Malawi
Multiple Indicator Cluster Survey
2006

Malawi 2006

Multiple Indicator Cluster Survey

MICS

Malawi

Monitoring the situation of children and women

National
Statistical
Office

unicef
United Nations
Children's Fund

MICS

MULTIPLE INDICATOR CLUSTER SURVEY 2006

MALAWI

National Statistical Office
United Nations Children's Fund

June 2008

The Malawi Multiple Indicator Cluster Survey (MICS) was carried out by the National Statistical Office (NSO) in collaboration with the United Nations Children's Fund (UNICEF).

The survey has been conducted as part of the third round of MICS surveys (MICS 3), carried out around the world in more than 50 countries, in 2005–2006, following the first two rounds of MICS surveys that were conducted in 1995 and 2000. Survey tools are based on the models and standards developed by the global MICS project, designed to collect information on the situation of children and women in countries around the world. Additional information on the global MICS project may be obtained from **www.childinfo.org.**

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FOREWORD

The 2006 Multiple Indicator Cluster Survey (MICS) is the largest nationally representative sample survey conducted by the National Statistical Office (NSO). It covered a total of 31,200 households (1,200 households per district) .

The primary objective of the 2006 MICS was to provide up to date estimates at district level for policymakers, planners, researchers, and programme managers for monitoring the situation of children and women on a number of social development indicators related to the Malawi Growth and Development Strategy (MGDS), the Millennium Development Goals (MDGs) and the goals of A World Fit for Children (WFFC). Information on more than 20 of the 48 MDG indicators has been collected in MICS, offering the largest single source of data for MDG monitoring coming from a sample survey. Specifically, the 2006 MICS collected information on fertility, child mortality, nutrition, child health, environment, reproductive health, education, child protection, HIV and AIDS and orphans and maternal mortality.

The 2006 MICS results indicate evidence of a decline in infant and child mortality levels and increase in the use of family planning methods compared to the earlier household surveys.

I wish to acknowledge the efforts of a number of organisations and individuals who contributed immensely towards the success of the survey. First I would like to acknowledge the technical and financial assistance from the United Nations Children's Fund (UNICEF). Acknowledgements are also due to the Save the Children Fund for partially funding the survey. The hard work and dedication of the staff of the NSO and the staff of the UNICEF should also be acknowledged for making the survey results available.

Last but not least, I am grateful to the survey respondents who generously gave their time to provide the information that forms the basis of this report.

Charles Machinjili
Commissioner of Statistics

SUMMARY TABLE FINDINGS

TOPIC	MDG NO.	INDICATOR	VALUE	UNIT
Fertility		Total fertility rate	6.3	Per woman
		Crude birth rate	44	Per 1,000 population
		Teenage pregnancy	35	Percent
Child mortality		Neonatal mortality rate	33	Per 1,000 live births
	13	Infant mortality rate	72	Per 1,000 live births
	14	Under-five mortality rate	122	Per 1,000 live births
Nutrition		Stunting prevalence	46	Percent
		Wasting prevalence	4	Percent
	4	Underweight prevalence	21	Percent
		Exclusive breastfeeding rate (0–3 months)	72	Percent
		Exclusive breastfeeding rate (6 months)	57	Percent
		Timely complementary feeding rate (6–9 months)	89	Percent
		Continued breastfeeding rate (12–15 months)	97	Percent
		Continued breastfeeding rate (20–23 months)	72	Percent
		Vitamin A supplementation (Under-5s)	69	Percent
		Iodised salt (15 + PPM) consumption	50	Percent
		Low birth weight	14	Percent
Child health		Tuberculosis immunisation coverage	96	Percent
		DPT 3 immunisation coverage	86	Percent
		Polio 3 immunisation coverage	81	Percent
	15	Measles immunisation coverage	84	Percent
		Fully immunisation coverage	70	Percent
		Antibiotic treatment of suspected pneumonia	30	Percent
		Incidence of diarrhoea (Under-5s)	24	Percent
		Use of oral rehydration treatment (ORT)	55	Percent
	29	Solid fuel use	99	Percent
	22	HHs with at least one bednet	51	Percent
		HHs with at least one insecticide-treated net (ITN)	38	Percent
		Under-fives sleeping under bednets	31	Percent
		Under-fives sleeping under insecticide-treated nets (ITN)	25	Percent
		Children under-5 with fever given anti-malarials	25	Percent
Environment	30	Use of improved drinking water sources	75	Percent
	31	Use of improved sanitation facilities (including pit latrine)	88	Percent
		Use of improved sanitation facilities (excluding pit latrine)	20	Percent
		Households with soap/washing powder or liquid	67	Percent

TOPIC	MDG NO.	INDICATOR	VALUE	UNIT
Reproductive health	19c	Contraceptive prevalence rate	41	Percent
	19	Condom use rate of contraceptive prevalence rate	2	Percent
		Antenatal care (one or more times)	97	Percent
		Protected against tetanus	89	Percent
		Iron supplementation	81	Percent
		Received Vitamin A supplement	46	Percent
		Sleeping under a bednet	32	Percent
		Sleeping under an ITN	26	Percent
		Received 2 doses of SP or Fansidar	47	Percent
		Tested for HIV during ANC visit	27	Percent
	17	Skilled attendant at delivery	54	Percent
		Institutional deliveries	54	Percent
		Postnatal check-up within 6 weeks - Mother	33	Percent
		Postnatal check-up within 6 weeks - Child (Born at home)	25	Percent
	16	Maternal Mortality Ratio	807	Per 100,000 live births
Education		Net intake rate in primary schools	67	Percent
	6	Net primary school attendance rate	86	Percent
		Net secondary school attendance rate	13	Percent
	7	Children reaching grade 5	86	Percent
		Children reaching grade 8	71	Percent
		Transition rate to secondary school	40	Percent
	7b	Primary school completion rate	9	Percent
	9	Gender Parity Index (Primary/Secondary)	0.92/0.78	Ratio
	8	Adult literacy rate	69	Percent
Child protection		Child labour	26	Percent
		Marriage before age 15 and age 18 (for women)	10/50	Percent
		Young women 15–19 currently married or in union	33	Percent
HIV and AIDS & orphanhood	19b	Comprehensive knowledge about HIV prevention (15–24 women/men)	41/42	Percent
	19a	Condom use at last high-risk sex (15–24 women/men)	40/58	Percent
		Children not living with a biological parent	18	Percent
		Prevalence of orphans	12	Percent
		Prevalence of single orphans	9	Percent
		Prevalence of double orphans	3	Percent
	20	School attendance of orphans versus non-orphans	0.97	Ratio

EXECUTIVE SUMMARY

The Malawi Multiple Indicator Cluster (MICS) 2006 survey is a nationally representative survey of children, women and men. A total of 22,994 children under the age of five, 26,259 women aged 15–49, and 7,636 men aged 15–49 were interviewed in 26 districts of Malawi. With 30,553 households interviewed in the survey, MICS 2006 is one of the largest household surveys undertaken in the country.

MICS 2006 is a major achievement for Malawi. For the first time in the country's history, key indicators on the situation of children and women at sub-national level have been captured, making the survey an indispensable planning and monitoring and evaluation tool for policy makers, programme planners and development partners. MICS 2006 has also been able to canvass nearly 20 out of 48 Millennium Development Goals (MDGs) indicators and will be used to help the Government of Malawi track progress towards the achievement of the MDGs.

The survey used a two-stage sampling methodology and included four questionnaires: household, children under five, women and men aged 15–49. The survey was designed to produce indicators for national, regional and district levels as well as by background characteristics of respondents. Twenty six teams carried out fieldwork between mid-July to mid–November 2006. Data entry started in August and completed by the end of December 2006.

MICS 2006 was implemented by the National Statistical Office of Malawi, with technical and financial support from UNICEF. Below is a summary of the findings.

FERTILITY

- Total Fertility Rate (TFR) in Malawi for 1-year preceding the survey is 6.3. That means a woman in Malawi will have on average 6.3 children during her reproductive years. TFR in rural areas is 6.6 whereas in urban areas it is 4.5.
- Crude Birth Rate (CBR) is reported at 43.9 - urban with 40.2 and rural 44.5 per 1,000 population.
- The median age at first birth is 20 years for women in all age groups.
- Women in Malawi space their births on average every 2 years although the length of birth intervals increases as the mother gets older.
- Teenage pregnancy is reported at 35 percent. Eight percent of teenagers are pregnant with their first child and 27 percent have had a live birth.

CHILD MORTALITY

- The infant mortality rate is estimated at 72 per 1,000 live births, while the under-five mortality is 122 per 1,000 live births estimates for 5 years preceding the survey.
- Neonatal mortality rate stands at 33 per 1,000 live births.

NUTRITIONAL STATUS

- More than one in five children under the age of 5 in Malawi are underweight (21 percent), more than two in five children under 5 are stunted (46 percent) and 4 percent of children in the same age group are wasted.
- Close to 4 percent children under the age of 5 are severely underweight, 21 percent are severely stunted and 1 percent severely wasted.
- In Malawi, 6 percent of children under 5 are overweight.

BREASTFEEDING

- A high proportion of children (94 percent) are reported to be put to the breast within 24 hours of birth while only 58 percent are breastfed within the recommended one-hour after birth.
- Exclusive breastfeeding is not fully practiced in Malawi. Among children under 6 months of age, only 57 percent are exclusively breastfed.
- Eighty-nine percent of children aged 6–9 months are receiving breast milk and some solid or semi-solid foods.
- By age 12–15 months, 97 percent of children continue to be breastfed. A significant proportion of the children are completely weaned off the breast by age 20–23 months, with only 72 percent still being breastfed in combination with solid and semi-solid foods.

MICRONUTRIENTS

- Sixty-nine percent of children aged 6–59 received a Vitamin A supplement within the last 6 months preceding the survey.
- Only 46 percent of women aged 15–49 years are given Vitamin A within the recommended eight weeks of the postnatal period.
- Fifty percent of households in Malawi are using adequately iodised salt (15 + PPM).

BIRTH WEIGHT

- Only 48 percent of children are weighed at birth.
- An estimated 14 percent of babies in Malawi are born with low birth weight (Weighed less than 2,500 grams at birth).

IMMUNISATION

- The percentage of children 12–23 months who received all the recommended vaccinations stands at 70 percent which means that they have received 1 dose of BCG, 3 doses of DPT-HepB+Hib (Pentavalent), 3 doses of Polio and 1 dose of measles before reaching one year.
- Approximately 96 percent of children aged 12–23 months receive a BCG vaccination, 86 percent of children in the same group get a third dose of pentavalent, and 81 percent of children receive their third dose of polio. Coverage for measles is lower than for other vaccines at 84 percent.
- In Malawi, 89 percent of pregnant women are protected against tetanus.

DIARRHOEA AND ORAL REHYDRATION TREATMENT

- Overall, 24 percent of children under 5 have had a bout of diarrhoea in the two weeks preceding the MICS survey. This implies an average rate of 6 diarrhoea episodes per child per year.
- The peak of diarrhoea prevalence tends to occur in the weaning period, when children are between 6 and 23 months of age.
- Of the children receiving treatment for diarrhoea, oral rehydration treatment (ORT) use rate is 55 percent. Fifty-one percent receive fluids from packets of oral rehydration salts (ORS), 12 percent receive pre-mixed ORS fluids and one percent gets recommended homemade fluids.

PNEUMONIA

- Nine percent of children under 5 were found to have suspected pneumonia, a leading cause of death in children.
- Of children with symptoms of pneumonia, 52 percent are taken to an appropriate provider such as a government health centre.
- In Malawi, only a third of children under 5 with suspected pneumonia receive antibiotic treatment.

USE OF SOLID FUELS

- There is almost universal use of solid fuels for cooking in Malawi, at 99 percent.
- The most common type of solid fuel use is an open stove or fire with no chimney or hood. This has implications for the health of women and children as stoves or fires without a smoke extractor do not protect people from indoor air pollution.

MALARIA

- Overall, 51 percent of households own at least one mosquito net, while 38 percent have at least one insecticide-treated net (ITN).
- Only 31 percent of children under 5 sleep under a mosquito net and 25 percent sleep under an ITN.
- Thirty-five percent of children under 5 become ill with fever and 25 percent of children with fever are treated with an anti-malarial drug. Around 21 percent of children with fever are treated with an appropriate anti-malarial drug within 24 hours of the onset of symptoms.
- The most common appropriate treatment given is SP/Fansidar while a larger percentage of children with fever (49 percent) are given other types of medicine that are not anti-malarials such as paracetamol.
- Among women who gave birth in the two years preceding the survey, 32 percent slept under a bed net and 26 percent slept under an ITN.

WATER

- In Malawi, 75 percent of the population uses an improved source of drinking water such as piped water, a public tap, a borehole, protected wells and springs, and rainwater collection.
- Only 19 percent of households treat water using an appropriate treatment method. The most common way of treating water in Malawi is boiling, followed by the use of bleach or chlorine and straining water through a cloth.
- Only six percent of households have a source of water located on the premises. Nearly 46 percent of households take 30 minutes or more to get to a water source.
- Ninety-one percent of the population in Malawi stores drinking water in a covered container.

SANITATION

- Overall, 88 percent of people in Malawi live in households that use improved sanitation facilities such as a piped sewer system, septic tanks, latrines and pit latrines.
- Seventy-nine percent of people have a hand-washing facility outside the toilet while 73 percent of households have soap or washing powder/liquid.
- Seventy-eight percent of young children's faeces (aged 0–2) are disposed of safely, either rinsed into a toilet or a latrine or disposed of by the children themselves when they go to the toilet.
- Use of soap by women aged 15–49 for all four key hygiene practices – after defecation, after cleaning a child, before feeding a child and before preparing food – is negligible.

CONTRACEPTION

- In Malawi, 41 percent of married women or those in union report use of a contraceptive method.
- Thirty-eight percent of women report the use of modern contraception, with injectables being the most popular method, followed by female sterilisation, the contraceptive pill and male condoms.
- Hardly any use of male sterilisation is reported.

ANTENATAL AND POSTNATAL CARE

- Among women aged 15–49 who gave birth in the two years preceding the survey, 97 percent received at least one antenatal care visit and 92 percent were attended by a skilled personnel during antenatal care. However, only 7 percent of antenatal care providers are doctors and clinical officers, while 84 percent received care from nurses and midwives.
- Among women aged 15–49 who gave birth in the two years preceding the survey, 85 percent were given at least one TT injection; 81 percent received iron tablets; blood pressure was measured for 75 percent; blood sample taken for 37 percent; urine specimen taken for 16 percent and weight measured for 93 percent of pregnant women.
- Eighty-three percent of pregnant women in Malawi take an anti-malarial drug for prevention of malaria during pregnancy. However, only 47 percent of these women received two or more doses of SP/Fansidar.
- Overall, 54 percent of births are assisted by a skilled personnel and the same proportion are delivered in a health facility. Among those births assisted by skilled personnel, 6 percent were assisted by a doctor, 47 percent by a nurse or midwife and the rest by traditional birth attendants, community health workers, friends and family.
- Only 33 percent of women receive postnatal care while only a quarter of children receive a health check-up within 6 weeks of birth.

EDUCATION

- Only 67 percent of children of primary school entry age are currently attending grade 1.
- The primary school Gross Attendance Ratio (GAR) is 111 and the primary school Net Attendance Ratio (NAR) is 86. The Gender Parity Index (GPI) for primary school is 0.92.
- Eighty-six percent of children entering 1st grade of primary school are eventually reaching grade 5 and 71 percent grade 8.
- Though 40 percent of primary school children are eventually reaching secondary education, the net primary school completion rate is only 9 percent.
- Forty-nine percent of children of secondary school age (14–17) are currently attending primary school.
- The secondary school Gross Attendance Ratio (GAR) is 26 and the secondary school Net Attendance Ratio (NAR) is 13. The Gender Parity Index (GPI) for secondary school is 0.78.
- Overall, 69 percent of adults in Malawi are literate; 77 percent of men compared to 67 percent of women.

CHILD LABOUR

- In Malawi, 26 percent of children aged 5–14 are involved in child labour.
- Fifteen percent of children are involved in family business and 5 percent in household chores. Eight percent of children do unpaid work and 3 percent are engaged in paid work.
- Eighty-six percent of child labourers are able to attend school (Labourer students). Twenty-eight percent of students are also involved in child labour (Student labourers).

EARLY MARRIAGE

- In Malawi, 10 percent of women aged 15–49 marry before the age of 15 and 50 percent of women aged 20–49 marry before the age of 18.
- One in every three female teenagers is either married or in union.
- Early marriage is less common for men than it is for women. Only 1 percent of men marry before they reach 15 and 7 percent of men in the 20–49 age group marry before age 18.

HIV & AIDS

- Overall, 97 percent of women and almost all men in Malawi have heard of HIV & AIDS.
- However, only 55 percent of women and men know all three means of preventing HIV infection – having one faithful uninfected partner, using a condom every time and abstaining from sex.
- Ninety-one percent of women and 95 percent of men know that HIV can be transmitted from mother to child. However, only 65 percent of women and 62 percent of men know all the three modes of mother-to-child transmission – during pregnancy, at delivery and through breast milk.
- Nearly 80 percent of women and 56 percent of men show a discriminatory attitude towards people living with HIV.
- Eighty-seven percent of women know a facility for HIV testing and 25 percent have been tested. Around 92 percent of men know where to go for testing and 26 percent have been tested.
- Of the women who attended antenatal care for their last pregnancy, 63 percent were provided with information on HIV, 27 percent were tested for HIV and 24 percent received their results at the visit.

SEXUAL BEHAVIOUR

- Overall, 14 percent of girls aged 15–19 have had sex before age 15 while 65 percent of women aged 20–24 have had sex before age 18.
- Around 8 percent of women aged 15–24 have had sex with a man 10 or more years older during the 12 months preceding the survey.
- Only 40 percent of women and 58 percent of men use a condom with a non-marital, non-cohabiting partner.

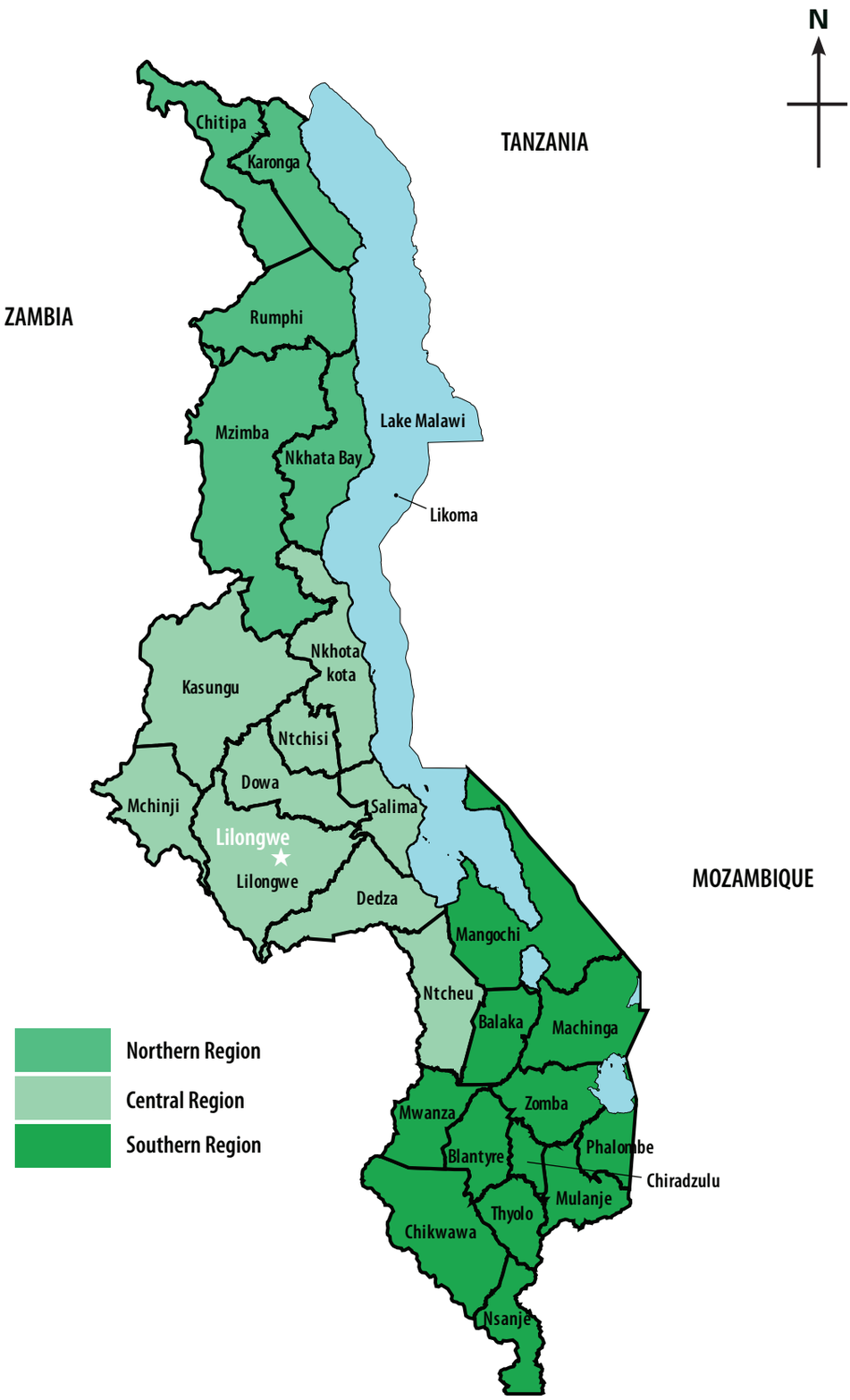
ORPHANS AND VULNERABLE CHILDREN

- In Malawi, 12 percent of children aged 0–17 are orphaned.
- Among orphans, 9 percent are single orphans (lost one parent) and 3 percent are double orphans (lost both parents).
- Nearly 7 percent of children aged 0–17 are considered to be vulnerable.
- In total, there are about 18 percent orphaned and vulnerable (OVC) children in Malawi.
- Eighty-nine percent of children whose mothers or fathers have died attend school compared to 91 percent of children whose parents are alive and who live with their parents.
- Orphaned and vulnerable children have higher levels of malnutrition than children who are not orphaned and vulnerable. The OVC to non-OVC ratio is 1.14 for underweight, 1.10 for stunting and 1.08 for wasting.
- Support provided to OVC is not sufficient in Malawi. Only 6 percent of OVC households receive medical support, 4 percent get psychosocial support and 9 percent receive material support. Six percent benefit from educational support.

ADULT AND MATERNAL MORTALITY

- Male adult mortality stands at 7 per 1,000 and the female mortality rate is 9 per 1,000. Mortality for both men and women peaks in the early 40s.
- The maternal mortality ratio (MMR) for Malawi is estimated at 807 per 100,000 live births with confidence interval of (696, 918). MMR for urban areas is 861 and for rural areas 802. Southern Region reported highest MMR of 1029 compared to Central Region (678) and Northern Region (543).

MAP OF MALAWI



1 INTRODUCTION

CHARLES MACHINJILI

1.1 BACKGROUND

This report is based on the Multiple Indicator Cluster Survey (MICS), conducted in Malawi in 2006 by the National Statistical Office (NSO). The survey was based, in large part, on the needs to monitor progress towards goals and targets emanating from recent international agreements: the Millennium Declaration, adopted by all 191 United Nations Member States in September 2000, and the Plan of Action of A World Fit For Children (WFFC), adopted by 189 Member States at the United Nations General Assembly Special Session (UNGASS) on Children in May 2002. Both of these commitments build upon promises made by the international community at the 1990 World Summit for Children.

In signing these international agreements, governments committed themselves to improving conditions for their children and to monitoring progress towards that end. UNICEF was assigned a supporting role in this task (see box below).

A COMMITMENT TO ACTION:
NATIONAL AND INTERNATIONAL REPORTING RESPONSIBILITIES

The governments that signed the Millennium Declaration and WFFC and Plan of Action also committed themselves to monitoring progress towards the goals and objectives they contained:

"We will monitor regularly at the national level and, where appropriate, at the regional level and assess progress towards the goals and targets of the present Plan of Action at the national, regional and global levels. Accordingly, we will strengthen our national statistical capacity to collect, analyse and disaggregate data, including by sex, age and other relevant factors that may lead to disparities, and support a wide range of child-focused research. We will enhance international cooperation to support statistical capacity-building efforts and build community capacity for monitoring, assessment and planning." (WFFC, paragraph 60)

"...We will conduct periodic reviews at the national and sub-national levels of progress in order to address obstacles more effectively and accelerate actions...." (WFFC, paragraph 61)

The Plan of Action (paragraph 61) also calls for the specific involvement of UNICEF in the preparation of periodic progress reports:

"... As the world's lead agency for children, the United Nations Children's Fund is requested to continue to prepare and disseminate, in close collaboration with governments, relevant funds, programmes and the specialised agencies of the United Nations system, and all other relevant actors, as appropriate, information on the progress made in the implementation of the Declaration and the Plan of Action."

Similarly, the Millennium Declaration (paragraph 31) calls for periodic reporting on progress:

"...We request the General Assembly to review on a regular basis the progress made in implementing the provisions of this Declaration, and ask the Secretary-General to issue periodic reports for consideration by the General Assembly and as a basis for further action."

The Government of Malawi has been developing and implementing long and medium term strategies that translate national and international goals and objectives into a reality. In 2000, the Government launched the Malawi Vision 2020. This policy framework sets out a long-term development perspective for Malawi. In May 2002, the Government launched a three-year Malawi Poverty Reduction Strategy (MPRS), which presented a first attempt to translate the long-term strategy of Malawi Vision 2020 into medium-term focused action plans. The MPRS was built around four cross cutting issues: HIV and AIDS, gender, environment and science and technology besides the main goal of achieving sustainable poverty reduction through empowerment of the poor. The lessons learnt in the implementation of MPRS have resulted in the development of a comprehensive policy, namely the Malawi Growth and Development Strategy (MGDS), aimed at stimulating economic growth.

Malawi remains committed to achieving the Millennium Development Goals (MDGs) localised to the Malawian context. The MDGs and the commitments made to the other international conventions are addressed with specific targets and strategies. Some of the key international conventions for which Malawi is signatory are - WFFC, UNGASS on HIV and AIDS, the Abuja targets on malaria, the Convention on the Rights of the Children (CRC) and Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). A number of national policies and action plans have been prepared and are being implemented to meet the goals set by the international community.

MICS 2006 can serve as one of the main monitoring tools for national and global development goals by providing the necessary data at national, regional and district levels. The information gathered in MICS 2006 can serve as a baseline for new initiatives and assess the success of ongoing programmes. MICS 2006 also strengthens the monitoring and evaluation component of the new United Nations Development Assistance Framework (UNDAF) 2008–2011 by providing the latest data on a number of key indicators related to the Government of Malawi/UN programme of cooperation.

This report presents the full set of results on the topics covered in the survey[1]. The results in this report are final. Since MICS 2006 aims at providing statistically significant results at district level for the effective monitoring of development programmes in the district, it is envisaged to publish and disseminate separate district level reports for all the districts of the country during 2008.

1.2 SURVEY OBJECTIVES

Despite the existence of a number of data sources, one of the challenges faced by policy makers and programme managers in Malawi is the lack of sub-national data. Many national and international agencies are interested in identifying districts with poor socio-economic indicators for intensive intervention but present data sources are unable to meet this demand. They either provide district level data for a selected number of districts, such as the Malawi Demographic and Health Survey, or calculate district estimates based on small sample sizes as in the Integrated Household Survey. In light of the decentralisation of governance and initiation of the MGDS, statistically significant

[1] For more information on the definitions, numerators, denominators and algorithms of multiple indicator cluster surveys and MDG indicators covered in the survey: see chapter 1, appendix 1 and appendix 7 of the Multiple Indicator Cluster Survey Manual 2005: Monitoring the Situation of Children and Women, also available at www.childinfo.org.

district level estimates are warranted for a number of socio-economic indicators for planning sub-national interventions by District Assemblies and to provide a baseline to measure progress of these interventions over time.

A number of new intervention programmes have been implemented by the Government in the recent past, which will have an impact on indicators and are expected to change over a short period of time. These include immunisation coverage, malaria prevention methods, access to water and sanitation and knowledge on HIV and AIDS. The latest data on these indicators will help programme managers to better plan and monitor development activities.

The primary objectives of Malawi MICS are to:

- Provide up-to-date information *at the district level* for assessing the situation of children and women in Malawi;

- Support the monitoring of MGDS indicators;

- Furnish data needed for monitoring progress toward goals established by the MDGs, WFFC goals and other internationally agreed upon goals, as a basis for future action;

- Contribute to the improvement of data and monitoring systems in Malawi and to strengthen technical expertise in the design, implementation, and analysis of such systems.

2 SAMPLE AND SURVEY METHODOLOGY

MERCY KANYUKA

2.1. SAMPLE SIZE

Since the objective of the MICS 2006 is to obtain estimates at district level on the key indicators related to the well being of children and women, it is estimated that a sample size of 1,200 households (HHs) is required per district to obtain statistically valid estimates at 95 percent confidence interval for majority of the indicators.

Each district was considered as a sampling domain and an equal allocation of 1,200 households was used. Presently there are 28 districts in Malawi; however, 26 districts were included in the survey and two districts (namely Likoma and Neno) were merged with other districts for the following reasons: The district of Likoma is too small an island to draw 1,200 households out of the total available households. Therefore, the population of Likoma was merged with Nkhata Bay district and the few selected clusters that have fallen in Likoma island have been canvassed. In the Southern Region, Neno district was part of Mwanza district as per the census frame used for sample selection. Therefore, Neno was not considered as a separate district, but rather was merged with Mwanza.

2.2. SAMPLE DESIGN

A two-stage sampling methodology was adopted in MICS 2006 to select the 1,200 households. Within each district, 40 census enumeration areas (clusters) were selected with probability proportional to size. A household listing was carried out within the cluster and a systematic sample of 30 households was drawn to obtain 1,200 households per district. For reporting results at the regional and national levels, sample weights were used.

A total of 31,200 HHs (26 districts x 1200 HHs) were selected in 1,040 clusters (26 districts x 40 clusters). All the selected 1,040 clusters were covered during the fieldwork period. MICS 2006 is thus one of the largest household surveys undertaken in Malawi.

2.3. QUESTIONNAIRES

Four questionnaires were used in the survey. In addition to a household questionnaire that was used to collect information on all household members, the household, and the dwelling, questionnaires were administered in each household to women aged 15–49. Mothers or caretakers of children under the age of five[1] were identified in each household, and these individuals were interviewed about the children. Questionnaires were also administered to men aged 15–49 years in every third household selected for the survey.

[1] The terms "children under the age of five", "children age 0–4 years", and "children aged 0–59 months" are used interchangeably in this report.

The Household Questionnaire included the following modules:

- Household Listing
- Education
- Water and Sanitation
- Household Characteristics
- Insecticide Treated Nets
- Orphanhood
- Child Labour
- Salt Iodisation

The Questionnaire for Children under Five was administered to mothers or caretakers of children under five living in the households. In cases where the mother was not listed in the household roster, a primary caregiver was identified and interviewed. The questionnaire included the following modules:

- Vitamin A
- Breastfeeding
- Care of Illness
- Malaria
- Immunisation
- Anthropometry

The Questionnaire for Individual Women was administered to all women aged 15–49 years living in the households, and included the following modules:

- Child Mortality
- Birth History
- Tetanus Toxoid
- Maternal and Newborn Health
- Marriage/Union
- Contraception
- Sexual Behaviour
- HIV and AIDS
- Maternal Mortality

The Questionnaire for Individual Men was administered to men aged 15–49 in every third household selected for the survey and included the following modules:

- Marriage/Union
- Contraception
- Sexual Behaviour
- HIV and AIDS

The questionnaires are based on the global MICS 3 model questionnaire. For this survey, the global questionnaires were customised for Malawi's needs, translated into Chichewa and Tumbuka and were pre-tested during the month of June 2006. Based on the results of the pre-test, modifications were made to the wording and translation of the questionnaires.

2.4. FIELDWORK AND DATA PROCESSING

The field staff were trained for 15 working days (three weeks) during June/July 2006. Twenty-six teams collected the data; each team comprised of four interviewers, one editor/measurer, one supervisor and a driver. The interviewers and editors were selected from the districts but the supervisors were NSO core staff. Fieldwork took four months from mid-July to mid-November 2006 and included a house listing operation, sample selection, interviewing the respondents and taking anthropometry measurements for children.

Data were entered on 20 microcomputers using the CSPro software. To ensure quality control, all questionnaires were double entered and internal consistency checks were performed. Procedures and standard programmes developed under the global MICS 3 project were adapted to the Malawi questionnaire and used throughout. Data entry began simultaneously in August 2006 and completed by the end of December 2006. Data were analysed using the SPSS software program and the model syntax and tabulation plans developed for this purpose.

3 CHARACTERISTICS OF HOUSEHOLDS AND RESPONDENTS

MERCY KANYUKA

3.1. SAMPLE COVERAGE

The 2006 MICS was designed to provide estimates of key indicators related to the well-being of children and women at national, regional and district levels.

Table 3.1
Results of household and individual interviews
Numbers of households, women, children under 5 and men by results of the household, women's, under-five's and men's interviews, and household, women's, under-five's and men's response rates, Malawi, 2006

Result	Residence		Region			Total
	Urban	Rural	Northern	Central	Southern	
Sampled households	3,489	27,711	6,000	10,800	14,400	31,200
Occupied households	3,489	27,711	6,000	10,800	14,400	31,200
Interviewed households	3,409	27,144	5,871	10,551	14,131	30,553
Household response rate	**97.7**	**98.0**	**97.9**	**97.7**	**98.1**	**97.9**
Eligible women	3,620	23,453	5,430	9,766	11,877	27,073
Interviewed women	3,526	22,733	5,301	9,368	11,590	26,259
Women response rate	97.4	96.9	97.6	95.9	97.6	97.0
Women's overall response rate	**95.2**	**94.9**	**95.5**	**93.7**	**95.8**	**95.0**
Eligible children under 5	2,367	20,871	4,622	8,536	10,080	23,238
Mother/Caretaker Interviewed	2,347	20,647	4,572	8,405	10,017	22,994
Child response rate	99.2	98.9	98.9	98.5	99.4	98.9
Children's overall response rate	**96.9**	**96.9**	**96.8**	**96.2**	**97.5**	**96.9**
Eligible men	1,272	7,284	1,748	3,177	3,631	8,556
Eligible men interviewed	1,153	6,483	1,599	2,744	3,293	7,636
Men response rate	90.6	89.0	91.5	86.4	90.7	89.2
Men's overall response rate	**88.6**	**87.2**	**89.5**	**84.4**	**89.0**	**87.4**

Table 3.1 displays results of interviews with whole households plus individuals. Categories of response fall under the four sectors: households, women, children under 5 and men. Results reveal that all of the selected 31,200 households were occupied. Of these, 30,553 were successfully interviewed, providing a household response rate of 98 percent. A total of 27,073 women aged between 15 and 49 years were identified as living within the households surveyed. Of these, 26,259 were interviewed successfully, yielding a response rate of 97 percent. For the child questionnaire, 23,238 children under five were listed in the household questionnaire. Of these, questionnaires

were completed for 22,994, corresponding to a response rate of 99 percent. In addition, 8,556 men (ages 15–49 years) were identified and of these, 7,636 have been interviewed, giving a response rate of 89 percent. Overall response rates of 95, 97 and 87 percent are calculated for interviewed women, under-fives and men respectively. The results do not reveal significant urban-rural and regional response rate differentials.

3.2. HOUSEHOLD CHARACTERISTICS

Table 3.2 shows the age and sex distribution of the survey population. The same data are used to produce the population pyramid in Figure 3.1. In the 30,553 households successfully interviewed, 131,021 household members were listed. Of these, 63,561 were males, and 67,452 were females. These data also reveal that the average household size is estimated at 4.3 and that there are no notable sex differentials among dependency age groups of < 15 years and 65+ years.

Table 3.2

Household age distribution by sex

Percent distribution of the household population by five-year age groups and dependency age groups, and number of children aged 0–17 years, by sex, Malawi, 2006

Characteristic	Sex				Total	
	Male		Female		Number	Percent
	Number	Percent	Number	Percent		
Age						
0–4	11,553	18.2	11,810	17.5	23,363	17.8
5–9	10,700	16.8	11,215	16.6	21,918	16.7
10–14	8,933	14.1	9,471	14.0	18,408	14.0
15–19	5,767	9.1	5,359	7.9	11,126	8.5
20–24	5,013	7.9	6,627	9.8	11,640	8.9
25–29	4,885	7.7	5,164	7.7	10,049	7.7
30–34	4,051	6.4	3,785	5.6	7,835	6.0
35–39	3,040	4.8	2,617	3.9	5,657	4.3
40–44	2,162	3.4	1,910	2.8	4,073	3.1
45–49	1,692	2.7	1,509	2.2	3,201	2.4
50–54	1,306	2.1	2,301	3.4	3,607	2.8
55–59	1,314	2.1	1,532	2.3	2,846	2.2
60–64	1,053	1.7	1,391	2.1	2,445	1.9
65–69	706	1.1	916	1.4	1,622	1.2
70+	1,363	2.1	1,788	2.7	3,152	2.4
Missing/DK	21	0.0	57	0.1	78	0.1
Dependency age groups						
<15	31,186	49.1	32,495	48.2	63,689	48.6
65+	2,070	3.3	2,705	4.0	4,774	3.6
Other age groups						
Children aged 0–17	34,752	54.7	35,516	52.7	70,276	53.6
Adults 18+/Missing/DK	28,809	45.3	31,936	47.3	60,745	46.4
Total	**63,561**	**100.0**	**67,452**	**100.0**	**131,021**	**100.0**

Figure 3.1
Age and sex distribution of household population, Malawi, 2006

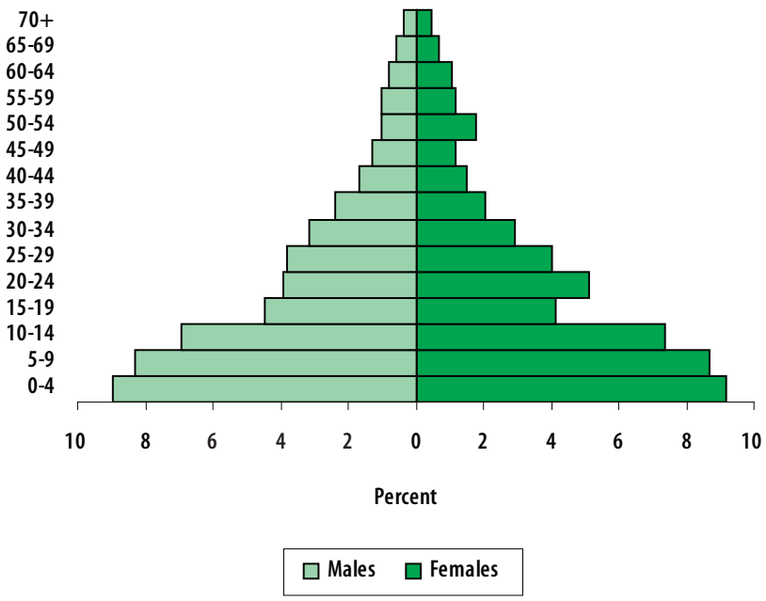


Table 3.3a provides household composition by selected characteristics. The table shows that in Malawi, 85 percent of households are situated in rural areas and therefore only 15 percent in urban areas. The results show that there are more households in the Southern Region (47 percent) than the Central Region (43 percent) and the Northern Region (10 percent). Lilongwe district has more households (16 percent) than any other district in Malawi.

As expected, table 3.3b shows that three-quarters of households in Malawi are male-headed and only one in four are female-headed. These proportions have not changed since the 1992 Malawi Demographic and Health Survey. The table also shows that 36 percent of people living in Malawi are Chewa by tribe, followed by Lomwe (17 percent), Yao (16 percent) and Ngoni (12 percent). The remaining groups constitute less than 10 percent of the population. Eighty-three percent of households include at least one child under 18 years, 55 percent have at least one child under the age of five and three-quarters of households have at least one woman aged 15–49.

Table 3.3a

Household composition

Percent distribution of households by selected characteristics, Malawi, 2006

Background characteristic	Weighted percent	Number of households weighted	Number of households unweighted
Malawi			
Total	100.0	30,553	30,553
Urban	14.7	4,481	3,409
Rural	85.3	26,072	27,144
Region			
Northern	10.2	3,132	5,871
Central	42.9	13,121	10,551
Southern	46.8	14,300	14,131
District			
Balaka	2.3	695	1,180
Blantyre	7.6	2,316	1,189
Chikwawa	3.7	1,137	1,148
Chiradzulu	2.0	610	1,182
Chitipa	1.2	358	1,184
Dedza	5.7	1,740	1,178
Dowa	4.0	1,236	1,145
Karonga	2.0	604	1,174
Kasungu	3.6	1,096	1,183
Lilongwe	16.0	4,894	1,186
Machinga	4.0	1,235	1,168
Mangochi	8.5	2,611	1,155
Mchinji	3.6	1,106	1,195
Mulanje	3.9	1,179	1,179
Mwanza	1.7	515	1,194
Mzimba	4.8	1,460	1,185
Nkhata Bay	1.3	385	1,132
Nkhotakota	1.6	493	1,157
Nsanje	1.8	549	1,192
Ntcheu	3.5	1,078	1,189
Ntchisi	1.2	374	1,175
Phalombe	2.1	643	1,178
Rumphi	1.1	325	1,196
Salima	3.6	1,105	1,143
Thyolo	4.7	1,445	1,183
Zomba	4.5	1,364	1,183

Table 3.3b

Household composition

Percent distribution of households by selected characteristics, Malawi, 2006

Background characteristic	Weighted percent	Number of households weighted	Number of households unweighted
Sex of household head			
Male	74.5	22,754	22,558
Female	25.5	7,799	7,995
Number of household members			
1	7.6	2,321	2,370
2–3	31.9	9,742	9,516
4–5	34.5	10,544	10,308
6–7	18.8	5,750	5,924
8–9	5.7	1,729	1,932
10+	1.5	467	503
Ethnicity			
Chewa	35.9	10,960	9,067
Tumbuka	6.9	2,122	3,129
Lomwe	17.2	5,267	5,431
Tonga	1.5	452	895
Yao	16.3	4,983	3,801
Sena	4.4	1,334	1,706
Nkhonde	1.1	333	579
Ngoni	11.8	3,597	3,568
Other	4.9	1,506	2,377
At least one child aged < 18 years	83.4	30,553	30,553
At least one child aged < 5 years	54.8	30,553	30,553
At least one woman aged 15–49 years	74.6	30,553	30,553

3.3. CHARACTERISTICS OF HOUSEHOLDS MEMBERS

Tables 3.4a and 3.4b provide information on the background characteristics of female respondents between the ages of 15 and 49 years, by place of residence, age category, marital status, motherhood status, education[1], wealth index quintiles[2] and ethnicity.

As expected, the majority of respondents reside in rural areas (82 percent). Across the regions, 45 percent live in the Southern Region, 44 percent in the Central Region while 11 percent in the Northern Region. Lilongwe has the highest percentage of women (16 percent).

The results in table 3.4b reveal that one in four women is aged between 20 and 24 years, that 20 percent are between 15 and 19 years, and 19 percent are within the 25–29 age group. Seventy-two percent report that they are either currently married or in union, 16 percent have never been married/in union while 12 percent were formerly married/in union. Eighty-one percent have given birth at some time in their lives leaving 19 percent who have never given birth.

In addition, the table reveals that 64 percent of women are educated at primary level, 15 percent at secondary level and one in five have no education at all. There are no major differentials across the wealth index quintiles.

Table 3.5a and 3.5b provide information on the background characteristics of men in the survey by place of residence, age category, marital status, education level, wealth index quintile and ethnicity.

The majority of men live in rural areas (81 percent). Across the regions, 46 percent live in the Central Region, 43 percent in the Southern Region while 11 percent in the Northern Region. Of all the districts surveyed, Lilongwe has the highest number of male residents (18 percent).

The results in table 3.5b show that one in five men falls in to the 15–19 years age range, 19 percent are between 20–24 years and another 19 percent are between 25–29 years. Sixty-four percent of men report to be either currently married or in union, 32 percent have never been married/in union while 4 percent have formerly been married/in union.

Furthermore, results reveal that 65 percent of men have attended primary school, 26 percent have had secondary education and one in ten have had no education at all.

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[1] Unless otherwise stated, "education" refers to educational level attained by the respondent throughout this report when it is used as a background variable.

[2] Principal components analysis was performed by using information on the ownership of household goods and amenities (assets) to assign weights to each household asset, and to obtain wealth scores for each household in the sample. The assets used in these calculations were as follows: person's sleeping room, type of floor, type of roof, type of wall, type of cooking fuel and other type of assets. Each household was then weighted by the number of household members, and the household population was divided into five groups of equal size, from the poorest quintile to the richest quintile, based on the wealth scores of households they were living in. The wealth index is assumed to capture the underlying long-term wealth through information on the household assets, and is intended to produce a ranking of households by wealth, from poorest to richest. The wealth index does not provide information on absolute poverty, current income or expenditure levels and the wealth scores calculated are applicable for only the particular data set they are based on. Further information on the construction of the wealth index can be found in Rutstein and Johnson, 2004, and Filmer and Pritchett, 2001.

Table 3.4a

Women's background characteristics

Percent distribution of women aged 15–49 years by background characteristics, Malawi, 2006

Background characteristic	Weighted percent	Number of women weighted	Number of women unweighted
Malawi			
Total	100.0	26,259	26,259
Urban	17.6	4,624	3,526
Rural	82.4	21,635	22,733
Region			
Northern	10.6	2,772	5,301
Central	44.4	11,665	9,368
Southern	45.0	11,822	11,590
District			
Balaka	2.2	571	978
Blantyre	8.4	2,209	1,177
Chikwawa	3.4	885	861
Chiradzulu	1.9	507	967
Chitipa	1.2	312	1,035
Dedza	5.8	1,521	1,003
Dowa	4.3	1,135	998
Karonga	2.1	545	1,076
Kasungu	4.1	1,079	1,122
Lilongwe	16.2	4,252	1,064
Machinga	3.8	985	931
Mangochi	8.4	2,206	946
Mchinji	3.6	956	1,051
Mulanje	3.4	886	891
Mwanza	1.8	467	1,100
Mzimba	4.8	1,264	1,054
Nkhata Bay	1.2	326	912
Nkhotakota	1.8	465	1,081
Nsanje	1.6	422	938
Ntcheu	3.4	904	1,008
Ntchisi	1.2	324	1,010
Phalombe	1.9	512	970
Rumphi	1.2	324	1,224
Salima	3.9	1,028	1,031
Thyolo	4.2	1,101	893
Zomba	4.1	1,072	938

Table 3.4b

Women's background characteristics

Percent distribution of women aged 15–49 years by background characteristics, Malawi, 2006

Background characteristic	Weighted percent	Number of women weighted	Number of women unweighted
Age			
15–19	19.5	5,124	5,213
20–24	24.5	6,427	6,283
25–29	19.4	5,088	4,899
30–34	14.0	3,680	3,742
35–39	9.7	2,550	2,544
40–44	7.2	1,900	2,009
45–49	5.7	1,490	1,569
Marital/Union status			
Currently married/in union	72.4	19,005	18,762
Formerly married/in union	11.9	3,125	3,321
Never married/in union	15.7	4,129	4,176
Motherhood status			
Ever gave birth	80.7	21,198	21,123
Never gave birth	19.3	5,061	5,136
Woman's education			
None	20.8	5,463	5,113
Primary	63.8	16,758	17,215
Secondary +	15.1	3,960	3,852
Other	0.3	78	79
Wealth index quintile			
Lowest	19.7	5,161	5,178
Second	19.1	5,022	5,223
Middle	19.3	5,058	5,241
Fourth	18.7	4,915	5,181
Highest	23.2	6,103	5,436
Ethnicity			
Chewa	36.1	9,483	7,920
Tumbuka	7.8	2,036	3,032
Lomwe	16.3	4,284	4,391
Tonga	1.6	422	782
Yao	16.1	4,219	3,154
Sena	4.1	1,082	1,339
Nkhonde	1.1	292	501
Ngoni	12.3	3,236	3,178
Other	4.6	1,204	1,962

Table 3.5a

Men's background characteristics

Percent distribution of men aged 15–49 years by background characteristics, Malawi, 2006

Background characteristic	Weighted percent	Number of men weighted	Number of men unweighted
Malawi			
Total	100.0	7,636	7,636
Urban	19.2	1,466	1,153
Rural	80.8	6,170	6,483
Region			
Northern	11.1	847	1,599
Central	45.7	3,490	2,744
Southern	43.2	3,299	3,293
District			
Balaka	2.2	171	303
Blantyre	8.8	671	385
Chikwawa	3.9	299	278
Chiradzulu	1.7	126	223
Chitipa	1.1	83	290
Dedza	5.0	381	232
Dowa	4.6	349	273
Karonga	2.1	160	326
Kasungu	4.9	375	381
Lilongwe	17.6	1343	348
Machinga	3.0	226	183
Mangochi	7.4	567	246
Mchinji	4.0	304	354
Mulanje	3.2	243	267
Mwanza	1.7	133	350
Mzimba	5.4	413	363
Nkhata Bay	1.3	96	258
Nkhotakota	1.7	130	286
Nsanje	1.6	120	286
Ntcheu	2.8	215	245
Ntchisi	1.4	107	348
Phalombe	1.8	139	243
Rumphi	1.2	95	362
Salima	3.8	287	277
Thyolo	3.5	268	225
Zomba	4.4	335	304

Table 3.5b

Men's background characteristics

Percent distribution of men aged 15–49 years by background characteristics, Malawi, 2006

Background characteristic	Weighted percent	Number of men weighted	Number of men unweighted
Age			
15–19	20.5	1,567	1,622
20–24	19.2	1,468	1,514
25–29	18.8	1,434	1,376
30–34	15.0	1,147	1,136
35–39	10.7	821	815
40–44	8.7	668	642
45–49	7.0	531	531
Marital/Union status			
Currently married/in union	64.1	4,896	4,804
Formerly married/in union	3.6	278	272
Never married/in union	32.2	2,462	2,560
Man's education			
None	9.0	691	574
Primary	64.9	4,958	5,000
Secondary +	25.9	1,979	2,050
Other	0.1	8	12
Wealth index quintile			
Lowest	16.4	1,253	1,260
Second	17.4	1,331	1,400
Middle	20.5	1,566	1,577
Fourth	20.5	1,568	1,618
Highest	25.1	1,917	1,781
Ethnicity			
Chewa	37.6	2,869	2,347
Tumbuka	7.8	598	891
Lomwe	17.0	1,301	1,304
Tonga	1.6	122	220
Yao	13.5	1,027	780
Sena	4.5	347	428
Nkhonde	1.3	96	151
Ngoni	11.7	896	924
Other	5.0	380	591

Tables 3.6a and 3.6b provide information on children's background characteristics by place of residence, sex, age, mother's level of education, wealth index quintile and ethnicity.

Nearly 85 percent of children live in rural areas with only 15 percent residing in urban areas. Across the regions, 46 percent live in the Central Region, 44 percent in the Southern Region and only 10 percent are in the Northern Region. More children live in Lilongwe (17 percent) than any other district.

The results in table 3.6b show that 51 percent of children in Malawi are female and 49 percent male. Of the children covered by MICS 2006, 10 percent are less than six months old, 12 percent are 6–11 months, 22 percent fall within the 12–23 months age group, 22 percent are aged 24–35 months, 20 percent are between 36–47 months, 14 percent are aged 48–49 months.

