system and are less likely to migrate, yet their con-

tribution to health system functioning has not been carefully evaluated.

Traditional birth attendants (TBAs) and village health workers (VHW) are providing a crucial link between health services and households. The role of the VHW is to maintain the supply of essential drugs, provide outpatient care, make home visits, and conduct outreach education. TBAs conduct deliveries and identify and refer mothers who are at health risk. The VHWs and the TBAs in the PHC villages are supervised and trained by the CHNs who in turn are supervised by the DHT. By 2001 there were 412 VHWs and 556 TBAs. There is a need to verify how effective the input of these workers has been, and what any weaknesses are.

### **Management of health personnel**

First, the issue of health staff shortage has become crucial and urgent. There is need to build capacity within the country of native physicians with appropriate training to adequately address care for communicable diseases and for maternal and child health care. As the group of local doctors will not graduate until 2006, immediate attention will be required to either recruit appropriate expatriate doctors with PHC and MCH training and post them with appropriate incentives for the rural regions or recruit and upgrade Gambian nurses to the post of assistant doctors. Nurses and midwives too may also be provided with appropriate post-graduation training to substitute for either some medical tasks (anesthesiology, for example) or some public health duties, entering the health officer track.

Given the population projections, by 2020 the Gambia will need 385 (an increase of 48 percent) physicians and 1,539 (an increase of 52 percent) nurses and midwives to retain the current norms (see Annex Tables 3.1 to 3.3). Priority should be given to those nurses working at the peripheral level (SENs and CHNs) in minor health centers and VHSs.

In the context of community-based health programs, emphasis will need to be given to the training and retention of intermediary workers, community nurses, assistant nurses, and auxiliary midwives to complement the work of trained TBAs and VHWs. The effectiveness of this approach will require strengthening the links with the referral system. Emphasis will also need to be given to better understand the quality of services provided by traditional healers and their integration into the greater health delivery system.

Second, the motivation and morale of health workers are very low, especially since there has been no salary increase since 1995–6. Most staff is also concentrated in the larger cities or in hospitals, therefore creating a constraint for the rural population to easily access their services. The staff working in the rural areas or in remote underserved areas do not receive any special incentives (such as “hardship payments”) for their work. Consequently the staff is disinterested from serving in such areas. Special emphasis on creating attractive incentives to post manpower in areas with acute shortages (such as the URD) should be implemented.

There is also a lack of human resource policy on health staff recruitment, promotion, salary, increments, and incentives. No appropriate job descriptions or career growth opportunities are documented or maintained for the health staff of the Ministry. The norms and standards of the Gambia health manpower are under review, but they need to be finalized. Staff requirements, especially for the medium- and long-term, need to be established. Facilities and programs for training and supervising paramedical staff are also often inadequate. The DoSH will have to assess the current situation, design appropriate curriculum, and make recommendations and plans for on-going training of the health staff. This plan should also include considering mechanisms to enhance health staff performance through performance-based contracting.

## Unavailability of essential drugs

The Gambia has been implementing a national drug policy for some years now and an extensive list of 251 drugs has been established. The national pharmaceutical services are under the directorate of health services in the Ministry of Health. Most essential drugs are imported by the public sector. The procurement process is rigid and slow. The procurement of drugs takes place once every two years as it takes about six months for each major order to be filled. The DoSH has neither the facilities to manufacture the drugs nor a quality control unit to assess the quality of drugs imported. The DoSH is exploring opportunities to import all their drugs from Egypt to simplify and consolidate the procurement process.

Some substantial management problems hamper the drug procurement and distribution system. The storage facilities are often not adequate. The DoSH is, for example, exploring the development of a larger facility for the central medical store. The HMIS under the Ministry of Health also does not track the inventory of the drugs distributed to the regional stores or to the health facilities. Neither do the central pharmaceutical services keep a record of the drugs distributed to the hospitals. This haphazard system of disbursement has created a situation of regular shortages of drugs in the public sector health facilities in the Gambia.

The annual pharmaceutical budget for 1999 and 2000 was almost 11.4 million dalasi (US\$0.7 million), representing an expenditure of about US\$0.5 per capita. Drugs and supplies constitute about 12 percent of the total health recurrent budget. Most of these drugs go to hospitals, leaving less than US\$0.2 per capita for the primary care level. Of the amount spent on drugs, 53 percent was budgeted for the three hospitals (RVH [29 percent], Bansang [15 percent], and AFPRC [8 percent]), and the rest for health centers. The 1999 drug resource allocation information suggests also that the health centers were only allocated 74 percent of the

planned budget. The balance of the resources were allocated among the three hospitals and to the Army/police departments—not part of the health ministry responsibility (see Table 11.1). Yet even this high level of resources allocated to drugs for hospitals is often not enough. For example, the RVH overspent its annual drug budget by 24 percent, the Bansang hospital by 42 percent, and the AFPRC hospital overspent by almost 100 percent.

The regional drug resource allocation data also show large variations in drug disbursement per region that appear relatively pro-poor. For example, the North Bank West and the Western divisions received US\$0.25, the lowest amount per capita, as compared to US\$0.37 allocated for the URD and CRD regions. These latter regions have the highest proportions of poor residents (over 40 percent are extremely poor). The data therefore suggest that the Ministry of Health considers geographic economic levels in their drug disbursement policies, although the overall amount remains low.

The replenishment of drugs in the Gambia is largely dependent on fees that are collected from non-hospital facilities. Unlike most countries that have implemented the Bamako Initiative, the proceeds of user fees are highly centralized and are remitted to the central level and collected in the Drug Revolving Fund (DRF). Until recently, even the DoSH did not have direct access to the DRF funds but instead sought approval and clearance for their use from the DoSFE. However, in 1999 the permanent secretary and senior management of DOSH were provided greater authority and discretion to allocate DRF revenues to priority areas in the health sector. DRF non-hospital collections in 1999 and in 2000 were 2.6 million dalasi and 2.5 million dalasi respectively. This represents just 3 percent of total DoSH recurrent expenditures or 21 percent of the budget direction to non-hospital, non-administration DoSH expenditures. A breakdown by divisions indicates that the WD, the division

**Table 11.1: The Gambia, budget and resource allocation for drugs by type of health facilities in the public sector, in dalasi for 1999 and 2000**

Budget/Allocation	Health Centers		RVH Hospital		Bansang Hospital		AFPRC Hospital		Army/Police		TOTAL	
	Dalasi	%	Dalasi	%	Dalasi	%	Dalasi	%	Dalasi	%	Dalasi	%
Total												
Budgeted	10,404,847	47%	6,329,928	29%	3,336,788	15%	1,850,847	8%	0	0%	21,922,410	
Resource												
Allocated	7,725,895	35%	6,929,405	32%	3,936,265	18%	2,450,324	11%	450,205	2%	21,492,095	98%

Source: Public Expenditure Review, 2002 unpublished

**Table 11.2: The Gambia, drug resource allocation for health centers by the public sector by division, in dalasi and US\$ for 1999 and 2000**

Divisions	Drug Resources		Population		Per Capita	
	Dalasi	%	#	%	Dalasi	US\$
Total	7,725,895	100%	1,476,587	100%	5.23	0.29
NBW + WD	3,996,114	52%	901,399	61%	4.43	0.25
URD + CRD	2,639,174	34%	394,363	27%	6.69	0.37
LRD + NBE	1,090,607	14%	180,825	12%	6.03	0.33

Source: Public Expenditure Review, 2002 unpublished

with the largest population and use of health services level, collects the most revenue; 52 and 54 percent of total DRF revenue in 1999 and 2000, respectively. The annual public sector revenue from the drug revolving fund is US\$103,000 (US\$0.08 per capita) or 15 percent of the drug expenditures for 1999. This low level of revenue suggests that there is a large level of inefficiency in the management of users fees due to the centralization process. Efforts made in the Bamako Initiative areas to retain user fees at the local level and develop a cash-and-carry system are promising in terms of both ensuring on-going availability of drugs and reinvesting in quality improvement and use of services at the local level. Yet as the evaluation has shown, the system will be able to thrive only if a reliable procurement system is put in place.

In summary, public spending on drugs represents on average US\$0.4 per capita and can be considered an acceptable amount to finance essential drugs at primary and secondary care levels. Yet drug shortages are rampant in the country, despite a remarkable effort to provide

drugs to the poorer regions. Several factors explain this situation. First, a large proportion of the funding for essential drugs flows to the large urban hospitals, and there is little effort to prioritize the “most” essential drugs among an extensive list of more than 200 essential drugs. Second, the national procurement and distribution system is still weak, experiencing severe management problems involving stock and management and financial accounting. This translates to difficulties for peripheral facilities to acquire drugs even when they have cash (cash-and-carry system). Finally, the overall cost recovery system which represents less than 15 percent of the total expenditures on drugs, is still highly centralized, hence does not allow the peripheral units to use it to introduce the demand-side drive that would better link needs to quantities purchased at the central level. Efforts are underway to improve this situation. This will likely require revisiting the drug distribution and storage system, focusing the subsidies on a more limited number of essential drugs for the health centers, and expanding the possibility for health facili-

ties to fully retain the proceeds of user fees and to use a cash-and-carry system to acquire essential drugs.

### Production and use of public sector health facilities<sup>41</sup>

In 2000, OPD visits in the public sector health facilities in the Gambia were estimated to be 0.75 per capita. Per capita OPD visits were comparable to the SSA (0.8) but much below levels in the other countries of comparable economy (4). Overall the OPD flow increased in the public sector over the period of analysis (1996–2000) from 0.5 to 0.75. Although a positive trend, this increase is nonetheless a concern as it has been mainly observed at the level of public sector hospitals. As most of these OPD visits could have taken place in health centers, this demonstrates the problem with the technical efficiency of the overall system (see Annex Table 4.3 which provides information on OPD visits to the public sector hospitals and to the major health centers).

This happens despite the Ministry's policy between 1993 and 1998 of placing physicians in health centers. OPD visits in health centers remain low relative to OPD use at hospitals. This appears to be largely related to the driving of demand for services by the supply side.

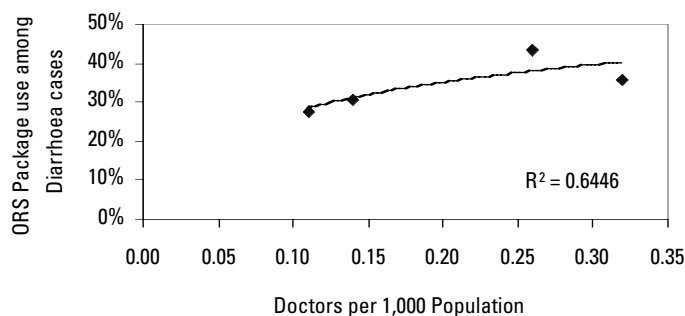
Households may perceive the quality of hospital services as higher than the quality of health centers. As seen above, hospitals have been favored in terms of receiving regular drug supply. Improvement in supplies at health center level, quality of services delivered (e.g., regular and timely availability of manpower at the health center, and the attitude of the manpower toward patients), marketing, and outreach could help increase the use of health centers.

Use of health centers has nevertheless increased overall between 1996 and 2000 in all divisions (see Annex Table 4.5). Figure 12.3 shows that the division with the largest proportion of extremely poor households, the LRD (which has the best access to PHC), also had the highest proportion of health center use relative to the other divisions.

### Inpatient admission flows at the public sector health facilities

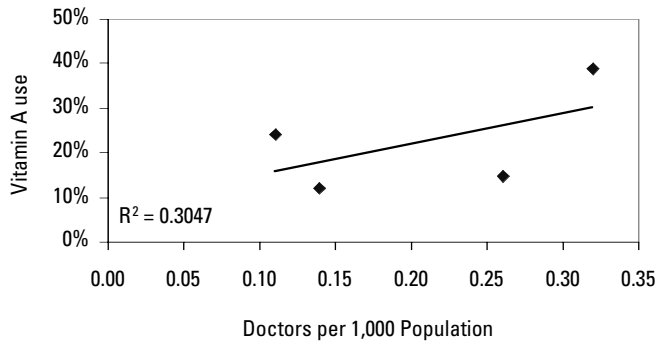
Admissions to public sector health facilities increased over the period of analysis and inpatient admissions increased from 6 to 8 percent of the total population in 2000. Admission rates seem to be below levels observed in the SSA (12 percent) and much below levels in the other countries of comparable economy (13

**Figure 11.1: The Gambia, physicians per 1,000 people and ORS package use among diarrhea cases for children under 5 years**



Sources: MICS, 2000 and Mapping, 1999

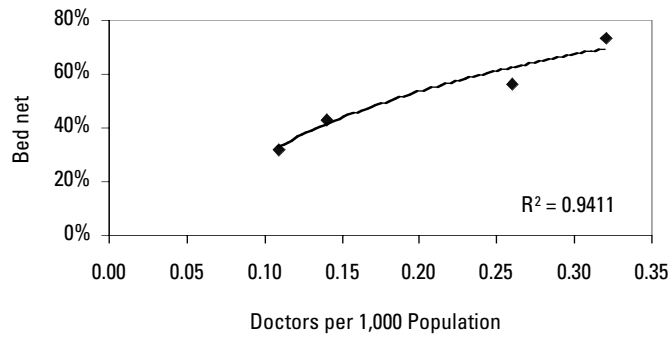
**Figure 11.2: The Gambia, physicians per 1,000 people and vitamin A use among children 6–59 months**



Sources: MICS, 2000 and Mapping, 1999

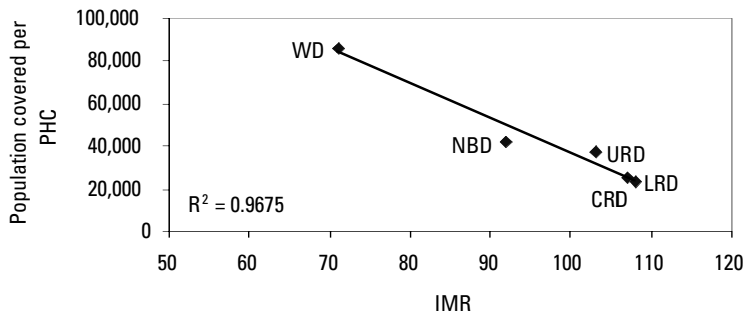
Note: High dose of vitamin A supplementation began in early 2000, thus within the six months before MICS 2000, less than 4 percent of children aged 6–59 months were affected. Government of the Gambia UNICEF, *Updating of the Situation of Children and Women in the Gambia*. January 2001.

