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MICS MULTIPLE INDICATOR CLUSTER SURVEY

Assessing the Situation of
Angolan Children and Women at
the Beginning of the Millennium

Analytical Report



Republic of Angola
Government of Unity and National Reconciliation
National Institute of Statistics



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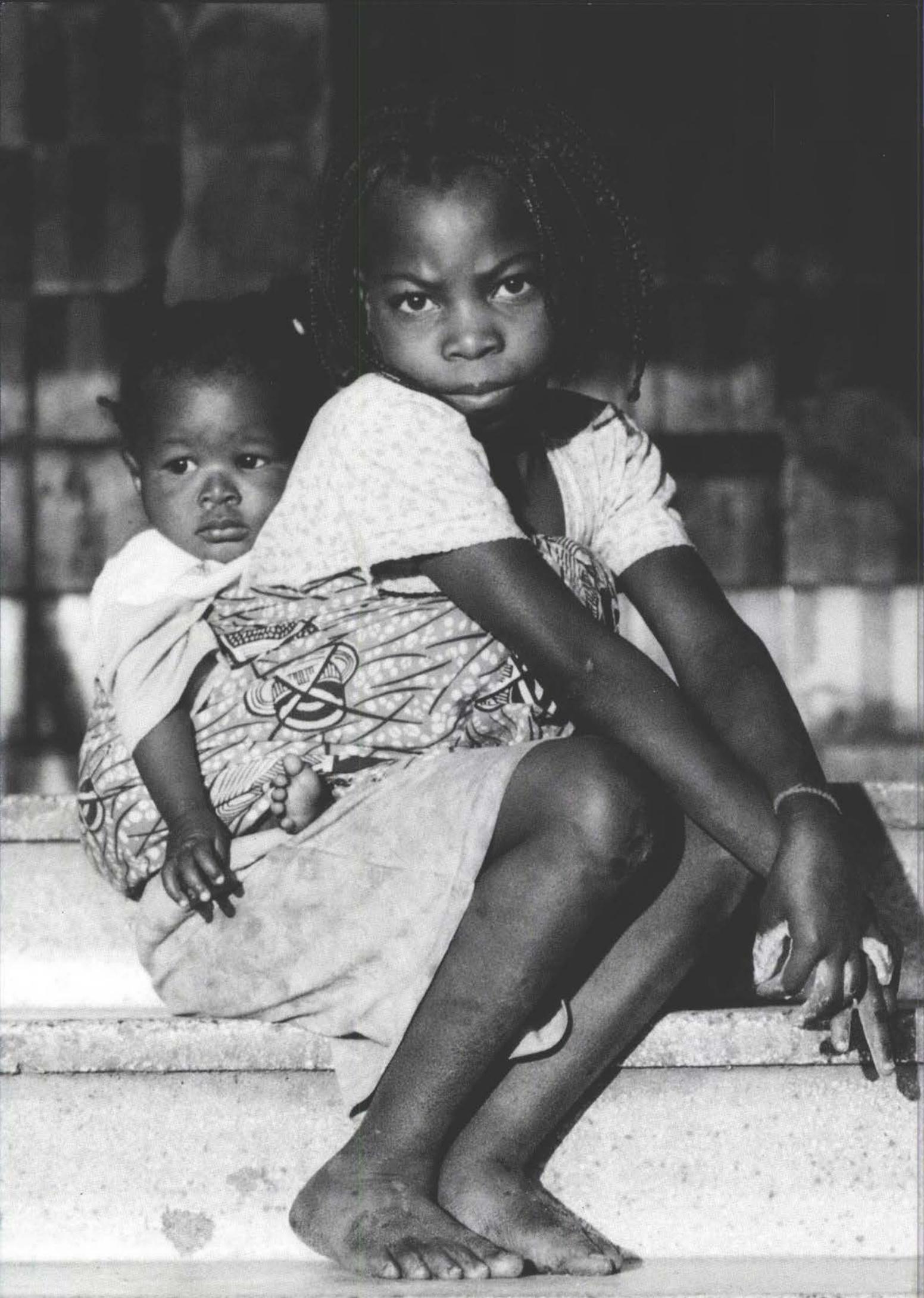
MICS

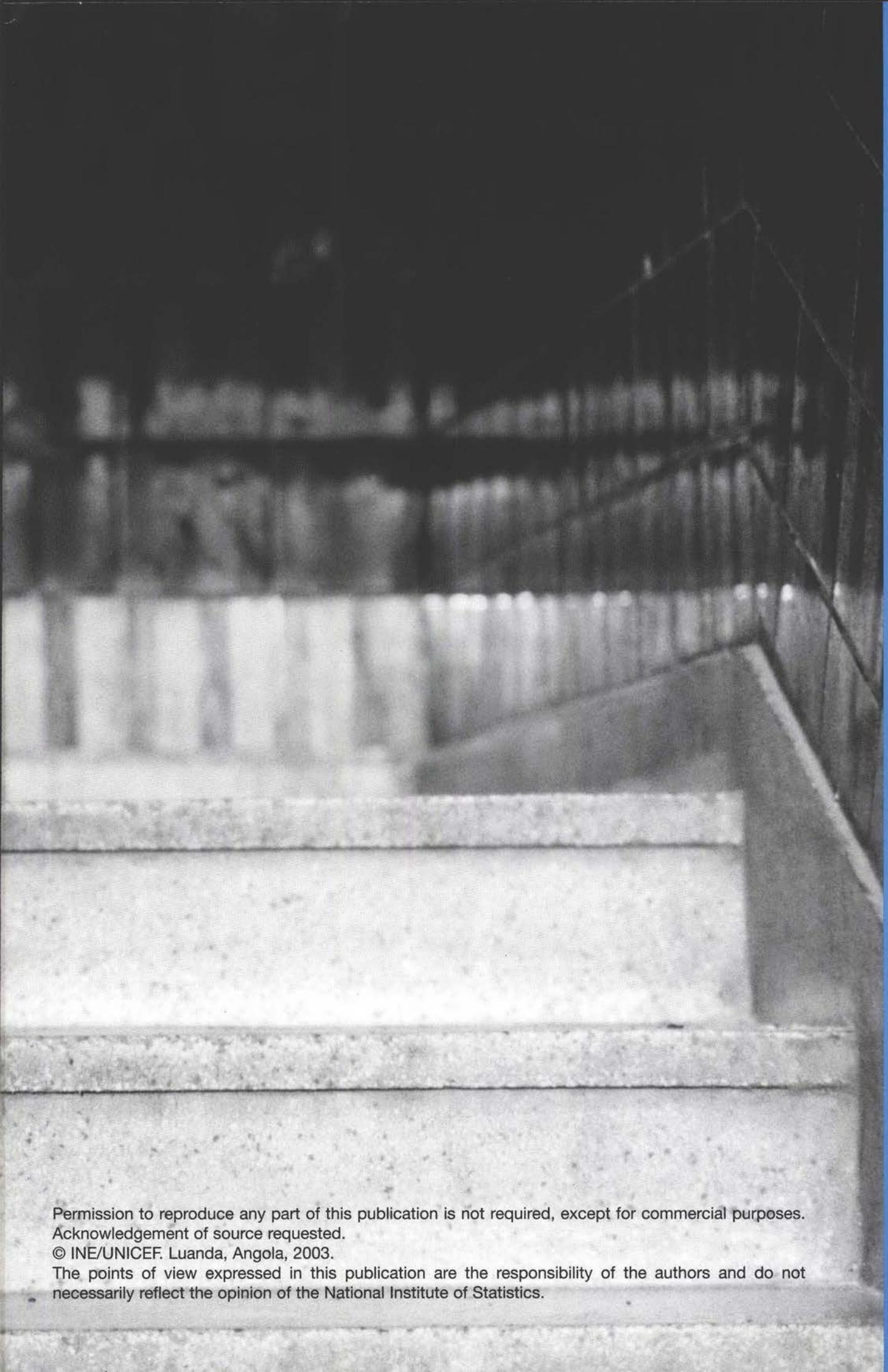
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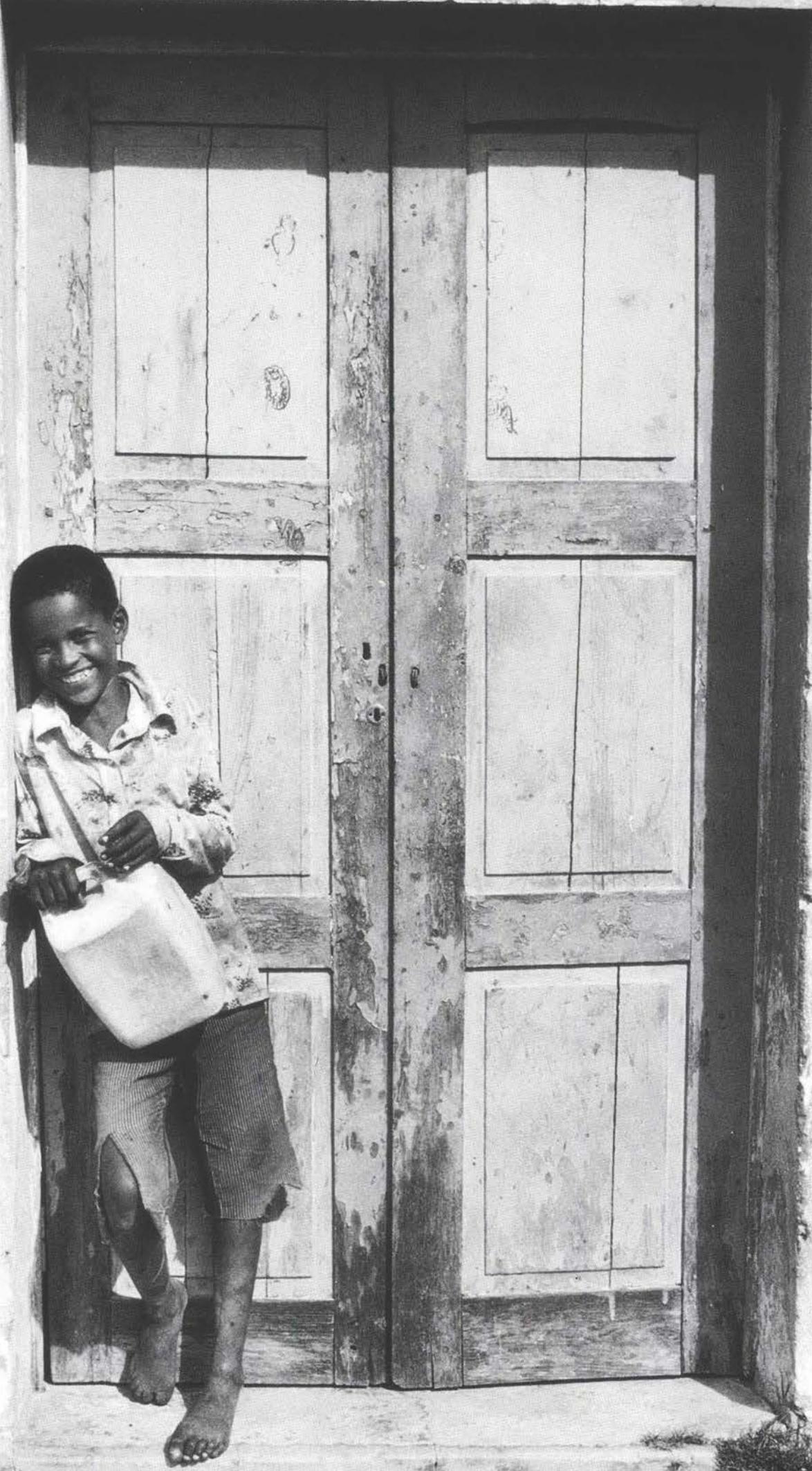




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International Goals and Targets for Children and Women

Through a series of world summits, conferences and UN General Assembly special sessions, the international community has set a series of goals and targets to promote the well-being of children and women. The first such event was the World Summit for Children held in 1990, when world leaders committed to achieve a series of 27 goals aiming to improve the lives of children and women.

At the beginning of the millennium, the Secretary General of the United Nations reported to the General Assembly on the progress made towards these goals in a report entitled "We the Children". This report was mainly based on information gathered by countries around the world through household surveys such as MICS. In his report, the Secretary General stated to the children of the world: "We, the grown-ups, have failed you deplorably".

During the Millennium Summit held in New York in September 2000, attended by 189 countries, the international community and the Government of Angola adopted a declaration that reiterated the goals and targets of the World Summit for Children and set additional goals to be achieved by 2015 to reflect emerging issues, such as HIV and AIDS. This set of eight goals and 18 targets, which were unanimously approved, are known as the Millennium Development Goals (MDGs).

Most recently Angola and the international community reaffirmed their commitments to children and women at the May 2002 Special Session of the UN General Assembly on Children. During the Special Session, Nations reaffirmed their obligation to take action to promote and protect the rights of each child, as defined in the Convention on the Rights of the Child. Nations also reiterated their commitment to complete the unfinished agenda of the World Summit for Children and build a strong foundation for attaining the 2015 MDGs. The outcome document of the Special Session, "A World Fit for Children", outlined this decade's promises from world leaders and governments to children around four priority areas: namely promoting healthy lives, providing quality education, protecting children against abuse, exploitation and violence, and combating HIV/AIDS. For each of these areas a set of specific goals and targets were established in line with the MDGs.

The Millennium Development Goals Goals and targets to be achieved by 2015

Goal 1	Eradicate extreme poverty and hunger
Target 1	Reduce by half the proportion of people living on less than a dollar a day
Target 2	Reduce by half the proportion of people who suffer from hunger
Goal 2	Achieve universal primary education
Target 3	Ensure that all boys and girls complete a full course of primary schooling
Goal 3	Promote gender equality and empower women
Target 4	Eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015
Goal 4	Reduce child mortality
Target 5	Reduce by two thirds the mortality rate among children under five
Goal 5	Improve maternal health
Target 6	Reduce by three quarters the maternal mortality ratio
Goal 6	Combat HIV/AIDS, malaria and other diseases
Target 7	Halt and begin to reverse the spread of HIV/AIDS
Target 8	Halt and begin to reverse the incidence of malaria and other major diseases
Goal 7	Ensure environmental sustainability
Target 9	Integrate the principles of sustainable development into country policies and programmes; reverse loss of environmental resources
Target 10	Reduce by half the proportion of people without sustainable access to safe drinking water
Target 11	Achieve significant improvement in lives of at least 100 million slum dwellers, by 2020
Goal 8	Develop a global partnership for development
Target 12	Further develop an open trading and financial system that is rule-based, predictable and non-discriminatory. Includes a commitment to good governance, development and poverty reduction — nationally and internationally
Target 13	Address the special needs of the least developed countries. This includes tariff and quota-free access for their exports, enhanced debt relief for heavily indebted poor countries, cancellation of official bilateral debt and more

generous official development assistance for countries committed to poverty reduction

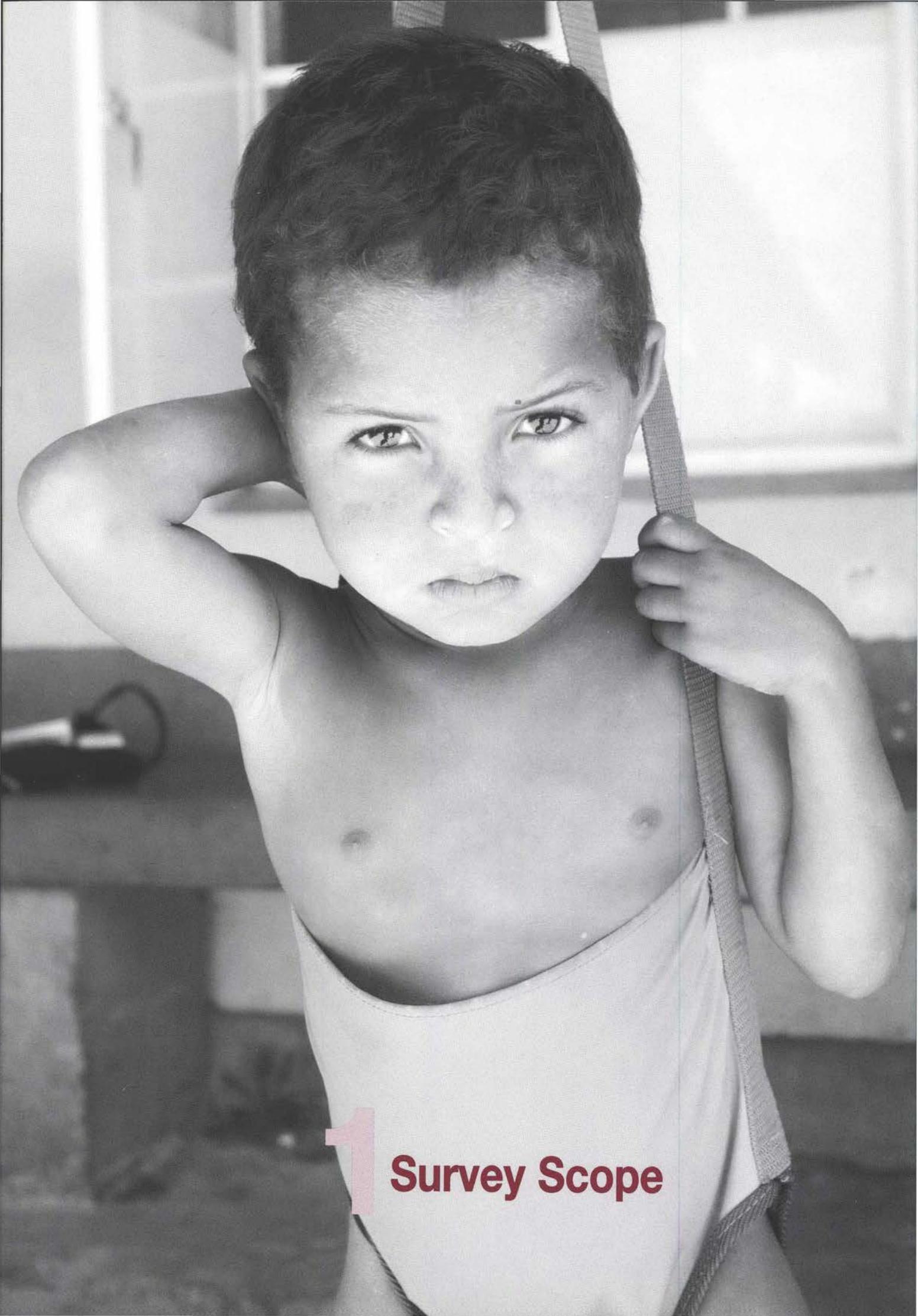
- Target 14 Address the special needs of landlocked and small island developing states
- Target 15 Deal comprehensively with developing countries' debt problems through national and international measures to make debt sustainable in the long term
- Target 16 In co-operation with the developing countries, develop decent and productive work for youth
- Target 17 In co-operation with pharmaceutical companies, provide access to affordable essential drugs in developing countries
- Target 18 In co-operation with the private sector, make available the benefits of new technologies — especially information and communications

Congruence between the World Fit for Children Goals and the Millennium Development Goals

Goals of the World Fit for Children	Millennium Development Goals
Promoting healthy lives	Goal 1: Poverty and hunger Goal 4: Child mortality Goal 5: Maternal health Goal 6: HIV/AIDS, malaria and other diseases Goal 7: Environmental sustainability
Promoting quality education	Goal 2: Universal primary education Goal 3: Gender equality and empowerment of women
Combating HIV/AIDS	Goal 6: HIV/AIDS, malaria and other diseases Goal 3: Gender equality and empowerment of women
Protecting against abuse, exploitation and violence	Millennium Summit Declaration Section 6 — Protecting the Vulnerable

The Millennium Development Goals and the MICS results, Angola 2001

Targets	Indicators	Value
Goal 1: Eradicate extreme poverty and hunger		
Target: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	Underweight prevalence Stunting prevalence Wasting prevalence	31 percent 45 percent 6 percent
Goal 2: Achieve universal primary education		
Target: Ensure that, by 2015, children everywhere — boys and girls alike — will be able to complete a full course of primary schooling	Net primary school attendance rate Children reaching Grade Five Literacy rate of 15 to 24 year olds	56 percent 76 percent 71 percent
Goal 3: Promote gender equality and empower women		
Target: Eliminate gender disparity in primary and secondary education preferably by 2005 and to all levels of education no later than 2015	Literacy rate among 15 to 24 year olds: male/female Net primary school attendance rate: male/female	83 percent/63 percent 55 percent/56 percent
Goal 4: Reduce child mortality		
Target: Between 1990 and 2015, reduce by two-thirds the under-five mortality rate	Under-five mortality rate Infant mortality rate DPT immunisation coverage Measles immunisation coverage Polio immunisation coverage Tuberculosis immunisation coverage Children protected against neonatal tetanus Home management of diarrhoea	250 per 1,000 live births 150 per 1,000 live births 34 percent 53 percent 63 percent 69 percent 62 percent 7 percent
Goal 5: Improve maternal health		
Target: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	Antenatal care Childbirth care Mothers receiving vitamin A supplementation	66 percent 45 percent 29 percent
Goal 6: Combat HIV/AIDS, malaria and other diseases		
Target: Halt and begin to reverse the spread of HIV/AIDS by 2015	Knowledge of preventing HIV/AIDS (total population) Knowledge of misconceptions of HIV/AIDS (total population) Knowledge of mother-to-child transmission (total population) Attitude to people with HIV/AIDS (total population) Proportion of population 15 to 49 years who have been tested for HIV Proportion of population 15 to 49 years who know where to get a HIV test Contraceptive prevalence rate (total population)	20 percent 18 percent 29 percent 45 percent 2 percent 26 percent 6 percent
Target: Have halted by 2015, and begun to reverse, the incidence of malaria and other major diseases	Bed nets Malaria treatment	2 percent 61 percent
Goal 7: Ensure environmental sustainability		
Target: Halve, by 2015, the proportion of people without sustainable access to safe drinking water	Use of safe drinking water	62 percent
Target: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers	Use of sanitary means of excreta disposal	59 percent



1

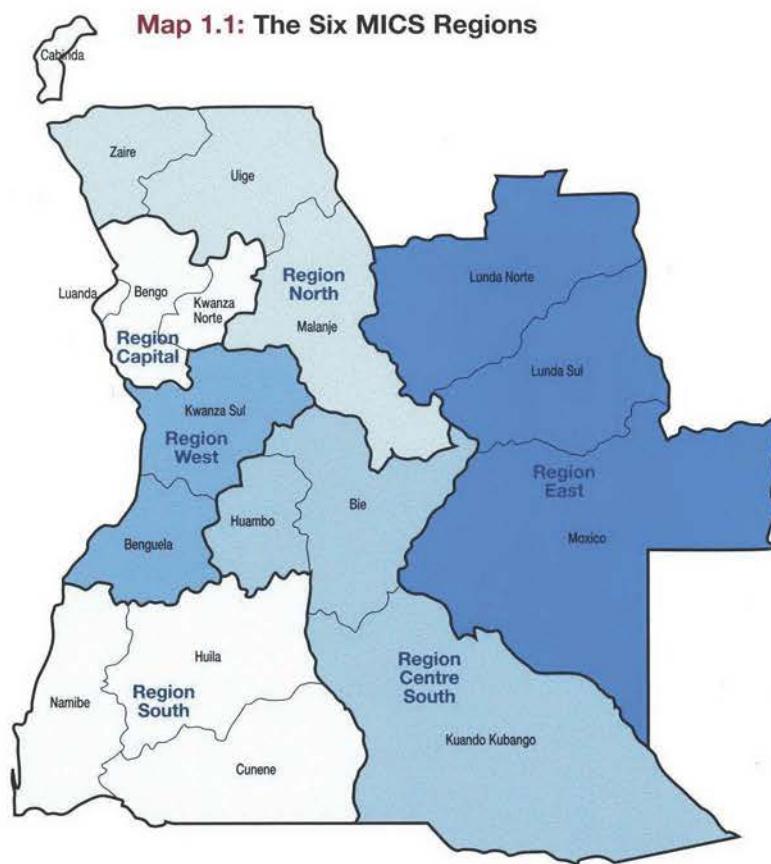
Survey Scope

Carried out in all 18 provinces of the country, the MICS covers 6,252 households or a total of 29,811 people in urban and rural areas. About two-thirds of the population was surveyed in urban areas (66%) and one-third in rural areas (34%). A total of 5,663 children under five years of age and 7,089 women aged 15 to 49 years were interviewed with an overall good response rate of 94%. Data collection in the field was conducted during a six-month period, from April to October 2001¹.

Table 1.1: Survey sample and response rate

	Areas of residence		
	Urban	Rural	Total
Households			
Number of households selected	4,080	2,580	6,660
Number of households found	4,056	2,568	6,624
Number of households surveyed	3,852	2,400	6,252
Response rate	95	93.5	94.4
Women (15 to 49 years)			
Total number of women found in households	4,750	2,350	7,100
Total number of women interviewed	4,745	2,344	7,089
Response rate	99.9	99.7	99.8
Children (below five years of age)			
Total number of children found in households	3,693	1,974	5,667
Total number of children interviewed	3,689	1,974	5,663
Response rate	99.9	100	99.9

Map 1.1: The Six MICS Regions



The survey provides socio-economic indicators desegregated by region and area of residence (urban and rural). The country is divided into six regions, each of which represents two, three or four provinces:

● **Capital Region:**

Luanda, Bengo, Kwanza Norte and Cabinda provinces

● **North Region:**

Zaire, Uige and Malanje provinces

● **East Region:**

Lunda Norte, Lunda Sul, and Moxico provinces

● **West Region:**

Benguela and Kwanza Sul provinces

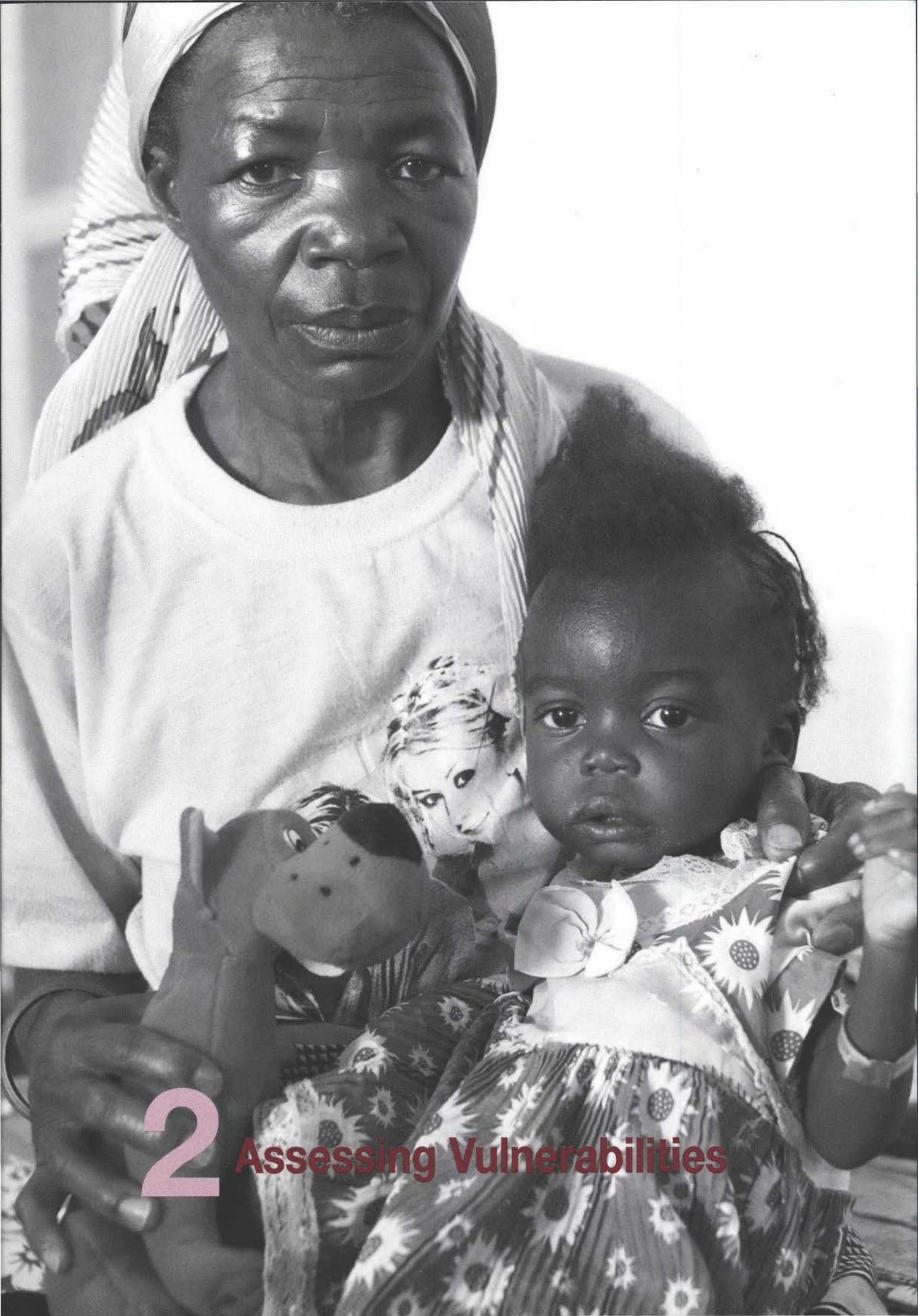
● **Centre South Region:**

Huambo, Bie and Kuando Kubango provinces

● **South Region:**

Namibe, Cunene and Huila provinces

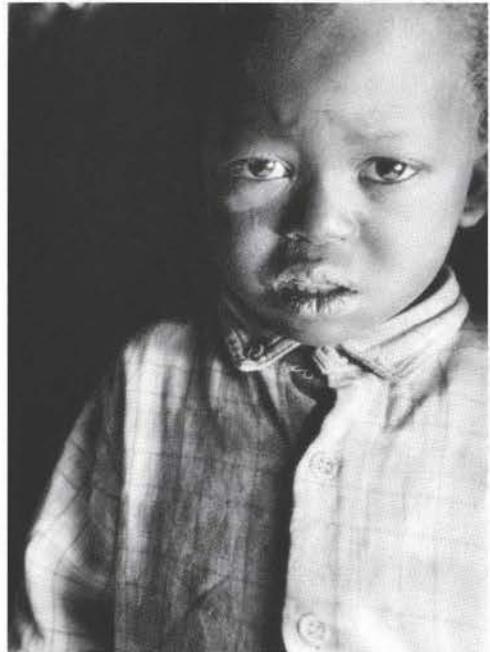
¹ See Methodology in Annex.



2

Assessing Vulnerabilities

The survey uses two indicators to measure vulnerabilities among households.

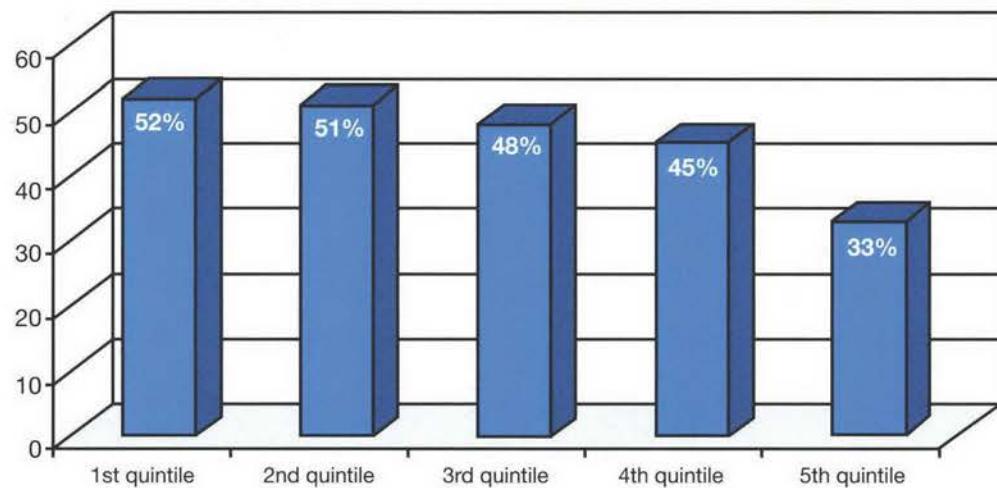


1. Wealth index quintile

As it is assumed that similar assets are common among households of similar wealth and that wealthy households have more assets than poor households, the survey ranks Angolan households according to an asset or wealth index. Households are divided into five equal groups of 20% each, and are ranked according to socio-economic criteria¹. The first group or first quintile refers to those 20% of households with the worst socio-economic conditions (with the least assets) while the fifth group or fifth quintile refers to those 20% of households with the best socio-economic conditions (with the most assets). The first quintile is usually

referred to as the most vulnerable or the "poorest", while the fifth quintile is referred to as the least vulnerable or the "richest".

Graph 2.1: Chronic malnutrition prevalence in children according to wealth index quintile



The survey indicates that households from the fifth quintile systematically present better conditions than households from the first quintile, indicating that poverty plays a determinant role in people's vulnerability. For example, children from the poorest households are almost 60% more likely to be chronically malnourished than children from

better off households. However, one should note that even among the fifth quintile, socio-economic indicators drawn by the MICS remain worrying. This probably reflects the fact that in Angola the rich are so few that they are statistically irrelevant in the analysis by quintile. For example, even among the "wealthiest" households a third of children

¹ The asset or "wealth" index was constructed using the following socio-economic criteria: whether any member owns a radio, television, refrigerator, bicycle, motorcycle or car, whether electricity is used, the source of drinking water, the type of sanitation, how many rooms, and the type of materials used in dwelling construction. For detailed methodology, see Filmer D. and Pritchett L., 1998, *Estimating wealth effects without expenditure data — or tears: An application to educational enrolments in States of India*, World Bank Policy Research Working Paper No. 1994, Washington.



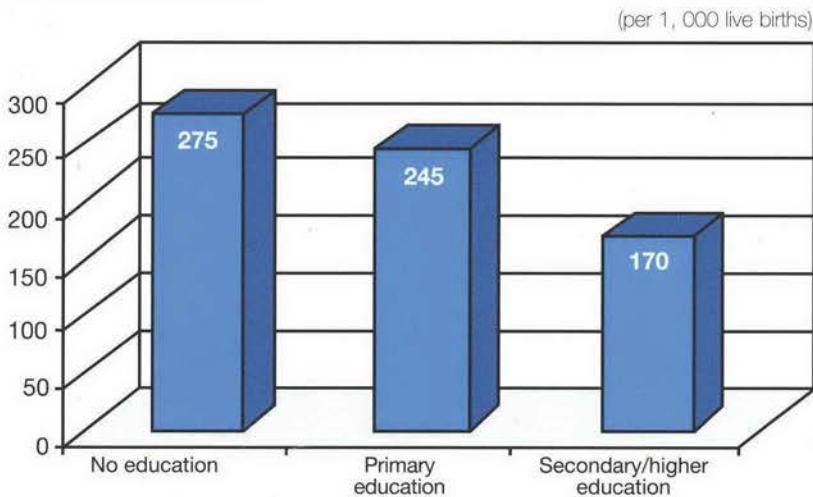
under five years of age suffer from chronic malnutrition. In this sense, the use of the expression "rich" can be misleading. In the present analysis the fifth quintile is therefore preferably referred to as the "better off" or the "least vulnerable" rather than the "richest".

2. Level of education

The surveyed population is divided into three groups according to their education level: those who never went

to school and are presumably illiterate, those who received primary education only, and those who received secondary or higher education. The survey consistently shows that children whose mothers received secondary or higher education are less vulnerable than children whose mothers are illiterate. For example, a child whose mother is illiterate is 60% more likely to die before reaching the age of five than a child whose mother received secondary or higher education.

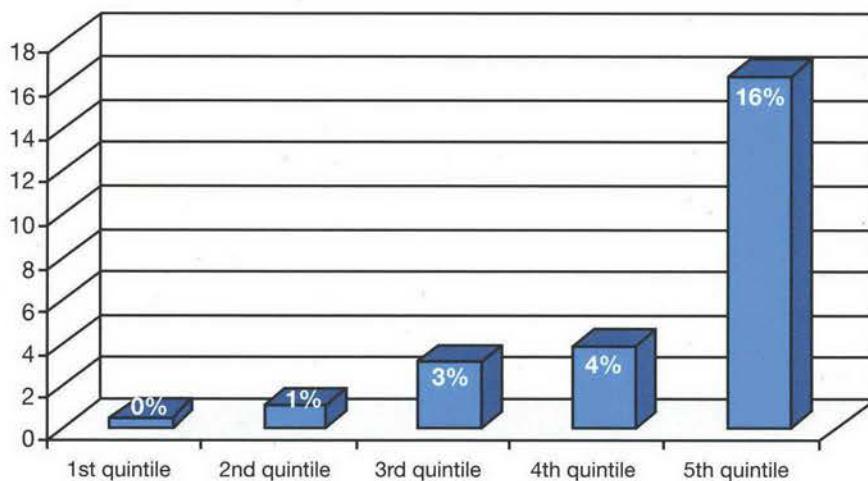
Graph 2.2: Mortality among under-five children according to mothers' education levels

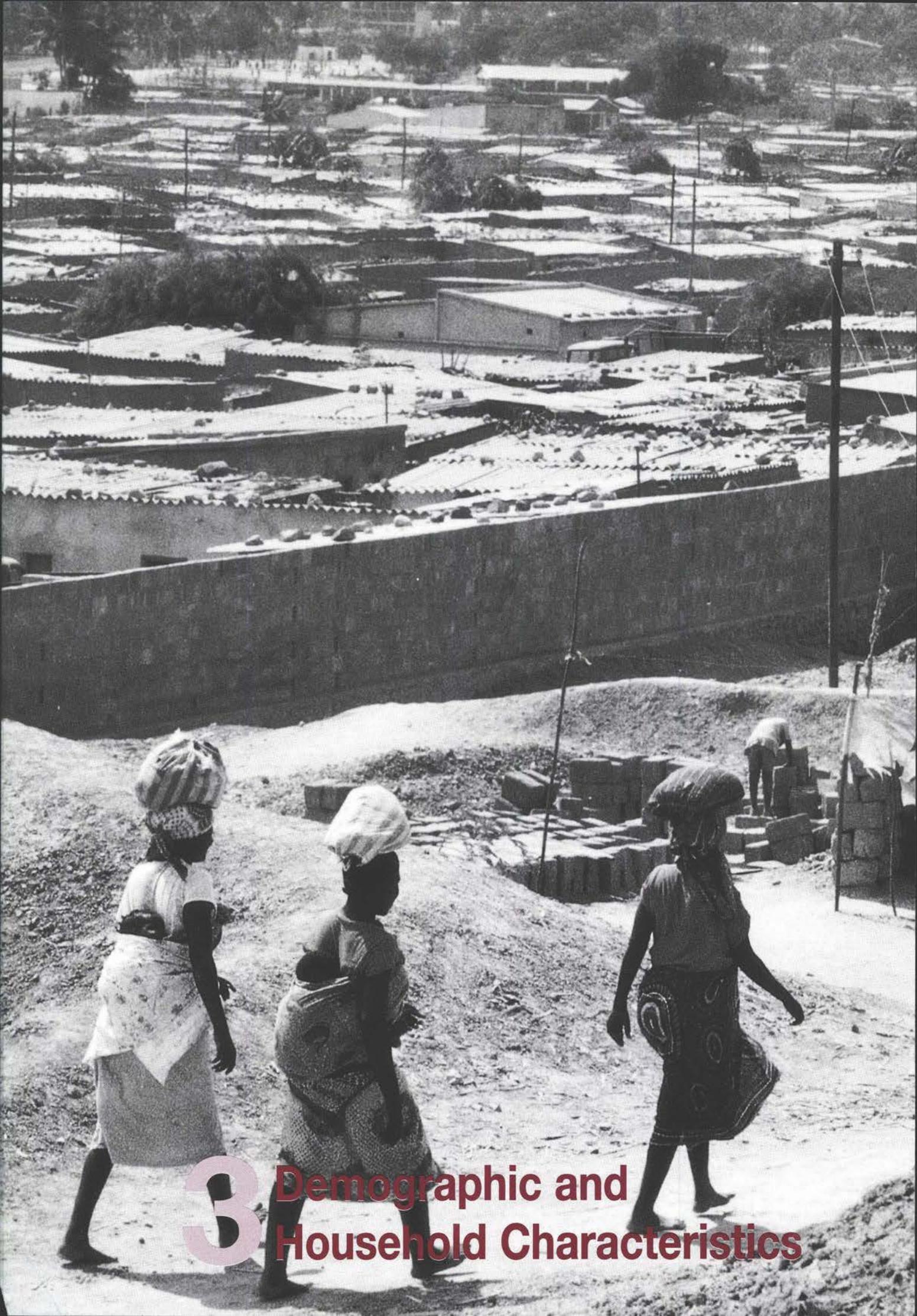


The survey shows that households' economic vulnerability strongly affects the capacity of their members to access education. For example, children from the first quintile are 16 times less likely than better off children to attend the second level of basic

education. The correlation seen, throughout the survey, between better results for the MICS indicators for wealthier and more educated people is probably a reflection of the fact that better off people are in fact the most educated.

Graph 2.3: Percentage of children attending the second level of basic education per socio-economic quintile





3

Demographic and Household Characteristics



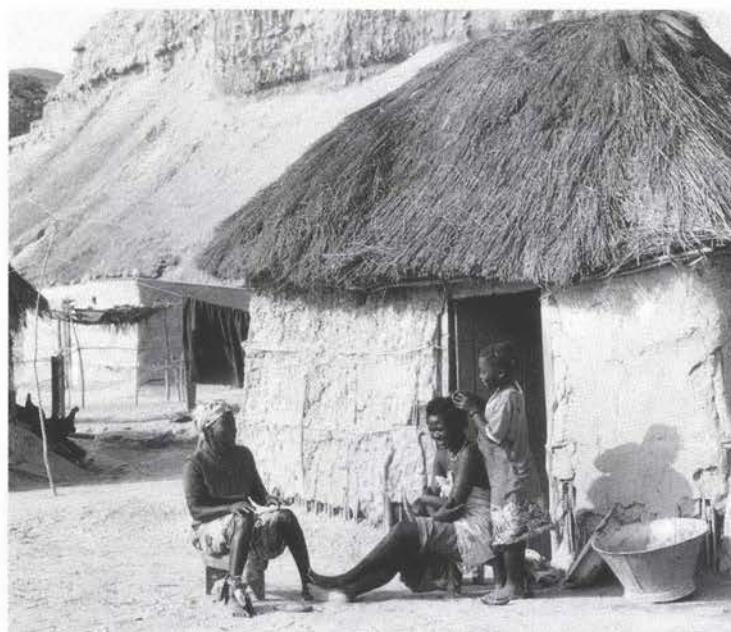
Demography: main characteristics

- The Angolan population is very young: almost 50% of Angolans are under 15 years of age and 60% are under 18 years of age.
- 93% of the population is below 50 years of age.
- The fertility rate is very high: on average there are seven live births per woman.
- The analysis of the population structure by age and sex reveals a significant deficit of males which is especially pronounced in the age group 20 to 29 years.
- The masculinity index is 91%: for every 100 Angolan women there are on average 91 Angolan men.
- The proportion of urban population is 66% and rural population is 34%. It was almost the opposite in the mid-1990s.
- At 18 years of age a third of Angolan girls have already given birth and at 20 years of age more than two-thirds are already mothers.
- The average age at first marriage is 21.4 for women and 24.7 for men.
- Only 6% of the population use contraceptives.

In Angola the lack of accurate population data poses enormous difficulties in terms of planning, monitoring, evaluation and management of socio-economic policies. It also hinders the functioning of national information systems. Because the latest population census was conducted in Angola in 1970, population figures should be regarded with caution. At national level, current population estimates are projections from the 1970's national census and from partial provincial censuses carried out in 1983. Based on this data, the National Institute of Statistics (INE) projected a population of 13.8 million in 2001. Since the latest census, however, about four million people were internally displaced and more than half a million took refuge in neighbouring countries. In addition, the war and AIDS probably impacted on mortality rates thus affecting overall population figures.

In this context, the MICS data provides a refreshed picture of the demographic characteristics of the Angolan population.

With almost 60% of the population under 18 years of age and a very high fertility rate (seven children per woman on average), the survey indicates that Angola is a demographically booming country that has not yet started a demographic transition. The



extremely low levels of contraception (6%) and the high adolescent fertility rates recorded (before 18 years of age a third of

Angolan women are already mothers) are also two important indicators confirming a demographically pre-transitional society.

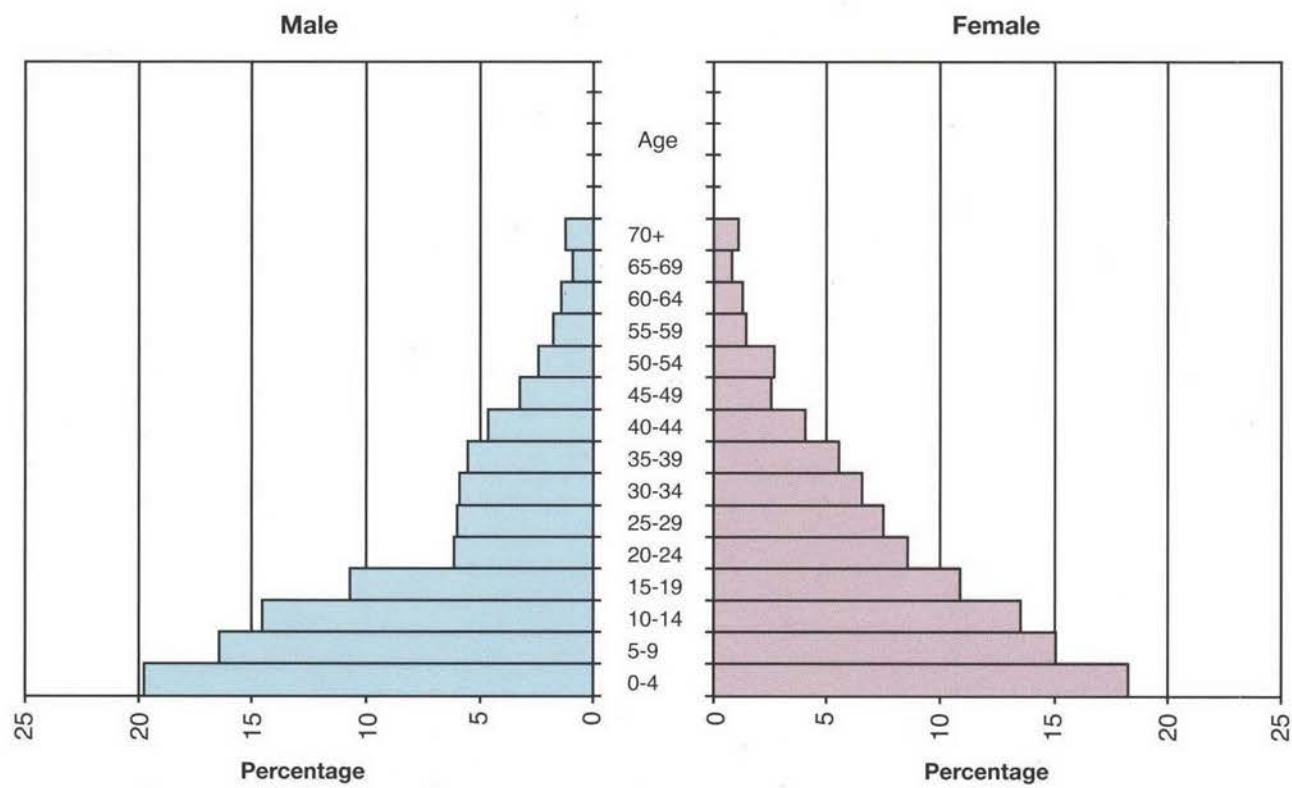
Table 3.1: Population distribution by age, area of residence and masculinity index

	Percentage of total population	Masculinity index (ratio male/female)
Age group (years)		
0 to 4	19	98
5 to 9	16	100
10 to 14	14	98
15 to 19	11	89
20 to 24	7	64
25 to 29	7	72
30 to 34	6	81
35 to 39	6	91
40 to 44	4	103
45 to 49	3	117
50 and above	7	98
Urban	66	92
Rural	34	90
Total	100	91

The population pyramid reveals a demographic profile typical of a young population with a broad base indicative of a high fertility rate, as well as a reduced number of people aged 40 years and over.

In fact, 85% of the population is below 40 years of age. The structure of the population pyramid also indicates a marked deficit of men in the age group 20 to 29 years.

Graph 3.1: Total population by sex and age group, Angola 2001



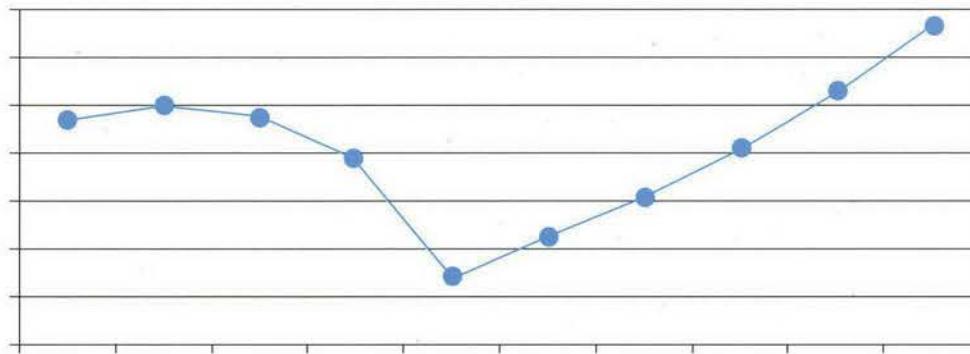


The masculinity index, which expresses the ratio of men per hundred women, indicates a pronounced lack of men. At national level there are on average 91 men for 100 women. This male to female ratio is characteristic of countries that have experienced high levels of migration or suffered a war. In Angola, the lack of men is likely to be associated with selective mortality caused by the war and by male migration.

The masculinity index varies greatly by age

group and is particularly pronounced in the age groups 20 to 24 and 25 to 29 years. In these age groups, there are on average only 68 men for 100 women. The acute male deficit noticed in the age groups 20 to 29 may also be related to errors in age declarations by young men, who feared that the survey results might be used for military conscription purposes. Although less acute, there is also an important male deficit in the age groups 30 to 39. The very same patterns were observed during the 1996 MICS exercise.