Table 3.6a

Children's background characteristics

Percent distribution of children under five years of age by background characteristics, Malawi, 2006

Background characteristic	Weighted percent	Number of under-5 children weighted	Number of under-5 children unweighted
Malawi			
Total	100.0	22,994	22,994
Urban	14.6	3,366	2,347
Rural	85.4	19,628	20,647
Region			
Northern	10.1	2,315	4,572
Central	46.0	10,569	8,405
Southern	44.0	10,111	10,017
District			
Balaka	2.2	498	859
Blantyre	6.6	1,527	796
Chikwawa	3.5	802	791
Chiradzulu	1.9	434	843
Chitipa	1.4	313	1,035
Dedza	5.8	1,345	911
Dowa	4.1	942	835
Karonga	2.0	449	886
Kasungu	4.5	1,026	1,098
Lilongwe	17.2	3,965	918
Machinga	3.8	872	826
Mangochi	9.5	2,186	981
Mchinji	3.7	861	935
Mulanje	2.8	633	640
Mwanza	1.8	412	964
Mzimba	4.3	995	826
Nkhata Bay	1.2	270	753
Nkhotakota	1.9	430	1,003
Nsanje	1.8	404	868
Ntcheu	3.5	794	886
Ntchisi	1.3	294	919
Phalombe	2.1	478	895
Rumphi	1.2	287	1,072
Salima	4.0	911	900
Thyolo	4.4	1,015	824
Zomba	3.7	852	730

Table 3.6b

Children's background characteristics

Percent distribution of children under five years of age by background characteristics, Malawi, 2006

Background characteristic	Weighted percent	Number of under-5 children weighted	Number of under-5 children unweighted
Sex			
Male	49.4	11,368	11,396
Female	50.6	11,626	11,598
Age			
< 6 months	10.2	2,353	2,298
6–11 months	11.6	2,673	2,583
12–23 months	22.1	5,080	5,085
24–35 months	21.9	5,027	5,052
36–47 months	19.7	4,540	4,603
48–59 months	14.4	3,322	3,373
Mother's education			
None	24.4	5,614	5,168
Primary	64.7	14,875	15,307
Secondary +	10.6	2,442	2,449
Other	0.3	63	70
Wealth index quintile			
Lowest	22.2	5,112	5,150
Second	20.4	4,686	4,920
Middle	20.6	4,736	4,895
Fourth	18.5	4,243	4,372
Highest	18.3	4,217	3,657
Ethnicity			
Chewa	36.6	8,418	7,012
Tumbuka	7.1	1,628	2,524
Lomwe	15.8	3,638	3,792
Tonga	1.4	324	616
Yao	16.8	3,857	2,878
Sena	4.5	1,042	1,264
Nkhonde	1.0	222	389
Ngoni	12.0	2,763	2,670
Other	4.8	1,102	1,849

4 FERTILITY

SOPHIE KANG'OMA

Population growth heavily influences the achievement of national goals. Measurement of current fertility is therefore an essential component of any large-scale survey. In MICS 2006, birth histories of sampled women between the ages of 15 and 49 years were gathered in order to measure current fertility rates in Malawi. Each woman was asked a series of questions related to her live births. Data were collected on the number of sons and daughters residing with her, the number living elsewhere and the number who had died. Detailed information on each child was then recorded, starting with the child's name, the month and year of their birth, sex, survival status and if dead, the age at death.

4.1 CURRENT FERTILITY LEVELS

Table 4.1 provides the widely used current fertility measure and the summary, namely the total fertility rate (TFR), which is defined as the number of births a woman would have if she survived to age 50 and experienced the currently observed age-specific fertility rates (ASFR). ASFRs are defined as the number of live births to women in a particular age group divided by the number of woman-years in that age group during the specified period. They are valuable measures of the age pattern of childbearing. In MICS 2006, the one-year period prior to the survey has been used to estimate the fertility.

Table 4.1
Current fertility
Age-specific and cumulative fertility rates, the total fertility rate, the general fertility rate, and the crude birth rate for the 1-year preceding the survey, by urban-rural residence, Malawi, 2006

Age group	Urban	Rural	Total
15–19	144	186	177
20–24	238	295	284
25–29	176	291	269
30–34	182	230	222
35–39	138	184	177
40–44	14	97	86
45–49	15	39	36
TFR	**4.5**	**6.6**	**6.3**
GFR	175	236	225
CBR	**40.2**	**44.5**	**43.9**

The TFR is estimated at 6.3, which indicates that if the fertility rate was to remain constant at the current levels measured in MICS 2006, a woman in Malawi would have on an average 6.3 children during her reproductive years. TFR is significantly higher among women in rural areas (6.6) than that of women in urban areas (4.5).

Whilst the table shows a general fertility rate of 225 live births per 1,000 women aged 15–49 and a crude birth rate of 43.9 births per 1,000 population, the ASFR is highest amongst women in the age group 20–24, where 28.4 percent of women have had a baby each year. The table also highlights that women in rural areas have higher ASFR than women in urban areas, a factor that is consistent across all the age groups.

4.2 FERTILITY DIFFERENTIALS

Data in tables 4.2a and 4.2b show a variation in fertility rates amongst women aged 15–49, according to a number of factors including area of residence, region and district, education and position in the wealth index. The TFR is used to measure fertility differentials in the percentage of currently pregnant

women, and those with completed fertility in terms of the mean number of births to women aged 40–49 by these characteristics.

Table 4.2a

Fertility by background characteristics

Total fertility rate for the 1-year preceding the survey, percentage of women 15–49 currently pregnant, and mean number of children ever born to women age 40–49 years, by background characteristics, Malawi, 2006

Background characteristic	Total fertility rate	Percentage currently pregnant	Mean number of children ever born to women age 40–49
Malawi			
Total	6.3	11.4	6.4
Urban	4.5	10.2	5.5
Rural	6.6	11.7	6.5
Region			
Northern	5.5	10.7	6.3
Central	6.5	11.4	7.1
Southern	6.2	11.7	5.7
District			
Balaka	6.3	12.6	5.8
Blantyre	4.6	8.7	4.9
Chikwawa	6.9	12.2	6.3
Chiradzulu	5.6	11.2	5.9
Chitipa	6.8	11.0	6.8
Dedza	7.0	8.6	7.3
Dowa	6.2	12.9	7.1
Karonga	5.6	11.6	5.9
Kasungu	6.1	10.6	7.1
Lilongwe	6.8	11.3	7.3
Machinga	6.9	14.4	5.4
Mangochi	8.0	11.0	6.3
Mchinji	5.7	14.9	7.7
Mulanje	4.5	16.6	4.8
Mwanza	6.0	13.5	6.2
Mzimba	5.3	9.4	6.5
Nkhata Bay	4.5	13.2	5.4
Nkhotakota	6.2	12.8	6.9
Nsanje	6.7	11.1	7.2
Ntcheu	5.6	10.8	6.6
Ntchisi	6.1	8.9	7.1
Phalombe	6.9	12.5	5.9
Rumphi	6.2	11.7	6.3
Salima	7.1	12.2	6.5
Thyolo	6.2	10.8	4.5
Zomba	5.5	11.8	6.2

TFR is higher among rural women (6.6) compared to urban women (4.5). Regionally, TFR is higher in the Central Region (6.5) than the other regions. In the Northern and Southern Regions, TFR is 5.5 and 6.2 respectively. TFR varies substantially at the district level (Map 4.1). TFR is highest in Mangochi (8.0) and lowest in Mulanje and Nkata Bay (4.5). Chikwawa, Dedza, Machinga, Salima and Phalombe are all districts with TFR close to 7.0 while TFRs for Chiradzulu, Karonga, Mchinji, Mzimba, Ntcheu and Zomba districts range from 5.0 to 5.9.

The table also shows that 11.4 percent of women aged 15–49 were pregnant at the time of the survey and that the highest number of pregnant women reside in rural areas and in the Southern Region. Blantyre, Dedza, Mzimba and Ntchisi have the lowest proportion of pregnant women (less than 10 percent) and the highest proportion is observed in Mulanje, Mchinji and Machinga (more than 14 percent).

Table 4.2a further shows the mean number of children ever born (CEB) to women aged 40–49. This is an indicator of cumulative fertility; it reflects the fertility performance of older women who are nearing the end of their reproductive period and thus represents completed fertility. If fertility had remained stable over time, the two fertility measures, TFR and CEB, would be equal or similar. The findings show that the mean number of children ever born to women aged 40–49 (6.4 children per woman) is similar to the TFR for the one year preceding the survey (6.3 children per woman). This indicates stability in fertility over the past several decades. While the data reveal no substantial change in fertility over the past several decades in rural areas, the higher number of children born in urban areas compared to TFRs indicates a greater percentage fall there. Chitipa and Rumphi are the two districts with similar TFR and CEB, an indication that fertility has remained stable over time in these two districts. Machinga, Mangochi and Thyolo are districts which suggest a recent rise in fertility. However, as there are only about 50 percent of women aged 40–49 in each of the districts, the CEB may well be underestimated. The high calculated TFR in Mangochi is not consistent with either the prevalence of pregnancy nor the CEB, making this estimate a suspect as well. Such outliers are expected with smaller sample sizes found in districts as opposed to regions or national estimates.

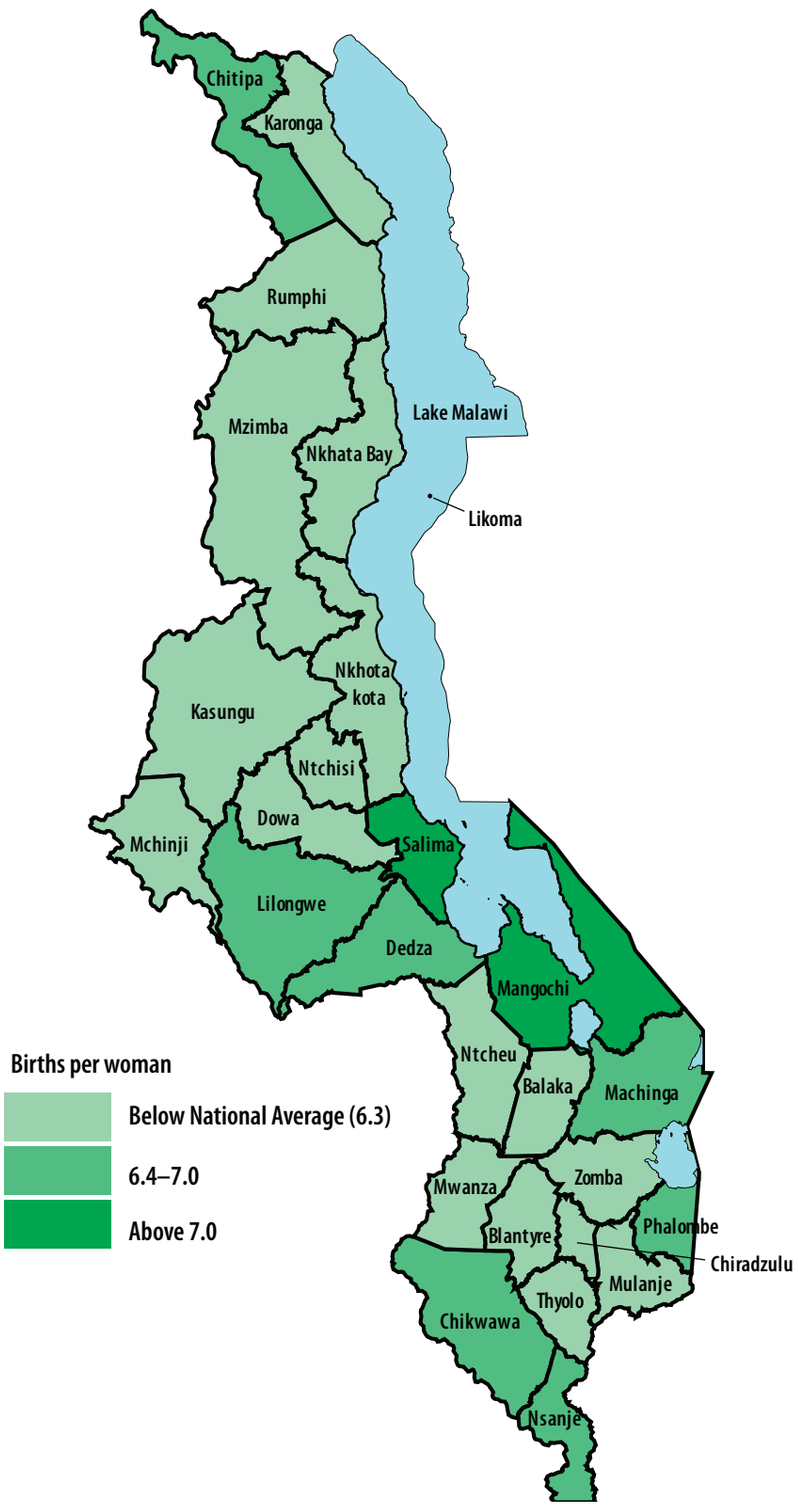
Table 4.2b

Fertility by background characteristics

Total fertility rate for the 1-year preceding the survey, percentage of women 15–49 currently pregnant, and mean number of children ever born to women age 40–49 years, by background characteristics, Malawi, 2006

Background characteristic	Total fertility rate	Percentage currently pregnant	Mean number of children ever born to women age 40–49
Mother's education			
No education	8.0	9.5	6.5
Primary	6.2	12.5	6.5
Secondary +	3.6	9.8	4.6
Wealth index quintile			
Lowest	7.6	10.3	7.1
Second	7.0	12.8	6.6
Middle	6.7	13.1	6.6
Fourth	6.0	12.5	5.8
Highest	4.4	9.0	5.9

Map 4.1
Total fertility rate, Malawi, 2006



There is a substantial variation in the TFR between women who have attended higher education compared to those with primary education or no education at all. Women with secondary education have a TFR of 3.6 compared to 6.2 for women with primary education and 8.0 for those with no education. Similarly, women in the poorest quintile have the highest TFR (7.6) while those in the wealthiest group have a TFR of 4.4. However, both education and wealth show substantial differences only in the top categories of secondary+ education and the highest wealth quintile.

4.3 TRENDS IN AGE-SPECIFIC FERTILITY RATES

Table 4.3 lays out trends in age-specific fertility rates for successive one year periods preceding the survey. Observing ASFR for the cohort of women, the findings indicate that ASFR is actually declining in more recent periods compared to two or three years ago. Fertility drops as women get older but can still be considered high among women aged 20–34. Since women aged 50 and above were not interviewed in the survey, the rates are successively truncated as the number of years preceding the survey increases.

Table 4.3

Trends in age-specific fertility rates

Age-specific fertility rates for 1-year period preceding the survey, by mother's age at the time of the birth, Malawi, 2006

Mother's age at birth	Number of years preceding the survey			
	0–1	1–2	2–3	3–4
15–19	177	184	189	165
20–24	284	281	306	285
25–29	269	260	285	244
30–34	222	215	220	195
35–39	177	164	183	166
40–44	86	99	121	104
45–49	36	45	64	38

4.4 CHILDREN EVER BORN AND CHILDREN LIVING

Table 4.4 shows the percentage of all women and currently married women by number of CEB (live births), the mean number of CEB and living children. The distribution of CEB is the outcome of lifetime fertility. Information on lifetime fertility is useful for examining the momentum of childbearing and for estimating levels of primary infertility. The number of CEB or current parity is based on a cross-sectional view at the time of survey. It does not refer directly to the timing of fertility of the individual respondent but is a measure of her completed fertility up to her age at the time of survey.

The data also display rates of infertility amongst Malawian women. Only 2 percent of women in the last reproductive age groups reported to be childless. Since voluntary childlessness is rare in Malawi, it is assumed that married women who reach the end of their reproductive years without giving birth are either infertile, or their husbands are. The percentage of women who are childless at the end of the reproductive period is an indirect measure of primary infertility (the proportion of women who are unable to bear children at all).

Table 4.4 further shows that only 15 percent of all women in their early twenties have not yet started childbearing, 28 percent of those in their early thirties have less than four children and by the end of their reproductive age, 54 percent of women have seven or more children and 15 percent have 10 or more children. The remarkable feature here is the high fertility in the older age group and the decline in the younger, even late in reproductive life. This implies falling fertility in the high parity numbers.

Table 4.4

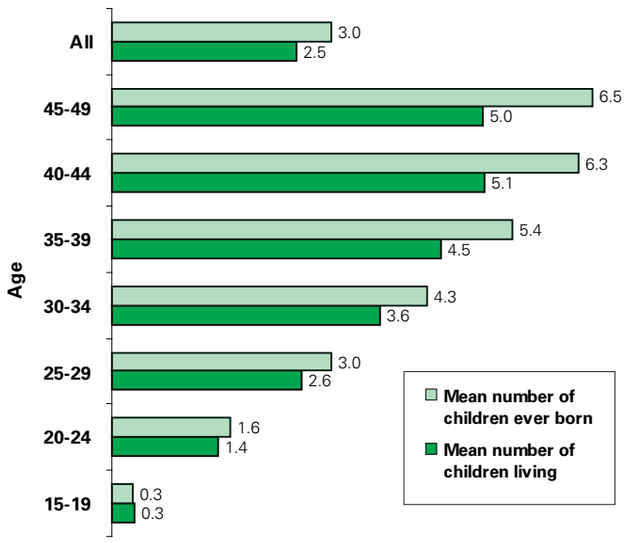
Children ever born and living

Percent distribution of all women and currently married women by number of children ever born, and mean number of children ever born and mean number of living children, according to age group, Malawi, 2006

Age	Number of children ever born											Total	Number of women	Mean number of children ever born	Mean number of children living
	0	1	2	3	4	5	6	7	8	9	10 +				
All women															
15–19	73.0	23.3	3.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	5,124	0.31	0.28
20–24	14.6	32.9	34.8	14.0	3.1	0.6	0.1	0.0	0.0	0.0	0.0	100.0	6,427	1.60	1.43
25–29	4.0	10.1	20.8	30.8	21.8	9.1	2.6	0.7	0.0	0.0	0.0	100.0	5,088	2.98	2.58
30–34	1.8	3.9	8.9	15.6	23.7	23.7	15.0	4.6	2.1	0.5	0.1	100.0	3,680	4.27	3.63
35–39	1.6	2.6	6.1	7.0	13.7	18.9	20.1	13.6	10.7	4.6	1.3	100.0	2,550	5.41	4.46
40–44	1.7	2.6	2.7	6.5	8.7	11.4	16.5	16.0	15.7	9.6	8.5	100.0	1,900	6.32	5.05
45–49	1.9	3.2	4.7	8.4	7.3	9.0	11.2	14.8	12.7	12.0	14.7	100.0	1,490	6.51	5.02
Total	**19.2**	**15.7**	**15.5**	**13.3**	**10.7**	**8.4**	**6.4**	**4.1**	**3.2**	**1.9**	**1.6**	**100.0**	**26,259**	**2.98**	**2.50**
Currently married women															
15–19	36.6	54.0	8.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1,708	0.73	0.66
20–24	7.5	33.8	38.8	15.4	3.6	0.7	0.1	0.0	0.0	0.0	0.0	100.0	5,163	1.76	1.58
25–29	2.3	8.8	20.3	32.3	22.9	9.8	2.8	0.8	0.0	0.0	0.0	100.0	4,295	3.09	2.69
30–34	1.2	3.1	7.4	15.2	23.7	24.3	16.8	5.1	2.3	0.5	0.2	100.0	3,076	4.42	3.75
35–39	1.0	1.9	4.8	6.3	13.1	20.0	21.3	14.5	11.4	4.4	1.3	100.0	2,120	5.57	4.63
40–44	1.6	2.5	2.2	5.6	7.9	11.4	16.9	16.5	16.3	10.4	8.8	100.0	1,537	6.45	5.17
45–49	1.9	2.4	5.0	5.9	6.8	8.4	10.8	14.5	14.1	13.8	16.5	100.0	1,105	6.80	5.25
Total	**6.4**	**17.1**	**18.1**	**15.5**	**12.5**	**10.0**	**7.8**	**4.8**	**3.8**	**2.2**	**1.8**	**100.0**	**19,005**	**3.50**	**2.95**

Information on CEB and the number of children surviving gives some indication of the extent of childhood mortality. Figure 4.1 shows the difference between the mean number of CEB and mean number of children still living. By the end of the reproductive period, women have lost on average 17 percent of the children born to them.

Figure 4.1
Mean number of children ever born and surviving for women aged 15–49, Malawi, 2006



4.5 BIRTH INTERVAL

Birth interval is one of the important determinants of total fertility. A number of studies have observed that women with closely spaced births experience higher fertility than those who have longer birth intervals. It has also been shown that short birth intervals, particularly those less than 24 months, elevate the risk of death for children on either side of the interval. Closely spaced births also jeopardise maternal health. Tables 4.5a and 4.5b describe the distribution of children after the first birth, in the five years preceding the survey by months since the preceding birth. Information is provided according to selected demographic and socio-economic variables.

Results from MICS 2006 indicate that the median interval of births in Malawi is 28 months. In other words, for women in Malawi, the space between births is on average more than two years. The median length of birth intervals increases slightly with the increasing age of the mother. Teenagers have marginally shorter birth intervals (26 months) than other women. There is no substantial difference on the length of birth intervals by parity and sex of the child. Survivor status of a preceding child influences a mother's decision whether to fall pregnant again or not. Data show that the median length of birth intervals is longer among women with living preceding children (29 months) than those with dead preceding children (24 months). This could well be due to the physiologic effect of breastfeeding, delaying fecundity in mothers with surviving children compared to those whose child or children have not survived.

There is no significant variation in the length of birth intervals between rural and urban residence. However, there is some regional variation, with children in the Northern Region experiencing longer birth intervals (31 months) than those in the Central and Southern Regions (28 months). At district level, the birth interval is longer in Rumphi and Mzimba (32 months) and a month or more shorter than the national average in Dowa, Mchinji, Mulanje Nkhotakota, Ntchisi, Phalombe and Salima. The birth interval for children born to women with higher education and to those in the highest wealth quintile is longer by two to three months compared to those born to women who fall within other education levels and wealth quintiles.

MICS 2006 data further indicate that 20 percent of non-first borns are born within an interval of 36–47 months, 48 percent are born within an interval of 24–35 months, and 29 percent are born within an interval of less than two years (Table 4.5a). The former two intervals seem healthy while the latter is associated with higher mortality of both mother and child.

Table 4.5a

Birth intervals

Percent distribution of non-first births in the 5-years preceding the survey by number of months since preceding birth, according to background characteristics, Malawi, 2006

Background characteristic	Months since preceding birth						Total	Number of non-first births	Median number of months since preceding birth
	7–17	18–23	24–35	36–47	48–54	55–59			
Malawi									
Total	11.9	17.5	48.3	19.6	2.4	0.2	100.0	7,436	28.4
Urban	9.7	16.8	51.4	19.1	2.8	0.2	100.0	1,008	29.4
Rural	12.3	17.6	47.8	19.7	2.4	0.2	100.0	6,429	28.2
Region									
Northern	7.6	13.3	53.1	24.0	1.7	0.2	100.0	670	31.1
Central	14.1	17.1	47.4	18.6	2.5	0.3	100.0	3,597	28.3
Southern	10.3	18.9	48.2	19.8	2.6	0.2	100.0	3,169	28.1
District									
Balaka	8.8	20.0	49.4	19.1	2.6	0.0	100.0	171	28.1
Blantyre	7.1	19.2	47.1	23.5	3.1	0.0	100.0	396	29.2
Chikwawa	8.8	15.8	47.1	23.1	5.1	0.0	100.0	260	29.4
Chiradzulu	13.4	20.3	42.5	21.3	2.4	0.0	100.0	135	28.7
Chitipa	7.8	14.8	54.4	21.7	1.2	0.3	100.0	102	29.7
Dedza	15.1	16.1	43.9	24.2	0.7	0.0	100.0	443	28.3
Dowa	11.7	21.4	44.7	16.0	4.9	1.4	100.0	296	27.3
Karonga	8.9	20.2	48.5	19.5	1.9	1.0	100.0	128	29.1
Kasungu	11.0	17.3	52.5	16.5	2.6	0.0	100.0	335	28.1
Lilongwe	14.6	15.9	47.2	19.1	2.7	0.4	100.0	1,432	29.0
Machinga	10.9	16.0	52.1	20.0	1.0	0.0	100.0	261	28.5
Mangochi	10.7	22.8	46.9	17.0	2.6	0.0	100.0	777	26.8
Mchinji	13.9	17.7	47.3	18.8	2.3	0.0	100.0	265	27.5
Mulanje	16.3	18.8	44.1	17.2	2.6	1.0	100.0	164	26.9
Mwanza	10.2	19.0	54.5	14.4	1.5	0.3	100.0	138	28.3
Mzimba	6.5	9.7	58.8	24.5	0.6	0.0	100.0	277	32.0
Nkhata Bay	10.6	13.7	43.9	28.4	3.4	0.0	100.0	82	30.5
Nkhotakota	15.0	17.6	49.9	14.4	3.1	0.0	100.0	157	27.1
Nsanje	12.0	13.4	49.1	21.7	3.1	0.6	100.0	146	30.0
Ntcheu	10.9	12.9	57.8	15.7	2.7	0.0	100.0	240	28.5
Ntchisi	14.4	20.2	43.4	19.0	2.7	0.4	100.0	102	27.4
Phalombe	14.2	17.2	52.7	12.8	2.0	1.1	100.0	163	27.0
Rumphi	6.0	12.8	49.0	28.3	4.0	0.0	100.0	80	32.2
Salima	18.0	20.4	42.9	17.5	1.0	0.1	100.0	327	27.4
Thyolo	9.9	17.5	49.5	20.2	2.6	0.3	100.0	303	28.7
Zomba	7.9	17.4	47.3	26.2	1.3	0.0	100.0	256	28.8

Note: First-order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth.

Table 4.5b

Birth intervals

Percent distribution of non-first births in the 5-years preceding the survey by number of months since preceding birth, according to background characteristics, Malawi, 2006

Background characteristic	Months since preceding birth						Total	Number of non-first births	Median number of months since preceding birth
	7–17	18–23	24–35	36–47	48–54	55–59			
Age									
15–19	17.7	22.9	48.7	10.1	0.6	0.0	100.0	168	25.6
20–29	12.0	18.1	49.2	18.2	2.2	0.2	100.0	4,870	28.1
30–39	10.8	15.5	46.7	23.6	3.2	0.3	100.0	2,021	29.3
40–49	14.1	18.2	45.1	20.4	1.8	0.4	100.0	377	28.6
Birth order									
2–3	11.6	16.8	50.0	18.3	3.2	0.2	100.0	2,871	28.6
4–6	11.8	14.8	48.7	22.3	2.2	0.3	100.0	1,909	28.9
7+	12.4	20.3	46.0	19.1	1.9	0.3	100.0	2,656	27.9
Sex of preceding birth									
Male	10.7	17.9	49.7	19.4	2.1	0.3	100.0	3,656	28.8
Female	13.1	17.2	46.9	19.8	2.8	0.2	100.0	3,781	28.0
Survival of preceding birth									
Living	10.9	17.1	48.9	20.3	2.5	0.2	100.0	6,960	28.8
Dead	26.7	23.8	38.3	9.8	1.4	0.0	100.0	476	23.9
Mother's education									
No education	13.6	17.0	47.8	19.3	2.3	0.1	100.0	1,831	28.0
Primary	11.5	18.4	48.9	18.8	2.2	0.2	100.0	4,991	28.3
Secondary +	10.5	12.2	44.8	27.6	4.3	0.6	100.0	599	31.1
Other	15.4	16.7	37.8	8.4	21.7	0.0	100.0	15	27.9
Wealth index quintile									
Lowest	13.3	18.0	46.6	19.4	2.5	0.3	100.0	1,762	28.0
Second	12.8	19.0	48.0	18.9	1.3	0.1	100.0	1,571	27.8
Middle	12.1	18.2	46.4	20.8	2.4	0.2	100.0	1,612	28.4
Fourth	11.2	17.6	49.1	18.9	2.9	0.3	100.0	1,393	27.9
Highest	9.2	13.5	53.0	20.3	3.6	0.3	100.0	1,099	30.3

Note: First-order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth.

4.6 AGE OF MOTHER AT FIRST BIRTH

Mother's age at first birth is an important determinant of fertility. It is also a determinant of the health and welfare of the mother and of the child. If a woman starts child bearing at a very young age, she is more likely to have higher parity by the end of her reproductive age, especially in a country where there is a low prevalence of contraceptive use and relatively short birth intervals.

Table 4.6 shows the median age at first birth among all women, by exact age and the median age at first birth, according to current age. In Malawi, the median age at first birth is 19 years for women in all age groups except for the 45–49 age group, which is 20 years. More than half of women in all age groups have given birth by the age of 20 and almost all women (90 or more percent) in the relevant age groups have given birth by age 25. Only 27 percent of women in the 45–49 age group have their first child by age 18. However, this could be more of a memory problem than a true reflection of difference as the median ages at first birth are very close. Two percent and 7 percent of women aged 15–19 and 35–39 respectively, have their first birth by age 15. Five to 7 percent of older women have their first birth by age 15, but the percentage has recently fallen, with only 1.7 percent of current 15–19 year olds having given birth before age 15. However, an indication of earlier child bearing is seen in the trend of those who give birth by age 20, rising from 50 percent 25 years ago to 66 percent in the present 20–24 year olds.

Table 4.6

Age at first birth

Among all women, percentage who gave birth by exact ages, percentage who have never given birth, and median age at first birth, by current age, Malawi, 2006

Current age	Percentage who gave birth by exact age					Percentage who have never given birth	Number of women	Median age at first birth
	15	18	20	22	25			
15–19	1.7	na	na	na	na	73.0	5,124	a
20–24	4.2	31.9	66.3	a	na	14.6	6,427	a
25–29	5.4	32.7	62.3	82.8	93.5	4.0	5,088	19.1
30–34	5.8	33.6	60.6	81.1	93.0	1.8	3,680	19.2
35–39	6.8	33.8	59.9	77.6	90.1	1.6	2,550	19.2
40–44	6.0	33.6	61.3	77.9	90.0	1.7	1,900	19.2
45–49	4.8	27.0	50.3	68.0	84.0	1.9	1,490	20.0

na = Not applicable

a = Omitted because less than 50 percent of women had a birth before reaching the beginning of the age group

4.7 MEDIAN AGE AT FIRST BIRTH

Data from MICS 2006 show that the median age at first birth is 19 years for women aged 20–49 and women aged 25–49. There is no substantial variation in the age of birth by place of residence, region and wealth quintile. However, the median age at first birth is higher (21.4 years) among women who have had higher education compared to 19 years for those with primary or no education in all age groups.

At district level, the lowest median age at first birth is among women in Balaka (18.6 years) and the highest is 19.6 years for women in Blantyre, Dowa, Lilongwe and Ntchisi.

4.8 TEENAGE PREGNANCY AND MOTHERHOOD

Adolescent childbearing has a negative impact on the health of both mothers and their children. Teenage mothers are more likely to have complications during delivery than older mothers, resulting in higher morbidity and mortality. In addition, early childbearing may impact on a young woman's life chances by limiting her ability to pursue educational or job opportunities.

Table 4.7a describes the distribution of women aged 15–19 who are mothers or pregnant with their first child and those who have begun childbearing by background characteristics. One in every three adolescents has started childbearing, 8 percent are pregnant with their first child and 27 percent have had a live birth.

The data indicate a disparity between rural and urban adolescents, with those in rural areas more likely to become mothers or become pregnant. Thirty-six percent of the adolescents in rural areas have begun childbearing as compared to 29 percent in urban areas. At the regional level, early childbearing is less common in the Central Region (31 percent) than in the Northern Region and Southern Region (both at 37 percent). At district level, the start of childbearing during adolescence is the lowest in Ntchisi (20 percent) and highest in Chiradzulu (48 percent) (Map 4.2).

More than half of adolescents (53 percent) aged 18 have begun childbearing and amongst those aged 15, 6 percent have begun childbearing. More than half of adolescents aged 19 (60 percent) are mothers compared to 3 percent of those aged 15 (Table 4.7b).

The percentage of adolescents who have begun childbearing declines dramatically with an increasing level of education. More than half (57 percent) of the adolescents who have no education have begun child bearing compared to 36 percent with primary education and 23 percent with secondary or higher education. Adolescents in the second wealth index quintile are more likely to start childbearing (43 percent) than those in the lowest quintile (35 percent). This proportion is lowest amongst adolescents in the highest wealth status (24 percent).

Table 4.7a

Teenage pregnancy and motherhood

Percentage of women aged 15–19 who are mothers or pregnant with their first child and percentage who have begun childbearing, by background characteristics, Malawi, 2006

Background characteristic	Percentage who:		Percentage who have begun childbearing	Number of women
	Have had a live birth	Are pregnant with first child		
Malawi				
Total	27.0	7.5	34.5	5,124
Urban	22.8	6.1	28.9	1,013
Rural	28.0	7.8	35.8	4,110
Region				
Northern	29.0	7.9	36.9	583
Central	24.2	6.7	30.9	2,240
Southern	29.2	8.1	37.2	2,300
District				
Balaka	25.4	11.5	36.8	139
Blantyre	23.2	4.2	27.4	482
Chikwawa	27.4	12.3	39.8	161
Chiradzulu	37.0	10.9	47.9	98
Chitipa	31.5	5.2	36.7	61
Dedza	27.5	5.2	32.7	345
Dowa	12.2	8.8	21.0	217
Karonga	29.2	11.6	40.8	125
Kasungu	29.6	7.3	36.9	211
Lilongwe	23.2	7.6	30.7	748
Machinga	31.0	10.4	41.4	211
Mangochi	35.6	5.6	41.1	374
Mchinji	23.8	7.1	30.9	179
Mulanje	26.9	14.7	41.6	181
Mwanza	22.8	9.6	32.4	92
Mzimba	26.5	7.5	33.9	279
Nkhata Bay	36.1	5.2	41.3	54
Nkhotakota	23.7	4.5	28.2	95
Nsanje	27.9	8.2	36.1	85
Ntcheu	34.9	8.1	43.0	167
Ntchisi	16.3	4.1	20.4	65
Phalombe	37.7	9.0	46.7	85
Rumphi	31.1	7.4	38.4	65
Salima	24.0	4.0	28.0	213
Thyolo	41.1	3.7	44.8	181
Zomba	21.3	9.2	30.5	211

Table 4.7b

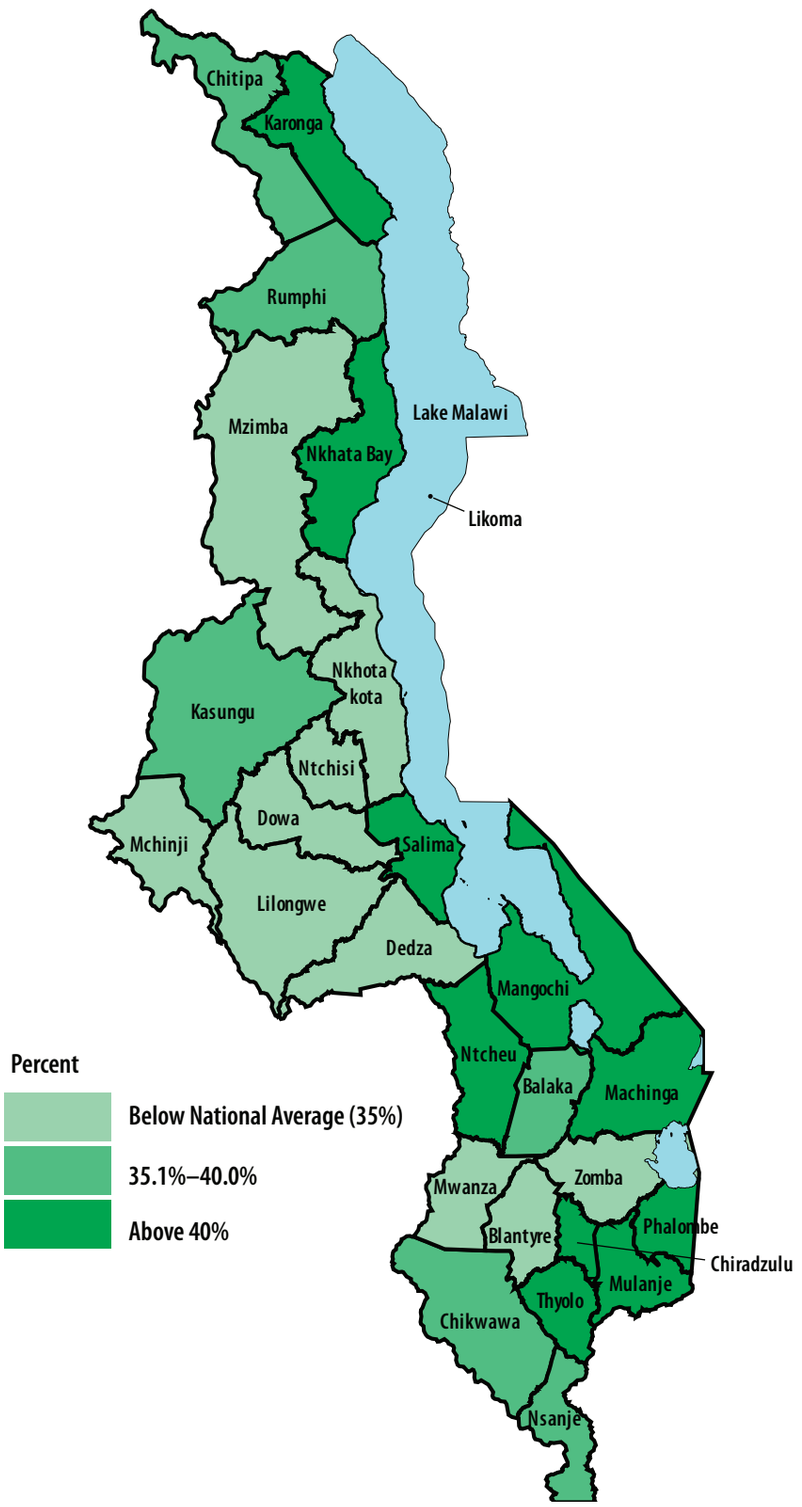
Teenage pregnancy and motherhood

Percentage of women aged 15–19 who are mothers or pregnant with their first child and percentage who have begun childbearing, by background characteristics, Malawi, 2006

Background characteristic	Percentage who:		Percentage who have begun childbearing	Number of women
	Have had a live birth	Are pregnant with first child		
Age				
15	3.1	2.9	6.0	1,049
16	6.5	4.9	11.5	993
17	19.1	10.2	29.4	826
18	41.2	11.5	52.6	1,220
19	60.3	7.6	67.9	1,035
Mother's education				
No education	48.0	8.5	56.5	252
Primary	28.0	7.7	35.7	3,925
Secondary +	17.0	6.4	23.4	945
Other	33.6	0.0	33.6	1
Wealth index quintile				
Lowest	28.2	7.0	35.2	959
Second	34.5	8.1	42.6	901
Middle	31.5	9.3	40.7	928
Fourth	24.9	10.0	35.0	960
Highest	19.6	4.4	24.0	1,376

Map 4.2

Teenage Pregnancy, Malawi, 2006



5 CHILD MORTALITY

ANGELA MSOSA

One of the overarching objectives of the MDGs and WFFC is to reduce infant and under-five mortality. Specifically, the MDGs call for a two-thirds reduction in the mortality rate for under-fives between 1990 and 2015.

Monitoring progress towards this goal is an important but difficult objective. Most MICS surveys use indirect techniques for estimating child mortality. However, child mortality in the Malawi MICS 2006 was calculated using direct measures from birth histories collected from the female respondents, to produce robust estimates that are comparable with the ones obtained from other sources in the country like the Malawi Demographic and Health Survey.

Information from the birth history of female respondents includes a series of aggregate questions on the total number of sons and daughters living with the mother, the number of children who live elsewhere and the number of children who have died. Details collected for each live birth include the child's name, date of birth, sex, whether the birth was single or multiple and whether the child resides with his/her mother. In addition, dates of death were collected in cases where children had not survived.

The infant mortality rate refers to the probability of dying before the first birthday. The under-five mortality rate refers to the probability of dying before the fifth birthday. The neonatal mortality rate is the probability of dying within the first month of life. Early neonatal rate is the probability of death during the first seven days of life and late neonatal death is the difference between neonatal mortality and early neonatal mortality. The post neonatal mortality rate is the difference between infant mortality and neonatal mortality. The child mortality rate is defined as the probability of dying between the first and the fifth birthday.

All mortality rates are expressed per 1,000 live births, except for child mortality, which is expressed per 1,000 children surviving to 12 months of age.

5.1 METHODOLOGICAL ISSUES

The direct technique used in MICS 2006 estimates mortality for specific time periods preceding the survey, typically five year periods, i.e. 0–4 years, 5–9 years and 10–14 years. The issue of the quality and accuracy of retrospective data cannot be overlooked. Reports given by women on their complete birth histories are likely to suffer from data quality issues; mortality for the most recent five years before the survey will tend to be underestimated while estimates for an earlier five year period will tend to be overestimated.

As the information used from birth histories is only available from surviving women, bias can be introduced where the mortality experience for surviving and non-surviving women is substantially different. In addition, data on older women are not available as information is only collected for women aged between 15–49. As such, there is no picture available from the mortality risk for children born to older women.

The estimation method used assumes that maternal mortality is independent of child mortality. Child mortality estimates in this report should be treated with caution due to high mortality in Malawi where maternal mortality rates are estimated at over 807 deaths per 100,000 live births. Under-reporting of deaths is assumed to be high for deaths when they occur very early in infancy. Selective under-reporting would result in unusually lower ratios of neonatal deaths to all infant deaths. MICS 2006 data show that early infant deaths have not been omitted as shown in the ratios (See appendix D under 'data quality tables'). The proportion of deaths in the first seven days of life compared to all infant deaths is high, between 70 and 76 percent. Also, the proportion of neonatal deaths to all infant deaths is relatively stable over the 15 year period before the survey. The proportion for the five year period immediately preceding the survey was higher at 46 percent than in the periods 5–9 years (44 percent) and 10–14 years preceding the survey (42 percent).

5.2 LEVELS AND TRENDS OF EARLY CHILDHOOD MORTALITY

In this chapter, the term 'childhood mortality' is generally used to refer to mortality during childhood and has no specific meaning regarding the specific age period of risk.

Table 5.1 provides estimates of childhood mortality for three five year periods preceding the survey. For the most recent five year period, corresponding approximately to 2002–2006, the infant mortality rate was estimated at 72 per 1,000 live births, while the under-five mortality rate was around 122 per 1,000 live births.

Table 5.1
Early childhood mortality rates
Neonatal, postneonatal, infant, child, and under-five mortality rates for 5-year periods preceding the survey, Malawi, 2006

Years preceding the survey	Approximate calendar period	Neonatal mortality (NN)	Postneonatal mortality (PNN)	Infant mortality (1q0)	Child mortality (4q1)	Under-five mortality (5q0)
0–4	2002–2006	33	39	72	53	122
5–9	1997–2001	41	50	91	78	162
10–14	1992–1996	36	54	90	99	180

During the 15 year period preceding the survey, the findings show a decline in under-five mortality by 32 percent from 180 to 122 deaths per 1,000 live births. Infant mortality declined by 20 percent from 90 to 72 deaths per 1,000 live births. Child mortality had the largest decline of 46 percent from 99 to 53 deaths per 1,000 live births.

During the same period, neonatal mortality remained almost unchanged from 36 to 33 deaths per 1,000. However the period 10–14 years to 5–9 years before the survey saw a slight increase from 36 to 41 deaths per 1,000 live births.

It is also interesting to note that the current downward trend of childhood mortality is linked to declines observed in the most recent period. For example, a dramatic fall of 21 percent (from 91 deaths per 1,000 to 72 deaths per 1,000) can be observed in IMR in the last five years. On the other hand, under-five mortality declined by 10 percent (from 180 deaths per 1,000 to 162 deaths per 1,000) 10–14 years ago and 25 percent (from 162 deaths per 1,000 to 122 deaths per 1,000) in the last five year interval. The highest decline, however, can be seen in child mortality from 78 to 53 (32 percent).

5.3 SOCIO-ECONOMIC AND DEMOGRAPHIC DIFFERENTIALS IN CHILDHOOD MORTALITY

Tables 5.2a and 5.2b and figure 5.1 show childhood mortality levels by socio-economic and demographic characteristics for the five year period (2002–2006) preceding the survey.

Generally, urban mortality rates are lower than rural mortality rates. The mortality rate for under-fives is 113 per 1,000 live births for urban areas, compared to 123 per 1,000 live births for rural areas. Neonatal mortality is also higher for rural areas at 34 per 1,000 live births compared to 30 per 1,000 live births for urban areas. Comparing the three regions, the Northern Region has lower under-five mortality (88 per 1,000 live births), than either the Central Region (129 per 1,000 live births) or the Southern Region (122 per 1,000 live births). The infant mortality rate is similarly lower for the Northern Region (57 per 1,000 live births) compared to the Central and Southern Regions (73 and 75 per 1,000 live births respectively). Post neonatal mortality in the Southern Region is almost twice as high for the Northern Region as shown in table 5.2a.

Numerous studies have demonstrated a strong relationship between a mother's level of education and the survival of her child. These findings are confirmed in this survey where the infant and under-five mortality rates are 73 and 126 per 1,000 live births respectively for mothers with no education while for mothers with secondary or higher education, the infant and under-five

Table 5.2a

Early childhood mortality rates by socio-economic and demographic characteristics

Neonatal, postneonatal, infant, child, and under-five mortality rates for the 5-year period preceding the survey, by socio-economic characteristics, Malawi, 2006

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)	Infant mortality (1q0)	Child mortality (4q1)	Under-five mortality (5q0)
Malawi					
Total	33	39	72	53	122
Urban	30	40	70	47	113
Rural	34	39	73	54	123
Region					
Northern	33	24	57	33	88
Central	35	38	73	60	129
Southern	31	44	75	51	122
Mother's education					
No education	32	41	73	57	126
Primary	33	40	73	53	123
Secondary +	36	30	66	43	106
Wealth index quintile					
Lowest	32	40	72	54	123
Second	34	45	79	61	135
Middle	30	46	76	56	128
Fourth	39	33	71	54	122
Highest	32	30	62	39	99

Table 5.2b

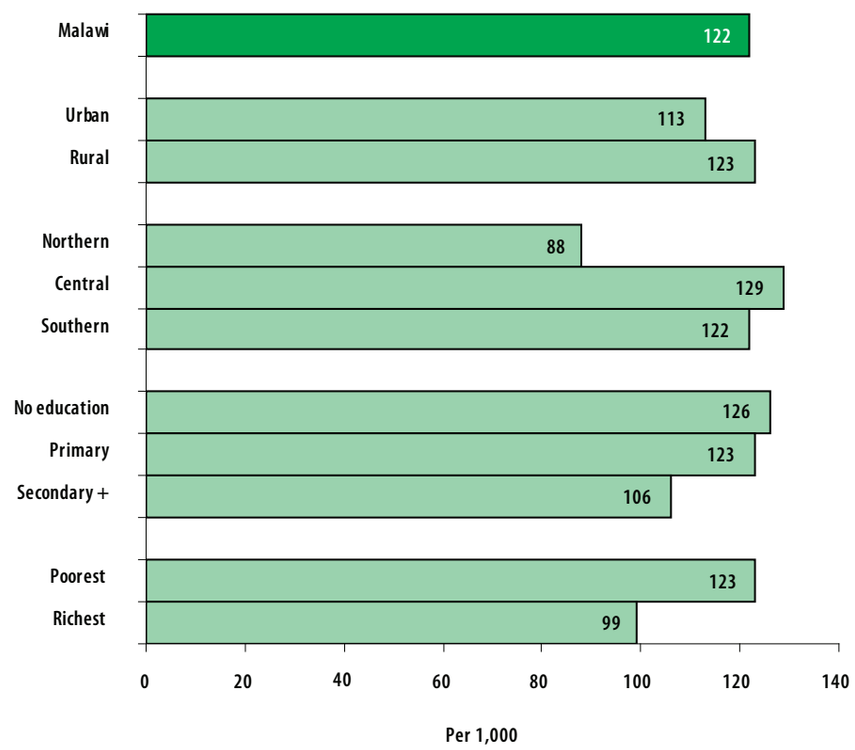
Early childhood mortality rates by socio-economic and demographic characteristics

Neonatal, postneonatal, infant, child, and under-five mortality rates for the 5-year period preceding the survey, by socio-economic characteristics, Malawi, 2006

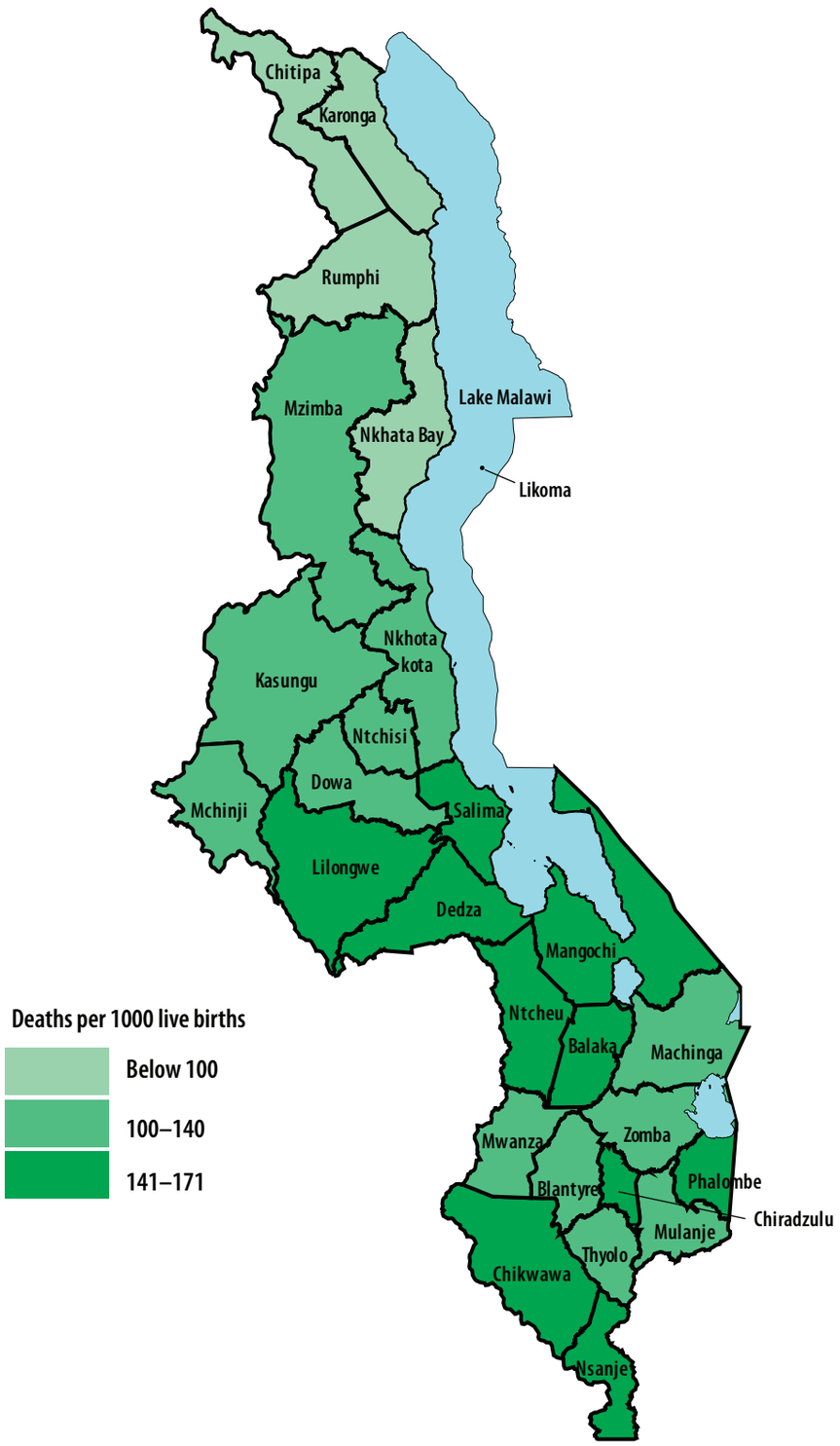
Background characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)	Infant mortality (1q0)	Child mortality (4q1)	Under-five mortality (5q0)
Child's sex					
Male	38	39	76	52	125
Female	28	40	69	54	119
Mother's age at birth					
<20	42	46	88	53	136
20–29	29	36	65	55	116
30–39	32	36	68	49	113
40–49	56	62	118	56	168
Birth order					
1	44	43	87	54	136
2–3	24	35	59	51	107
4–6	28	38	66	54	117
7+	56	51	107	58	159
Previous birth interval					
<2 years	57	58	115	75	182
2 years	30	34	64	49	109
3 years	21	29	49	52	98
4+ years	19	39	58	41	96

Figure 5.1

Under-5 mortality rates by background characteristics, Malawi, 2006



Map 5.1
Under-five mortality rate, Malawi, 2006



mortality rates are 66 and 106 per 1,000 live births. Notably, neonatal mortality is not influenced by education or wealth while both influence mortality at ages above one month, an indication of the importance of childcare practices at home beyond the neonatal period. Neonatal mortality, on the other hand is most heavily influenced by birth events, low birth weight and congenital problems.