**Figure 11.3: The Gambia, physicians per 1,000 people and bed net use**



Sources: MICS, 2000 and Mapping, 1999

**Figure 11.4: The Gambia, deliveries by professional health staff and the availability of nurses and midwives by division**



Sources: MICS, 2000 and Mapping, 1999

percent). The share of hospital admissions increased as compared to inpatient admissions in the health center. (Annex Table 4.4 provides information on inpatient admissions to the public sector hospitals and to the major health centers.)

When analyzing only health center admissions between 1996 and 2000, the findings suggest that all divisions, except for the NBD-E and the LRD, faced an increase in their IPD. The largest proportion of inpatients was admitted in the WD in 2000 (see Annex Table 4.5). Figure 12.4 shows that the URD and the CRD have the highest admission rates. These are also divisions with a relatively large proportion of households living below poverty and with the worst access of the population to PHC. However, the rate of admission at the health centers does not vary by the poverty profile of the division.

Lack of data on hospital bed occupancy rates (BORs) and hospital average length of stay (ALOS) limit the analysis. BOR and ALOS data are only available for the 627-bed Royal Victoria public hospital. Currently data suggest high ALOS and low BOR at the RVH. Data suggests that 61 percent of the beds were occupied in 1999, and the ALOS was 18 days. The highest ALOS (about 30 days) was seen in the orthopedic and surgical units. The ALOS in the Gambia is significantly higher than are hospital stays reported by the OECD countries, which intensified concerns about technical inefficiencies.

An assessment of the private sector hospitals could help in building complementary services with the public sector. The private sector hospitals are very small and have concerns regarding cost inefficiencies. Overall the few public hospitals concentrated in the cities are heavily used for both outpatient basic health services and for inpatient care. The lack of drugs and qualified health manpower are the primary reasons for the underuse of the lower level health facilities, even for the most basic health care services.

## **Morbidity pattern at the public sector health facilities**

Communicable and reproductive illnesses still represent the largest health burden on poor Gambian households. This is reflected in the pattern of services produced by the health sector. Malaria, skin problems, diarrhea, and lower respiratory tract infection are the most frequent causes for using public sector health facilities in 1996 and 1997.

Malaria is the most prevalent disease encountered in the public sector health facilities in all divisions for children under 5 and for adults in 1996 and 1997. About 208,000 malaria cases (or 1,100 cases per 1,000 people) were seen in the Western division in 1997. The CRD reported seeing the most at 105,000 malaria cases (or 2,500 cases per 1,000 people) in 1997, followed by the WD.

The WD and LRD reported the highest prevalence of malaria.<sup>42</sup> Although the WD reported seeing a relatively high proportion of malaria patients at the public sector health facilities, the LRD did not follow suit. The LRD reported the least proportion of children receiving anti-malarial drugs. The LRD therefore needs particular attention on developing malaria intervention programs as most children suffering from malaria are not being reached, indicated by the low health service use among malaria cases at the public facilities.

## **Age, gender, and household economic status patterns**

Overall the extremely poor households were found to be less likely to use the public provider than the non-poor households with most age groups. Most poor households either do not use services or use services of other informal providers. Table 12 shows that the largest difference in the use of public providers between the extremely poor households and the non-poor households was found in 5-9-year-old children.



**Table 12: Estimated public provider consultations per person per year by age group, gender, and poverty status (percent)**

Age	Sex	Extremely Poor	Poor	Non-Poor	All	Extremely Poor/ Non-Poor
0-4	F	2.5	2.8	3.0	2.8	0.83
	M	2.0	2.8	4.0	3.2	0.50
5-9	F	0.4	0.8	1.0	0.8	0.40
	M	0.6	1.1	1.6	1.2	0.38
10-14	F	1.0	1.0	0.7	0.8	1.43
	M	0.7	0.4	0.9	0.7	0.78
15-34	F	1.1	1.2	1.5	1.3	0.73
	M	0.6	0.5	0.5	0.5	1.20
34-49	F	2.3	1.3	1.8	1.9	1.28
	M	1.1	1.0	1.3	1.2	0.85
50+	F	0.9	1.7	1.8	1.5	0.50
	M	2.2	1.3	1.7	1.8	1.29
All	F	1.3	1.4	1.6	1.5	0.81
	M	1.1	1.2	1.5	1.3	0.73

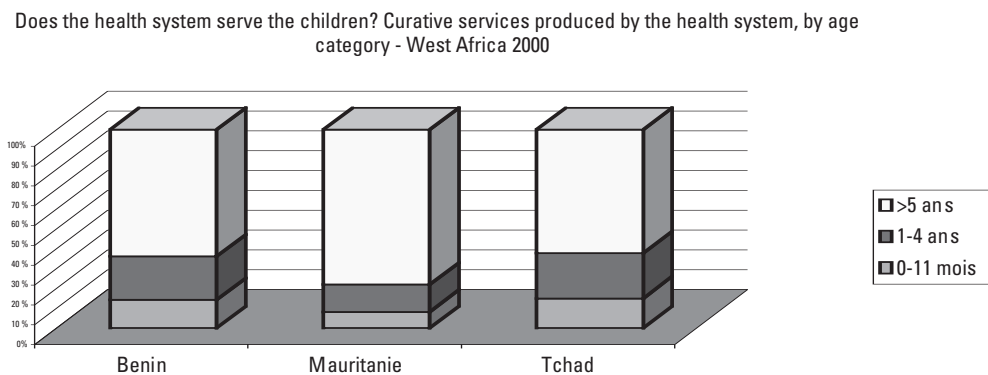
Source: NHPS, 1998

Note: In the proportion of extremely poor to non-poor, a ratio under 1 indicates less utilization of the extremely poor in relation to the non-poor, and a ratio above 1 indicates greater utilization of the extremely poor in relation to the non-poor. This only includes household members who reported visiting a public provider for treatment when sick.

Figure 12 shows the age distribution of OPD visits at government health facilities by selected countries. In the Gambia, 11 percent of all users of government basic health facilities (health centers and dispensaries) were children under 1 and 19 percent were children 1-5 years of age. The proportion of users of the

public sector health facilities who were children under 5 is comparable to the information reported by Benin and Chad, countries that have systems that are particularly oriented toward serving the needs of children. But these rates are significantly higher than in Mauritania, for example.

**Figure 12: OPD visits at government health facilities by age group for selected countries, 2000**



Source: Chad: Health and poverty country status report

Note: The type of health facilities selected for analysis may be different from those selected for analysis in the Gambia study. The latter only included government basic health facilities (health centers and dispensaries).

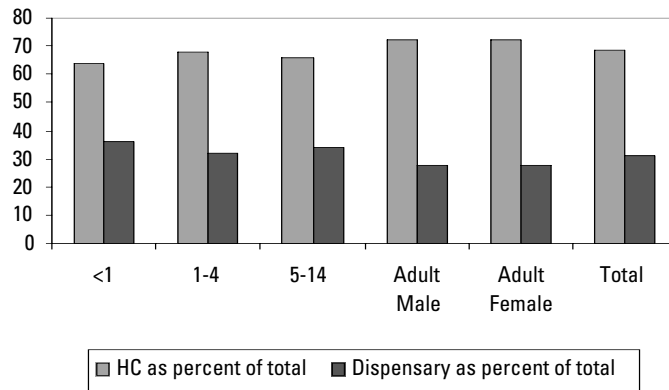
Children under the age of 1 were more likely to visit dispensaries than health centers, with the exception of the LRD. However, for all other age groups, with the exception of the CRD, URD, and NBD-W, most patients visited the health centers rather than the health dispensaries. Service delivery data suggest that the largest proportion of patients who visited health centers and dispensaries were between 5 and 14, except for the URD, where most patients were seen between the ages of 1 and 4 years (see Table Annex 4.6 and Figures 12.1

and 12.2). The CRD reports the highest visits for all childhood diseases and for the population above 5 years of age.

### Relationship between access and health behaviors

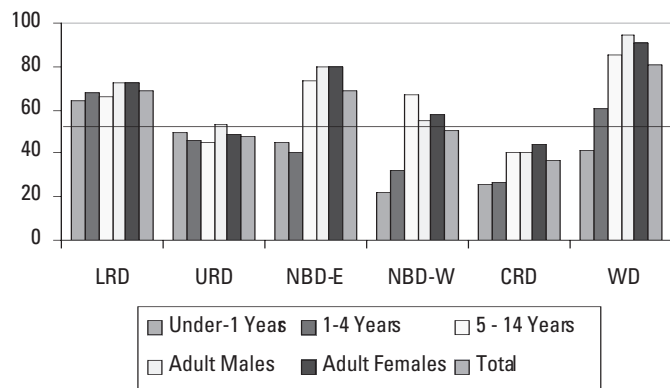
The examination of health care use patterns by PHC facilities also unveils revealing relationships between access and health behaviors. Figures 13.1 through 13.3 show that

**Figure 12.1: The Gambia, type of health facilities visited by patients for OPD, 1996**



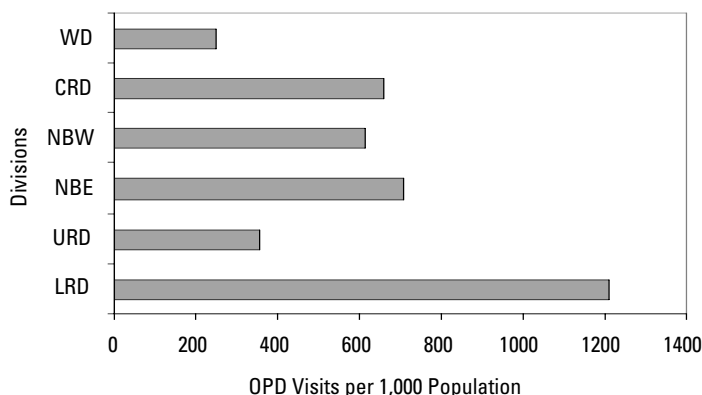
Source: Service delivery data from DoSH, 2001  
 Note: Health service use data were only available for health centers and dispensaries.

**Figure 12.2: The Gambia, proportion of population by age and division visited health centers for OPD, 1996**



Source: Service delivery data from DoSH, 2001  
 Note: Health service use data were only available for health centers and dispensaries.

**Figure 12.3: The Gambia, outpatient visits per 1,000 people at public sector health centers by division, 2000**



Source: Service delivery data from DoSH, PER, 2001 (Unpublished)

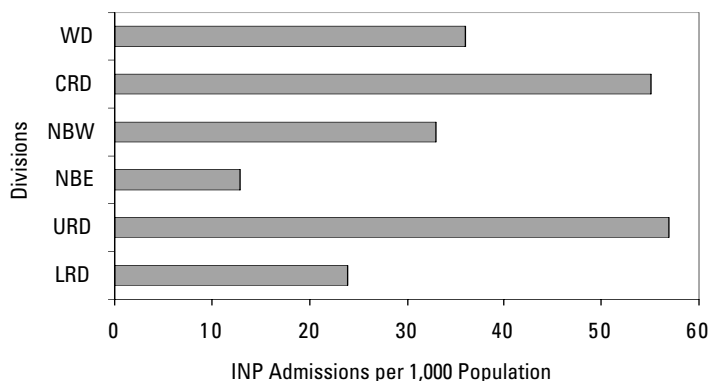
divisions with easier access to PHC also had relatively higher use of bed nets, higher consumption of vitamin A, and higher use of ORS by children. On the other hand, the use of anti-malarial drugs and the appropriate treatment for ARI were not necessarily affected by PHC access as these are behaviors more at the household level. Earlier sections suggested the significant impact of household characteristics on treatment for ARI. Participatory studies suggested the following main reasons that the poor had low use of public sector health services: long waiting times that encroached on farm and household duties (especially for

women); low perception of service quality; drug shortages; and lack of qualified manpower, mainly physicians.