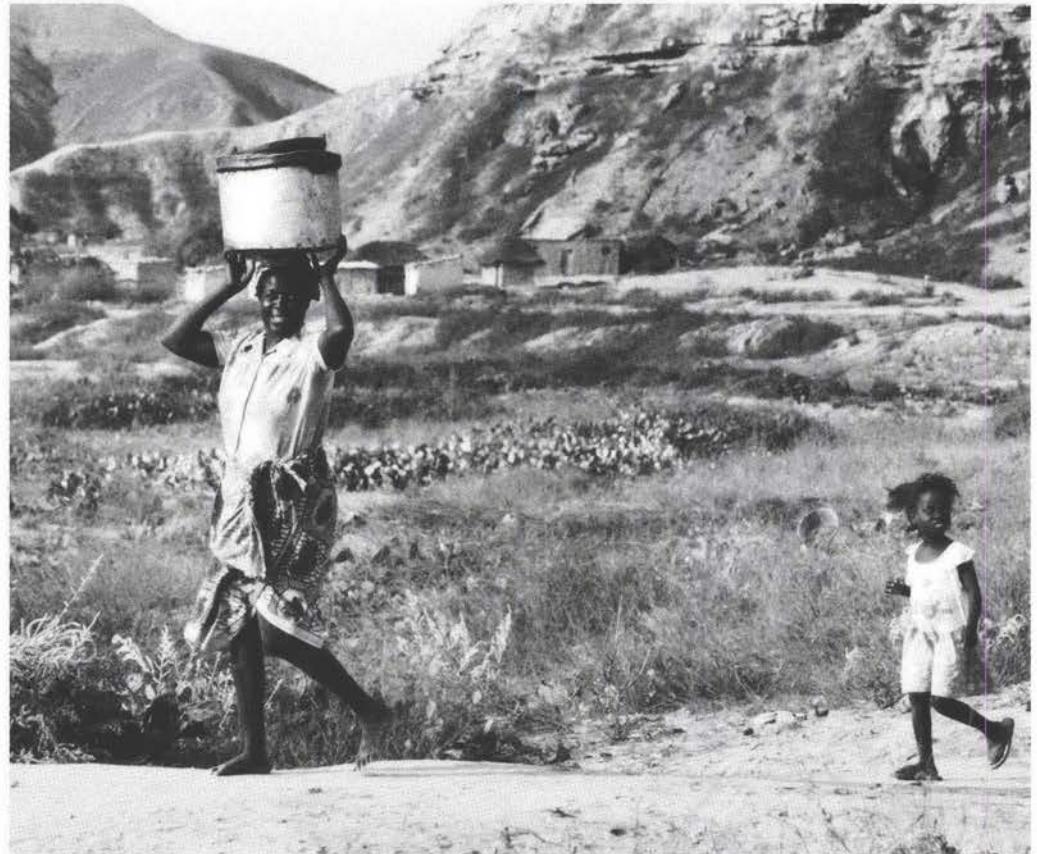
Graph 3.2: Masculinity index among the population between 0 and 50 years of age



The pattern whereby there is an excess of men in older age group categories, which was also observed in 1996, is likely to be due to inaccuracies of the information provided on age by older women and men, whereby men would tend to overestimate their age and women to underestimate it.

The MICS indicates that in 2001, 66% of households were in urban areas and 34% in rural areas. Residency patterns have significantly changed from those observed by the MICS in 1996 when 42% of the surveyed population was urban and 58% rural. This undoubtedly reflects the large population movements towards urban areas that occurred between 1996 and 2001. The masculinity index is slightly higher in urban areas (92%) than in rural areas (90%), which probably reflects more intense male migration towards urban areas for economic reasons and a greater impact of the war in rural areas. The population structure observed nationally

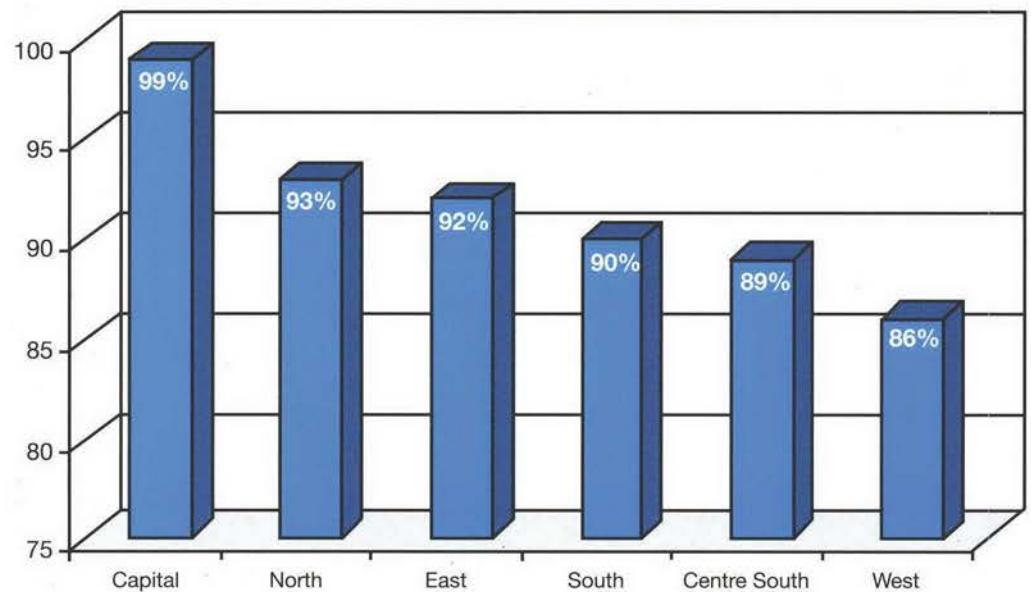




is replicated in all six regions. There are however regional variations in terms of male deficit. While the Capital Region registers the highest index of masculinity with an almost equal proportion of men and women (99%), in other regions the masculinity index varies from 86% in the West to 93% in the North. Variations are particularly accentuated for the age group 20 to 24. In this age group, the highest variation is noted in the Centre South Region where there are on average only 55 young

men aged 20 to 24 years for every 100 young women of the same age. In comparison, in the Capital Region the masculinity index in this age group is 83%. This finding is probably related to a greater impact of the war in the Centre South Region, which in fact includes the more war-affected provinces (Huambo, Bie, and Kuando Kubango). The relatively higher proportion of men in the Capital Region might be related to male economic migration towards the capital, Luanda.

Graph 3.3: Masculinity index per region





Households: main characteristics

- Angolan households average 4.8 people.
- Urban households tend to be larger than rural households with an average of 5.1 members against 4.3 in rural areas.
- 82% of households have at least one child below 15 years of age.
- 60% of households have at least one child below five years of age.
- 27% of Angolan households are headed by women.
- Over half of women heads of households are illiterate.
- 71% of Angolan dwellings have floors made of "terra batida" (dirt floor).
- 57% of dwellings have only one bedroom or none at all.
- 80% of households do not have electricity.
- Only 38% of households own a radio and 14% a television.
- The main sources of energy used by households for cooking are firewood (42%), charcoal (41%) and gas (14%).

The survey indicates that there are on average 4.8 members per household and that urban households are of slightly bigger size than rural households. About 8% of Angolan households have 1 member only, 26% have 2 or 3 members, 31% have 4 or 5 members, 21% have 6 or 7 members, and 14% have 8 or more members. The MICS

indicates a high level of promiscuity with 57% of all households having no or only one bedroom. Most dwellings (71%) have dirt floors ("terra batida"), while floors made of wood or cement are found in less than 30% of households.

Table 3.2:
**Household size according
to area of residence**

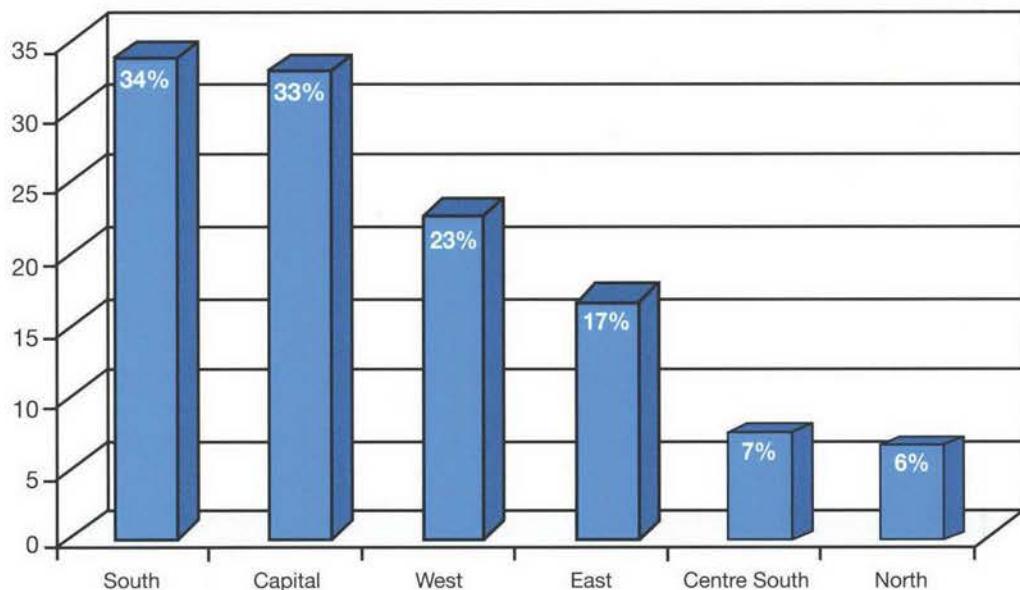
	(%)		
	Urban	Rural	Total
1 Member	7	10	8
2 - 3 Members	23	31	26
4 - 5 Members	31	31	31
6 - 7 Members	22	19	21
8 and more Members	17	8	14



The MICS indicates that only 20% of Angolan households have electricity. The percentage of households connected to

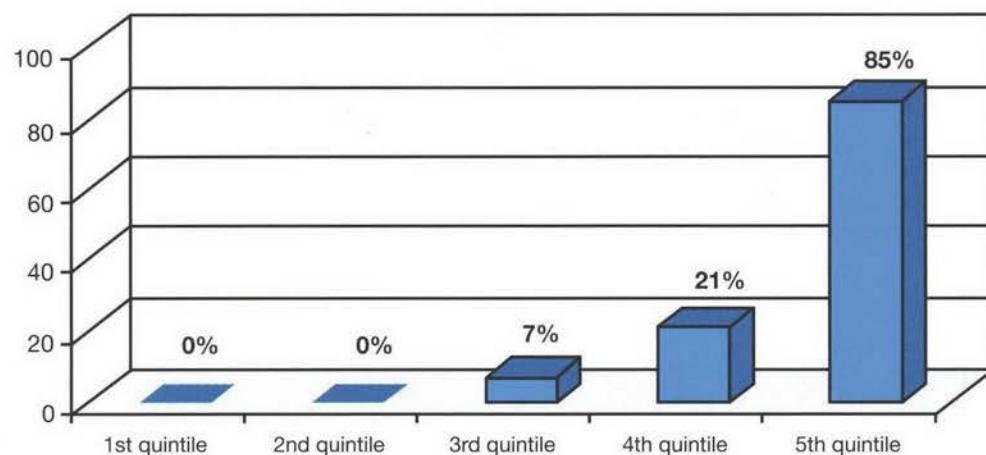
electricity varies between about 33% in the Capital and South Regions to 6% in the North Region.

Graph 3.4: Percentage of households with access to electricity by region



There are significant variations by wealth index quintile, with none of the households among the two lowest quintiles benefiting from electricity. Even among the third and fourth quintiles the proportion of households connected to electricity is very limited (7% and 21% respectively). One also notes that even among better off households, 15% do not have access to electricity. Electricity supply is almost exclusively restricted to urban areas where 30% of households have electricity compared to only 4% in rural areas.

Graph 3.5: Percentage of households with access to electricity by wealth index quintile



In terms of energy source used by households for cooking, the survey indicates that the vast majority of households use firewood and charcoal (83%). The use of gas is limited (14%) while the use of electricity and fuel is marginal (less than 3%). In the North, East and Centre South Regions the use of

gas is negligible with households using firewood and charcoal almost exclusively. Although in the Capital Region more than half of households use charcoal and firewood (54%), gas is an important source of energy with 40% of households using gas for cooking. The use of gas is also important in



the South and West Regions (27% and 23% respectively).

In terms of household assets, the MICS

establishes that 18% of households own the means of transportation. The most frequently owned are bicycles (50%) followed by cars and motorcycles (33%).

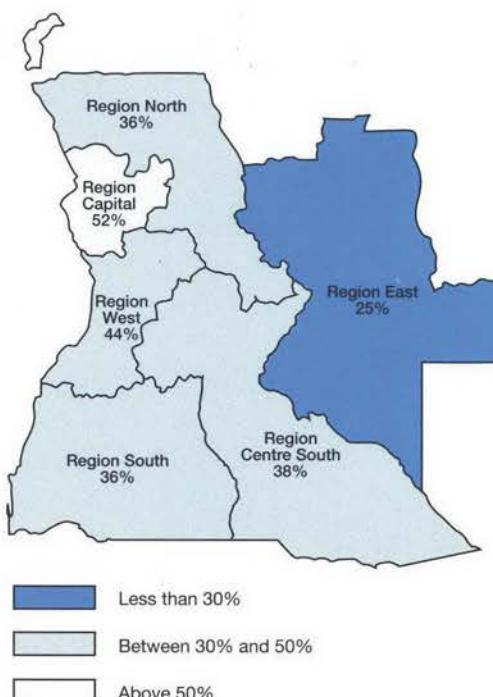
Table 3.3: Distribution of households according to their means of transportation

	Households that own a means of transport	Bicycle	Motorbike	Automobile	Wagon	Horse/ Donkey	Other	(%)
Region								
Capital	16	45	15	37	0	0	3	
North	13	66	19	12	1	0	2	
East	17	72	15	12	1	0	0	
West	15	20	22	15	5	0	39	
South	21	29	10	10	16	6	29	
Centre South	30	70	17	7	3	1	3	
Area of residence								
Urban	18	50	23	23	2	0	2	
Rural	17	51	7	3	13	4	22	
Total	18	50	17	16	6	2	9	

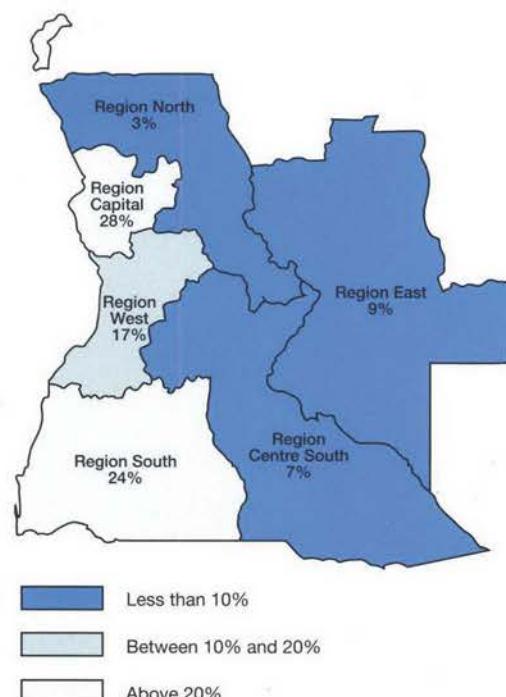
With regard to information means, 38% of households own a radio and 14% a television set. There are important variations by region and wealth index quintile. The higher proportion of households that own a radio and/or television set is found in urban households in the Capital, West and South

Regions. Ownership of radios varies between 25% in the East Region and 52% in the Capital Region. The same patterns are observed with regard to television sets, with the highest proportion of households owning a TV found in the Capital Region (28%) and the lowest in the North Region (3%).

Map 3.1:
**Percentage of households
owning a radio**



Map 3.2:
**Percentage of households
owning a television**





4 Infant and Under-Five Mortality

Indicators

Infant mortality rate:	<i>Probability of dying between birth and one year of age, per 1,000 live births – 150</i>
Under-five mortality rate:	<i>Probability of dying between birth and five years of age, per 1000 live births – 250</i>

The under-five mortality rate (U5MR) is the principal indicator used to measure the level of child well-being and its rate of change. This indicator is the result of a wide variety of inputs: the nutritional health and the health knowledge of mothers, the availability and quality of maternal and child health services, income and food availability in the family, the availability of clean water and safe sanitation, and the overall safety of the child's environment. It also measures an end result of the development process rather than an "input" such as school enrolment level, which is a means to an end. It therefore presents a good overall picture of the health status of Angolan children and of Angolan society as a whole.

The MICS indicates alarming levels of mortality among children. In fact, the survey shows that Angola records one of the highest levels of child mortality in the world. Infant mortality is estimated nationally at 150 deaths per 1,000 live births and under-five mortality at 250 deaths per 1,000 live births. This means that in Angola today one in four children will die before reaching the age of five. Of an estimated 600,000 newborn

babies every year, the mortality rate recorded also means that 90,000 will die before their first birthday and an additional 60,000 will not reach their fifth birthday.

The main causes of mortality in Angola among children are related to malaria, diarrhoeal diseases, acute respiratory infections and vaccine preventable diseases, particularly measles¹. Malnutrition is also implicated in about half of all deaths. A large majority of these deaths could be avoided as they are essentially related to diseases for which practical and low cost interventions exist.

When comparing the 1996 MICS and 2001 MICS mortality results, the under-five mortality rate decreased from 271 to 250 and the infant mortality rate decreased from 166 to 150. These variations do not show significant change in the probability of death among children. The lack of substantive progress in reducing mortality reflects the serious humanitarian problems that much of the Angolan population has suffered, the lack of impact of health interventions, and the insufficient public investment in social sectors².

¹ Although there are no accurate data on the main causes of child mortality in Angola, data from the Ministry of Health showed that among the causes of mortality recorded in national health services in 2000, malaria was by far the largest killer (76%) followed by acute respiratory infections (7%) and diarrhoeal diseases (7%).

² According to the 2002 study on Public Financing of the Social Sectors in Angola, jointly conducted by the Ministry of Finance and the United Nations, Angola spends the lowest amount on education and health of any Southern African Development Community (SADC) country. The share of resources spent on primary health care, primary education and water and basic sanitation averaged 3.2% of total Government expenditure between 1997 and 2001, peaking in 2001 at 6%. On average, 4.7% of national expenditures between 1997 and 2001 were spent on education compared to 16.7% in the 14 SADC countries. During the same period, 3.3% was spent on health, compared with 7.2% among SADC members.

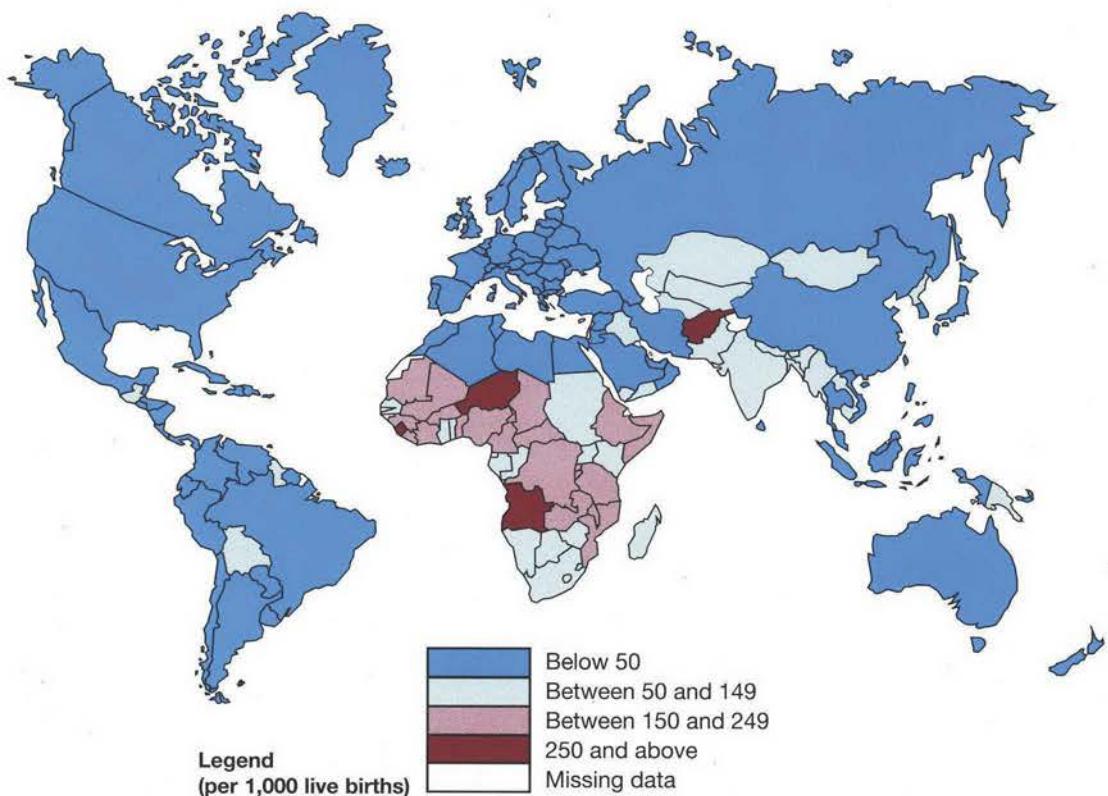
Methodological note

Women of childbearing age (15 to 99 years) were asked about the number of children they had given birth to, and the number of surviving children. From these statements, infant and under-five mortality rates were indirectly estimated. To calculate these estimates, the technique of Brass, as modified by Coale and Demeny, was used (Southern model).

The most consistent data for estimating mortality among children are obtained from the declarations of women aged 20 to 34, which implies that the estimates of mortality from the 1996 MICS corresponded to 1991, and those from 2001 MICS correspond to 1996. Statements from younger women, aged 15 to 19, which approximate to mortality estimates for the year 2000, are not used in this analysis since this age group has a lower birth rate and greater risks which might distort the results.

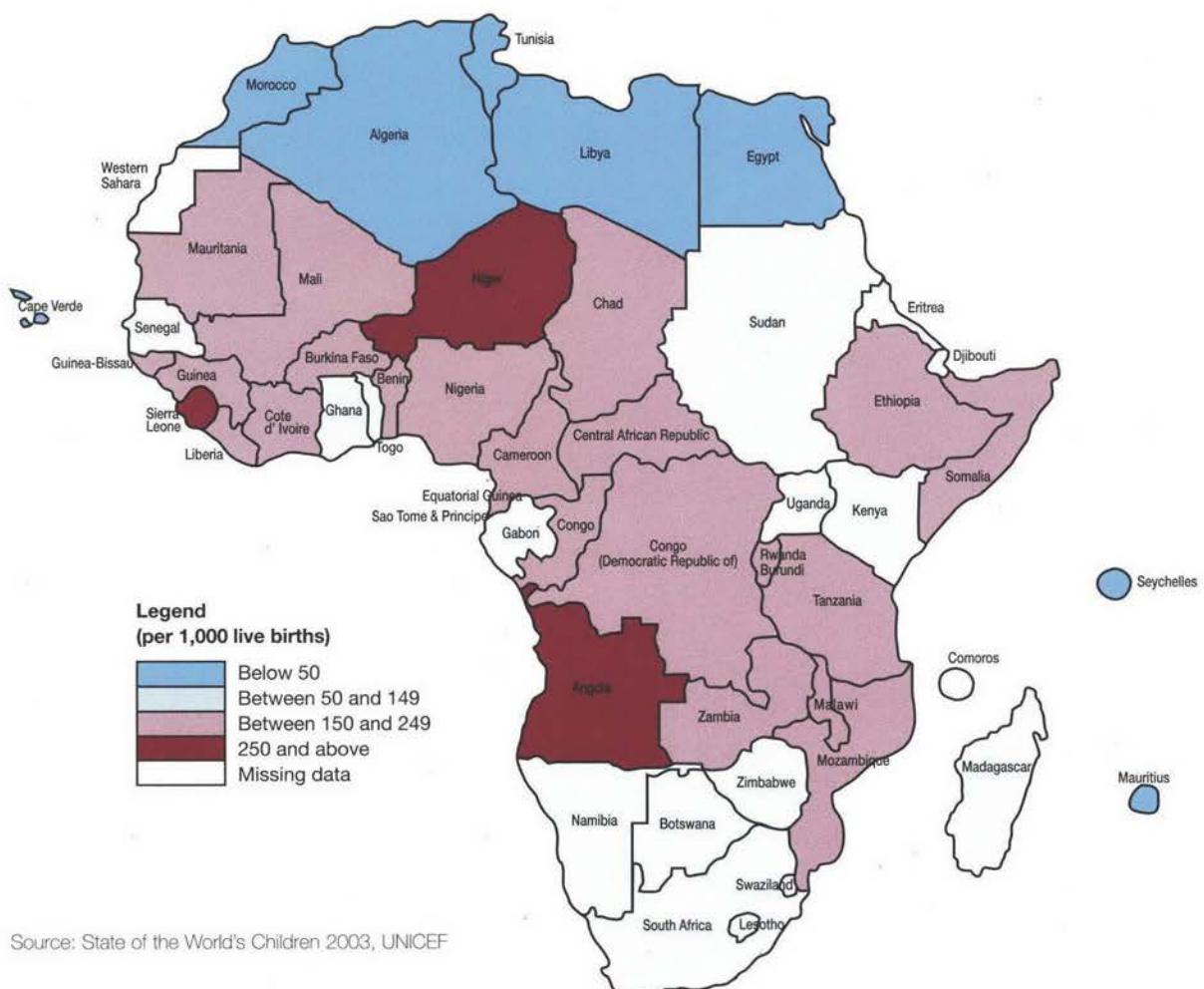
As with other demographic variables, the mortality estimates are subject to mistakes made in the statements of the women surveyed. Thus the reliability of the estimates of mortality depend on the levels of omission of children who died shortly after birth, particularly when the death occurred a long time before the survey. In order to avoid these omissions, the methodology used incorporated additional questions verifying the statements of the mothers and increasing the reliability of the data.

Map 4.1: Under-five mortality rate in the world in 2001



Source: State of the World's Children 2003, UNICEF.

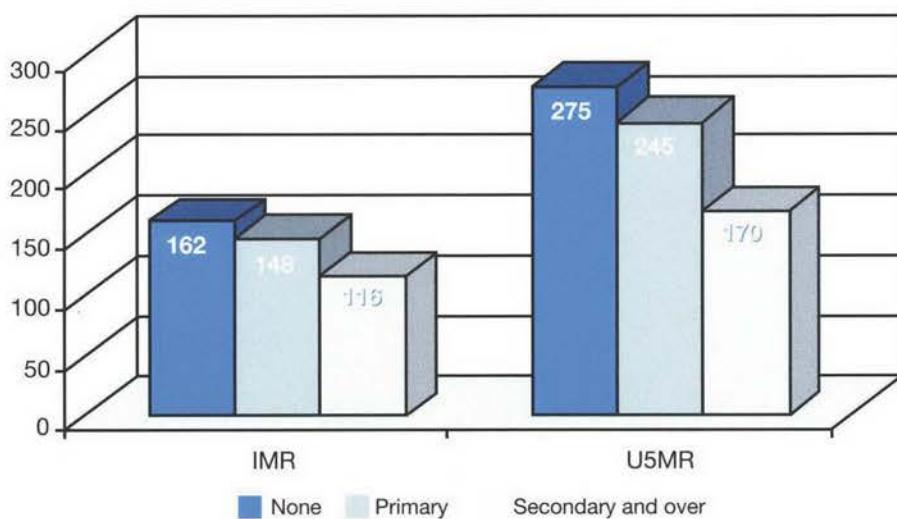
Map 4.2: Under-five mortality rate in Africa in 2001



The level of education attained by the mother is the characteristic that provides the greatest differential in risk of infant and under-five mortality. The children of mothers with secondary and

higher education are 62% less likely to die before their fifth birthday and 40% less likely to die in their first year of life than the children of mothers without education.

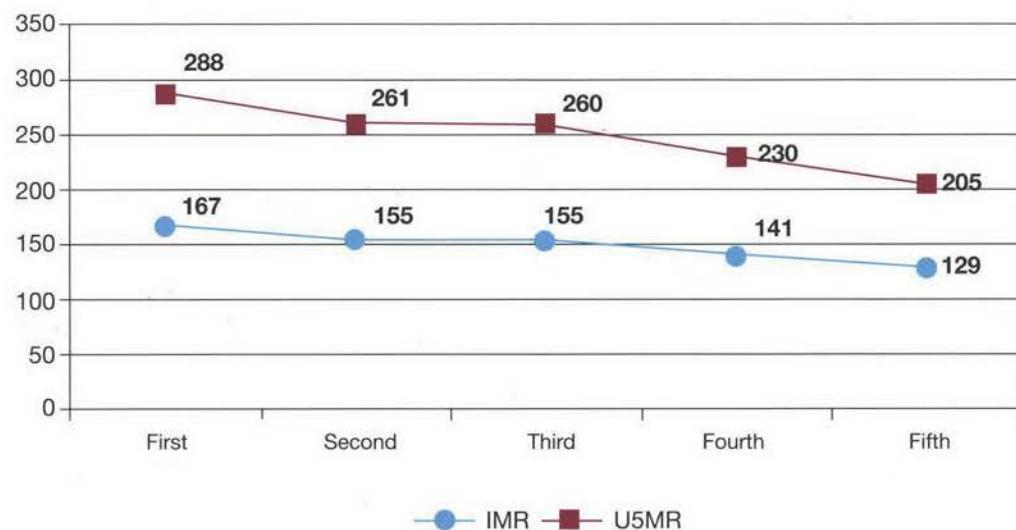
Graph 4.1: Differentials in mortality by mothers' education level



Households' socio-economic status also appears as an important factor impacting on mortality among Angolan children. One notes a gradually descending mortality gradient, falling as poverty declines.

Children in the poorest households (first quintile) are 40% more likely to die before reaching the age of five than children from the better off households (fifth quintile).

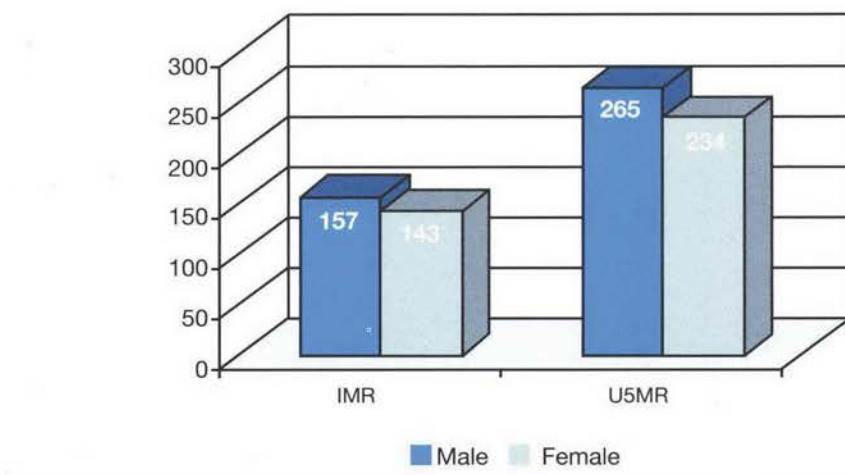
Graph 4.2: Differentials in mortality by wealth index quintile



Boys have an 8% higher chance of dying in their first year of life than girls. This situation is similar to that observed in other countries;

however boys are still at greater risk of death between the ages of one and four, which is not a usual pattern.

Graph 4.3: Differentials in mortality by sex



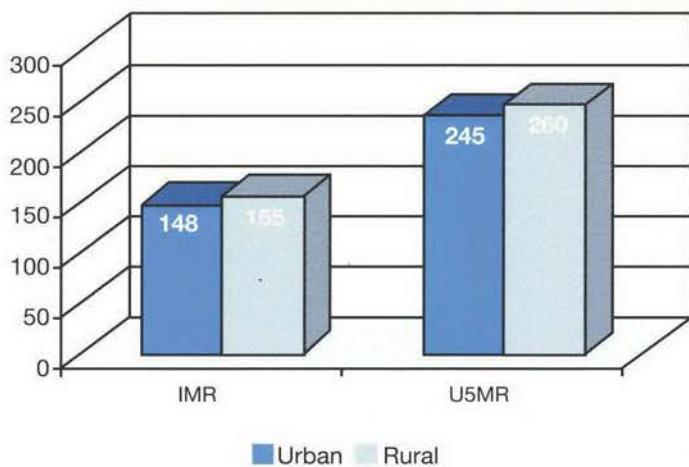
One notes that rural areas show only slightly higher mortality than urban areas. This difference is very small when compared with that observed in other countries. This probably reflects the massive displacement of the rural population towards urban areas and the poor living and overcrowded

conditions for a great part of the population in urban areas.

The lowest risk in terms of under-five mortality is in the Southern Region, where it is 30% lower than the national average. The risk of under-five mortality is the greatest in



Graph 4.4: Differentials in mortality by area of residence

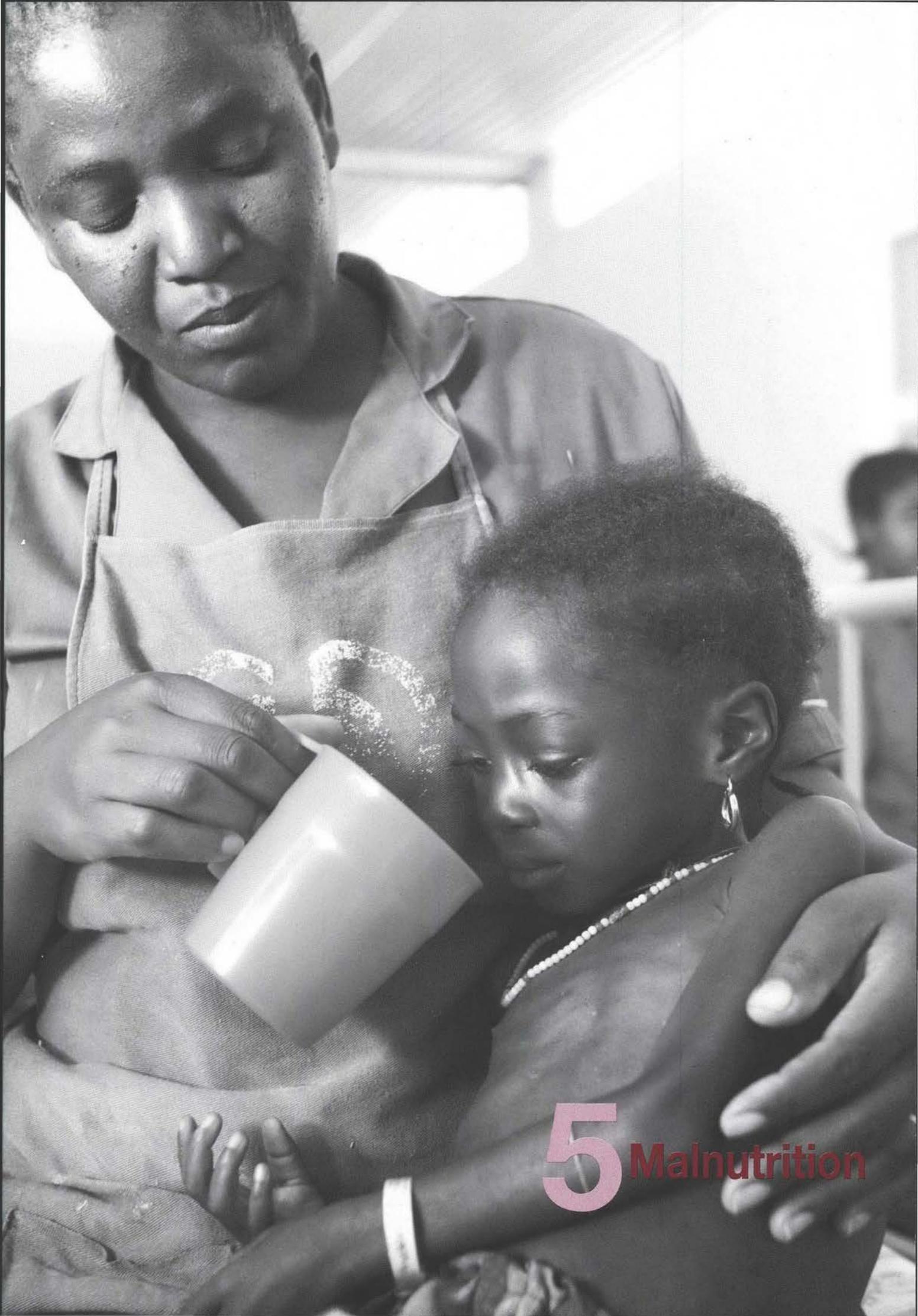


the Western Region, which shows a risk 64% higher than the Southern Region and 26% higher than the national average. The Centre South Region also has a greater risk than the national average. One notes a relatively lower

risk of dying in the Eastern Region than would have been expected there. The Capital and Northern Regions have intermediate figures when compared with the national average and the other regions.

Table 4.1: Infant and under-five mortality rates, Angola, 2001

	Infant mortality	Under-five mortality
Wealth index quintile		
First	167	288
Second	155	261
Third	155	260
Fourth	141	230
Fifth	129	205
Sex		
Male	157	265
Female	143	234
Mothers' level of education		
None	162	275
Primary	148	245
Secondary and higher	116	170
Region		
Capital	150	250
North	156	262
East	135	217
West	181	315
South	123	192
Centre South	162	277
Area of residence		
Urban	148	245
Rural	155	260
Total	150	250



5 Malnutrition

Indicators

Stunting prevalence: Also referred to as *chronic malnutrition*. This indicator manifests a retardation in growth as a result of poor diet over a prolonged period of time. It is the proportion of under-fives who fall below minus 2 and below minus 3 standard deviations from median height for age of NCHS/WHO reference population – 45%

Wasting prevalence: Also referred to as *acute malnutrition*. This indicator manifests a recent loss of weight as a result of severe illness or lack of food. It is mainly used in emergency settings as it reflects the present nutritional situation of the child. It is the proportion of under-fives who fall below minus 2 and below minus 3 standard deviations from median weight for height of NCHS/WHO reference population – 6%

Underweight prevalence: This indicator is a combination of the two previous indices (height/age and weight/height) and reflects the global nutritional status of a child without taking into account that the child might be short or thin. It is mainly a reflection of stunting with a relatively small contribution from wasting and is used in national health programmes, such as Mother and Child Clinics. It is the proportion of under-fives who fall below minus 2 and below minus 3 standard deviations from median weight for age of NCHS/WHO reference population – 31%

The risk of mortality for children under five years of age due to infections is 2.5 fold in the case of mild malnutrition, 4.5 fold in the case of moderate malnutrition, and 8 fold in the case of severe malnutrition. Malnutrition is implicated in half of all under-five deaths¹. Among children, the causes of malnutrition are interrelated and complex. There is a strong synergistic relationship between malnutrition and poor health. The interaction between inadequate dietary intake and disease leads to increased morbidity and mortality. Inadequate dietary intake and diseases in turn are caused by insufficient access to food, inadequate maternal and child care practices, and insufficient access to safe water and sanitation, as well as poor health care. These underlying causes are the consequences of the availability, use and control of various resources.

On an individual level malnutrition places the child at risk of entering the downward spiral of malnutrition/infection. Insufficient dietary intake leads to an immuno-incompetency similar to that of HIV and hence an increased susceptibility to infections. Infections lead to a further reduction in nutrient intake. As a consequence, the child suffers from frequent infections that become progressively more severe and longer lasting. The child fails to regain weight lost during one infection before the onset of the next, therefore increasing the child's chances of dying.

Three different anthropometric indicators have been used in the MICS: stunting prevalence (height for age), wasting prevalence (weight for height), and underweight prevalence (weight for age).



¹ Pelletier, D. and Jonsson, U., 1994.

Methodological note

All children aged between 0 and 59 months encountered in households were included in the sample. A total of 5,127 children under five years of age were measured and weighed, i.e. over 90% of the total survey sample size. The distribution of children surveyed in different age groups corresponds to the distribution generally found in populations in developing countries.

The anthropometric variables were obtained as follows:

Age: Whenever possible available documentation such as birth certificates or vaccination cards were used as reference. If no documentation was available a Calendar of Events was used to estimate the age.

Weight: The UNICEF Electronic Scale 890 was used to obtain the weight of the children. The caretaker and the child were weighed together, then the mother alone. Her weight was deducted from the total weight to obtain the child's weight.

Height: A standard UNICEF measuring board was used to measure height. Children less than 85 cm were measured lying down, and those of 85 cm or more were measured standing.

The presence of oedema among children was not recorded. This fact might compromise the analysis of the anthropometric data. Bilateral oedema is an indicator of Kwashiorkor. Children presenting bilateral oedema are regarded as severely malnourished independently of their anthropometric indices. The oedema is caused by the retention of water and sodium in the extra-cellular spaces and may account for between 5% to 15% of body weight. The presence of oedema is closely associated with an increased risk of mortality. Because the weight of children with bilateral oedema might be biased, the indicators' weight for height and weight for age might not reflect their actual nutritional status.

The indicators using age (stunting and underweight) might be compromised in

cases where it was difficult to verify the age of a child due to absence of documentation. To estimate the nutritional status of Angolan children, the MICS anthropometrical data were compared to an international reference population using the National Centre for Health Statistics / Centre for Disease Control / World Health Organisation International Growth References (NCHS, 1977). These growth references indicate the height a child should have reached at a certain age, the weight it should have at certain age, and the weight it should present for a certain height thus offering a comparison.

The expression in z-scores (i.e. the exact number of standard deviations from the median) is used in the analysis as it takes into account both the median weight and the standard deviation from the distribution of the reference population. This expression provides a more exact estimation of the nutritional status than other expressions, such as percentage of the median and percentiles, and possesses statistical properties that allow for comparison of nutritional data.

Five levels of malnutrition are defined for the three indicators used in the MICS (i.e. stunting, wasting, and underweight prevalence):

- Absence of malnutrition: ≥ -1 z-score
- Slight malnutrition: ≥ -2 z-score $a < -1$ z-score
- Moderate malnutrition: ≥ -3 z-score $a < -2$ z-score
- Severe malnutrition: < -3 z-score
- Global malnutrition: < -2 z-score

The combination of moderate malnutrition and severe malnutrition is generally referred to as global malnutrition (i.e. children whose z-scores fall 2 or more standard deviations below the median of the reference population).

This analysis focuses on global, moderate, and severe malnutrition, as slight malnutrition is of lesser importance and pertinence to the study.

The anthropometric data was analysed using the SPSS and EPIINFO/EPINUT software.

Severity level of malnutrition among Angolan children

In order to determine the severity of malnutrition within a population, WHO has established international threshold levels expressed in percentage of malnutrition prevalence. The severity of malnutrition has been classified in four levels, from low to very high. When using this classification as a reference, one notes that no substantial improvement in malnutrition prevalence

among Angolan children occurred between 1996 and 2001. Stunting and underweight malnutrition prevalence is still at a very high level whereas wasting malnutrition prevalence remains at a medium level. This high prevalence has enormous social and economic implications and constitutes one of the main challenges for public health interventions in Angola.

WHO classification by level of malnutrition prevalence (%)

	Low	Medium	High	Very high
Stunting prevalence	<20	20-30	30-40	>40
Wasting prevalence	< 5	5-10	10-15	>15
Underweight prevalence	<10	10-20	20-30	>30

Comparison of malnutrition prevalence in Angola between 1996 and 2001

	Angola 2001	Angola 1996
Stunting prevalence	45%	53%
Wasting prevalence	6%	6%
Underweight prevalence	31%	42%

Stunting prevalence (chronic malnutrition)

Defined on the basis of the height to age ratio, stunting or chronic malnutrition refers to malnutrition resulting from accumulated distortions in the child's nutritional status. The stunting process can start in utero and continue post-natally during the first three years of life. It is assumed that children are stunted because of environmental reasons. Many children become stunted because of inappropriate weaning practices, repeated infections, and poor diet. Stunting is a good indicator for the general well-being of a population as it reflects the structural context surrounding malnutrition. Despite the fact that some catch up growth is possible, total recovery is generally very difficult as it can only occur with a very substantial improvement of the child's

quality of life. In addition, stunting is closely linked to impaired mental development.

With 45% stunting prevalence, the MICS reveals that almost one in two Angolan children suffer from chronic malnutrition. Stunting prevalence in Angola is higher than the average stunting prevalence recorded among children in sub-Saharan Africa countries, which was estimated in 2001 at 40%. When using the WHO classification as a reference, Angola in 2001 was among the eleven African countries with very high stunting prevalence (above 40%)².

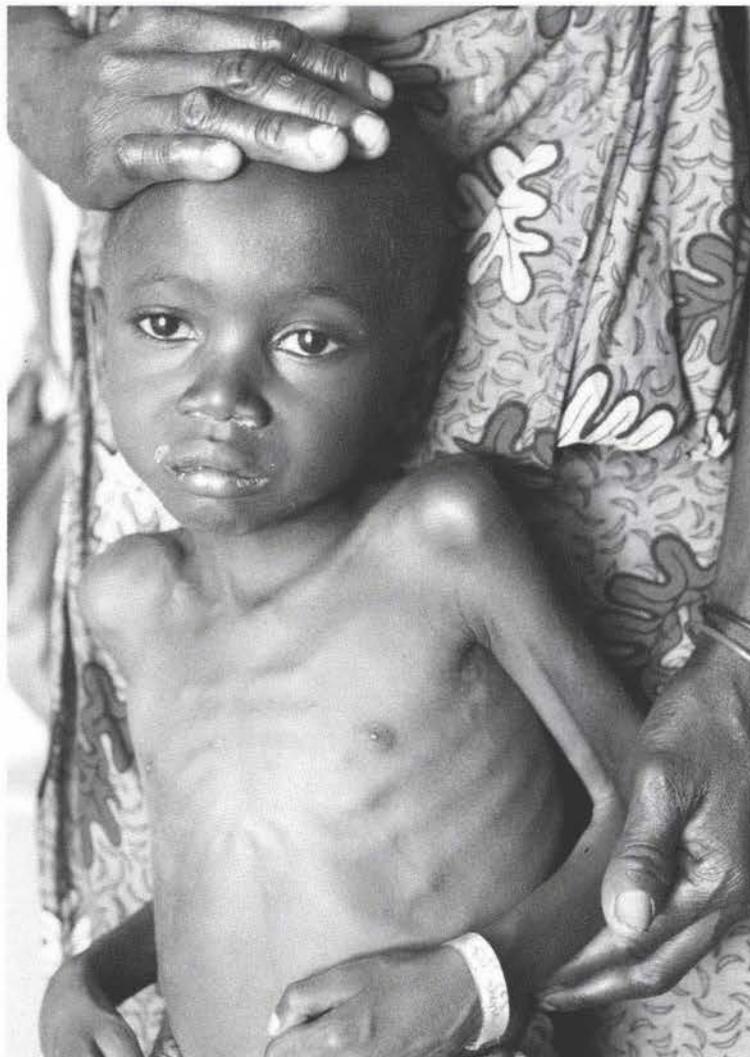
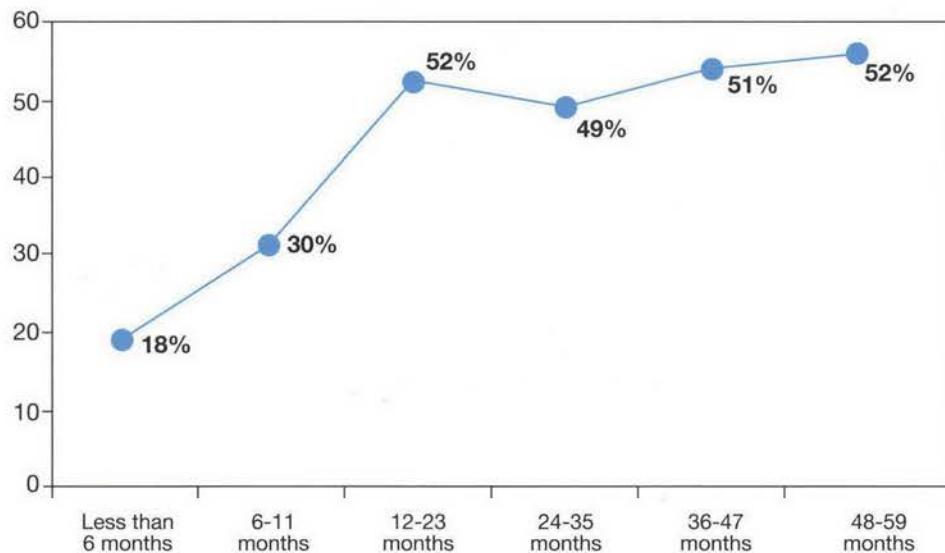
Stunting, both for global and severe chronic malnutrition rates, increases with age up to 12 to 23 months. From the 24th month

²See State of The World's Children 2003, UNICEF.

onwards it remains at stable levels. This is because during the first months of life the nutritional demands of the child can still be met with breast milk. With increasing age poor quality traditional weaning practices are

introduced which lead directly to impaired growth. In the absence of adequate feeding, the accumulation of deficits over an extended period of time will result in children with lower height than required for their age.

Graph 5.1: Stunting prevalence by age group



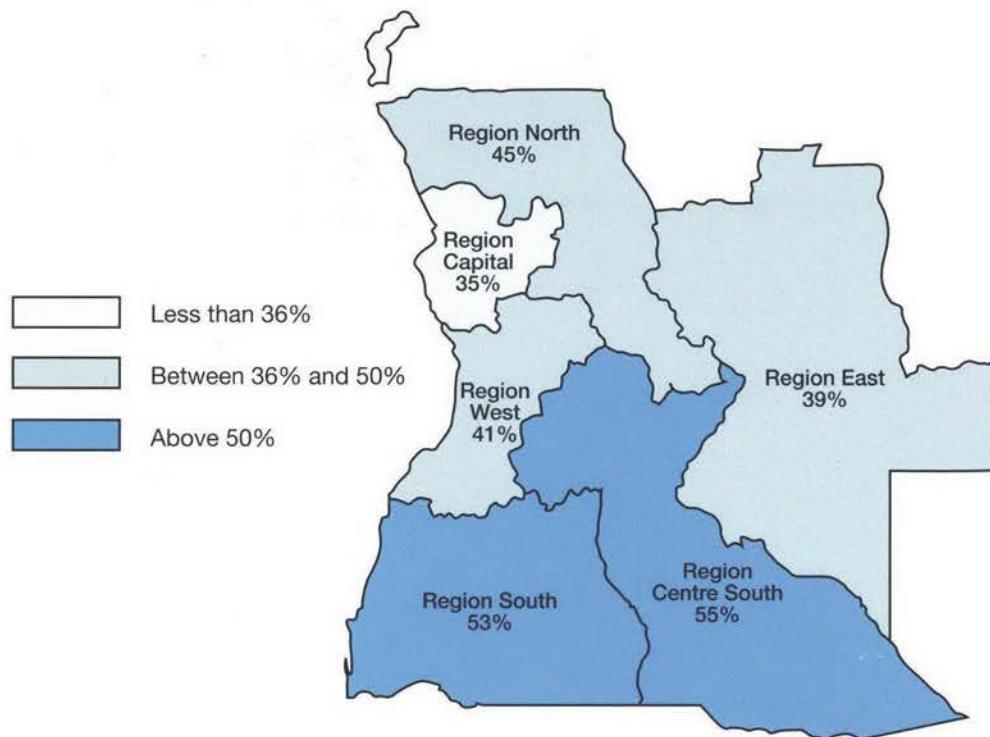
Boys are slightly more stunted than girls (48% versus 43%), which can be partly accounted for by the fact that boys have a higher requirement for certain micronutrients such as zinc and are, therefore, more susceptible to zinc deficiency. This finding also reveals the lack of discriminatory practices against girls in terms of access to food.

Children living in rural areas show a higher prevalence of stunting than those living in urban areas, largely explained by differences in food availability (43% versus 50%). In addition, monotonous feeds and lesser access to services might also play a role.

The highest stunting prevalence is found in the Centre South Region (55%), which includes the provinces most affected by the war. Stunting prevalence in the Southern Region is also very elevated with 53% recorded. The lowest stunting prevalence is found in the Capital Region (35%), whereas all other regions record a prevalence rate of between 39% and 45%.



Map 5.1: Chronic malnutrition prevalence among under-five children



As expected the prevalence of stunting declines with increasing social status and level of schooling. One notes however that only among the better off households (fifth quintile) is stunting prevalence significantly lower than among all other households. While stunting prevalence is only 13% lower in the fourth quintile than in the first quintile, it is 37% lower in the fifth quintile

than in the first quintile. This reflects poor nutrition in the overwhelming majority of Angolan households. Regarding education levels, the same patterns are observed, with stunting prevalence varying from 50% among children whose mothers are illiterate to 33% among children whose mothers received secondary or higher education.