Map 5.1 shows under-five mortality rates by district. Of the six districts in the Northern Region, four have mortality rates less than 100 per 1,000 live births whereas Mzimba has an under-five mortality rate in the range of 100–140. Data are missing for Likoma and Neno as MICS 2006 was not carried out in these two districts. Higher estimates of under-five mortality can be observed in the lower Central and Southern Regions.

Mother's age at the time of child birth influences child survival in all periods as seen in table 5.2b, showing the classic 'J' shape with the mother's age (both very young and old mothers have higher child mortality) and same effect also seen with birth order. The birth interval also affects survival when there is less than two years between pregnancies, demonstrating the importance of spacing on child survival. There is no obvious sex differential in child survival seen in Malawi, except for neonatal mortality rate.

Information on infant and neonatal mortality at district level is presented in table 5.3 and figure 5.2. Estimates for the 10 year period preceding the survey have been used for the childhood mortality rates at district level to reduce the sampling variability. The 10 year period estimates show that the majority of districts have infant mortality rates lower than the 10 year national average of 81 per 1,000 live births. Three districts, namely Balaka, Nsanje and Phalombe have an infant mortality rate of over 100 per 1,000 live births, which is twice the infant mortality rate for Chitipa and Karonga (52 per 1,000 live births).

Even more dramatic is the spread of under-five mortality with rates over 160, which is double the lowest infant mortality rate of 81. The child mortality rate shows the highest disparity of more than a factor of three times, from 25 to 87 per 1,000 live births. Low child survival after the first year of life is related to higher infections and poorer access to quality health services in these districts. These are also ten districts with an under-five mortality rate above 140 deaths per 1,000 live births, which is the national rate for the 10 year period. Districts in the Northern Region, namely Chitipa, Karonga, Nkhata Bay and Rumphi, have shown low levels of under-five mortality rates compared to all other districts. This corroborates with the low mortality rates for the Northern Region compared to the Central and Southern Regions.

Table 5.3

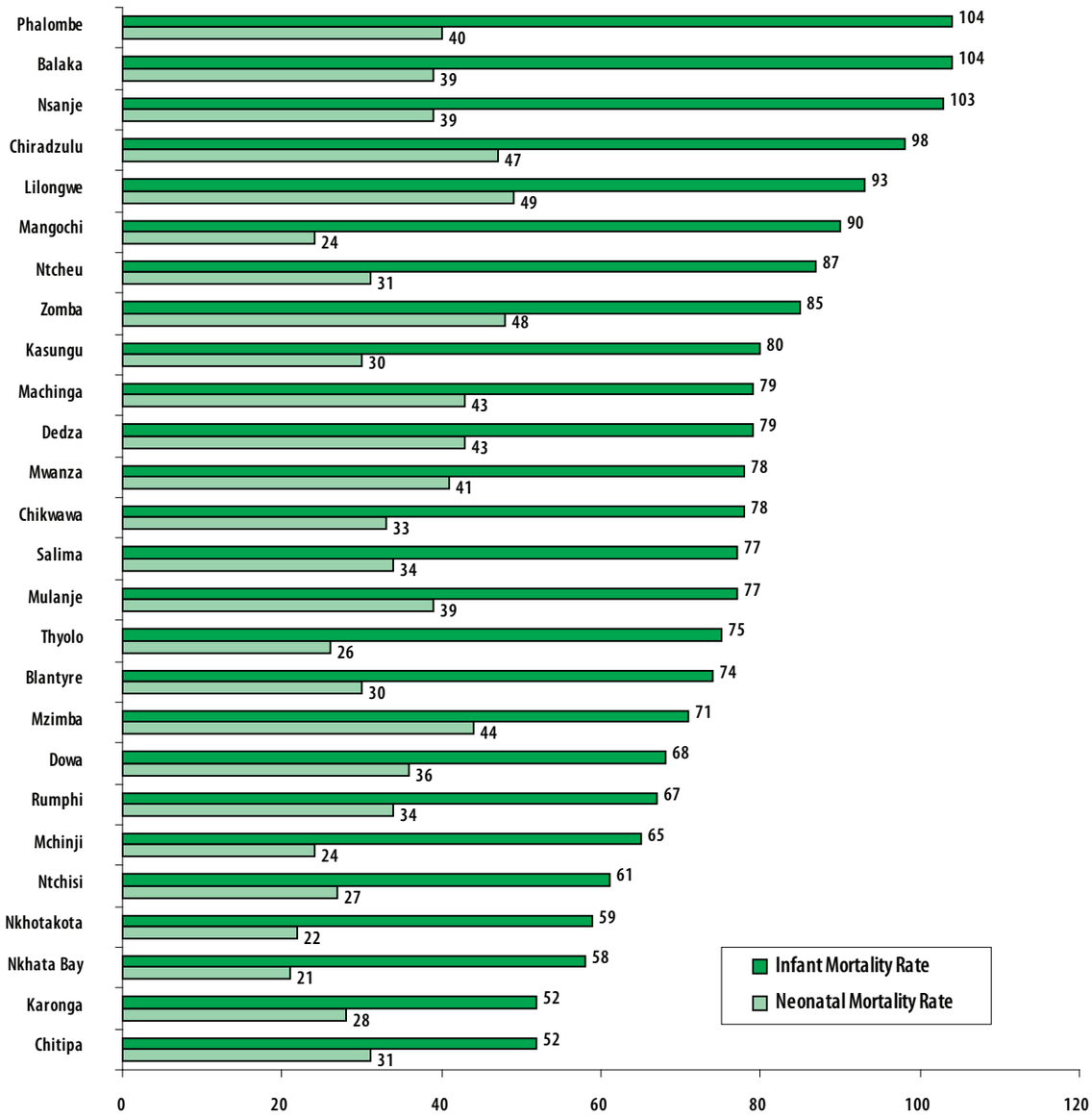
Early childhood mortality rates by district

Neonatal, postneonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey, by background characteristic, Malawi, 2006

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)	Infant mortality (1q0)	Child mortality (4q1)	Under-five mortality (5q0)
Malawi					
Total	37	44	81	64	140
Urban	37	40	77	56	129
Rural	36	45	81	65	141
Region					
Northern	35	28	63	41	101
Central	39	42	81	75	150
Southern	34	50	85	58	138
District					
Balaka	39	65	104	63	160
Blantyre	30	43	74	51	121
Chikwawa	33	45	78	75	147
Chiradzulu	47	51	98	67	159
Chitipa	31	21	52	49	99
Dedza	43	36	79	87	160
Dowa	36	32	68	76	139
Karonga	28	24	52	32	83
Kasungu	30	50	80	57	132
Lilongwe	49	44	93	80	166
Machinga	43	36	79	41	117
Mangochi	24	66	90	66	150
Mchinji	24	41	65	73	133
Mulanje	39	39	77	33	107
Mwanza	41	37	78	63	137
Mzimba	44	27	71	47	115
Nkhata Bay	21	37	58	25	81
Nkhotakota	22	36	59	63	118
Nsanje	39	64	103	75	171
Ntcheu	31	55	87	68	149
Ntchisi	27	34	61	62	119
Phalombe	40	64	104	63	161
Rumphi	34	33	67	35	99
Salima	34	43	77	73	144
Thyolo	26	49	75	52	123
Zomba	48	36	85	58	138

Figure 5.2

Infant and neonatal mortality by district, Malawi, 2006



6 NUTRITION

BEATRICE MTIMUNI & BENSON KAZEMBE

Malnutrition remains the world's most prevalent health problem and the single biggest contributor to child mortality. Nearly one-third of children in the developing world are either underweight or stunted and more than 30 percent of the developing world's population suffers from micronutrient deficiencies. Malnutrition contributes to more than half of all child deaths from all causes. Unless policies and priorities are changed, the scale of the problem will prevent many countries from achieving the MDGs. This is especially pertinent for sub-Saharan Africa, where malnutrition is increasing.

6.1 NUTRITION STATUS OF CHILDREN

Children's nutritional status is a reflection of their overall health and development. When children have access to adequate food, are not exposed to repeated illness and are well cared for, they reach their growth potential and are considered well nourished. The nutritional well being of young children reflects household, community, and national investments in family health. All of these factors contribute in both direct and indirect ways to a country's development. Satisfactory nutrition does not only help children to grow, but also saves lives and reduces poverty while advancing human development and economic growth.

The assessment of nutritional status is based on the rationale that in a well nourished population there is a statistically predictable distribution of children of a given age with respect to height and weight of the child. Use of a standard reference population makes it possible to analyse any given population over time, as well as to make comparisons among population subgroups. The reference population used in this report is the WHO/CDC/NCHS reference, which is recommended for use by UNICEF and WHO.

In MICS 2006, weights and heights of all children under five were measured using standardised anthropometric techniques (UNICEF electronic scale - SECA mother/child electronic scale and infant/child height/length measuring board manufactured by Shorr Production, USA). The indicators used in this report to assess the nutritional status of children under five are height-for-age, weight-for-height and weight-for-age. A child is considered stunted if he or she is too short for his or her age, indicating chronic undernutrition typically due to poor nutrition over an extended period. A child is considered wasted if he or she is too thin, that is, weighs too little for his or her height. Wasting is an indicator of recent acute nutrition deficits and is closely tied to mortality risk. Finally, a child is considered underweight if he or she weighs too little for his or her age. A child can be underweight for his or her age because he or she is stunted, wasted, or both.

Almost one in five children under five in Malawi are underweight (21 percent) and 4 percent are severely underweight (Table 6.1a). More than two in five children under the age of five (46 percent) are stunted and almost half of these (21 percent) are severely stunted. Wasting stands at 4 percent with 0.5 percent of children found to be severely wasted. This finding in MICS 2006 indicates that undernutrition rates in Malawi have slightly declined compared with the Malawi Demographic and Health Survey 2004.

Table 6.1a

Child malnourishment

Percentage of under-five children who are severely or moderately undernourished, Malawi, 2006

Background characteristic	Weight-for-age (Underweight)		Height-for-age (Stunting)		Weight-for-height (Wasting)		Weight-for-height: % above +2 SD (Overweight)	Number of children
	% below - 2 SD	% below -3 SD	% below - 2 SD	% below - 3 SD	% below - 2 SD	% below - 3 SD		
Malawi								
Total	20.5	3.6	46.0	20.5	3.5	0.5	6.1	20,404
Urban	19.0	3.5	37.5	16.7	5.1	0.4	4.3	3,113
Rural	20.8	3.7	47.5	21.2	3.2	0.5	6.4	17,291
Region								
Northern	16.5	2.7	39.6	14.5	4.4	0.8	6.8	2,139
Central	22.6	4.0	48.0	22.5	3.9	0.6	5.6	9,357
Southern	19.2	3.5	45.4	19.8	2.9	0.4	6.4	8,907
District								
Balaka	14.7	2.5	40.9	14.1	2.4	0.5	5.0	475
Blantyre	14.5	2.2	41.6	16.1	1.1	0.1	3.9	1,415
Chikwawa	22.4	4.6	39.1	16.2	6.3	0.9	12.2	603
Chiradzulu	18.4	3.6	45.8	17.1	5.4	0.6	4.5	382
Chitipa	18.8	3.3	38.3	13.7	4.7	0.8	4.0	290
Dedza	29.3	5.8	57.1	27.7	4.6	1.1	4.6	1,192
Dowa	18.1	3.9	42.2	19.9	3.4	0.4	7.9	810
Karonga	13.1	1.4	29.7	11.9	7.6	1.2	7.5	392
Kasungu	18.3	3.1	46.9	18.7	1.9	0.2	5.1	961
Lilongwe	24.0	4.3	46.1	22.5	5.0	0.7	4.9	3,580
Machinga	22.3	4.9	57.0	28.4	2.3	0.1	5.8	766
Mangochi	22.3	4.3	44.0	19.5	1.8	0.1	4.0	1,890
Mchinji	20.9	3.1	57.1	30.6	3.0	0.1	12.6	700
Mulanje	15.6	2.3	42.8	18.7	3.1	0.4	20.2	524
Mwanza	18.4	3.0	50.6	20.6	1.9	0.1	3.9	388
Mzimba	18.3	3.0	46.2	16.4	3.1	0.5	7.6	938
Nkhata Bay	15.8	3.6	37.1	15.7	6.4	1.5	7.8	247
Nkhotakota	21.6	3.9	44.0	21.0	3.6	0.5	6.3	373
Nsanje	24.6	4.2	38.5	13.5	4.1	0.9	2.1	356
Ntcheu	21.4	3.2	50.4	22.5	3.4	0.2	4.4	717
Ntchisi	22.1	4.0	56.2	29.1	1.6	0.2	5.3	276
Phalombe	20.3	3.3	46.8	23.1	4.1	0.4	6.5	406
Rumphi	14.0	1.8	35.0	11.8	2.0	0.6	5.0	272
Salima	19.2	2.7	37.6	13.1	3.1	0.4	2.9	748
Thyolo	19.4	3.2	47.3	22.6	4.9	1.0	6.4	913
Zomba	17.7	3.2	51.5	24.6	2.5	0.4	8.3	790

The differential in the prevalence of stunting amongst children under five is significant between urban and rural areas with stunting at 38 percent in urban areas compared to 48 percent in rural areas. There are no significant differences in the levels of underweight between urban (19 percent) and rural (21 percent) children. Children under five in the Southern and Central Regions are slightly more likely to be underweight than in the Northern Region. In contrast, the percentage of wasting is higher in the Northern Region than the other two regions.

In Malawi, 6 per cent of children under five are estimated to be overweight. Three districts, Mulanje (20 percent), Mchinji (13 percent) and Chikwawa (12 percent), have significantly higher overweight rates than the national average. Overall variations among districts in the levels of overweight range from 2 percent to 20 percent. This may simply be an age distribution phenomena as the standards show "overweight" for those under 6 and 12 months of age at high levels. These data probably reflect the close association between continued and complementary breastfeeding and satisfactory nutrition. There is no rise in overweight with age thereafter.

Table 6.1b

Child malnourishment

Percentage of under-five children who are severely or moderately undernourished, Malawi, 2006

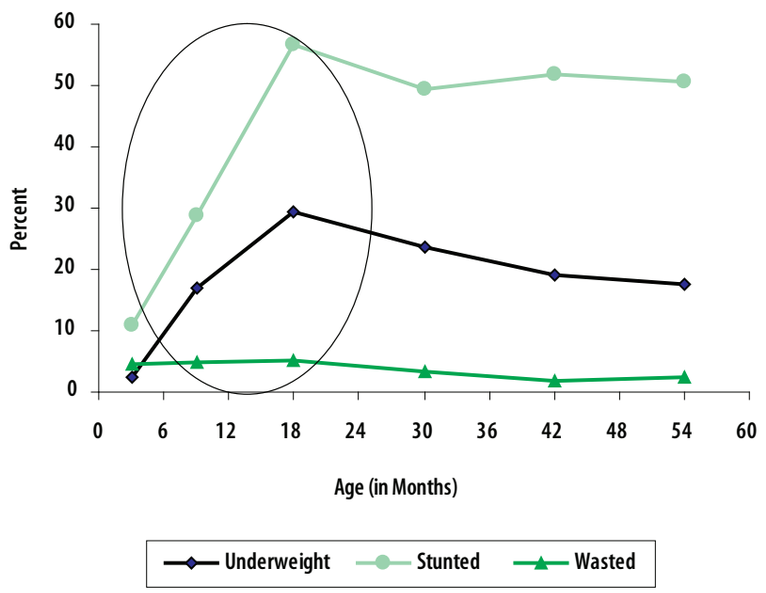
Background characteristic	Weight-for-age (Underweight)		Height-for-age (Stunting)		Weight-for-height (Wasting)		Weight-for-height: % above +2 SD (Overweight)	Number of children
	% below - 2 SD	% below -3 SD	% below - 2 SD	% below - 3 SD	% below - 2 SD	% below - 3 SD		
Sex								
Male	21.5	3.9	47.4	21.7	3.9	0.6	5.6	10,122
Female	19.5	3.3	44.5	19.4	3.1	0.4	6.5	10,283
Age								
< 6 months	2.4	0.2	11.0	2.6	4.6	0.9	16.1	1,726
6–11 months	16.9	2.7	28.8	8.2	4.7	0.7	9.9	2,423
12–23 months	29.3	6.3	56.7	26.8	5.3	0.7	6.4	4,552
24–35 months	23.5	4.1	49.3	21.7	3.2	0.3	3.4	4,624
36–47 months	19.1	2.7	51.8	24.7	1.7	0.3	3.4	4,095
48–59 months	17.7	2.9	50.7	23.7	2.3	0.4	4.4	2,984
Mother's education								
None	24.1	4.3	49.7	23.7	3.6	0.5	5.9	4,780
Primary	20.4	3.6	46.6	20.6	3.3	0.5	6.0	13,360
Secondary +	13.2	2.5	33.9	13.3	4.5	0.7	6.9	2,210
Other	22.0	2.3	49.1	12.3	2.5	0.0	2.6	54
Wealth index quintile								
Lowest	24.6	4.9	50.2	22.9	4.0	0.6	5.7	4,493
Second	20.0	3.7	49.2	22.2	2.6	0.3	6.7	4,143
Middle	21.1	3.5	46.7	20.8	3.2	0.6	5.9	4,139
Fourth	19.9	3.3	45.7	20.8	4.3	0.5	6.4	3,765
Highest	16.2	2.6	37.1	15.3	3.7	0.6	5.5	3,864

There are substantial differences in nutritional status across the 26 districts of the country. Children in Dedza, Nsanje and Lilongwe districts have the highest underweight rates of above 24 percent with the lowest rates in Karonga district (13 percent). Almost half of children under five in seven districts, that is, Dedza, Ntcheu, Ntchisi, Mchinji, Machinga, Mwanza and Zomba, are stunted with a high prevalence of severe stunting as well. Surprisingly, Karonga, Nkhata Bay, Chikwawa, Chiradzulu and Lilongwe have wasting rates above 5 percent, with Blantyre district registering the lowest rate of 1 percent (Map 6.1).

Boys appear more likely to be underweight, stunted, and wasted than girls, though the difference is not significant. Those children whose mothers received secondary or higher education are the least likely to be underweight and stunted compared to children of mothers with no education. Although the top wealth index quintile has a third less children who are underweight and a quarter less children who are stunted than the bottom quintile, a mother's education and behaviour as well as the child's residential environment are more influential factors to cause malnutrition. This concurs well with findings from industrialised countries where malnutrition is less likely to result from insufficient food than from unhealthy diets dominated by inappropriate food choices and lifestyle practices.

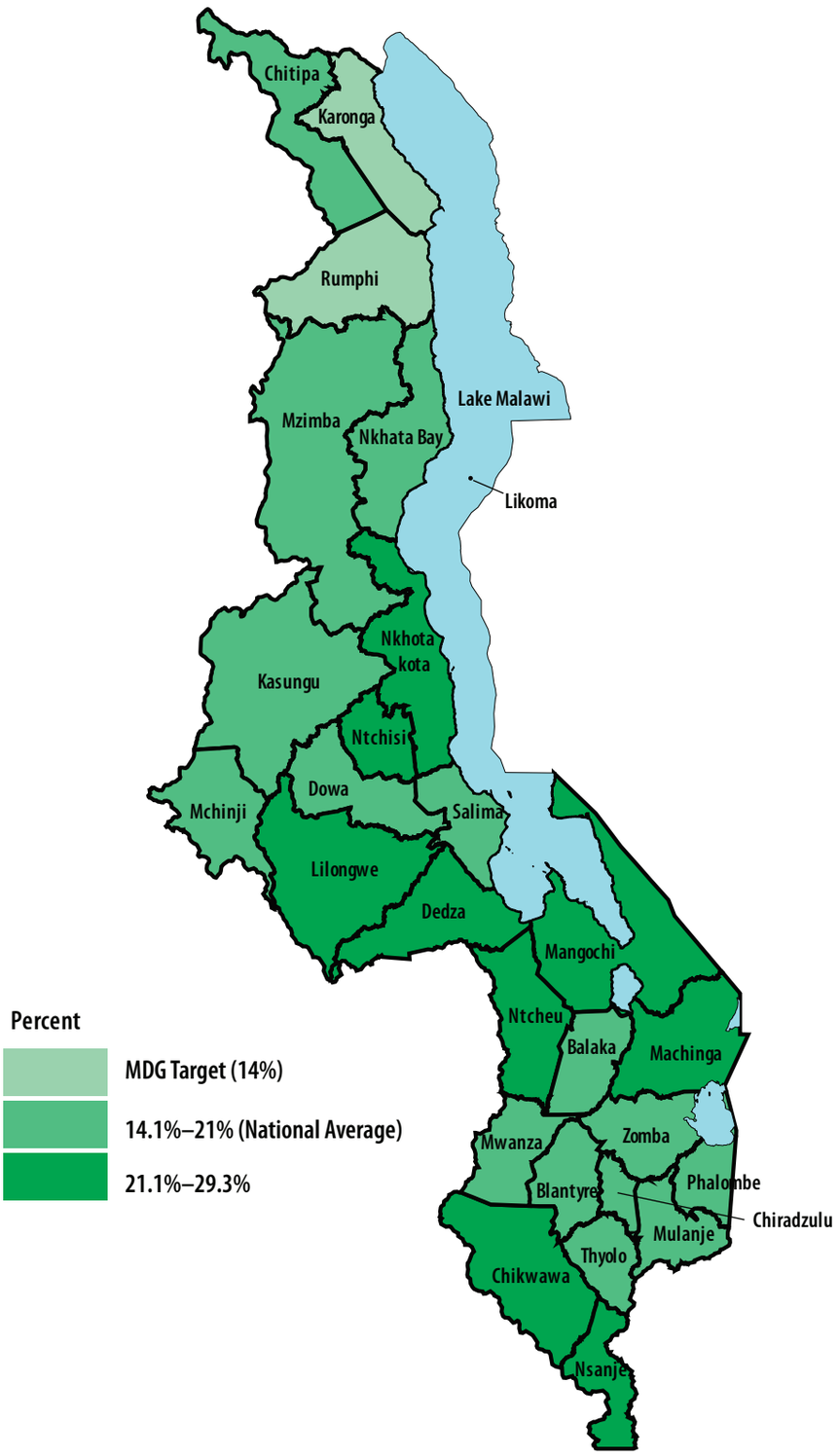
Figure 6.1 shows the percentage of children under five who are stunted, wasted and underweight, by age in months. The prevalence of all the three indicators is lowest among infants under six months of age but highest in the 12–23 months age group. The extent of underweight and stunting is lowest for children of less than six months of age, then it increases exponentially from six months and reaches the peak at age of 12–23 months (29 percent and 57 percent respectively).

Figure 6.1
Percentage of under-five children undernourished according to age pattern, Malawi, 2006



Map 6.1

Prevalence of underweight (moderate and severe), Malawi, 2006



MICS 2006 shows high levels of wasting in children aged 12–23 months (5 percent) and the lowest between those aged 36–47 months (2 percent). The important thing here is the age at which children become malnourished – from three months (or perhaps even from birth) onwards, peaking at 18 months. Yet most nutrition programmes target children over two years of age when damage has already been done.

The age pattern shows that deterioration in nutritional status begins within the first two years of life, according to all the three indices (Figure 6.1). This pattern is related to factors such as the initiation of complementary feeding before the sixth month of life, inadequate and micronutrient deficient complementary foods plus exposure to infections through water, food and the environment.

The findings clearly indicate that children aged between 12–23 months are more prone to malnutrition than the other under-five age groups. Levels of underweight and wasting drop significantly after 23 months unlike the level of stunting, which remains constantly high as recovery of height is not possible while weight deficit is.

6.2 BREASTFEEDING

Breastmilk is the best food and drink for a baby and should be the only food given during the first six months. It provides essential nutrients up to two years of age and beyond. During the first few years of life, breastfeeding protects children from infections, provides an ideal source of nutrients and is economical. However, many mothers stop breastfeeding too soon in the face of pressures to switch to complementary feeding, which traditionally comprises of thin plain porridge. The energy and nutrient density in porridge is low and can contribute to growth faltering and micronutrient malnutrition. The Ministry of Health, in line with other global initiatives such as WFFC, promotes exclusive breastfeeding during the first six months of life and continued breastfeeding with safe, appropriate and adequate complementary feeding for up to two years of age and beyond.

6.2.1 Initiation of breastfeeding

Early initiation of breastfeeding determines the successful establishment and duration of breastfeeding. It is recommended that a baby should be put to the breast immediately or within an hour of birth. This stimulates production of breastmilk and colostrum, the first breastmilk. Both are an important source of nutrients and antibodies, providing immunity before the baby's own immune system matures. Early initiation of breastfeeding also encourages bonding between the mother and the baby. Pre-lactal feeding (giving of liquids or foods other than breastmilk) prior to the establishment of regular breastfeeding exposes the newborn infant to infections as well as depriving him/her of the valuable nutrients and protection provided by colostrum and breastmilk.

Table 6.2a records the proportion of women who breastfed their infants within one hour of birth, as well as those who started breastfeeding within one day of birth (including starting within one hour). A high proportion of the children (94 percent) are reported to have been put to the breast within 24 hours of birth while only 58 percent are breastfed within the recommended one hour after birth.

Table 6.2a clearly shows significant differences across the districts. In Rumphi, 86 percent of children had been put to the breast within one hour of birth followed by Balaka, Blantyre, Thyolo and Chiradzulu where the rates are over 70 percent. The lowest rates are registered in Dedza (37 percent), followed by Chitipa and Zomba with 38 and 39 percents respectively.

Table 6.2a

Initial breastfeeding

Percentage of women aged 15–49 years with a birth in the 2 years preceding the survey who breastfed their baby within one hour of birth and within one day of birth, Malawi, 2006

Background characteristic	Percentage who started breastfeeding within one hour of birth	Percentage who started breastfeeding within one day of birth	Number of women with live birth in the two years preceding the survey
Malawi			
Total	58.3	93.5	10,552
Urban	65.2	95.7	1,507
Rural	57.1	93.2	9,045
Region			
Northern	59.2	93.2	1,035
Central	53.7	92.6	4,959
Southern	63.1	94.6	4,557
District			
Balaka	78.0	96.7	231
Blantyre	73.0	93.8	656
Chikwawa	50.1	95.0	391
Chiradzulu	70.9	93.2	196
Chitipa	38.1	95.6	139
Dedza	36.5	78.0	675
Dowa	69.7	96.9	427
Karonga	49.8	98.3	202
Kasungu	53.6	95.7	456
Lilongwe	49.0	95.5	1,907
Machinga	54.3	87.8	386
Mangochi	67.1	95.5	988
Mchinji	58.0	97.9	379
Mulanje	64.1	94.7	271
Mwanza	58.8	95.6	180
Mzimba	62.3	89.9	452
Nkhata Bay	61.2	92.2	118
Nkhotakota	63.1	96.6	200
Nsanje	69.0	98.0	191
Ntcheu	61.5	87.8	360
Ntchisi	60.7	94.0	139
Phalombe	54.8	90.7	226
Rumphi	85.5	95.1	123
Salima	68.9	92.2	417
Thyolo	71.3	94.8	458
Zomba	39.2	99.5	384

Table 6.2b

Initial breastfeeding

Percentage of women aged 15–49 years with a birth in the 2 years preceding the survey who breastfed their baby within one hour of birth and within one day of birth, Malawi, 2006

Background characteristic	Percentage who started breastfeeding within one hour of birth	Percentage who started breastfeeding within one day of birth	Number of women with live birth in the two years preceding the survey
Months since last birth			
< 6 months	56.8	93.6	2,436
6–11 months	60.5	94.4	2,812
12–23 months	58.3	93.6	4,964
Mother's education			
None	55.1	93.7	2,407
Primary	59.1	93.3	6,912
Secondary +	59.7	94.3	1,213
Other	63.6	95.6	20
Wealth index quintile			
Lowest	51.2	91.7	2,442
Second	57.0	92.4	2,225
Middle	59.5	95.2	2,164
Fourth	60.3	94.1	1,899
Highest	65.8	94.7	1,822

There are hardly any differences in timing of initiation of breastfeeding based on region of residence (Figure 6.2). Children born in urban areas are more likely to be breastfed within one hour of birth. The difference in the percentage between educated and uneducated women that started breastfeeding within one hour of birth is notable. Women in the top wealth index quintile are more likely to start breastfeeding within one hour of birth.

6.2.2 Age pattern of breastfeeding

The Ministry of Health, UNICEF and WHO recommend that children be exclusively breastfed on demand for the first six months of life. That is, fed on breastmilk only with no other liquids including water. Early introduction of other fluids and food reduces breastmilk intake, decreases absorption of nutrients from breastmilk, and increases the risk of common childhood diseases such as diarrhoea and acute respiratory infections.

Table 6.3 and figure 6.3 show the detailed breastfeeding pattern based on a child's age in months. Even within the early months, only 83 percent of infants aged 0–1 month, 61 percent aged 2–3 months and 26 percent aged 4–5 months are exclusively breastfed. This results in poor weight gain and increased infections, and probably contributes to the high post neonatal mortality rate.

Figure 6.2

Percentage of mothers who started breastfeeding within one hour and within one day of birth, Malawi, 2006

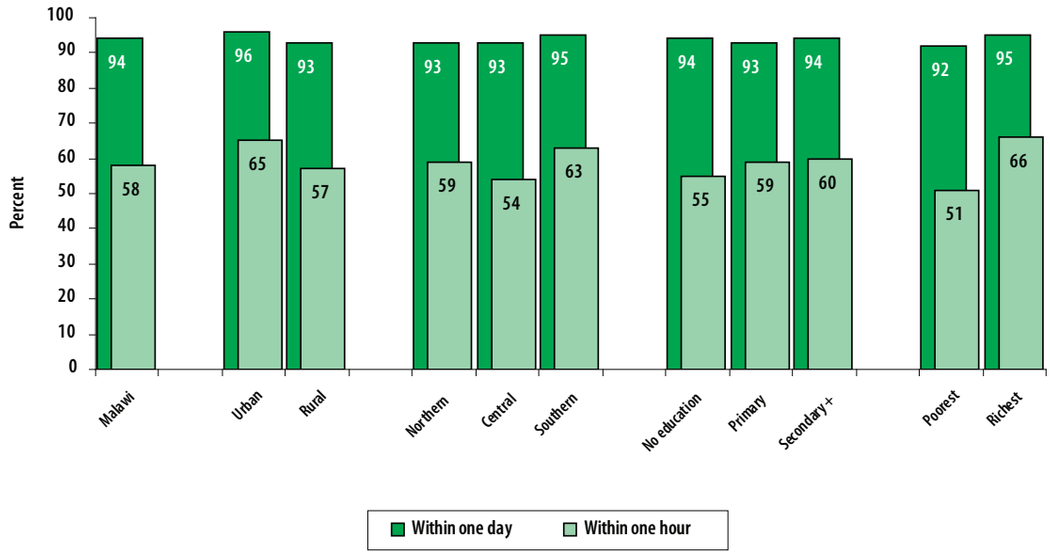
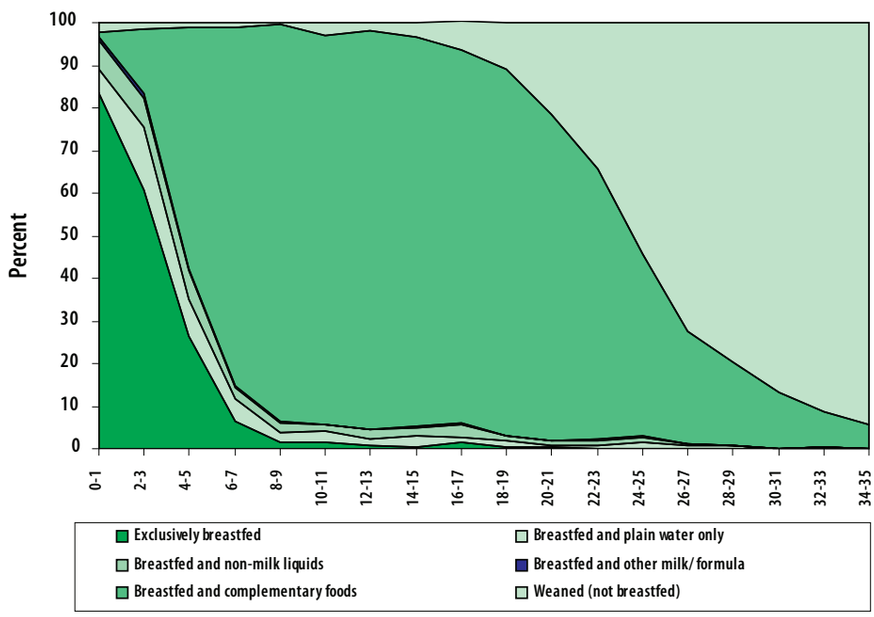


Figure 6.3

Infant feeding patterns by age: Percent distribution of children under 3 years by feeding pattern and age group, Malawi, 2006



It is also evident from table 6.3 that the duration of breastfeeding is about 24 months by which period 55 percent of the children are completely weaned from the breast. By end of 35 months practically all children have been weaned off. Formula is hardly used and hence insignificant (0.2 percent). In Malawi, the use of formula, particularly using a bottle with a nipple, is not recommended.

6.2.3 Breastfeeding status

The results on breastfeeding status presented in table 6.4a are based on mother/caretaker recall of their children's food and fluid consumption over 24 hours (previous day and night) prior to the interviews. The table shows exclusive breastfeeding of infants during the first six months of life (separately for 0–3 months and 0–5 months), as well as complementary feeding of children 6–9 months and continued breastfeeding of children at 12–15 and 20–23 months of age.

Table 6.3
Infant feeding patterns by age
Percent distribution of children aged under 3 years by feeding pattern and age group, Malawi, 2006

Age	Infant feeding pattern						Total	Number of children
	Exclusively breastfed	Breastfed and plain water only	Breastfed and non-milk liquids	Breastfed and other milk/ formula	Breastfed and complementary foods	Weaned (not breastfed)		
0–1	83.4	5.6	7.0	0.6	1.1	2.3	100.0	788
2–3	60.8	14.8	6.7	1.1	15.2	1.5	100.0	772
4–5	26.3	8.8	6.7	0.5	56.6	1.1	100.0	793
6–7	6.4	5.3	2.6	0.5	84.1	1.1	100.0	832
8–9	1.4	2.5	2.2	0.4	93.0	0.4	100.0	923
10–11	1.4	2.6	1.6	0.1	91.3	3.0	100.0	918
12–13	0.7	1.7	2.0	0.1	93.6	1.9	100.0	933
14–15	0.4	2.6	2.0	0.3	91.4	3.3	100.0	908
16–17	1.5	1.3	3.0	0.2	87.5	6.7	100.0	830
18–19	0.2	1.7	1.3	0.0	85.8	10.9	100.0	799
20–21	0.2	0.6	1.0	0.0	76.8	21.3	100.0	814
22–23	0.0	0.8	1.1	0.3	63.4	34.4	100.0	795
24–25	0.1	1.5	1.1	0.3	42.5	54.6	100.0	852
26–27	0.0	0.9	0.4	0.0	26.4	72.4	100.0	918
28–29	0.0	0.6	0.1	0.0	19.5	79.8	100.0	886
30–31	0.0	0.0	0.0	0.0	13.3	86.6	100.0	826
32–33	0.2	0.0	0.0	0.0	8.3	91.5	100.0	792
34–35	0.0	0.1	0.0	0.0	5.6	94.3	100.0	753
Total	**9.5**	**2.8**	**2.1**	**0.2**	**54.2**	**31.1**	**100.0**	**15,133**

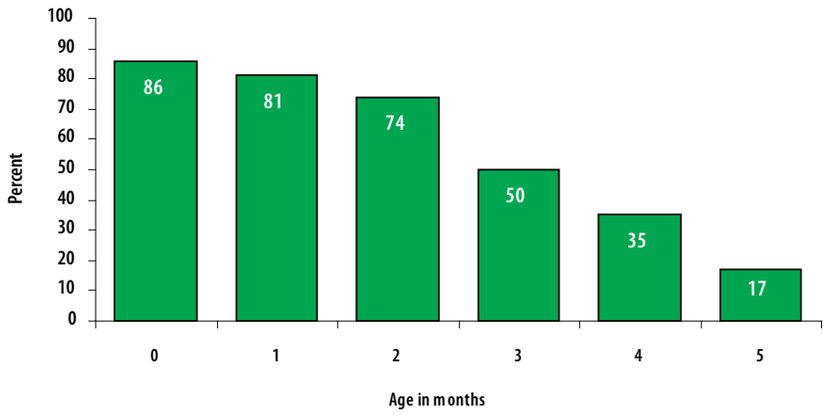
In table 6.4a 'exclusively breastfed' refers to infants who received only breastmilk (vitamins and mineral supplements or medicines may be taken). The results reveal that exclusive breastfeeding is not fully practised, as only 72 percent of 0–3 month old infants are exclusively breastfed and the highest proportion is for children from Kasungu (87 percent) while the lowest is from Karonga (42 percent). For all of the infants under six months of age (0–5 month category), only 57 percent are exclusively breastfed. Phalombe registers the highest proportion of 72 percent while Mwanza registers the lowest with only 36 percent. It follows that the proportion of infants that are exclusively breastfed significantly declines after as soon as the first month of life, as also shown in figure 6.3.

National exclusive breastfeeding rates of 72 for 0–3 months and 57 percent for 0–5 months show a steady improvement since 1990, when exclusive breastfeeding for the first four months was only 3 percent. This can be attributed to the increased emphasis by the Ministry of Health for all health facilities to attain the Baby Friendly Hospital Initiative. However, more attention is needed in those districts like Karonga, Mchinji and Mwanza where exclusive breastfeeding rates are less than 50 percent (Map 6.2).

Infants from the Northern Region (52 percent) are less likely to be exclusively breastfed than those from the Central Region (56 percent) and the Southern Region (59 percent) for the first six months. Likewise, urban children (68 percent) are more likely to be exclusively breastfed than those from rural areas (55 percent). This may be related to a combination of higher levels of mother's education and the fact that some urban households are in the highest income quintile. There are no differences on breastfeeding practices between boys and girls but significant differences are seen between wealthy families, with a 63 percent exclusive breastfeeding rate, and the poorest families, with an exclusive breastfeeding rate of 51 percent (Table 6.4b). Mothers with secondary education and higher are more likely to exclusively breastfeed their children (62 percent) compared to mothers with no education (57 percent).

Presented in figure 6.4 is the proportion of children aged below six months who are exclusively breastfed at the time of the survey, by age. The results show that exclusive breastfeeding declines

Figure 6.4
Proportion of children aged below 6 months who were exclusively breastfed by age, Malawi, 2006



Map 6.2

Exclusive breastfeeding rate (6 months), Malawi, 2006

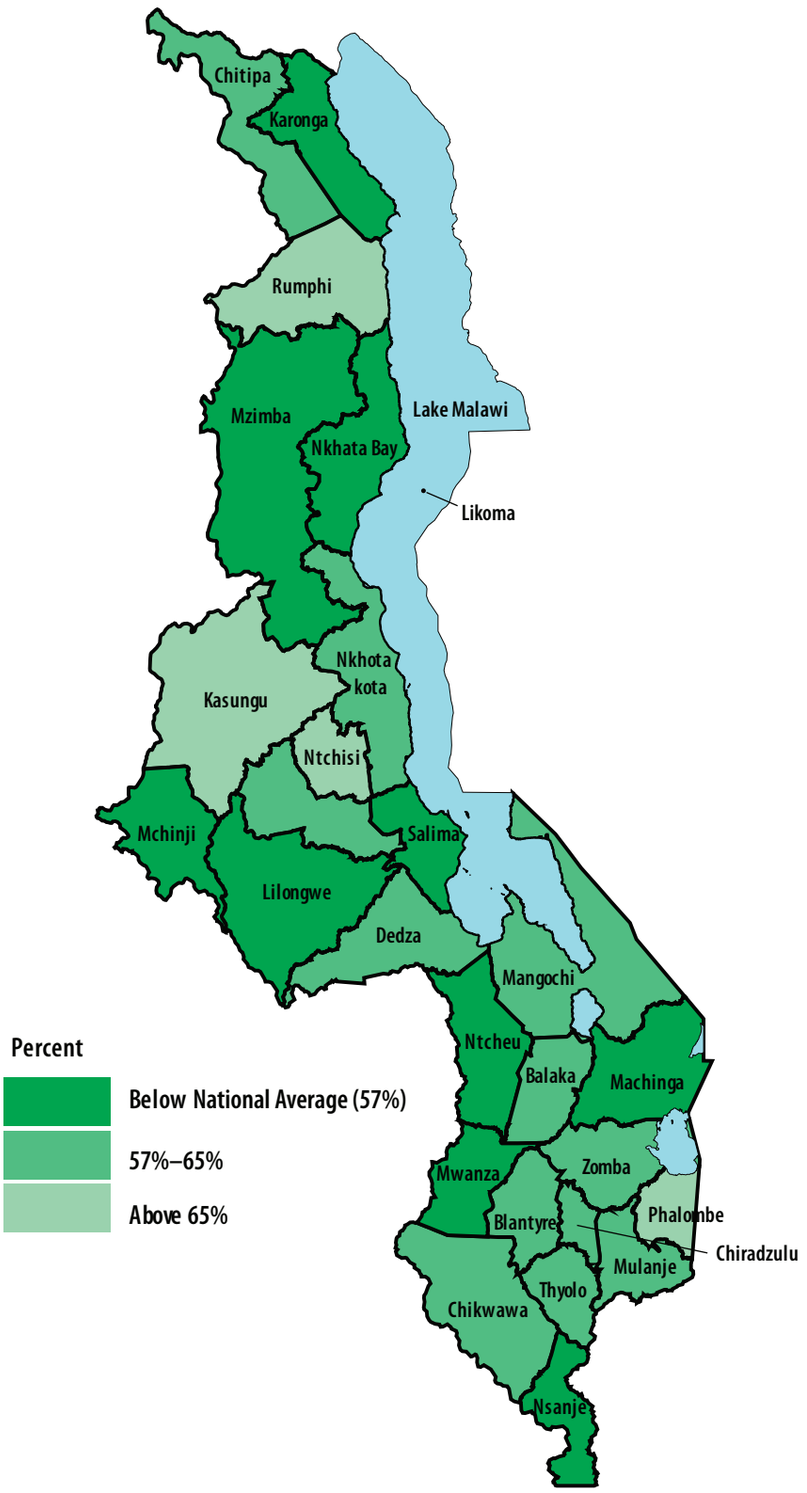


Table 6.4a

Breastfeeding status

Percent of living children according to breastfeeding status by each age group, Malawi, 2006

Background characteristic	Children 0–3 months		Children 0–5 months		Children 6–9 months		Children 12–15 months		Children 20–23 months	
	Percent exclusively breastfed	Number of children	Percent exclusively breastfed	Number of children	Percent receiving breastmilk and solid/ mushy food	Number of children	Percent breastfed	Number of children	Percent breastfed	Number of children
Malawi										
Total	72.2	1,560	56.7	2,353	88.8	1,755	97.4	1,841	72.2	1,609
Urban	80.0	272	68.2	356	88.8	311	95.9	246	62.6	266
Rural	70.5	1,288	54.7	1,997	88.7	1,444	97.6	1,596	74.1	1,343
Region										
Northern	62.0	148	51.6	220	84.8	158	97.4	171	76.3	175
Central	72.5	733	55.7	1,090	88.5	848	98.2	857	73.0	752
Southern	74.1	679	58.9	1,043	89.9	748	96.6	814	70.3	682
District										
Balaka	74.0	32	60.0	51	86.8	36	99.0	43	71.4	34
Blantyre	78.1	117	58.6	169	91.4	117	91.2	102	(66.1)	96
Chikwawa	67.7	72	57.8	106	93.5	69	96.3	65	(84.9)	38
Chiradzulu	71.4	27	58.9	42	88.1	25	98.6	35	74.7	27
Chitipa	71.5	22	63.4	30	65.9	20	97.8	26	71.0	22
Dedza	79.1	91	64.9	133	85.5	80	98.7	152	75.1	101
Dowa	79.8	64	61.4	95	93.6	74	99.2	61	76.0	64
Karonga	42.0	30	41.1	48	82.5	37	97.0	30	66.9	34
Kasungu	86.9	67	67.1	104	79.9	66	98.0	77	78.4	74
Lilongwe	74.2	295	53.9	441	88.3	394	99.3	305	69.8	291
Machinga	64.9	56	48.0	87	84.1	69	98.4	64	70.5	56
Mangochi	81.9	136	61.8	229	92.8	176	95.2	197	63.2	148
Mchinji	48.8	58	42.1	90	(78.5)	43	98.0	70	67.7	56
Mulanje	(71.6)	43	64.6	58	(93.5)	41	96.5	54	(74.5)	40
Mwanza	48.4	24	36.2	37	93.6	27	96.0	28	74.1	28
Mzimba	59.0	60	45.9	84	90.2	62	98.4	77	80.3	78
Nkhata Bay	(69.7)	16	54.7	26	(78.9)	16	91.2	19	82.7	21
Nkhotakota	74.2	29	60.5	42	88.0	32	93.3	41	68.3	27
Nsanje	73.3	23	56.2	37	84.4	30	100.0	31	84.7	31
Ntcheu	70.7	56	55.7	75	91.9	57	96.9	67	79.1	55
Ntchisi	81.8	15	65.9	25	83.1	21	98.2	25	85.4	26
Phalombe	82.1	32	72.1	45	94.2	39	99.4	35	70.5	40
Rumphi	85.2	19	68.6	32	94.1	23	100.0	18	76.1	21
Salima	51.2	58	39.7	85	98.9	81	95.1	60	71.0	58
Thyolo	73.0	68	63.1	105	(77.4)	57	98.7	95	74.3	89
Zomba	(76.1)	48	58.0	77	91.4	63	99.0	66	64.7	57

Note: Figures in parantheses are based on 25–49 unweighted cases.

gradually and significantly by the fourth month of age. By the end of the fifth month, the percentage of children exclusively breastfed is 17 percent. The early introduction of complimentary foods exposes these infants to pathogens and accounts for the high incidence of diarrhoeal disease, as well as the precipitous fall in nutritional status that starts by the age of six months and continues throughout the first two years of life.

Optimal infant and young child feeding practices include continued and frequent on-demand breastfeeding for children aged 6–23 months and beyond. Continued breastfeeding is important for older infants (6–11 months) as well as for young children (12 months and older). For older infants, breastmilk remains an important source of energy, protein, micronutrients particularly Vitamin A, Vitamin C and essential fatty acids while for young children, breastmilk can provide as much as 35–40 percent of total energy needs.

Tables 6.4a and 6.4b also give indication of the proportions of children aged 6–23 months receiving breastmilk and other foods. At age 6–9 months, 89 percent of children are receiving breastmilk and solid or semi-solid foods. By age 12–15 months, 97 percent of children (all children in Nsanje and

Table 6.4b

Breastfeeding status

Percent of living children according to breastfeeding status by each age group, Malawi, 2006

Background characteristic	Children 0–3 months		Children 0–5 months		Children 6–9 months		Children 12–15 months		Children 20–23 months	
	Percent exclusively breastfed	Number of children	Percent exclusively breastfed	Number of children	Percent receiving breastmilk and solid/ mushy food	Number of children	Percent breastfed	Number of children	Percent breastfed	Number of children
Sex										
Male	72.8	760	58.3	1,114	88.7	900	97.8	926	70.5	788
Female	71.6	800	55.3	1,239	88.8	855	97.0	916	73.9	821
Mother's education										
None	72.5	338	57.3	513	89.9	451	95.2	399	72.0	374
Primary	71.1	1,007	55.4	1,533	87.8	1,094	98.4	1,221	72.5	1,047
Secondary +	76.8	213	62.2	304	91.3	202	95.8	219	71.3	185
Other	78.5	2	65.7	3	89.0	8	100.0	2	73.9	3
Wealth index quintile										
Lowest	68.2	348	50.7	552	89.2	394	98.1	450	83.3	332
Second	74.5	299	54.7	484	84.3	376	97.5	354	70.7	362
Middle	64.2	320	53.3	475	91.2	369	97.6	412	69.0	297
Fourth	76.4	294	64.6	412	90.2	279	97.0	330	70.1	353
Highest	79.0	298	63.0	430	89.3	336	96.4	296	66.9	265

Rumphi) continue to be breastfed. A significant proportion of the children are completely weaned off the breast by age 20–23 months, with only 72 percent still being breastfed in combination with solid and semi-solid foods. The likelihood of a child being completely weaned off the breast by 23 months is higher in urban areas (only 63 percent still being breastfed), compared to 74 percent of rural children who are still being breastfed.

6.2.4 Adequately fed infants

The information on adequacy of infant feeding in children less than 12 months is provided in tables 6.5a and 6.5b. Different criteria for assessing adequacy of feeding are used depending on the age of the child. For infants aged 0–5 months, exclusive breastfeeding is considered as adequate feeding. Infants aged 6–8 months are considered to be adequately fed when they are receiving breastmilk on demand and complementary food at least two times per day, while infants aged 9–11 months are considered to be adequately fed when they are receiving breastmilk and eating complementary food at least three times a day.

Table 6.5a shows that only 57 percent of infants less than 6 months are adequately and appropriately fed. The results also show that 70 percent of infants aged 6–8 months and 44 percent of those aged 9–11 months are adequately fed. Overall, only 56 percent of the infants aged 6–11 months or 0–11 months are adequately fed. This dilemma is contributing to a steady increase in the proportion of infants that become malnourished with increasing age.

There are wide variations and inconsistencies among the districts. In Salima, only 40 percent of infants below six months are adequately fed compared to 85 percent of those aged 6–8 months. Likewise in Chitipa, 63 percent of children aged 0–5 months receive adequate feeding compared to only 43 percent of those aged 6–8 months. The variations and inconsistencies indicate inadequacies that exist in knowledge and practices in appropriate infant feeding. Children of mothers with secondary school education consistently show higher rates of feeding frequency than the mean for all the age groups (62 percent against 57 percent for infants aged 0–5 months; 72 percent against 65 percent for infants aged 6–8 month and 61 percent against 40 percent for infants in the 9–11 month age group).

In general, except for those in the 9–11 month age category, urban infants are more likely to be adequately fed than those living in rural areas. Rates displayed within wealth index quintiles are equally inconsistent, indicating that appropriate feeding may not necessarily be associated with having money.