### Quality of care

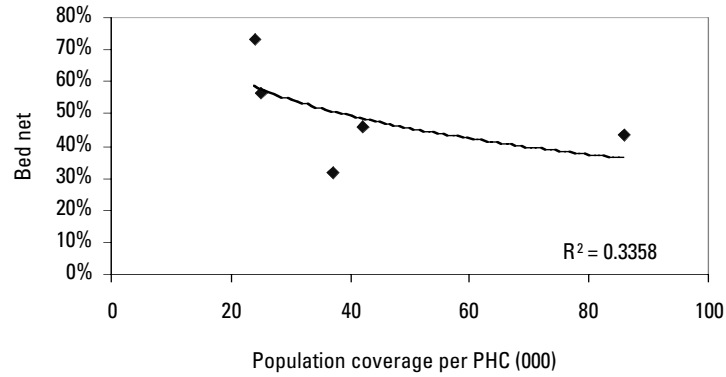
Poor quality of health service care is often a key reason for the service’s lack of impact, particularly in reproductive health care. An indication often used is the fact that maternal mortality remains high although the use of prenatal care is extremely high. High-risk cases, such as hypertension, are often not detected early

**Figure 12.4: The Gambia, inpatient admissions per 1,000 people at public sector health centers by division, 2000**



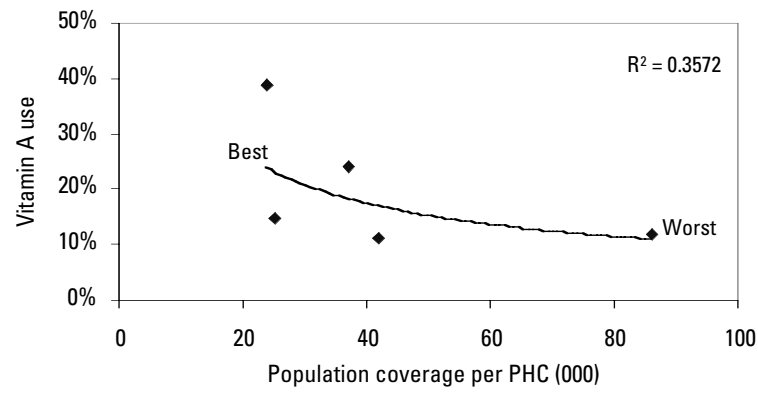
Source: Service delivery data from DoSH, PER, 2001 (Unpublished)

**Figure 13.1: The Gambia, population coverage per PHC and bed net use by children**



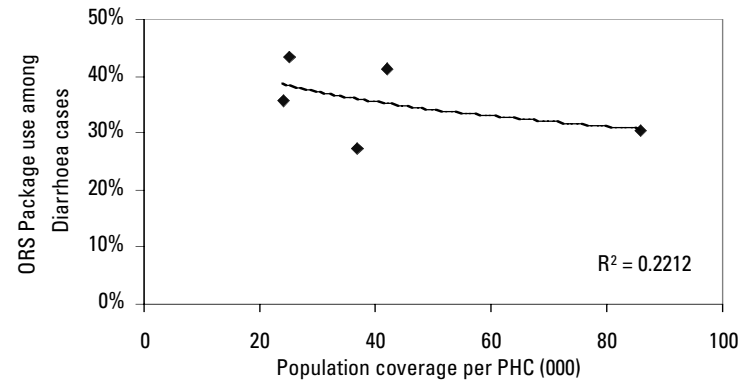
Sources: MICS, 2000 and Mapping, 1999

**Figure 13.2: The Gambia, population coverage per PHC and vitamin A use by children**



Sources: MICS, 2000 and Mapping, 1999

**Figure 13.3: The Gambia, PHC access and ORS use among children with diarrhea**



Sources: MICS, 2000 and Mapping, 1999

enough and thereby remained untreated. Although family planning services are present in many government health facilities, several of them lack contraceptive supplies and alternatives, such as the surgical procedures. There is only one Gambian obstetrician/gynecologist in the country. The referral system for emergency obstetrical cases is also deficient in providing

timely transport as well as quality emergency obstetrical care. Due to both the lack of technically skilled manpower attending the patients and the lack of easy access to the appropriate health care services, the health care system too often fails to identify the risk cases and provide timely and appropriate care.

## Health Care Financing

**G**ambia spent 3.4 percent of its GDP on health in 1998/99 which amounts to total per capita health expenditure of US\$11.8. The per capita public spending on health in real terms has increased slowly from US\$4 in 1991/92 to US\$8.7 in 1998/99. Though the per capita public spending is comparable to the public spending in countries of similar economy, it is significantly higher than what governments spend in the West and Central African region. The capital expenditure share increased from 21 percent in 1990/91 to 47 percent in 1998/99 with a corresponding declining recurrent expenditure share. The capital expenditure has favored hospitals over health centers.

### International comparisons

The Gambia's per capita total health spending was estimated to be about US\$11.8 for 1998/99. The total health spending levels are below those of the SSA region and below those of other countries with comparable economies (US\$21) (see Figures 14.1 and 14.2). The Gambia's total health expenditures as a proportion of GDP was 3.4 percent in 1998/99, a relative-

ly low figure. Hence this appears significantly below levels reported by SSA (4.3 percent) and by the other countries with comparable economies (4.5 percent) (see Figure 14.3).

The Gambia's per capita public sector health expenditure was overall quite high as compared to the SSA as a whole and the West and Central Africa region in particular. The Gambia's per capita public spending on health is about US\$8.7. This represents about 2.5 percent of GDP.<sup>43</sup> This is above the levels reported by SSA (1.7 percent) and by the other countries with comparable economies (1.2 percent) (see Figure 14.4).

The Gambia's public share of total health expenditure (including contributions by external partners) is about 78 percent. This share is much above that reported by other countries of similar economies and by the SSA, where less than 50 percent of total health expenditures are contributed by the public sector. This may, however, be due to an underestimation of the private spending in a recent NHA study conducted in Eastern and Southern Africa (see Tables 14.1 and 14.2). A National Health Accounts (NHA) study is recommended to further assess the private sector's contribution share in the Gambia.

## Sources and mechanisms of financing

In line with a high level of public financing, the health care system in the Gambia is primarily managed and financed by the public sector. The public health services receive resources from general tax revenues, households, and external partners.

User fees contribute a quarter of the revenue base of the public sector (26 percent). Government contributions accounted for around 46 percent, and donors for 28 percent of the total health expenditure in 1998/99. This is, however, only a one-sided view of the situation. Trend data are not available to assess the changes in household contribution toward health or the changes in the burden of health expenditure on households.

Following the pattern seen among many low-income countries, the public sector in the Gambia finances most public health expenditures and is the primary health care providers. Taxes make up the primary resource base. However, as most Gambians are not active in the formal labor market, and because of the inefficient financial collection capacity of the government, tax-based financing is unreliable. User fees represent a relatively small proportion of the total public sector health expenditures.

An estimated one-third of this public funding has been contributed by external partners, but this funding is mostly allocated toward development budgets and investment expenditures for the health sector including training, civil work, drug seed funds, and materials. Their contributions have increased several fold in the past decade. This contribution has changed in nature from grants to loans. One worrying observation is the move of external funding to less technically efficient services, away from health centers toward hospitals (see Figures 15.1 and 15.2).

## Trend in public health spending

Although no trend analysis on overall health spending has been possible, data were available on the trend of public sector health expenditure over the years. The recent public expenditures review shows that public spending has increased both in nominal and real terms between 1990 and 1999 (see Figure 15.1). The real per capita public expenditure was 41 dalasi (US\$4 in 1990 prices) in 1991/92 and increased to 62 dalasi (US\$6 in 1998/99) in the past decade reaching US\$8.7 today. The growth of public spending has mainly been due to the health services receiving stable allocations from a growing government budget. The share of health in public spending has averaged 11 percent of total government expenditure since 1997/98.

## Recurrent share in total public health expenditure

Overall, recurrent expenditure increased in the past decade in nominal and real terms (see Figures 15.2 and 15.3). The public sector share of recurrent expenditure, however, declined over the years in favor of development investment (see Figures 15.4, 15.5, and 15.6). In 1991/92 about 21 percent of the public sector health expenditures was allocated toward capital investment. Whereas in 1998/99 capital investment increased to 30 percent, it is estimated to increase to 47 percent in 1999/2000. The entire development investment budget was received from the external partners representing an increase what they will provided for. This trend favoring investment raises questions as to whether today's recurrent budgets do actually correspond to the level of investment made over these years.

The increasing allocation to health has taken place in a context where salaries of the Gambia

**Table 13: Annual salary for public sector ministry of health employees, 2000**

Staff Category	Per Unit Annual Salary in Dalasi (US\$)
Principal Medical Officer	32,952 (3,300)
Senior Medical Officer	30,552 (3,000)
Medical Officer	26,436 (2,600)
Public Health Officer	18,480 (1,850)
Nurse (SRN)	14,568 (1,450)
Nurse (SEN, CHN)	9,084 (900)
Technician	9,084 (900)

*Source:* Ministry of Health

*Note:* Data presented in local currency and US\$. The latter is given in brackets.

public sector staff have been frozen. No salary increase has been received by staff since the mid-1990s (see Table 13). Wages and allowances as a share of total recurrent expenditure of the public sector are now at about 50 percent of the recurrent health budget.

On the other hand the non-salary recurrent budget for drugs and dressings, which made up about 14 percent of the total recurrent expenditure in 1993/94, increased significantly to about 25 percent of the total recurrent expenditure in 1998/99. But other critical inputs seem to have suffered from insufficient financing. Transport today receives little public sector budget support. Vehicle fuel made up 6 percent of total recurrent expenditure in 1993/94, but this proportion was halved by 1998/99. The budgets of 2000 and 2001 allocated even less funding toward vehicle fuel and maintenance in both real terms and in budget shares. Such budget choices have obvious implications on essential services relying on outreach strategies and timely referral care.

However, some significant effort has been made to channel funding to some typically under-funded but key recurrent costs such as maintenance. Recently the government has separated maintenance and operations as two budget line items, while both were lumped

under one budget line item of “Operations and Maintenance” in the past. By creating two separate budget line items, more resources can be allocated for the purposes of maintenance, which was a cost largely ignored in the past.

## Allocation

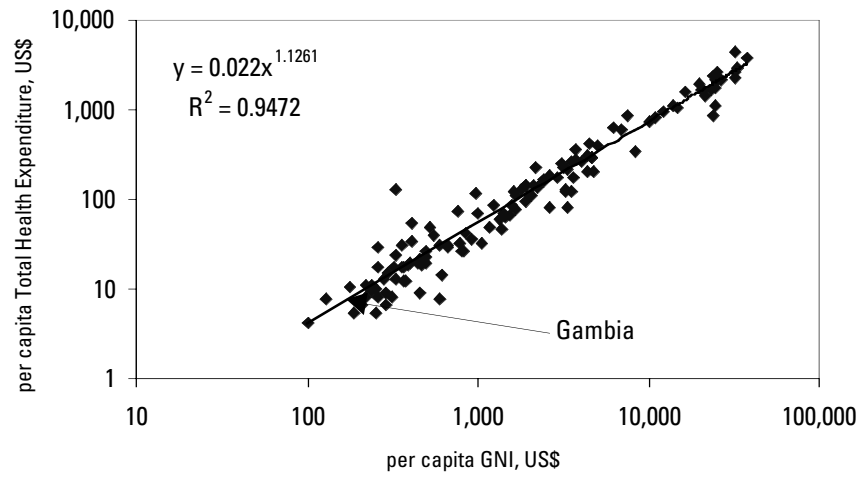
The current allocation of public funding between the levels of care reveals significant problems in terms of technical efficiency. In particular, tertiary level health facilities receive a substantial public sector health budget. Of total recurrent expenditure of the public sector in health, DoSH reports half for tertiary health care and half for primary and secondary health care (40 percent) and for administration (10 percent). Almost 50 percent of resources are allocated in favor of hospitals relative to PHC in 2002. Yet this is an improvement from the about 63 percent resources allocated for hospitals in 2001.

The large share of funding going to the tertiary level has been a recent trend. Increased funding to those facilities favors their use instead of the use of services that could have been delivered more cheaply and more efficiently at health centers. Patients are attracted by the fact that these facilities have more personnel and drugs than primary care facilities.

The share of the health expenditures for primary health care has remained approximately constant over the years. Most resources (21 percent) were allocated toward maintenance of health centers, dispensaries, and sub-dispensaries. Drugs and dressings were allocated about 11 percent of the total non-salary recurrent budget. No resources were allocated for fuel and maintenance of vehicles, providing little if no budget support and incentives for outreach services.

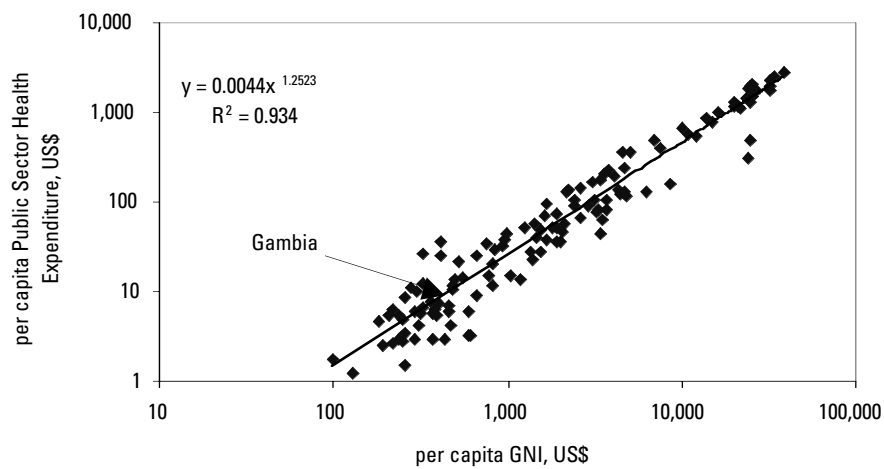


**Figure 14.1: Global trend in per capita health expenditure (log scale)**



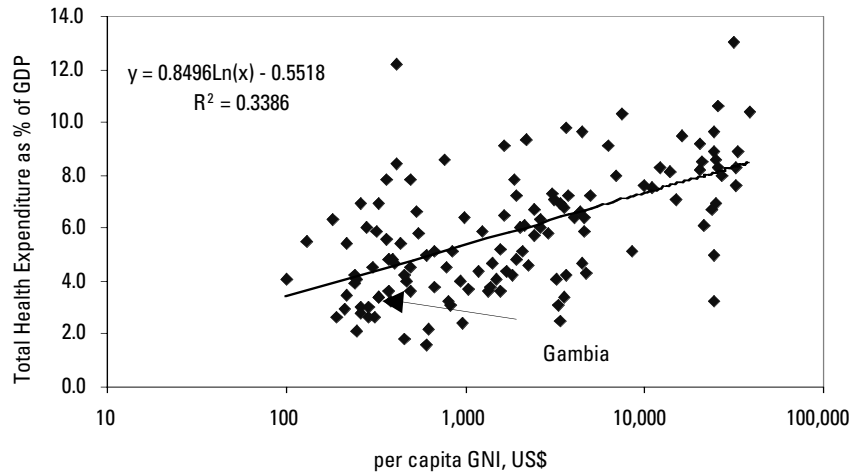
Source: World Development Indicators, World Bank, Washington, D.C., 2001