Wasting prevalence (acute malnutrition)

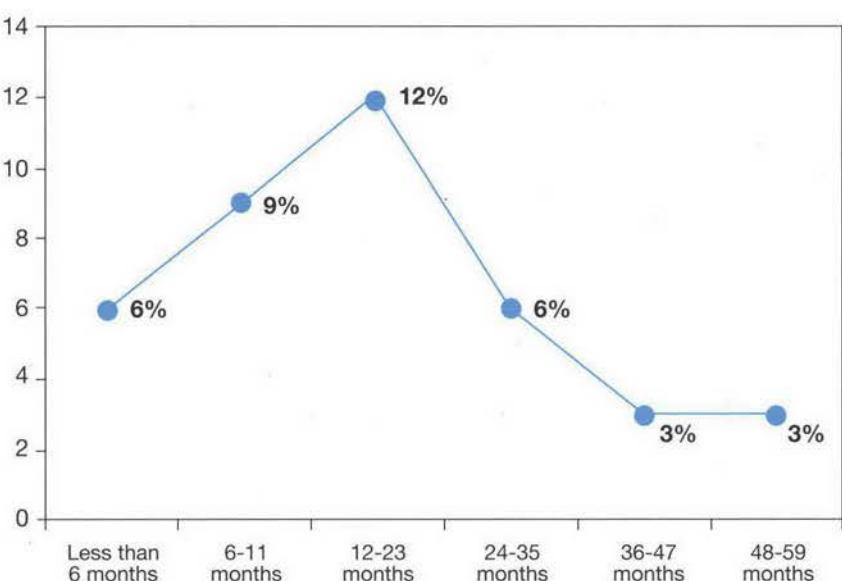
Defined on the basis of weight to height, wasting or acute malnutrition refers to malnutrition resulting from excessive loss of weight that occurred in a recent period due to severe illness or lack of food. This indicator is particularly dynamic as it is very sensitive to seasonal variations and changes in the child's environment. With 6% prevalence, the severity of wasting among Angolan children can be considered medium according to WHO threshold levels. No improvement occurred since 1996, when the MICS also recorded 6% wasting prevalence nationally.

The prevalence of wasting does not reach the proportions of stunting and underweight, but is elevated enough to be a public health concern given its close association with morbidity and mortality. For example, acutely malnourished children are 20 to 40 times more likely to die during an episode of

persistent diarrhoea, and 4 to 10 times more likely to die during an episode of acute diarrhoea.

The prevalence of acute malnutrition increases steadily during the first two years of life and only decreases after 35 months of age, which is explained by poor breastfeeding and feeding practices in Angola. Breast milk is complemented or even replaced by foods of inadequate nutrient content, usually at a far too early age. With early weaning, passively acquired immunity declines earlier while children come increasingly into contact with each other and start to consume foods prepared under poor hygienic circumstances. At the same time their dietary requirements relative to body size are higher than in adults and they require frequent feeding with adequate and hygienically prepared foods.

Graph 5.2: Wasting prevalence by age group

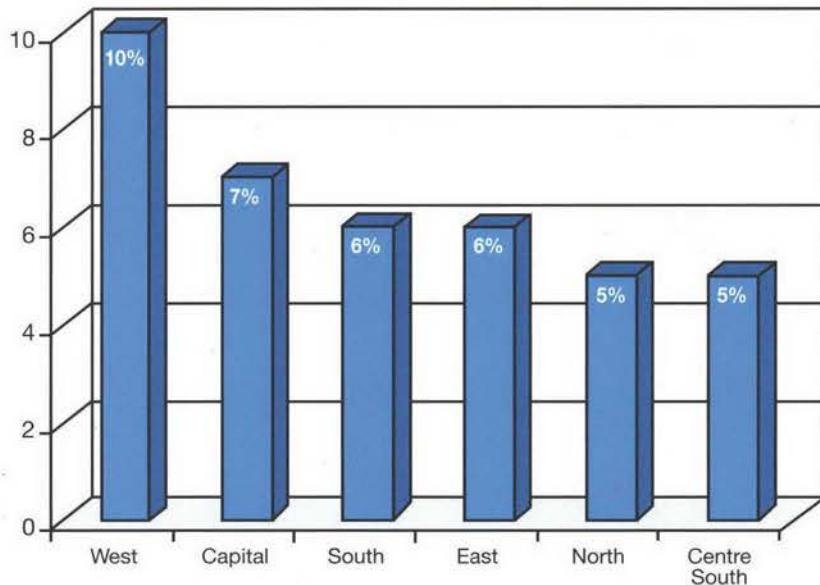


When reading the results pertaining to the prevalence of acute malnutrition one should keep in mind the following facts. First, the survey did not reach those children in areas of difficult access and does not reflect the nutritional emergencies that occurred throughout 2001 in the most war-affected areas, where wasting prevalence rates of over 20% were commonly recorded among children attending Therapeutic Feeding Centres. Second, anthropometric MICS data were gathered in the periods covering the harvest and post-harvest periods (April-October 2001), when there was a higher availability of foods in most provinces.

There are no significant differences between wasting prevalence in boys and girls, or by area of residence. The prevalence of wasting declines proportionally to increasing social status and level of schooling. However, even among those with the highest wealth index or the highest level of schooling, rates of acute malnutrition remain relatively high (5%) which reflects overall poor nutritional habits.

In terms of geographical distribution the West Region presents the highest rates of wasting. Unfortunately an analysis by region according to the agricultural calendar is not possible, as the survey in the different provinces that constitute one region took place at different periods.

Graph 5.3: Wasting prevalence per region



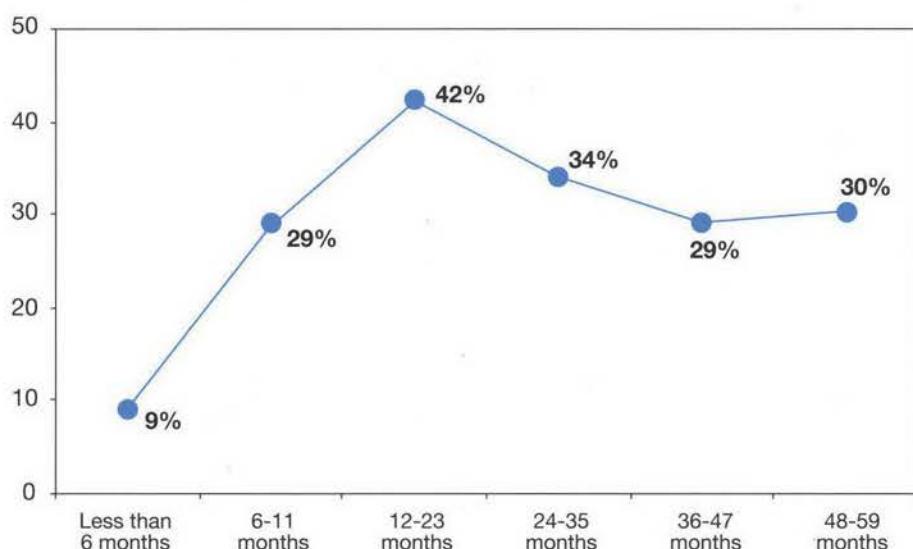
Underweight prevalence

Underweight reflects, similarly to stunting, the past nutritional or health deficits experienced by the population. This index represents body mass relative to age and is a composite of stunting and wasting. With 31% prevalence, the severity of underweight among Angolan children is, according to WHO threshold levels, very high. It is slightly higher than the average underweight prevalence recorded among children in sub-Saharan Africa countries, which

was estimated in 2001 at 29%³.

Similarly to stunting and wasting, underweight levels by age group are higher at ages 12 to 23 months, decreasing slowly after that to what can still be considered to be high levels of malnutrition. Boys are also slightly more underweight than girls. Children living in rural areas show a slightly higher prevalence of underweight than those living in urban areas (32% against 30%).

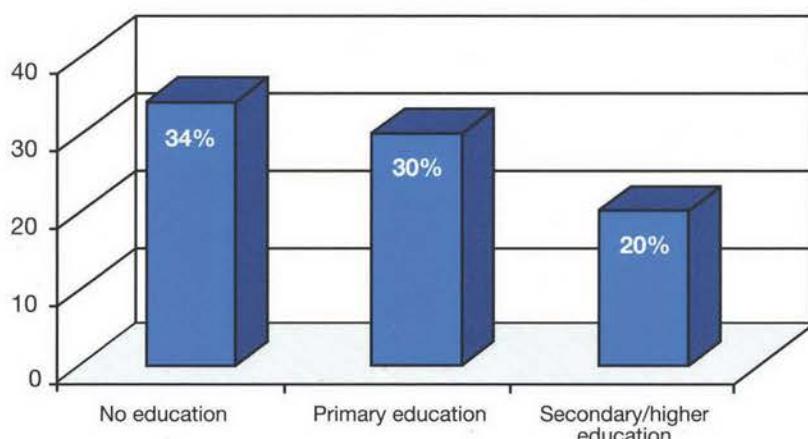
Graph 5.4: Underweight prevalence by age group



As for stunting and wasting prevalence, underweight prevalence declines proportionally to increasing educational levels of children's mothers. The MICS shows that children whose mothers are not educated are 70% more likely to be underweight, 53% more likely to be stunted, and 40% more likely

to be wasted. In developing countries, women's education contributes to 43% of the underlying factors of malnutrition⁴. This is particularly important, considering that 35% of women surveyed in the MICS have no education and 52% received only primary education.

Graph 5.5: Underweight prevalence according to mothers' education level



³ State of the World's Children 2003, UNICEF.

⁴ Smith, L. C. and Haddad, L., 2000.

Table 5.1: Stunting, wasting, and underweight malnutrition prevalence among under-five children, Angola, 2001

	Stunting prevalence (%) (Height for age)		Wasting prevalence (%) (Weight for height)		Underweight prevalence (%) (Weight for age)	
	Global (percent below - 2 z-score)	Severe (percent below - 3 z-score)	Global (percent below - 2 z-score)	Severe (percent below - 3 z-score)	Global (percent below - 2 z-score)	Severe (percent below - 3 z-score)
Wealth index quintile						
First	52	28	8	2	35	10
Second	51	27	7	2	34	11
Third	48	24	7	1	34	10
Fourth	45	21	6	1	30	8
Fifth	33	13	5	1	22	4
Sex						
Male	48	23	7	1	32	9
Female	43	21	6	1	29	8
Region						
Capital	35	18	7	2	23	6
North	45	22	5	1	31	7
East	39	17	6	1	27	7
West	41	21	10	2	32	10
South	53	26	6	1	40	12
Centre South	55	29	5	1	31	8
Area of residence						
Urban	43	21	7	1	30	8
Rural	50	26	6	1	32	9
Age group						
< 6 months	18	7	6	2	9	2
6 to 11 months	30	12	9	2	29	8
12 to 23 months	52	24	12	3	42	13
24 to 35 months	49	24	6	1	34	11
36 to 47 months	51	27	3	0	29	6
48 to 59 months	52	28	3	0	30	7
Mothers' education level						
None	50	25	7	1	34	11
Primary	45	22	6	1	30	8
Secondary and higher	33	15	5	1	20	5
Total 2001	45	22	6	1	31	8
Comparison						
Sub-Saharan Africa 2001	40	-	10	-	29	-



6 Breast-feeding

Indicators

Exclusive breast-feeding rate

Proportion of infants under 4 months who are exclusively breast-fed – 14%

Timely complementary feeding rate

Proportion of infants aged 6 to 9 months who are receiving breast milk and complementary food – 77%

Continued breast-feeding rate

Proportion of children aged 12 to 15 months and 20 to 23 months who are still receiving breast milk in addition to family foods – 89% and 37% respectively

further indicates that nearly one-fourth of all children under one year of age are given the feeding bottle. All of which only increases the child's vulnerability to infections and places the child at risk of entering the vicious malnutrition-infection cycle.

The two most important breast-feeding indicators – exclusive breast-feeding and complementary breast-feeding at 20 to 23 months – are in Angola well below the sub-Saharan African countries' average, estimated in 2001 at 33% and 51% respectively². Only in the field of complementary breast-feeding at 12 to 15 months is Angola performing adequately. No major changes have occurred in breast-feeding patterns since the last MICS survey carried out in 1996. Nevertheless, some smaller improvements can be noted in the field of exclusive and complementary breast-feeding, whereas practising of continued breast-feeding at 20 to 23 months deteriorated.

Despite being a risk factor of HIV transmission from the sero-positive mother to the child, overall, the benefits of breast-feeding, both for the child as well as for the mother, are well known and widely documented. Among the most important benefits of breast-feeding for infants in developing countries are the reduction of the incidence and severity of diarrhoeal diseases during the first year, reduction of the risk of respiratory infections and improved neurological development, as well as an improved protection against a number of chronic diseases in later life. Infants not breast-fed at all are at a much higher risk of dying, particularly due to diarrhoea, than breast-fed children³.

In the second year of life, breast milk remains an important source of fats, calcium, quality protein and vitamin A. Absence of frequent and sustained breast-feeding is a significant risk factor for Vitamin A Deficiency (VAD). Children who are still breast-fed in their second year of life are 65% to 95% less likely to develop deficiency signs when mothers'

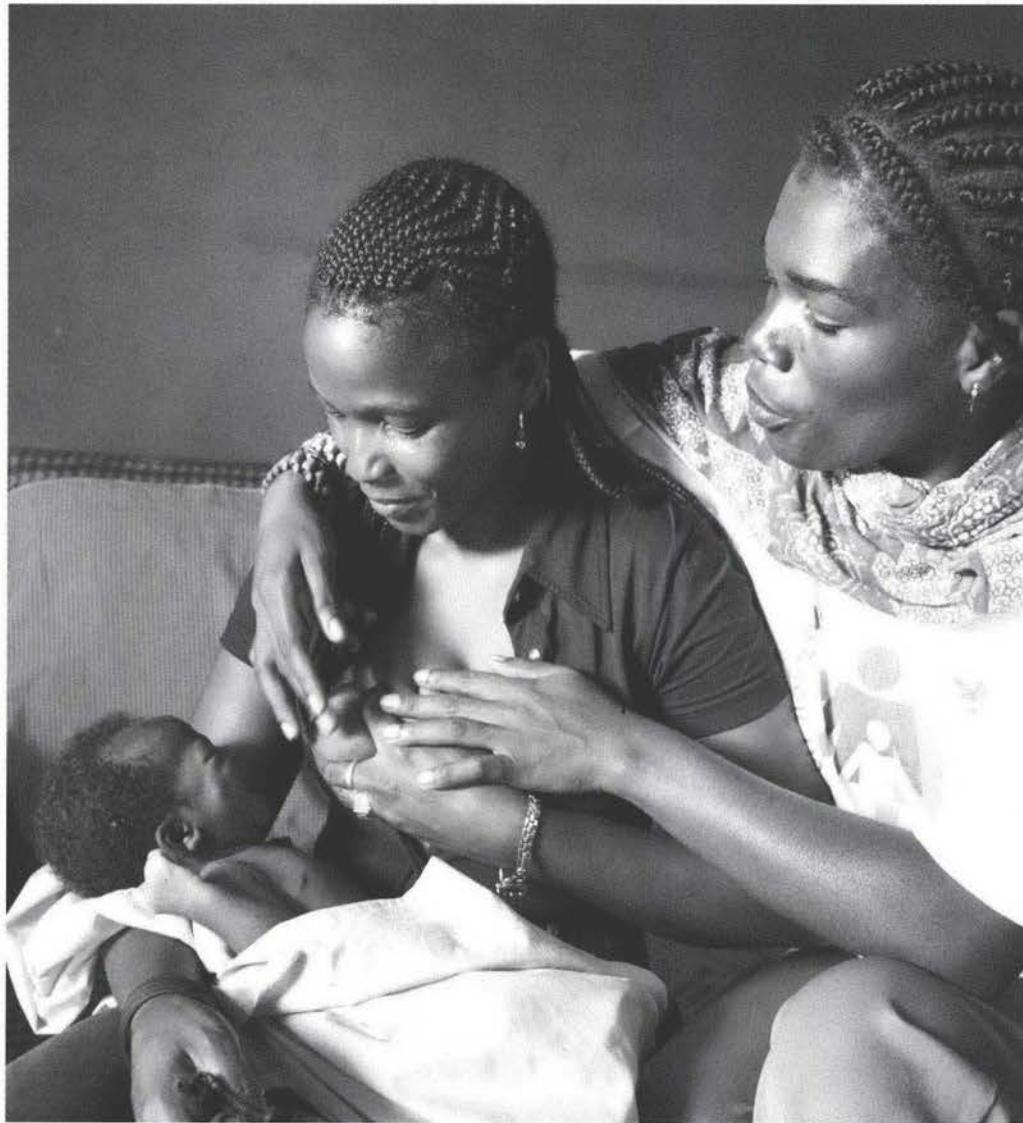
Breast milk provides a complete source of nutrition during the first six months of life, fulfils half of the child's nutritional requirements during the second six months of life, and one-third of requirements in the second year of life.

¹ Although international recommendations for exclusive breast-feeding is up to six months of age, the MICS focuses on exclusive breast-feeding only up to four months of age.

² See State of the World's Children 2003; UNICEF.

³ Feachem, R.G. and Jamison, D.T., 1991.

⁴ Sommerfelt, A. E., and Stewart, K., 1994.



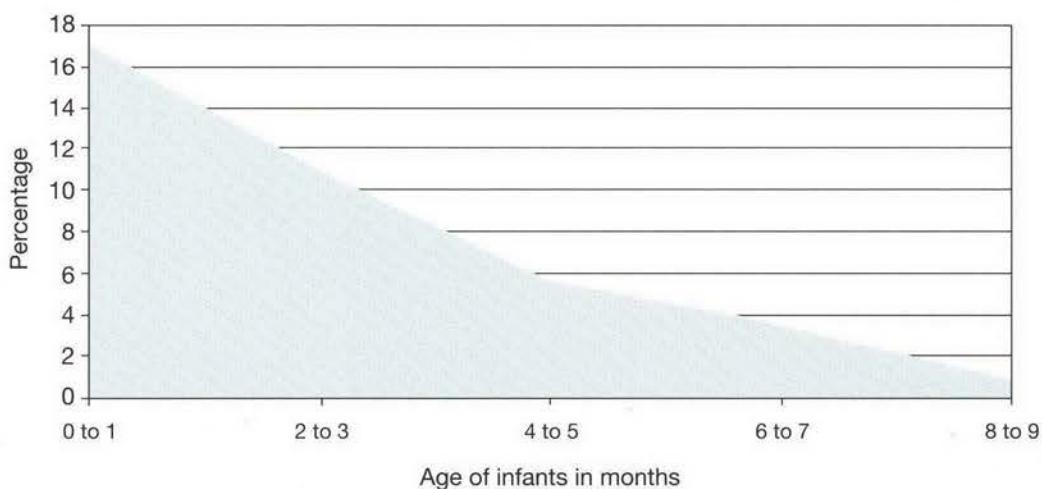
milk has sufficient levels of vitamin A⁴. The MICS found that breast-feeding is stopped rather early, between 16 months and 19 months. At the age of 20 to 23 months only 37% of the children still receive breast milk, which might result in depleted vitamin A stores. This is a worrying factor considering the low coverage of vitamin A supplementation in Angola.

Breast-feeding also greatly benefits mothers. Initiation of breast-feeding within one hour of delivery prevents post-partum haemorrhage and promotes uterine involution. Breast-feeding mothers have a decreased risk of developing diabetes and osteoporosis, as well as reproductive cancers. In addition, breast-feeding can act as a powerful contraceptive that is highly effective for six months after delivery if the mother is fully or nearly fully breast-feeding (Lactation Amenorrhoeal Method). This benefits the health of mother and child through child

spacing. This contraceptive method is hardly practised at all by Angolan women. The MICS found that only 0.2% of women aged 15 to 49 years old were using it.

When analysing the curve that characterises the frequency of exclusive breast-feeding by age, one notes that although the majority of children start breast-feeding at birth (96%), the rate of abandoning exclusive breast-feeding is extremely high in the first month of life, with only 17% of children from 0 to 1 month of age being exclusively breast-fed. Further, exclusive breast-feeding declines significantly with age, with only 6% of infants aged 4 to 5 months exclusively depending on mother's milk. It should also be noted that nearly half of the surveyed children under four months of age receive additional fluids such as water and other liquids and 34% of them already receive a solid/mushy food component in addition to breast milk, which highly increases their vulnerability to infections.

Graph 6.1: Percentage of infants exclusively breast-fed by age group

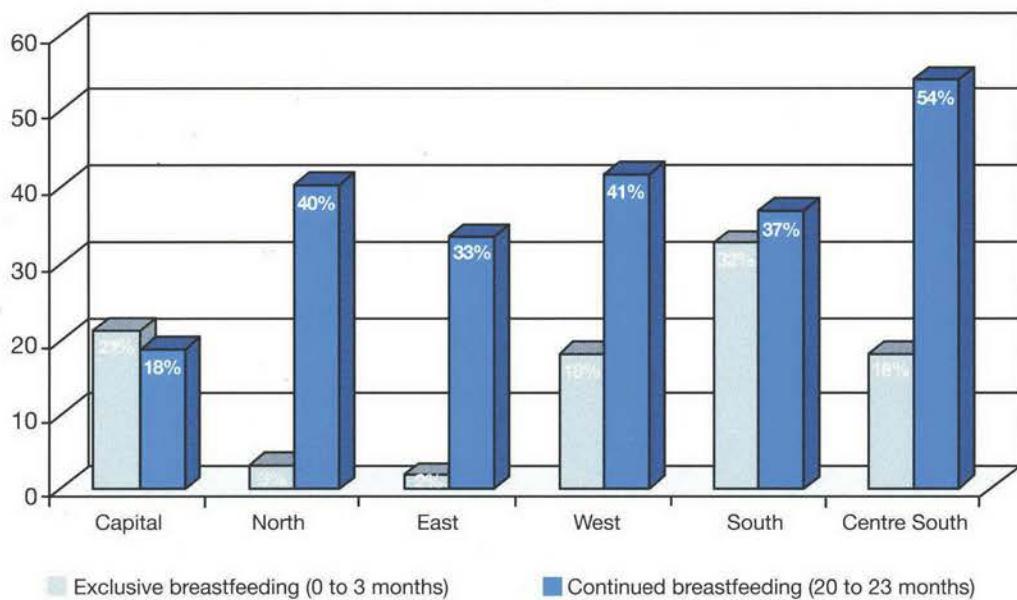


The area of mothers' residence, urban or rural, does not have a major influence on breast-feeding patterns in Angola. Only complementary feeding and continued breast-feeding at 20 to 23 months register as a slightly higher percentage of breast-fed children in rural areas. This can partly be explained by the fact that women in urban areas have better access to jobs, which might oblige them to stop breast-feeding for convenience.

Another contributing factor might be the higher availability of milk substitutes in urban areas⁴.

The highest percentage of exclusive breast-feeding is practised in the South Region (32%), and the lowest in the East Region (2%). Continued breast-feeding at 20 to 23 months is most practised in the Centre South Region (54%) and is least practised in the Capital Region (18%).

Graph 6.2: Selected breast-feeding indicators by region



Mothers with a higher educational level are more likely to breast-feed exclusively, though at the same time they are also more likely to abandon breast-feeding earlier. This

may partly be explained by the better job opportunities these women have access to, which might lead them to choose more convenient feeding methods. Mothers with

⁴ Implementation of the International Code of Marketing of Breast Milk Substitutes is still under study in Angola.



no or low education levels are those least likely to breast-feed exclusively, but they are also more likely to breast-feed for longer. This probably reflects the fact that the least educated women are also economically more vulnerable and might, therefore, have the least access to milk substitutes.

Use of bottle feeding

The use of the feeding bottle is a dangerous practice taking into account that the hygienic requirements necessary for the preparation of safe foods in Angola can often not be met. In addition, a bottle-fed child might not receive all nutrients offered by powdered milk, as mothers tend to over-dilute powdered milk in order to stretch the supply.

Bottle-feeding is extensively practised all over Angola but in the South Region nearly half of all children of under one year of age received the feeding bottle. It is possible that the provinces located close to the border with Namibia have more access to feeding bottles and breast milk substitutes than the other provinces and regions. Similarly infants of mothers with higher levels of education are more often bottle-fed than infants of mothers with lower levels of education or no education at all. This can be explained by the higher purchasing power of this group of women and greater job opportunities, which might oblige them to stop breast-feeding and turn to bottle-feeding. Finally, more children in urban than in rural areas (29% versus 18%) receive the feeding bottle, which can be explained by the higher availability of breast milk substitutes in urban areas.

Table 6.1: Summary table of breast-feeding indicators, Angola, 2001

	Exclusive breast-feeding rate (less than 4 months)	Timely complementary feeding rate	Continued breast-feeding rate (12 to 15 months)	Continued breast-feeding rate (20 to 23 months)
Sex				
Male	12	79	89	37
Female	15	76	90	37
Region				
Capital	21	63	86	18
North	3	76	90	40
East	2	78	89	33
West	18	83	94	41
South	32	82	85	37
Centre South	18	79	91	54
Area of residence				
Urban	14	75	89	35
Rural	13	83	89	43
Mothers' education level				
None	11	78	88	43
Primary	15	78	91	37
Secondary and higher	19	70	86	21
Total	14	77	89	37
Comparison				
Sub-Saharan Africa 2001	33	63	<i>n.a.</i>	51
Comparison				
Total Angola 1996	12	70	90	48



7 Salt Iodisation



Iodine deficiency remains the single greatest cause of preventable brain damage and mental retardation world-wide. Iodine Deficiency Disorders (IDDs) can lead to increased rates of stillbirths, congenital abnormalities, cretinism, psychomotor defects and neonatal mortality. In the child and adolescent the effects are manifested as goitre, hypothyroidism, impaired mental function, and retarded mental and physical development. In addition, it can lead to diminished school function, as milder IDD in a community means that many children without outward disabilities will be condemned to suffer learning problems and do poorly in school.

The most cost-effective and efficient way to prevent IDDs among the population is to ensure that salt consumed contains enough iodine. This means reaching the vast majority of the population, as salt is encountered in most households. Globally, progress towards the elimination of IDD through universal salt iodisation appears to be one of the most significant successes in the field of non-communicable diseases. In August 1996 Angola adopted the Universal Salt Iodisation policy as a way to control IDDs. That same year, the government's decree of Exclusive Distribution of Iodised Salt recommended that all salt for human and animal consumption should be iodised.

Angola has a large and potentially self-sufficient salt production capacity. In 2001, there were 17 salt production plants located in Namibe, Benguela, Kwanza Sul, Luanda and Zaire provinces, with ten plants having the capacity to produce iodised salt. The national production of salt in 2000 was estimated at 32,600 metric tons, of which only 30% was iodised (9,800 metric tons). The plants in Benguela and Kwanza Sul were accountable for 70% of the salt production and 86% of the iodised salt production. In 2001, the trends were similar.

The criterion used for the adequacy of prevention of IDD is the proportion of households ($> 90\%$) consuming adequately iodised salt. In 2001, the MICS reveals that 87% of Angolan households use salt. Among

Indicator

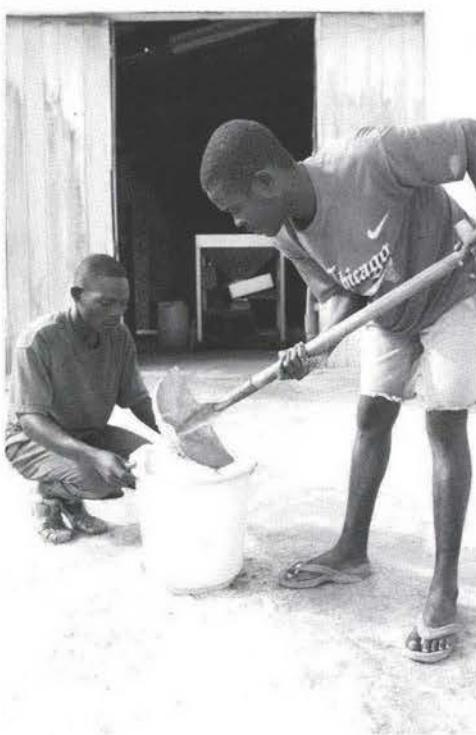
Iodised salt consumption¹

Proportion of households consuming adequately iodised salt – 35%

households with salt, only 35% are using salt that is adequately iodised, with wide regional disparities, from 11% in the West Region to 62% in the East Region. In other words, at national level 65% of households have salt that if iodised adequately could prevent the occurrence of iodine deficiencies. This level places Angola well below the average iodised salt consumption recorded in sub-Saharan Africa in the same period at 67%².

There are some variations by area of residence. Rural households have relatively less salt available, and for those that have, the salt is less adequately iodised than in the urban population. The availability of salt can be related to reduced product diversity and distribution as well as market accessibility in rural settings.

The MICS findings highlight that the poorest groups are the least likely to afford and thus



¹ Salt is considered adequately iodised when it contains at least 15 parts of iodine per million.

² See State of the World's Children 2003, UNICEF.

consume salt on a regular basis. This is an important factor when targeting salt iodisation programmes. Alternative or additional strategies may be required in such situations where groups at risk of IDD do not purchase iodised salt through normal commercial channels.

Whereas the availability of salt in households is significantly related to the households' wealth, the adequacy of iodised salt is not. While one in five of the most vulnerable households do not have salt compared to one in 20 among those which are better off, the proportion of adequately iodised salt consumed is the same in each group. The probability of encountering adequately iodised salt is actually slightly higher among the most vulnerable (34%) than the least vulnerable (33%). This finding should be highlighted in the sense that market prices for iodised and non-iodised salt vary, the latter being less expensive. This situation reflects the fact that a large proportion of vulnerable people were receiving in 2001 monthly food baskets provided by the World Food Programme, that included iodised salt. These findings also reflect the overall poor availability of iodised salt in Angola and the lack of knowledge about its benefits. If educated about the importance of iodine in salt, it would not be surprising to see women

from better off households purchasing more expensive iodised salt.

Household salt availability has a clear correlation with the areas of salt production and the regions surveyed in relation to their proximity. The Western Region (Benguela and Kwanza Sul provinces) accounts for approximately 70% of all salt produced annually in Angola. It is in the same region that the highest number of households with salt is encountered (93%). The same trend is observed in other regions where salt is produced, namely the Southern, Capital and Northern Regions, which all present significantly lower numbers of households with no salt in comparison to the non-littoral East and Centre South Regions.

However, the households with salt testing adequate for iodisation show no correlation to proximity of localities where salt is iodised. In fact there is a marked reverse trend between availability of salt, consumption of adequately iodised salt, and regions of production. It is in the West Region that the salt consumed by households is the least adequately iodised (only 11%), an area that is seen to produce the vast majority of the iodised salt in Angola and where salt is most frequently available to households.





Map 7.1: Percentage of households consuming adequately iodised salt

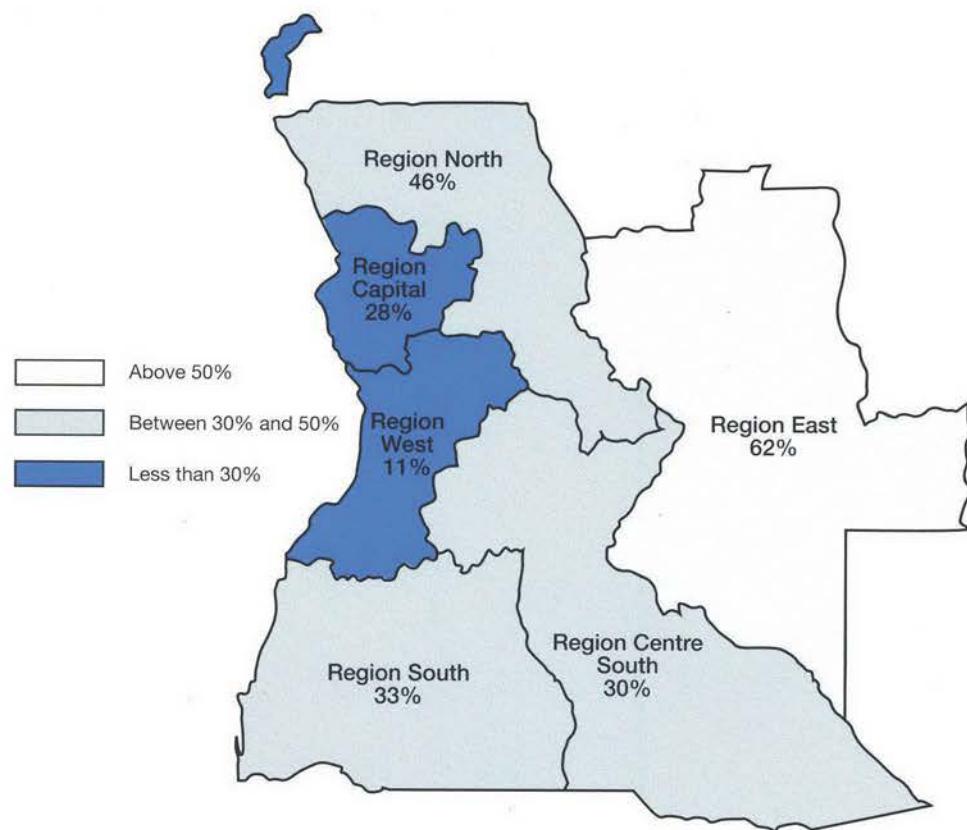
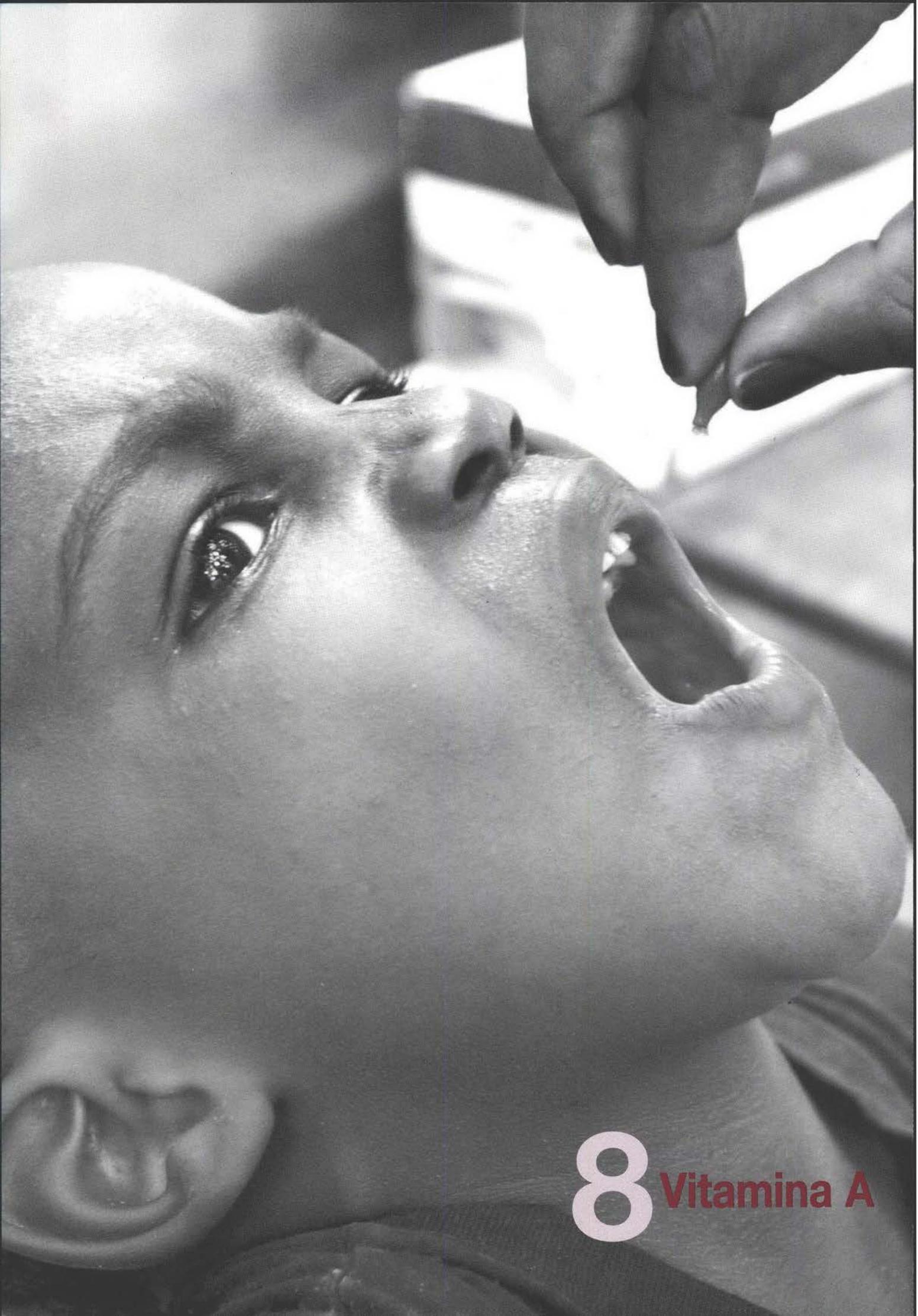


Table 7.1: Percentage of households consuming adequately iodised salt, Angola, 2001

	Percentage of households with no salt	Percentage of households in which salt was tested	Salt not adequately iodised	Test results Salt adequately iodised
Wealth index quintile				
First	20	78	66	34
Second	16	82	66	35
Third	14	84	60	40
Fourth	9	89	67	33
Fifth	5	93	68	33
Region				
Capital	8	90	72	28
North	12	86	54	46
East	20	78	38	62
West	7	92	89	11
South	9	91	67	33
Centre South	19	74	70	30
Area of residence				
Urban	11	86	64	36
Rural	15	83	67	33
Total	13	85	65	35



8 Vitamina A



Vitamin A is an essential micronutrient for the normal functioning of the visual system, development, maintenance of epithelial cellular integrity, immune function and reproduction. Deficiency in vitamin A initially compromises the integrity of the epithelial barriers and the immune system, which is then followed by impairment of the visual system and increased infection. Consequently, there is an increased risk of death, especially among children.

In Angola, Vitamin A Deficiency (VAD) is a major public health problem. In 1998, the Ministry of Health National Nutrition Programme conducted a study to determine the VAD prevalence among children¹. Low vitamin A prevalence (i.e. proportion of children aged 6 to 59 months with serum retinol below 20 (g/100 ml) was established at 64%, which is well above the WHO threshold of severe public health importance ($\geq 20\%$). VAD among lactating women was also worryingly high at 77% (breast milk retinol below 8 ($\mu\text{g}/100 \text{ ml}$)).

High-dose vitamin A supplementation is one method of improving the vitamin A status of children and women. Since 1999, the national Expanded Programme of Immunisation (EPI) has included the administration of high-dose vitamin A for all children aged 6 to 59 months vaccinated against polio during the annual National Immunisation Days (NIDs). The Angolan national protocol of high-dose vitamin A supplementation recommends that children from 6 to 59 months receive supplementation of vitamin A every six months and women post-partum receive one dose of vitamin A within six weeks of delivery. The MICS, which reviewed vitamin A supplementation coverage for these two population groups, reveals very low coverage and compliance practices with the national protocol.

Only 31% of children received timely vitamin A supplementation. Just 7% reported to have received the supplement after the six-month period and 13% were unable to specify the timeframe in which they had

Indicators

Children receiving vitamin A supplements

Proportion of children aged 6 to 59 months who received a high-dose vitamin A supplement in the last six months – 31%

Mothers receiving vitamin A supplements

Proportion of mothers who received a high-dose vitamin A supplement before the infant was eight weeks old – 26%

received the supplementation. There is no variation in the coverage according to gender. The most common method of delivering vitamin A supplementation are the NIDs (83%), followed by routine clinic services (12%), and curative clinic consultations (5%). There is no significant variation between rural and urban areas, which could be explained by the fact that the NIDs covered both urban and rural areas. The main limitation of NIDs however is that they provide the opportunity for only one dose of vitamin A per year.

One of the underlying causes of vitamin A deficiency is poor maternal awareness, education and literacy. Studies also suggest that VAD has strong socio-economic

Improving the vitamin A status in young child populations leads to an average reduction of 23 % in mortality rates in children with VAD. Improving the vitamin status of pregnant women may reduce their risk of dying during pregnancy and childbirth. Vitamin A improves their resistance to infection such as HIV and malaria.

¹ Study on vitamin A deficiency in Angola, Ministry of Health and UNICEF, 1998.

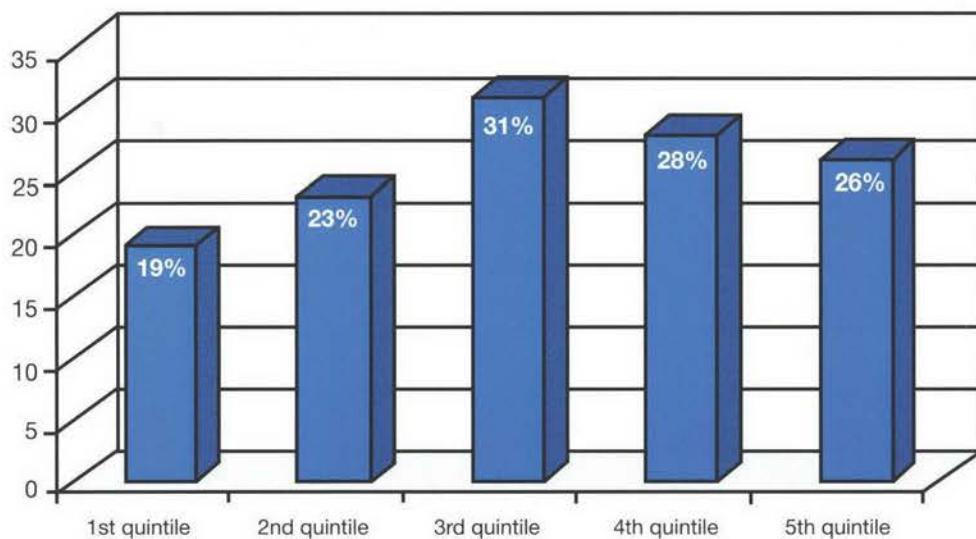
associations². In Angola, the significant variations observed between the coverage of vitamin A supplementation according to households' wealth and mothers' level of education highlight that those most at risk have the lowest coverage rates. For example, a child whose mother is not educated is 60% less likely to receive vitamin A supplementation than a child whose mother received secondary or higher education.

Poorest children are 40% less likely to receive timely supplementation than children from better off households. Considering that the main way of administering vitamin A to children is the NIDs, the variations by wealth index quintile indicate that, contrarily to polio

immunisation, the NIDs did not yet result in reduced vulnerabilities among the poorest population. This reflects the fact that the NIDs did not reach all children in terms of vitamin A distribution.

Among children and mothers the middle wealth index has a higher coverage than the fourth quintile, and even the fifth quintile in the case of mothers. This might reflect the fact that socio-economically better off households more frequently use private sector services that may not follow the national health guidelines regarding vitamin A administration. In this sense, the middle socio-economic group seems to be the one that more frequently takes advantage of implemented national programmes.

Graph 8.1: Percentage of mothers receiving vitamin A according to level of households' wealth



Regional results of vitamin A supplementation among children should be interpreted with caution. Indeed, the third round of the 2001 NIDs during which high-dose vitamin A was distributed was carried out in August 2001, i.e. during the period of MICS data collection. As data were collected in the regions over different periods of time, vitamin A coverage will be higher in those regions where MICS

data were collected during August, September and October 2001. This is particularly true in the case of the Southern Region, which was surveyed prior to the NIDs and presents the lowest coverage.

An interesting trend is the reduction in the number of children who receive vitamin A in routine clinic services as their age increases, in comparison with those receiving vitamin A

² ACC/SCN, 2000.



through the NIDs, which number increases with age. This can be related to the distribution of vitamin A in routine immunisation services, which primarily target

children under one year of age. Thereafter, as the age of children increases, supplementation is progressively more reliant on the NIDs.

Table 8.1: Percentage of children who ever received vitamin A supplementation by age group and method of delivery

Age in months	Percentage of children who ever received vitamin A	Received in routine clinic services	Received during curative consultation	Received during the NIDs
6 to 11	41	21	4	75
12 to 23	50	12	7	80
24 to 35	54	11	5	84
36 to 47	54	10	3	86
48 to 59	52	9	4	87
Total	51	12	5	83

With regard to supplementation among women, only 26% received vitamin A before their infant was eight weeks old. There was no significant variation between rural or urban residence. Breast-feeding is critical for vitamin A status of infants and therefore giving vitamin A to new, breast-feeding mothers helps protect the infant during the first months of life. The MICS indicates that those mothers from the lower wealth index quintiles who are most likely to have low vitamin A stores are those who have the least coverage of supplementation. Assistance during delivery with post-partum follow-up, and/or place of delivery are certainly factors that can be related to the low coverage of vitamin A among women. Indeed, in Angola most of the deliveries take

place outside the health facilities, or they take place without skilled assistance.

Integrating vitamin A supplementation alongside routine immunisation services and NIDs continues to function as an important method of delivery. However, as the causes of Vitamin A Deficiency are diverse (e.g. immediate causal factors are low vitamin A levels in mothers' breast milk, low birth weight, breast-feeding of short duration and non exclusive breast-feeding in the first six months) interventions should also be targeted through other channels. For example, food based approaches such as food fortification with vitamin A and nutrition education are the logical preferred long-term strategies to improve the vitamin A status of children and women.

Table 8.2: High-dose vitamin A supplementation among children 6 to 59 months and mothers 15 to 49 years

	Children receiving vitamin A supplements *	Mothers receiving vitamin A supplements
Wealth index quintile		
First	26	19
Second	29	23
Third	33	31
Fourth	29	28
Fifth	36	26
Sex		
Male	31	n.a. **
Female	31	n.a.
Region		
Capital	51	34
North	37	30
East	33	22
West	24	24
South	9	31
Centre South	35	16
Area of residence		
Urban	31	26
Rural	30	25
Mothers' education level		
None	25	22
Primary	33	27
Secondary and higher	40	32
Total	31	26

* This indicator only takes into account children who received timely supplementation within the six-month period. The other groups who received vitamin A after six months or an unknown period have been excluded from the analysis as the date of vitamin A administration could have ranged far beyond the positive effect of the vitamin A on the child's status.

** n.a. = not applicable

A black and white photograph showing a woman and a young child sitting on a bed. A large mosquito net is draped over them, covering most of the upper half of the image. The woman, wearing a patterned headwrap and a dark jacket, is looking towards the right. The child, wearing a dark vest over a striped shirt and dark pants, is looking towards the left. The background shows a simple room with a concrete wall.

9 Malaria

Indicators

Use of bed nets

Proportion of children aged 0 to 59 months who slept under a mosquito net (treated or not treated with insecticide) during the previous night – 10%

Use of treated bed nets

Proportion of children aged 0 to 59 months who slept under an insecticide treated mosquito net (ITN) during the previous night – 2%

Use of untreated bed nets

Proportion of children aged 0 to 59 months who slept under a non-treated mosquito net during the previous night – 8%

Fever prevalence

Proportion of children aged 0 to 59 months who were ill with fever in the last two weeks – 25%

Malaria treatment

Proportion of children aged 0 to 59 months who were ill with fever in the last two weeks and received anti-malarial drugs – 63%

Malaria Summit held in Abuja, Nigeria, African heads of state adopted a comprehensive action plan for the prevention, diagnosis and treatment of the disease. Preventive measures, especially the use of mosquito nets treated with insecticide, were put forward as a way to reduce malaria mortality rates among children².

The MICS looks into the use of treated and untreated mosquito nets and the prevalence and treatment of fever among children under five years of age. In general, the survey indicates a very high prevalence of fever, with 25% of all children reporting to have had fever in the two weeks prior to the survey. Although the majority of children with fever are treated with some anti-malarial medicine (63%) and take some antipyretic agent such as paracetamol and aspirin (77%), prevention of malaria through the use of mosquito nets is very low, with only 8% and 2% of children using untreated and treated mosquito nets respectively. At the national level, only 10% of children use mosquito nets, of which 23% are treated with insecticide. This means that overall, only 2% of children use bed nets treated with insecticide.

Occurrence of fever is about the same among children surveyed, with no major variations between socio-economic groups, areas of residence and sex, indicating that fever suggestive of malaria affects children from all segments of the Angolan population. Fever prevalence among children also remains steady among regions (between 21% and 27%), with the exception of the West Region where prevalence peaks at 35%, i.e. 40% above the national average. Considering that the survey took place over a six-month period, this finding probably reflects a distortion due to the fact that malaria prevalence is seasonal.

Fever prevalence by age group shows the same pattern as observed with diarrhoea prevalence. It reaches a peak at 6 to 11

In Angola, malaria is by far the largest cause of mortality and morbidity among children. In 2000, the Ministry of Health reported that over 75% of all illnesses and deaths in national health services were related to malaria¹. Malaria also has extensive effects on economic productivity and households income. The disease is the first cause of absenteeism among Angolans at school and at work. According to the National Malaria Control Programme, every Angolan typically experiences three to five malaria episodes per year. In April 2000, during the Roll Back

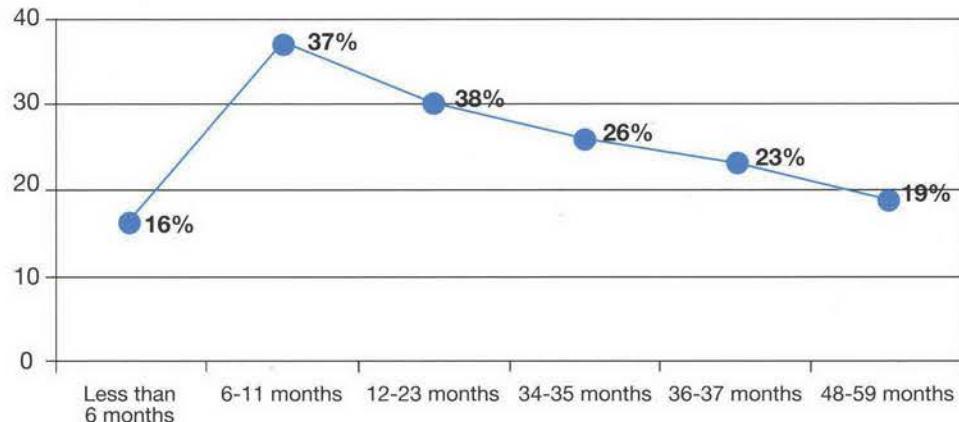
¹ See "Angola: the post war challenges" United Nations System 2002 Common Country Assessment. In view of the poor national health information system in Angola, these data should be regarded as only indicative of the determinant role played by malaria in morbidity and mortality.

² Within the framework of the Roll Back Malaria Initiative, the National Malaria Control Programme launched with UNICEF support in 1998 a large project to promote the use of insecticide treated mosquito nets. At the beginning of 2003, the project was operating in 14 provincial capitals where 500,000 nets were distributed at a subsidised price and 47 Insecticide Treatment Units for the impregnation of mosquito nets with insecticide were established.

months and declines gradually thereafter until 48 to 59 months. The increased vulnerability among children aged 6 to 11 months reflects

the immunology status at this age whereby the antibodies provided by the mother no longer efficiently protect the child.

Graph 9.1: Fever prevalence among children by age groups



In areas where malaria is common (such as Angola) it is recommended to treat any fever in children as if it were malaria and give the child a full course of anti-malarial tablets. Overall, 63% of children with fever received anti-malarial drugs. The most frequently used drug is chloroquine (57%), while the use of other anti-malarial drugs such as quinine, Alofantrin and Sulfadoxine+Pyrimethamine (commercial brands known as Alfan and Fansidar) remains marginal (6%). This reflects the fact that chloroquine is the most accessible anti-malarial drug in terms of market supply and price in Angola. One should note however that in Angola 50% of malaria cases are resistant to chloroquine. In general, a relatively high percentage of children with fever (20%) were given some other medicine.