Table 6.5a

Adequately fed infants

Percentage of infants under 6 months of age exclusively breastfed, percentage of infants 6–11 months who are breastfed and who ate solid/semi-solid food at least the minimum recommended number of times yesterday and percentage of infants adequately fed, Malawi, 2006

Background characteristic	0–5 months exclusively breastfed	6–8 months who received breastmilk and complementary food at least 2 times in prior 24 hours	9–11 months who received breastmilk and complementary food at least 2 times in prior 24 hours	6–11 months who received breastmilk and complementary food at least the minimum recommended number of times per day	0–11 months who were appropriately fed	Number of infants aged 0–11 months
Malawi						
Total	56.7	69.5	43.7	55.7	56.2	5,026
Urban	68.2	73.8	43.5	59.6	63.6	759
Rural	54.7	68.6	43.7	55.0	54.8	4,267
Region						
Northern	51.6	69.2	56.9	62.8	57.6	470
Central	55.7	67.3	38.9	52.4	53.9	2,363
Southern	58.9	72.3	45.9	57.7	58.3	2,192
District						
Balaka	60.0	65.4	50.4	58.0	59.0	103
Blantyre	58.6	78.0	37.7	56.0	57.3	348
Chikwawa	57.8	77.8	44.3	62.5	59.9	196
Chiradzulu	58.9	77.4	48.5	58.2	58.5	87
Chitipa	63.4	43.0	21.8	32.4	47.2	63
Dedza	64.9	54.8	33.3	40.0	51.7	284
Dowa	61.4	60.2	40.6	48.2	54.0	214
Karonga	41.1	64.6	48.4	57.1	49.4	99
Kasungu	67.1	65.2	42.1	51.8	59.5	206
Lilongwe	53.9	66.9	31.6	51.5	52.6	971
Machinga	48.0	66.4	44.1	53.2	50.9	195
Mangochi	61.8	66.1	46.8	55.9	58.6	493
Mchinji	42.1	73.3	54.6	62.0	51.6	172
Mulanje	64.6	75.6	20.0	43.5	53.3	124
Mwanza	36.2	67.4	19.3	38.0	37.2	85
Mzimba	45.9	78.4	69.2	72.8	61.2	196
Nkhata Bay	54.7	63.1	56.1	60.1	57.2	50
Nkhotakota	60.5	70.5	48.6	59.3	59.9	87
Nsanje	56.2	67.4	38.0	52.4	54.1	83
Ntcheu	55.7	66.2	43.7	54.7	55.2	168
Ntchisi	65.9	62.6	52.3	56.6	60.5	59
Phalombe	72.1	75.2	43.8	57.1	63.7	102
Rumphi	68.6	81.2	52.8	71.2	69.9	62
Salima	39.7	84.8	46.6	64.7	54.2	203
Thyolo	63.1	70.6	62.7	65.5	64.3	204
Zomba	58.0	82.1	79.7	80.9	70.8	173

Table 6.5b

Adequately fed infants

Percentage of infants under 6 months of age exclusively breastfed, percentage of infants 6–11 months who are breastfed and who ate solid/semi-solid food at least the minimum recommended number of times yesterday and percentage of infants adequately fed, Malawi, 2006

Background characteristic	0–5 months exclusively breastfed	6–8 months who received breastmilk and complementary food at least 2 times in prior 24 hours	9–11 months who received breastmilk and complementary food at least 2 times in prior 24 hours	6–11 months who received breastmilk and complementary food at least the minimum recommended number of times per day	0–11 months who were appropriately fed	Number of infants aged 0–11 months
Sex						
Male	58.3	71.1	41.2	55.9	57.0	2,443
Female	55.3	67.8	45.9	55.5	55.4	2,583
Mother's education						
None	57.3	65.1	39.6	51.5	54.0	1,178
Primary	55.4	70.8	42.5	55.3	55.4	3,238
Secondary +	62.2	72.2	61.4	67.0	64.6	599
Other	65.7	66.1	0.0	66.1	66.0	11
Wealth index quintile						
Lowest	50.7	68.0	34.9	50.6	50.6	1,163
Second	54.7	63.8	45.6	53.8	54.2	1,052
Middle	53.3	74.9	45.0	58.9	56.3	1,039
Fourth	64.6	69.4	40.3	52.7	58.3	864
Highest	63.0	71.9	54.9	63.4	63.2	907

6.3 MICRONUTRIENTS

Over the last few years, there has been a growing interest in micronutrient nutrition. One of the main reasons for this is the realisation that the prevalence of micronutrient malnutrition continues to be high and that effective interventions exist to virtually eliminate it. While micronutrient deficiencies are certainly found to be more frequent and severe among disadvantaged people, they also contribute to public health problems in some industrialised countries.

In 2000, the *World Health Report* identified deficiencies in iodine, iron, Vitamin A and zinc to be among the world's most serious health risk factors. In addition to the more obvious clinical manifestations, micronutrient malnutrition is responsible for a wide range of non-specific physiological impairments, leading to reduced resistance to infections, metabolic disorders and delayed or impaired physical, mental and psychomotor development. The public health implications of micronutrient malnutrition are potentially huge and are especially significant when it comes to designing strategies for the prevention and control of chronic diseases related to diet.

The micronutrient disorders that currently constitute a public health concern in Malawi are deficiencies of Vitamin A, iodine and iron/folate. The only national micronutrient survey conducted in 2001 revealed that 59 percent of children under five, 57 percent of non-pregnant women, 38 percent of school aged children and 37 percent of men had sub-clinical Vitamin A deficiency. In addition, 80 percent of children under five, 27 percent of non-pregnant women, 22 percent of school aged children and 17 percent of men were found to have anaemia (MOHP, NSO, UNICEF, CDC, 2003).

Deficiencies of key vitamins and minerals continue to be pervasive and they overlap considerably with problems of general undernutrition (underweight and stunting). Hence, in MICS 2006, data were collected to assess Vitamin A supplementation coverage, iodine status in household salt, storage of salt at home, knowledge of iodised salt and source of information for iodised salt.

6.3.1 Vitamin A supplementation

Vitamin A is essential for good vision, proper functioning of the immune system, growth, development and reproduction. It is found in foods such as milk, liver, eggs, red and orange fruits, red palm oil and green leafy vegetables. The amount of Vitamin A readily available to the body from these sources varies widely. Vitamin A Deficiency Disorders (VADD) is the comprehensive term covering the effects of the deficiency. Vitamin A supplements have been shown to improve immunity and to significantly reduce mortality in infants and young children.

The Ministry of Health's policy with this regard is to supplement children aged 6 to 59 months with a Vitamin A capsule once every six months. Vitamin A supplementation is linked to immunisation services and Vitamin A is given when the child has contact with these services after six months of age. It is also recommended that mothers take a Vitamin A supplement within eight weeks of giving birth due to increased micronutrient requirements during pregnancy and lactation, as well as to provide adequate Vitamin A to their infants in breastmilk.

6.3.1.1 Vitamin A supplementation among children under five

Table 6.6a shows that 69 percent of children aged 6–59 months received a Vitamin A supplement six months prior to the survey. Approximately 16 percent did not receive the supplement within the last six months but did receive one prior to that time. About 8 percent of children received a Vitamin A supplement at some time in the past but their mother/caretaker was unable to specify when. Only 7 percent of children never received Vitamin A. The coverage of Vitamin A supplementation was reported higher in the Southern Region (72 percent) where, compared to other regions, coverage was higher on child health days. There were no differences between urban and rural children in terms of the proportion who had received Vitamin A supplements in the last six months prior to MICS 2006.

The age pattern of Vitamin A supplementation shows that supplementation in the six months prior to the survey rose from 71 percent among children aged 6–11 months to 76 percent among children aged 12–23 months and then declined steadily with age to 58 percent among the oldest children (Table 6.6b). The coverage of Vitamin A supplementation declines after the child's second year of life, reflecting the decline in attendance of older children at growth monitoring and promotion centres. However, earlier ages are of greater importance as the child is more susceptible to illness

Table 6.6a

Children's Vitamin A supplementation

Percent distribution of children aged 6–59 months by whether they received a high dose Vitamin A supplement in the last 6 months, Malawi, 2006

Background characteristic	Percent of children who received Vitamin A:							Total	Number of children aged 6–59 months
	Within last 6 months	Prior to last 6 months	Not sure when	Total received	Not sure if received	Never received Vitamin A	Missing		
Malawi									
Total	68.5	15.6	8.3	92.4	0.7	6.9	0.1	100.0	20,641
Urban	67.7	16.6	9.3	93.6	0.7	5.7	0.1	100.0	3,011
Rural	68.6	15.5	8.1	92.2	0.6	7.1	0.1	100.0	17,631
Region									
Northern	65.5	13.9	13.7	93.1	1.4	5.5	0.0	100.0	2,095
Central	65.7	17.0	9.2	91.9	0.6	7.5	0.0	100.0	9,479
Southern	72.0	14.6	6.2	92.8	0.5	6.5	0.2	100.0	9,068
District									
Balaka	82.0	8.6	4.0	94.6	0.3	5.0	0.1	100.0	448
Blantyre	78.2	6.2	6.6	91.0	0.9	8.0	0.1	100.0	1,358
Chikwawa	73.5	17.3	5.9	96.7	0.2	2.8	0.3	100.0	695
Chiradzulu	72.4	9.6	10.2	92.2	0.2	7.5	0.1	100.0	391
Chitipa	64.2	9.0	20.6	93.8	0.7	5.4	0.0	100.0	283
Dedza	66.3	11.4	9.3	87.0	0.0	13.0	0.0	100.0	1,211
Dowa	58.7	19.7	5.6	84.0	0.3	15.8	0.0	100.0	848
Karonga	73.0	9.1	12.4	94.5	1.6	3.9	0.0	100.0	402
Kasungu	59.5	26.4	7.5	93.4	0.8	5.8	0.0	100.0	922
Lilongwe	64.0	18.0	11.2	93.2	0.8	6.0	0.0	100.0	3,524
Machinga	77.4	6.5	8.3	92.2	0.4	7.2	0.2	100.0	784
Mangochi	58.7	23.7	8.7	91.1	0.9	7.7	0.4	100.0	1,957
Mchinji	78.1	12.6	3.8	94.5	0.4	5.0	0.0	100.0	771
Mulanje	64.0	26.3	2.2	92.5	0.6	6.9	0.0	100.0	575
Mwanza	81.9	9.3	4.2	95.4	0.3	4.3	0.1	100.0	375
Mzimba	64.6	15.5	13.2	93.3	1.9	4.8	0.0	100.0	910
Nkhata Bay	59.5	19.2	17.1	95.8	0.7	3.4	0.1	100.0	244
Nkhotakota	62.5	21.4	7.7	91.6	1.3	7.2	0.0	100.0	388
Nsanje	79.7	11.1	4.1	94.9	0.0	5.1	0.0	100.0	366
Ntcheu	67.4	8.0	18.9	94.3	1.3	4.4	0.0	100.0	719
Ntchisi	70.8	20.1	3.3	94.2	0.3	5.6	0.0	100.0	270
Phalombe	56.2	21.6	10.2	88.0	0.5	11.3	0.2	100.0	434
Rumphi	64.4	15.7	6.5	86.6	0.7	12.7	0.0	100.0	255
Salima	73.3	16.5	4.8	94.6	0.0	5.2	0.1	100.0	826
Thyolo	75.6	14.9	5.0	95.5	0.7	3.9	0.0	100.0	909
Zomba	84.2	9.6	0.2	94.0	0.1	5.8	0.0	100.0	775

then and diet is also more limited. Table 6.6b also shows that neither maternal education nor wealth affect the likelihood of a child receiving Vitamin A.

Table 6.7a shows that half of the children receive a Vitamin A supplement during routine visits to health facilities and 44 percent during national campaigns or child health days. There is a sharp decline in children receiving routine Vitamin A supplements between those aged 6–11 months and those aged 48–59 months (Table 6.7b). The role played by child health days may be quite significant for Vitamin A supplementation in children under five. This is particularly so for those aged 12–59 months as indicated by the sharp increase in routine supplementation. Districts display significant variations in their routine Vitamin A supplementation, ranging from above 70 percent (Mzimba, Chikwawa and Ntchisi) to below 30 percent (Thyolo, Blantyre, Chiradzulu and Machinga). This gives a clear indication of priorities for improvement in health services in these districts (Map 6.3).

Variations in Vitamin A supplementation rates by mother's level of education, socio-economic status and the sex of the child are quite minimal (Table 6.7b)

Table 6.6b

Children's Vitamin A supplementation

Percent distribution of children aged 6–59 months by whether they received a high dose Vitamin A supplement in the last 6 months, Malawi, 2006

Background characteristic	Percent of children who received Vitamin A:							Total	Number of children aged 6–59 months
	Within last 6 months	Prior to last 6 months	Not sure when	Total Received	Not sure if received	Never received Vitamin A	Missing		
Sex									
Male	68.6	15.4	8.5	92.5	0.7	6.7	0.1	100.0	10,254
Female	68.3	15.9	8.1	92.3	0.6	7.1	0.1	100.0	10,387
Age									
6–11 months	71.1	4.1	2.5	77.7	0.2	21.9	0.2	100.0	2,673
12–23 months	76.0	11.2	5.4	92.6	0.2	7.0	0.1	100.0	5,080
24–35 months	70.3	17.5	7.8	95.6	0.5	3.9	0.1	100.0	5,027
36–47 months	64.5	19.8	11.0	95.3	1.0	3.6	0.0	100.0	4,540
48–59 months	57.5	23.2	14.4	95.1	1.3	3.6	0.0	100.0	3,322
Mother's education									
None	66.4	16.2	8.3	90.9	0.8	8.2	0.0	100.0	5,100
Primary	69.0	15.1	8.5	92.6	0.7	6.7	0.1	100.0	13,343
Secondary +	69.9	17.9	6.8	94.6	0.4	5.0	0.0	100.0	2,138
Other	68.0	9.4	13.1	90.5	0.0	9.5	0.0	100.0	61
Wealth index quintile									
Lowest	67.6	15.0	8.5	91.1	0.4	8.5	0.0	100.0	4,560
Second	68.1	14.7	9.6	92.4	0.4	7.2	0.0	100.0	4,202
Middle	69.6	15.5	7.4	92.5	0.8	6.6	0.1	100.0	4,262
Fourth	67.5	18.3	7.5	93.3	0.6	5.9	0.2	100.0	3,831
Highest	69.7	15.0	8.4	93.1	1.0	5.8	0.1	100.0	3,787

Map 6.3

Proportion of children 6–59 months who received a high dose vitamin A supplement within the last 6 months, Malawi, 2006

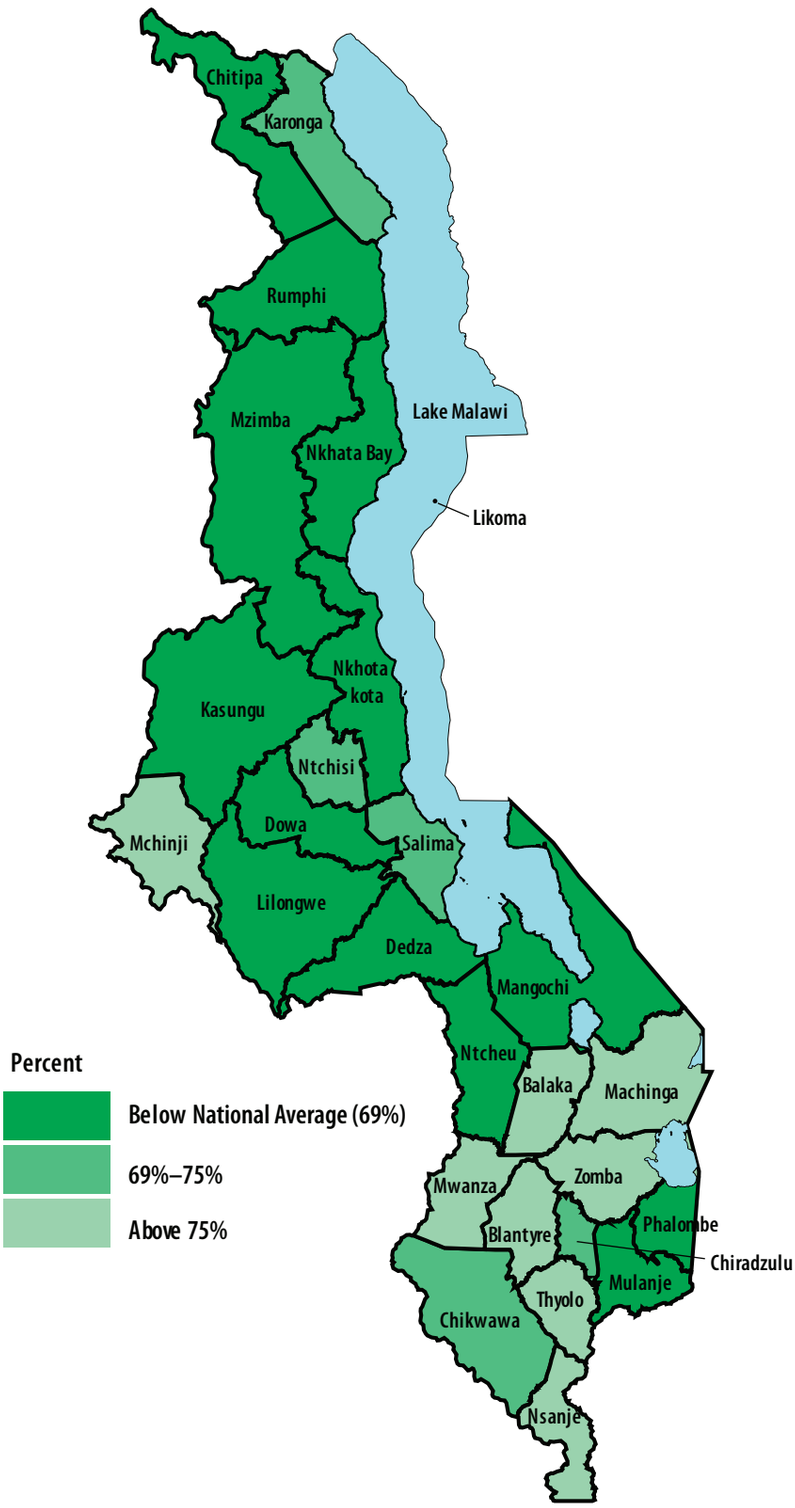


Table 6.7a

Source of children's Vitamin A supplementation

Percent distribution of children aged 6–59 months who ever received Vitamin A by source of last Vitamin A dose, Malawi, 2006

Background characteristic	Place child got last Vitamin A dose						Total	Number of children aged 6–59 months who ever received Vitamin A
	On routine visit to health centre	Sick child visit to health centre	National immunisation day campaign	Other	DK	Missing		
Malawi								
Total	50.4	4.0	43.6	1.8	0.1	0.1	100.0	19,088
Urban	46.2	1.9	51.2	0.4	0.1	0.2	100.0	2,818
Rural	51.1	4.3	42.3	2.1	0.1	0.1	100.0	16,270
Region								
Northern	63.8	1.4	34.3	0.2	0.1	0.2	100.0	1,950
Central	54.5	5.1	38.5	1.7	0.1	0.1	100.0	8,710
Southern	43.1	3.4	51.0	2.3	0.1	0.1	100.0	8,428
District								
Balaka	31.4	5.5	62.8	0.1	0.0	0.3	100.0	424
Blantyre	18.0	3.5	77.5	0.4	0.4	0.1	100.0	1,237
Chikwawa	70.1	1.2	28.2	0.1	0.1	0.2	100.0	675
Chiradzulu	29.6	1.1	68.9	0.4	0.0	0.0	100.0	361
Chitipa	54.9	1.1	43.6	0.3	0.1	0.0	100.0	265
Dedza	58.8	5.2	35.8	0.2	0.0	0.0	100.0	1,054
Dowa	47.4	5.7	46.5	0.2	0.1	0.0	100.0	712
Karonga	45.5	2.7	50.8	0.3	0.4	0.3	100.0	380
Kasungu	56.0	9.5	33.7	0.8	0.0	0.0	100.0	861
Lilongwe	53.0	3.3	39.7	3.7	0.1	0.2	100.0	3,285
Machinga	23.8	0.9	75.1	0.1	0.0	0.0	100.0	725
Mangochi	64.1	1.1	25.7	9.2	0.0	0.0	100.0	1,790
Mchinji	53.7	7.5	37.9	0.9	0.0	0.1	100.0	729
Mulanje	67.3	5.2	27.0	0.4	0.0	0.0	100.0	532
Mwanza	34.4	1.5	63.8	0.0	0.2	0.0	100.0	358
Mzimba	75.1	0.2	24.6	0.1	0.0	0.0	100.0	850
Nkhata Bay	60.4	4.9	33.5	0.0	0.2	1.0	100.0	234
Nkhotakota	53.7	2.5	42.7	0.9	0.2	0.0	100.0	355
Nsanje	60.8	0.7	37.9	0.4	0.0	0.3	100.0	348
Ntcheu	53.4	4.3	42.1	0.1	0.1	0.0	100.0	679
Ntchisi	74.4	2.7	21.1	1.5	0.1	0.3	100.0	254
Phalombe	54.1	19.2	25.2	1.3	0.0	0.3	100.0	383
Rumphi	66.0	0.4	33.3	0.2	0.0	0.0	100.0	221
Salima	55.8	7.2	36.8	0.2	0.0	0.0	100.0	782
Thyolo	25.5	3.4	70.1	0.7	0.1	0.1	100.0	868
Zomba	35.0	6.5	57.4	0.7	0.0	0.5	100.0	729

Table 6.7b

Source of children's Vitamin A supplementation

Percent distribution of children aged 6–59 months who ever received Vitamin A by source of last Vitamin A dose, Malawi, 2006

Background characteristic	Place child got last Vitamin A dose						Total	Number of children aged 6–59 months who ever received Vitamin A
	On routine visit to health centre	Sick child visit to health centre	National immunisation day campaign	Other	DK	Missing		
Sex								
Male	50.9	3.9	43.2	1.8	0.1	0.1	100.0	9,499
Female	50.0	4.0	44.0	1.8	0.1	0.1	100.0	9,589
Age								
6–11 months	72.2	5.5	21.0	1.3	0.0	0.1	100.0	2,082
12–23 months	59.5	3.6	35.3	1.5	0.0	0.1	100.0	4,713
24–35 months	48.5	3.6	46.2	1.5	0.1	0.2	100.0	4,803
36–47 months	41.5	4.1	51.6	2.4	0.2	0.1	100.0	4,331
48–59 months	37.7	3.9	55.9	2.2	0.2	0.1	100.0	3,159
Mother's education								
None	52.8	5.3	38.4	3.2	0.1	0.1	100.0	4,645
Primary	50.2	3.6	44.6	1.4	0.1	0.1	100.0	12,366
Secondary	46.4	2.7	49.3	1.1	0.2	0.3	100.0	2,023
Other	35.4	14.7	49.9	0.0	0.0	0.0	100.0	55
Wealth index quintile								
Lowest	55.8	4.0	37.4	2.5	0.1	0.1	100.0	4,153
Second	50.6	4.5	42.7	2.0	0.1	0.1	100.0	3,883
Middle	48.4	3.8	45.8	1.8	0.0	0.2	100.0	3,944
Fourth	49.9	4.5	43.8	1.6	0.1	0.1	100.0	3,580
Highest	46.6	3.0	49.2	1.0	0.2	0.1	100.0	3,529

6.3.1.2 Vitamin A supplementation among women

Pregnancy and lactation require extra Vitamin A and can strain a woman's nutritional status as well as her micronutrient stores. Providing Vitamin A supplements to postpartum mothers helps to boost and replenish these stores and ensures that babies receive adequate amounts of this vital micronutrient in breastmilk.

Table 6.8a shows that 46 percent of mothers aged 15–49 years in the two years prior to MICS 2006 received a Vitamin A supplement within eight weeks of the postnatal period. Supplementation is significantly higher in urban areas (53 percent), in the Northern Region (57 percent) and among women with more education (58 percent). Almost half of postpartum women are not receiving Vitamin A despite countrywide implementation of the supplementation programme. Variations among the districts are quite substantial, ranging from 27 percent (Phalombe) to 70 percent (Karonga). Greater efforts are needed to ensure that postpartum mothers receive Vitamin A supplements either at delivery or during their postpartum examination.

Table 6.8a

Post-partum mother's Vitamin A supplementation

Percentage of women aged 15–49 years with a birth in the two years preceding the survey whether they received a high dose Vitamin A supplement before the infant was 8 weeks old, Malawi, 2006

Background characteristic	Received Vitamin A supplement	Not sure if received Vitamin A	Number of women aged 15–49 years
Malawi			
Total	45.6	0.9	10,552
Urban	52.8	0.9	1,507
Rural	44.3	0.9	9,045
Region			
Northern	57.0	1.4	1,035
Central	43.5	1.0	4,959
Southern	45.2	0.7	4,557
District			
Balaka	39.1	1.3	231
Blantyre	50.7	0.4	656
Chikwawa	62.9	0.8	391
Chiradzulu	30.9	0.5	196
Chitipa	47.0	0.7	139
Dedza	31.3	1.4	675
Dowa	39.9	0.7	427
Karonga	69.7	1.5	202
Kasungu	48.0	0.5	456
Lilongwe	43.5	1.4	1,907
Machinga	46.4	0.2	386
Mangochi	31.6	1.1	988
Mchinji	61.9	0.8	379
Mulanje	50.0	0.9	271
Mwanza	61.5	1.8	180
Mzimba	53.4	1.7	452
Nkhata Bay	64.6	2.4	118
Nkhotakota	38.9	0.4	200
Nsanje	40.5	0.3	191
Ntcheu	38.2	1.5	360
Ntchisi	54.1	0.3	139
Phalombe	26.5	0.0	226
Rumphi	53.1	0.4	123
Salima	48.8	0.1	417
Thyolo	59.4	1.2	458
Zomba	47.7	0.0	384

Table 6.8b

Post-partum mother's Vitamin A supplementation

Percentage of women aged 15–49 years with a birth in the two years preceding the survey whether they received a high dose Vitamin A supplement before the infant was 8 weeks old, Malawi, 2006

Background characteristic	Received Vitamin A supplement	Not sure if received Vitamin A	Number of women aged 15–49 years
Education			
None	40.6	1.2	2,407
Primary	45.2	0.9	6,912
Secondary +	57.6	0.6	1,213
Other	41.5	0.0	20
Wealth index quintile			
Lowest	42.8	1.0	2,442
Second	43.9	1.0	2,225
Middle	44.2	0.4	2,164
Fourth	44.9	0.9	1,899
Highest	53.5	1.4	1,822

6.3.2 Iodine Status of household salt

The human body requires only about a teaspoon of iodine during the course of a life time but iodine cannot be stored in the body for long periods. Tiny and regular amounts are required for good health. Iodine Deficiency Disorders (IDD) are the world's leading cause of preventable mental retardation and impaired psychomotor development in young children, resulting in poor school performance, reduced intellectual ability and impaired work performance. In its most extreme form, iodine deficiency causes cretinism. Iodine deficiency is most commonly and visibly associated with goitre. It also increases the risks of stillbirth and miscarriage in pregnant women and deaf mutism in newborns.

6.3.2.1 Consumption of iodised salt

The iodine content of household salt can be tested using rapid test kits based on the reaction of potassium iodate to starch, causing the blue colour. The colour change evaluation can be used to log iodine content based on the darkness of the colour change. Salt was tested in 81 percent of the households interviewed. The remaining 19 percent did not have any salt at the date of interview. The results are presented in table 6.9. Of the households with salt, an estimated 50 percent had salt containing adequate iodine (15+ parts per million). A third of sampled households had low levels of iodine (<15 parts per million). The indication is that while the majority of households are buying iodised salt, the level of iodisation is either inadequate, or that high losses occur during storage.

The use of iodised salt is not significantly different between the country's regions. However, there are wide variations in the consumption of iodised salt among districts. Consumption of iodised salt is highest in Chitipa (82 percent), followed by Blantyre (72 percent). The lowest is in Nsanje (14 percent), a district that borders Mozambique. It is possible that people in Nsanje have easy access to salt from Mozambique that is not iodised. Chitipa, on the other hand, is on the border with Zambia where adequately iodised salt may be available.

Table 6.9

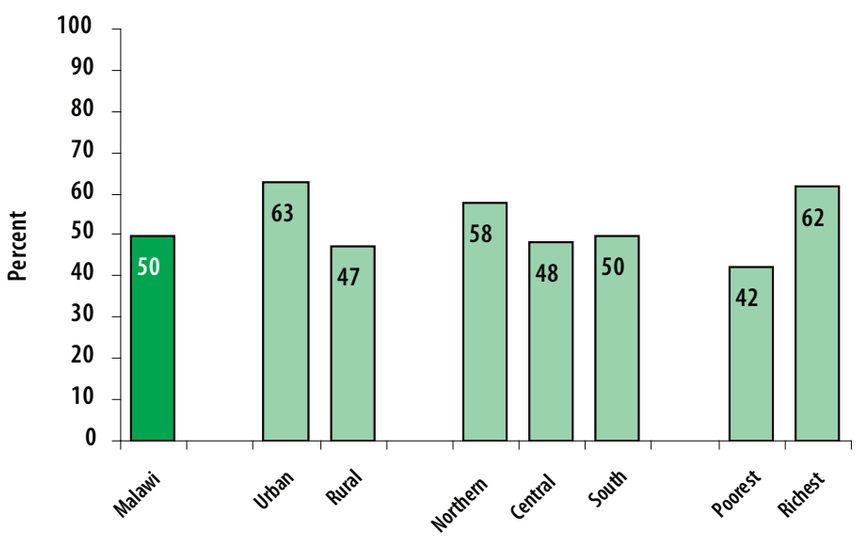
Iodised salt consumption

Percentage of households consuming adequately iodised salt, Malawi, 2006

Background characteristic	Percent of households in which salt was tested	Number of households interviewed	Percent of households with salt test result				Total	Number of households in which salt was tested or with no salt
			Percent of households with no salt	< 15 PPM	15+ PPM	Any iodine		
Malawi								
Total	80.6	30,553	18.2	32.1	49.7	81.8	100.0	30,100
Urban	83.6	4,481	15.1	21.8	63.2	85.0	100.0	4,413
Rural	80.1	26,072	18.7	33.9	47.4	81.3	100.0	25,687
Region								
Northern	85.8	3,132	12.4	29.2	58.4	87.6	100.0	3,068
Central	77.9	13,121	21.1	31.4	47.6	79.0	100.0	12,949
Southern	82.0	14,300	16.7	33.5	49.8	83.3	100.0	14,083
District								
Balaka	80.8	695	18.6	23.7	57.7	81.4	100.0	690
Blantyre	86.8	2,316	11.4	16.2	72.4	88.6	100.0	2,268
Chikwawa	79.7	1,137	19.6	43.7	36.7	80.4	100.0	1,128
Chiradzulu	74.9	610	24.4	17.7	57.9	75.6	100.0	604
Chitipa	93.8	358	6.0	12.4	81.6	94.0	100.0	357
Dedza	80.5	1,740	19.2	36.6	44.3	80.9	100.0	1,734
Dowa	74.8	1,236	23.7	44.5	31.9	76.4	100.0	1,212
Karonga	88.7	604	10.6	47.5	41.9	89.4	100.0	599
Kasungu	79.0	1,096	19.8	17.7	62.4	80.1	100.0	1,080
Lilongwe	77.0	4,894	21.9	27.2	50.9	78.1	100.0	4,822
Machinga	81.4	1,235	17.8	35.5	46.7	82.2	100.0	1,224
Mangochi	77.2	2,611	22.3	28.3	49.4	77.7	100.0	2,594
Mchinji	80.3	1,106	18.3	25.7	55.9	81.6	100.0	1,088
Mulanje	84.8	1,179	14.4	54.3	31.3	85.6	100.0	1,168
Mwanza	91.3	515	8.3	29.7	61.9	91.6	100.0	513
Mzimba	86.0	1,460	13.5	25.5	61.0	86.5	100.0	1,451
Nkhata Bay	79.3	385	18.8	23.6	57.6	81.2	100.0	376
Nkhotakota	81.0	493	17.0	36.6	46.4	83.0	100.0	481
Nsanje	78.9	549	19.8	66.2	14.0	80.2	100.0	540
Ntcheu	82.4	1,078	17.2	33.5	49.3	82.8	100.0	1,074
Ntchisi	83.8	374	16.0	35.3	48.7	84.0	100.0	373
Phalombe	77.5	643	21.8	39.9	38.3	78.2	100.0	636
Rumphi	78.5	325	10.2	38.1	51.7	89.8	100.0	284
Salima	70.1	1,105	28.7	40.6	30.7	71.3	100.0	1,086
Thyolo	86.5	1,445	9.0	44.0	47.0	91.0	100.0	1,374
Zomba	81.9	1,364	16.8	30.8	52.4	83.2	100.0	1,343
Wealth index quintile								
Lowest	75.4	6,360	23.6	33.9	42.4	76.3	100.0	6,281
Second	78.0	6,297	20.8	32.4	46.8	79.2	100.0	6,197
Middle	81.0	5,976	17.8	32.7	49.5	82.2	100.0	5,892
Fourth	81.7	5,863	17.3	34.4	48.3	82.7	100.0	5,786
Highest	87.5	6,057	10.8	27.2	62.0	89.2	100.0	5,944

A high proportion (63 percent) of urban households are estimated to be using adequately iodised salt compared with only 47 percent of their rural counterparts. Although this suggests that storage losses of iodine may be the major problem, results displayed in table 6.10 indicate no significant differences in methods of storage. Table 6.10 also shows that 58 percent of households store salt in containers with lid. Interestingly, there are significant differences between the wealthiest and poorest households in terms of iodised salt consumption (Figure 6.5).

Figure 6.5
Percentage of households consuming adequately iodised salt (15+ PPM), Malawi, 2006



6.3.2.2 Knowledge of iodised salt and the source of information

A total of 30,553 households were asked about knowledge and use of iodised salt. The results are presented in table 6.11 and reveal that only 66 percent have ever heard of iodine. Knowledge of iodine varies widely within districts, ranging from 48 percent in Ntchisi to 87 percent in Blantyre. The urban population is more likely to know about iodine (87 percent) than its rural counterpart (62 percent). The main source of information for both rural and urban populations is the radio. Knowledge of iodine drops from 88 percent in the highest income quintile to 48 percent in the lowest income quintile.

Table 6.10

Storage place for salt

Percent distribution of storage place of salt of households knowing of iodised salt, Malawi, 2006

Background characteristic	Storage						Total	Number of households knowing of iodised salt
	Container with lid	Container without lid	Same packet	Open surface	Covered surface	Other		
Malawi								
Total	58.3	3.4	34.3	0.1	0.3	3.5	100.0	20,163
Urban	59.8	1.7	30.9	0.0	0.0	7.6	100.0	3,899
Rural	58.0	3.8	35.1	0.2	0.4	2.6	100.0	16,264
Region								
Northern	55.3	2.8	39.6	0.0	0.1	2.3	100.0	2,075
Central	59.2	3.0	35.7	0.2	0.5	1.5	100.0	8,231
Southern	58.3	4.0	32.0	0.1	0.2	5.5	100.0	9,858
District								
Balaka	69.6	7.8	22.2	0.2	0.0	0.3	100.0	541
Blantyre	41.6	2.3	35.2	0.0	0.0	20.9	100.0	2,003
Chikwawa	58.3	3.0	37.2	0.4	0.5	0.6	100.0	654
Chiradzulu	77.1	0.7	22.2	0.0	0.0	0.0	100.0	400
Chitipa	40.6	1.1	58.0	0.0	0.0	0.3	100.0	197
Dedza	66.5	2.2	26.5	0.1	3.4	1.2	100.0	1,123
Dowa	53.2	2.9	42.8	0.1	0.2	0.9	100.0	687
Karonga	55.6	4.3	36.8	0.0	0.0	3.3	100.0	324
Kasungu	46.0	4.5	48.8	0.0	0.0	0.7	100.0	816
Lilongwe	61.4	1.0	37.4	0.2	0.0	0.0	100.0	3,033
Machinga	48.3	8.0	36.6	0.0	0.0	7.1	100.0	924
Mangochi	73.7	3.8	20.5	0.0	0.3	1.7	100.0	1,484
Mchinji	44.3	11.0	43.3	0.3	0.0	1.2	100.0	701
Mulanje	49.8	6.2	42.9	0.0	0.9	0.3	100.0	813
Mwanza	55.2	4.1	37.4	0.4	0.5	2.5	100.0	361
Mzimba	53.3	2.6	40.6	0.0	0.0	3.5	100.0	1,014
Nkhata Bay	79.3	1.9	18.0	0.0	0.5	0.3	100.0	265
Nkhotakota	71.7	1.8	25.8	0.0	0.1	0.6	100.0	337
Nsanje	56.0	3.0	40.5	0.0	0.0	0.4	100.0	329
Ntcheu	63.8	2.7	22.4	0.6	0.0	10.5	100.0	765
Ntchisi	44.3	4.4	50.4	0.3	0.0	0.6	100.0	181
Phalombe	34.1	5.1	59.5	0.0	0.2	1.1	100.0	409
Rumphi	49.6	3.7	46.6	0.1	0.1	0.0	100.0	275
Salima	67.9	3.5	27.1	0.3	0.0	1.3	100.0	588
Thyolo	68.7	3.7	27.1	0.0	0.0	0.5	100.0	947
Zomba	73.4	1.9	23.8	0.3	0.0	0.7	100.0	993
Wealth index quintile								
Lowest	52.6	3.2	41.3	0.4	1.0	1.5	100.0	3,039
Second	57.1	4.1	34.8	0.1	0.3	3.6	100.0	3,608
Middle	58.9	3.8	34.1	0.1	0.2	3.0	100.0	4,048
Fourth	60.2	4.0	32.7	0.1	0.1	2.9	100.0	4,171
Highest	60.5	2.4	31.3	0.1	0.1	5.7	100.0	5,298

Table 6.11:

Knowledge and source of information regarding Iodised salt

Percentage of households knowing of iodised salt and percentage of households by specific source of information regarding iodised salt, Malawi, 2006

Background Characteristic	Heard about iodised salt		Number of households interviewed	Percent who heard from the radio	Percent who heard from the television	Percent who heard from the newspaper	Percent who heard from a poster	Percent who heard from clothing	Percent who heard from drama	Percent who heard from another source	Number of households knowing of iodised salt
	Yes	No									
Malawi											
Total	66.0	34.0	30,553	94.5	8.5	10.7	7.6	6.9	7.2	21.1	20,163
Urban	87.0	13.0	4,481	97.3	26.5	25.2	16.2	16.5	12.4	27.8	3,899
Rural	62.4	37.6	26,072	93.8	4.1	7.3	5.5	4.6	5.9	19.5	16,264
Region											
Northern	66.3	33.7	3,132	88.5	8.9	14.4	11.9	6.9	8.6	35.8	2,075
Central	62.7	37.3	13,121	95.2	8.2	11.3	7.6	7.1	7.1	19.2	8,231
Southern	68.9	31.1	14,300	95.1	8.6	9.5	6.7	6.7	7.0	19.6	9,858
District											
Balaka	77.9	22.1	1,105	95.0	7.2	11.6	7.9	4.9	5.0	22.6	541
Blantyre	86.5	13.5	1,364	94.0	19.2	12.0	7.9	9.2	8.0	38.2	2,003
Chikwawa	57.5	42.5	1,236	97.4	3.1	6.9	8.2	10.0	5.1	13.4	654
Chiradzulu	65.6	34.4	1,179	94.2	10.2	16.3	11.1	10.3	16.1	23.7	400
Chitipa	55.1	44.9	610	64.5	1.9	7.7	5.1	5.3	6.8	71.8	197
Dedza	64.5	35.5	2,611	95.3	2.3	4.0	3.1	1.9	5.2	16.1	1,123
Dowa	55.6	44.4	358	96.6	7.2	12.8	7.8	8.6	11.0	17.4	687
Karonga	53.6	46.4	1,137	85.7	6.1	13.1	6.7	3.7	5.5	38.3	324
Kasungu	74.5	25.5	643	97.1	6.8	15.3	12.4	6.9	8.2	18.4	816
Lilongwe	62.0	38.0	1,096	96.3	12.6	14.1	8.3	9.5	6.5	16.4	3,033
Machinga	74.8	25.2	325	93.7	3.7	3.4	2.0	2.4	1.9	11.9	924
Mangochi	56.8	43.2	1,740	95.6	11.0	17.0	12.3	11.7	8.3	17.3	1,484
Mchinji	63.4	36.6	4,894	95.6	6.8	9.3	7.7	7.8	9.2	16.3	701
Mulanje	68.9	31.1	1,460	98.2	3.3	5.0	4.7	5.5	13.8	4.0	813
Mwanza	70.0	30.0	549	96.2	7.0	9.0	5.0	8.4	5.7	20.8	361
Mzimba	69.4	30.6	493	92.1	13.6	19.1	17.8	9.8	12.0	29.1	1,014
Nkhata Bay	68.9	31.1	385	93.2	5.5	7.9	6.5	1.7	5.1	12.3	265
Nkhotakota	68.5	31.5	515	93.0	6.9	10.6	6.5	4.8	6.6	29.9	337
Nsanje	60.0	40.0	604	95.2	3.5	9.2	6.7	6.5	8.7	14.8	329
Ntcheu	70.9	29.1	1,078	87.1	1.6	2.8	2.1	1.6	1.7	31.2	765
Ntchisi	48.3	51.7	695	97.1	2.6	8.1	8.4	2.5	8.9	13.6	181
Phalombe	63.7	36.3	1,235	95.5	4.8	8.9	5.9	4.4	6.1	18.6	409
Rumphi	84.6	15.4	1,445	91.0	3.1	9.7	6.4	6.2	4.0	54.5	275
Salima	53.2	46.8	2,316	96.1	12.2	17.9	13.1	11.8	11.5	26.4	588
Thyolo	65.5	34.5	1,106	95.3	2.4	2.6	1.1	0.5	2.2	7.1	947
Zomba	72.8	27.2	374	93.7	5.9	7.8	4.8	3.3	5.6	19.5	993
Wealth index quintile											
Lowest	47.8	52.2	6,360	90.6	1.4	3.7	3.5	3.3	3.9	20.4	3,039
Second	57.3	42.7	6,297	91.5	2.1	5.2	4.5	3.6	4.6	21.6	3,608
Middle	67.7	32.3	5,976	95.2	2.9	7.0	5.5	4.6	5.6	17.4	4,048
Fourth	71.1	28.9	5,863	95.6	4.2	8.2	5.7	5.1	7.7	19.6	4,171
Highest	87.5	12.5	6,057	97.4	24.4	23.4	15.2	14.4	11.6	25.2	5,298

Table 6.12

Reason for not using iodised salt in the household

Percent distribution of main reason for not using iodised salt in the household, Malawi, 2006

Background characteristic	Reason for not iodised						Total	Number of households knowing of iodised salt with no iodised salt at home
	Too expensive	Not available in the market	Doesn't taste good	Not considered necessary	Didn't know salt not iodised	Others		
Malawi								
Total	6.7	3.1	1.9	2.2	84.4	1.7	100.0	604
Urban	11.1	3.9	6.4	3.5	75.1	0.0	100.0	61
Rural	6.2	3.0	1.4	2.1	85.5	1.9	100.0	543
Region								
Northern	10.4	2.5	.6	1.7	82.6	2.2	100.0	64
Central	5.8	3.0	1.2	2.6	86.7	0.7	100.0	232
Southern	6.5	3.3	2.7	2.0	83.0	2.4	100.0	307
Wealth index quintile								
Lowest	2.9	6.7	2.2	2.3	82.7	3.1	100.0	112
Second	12.7	1.3	1.9	3.6	77.5	3.1	100.0	106
Middle	5.6	2.7	0.0	2.3	89.1	0.3	100.0	134
Fourth	6.7	2.0	2.0	1.4	87.3	0.7	100.0	136
Highest	6.0	2.9	3.7	1.7	83.7	2.0	100.0	116

6.3.2.3 Reasons for not using iodised salt in the household

A total of 604 households out of 20,163 (3 percent) who had knowledge of iodine but did not have iodised salt on the day of the interview were asked about the reasons for not using iodised salt. As shown in table 6.12, the major reason for not using iodised salt was that they did not know the salt was not iodised (84 percent). The results show that not using iodised salt is not a function of income but rather of either inadequate iodisation or losses of iodine during storage at various levels. Better enforcement of iodisation laws is clearly needed to make sure that people can only buy adequately iodised salt.

6.4 LOW BIRTH WEIGHT

Weight at birth is a good indicator of a mother's health and nutritional status. Moreover, birth weight has a direct affect on a newborn's chances of survival, growth, long-term health and psychosocial development. Low birth weight (less than 2,500 grams) carries a range of serious health risks for children. A baby's low weight at birth is either the result of preterm birth or of restricted foetal (intrauterine) growth. Low birth weight is closely associated with foetal and neonatal mortality and morbidity, inhibited growth and cognitive development as well as chronic diseases later in life. Three factors have the most impact on a mother's poor health and nutrition: the mother's poor nutritional status before conception, short stature (due mostly to undernutrition and infections during her childhood), and poor nutrition, heavy work, smoking and alcohol use during pregnancy. Inadequate weight gain during pregnancy is particularly significant since it accounts for a large proportion of foetal growth retardation.

6.4.1 Prevalence of Low Birth Weight

The results presented are estimated from two items in the questionnaire. These are the mother's assessment of the child's size at birth, that is, very small, smaller than average, average, larger than average, very large and the mother's recall of the child's weight or the weight as recorded on a health card if the child was weighed at birth[1].

Table 6.13a shows that in Malawi 14 percent of all babies are born with a low birth weight. The low birth weight prevalence by district ranges from 11 percent to 17 percent with wide variation across the country. Three districts with the highest prevalence of low birth weight of 15 percent and above are Salima (17 percent), Dedza (16 percent) and Phalombe (15 percent). The data show that three districts, Blantyre, Ntcheu and Karonga, have a low prevalence of low birth weight of 11 percent. There are no significant disparities according to residence, region, mother's education and wealth status on the prevalence of low birth weight (Figure 6.6). The high levels of low birth weight reflect a generational cycle of undernutrition, where mothers who are themselves in poor health or undernourished give birth to babies who are underweight.

6.4.2 Percentage of infants not weighted at birth

Table 6.13a also shows that only 48 percent of babies born in Malawi are weighed at birth. The proportion of infants who are not weighed at birth is highest in the Central and Southern Regions. Data shows that infants born in the Northern Region (62 percent) are more likely to be weighed at birth than in the Central (45 percent) and Southern (48 percent) Regions. The data also show that Rumphi district (79 percent) has the highest percentage of babies who are weighed at birth while in Mangochi (34 percent) babies are least likely to be weighed at birth

There are wide variations in the proportion of infants weighed at birth by residence, mother's education and socio-economic status. Infants in urban areas (70 percent), born to better-educated mothers (77 percent), and to those in the highest wealth quintile (72 percent) are more likely to be weighed at birth than those born to mothers from rural areas (44 percent), to mothers who are less educated (33 percent), and in lower wealth quintiles (37 percent). This can be attributed to the fact that most urban women attend health facilities where infants are likely to be weighed by a skilled attendant upon birth. Greater emphasis on weighing at birth and immediately thereafter will help to identify infants at particularly high risk. It also initiates close follow up and attention to good breastfeeding practises.

[1] For detailed description of the methodology, see Boerma, Weinstern, Rutstein and Sommerfelt, 1996

Table 6.13a

Low birth weight infants

Percentage of live births in the 2 years preceding the survey that weighed below 2500 grams at birth, Malawi, 2006

Background characteristic	Percent of live births below 2500 grams	Percent of live births weighed at birth	Number of live births
Malawi			
Total	13.5	47.7	10,552
Urban	11.2	69.6	1,507
Rural	13.9	44.1	9,045
Region			
Northern	12.9	61.5	1,035
Central	13.8	44.7	4,959
Southern	13.3	47.9	4,557
District			
Balaka	13.3	59.6	231
Blantyre	10.6	69.5	656
Chikwawa	14.8	43.3	391
Chiradzulu	13.6	50.7	196
Chitipa	14.2	53.7	139
Dedza	16.3	39.8	675
Dowa	11.8	47.5	427
Karonga	10.8	38.4	202
Kasungu	14.5	54.4	456
Lilongwe	13.2	44.2	1,907
Machinga	14.6	40.5	386
Mangochi	12.9	33.9	988
Mchinji	13.7	50.1	379
Mulanje	12.9	53.0	271
Mwanza	14.7	55.8	180
Mzimba	13.4	68.1	452
Nkhata Bay	12.4	66.7	118
Nkhotakota	14.7	43.5	200
Nsanje	13.3	45.9	191
Ntcheu	10.8	48.1	360
Ntchisi	13.6	39.8	139
Phalombe	15.1	36.0	226
Rumphi	13.4	78.8	123
Salima	16.8	36.1	417
Thyolo	14.6	43.3	458
Zomba	13.4	56.2	384

Table 6.13b

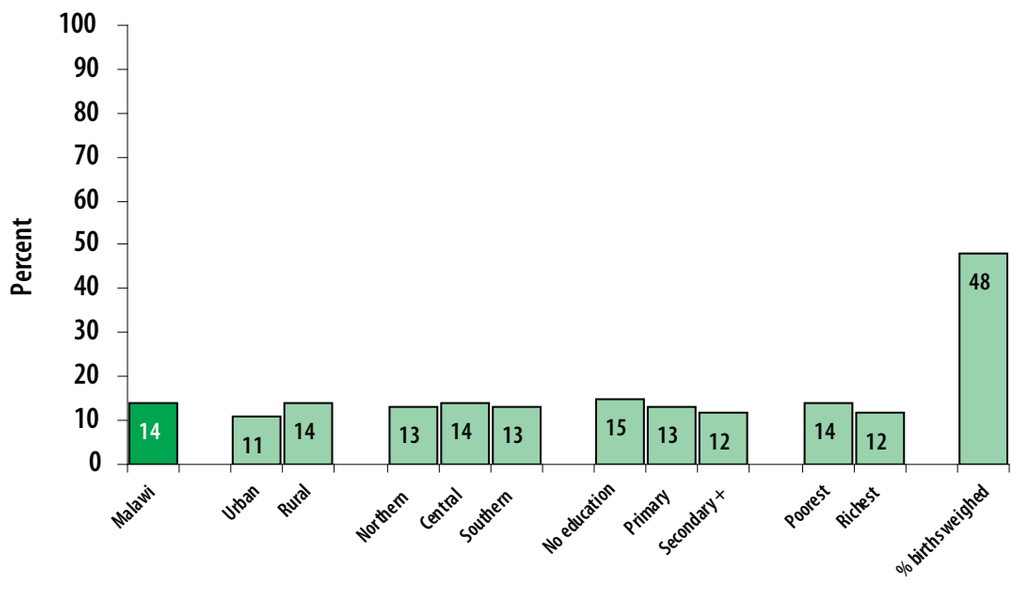
Low birth weight infants

Percentage of live births in the 2 years preceding the survey that weighed below 2500 grams at birth, Malawi, 2006

Background characteristic	Percent of live births below 2500 grams	Percent of live births weighed at birth	Number of live births
Mother's education			
None	14.8	33.0	2,407
Primary	13.4	47.6	6,912
Secondary +	11.8	77.3	1,213
Other	16.3	46.0	20
Wealth index quintile			
Lowest	14.3	37.0	2,442
Second	14.5	40.6	2,225
Middle	13.5	46.4	2,164
Fourth	12.9	47.9	1,899
Highest	12.0	72.2	1,822

Figure 6.6

Percentage of infants weighing less then 2500 grams at birth, Malawi, 2006



7 CHILD HEALTH

HABIB SOMANJE & STORN KABULUZI

This chapter covers key aspects of child health: immunisation, tetanus toxoid, oral rehydration treatment, pneumonia, use of solid fuels, risk of respiratory infections and malaria.

7.1 IMMUNISATION

MDG 4 sets out a goal to reduce child mortality by two thirds between 1990 and 2015. Immunisation is key to achieving this goal. It is an active strategy that has saved the lives of millions of children in the three decades since the launch of the Expanded Programme on Immunisation (EPI) in 1974. Worldwide, there are still 27 million children overlooked by routine immunisation and as a result, vaccine-preventable diseases cause more than two million deaths every year.

One of the central goals of WFFC is to achieve full immunisation of 90 percent of children under 12 months of age at 90 percent nationally, with at least 80 percent coverage in every district or equivalent administrative unit.

According to UNICEF and WHO guidelines, before reaching one year, a child should receive a BCG vaccination to protect against tuberculosis, three doses of DPT–HepB + Hib, a pentavalent vaccine to protect against diphtheria, pertusis, tetanus, hepatitis B and infections caused by haemophylus influenza type b bacteria such as meningitis and pneumonia, three doses of polio vaccine and a measles vaccine.