**Figure 14.2: Global trend in public sector per capita health expenditure (log scale)**



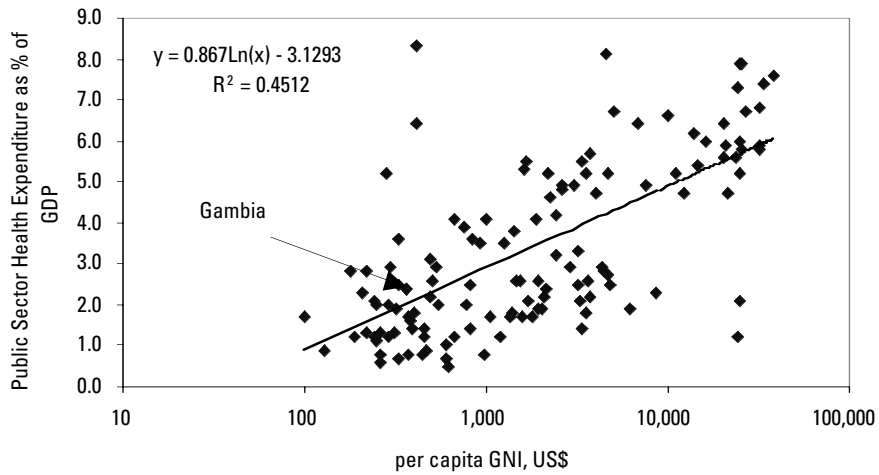
Source: World Development Indicators, World Bank, Washington, D.C., 2001

**Figure 14.3: Global trend in public sector health expenditure as percent of GDP**



Source: World Development Indicators, World Bank, Washington, D.C., 2001

**Figure 14.4: Global trend in public sector health expenditure as percent of GDP**



Source: World Development Indicators, World Bank, Washington, D.C., 2001

**Table 14.1: Health expenditure for selected countries in SSA, (1990–98)**

Selected countries in SSA	Health expenditure as % of GDP (1990-98)				Health expenditure per capita	
	Public	Private	Total	Public Share	PPP US\$	Current US\$
				(Including Donors)		
Benin	1.6	1.6	3.2	50%	29	12
Burkina Faso	1.2	2.7	3.9	31%	36	10
Cameroon	1.0	4.0	5.0	20%	77	31
Cote d'Ivoire	1.2	2.6	3.8	32%	62	29
<b>The Gambia</b>	<b>2.5</b>	<b>0.9</b>	<b>3.4</b>	<b>74%</b>	<b>51</b>	<b>12</b>
Ghana	1.8	2.9	4.7	38%	85	19
Guinea	2.2	1.4	3.6	61%	68	19
Mali	2.1	2.2	4.2	50%	30	11
Mauritania	1.4	3.4	4.8	29%	74	19
Nigeria	0.8	2.0	2.8	29%	23	30
Senegal	2.6	1.9	4.5	58%	61	23
Sierra Leone	0.9	4.5	5.5	16%	27	8
Togo	1.3	1.3	2.6	50%	36	8
Sub-Saharan Africa	1.7	2.6	4.3	40%	89	42

Source: World Development Indicators, 2002

Note: Data are for most currently available year between 1990-1998.

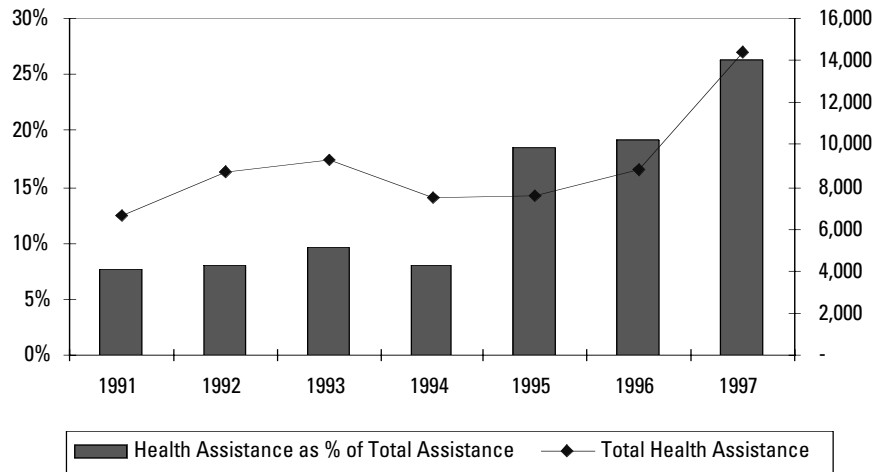
For the Gambia, the figures have been revised given the PER, 2001. It is assumed that the share of the public sector of total health expenditure changed from 51 percent to 74 percent, which includes the donor contributions.

**Table 14.2: Health expenditures in the Sub-Saharan region**

Countries	Per capita government health expenditure (US\$) (including budget support)	Per capita donor expenditures	Year	Source of information
<i>West Africa</i>				
Cameroon	4.7	1.7	1999	Health and Poverty Country Status Report
Benin	2.2		1999	Country Status Report 2001
Guinea Conakry	1.8	4.3	1997	Country Status Report 2001
Chad	1.4 (50% budget support)	2.9	2000	Public Expenditures Review 2001
Niger	1.9		1999	Public expenditures Review 1999
Mali	2.8	2.7	2000	Health and Poverty Country Status report 2001
Senegal	4.7	2.8	1999	Health and Poverty Country Status report 2001
Burkina Faso	4.5	2.5	1999	Public Expenditures Review 2000
Mauritania	5.3	2.7	2000	Public Expenditures Review 2001
The Gambia	8.7	3.3	1998/99	Public Expenditure Review 2002
<i>East Africa</i>				
Zambia	8.8	4.6	1997/98	ESA NHA Network.
Ethiopia	1.7	6.4	1997/98	ESA NHA Network.
Malawi	4.3	5.3	1997/98	ESA NHA Network.
Kenya	5.8	4.2	1997/98	ESA NHA Network.
Tanzania	2.4	2.6	1997/98	ESA NHA Network.
Mozambique	2.0	5.1	1997/98	ESA NHA Network.
Uganda	2.5	1.8	1997/98	ESA NHA Network.
Rwanda	1.2	0.4	1997/98	ESA NHA Network.
<i>South Africa</i>	132.9		1997/98	ESA NHA Network.

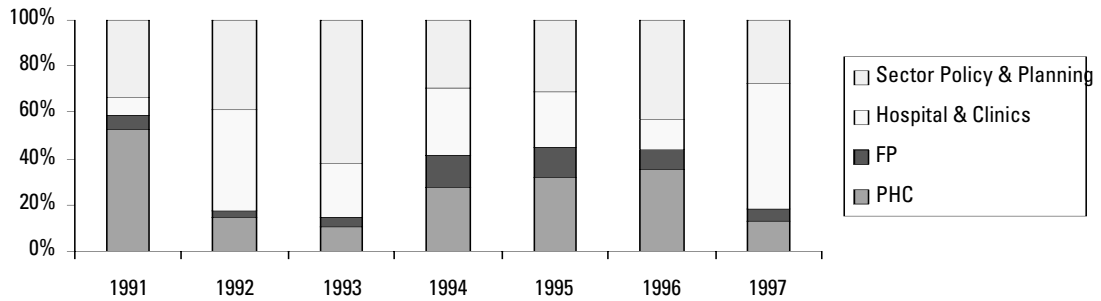
Note: Budget support includes the external year-marked grants received by countries.

**Figure 15.1: The Gambia, health external assistance in US\$ and percent, 1991–1997**



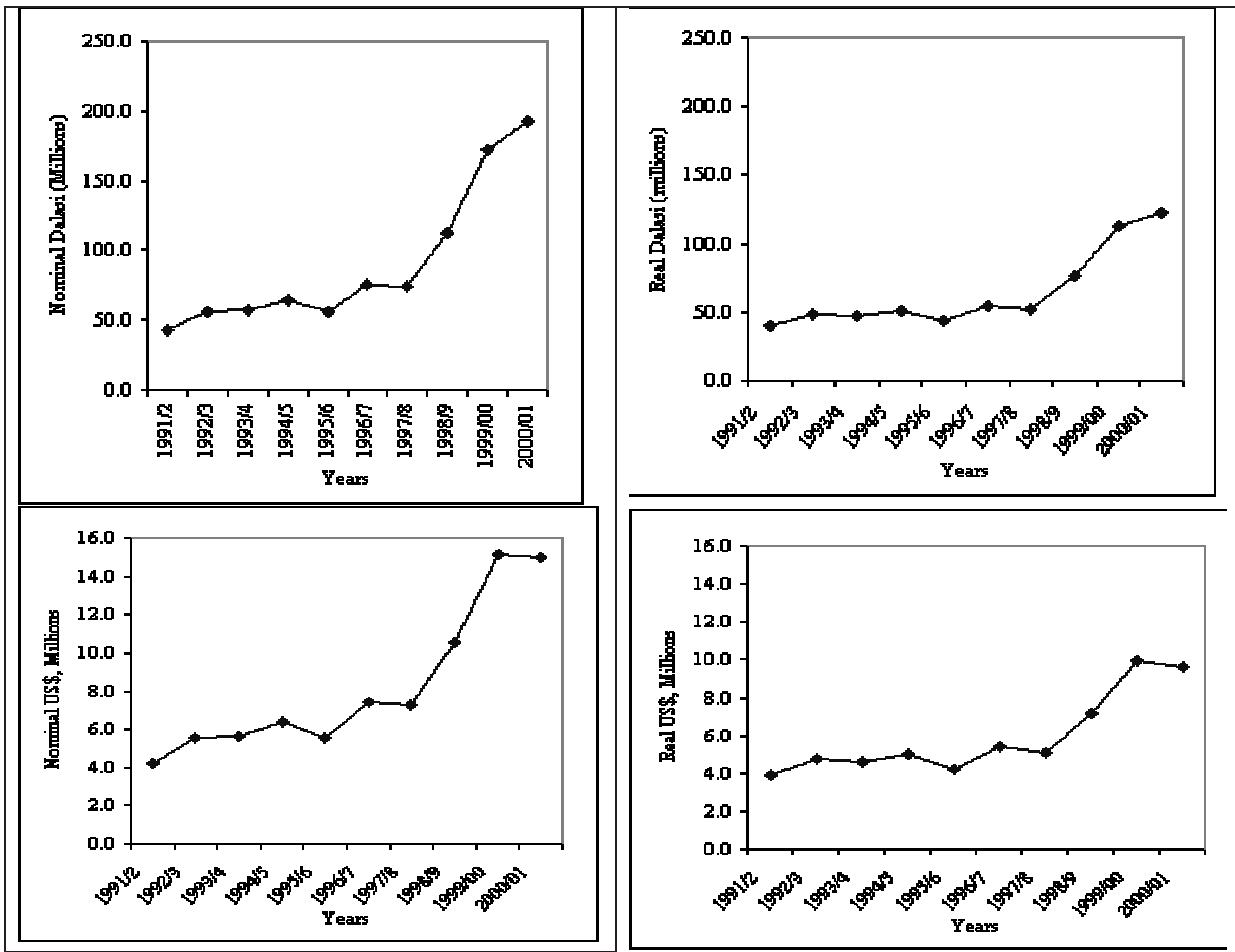
Source: MOH, 2001

**Figure 15.2: The Gambia, the allocation of health external assistance toward various health programs, 1991–1997 (percent)**



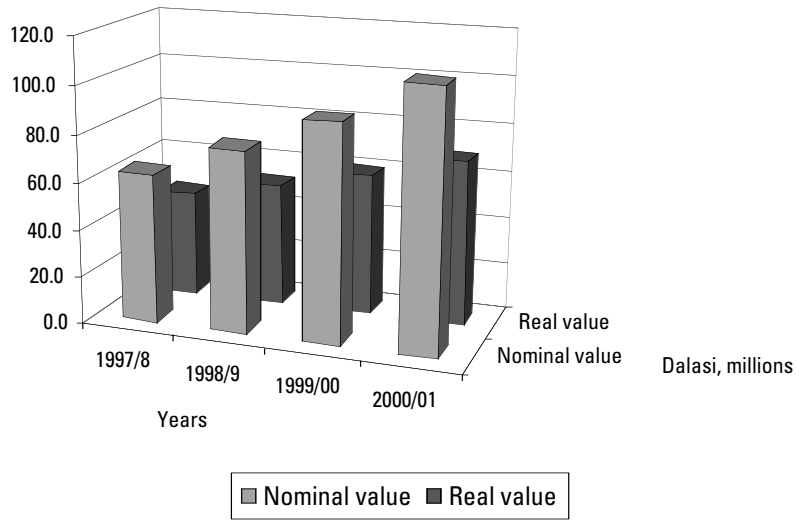
Source: MOH, 2001

Figure 15.3: The Gambia, MOH health expenditure in nominal and real (1990 constant) values for 1991/92 to 2000/01 in dalasi and US\$ (millions)



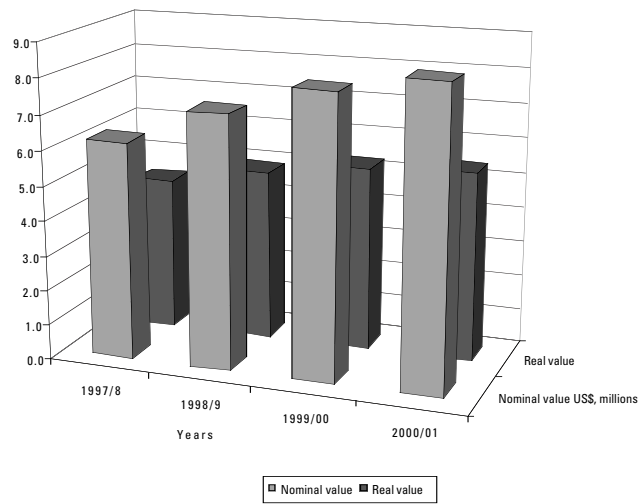
Source: The Gambia, Public Expenditure Review, 2001.