The important use of antipyretic agents, such as paracetamol and aspirin, and chloroquine and "other medicine" reveals positive action taken by the child caretaker in case of fever. However, this also expresses a self-medication attitude among the population, probably as a result of the overall poor availability of health services in Angola. It can indeed be assumed that, as in the case of respiratory infections, a large proportion of

children with fever were not taken to a qualified health provider for proper consultation and treatment.

There are important disparities in terms of households' socio-economic status, with children from the most vulnerable households three times less likely to use mosquito nets (treated or untreated) than children from better off households. It is really mainly among the fifth quintile that mosquito nets are more available (although quite low at 20%), while in all other quintiles their use varies between 5% and 11%. Similar vulnerability among the poorest is observed regarding the use of treated nets, which varies from 11% among the most disadvantaged households to 23% among the better off households. The MICS shows here that economic constraint remains an important factor as to whether a household will appropriately protect itself against malaria or not³.

By far, the largest percentage of children using nets (treated or not) is in the Capital Region (23%), a finding probably reflecting higher availability of mosquito nets in the country's capital, Luanda. In all other regions, untreated mosquito net use varies between 4% in the Centre South Region to

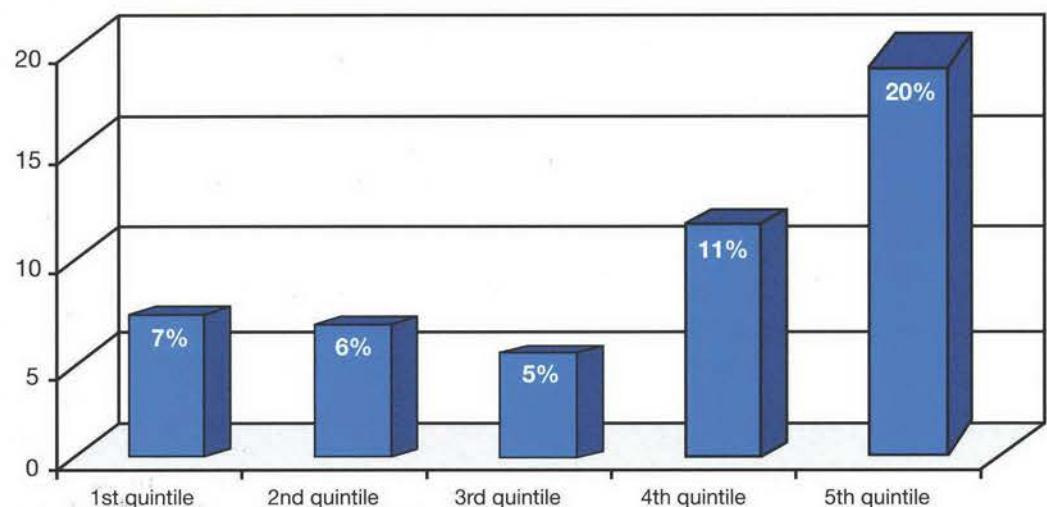
³ This finding should be highlighted as, although distributed at a very low subsidised price, mosquito nets provided within the framework of the Roll Back Malaria initiative are sold.

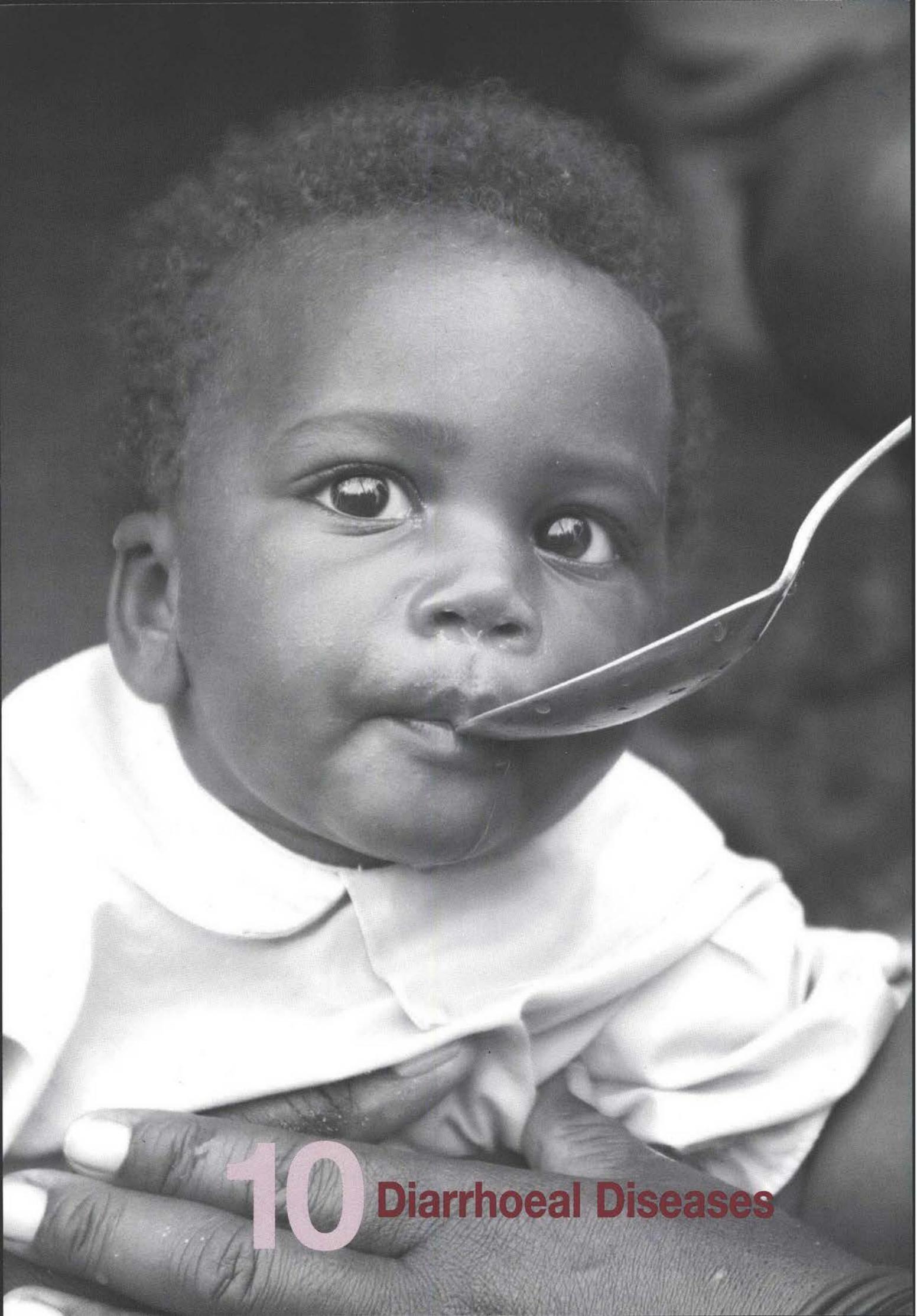


14% in the West Region. It is not however in the Capital Region where the use of treated mosquito nets is the highest but in the North Region where 51% of all children who sleep under a mosquito net use a treated one. The higher use of treated nets in the North may be related to the fact that the promotion of Insecticide Treated Nets through the Roll

Back Malaria Initiative first started in the northern provinces and Luanda in 2000 before being expanded to the South in 2002. While there are no significant variations in the use of untreated nets between urban and rural households (11% versus 9%), the use of treated nets is much more pronounced in urban areas.

Graph 9.2: Percentage of children under five years of age using mosquito nets (treated or not) by wealth index quintile





10 Diarrhoeal Diseases

Indicators

Diarrhoea prevalence

Proportion of children aged 0 to 59 months who had diarrhoea in the last two weeks – 23%

Home management of diarrhoea

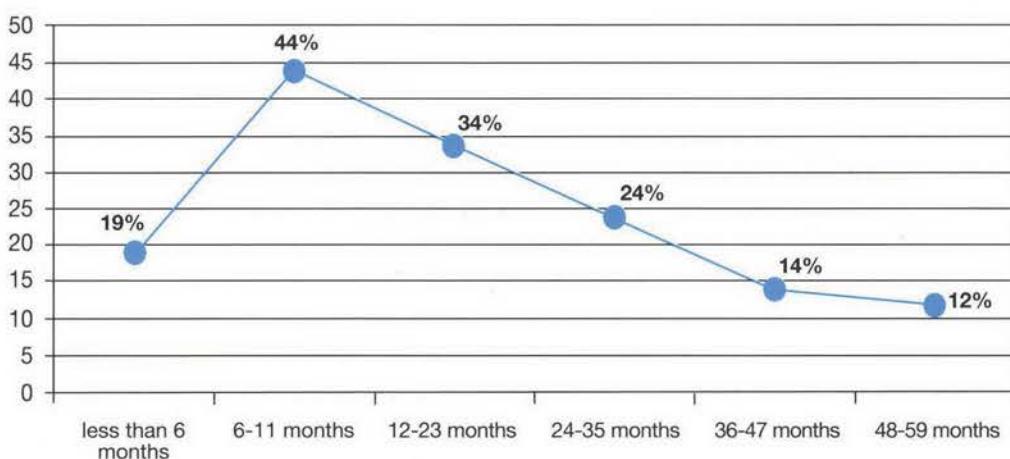
Proportion of children aged 0 to 59 months who had diarrhoea in the last two weeks and received increased fluids and continued feeding during the episode – 7%

With regard to fever prevalence, the MICS assesses the prevalence of diarrhoea among children for a reference period of two weeks prior to the survey. Diarrhoea is defined as all situations where children have three or more liquid evacuations per day. The survey reveals overall high diarrhoea prevalence, with 23% of children under five years of age having suffered diarrhoea in the two weeks prior to the survey.

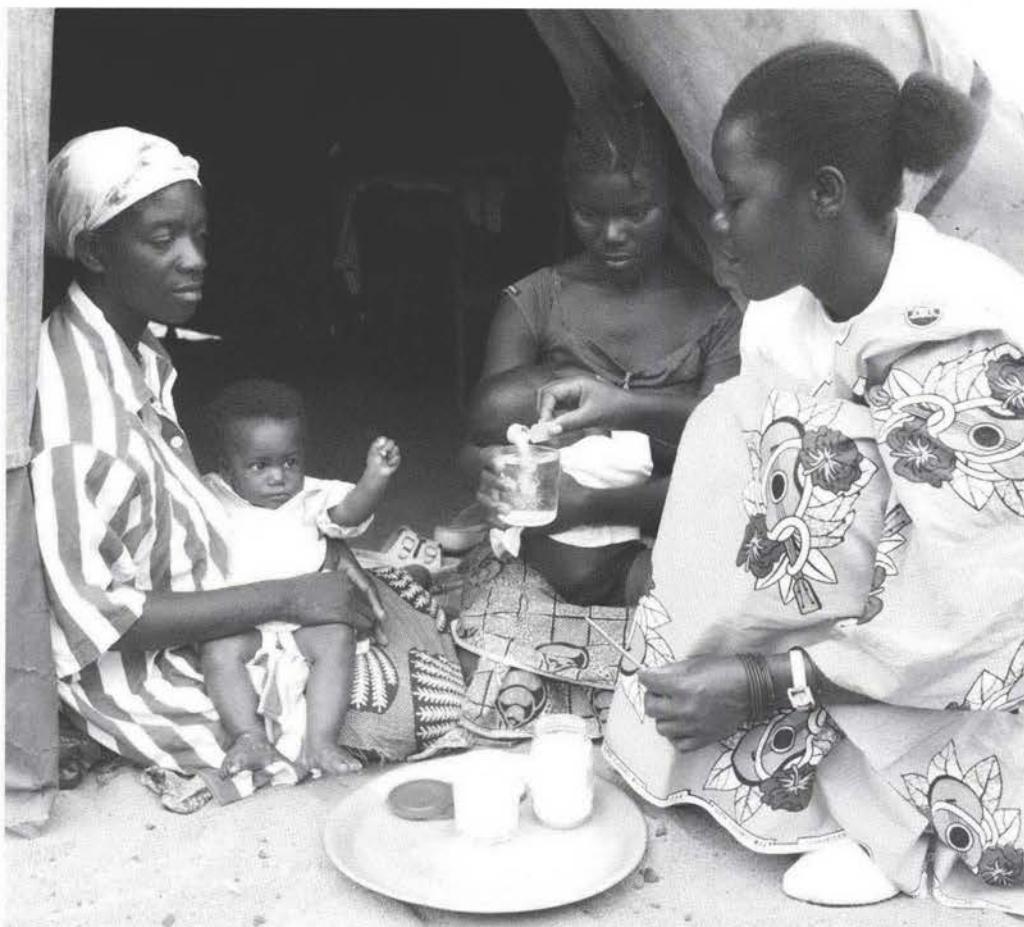
Apart from age group variations, there are no significant variations in diarrhoea prevalence among households' characteristics. Prevalence varies between 20% and 28% for all indicators, namely wealth index quintile, sex, region and area of residence, indicating that diarrhoea affects all Angolan children similarly. Like what was observed for fever suggestive of malaria, the prevalence of diarrhoea increases with the age of the child, reaching its peak at 6 to 11 months (44%) and then declines with age. This reflects the fact that at six months of age Angolan children in general are not exclusively breast-fed anymore and are given complementary foods. Breast milk indeed reduces the severity and frequency of diarrhoea in children. It is also between 6 and 11 months that children, for reasons linked to their development, are most exposed to pathogens.

Diarrhoeal disease in Angola stands out as one of the most important causes of mortality among children¹. Children are more likely to die from diarrhoea than adults because they become dehydrated more quickly. Diarrhoea, which is caused by germs that are swallowed (especially germs from faeces), kills children through dehydration and malnutrition. The survey found a high prevalence of diarrhoea among Angolan children reflecting poor hygiene practices, unsafe disposal of faeces, lack of clean drinking water and poor breast-feeding practices.

Graph 10.1: Diarrhoea prevalence among children by age group



¹ Although there are no accurate data on the main causes of mortality in Angola, data from the Ministry of Health indicate that among the causes of mortality recorded in national health services in 2000, malaria was by far the largest killer (76%) followed by acute respiratory infections (7%) and diarrhoeal diseases (7%).



Diarrhoea mostly kills children by draining liquid from the body, thus dehydrating the child. As soon as diarrhoea starts, it is essential that the child be given extra fluids as well as regular food and fluids. Although the vast majority of children (98%) were given fluids defined as acceptable during the diarrhoea episode² the MICS indicates poor care practice in terms of diarrhoea episode management as only 14% of all children with diarrhoea were given extra fluids by their caretakers. Furthermore, only 7% of Angolan children with diarrhoea received more liquid and continued to eat. There is a trend showing slightly better management of diarrhoea among urban, better off and more educated households. The survey also indicates that older children are more likely to be administered proper care than younger children (4% proper management among children less than six months old versus 11% among children aged three years).

As for the type of liquid given by caretakers to children with diarrhoea, the most frequently given is water. In a context where water used by Angolan households is rarely safe for drinking without treatment, one should consider the very low proportion of the population treating water before drinking (19%). The use of Oral Rehydration Salts (ORS) is limited, with only 40% of children being given ORS. Children in the better off households are twice more likely to receive ORS (50%) than children from the most vulnerable households (24%). The same pattern is observed according to mothers' education levels. Breast milk, which is known to reduce the severity and frequency of diarrhoea, is only given to half of children with diarrhoea (51%). As the survey does not assess the severity of the diarrhoea episode in the child, these findings should be seen as indicative of the general state of the children's health and the measures taken by the caregivers during the diarrhoea episode.

² Acceptable fluids received by children during diarrhoea include oral rehydration salt, breast milk, milk or infant formula, water, and locally acceptable home fluids.



11 Water, Sanitation and Hygiene

More than half the world's illnesses and deaths among young children are caused by germs that enter their mouths through food, water or dirty hands. Many illnesses, especially diarrhoea and water-borne diseases, can be prevented by good hygiene practices, such as putting all faeces in a toilet or latrine, but also by exclusively drinking water that is from a clean and safe water source, or is purified. The single most important action to prevent the spread of germs is to dispose of all faeces safely by using sanitary means of excreta disposal.

The survey shows that 81% of the Angolan population does not treat water before drinking, 41% of households do not use sanitary means of excreta disposal and almost 40% do not extract the water they drink from safe water sources. Further, there are very important disparities between areas of residence, with rural households being three times less likely to use sanitary means of excreta disposal or to treat water before drinking than urban households. Rural households are also twice less likely to extract water from safe sources than urban households.

In Angola, under the Ministry of Energy and Water, the National Directorate of Water has the overall responsibility for the management of water supply and sanitation systems, with a high level of decentralisation at provincial level through the Provincial Delegations of Water. The state of the water supply system in Angola has been affected both by the significant destruction of infrastructure during the 27-year war and the increased demand on urban water supply caused by the massive population displacement towards provincial and municipal capitals. There are few provincial capitals to which water is supplied on a continuous basis. Among the

Indicators

Use of safe drinking water

Proportion of population who use any of the following types of water supply for drinking: piped water; public tap; borehole/pump; well (protected/covered); protected spring; rainwater – 62%

Use of sanitary means of excreta disposal

Proportion of population who have, within their dwelling or compound: toilet connected to sewage system; any other flush toilet (private or public); improved pit latrine; traditional pit latrine – 59%

Water treatment

Proportion of population that treat water before drinking – 19%

main constraints are the poor quality of the water supply systems and the lack of appropriate sources of energy to sustain these water supply systems. The situation is considerably more precarious in rural areas where, when safe water is supplied, it is only done so through wells and boreholes equipped with manual pumps. Communities are not well equipped to independently manage their water supply and there is little operational support from provincial water delegations in terms of spare parts and equipment maintenance. This constitutes a constraint to the implementation of the New Water Law, passed in 2002, which stipulates that the development and utilisation of water resources be developed with the participation of communities¹.

¹ Approved by the Angolan Parliament on 21st June 2002, it set out the main principles that guide the administration and usage of water resources in Angola. Among the most significant elements set out in the legislation is the active promotion of the participation of the private sector in water management. The Water Law also determines that the general framework of development and utilisation of water resources be developed with the participation of communities and foresees the creation of voluntary associations of consumers stipulating that it is the responsibility of the State to promote the participation of these associations in matters pertaining to the rational utilisation of water resources.

Note

During the war, the massive population displacement towards urban and peri-urban areas was accompanied by significant efforts by the humanitarian community to provide both displaced and resident populations with safe water and sanitation. The results of these efforts are reflected in the MICS coverage figures. Populations inaccessible at the time of the survey benefited from no water and sanitation interventions. Humanitarian Rapid Assessment of Critical Needs conducted by the Government during 2002 in areas that were previously inaccessible revealed that the overwhelming majority of the population in these areas did not have access to safe drinking water and sanitary means of excreta disposal.

The disproportionate destruction of the

water and sanitation infrastructure in areas outside State control in 2001 and the concentration of rehabilitation efforts by the humanitarian community in urban and peri-urban areas contributed to the creation of major discrepancies between coverage rates in urban and rural areas. The MICS findings illustrate those discrepancies and show that in rural areas only 40% of the population has access to protected water sources and 25% use sanitary means of excreta disposal (compared to 71% and 74% respectively in urban areas). The situation in rural areas is however considered to be much worse by the Ministry of Energy and Water, which in its 2002 report on national water and sanitation coverage indicated that adequate water supply and sanitation coverage in rural areas was 15% and 20% respectively.

Safe water source: type of water source

Although the MICS indicates whether the water used for drinking by the population is extracted from a safe water source or not, it does not ultimately indicate whether the water is safe for consumption. This is of particular importance when reading the MICS findings². Almost 40% of Angolans drink water extracted from an unsafe water source (21% from lakes, rivers and streams and 17% from other unprotected water sources). The findings concerning the use of water extracted from safe sources shows that 33% of Angolans use piped water (directly in dwellings or yards, neighbours' taps or public fountains), while 29% use water extracted from other safe sources such as boreholes, protected wells and springs as well as rain water.

The source of water used by households varies greatly among urban and rural areas. While in urban areas the most important source of drinking water is piped water (42%), lakes, rivers and streams are the main sources of drinking water in rural areas (42%). The relatively high proportion of households using water extracted from safe water sources at national level (62%) certainly reflects rapid urbanisation, with an increasing number of Angolans moving into urban centres where they have better access to safe water sources. The survey, however, does not touch upon the quality of the water supply. As noted, there are very few provincial and municipal capitals where water is provided on a continuous basis.

² The internationally recommended indicator to monitor the goal of universal access to safe drinking water is the "Use of Safe Drinking Water". This indicator only looks into whether the water source used by households is protected, but not at the cleanliness of the water used by households for drinking. Therefore, the MICS does not indicate whether the water used by Angolan households is safe for drinking.

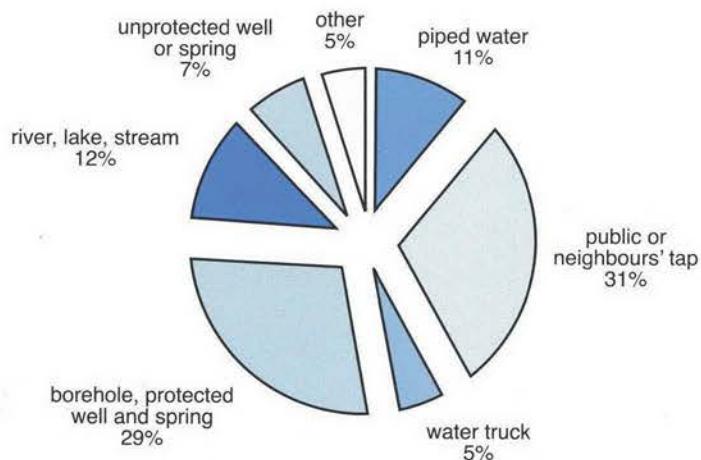
**Table 11.1: Main source of drinking water used by households (%), Angola, 2001**

	Piped water (in dwellings or yards, neighbours' taps, public fountain)	Other safe sources (borehole, protected well and spring, rain water)	Unprotected water sources (lake, river and stream)	Other unprotected water sources (unprotected well and spring, water truck)	Percentage of households extracting water from a safe water source
Regions					
Capital	57	6	16	21	63
North	13	56	17	14	69
East	21	19	43	17	40
West	57	9	18	15	67
South	35	25	19	21	60
Centre South	19	54	12	14	74
Area of residence					
Urban	42	29	12	17	71
Rural	13	27	42	18	40
Total	33	29	21	17	62

The use of piped water for drinking is highest in the Capital Region (57%) and lowest in the North and Centre South Regions (13% and 19% respectively). In the two latter regions, the majority of households extract water from boreholes and protected wells and springs (about 55%). The worst situation in terms of safe water source is found in the East Region where 60% of households use drinking water extracted from unsafe water sources, the main one being river, lake or stream (43%). The highest proportion of households getting water delivered by water truck is also found in

the East Region (16%), providing a clear indication of increased difficulties in accessing water there.

In urban areas, the main source of water is piped water extracted from public or neighbours' taps (31%), followed by boreholes and protected wells and springs (29%), rivers, lakes or streams (12%), and piped water within the dwelling (11%). The very low proportion of households with water facilities within their dwellings indicates the precarious state of the water supply in urban areas.

Graph 11.1: Type of water source used by urban households

The majority of rural households extract water for drinking from unsafe sources. Rural households are in fact over three times more likely to procure drinking water from lakes, rivers or streams than urban households and twice as likely to get water from unprotected wells. Access to piped water is extremely limited in rural areas. Rural households are 30 times less likely than urban households to have direct access to a piped water system, nine times less likely to have access to piped water in their residential compound and 35 times less likely to have access to a neighbour's tap. The most significant source of piped water in rural areas is public fountains, which provide access to drinking water to only 12% of rural households.

Water treatment

Adequately treating water before drinking is fundamental to prevent water borne diseases such as diarrhoea, which is an important cause of mortality and morbidity among children. MICS results indicate that only 19% of the population treats water before drinking, with important variations between regions and areas of residence. Treatment of water is least practised in the East Region (9%) and most practised in the Capital Region (29%). Worryingly, the East Region also has the worst record for availability of safe drinking water sources. In urban areas, households are three times more likely to treat water than in rural areas. Treatment rates are above the national average in the South Region (25%) and remain slightly below the national average in the North, West and Centre South Regions.

The vast majority of Angolan households who provide treatment for drinking water do so by boiling the water they consume (72%). This method is over three times more popular than the next most commonly used method, i.e. the use of bleach (22%). The use of chlorine remains negligible at national level (6%).

Households' members who fetch water

As seen above, the overwhelming majority of households do not have access to drinking water within their dwellings and therefore need to walk to fetch



water. MICS results indicate that the task of fetching water for cooking, cleaning and drinking falls squarely to women and girls. At national level, in 80% of the cases water is fetched by women and girls aged 12 years old and over (15% by girls aged 12 to 17 years and 65% by women 18 years and over). The lack of adequate access to water has a disproportionate impact on the workload of women and girls. This pattern is observed both in rural and urban areas and across all regions, where the proportion of women and girls collecting water fluctuates between 73% in the Capital Region to 85% in the East Region. Women are on average 13 times more likely than men and boys to fetch water, followed by girls aged 12 to 17 years, who are again three times more likely to carry out this domestic chore than either adult men or boys. The proportion of children fetching water is also important with 5% of children aged 5 to 11 years carrying out this task.

The survey indicates that an important proportion of women and girls fetching water walk long distances to reach the water source. The MICS measures the distance of the water source from the household. When women and girls reach the water source, they have to travel a similar distance to return to their households carrying a heavy weight. When the MICS therefore indicates, for

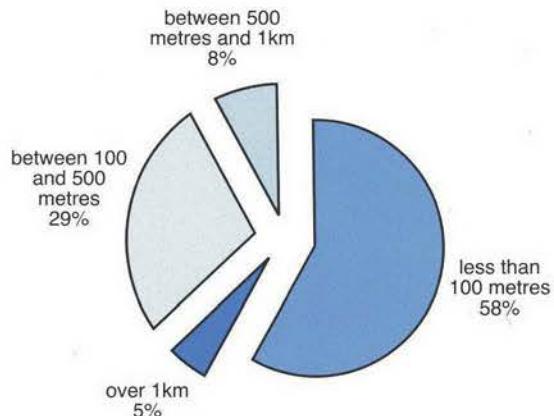


example, that 9% of households' water sources are located between 500 meters and one kilometre away from the dwellings, one should understand that households' members travel between one and two kilometres to fetch water.

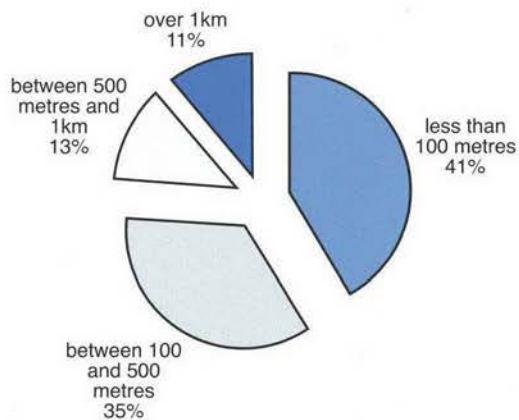
At national level, 16% of Angolans walk more than one kilometre to collect water, 31% walk between 200 meters and one kilometre, and 53% less than 200 meters. The distance travelled by households' members confirms the trend whereby rural areas suffer from the worst conditions in terms of access to water supply. While the majority of water sources in urban

areas are located less than 100 meters away from the dwelling (58%), the majority of water sources in rural areas are located more than 100 meters away (60%). Nearly a quarter of the rural population has to walk over one kilometre to fetch water. Furthermore, over one in ten urban Angolans walk more than two kilometres to fetch water. The situation for girls and women is particularly precarious in the East Region where a third of them walk more than one kilometre to fetch water. It is in the Capital Region that households' members walk the least to fetch water, with 65% of households with drinking water sources located less than 100 meters from the dwellings.

Graph 11.2: Distance of water source from dwelling in urban areas



Graph 11.3: Distance of water source from dwelling in rural areas





Use of sanitary means of excreta disposal

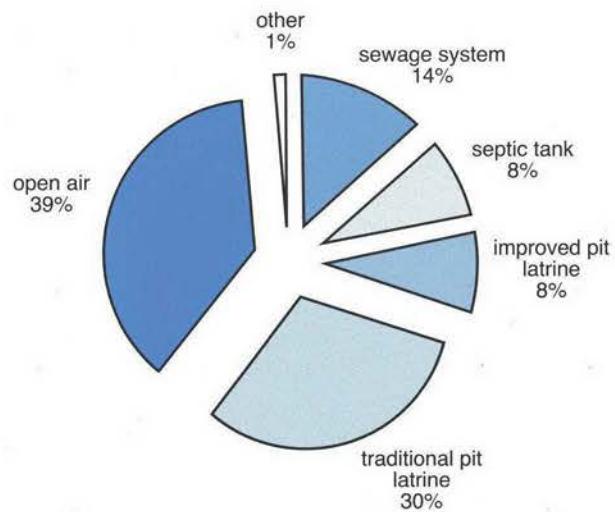
Overall, the MICS indicates that a high proportion of Angola's population does not use sanitary means of excreta disposal (41%), with very high variations across regions and areas of residence. The situation is the most precarious in the West and Centre South Regions where two-thirds of the population does not have access to sanitary means of excreta disposal (62%). Better access is found in the South Region where 82% of households dispose of excreta by safe sanitary means, mainly through the use of traditional pit latrines (62%).

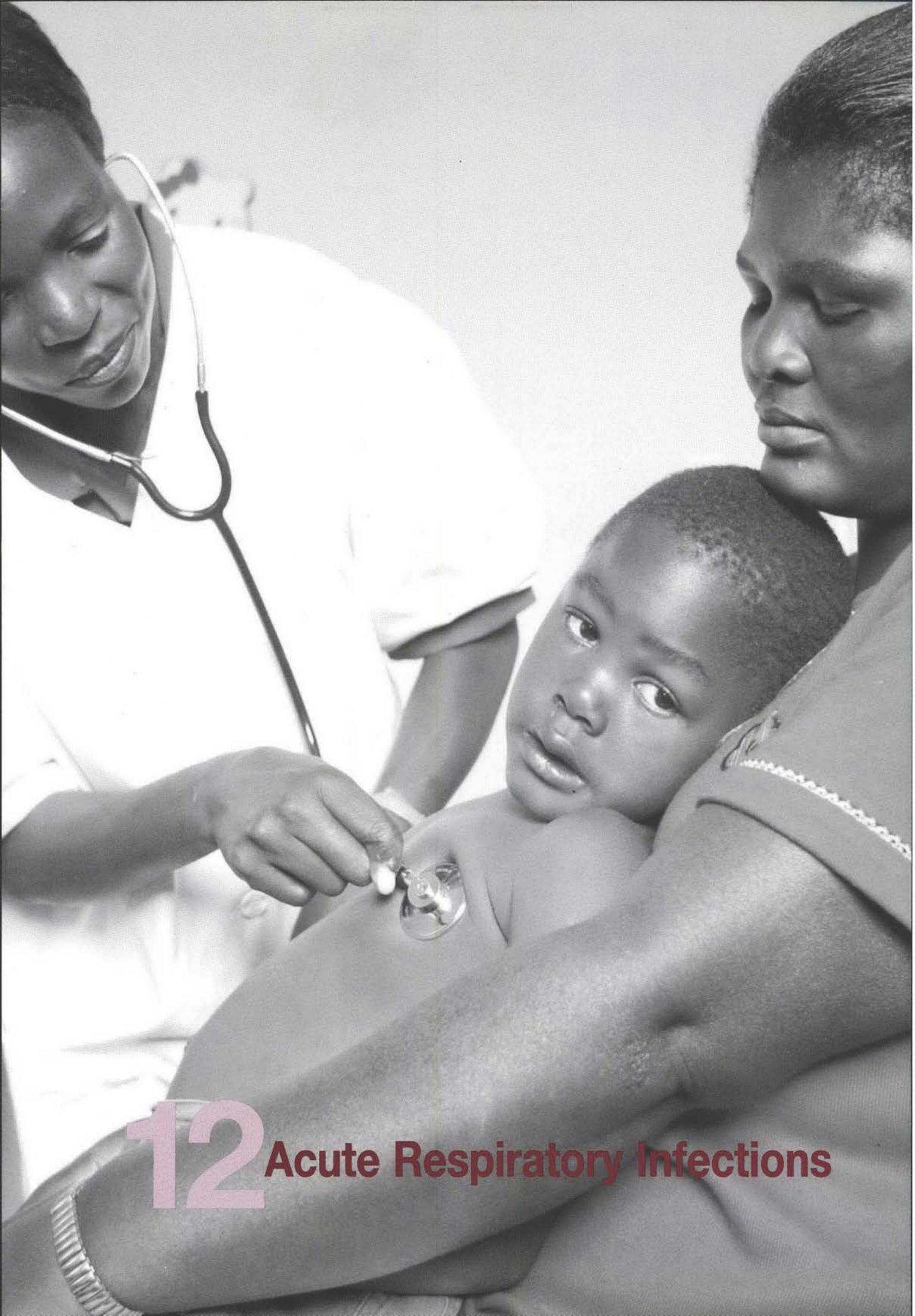
At national level, the main way used to dispose of excreta is in the open air (39%), followed by the use of traditional pit latrines

(30%) and sewage systems (14%). Overall the proportion of the population benefiting from a connection to a sewage network is very low, varying from 28% in the Capital Region to only 6% in the East Region. It is worth noting here that only five cities in Angola benefit from the partial coverage of a sewage network (Luanda, Huambo, Namibe, Lobito and Benguela).

Households in rural areas are three times less likely to have access to appropriate sanitation than those in urban areas (26% against 74%). In rural areas, almost three in four people dispose of excreta in the open air compared to 24% in urban areas. Furthermore, rural households are nine times less likely to be connected to a sewage system and eleven times less likely to possess a toilet with a connection to a septic tank.

Graph 11.4: Households' ways of disposing of excreta





12 Acute Respiratory Infections

Indicators

Acute respiratory infections (ARI) prevalence

Proportion of children aged 0 to 59 months who had acute respiratory infections in the last two weeks – 8%

Care seeking for acute respiratory infections

Proportion of children aged 0 to 59 months who had ARI in the last two weeks and were taken to an appropriate health provider – 58%

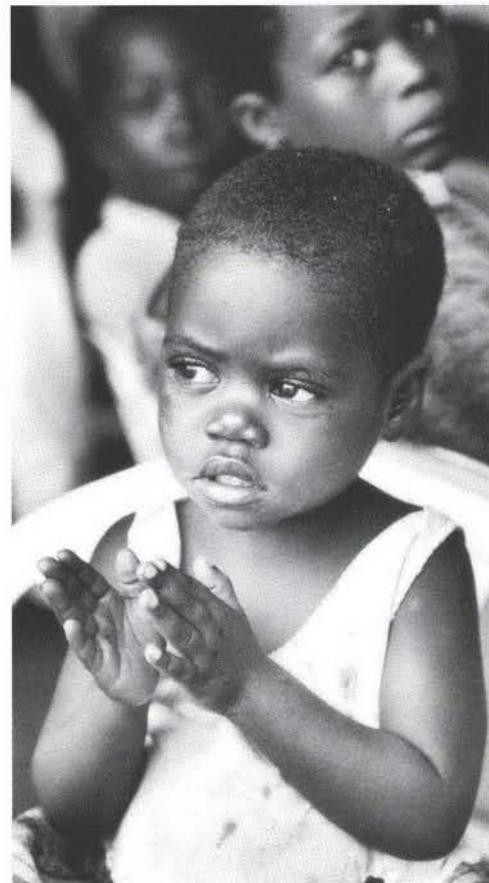
hospital and the other half to health centres and posts (28%). There are important variations in the likelihood of children receiving appropriate treatment by wealth index quintiles, with the most vulnerable children almost twice less likely to be taken to an appropriate health provider than children from better off households. The use of hospitals is more pronounced among the better off (34%) than among the socio-economically more vulnerable (18%), with the same pattern observed regarding the use of health centres and posts.

One notes that it is mostly among the fifth socio-economic quintile that health centres and posts are the most used. The variations in the use of health centres and posts among the first four quintiles are of limited

As with diarrhoeal diseases, acute respiratory infections (ARI) stand out as one of the most important causes of mortality among Angolan children¹. A child who is breathing rapidly or with difficulty might have pneumonia, which is a life-threatening disease that requires immediate treatment. In the survey, ARI in children are defined as all situations where children suffered in the two weeks prior to the interview from coughing, accompanied by rapid or difficult breathing, with or without colds. The MICS indicates that 8% of children under five years of age suffered from such illnesses in the two weeks prior to the survey². Furthermore, a large proportion of children (42%) with signs of ARI did not see an appropriate health provider³.

The group most affected with ARI are those children aged between 12 and 23 months (11%). Acute respiratory infections seem to affect boys and girls with the same intensity and no significant differences are noted according to area of residence, households' socio-economic level or region.

In total, 58% of children with ARI were taken to an appropriate health provider. Of those children, about half (28%) were taken to a



¹ Although there are no accurate data on the main causes of child mortality in Angola, data from the Ministry of Health showed that among the causes of mortality recorded in national health services in 2000, malaria was by far the largest killer (76%) followed by acute respiratory infections (7%) and diarrhoeal diseases (7%).

² Similarly to fever suggestive of malaria and diarrhoeal diseases, the MICS findings on ARI should be regarded only as indicative of the general state of the children's health and the measures taken by the caregivers during the infections. The diagnosis is made by the caretaker and is therefore subject to its interpretation. In addition the survey does not assess the severity of the infections.

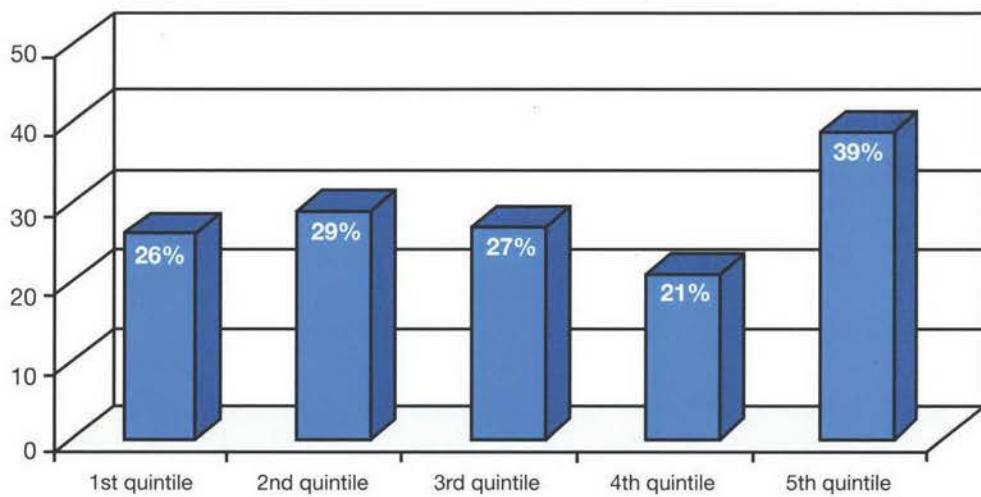
³ Appropriate health providers include those who see children in hospitals, health centres, health posts and dispensaries.



significance. These findings show that socio-economic conditions play a determinant role in whether a child will be seen by an appropriate health provider or not. They also reveal the extent to which the vast majority of

the population is vulnerable. Finally, they reflect the overall availability of health services and the fact that the better off population is more likely to be urban and, therefore, have better access to health facilities.

Graph 12.1: Proportion of children with ARI taken to health centres and posts according to socio-economic quintile



In terms of regional disparities, children are more likely to be taken to an appropriate health provider in the Capital Region (65%) and the least likely in the North and East

Regions (51% and 54% respectively), reflecting the overall availability of health services in the country.



13 Maternal Care



Skilled health personnel should check pregnant women at least four times during every pregnancy and assist women during delivery at every birth¹. Regular contact with skilled health personnel² during pregnancy allows women to identify and possibly correct potential health problems in addition to receiving general health advice on tetanus immunisation, good nutrition, HIV/AIDS, malaria and hygiene. It is also necessary that doctors, midwives or nurses, who have the skills to safely handle normal deliveries and to recognise the onset of complications requiring emergency care, supervise labour and delivery. This is particularly important to tackle maternal mortality, which in Angola is thought to be extremely high³.

In Angola the MICS indicates that qualified health personnel assist less than half of all deliveries and that a third of women are not attended even once during pregnancy. This situation is similar to that in sub-Saharan



Indicators

Antenatal care

Proportion of women aged 15 to 49 years attended at least once during pregnancy by skilled health personnel (doctors, nurses, and midwives) – 66%

Childbirth care

Proportion of births attended by skilled health personnel (doctors, nurses, and midwives) – 45%

Africa, where in 2001 antenatal care was estimated at 66% and childbirth care at 41%. Although no improvement in antenatal care was recorded since 1996, with actually a decline in urban areas, the number of women attended by skilled health personnel almost doubled between 1996 and 2001.

Antenatal care

The MICS indicates that 66% of women are provided antenatal care by skilled personnel, 16% by Traditional Birth Attendants⁴ (TBAs), and 19% are not provided care at all. Among skilled personnel providing care, the overwhelming majority are nurses and midwives (74%), followed by doctors (18%) and auxiliary midwives (8%). There are important variations in coverage according to areas of residence, region, socio-economic quintile, and level of education. At national level, the situation is similar to that in 1996, when the MICS indicated that 64% of women received antenatal care. However coverage decreased in urban areas from 80% in 1996 to 71% in 2001, probably reflecting increased hardship for women in accessing health services in urban areas.

¹ See Facts for Life: The MICS gathered data on the proportion of women attended once during pregnancy. It is internationally recommended, however, that women should be attended by skilled personnel at least four times during each pregnancy.

² Skilled health personnel include doctors, nurses and midwives. Not included are traditional birth attendants, whether trained or not.

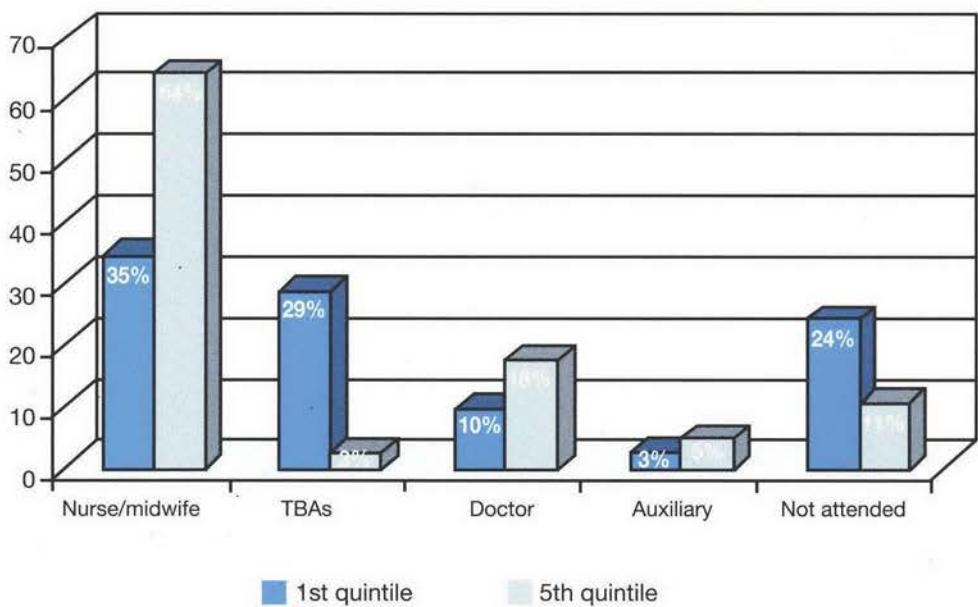
³ There are no accurate estimates of maternal mortality in Angola. In 2001, the Ministry of Health estimated the maternal mortality rate at 1,500 per 100,000.

⁴ TBAs are considered to be unskilled personnel, as the MICS does not identify whether TBAs have been trained or not, or determine the quality of the training provided.

The survey points out serious disparities among women in terms of access and capacity to pay for health care. The greater the level of schooling and wealth, the higher the antenatal coverage rate (about double). Regardless of schooling or wealth, a nurse or midwife attends most women. What

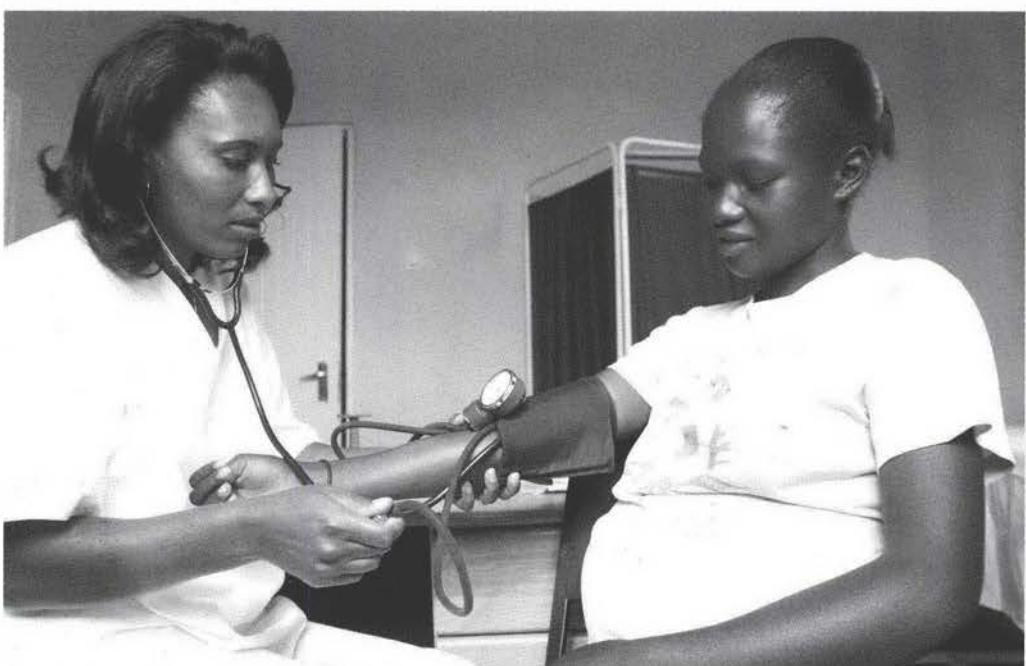
differentiates the better off women from the rest of the women surveyed is that following attendance by a nurse or midwife, most of them receive pre-natal consultations from doctors, while illiterate women and women from the lowest four quintiles are seen by traditional midwives.

Graph 13.1: Type of personnel providing antenatal care by wealth index quintile

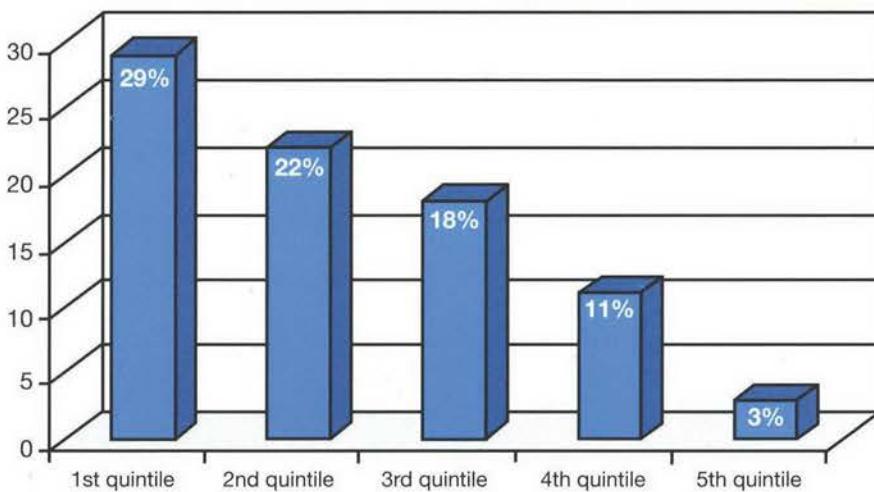


The use of TBA drastically decreases by socio-economic groups and mothers' level of education. Poorest women use TBAs ten times more during prenatal consultation than better off women. TBAs are also more largely seen in

rural areas (23%) than in urban areas (13%). Furthermore, the proportion of unqualified personnel attending pregnant women varies significantly by region, from 29% in the East, to 20% in the North, and 7% in the South.



Graph 13.2: Percentage of women provided with antenatal care by traditional birth attendants per socio-economic quintile



In rural areas, only half of the women are attended at least once during pregnancy, compared to more than two-thirds in urban areas. In general, women in rural areas either receive no antenatal care (24%), or receive it from less qualified staff.

Antenatal coverage also varies according to the country's regions. The South has higher antenatal coverage than the other regions

(76%), while the Centre South has the lowest coverage (59%). Similarly to what is observed at national level, the midwife nurse is the person who provides most antenatal care in all regions of the country. However the Capital, West and South Regions stand out where, unlike the other regions, the person most frequented (after the midwife nurse) is the medical doctor. In the other regions, the second most frequented person is the TBA.

Table 13.1: Percentage of women 15 to 49 years old with a birth in the last year by type of personnel delivering antenatal care, Angola, 2001

	Person delivering antenatal care				No care received	Total assisted by skilled personnel
	Doctor	Nurse/ midwife	Auxiliary midwife	Traditional birth attendant		
Wealth index quintile						
First	10	35	3	29	24	47
Second	12	43	6	22	17	61
Third	10	43	6	18	23	59
Fourth	10	55	6	11	18	71
Fifth	18	64	5	3	11	86
Region						
Capital	12	51	8	9	20	71
North	12	48	9	20	12	69
East	14	39	2	29	15	56
West	17	50	2	15	17	69
South	13	58	4	7	17	76
Centre South	3	50	6	10	31	59
Area of residence						
Urban	14	52	5	13	16	71
Rural	7	41	5	23	24	53
Mothers' education level						
None	7	36	6	26	24	49
Primary	12	54	5	12	17	72
Secondary and higher	23	63	3	3	9	89
Total Angola	12	49	5	16	19	66

Care at childbirth

The MICS reveals a completely different picture in terms of childbirth care and type of personnel delivering care than in 1996. At national level, the coverage increased from 26% to 45%. While in 1996 the majority

of births were assisted by parents or friends (55%) followed by nurse/midwife/auxiliary (21%) and TBAs (12%), in 2001 the majority were assisted by nurse/midwife/auxiliary (39%), followed by TBAs (26%), and then parents or friends (24%). The number of births not assisted also decreased from 9% to 3%.