In this survey, mothers were asked to provide health cards for children under the age of five. Interviewers copied vaccination information from the cards onto the MICS 2006 questionnaire. Overall, 77 percent of children aged 12–23 months had health cards (Table 7.2a). Where children did not have cards, mothers were asked to recall whether or not the child had received each of the vaccinations and in the case of pentavalent and polio, how many times. The percentage of children aged 12–23 months who received each of the vaccinations is shown in table 7.1. The denominator for the table is children aged 12–23 months. This ensures that only children who are old enough to be fully vaccinated are counted. In the top panel, the numerator includes all children who were vaccinated at any time before the survey according to the health card or the mother's report. In the bottom panel, only those who were vaccinated before their first birthday, as is recommended, are included. For children without health cards, the proportion of vaccinations given before the first birthday is assumed to be the same as for children with health cards.

Approximately 96 percent of children aged 12–23 months receive a BCG vaccination and the first dose of pentavalent is given to 96 percent. The percentage declines for subsequent doses of the pentavalent vaccine to 93 percent for the second dose, and 86 percent for the third dose. Similarly, 96 percent of children receive polio 1 and this decline to 81 percent by the third dose. The coverage for the measles vaccine is lower than for the other vaccines at 84 percent. The percentage of children who are given all the recommended vaccinations is 70 percent (Figure 7.1).

Table 7.1

Vaccinations in the first year of life

Percentage of children aged 12-23 months immunised against childhood diseases at any time before the survey and before the first birthday, Malawi, 2006

Background characteristic	BCG	Pentavalent			Polio				Measles	All	None	Number of children aged 12–23 months
		1	2	3	0	1	2	3				
Health card	74.9	75.6	74.6	72.7	25.0	75.6	74.5	72.4	65.5	63.6	0.2	5,080
Mother's report	20.8	20.6	18.5	13.7	10.2	19.9	16.5	8.8	18.9	6.8	2.0	5,080
Either	95.7	96.2	93.1	86.4	35.2	95.5	90.9	81.3	84.4	70.4	2.3	5,080
Vaccinated by 12 months of age	95.2	95.3	92.3	84.4	35.2	95.2	90.2	79.1	75.9	60.7	2.3	5,080

Approximately 95 percent of children aged 12–23 months have received a BCG vaccination by the age of 12 months. By the age of 12 months, 95 percent of children have received the first dose of pentavalent. The percentage declines for subsequent doses of the pentavalent vaccine to 92 percent for the second dose, and 84 percent for the third dose. Similarly, 95 percent of children have received polio 1 by 12 months of age and this declines to 79 percent by the third dose. While the coverage for measles immunisation, an indicator of MDG 4, is 76 percent, the percentage of children who had all the recommended vaccinations by their first birthday is 61 percent only.

Tables 7.2a and 7.2b show vaccination coverage rates among children aged 12–23 months by background characteristics. The tables indicate children receiving the vaccinations at any time up to the date of the survey and are based on information from both the health cards and mothers/caretakers reports. The tables include background characteristics such as sex, region, and district of origin, rural or urban areas, mother's education and wealth status of the family. Table 7.2b indicates that the percentage of girls who are immunised is slightly higher than boys. The only

Figure 7.1

Percentage of children aged 12–23 months who received the recommended vaccinations at any time before the survey, Malawi, 2006

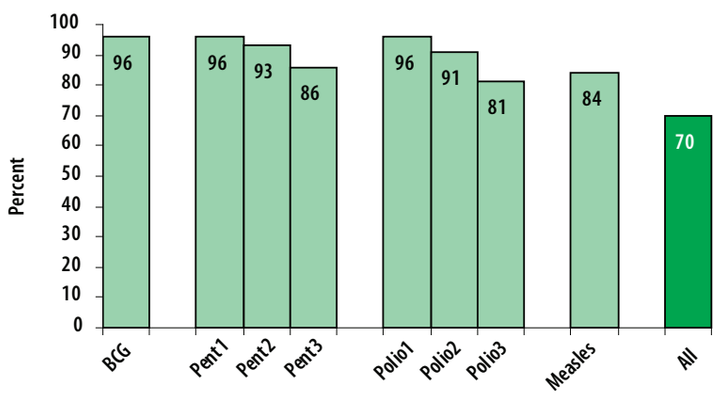


Table 7.2a

Vaccinations by background characteristics

Percentage of children aged 12–23 months currently vaccinated against childhood diseases, Malawi, 2006

Background characteristic	BCG	Pentavalent			Polio				Measles	All	None	Percent with health card	Number of children aged 12–23 months
		1	2	3	0	1	2	3					
Malawi													
Total	95.7	96.2	93.1	86.4	35.2	95.5	90.9	81.3	84.4	70.4	2.3	76.8	5,080
Urban	98.1	98.4	96.6	92.9	52.6	97.8	95.4	86.9	86.6	76.8	1.0	80.1	723
Rural	95.2	95.9	92.5	85.3	32.4	95.1	90.2	80.3	84.0	69.3	2.5	76.3	4,356
Region													
Northern	94.4	95.8	95.2	89.8	52.0	96.2	92.8	84.5	86.3	73.5	2.3	79.6	511
Central	94.6	95.1	90.9	83.4	36.9	93.9	88.6	77.2	80.6	64.9	3.1	74.9	2,388
Southern	97.2	97.7	94.9	88.9	29.5	97.1	93.1	85.0	88.1	75.7	1.4	78.3	2,181
District													
Balaka	96.9	98.5	96.4	92.8	21.4	98.1	96.4	90.6	90.7	82.4	1.2	90.3	109
Blantyre	98.0	99.0	97.9	92.3	34.9	99.6	95.8	85.5	93.2	81.0	0.4	79.5	283
Chikwawa	98.5	97.3	94.8	90.3	21.4	97.3	94.8	87.6	88.3	78.2	1.5	80.9	172
Chiradzulu	97.8	99.6	96.5	91.9	29.2	99.6	95.9	89.9	90.7	81.2	0.4	84.9	92
Chitipa	94.2	96.5	94.0	85.4	43.3	96.0	89.3	76.3	84.4	59.4	0.7	81.6	69
Dedza	90.7	93.9	87.1	77.4	22.9	92.1	86.1	76.8	75.6	59.9	4.2	78.7	355
Dowa	91.1	92.7	89.1	81.0	45.1	91.8	85.9	80.8	82.0	71.4	6.5	80.9	186
Karonga	89.9	92.1	91.1	89.7	55.2	92.0	89.8	86.6	83.0	75.6	7.1	77.0	97
Kasungu	96.3	97.3	90.6	84.8	20.4	96.5	91.6	83.8	81.4	71.6	2.2	70.1	226
Lilongwe	96.0	94.8	91.6	85.5	45.2	93.0	88.7	77.6	80.1	65.0	2.7	76.0	879
Machinga	96.3	97.4	93.1	83.5	27.5	97.1	88.1	78.1	81.9	68.3	1.9	77.9	176
Mangochi	96.4	97.1	94.0	87.8	26.3	96.0	91.2	85.1	84.3	72.2	1.7	69.0	479
Mchinji	96.1	95.2	91.2	83.9	33.6	94.9	88.7	69.0	83.2	60.9	3.1	72.1	196
Mulanje	98.1	97.4	92.8	87.3	27.6	98.0	90.5	79.2	88.8	72.5	1.3	76.8	136
Mwanza	96.1	97.2	94.3	89.8	31.5	96.7	94.1	89.2	89.5	79.7	2.8	79.5	83
Mzimba	95.6	97.0	97.0	90.0	47.5	98.4	95.7	84.7	88.7	76.0	0.8	81.8	224
Nkhata Bay	93.1	93.7	92.1	86.7	61.8	91.9	84.6	78.8	82.9	65.4	4.4	66.1	60
Nkhotakota	90.4	91.9	85.2	75.3	37.5	90.9	82.0	67.7	76.3	54.1	3.5	67.9	107
Nsanje	92.3	95.0	90.4	83.7	45.8	94.2	91.0	80.7	82.5	71.7	4.2	80.2	95
Ntcheu	95.8	98.5	97.3	93.4	34.8	97.8	98.1	85.8	86.2	74.8	1.0	84.5	180
Ntchisi	94.2	92.0	90.3	76.5	55.5	92.5	87.0	71.6	83.1	59.5	3.5	67.8	73
Phalombe	95.0	93.7	87.9	82.9	25.5	91.3	88.5	80.2	86.4	70.7	3.4	70.8	114
Rumphi	98.4	98.9	99.7	97.1	64.3	99.7	99.0	95.5	88.1	84.9	0.0	86.1	60
Salima	96.3	97.6	94.1	82.3	34.1	97.6	87.0	72.0	83.4	62.0	1.6	62.7	186
Thyolo	98.0	98.0	97.1	88.6	28.7	97.8	93.9	84.6	91.0	74.3	0.5	82.9	240
Zomba	99.7	99.7	98.2	93.9	39.0	97.7	97.4	90.1	91.3	82.0	0.3	85.7	202

exceptions are for polio 1, where rates are equal amongst girls and boys and polio 2 where slightly fewer girls are immunised compared to boys.

Tables 7.2a and 7.2b also show that in terms of the overall coverage of those fully immunised and for all of the antigen doses, urban areas have higher percentages of immunisation coverage than rural areas. The greatest difference is found amongst children immunised with polio 0 vaccine (20 percent) and the least amongst children immunised with pentavalent 1 vaccine (3 percent). In terms of mother's education, table 7.2b shows that the higher the mother's education level, the higher the percentage of children vaccinated by all antigen doses. The percentage coverage for all the vaccines ranges from 65 percent among children whose mothers have no education to 84 percent among children whose mothers attained secondary school education. Seventy percent coverage is found in those children whose mothers had primary education.

Table 7.2b also describes coverage by wealth index quintiles. In terms of pentavalent and polio vaccines, similar patterns can be observed with coverage rates becoming lower as they move from the first to the last dose. This pattern is repeated in all the wealth index quintiles. The highest quintile has the highest percentage coverage for almost all of the antigen doses with the exception of BCG, pentavalent 1 and polio 1, where the middle quintile has the highest percentage coverage. However, amongst those children who are fully immunised, the overall trend shows that the higher the quintile, the higher the percentage coverage, ranging from 66 percent in the lowest quintile to 77 percent in the highest quintile.

Table 7.2b

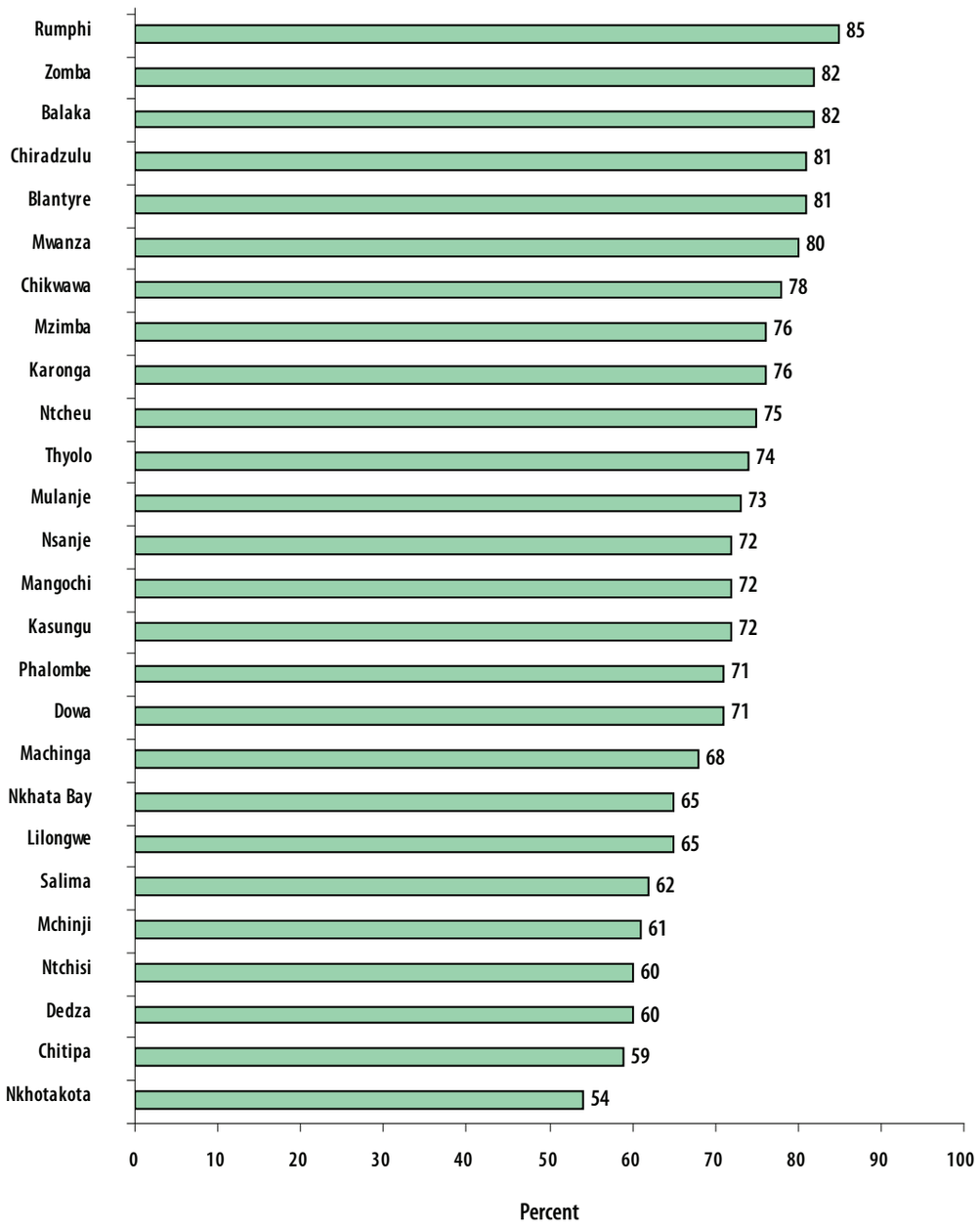
Vaccinations by background characteristics

Percentage of children aged 12–23 months currently vaccinated against childhood diseases, Malawi, 2006

Background characteristic	BCG	Pentavalent			Polio				Measles	All	None	Percent with health card	Number of children aged 12–23 months
		1	2	3	0	1	2	3					
Sex													
Male	94.8	96.0	92.6	86.6	36.0	95.5	91.1	81.2	83.8	70.2	2.6	77.8	2,502
Female	96.5	96.5	93.5	86.2	34.6	95.5	90.7	81.3	85.0	70.6	1.9	75.8	2,578
Mother's education													
None	94.0	95.6	90.8	81.6	28.3	93.9	87.6	77.7	80.2	64.8	3.1	74.0	1,158
Primary	95.9	96.1	93.1	86.5	34.9	95.6	91.0	81.3	83.9	70.0	2.3	76.8	3,332
Secondary +	97.0	98.2	97.3	95.0	51.1	97.8	96.8	88.2	95.3	83.5	0.6	82.2	580
Other	100.0	100.0	100.0	100.0	26.2	100.0	100.0	100.0	100.0	100.0	0.0	100.0	10
Wealth index quintile													
Lowest	94.4	94.7	91.8	83.6	30.7	93.8	89.2	78.5	82.0	66.2	3.2	74.0	1,198
Second	94.2	95.5	91.4	84.8	33.4	93.8	89.6	79.8	85.3	69.9	2.6	77.5	1,047
Middle	96.7	97.3	93.6	85.8	33.2	97.0	91.5	79.8	85.0	69.5	1.5	76.8	1,027
Fourth	96.6	96.9	94.0	88.1	34.4	97.1	92.0	83.2	83.1	71.1	1.7	78.2	973
Highest	96.9	97.3	95.2	91.2	47.7	96.3	93.2	86.7	87.2	77.3	2.2	78.5	835

Figure 7.2

Percentage of children aged 12–23 months fully immunised by district, Malawi, 2006

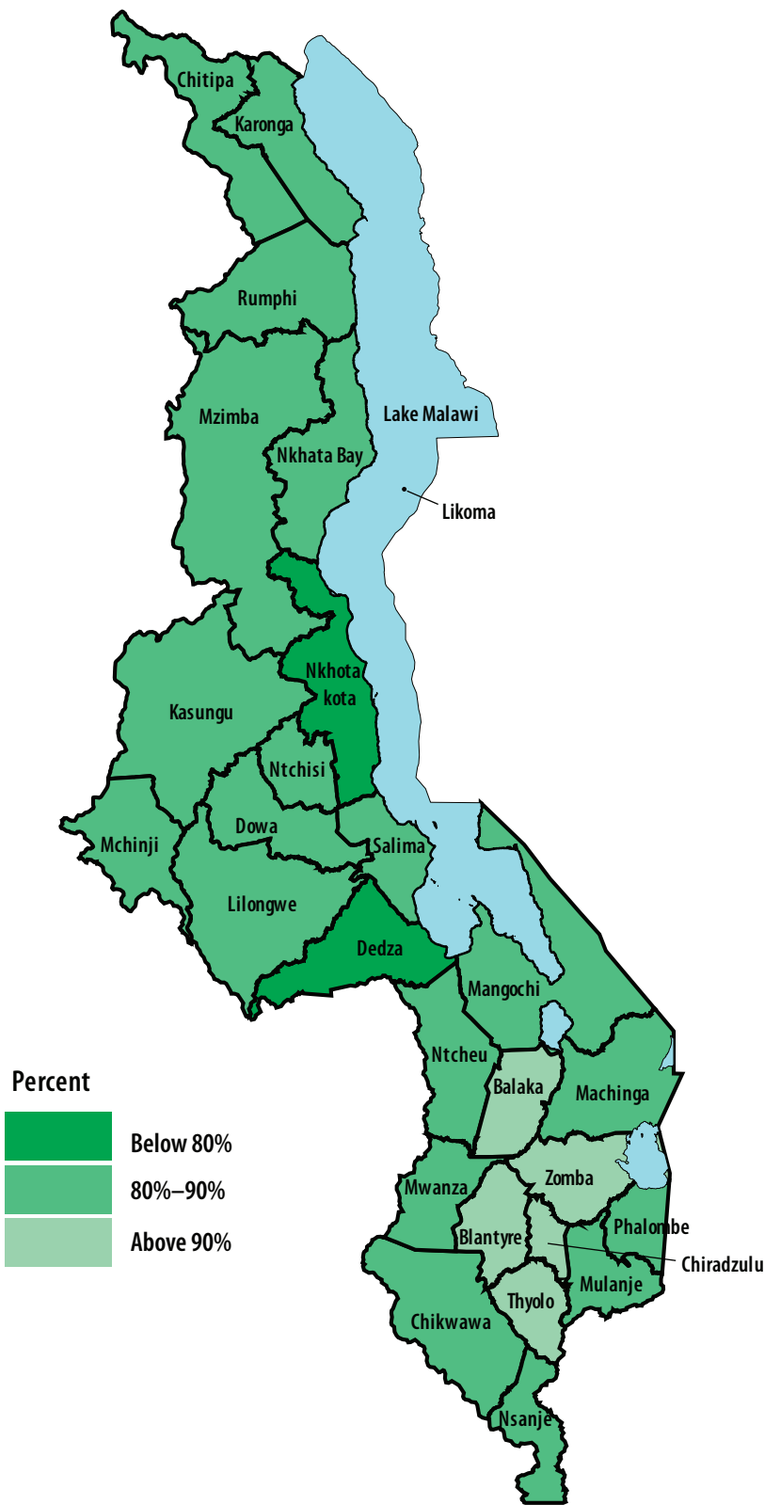


In terms of the regions of the country, the Central Region has the lowest percentages of children immunised among all antigen doses (65 percent). The Southern Region has the highest percentages in overall coverage (76 percent) and for most of the antigens except for pentavalent 2 and 3 and polio 0 (95 percent, 89 percent and 30 percent respectively). The most remarkable finding of all is the extremely low percentage of children who have not been vaccinated: 2.5 percent in rural and a mere 1 percent in urban areas. This shows the potential of the health system to reach virtually every child in Malawi. Even the worst covered district, Karonga, had reached all but 7 percent of children at least once and in 15 districts, fewer than 2 percent had not received a vaccine.

Overall coverage ranges from a high of 85 percent in Rumphi to a low of 54 percent in Nkhotakota. So far, most of the antigen doses are equal to or above 80 percent with the exception of pentavalent 3 in Dedza (77 percent), Nkhotakota (75 percent) and Ntchisi (77 percent); polio 3 in ten districts such as Chitipa (76 percent), Dedza (77 percent), Lilongwe (78 percent), Machinga (78 percent), Mchinji (69 percent), Mulanje (79 percent), Nkhata Bay (79 percent), Nkhotakota (68 percent), Ntchisi (72 percent) and Salima (72 percent) and measles in two districts of Dedza (76 percent) and Nkhotakota (68 percent). Figure 7.2 summarises the coverage of fully immunised children by district in Malawi and map 7.1 demonstrates the importance of follow-up in the majority of districts where measels immunisation falls far short of the MDG target of 95 percent.

Map 7.1

Proportion of children aged 12–23 months immunised against measles, Malawi, 2006



7.2 TETANUS TOXOID

One of the stated goals of WFFC was to eliminate maternal and neonatal tetanus by 2005. Tackling tetanus amongst mothers and children is also vital to the achievement of the Millennium Development Goals concerned with the reduction of maternal, child and infant mortality. Eradicating maternal tetanus is a key strategy in reaching the target of reducing the maternal mortality ratio by three quarters. Another target is to reduce the incidence of neonatal tetanus to less than one case per 1,000 live births, in every district.

Prevention of maternal and neonatal tetanus can be assured if all pregnant women receive at least two doses of tetanus toxoid vaccine. However, where women do not receive two doses of the vaccine during the pregnancy, they and their newborns are considered to be protected if they have:

- Received at least 2 doses, the last within 3 years;
- Received at least 3 doses, the last within 5 years;
- Received at least 4 doses, the last within 10 years;
- Received at least 5 doses during lifetime.

7.2.1 Women's protection status against neonatal tetanus

Tables 7.3a and 7.3b show the protection status from tetanus of women who have had a live birth within the last 12 months by background characteristics. In Malawi, 89 percent of pregnant women are protected against tetanus. There is no major difference in the percent of women protected against tetanus amongst regions. The table also includes data for all the 26 districts. The protection of women against tetanus ranges from 66 percent in Karonga to 95 percent in Lilongwe, Mulanje, Nkhata Bay and Rumphi. In all of the districts except Dedza, Ntcheu and Phalombe, most women are protected against tetanus (80 percent or above). The data also shows no marked variation among women of different educational levels (89 percent, 88 percent and 92 percent for women with no education, primary and secondary+ respectively).

Among the seven age groups of women of childbearing age, the percentage of women protected against tetanus ranges from 78 percent for women in the 15–19 age group to 92 percent for women in the 25-29 and 35–39 age groups. Apart from those in the youngest age group, over 85 percent of women in all other age groups are immunised with tetanus toxoid vaccine. This can be explained by the existing priority to reach primiparous women during their pregnancy.

Table 7.3a

Neonatal tetanus protection

Percentage of mothers with a birth in the last 12 months protected against neonatal tetanus, Malawi, 2006

Background characteristic	Received at least 2 doses during last pregnancy	Received at least 2 doses, the last within 3 years	Received at least 3 doses, the last within 5 years	Received at least 4 doses, the last within 10 years	Received at least 5 doses during lifetime	Protected against tetanus	Number of mothers
Malawi							
Total	71.2	12.1	2.4	2.2	0.6	88.5	10,552
Urban	79.2	10.1	1.9	2.0	0.5	93.6	1,507
Rural	69.9	12.5	2.5	2.2	0.6	87.7	9,045
Region							
Northern	69.9	10.8	2.6	3.2	1.2	87.6	1,035
Central	74.0	10.7	2.2	1.7	0.4	89.1	4,959
Southern	68.5	14.0	2.5	2.5	0.6	88.1	4,557
District							
Balaka	64.9	13.6	2.7	3.2	0.4	84.7	231
Blantyre	66.3	15.9	2.1	4.1	1.1	89.5	656
Chikwawa	67.4	14.0	2.3	4.4	0.7	88.8	391
Chiradzulu	64.6	16.6	4.5	3.4	0.7	89.7	196
Chitipa	63.2	13.5	6.3	5.7	2.4	91.1	139
Dedza	62.4	11.0	1.1	1.8	0.2	76.5	675
Dowa	65.7	14.2	3.9	3.1	1.3	88.1	427
Karonga	50.8	11.5	1.3	2.0	0.5	66.0	202
Kasungu	75.5	9.0	2.5	4.6	1.9	93.5	456
Lilongwe	81.7	9.7	2.4	0.7	0.1	94.6	1,907
Machinga	76.5	10.3	2.5	2.3	0.4	92.1	386
Mangochi	72.9	12.5	1.5	1.2	0.9	88.9	988
Mchinji	74.9	13.8	2.9	2.7	0.2	94.5	379
Mulanje	86.0	5.5	0.8	0.4	0.3	93.0	271
Mwanza	53.0	20.6	4.8	6.8	1.8	86.9	180
Mzimba	80.5	8.9	2.2	1.8	1.5	94.8	452
Nkhata Bay	74.5	6.3	0.7	3.8	0.2	85.5	118
Nkhotakota	65.5	12.6	2.3	1.4	0.4	82.2	200
Nsanje	61.7	21.7	1.6	0.4	0.1	85.4	191
Ntcheu	57.2	17.6	2.5	1.8	0.8	79.8	360
Ntchisi	78.7	4.7	0.3	0.0	0.5	84.2	139
Phalombe	58.2	16.1	3.1	1.4	0.3	79.1	226
Rumphi	65.7	17.7	3.8	6.9	0.8	94.9	123
Salima	80.8	6.1	0.6	0.9	0.0	88.5	417
Thyolo	64.9	16.1	4.4	2.3	0.3	88.0	458
Zomba	66.9	11.9	3.5	2.0	0.2	84.4	384

Table 7.3b

Neonatal tetanus protection

Percentage of mothers with a birth in the last 12 months protected against neonatal tetanus, Malawi, 2006

Background characteristic	Received at least 2 doses during last pregnancy	Received at least 2 doses, the last within 3 years	Received at least 3 doses, the last within 5 years	Received at least 4 doses, the last within 10 years	Received at least 5 doses during lifetime	Protected against tetanus	Number of mothers
Age							
15–19	72.8	4.8	0.2	0.0	0.0	77.8	1,158
20–24	76.7	11.0	1.2	0.3	0.0	89.1	3,599
25–29	71.8	13.7	3.4	2.5	0.2	91.5	2,670
30–34	62.3	16.1	3.4	5.3	1.5	88.6	1,621
35–39	65.9	13.5	4.8	5.0	2.4	91.5	970
40–44	63.8	15.1	3.9	3.9	1.4	88.1	384
45–49	66.4	10.1	0.4	4.5	3.7	85.2	150
Mother's education							
None	70.2	13.6	2.3	2.3	0.4	88.7	2,407
Primary	70.4	12.0	2.4	2.4	0.7	87.8	6,912
Secondary +	78.2	10.1	2.4	1.0	0.3	92.1	1,213
Other	50.2	8.4	24.4	0.0	1.7	84.6	20
Wealth index quintile							
Lowest	72.1	12.2	1.9	1.6	0.5	88.3	2,442
Second	71.1	10.6	2.5	1.9	0.5	86.7	2,225
Middle	68.2	14.2	2.3	2.2	0.4	87.2	2,164
Fourth	70.7	13.2	2.5	3.0	0.8	90.1	1,899
Highest	74.4	10.4	2.9	2.5	0.9	91.1	1,822

7.3 ORAL REHYDRATION TREATMENT (ORT)

Diarrhoea is one of the leading causes of morbidity and mortality among children under five in Malawi. Most diarrhoea-related deaths in children are due to dehydration from loss of large quantities of water and electrolytes from the body in liquid stools. Management of diarrhoea, either through oral rehydration salts (ORS) or a recommended home fluid can prevent many of these deaths. Preventing dehydration and malnutrition by increasing fluid intake and continuing to feed the child are important strategies for managing diarrhoea.

The goals are to: 1) reduce by one half, deaths due to diarrhoea among children under five by 2010 (WFFC); and 2) reduce by two thirds the mortality rate among children under five by 2015 (MDG). In addition, WFFC calls for a reduction in the incidence of diarrhoea by 25 percent.

The indicators are:

- Prevalence of diarrhoea
- Oral rehydration therapy
- Home management of diarrhoea
- ORT or increased fluids and continued feeding

In the MICS 2006 questionnaire, mothers (or caretakers) were asked to report on whether their child had experienced diarrhoea in the two weeks prior to the survey. If so, the mother was asked a series of questions to establish what liquids and solids were given to the child during the episode and how this compared to usual eating and drinking patterns.

Overall, 24 percent of children under five have had a bout of diarrhoea in the two weeks preceding the survey (Tables 7.4a and 7.4b). This is a remarkably high prevalence of diarrhoea, implying a rate of some 6.2 episodes per child per year (24 x 26 two-week periods divided by 100). Diarrhoea prevalence ranges from 19 percent in the Northern Region to 27 percent in the Central Region. By districts, the prevalence of diarrhoea ranges from 10 percent in Karonga to 32 percent in Ntchisi. Twelve districts display diarrhoea prevalence above the overall national average. The peak of diarrhoea prevalence tends to occur in the weaning period, among children aged 6–23 months with a two-week prevalence of 10 episodes per child, per year if the rate remains constant throughout the year.

Table 7.4a also shows the percentage of children receiving various types of recommended liquids during the episode of diarrhoea. Fifty-one percent receive fluids made from ORS packets; 12 percent receive pre-mixed ORS fluids, and 1 percent receives recommended homemade fluids. Children born to mothers with secondary education are more likely to receive oral rehydration treatment than other children (Table 7.4b). Fifty-five percent of children of educated mothers with diarrhoea receive one or more of the recommended home treatments, that is, are treated with ORS or recommended home fluids, compared to 48 percent children whose mothers are illiterate.

Table 7.4b also shows the prevalence of diarrhoea in relation to other background characteristics such as sex, age and wealth status. The results in the table show that there is no marked difference in the prevalence of diarrhoea among male and female children. In terms of the wealth index quintile, there is a classical vulnerability pattern from 26 percent diarrhoea prevalence among children in the lowest quintile to 20 percent among children in the highest quintile. The pattern is

Table 7.4a

Oral rehydration treatment

Percentage of aged 0–59 months with diarrhoea in the last two weeks and treatment with oral rehydration solution (ORS) or other oral rehydration treatment (ORT), Malawi, 2006

Background characteristic	Had diarrhoea in last two weeks	Number of children aged 0–59 months	Fluid from ORS packet	Recommended home-made fluid	Pre–packaged ORS fluid	No treatment	ORT use rate	Number of children aged 0–59 months with diarrhea
Malawi								
Total	24.1	22,994	51.4	0.8	11.7	44.7	55.3	5,532
Urban	22.0	3,366	59.4	0.6	23.8	33.7	66.3	742
Rural	24.4	19,628	50.1	0.8	9.8	46.4	53.6	4,790
Region								
Northern	18.7	2,315	39.5	1.9	14.8	52.3	47.7	433
Central	26.6	10,569	50.4	0.3	11.5	45.8	54.2	2,809
Southern	22.7	10,111	54.8	1.3	11.4	41.8	58.2	2,291
District								
Balaka	25.5	498	45.1	0.0	6.4	53.6	46.4	127
Blantyre	17.0	1,527	63.0	6.9	33.0	26.5	73.5	260
Chikwawa	27.6	802	45.7	0.0	2.7	52.7	47.3	221
Chiradzulu	22.7	434	55.2	1.1	10.7	41.3	58.7	98
Chitipa	22.2	313	35.0	0.4	4.0	63.7	36.3	70
Dedza	25.7	1,345	52.1	0.6	10.1	44.3	55.7	346
Dowa	30.6	942	40.1	0.0	9.9	54.2	45.8	288
Karonga	9.6	449	46.8	4.8	25.8	35.4	64.6	43
Kasungu	30.1	1,026	38.9	0.7	8.7	55.5	44.5	309
Lilongwe	26.4	3,965	57.1	0.2	14.3	39.9	60.1	1,045
Machinga	23.2	872	67.2	0.0	3.9	31.4	68.6	202
Mangochi	24.1	2,186	47.0	0.0	5.2	51.6	48.4	528
Mchinji	23.2	861	52.3	0.0	13.5	40.8	59.2	199
Mulanje	13.7	633	67.3	0.0	10.2	31.0	69.0	87
Mwanza	19.3	412	61.9	0.0	16.1	32.5	67.5	80
Mzimba	23.3	995	34.3	1.5	11.8	58.9	41.1	232
Nkhata Bay	18.0	270	53.9	3.4	35.0	30.7	69.3	49
Nkhotakota	28.5	430	51.6	0.0	12.8	45.4	54.6	123
Nsanje	26.2	404	42.0	0.5	6.7	55.7	44.3	106
Ntcheu	21.7	794	39.6	0.0	2.6	59.2	40.8	172
Ntchisi	32.2	294	51.0	0.2	11.5	45.0	55.0	95
Phalombe	28.4	478	55.4	2.9	13.7	39.2	60.8	136
Rumphi	13.6	287	52.4	2.3	14.7	38.7	61.3	39
Salima	25.4	911	51.4	0.4	11.1	46.5	53.5	232
Thyolo	20.3	1,015	56.7	1.1	18.9	38.6	61.4	206
Zomba	28.2	852	62.6	1.4	11.9	34.3	65.7	240

Table 7.4b

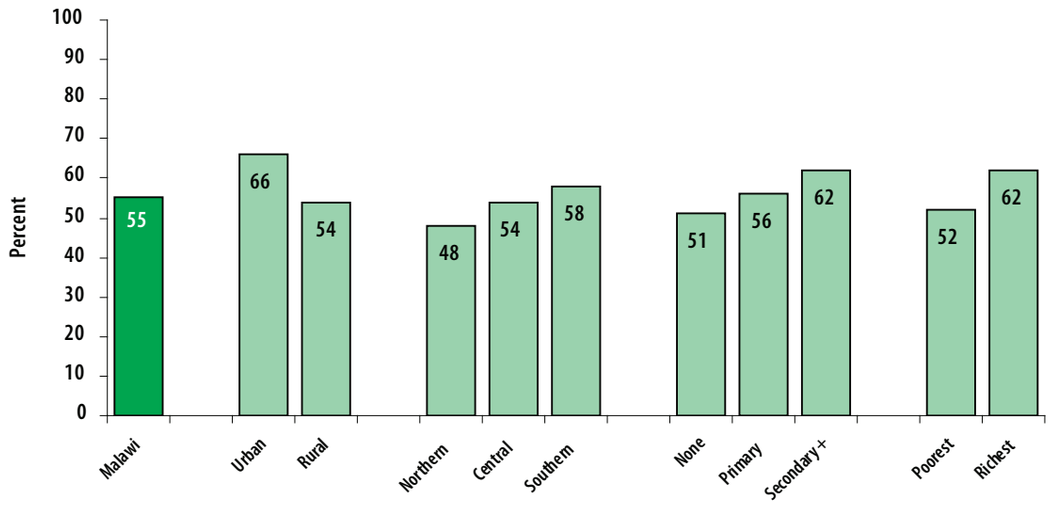
Oral rehydration treatment

Percentage of aged 0–59 months with diarrhoea in the last two weeks and treatment with oral rehydration solution (ORS) or other oral rehydration treatment (ORT), Malawi, 2006

Background characteristic	Had diarrhoea in last two weeks	Number of children aged 0–59 months	Fluid from ORS packet	Recommended home-made fluid	Pre–packaged ORS fluid	No treatment	ORT use rate	Number of children aged 0–59 months with diarrhea
Sex								
Male	24.5	11,368	50.6	0.8	12.2	45.3	54.7	2,787
Female	23.6	11,626	52.2	0.8	11.2	44.0	56.0	2,746
Age								
< 6 months	12.2	2,353	33.6	0.4	4.6	64.9	35.1	286
6–11 months	44.0	2,673	54.2	1.0	10.1	42.6	57.4	1,177
12–23 months	39.4	5,080	54.1	1.1	12.1	42.2	57.8	2,004
24–35 months	22.1	5,027	47.6	0.4	12.1	47.7	52.3	1,112
36–47 months	13.8	4,540	51.0	0.7	13.7	42.9	57.1	628
48–59 months	9.8	3,322	53.2	0.5	16.1	42.6	57.4	325
Mother's education								
None	24.2	5,614	48.2	0.2	6.1	49.3	50.7	1,360
Primary	24.4	14,875	52.0	1.1	12.6	43.9	56.1	3,626
Secondary +	22.0	2,442	55.2	0.6	20.3	38.0	62.0	537
Other	14.0	63	37.4	0.0	4.0	62.6	37.4	9
Wealth index quintile								
Lowest	25.6	5,112	49.7	0.5	7.6	47.8	52.2	1,308
Second	25.3	4,686	48.7	0.8	7.1	48.5	51.5	1,187
Middle	25.1	4,736	52.1	0.8	9.0	45.7	54.3	1,188
Fourth	23.4	4,243	53.6	1.3	14.7	40.7	59.3	991
Highest	20.3	4,217	53.9	0.9	24.7	37.6	62.4	858

Figure 7.3

Percentage of children aged 0–59 months with diarrhoea who received oral rehydration treatment, Malawi, 2006



the same in terms of use of pre-packed ORS fluids and overall ORT use. That is, children whose mothers are in the lowest wealth index quintile are less likely to use ORT than children with mothers in the highest wealth index quintile. For the children who did not get any treatment, the worst situation was among children in the lowest quintile and less serious among children in the highest quintile. Wealth did little to prevent diarrhoea, nor did education – essentially, diarrhoea is a concomitant of the general environment in Malawi. It is also noted that the age of peak incidence of diarrhoea closely follows the peak growth faltering as mentioned in chapter six on nutrition.

Figure 7.3 portrays the relationship between ORT use and some of the most important background characteristics such as residence, region, mother's level of education and the wealth index. The pattern, as far as education and area of residence are concerned, is predictable. The most undesirable situation can be found among children living in rural settings and those whose mothers have no education. In general, the ORT use rate is highest among children in the Southern Region and lowest in the Northern Region.

Tables 7.5a and 7.5b show the percentage of children aged 0–59 months who had experienced diarrhoea in the two weeks preceding the survey and who took increased fluids and continued to feed during the episode. The fluids were categorised into 'more' and 'same or less' than those taken before the episode, whereas foods were categorised as 'somewhat less, same or more' and 'much less or none'. Only 9 percent of children under five with diarrhoea drank more than usual, with a range between 3 percent in Thyolo and 50 in Rumphi, while 90 percent drank the same or less with a range between 49 and 97 percent in Rumphi and Thyolo respectively. Forty-four percent eat somewhat less, the same or more (continued feeding), ranging from 18 percent in Mulanje to 68 percent in Chiradzulu while 81 percent eat much less or eat almost nothing in Mulanje while Chiradzulu represents the upper limit (32 percent).

Table 7.5a

Home management of diarrhoea

Percentage of children aged 0–59 months with diarrhoea in the last two weeks who took increased fluids and continued to feed during the episode, Malawi, 2006

Background characteristic	Had diarrhoea in last two weeks	Number of children aged 0–59 months	Children with diarrhoea who drank more	Children with diarrhoea who drank the same or less	Children with diarrhoea who ate somewhat less, same or more	Children with diarrhoea who ate much less or none	Home management of diarrhoea	Received ORT or increased fluids and continued feeding	Number of children aged 0–59 months with diarrhea
Malawi									
Total	24.1	22,994	9.3	90.2	43.5	56.2	5.2	26.5	5,532
Urban	22.0	3,366	9.2	90.7	53.5	46.4	4.7	35.7	742
Rural	24.4	19,628	9.4	90.1	42.0	57.7	5.2	25.1	4,790
Region									
Northern	18.7	2,315	27.1	72.5	38.6	61.2	10.4	23.1	433
Central	26.6	10,569	8.0	91.5	40.2	59.6	4.4	24.4	2,809
Southern	22.7	10,111	7.6	91.9	48.5	51.1	5.1	29.6	2,291
District									
Balaka	25.5	498	7.2	92.5	35.7	64.3	3.0	17.5	127
Blantyre	17.0	1,527	6.1	93.9	61.6	38.4	5.1	43.6	260
Chikwawa	27.6	802	10.3	88.3	35.9	62.3	8.5	20.9	221
Chiradzulu	22.7	434	9.0	91.0	68.1	31.9	3.7	43.8	98
Chitipa	22.2	313	33.5	66.5	25.9	74.1	6.8	13.7	70
Dedza	25.7	1,345	8.5	91.1	39.3	60.4	5.0	26.0	346
Dowa	30.6	942	14.5	83.8	46.7	53.0	8.8	26.0	288
Karonga	9.6	449	16.3	82.8	35.9	64.1	7.9	27.0	43
Kasungu	30.1	1,026	3.2	96.8	18.5	81.5	1.6	8.7	309
Lilongwe	26.4	3,965	5.8	93.9	45.9	54.1	2.3	29.1	1,045
Machinga	23.2	872	8.7	91.3	27.1	72.9	3.7	17.9	202
Mangochi	24.1	2,186	9.6	89.4	61.9	37.7	8.1	34.7	528
Mchinji	23.2	861	11.2	88.2	38.3	61.1	7.8	23.8	199
Mulanje	13.7	633	9.7	89.5	18.4	80.8	1.1	10.4	87
Mwanza	19.3	412	6.4	93.1	51.0	48.4	5.4	36.1	80
Mzimba	23.3	995	26.6	73.2	38.5	61.5	9.3	19.1	232
Nkhata Bay	18.0	270	11.1	87.8	54.2	44.7	8.1	42.9	49
Nkhotakota	28.5	430	14.9	84.1	38.8	60.0	10.0	22.6	123
Nsanje	26.2	404	4.2	95.4	53.8	46.2	2.0	27.3	106
Ntcheu	21.7	794	11.8	87.8	41.5	58.5	6.4	21.3	172
Ntchisi	32.2	294	6.6	93.4	53.3	46.5	5.1	33.4	95
Phalombe	28.4	478	8.6	90.5	45.4	53.7	5.2	30.2	136
Rumphi	13.6	287	50.3	49.0	45.6	53.6	29.6	35.0	39
Salima	25.4	911	7.0	92.6	33.1	66.6	3.9	20.6	232
Thyolo	20.3	1,015	2.7	97.3	54.9	45.1	1.0	34.9	206
Zomba	28.2	852	6.0	94.0	37.6	62.4	4.1	22.7	240

Table 7.5b

Home management of diarrhoea

Percentage of children aged 0–59 months with diarrhoea in the last two weeks who took increased fluids and continued to feed during the episode, Malawi, 2006

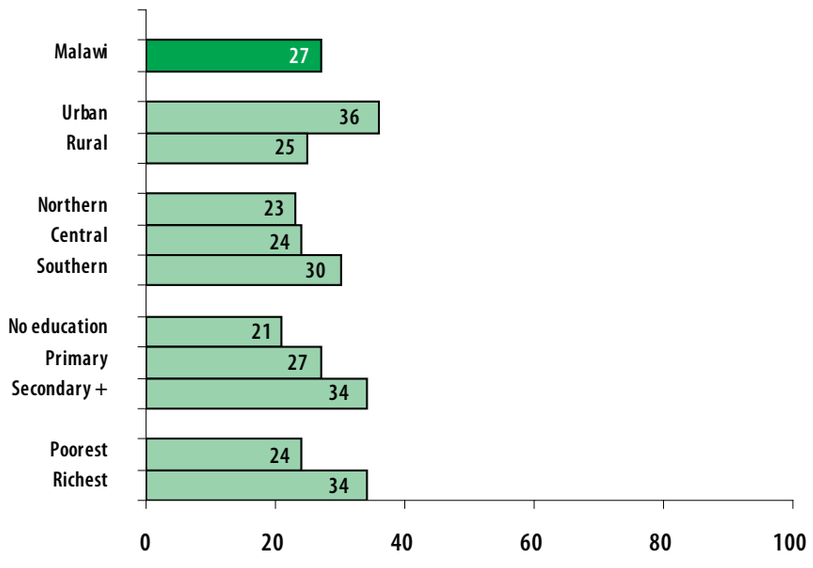
Background characteristic	Had diarrhoea in last two weeks	Number of children aged 0–59 months	Children with diarrhoea who drank more	Children with diarrhoea who drank the same or less	Children with diarrhoea who ate somewhat less, same or more	Children with diarrhoea who ate much less or none	Home management of diarrhoea	Received ORT or increased fluids and continued feeding	Number of children aged 0–59 months with diarrhea
Sex									
Male	24.5	11,368	9.0	90.4	45.0	54.6	5.1	28.0	2,787
Female	23.6	11,626	9.7	89.9	42.0	57.8	5.2	24.9	2,746
Age									
0–11 months	29.1	5,026	7.7	91.5	34.1	65.4	4.0	18.5	1,463
12–13 months	39.4	5,080	8.8	90.8	42.4	57.4	4.6	27.6	2,004
24–35 months	22.1	5,027	11.3	88.6	53.6	46.3	6.4	31.2	1,112
36–47 months	13.8	4,540	10.6	89.0	47.4	52.4	6.7	29.7	628
48–59 months	9.8	3,322	11.0	88.3	51.3	48.1	6.4	33.2	325
Mother's education									
None	24.2	5,614	7.3	92.1	37.3	62.6	4.0	20.9	1,360
Primary	24.4	14,875	9.7	90.0	44.8	55.0	5.5	27.4	3,626
Secondary	22.0	2,442	11.8	86.8	50.9	48.2	6.3	34.4	537
Other	14.0	63	13.4	86.6	58.5	41.5	5.5	27.7	9
Wealth index quintile									
Lowest	25.6	5,112	8.5	91.4	39.1	60.9	4.2	23.7	1,308
Second	25.3	4,686	8.6	91.1	44.8	55.0	3.9	25.1	1,187
Middle	25.1	4,736	9.4	89.5	41.3	58.2	5.9	23.8	1,188
Fourth	23.4	4,243	9.2	90.1	43.7	55.9	5.3	28.9	991
Highest	20.3	4,217	11.6	88.0	51.5	48.2	7.1	33.5	858

Overall, the mean percentage of children receiving ORT or increased fluids and continued feeding is 27 percent. In the Southern Region, just over a quarter of children (30 percent) receive ORT or increased fluids and continued feeding, while 23 percent of children in the Northern Region and 24 percent in the Central Region, receive ORT or increased fluids and continued feeding.

There are significant differences in the home management of diarrhoea by background characteristics. Figure 7.4 summarises some of the important background characteristics such as residence, region, mother's education and wealth index. The data show that children in the urban setting are more likely to receive ORT or increased fluids and continued feeding during an episode of diarrhoea. There is a ten-percentage difference between rural and urban settings. Furthermore, the higher the mother's level of education, the more a child with diarrhoea is likely to receive ORT or increased fluids and continued feeding. This clearly demonstrates the importance of renewed emphasis on proper home management of diarrhoea as a priority for the health system.

Figure 7.4

Percentage of children aged 0–59 months with diarrhoea who received oral rehydration treatment or increased fluids and continued feeding, Malawi, 2006



7.4 CARE SEEKING AND ANTIBIOTIC TREATMENT OF PNEUMONIA

Pneumonia is one of the leading causes of death in children and the use of antibiotics in under-fives with suspected pneumonia is a key intervention. A WFFC goal is to reduce deaths due to acute respiratory infections by one third between 2000 and 2010.

Children with suspected pneumonia are those who have an illness with a cough accompanied by rapid or difficult breathing and whose symptoms are not due to another problem in the chest and a blocked nose. The indicators are:

- Prevalence of suspected (presumptive diagnosis) pneumonia
- Care seeking for suspected pneumonia
- Antibiotic treatment for suspected pneumonia
- Knowledge of the danger signs of pneumonia

Tables 7.6a and 7.6b present the prevalence of suspected pneumonia and indicate whether or not care was sought outside the home. Nine percent of children aged 0–59 months are reported to have had symptoms of pneumonia during the two weeks preceding the survey. Of these children, around 52 percent were taken to an appropriate provider. Of all of the appropriate providers, the highest percentage of children received services from government health centres (25 to 30 percent). Shops, though not appropriate providers, gave pneumonia treatment to 9 percent of the children, a proportion that is not very different from those children who received treatment from a private hospital clinic (8 percent). Government health posts and village health workers can provide very appropriate treatment within 24 hours of onset of the illness. Yet these services were only used to provide pneumonia treatment to a small proportion of children with pneumonia at 2 percent and 0.5 percent respectively.

Table 7.6a

Care seeking for suspected pneumonia

Percentage of children aged 0–59 months with symptoms of suspected pneumonia in the last two weeks taken to a health provider, Malawi, 2006

Background characteristic	Had acute respiratory infection	Number of children aged 0–59 months	Govt. hospital	Govt. health centre	Govt. health post	Village health worker	Mobile/outreach clinic	Other public	Private hospital clinic	Private physician	Pharmacy	Mobile clinic	Other private medical	Relative or friend	Shop	Traditional practitioner	Other	Any appropriate provider	Children aged 0-59 months with suspected pneumonia
Malawi																			
Total	8.5	22,994	10.7	28.0	1.8	0.5	0.5	1.2	7.9	0.2	0.2	0.3	1.1	0.6	8.7	2.1	0.7	51.8	1,952
Urban	8.7	3,366	27.0	30.3	1.1	0.0	0.0	0.4	16.7	0.0	0.0	0.0	0.0	0.2	7.5	1.7	0.0	74.5	291
Rural	8.5	19,628	7.9	27.7	1.9	0.5	0.6	1.4	6.4	0.3	0.3	0.3	1.3	0.7	9.0	2.1	0.9	47.8	1,660
Region																			
Northern	8.1	2,315	10.4	28.3	1.2	0.4	0.6	1.5	5.0	0.2	0.0	0.0	0.3	0.7	12.2	1.4	0.0	47.8	186
Central	9.9	10,569	10.6	28.5	2.4	0.3	0.6	1.3	8.5	0.1	0.4	0.5	0.2	0.4	7.1	1.5	0.3	52.7	1,051
Southern	7.1	10,111	10.9	27.3	1.1	0.8	0.3	1.0	7.7	0.3	0.0	0.0	2.7	1.0	10.2	3.0	1.5	51.5	714
District																			
Balaka	10.5	498	15.7	36.0	2.7	0.0	0.7	0.0	4.6	0.0	0.0	0.0	2.8	0.0	5.7	0.0	2.6	60.7	53
Blantyre	5.5	1,527	(1.4)	(44.1)	(3.3)	(0.0)	(0.0)	(0.0)	(20.9)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(7.6)	(0.0)	(0.0)	(66.5)	84
Chikwawa	8.4	802	7.4	33.6	3.2	0.0	0.7	3.3	9.2	1.2	0.0	0.0	3.3	0.0	2.4	0.0	0.0	62.0	67
Chiradzulu	4.4	434	(13.8)	(20.8)	(0.0)	(0.0)	(0.0)	(2.3)	(12.6)	(0.0)	(0.0)	(0.0)	(0.0)	(2.7)	(2.3)	(13.9)	(0.0)	49.5	19
Chitipa	5.2	313	11.4	19.9	3.4	1.4	3.6	1.8	3.2	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	44.6	16
Dedza	6.5	1,345	8.2	22.0	1.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	5.6	1.1	0.0	37.4	88
Dowa	11.1	942	5.2	26.2	11.0	0.8	0.0	0.8	8.4	1.3	0.0	0.0	0.0	0.0	5.9	6.3	2.8	51.7	104
Karonga	4.7	449	(4.2)	(37.9)	(3.9)	(2.6)	(1.5)	(0.0)	(10.3)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(7.6)	(0.0)	(0.0)	(60.4)	21
Kasungu	10.5	1,026	9.7	22.2	7.2	0.8	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0	15.7	4.6	0.0	45.0	108
Lilongwe	12.8	3,965	13.2	31.9	0.0	0.0	1.0	1.2	10.6	0.0	0.9	1.0	0.0	0.0	5.8	0.0	0.0	59.0	508
Machinga	3.9	872	(5.8)	(30.2)	(0.0)	(0.0)	(1.7)	(0.0)	(3.5)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(29.1)	(0.0)	(4.6)	(41.3)	34
Mangochi	11.1	2,186	13.5	19.2	0.0	0.9	0.0	0.0	8.6	0.0	0.0	0.0	6.2	2.0	17.4	6.2	2.0	47.5	243
Mchinji	6.2	861	2.6	23.7	1.4	1.7	0.0	3.9	5.9	0.0	0.0	0.0	2.5	4.1	2.8	0.0	0.0	41.8	53
Mulanje	5.2	633	(25.7)	(16.8)	(2.8)	(0.0)	(0.0)	(0.0)	(2.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(3.0)	(3.6)	(0.0)	(47.3)	33
Mwanza	6.3	412	21.4	29.4	0.0	10.3	1.8	0.0	1.0	1.7	0.0	0.0	0.0	1.2	4.6	0.0	2.7	65.6	26
Mzimba	12.5	995	9.4	27.2	0.7	0.0	0.0	0.9	3.9	0.0	0.0	0.0	0.0	1.1	15.0	2.2	0.0	42.1	125
Nkhata Bay	2.8	270	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	8
Nkhotakota	5.7	430	13.3	31.1	0.0	0.0	0.0	9.0	11.9	0.0	0.0	0.0	1.5	2.0	14.1	3.8	0.0	66.9	24
Nsanje	9.6	404	12.5	33.9	0.0	2.0	0.0	0.0	2.2	0.0	0.0	0.0	1.0	0.0	2.5	1.5	5.4	51.5	39
Ntcheu	3.2	794	(16.8)	(11.9)	(2.0)	(0.0)	(0.0)	(7.3)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(1.0)	(5.2)	(4.4)	(0.0)	(38.0)	25
Ntchisi	13.8	294	7.9	38.8	5.5	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	3.8	2.8	0.0	53.0	40
Phalombe	7.7	478	0.0	27.3	2.4	0.0	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	13.1	3.1	0.0	32.1	37
Rumphi	5.8	287	19.6	23.0	0.0	0.0	1.3	7.4	6.9	2.6	0.0	0.0	3.6	0.0	6.1	0.0	0.0	63.3	17
Salima	10.9	911	9.4	28.2	1.4	0.0	1.2	0.5	9.0	0.0	0.0	0.0	0.0	1.1	9.6	0.0	0.8	49.8	99
Thyolo	2.0	1,015	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	20
Zomba	6.9	852	(9.4)	(29.6)	(0.0)	(0.0)	(0.0)	(7.2)	(4.6)	(2.1)	(0.0)	(0.0)	(0.0)	(0.0)	(2.0)	(1.6)	(0.0)	(52.8)	59

Note: Figures in parantheses are based on 25–49 unweighted cases. An asterisk indicates that an estimate is based on fewer than 25 unweighted cases and has been supressed.