**Figure 15.4: The Gambia, recurrent expenditures for ministry of health in nominal and real (1990 constant) values for 1997–2001, dalasi**



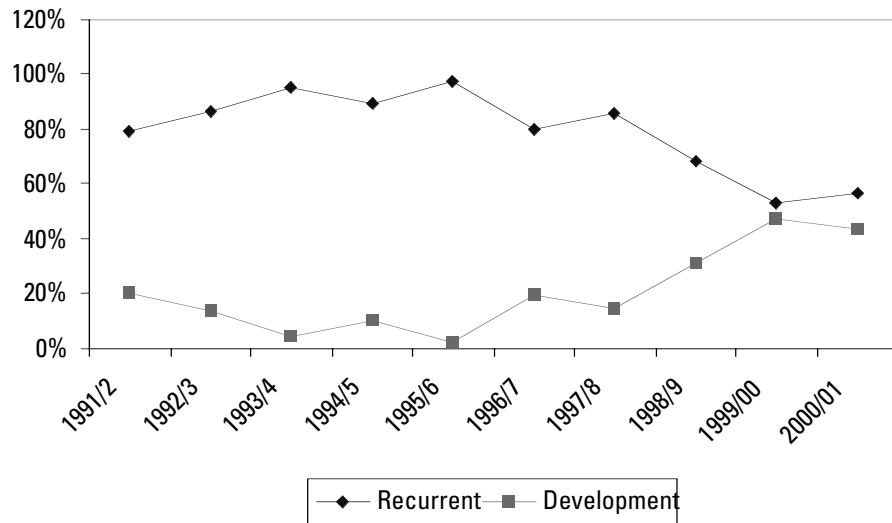
Source: The Gambia, Public Expenditure Review, 2001.

**Figure 15.5: The Gambia, recurrent expenditures for ministry of health in nominal and real (1990 constant) values for 1997–2001, US\$**



Source: The Gambia, Public Expenditure Review, 2001.

**Figure 15.6: The Gambia, public sector recurrent and development expenditures as a percentage of total public sector health expenditure, 1997–2001**



Source: The Gambia, Public Expenditure Review, 2001.

Note: Development Budget mostly includes funding from external partners. 1999/2000 are revised estimates, and 2000/2001 are budgets.

## Other Major Sectors that Influence Health Outcomes

**E**ducation and access to safe water and sanitation have been shown to influence various health outcomes including child mortality. However, Gambia fares poorly in both these sectors. Only 36 percent of population is literate and the gross primary school enrollment rate is just 52 percent. Only half of the population has access to safe water, and sanitation facilities are available for only 37 percent of population. However, these averages hide significant variations by regions of residence and by household wealth.

This section examines some of the critical factors that are known to strongly affect the health indicators of children and women. In particular, maternal education and access to water and sanitation have been shown to be major contributors to the decline in infant mortality. As the findings below suggest, low performance in these sectors is likely to negatively influence the progress toward better health outcomes.

### Education sector

Illiteracy is high in the country. Only 36 percent of the population (above age 15 years) is literate, with 52 percent literacy in the urban

areas and 25 percent in the rural areas. Only 17 percent of the bottom income quintile is literate, as compared to 63 percent of the top income quintile. The CRD and URD report only 20 percent literacy.

School enrollment also remains low especially for the poor groups. Among primary school age children, only 52 percent attend primary school. A wide disparity also exists according to the economic status of the household; only 33 percent of children in the lowest income quintile are reported to be in primary school, as compared to 72 percent in the highest income quintile. The CRD and URD report less than 30 percent of children in primary schools, as compared to almost 70 percent reported by Banjul and Kanifing. Gender disparities also exist in school enrollment, as 0.9 girls to every boy were admitted to primary schools.

Organized early childhood education has also been introduced in the Gambia. A survey (MICS 2000) showed that overall only 16 percent of children between 36 and 59 months attended ECD program, varying from 11 percent of children in the rural areas to 20 percent in the urban areas. More children from educated households benefit from ECD programs: 13 percent among the illiterate households; 19



percent among households with at least primary education; and 42 percent among households with at least secondary education. Less than 12 percent of children in the lower income groups (bottom 60 percent households) attended ECD programs, compared to almost 30 percent (more than double) in the top income quintile. Banjul and Kanifing reported over 25 percent of children in ECD programs, as compared to only 3 percent of children in the CRD region.

## **Water and sanitation**

Most poor households depend on wells for drinking water and pit latrines for sanitary purposes. In 1993 only half the population had access to safe water. Although there have been marked improvements in provision, water quality remains a problem especially where

traditional uncovered wells are the main source of water supply. Twenty-five percent of the extremely poor households obtain their water from uncovered wells, compared with 15 percent of the non-poor households. The lack of knowledge on the relationship between unclean water and disease is a major factor of water point contamination.

Polluted water, which is the main cause of most water-borne diseases such as diarrhea (the third most prevalent cause of child morbidity and mortality), is exacerbated by poor sanitation. Only 37 percent of the population had access to proper sanitary facilities in 1998. As might be expected, access to proper sanitary facilities varies radically between urban areas (83 percent) and rural areas (17 percent). Just 1 percent of the extremely poor households had access to flush toilets, with 85 percent relying on pit latrines.

## Conclusion

**T**he Gambia still shows a pattern of high levels of reproductive and child health ailments linked to poor nutritional status and communicable diseases. These will need to be addressed for future progress. To respond to these problems, the Gambia is not without assets. The government can count on a record of strong health programs that prioritize the problem of communicable diseases. The high immunization coverage for children under 5 and pregnant women is an indication of the effectiveness of prioritized public health programs. Tuberculosis treatments are up to date, malaria vector control programs exist, and iodine deficiency is being addressed through iodized salts. Demand for some key maternal health services such as antenatal care has been high over the last few years.

The health system also has some notable strengths. The Ministry of Health has long been emphasizing the equitable provision of appropriate health care to the population. Community-based PHC programs are already a part of the Gambian health care system and some of the determinants of poor nutrition among children are being addressed through the Baby Friendly Community Initiative. Strengthening and expanding such programs

are part of the Ministry's five-year plan. There is already a strong network of community workers who are trained and placed closer to their clients. Despite changes at the top, nurse/midwife cadres seem to have remained the backbone of the health care system because several facilities for higher education exist for nurses, midwives, and public health officers. The number for health workers has also increased recently with the introduction of a school of medicine.

But the country faces significant health challenges as infant and under-5 child mortality rates are still high. Remaining causes are not amenable to immunization and malnutrition is contributing largely to the high level of mortality. Yet most causes—ARI, malaria, diarrhea, neonatal sepsis, etc.—remain preventable through household and community-based action supported by primary care services. Readiness to respond to meningitis epidemics should also be strengthened. Poor obstetrical conditions keep maternal mortality high and will require combining interventions at the household level, TBA services with adequate transport for referral, and the presence of qualified staff in physically accessible emergency obstetric care. Nutrition improvements should also focus on women as anemia among preg-

nant women is extremely high. Promotion of contraception also remains a priority to support birth-spacing that will reduce maternal and under-5 mortality.

Because malaria remains the number one communicable disease, a renewed effort to promote the use of insecticide-treated nets with presumptive treatment for pregnant women and children should be launched. But emerging diseases such as HIV/AIDS should also be given priority with the design of appropriate programs to control its spread, as well as the spread of associate diseases like STIs and TB.

To face these challenges the government will have to expand strategies to respond to some key identified weaknesses in the functioning of the Gambian health sector. The first point of referral—the major health center—lacks resources and appropriate staff, hampering the delivery of the appropriate emergency obstetrical care essential to cutting maternal mortality. Referral systems should be given priority and significantly strengthened to give appropriate and timely attention to emergency cases, particularly concerning obstetrical care. This will require developing appropriate mechanisms to ensure the availability of trained and competent staff 24 hours a day. New recruitment agendas, incentives schemes and/or contractual arrangements urgently need to be developed to ensure the presence of such staff in referral centers.

The health mapping exercise simplified the health pyramid but there is still a need to improve access to services in some poor areas. There is also a need to allocate sufficient resources for the maintenance of the primary care infrastructure. Funds are required for the maintenance and operations of vehicles for outreach services that are fundamental for the effectiveness of the PHC. Government commitment is also required to develop standards for sustaining good quality of services by training community health workers and traditional birth attendants and recruiting physicians and nurses with appropriate training for rural areas

and for communicable health concerns. IEC programs are required to improve the access of the population to appropriate and timely knowledge, especially for the high risk, the underserved, and the vulnerable population.

Some weaknesses in the financing system will also need to be addressed. A significant shift in resource allocation is needed to align public financing flows with expressed priorities of the government. This will imply systematically allocating incremental funds—whether from external sources or from internal revenue through the debt-relief process—to community-based primary and secondary services. Addressing the major technical inefficiencies linked to providing OPD through large hospitals will require significant political will. One method would be to refocus hospital activities on inpatient services and referral care and close general OPD services. Another would be to develop pricing mechanisms that encourage use of primary centers and limit the use of large hospitals for OPD. Reallocation of personnel from hospitals to health centers, financial incentives, and the development of contractual approaches for those personnel are also among the options to be considered. The issue of recurrent drug shortages should also be addressed. Creating an independent central medical store that operates on a cash-and-carry basis could be an avenue worth exploring.

Capacity development will also be required to translate policy into plans, execute those plans, and monitor and evaluate health programs with a readiness to make changes. Special attention would need to be given to decentralized units. The divisional health teams need to be able to manage more of their resources if they are going to be more effective. There is limited data analysis or feedback provided to service providers and program implementers. Critical data for decisionmaking such as national health accounts (including private sector expenditures and unit cost information for facilities) are lacking. Development of more

systematic data analysis will be necessary. There is insufficient knowledge of financing sources, flows, and use of funds to make relevant decisions with regard to future financing strategies. In particular, little is known about risk pooling institutions or about household (private sector) contributions toward health. It is highly recommended that the Gambia undertakes a national health accounts study (which can be conducted in collaboration with other household studies) with, for example, the Central Bureau of Statistics. The government needs to assess health care spending for the country, through private and public contributions, and to assess which segments of the population require public subsidies.

Overall health care spending as well as public spending is low by international standards, suggesting the need for the government to assess if it is adequately meeting the underlying health needs of the population. Pricing and exemption policies need to be revisited; policies on drug purchase, supply, disbursement, and pricing are required. Although much of the population avail the services of the private providers, little information is available about them and further investigation would be required to envision mechanisms of collaboration between the public and the private services.

### **Community-based programs support**

A strategy that the government may want to support is the further development of commu-

nity-based health and health outreach programs. The Gambia has initiated such programs in the past decade, with a focus on MCH services. Overall these community-based health programs have improved some indicators such as implementing exclusive breastfeeding. However, community-based programs need to be strengthened to build capacity at village level. Government involvement at the community level is still financially and managerially limited. Because of the decentralization of the health ministry's decisionmaking process for the management of the health sector, the government has disengaged from community-based activities. Greater involvement is required on the part of the community, and further dissemination of information is required for the population at large, with particular emphasis on underprivileged areas. Finally, resource mobilization, capacity strengthening, and integration of community-based activities remain major challenges to the system.

An additional strategy is to seek assistance from NGOs, CBOs, and private providers, especially in accessing the population of the remote and underserved rural areas and in carrying out behavioral changes. This could be achieved through collaborated efforts among the community, NGOs, and private sector such as providing incentives through training and supplies (such as for vaccination, ORS, etc.).

# Notes

## Executive Summary

1. The 1990 Contraceptive Prevalence Survey measured access to health facilities by distance and travel time. A similar finding was reported by the 1993 HEHS survey.
2. Although the presence of the expatriate staff is attractive to the government because they do not require wages, the benefits costs are not negligible. This approach might also be detrimental for the country if it prevents the building of local capacity and/or the retention of locally trained staff.
3. These figures should be taken cautiously, however, as the Gambia data reflect data from public sector facilities only.

## Chapter 1

4. A marked reduction is seen in the infant (and child) mortality rates in the Gambia over the past 30 years (from 217 [320] in 1973 to 64 [82] in 1998 as shown in Figure 6 [IMR declined by 23 percent between 1973–83, by 49 percent between 1983–93, and by 25 percent between 1993–1998]).
5. Information on the causes of child mortality is not available for the entire country.

Therefore, for purposes of analysis, information is sought from registers in the children's ward at the Royal Victoria Hospital for 1995.

6. Poverty Survey, 1998.
7. The Department of State for Health, Social Welfare, and Women's Affairs (DoSH) is organized into geographical divisions, which differ from the administrative divisions of the government.
8. Annex Tables 1.1 and 1.2 show the anthropometric indicators for children under 5 years from two different surveys: MICS 2000, and the National Anthropometric Exit Survey, 2000. Annex Figure 1 shows the variations in wasting seasonally and reported over time by the Anthropometric Exit Survey of 2000. Both survey results vary and therefore must be viewed with caution. The data are especially different between the two surveys for the stunting of children under 5 years. This section uses results from the MICS 2000 survey, which is also a nationally representative survey. Some evidence of similarities and differences in survey results are also provided from the Poverty Survey, 1998.