Table 13.2: Type of personnel assisting at birth: comparison between 1996 and 2001 in urban areas

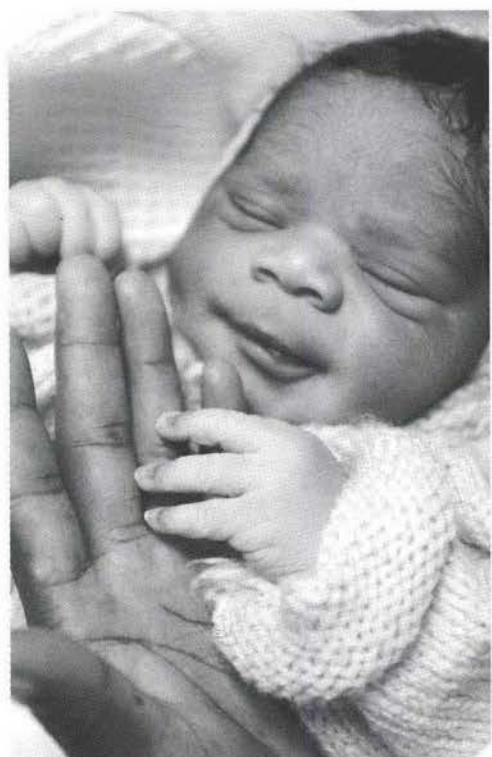
	Doctor	Nurse/midwife/ auxiliary	TBAs	Parents/ friends	No assistance	Other	(%)
1996	3	32	8	49	7	1	
2001	7	45	20	23	2	2	

These findings might be partly accounted for by better awareness and behaviour of women who increasingly demand more assistance for delivery outside the family circle. They also show a significant increase in the demand for health services, certainly as a result of the rapid urbanisation. Finally, they indicate that the increase in demand has not been adequately met by the offer of appropriate health services. For example the number of births attended by TBAs in urban areas increased by 150% between 1996

and 2001 while the number of births attended by qualified personnel increased by only 40% over the same period. In short, women increasingly resort to basic level health professionals as a matter of convenience and due to problems in access to health services, and possibly lack of capacity to pay.

In rural areas only 25% of women have their births assisted by skilled health personnel. This coverage is less than half of that in urban areas and reflects a lack of knowledge and lack of access to health services. For example, while nurses or midwives more frequently assist women in urban areas, it is TBAs in rural areas who most frequently assist women during delivery. The importance of friends or relatives in childbirth care is also far from negligible in rural areas where they assist a quarter of all births. Although the survey does not indicate the place of birth, it can be assumed that those births assisted by relatives or friends, plus those that were not assisted at all, plus those assisted by traditional midwives, are home deliveries. This would mean that the majority of women in Angola are still delivering at home. As a reference, the MICS in 1996 established that 83% of all births were taking place at home.

Women among the lowest three wealth index quintiles predominantly use traditional midwives. Only from the fourth quintile

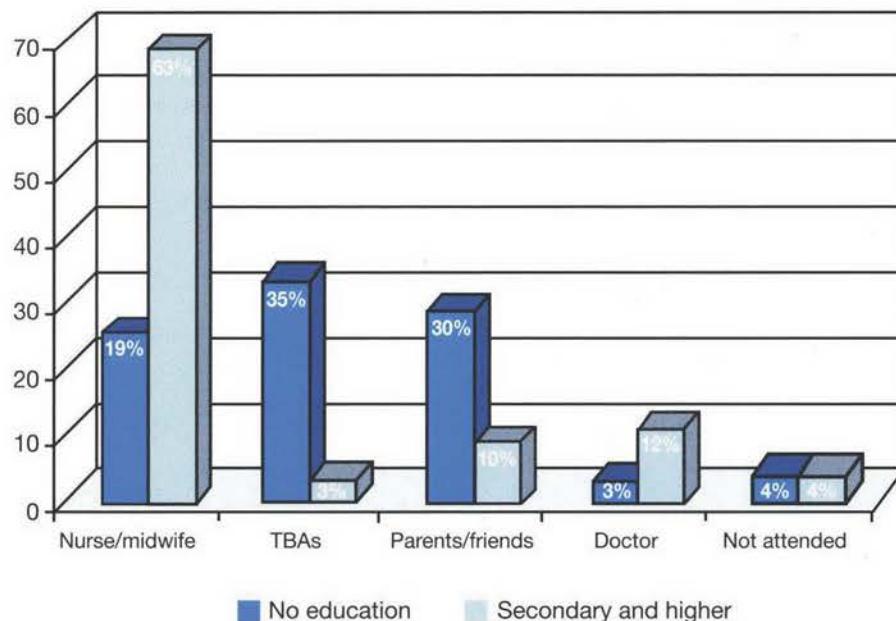




upwards (the less poor) did women more frequently use nurses or midwives to assist at birth. The same patterns are observed according to women's level of schooling. While the majority of women with higher education use nurses or midwives, women with the least education mainly use TBAs and relatives or friends

to assist at delivery. Education about the critical benefits of childbirth care appears as the determinant factor in whether a woman will seek assistance at birth or not. The childbirth coverage is three times higher among women with secondary and higher education than among illiterate women⁵.

Graph 13.3: Type of personnel assisting women at delivery according to women's level of education



Analysis of assistance at delivery by regions reflects the overall availability of health services in Angola. The highest childbirth care coverage is found in the Capital and West Regions, and the lowest in the East Region. Coverage is similar to the national average in the North, South and Centre South Regions. The use of doctors is twice higher in the Capital than the national average. In the Capital, care at birth is essentially provided by nurses or midwives and relatives or friends. In the North, West, Centre South and South Regions, nurses or midwives more frequently assist births, although in the South assistance from relatives or friends accounts for more than a third of all deliveries.

The highest percentage of women receiving no assistance at delivery at all is found in the

Centre South Region, where the percentage is three times higher than the national average. In this region, almost one in ten women never receive assistance at delivery. Of note is the relatively high percentage of women in the Capital that receive no assistance, where the rate is almost double the national average. The MICS indicates that a large proportion of women in the Capital (over a third) have their deliveries either assisted by relatives/friends or not assisted at all. Only in the Eastern Region are most of the births assisted by traditional midwives. Paradoxically, it is in the East that friends or relatives assist least deliveries and where unassisted births are the lowest.

The great majority of maternal care provided is undertaken by mid-level and basic professionals. Taking into account the existing

⁵ This is also related to the fact that in the MICS, women with secondary or higher education belong in their vast majority to the richest segment of the population (i.e. the fifth wealth index quintile).

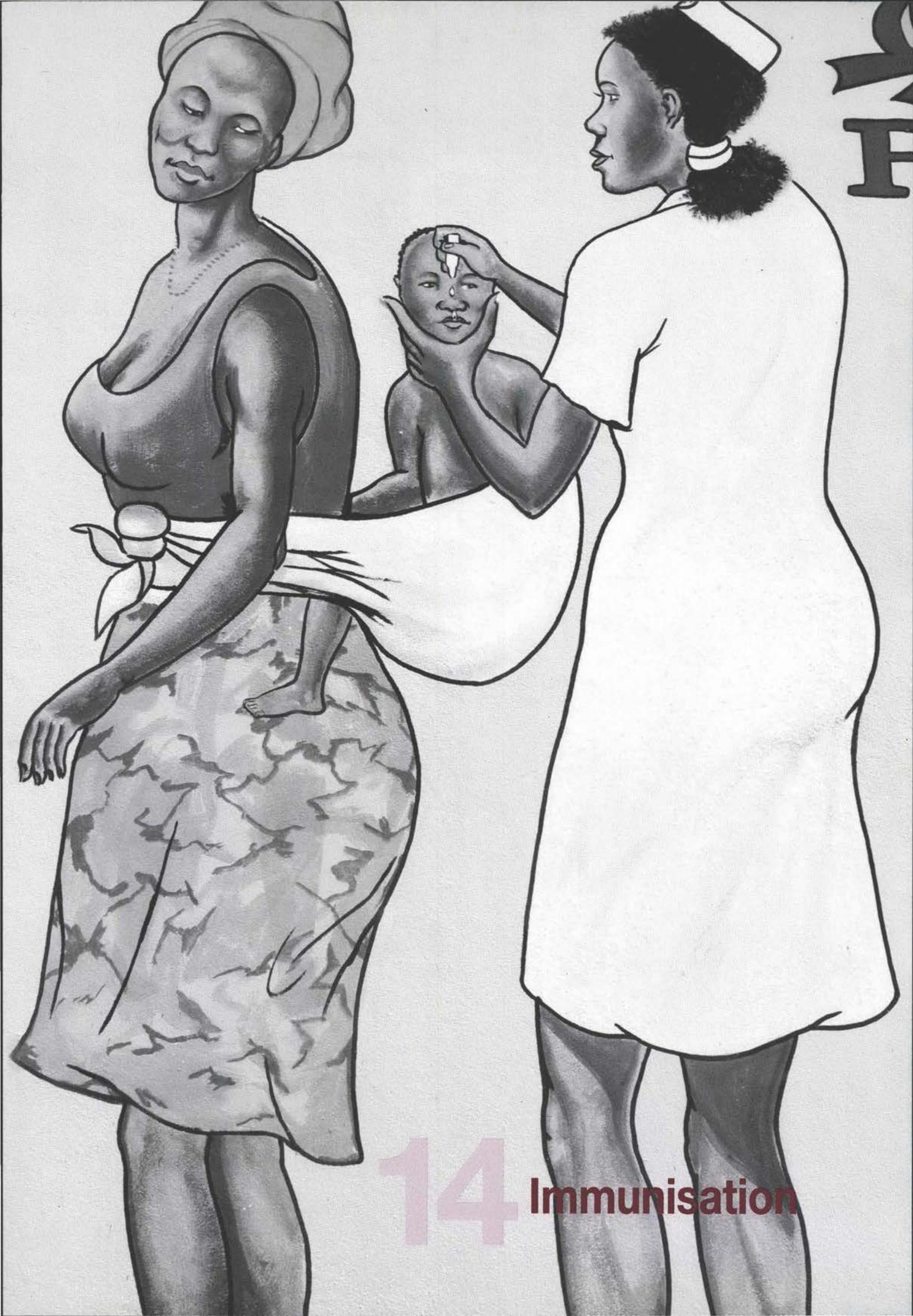


high levels of maternal mortality, with deaths occurring during pregnancy, childbirth and post-childbirth, the data on maternal care

suggest the importance of training for mid-level and basic staff in order to maintain acceptable levels of maternal services.

Table 13.3: Percentage of women 15 to 49 years old with a birth in the last year by type of personnel assisting at delivery, Angola, 2001

	Doctor	Person assisting at delivery			Parents/ friends	Not assisted	Other/ missing	Total assisted by skilled personnel
		Nurse/ midwife	Auxiliary midwife	Traditional birth assistant				
Wealth index quintile								
First	3	16	4	41	29	3	4	23
Second	4	25	8	32	27	3	2	36
Third	3	25	9	32	26	3	2	37
Fourth	7	39	8	20	23	2	2	54
Fifth	11	53	6	9	17	2	2	67
Region								
Capital	10	32	8	10	30	5	5	50
North	3	31	12	28	23	2	2	46
East	4	29	4	50	11	0	1	37
West	9	35	5	26	24	0	1	49
South	7	37	3	12	35	3	4	47
Centre South	3	32	9	20	26	9	2	43
Area of residence								
Urban	7	38	7	20	23	2	2	53
Rural	1	19	6	40	26	5	4	25
Mothers' education level								
None	3	19	7	35	30	4	2	29
Primary	6	35	7	24	23	2	2	48
Secondary and higher	12	63	6	3	10	4	2	82
Total Angola	6	32	7	26	24	3	2	45



14 Immunisation

Seven of the main childhood illnesses can be prevented through vaccination. Three doses of DPT vaccine protect the child against diphtheria, pertussis and tetanus. Three or more doses of polio vaccine protect the child against poliomyelitis.

One dose of BCG vaccine protects the child against severe cases of tuberculosis (TB), one dose of measles vaccine protects the child against measles, and one dose of yellow fever vaccine protects the child against yellow fever¹.

Indicators

TB immunisation coverage

Proportion of one-year-old children immunised against tuberculosis – **69%**

Polio immunisation coverage

Proportion of one-year-old children immunised against poliomyelitis (Polio 3) – **63%**

Measles immunisation coverage

Proportion of one-year-old children immunised against measles – **53%**

DPT immunisation coverage

Proportion of one-year-old children immunised against diphtheria, pertussis and tetanus (DPT3) – **34%**

Children fully immunised

Proportion of one-year-old children immunised against DPT, polio, measles, and tuberculosis – **27%**

In Angola, the national Expanded Programme of Immunisation (EPI) recommends that all children be fully vaccinated against DPT, tuberculosis, measles, yellow fever and polio before reaching one year of age. Therefore,

the most appropriate age group to estimate vaccination coverage is among children 12 to 23 months old, as all the compulsory vaccination doses should have been administered to the child by 12 months of age.

Recommended vaccination calendar in Angola

Age of child at which vaccine should be administered	Type of vaccine
0 months	BCG and initial dose of polio (Polio 0)
2 months	First dose of DPT (DPT1) and first dose of polio (Polio 1)
4 months	Second dose of DPT (DPT2) and second dose of polio (Polio 2)
6 months	Third dose of DPT (DPT3) and third dose of polio (Polio 3)
9 months	Measles and yellow fever

Overall, the MICS indicates that only 27% of one-year-old children are fully immunised against six of the seven preventable diseases². Children are least immunised against DPT (34%) and more immunised against tuberculosis

(69%). This coverage places Angola among the ten countries in the world with the lowest immunisation coverage, and well below the average coverage in sub-Saharan Africa, which in 2001 was estimated at 46%³.

¹ Immunisation against yellow fever is not covered in the MICS.

² Diphtheria, pertussis, tetanus, polio, measles and TB.

³ See State of the World's Children 2003, UNICEF.



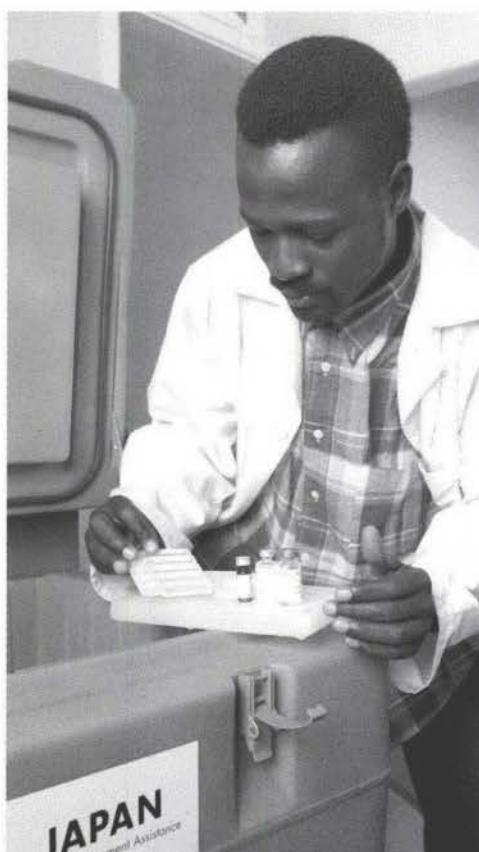
Only in terms of polio immunisation is Angola performing significantly well compared to sub-Saharan African countries. This positive achievement is due to the major efforts deployed by the EPI to interrupt wild poliovirus transmission in Angola through the implementation of National Immunisation Days (NIDs). Since 1996 these national campaigns have been repeatedly conducted throughout the country. As a result, the number of children immunised against polio more than doubled since 1996 (from 28% to 63%). Relatively adequate coverage against tuberculosis (69%) is also another feature of immunisation in Angola, which might reveal a higher awareness of mothers about TB than other diseases such as DPT and measles and the fact that BCG vaccine is given at birth. Immunisation levels against TB, measles and DPT increased by about 10% since 1996, whereas polio stands out as the vaccine that recorded a more than 100% increase.

The two main ways of administering vaccines in Angola are through routine immunisation services and supplementary immunisation activities, such as campaign-type interventions. The MICS has confirmed that routine immunisation services function poorly. For example, the percentage of children receiving the third dose of DPT is usually used as a good indicator of how well countries provide routine immunisation. It is a particularly relevant indicator in the Angolan context, as DPT is solely administered through routine service channels. The MICS shows that nationally only a third of one-year-old children are immunised against DPT3. In 2001, of 164 municipalities in the country, the routine EPI was operating in only 91 of them and functioning routine immunisation services were mainly concentrated in and around provincial and municipal capitals. This was highlighted in that children in urban areas were twice as likely to be more immunised against DPT than children in rural areas.

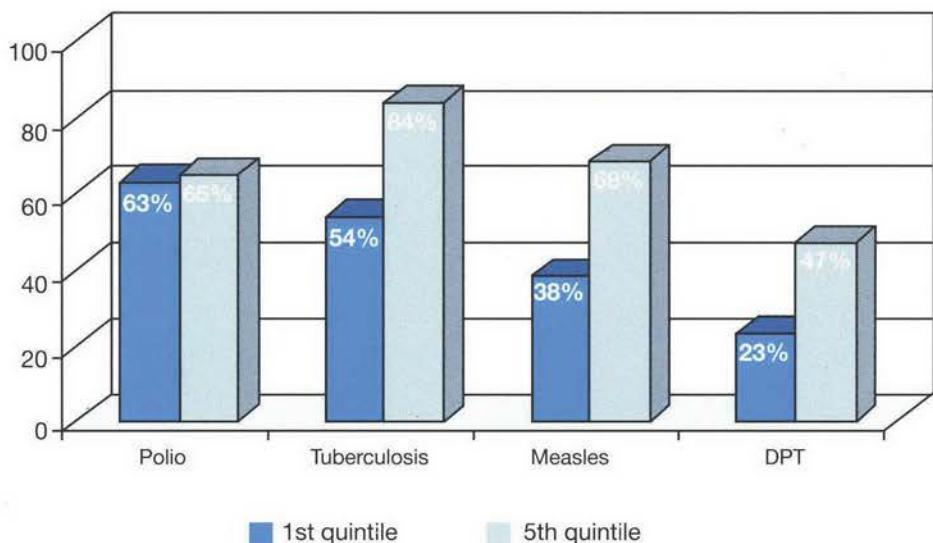
These findings highlight a considerable challenge for the public health sector in Angola. Until routine immunisation services are revitalised at community level, targeted vaccination campaigns will remain the most effective way to reach an increased number of children, particularly among the most

vulnerable. These campaigns however are unsustainable, as they only provide short-term and non cost-effective solutions. Nonetheless, without the war constraint, the campaign approach can now be used in Angola as a mean, and not only a palliative solution, to help rebuilding routine immunisation services, increasing mothers' awareness, and reducing disparities among socio-economic groups.

The MICS illustrates how the campaign-type approach in general and the NIDs in particular have been powerful instruments in eliminating socio-economic disparities and disparities between the urban and rural populations. Among the most vulnerable children, immunisation levels against poliomyelitis are similar to those among the more privileged children. In comparison, immunisation levels against DPT are twice lower among the poorest. The same pattern is observed for immunisation against measles and tuberculosis. Of concern is the very low DPT immunisation coverage, even among the wealthiest population (less than 50%). This not only reveals the poor access to routine immunisation services, but also the inadequate awareness about diphtheria, pertussis and tetanus among the Angolan population.



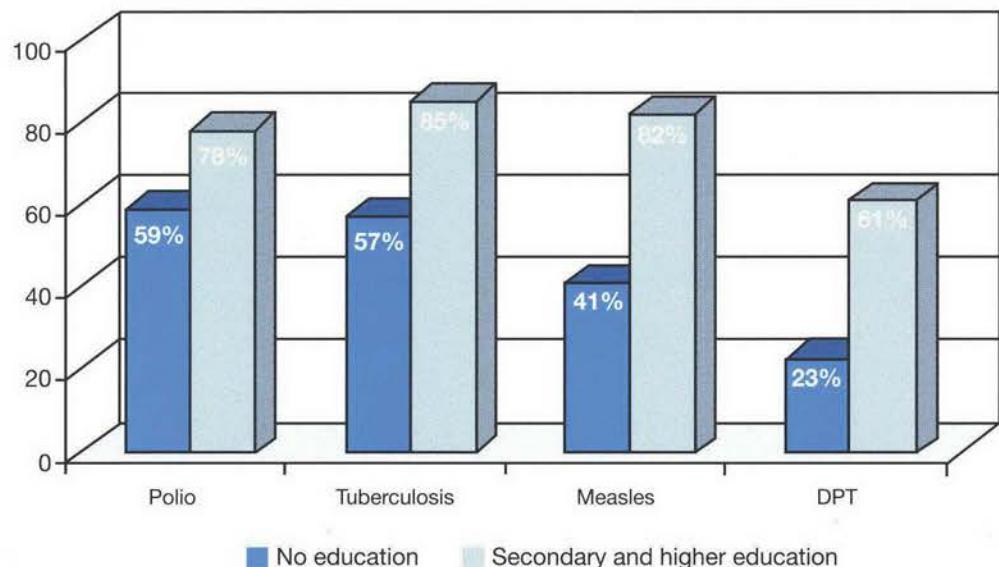
Graph 14.1: Immunisation coverage among one-year-old children by wealth index quintile



The education level of mothers is the most determinant factor impacting on whether a child is vaccinated or not. Overall, an Angolan child whose mother has attained secondary or higher education is 2.5 times more likely to be fully immunised than a child whose mother never attended school. More than 75% of all children whose mothers enjoyed secondary education are immunised against polio, measles, and tuberculosis. Similarly to what

is observed among wealthiest households, immunisation coverage against DPT is the lowest among educated mothers (61%), but still significantly higher than DPT coverage among children whose mothers are illiterate, where it does not even reach 25%. Immunisation coverage for polio shows the smallest variations in terms of education, which probably reflects the positive effects of the NIDs.

Graph 14.2: Immunisation coverage among one-year-old children by mothers' level of education



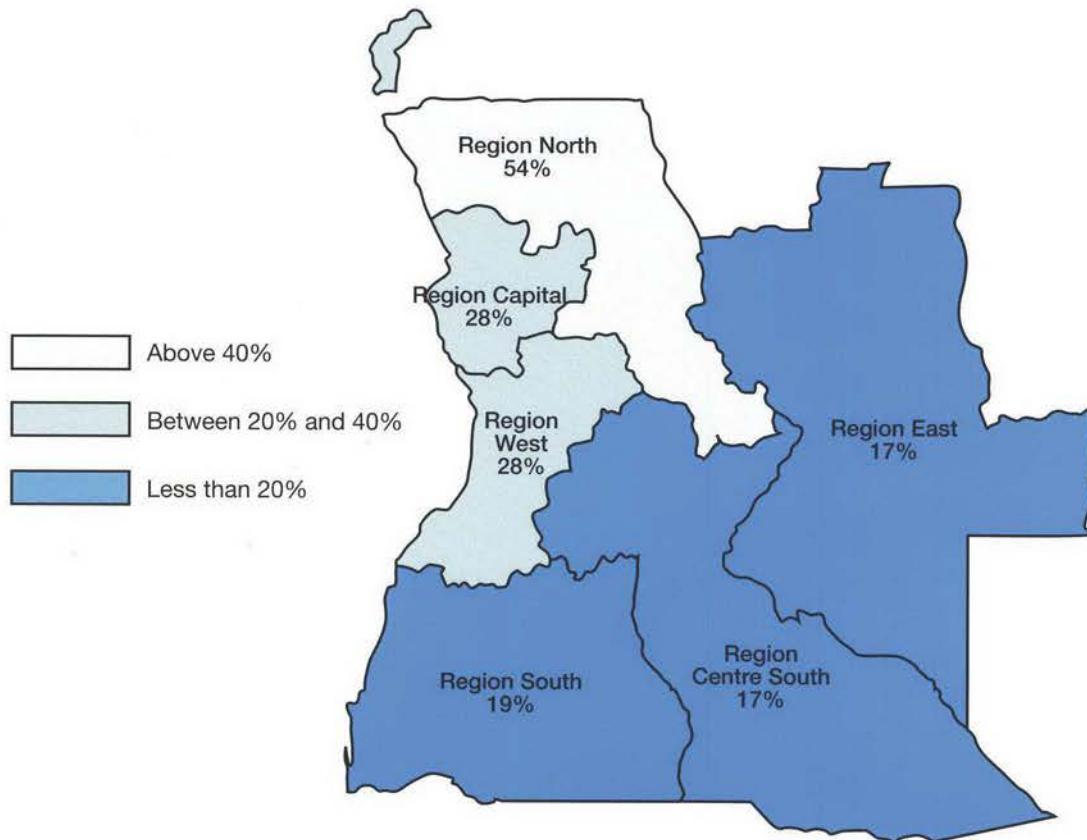
Children are most protected against tuberculosis and polio in the Capital Region. The coverage against measles and DPT is also higher in the Capital than in the West, East, South, and Centre South Regions.

Surprisingly, it is not, however, where full immunisation coverage is the highest. This is due to the fact that DPT3 coverage in the Capital is very low (37%) when compared to DPT3 coverage in the North Region (57%).

For all preventable diseases, the North Region consistently presents a coverage superior to 50%. Consequently, one-year-old children in this region are two times more fully immunised than children in any other region. It is also only in the North Region that more than 50% of children possess a vaccination card. This fact might indicate

higher access to routine immunisation services. The least variations in immunisation level across regions are recorded for tuberculosis (between 64% and 78% coverage across regions), whereas the highest variations are recorded for DPT (between 17% and 57% coverage across regions).

Map 14.1: Full immunisation coverage among one-year-old children



Although immunisation coverage varies greatly according to households' wealth, area of residence, regions, and mothers' education level, there are no significant variations by sex. Boys and girls are vaccinated alike, which reveals no gender discrimination.

Finally, the MICS shows that 70% of all Angolan children under five years of age do not have a vaccination card. Even among the least vulnerable, less than 40% own a card. Urban areas indicate a higher number of children with vaccination cards than rural areas (32% versus 24%). This low level of possession of vaccination cards is due to their unavailability in vaccination posts, their loss, and the fact that they are not distributed during national immunisation campaigns.



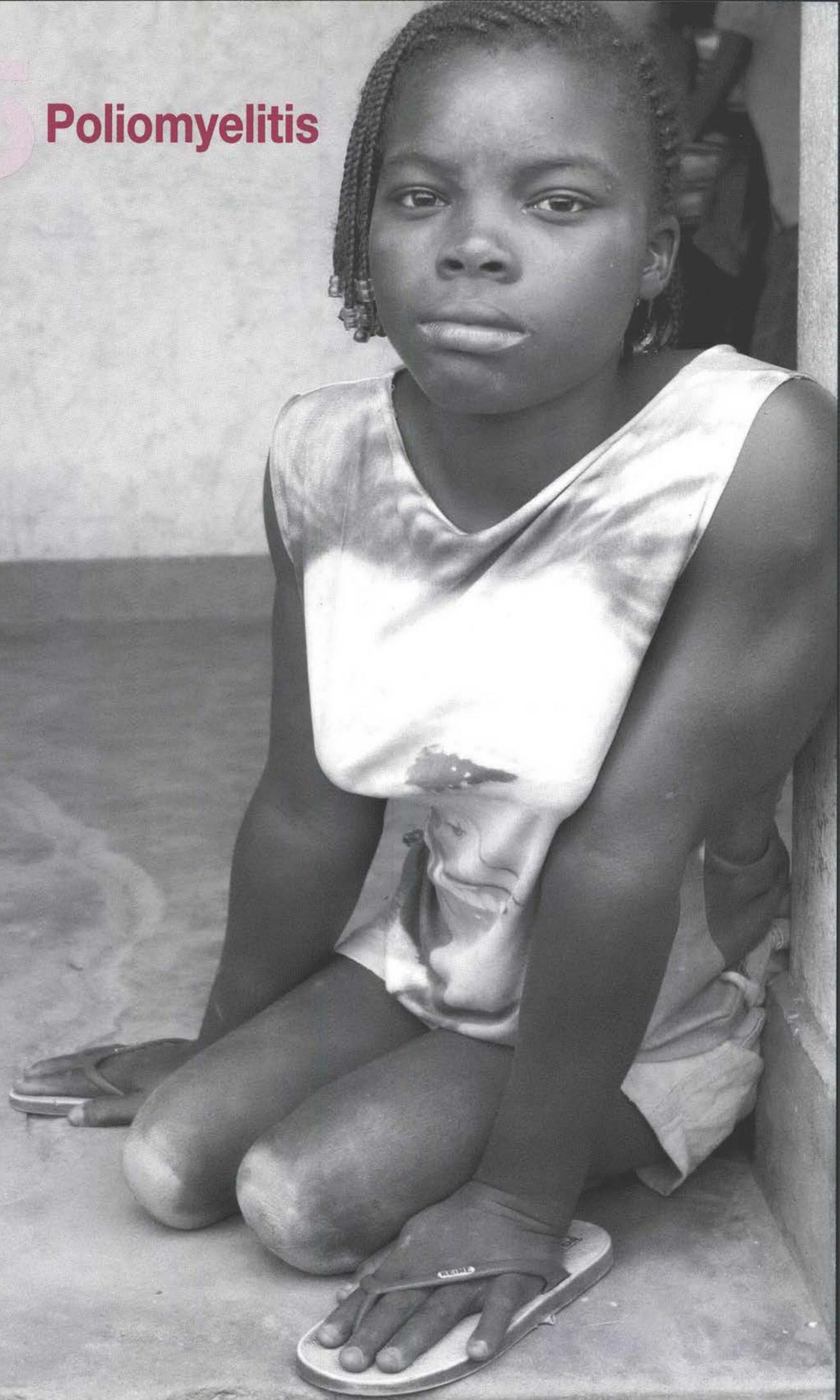
**Table 14.1: Immunisation coverage among children aged 12 to 23 months, Angola, 2001
(by vaccination card and mothers' history)⁴**

	TB immunisation coverage	Polio 3 immunisation coverage	Measles immunisation coverage	DPT 3 immunisation coverage	Full immunisation coverage
Socio-economic quintile					
First	54	63	38	23	20
Second	57	57	44	23	18
Third	73	62	56	34	28
Fourth	70	68	55	36	28
Fifth	84	65	68	47	35
Sex					
Male	68	61	54	34	26
Female	69	65	53	34	27
Region					
Capital	78	72	65	37	28
North	73	69	69	57	54
East	64	60	44	24	17
West	65	64	53	33	28
South	64	53	52	27	19
Centre South	69	63	42	27	17
Area of residence					
Urban	74	64	58	39	31
Rural	57	61	42	22	18
Mothers' education level					
None	57	59	41	23	20
Primary	73	63	55	35	26
Secondary and higher	85	78	82	61	49
Total	69	63	53	34	27
Comparison	73	52	58	54	46
Total Sub-Saharan Africa 2001					

⁴ In the MICS, mothers were asked if they had a vaccination card for their children. If this was the case, the interviewer extracted from the vaccination card information about the child's immunisation status. When children did not possess a vaccination card or when it was incomplete, mothers supplied information on the children's vaccination history through conversation with the interviewer.

13

Poliomyelitis



One of the most remarkable achievements in Angola's recent public health history has been the progress made towards the eradication of polio. As a result of the massive investment made since 1996 to eradicate the disease through the implementation of repeated National Immunisation Days (NIDs), polio immunisation coverage among one-year-old Angolan children more than doubled between 1996 and 2001, from 28% to 63%.

Polio eradication

Eradication of polio involves both halting the incidence (the number of new cases) of the disease and the world-wide eradication of poliovirus, the virus that causes it. The world will be certified polio-free after at least three years of no new cases reported due to indigenous wild poliovirus.

Polio is a highly infectious disease that has paralysed thousands of Angolan children. The poliovirus spreads silently and rapidly, and only the first cases of paralysis trigger awareness of an outbreak. Polio cannot be cured but can be prevented by immunisation. World-wide, polio cases have declined by



UNICEF special representative, Mrs Mia Farrow, gives a dose of polio vaccine to a baby.

99% since the launch of the global polio eradication initiative.

Much attention was given to Angola, as in 2000 it was among the 20 countries in the world where polio was still endemic. This was largely because of the difficulties in reaching all children due to the war and massive internal displacement. In 2002, polio was no longer considered to be endemic in Angola. From 1,103 polio cases reported in 1999, the numbers of confirmed cases decreased to 55 in 2000, only one in 2001, and none in 2002.

Table 15.1: Evolution in the number of confirmed wild poliovirus cases among countries that recorded the highest number of cases in 1999

	1999	2000	2001	2002
India	2817	265	268	1458
Angola	1103	55	1	0
Nigeria	981	28	56	159
Pakistan	558	199	119	89
Bangladesh	393	1	0	0
Afghanistan	150	27	11	9
Ethiopia	131	3	1	0
Sudan	60	4	1	0
DRC	45	28	0	0
Somalia	19	46	7	3

Source: WHO, January 2003.



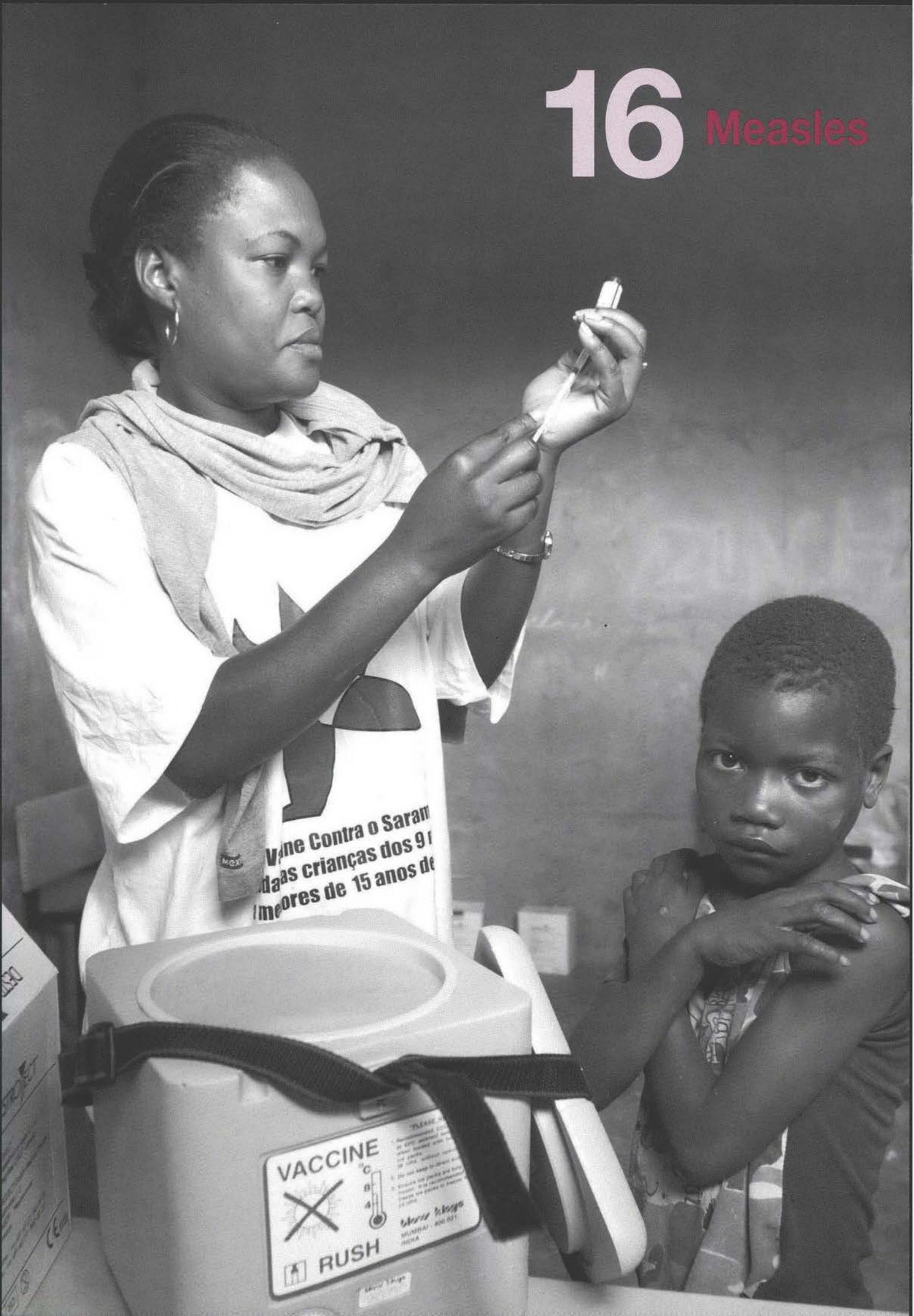
The trend observed in Angola is similar to that observed in Bangladesh and other African countries such as Ethiopia, Sudan and DRC where the number of polio cases consistently decreased since 1999 and fell to zero in 2002. However, the example of Nigeria and India, where confirmed polio cases first drastically decreased and then increased again, shows how critical it is in the coming years to sustain the NIDs and the coverage already attained. If the virus is to be globally eradicated, those countries where polio cases have not been reported for several years cannot afford to diminish their efforts towards polio immunisation and surveillance. For example, in 2000 polio was not considered to be endemic in Zambia with zero confirmed polio cases. It recorded however three polio cases in 2001 and two polio cases in 2002. Large movements of population from Zambia to Angola are

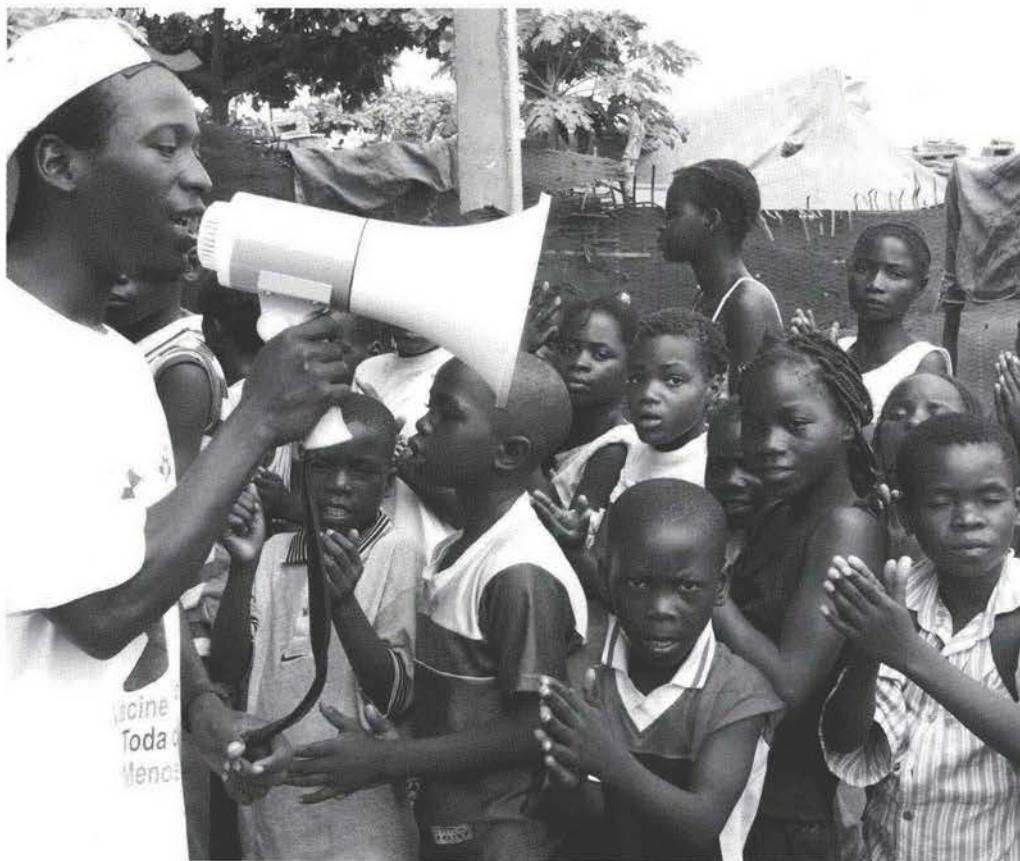
expected in 2003, with the return of Angolan refugees. Costly immunisation campaigns will therefore remain necessary until at least 2005.

In Angola, all regions register immunisation levels above 50%, with the highest coverage in the Capital Region (72%) and the lowest in the South Region (53%). In the Southern Region however, results should be interpreted with caution, as this region was surveyed prior to the 2001 NIDs, which were conducted in June, July and August 2001. Therefore, it is not surprising that this region registers the lowest coverage. This phenomenon was also observed in vitamin A supplementation among children. As noted, immunisation levels are harmonised throughout urban and rural areas, socio-economic groups and sex, although mothers' education level remains a determinant factor.



16 Measles





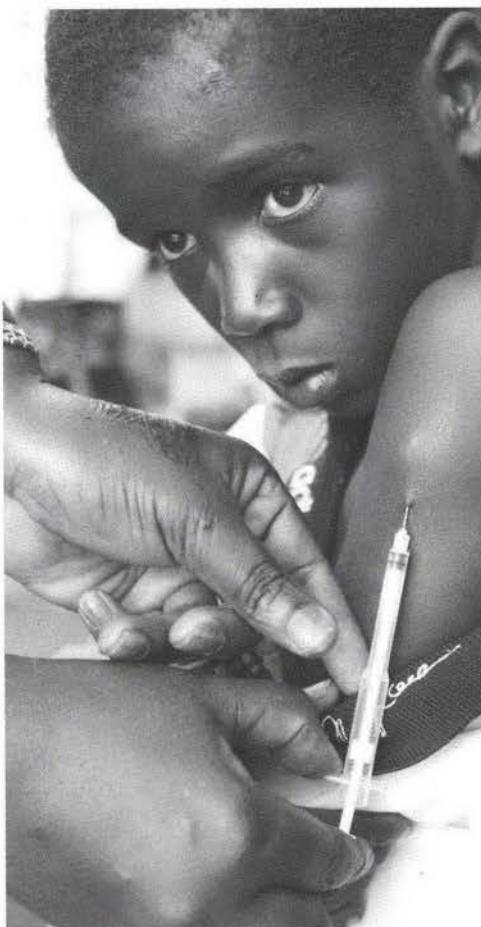
Measles is a highly contagious, yet avertable viral infection that kills more Angolan children than any other vaccine-preventable disease. In Angola it is probably responsible for 5% to 10% of all deaths among under-five children. Analysis of available epidemiological data shows that 95% of measles cases occur in children below 15 years of age, the majority of which occur in children under five years of age. Measles-related mortality usually occurs among young infants. The virus weakens the immune system and renders children very susceptible to fatal complications from diarrhoea, pneumonia, and encephalitis. Children that survive measles can have permanent disabilities, including brain damage, blindness and deafness.

Due to the weak national surveillance information system for the collection and analysis of health data, it is difficult to provide an accurate picture of measles incidence in Angola. There is massive under-reporting about measles cases, particularly in rural areas. In 2001, the Ministry of Health reported 9,000 cases of measles nationwide, but this is thought to represent less than 30% of the real number.

The measles virus is transmitted via droplets

released into the air when an infected person coughs or sneezes. Because it is highly contagious, vaccination coverage levels need to be maintained at least at 90%. The MICS shows that on average 53% of one-year-old children are vaccinated against the disease. Analysis of immunisation levels by age groups reveals that only 42% of Angolan children are vaccinated at the recommended age (i.e. between 9 and 12 months). Immunisation levels increase slightly with age, reaching 54% among one-year-olds, 56% among two-year-olds, and 60% among three-year-olds. At four years of age they decrease to 56%. Double the number of children whose mothers are most educated are vaccinated than children whose mothers are illiterate. The same pattern occurs according to households' wealth.

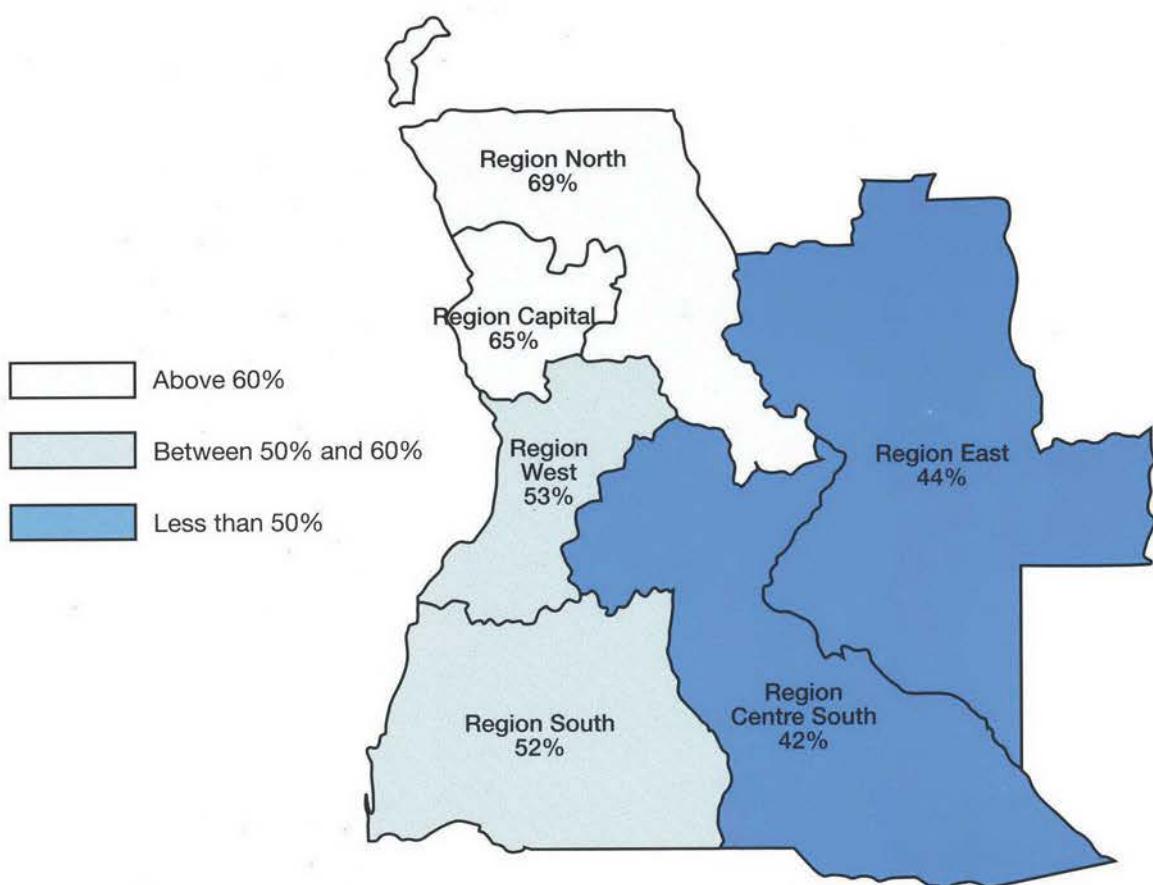
Children are the most vaccinated in the Capital and North Regions, and the least vaccinated in the East and Centre South Regions. The overall low measles coverage is linked to the weak health care system, logistical difficulties in reaching children, lack of awareness about the disease, and the high level of missed opportunities. Typically, a sick Angolan child attending health facilities will generally not be checked for his/her immunisation status, therefore missing the



opportunity to be vaccinated against measles.

With polio eradication almost within reach, it is now possible to focus on measles mortality reduction in Angola. The under-five mortality rate could decrease by up to 10% if all children were immunised against measles. This means that over 7,000 Angolan children could be saved every year. The implementation in April-May 2003 of the first ever nation-wide measles campaign conducted in Angola, targeting all children 9 months to 14 years old, was the first significant step in that direction. The campaign also allowed the development of better measles epidemiological surveillance. However, similarly to what was observed in polio, the campaign-type approach is inherently difficult to sustain and is costly. In the present context, it is nevertheless a powerful instrument, not only to reach an increased number of children and protect the most vulnerable, but also to equip and reactivate the network of routine vaccination centres throughout the country.

Map 16.1: Measles immunisation coverage among one-year-old children





17

Maternal and Neonatal Tetanus

Maternal and neonatal tetanus is a preventable, often fatal condition resulting from unhygienic birth practices which expose the umbilical cord to tetanus bacteria. When mothers give birth under unhygienic conditions, both mother and child are at risk of getting tetanus, a major killer of new-born infants. In Angola, tetanus is one of the main causes of neonatal mortality. Tetanus Toxoid (TT) is given to women of childbearing age, or who are already pregnant, in order to protect both women and new-born children against tetanus. The national Expanded Programme of Immunisation (EPI) recommends that women of childbearing age receive five doses of TT vaccine according to the following calendar:

First dose: as soon as the woman knows she is pregnant

Second dose: one month after the first dose

Third dose: six months after the second dose

Fourth dose: one year after the third dose or during a subsequent pregnancy

Fifth dose: one year after the fourth dose or during a subsequent pregnancy.

If a girl or a woman has been vaccinated with five properly spaced doses of Toxoid

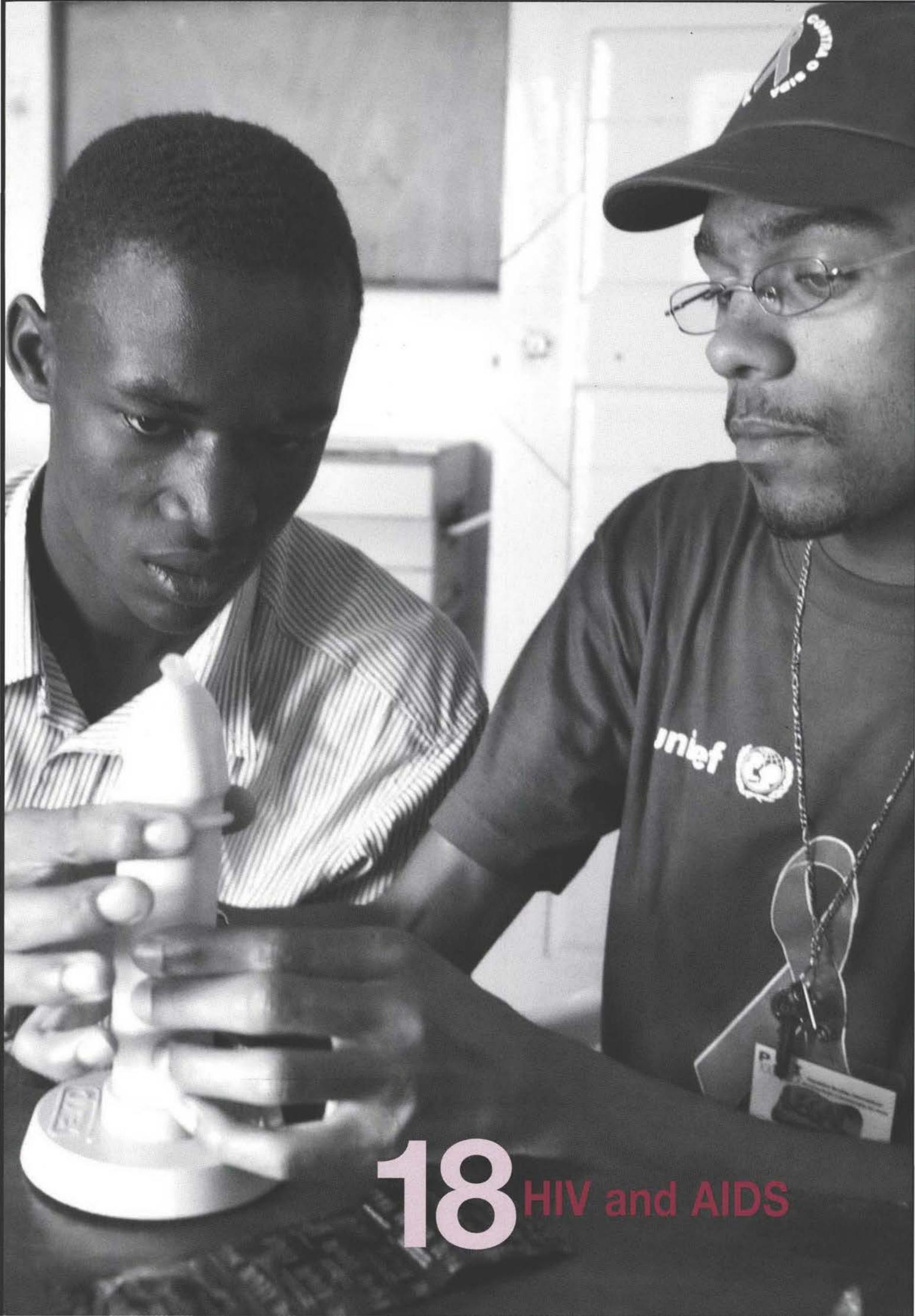
Tetanus, she is protected for her lifetime. Her children are also protected for the first few weeks of life. During pregnancy two doses of TT will give mother and new-born baby adequate protection but, given that protection only lasts for three years, will fall short of providing lifetime protection covering all other pregnancies.