Table 7.6b

Care seeking for suspected pneumonia

Percentage of children aged 0–59 months with symptoms of suspected pneumonia in the last two weeks taken to a health provider, Malawi, 2006

Background characteristic	Had acute respiratory infection	Number of children aged 0–59 months	Govt. hospital	Govt. health centre	Govt. health post	Village health worker	Mobile/ outreach clinic	Other public	Private hospital clinic	Private physician	Pharmacy	Mobile clinic	Other private medical	Relative or friend	Shop	Traditional practitioner	Other	Any appropriate provider	Children aged 0-59 months with suspected pneumonia
Sex																			
Male	8.2	11,368	11.1	25.4	2.2	0.4	0.2	0.8	8.6	0.1	0.5	0.6	1.5	0.8	7.9	1.8	0.8	50.8	932
Female	8.8	11,626	10.3	30.4	1.4	0.5	0.8	1.6	7.2	0.3	0.0	0.0	0.7	0.5	9.5	2.2	0.6	52.7	1,020
Age																			
0–11 months	8.1	5,026	20.6	27.5	2.0	0.2	1.5	0.8	6.0	0.2	1.1	0.0	1.5	1.0	4.3	2.3	0.3	59.7	409
12–23 months	9.0	5,080	6.6	28.6	1.6	0.2	0.2	1.7	10.5	0.2	0.0	0.0	1.8	0.8	13.0	2.1	0.8	51.2	455
24–35 months	8.4	5,027	8.5	31.4	2.2	1.1	0.4	0.6	10.2	0.0	0.0	0.0	0.7	0.5	7.2	2.2	1.0	54.2	420
36–47 months	8.6	4,540	8.0	30.5	1.6	0.4	0.2	2.2	4.8	0.7	0.0	1.3	0.6	0.3	10.0	0.8	0.9	50.0	392
48–59 months	8.3	3,322	10.0	19.3	1.6	0.3	0.1	0.6	7.3	0.0	0.0	0.0	0.7	0.6	8.7	3.3	0.6	39.9	275
Mother's education																			
None	9.3	5,614	8.6	29.4	1.6	0.6	1.2	1.1	4.4	0.0	0.0	1.0	1.7	0.7	8.0	1.8	0.4	49.6	521
Primary	8.5	14,875	10.3	28.3	2.1	0.4	0.2	1.3	7.7	0.3	0.4	0.0	1.0	0.6	8.9	2.4	0.9	51.0	1,260
Secondary +	6.7	2,442	20.3	22.1	0.3	0.5	0.1	0.8	20.4	0.3	0.0	0.0	0.0	0.3	9.9	0.0	0.5	64.8	164
Other	9.7	63	5.8	20.9	0.0	0.0	7.3	0.0	14.9	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0	48.8	6
Wealth index quintile																			
Lowest	9.1	5,112	8.1	33.5	2.3	0.9	0.4	0.5	4.9	0.0	0.0	0.0	0.4	1.6	7.2	2.9	0.3	50.9	467
Second	8.5	4,686	6.8	25.6	2.3	0.3	0.3	0.4	6.2	0.6	0.0	1.3	1.3	0.0	11.0	2.0	0.2	43.9	400
Middle	8.3	4,736	10.2	32.9	2.4	0.6	0.2	3.5	6.4	0.0	0.0	0.0	0.9	0.7	6.7	2.2	1.8	56.9	391
Fourth	8.9	4,243	11.3	22.9	0.4	0.0	1.6	1.0	4.9	0.4	1.2	0.0	2.7	0.3	14.4	1.4	0.9	44.7	376
Highest	7.5	4,217	19.5	23.2	1.5	0.6	0.1	0.8	19.9	0.1	0.0	0.0	0.3	0.3	3.9	1.4	0.5	65.0	318

Tables 7.7a and 7.7b show the use of antibiotics for the treatment of suspected pneumonia in children under five by sex, age, region, residence, age, and socio-economic factors. In Malawi, only a third of children under five with suspected pneumonia received an antibiotic during the two weeks prior to the survey. The percentage, though less than half, is considerably higher in the Northern Region (41 percent), while the percentage declines to only 25 percent in the Central Region. Children in urban areas are more likely to receive antibiotics (38 percent) than their counterparts in rural areas (28 percent). The table also shows that antibiotic treatment of suspected pneumonia is lower amongst poorer households while the middle and highest quintiles have the highest percentage of children who receive antibiotics. The proportion receiving antibiotic treatment increases with the level of education of the mother or caretaker. The use of antibiotics is the highest among children who are in the 24–35 months age group.

Table 7.7a

Antibiotic treatment of pneumonia

Percentage of children aged 0–59 months with suspected pneumonia in the last two weeks who received antibiotic treatment, Malawi, 2006

Background characteristic	Percentage of children aged 0–59 months with suspected pneumonia who received antibiotics in the last two weeks	Number of children aged 0–59 months with suspected pneumonia in the two weeks prior to the survey
Malawi		
Total	29.5	1,952
Urban	37.6	291
Rural	28.1	1,660
Region		
Northern	40.7	186
Central	25.0	1,051
Southern	33.3	714
District		
Balaka	46.7	53
Blantyre	(38.5)	84
Chikwawa	40.6	67
Chiradzulu	(28.0)	19
Chitipa	7.8	16
Dedza	8.0	88
Dowa	20.2	104
Karonga	(27.2)	21
Kasungu	12.6	108
Lilongwe	29.4	508
Machinga	(36.0)	34
Mangochi	26.1	243
Mchinji	27.2	53
Mulanje	(31.0)	33
Mwanza	39.6	26
Mzimba	46.0	125
Nkhata Bay	*	8
Nkhotakota	43.7	24
Nsanje	27.0	39
Ntcheu	(34.4)	25
Ntchisi	21.5	40
Phalombe	8.9	37
Rumphi	50.3	17
Salima	29.1	99
Thyolo	*	20
Zomba	(47.7)	59

Note: Figures in parantheses are based on 25–49 unweighted cases. An asterisk indicates that an estimate is based on fewer than 25 unweighted cases and has been supressed.

Table 7.7b

Antibiotic treatment of pneumonia

Percentage of children aged 0–59 months with suspected pneumonia in the last two weeks who received antibiotic treatment, Malawi, 2006

Background characteristic	Percentage of children aged 0–59 months with suspected pneumonia who received antibiotics in the last two weeks	Number of children aged 0–59 months with suspected pneumonia in the two weeks prior to the survey
Age		
0–11 months	29.3	409
12–23 months	28.4	455
24–35 months	33.5	420
36–47 months	28.6	392
48–59 months	27.1	275
Mother's education		
None	28.1	521
Primary	29.8	1,260
Secondary +	32.9	164
Other	0.0	6
Wealth index quintile		
Lowest	23.3	467
Second	33.9	400
Middle	31.7	391
Fourth	34.2	376
Highest	28.6	318

Issues related to knowledge of the danger signs of pneumonia are presented in tables 7.8a and 7.8b. Obviously, a mother's knowledge of the danger signs is an important determinant of care seeking behaviour. Overall a mere 6 percent of women recognise two signs of pneumonia – fast and difficult breathing. The percentage of those who know these two signs is highest in Zomba, Mzimba, Mulanje and Thyolo districts but even there, it only reaches one-fifth of mothers. The most commonly identified symptom for taking a child to a health facility is fever (88 percent). Only 18 percent of mothers identify fast breathing and 25 percent of mothers identify difficult breathing as symptoms that warrant an immediate trip to a health care provider.

Figure 7.5 shows the relationship between the knowledge mothers or caretakers have and certain background characteristics such as residence, region, mother's education and wealth index. The Northern Region has the highest proportion of mothers or caretakers who know the two signs of pneumonia while the Central Region has the lowest proportion. Urban mothers are slightly more knowledgeable about the two signs of pneumonia than rural mothers, although the percentages are very low in both groups. The knowledge distribution pattern also correlates to levels of education attained by mothers or caretakers. Those without any formal education have less knowledge about the two signs of pneumonia than the general population.

The remarkable thing about these observations is not the differences found between groups, but rather the extremely low overall knowledge that mothers have of the danger signs of pneumonia and of the indications for seeking care.

Table 7.8a

Knowledge of the two danger signs of pneumonia

Percentage of mothers/caretakers of children aged 0–59 months by knowledge of types of symptoms for taking a child immediately to a health facility, and percentage of mothers/caretakers who recognize fast and difficult breathing as signs for seeking care immediately, Malawi, 2006

Background characteristic	Percentage of mother/caretakers of children aged 0–59 months who think that a child should be taken immediately to a health facility if the child:								Mothers/ caretakers who recognize the two danger signs of pneumonia	Number of mothers/ caretakers of children aged 0–59 months
	Is not able to drink or breastfeed	Becomes sicker	Develops a fever	Has fast breathing	Has difficulty breathing	Has blood in stool	Is drinking poorly	Has other symptoms		
Malawi										
Total	14.5	45.5	88.2	17.9	24.7	11.2	3.5	50.7	6.0	22,994
Urban	13.1	38.9	92.2	16.4	26.5	6.2	2.6	66.7	6.7	3,366
Rural	14.8	46.6	87.5	18.2	24.4	12.0	3.6	47.9	5.9	19,628
Region										
Northern	23.0	46.9	90.4	25.3	25.1	7.9	4.1	48.8	10.3	2,315
Central	10.6	42.2	86.3	14.0	27.9	10.2	2.9	55.9	3.8	10,569
Southern	16.7	48.6	89.7	20.3	21.3	13.0	3.9	45.7	7.4	10,111
District										
Balaka	14.2	34.8	95.9	18.8	20.3	10.2	4.1	55.3	7.0	498
Blantyre	19.7	56.4	90.6	16.6	23.9	4.8	2.1	59.3	5.5	1,527
Chikwawa	11.1	51.6	85.5	11.5	16.7	11.8	1.5	36.3	3.4	802
Chiradzulu	5.8	24.0	92.8	5.8	19.0	7.4	4.5	73.9	1.8	434
Chitipa	48.3	14.8	94.1	13.6	25.7	6.9	3.9	59.5	4.5	313
Dedza	9.7	57.6	76.3	19.1	13.5	2.3	2.9	43.8	2.8	1,345
Dowa	8.9	36.3	73.2	13.4	28.5	13.1	2.3	36.8	4.2	942
Karonga	36.9	68.6	89.4	21.2	7.8	7.3	1.6	56.9	1.9	449
Kasungu	42.4	36.1	92.9	13.0	31.4	8.4	5.7	46.9	3.1	1,026
Lilongwe	2.8	34.6	91.7	10.1	38.8	8.8	2.8	71.7	3.4	3,965
Machinga	15.3	57.2	88.9	19.3	8.6	2.7	2.0	33.7	3.1	872
Mangochi	8.3	35.2	91.2	18.3	21.6	2.7	1.6	56.5	4.1	2,186
Mchinji	10.9	59.9	81.6	14.9	17.8	6.6	0.6	46.2	6.2	861
Mulanje	42.1	75.8	90.1	48.4	25.8	11.0	3.0	13.6	17.6	633
Mwanza	28.7	21.8	97.0	8.2	17.4	4.1	1.5	60.7	4.2	412
Mzimba	15.3	45.6	89.1	32.1	35.8	7.3	5.7	44.6	19.0	995
Nkhata Bay	8.0	50.2	94.4	31.8	11.5	17.0	1.5	35.5	4.8	270
Nkhotakota	16.0	35.6	84.5	7.3	17.8	8.0	2.9	59.5	1.3	430
Nsanje	11.2	38.5	90.8	21.5	15.9	7.1	6.3	44.5	6.2	404
Ntcheu	5.8	47.4	88.1	29.4	21.6	30.7	1.3	60.3	8.1	794
Ntchisi	16.3	35.8	80.2	15.0	31.4	34.8	4.7	44.2	6.6	294
Phalombe	27.2	47.4	77.4	14.1	9.9	42.7	0.6	57.3	1.8	478
Rumphi	14.9	49.5	89.0	15.1	27.1	3.4	5.0	51.2	5.2	287
Salima	10.7	49.3	89.8	13.9	15.4	5.4	4.0	42.2	1.7	911
Thyolo	21.6	57.5	87.8	24.4	27.8	17.1	17.8	48.1	13.4	1,015
Zomba	12.6	66.1	88.3	33.1	34.6	57.2	2.6	2.5	20.5	852

Table 7.8b

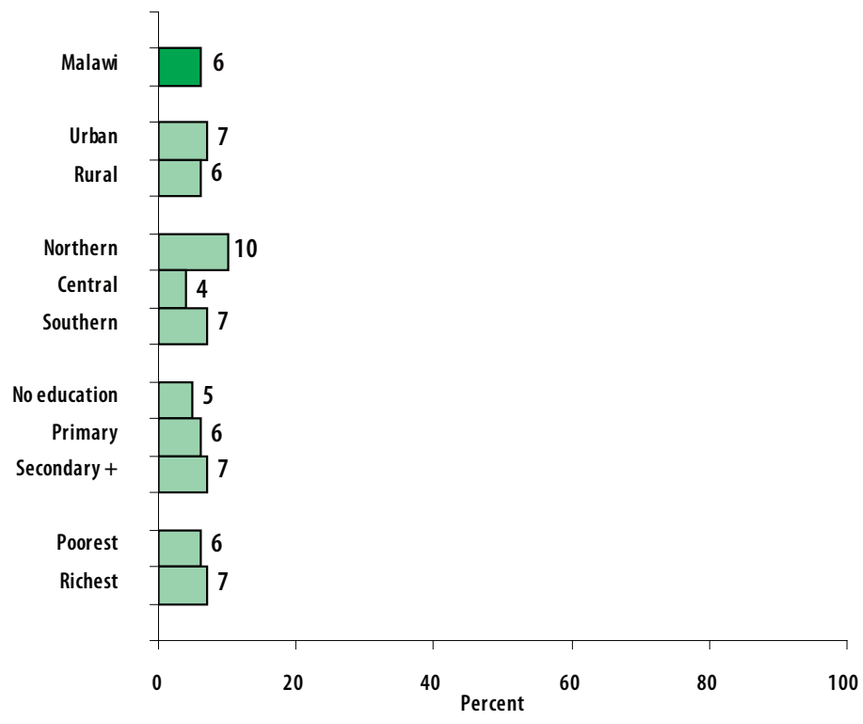
Knowledge of the two danger signs of pneumonia

Percentage of mothers/caretakers of children aged 0-59 months by knowledge of types of symptoms for taking a child immediately to a health facility, and percentage of mothers/caretakers who recognize fast and difficult breathing as signs for seeking care immediately, Malawi, 2006

Background characteristic	Percentage of mother/caretakers of children aged 0–59 months who think that a child should be taken immediately to a health facility if the child:								Mothers/ caretakers who recognize the two danger signs of pneumonia	Number of mothers/ caretakers of children aged 0–59 months
	Is not able to drink or breastfeed	Becomes sicker	Develops a fever	Has fast breathing	Has difficulty breathing	Has blood in stool	Is drinking poorly	Has other symptoms		
Mother's education										
None	13.1	48.2	87.4	18.5	23.6	9.1	2.9	46.0	5.2	5,614
Primary	14.7	45.4	88.1	17.6	25.0	12.0	3.6	50.6	6.1	14,875
Secondary +	17.3	39.7	90.9	18.5	25.9	10.8	3.9	62.0	7.2	2,442
Other	3.9	52.7	96.0	17.7	13.0	7.2	0.0	47.1	6.6	63
Wealth index quintile										
Lowest	13.0	44.7	85.4	16.4	27.6	7.3	3.1	51.2	5.5	5,112
Second	12.9	45.8	87.1	16.5	22.5	12.8	3.0	49.0	5.5	4,686
Middle	15.9	46.8	88.4	20.0	22.0	15.1	3.7	47.0	6.0	4,736
Fourth	15.7	48.4	89.1	19.8	23.3	11.7	3.9	48.6	6.4	4,243
Highest	15.5	41.7	91.7	17.1	28.0	9.2	3.6	58.2	6.8	4,217

Figure 7.5

Percentage of mothers / caretakers of children aged 0–59 months who are knowledgeable of the two signs of pneumonia, Malawi, 2006



7.5 USE OF SOLID FUELS

More than three billion people around the world rely on solid fuels (biomass and coal) for their basic energy needs, including cooking and heating. Solid fuels produce products of incomplete combustion, including carbon monoxide, polyaromatic hydrocarbons, sulphur dioxide and other toxic elements. Cooking and heating with solid fuels can lead to high levels of indoor smoke, making up a complex mix of health-damaging pollutants, increasing the risk of acute respiratory illness, pneumonia, chronic obstructive lung disease, cancer, and possibly tuberculosis, low birth weight, cataracts and asthma. The main indicator is the proportion of the population using solid fuels as the primary source of domestic energy for cooking.

Table 7.9 shows that in Malawi there is almost universal use of solid fuels for cooking (99 percent). The use of solid fuels is slightly lower in urban (93 percent) than in rural areas.

The use of solid fuels declines with increasing levels of education, especially amongst those with secondary school education and above. A similar pattern prevails with increasing wealth status.

Table 7.9
Solid fuel use
Percent distribution of households according to type of cooking fuel, and percentage of households that used solid fuels for cooking, Malawi, 2006

Background characteristic	Type of fuel using for cooking													Total	Solid fuels for cooking	Number of households
	Electricity	Liquid propane gas (LPG)	Natural gas	Biogas	Kerosene	Coal/lignite	Charcoal	Wood	Straw/ shrubs/grass	Animal dung	Agricultural crop residue	Other	Missing			
Malawi																
Total	1.2	0.0	0.0	0.0	0.0	0.0	7.2	89.9	0.8	0.0	0.7	0.0	0.1	100.0	98.7	30,553
Urban	7.2	0.0	0.0	0.1	0.0	0.0	41.4	50.5	0.5	0.0	0.2	0.1	0.1	100.0	92.5	4,481
Rural	0.2	0.0	0.0	0.0	0.0	0.0	1.3	96.7	0.8	0.0	0.8	0.0	0.0	100.0	99.7	26,072
Region																
Northern	1.2	0.0	0.0	0.0	0.0	0.0	3.7	94.7	0.2	0.0	0.1	0.0	0.0	100.0	98.7	3,132
Central	0.9	0.0	0.0	0.0	0.0	0.0	5.1	92.5	0.5	0.0	0.8	0.0	0.0	100.0	99.0	13,121
Southern	1.4	0.0	0.0	0.0	0.0	0.0	10.0	86.5	1.1	0.0	0.8	0.0	0.1	100.0	98.4	14,300
Education of household head																
None	0.0	0.0	0.0	0.0	0.0	0.0	1.6	96.2	0.9	0.0	1.2	0.0	0.1	100.0	99.9	6,955
Primary	0.1	0.0	0.0	0.0	0.0	0.0	4.7	93.6	0.8	0.0	0.7	0.0	0.0	100.0	99.8	17,895
Secondary +	6.3	0.0	0.0	0.1	0.0	0.0	22.7	70.2	0.4	0.0	0.2	0.0	0.1	100.0	93.5	5,513
Other	0.0	0.0	0.0	0.0	0.0	0.0	2.0	95.7	1.6	0.0	0.7	0.0	0.0	100.0	100.0	190
Wealth index quintile																
Lowest	0.0	0.0	0.0	0.0	0.0	0.0	0.1	99.6	0.1	0.0	0.2	0.0	0.0	100.0	100.0	6,360
Second	0.0	0.0	0.0	0.0	0.0	0.0	0.1	99.6	0.1	0.0	0.1	0.0	0.0	100.0	100.0	6,297
Middle	0.0	0.0	0.0	0.0	0.0	0.0	0.1	98.6	0.3	0.0	0.9	0.0	0.1	100.0	99.9	5,976
Fourth	0.0	0.0	0.0	0.0	0.0	0.0	3.8	90.3	3.2	0.0	2.4	0.1	0.1	100.0	99.8	5,863
Highest	6.1	0.0	0.0	0.1	0.0	0.0	32.3	60.8	0.4	0.0	0.1	0.0	0.1	100.0	93.7	6,057

All households in the lowest and second wealth index quintile use solid fuels while in wealth quintile five, the rate drops to 94 percent. The findings show that the use of solid fuel is similar across all three regions of the country, at around 99 percent. The table also shows that the type of fuel commonly used is wood, with 90 percent of all households using wood. Seven percent of households use charcoal and only 1 percent uses electricity. Households in urban areas are most likely to use electricity (7 percent) and charcoal (41 percent).

Solid fuel use alone is a poor proxy for indoor air pollution since the concentration of the pollutants is different when the same fuel is burnt in different stoves or fires. While closed stoves with chimneys minimise indoor pollution, open stoves or fires without chimneys or hoods do not protect from the harmful effects of solid fuels. The type of stove used is depicted in table 7.10. Results show that the majority of households using solid fuels for cooking (92 percent) do so on an open stove or fire with no chimney or hood. Only 8 percent use an open stove or fire with a chimney or hood, while a negligable percent use a closed stove with a chimney. The use of solid fuels with an open stove or fire with no chimney varies slightly in the three regions of the country. Eighty-eight percent of the households using solid fuels in the Central Region use an open stove or fire with no chimney or hood while for the Northern and Southern Regions the data

Table 7.10

Solid fuel use by type of stove or fire

Percent of households using solid fuels for cooking by type of stove or fire, Malawi, 2006

Background characteristic	Percentage of households using solid fuels for cooking:					Total	Number of households using solid fuels for cooking
	Closed stove with chimney	Open stove or fire with chimney or hood	Open stove or fire with no chimney or hood	Other stove	DK/stove type missing		
Malawi							
Total	0.2	7.9	91.9	0.0	0.0	100.0	30,152
Urban	0.7	4.7	94.2	0.3	0.1	100.0	4,147
Rural	0.1	8.4	91.5	0.0	0.0	100.0	26,005
Region							
Northern	0.3	5.4	94.2	0.0	0.0	100.0	3,090
Central	0.1	11.7	88.3	0.0	0.0	100.0	12,986
Southern	2.0	4.9	94.7	0.1	0.1	100.0	14,075
Education of household head							
None	0.0	7.2	92.6	0.1	0.0	100.0	6,946
Primary	0.1	8.2	91.7	0.0	0.0	100.0	17,861
Secondary +	0.5	7.6	91.7	0.0	0.1	100.0	5,155
Other	0.0	10.8	88.8	0.0	0.4	100.0	190
Wealth index quintile							
Lowest	0.0	6.9	93.0	0.0	0.0	100.0	6,360
Second	0.0	7.4	92.5	0.0	0.0	100.0	6,294
Middle	0.0	8.8	91.2	0.0	0.0	100.0	5,971
Fourth	0.1	8.4	91.4	0.1	0.0	100.0	5,851
Highest	0.7	8.0	91.1	0.2	0.1	100.0	5,675

are 94 percent and 95 percent respectively. Households using solid fuels in the Central Region are more likely to use an open stove or fire with a chimney or hood (12 percent) than households in the Southern and Northern Regions (5 percent). In terms of the education of the household head or wealth of the household, no marked variations are found in whether stoves were open, have chimneys or are protected by hoods.

7.6 MALARIA

Malaria is a leading cause of death in children under five in Malawi. It also contributes to anaemia in children and is a common cause of school absenteeism. Preventive measures, especially the use of mosquito nets treated with insecticide (ITNs), can dramatically reduce malaria mortality rates among children. In areas where malaria is common, international recommendations suggest treating any fever in children as if it were malaria and immediately giving the child a full course of recommended anti-malarial tablets. Children with severe symptoms of malaria, such as fever or convulsions, should be taken to a health facility. Children recovering from malaria should be given extra liquids and food. For younger children, breastfeeding should be continued.

The questionnaire in this survey incorporates questions on the availability and use of bed nets, both at household level and among children under five, as well as anti-malarial treatment for malaria.

7.6.1 Availability of nets

The use of ITNs is a primary health intervention to reduce malaria transmission. Use of ITNs, especially by children under five and pregnant women, is one of the key strategies adopted by the Government of Malawi to control malaria in the country. All the households in this survey were asked whether they own mosquito nets, where they got the nets from and whether and when their nets were treated. Tables 7.11a and 7.11b show the percentage of households with at least one mosquito net and ITN by background characteristics.

Survey results for Malawi indicate that 51 percent of households own at least one mosquito net, while 38 percent have at least one ITN (Figure 7.6). Urban households are more likely to own at least one mosquito net compared to rural households. The Northern Region has on average 1.2 nets per household compared to 0.8 nets in the Central Region and 0.9 nets in Southern Region. In terms of districts, 77 percent of households in Karonga have at least one net while use of ITNs is higher in Nkhotakota (53 percent). Mulanje has the lowest proportion of households owning a net (26 percent) (Figure 7.7).

Table 7.11b shows that education of the head of the household and the wealth status of the household have a significant impact on the ownership of bed nets. When the head of the household has received secondary level education and above, the ownership rate of bed nets and ITNs is 74 percent and 58 percent respectively. In households where the head of the house is illiterate, the rate drops to 37 and 24 percent. Similarly, the ownership of bed nets and ITNs is clearly higher amongst households in the top wealth index quintile (73 and 57 percent respectively) compared to poor households, where only 35 percent have bed nets and 23 percent have ITNs.

Table 7.11a

Availability of insecticide treated nets

Percent of households with at least one insecticide treated net (ITN), Malawi, 2006

Background characteristic	Percentage of households with at least one mosquito net	Percentage of households that have more than one net	Average number of nets per household	Percentage of households with at least one ever treated net	Percentage of households with at least one insecticide treated net (ITN)	Number of households
Malawi						
Total	51.4	23.8	0.9	45.8	37.8	30,553
Urban	71.6	43.5	1.5	63.6	55.2	4,481
Rural	47.9	20.4	0.8	42.7	34.9	26,072
Region						
Northern	57.6	33.1	1.2	48.4	38.9	3,132
Central	50.6	21.2	0.8	45.2	38.5	13,121
Southern	50.8	24.1	0.9	45.7	37.0	14,300
District						
Balaka	63.3	31.2	1.1	58.6	48.5	695
Blantyre	54.7	29.1	1.1	51.2	42.9	2,316
Chikwawa	54.1	26.4	0.9	45.9	37.4	1,137
Chiradzulu	37.5	13.6	0.6	35.2	30.9	610
Chitipa	35.4	17.2	0.6	28.6	22.4	358
Dedza	39.8	12.2	0.6	36.3	31.5	1,740
Dowa	37.6	15.3	0.6	33.4	28.8	1,236
Karonga	76.9	51.0	1.7	54.0	41.4	604
Kasungu	52.1	21.1	0.8	40.4	33.2	1,096
Lilongwe	53.3	20.6	0.8	47.0	41.2	4,894
Machinga	52.4	21.6	0.8	42.6	30.3	1,235
Mangochi	63.0	31.8	1.1	58.0	43.0	2,611
Mchinji	52.1	22.2	0.8	49.6	42.7	1,106
Mulanje	26.3	10.0	0.4	25.7	22.7	1,179
Mwanza	45.6	22.2	0.8	38.7	34.7	515
Mzimba	55.6	29.3	1.1	50.3	42.8	1,460
Nkhata Bay	53.9	32.7	1.1	45.8	32.2	385
Nkhotakota	70.2	37.1	1.3	63.5	52.5	493
Nsanje	52.9	22.3	0.9	45.0	38.3	549
Ntcheu	48.3	20.7	0.8	45.9	36.8	1,078
Ntchisi	29.6	12.2	0.5	27.3	23.4	374
Phalombe	57.8	25.7	0.9	47.0	35.8	643
Rumphi	60.1	34.4	1.3	54.5	42.9	325
Salima	67.3	40.2	1.3	62.8	50.1	1,105
Thyolo	30.6	11.9	0.5	27.5	23.9	1,445
Zomba	56.7	28.0	1.0	52.0	45.6	1,364

Table 7.11b

Availability of insecticide treated nets

Percent of households with at least one insecticide treated net (ITN), Malawi, 2006

Background characteristic	Percentage of households with at least one mosquito net	Percentage of households that have more than one net	Average number of nets per household	Percentage of households with at least one ever treated net	Percentage of households with at least one insecticide treated net (ITN)	Number of households
Education of household head						
None	36.8	14.1	0.6	32.2	24.3	6,955
Primary	50.4	21.4	0.8	44.8	37.0	17,895
Secondary +	73.6	43.8	1.5	66.3	58.2	5,513
Other	41.7	18.5	0.7	38.8	27.1	190
Wealth index quintile						
Lowest	34.6	9.1	0.5	30.2	22.9	6,360
Second	42.3	15.0	0.6	37.6	30.6	6,297
Middle	52.7	21.3	0.8	47.0	38.3	5,976
Fourth	56.3	26.8	1.0	49.3	41.6	5,863
Highest	72.6	47.7	1.6	66.0	57.0	6,057

Figure 7.6

Percentage of households with any bednet and an insecticide treated net (ITN), Malawi, 2006

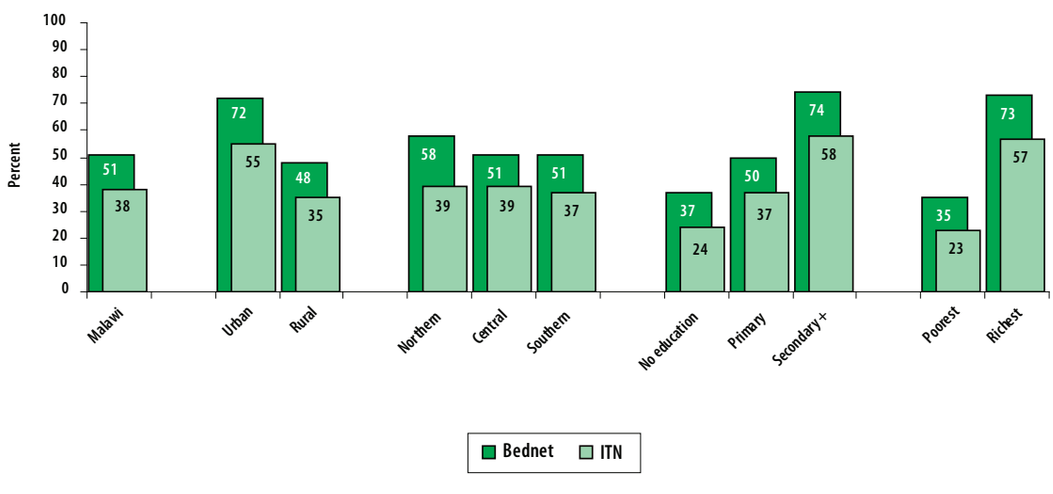


Figure 7.7

Percentage of households with any bednet and with an insecticide treated net (ITN) by district, Malawi, 2006

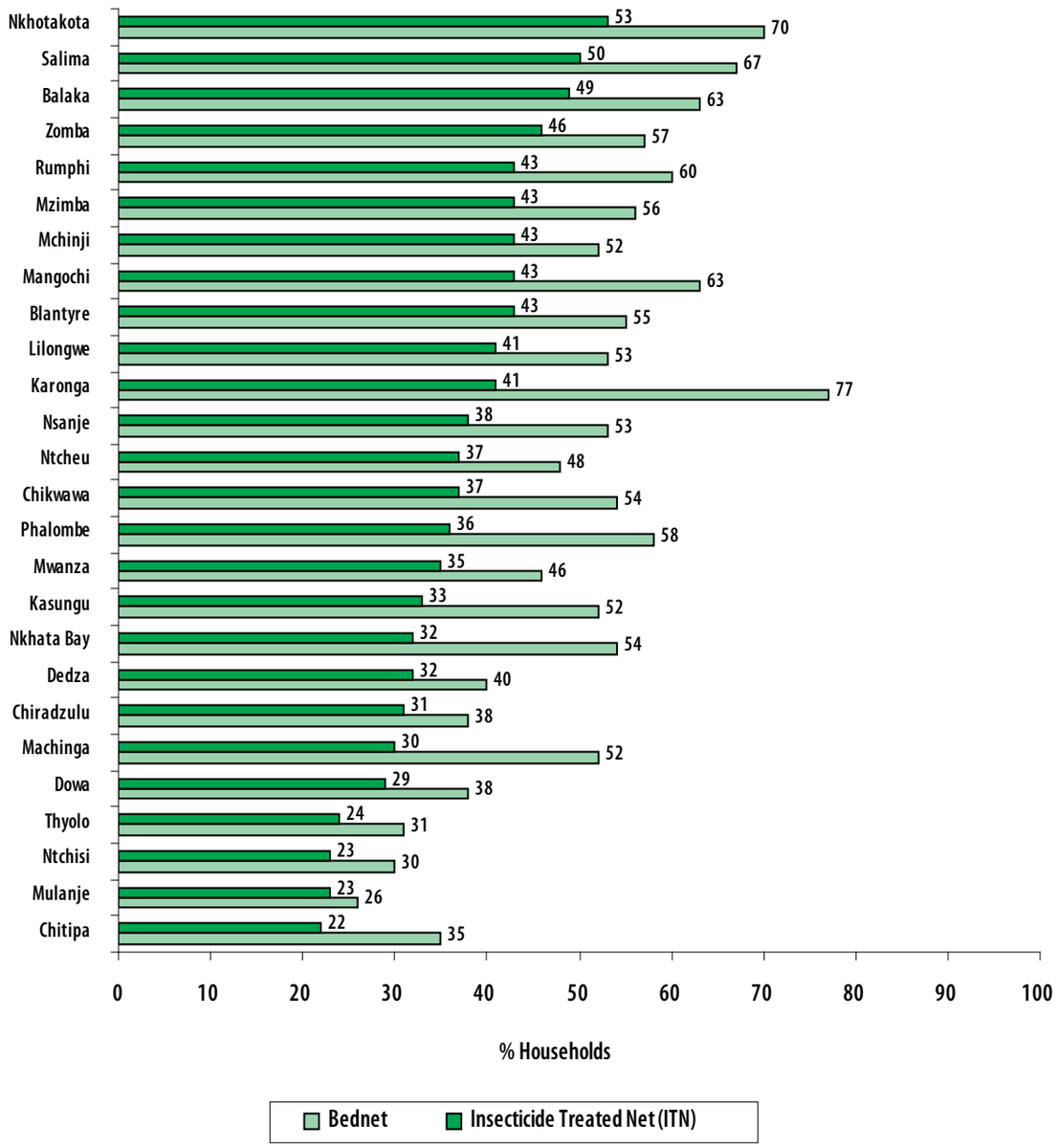


Table 7.12a

Children sleeping under bednets

Percentage of children aged 0-59 months who slept under an insecticide treated net during the previous night, Malawi, 2006

Background characteristic	Slept under a bednet	Slept under an insecticide treated net	Slept under an untreated net	Slept under a net but don't know if treated	Don't know if slept under a net	Did not sleep under a bednet	Number of children aged 0–59 months
Malawi							
Total	31.2	24.7	5.8	0.7	0.1	68.8	22,994
Urban	51.7	42.3	7.9	1.4	0.0	48.3	3,366
Rural	27.7	21.6	5.5	0.6	0.1	72.3	19,628
Region							
Northern	34.4	23.7	8.6	2.1	0.0	65.5	2,315
Central	29.9	24.4	5.1	0.4	0.0	70.1	10,569
Southern	31.8	25.2	5.9	0.7	0.1	68.1	10,111
District							
Balaka	38.4	29.5	8.0	0.9	0.0	61.6	498
Blantyre	39.5	33.1	4.6	1.8	0.0	60.5	1,527
Chikwawa	34.5	27.3	5.9	1.2	0.0	65.5	802
Chiradzulu	22.6	20.4	1.9	0.2	0.0	77.4	434
Chitipa	6.9	4.6	1.1	1.2	0.0	93.1	313
Dedza	22.5	18.2	4.1	0.3	0.2	77.3	1,345
Dowa	14.7	12.5	1.8	0.4	0.0	85.3	942
Karonga	73.1	41.2	27.9	4.0	0.0	26.9	449
Kasungu	21.2	16.8	4.2	0.2	0.0	78.8	1,026
Lilongwe	33.4	27.2	6.0	0.3	0.0	66.6	3,965
Machinga	20.9	14.0	6.2	0.7	0.0	79.1	872
Mangochi	37.3	27.9	9.3	0.1	0.4	62.3	2,186
Mchinji	36.6	31.1	5.4	0.1	0.0	63.4	861
Mulanje	26.4	22.2	3.8	0.4	0.3	73.4	633
Mwanza	25.5	20.0	4.1	1.3	0.0	74.5	412
Mzimba	30.4	25.6	3.8	1.0	0.0	69.6	995
Nkhata Bay	28.0	15.0	7.1	5.9	0.3	71.7	270
Nkhotakota	54.4	41.5	12.3	0.6	0.0	45.6	430
Nsanje	43.1	32.0	9.9	1.2	0.1	56.8	404
Ntcheu	21.9	18.7	1.7	1.6	0.0	78.1	794
Ntchisi	15.4	12.9	2.4	0.1	0.0	84.6	294
Phalombe	27.4	21.4	5.0	1.0	0.1	72.5	478
Rumphi	23.7	18.8	4.6	0.3	0.0	76.3	287
Salima	44.4	36.2	8.0	0.3	0.0	55.6	911
Thyolo	20.5	17.3	3.1	0.1	0.0	79.5	1,015
Zomba	31.1	26.4	4.6	0.1	0.0	68.9	852

7.6.2 Use of nets

Mothers and caretakers of children under five were asked if their children had slept under either a mosquito net or an ITN on the night before the day of the survey. Tables 7.12a and 7.12b show these results displayed by background characteristics. The data show that nearly one-third of children under five (31 percent) within these households slept under a mosquito net and 25 percent slept under an ITN on the night prior to the date of interview. There was no marked difference in mosquito net usage between female and male children. Children in urban areas were more likely to use a mosquito net than children in rural areas (52 percent and 28 percent respectively). Less than half of children in urban areas (42 percent) slept under an ITN compared to 22 percent of children in rural areas. The Northern Region had the highest proportion (34 percent) of children who slept under a net. The use of ITNs was almost identical in all the three regions. Among the districts, the use of ITNs was higher in Karonga and Nkhotakota while the use of bed nets was higher in Karonga, Nkhotakota, Nsanje, Salima and Blantyre, with rates of 40 percent and above. In Chitipa, coverage was very low with only 7 percent of children sleeping under a net and only 5 percent under an ITN (Map 7.2). Table 7.12b shows that as the ages of the children increase from zero months to 59 months, the percentage of children sleeping under either a bed net or treated net decreases. More children sleep under a mosquito net (whether treated or not) in their first year of life than at any other time. The wealthier a child's family, the more likely he/she is to use a mosquito net.

Table 7.12b

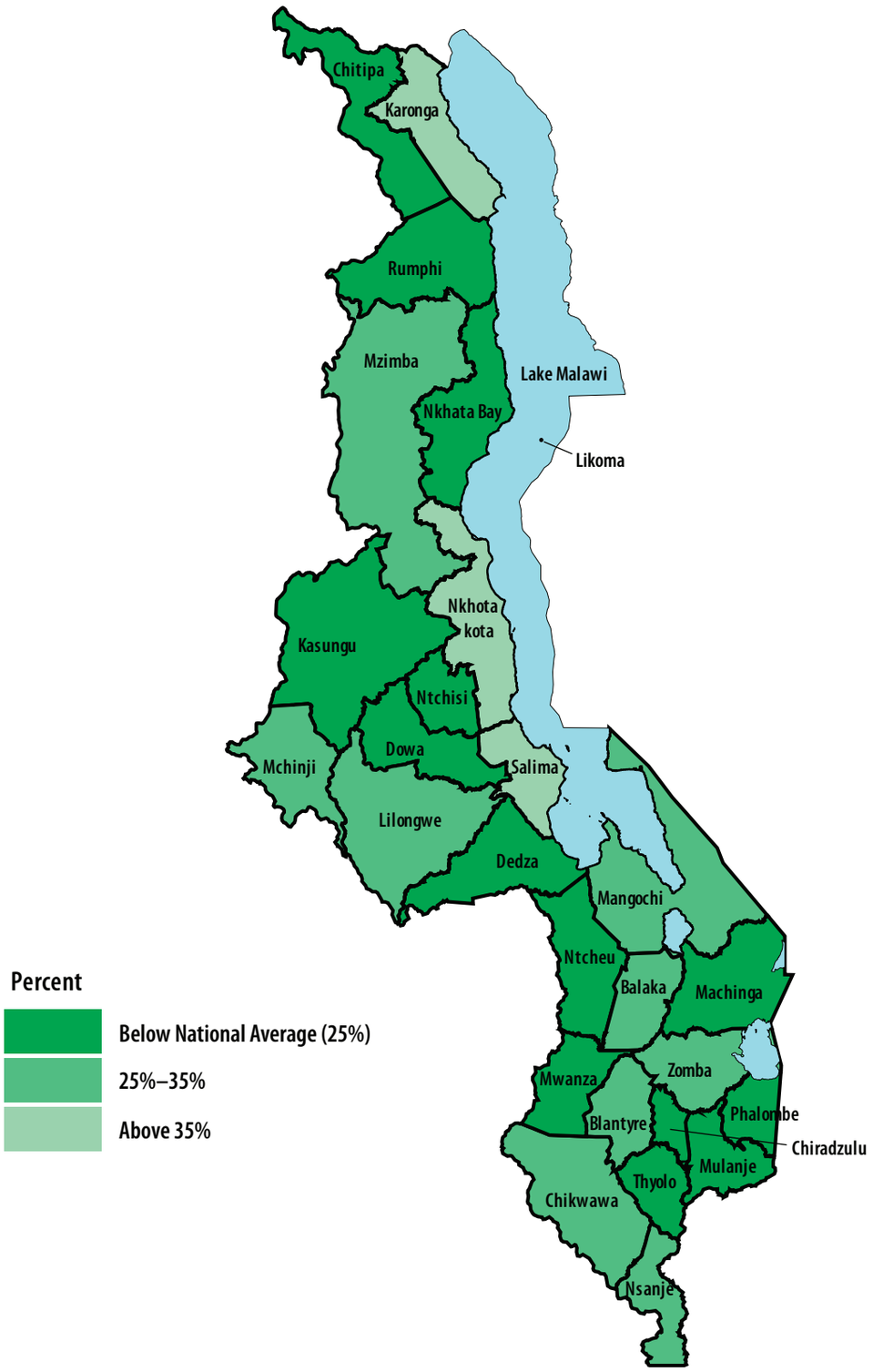
Children sleeping under bednets

Percentage of children aged 0-59 months who slept under an insecticide treated net during the previous night, Malawi, 2006

Background characteristic	Slept under a bednet	Slept under an insecticide treated net	Slept under an untreated net	Slept under a net but don't know if treated	Don't know if slept under a net	Did not sleep under a bednet	Number of children aged 0–59 months
Sex							
Male	31.6	25.1	5.8	0.7	0.1	68.3	11,368
Female	30.8	24.2	5.8	0.7	0.0	69.2	11,626
Age							
0–11 months	35.0	28.9	5.4	0.7	0.0	65.0	5,026
12–23 months	32.8	25.3	6.9	0.6	0.0	67.2	5,080
24–35 months	30.3	23.7	6.0	0.6	0.1	69.6	5,027
36–47 months	28.5	22.6	5.3	0.7	0.1	71.4	4,540
48–59 months	28.0	21.6	5.5	0.9	0.1	71.9	3,322
Wealth index quintile							
Lowest	20.7	14.6	5.6	0.4	0.1	79.2	5,112
Second	25.4	19.9	5.1	0.5	0.0	74.6	4,686
Middle	30.8	24.1	6.0	0.6	0.1	69.1	4,736
Fourth	31.6	25.5	5.4	0.6	0.1	68.3	4,243
Highest	50.4	41.8	7.2	1.3	0.0	49.6	4,217

Map 7.2

Proportion of children under-five who slept under an insecticide treated net, Malawi, 2006



Questions on the prevalence and treatment of fever were asked for all children under the age of five. Slightly more than one in three children (35 percent) had been ill with fever in the two weeks prior to the survey (Tables 7.13a and 7.13b). Fever prevalence declines with age after it peaks at 12–23 months (40 percent). Fever is less common among children whose mothers have secondary or higher education than among children of less educated mothers. Regional differences in fever prevalence range from 29 percent in the Northern Region to 37 percent in the Central Region. In the Southern Region, 34 percent of children had experienced fever in the two weeks prior to the survey. Figure 7.8 presents information on children with fever given anti-malarials by district.

Mothers were asked to report on all of the medicines given to a child to treat the fever, including those given at home and those provided or prescribed at a health facility. Overall, 25 percent of children with fever in the last two weeks were treated with an "appropriate" anti-malarial drug and 21 percent received anti-malarial drugs within 24 hours of the onset of symptoms.

"Appropriate" anti-malarial drugs include sulfadoxine-pyrimethamin, chloroquine, amodiaquine, quinine, and artimisinin combination drugs. In Malawi, 20 percent of children with fever were given sulfadoxine-pyrimethamin, and 4 percent were given quinine. A large percentage of children (49 percent) were given other types of medicines that are not anti-malarials, including anti-pyretics such as paracetemol. Thirty-two percent were given aspirin.