9. Low birth weight (LBW) is measured as weight of infants at less than 2,500 grams.
10. MICS, 2000.
11. Although, the data reported for wasting and underweight at the national level are more or less close between the two surveys; however, at the regional level, results reported by the two surveys vary significantly.
12. According to the Poverty Survey, 1998, the greater Banjul area reported the highest proportion of under-5 children who were wasted.
13. This result is not necessarily supported by the Poverty Survey, 1998, which reports URD with the largest proportion of mildly and moderately stunted children and LRD with the largest proportion of severely stunted children.
14. Poverty Survey, 1998. A larger proportion of mildly wasted children were seen in LRD (38 percent), followed by NBD and CRD. A larger proportion of moderately wasted children were seen in the Banjul city (10 percent), followed by the CRD and the KMC divisions.
15. Poverty Survey, 1998.
16. The Poverty Survey, 1998 shows that mild and moderate wasting were more prevalent among the poor, whereas severe wasting was more prevalent among the non-poor.
17. Literature suggests that stunting is mostly affected by household behavior on feeding and care of illness, whereas wasting is primarily affected by economic shocks and downturns.
18. MICS, 2000.
- 19.. Medical Research Corporation (MRC), 1996.
20. Data is from the WDI, and is for the latest period between 1988 and 1995.
21. NaNA, 2000.
22. The 1998 Poverty Survey in the Gambia showed a high association between poverty and total fertility, ranging from 3.9 per woman in non-poor monogamous relationships to 6.8 for extremely poor women in polygamous relationships.
23. Disaggregate data is only available from 1993.
24. Poverty Survey of 1998. The TFR among the extremely poor was about 6.7 births per woman, the TFR among the poor was about 4.7 (range between 4.4 and 5), and the TFR among the non-poor was about 4.1 (ranged between 3.9 and 4.4).
25. Government of the Gambia-UNICEF, *Updating of the Situation of Children and Women in the Gambia*. January 2001.

## Chapter 2

26. MICS, 2000.
27. Vast differences were noted in the 1993 data on the type of health facility used or the health manpower visited by the poor versus the non-poor. The 1998 data show little differences in the type of health service used by economic status.
28. All data come from The Gambia Multiple Indicator Cluster Survey Report, 2000, also known as the MICS Survey; however, a Mortality and Contraceptive Prevalence Survey conducted in 2001 gave a CPR of 13.4 percent for modern methods, which seems to be too high.
29. Guengant, J.-P. and J.F. May, "Impact of the proximate determinants on the future course of fertility in sub-Saharan Africa," *Population Bulletin of the United Nations*, Special Issue (forthcoming).
30. Economic differences were noted in CPR. Only 6 percent of the poorer households (compared to 13 percent of the higher income households) used contraceptives.
31. The MICS 2000 and EPI Coverage Evaluation Survey of 2000 report TT2+ coverage to be 76 percent of all CBA women.
32. Fifty-five percent of overall deliveries, 78 percent in urban areas and 42 percent in

rural areas, were attended by a nurse/midwife/assistant midwife in 2000; 25 percent of overall deliveries, 9 percent in urban areas and 34 percent in rural areas, were attended by a traditional birth attendant (TBA).

33. MICS (2000) asked these questions to women in households: if they (i) have heard of AIDS; (ii) know three ways to prevent HIV transmission; (iii) can correctly identify misconceptions about HIV transmission.
34. MICS (2000)
35. Currently, UNICEF is providing some support for the efforts under the Basic Social Services Program.

### Chapter 3

36. The 1990 Contraceptive Prevalence Survey measured access to health facilities by distance and travel time. A similar finding was reported by the 1993 HEHS survey.
37. The two data come from different sources and therefore one requires caution when comparing figures as hospital beds may be defined differently. For example, the 1999 hospital bed data does not include birth/delivery and observation beds.
38. Mapping, 1999
39. Although the presence of the expatriate staff is attractive to the government because the government does not have to pay wages, the benefits costs are not negligible. If the country does not build the local capacity and/or or retain the locally

trained staff, the expatriate medical staffing approach might be detrimental for the country.

40. The data in this section have been extracted from two different sources: (i) service delivery records and (ii) household surveys. The service delivery data were from the public health facilities (only DOSH) on the outpatient visits, and the inpatient admissions. Since the Health Management Information System (HMIS) under the DoSH is being developed, historical data were not available to conduct trend analysis. Two household surveys of 1993 and 1998 provide some information on the utilization of services in case of illness. However because of the small sample size, results should be viewed with discretion. Data on use of private health services or traditional healers are also not included in these analyses for the most part. There is also limited information on the details of patients (age, gender, type of illness, number of visits, etc.).
41. This is the latest data available for analysis.
42. MICS, 2000.

### Chapter 4

43. Source of data is DoSH, PER, 2002 (unpublished)

# Annexes



## ANNEX A: COUNTRY DATA

**Annex A, table 1: The Gambia, demographic and health indicators 1973–2000**

	1973	1983	1993	1999
Population (millions)	0.49	0.69	1.04	1.251
Annual growth rate (percent)	3.4%	3.4%	4.2%	6.4%
Urban Population (percent)	15%	18%	26%	26%
Life expectancy:				
Total	33	42	53	53
Male	32	40	52	52
Female	35	44	54	55
Total fertility rate	6.1	6.4	6.1	5.5
Crude birth rate (per 1,000 population)	49	51	46	?
Crude death rate (per 1,000 population)	30	21.2	19	?
Infant mortality rate (per 1,000 live births)	217	167	137?	75
Under 5 mortality rate (per 1,000 live births)	320	260	137?	110
Population's access to safe water (percent)	...	23%	50%	62%
Adult literacy (percent)	...	23%	37%	37%

Source: National Census 1973, 1983 and 1993

**Annex A, table 2: The Gambia; anthropometrics indicators among under 5s**

Indicator	Level	Western	NBD	URD	LRD	CRD-N	CRD	National
Stunting	Chronic	14.9	25.6	22.7	20.9	23.3	29.9	19.1
(Height for age)	Severe	3.9	8.7	6.7	7.9	7.8	14.8	6.2
Wasting	Chronic	5.2	9.0	12.1	6.9	12.7	16.3	8.2
(Weight for height)	Severe	0.3	2.5	0.0	0.4	1.7	3.8	1.1
Underweight	Chronic	11.3	21.0	26.4	19.1	26.8	29.2	17.1
(Weight for age)	Severe	1.9	5.4	4.5	3.2	6.3	9.1	3.5

Source: MICS 2000

**Annex A, table 3. The Gambia, anthropometrics indicators among children under 5, 2000**

Index	Indicator	Western	NBD-West	NBD-East	LRD	CRD	URD	National (Wtd. Avg.)
Height-for-age (stunting)	Mean z score	-0.22	-0.31	-0.60	-0.52	-0.54	-0.43	-0.35
	% of children with z score <-2	5.5%	8.3%	15.1%	14.8%	14.0%	10.1%	9.0%
	% of children with z score <-3	2.2%	2.5%	2.7%	5.6%	6.9%	2.9%	3.3%
Weight-for-height (wasting)	Mean z score	-0.69	-0.84	-0.82	-1.03	-0.86	-0.86	-0.78
	% of children with z score <-2	8.4%	11.6%	9.8%	18.0%	12.7%	9.4%	10.1%
	% of children with z score <-3	0.5%	0.8%	1.6%	1.1%	1.1%	0.3%	0.7%
Weight-for-age (underweight)	Mean z score	-0.75	-0.93	-1.03	-1.12	-1.00	-0.98	-0.88
	% of children with z score <-2	12.4%	14.7%	20.2%	22.1%	23.1%	16.2%	15.9%
	% of children with z score <-3	1.9%	5.2%	3.7%	4.9%	4.8%	2.8%	3.0%

Source: CRS/GAFNA/DoSH National Anthropometrics Exit Survey, 2000.

**Annex A, table 4:**

Division	Distribution of public health facilities			Name/Location
	Population (1993)	Pop/Facility	Facilities	
Banjul City	42,000	42,000	Hospital	RVH Banjul
		42,000	Polyclinic	Banjul
		21,000	MCH Clinic	Leman Street
Kanifing Municipal Area (KMC)	341,000	341,000	Major Health Center	FajiKunda
		170,500	Min. Health Center	Serekunda
				Bakau
Western (WD)	307,000	307,000	Major Health Center	Brikama
		61,400	Min. Health Center	Banjulunding
				Gunjur
				Sukuta
				Brufut
				Bwiam
			Hospital (incomplete)	Bwaim
			VHS	127 Villages
Lower River (LRD)	71,000	71,000	Major Health Center	Soma
		23,667	Min. Health Center	Kiang Karantab
				Bureng
				Kwinella
			VHS	64 Villages
North Bank (NBD)	185,000	185,000	Hospital	Farafeni
		185,000	Major Health Center	Essau
		37,000	Min. Health Center	Kuntaya
				Medina Bafulot
				Kerewan
				Ngayan Sanjal
				Salikene
			VHS	107 Villages
Central River (CRD)	175,000	175,000	Hospital	Bansang
		175,000	Major Health Center	Kuntaur
		25,000	Min. Health Center	Kaur
				Kudang
				Chamen
				Janjanbureh
				Brikamaba
				Sami Karantab
				Dankunku
			VHS	89 Villages
Upper River (URD)	185,000	185,000	Major Health Center	Basse
		37,000	Min. Health Center	Fatoto
				YoroBawol
				Gambisara
				Diabugu
				Baja Kunda
			VHS	60 Villages

**Annex A, table 5: Skilled health human resource needs and status in the basic health facilities**

Category	Available June 2001	Required 2001	Req 2002	Req 2003
Medical doctor	61	29	49	73
SRN midwife	25	29	49	73
SRN	23	58	98	146
SEN	59	29	49	73
CHN	86	116	196	292
Public health officer	33	29	49	73
Dispensing assist.	0	29	49	73

**Annex A, table 6: Major health centers**

Category	Available June 2001	Required 2001
Medical doctor	44	17
At-Risk midwife		17
SRN midwife	16	10
Perioperative nurse		20
Nurse anesthetist		14
SEN	54	102
SRN	27	58
Pharmacy technician	0	7
Dispensary assistant	8	14
Laboratory technician	0	7
Laboratory assistant		14
Senior radiologist assistant	0	14
Records clerk	0	13
Management staff		26

**Annex A, table 7: The Gambia, morbidity pattern among patients under 5 years of age**

Divisions	Morbidity Pattern Among Patients Under 5 years of age							
	Total	Lower respiratory tract infection	Diarrhea	Dysentery	Skin	Malaria	Anemia	Malnutrition
<i>1996</i>								
Western Division	147,936	6,325	21,726	2,762	28,446	84,149	3,432	1,096
North Bank Division–West	24,202	1,497	2,317	308	4,043	15,711	155	171
North Bank Division–East	19,184	1,400	3,101	438	3,476	10,162	329	278
LRD	27,031	1,819	3,272	706	4,323	15,899	471	541
CRD	106,736	7,524	16,691	4,521	14,974	59,968	1,428	1,630
URD	43,920	2,539	5,075	1,303	6,025	27,797	483	698
National	369,009	21,104	52,182	10,038	61,287	213,686	6,298	4,414
<i>1997</i>								
Western Division	150,806	6,048	22,601	3,201	28,699	85,679	3,007	1,571
North Bank Division–West	30,605	1,941	2,871	363	5,296	19,849	171	114
North Bank Division–East	15,135	745	1,849	340	2,950	8,932	146	173
LRD	33,762	1,421	4,925	643	6,058	19,603	432	680
CRD	111,807	6,751	16,693	4,378	15,710	65,657	1,117	1,501
URD	26,893	1,322	3,867	797	3,742	16,746	165	254
National cases per 1,000 population < 5 years	369,008	18,228	52,806	9,722	62,455	216,466	5,038	4,293
<i>1996</i>								
Western Division	1621	69	238	30	312	922	38	12
North Bank Division–West	1679	104	161	21	280	1090	11	12
North Bank Division–East	1178	86	190	27	213	624	20	17
LRD	2259	152	273	59	361	1329	39	45
CRD	3875	273	606	164	544	2177	52	59
URD	1441	83	166	43	198	912	16	23
National	1946	111	275	53	323	1127	33	23
<i>1997</i>								
Western Division	1546	62	232	33	294	878	31	16
North Bank Division–West	2042	130	192	24	353	1325	11	8
North Bank Division–East	903	44	110	20	176	533	9	10
LRD	2775	117	405	53	498	1611	36	56
CRD	3973	240	593	156	558	2333	40	53
URD	852	42	122	25	119	530	5	8
National	1867	92	267	49	316	1095	25	22