In the MICS, all women between 15 and 49 years of age who had a child in the 12 months prior to the survey were asked about anti-tetanus vaccination. Women were regarded as protected if they had received at least two doses in the last three years; if they had received at least three doses in the last ten years; and if they had received at least five doses at any time in their life.

Overall, 62% of women who had a child in the 12 months prior to the survey received two doses of TT vaccine in the last three years, indicating that a relatively adequate number of Angolan women were protected during their last pregnancy. However, their protection level was not sufficient to protect them and their children during further pregnancies. It is worth noting that only 0.1% of women received three doses of TT vaccine in the last ten years, and none received five doses in their entire lifetime. These striking findings mean that no Angolan woman of childbearing age is protected for life against tetanus. It also indicates that Angolan women might not be fully aware of the risk of neonatal tetanus and do not comply with the recommended national vaccination calendar.

Women in urban areas are more protected than women in rural areas. Similarly to what was observed in child immunisation patterns, it is in the North Region that women are most protected (71%) and in the Centre South Region that they are the least protected (50%). The level of poverty is directly associated with anti-tetanus coverage, with coverage increasing from 47% among the poorest women to 71% among the better off women. Mothers' level of education has the highest impact on whether mother and child are protected. Coverage among the most educated women reaches 82% compared to 51% among women who are illiterate.





18 HIV and AIDS

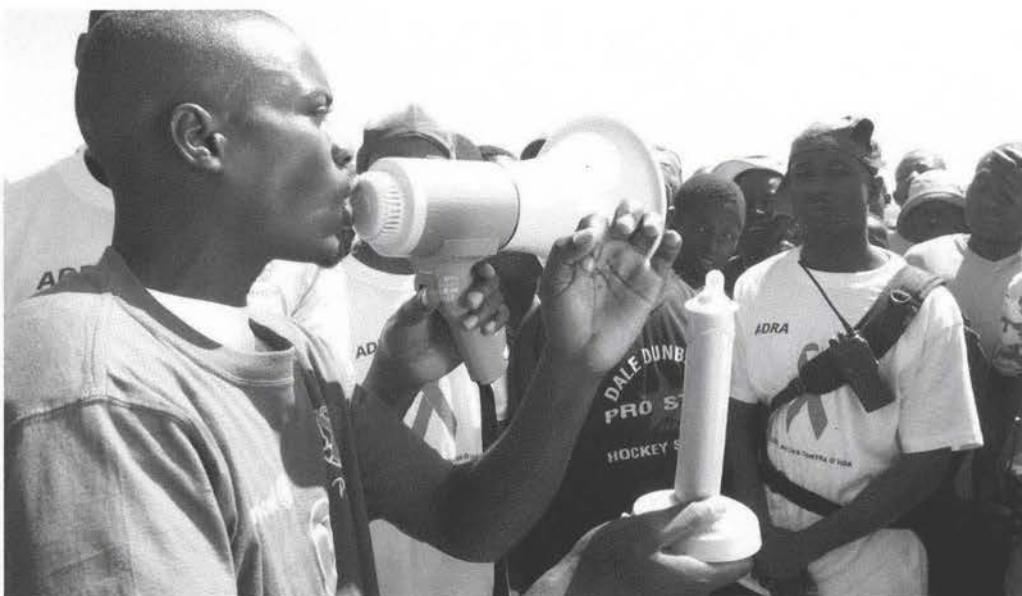
By the end of 2001 HIV/AIDS was being transmitted to about four million people annually in sub-Saharan Africa. With the death toll doubling every four years, it seems increasingly likely that less affected countries, such as Angola, are merely at an earlier phase of the pandemic¹.

By the end of 2001, the proportion of adults (ages 15 to 49 years) infected with HIV/AIDS was more than 20% in seven sub-Saharan African countries, two of which border Angola. In Namibia, South Africa, Swaziland, Lesotho, Botswana, Zambia and Zimbabwe² the pandemic already promises to kill more than one in five adults. One third of children have already lost one parent and their chances of losing the other one are high. The demo-graphic consequences of the epidemic are unprecedented, with the expected population deficit surpassing that of any war ever known. By the end of 2001, in sub-Saharan Africa alone, 28 million people were infected and 11 million children were orphaned with one or both parents lost to the disease. If the pandemic continues unabated, the fabric of African society may start to disintegrate under its demographic, social and economic onslaught³.

Controlling the spread of HIV/AIDS is without doubt the biggest public health challenge of

modern times, both at global and regional levels. African leaders' commitment to halting the spread of HIV was reaffirmed during the April 2001 Abuja Conference on HIV and AIDS. In addition to their personal commitment to fight HIV, African leaders were to allocate 15% of the government budget to the health sector. The United Nations General Assembly Special Session (UNGASS) on HIV/AIDS, held in June 2001, also represented an extraordinary effort by the global political leadership to act upon the HIV/AIDS pandemic in a concerted and meaningful way. The UNGASS Declaration of Commitment, which Angola signed, set clear targets to reduce the spread and impact of HIV and AIDS. In Angola this has been taken up at the highest level of decision-making through the creation of a National Aids Commission, including all ministerial representatives and chaired by the President of the Republic.

Despite the general lack of information on the scope of the epidemic in Angola, there are indications that HIV/AIDS is spreading rapidly. The large number of internally displaced persons together with increased contact with military personnel, the high percentage of the population under 24 years of age, low levels of education, and a high poverty index further indicate that Angola has almost all of the risk factors associated with the rapid increase of the epidemic.



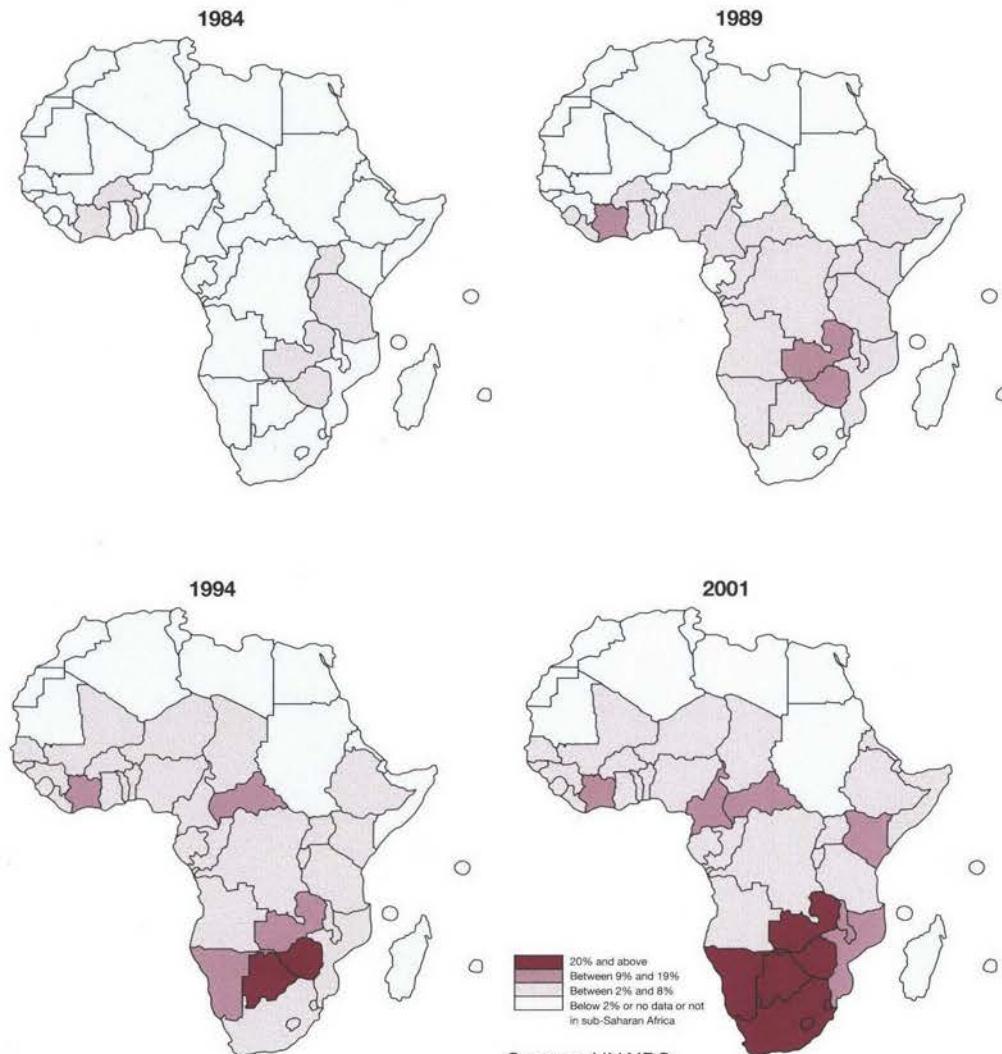
^{1,3} "UNICEF and UNAIDS evaluation of HIV/AIDS programme in sub-Saharan Africa", introduction by Mahesh Patel, Karen B. Allen, Robert Keatley and Urban Jonsson, in Evaluation and Programme Planning, volume 25, Number 4, November 2002.

² UNAIDS, 2001.



**Map 18.1: The HIV/AIDS Pandemic
Speed at which the pandemic has developed
and progressed in sub-Saharan Africa**

Estimated percentage of adults aged 15 to 49 years infected with HIV
in sub-Saharan Africa between 1984 and 2001



Source: UNAIDS

A 250% increase in the sero-prevalence of women attending antenatal clinics in Luanda was recorded between 1999 and 2001 (from 3.4% to 8.6)⁴. Of particular concern was the very high syphilis rate (19%), which often serves as a proxy indicator for HIV sero-prevalence. The same year, it was discovered that 33% of commercial sex workers in Luanda were infected with the HIV virus and 34.1% were infected with syphilis⁵. In Lubango, 11.7% sero-prevalence was recorded among

blood donors in 2001⁶.

In spite of the rapid pace of the increase of the sero-prevalence rate by the end of 2001, UNAIDS still estimated sero-prevalence among the Angolan population at 5.5%, a rate four times lower than that recorded in neighbouring Zambia (21.5%) and Namibia (22.5%), indicating that there still might be a rare window of opportunity for Angola to avoid the disaster witnessed in neighbouring countries.

⁴ Angola National Public Health Institute (INSP), National HIV/AIDS Program (PNLS), UNICEF, Italian Co-operation, WHO, 2001. The study also indicated sero-prevalence rates of 2.6% in Benguela and 4.4% in Huila, with syphilis rates of 13.9% and 18.5% respectively.

⁵ Population Action International, 2001.

⁶ Huila Provincial Public Health Delegation, 2001.

⁷ This would mean that in 2001, there were about 330,000 Angolans aged between 15 and 49 infected. Projections from this data further indicate that there were in 2001 approximately 100,000 Angolan children between 0 and 14 years of age orphaned by AIDS.

The MICS looks in detail at the knowledge of four simple, life-saving facts of HIV prevention among the Angolan population aged between 15 and 49:

- Consistently use a condom when having sex.
- Having only one faithful uninfected sexual partner.
- Abstain from sex.
- HIV can be transmitted from mother to child during pregnancy, childbirth and breast-feeding.

The survey also examines the stigma that surrounds HIV and AIDS by looking into the understanding of the disease by the population. In particular it gauges the level of prejudice and the attitude of Angolans towards compatriots who have already been infected, by looking at three misconceptions and two discriminatory attitudes:

Three misconceptions:

- Healthy looking persons cannot be infected with HIV.
- HIV can be transmitted by mosquito bites.
- HIV can be transmitted by supernatural means.

Two discriminatory attitudes:

- Believe that a teacher with HIV or AIDS should not be allowed to work.
- Would not buy food from a person with HIV or AIDS.

When it comes to monitoring the impact of HIV/AIDS, the state of decay of Angola's public health infrastructure puts the country at an enormous disadvantage. Functioning national health information systems have allowed Namibia and Zambia to determine that more than one in five adults were infected. In Angola, this capacity does not yet exist. In 2001, less than half of all provinces had laboratories capable of undertaking HIV tests. At the beginning of 2003, in Luanda there were only four locations where Angolans could be tested and counselled for HIV, although the city of Luanda has about 3.5 million inhabitants. No other provinces at the beginning of 2003 possessed facilities for Voluntary Counselling and Testing (VCT).

In this context of uncertainty regarding sero-prevalence status among the Angolan population, the MICS provides information at national and regional levels on the attitude, knowledge, and to some extent practice, of the Angolan population towards HIV and AIDS. MICS data shows that, while time is

running out if Angola is to avoid the disaster witnessed in neighbouring countries, the only existing way to avoid infection (i.e. possessing enough knowledge about it in order to change sexual behaviour) is still lacking among the population. Overall, the survey indicates that only one in ten Angolan people aged 15 to 49 years have sufficient knowledge about the disease. Disparities among men and women are dramatic, with women twice as likely not to possess sufficient knowledge on HIV prevention and transmission.

The most important strategy for reducing the spread of the pandemic is to promote accurate knowledge of how HIV is spread and prevented, leading to behaviour changes. The future evolution of the pandemic will mostly depend on the success of actions – such as information, education and communication campaigns – to prevent HIV transmission among young people. This is particularly relevant in the Angolan context where 59% of the population is under 18. The MICS reveals that Angolan youth has very little knowledge



about the disease. For example, only 21% of young people aged 15 to 19 years know the three main ways of preventing HIV transmission and a mere 18% are able to correctly identify three misconceptions about HIV.

The survey indicates great regional variations. Most knowledge of HIV transmission and prevention is consistently found among Angolans in the Capital Region, while the lowest proportion is found in the Centre South Region. In Huambo, Bie and Kuando Kubango provinces, only three percent of women and six percent of men have sufficient knowledge to protect themselves, revealing the extent to which war-affected provinces have been cut off from information, education and communication. The situation

is however not much better in the Capital Region where less than one in four people over 15 years of age has a sufficient level of knowledge about HIV transmission and prevention. Interestingly, it is in the Capital Region that the majority of people show discriminatory attitudes towards people living with HIV or AIDS and in the Centre South Region where people are the least discriminatory. The MICS here establishes a clear correlation between the level of knowledge and attitude of the population. People with basic knowledge about HIV transmission and prevention tend to be more discriminatory towards infected people. This correlation is also visible according to households' level of wealth and education.

Indicators

Knowledge of preventing HIV/AIDS

Proportion of women who correctly state the three main ways of avoiding HIV infection – 17%

Knowledge of misconceptions of HIV/AIDS

Proportion of women who correctly identify three misconceptions about HIV/AIDS – 14%

Knowledge of mother-to-child transmission of HIV

Proportion of women who correctly identify means of HIV transmission from mother to child – 29%

Attitude to people with HIV/AIDS

Proportion of women expressing a discriminatory attitude towards people with HIV/AIDS – 44%

Sufficient knowledge about HIV/AIDS

Proportion of women who know the three main ways to prevent HIV transmission and who correctly identify three misconceptions about HIV transmission – 8%

Women who know where to be tested for HIV

Proportion of women who know where to get a HIV test – 23%

Women who have been tested for HIV

Proportion of women who have been tested for HIV – 2%

Fear, silence and stigma

The more wealthy and educated people are, the more they know about HIV transmission and prevention. Paradoxically, they are also more likely to have a discriminatory attitude towards people living with HIV or AIDS. For example, better off people are seven times more likely to have sufficient knowledge about HIV and AIDS than the poorest, but are also twice as likely to show discriminatory attitudes. Similarly, people with secondary or higher education are twelve times more likely to have sufficient knowledge than illiterate people, but are three times more likely to have discriminatory attitudes towards infected people.

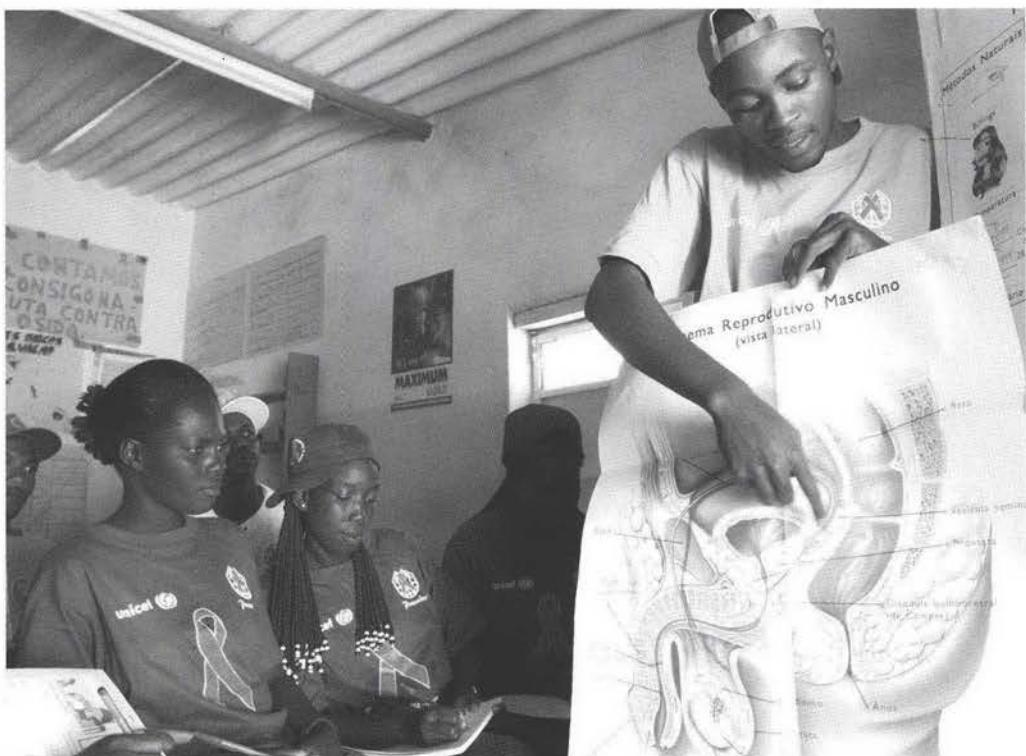
This finding reveals the importance of the

"culture of silence" and "social stigma" that exists around the disease, a factor that greatly contributes to the rapid spread of HIV/AIDS. The fact that increased knowledge does not dispel misconceptions about the disease is indicative of the significant progress that remains to be made to provide the Angolan population with comprehensive knowledge about HIV and AIDS. The prevalence of discriminatory attitudes reveals that knowledge of transmission and prevention remains partial and confused even among those groups which can demonstrate a sufficient level of basic knowledge of prevention and transmission. It also reveals the urgent need to find ways to break the silence and end the stigma in order to fight the epidemic.

Women who have heard of HIV and AIDS

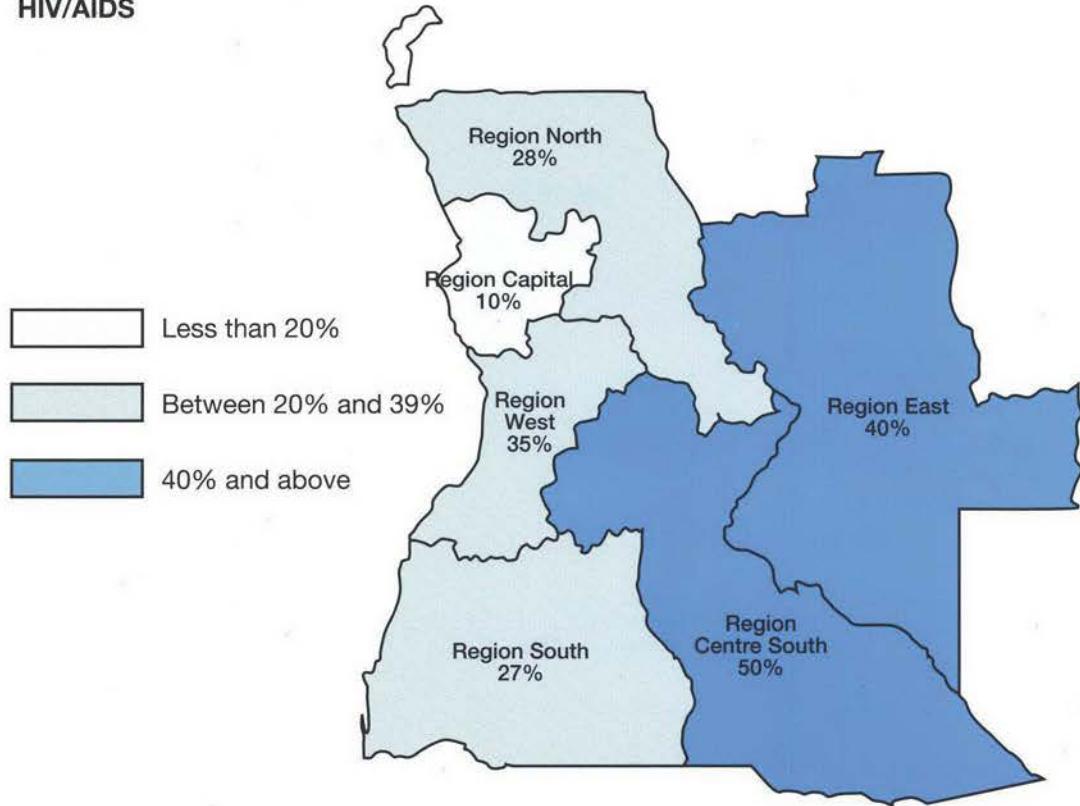
Among Angolan women aged 15 to 49 years, one third have not even heard of HIV/AIDS (32%), with a much higher proportion in rural areas (47%) than urban areas (26%). The highest number of women who have heard of HIV/AIDS is found in the Capital Region (90%) and the lowest in the East and Centre South Regions (60% and 50% respectively). The West, North, and South Regions are close

to the national average. Almost all women who have received secondary or higher education have heard of HIV/AIDS (96%), against less than half of illiterate women (45%). Although less pronounced, the same pattern is observed when looking at households' level of wealth, with 51% of women among poorest households who have never heard of the disease against 11% among the better off women.





Map 18.2: Percentage of women 15 to 49 years who have never heard of HIV/AIDS



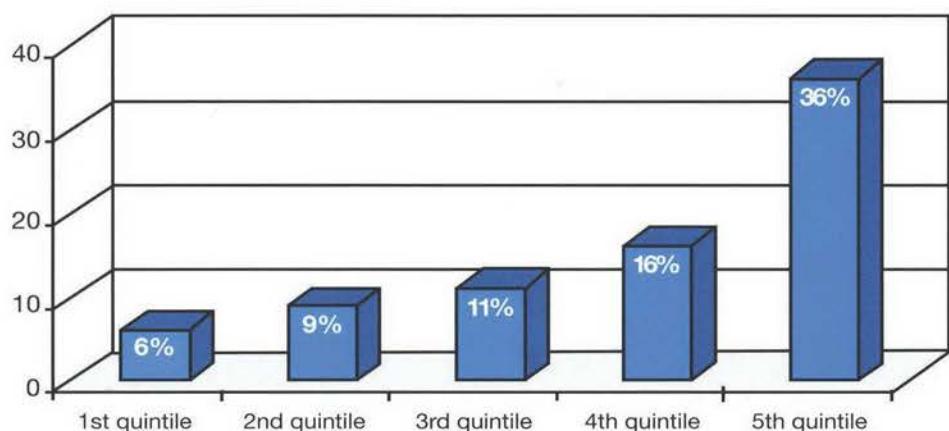
Knowledge of preventing HIV/AIDS

Only 17% of women aged 15 to 49 years know the three main ways to prevent transmission, namely the consistent use of a condom when having sex, having only one faithful uninfected partner, and abstaining from sex. The first two ways are known to 27% of Angolan women, whereas the latter is known by only 21%. There are colossal variations according to households' wealth levels, regions, areas of residence, age group and education levels.

Knowledge of the three main ways of preventing HIV transmission is eight times higher among women with secondary or higher education than among illiterate women, with the same pattern observed according to wealth index quintiles. Among the most vulnerable Angolan women, only 6% know the three main ways to protect themselves from being infected.



Graph 18.1: Percentage of women 15 to 49 years who know the three main ways of preventing HIV according to wealth index quintile



Prevention knowledge is higher than the national average among younger women than among older women. For example, while 19% of 15 to 19-year-old women know the three main ways of avoiding HIV, only 8% of women aged 45 to 49 years do. With almost 70% of the Angolan population under 24 years of age, it is extremely worrying that two-thirds of women aged between 15 and 24 do not know any ways that HIV can be prevented. In the Capital Region, women are four times more likely to know the main ways of transmission than in the North and Centre South Regions. The other regions are close to the national average.

The same patterns are observed when looking at the knowledge about each individual way of preventing HIV. For example, while 51% of women in the Capital Region know that the consistent use of a condom during sexual relationships can prevent infection, only 13% and 16% of women in the Centre South and North Regions respectively know this fact. Women with secondary or higher education are almost seven times more likely to identify condom use as a prevention method than those with no education (63% against 9%), and women aged 15 to 19 years are twice as likely to know about condom use than women aged 45 and 49.

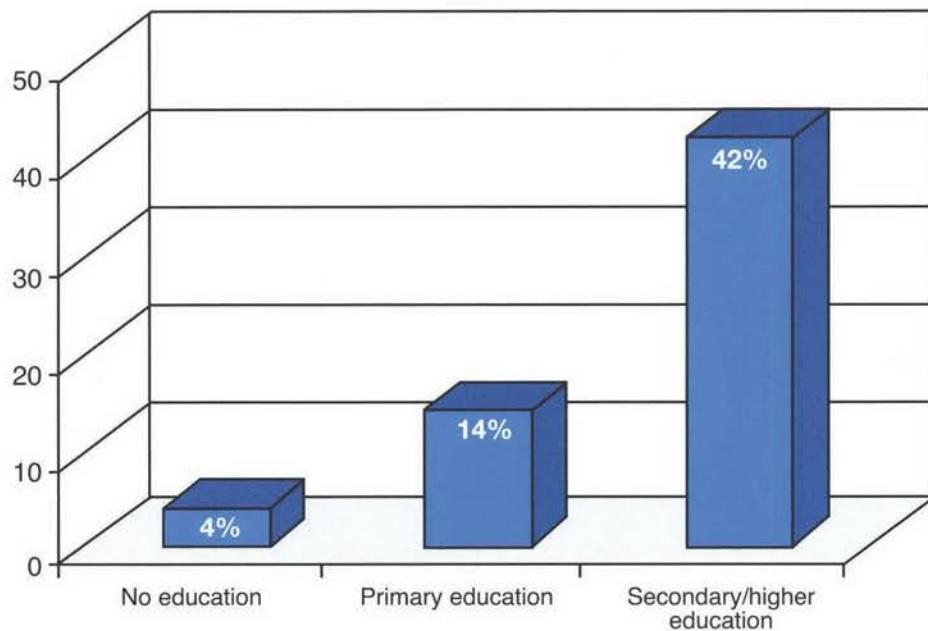
Knowledge of misconceptions of HIV/AIDS

Only 14% of women aged between 15 and 49 could correctly identify three misconceptions about HIV/AIDS. The same patterns as those observed in the knowledge of preventing HIV are noted. Poorest women are six times less likely to correctly identify these three beliefs as misconceptions than better off women (6% versus 33%). More-over, illiterate women are ten times less likely to correctly identify these misconceptions than more educated women (4% versus 42%). Only 10% of

women in the Centre South Region know that HIV cannot be transmitted by mosquito bites, against 44% in the Capital Region. It is striking to note that although higher levels of misconceptions are recorded among older Angolan women, a staggering 84% of young Angolan women aged 15 to 19 years cannot correctly identify the above-mentioned beliefs as misconceptions. Almost 80% of young women believe that HIV can be transmitted by mosquito bites and 70% that it can be transmitted by supernatural means.



Graph 18.2: Percentage of women 15 to 49 years who correctly identify three misconceptions about HIV/AIDS according to education level



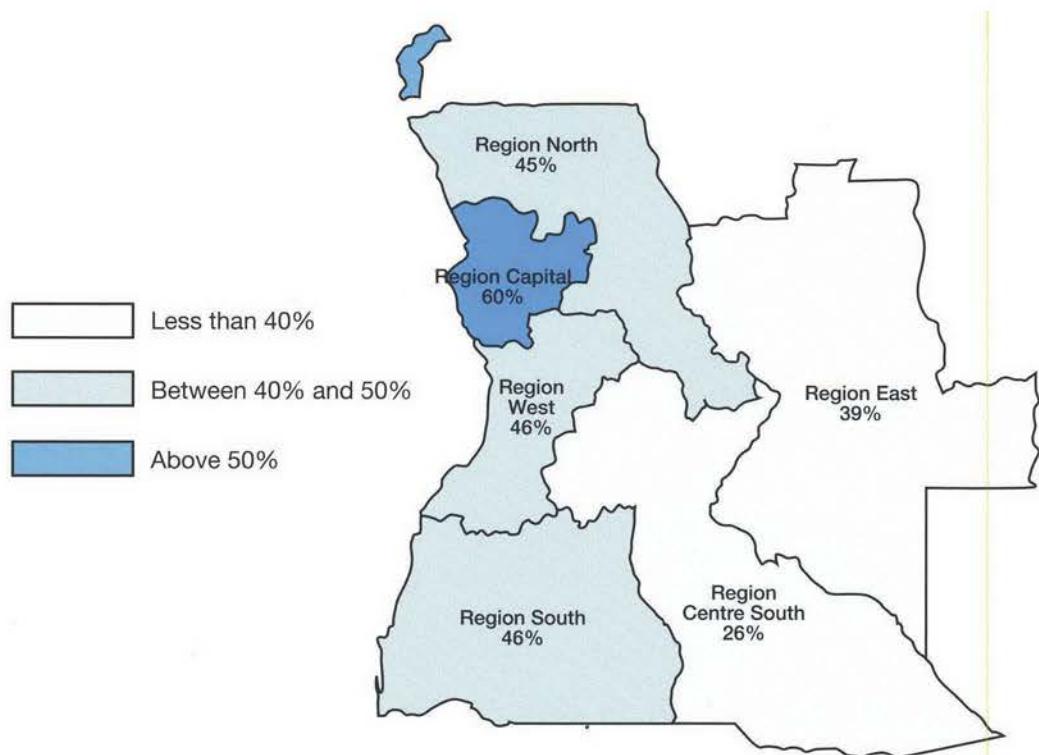
Attitude to people with HIV or AIDS

The MICS gauged women's discriminatory attitudes towards people living with HIV/AIDS by asking women whether they believe that a teacher who has HIV or AIDS should be allowed to continue teaching and whether they would buy food from an infected person. More than one in four Angolan women believe that a teacher with HIV or AIDS should not be allowed to work (28%). The same proportion would not buy food from an infected person. In general, 44% of women agree with at least one discriminatory statement. Urban women and those with secondary or higher education are more likely to express discriminatory attitudes than rural women and those with no education or only a primary school education.

As noted, there is a striking correlation between the level of women's knowledge of HIV/AIDS and their attitude towards infected people. The more women are better off, educated and able to demonstrate basic knowledge about HIV transmission, the more they tend to have discriminatory attitudes, indicating the alarming level of prejudice surrounding HIV and AIDS. This finding also reflects the fact that the more people know about HIV and AIDS, the more they tend to isolate themselves from the problem.



Map 18.3: Percentage of women aged between 15 and 49 years who demonstrate a discriminatory attitude towards people living with HIV/AIDS



Knowledge of mother-to-child transmission of HIV

More than half of Angolan women do not know that HIV can be transmitted from mother to child. When looking at the specific mechanisms through which mother-to-child transmission can take place, 55% of women do not know that HIV can be transmitted during pregnancy, 38% do not know that HIV can be transmitted during childbirth, and 34% do

not know that it can be transmitted through breast-feeding. Similar patterns are observed to those noted in knowledge of prevention and prevalence of misconceptions, with a higher proportion of women knowing about mother-to-child transmission among the better off, more educated, younger and urban women, and women living in the Capital Region.

Women who know where to be tested for HIV

Voluntary testing for HIV, best when accompanied by counselling, allows those infected to seek health care and to prevent the infection of others. Testing is particularly important for pregnant women who can then take steps to prevent infecting their babies. The MICS measures whether women are aware of places to get an HIV test, the extent to which they have been tested, and the extent to which those tested have been told the result of the test. As a result of the fear, "culture of silence" and stigma that surround HIV/AIDS, in some places a relatively large proportion of people

who are tested do not return to get their results due to fear of having the disease, fear that their privacy will be violated, or other reasons. In other cases, health care professionals, mainly due to lack of training, do not inform the patients of their sero-positivity but rather indicate a more socially acceptable diagnosis such as malaria or TB.

Outside Luanda, there are very few places where people can be tested for HIV. This factor has allowed the epidemic to go unchecked in Angola. Overall, less than one in four women know a place to get tested for



HIV (23%), with wide disparities among regions, households' wealth, women's education levels, age groups and areas of residence. For example, better off women

and women in the Capital Region are four times more likely to know a place to get tested than poorest women and women in the Centre South Region.

Women who have been tested for HIV and have been told the results

Overall, only two percent of Angolan women have been tested for HIV, a percentage that varies from one percent among illiterate women to six percent among women who received secondary or higher education. It is in the Capital Region that the highest percentage of women has been tested (4%). In all other regions, the percentage varies between one and two percent. Although the majority of women who have been tested were told the result, one in four were not. There are also worrying variations across regions, age groups, and education levels.

Surprisingly, it is not in the Capital Region that

most women tested were told the results of the test but in the East where 96% of women tested had knowledge of the test results. Of particular note is the situation in the West Region, where nine in ten women who were tested were not told the results of the test. In all other regions, the percentage of women who were informed of the test results is 70% or over. Despite the importance of targeting youth to fight the epidemic, it is adolescent Angolan women (aged 15 to 19) who are the least likely of any age group to have been tested (only 1%). They are also the least likely to know the result of their test with only 56% of the adolescents tested ever being told the test results.



Source of information about HIV and AIDS

Although only 14% of Angolan households own a television, compared to 38% that own a radio, the survey reveals that at national level most women received information on HIV/AIDS through television (42%) with only 4% being informed through radio. The second most important channels through which women received information on HIV/AIDS are parents, relatives and friends (36%), with the

third main source of information being the Church and meetings within the communities (23%). There are important variations between regions regarding the source of information. While TV is the main channel through which information on HIV/AIDS is circulated to women in the Capital Region, parents, relatives, friends, communities and Church appear as the main source of information in all other regions.

Box 1: United Nations General Assembly Special Session (UNGASS) on HIV/AIDS of June 2001

Selected UNGASS Targets

Prevention targets

By 2003, establish time bound national targets to achieve the internationally agreed global prevention goal to reduce by 2005 HIV prevalence among young men and women aged 15 to 24 in the most affected countries by 25% and by 25% globally by 2010.

By 2005, ensure that at least 90% and by 2010 at least 95% of young men and women aged 15 to 24 have access to the information, education, including peer education and youth specific HIV education and services necessary to develop the life skills required to reduce their vulnerability to HIV infection; in full partnership with youth, parents, families, educators and health care providers;

By 2005 reduce the proportion of infants infected by HIV by 20% and 50% by 2010, by:

- ensuring that 80% of pregnant women accessing antenatal care have information, counselling and other HIV prevention services available to them;
- increasing the availability of and providing access for HIV-infected women and babies to effective treatment to reduce mother to child transmission of HIV; and
- providing effective interventions for HIV-infected women, including voluntary and confidential counselling and testing, access to treatment, especially retro-viral therapy and, where appropriate, breast milk substitutes and the provision of a continuum of care.

Care, support and treatment target

By 2003, ensure that national strategies are developed in order to provide psychosocial care for individuals, families and communities affected by HIV/AIDS.

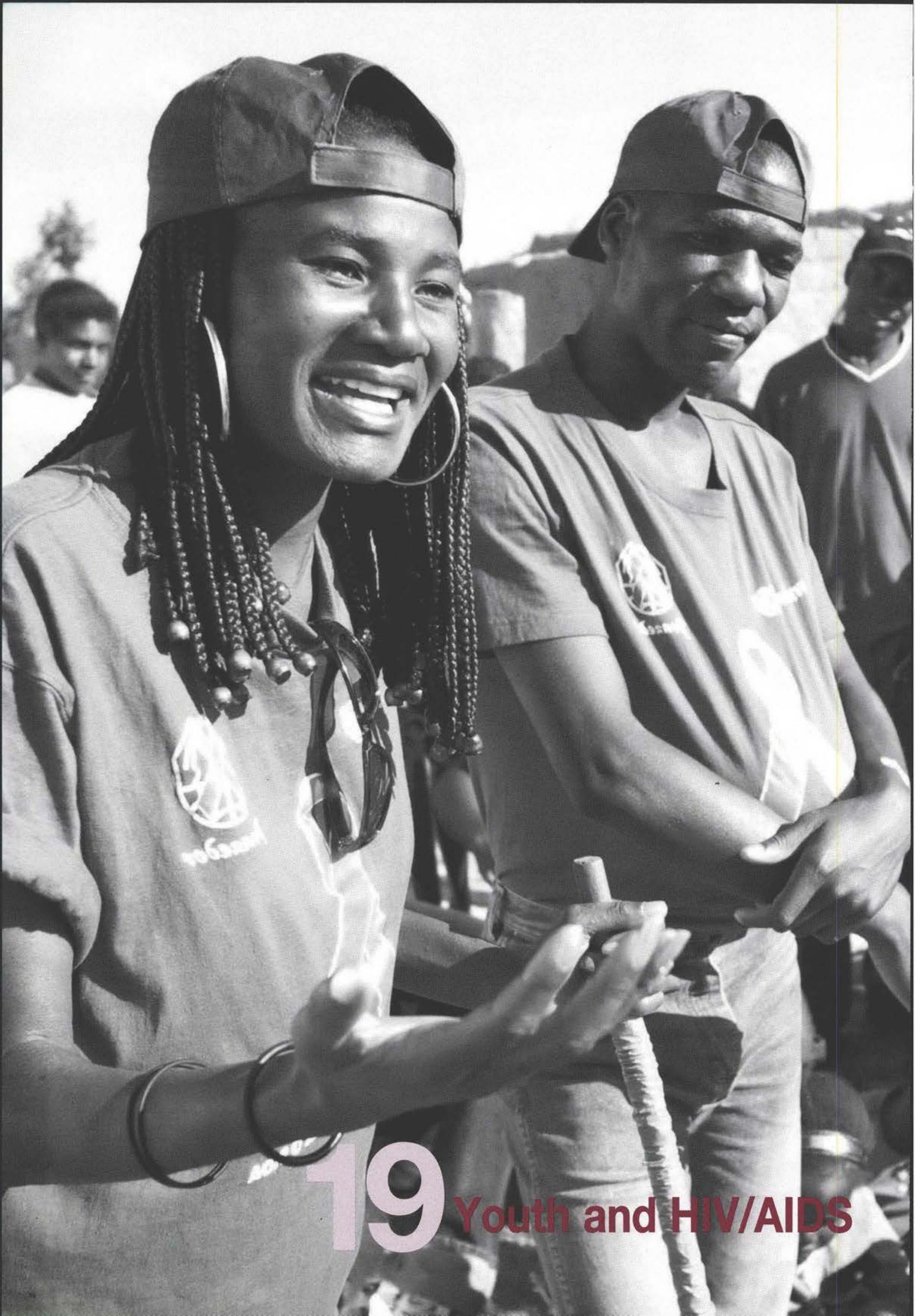
Children orphaned by HIV/AIDS targets

By 2003, develop and by 2005 implement national policies and strategies to build and strengthen governmental, family and community capacities to provide a supportive environment for orphans and girls and boys infected and affected by HIV/AIDS.

Ensure non-discrimination and full and equal enjoyment of human rights through the promotion of an active and visible policy of de-stigmatisation of children orphaned and made vulnerable by HIV/AIDS.

Table 18.1: Summary table of HIV/AIDS indicators

	Have heard of HIV/AIDS		Know three main ways to prevent HIV transmission		Correctly identify three misconceptions about HIV transmission		Have sufficient knowledge	
	Female	Male	Female	Male	Female	Male	Female	Male
Wealth index quintile								
First								
First	49	60	6	11	6	9	3	6
Second	57	72	9	20	7	17	4	11
Third	63	76	11	24	8	18	5	10
Fourth	71	81	16	30	11	25	6	15
Fifth	89	92	36	44	33	43	19	26
Region								
Capital	90	95	36	44	37	46	21	28
North	72	80	9	20	9	23	4	12
East	60	72	15	26	10	19	6	13
West	65	85	17	35	12	24	7	18
South	73	77	18	25	13	24	7	13
Centre South	50	62	9	17	5	11	3	6
Area of residence								
Urban	74	84	21	33	17	29	10	18
Rural	53	66	8	16	7	14	4	8
Age group								
15 to 19 years	68	71	19	23	16	19	8	11
20 to 24 years	72	81	21	30	18	29	11	16
25 to 29 years	71	81	18	32	14	27	8	17
30 to 34 years	70	83	16	31	14	28	8	17
35 to 39 years	67	83	15	31	12	27	7	18
40 to 44 years	59	81	13	29	10	26	6	16
45 to 49 years	56	77	8	25	8	22	4	13
Education level								
None	45	42	5	7	4	5	2	3
Primary	76	78	19	24	14	20	8	12
Secondary and higher	96	94	42	45	42	44	22	27
Total	68	79	17	28	14	25	8	15



19 Youth and HIV/AIDS

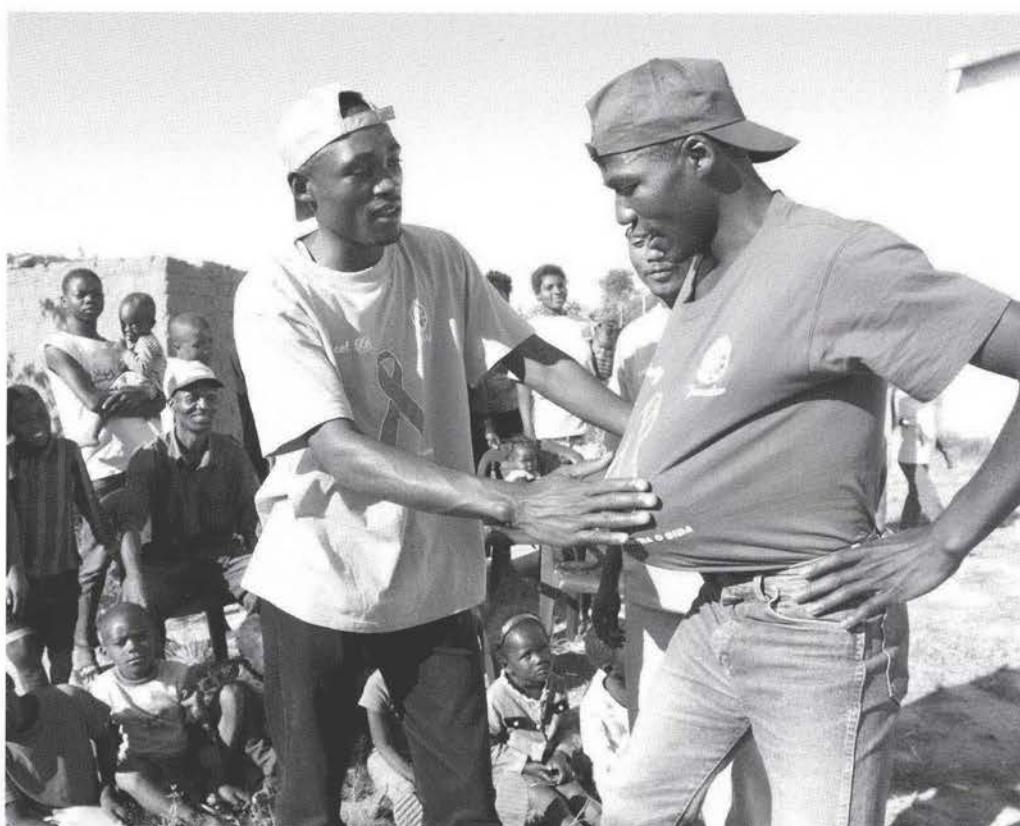


In sub-Saharan Africa, the majority of new HIV infections are among young people aged 15 to 24. In areas where the spread of HIV/AIDS is subsiding or even declining, it is primarily because young men and women are being given the tools and the incentives to adopt safe sexual behaviours. For example, in Lusaka, Zambia, HIV prevalence among adolescents aged 15 to 19 declined from 28% in 1993 to 15% in 1998. This decrease was attributed to increased condom use and fewer sexual partners, thanks to a vigorous national programme providing life-skills education and health services for young people¹.

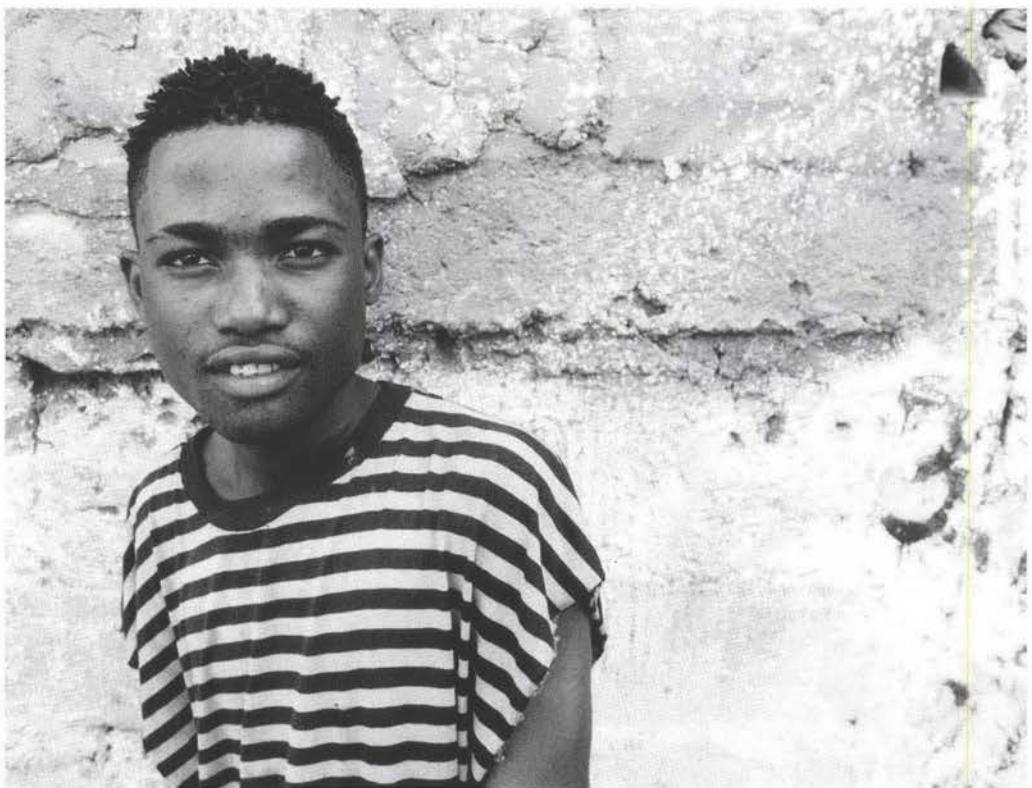
In Angola, more than two decades into the epidemic, the overwhelming majority of young men and women remain uninformed about HIV and AIDS. This is particularly worrying in a context where the youth is sexually active (by 20 years of age, almost 70% of Angolan women have already given birth). The vast majority of the Angolan youth have no idea how HIV/AIDS is transmitted or how to protect themselves from the disease. More than nine in ten young people (15 to 19 years) do not have sufficient knowledge about the disease.

What young people have the right to know:

- *To know about sex and their sexuality*
- *To know the basic facts on HIV/AIDS and have the necessary life skills to protect themselves from HIV and other STIs*
- *To know their HIV status*
- *To know how to protect themselves if they are living with HIV/AIDS*
- *To know where to get medical, emotional and psychological support if they are living with HIV/AIDS*
- *To know how to protect those in their communities who are living with HIV/AIDS*
- *To know about and participate in HIV education programmes tailored for youth*
- *To know their rights and entitlements, and the commitments that governments have made to them*
- *To know how to protect, claim and realise these rights*



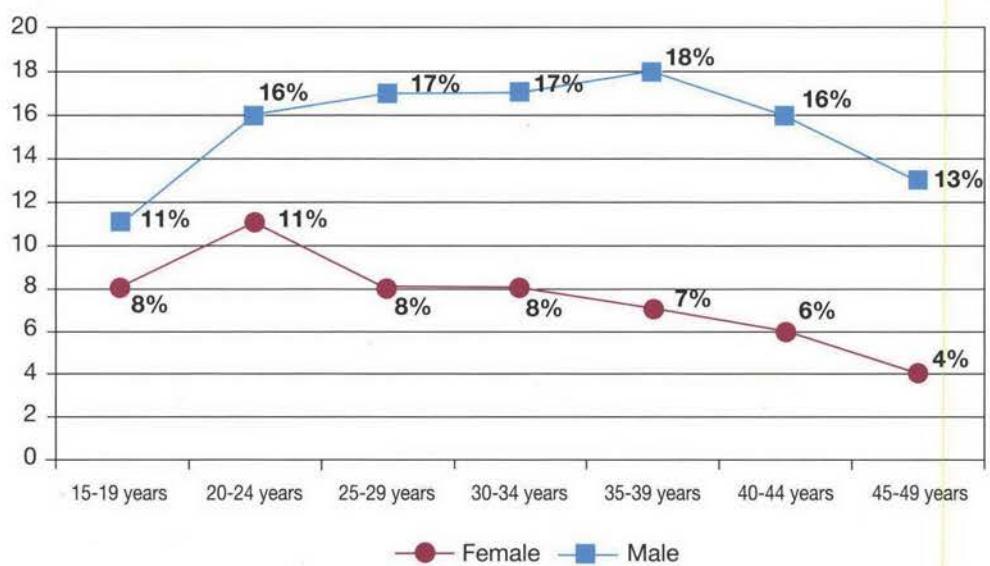
¹ Young people and HIV/AIDS: Opportunity in crisis, UNAIDS, UNICEF, WHO, 2002.



Although a majority have heard of AIDS, many do not know how HIV is spread and do not believe they are at risk. More than two-thirds (68%) do not know that the consistent use of a condom can prevent infection. Further, those young people who do know about HIV often do not protect themselves because they lack the skills, the support or the means to adopt safe behaviours. This was strikingly illustrated by the fact that only 0.6% of young men and women reported use of either feminine or masculine condoms.