Table 7.13a

Treatment of children with anti-malarial drug

Percentage of children 0–59 months of age who were ill with fever in the last two weeks who received anti-malarial drugs, Malawi, 2006

Background characteristic	Had a fever in last two weeks	Number of children aged 0–59 months	Children with a fever in the last two weeks who were treated with:													Number of children with fever in last two weeks
			Anti-malarials							Other medications						
			SP/Fansidar	Chloroquine	Armodiaquine	Quinine	Artemisnin based combinations	Other Anti-malarial	Any appropriate anti-malarial drug	Paracetamol/Panadol/ Acetaminophan	Aspirin	Ibuprofen	Other	Don't know	Any appropriate anti-malarial drug within 24 hours of onset of symptoms	
Malawi																
Total	34.7	22,994	20.2	0.7	0.2	3.7	0.2	0.6	24.9	48.9	32.0	0.8	13.2	1.2	21.1	7,990
Urban	29.5	3,366	25.3	0.4	1.7	5.4	0.0	0.2	32.1	65.5	21.2	0.5	17.7	1.1	27.3	993
Rural	35.6	19,628	19.5	0.7	0.0	3.5	0.2	0.7	23.9	46.6	33.5	0.9	12.6	1.2	20.2	6,997
Region																
Northern	28.9	2,315	22.0	0.5	0.3	3.9	0.1	0.0	26.3	56.6	29.4	1.5	9.8	1.1	19.6	669
Central	36.7	10,569	19.4	0.9	0.4	3.9	0.1	0.4	24.1	51.9	30.0	0.7	13.2	1.2	21.4	3,875
Southern	34.1	10,111	20.8	0.5	0.0	3.5	0.3	1.0	25.6	44.1	34.7	0.8	13.8	1.3	21.1	3,445
District																
Balaka	42.3	498	26.8	0.8	0.0	4.3	0.2	1.1	32.2	47.9	27.8	1.1	7.3	0.2	23.8	211
Blantyre	27.9	1,527	15.9	0.9	0.0	5.6	0.0	0.0	22.4	59.5	30.6	0.0	19.2	0.5	15.3	426
Chikwawa	36.8	802	24.3	0.0	0.0	3.3	0.0	1.1	28.3	47.2	47.7	1.9	2.2	0.0	24.3	295
Chiradzulu	38.2	434	18.4	0.6	0.0	2.6	0.0	0.4	20.6	42.4	37.5	1.3	22.4	0.3	19.6	166
Chitipa	29.4	313	20.7	0.0	0.6	4.8	0.0	0.0	24.6	49.1	30.0	0.0	4.5	3.7	16.0	92
Dedza	32.8	1,345	8.4	2.1	0.3	5.2	0.3	1.5	16.3	51.3	28.6	0.0	15.2	2.0	14.8	440
Dowa	44.2	942	13.4	0.6	0.0	1.7	0.6	0.0	15.7	50.4	32.7	0.0	13.2	1.4	13.9	416
Karonga	18.4	449	23.2	0.5	0.4	4.9	0.5	0.0	28.7	54.9	31.7	0.0	11.7	0.4	16.3	83
Kasungu	31.2	1,026	10.4	1.3	0.0	5.7	0.0	0.3	16.4	59.3	29.4	0.3	16.9	0.5	13.9	320
Lilongwe	36.1	3,965	24.0	0.7	1.0	3.9	0.0	0.3	28.2	46.8	29.9	0.7	16.0	1.6	26.4	1,433
Machinga	32.2	872	13.2	1.0	0.0	2.0	0.4	2.4	19.1	20.7	42.9	1.9	10.5	3.8	11.8	281
Mangochi	35.5	2,186	15.3	0.2	0.0	3.3	0.0	0.0	18.6	59.7	24.2	0.3	19.8	1.4	15.7	776
Mchinji	34.1	861	22.1	0.3	0.0	5.1	0.3	0.6	27.9	59.8	30.2	1.7	13.3	0.0	21.3	294
Mulanje	24.0	633	35.1	0.7	0.7	2.2	0.0	0.0	37.9	41.6	21.3	1.6	4.1	0.0	36.2	152
Mwanza	24.9	412	31.8	0.4	0.0	4.1	0.0	0.0	35.3	48.4	46.3	0.0	2.8	2.0	23.4	103
Mzimba	31.8	995	19.1	0.8	0.4	2.6	0.0	0.0	22.9	58.7	28.2	3.0	6.9	0.8	18.4	316
Nkhata Bay	45.3	270	29.4	0.2	0.0	6.0	0.0	0.0	35.3	56.6	28.9	0.2	11.4	0.7	28.8	123
Nkhotakota	53.4	430	25.5	2.4	0.0	7.9	0.0	0.7	34.5	52.7	30.9	1.1	8.3	0.0	29.7	230
Nsanje	45.8	404	20.5	0.0	0.1	2.9	0.4	3.0	26.4	29.5	49.6	0.1	8.7	1.9	22.7	185
Ntcheu	26.6	794	17.3	0.6	0.0	1.3	0.0	0.0	19.3	57.9	27.4	0.4	12.5	1.8	17.0	211
Ntchisi	46.1	294	18.9	0.5	0.0	1.3	0.0	0.7	21.2	37.8	47.1	2.7	6.5	1.1	19.1	136
Phalombe	47.8	478	19.1	1.7	0.0	3.2	0.0	1.8	24.1	26.0	44.0	0.9	18.7	3.9	20.7	229
Rumphi	19.6	287	21.9	0.6	0.0	3.0	0.0	0.0	25.5	59.9	33.1	0.5	28.7	0.0	16.8	56
Salima	43.4	911	24.1	0.3	0.0	2.6	0.0	0.2	27.3	61.5	25.0	1.1	3.6	0.4	22.8	395
Thyolo	26.6	1,015	23.8	0.5	0.0	2.8	2.6	1.2	29.8	24.2	32.6	1.9	17.8	2.5	27.5	270
Zomba	41.2	852	29.3	0.0	0.0	4.2	0.0	2.0	35.2	40.5	38.4	0.5	10.2	0.0	31.2	351

Table 7.13b

Treatment of children with anti-malarial drug

Percentage of children 0-59 months of age who were ill with fever in the last two weeks who received anti-malarial drugs, Malawi, 2006

Background characteristic	Had a fever in last two weeks	Number of children aged 0–59 months	Children with a fever in the last two weeks who were treated with:													Number of children with fever in last two weeks
			Anti-malarials							Other medications						
			SP/Fansidar	Chloroquine	Armodiaquine	Quinine	Artemisnin based combinations	Other Anti-malarial	Any appropriate anti-malarial drug	Paracetamol/Panadol/ Acetaminophan	Aspirin	Ibuprofen	Other	Don't know	Any appropriate anti-malarial drug within 24 hours of onset of symptoms	
Sex																
Male	34.2	11,368	20.4	0.7	0.5	4.2	0.3	0.4	25.8	49.3	31.3	1.1	12.6	1.4	21.8	3,887
Female	35.3	11,626	20.1	0.7	0.0	3.3	0.1	0.8	24.1	48.6	32.7	0.6	13.7	1.1	20.4	4,102
Age																
0–11 months	33.8	5,026	17.0	0.7	1.0	3.2	0.0	0.5	21.5	41.9	28.5	0.5	19.2	1.5	19.5	1,697
12–23 months	40.3	5,080	17.7	0.7	0.1	3.7	0.5	1.0	23.1	48.6	33.0	1.0	14.3	1.4	19.0	2,049
24–35 months	36.9	5,027	22.1	0.7	0.0	4.5	0.2	0.5	26.8	49.8	32.0	0.9	11.0	1.4	22.4	1,853
36–47 months	32.9	4,540	24.1	1.0	0.0	4.5	0.1	0.6	29.5	55.0	34.3	1.1	8.3	0.6	24.6	1,491
48–59 months	27.1	3,322	21.4	0.3	0.0	2.2	0.0	0.5	24.0	51.3	32.7	0.6	12.1	1.0	20.4	899
Mother's education																
None	35.4	5,614	17.7	0.6	0.8	2.3	0.2	0.3	21.5	41.2	36.4	0.4	12.7	1.8	18.4	1,985
Primary	35.0	14,875	20.0	0.8	0.1	3.6	0.2	0.7	24.6	51.0	31.2	1.0	12.1	1.2	20.8	5,206
Secondary +	31.9	2,442	27.8	0.5	0.0	8.2	0.0	1.3	35.7	55.4	25.7	0.9	21.8	0.2	29.9	779
Other	31.9	63	22.8	0.0	0.0	6.5	0.0	0.0	29.4	31.6	42.2	0.0	28.0	3.5	18.8	20
Wealth index quintile																
Lowest	37.1	5,112	16.4	1.0	0.1	1.9	0.4	0.2	19.7	43.4	34.5	0.6	14.5	0.7	17.4	1,899
Second	36.0	4,686	20.6	0.7	0.0	3.0	0.2	1.1	24.8	47.3	33.2	1.0	11.5	1.1	21.4	1,685
Middle	36.6	4,736	20.2	0.4	0.0	4.2	0.2	1.0	25.0	45.7	33.8	0.7	12.2	2.1	20.8	1,735
Fourth	36.1	4,243	21.2	0.6	1.0	3.9	0.0	0.4	26.5	52.5	31.7	1.2	11.9	1.5	21.6	1,530
Highest	27.1	4,217	24.6	0.8	0.2	7.0	0.1	0.4	31.4	60.6	23.7	0.9	16.8	0.7	26.7	1,141

Figure 7.8

Percentage of children below five years who had fever in the last two weeks and who were given anti-malaria drug by district, Malawi, 2006

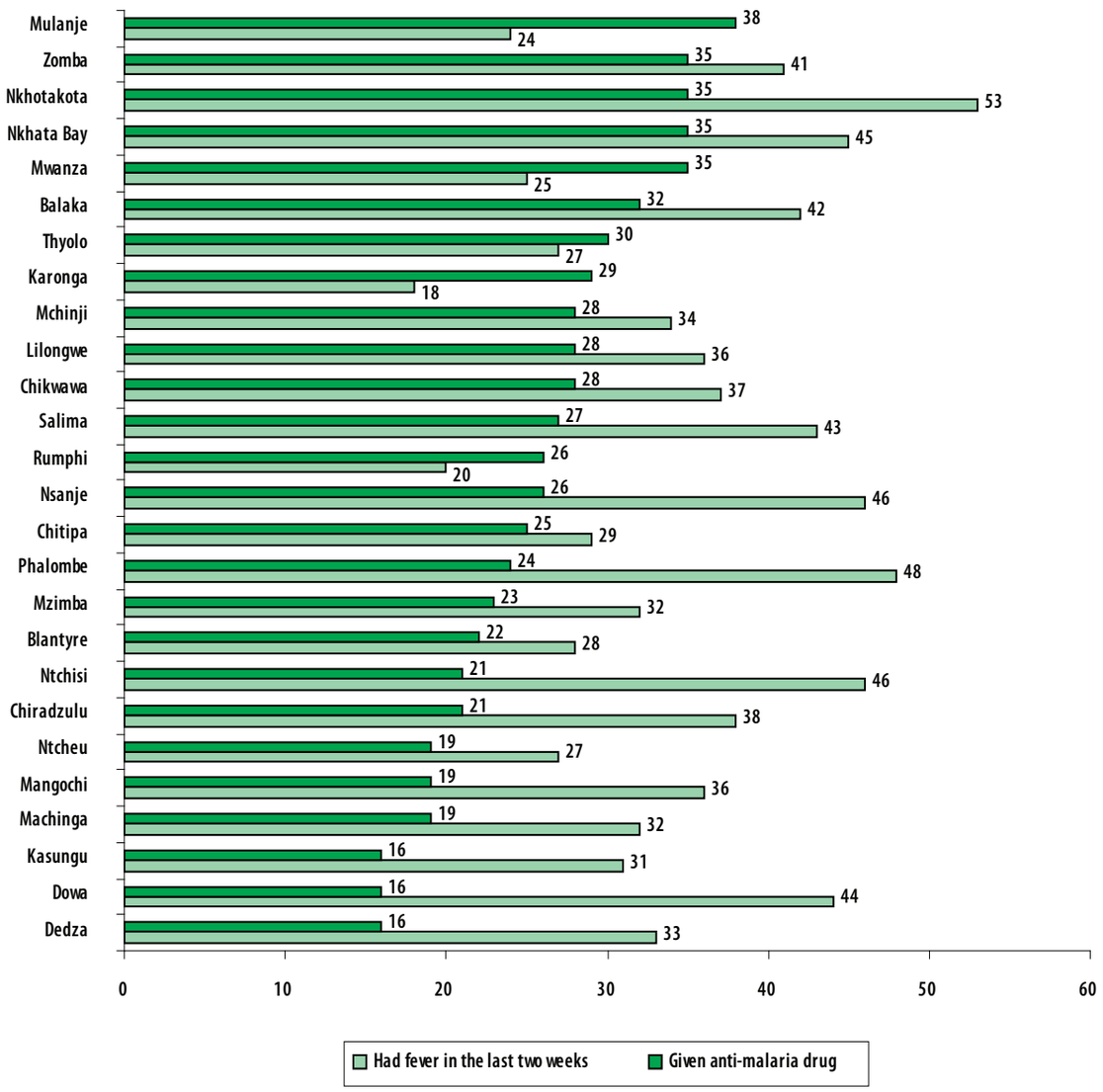


Table 7.14a

Source of supplies of insecticde treated nets

Percent distribution of households by source of ITNs for prevention of malaria, Malawi, 2006

Background characteristic	Source of insecticide treated nets			Total	Number of households with an least one
	Public	Private	Other		
Malawi					
Total	75.5	6.0	18.5	100.0	11,564
Urban	66.4	3.9	29.7	100.0	2,474
Rural	78.0	6.6	15.4	100.0	9,089
Region					
Northern	77.4	4.0	18.6	100.0	1,218
Central	79.1	6.1	14.7	100.0	5,053
Southern	71.6	6.4	22.0	100.0	5,293
District					
Balaka	85.4	5.8	8.8	100.0	337
Blantyre	68.9	2.4	28.7	100.0	992
Chikwawa	60.8	13.2	26.0	100.0	425
Chiradzulu	79.1	10.2	10.6	100.0	188
Chitipa	72.4	7.6	20.0	100.0	80
Dedza	81.5	11.0	7.5	100.0	548
Dowa	85.5	4.2	10.3	100.0	355
Karonga	74.0	0.6	25.5	100.0	250
Kasungu	87.2	1.6	11.2	100.0	364
Lilongwe	77.4	4.5	18.1	100.0	2,018
Machinga	64.6	3.1	32.3	100.0	374
Mangochi	59.7	11.4	28.9	100.0	1,122
Mchinji	84.0	7.1	8.9	100.0	472
Mulanje	86.1	3.1	10.7	100.0	267
Mwanza	82.8	4.6	12.6	100.0	179
Mzimba	77.5	4.3	18.2	100.0	624
Nkhata Bay	78.2	8.1	13.7	100.0	124
Nkhotakota	64.8	9.6	25.6	100.0	259
Nsanje	67.1	9.1	23.8	100.0	210
Ntcheu	85.2	8.5	6.3	100.0	396
Ntchisi	93.4	1.1	5.4	100.0	88
Phalombe	81.6	1.1	17.2	100.0	230
Rumphi	85.4	3.0	11.6	100.0	139
Salima	69.5	8.1	22.4	100.0	553
Thyolo	80.7	10.5	8.9	100.0	345
Zomba	82.3	1.3	16.4	100.0	623

Table 7.14b

Source of supplies of insecticide treated nets

Percent distribution of households by source of ITNs for prevention of malaria, Malawi, 2006

Background characteristic	Source of insecticide treated nets			Total	Number of households with an least one
	Public	Private	Other		
Education of household head					
None	73.8	7.1	19.1	100.0	1,691
Primary	79.1	6.2	14.6	100.0	6,615
Secondary +	68.8	5.2	26.1	100.0	3,207
Other	81.9	1.5	16.6	100.0	51
Wealth index quintile					
Lowest	81.8	6.7	11.5	100.0	1,459
Second	80.0	7.1	12.8	100.0	1,927
Middle	78.2	6.3	15.4	100.0	2,289
Fourth	74.7	6.7	18.5	100.0	2,439
Highest	69.0	4.5	26.5	100.0	3,450

7.6.3 Source of ITN supplies

In MICS 2006, questions were included to collect information on the source of ITN supplies. Such information is very important in the sense that it makes possible a population-based assessment of the reach of programmes and the extent to which particular target groups are covered by the programmes. For programme managers wishing to determine public and private shares in the provision of the supplies and of the relative importance of each source, information on sources of supplies can be crucial.

The source of supplies for ITNs is provided in tables 7.14a and 7.14b. The table provides information on whether ITNs are obtained from public or private health facilities or other sources such as shops. The results of this survey show that the majority of households (76 percent) in Malawi obtain their nets from the public health facilities, 6 percent from the private health facilities and 19 percent from other sources such as shops. Only small variations can be seen in the sources of ITNs among the three regions in the country. Seventy-two percent, 77 percent and 79 percent of the households in the Southern, Northern and Central Regions respectively get their ITNs from the public sector while only 4 to 6 got their ITNs from the private sector. More rural households (78 percent) get their ITNs from the public sector than those in urban areas (66 percent). There is not much variation in the source of ITNs by either the education level of the household head or wealth of the household.

8 ENVIRONMENT

MALAWI YUTE

Safe drinking water is a basic necessity for good health. Unsafe drinking water is a significant cause of diarrhoea and can be a carrier of diseases such as cholera, typhoid, and schistosomiasis. Drinking water can also be tainted with chemical, physical and radiological contaminants, all of which have harmful effects on human health. In addition to its association with disease, the issue of access to drinking water is important for women and children, particularly in rural areas, who bear the primary responsibility for carrying water, often across long distances.

The MDG goal is to reduce by half, between 1990 and 2015, the proportion of people without sustainable access to safe drinking water and to basic sanitation. WFFC calls for a reduction, by at least one-third, in the proportion of households without access to hygienic sanitation facilities and affordable, safe drinking water.

MICS 2006 uses the following list of indicators:

Water
- Use of improved drinking water sources
- Use of adequate water treatment method
- Time to source of drinking water
- Person collecting drinking water

Sanitation
- Use of improved sanitation facilities
- Sanitary disposal of child's faeces

8.1 WATER

The distribution of population by source of drinking water is shown in tables 8.1a and 8.1b and in figure 8.1. Improved drinking water sources refer to piped water (into dwelling, yard or plot), a public tap/standpipe, borehole/tubewell, protected well, protected spring and rainwater collection. Bottled water is considered to be an improved water source only if the household is using an improved water source for other purposes, such as hand washing and cooking. The findings of the survey reveal that 75 percent of Malawi's population use an improved source of drinking water (96 percent in urban areas and 72 percent in rural areas).

Access to an improved source of drinking water is lower in the Central Region (70 percent) and similar in the Northern and Southern Regions. At district level, Chiradzulu reported the highest access to improved drinking water sources (90 percent). Of particular interest is Ntchisi, whose coverage is the lowest (59 percent) lagging far behind all other districts in the country. Of the six districts with less than 70 percent of households accessing an improved source of water, the five districts are from the Central Region: Dedza, Dowa, Kasungu, Mchinji and Ntchisi.

Table 8.1a

Use of improved water sources

Percent distribution of household population according to main source of drinking water and percentage of household members using improved drinking water sources, Malawi, 2006

Background characteristic	Main source of drinking water																Total	Improved source of drinking water	Number of household members
	Improved sources									Unimproved sources									
	Piped into dwelling	Piped into yard or plot	Public tap/standpipe	Tubewell/borehole	Tubewell with powered pump	Protected well	Protected spring	Rainwater collection	Bottled water	Unprotected well	Unprotected spring	Cart with small tank/drum	Surface water	Bottled water	Other	Missing			
Malawi																			
Total	1.8	3.7	13.3	49.5	0.9	5.8	0.3	0.0	0.0	18.1	1.0	0.2	5.4	0.0	0.0	0.0	100.0	75.2	131,021
Urban	10.1	19.8	48.4	15.0	0.3	2.3	0.0	0.0	0.0	3.3	0.1	0.0	0.3	0.0	0.1	0.2	100.0	96.0	19,899
Rural	0.3	0.8	7.0	55.6	1.0	6.4	0.4	0.0	0.0	20.8	1.1	0.2	6.3	0.0	0.0	0.0	100.0	71.5	111,122
Region																			
Northern	2.5	6.8	14.4	50.6	1.4	3.4	0.1	0.0	0.0	9.7	1.1	0.0	9.8	0.0	0.0	0.0	100.0	79.3	13,990
Central	1.3	2.5	10.9	46.0	0.9	7.4	0.5	0.0	0.0	24.9	1.0	0.1	4.5	0.0	0.0	0.0	100.0	69.5	58,035
Southern	2.1	4.1	15.3	52.5	0.7	4.8	0.2	0.0	0.0	13.5	0.9	0.3	5.2	0.0	0.1	0.1	100.0	79.9	58,996
District																			
Balaka	0.3	2.1	19.4	50.2	0.0	14.3	0.0	0.0	0.0	2.9	0.2	0.0	10.6	0.0	0.0	0.0	100.0	86.2	2,997
Blantyre	7.0	14.4	34.9	29.6	0.8	1.2	0.0	0.0	0.0	9.8	0.3	0.6	1.2	0.0	0.2	0.0	100.0	87.9	9,969
Chikwawa	1.3	2.2	12.6	54.9	0.0	1.2	0.0	0.0	0.0	13.4	0.3	0.1	14.1	0.0	0.0	0.0	100.0	72.1	4,863
Chiradzulu	0.5	0.5	0.7	86.4	0.0	1.9	0.0	0.0	0.0	9.3	0.5	0.0	0.3	0.0	0.0	0.0	100.0	90.0	2,417
Chitipa	0.2	2.4	12.8	48.6	0.0	1.9	0.3	0.0	0.0	16.4	2.1	0.0	15.3	0.0	0.0	0.0	100.0	66.1	1,647
Dedza	0.0	0.1	3.1	48.9	4.0	5.8	0.3	0.0	0.0	29.3	1.6	0.0	6.7	0.0	0.0	0.0	100.0	62.3	7,573
Dowa	0.8	0.4	0.4	47.9	1.0	9.5	0.0	0.0	0.0	34.0	0.8	0.0	5.1	0.0	0.0	0.0	100.0	60.1	5,638
Karonga	3.4	4.8	8.7	57.5	6.9	3.3	0.3	0.0	0.1	2.7	0.2	0.0	11.9	0.0	0.2	0.0	100.0	85.0	2,707
Kasungu	0.4	1.2	7.7	43.5	0.7	13.0	0.3	0.0	0.0	19.4	0.7	0.2	12.9	0.0	0.0	0.0	100.0	66.8	5,606
Lilongwe	2.3	4.8	18.0	38.0	0.1	7.6	1.0	0.0	0.0	25.1	1.3	0.1	1.5	0.0	0.0	0.0	100.0	72.0	20,548
Machinga	0.7	0.0	17.3	49.9	0.1	2.6	0.0	0.0	0.0	26.9	0.1	0.0	2.4	0.0	0.0	0.0	100.0	70.6	4,753
Mangochi	1.8	2.7	6.3	58.6	0.1	4.9	0.3	0.0	0.1	15.2	1.0	0.5	7.8	0.0	0.4	0.4	100.0	74.7	11,407
Mchinji	0.6	1.9	8.5	41.7	0.6	8.5	0.2	0.0	0.0	34.9	0.3	0.0	2.8	0.0	0.0	0.0	100.0	62.0	5,011
Mulanje	1.4	2.6	24.1	47.5	0.1	4.6	0.4	0.0	0.0	8.2	2.1	1.1	7.9	0.0	0.0	0.0	100.0	80.7	4,322
Mwanza	0.2	2.0	3.1	65.8	0.2	4.5	0.2	0.0	0.0	17.9	0.8	0.0	5.2	0.0	0.0	0.0	100.0	76.0	2,292
Mzimba	2.9	8.0	13.1	51.4	0.0	4.3	0.0	0.0	0.0	11.9	1.3	0.0	7.1	0.0	0.0	0.0	100.0	79.7	6,402
Nkhata Bay	0.7	2.6	12.9	57.3	0.2	3.3	0.0	0.0	0.0	12.5	1.3	0.0	9.2	0.0	0.0	0.0	100.0	77.0	1,647
Nkhotakota	0.8	1.7	17.2	53.7	0.1	3.5	0.2	0.0	0.0	19.8	1.4	0.0	1.7	0.0	0.0	0.0	100.0	77.1	2,330
Nsanje	1.4	0.9	1.2	74.3	0.1	1.9	1.1	0.0	0.0	9.0	3.0	0.4	6.7	0.0	0.0	0.0	100.0	80.9	2,337
Ntcheu	0.1	0.0	15.5	61.6	0.1	3.6	0.5	0.0	0.0	13.4	0.5	0.1	4.6	0.0	0.0	0.0	100.0	81.4	4,496
Ntchisi	0.0	0.7	4.9	42.5	4.5	6.4	0.2	0.0	0.0	33.9	1.7	0.6	4.6	0.1	0.0	0.0	100.0	59.2	1,680
Phalombe	0.0	0.0	35.7	48.6	0.1	0.6	0.1	0.0	0.0	10.6	2.6	0.2	1.6	0.0	0.0	0.0	100.0	85.1	2,652
Rumphi	3.9	14.4	32.7	31.3	0.6	1.6	0.0	0.0	0.0	3.2	0.3	0.0	12.0	0.0	0.0	0.0	100.0	84.4	1,587
Salima	3.0	4.0	5.8	62.8	0.0	4.5	0.0	0.0	0.0	13.4	0.2	0.1	6.3	0.0	0.0	0.0	100.0	80.1	5,153
Thyolo	1.2	3.6	5.4	49.6	4.7	15.0	0.0	0.0	0.0	16.0	0.1	0.0	4.4	0.0	0.0	0.0	100.0	79.5	5,516
Zomba	1.1	2.3	7.9	62.4	1.2	6.2	0.5	0.0	0.0	15.6	1.8	0.0	1.0	0.0	0.0	0.0	100.0	81.7	5,471

Table 8.1b

Use of improved water sources

Percent distribution of household population according to main source of drinking water and percentage of household members using improved drinking water sources, Malawi, 2006

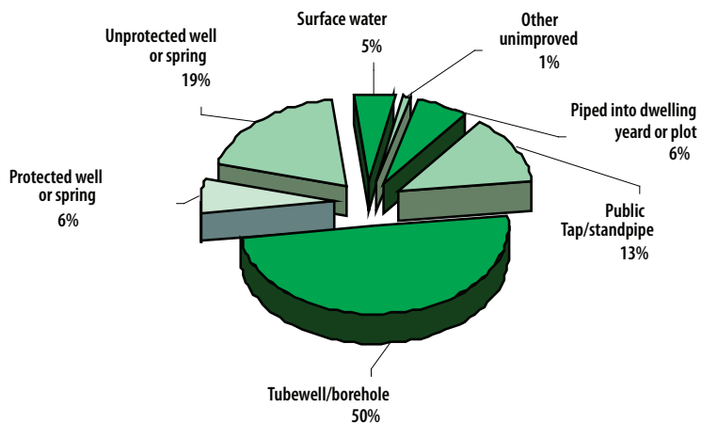
Background characteristic	Main source of drinking water																Total	Improved source of drinking water	Number of household members
	Improved sources									Unimproved sources									
	Piped into dwelling	Piped into yard or plot	Public tap/standpipe	Tubewell/borehole	Tubewell with powered pump	Protected well	Protected spring	Rainwater collection	Bottled water	Unprotected well	Unprotected spring	Cart with small tank/drum	Surface water	Bottled water	Other	Missing			
Education of household head																			
None	0.1	0.6	7.8	53.6	0.9	5.6	0.4	0.0	0.1	22.9	1.4	0.2	6.1	0.0	0.1	0.1	100.0	69.1	28,406
Primary	0.4	2.0	12.4	51.3	0.9	6.3	0.4	0.0	0.0	19.0	1.0	0.2	5.9	0.0	0.0	0.0	100.0	73.8	78,350
Secondary +	8.4	13.0	22.9	38.0	0.8	4.5	0.0	0.0	0.0	8.9	.5	0.0	2.8	0.0	0.1	0.0	100.0	87.7	23,434
Other	0.7	1.6	5.8	53.4	1.2	1.7	0.9	0.0	0.0	28.4	1.5	0.3	4.5	0.0	0.0	0.0	100.0	65.3	831
Wealth index quintile																			
Lowest	0.0	0.0	2.0	53.3	0.5	5.0	0.4	0.0	0.0	28.6	1.3	0.2	8.5	0.0	0.1	0.0	100.0	61.3	26,674
Second	0.0	0.0	3.1	59.7	0.6	5.4	0.4	0.0	0.1	23.3	0.9	0.3	6.3	0.0	0.0	0.0	100.0	69.2	25,522
Middle	0.0	0.1	11.7	52.5	0.9	8.0	0.4	0.0	0.0	19.1	1.3	0.2	5.9	0.0	0.0	0.0	100.0	73.5	25,420
Fourth	0.1	1.7	17.2	51.8	1.8	6.7	0.2	0.0	0.0	14.2	0.9	0.2	4.9	0.0	0.0	0.2	100.0	79.6	25,248
Highest	8.2	15.5	31.0	31.7	0.7	4.2	0.2	0.0	0.0	6.2	0.5	0.0	1.7	0.0	0.1	0.0	100.0	91.5	28,157

Almost half of the households surveyed indicate a tubewell or borehole as the main source of drinking water. Thirteen percent use a public tap or standpipe and 19 percent get water from an unprotected well and spring. Tap water is used by 19 percent of households. Only 2 percent use in-house water and 4 percent use water piped into the yard. Boreholes and unprotected wells are more prevalent in rural areas (56 percent and 21 percent respectively) than in urban areas (15 percent and 3 percent respectively). Urban residents are more likely to use tap water (78 percent) and have the source in-house (10 percent) than rural residents (8 percent and 0.3 percent respectively).

Boreholes are the most common source of drinking water in all the regions. Use of boreholes and tap water is similar in the Northern and Southern Regions and lower in the Central Region. Unimproved sources are commonly used in the Central Region, where the main source is an unprotected well (25 percent). In Chiradzulu 86 percent of the population use a borehole or tubewell, which compensates for their extremely low piped water supply (less than 1 percent). Rumphi, Phalombe and Blantyre respondents indicate boreholes and public taps as the main sources of drinking water.

The survey shows that there is a relationship between the literacy status of the head of the household and the use of improved sources of drinking water. Among the households whose head has been educated to secondary level or higher, use of an improved water source is 88 percent compared to 69 percent for those without education. The same trend is observed between wealth index quintiles, where wealthier households have higher access to improved water sources (92 percent) and the poorest households least access (61 percent). Table 8.1b shows a steady increase in the use of improved sources of drinking water as educational level and wealth status of the household rise.

Figure 8.1
Percentage distribution of household members by source of drinking water, Malawi, 2006



Use of in-house water treatment is presented in tables 8.2a and 8.2b. Households were asked whether they treat their water to make it safer to drink. There are different methods of treating water such as boiling, adding bleach or chlorine, using a water filter and using solar disinfection. The table shows the percentage using appropriate water treatment methods, for households using both improved and unimproved sources of drinking water.

The survey results indicate that, overall, 19 percent of households treat water using an appropriate water treatment method. Sixteen percent of households with access to improved drinking water sources and 26 percent of households drinking water from unimproved sources treat the water using an appropriate water treatment method (Table 8.2a). Water treatment is higher among those using unimproved drinking water sources and less common among those using improved water sources. Application of an appropriate water treatment method to drinking water regardless of source is higher in rural areas (19 percent), the Central Region (22 percent), Dedza and Dowa districts (29 percent and 30 percent respectively). It also becomes more common where the educational level of the household head and the wealth status of the households increase (Table 8.2b). The appropriate treatment of water amongst those using unimproved drinking sources of water is higher in urban areas, the Central Region and Balaka district.

The most common method of water treatment is boiling water. Ten percent of households boil water, 9 percent use bleach or chlorine and 2 percent strain water through a cloth. In urban areas, bleach or chlorine is more commonly used than in rural areas (12 and 9 percent respectively) while in rural areas, boiling is the most frequently used method (12 percent). Bleach is highly used in Blantyre and Chikwawa (17 percent) and less likely to be used in Chitipa (1 percent).

Table 8.2a

Household water treatment

Percentage distribution of household population according to drinking water treatment method used in the household and percentage of household members that applied an appropriate water treatment method, Malawi, 2006

Background characteristic	Water treatment method used in the household									All drinking water sources: Appropriate water treatment method	Number of household members	Improved drinking water sources: Appropriate water treatment method	Number of household members	Unimproved drinking water sources: Appropriate water treatment method	Number of household members
	None	Boil	Add bleach/ chlorine	Strain through a cloth	Use water filter	Solar disinfection	Let it stand and settle	Other	Don't know						
Malawi															
Total	79.0	10.9	9.2	1.6	0.2	0.0	0.8	1.4	0.0	18.7	131,021	16.2	98,539	26.2	32,482
Urban	79.6	6.6	11.5	1.0	0.4	0.0	2.6	0.8	0.0	17.1	19,899	16.3	9,092	35.4	807
Rural	78.9	11.6	8.7	1.7	0.1	0.0	0.4	1.5	0.0	19.0	11,122	16.2	79,447	26.0	31,675
Region															
Northern	88.6	6.9	3.6	1.1	0.2	0.0	0.1	1.1	0.1	9.9	13,990	8.5	11,096	15.5	2,893
Central	76.0	14.3	9.3	1.5	0.2	0.0	0.6	1.1	0.0	22.2	58,035	18.7	40,325	30.2	17,710
Southern	79.7	8.5	10.3	1.7	0.1	0.0	1.1	1.8	0.0	17.4	58,996	16.0	47,117	22.8	11,878
District															
Balaka	79.9	10.0	10.3	2.6	0.1	0.0	0.7	0.8	0.0	18.5	2,997	14.6	2,585	43.2	412
Blantyre	70.7	10.3	17.2	1.8	0.4	0.1	5.1	0.0	0.0	23.8	9,969	21.9	8,759	37.2	1,210
Chikwawa	78.2	5.1	17.3	1.0	0.0	0.0	1.2	0.2	0.0	21.1	4,863	21.2	3,508	20.8	1,354
Chiradzulu	84.2	9.5	7.5	1.5	0.3	0.0	0.2	0.0	0.0	15.4	2,417	14.4	2,176	24.4	242
Chitipa	96.4	2.8	0.6	0.0	0.0	0.0	0.0	0.2	0.1	3.3	1,647	1.2	1,089	7.5	558
Dedza	66.3	18.5	11.7	1.8	0.3	0.0	0.2	5.0	0.0	28.8	7,573	22.6	4,721	39.1	2,852
Dowa	70.1	22.0	11.0	1.9	0.1	0.0	0.2	0.3	0.0	29.5	5,638	28.6	3,386	30.8	2,252
Karonga	87.1	5.0	6.1	0.6	0.0	0.0	0.0	1.5	0.4	10.9	2,707	10.0	2,298	16.1	409
Kasungu	79.0	11.6	10.1	2.3	0.2	0.3	0.1	0.0	0.0	20.4	5,606	16.4	3,746	28.5	1,861
Lilongwe	75.1	15.3	9.1	0.5	0.3	0.0	1.1	0.2	0.0	23.4	20,548	19.8	14,786	32.8	5,762
Machinga	91.5	6.4	2.5	0.7	0.0	0.0	0.0	0.2	0.0	8.3	4,753	6.4	3,354	12.9	1,399
Mangochi	69.4	12.9	11.0	4.2	0.2	0.0	0.0	8.6	0.0	22.7	1,407	21.2	8,506	27.0	2,902
Mchinji	80.3	9.0	9.7	0.4	0.1	0.0	1.1	2.2	0.0	17.6	5,011	15.0	3,109	21.8	1,902
Mulanje	91.9	4.7	3.4	0.9	0.0	0.0	0.5	0.0	0.0	7.7	4,322	6.7	3,488	11.7	834
Mwanza	85.2	7.1	9.6	1.0	0.0	0.0	0.1	0.1	0.0	14.5	2,292	11.6	1,742	23.7	550
Mzimba	87.4	9.3	2.3	1.5	0.4	0.0	0.1	1.3	0.1	10.9	6,402	9.4	5,101	17.2	1,301
Nkhata Bay	82.4	9.2	9.1	2.3	0.0	0.0	0.1	0.0	0.0	16.7	1,647	14.1	1,269	25.2	378
Nkhotakota	80.2	12.6	7.7	6.4	0.3	0.0	0.3	0.1	0.0	18.3	2,330	16.8	1,795	23.5	534
Nsanje	79.9	5.9	13.7	1.2	0.0	0.0	1.4	0.1	0.0	18.3	2,337	17.4	1,891	22.5	446
Ntcheu	92.4	4.5	0.6	0.5	0.0	0.0	0.1	2.3	0.0	5.0	4,496	4.0	3,661	9.7	835
Ntchisi	80.6	14.6	4.7	1.0	0.0	0.0	0.6	0.1	0.0	18.9	1,680	12.3	993	28.4	686
Phalombe	83.4	8.4	9.1	0.6	0.1	0.0	0.1	0.1	0.0	16.3	2,652	16.1	2,256	17.5	396
Rumphi	94.2	2.2	2.0	0.2	0.0	0.0	0.1	1.7	0.0	4.2	1,587	3.3	1,340	8.6	247
Salima	75.3	12.6	13.8	3.5	0.0	0.0	0.0	0.0	0.0	24.0	5,153	22.5	4,127	30.0	1,025
Thyolo	87.0	4.9	7.4	0.2	0.0	0.0	0.1	0.8	0.0	12.0	5,516	10.7	4,387	17.0	1,130
Zomba	85.6	7.9	5.9	1.0	0.0	0.0	0.0	0.0	0.0	13.7	5,471	12.6	4,467	18.6	1,004

Table 8.2b

Household water treatment

Percentage distribution of household population according to drinking water treatment method used in the household and percentage of household members that applied an appropriate water treatment method, Malawi, 2006

Background characteristic	Water treatment method used in the household									All drinking water sources: Appropriate water treatment method	Number of household members	Improved drinking water sources: Appropriate water treatment method	Number of household members	Unimproved drinking water sources: Appropriate water treatment method	Number of household members
	None	Boil	Add bleach/ chlorine	Strain through a cloth	Use water filter	Solar disinfection	Let it stand and settle	Other	Don't know						
Education of household head															
None	81.6	11.8	5.7	1.6	0.2	0.0	0.5	1.5	0.0	16.4	28,406	13.1	19,611	23.8	8,795
Primary	79.8	11.0	8.8	1.5	0.1	0.0	0.6	1.3	0.0	18.3	78,350	15.7	57,841	25.8	20,509
Secondary +	73.5	9.2	14.6	1.6	0.2	0.0	1.7	1.8	0.1	22.6	23,434	20.8	20,545	35.6	2,889
Other	75.9	18.0	6.4	3.7	0.0	0.0	0.3	0.0	0.0	23.8	831	19.4	542	32.0	289
Wealth index quintile															
Lowest	80.9	12.6	5.2	1.3	0.2	0.0	0.7	1.5	0.0	17.0	26,674	13.6	16,353	22.4	10,321
Second	81.7	10.6	6.9	1.8	0.1	0.0	0.3	1.5	0.0	16.2	25,522	12.8	17,650	23.9	7,872
Middle	79.7	11.0	8.3	1.6	0.1	0.0	0.3	1.5	0.0	18.4	25,420	15.7	18,690	26.0	6,729
Fourth	77.1	12.1	11.3	1.8	0.1	0.0	0.6	1.3	0.0	21.1	25,248	19.0	20,095	29.1	5,152
Highest	75.9	8.3	13.8	1.4	0.3	0.0	1.9	1.4	0.0	20.7	28,157	18.5	25,750	44.5	2,407

Bleach is more likely to be used by those with higher education and by wealthier households. The data also highlights the dismal fact that 79 percent of households surveyed do not use any water treatment method.

The survey also collected information on households having to travel to collect drinking water and time taken to reach the source. Where householders have to walk for over five minutes to get their water, it is likely that they will not use more than the very basic quantities required for hygiene, drinking and cooking (against the recommended norms of 20 litres per capita per day). The amount of time it takes to obtain water is presented in tables 8.3a and 8.3b. Note that these results refer to just one roundtrip from home to the drinking water source. Information on the number of trips made in one day was not collected. The results show that only 6 percent of households in Malawi have a source of drinking water located on the premises. One-quarter of households takes less than 15 minutes to reach the source, while a further quarter takes between 15 and 30 minutes. One in every five households take one hour or more. Nearly 45 percent of households take 30 minutes or more to get to the water source.

The mean time to reach drinking water for those with sources away from the household is 37 minutes. Households in rural areas spend longer travelling (38 minutes) than those in urban areas (32 minutes). However, at regional level the difference is very significant. The Southern Region has the highest mean time to collect water (44 minutes) followed by the Northern (38 minutes) and Central Regions (30 percent). Households in Nsanje and Chikwawa spend more than one hour to get drinking water home (79 minutes and 70 minutes respectively).

Table 8.3a

Time to source of water

Percent distribution of households according to time to go to source of drinking water, get water and return, and mean time to source of drinking water, Malawi, 2006

Background characteristic	Time to source of drinking water							Total	Mean time to source of drinking water (excluding those on premises)	Number of households
	Water on premises	Less than 15 minutes	15 minutes to less than 30 minutes	30 minutes to less than 1 hour	1 hour or more	Don't know	Missing			
Malawi										
Total	6.0	25.2	23.0	25.3	20.3	0.1	0.0	100.0	37.1	30,553
Urban	28.4	28.8	18.1	12.1	12.6	0.0	0.0	100.0	32.0	4,481
Rural	2.2	24.6	23.8	27.6	21.6	0.1	0.0	100.0	37.8	26,072
Region										
Northern	9.1	24.6	22.8	22.6	20.7	0.3	0.0	100.0	37.5	3,132
Central	5.1	33.3	24.8	22.6	14.0	0.1	0.0	100.0	29.5	13,121
Southern	6.2	18.0	21.4	28.4	26.0	0.1	0.0	100.0	44.2	14,300
District										
Balaka	8.4	24.1	21.8	22.0	23.7	0.0	0.0	100.0	39.2	695
Blantyre	20.6	15.9	12.3	19.2	31.8	0.2	0.0	100.0	57.9	2,316
Chikwawa	3.5	3.1	8.5	20.6	64.1	0.1	0.1	100.0	79.2	1,137
Chiradzulu	1.4	27.2	22.4	30.2	18.7	0.1	0.0	100.0	31.9	610
Chitipa	2.3	17.8	24.2	33.1	22.6	0.0	0.0	100.0	37.1	358
Dedza	0.5	23.5	25.8	34.7	15.5	0.0	0.0	100.0	31.5	1,740
Dowa	3.7	37.2	28.5	18.9	10.6	1.1	0.0	100.0	27.0	1,236
Karonga	6.8	35.5	29.0	21.0	7.4	0.3	0.0	100.0	24.1	604
Kasungu	2.7	30.0	21.1	20.8	25.4	0.0	0.0	100.0	42.1	1,096
Lilongwe	6.9	40.3	22.5	19.6	10.6	0.0	0.0	100.0	24.5	4,894
Machinga	0.9	12.3	21.5	30.5	34.6	0.2	0.0	100.0	50.5	1,235
Mangochi	3.4	25.2	28.1	26.0	17.1	0.1	0.0	100.0	34.9	2,611
Mchinji	13.2	14.9	32.0	24.6	15.2	0.1	0.0	100.0	32.3	1,106
Mulanje	4.2	24.0	23.9	34.0	13.8	0.0	0.0	100.0	28.4	1,179
Mwanza	3.4	21.5	31.6	31.4	12.1	0.0	0.0	100.0	32.0	515
Mzimba	11.3	19.9	17.4	20.9	30.1	0.4	0.0	100.0	47.9	1,460
Nkhata Bay	3.2	31.2	35.7	25.1	4.7	0.2	0.1	100.0	22.4	385
Nkhotakota	2.0	37.5	26.0	20.8	13.6	0.0	0.0	100.0	29.5	493
Nsanje	1.5	11.3	15.4	34.0	37.6	0.0	0.1	100.0	70.1	549
Ntcheu	0.7	42.5	26.5	21.7	8.6	0.0	0.0	100.0	23.8	1,078
Ntchisi	0.8	13.2	29.5	32.4	24.0	0.0	0.0	100.0	37.4	374
Phalombe	0.0	16.5	15.4	43.1	25.0	0.0	0.0	100.0	43.3	643
Rumphi	17.8	24.6	19.0	18.8	19.8	0.1	0.0	100.0	36.5	325
Salima	7.7	31.5	21.8	19.3	19.6	0.0	0.0	100.0	38.2	1,105
Thyolo	5.3	21.8	28.7	35.4	8.5	0.3	0.0	100.0	28.8	1,445
Zomba	3.3	10.4	25.5	32.6	28.1	0.0	0.0	100.0	39.7	1,364

Table 8.3b

Time to source of water

Percent distribution of households according to time to go to source of drinking water, get water and return, and mean time to source of drinking water, Malawi, 2006

Background characteristic	Time to source of drinking water							Total	Mean time to source of drinking water (excluding those on premises)	Number of households
	Water on premises	Less than 15 minutes	15 minutes to less than 30 minutes	30 minutes to less than 1 hour	1 hour or more	Don't know	Missing			
Education of household head										
None	1.9	23.9	24.4	28.3	21.3	0.2	0.0	100.0	37.9	6,955
Primary	3.2	25.1	23.5	26.6	21.5	0.1	0.0	100.0	37.8	17,895
Secondary +	20.5	27.3	19.7	17.2	15.1	0.2	0.1	100.0	33.5	5,513
Other	4.3	23.9	18.8	32.1	20.1	0.8	0.0	100.0	39.2	190
Wealth index quintile										
Lowest	0.8	27.1	23.0	27.4	21.3	0.2	0.0	100.0	37.3	6,360
Second	0.9	22.7	24.7	28.8	22.8	0.0	0.0	100.0	39.0	6,297
Middle	1.0	23.0	25.4	28.6	21.8	0.1	0.0	100.0	37.8	5,976
Fourth	3.1	26.8	22.7	26.6	20.7	0.1	0.0	100.0	37.1	5,863
Highest	24.6	26.5	19.2	14.9	14.7	0.1	0.0	100.0	33.7	6,057

Households headed by a person with secondary or higher education and those in the highest wealth quintile spend less time collecting drinking water than their counterparts. The majority of households whose head has secondary education (27 percent) take less than 15 minutes, while the majority of those with primary or no education take 30 minutes to less than 1 hour.

In addition to the source of drinking water, treatment of water and time taken to reach the source, the survey investigated how water is stored in the households. Among the options for storing drinking water are: a jerry can/narrow neck container with a lid, a jerry can/narrow neck container without lid, an open container with a lid and an open container without a lid. It remains an important fact that the safety of drinking water depends on the storage facility's ability to avoid dust and other particles that may bring infectious diseases. Tables 8.4a and 8.4b and figure 8.2 provide information on the percentage distribution of households by method of water storage by background characteristics.

Overall, 73 percent of people in Malawi utilise open containers with a lid to store drinking water and 19 percent use a jerry can or narrow neck container with a lid. Notably, 91 percent of the population 'covers' the drinking water. There is no regional or district variation in methods of storing water. However, 82 percent of the population in the Southern Region uses open containers with lids as compared to 64 percent in the Northern Region and 65 percent in the Central Region. The use of a jerry can with a lid is common in the Northern Region and least used in the Southern Region. At district level, Chiradzulu and Balaka have the highest percentage of people storing water in an open container with a lid (93 percent) and Dowa and Nkhatabay have the lowest percentages (44 percent). Comparing those with different levels of education, it is notable that those with secondary or higher education are more likely to store water in a jerry can with a lid than their counterparts.

Table 8.4a

Storage of water in the household

Percent distribution of household population by type of water storage, Malawi, 2006

Background characteristic	Storage of water in the household					Total	Number of household members
	Jerry can/ Narrow neck container with lid	Jerry can/ Narrow neck container without lid	Open container with lid	Open container without lid	Other		
Malawi							
Total	18.5	2.2	72.5	6.2	0.6	100.0	131,021
Urban	22.8	1.3	69.0	4.0	3.0	100.0	19,899
Rural	17.7	2.4	73.1	6.6	0.2	100.0	111,122
Region							
Northern	31.9	0.6	63.7	2.8	1.0	100.0	13,990
Central	22.7	3.2	64.6	9.2	0.3	100.0	58,035
Southern	11.2	1.6	82.3	4.0	0.9	100.0	58,996
District							
Balaka	3.7	2.3	92.6	1.4	0.0	100.0	2,997
Blantyre	10.3	0.9	81.1	5.0	2.7	100.0	9,969
Chikwawa	11.2	0.7	84.5	3.6	0.0	100.0	4,863
Chiradzulu	3.8	0.7	92.9	2.7	0.0	100.0	2,417
Chitipa	22.8	1.3	74.3	1.6	0.1	100.0	1,647
Dedza	35.8	2.1	57.8	4.2	0.0	100.0	7,573
Dowa	35.1	8.0	44.6	12.3	0.1	100.0	5,638
Karonga	21.3	0.9	75.3	1.9	0.7	100.0	2,707
Kasungu	21.3	1.7	66.4	10.5	0.1	100.0	5,606
Lilongwe	17.3	1.4	69.7	11.1	0.5	100.0	20,548
Machinga	7.0	1.8	85.1	4.9	1.2	100.0	4,753
Mangochi	6.5	0.7	89.1	2.3	1.4	100.0	11,407
Mchinji	27.0	11.4	56.2	5.0	0.5	100.0	5,011
Mulanje	21.6	2.4	74.6	1.2	0.1	100.0	4,322
Mwanza	12.5	2.1	72.1	12.9	0.4	100.0	2,292
Mzimba	32.6	0.3	62.1	3.4	1.7	100.0	6,402
Nkhata Bay	50.0	1.1	44.4	3.7	0.7	100.0	1,647
Nkhotakota	11.9	1.7	83.4	2.7	0.4	100.0	2,330
Nsanje	23.5	0.6	74.5	1.1	0.2	100.0	2,337
Ntcheu	4.2	1.6	85.9	8.3	0.0	100.0	4,496
Ntchisi	26.3	4.2	49.0	20.6	0.0	100.0	1,680
Phalombe	15.3	8.5	72.7	3.4	0.0	100.0	2,652
Rumphi	37.6	0.5	59.3	2.5	0.2	100.0	1,587
Salima	28.0	2.7	60.3	8.4	0.6	100.0	5,153
Thyolo	22.1	1.1	67.5	9.3	0.0	100.0	5,516
Zomba	6.1	2.0	89.4	2.1	0.4	100.0	5,471

Table 8.4b

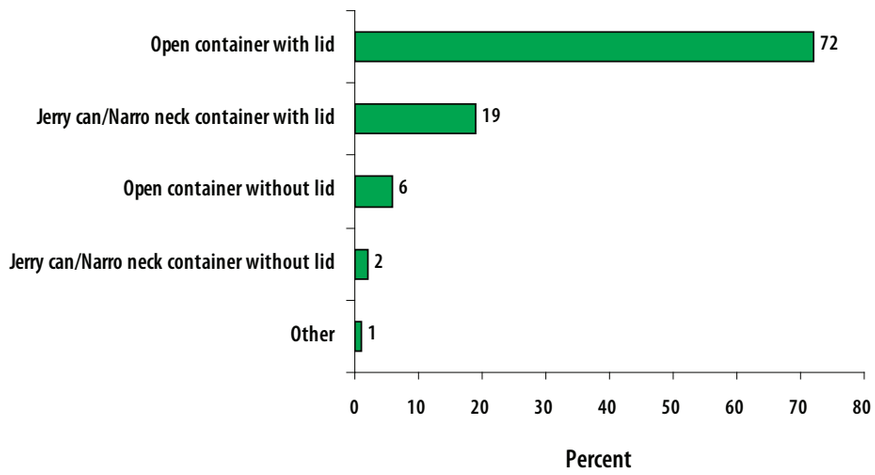
Storage of water in the household

Percent distribution of household population by type of water storage, Malawi, 2006

Background characteristic	Storage of water in the household					Total	Number of household members
	Jerry can/ Narrow neck container with lid	Jerry can/ Narrow neck container without lid	Open container with lid	Open container without lid	Other		
Education of household head							
None	16.0	2.4	74.2	7.0	0.4	100.0	28,406
Primary	18.1	2.3	72.6	6.6	0.2	100.0	78,350
Secondary +	22.6	1.6	69.9	3.7	2.2	100.0	23,434
Other	19.6	0.6	72.7	6.1	1.0	100.0	831
Wealth index quintile							
Lowest	21.1	2.7	66.2	9.8	0.1	100.0	26,674
Second	16.2	2.7	74.5	6.2	0.3	100.0	25,522
Middle	14.0	2.2	77.6	6.0	0.1	100.0	25,420
Fourth	18.5	2.0	74.0	5.3	0.2	100.0	25,248
Highest	22.0	1.5	70.6	3.7	2.3	100.0	28,157

Figure 8.2

Percentage distribution of household population by type of water storage, Malawi, 2006



Tables 8.5a and 8.5b show the percent distribution of those collecting water for use by the household. In 87 percent of cases, adult women collect water. Only 6 percent of households use female children under the age of 15 to collect water. Adult men collect water in only 6 percent of the households. Male children under the age of 15 are least likely to collect water (less than 1 percent). The collection of water by adult men is more prevalent in urban (11 percent) than rural areas (5 percent). Female children under the age of 15 are more likely to collect water in the Southern and Central Regions (7 percent and 6 percent respectively).

At district level, the use of female children under the age of 15 is higher in Mwanza (15 percent) and Ntchisi (10 percent) while the use of adult men is higher in Nkhata Bay (11 percent). Use of adult women is lower in Mwanza (75 percent).

Table 8.5a

Person collecting water

Percent distribution of households according to the person collecting water used in the household, Malawi, 2006

Background characteristic	Person collecting drinking water						Total	Number of households
	Adult woman	Adult man	Female child (under 15)	Male child (under 15)	Don't know	Missing		
Malawi								
Total	87.2	5.8	6.2	0.7	0.0	0.1	100.0	28,714
Urban	83.5	10.8	5.0	0.7	0.0	0.1	100.0	3,208
Rural	87.6	5.2	6.4	0.7	0.0	0.1	100.0	25,506
Region								
Northern	87.5	6.8	4.6	1.0	0.1	0.1	100.0	2,848
Central	88.0	5.2	6.2	0.4	0.0	0.1	100.0	12,447
Southern	86.3	6.2	6.6	0.8	0.0	0.0	100.0	13,419
District								
Balaka	85.7	6.3	7.2	0.8	0.0	0.0	100.0	637
Blantyre	83.6	8.9	6.5	1.0	0.0	0.0	100.0	1,839
Chikwawa	85.9	7.1	6.0	1.0	0.0	0.0	100.0	1,098
Chiradzulu	88.0	3.5	8.2	0.4	0.0	0.0	100.0	601
Chitipa	90.0	4.4	4.4	1.1	0.0	0.0	100.0	349
Dedza	90.4	2.3	6.4	0.7	0.1	0.0	100.0	1,730
Dowa	87.3	5.6	6.3	0.8	0.0	0.0	100.0	1,190
Karonga	89.7	6.9	2.8	0.6	0.0	0.0	100.0	562
Kasungu	92.6	5.3	2.0	0.0	0.0	0.0	100.0	1,067
Lilongwe	88.0	5.6	5.9	0.3	0.0	0.3	100.0	4,555
Machinga	90.6	5.0	3.7	0.7	0.0	0.0	100.0	1,224
Mangochi	87.6	5.0	6.4	0.9	0.0	0.1	100.0	2,522
Mchinji	86.4	6.8	6.6	0.2	0.0	0.0	100.0	960
Mulanje	86.6	6.9	6.0	0.6	0.0	0.0	100.0	1,130
Mwanza	74.9	8.5	14.7	1.8	0.0	0.2	100.0	498
Mzimba	86.4	6.8	5.3	1.2	0.2	0.2	100.0	1,295
Nkhata Bay	81.0	10.9	6.8	1.2	0.0	0.1	100.0	373
Nkhotakota	86.3	8.9	4.2	0.6	0.0	0.1	100.0	483
Nsanje	89.3	5.1	5.2	0.3	0.0	0.1	100.0	540
Ntcheu	86.6	5.3	7.7	0.4	0.0	0.0	100.0	1,071
Ntchisi	84.2	4.8	10.2	0.7	0.0	0.1	100.0	371
Phalombe	85.0	4.2	9.3	1.4	0.2	0.0	100.0	643
Rumphi	93.6	3.7	1.9	0.6	0.0	0.1	100.0	267
Salima	85.4	4.6	9.4	0.6	0.0	0.0	100.0	1,020
Thyolo	86.6	5.7	6.6	1.1	0.0	0.0	100.0	1,369
Zomba	86.1	7.3	6.3	0.3	0.0	0.0	100.0	1,318

Table 8.5b

Person collecting water

Percent distribution of households according to the person collecting water used in the household, Malawi, 2006

Background characteristic	Person collecting drinking water						Total	Number of households
	Adult woman	Adult man	Female child (under 15)	Male child (under 15)	Don't know	Missing		
Education of household head								
None	85.1	4.6	9.2	0.9	0.0	0.1	100.0	6,822
Primary	88.2	5.5	5.6	0.6	0.0	0.1	100.0	17,328
Secondary +	86.4	9.1	4.0	0.4	0.0	0.1	100.0	4,382
Other	82.8	2.5	12.1	2.6	0.0	0.0	100.0	182
Wealth index quintile								
Lowest	88.7	3.6	7.1	0.6	0.0	0.1	100.0	6,308
Second	88.0	4.9	6.2	0.7	0.0	0.2	100.0	6,241
Middle	88.3	5.9	5.2	0.5	0.0	0.0	100.0	5,915
Fourth	86.6	6.4	6.2	0.7	0.0	0.1	100.0	5,683
Highest	83.0	9.4	6.5	1.0	0.0	0.0	100.0	4,568

8.2 SANITATION

The inadequate disposal of human excreta is associated with a range of diseases including diarrhoeal diseases. Improved sanitation facilities for safe disposal of excreta include the following: flushing or pouring to a piped sewer system, septic tanks, or latrines, a ventilated improved pit latrines, pit latrines with slabs and composting toilets.