Source: MOH, 2001

**Annex A, table 8: The Gambia, morbidity pattern among patients above 5 years of age**

Morbidity Pattern Among Patients Above 5 years of age										
Divisions	Total	Lower respiratory tract infection	Circulatory Problems	Diarrhea	Dysentery	Upper respiratory tract infection	Skin	Malaria	Anemia	Malnutrition
<i>1996</i>										
WD	104,557	2,109	3,055	3,131	1,277	4,864	10,156	77,830	2,036	99
NBD-W	23,626	1,071	585	708	446	846	3,045	16,596	308	21
NBD-E	14,543	1,171	460	821	312	511	1,439	9,404	331	94
LRD	12,283	982	710	453	283	728	1,346	7,517	231	33
CRD	57,228	3,185	2,043	3,217	1,674	2,191	4,727	38,898	1,193	100
URD	24,075	1,398	766	548	720	1,519	1,964	16,819	321	20
National	236,312	9,916	7,619	8,878	4,712	10,659	22,677	167,064	4,420	367
<i>1997</i>										
WD	157,706	3,053	3,925	5,226	1,898	7,621	10,280	123,166	2,341	196
NBD-W	23,011	903	497	574	331	951	2,984	16,474	284	13
NBD-E	13,111	600	504	217	188	403	1,299	9,646	209	45
LRD	13,160	467	377	317	232	531	1,400	9,577	226	33
CRD	58,147	2,773	1,758	3,317	1,768	2,260	5,088	39,720	1,237	226
URD	14,500	1,112	598	629	440	719	1,587	9,293	73	49
National cases per 1,000 population >5 years										
	279,635	8,908	7,659	10,280	4,857	12,485	22,638	207,876	4,370	562
<i>1996</i>										
WD	205	4	6	6	3	10	20	153	4	0.2
NBD-W	358	16	9	11	7	13	46	252	5	0.3
NBD-E	191	15	6	11	4	7	19	124	4	1.2
LRD	217	17	13	8	5	13	24	133	4	0.6
CRD	412	23	15	23	12	16	34	280	9	0.7
URD	166	10	5	4	5	10	14	116	2	0.1
National	239	10	8	9	5	11	23	169	4	0.4
<i>1997</i>										
WD	292	6	7	10	4	14	19	228	4	0.4
NBD-W	336	13	7	8	5	14	44	240	4	0.2
NBD-E	168	8	6	3	2	5	17	123	3	0.6
LRD	229	8	7	6	4	9	24	167	4	0.6
CRD	410	20	12	23	12	16	36	280	9	1.6
URD	96	7	4	4	3	5	11	62	0.5	0.3
National	271	9	7	10	5	12	22	202	4	0.5

Source: MOH, 2001

**Annex A, table 9: Total skilled human resource needs and status in the basic health facilities and major health centers**

Category	Available 2001 (June)	Additional Staff Requirements		
		2001	2002	2003
Medical doctor	105	46	66	90
At-risk midwife	1	17	17	17
SRN midwife	41	39	59	83
Perioperative nurse	0	20	20	20
Nurse anesthetist	0	14	14	14
SEN	113	131	151	175
SRN	50	116	156	204
Pharmacy technician	0	7	7	7
Dispensary assistant	8	14	14	14
Laboratory tech	0	7	7	7
Laboratory assist.	0	14	14	14
Senior radiologist assistant	0	14	14	14
Records clerk	0	13	13	13
Management staff	0	26	26	26
CHN	86	116	196	292

**Annex A, table 10: The Gambia, outpatient consultations at hospitals and basic health facilities, 1996–2000**

Year	Population	OPD visits					
		Total	Per 1000 population	Hospitals		Basic health facility	
				#	%	#	%
1996	1145880	602716	526	146350	24%	456366	76%
1997	1180880	687731	582	194545	28%	493186	72%
1998	1215940	735405	605	214545	29%	520860	71%
1999	1251000	893142	714	256328	29%	636814	71%
2000	1286000	967919	753	320168	33%	647751	67%

Source: Population from WDI, 2002, and patient visits from service delivery data, MOH, The Gambia, 2001

Note: Basic Health Facilities included major health centers, since no minor health centers are located in towns/villages where major health centers are located.

**Annex A, table 11: The Gambia, inpatient admissions at hospitals and major health centers, 1996–2000**

Year	Population	INP visits					
		Total	Per 1000 population	Hospitals		Major health center	
				#	%	#	%
1996	1,145,880	69,704	61	27,089	39%	42,615	61%
1997	1,180,880	78,614	67	29,053	37%	49,561	63%
1998	1,215,940	83,858	69	30,897	37%	52,961	63%
1999	1,251,000	93,654	75	38,495	41%	55,159	59%
2000	1,286,000	103,778	81	46,450	45%	57,328	55%

Source: Population from WDI, 2002, and Patient Visits from Service Delivery Data, MOH, The Gambia, 2001

**Annex A, table 12: The Gambia, outpatient visits and inpatient admissions to public sector health centers by division, 1996–2000**

	WD	LRD	NBD-E	NBD-W	CRD	URD	National
<i>Population</i>	803,930	74,349	106,476	97,469	185,107	209,256	1,476,587
<i>Outpatient</i>							
1996	111,234	68,789	64,567	50,841	86,756	74,179	456,366
1997	121,379	76,478	63,567	53,665	90,898	87,199	493,186
1998	122,897	86,478	65,897	56,490	98,719	90,379	520,860
1999	189,389	87,689	73,678	75,159	112,718	98,778	637,411
2000	198,896	89,987	75,456	59,741	121,718	101,953	647,751
<i>OPD per 1,000 Population</i>							
1996	138	925	606	522	469	354	309
1997	151	1,029	597	551	491	417	334
1998	153	1,163	619	580	533	432	353
1999	236	1,179	692	771	609	472	432
2000	247	1,210	709	613	658	487	439
<i>Divisional share as Percent of National</i>							
1996	24	15	14	11	19	16	100
1997	25	16	13	11	18	18	100
1998	24	17	13	11	19	17	100
1999	30	14	12	12	18	15	100
2000	31	14	12	9	19	16	100
<i>Inpatient</i>							
1996	19,987	2,689	2,896	1,311	6,186	9,546	42,615
1997	21,987	3,245	3,895	1,467	8,987	9,980	49,561
1998	25,876	1,879	3,987	1,575	9,654	9,990	52,961
1999	27,980	1,665	2,869	1,804	10,765	10,076	55,159
2000	28,786	1,815	1,345	3,253	10,149	11,980	57,328
<i>INP per 1,000 Population</i>							
1996	25	36	27	13	33	46	29
1997	27	44	37	15	49	48	34
1998	32	25	37	16	52	48	36
1999	35	22	27	19	58	48	37
2000	36	24	13	33	55	57	39
<i>Divisional share as Percent of National</i>							
1996	47	6	7	3	15	22	100
1997	44	7	8	3	18	20	100
1998	49	4	8	3	18	19	100
1999	51	3	5	3	20	18	100
2000	50	3	2	6	18	21	100

Source: Service Delivery Data from MOH, PER, The Gambia, 2002 (unpublished)

Note: Divisional population are not known by year



**Annex A, table 13: The utilization pattern of public sector health centers and dispensaries for OPD by division, age and gender, 1996**

Divisions	<1	1-4	5-14	Adult Male	Adult Female	Total
<b>Dispensary</b>						
LRD	1,345	2,389	2,760	1,275	1,732	9,501
URD	3,076	6,923	5,651	4,083	6,921	26,654
NBD-E	860	2,167	1,702	884	1,182	6,795
NBD-W	4,566	5,476	3,936	3,130	4,297	21,405
CRD	11,834	18,720	18,637	14,454	16,616	80,261
WD	7,398	9,771	7,535	1,698	3,027	29,429
<i>National</i>	19,232	28,491	26,172	16,152	19,643	109,690
<b>Health Center</b>						
LRD	2,376	5,151	5,363	3,354	4,565	20,809
URD	3,024	5,810	4,589	4,688	6,477	24,588
NBD-E	697	1,463	4,652	3,502	4,714	15,028
NBD-W	1,308	2,543	7,927	3,837	5,967	21,582
CRD	4,104	6,699	12,651	9,738	13,279	46,471
WD	5,119	15,149	42,755	30,724	29,647	123,394
<i>National</i>	9,223	21,848	55,406	40,462	42,926	169,865
HC as % of total	64	68	66	72	72	69
Dispensary as % of total	36	32	34	28	28	31
<b>Total</b>						
LRD	3,721	7,540	8,123	4,629	6,297	30,310
URD	6,100	12,733	10,240	8,771	13,398	51,242
NBD-E	1,557	3,630	6,354	4,386	5,896	21,823
NBD-W	5,874	8,019	11,863	6,967	10,264	42,987
CRD	15,938	25,419	31,288	24,192	29,895	126,732
WD	12,517	24,920	50,290	32,422	32,674	152,823
<i>National</i>	45,707	82,261	118,158	81,367	98,424	425,917
<b>What are the age distribution at each facility: Percent at Dispensary</b>						
LRD	14	25	29	13	18	100
URD	12	26	21	15	26	100
NBD-E	13	32	25	13	17	100
NBD-W	21	26	18	15	20	100
CRD	15	23	23	18	21	100
WD	25	33	26	6	10	100
<b>Percent-Health Center</b>						
LRD	9	14	27	21	29	100
URD	6	12	37	18	28	100
NBD-E	11	25	26	16	22	100
NBD-W	5	10	31	23	31	100
CRD	6	12	37	18	28	100
WD	12	24	19	19	26	100
<b>Total Percent</b>						
LRD	12	25	27	15	21	100
URD	12	25	20	17	26	100
NBD-E	7	17	29	20	27	100
NBD-W	14	19	28	16	24	100
CRD	13	20	25	19	24	100
WD	8	16	33	21	21	100
<i>National</i>	11	19	28	19	23	100

**Annex A, table 13** (continued)

Divisions	<1	1-4	5-14	Adult Male	Adult Female	Total
What proportion go to Health Center vs. Dispensary: Percent at Dispensary						
LRD	36	32	34	28	28	31
URD	50	54	55	47	52	52
NBD-E	55	60	27	20	20	31
NBD-W	78	68	33	45	42	50
CRD	74	74	60	60	56	63
WD	59	39	15	5	9	19
Percent–Health Center						
LRD	64	68	66	72	72	69
URD	50	46	45	53	48	48
NBD-E	45	40	73	80	80	69
NBD-W	22	32	67	55	58	50
CRD	26	26	40	40	44	37
WD	41	61	85	95	91	81
Total Percent						
LRD	100	100	100	100	100	100
URD	100	100	100	100	100	100
NBD-E	100	100	100	100	100	100
NBD-W	100	100	100	100	100	100
CRD	100	100	100	100	100	100
WD	100	100	100	100	100	100
Per 1,000 Population–Dispensary						
LRD	18	32	37	17	23	128
URD	17	37	31	22	37	144
NBD-E	8	20	16	8	11	64
NBD-W	47	56	40	32	44	220
CRD	15	23	23	18	21	100
WD	35	47	36	8	14	141
Health Center						
LRD	32	69	72	45	61	280
URD	16	31	25	25	35	133
NBD-E	7	14	44	33	44	141
NBD-W	13	26	81	39	61	221
CRD	5	8	16	12	17	58
WD	24	72	204	147	142	590
Total						
LRD	50	101	109	62	85	408
URD	82	171	138	118	180	689
NBD-E	21	49	85	59	79	294
NBD-W	79	108	160	94	138	578
CRD	214	342	421	325	402	1,705
WD	168	335	676	436	439	2,055
<i>National</i>	615	1,106	1,589	1,094	1,324	5,729

Source: Service Delivery Data from MOH, The Gambia, 1996

**Annex A, table 14: The Gambia, total health expenditure in the public sector in US\$ and dalasi, 1991–2001**

Expenditure Category	1991/2	1992/3	1993/4	1994/5	1995/6	1996/7	1997/8	1998/9	1999/00 Rev. Est.	2000/01 Budget
<b>Total Health Expenditure</b>										
<i>Nominal</i>										
US\$, million	4.2	5.5	5.6	6.4	5.6	7.4	7.2	10.5	15.1	15.0
% change since 1997								45%	109%	107%
Dalasi, million	42.9	56.5	57.3	64.9	56.8	75.8	73.9	111.9	172.2	192.2
% change since 1997								52%	301%	348%
<i>Real (constant, 1990)</i>										
US\$, million	3.9	4.8	4.6	5.0	4.2	5.4	5.1	7.1	9.9	9.6
% change since 1997							32%	39%	156%	147%
Dalasi, million	39.6	48.7	47.0	51.3	43.2	55.0	52.3	76.0	113.0	122.8
% change since 1997							32%	45%	185%	210%
Exchange Rates	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.64	11.39	12.8
<b>Total Recurrent Health Expenditure</b>										
<i>Nominal</i>										
US\$, million	3.3	4.8	5.4	5.7	5.4	6.0	6.2	7.2	8.0	8.5
% change since 1997								16%	29%	37%
Dalasi, million	34.1	48.9	54.7	58.2	55.5	60.7	63.3	76.8	91.4	108.7
% change since 1997								21%	168%	219%
<i>Real (constant, 1990)</i>										
US\$, million	3.1	4.1	4.4	4.5	4.1	4.3	4.4	4.9	5.3	5.4
% change since 1997							43%	11%	71%	76%
Dalasi, million	31.4	42.1	44.8	46.0	42.1	44.1	44.8	52.1	60.0	69.5
% change since 1997							43%	16%	91%	121%
Exchange Rates	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.64	11.39	12.8
Recurrent as % of Total	79%	86%	95%	90%	98%	80%	86%	69%	53%	57%
Development as % of Total GDP (Dalasi, millions)	21%	14%	5%	10%	2%	20%	14%	31%	47%	43%
<i>Nominal</i>							4180	4479	4956	5171
<i>Real (constant, 1990)</i>										
Health Expenditure as % of GDP							1.8%	2.5%	3.5%	3.7%
<i>Nominal</i>										
Govt. Total Expenditure (Dalasi, millions)							1120	668	1686	2037
<i>Nominal</i>										
Health Expenditure as % of Total Govt. Expenditure							7%	17%	10%	9%
<i>Nominal</i>										
<b>Per Capita Health Expenditure</b>										
<i>Nominal</i>										
US\$	4.4	5.5	5.4	5.9	5.0		6.1	8.7	12.1	11.7
Dalasi	44.7	56.5	55.1	60.3	51.2		62.6	92.1	137.6	149.4
<i>Real (constant, 1990)</i>										
US\$	4.0	4.8	4.4	4.7	3.8		4.3	5.9	7.9	7.5
Dalasi	41.2	48.7	45.2	47.7	38.9		44.4	62.5	90.3	95.5
Population (million)	0.96	1.00	1.04	1.08	1.11	1.15	1.18	1.22	1.25	1.29