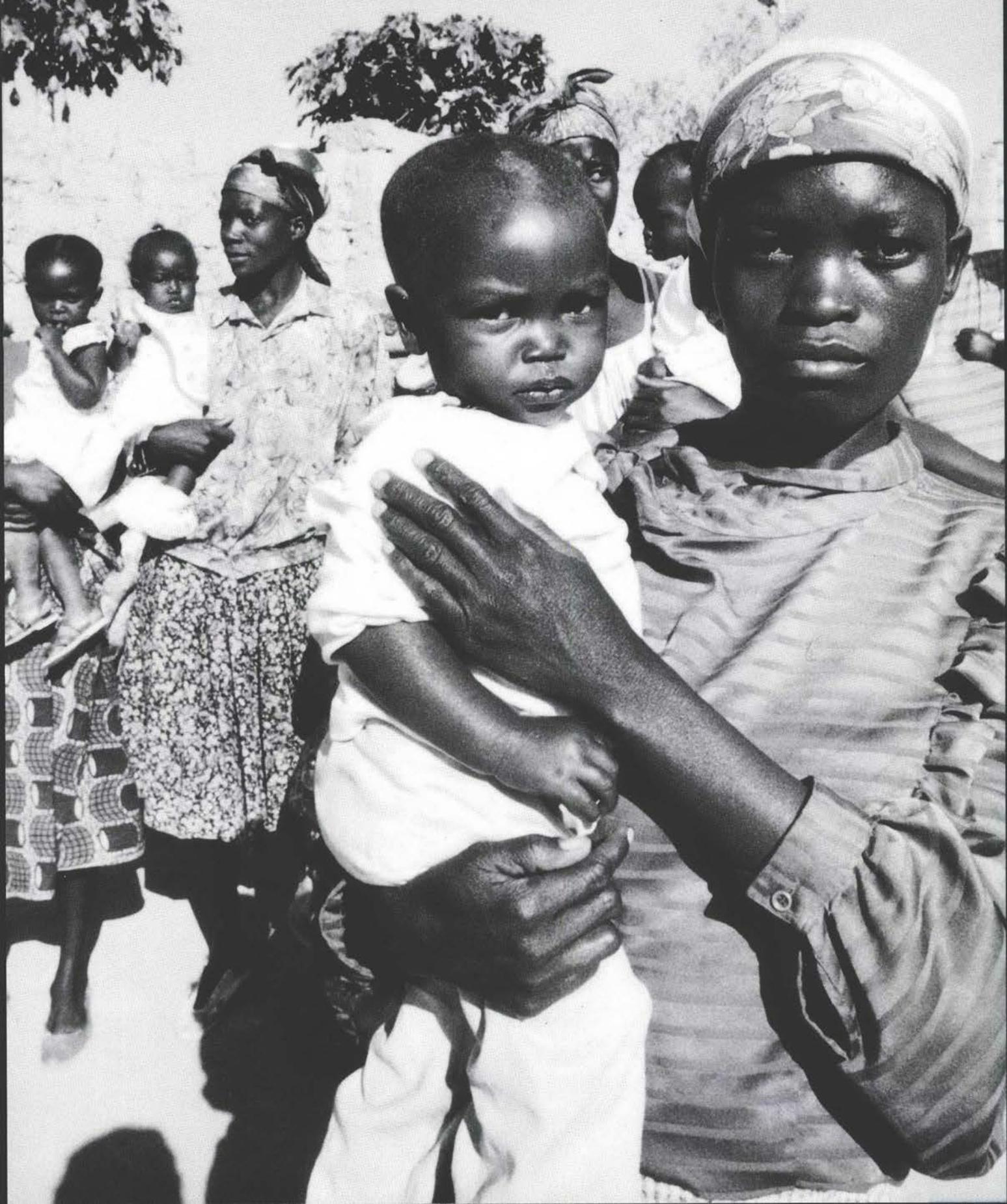
The youth is more likely to have less knowledge about HIV/AIDS than other age groups. For example, young Angolan men have the lowest knowledge about HIV/AIDS than any other age group among the male population 15 to 49 years of age. Young women aged 15 to 19 years also demonstrate less knowledge about HIV transmission than women aged 20 to 24 years, although their knowledge is higher than women aged 35 to 49 years.

Graph 19.1: Proportion of the population aged 15 to 49 years with sufficient knowledge about HIV/AIDS: disparities between men and women by age group



20

Contraception



Indicators

Contraceptive prevalence

Proportion of women aged 15 to 49 who are using (or whose partner is using) a contraceptive method (either modern or traditional) – 6%

Contraceptive prevalence among married women and women in unions

Proportion of married women or women in unions aged 15 to 49 who are using (or whose partner is using) a contraceptive method (either modern or traditional) – 6%

are directly related to the very high fertility rate recorded in Angola, with on average seven children per woman. At national level, the use of modern methods, such as pills, condoms, and intra-uterine devices (IDU) is more frequent than the use of traditional methods such as periodical abstinence and the lactation amenorrhoeal method (5% versus 1%).

Overall, contraception is more prevalent in urban areas, where women are nearly four times more likely to use contraceptives than women in rural areas. There are also important regional variations. The highest proportion of contraceptive use is found in the Capital Region (15%) and the lowest in the North Region (2%).

At the beginning of the millennium, contraceptive prevalence in sub-Saharan Africa was the lowest in the world. It was estimated in 2000 at 23%¹. The MICS indicates a much lower prevalence in Angola, with only 6% of women aged 15 to 49 using (or whose partner is using) a modern or traditional method. The pattern of contraceptive use for married women (or women in unions) is identical. These findings

Contraceptive use is highly variable according to the socio-economic status of households and women's education level. It is seven times more prevalent among better off Angolans than among those belonging to the lowest socio-economic quintile. Furthermore, the level of contraceptive use among the first four socio-economic quintiles is very similar, indicating that there are significant income barriers to the use of contraceptives.

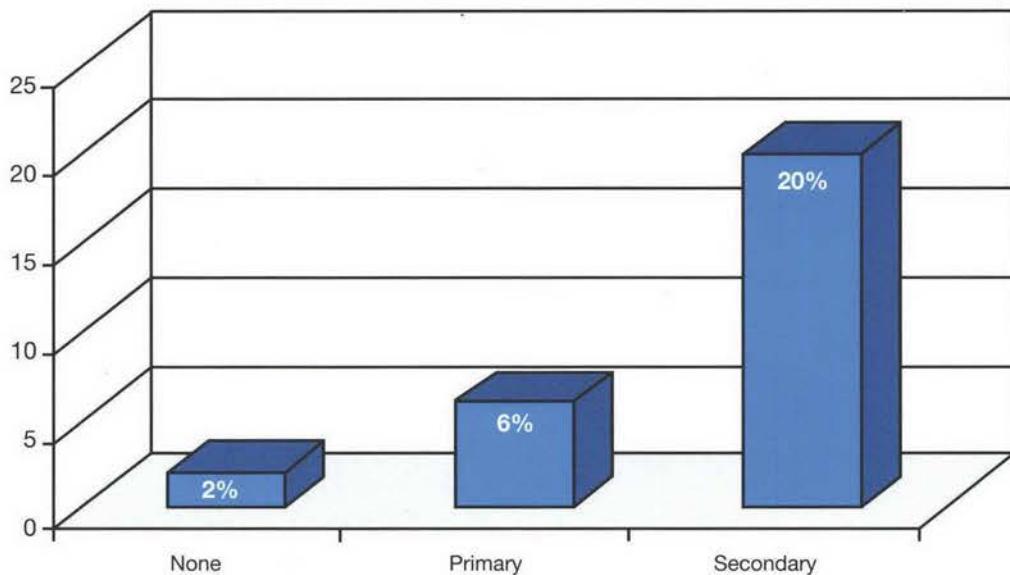


¹ State of the World's Children 2003, UNICEF.

Women who have secondary education are ten times more likely to use contraceptives than women with no education. This trend is also confirmed for married women and women in unions. Among this category, more educated women are 18 times more likely to use modern methods of contraception than women who have

never attended school. This trend reveals the close link between higher levels of education and reduced fertility rate. In fact, the MICS has shown that women with secondary or higher education have on average two children less than women with no education or primary education only.

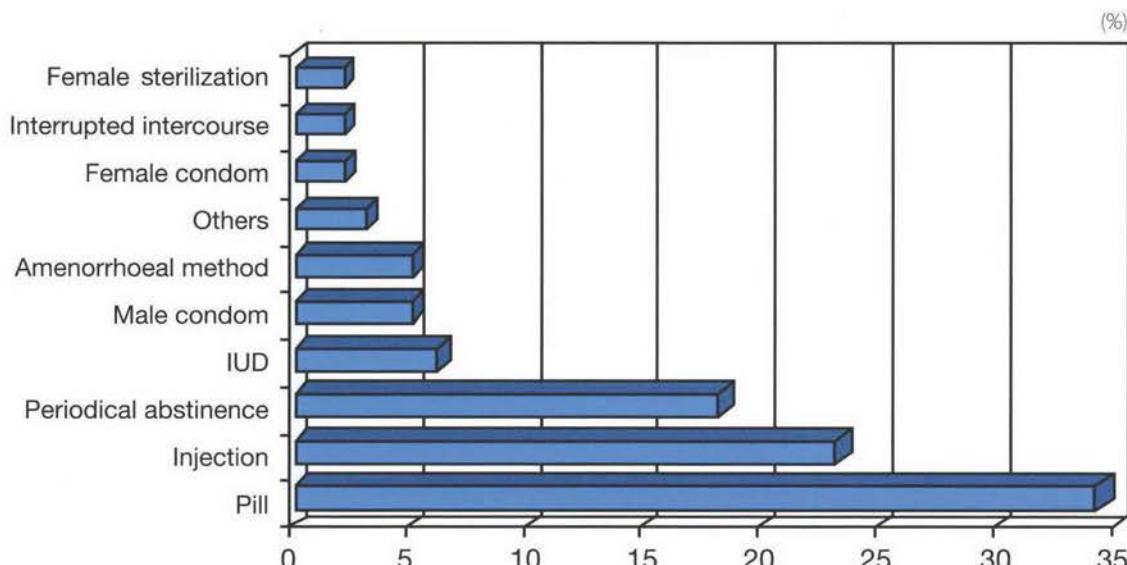
Graph 20.1: Contraception prevalence according to women's education level

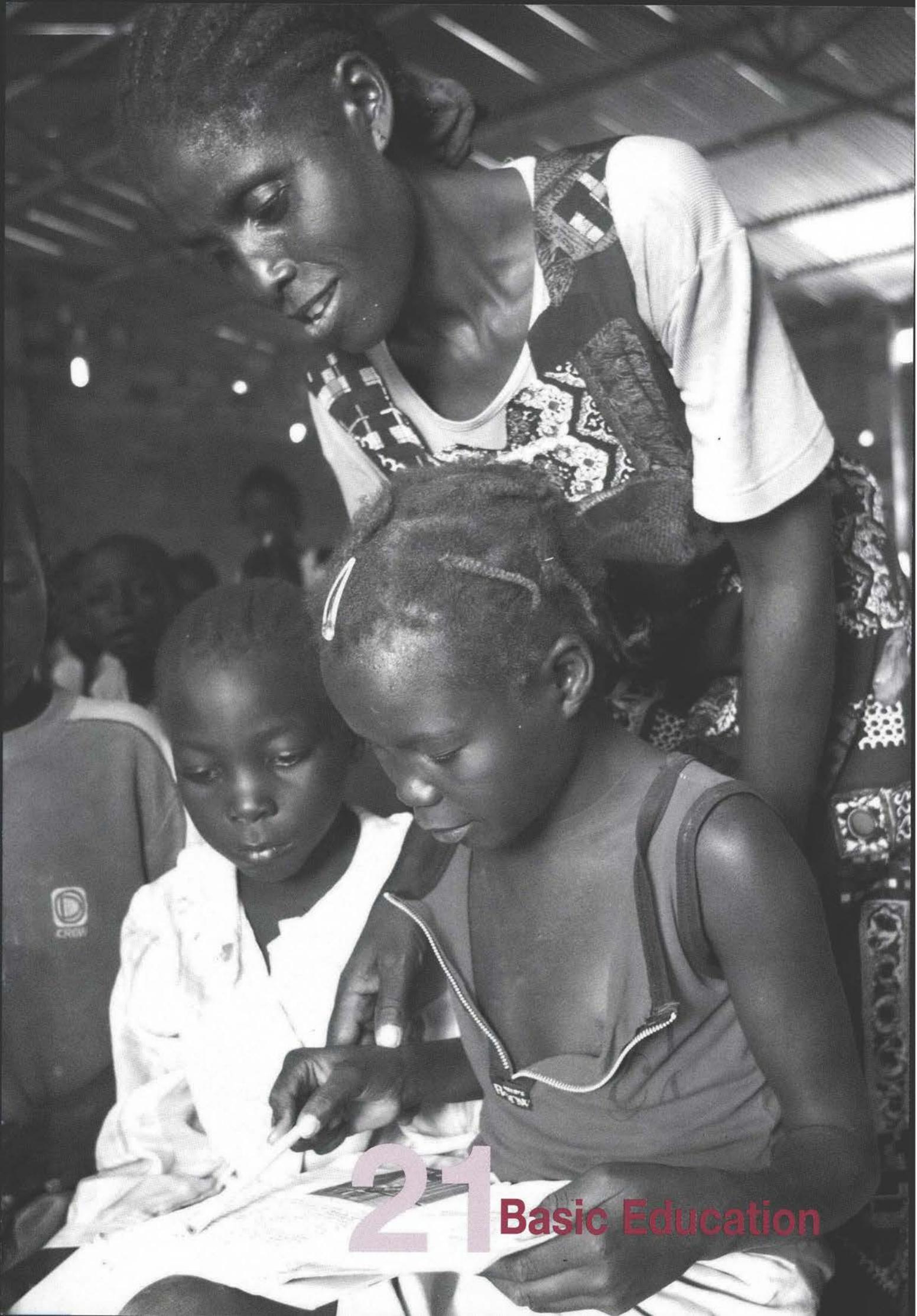


Among the 6% of women that use contraception, the most commonly used method is the contraceptive pill (34%), followed by contraceptive injections (23%)

and periodical abstinence (18%). Despite the threat of HIV and AIDS, the use of male and female condoms remains significantly low at 7%.

Graph 20.2: Type of contraception methods used by married women (or in union) that use contraception methods





21 Basic Education



Until the recent reform of the Angolan educational system, only the first four years (Grade 1 to 4) of basic education, also referred to as primary education, were compulsory for Angolan children. With the Education Reform Law passed by the national Parliament in 2001, this period has now been extended to six years (i.e. until Grade 6), effective as of 2003. The Education Reform Law also had the merit of simplifying the structure of the education system: primary education now consists of six mandatory years of schooling for all children aged 6 to 11. Secondary education similarly consists of six years divided into two levels of three optional years each. Prior to 2003, basic education in Angola comprised eight years of schooling (or eight grades) divided into three levels. The first level consisted of four years and was referred to as primary education, while the second and third levels, which were referred to as basic intermediate education, comprised two years each. As for secondary education, it consisted of four years. The age of entry into the first year of primary education remained the same before and after the reform (six years of age).

The MICS focuses on the first six years of schooling, looking into attendance rates in the mandatory first level and attendance rates in the second optional level of basic education. It also assesses the internal efficacy of the education system by focusing on completion rates and socio-economic and demographic characteristics of those attending the first six years of schooling.

The survey reveals very low attendance rates, with 44% of children not attending the compulsory first four years of schooling and 94% not attending the second level of basic education. Of those children attending the first level of basic education, the survey indicates that 25% will not reach Grade 5. Furthermore, and as a result of late entry into school, the majority of children who attend school do not do so at the recommended age. For example, 70% of seven-year-old children in school do not attend the appropriate grade for their age (i.e. second class). The MICS also reveals that due to the high repetition rates the education system has become overloaded and is presently unable to absorb new pupils. The findings of the survey indicate that children are attending

Indicators

Net primary school attendance rate – first level of basic education

Proportion of 6 to 9-year-old children attending the first level of basic education (Grade 1 to 4) – 56%

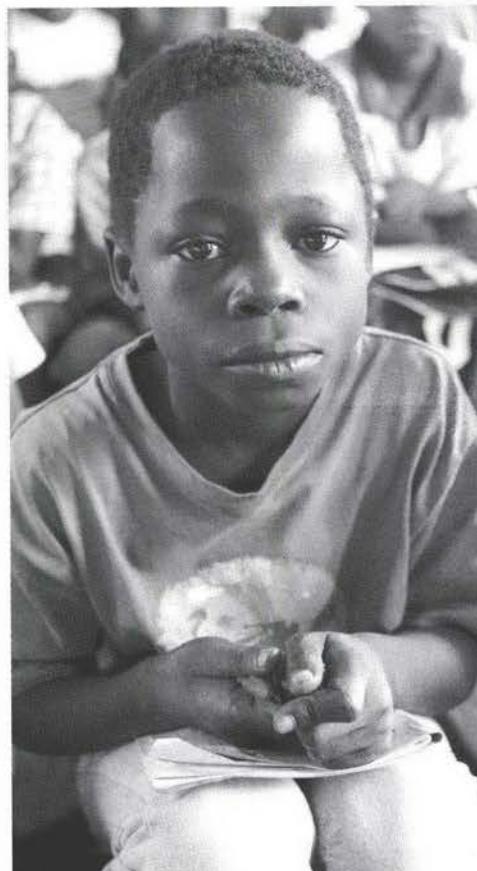
Net primary school attendance rate – second level of basic education

Proportion of 10 and 11-year-old children attending the second level of basic education (Grades 5 and 6) – 6%

Completion rate – children reaching Grade 5

Proportion of children who enter the first grade of primary school and eventually reach Grade 5 – 76%

basic education at a late age and are therefore occupying the places of younger pupils. For example, among 15-year-old Angolan teenagers attending school, the overwhelming majority (85%) are still attending the first six classes of basic education, which should normally have been completed at 11 years of age.

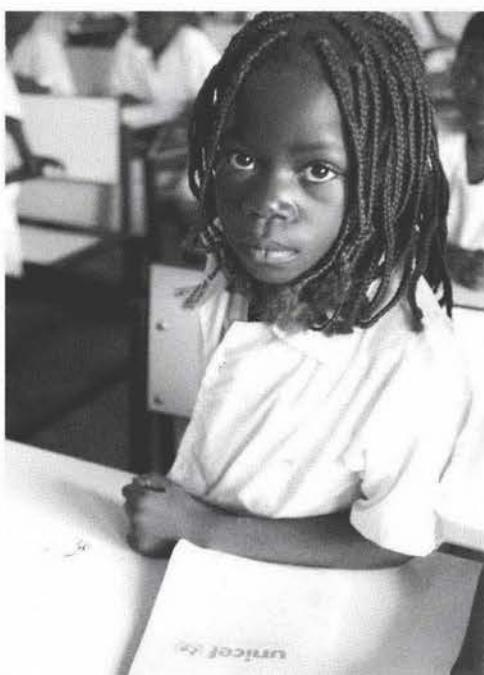


Pre- and post-2003 education system in Angola

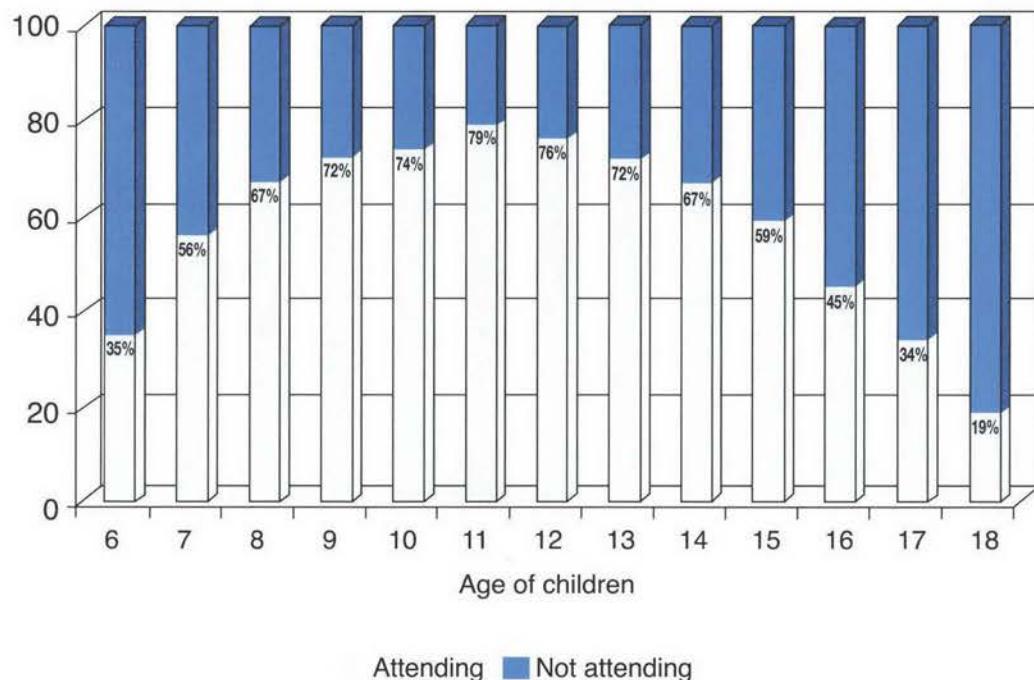
School system prior to 2003			School system from 2003 onwards		
	Grade/year	Normal age of attendance		Grade/year	Normal age of attendance
Primary education					
1st level	1st	6 years old		1st	6 years old
	2nd	7 years old		2nd	7 years old
	3rd	8 years old		3rd	8 years old
	4th	9 years old		4th	9 years old
2nd level	5th	10 years old		5th	10 years old
	6th	11 years old		6th	11 years old
	7th	12 years old		7th	12 years old
	8th	13 years old		8th	13 years old
Intermediate basic education					
3rd level	9th	14 years old		1st level	7th
	10th	15 years old			8th
	11th	16 years old			9th
	12th	17 years old		2nd level	10th
					11th
					12th
Secondary education					
	9th	14 years old		1st level	7th
	10th	15 years old			8th
	11th	16 years old			9th
	12th	17 years old			10th
					11th
					12th

(Source: Ministry of Education)

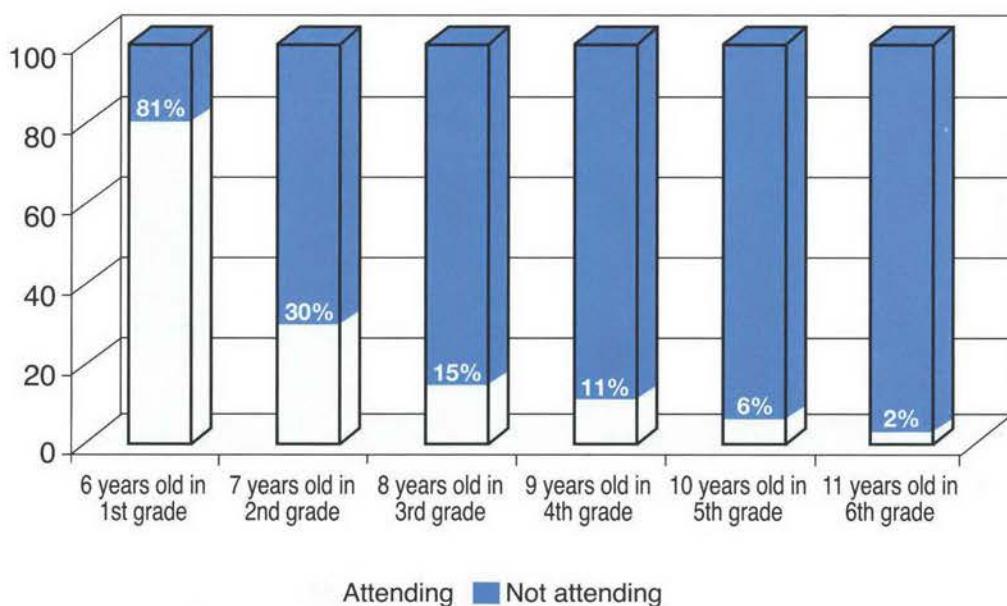
When looking at net attendance rates in the first level, there are serious disparities among areas of residence, regions and households' wealth. On a positive note, there are no disparities between boys and girls, who at national level attend school in equal numbers. This positive finding corroborates the 1996 MICS results, which registered minimal difference in attendance rate between boys and girls (only 4% difference). This does however hide disparities in terms of school completion rates, to the disadvantage of girls. At national level, 79% of boys who enter Grade 1 will eventually reach Grade 5 compared to only 73% of girls. In the East Region, while 70% of boys who enter Grade 1 will eventually reach Grade 5, only 56% of girls will, therefore indicating a higher dropout rate amongst girls.



Graph 21.1: Proportion of children aged 6 to 18 years attending the first six years of basic education by age



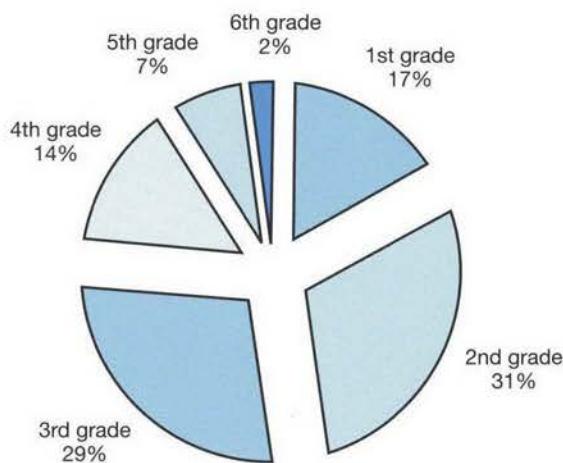
Graph 21.2: Percentage of children attending the first six years of basic education at the recommended age



Seventy-nine percent of 11-year-olds attend school, the highest of any age group in Angola. At this age, children should normally be attending Grade 6. Strikingly however only 2% of 11-year-old children attend the 6th grade. The overwhelming majority of 11-year-old children (91%) are still attending primary education (Grade 1 to 4), therefore occupying the place of younger pupils. This situation creates teaching difficulties as the

same curriculum is taught to pupils of different ages. Adding to those difficulties, one notes that in 2001 the Ministry of Education reported that there were on average 64 pupils per classroom. This severe shortage of classrooms has thus led to the introduction of a system of two or three shifts of classes per day, which significantly reduces the contact time of pupils with their teachers.

Graph 21.3: Grade attended by 11-year-old children

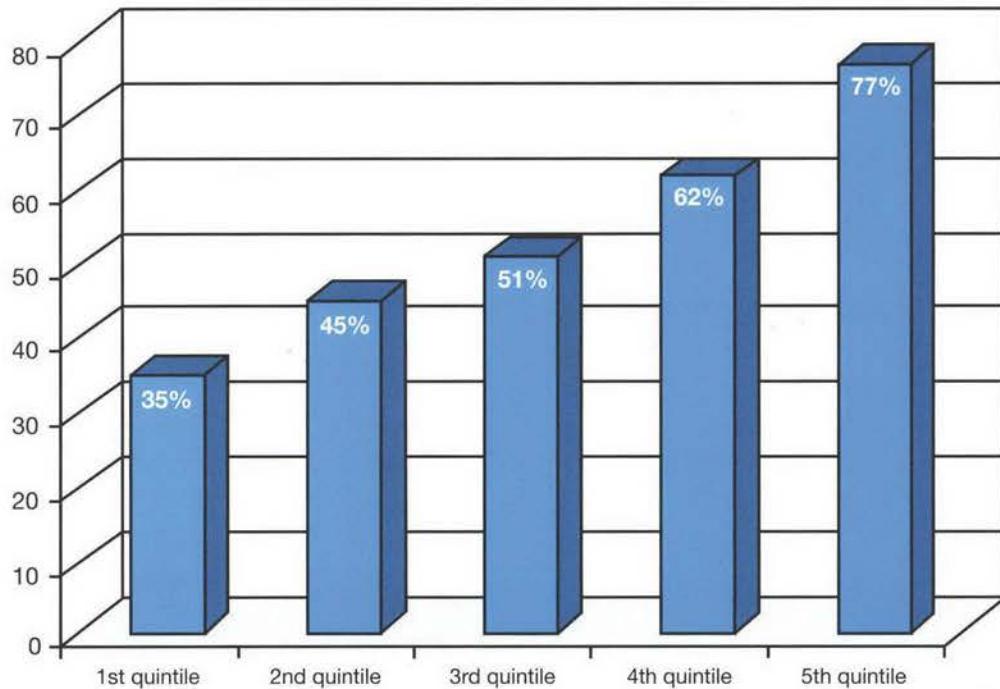


Lack of school personnel and infrastructure, low system productivity, early entry into the labour market, low household incomes, and lack of school material limit the normal progression of children attending basic education. The ability to gain access to education is directly influenced by the level of households' wealth. For example, in primary education, the attendance rate of children from the better off households is double that

of children from the most vulnerable households. In the second level, this rate is 16 times higher, revealing the extent to which the poorest children have been marginalized after just a few years of schooling.

The very low level of attendance recorded among children from the most vulnerable households is directly linked to the early flight of these children to the labour market. For example, child labour is much more prevalent among poorest children than better off children (43% versus 17%). The close correlation between income and school attendance is also linked to the level of birth registration. The lack of documentation indeed deprives many children of enrolling in school especially in the second level of primary education as proof of identity is required for enrolment in schools. Specifically, the MICS shows that while 48% of children from the better off households are registered, only 17% of children from the poorest households have civil documentation. One can also assume that the cost of basic education explains this correlation. For example the shortage of school material implies that pupils' access to school material is dependent on the ability of households to buy that material on the market.

Graph 21.4: Primary school attendance rate according to wealth index quintile





While completion rates of children (i.e. the proportion of children reaching Grade 5) are also associated to households' wealth, with 56% of the poorest children eventually reaching Grade 5 compared to 89% among the better off children, disparities between lower and higher wealth index quintiles in completion rates are less significant than disparities in attendance rates. For example, a poor child is 60% less likely to reach Grade 5 than a child from a better off household, although he is 120% less likely to attend school. The vulnerability of children from better off households with regard to completion rate is probably linked to factors internal to the education system itself, such as the minimal amount of teaching time, the low qualifications of teachers, and the general lack of resources. The extent to which the system is not functioning is also revealed by the fact that even among the better off population, the overwhelming majority of children (84%) are not attending the second level of basic education at the correct age.

The Capital and South Regions show the highest primary education attendance rates (63%) and the East Region the lowest (44%). Attendance rates in the West, North and Centre South Regions are close to the national average. When looking at the proportion of children eventually reaching Grade 5, the same patterns are observed, with the highest percentage found in the Capital and the South Regions (82%) and the lowest in the East (61%). Of interest is the fact that only in the Capital Region is the proportion of children reaching Grade 5 without repeating classes significantly higher than in all other regions, including the South.

Similar patterns are further observed in the second level of basic education, where the Capital Region stands out as the region with the highest attendance (double the national average) and the East as the region with the lowest attendance rate (six times lower than the national average).

Table 21.1: Proportion of children entering Grade 1 who reach Grade 5

	Total	Male	Female	Reach Grade 5 without repetition (%)
Wealth index quintile				
First	56	56	54	37
Second	68	71	64	36
Third	70	77	63	39
Fourth	76	83	70	48
Fifth	89	90	88	55
Sex				
Male	-	-	-	48
Female	-	-	-	43
Region				
Capital	82	88	76	65
North	71	76	62	39
East	61	70	56	39
West	77	81	73	39
South	82	85	65	45
Centre South	75	78	87	46
Area of residence				
Urban	77	82	72	45
Rural	73	71	76	45
Total	76	79	73	46

Table 21.2: Net primary school attendance rate, Angola, 2001

	First level (class 1 to 4)			Second level (class 5 to 6)		
	Total	Male	Female	Total	Male	Female
Wealth index quintile						
First	35	36	34	0	1	0
Second	45	45	44	1	1	2
Third	51	52	60	3	5	1
Fourth	62	60	63	4	4	3
Fifth	77	77	77	16	16	17
Region						
Capital	63	66	60	14	12	17
North	55	52	58	2	2	2
East	44	43	45	1	3	0
West	53	54	52	8	9	6
South	63	62	64	6	8	4
Centre South	56	55	56	5	6	3
Area of residence						
Urban	61	60	61	8	9	7
Rural	44	41	44	1	2	1
Children's age						
6 years	35	35	35	-	-	-
7 years	56	54	57	-	-	-
8 years	66	66	67	-	-	-
9 years	71	72	70	-	-	-
10 years	-	-	-	5	6	4
11 years	-	-	-	8	8	7
Total	56	55	56	6	7	5

Box 2: Public expenditure in the education sector

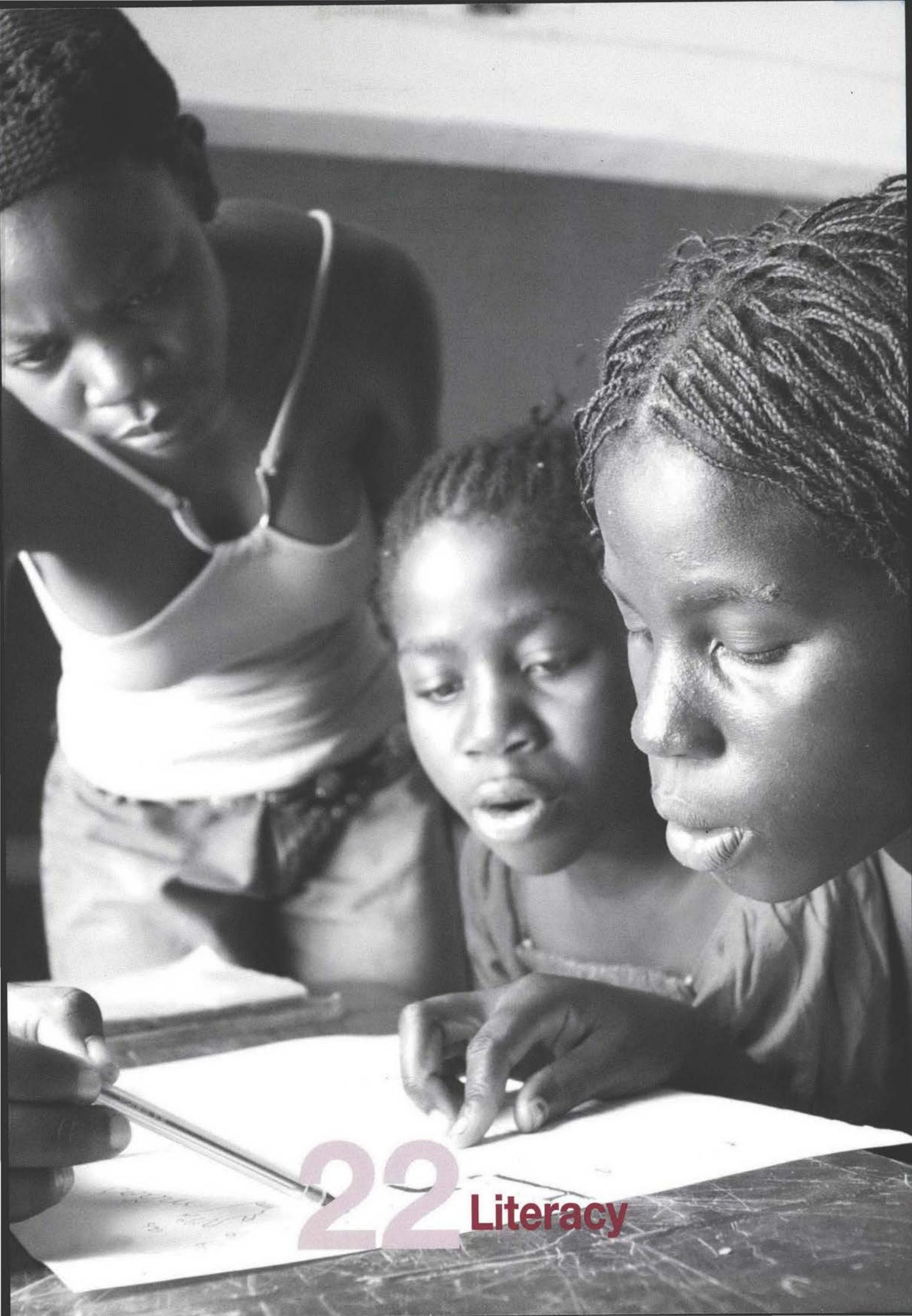
In 2001, State Budget expenditures in the education sector represented just 4.7% of the total budgetary expenditure in Angola. This figure was the lowest of all the countries of the Southern African Development Community (SADC), which for the same period averaged 16.7%.

Percentage of government expenditure dedicated to the education sector in SADC member countries, 1997-2001¹

Countries	Percent of the education sector in governmental expenditure
Angola	4.7
Zambia	9.6
Tanzania	13.6
South Africa	22.1
Zimbabwe	23
Botswana	23.1
Namibia	24.3
SADC Average	16.7

Together with the low level of expenditure in the education sector, the nature of this expenditure indicates a low level of investment. Between 1997 and 2001, 60% of expenditure in the sector was on wages, while only 14% was spent on goods and services. The total investment in the sector was limited to 6% of total educational expenditure. It is also important to stress that in the period 1997-2001, only 39% of expenditure was on basic education.

¹ Ministry of Finance and United Nations System in Angola 2002, *O Financiamento Público dos Sectores Sociais em Angola*.



22 Literacy

Indicators

Total literacy rate

Proportion of the population aged 15 years and older that is literate – 67%¹

Female literacy rate

Proportion of the women aged 15 years and older that is literate – 54%

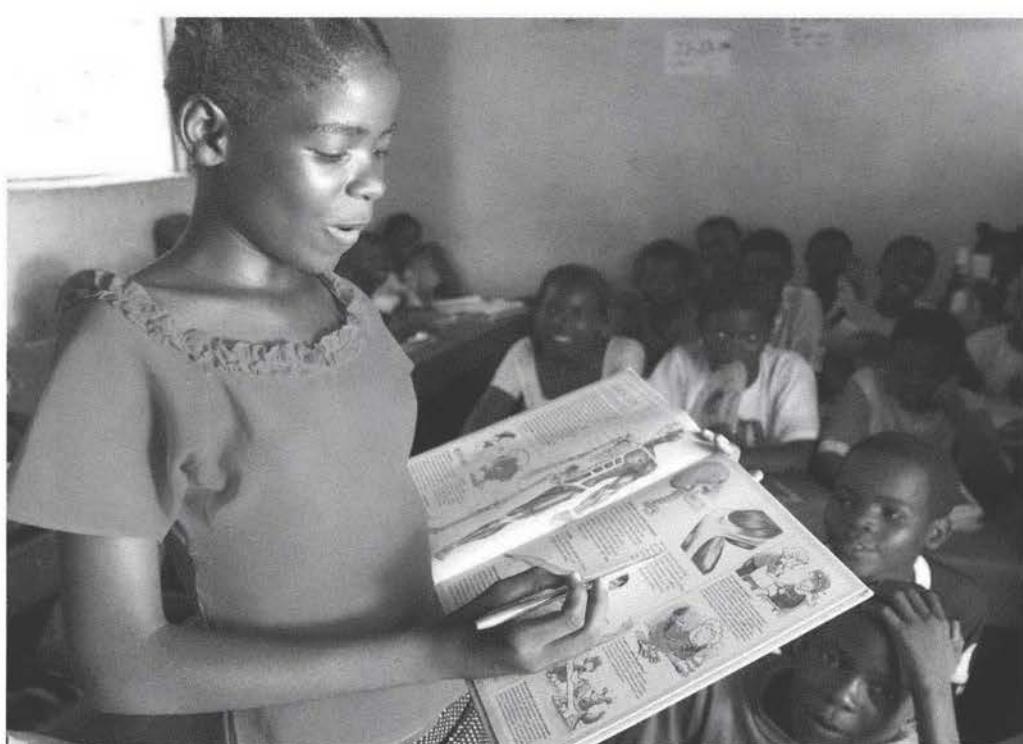
Illiteracy is directly correlated with the poor living conditions of the population. It is normally associated with low life expectancy, high rates of child mortality, unemployment and consequently with an income insufficient to guarantee the fundamental needs of households. The results of the MICS have shown that children whose mothers are educated are consistently less vulnerable than children whose mothers are illiterate.

The survey indicates that a third of the population is illiterate, with very high disparities between men and women. Only 54% of women are literate compared to 82% of men, which means that men are on average 50% more likely to know how to read and write. The gender gap is further accentuated in older age groups, with men

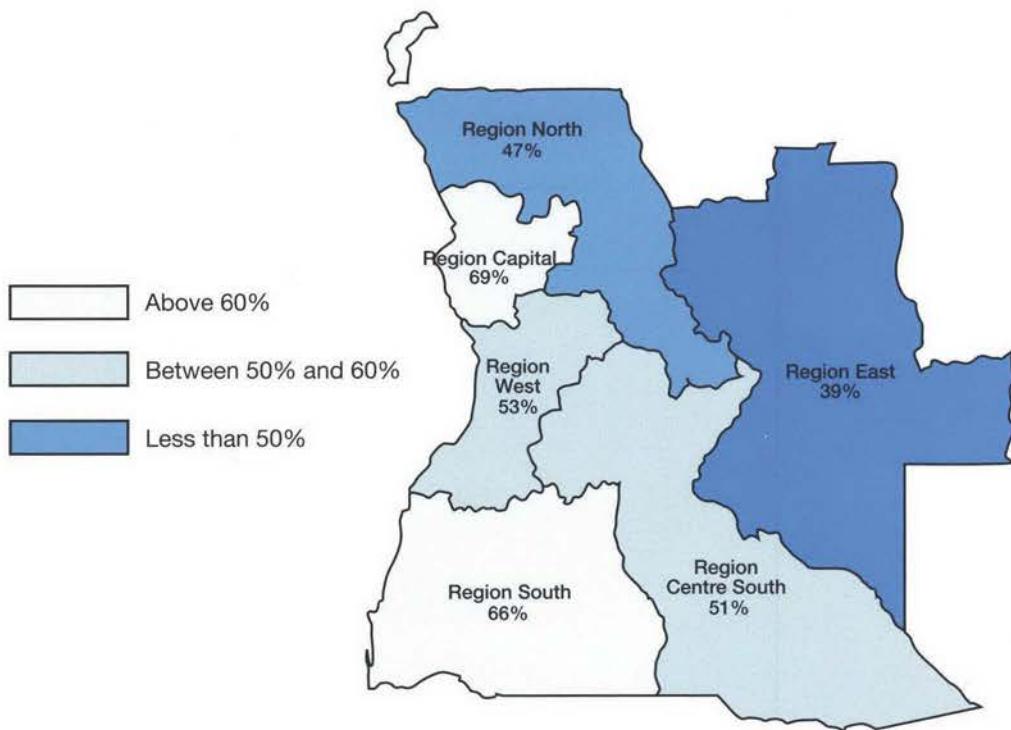
aged 65 years and above being 150% more likely to be literate than women aged 65 years and above.

The concentration of educational resources in urban areas is reflected in a higher literacy rate for both male and female urban populations. Only half of the rural population report knowing how to read and write, a proportion 48% lower than that reported for urban areas, where 74% of the population is literate. Significantly the gender gap is two and a half times more accentuated in rural areas with a third of rural women reported to know how to read and write against 69% of men.

The MICS reveals important regional variations, which follow those generally observed for the primary education indicators with the higher values being registered for the Capital Region (79%) and the lowest for the East Region (56%). While the South Region registers literacy rates above the national average (74%), the West, Centre South and North Regions register values closer to the national average (67%, 65% and 62% respectively). In terms of women literacy, the lowest rates are found in the East and North Regions (39% and 47% respectively), while the highest rates are found in the Capital and South Regions (69% and 66% respectively).



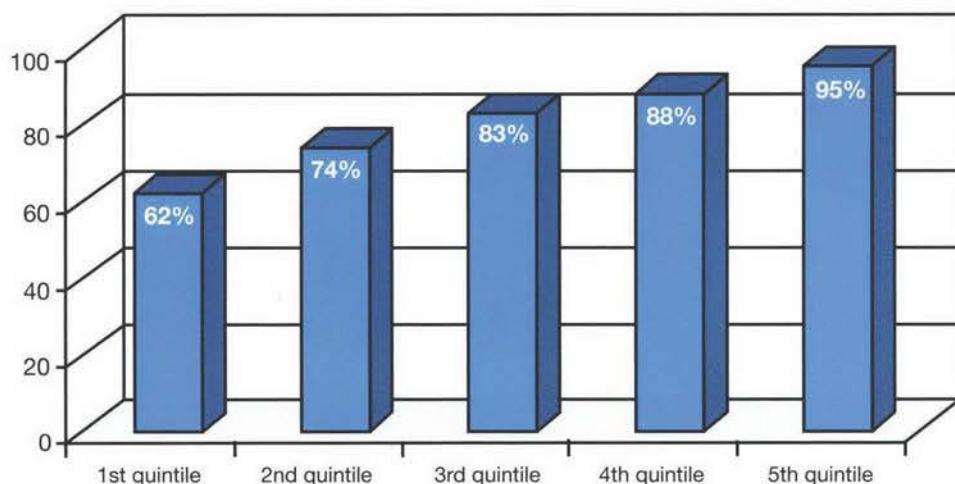
¹ The literate population includes those who are reported in the household to read and write easily or with difficulty.

Map 22.1: Female literacy rate

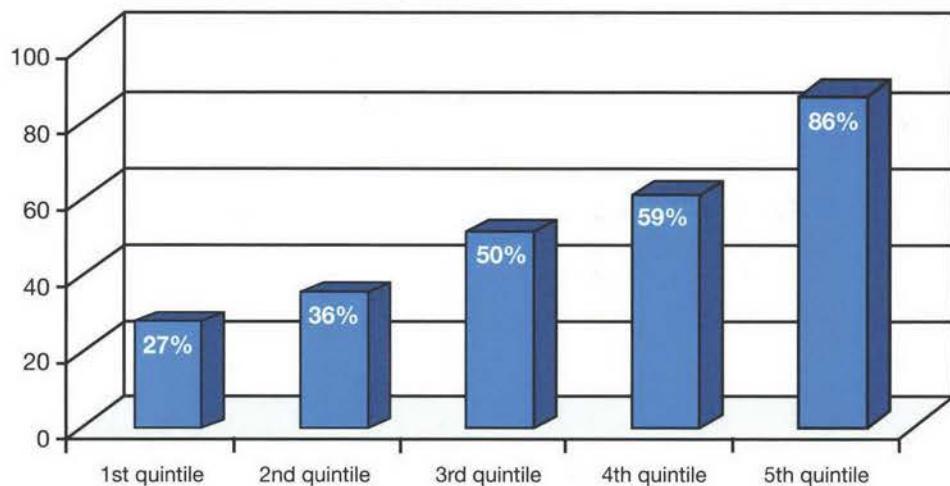
The correlation between access to education and the level of households' socio-economic well-being observed for pre-school and primary education indicators is again confirmed here with the proportion of literate Angolans increasing progressively with levels of well-being.

While only 10% of better off Angolans do not know how to read and write, among the poorest the illiteracy rate approaches 60%. The effect of poverty on women's ability to learn how to read and write is particularly striking with the poorest women being three

times more likely to be illiterate than the better off women. While the same tendency is observed with male literacy rates, the effect of poverty is less intense with the poorest men being one and a half times less likely to be literate than those belonging to the highest socio-economic quintile. The effects of poverty on the gender gap seem to indicate that households place a greater value on male education. When resources are insufficient to provide education to all household members it would seem that girls tend to be the first to be pulled out of school.

Graph 22.1: Male literacy rate according to wealth index quintile

Graph 22.2: Female literacy rate according to wealth index quintile

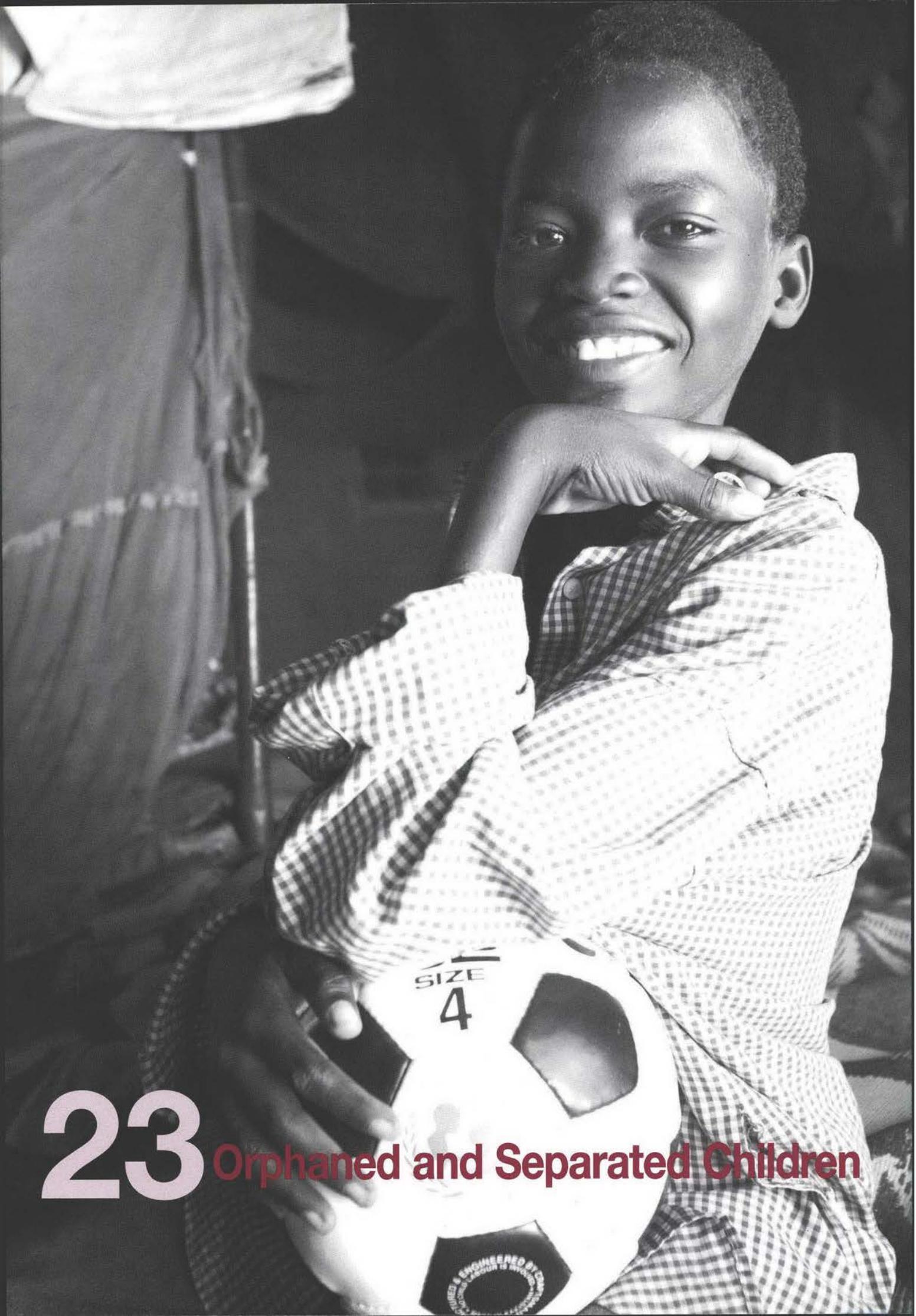


In spite of the high illiteracy rates, the MICS reveals a positive trend whereby there is a tendency for a greater proportion of younger Angolans to know how to read and write. While only a third of Angolans over 65 years of age are literate, over two-thirds of young Angolans 15 to 24 years of age are literate. Encouragingly there is also a reduction of the gender gap among younger Angolans

revealing progressively more equitable access to education. Among Angolans aged between 15 and 24 years, women are 32% less likely than men to know how to read and write. Although still extremely significant, this disparity constitutes a marked improvement in relation to that observed among the oldest Angolans, with women being 150% less likely to be literate than men.

Table 22.1: Proportion of the population aged 15 years and older that is literate, Angola, 2001

	(%)		
	Male	Female	Total
Wealth index quintile			
First	62	27	42
Second	74	36	53
Third	83	50	65
Fourth	88	59	73
Fifth	95	86	90
Region			
Capital	90	69	79
North	81	47	62
East	74	39	56
West	85	53	67
South	82	66	74
Centre South	82	51	65
Area of residence			
Urban	88	63	74
Rural	69	34	50
Age group			
15 to 24 years	83	63	71
25 to 34 years	88	62	73
35 to 44 years	89	53	71
45 to 54 years	78	30	54
55 to 64 years	64	20	43
65 years and older	47	19	33
Total	82	54	67



23 Orphaned and Separated Children



Indicators

Children's living arrangements

Proportion of children 0 to 14 years not living with a biological parent – 10%

Orphans in households

Number of children 0 to 14 years who are orphans of one or both biological parents – 11%

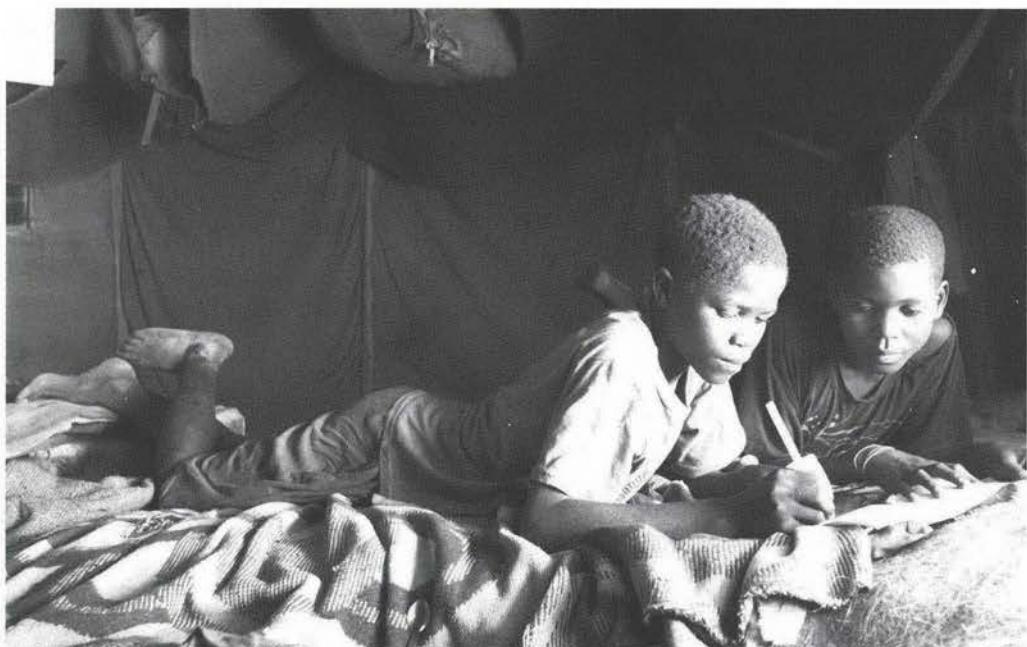
In 2001, sub-Saharan Africa had the highest percentage of orphaned children of any region in the world with 12% of children having lost at least one parent. This is almost double the proportion of orphans in Asia (7%), and more than double that found in Latin America¹. Such high numbers of orphans in sub-Saharan Africa is attributable to HIV/AIDS. The MICS indicates that the situation in Angola falls within the average values for sub-Saharan Africa with 11% of Angolan children being orphans of one or both parents. Of these 1.3% have lost both their mother and their father. In more concrete terms this means that in 2001, 730,000 Angolan children had lost at least one of their parents and 88,000 were orphaned of both². The survey seems to indicate that the high rate of orphans is also related to the impact of the war, with orphaned children being three

times more likely to have lost their father than their mother. Although the MICS does not verify the cause of parents' death, estimates for this period project a growing impact of HIV and AIDS in the number of orphans in sub-Saharan Africa³.

The highest proportion of children who have lost one or both parents is found in the South Region (14%) and the lowest in the Capital and East Regions (9%). In addition, the proportion of orphans is slightly higher in urban areas (11%) than in rural areas (9%). The percentage of orphaned children decreases with age. The number of orphans is significantly higher among children aged 10 to 14 years (17%), and this group also comprises the majority of children placed with foster families. While 12% of children aged between 5 and 9 have lost at least one parent, that figure falls well below the national average for children aged between 0 and 4 (5%).

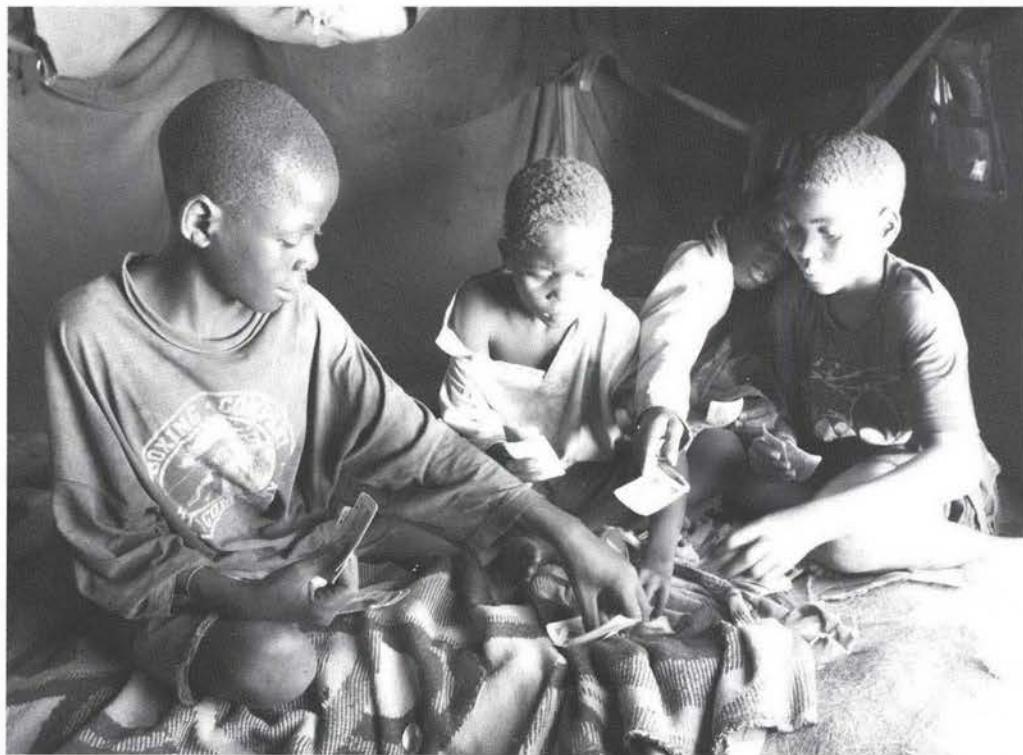
The survey indicates that there is no correlation between the proportion of orphans observed and socio-economic quintile, with no variation in the percentage of orphans among the poorest and the better off households.

Regarding children not living with their biological parents, the survey indicates that



^{1,2} UNAIDS, UNICEF and USAID, 2002, Children on the Brink 2002 – A joint report on orphan estimates and program strategies.

² Estimates based on a population of 13.8 million people in 2001.



about a third (32%) of all children aged 0 to 14 years do not live with both parents. Children who do not live with both parents are six times more likely to live with their mother only, which is compatible with the significant percentage of female headed households found by the MICS (27%). The percentage of children not living with their biological family does not vary between rural and urban areas. Small variations are also recorded among regions, between 8% in the Capital Region and 11% in the West and Centre South Regions. Interestingly children in the last age group (10 to 14) are overall 27% less likely to live with both their parents than children in the youngest category (0 to 4).

The survey further indicates that 10% of children live with neither parent. Among those, more than half (6%) are children who live with foster families despite the fact that both of their parents are alive. This finding might be explained by poverty, with households not having the financial capacity to care for all children and also by the high level of separated rather than orphaned children due to the war. In fact, only 14% of all children in foster care have lost both their parents. Older children (10 to 14 years) are 58% more likely to live with foster families in

spite of the fact that both their parents are still alive, than the youngest children (0 to 4 years).

Although the MICS does not assess the relative weight of foster care in relation to the care of children in institutions, figures on the overall number of children being cared for in orphanages provided by MINARS confirms the weight of foster care in households. With 10% of children 0 to 14 years not living with either biological parent, there were therefore in 2001 about 670,000 children not living with either biological parent⁴. In comparison, at the beginning of 2003, MINARS estimated that there were only 2,246 Angolan children in institutional care. Although further research is required to assess the real weight of institutions such as orphanages, the survey shows that the overwhelming majority of orphans and separated children (i.e. children who do not live with either parent in spite of the fact that both are alive) are being cared for in households – through extended family networks or networks of affinity with the children in the community. In this sense, the MICS indicates good traditional practices of foster care and protection of orphaned and separated children by Angolan families.

⁴ Children below 15 years of age represent 49% of the total population. In 2001, the total population was estimated at 13.8 million by National Institute of Statistics.

Box 3: Orphans and the impact of HIV/AIDS

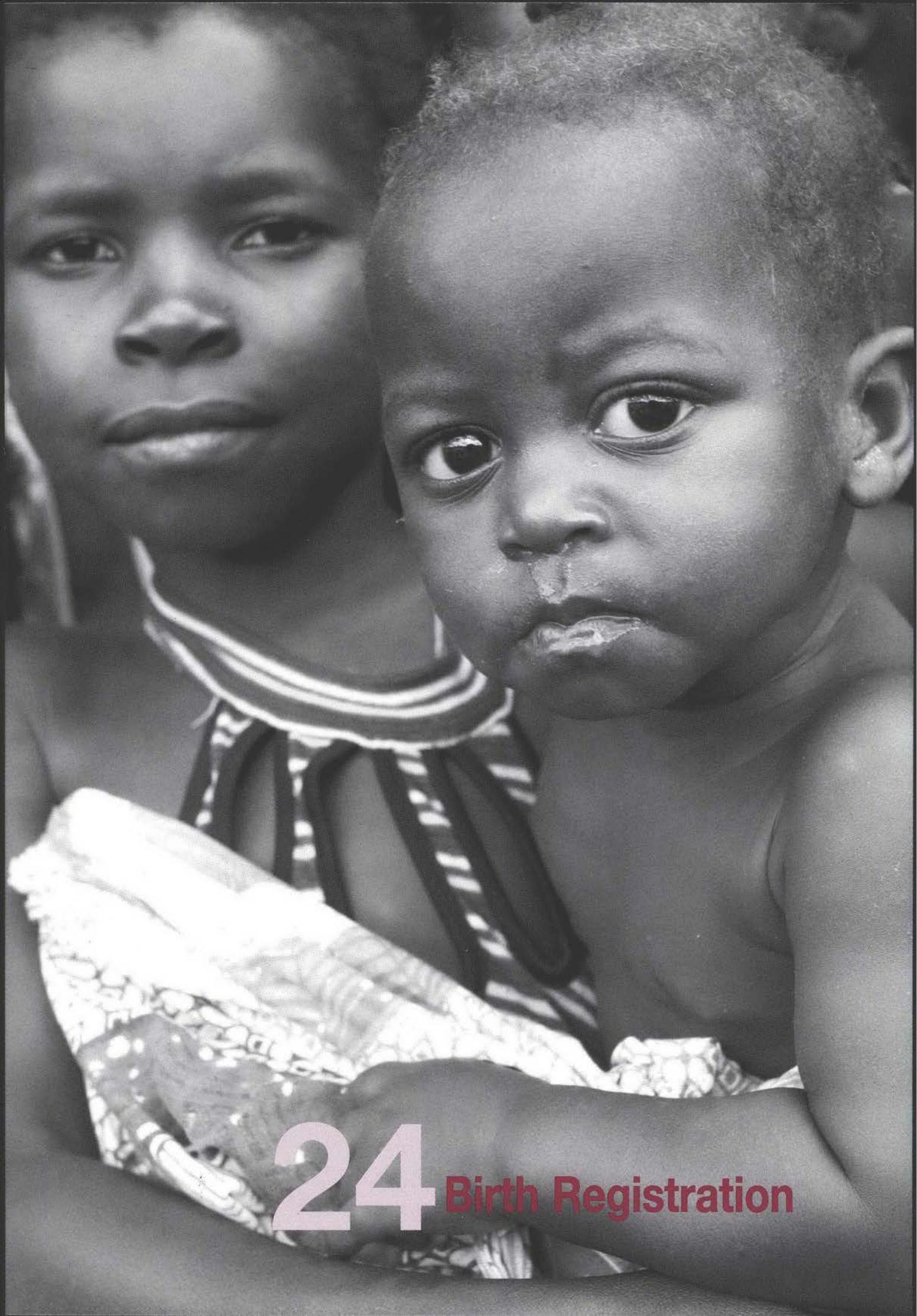
HIV/AIDS has created an orphan crisis in sub-Saharan Africa. One of the most troubling consequences of the epidemic is the number of children it has orphaned or seriously impacted. In 2001, more than 13 million children worldwide had lost one or both parents to AIDS, the overwhelming majority of whom were in sub-Saharan Africa⁵. Of the 34 million orphans in sub-Saharan Africa in 2001, 11 million were due to HIV/AIDS. Projections for the year 2010 are devastating with 42 million orphans in sub-Saharan Africa, of whom 20 million will have lost one or both parents to AIDS. In Zambia and Namibia, 75% of all orphans in 2010 will be due to AIDS⁶. This unprecedented orphan crisis will require radically scaled-up national, regional and community responses for at least two decades, especially in sub-Saharan Africa where children have been hardest hit.

The number of orphans due to AIDS will continue to rise for at least the next decade. In general, it takes ten years between HIV infection and death from AIDS. So today's prevalence rate will largely determine the pattern of orphaning for the next decade. Because of the ten-year lag between infection and death and the lack of accurate information about sero-prevalence in Angola, the full impact of AIDS on the estimated number of orphans has yet to emerge. In 2001, UNAIDS estimated that in Angola 15% of all orphans were due to AIDS, with this percentage projected to increase to 24% by 2005 and 34% by 2010. In other words in 2005 there will be in Angola 197,000 orphans due to AIDS and 331,000 by 2010.

By increasing the proportion of orphaned children over the next decade HIV is estimated to have a further detrimental effect on the number of children attending school and to increase the proportion of children who work. Analysis of the effects of orphanage in schooling and labour in 20 African countries indeed reveals that children who have lost one or two parents are more likely to abandon school and enter the labour market prematurely.

The impact of HIV/AIDS is not, however, limited to the increase in the proportion of orphans. The nature of the disease and of the misconceptions and stigma surrounding it has a more insidious effect. Firstly, HIV/AIDS is increasing the proportion of children who are orphans of both parents. It is, therefore, placing huge burdens on the extended family system – the backbone of African societies – while also ravaging entire communities. Secondly, while in Angola, as is the norm in sub-Saharan Africa, there are good practices of foster care due to the weight of the extended family and community networks, evidence from other African countries suggests that it is harder to find substitute families for children orphaned by AIDS than children orphaned by other causes.

^{5,6} UNAIDS, UNICEF and USAID 2002, Children on the Brink 2002 — A joint report on orphan estimates and program strategies.



24 Birth Registration

Indicator

Birth registration

Number of children 0 to 59 months whose births are reported registered – 29%

Guaranteeing every child's right to birth registration is the first step towards ensuring their right to adequate health care, education, social support and citizenship. The inability to uphold this "first right" of children is particularly worrying in sub-Saharan Africa where on average 71% of children did not have their births registered by the time they reached five years of age in 2001. The MICS confirms that the situation in Angola is typical of sub-Saharan Africa. While the Convention on the Rights of the Child and the Angolan legislation guarantee the right of every child to a name and a nationality the survey indicates that the vast

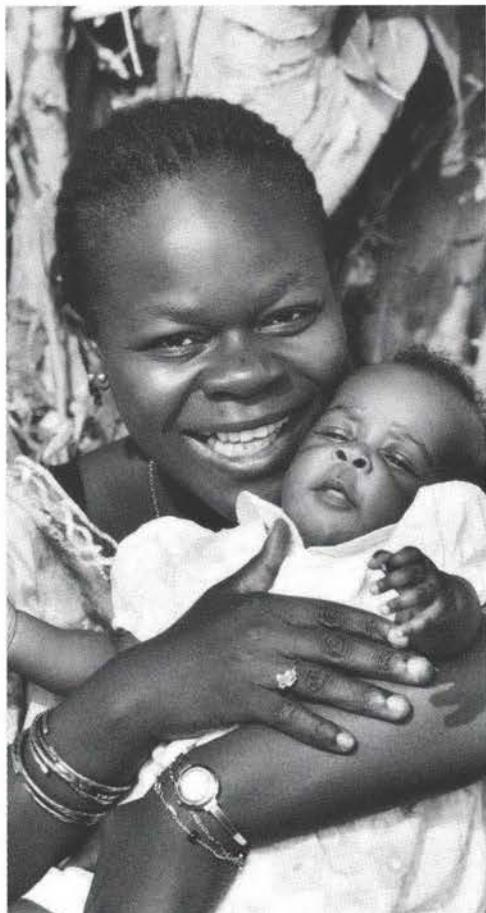
majority of children under five do not have a legal identity with only 29% of births registered in 2001.

Among those caretakers who register children, there is a tendency for late registration. Children are five times more likely to be registered between the ages of four and five than in their first six months of life. This finding might be linked to the fact that caretakers postpone registration until proof of legal identity is required for children to access social services. Given the very low rates of birth registration, primary schools allow children to start without presenting the birth registration certificate. Parents usually seek registration at a later stage, when their children complete Grades 3 to 4, after which positive proof of identification is necessary for access to the higher levels of basic education.

An analysis of the reasons indicated by caretakers for not registering children reveals that excessive cost is the most significant (34%) followed by the distance where registration services are located (16%). Less significant reasons are the lack of knowledge that registration should be carried out (6%), that services were available (5%), and refusal to pay the late registration fine (4%).

The economic situation of caretakers has direct influence on their ability to register their children: a child from the highest socio-economic quintile is nearly three times more likely to be registered than one whose household level of income is amongst the lowest¹.

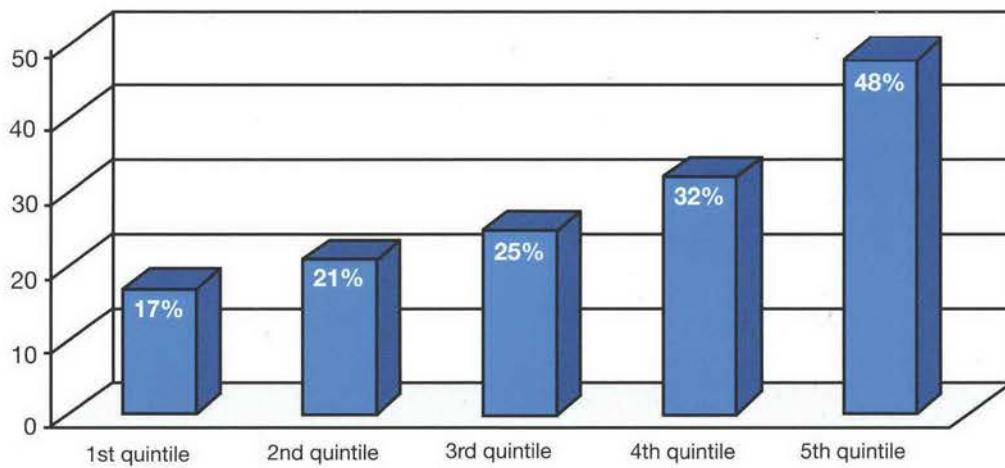
There are important variations by regions, between 35% in the West and South Regions and 19% in the North Region. While the East Region shows a value slightly above average, the Centre South and Capital Regions are the second and third regions where fewer children were registered in 2001. The low rate of registration in the Capital Region is surprising in view of the fact that greater levels of services and resources are centralised in Luanda and neighbouring areas.



¹ In addition to the official registration fee, caretakers will have to add the cost of transportation and potentially hidden costs of registration. Hidden and associated costs might partly explain the significant percentage of wealthiest households (21%) who indicated the high cost of registration as the main obstacle faced.



Graph 24.1: Percentage of children registered by the age of five by wealth index quintile



The impact of cost varies greatly across regions and is three times higher in the North than in the West and South Regions. Cost however shows little sensitivity to the age of the children to be registered. Mothers with a higher level of education complain less about the cost of registration than illiterate women. While this pattern can be partly explained by the fact that more educated women are in fact socio-economically better off women, it is likely that this is also associated with a better awareness of the advantages of birth registration among more educated women. It is, however, important to mention that nearly a quarter of mothers who attended secondary or higher education indicated that the cost of registration was too high. Even among this category excessive cost remains three times more significant than the next reason quoted for not registering one's children. It is possible that the

estimation of the cost of birth registration is not only associated with fees to be paid but also to a subjective valuation of registration.

The need to travel a significant distance to have births registered was the second biggest reason indicated by caretakers for not registering children in all but the South Region. In the South distance is indeed the primary reason for not registering children, indicating a more pronounced lack of birth registration services there. The cost associated with transport is significant as the distance from registration sites was indicated as a cause for not registering children three times more frequently for poorer households than for those in the highest socio-economic quintile.

The impact of the inaccessibility of registration services is confirmed by the significantly lower number of children





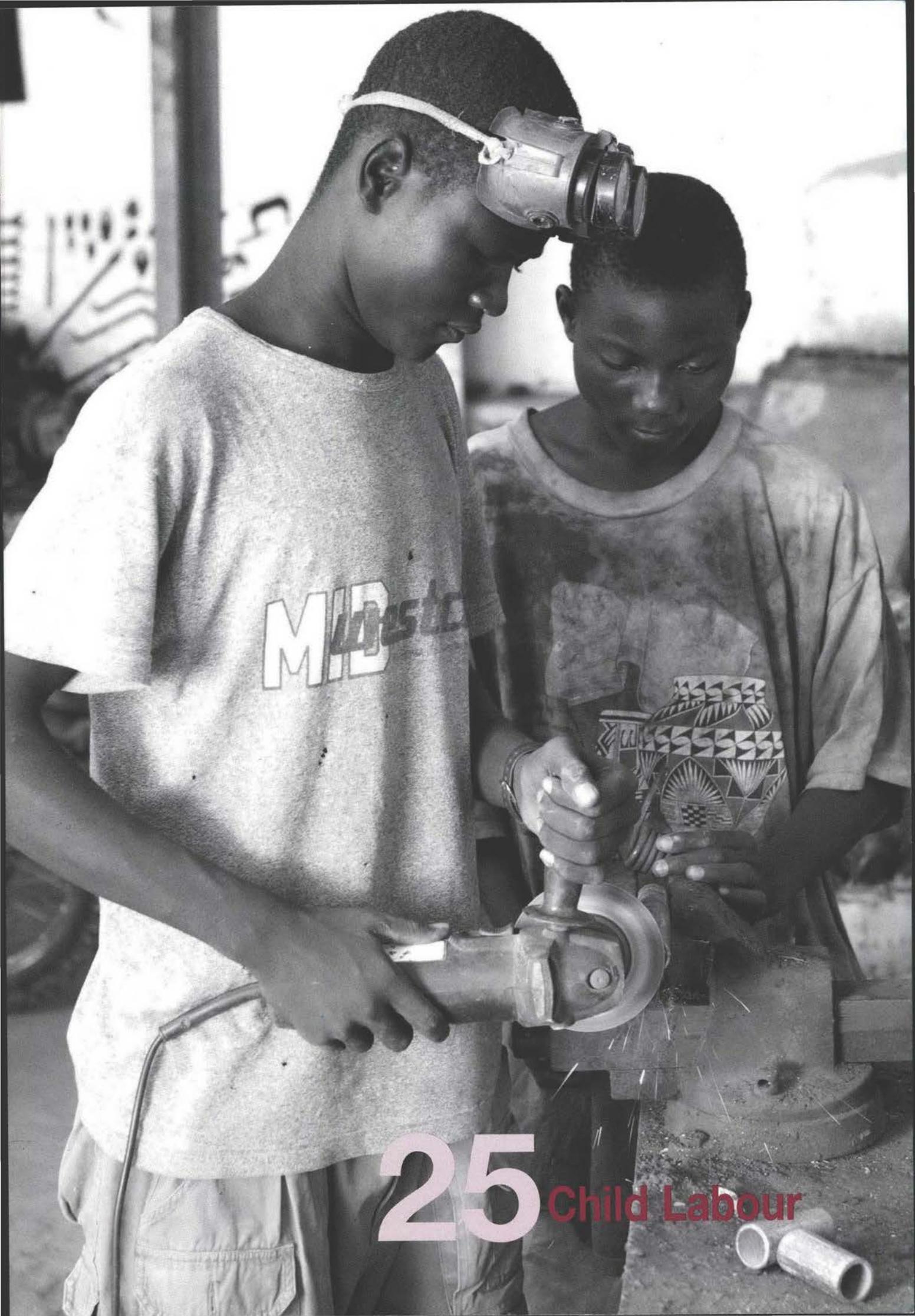
registered in rural areas. A child born in an urban setting is in fact 75% more likely to be registered before the age of five than a child in rural areas. Significantly, although there are no noteworthy gender variations on access to birth registration, with boys being 5% more

likely to be registered than girls, caretakers complained more about the distance of registration sites in the case of girls. This finding reinforces the need for making the service available as close as possible to communities.

Box 4: 2001-2002 Free Birth Registration Campaign

The Government of Angola is tackling the main obstacles to birth registration through a campaign type approach to registration that started in 2001. The campaign began addressing the backlog of unregistered children by promoting free birth registration and raising awareness of its benefits. By the end of 2002, approximately 1.5 million children aged 0 to 17 years were registered. This success was due to the broadened range of entities entitled to carry out registrations, including churches and NGOs, and the simplified administrative procedures for registration. This approach contributed to an expansion and improvement in quality of the birth registration service with benefits beyond the immediate implementation of the campaign.

The massive adherence of families to the National Free Birth Registration Campaign is a clear example of how the main measures adopted (i.e. free registration, easy access by caretakers and simple registration procedures) would be instrumental in boosting the rate of registration if adopted on a permanent basis. The new birth registration policy adopted by the Angolan Government in 2001 constitutes a first step in entrenching these progressive measures and making the access to this right freely and widely exercised by children.



25 Child Labour

Indicator

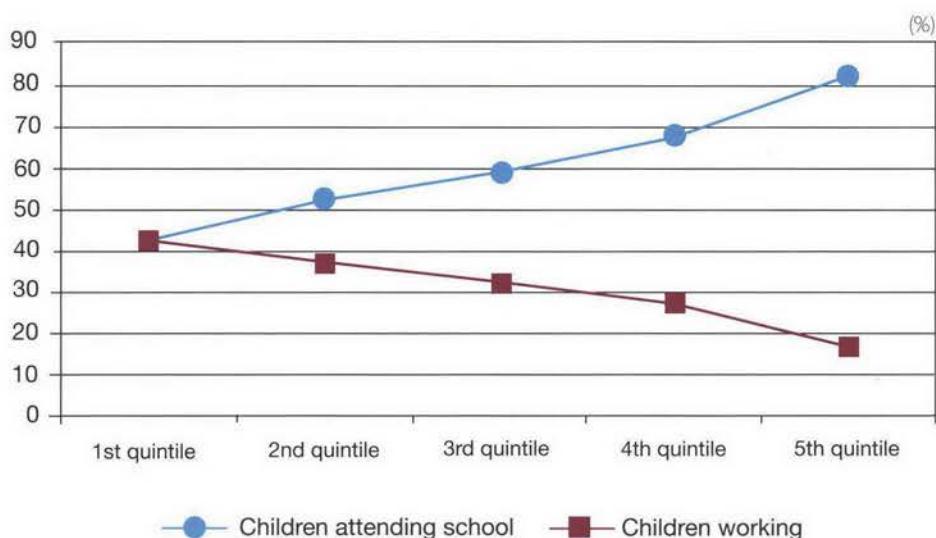
Child labour

Number of children aged 5 to 14 years who are currently working¹ – 30%

At the beginning of the millennium, sub-Saharan African countries had the highest proportion of children working, with 39% of children aged between 5 and 14 years engaged in some form of labour. Although less pronounced, the MICS indicates a similar situation in Angola, with 30% of Angolan children aged 5 to 14

years involved in some sort of paid or unpaid work, and girls working slightly more than boys (31% versus 29%). The survey also establishes a clear correlation between vulnerability, school attendance and the beginning of a child's working life. Children from the socio-economically more vulnerable households attend school the least and work the most, while children from the wealthiest households attend school the most and work the least. Hindering education, child labour also prevents the acquisition of crucial skills and prevents those children from entering the labour market as adults in a more advantageous position.

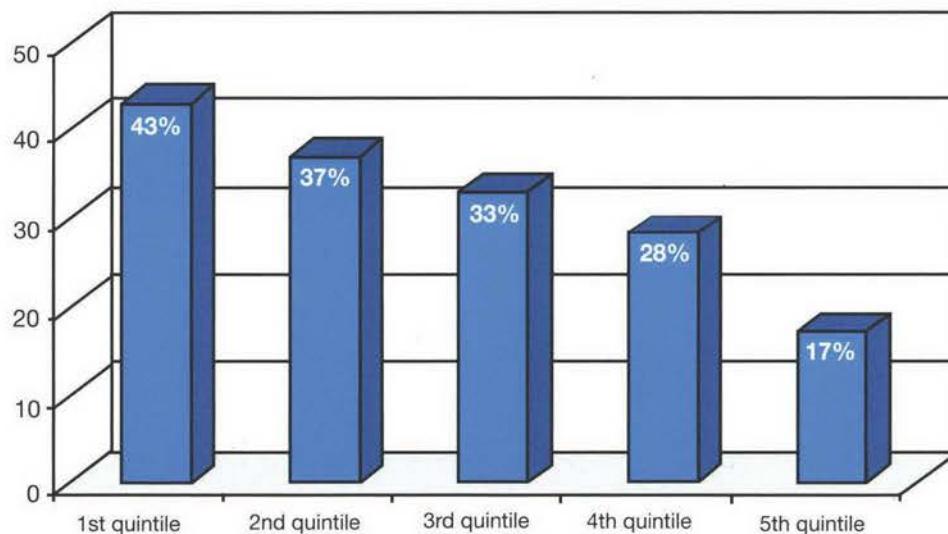
Graph 25.1: Comparison between school attendance rate and child labour by wealth index quintile



Children aged between 10 and 14 are on average twice as likely to work as those aged 5 to 9. Older children are also more likely to do remunerated work. The percentage of children who work for a fee is four times higher for the oldest category of children. This pattern is closely linked to school attendance rates with a significant drop in attendance rates for the second level of primary education (6% attendance in the second level against 56% in the first level of basic education).

Child labour is much more prevalent among children of the more vulnerable households. Almost half of children from the lowest socio-economic quintile work, which is 2.5 times more than children from better off households. The rate of children working remains significant overall, even among the highest socio-economic quintile, with almost one out of every five better off children doing work of some sort.

¹ Children were counted as working if, during the week before the survey, they were engaged in paid or unpaid work for someone who is not a member of the household, did household chores for more than four hours a day, or worked for a family farm or business.

Graph 25.2: Percentage of children working according to wealth index quintile

The socio-economic status of households also impacts on the type of work carried out by children. Among better off households children are three times less likely to perform remunerated tasks and 2.5 times less likely to work on a family farm or business in comparison with the national average. Significantly the percentage of children from better off households doing domestic work contradicts the general trend whereby the lowest percentage of working children is found among the first socio-economic quintile. Children in better off households are the third largest group, performing domestic tasks more than four hours a day, and are also as likely as the poorest children to receive no remuneration for their work. The patterns of foster care analysed regarding the situation of orphans might partly explain this trend. In fact the greatest percentage of children not living with their biological parents but whose parents are both living is found among the better off households. Fosterage for economic purposes or as a result of separation might explain the presence in wealthy households of children shouldering a higher burden of domestic chores.

The percentage of children who work is considerably higher in rural areas. Children are 68% more likely to work away from the cities. This pattern, coupled with the fact that the majority of children who work tend to do so in family farms or businesses,

seems to indicate that the majority of working children are involved in agricultural work in small scale productions. Work for one's family is the most common form of child labour in Angola, occupying 20% of children, with no differences between boys and girls. Worryingly, children begin working for their families at a very early age with 13% of children aged 5 to 9 already working for their families. Finally, working conditions for children also seem to be more disadvantageous in rural areas where they have 17% more chance of not being remunerated for their work.

There are very high variations by region. The regional distribution of child labour varies between 21% in the Capital Region and 39% in the North Region. Significantly it is in the South where children undertake the highest percentage of work for third parties as well as non-remunerated work.

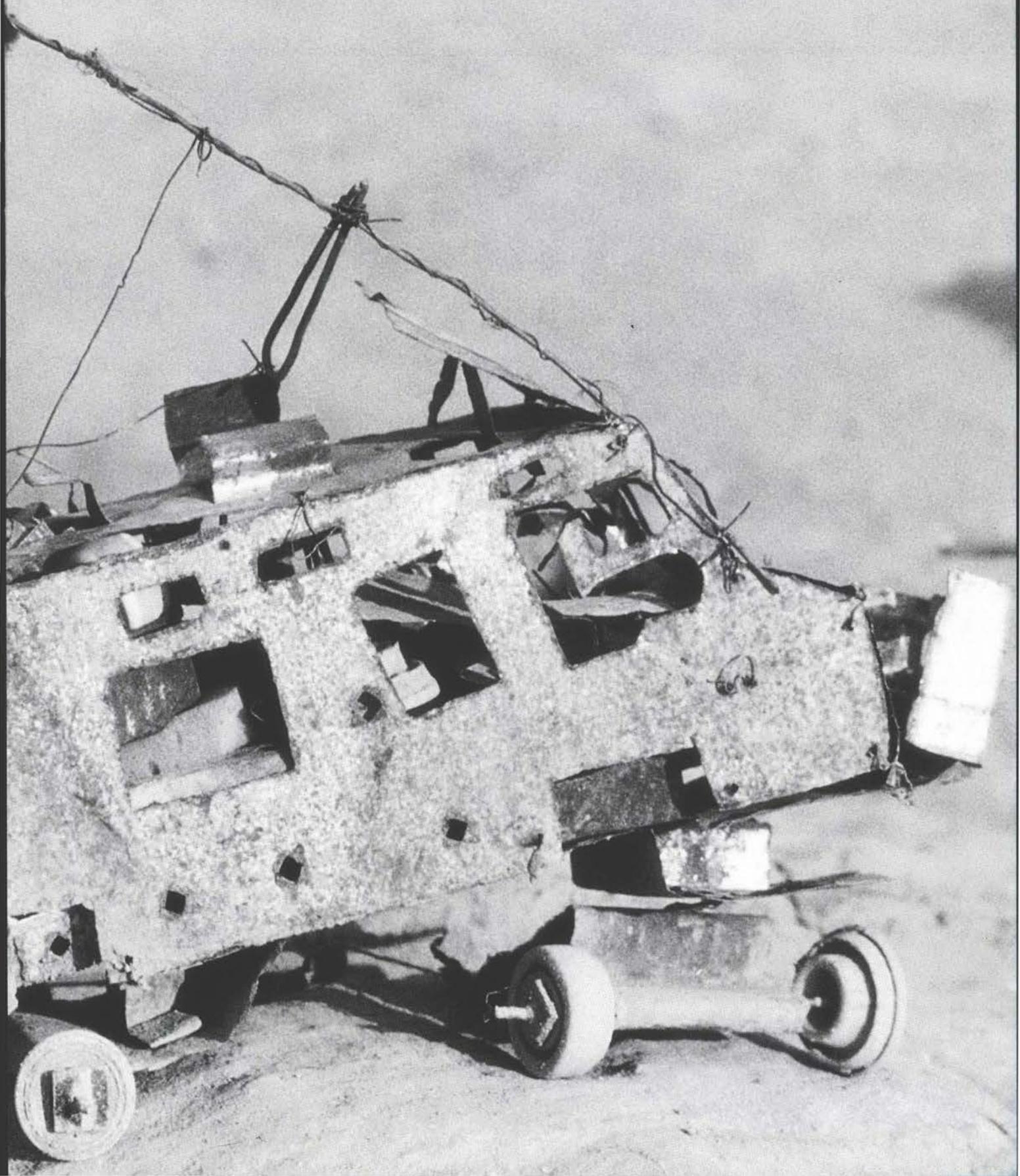
"Domestic work" is defined as cooking, shopping, cleaning, washing clothes, fetching water and caring for children. The vast majority of children (70%) are involved in some sort of domestic work for less than four hours a day, and girls are more likely than boys, not only to perform domestic tasks, but also to be domestic workers. Girls are also more vulnerable in the labour market, being 17% more likely not be paid for their work. Further, girls work slightly more than boys, which will impact negatively on their chances of attending school.

Table 25.1: Percentage of children aged 5 to 14 years who are currently working², Angola, 2001

	Paid work	Unpaid work	Domestic work		Family work (business or farm)	Total working
			Less than 4 hours per day	4 or more hours per day		
Wealth index quintile						
First	3	5	68	10	32	43
Second	4	7	69	7	27	37
Third	4	7	71	5	22	33
Fourth	2	6	72	4	20	28
Fifth	1	5	70	6	8	17
Sex						
Male	3	6	68	5	20	29
Female	2	7	73	7	20	31
Region						
Capital	1	4	66	4	15	21
North	2	10	75	5	30	39
East	1	3	60	9	14	24
West	1	6	73	6	23	31
South	8	12	73	4	19	35
Centre South	2	3	75	7	21	29
Area of residence						
Urban	3	6	70	6	15	25
Rural	2	7	72	7	34	42
Age group						
5 to 9 years	1	5	61	3	13	20
10 to 14 years	4	8	81	9	28	41
Total	3	6	70	6	20	30

² Children who have done any paid or unpaid work for someone who is not a member of the household or who did more than four hours of housekeeping chores in the household or who did other family work are considered to be currently working.

Methodology



Adetailed methodology and survey questionnaire were published by the National Institute of Statistics (INE) in its November 2002 statistical publication of the final MICS2 results. These can also be found on the Child Info web site¹. The note below outlines the main methodological aspects of the survey.

Data collection at field level was conducted during a six-month period, from April to October 2001. Data was collected in three distinct phases. Phase I took place from April to May 2001, Phase II from June to July 2001, and Phase III throughout August, September and October 2001.

Table i: Sample size: number of clusters and households selected

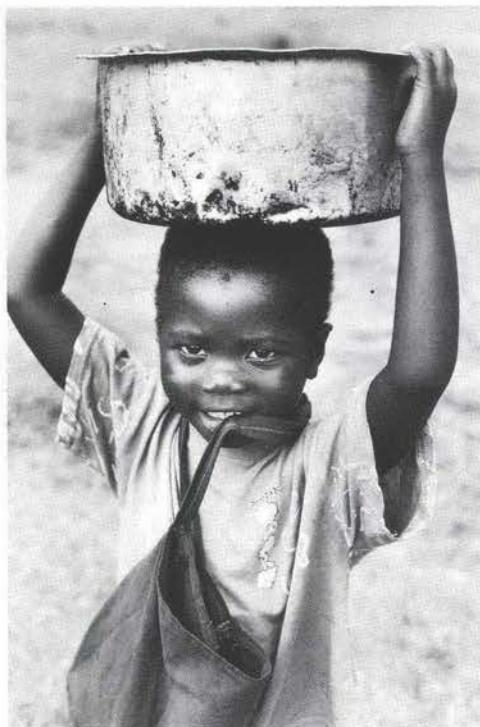
Regions	Provinces	Data collection phase	Number of clusters selected			Number of households selected		
			Area of residence			Area of residence		
			Urban	Rural	Total	Urban	Rural	Total
Capital	Luanda	I	21	12	33	420	240	660
	Bengo	II	3	3	6	60	60	120
	Kwanza Norte	III	6	3	9	120	60	180
	Cabinda	I	3	3	6	60	60	120
North	Malanje	II	12	6	18	240	120	360
	Uige	II	18	12	30	360	240	600
	Zaire	III	3	3	6	60	60	120
East	Moxico	III	12	6	18	240	120	360
	Lunda Sul	III	12	9	21	240	180	420
	Lunda Norte	I	15	9	24	300	180	480
West	Kwanza Sul	II	12	9	21	240	180	420
	Benguela	I	21	12	33	420	240	660
South	Huila	I	21	12	33	420	240	660
	Cunene	I	6	6	12	120	120	240
	Namibe	I	6	3	9	120	60	180
Centre	Bié	III	12	6	18	240	120	360
South	Huambo	II	18	12	30	360	240	600
	Kuando Kubango	III	3	3	6	60	60	120
Total			204	129	333	4,080	2,580	6,660

¹ <http://www.childinfo.org>.

A total of 333 clusters, comprising 20 households each, were selected in all 18 provinces of the country. At national level, this corresponds to 6,660 households. In urban areas, 204 clusters (or 4,080 households) and in rural areas 129 clusters (or 2,580 households) were selected.

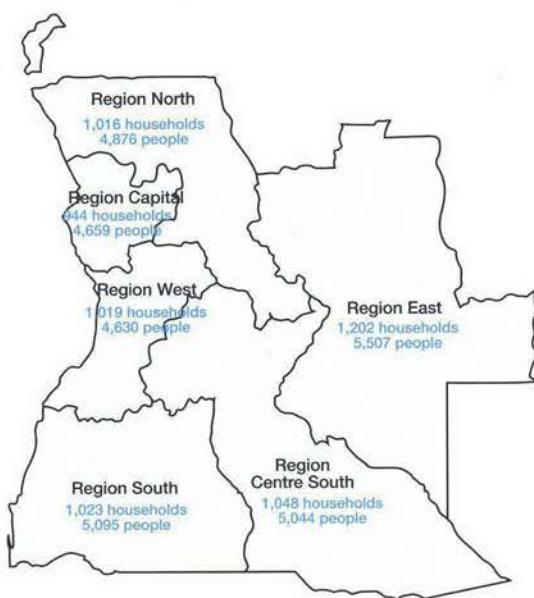
A multi-stage probabilistic sample was used to conduct the survey. Two stages of selection were used in urban areas and three in rural areas. In urban areas the primary unit of selection was the census section, selected with proportional probability to size in terms of the households of which it is comprised, and the secondary unit of selection was the household, chosen at random. In rural residential areas, the primary unit of selection was the commune, while the secondary unit was the village, and the tertiary unit the household. The commune was chosen with a probability proportional to population, and the last two units were chosen at random.

Of 6,660 households selected in the survey's sample, 6,252 households were surveyed (or



94% of the sample size) in all 18 provinces of the country, corresponding to a total of 29,811 people. A total of 7,089 women aged 15 to 49 years and 5,663 children aged 0 to 5 years were surveyed.

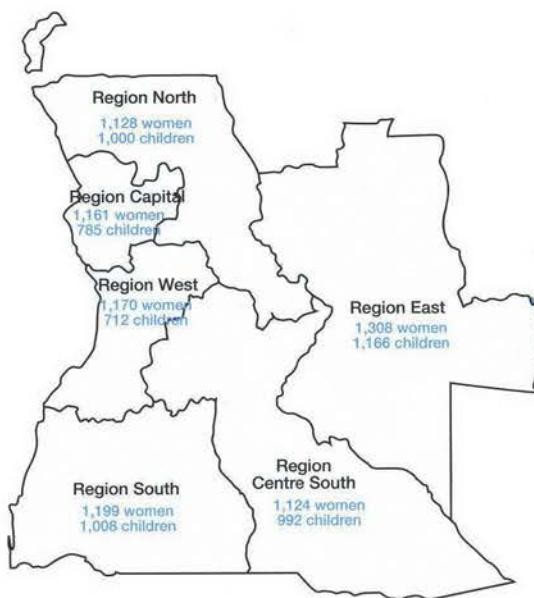
Map i: Number of households and people surveyed per region



Total number of households surveyed: 6,252

Total number of people in households surveyed: 29,811

Map ii: Number of children and women surveyed per region



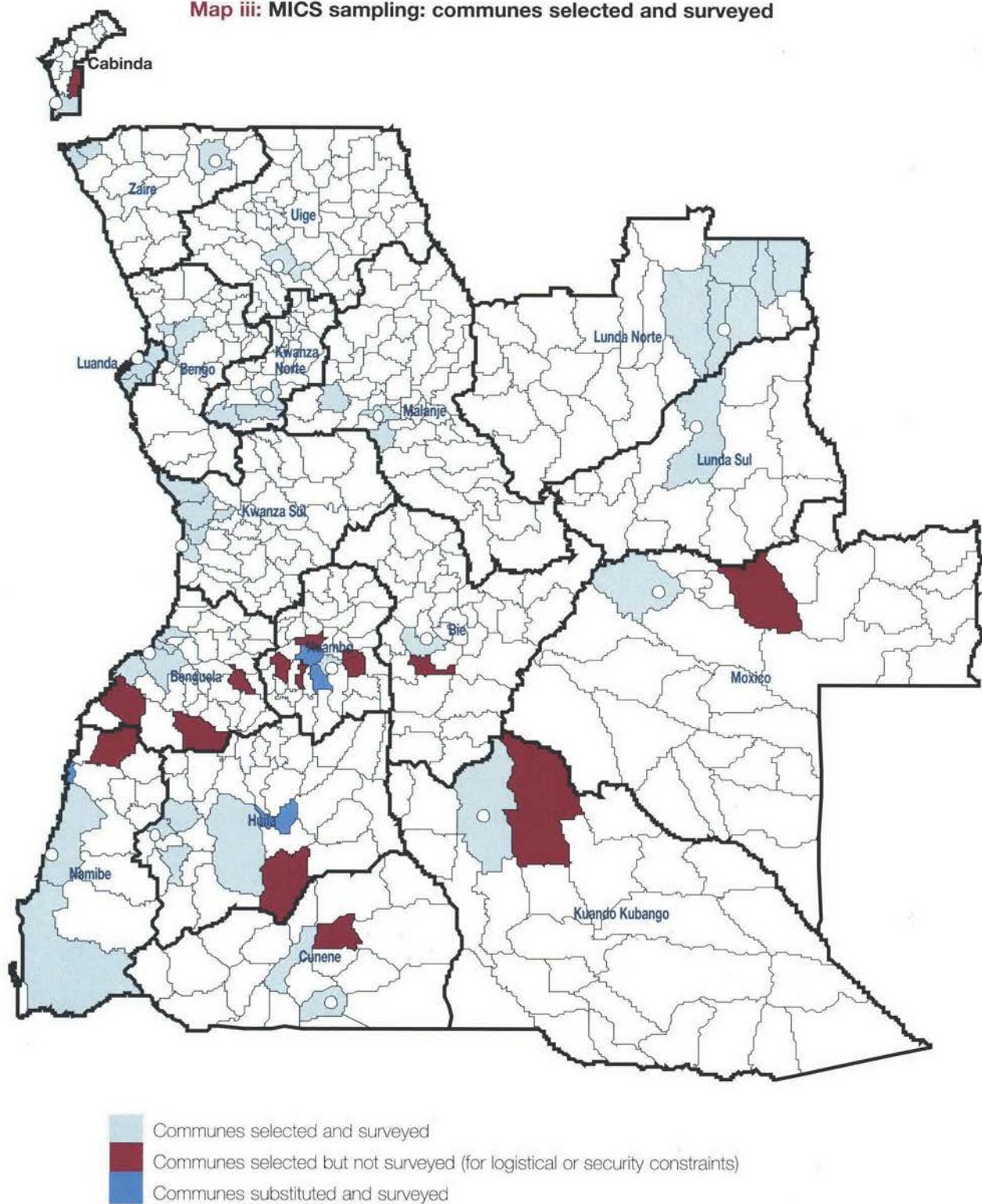
Total number of women 15 to 49 years surveyed: 7,089

Total number of children under 5 years of age surveyed: 5,663

Due to logistical and security constraints, several communes selected in the survey sample could not be reached in rural areas

and were therefore substituted. In total, the survey took place in 70 communes and 43 municipalities.

Map iii: MICS sampling: communes selected and surveyed





The formula used to calculate the size of the sample was as follows:

$$n = \frac{z\alpha s^2}{2} \times deff$$

where:
 n is the total size of the sample, that is the number of households to be questioned in the six regions
 $z\alpha$ is equal to 1.96 value of the statistic z of the normal distribution for a level of confidence of 95%
 d^2 is the absolute error admitted for the variables to be estimated
 s^2 is the estimate of the variance of the population for a specific variable
 $deff$ is the adjustment factor for the sampling method used

Given the lack of any up-to-date operational and geographical basis in all the provinces, it was not possible to choose the Primary Selection Units simultaneously by region, with the sample of the conglomerates shared proportionately to the population of each province of each region. In sharing out the sample by provinces, it was ensured that in each province at least two Primary Selection Units were chosen.

The probability of selection of the section, the households, the communes and the villages was calculated as follows:

For the urban areas, the probability of selection of section i was given by:

$$P_i = s \times \frac{N_i}{N}$$

where:
 N_i is the number of households in section i
 N is the number of households in the province
 s is the number of census sections selected in the province

The probability of selection of household j , of section i , is given by:

$$P_{ij} = \frac{n_i}{N'_i}$$

where:
 N'_i is the number of households listed in section i
 n_i is the number of households selected in section i

The final probability of selection of each household is given by the product of the probabilities of selection of the units in each of the stages, resulting in the following:

$$f_i = f_{ij} = P_i \times P_{ij} = s \times \frac{N_i}{N} \times \frac{n_i}{N'_i}$$

For the rural area of each province the probability of selection of commune i is given by:

$$P_i = c \times \frac{C_i}{C}$$

where:
 C is the estimate of the total population in the rural area of the province
 C_i is the estimate of the total population in the rural area of commune i
 c is the number of communes selected in each province

The probability of selection of village j , of commune i , is given by:

$$P_{ij} = a \times \frac{1}{A_i}$$

where:
 a is the number of villages selected in each selected commune
 A_i is the total number of villages in commune i

The probability of the selection of household j of commune i , of village j , is given by:

$$P_{ijk} = \frac{n_{ij}}{A_{ij}}$$

where:
 A_{ij} is the number of households in village j of commune i
 n_{ij} is the number of households selected in village j of commune i

The final probability of selection of each household is given in the following way:

$$f_{ijk} = f_{ij} = P_i \times P_{ij} \times P_{ijk} = c \times \frac{C_i}{C} \times \frac{a}{A_i} \times \frac{n_{ij}}{A_{ij}}$$

For the urban area, the estimator of the total of a variable Y is given as follows:

$$\hat{Y} = \sum_i w'_i Y_i$$

where:
 \hat{Y} is the estimated total for variable Y
 $w'_i = \frac{1}{f_i} \times \frac{n_i}{n'_i}$ is the weight of the adjusted sample of section i
 f_i is the probability of selection of households in section i
 $Y_i = \sum_j y_{ij}$ is the total of variable y in the sample section i

While for the rural area it is given by:

$$\hat{Y} = \sum_i \sum_j w'_{ij} Y_{ij}$$

where:
 \hat{Y} is the estimated total for variable Y
 $w'_i = \frac{1}{f_{ij}} \times \frac{n_{ij}}{n'_{ij}}$ is the weight of the adjusted sample for village j of commune i
 f_{ij} is the probability of selection of households of village j , of commune i
 $Y_{ij} = \sum_k y_{ijk}$ is the total of variable y in the sample of village j , commune i

The estimator of a given ratio is given by the following expression:

$$\hat{R} = \frac{\hat{Y}}{\hat{X}}$$

where:
 \hat{R} is the estimator for the ratio of two variables, Y/X
 \hat{Y} is the estimator for the total for variable Y , given by formula (1) or (2)
 \hat{X} is the estimator for the total for variable X , given by formula (1) or (2)

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