Source: Expenditure data from PER, 2001, and exchange rates for 1997-2001 from EIU

Note: 8.803 dalasi = 1\$US in 1991, 8.881 in 1992, 9.129 in 1993, 9.576 in 1994, 9.565 in 1995, and 9.789 in 1996,

## ANNEX B: INTERNATIONAL COMPARISON TABLES

**Annex B, Table 1: Sub-Saharan Africa, global demographic indicators, 1999**

Country Name	Population 1999	Growth% 1999	TFR 1999	Country Name	Population 1999	Growth% 1999	TFR 1999
Angola	12,356,900	2.88	6.68	Malawi	10,787,800	2.39	6.31
Benin	6,114,050	2.75	5.60	Mali	10,583,700	2.39	6.36
Botswana	1,588,120	1.68	4.14	Mauritania	2,598,330	2.70	5.26
Burkina Faso	10,995,700	2.44	6.56	Mauritius	1,174,400	1.26	2.02
Burundi	6,677,950	1.96	6.08	Mayotte	140,000	..	..
Cameroon	14,690,500	2.67	4.86	Mozambique	17,299,000	1.95	5.18
Cape Verde	427,790	2.96	3.75	Namibia	1,701,330	2.33	4.73
Central African Republic	3,539,810	1.70	4.74	Niger	10,495,600	3.39	7.28
Chad	7,485,610	2.75	6.32	Nigeria	123,897,000	2.52	5.21
Comoros	544,280	2.50	4.38	Rwanda	8,310,000	2.50	5.98
Congo, Dem. Rep.	49,775,500	3.18	6.24	Sao Tome and Principe	145,260	2.27	4.53
Congo, Rep.	2,858,760	2.70	5.94	Senegal	9,285,310	2.69	5.44
Cote d'Ivoire	15,545,500	2.57	4.94	Seychelles	80,030	1.49	2.10
Equatorial Guinea	442,680	2.58	5.33	Sierra Leone	4,949,340	1.93	5.87
Eritrea	3,991,000	2.85	5.56	Somalia	9,388,250	3.38	7.13
Ethiopia	62,782,000	2.44	6.26	South Africa	42,106,200	1.69	2.92
Gabon	1,208,410	2.35	5.08	Sudan	28,993,300	2.25	4.52
Gambia, The	1,251,000	2.84	5.46	Swaziland	1,019,470	2.89	4.50
Ghana	18,784,500	2.27	4.26	Tanzania	32,922,600	2.44	5.43
Guinea	7,250,520	2.29	5.33	Togo	4,566,940	2.42	5.08
Guinea-Bissau	1,184,670	1.99	5.54	Uganda	21,479,300	2.75	6.36
Kenya	29,410,000	2.13	4.51	Zambia	9,881,210	2.21	5.38
Lesotho	2,105,000	2.27	4.51	Zimbabwe	11,903,700	1.82	3.61
Liberia	3,044,050	2.75	6.10				
Madagascar	15,050,500	3.09	5.56	Average	13,391,935	2.43	5.21

Source: World Bank, *World Development Indicators* 2001, Washington, D.C., 2001

**Annex B, Table 2: Sub-Saharan Africa: health indicators (1990-1999)**

Country Name	Infant Mortality Rate (1999)	Under-5 Mortality Rate (1999)	Maternal Mortality Rate (1990-7)	Life Exp. at Birth (1999)
Angola	127	208	1,500	47
Benin	87	145	500	53
Botswana	58	95	250	39
Burkina Faso	105	210	930	45
Burundi	105	176	1,300	42
Cameroon	77	154	550	51
Central African Republic	96	151	700	44
Chad	101	189	840	49
Comoros	61	86	...	61
Congo, Dem. Rep.	85	161	870	46
Congo, Rep.	89	144	890	48
Cote d'Ivoire	111	180	810	46
Djibouti	109	177	570	47
Equatorial Guinea	104	170	...	51
Eritrea	60	105	1,000	50
Ethiopia	104	180	1,400	42
Gabon	84	133	500	53
Gambia, The	75	110	1,050	53
Ghana	57	109	740	58
Guinea	96	167	880	46
Guinea-Bissau	127	214	910	44
Kenya	76	118	650	48
Lesotho	92	141	610	45
Liberia	113	188	...	47
Madagascar	90	149	500	54
Malawi	132	227	620	39
Mali	120	223	580	43
Mauritania	88	142	800	54
Mauritius	19	23	110	71
Mozambique	131	203	1,100	43
Namibia	63	108	220	50
Niger	116	252	590	46
Nigeria	83	151	1,000	47
Rwanda	123	203	1,300	40
Sao Tome and Principe	47	66	...	65
Senegal	67	124	510	52
Seychelles	9	15	...	72
Sierra Leone	168	283	...	37
Somalia	121	203	...	48
South Africa	62	76	230	48
Sudan	67	109	370	56
Swaziland	64	113	...	46
Tanzania	95	152	530	45
Togo	77	143	640	49
Uganda	88	162	550	42
Zambia	114	187	650	38
Zimbabwe	70	118	280	40
Africa Region Average=	89.35	151.31	715.25	48.78

Source: World Bank, *World Development Indicators 2001*, Washington, D.C., 2001 and World Health Organization, *World Health Report 2000*, WHO, Geneva, 2000

**Annex B, Table 3: Sub-Saharan Africa, physicians and beds per 1,000 population (1990–1999)**

Country Name	Physicians per 1,000 Population (1999)	Beds per 1,000 Population (1998)
Angola	0.04	1.29
Benin	0.03	0.23
Botswana	0.19	1.58
Burkina Faso	...	1.42
Burundi	0.06	0.66
Cameroon	0.06	2.55
Central African Republic	0.03	0.87
Chad	0.02	0.72
Comoros	0.09	2.76
Congo, Dem. Rep.	0.05	1.43
Congo, Rep.	0.21	3.35
Cote d'Ivoire	0.07	0.80
Djibouti	0.13	2.54
Equatorial Guinea	0.22	...
Eritrea	0.02	0.75
Ethiopia	0.03	0.24
Gabon	0.23	3.19
Gambia, The	0.20	1.21
Ghana	...	1.46
Guinea	0.11	0.55
Guinea-Bissau	0.18	1.48
Kenya	0.04	1.65
Lesotho	0.04	...
Liberia	...	...
Madagascar	1.14	0.94
Malawi	0.03	1.34
Mali	0.06	0.24
Mauritania	0.06	0.67
Mauritius	0.86	3.07
Mozambique	..	0.87
Namibia	0.23	...
Niger	0.03	0.12
Nigeria	0.19	1.67
Rwanda	0.04	1.65
Sao Tome and Principe	0.42	4.74
Senegal	0.04	0.40
Seychelles	1.03	...
Sierra Leone	...	...
Somalia	0.04	0.75
South Africa	0.62	...
Sudan	0.10	1.09
Swaziland	0.08	...
Tanzania	0.04	0.89
Togo	0.06	1.51
Uganda	0.04	...
Zambia	0.07	...
Zimbabwe	0.12	0.51
Africa Region Average=	0.17	1.37

Source: World Bank, *World Development Indicators 2001*, Washington, D.C., 2001

**Annex B, Table 4: Sub-Saharan Africa, health expenditure pattern, 1990–1998**

Country Name	Per Capita GDP, US\$ (1998)	Per Capita Public Sector Health Exp, US\$ (1998)	Public Sector Health Exp. % of GDP (1998)
Angola	1272	50	3.90
Benin	388	6	1.60
Botswana	3123	78	2.50
Burkina Faso	240	3	1.20
Burundi	134	0.80	0.60
Cameroon	608	6	1.00
Central African Republic	301	6	2.00
Chad	231	5	2.30
Comoros	374	12	3.10
Congo, Dem. Rep.	...	...	..
Congo, Rep.	701	14	2.00
Cote d'Ivoire	742	9	1.20
Djibouti	...	...	..
Equatorial Guinea	1184	36	3.00
Eritrea	173	5	2.90
Ethiopia	107	2	1.70
Gabon	3913	82	2.10
Gambia, The	343	8.7	2.50
Ghana	407	7	1.80
Guinea	506	11	2.20
Guinea-Bissau	222	2	1.10
Kenya	398	10	2.40
Lesotho	484	16	3.40
Liberia	...	...	..
Madagascar	256	3	1.10
Malawi	165	5	2.80
Mali	251	5	2.10
Mauritania	396	6	1.40
Mauritius	3512	63	1.80
Mozambique	230	6	2.80
Namibia	1831	75	4.10
Niger	205	2	1.20
Nigeria	267	2	0.80
Rwanda	250	5	2.00
Sao Tome and Principe	345	21	6.10
Senegal	516	13	2.60
Seychelles	6789	367	5.40
Sierra Leone	138	1	0.90
Somalia	...	...	..
South Africa	3236	107	3.30
Sudan	370	3	0.70
Swaziland	1232	33	2.70
Tanzania	267	3	1.30
Togo	317	4	1.30
Uganda	324	6	1.90
Zambia	335	12	3.60
Zimbabwe	757	22	2.90
Africa Region Average=	880.08	26.34	2.20

Source: World Bank, *World Development Indicators 2001*, Washington, D.C., 2001

## ANNEX C

**Annex C, Table 1: Key indicators for monitoring and evaluation of the participatory health population and nutrition project and its environment**

Indicator	Description	Value (1998)	Present value (2001)	Target (2003)	Source of Information	Frequency
<i>Inputs</i>						
% GoG budget to health		6.6%	12.7%	Increase by 4% per year	PER	1 yr
Population of GoG health budget to primary and secondary care	Percentage of the total government health budget to primary and secondary levels of care	35%	37.4%	52%	FIS	1 yr
Equity index for CHNs	Ratio of number of CHN/1000 people in best served and least served division	Data not available	0.23/1000 best (NBDE) 0.11/1000 least (CRD) Ratio 23/11 = 2.09	50% improvement	HRIS	1 yr
<i>Outputs</i>						
% of children exclusively breast fed	Proportion children < 4 months old which received no other feeding than breast milk	17%	36% (MICS 2000)		40%	HH Survey 3 yr
Vaccination coverage	Proportion of children 12-24 months, which are fully vaccinated	83%	74.0% (2000)	90%	EPI Coverage Survey	1 yr
Vitamin A NID coverage	Proportion of children up to 5 yrs given dose of Vitamin A during National Immunization Days	Data not available	89%	90%	NID Reports	1 yr



Annex C, Table 1 (continued)

Indicator	Description	Value (1998)	Present value (2001)	Target (2003)	Source of Information	Frequency
Vitamin A coverage routine	Proportion of children up to 5 yrs given dose of Vitamin A through routine MCH services	Data not available	60%	75%	EPI Coverage Survey	1 yr
IMCI drug availability among VHW	Proportion of VHW with at least 1 month stock of 5 essential IMCI drugs (Chloroquin, Cotrimoxazole, ORS) in pilot divisions	Data not available	Data not available	90%	CHN super-vision reports	1 yr 3 yr VHW surveys
% correct case managment. of childhood illness by BHF staff and VHWs	Proportion of BHF staff and VHWs which correctly examine, diagnose and treat IMCI illnesses in pilot divisions	Data not available	Data not available	80%	CHN super-vision reports	IMCI Assessment Report
% trained attendance at births	Proportion of all births which is attended by trained TBAs, midwives or medical doctors	Data not indicated	60%	70%	HH Survey	3 yrs
Contraceptive Prevalence Rate	Proportion of women of reproductive age using modern contraceptives	Around 10%	13.4 modern, 4.1% trad., 17.4 (MM Survey 2001)	16%	HH Survey	3 yr
Condom availability	Number of condoms distributed per unit of 1000 people in the general population	Data not available	Data not available	25%	UNFPA Mission Report	3 yr
Equity index for staff efficiency in PHC	Ratio of a package of PHC interventions (Service Units) provided per staff member per facility in the most and least efficient facility	Data not available	Data not available	50% improvement	HIS	1 yr

Annex C, Table 1 (continued)

Indicator	Description	Value (1998)	Present value (2001)	Target (2003)	Source of Information	Frequency
Equity index for service use in PHC	Ratio of the utilization of a package of PHC interventions (Service Units) per number of population in the catchments area in the best and least served division in the country	Data not available	Data not available	50% improvement	HIS and HRIS	1 yr
<i>Outcomes</i>						
Infant Mortality Rate	Number of children dying before the age of 1 yr per 1000 children of that age group	92/1000	91.62/1000	90/1000	HH survey, Census, Mortality Statistics	3 yr
Child Malnutrition Rate	Prevalence rate of general malnutrition (W/A) and H/A among children < 5 yr	Data not available	Stunting 19%, Underweight 17% (MICS 2000)	19%, 16% and 14%	HH survey	3 yr
STD Incidence Rate	Number of new STD cases reported per 1000 antenatal visits in the total population per year	Data not available	28.2/1000	20%	HIS	3 yr
Total Fertility Rate	The number of children a woman would have if she would have a series of age-specific fertility rates prevalent among the women of reproductive age at the time of measurement	6.5 (1980)	5.55	5.5 7% reduction	HH survey	3 yr
Maternal mortality Ratio		1030/100,000 live births	703/100,000 (MMR 2001 Study)	608/100,000 live births	Survey	2 yr

*Notes:* It was observed that some of the indicators are not project specific and therefore cannot be used in assessing performance of the Project. Equity indices for staff efficiency and utilization though useful, cannot be determined now since staffing norms and job allocations are not completed.