Tables 8.6a and 8.6b show that only 20 percent of people Malawi are living in households that use improved sanitation facilities. Of these, 45 percent live in urban areas and 16 percent in rural areas. Residents of the Central and Southern Regions are more likely than those in the Northern Region to use improved sanitation facilities. Overall, 12 percent of households in Malawi do not have toilet facilities (Figure 8.3). This is more commonly the case in rural areas (14 percent) than urban areas (2 percent).

Amongst the districts, while half of households in Blantyre are using improved sanitation facilities, the lowest percentages are observed in Nsanje and Phalombe. In terms of wealth and income, 43 percent of those in wealthy households use improved sanitation compared to only 4 percent in poor households. Similarly, the level of education reached by the head of the household impacts on the use of improved sanitation facilities.

In Malawi, the presence of simple pit latrines is quite common. If we include the percentage of households that have simple pit latrines, the proportion of those with improved sanitation increases to 88 percent (Table 8.6a). This proportion rises in urban areas to 12 percentage points higher than rural areas (98 percent) Not much difference is observed in the use of pit latrines between rich and poor households. Yet in Chikwawa, only 54 percent of households use sanitation facilities.

Table 8.6a

Use of sanitary means of excreta disposal

Percent distribution of household population according to type of toilet used by the household and the percentage of household members using sanitary means of excreta disposal, Malawi, 2006

Background characteristic	Flush to piped sewer system	Flush to septic tank	Flush to pit (latrine)	Flush to somewhere else	Flush to unknown place/ not sure/DK where	Ventilated Improved Pit (VIP) latrine	Pit latrine with slab	Pit latrine without slab/ open pit	Hanging toilet/hanging latrine	No facilities or bush or field	Other	Missing	Total	Population using sanitary means of excreta disposal (excluding pit latrine)	Population using sanitary means of excreta disposal (including pit latrine)	Number of household members
Malawi																
Total	0.2	1.9	0.0	0.0	0.0	0.3	17.9	67.2	0.0	12.1	0.2	0.1	100.0	20.4	87.6	131,021
Urban	1.0	9.7	0.1	0.3	0.1	1.2	32.2	52.8	0.0	2.3	0.0	0.2	100.0	44.7	97.5	19,899
Rural	0.1	0.5	0.0	0.0	0.0	0.1	15.3	69.7	0.0	13.8	0.2	0.1	100.0	16.1	85.8	111,122
Region																
Northern	0.1	3.1	0.0	0.0	0.0	0.8	11.1	72.6	0.1	11.8	0.0	0.4	100.0	15.1	87.7	13,990
Central	0.2	1.7	0.0	0.0	0.0	0.1	19.8	66.9	0.0	10.7	0.4	0.0	100.0	21.9	88.8	58,035
Southern	0.3	1.9	0.0	0.1	0.0	0.4	17.6	66.1	0.0	13.5	0.0	0.1	100.0	20.2	86.3	58,996
District																
Balaka	0.4	0.3	0.1	0.0	0.0	0.5	7.8	80.4	0.0	10.5	0.0	0.0	100.0	9.2	89.6	2,997
Blantyre	1.3	6.5	0.1	0.1	0.0	1.1	37.0	48.3	0.0	5.1	0.0	0.4	100.0	46.2	94.5	9,969
Chikwawa	0.0	2.1	0.0	0.0	0.0	0.4	14.5	37.2	0.0	45.7	0.1	0.0	100.0	16.9	54.1	4,863
Chiradzulu	0.1	0.4	0.0	0.0	0.0	0.1	23.4	72.8	0.0	2.7	0.1	0.3	100.0	24.0	96.8	2,417
Chitipa	0.0	0.0	0.0	0.0	0.0	0.0	11.9	84.3	0.1	3.6	0.0	0.0	100.0	11.9	96.2	1,647
Dedza	0.0	0.0	0.0	0.0	0.0	0.0	32.3	64.8	0.0	2.7	0.3	0.0	100.0	32.3	97.1	7,573
Dowa	0.1	0.5	0.0	0.0	0.0	0.3	7.2	85.9	0.0	5.8	0.2	0.0	100.0	8.0	93.9	5,638
Karonga	0.0	4.1	0.1	0.0	0.0	0.3	17.0	56.9	0.2	20.7	0.0	0.7	100.0	21.5	78.4	2,707
Kasungu	0.0	0.7	0.0	0.0	0.0	0.0	26.6	63.3	0.1	9.2	0.0	0.0	100.0	27.3	90.6	5,606
Lilongwe	0.2	2.0	0.1	0.0	0.0	0.2	28.7	55.7	0.0	13.3	0.0	0.0	100.0	31.1	86.8	20,548
Machinga	0.2	0.3	0.0	0.5	0.0	0.3	4.8	79.5	0.0	14.5	0.0	0.0	100.0	6.0	85.5	4,753
Mangochi	0.0	1.5	0.0	0.0	0.0	0.0	15.2	68.4	0.0	14.6	0.0	0.2	100.0	16.8	85.2	11,407
Mchinji	0.0	0.3	0.0	0.0	0.0	0.1	8.5	75.3	0.0	11.5	4.1	0.0	100.0	9.1	84.4	5,011
Mulanje	0.0	0.3	0.1	0.0	0.0	0.8	19.4	77.7	0.0	1.6	0.0	0.0	100.0	20.7	98.4	4,322
Mwanza	0.2	0.2	0.0	0.0	0.0	0.2	7.5	70.2	0.0	21.5	0.1	0.0	100.0	8.1	78.3	2,292
Mzimba	0.1	4.4	0.0	0.0	0.0	1.5	9.2	72.5	0.0	11.7	0.1	0.6	100.0	15.2	87.7	6,402
Nkhata Bay	0.0	1.0	0.0	0.0	0.0	0.0	12.1	72.5	0.0	14.5	0.0	0.0	100.0	13.0	85.5	1,647
Nkhotakota	0.5	11.3	0.0	0.0	0.0	0.0	12.6	59.7	0.0	15.9	0.0	0.0	100.0	24.4	84.1	2,330
Nsanje	0.0	1.1	0.0	0.0	0.0	0.0	30.1	36.8	0.0	32.0	0.0	0.0	100.0	31.1	67.9	2,337
Ntcheu	0.0	0.0	0.1	0.0	0.0	0.1	2.7	89.6	0.0	7.5	0.0	0.0	100.0	2.9	92.5	4,496
Ntchisi	0.0	0.0	0.0	0.0	0.0	0.0	6.3	86.0	0.1	7.6	0.0	0.1	100.0	6.3	92.3	1,680
Phalombe	0.0	0.0	0.0	0.0	0.0	0.0	1.2	66.9	0.0	31.8	0.0	0.0	100.0	1.2	68.1	2,652
Rumphi	0.0	1.7	0.0	0.0	0.2	0.1	6.9	87.8	0.0	2.8	0.1	0.5	100.0	8.8	96.6	1,587
Salima	0.8	4.0	0.0	0.0	0.0	0.0	7.3	67.5	0.0	20.4	0.0	0.0	100.0	12.1	79.6	5,153
Thyolo	0.0	0.4	0.0	0.3	0.1	0.1	16.2	81.8	0.1	0.7	0.0	0.2	100.0	17.2	99.0	5,516
Zomba	0.0	1.7	0.0	0.0	0.1	0.0	10.6	82.6	0.0	5.0	0.0	0.0	100.0	12.4	95.0	5,471

Table 8.6b

Use of sanitary means of excreta disposal

Percent distribution of household population according to type of toilet used by the household and the percentage of household members using sanitary means of excreta disposal, Malawi, 2006

Background characteristic	Flush to piped sewer system	Flush to septic tank	Flush to pit (latrine)	Flush to somewhere else	Flush to unknown place/ not sure/DK where	Ventilated Improved Pit (VIP) latrine	Pit latrine with slab	Pit latrine without slab/ open pit	Hanging toilet/hanging latrine	No facilities or bush or field	Other	Missing	Total	Population using sanitary means of excreta disposal (excluding pit latrine)	Population using sanitary means of excreta disposal (including pit latrine)	Number of household members
Education of household head																
None	0.0	0.2	0.0	0.0	0.0	0.0	14.2	67.0	0.0	18.2	0.3	0.1	100.0	14.5	81.5	28,406
Primary	0.0	0.5	0.0	0.0	0.0	0.2	16.3	70.2	0.0	12.2	0.2	0.1	100.0	17.2	87.4	78,350
Secondary +	0.9	8.7	0.1	0.2	0.1	1.1	27.5	57.3	0.0	4.0	0.1	0.1	100.0	38.4	95.7	23,434
Other	0.7	1.2	0.0	0.0	0.0	0.0	16.4	64.1	0.0	17.6	0.0	0.0	100.0	18.3	82.4	831
Wealth index quintile																
Lowest	0.0	0.0	0.0	0.0	0.0	0.0	4.1	70.5	0.0	25.2	0.1	0.0	100.0	4.2	74.7	26,674
Second	0.0	0.0	0.0	0.0	0.0	0.0	8.4	74.6	0.1	16.5	0.4	0.1	100.0	8.4	83.0	25,522
Middle	0.0	0.0	0.0	0.0	0.0	0.0	18.8	70.1	0.0	10.7	0.3	0.1	100.0	18.8	88.9	25,420
Fourth	0.0	0.1	0.0	0.0	0.0	0.1	26.4	66.3	0.0	6.7	0.2	0.1	100.0	26.7	93.0	25,248
Highest	0.9	8.9	0.1	0.2	0.1	1.2	31.2	55.4	0.0	1.7	0.0	0.2	100.0	42.6	81.5	28,157

The availability of hand washing facilities outside toilets can enhance the prevention of diseases such as cholera and dysentery. Households were asked whether they had access to a hand washing facility outside the toilet. Interviewers recorded whether or not this facility was seen with or without water.

Tables 8.7a and 8.7b indicate that 79 percent of Malawi residents have a facility to wash their hands outside the toilet. Sixty-six percent have a facility with no water, while 13 percent of households have a facility that has water. The availability of hand washing facilities is higher in urban areas (89 percent) compared to rural areas (77 percent).

The vast majority of residents in the Northern Region do not have hand washing facilities outside of the toilet (87 percent) as compared

Figure 8.3

Percentage distribution of household population by type of toilet use, Malawi, 2006

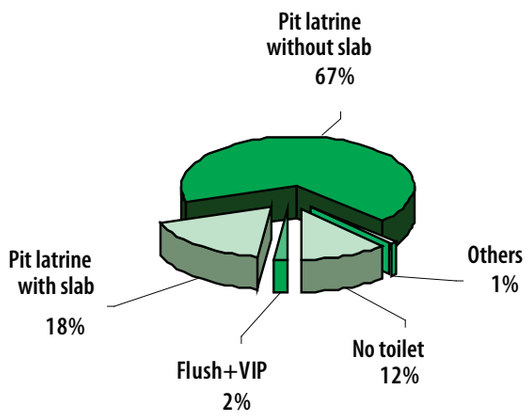


Table 8.7a

Hand washing facility outside the toilet

Percent distribution of household population by whether the household has a handwashing facility outside the toilet, Malawi, 2006

Background characteristic	Hand washing facility outside toilet				Total	Number of household members
	Seen the facility filled with water	Seen the facility, but no water	Not seen	No hand washing facility		
Malawi						
Total	12.7	66.2	0.1	21.0	100.0	131,021
Urban	15.9	72.9	0.2	11.1	100.0	19,899
Rural	12.1	65.0	0.1	22.7	100.0	111,122
Region						
Northern	3.7	8.4	0.8	87.2	100.0	13,990
Central	6.9	80.4	0.0	12.7	100.0	58,035
Southern	20.6	66.0	0.0	13.5	100.0	58,996
District						
Balaka	19.2	70.4	0.0	10.5	100.0	2,997
Blantyre	11.5	83.4	0.0	5.1	100.0	9,969
Chikwawa	3.2	51.0	0.0	45.7	100.0	4,863
Chiradzulu	8.2	89.0	0.0	2.7	100.0	2,417
Chitipa	1.5	2.5	0.2	95.8	100.0	1,647
Dedza	10.4	86.9	0.0	2.7	100.0	7,573
Dowa	3.1	91.0	0.0	5.8	100.0	5,638
Karonga	3.3	1.5	0.3	94.9	100.0	2,707
Kasungu	3.1	68.0	0.0	28.9	100.0	5,606
Lilongwe	4.9	81.9	0.0	13.3	100.0	20,548
Machinga	43.0	42.5	0.0	14.5	100.0	4,753
Mangochi	49.6	35.8	0.0	14.6	100.0	11,407
Mchinji	6.1	82.3	0.1	11.5	100.0	5,011
Mulanje	10.2	88.3	0.0	1.6	100.0	4,322
Mwanza	11.7	66.8	0.0	21.5	100.0	2,292
Mzimba	4.5	4.4	1.2	89.9	100.0	6,402
Nkhata Bay	5.5	44.9	1.0	48.6	100.0	1,647
Nkhotakota	19.7	64.2	0.0	16.1	100.0	2,330
Nsanje	4.5	63.4	0.1	32.0	100.0	2,337
Ntcheu	3.5	89.0	0.0	7.5	100.0	4,496
Ntchisi	2.0	90.2	0.0	7.8	100.0	1,680
Phalombe	3.7	64.5	0.0	31.8	100.0	2,652
Rumphi	1.3	4.3	0.2	94.2	100.0	1,587
Salima	17.9	61.7	0.0	20.4	100.0	5,153
Thyolo	9.8	89.4	0.0	0.7	100.0	5,516
Zomba	16.4	78.6	0.0	5.0	100.0	5,471

Table 8.7b

Hand washing facility outside the toilet

Percent distribution of household population by whether the household has a handwashing facility outside the toilet, Malawi, 2006

Background characteristic	Hand washing facility outside toilet				Total	Number of household members
	Seen the facility filled with water	Seen the facility, but no water	Not seen	No hand washing facility		
Education of household head						
None	16.7	62.0	0.1	21.1	100.0	28,406
Primary	10.6	67.6	0.0	21.8	100.0	78,350
Secondary +	14.7	67.1	0.2	18.1	100.0	23,434
Other	20.4	60.4	0.0	19.3	100.0	831
Wealth index quintile						
Lowest	6.2	58.8	0.0	35.0	100.0	26,674
Second	12.3	62.7	0.1	24.9	100.0	25,522
Middle	13.5	68.9	0.1	17.5	100.0	25,420
Fourth	14.3	69.9	0.1	15.7	100.0	25,248
Highest	17.1	70.9	0.1	11.9	100.0	28,157

to 13 percent in the Central Region and 14 percent in the Southern Region. At district level, the situation is worse in Chitipa (96 percent), Karonga (95 percent), Rumphi (94 percent) and Mzimba (90 percent). All of these districts are located in the Northern Region. Other districts with close to half the population lacking a hand washing facility are Chikwawa and Nkhata Bay. The percentage of the population with hand washing facilities outside the toilet increases with household wealth and with increasing levels of education of the head of the household.

Tables 8.8a and 8.8b show the distribution of households that have soap or washing powder/liquid. The findings indicate that 73 percent of those surveyed have soap or washing powder/liquid. Sixty-seven percent of interviewees were able to show soap to the interviewer. Soap is more likely to be available in urban areas (89 percent) than in rural areas (70 percent).

At regional level, the Northern Region has the highest percentage of households with soap (81 percent) compared to 75 percent in the Southern Region and 69 percent in the Central Region. This is in contrast to the information in table 8.7a, where those in the Northern Region have relatively low access to a hand washing facility outside the toilet. The data further indicates that Karonga has the highest population with soap (91 percent) and Dowa has the lowest, with 53 percent. Map 8.1 depicts percentage of households without a soap/washing powder or liquid by district. The availability of soap to households varies with the level of education of the household head. Use of soap within households headed by those with a secondary education recorded the highest, with 89 percent compared with to those where the head has no education (60 percent). Similarly, those in the highest wealth index quintile recorded 90 percent and those in the lowest 56 percent, indicating that the poor lag far behind in terms of facilities.

Table 8.8a

Soap in the household

Percent distribution of household population by whether the household has soap or washing powder/liquid, Malawi, 2006

Background characteristic	Household has soap/washing powder or liquid			Total	Number of household members
	Yes seen	Yes not seen	No		
Malawi					
Total	66.7	6.5	26.8	100.0	131,021
Urban	79.0	9.6	11.4	100.0	19,899
Rural	64.5	5.9	29.5	100.0	111,122
Region					
Northern	75.8	5.2	19.0	100.0	13,990
Central	61.6	7.8	30.6	100.0	58,035
Southern	69.6	5.6	24.9	100.0	58,996
District					
Balaka	71.9	2.1	26.0	100.0	2,997
Blantyre	80.9	5.4	13.6	100.0	9,969
Chikwawa	61.8	1.0	37.3	100.0	4,863
Chiradzulu	65.1	1.8	33.1	100.0	2,417
Chitipa	85.2	1.9	12.9	100.0	1,647
Dedza	61.4	8.7	29.8	100.0	7,573
Dowa	50.5	2.1	47.4	100.0	5,638
Karonga	84.8	7.2	8.0	100.0	2,707
Kasungu	74.9	1.1	24.0	100.0	5,606
Lilongwe	55.1	14.7	30.2	100.0	20,548
Machinga	78.1	2.6	19.3	100.0	4,753
Mangochi	54.6	13.6	31.8	100.0	11,407
Mchinji	75.7	3.0	21.3	100.0	5,011
Mulanje	84.8	3.8	11.4	100.0	4,322
Mwanza	70.9	1.1	28.0	100.0	2,292
Mzimba	71.0	3.6	25.4	100.0	6,402
Nkhata Bay	66.0	13.4	20.6	100.0	1,647
Nkhotakota	68.6	3.4	28.0	100.0	2,330
Nsanje	61.3	2.0	36.7	100.0	2,337
Ntcheu	65.7	5.5	28.8	100.0	4,496
Ntchisi	64.4	1.1	34.5	100.0	1,680
Phalombe	62.9	4.7	32.4	100.0	2,652
Rumphi	80.4	3.4	16.2	100.0	1,587
Salima	63.9	2.7	33.4	100.0	5,153
Thyolo	71.1	8.4	20.6	100.0	5,516
Zomba	72.8	1.8	25.4	100.0	5,471

Table 8.8b

Soap in the household

Percent distribution of household population by whether the household has soap or washing powder/liquid, Malawi, 2006

Background characteristic	Household has soap/washing powder or liquid			Total	Number of household members
	Yes seen	Yes not seen	No		
Education of household head					
None	53.1	6.7	40.2	100.0	28,406
Primary	66.9	6.4	26.7	100.0	78,350
Secondary +	82.9	6.6	10.4	100.0	23,434
Other	58.7	6.8	34.6	100.0	831
Wealth index quintile					
Lowest	51.0	5.3	43.7	100.0	26,674
Second	61.0	5.4	33.5	100.0	25,522
Middle	67.5	7.6	24.9	100.0	25,420
Fourth	70.6	6.8	22.7	100.0	25,248
Highest	82.5	7.4	10.1	100.0	28,157

Tables 8.9a and 8.9b provide information on the disposal of faeces of children 0–2 years of age, by background characteristics. In 78 percent of cases, stools are disposed of safely. The majority (73 percent) of children's faeces are rinsed into a toilet or latrine, while 6 percent of children go to the toilet themselves. In other cases, faeces are rinsed into a drain or ditch (9 percent), thrown into the garbage as solid waste or buried (4 percent).

The safe disposal of children's faeces is more common in urban areas (90 percent) compared to rural areas (76 percent). At regional level, there is little difference in outcome for the Central Region and Southern Region (79 percent). The Northern Region has the lowest percentage of children whose stools are disposed of safely (72 percent). At district level, Zomba has the highest percentage of children whose stools are safely disposed (96 percent) while Karonga has the lowest, 41 percent. The proportion of children whose stools are disposed of safely increases with a mother's education and with the wealth status of the household.

Map 8.1

Proportion of households not having soap/washing powder or liquid , Malawi, 2006

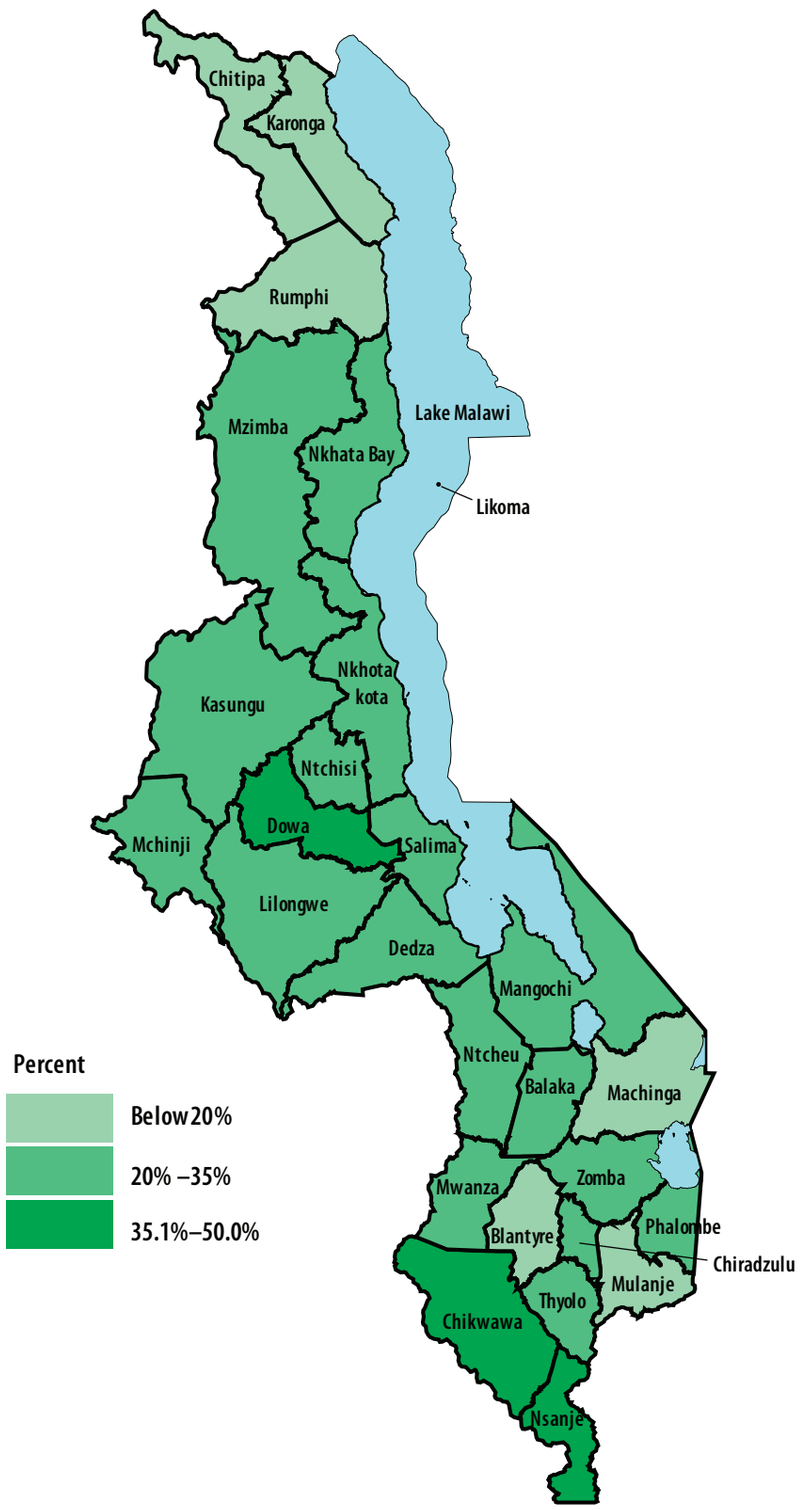


Table 8.9a

Disposal of child's faeces

Percent distribution of children aged 0–2 years according to place of disposal of child's faeces, and the percentage of children aged 0–2 years whose stools are disposed of safely, Malawi, 2006

Background characteristic	What was done to dispose of the stools									Total	Proportion of children whose stools are disposed of safely	Number of children aged 0–2 years
	Child used toilet/ latrine	Put/rinsed into toilet or latrine	Put/rinsed into drain or ditch	Thrown into garbage (solid waste)	Buried	Left in the open	Other	Don't know	Missing			
Malawi												
Total	5.7	72.6	9.0	3.5	3.5	1.7	3.1	0.2	0.7	100.0	78.1	15,270
Urban	8.2	81.4	7.3	0.7	0.8	0.1	0.6	0.0	0.7	100.0	89.6	2,213
Rural	5.3	71.1	9.3	4.0	4.0	2.0	3.5	0.2	0.7	100.0	76.2	13,057
Region												
Northern	7.2	64.6	15.8	3.9	3.2	1.8	2.8	0.0	0.8	100.0	71.6	1,542
Central	4.9	74.1	10.2	3.6	2.7	1.8	2.1	0.1	0.4	100.0	78.8	7,081
Southern	6.2	72.9	6.1	3.3	4.5	1.6	4.2	0.2	1.1	100.0	78.9	6,647
District												
Balaka	2.4	82.0	3.7	3.6	6.9	0.4	0.2	0.0	0.8	100.0	84.0	319
Blantyre	6.4	83.8	1.7	1.2	4.5	0.1	1.0	0.2	1.1	100.0	90.2	993
Chikwawa	14.2	45.9	14.0	8.9	8.1	8.1	0.2	0.0	0.5	100.0	60.2	554
Chiradzulu	5.8	71.6	16.5	4.6	0.2	0.0	0.6	0.0	0.8	100.0	76.5	272
Chitipa	12.3	67.0	9.7	6.7	1.5	0.4	1.9	0.0	0.5	100.0	79.4	208
Dedza	2.0	83.2	6.4	1.7	1.8	3.5	0.2	0.0	1.2	100.0	84.7	913
Dowa	5.2	73.4	4.7	6.3	3.9	2.1	4.2	0.0	0.1	100.0	78.3	637
Karonga	4.4	37.0	35.0	10.3	8.0	1.7	2.1	0.0	1.6	100.0	41.4	296
Kasungu	10.3	77.4	3.9	2.8	2.0	0.4	2.5	0.7	0.0	100.0	87.8	685
Lilongwe	5.2	72.0	15.5	4.5	0.9	1.1	0.5	0.2	0.1	100.0	77.1	2,671
Machinga	3.8	76.9	6.7	3.3	7.6	0.5	1.0	0.0	0.3	100.0	80.6	581
Mangochi	7.9	70.6	2.0	2.6	2.7	1.1	10.9	0.8	1.2	100.0	78.4	1,468
Mchinji	2.0	70.3	1.3	3.0	11.1	0.7	10.9	0.0	0.7	100.0	72.2	571
Mulanje	3.7	82.4	3.9	2.0	4.4	0.0	0.0	0.0	3.5	100.0	85.0	405
Mwanza	3.9	64.3	4.2	15.2	6.4	1.7	4.1	0.0	0.1	100.0	68.1	256
Mzimba	7.3	69.6	13.9	1.0	2.3	3.1	2.6	0.0	0.3	100.0	76.5	669
Nkhata Bay	4.7	72.9	7.0	1.0	3.7	0.6	7.8	0.0	2.4	100.0	77.5	181
Nkhotakota	2.8	68.8	5.9	1.8	7.0	6.3	6.3	0.4	0.8	100.0	71.3	281
Nsanje	1.0	53.8	6.6	2.2	15.8	8.8	9.5	0.0	2.2	100.0	54.9	257
Ntcheu	4.1	77.8	14.4	1.0	1.9	0.1	0.2	0.0	0.4	100.0	81.7	533
Ntchisi	2.4	76.2	7.6	5.6	0.8	1.4	4.1	0.0	1.8	100.0	78.5	200
Phalombe	0.2	62.3	7.3	4.3	3.9	2.1	18.6	0.0	1.3	100.0	62.1	320
Rumphi	7.6	79.9	7.4	3.8	0.2	0.0	0.6	0.0	0.4	100.0	87.5	187
Salima	6.6	68.4	12.9	3.9	2.8	4.8	0.2	0.0	0.4	100.0	75.0	590
Thyolo	11.5	68.2	16.2	1.0	1.5	0.2	0.2	0.0	1.2	100.0	79.4	654
Zomba	1.3	94.4	2.2	0.4	1.0	0.2	0.4	0.0	0.2	100.0	95.5	569

Table 8.9b

Disposal of child's faeces

Percent distribution of children aged 0–2 years according to place of disposal of child's faeces, and the percentage of children aged 0–2 years whose stools are disposed of safely, Malawi, 2006

Background characteristic	What was done to dispose of the stools									Total	Proportion of children whose stools are disposed of safely	Number of children aged 0–2 years
	Child used toilet/ latrine	Put/rinsed into toilet or latrine	Put/rinsed into drain or ditch	Thrown into garbage (solid waste)	Buried	Left in the open	Other	Don't know	Missing			
Mother's education												
None	4.7	67.6	9.7	5.0	5.1	3.2	3.7	0.2	1.0	100.0	72.1	3,613
Primary	5.7	73.5	8.9	3.3	3.3	1.4	3.2	0.2	0.6	100.0	79.0	9,946
Secondary +	7.8	78.4	7.8	1.7	1.6	0.4	1.3	0.0	1.0	100.0	86.0	1,680
Other	1.5	67.9	10.4	7.6	3.0	9.6	0.0	0.0	0.0	100.0	69.4	31
Wealth index quintile												
Lowest	5.2	63.6	12.1	7.1	4.8	2.7	3.6	0.3	0.5	100.0	68.7	3,480
Second	5.1	71.4	8.8	3.9	3.7	2.3	3.8	0.1	1.0	100.0	76.2	3,160
Middle	5.3	74.0	8.4	2.5	3.7	1.4	3.8	0.2	0.7	100.0	79.2	3,157
Fourth	6.1	75.5	7.5	2.2	3.8	1.5	2.7	0.1	0.6	100.0	81.2	2,758
Highest	7.1	81.0	7.3	1.0	1.3	0.2	1.0	0.0	1.0	100.0	87.9	2,713

Tables 8.10a and 8.10b show the percentage of households using both an improved source of drinking water and a sanitary means of excreta disposal. Overall, 17 percent of respondents have improved sources of drinking water and sanitary means of household excreta disposal (Figure 8.4).

The table indicates that urban areas record the highest use of both improved sources of drinking water and of sanitary means of excreta disposal (44 percent) while the rural population lags far behind with only 13 percent. The Southern Region fares better in both (18 percent) although differences between the regions are not very significant.

At district level, people in Blantyre are most likely to use both improved sources of drinking water and sanitary facilities. People in Phalombe are the least likely to use these improved facilities (1 percent). The levels of education and wealth have a very big impact on the availability of improved facilities for drinking and sanitation. Households headed by those with secondary education and households in the highest wealth index quintile account for 37 percent and 41 percent respectively in using safe drinking water and improved methods of sanitation.

Table 8.10a

Use of improved water sources and improved sanitation

Percentage of household population using both improved drinking water sources and sanitary means of excreta disposal, Malawi, 2006

Background characteristic	Percentage of household population using improved sources of drinking water	Percentage of household population using sanitary means of excreta disposal (excluding pit latrine)	Percentage of household population using improved sources of drinking water and using sanitary means of excreta disposal (excluding pit latrine)	Number of household members
Malawi				
Total	75.2	20.4	17.4	131,021
Urban	96.0	44.7	43.5	19,899
Rural	71.5	16.1	12.7	111,122
Region				
Northern	79.3	15.1	14.0	13,990
Central	69.5	21.9	17.5	58,035
Southern	79.9	20.2	18.2	58,996
District				
Balaka	86.2	9.2	7.9	2,997
Blantyre	87.9	46.2	41.3	9,969
Chikwawa	72.1	16.9	13.7	4,863
Chiradzulu	90.0	24.0	21.7	2,417
Chitipa	66.1	11.9	9.2	1,647
Dedza	62.3	32.3	19.0	7,573
Dowa	60.1	8.0	7.1	5,638
Karonga	85.0	21.5	19.3	2,707
Kasungu	66.8	27.3	23.1	5,606
Lilongwe	72.0	31.1	26.0	20,548
Machinga	70.6	6.0	5.1	4,753
Mangochi	74.7	16.8	16.1	11,407
Mchinji	62.0	9.1	7.6	5,011
Mulanje	80.7	20.7	17.8	4,322
Mwanza	76.0	8.1	6.8	2,292
Mzimba	79.7	15.2	14.9	6,402
Nkhata Bay	77.0	13.0	11.9	1,647
Nkhotakota	77.1	24.4	22.8	2,330
Nsanje	80.9	31.1	26.2	2,337
Ntcheu	81.4	2.9	2.6	4,496
Ntchisi	59.2	6.3	3.9	1,680
Phalombe	85.1	1.2	1.2	2,652
Rumphi	84.4	8.8	8.3	1,587
Salima	80.1	12.1	11.3	5,153
Thyolo	79.5	17.2	16.0	5,516
Zomba	81.7	12.4	11.8	5,471

Table 8.10b

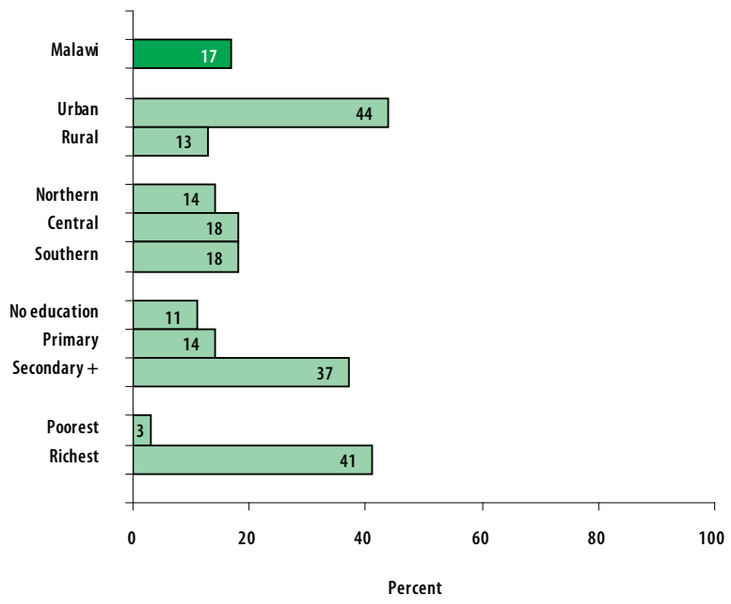
Use of improved water sources and improved sanitation

Percentage of household population using both improved drinking water sources and sanitary means of excreta disposal, Malawi, 2006

Background characteristic	Percentage of household population using improved sources of drinking water	Percentage of household population using sanitary means of excreta disposal (excluding pit latrine)	Percentage of household population using improved sources of drinking water and using sanitary means of excreta disposal (excluding pit latrine)	Number of household members
Education of household head				
None	69.1	14.5	11.0	28,406
Primary	73.8	17.2	14.1	78,350
Secondary +	87.7	38.4	36.5	23,434
Other	65.3	18.3	10.8	831
Wealth index quintile				
Lowest	61.3	4.2	2.6	26,674
Second	69.2	8.4	5.5	25,522
Middle	73.5	18.8	13.8	25,420
Fourth	79.6	26.7	22.9	25,248
Highest	91.5	42.6	40.6	28,157

Figure 8.4

Percentage of households population using improved sources of drinking water and using sanitary means of excreta disposal (Excluding pit latrines), Malawi, 2006



8.3 HAND WASHING PRACTICES

Hand washing is one of the most effective means of preventing diarrheal diseases and thereby reduce significantly childhood mortality. Hand washing with soap can vastly improve public hygiene. Though the majority of the households have soap, hand washing with soap at key times, is not widely practiced in Malawi. If the MDG 4 of reducing child mortality is to be achieved, hand washing practices must be improved along with access to safe water and sanitation.

In MICS 2006, hand washing practices questions were posed to nearly 8,700 women aged 15–49 who gave birth in the preceding two years. On the use of soap, the mothers were asked (without prompting), to mention occasions for which they have washed their hands with soap yesterday or today.

Tables 8.11a and 8.11b present the use of soap by women for different activities. Majority of the women (89 percent) mentioned washing body as the key reason for using soap. Use of soap for washing child's bottom is slightly high among urban women. Among the regions, use of soap for washing child is less in the Central Region compared to Northern and Southern Regions. Hand washing with soap after washing child's bottom is higher in Zomba (28 percent) and lower in Dedza (1 percent). Only Karonga seems to have higher proportion of soap use before preparing food (13 percent) and before eating food (20 percent).

As the emphasis of the national programme is on the promotion of four key hygiene practices namely - washing hands with soap (i) after defecation (ii) after cleaning a child (3) before feeding a child and (iv) before preparing food, MICS 2006 collected data pertaining to the use of soap by women for all key hygiene practice (Table 8.12). It can be observed that the proportion of women practicing all four hygiene practices is nearly non-exsistent. A huge effort is therefore needed in terms of advocacy and programme communication to bring about behavioural changes in the population on hand washing practices.

Table 8.11a

Use of soap by women for different activities

Percentage of women aged 15–49 with a birth in two years preceding the survey who used soap today or yesterday by use of soap for different activities, Malawi, 2006

Background characteristic	Washing clothes	Wash body	Wash children	Wash child's bottom	Wash child's hands	wash after defecating	Wash after cleaning child	Wash before feeding child	Wash before preparing food	Wash before eating	Number of women who gave birth in preceding two years
Malawi											
Total	84.0	88.9	51.2	8.8	1.0	1.6	0.8	0.6	0.8	1.0	8,697
Urban	86.0	90.7	51.1	10.8	1.1	2.5	1.0	1.0	1.0	1.2	1,450
Rural	83.6	88.6	51.2	8.4	0.9	1.5	0.7	0.6	0.8	0.9	7,247
Region											
Northern	81.2	87.9	72.3	15.7	1.4	2.1	1.5	2.1	3.5	5.4	883
Central	87.2	89.1	39.5	3.6	0.5	1.7	0.5	0.4	0.3	0.5	3,996
Southern	81.3	89.0	58.6	12.6	1.3	1.5	0.9	0.6	0.8	0.4	3,818
District											
Balaka	88.9	90.1	70.7	4.1	1.1	0.7	0.3	0.0	0.0	0.6	186
Blantyre	64.8	95.4	68.3	14.9	1.6	2.0	0.2	0.5	0.9	0.3	609
Chikwawa	79.9	71.1	27.3	12.1	0.3	0.9	0.4	0.0	0.8	0.0	289
Chiradzulu	88.1	88.7	52.3	24.3	1.5	0.8	0.7	0.5	0.4	0.5	167
Chitipa	74.4	90.2	78.5	19.5	0.7	1.0	0.6	0.4	0.0	2.1	116
Dedza	91.8	91.4	50.5	0.7	0.2	0.7	0.2	0.0	0.4	0.0	523
Dowa	90.7	85.5	34.3	3.6	1.7	3.5	0.8	2.5	1.3	0.0	290
Karonga	94.5	99.1	83.9	15.6	2.6	7.5	4.7	7.1	13.2	20.2	195
Kasungu	85.6	94.9	85.2	1.4	0.0	1.2	0.3	0.0	0.0	1.5	383
Lilongwe	88.6	86.5	26.9	2.7	0.2	1.9	0.3	0.1	0.0	0.2	1,551
Machinga	83.6	94.4	63.9	9.8	2.0	1.1	0.9	0.0	0.0	0.0	341
Mangochi	84.2	85.4	46.4	12.4	0.0	0.8	0.6	1.0	0.0	0.5	771
Mchinji	75.3	94.3	43.4	16.1	0.4	0.6	0.9	0.4	0.5	0.2	350
Mulanje	97.9	97.5	86.4	18.9	4.8	2.4	2.5	3.4	7.1	0.9	256
Mwanza	87.4	81.0	72.0	4.0	2.4	3.5	0.2	0.0	0.3	0.5	142
Mzimba	74.0	84.4	81.3	17.5	0.9	0.1	0.3	1.1	0.8	1.0	368
Nkhata Bay	83.9	84.2	37.2	4.5	1.0	1.2	0.0	0.0	0.8	0.7	106
Nkhotakota	91.5	91.8	29.5	5.7	0.8	0.9	0.0	0.0	0.5	0.4	169
Nsanje	86.5	87.1	20.1	1.2	5.6	1.6	1.1	0.4	0.5	0.4	137
Ntcheu	87.7	89.4	43.8	2.5	0.2	0.0	0.5	0.0	0.2	1.0	298
Ntchisi	84.6	79.0	33.1	2.3	0.3	0.8	1.9	0.2	0.0	0.8	118
Phalombe	83.3	85.6	54.6	4.7	0.2	1.7	1.2	0.0	0.5	1.6	199
Rumphi	86.2	79.5	46.2	16.5	2.3	1.3	2.2	0.0	1.0	1.8	98
Salima	82.7	90.5	32.2	1.6	3.0	4.3	1.7	1.3	1.0	2.0	314
Thyolo	67.9	88.7	48.2	3.8	0.3	2.7	3.0	0.3	0.0	0.0	372
Zomba	91.3	94.6	88.4	28.1	0.5	0.6	0.0	0.0	0.0	0.5	349

Table 8.11b

Use of soap by women for different activities

Percentage of women aged 15– 49 with a birth in two years preceding the survey who used soap today or yesterday by use of soap for different activities, Malawi, 2006

Background characteristic	Washing clothes	Wash body	Wash children	Wash child's bottom	Wash child's hands	wash after defecating	Wash after cleaning child	Wash before feeding child	Wash before preparing food	Wash before eating	Number of women who gave birth in preceding two years
Age											
15–19	84.5	89.2	50.0	10.0	0.7	1.7	0.6	0.4	1.0	1.0	965
20–24	85.7	90.2	52.2	8.6	0.9	1.6	0.8	0.7	0.8	0.9	3,076
25–29	83.9	86.5	51.7	9.2	1.2	2.1	1.2	1.0	0.9	1.1	2,218
30–34	82.9	88.7	50.0	7.2	0.7	1.2	0.6	0.3	0.6	0.9	1,341
35–39	79.3	92.2	53.8	8.4	1.0	1.4	0.6	0.3	0.7	1.2	697
40–44	84.7	85.4	41.4	10.4	1.2	0.7	0.1	0.5	1.7	0.4	292
45–49	74.2	89.6	50.8	11.2	0.0	0.0	0.0	0.0	0.0	0.6	107
Woman's education											
None	81.9	85.1	45.1	7.6	0.7	1.0	0.5	0.3	0.2	0.3	1,693
Primary	83.5	89.4	51.6	8.5	0.8	1.6	0.7	0.5	0.8	1.0	5,816
Secondary +	89.6	92.1	58.2	11.9	1.9	2.6	1.9	1.5	1.6	1.8	1,170
Other	73.5	94.5	38.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18
Wealth index quintile											
Lowest	83.8	87.5	48.0	6.5	1.0	0.8	0.6	0.7	0.7	1.1	1,726
Second	79.4	88.1	50.8	7.7	0.8	1.3	0.4	0.4	0.9	1.1	1,757
Middle	84.2	89.9	51.5	8.6	0.6	1.7	0.9	0.3	0.5	0.7	1,818
Fourth	85.1	86.2	51.2	9.2	1.1	1.8	0.7	0.7	0.9	0.5	1,645
Highest	87.4	92.7	54.6	11.9	1.4	2.6	1.2	1.0	1.1	1.4	1,752

Table 8.12

Use of soap by women for all key hygiene practices

Percentage of women aged 15–49 with a birth in two years preceding the survey following the four key hygiene practices ie., who used soap today or yesterday: after defecation, after cleaning a child, before feeding a child and before preparing food - Malawi, 2006

Background characteristic	Mothers who practiced all four key hygiene practices	Number of women who gave birth in preceding two years
Malawi		
Total	0.1	8,697
Urban	0.0	1,450
Rural	0.1	7,247
Region		
Northern	0.5	883
Central	0.0	3,996
Southern	0.0	3,818
Age		
15–19	0.1	965
20–24	0.1	3,076
25–29	0.0	2,218
30–34	0.1	1,341
35–39	0.0	697
40–44	0.0	292
45–49	0.0	107
Woman's education		
None	0.0	1,693
Primary	0.1	5,816
Secondary +	0.0	1,170
Other	0.0	18
Waelth index quintile		
Lowest	0.1	1,726
Second	0.1	1,757
Middle	0.0	1,818
Fourth	0.1	1,645
Highest	0.0	1,752

9 REPRODUCTIVE HEALTH

JEAN MWALABU & MYLEN MAHOWE

9.1 CONTRACEPTION

Appropriate family planning is important to the health of women and children in that it: 1) prevents pregnancies that are too early or too late; 2) extends the period between births; and 3) limits the number of children born to a woman. A WFFC goal is to give all couples access to information and services in order to prevent pregnancies that are too early, too closely spaced, too late or too many.

Tables 9.1a and 9.1b show that 41 percent of women currently married or in union report use any type of contraceptive method. Use of modern contraception is reported by 38 percent of women (Figure 9.1). The most popular method reported is injectable contraceptives, used by 29 percent of married women in Malawi. This is followed by female sterilisation which accounts for 4 percent of use. Nearly 2 percent of women report use of birth control pills and male condoms. Less than 1 percent report use of either periodic abstinence, withdrawal, vaginal methods, implants, the Intra-Uterine Device (IUD) or Lactational Amenorrhea Method (LAM) (Figure 9.2). Hardly any use of male sterilisation is reported by respondents.

Use of contraceptive methods (any method) is slightly higher in the Central Region at 43 percent, compared to around 39 percent in the Southern and Northern Regions. However, the results show that married women in the Southern and Central Regions are more likely to use modern contraception at 37 and 41 percent respectively, compared to married women in the Northern Region at 32 percent. In fact, withdrawal, which is one of the most unreliable contraception methods, is reported by 6 percent of women in the Northern Region, and less than one percent in the rest of the country. Contraceptive use is higher among urban married women (45 percent) compared to rural women (40 percent). Married women in urban areas are more likely to use modern contraceptives (43 percent) than their counterparts in rural areas (37 percent).

Table 9.1a also shows that use of modern contraceptives varies by district. Married women in Blantyre, Chitipa, Dowa, Lilongwe, Mwanza, and Ntchisi are most likely to use modern family planning methods (45 percent or higher) followed by Zomba (44 percent). The districts with low incidence of modern contraception use are Nkhatabay (18 percent) and Karonga (17 percent). It is also interesting to note that Chitipa district is most likely to use modern methods of contraception (46 percent); the method of contraception chosen by the majority of couples is condoms (11 percent) or withdrawal (14 percent), both of which are not as effective as methods such as injectables.

Adolescents are far less likely to use contraception than older women (Table 9.1b). Only 24 percent of married women or those in union, aged 15–19, currently use contraception compared to 42 percent of 20–24 year olds and 46 percent of older women (25–29 years). A woman's educational level is strongly associated with contraceptive use. The percentage of women using any method of contraception rises from 37 percent among those with no education to 51 percent among women with secondary or higher education. Education is positively correlated with all modern methods, apart from female sterilisation. The percentage of women with no education who are sterilised is almost double (5 percent) that of women who have been educated to secondary or higher level (3 percent). With respect to preference for injectable contraceptives, more women with secondary

Table 9.1a

Use of Contraception - Women

Percentage of women aged 15–49 years married or in union who are using (or whose partner is using) a contraceptive method, Malawi, 2006

Background characteristic	Percent of women (currently married or in union) who are using:														Total	Any modern method	Any traditional method	Any method	Number of women currently married or in union
	Not using any method	Female sterilisation	Male sterilisation	Pill	IUD	Injections	Implants	Condom	Female condom	Diaphragm/foam/jelly	LAM	Periodic abstinence	Withdrawal	Other					
Malawi																			
Total	59.0	4.4	0.1	2.4	0.3	29.0	0.7	1.5	0.0	0.1	0.2	0.7	0.8	0.8	100.0	38.4	2.6	41.0	19,005
Urban	55.3	4.7	0.0	3.5	0.4	32.0	1.6	1.1	0.0	0.2	0.2	0.7	0.2	0.2	100.0	43.4	1.3	44.7	3,058
Rural	59.7	4.4	0.1	2.1	0.3	28.5	0.5	1.6	0.0	0.0	0.2	0.7	1.0	0.9	100.0	37.4	2.9	40.3	15,947
Region																			
Northern	60.5	5.2	0.1	5.5	0.3	14.5	1.1	5.4	0.1	0.1	0.0	0.5	6.0	0.6	100.0	32.3	7.2	39.5	2,046
Central	56.6	5.9	0.1	1.9	0.3	31.4	0.8	0.9	0.0	0.0	0.3	1.1	0.3	0.6	100.0	41.2	2.2	43.4	8,690
Southern	61.2	2.6	0.0	2.1	0.3	30.1	0.6	1.2	0.0	0.1	0.2	0.4	0.2	1.0	100.0	37.0	1.9	38.8	8,269
District																			
Balaka	63.7	4.8	0.2	0.8	0.0	24.0	0.0	1.5	0.0	0.0	1.0	1.4	0.7	2.1	100.0	31.2	5.1	36.3	377
Blantyre	54.1	2.7	0.0	3.6	0.3	35.9	1.4	0.9	0.0	0.1	0.0	0.7	0.0	0.4	100.0	44.8	1.1	45.9	1,374
Chikwawa	60.0	4.9	0.0	3.0	0.1	29.9	0.2	0.1	0.0	0.0	0.8	0.6	0.0	0.4	100.0	38.2	1.8	40.0	690
Chiradzulu	56.8	6.2	0.0	1.6	0.6	31.7	0.5	1.2	0.0	0.0	0.4	0.2	0.4	0.6	100.0	41.8	1.5	43.2	336
Chitipa	38.9	4.6	0.0	8.0	0.7	19.7	1.8	11.3	0.0	0.1	0.0	0.6	13.6	0.5	100.0	46.3	14.8	61.1	241
Dedza	55.9	4.0	0.0	2.6	0.3	33.7	0.8	0.1	0.0	0.0	0.3	1.2	0.1	0.8	100.0	41.6	2.5	44.1	1,073
Dowa	49.2	9.5	0.0	1.4	0.0	36.5	0.6	0.8	0.0	0.0	0.0	0.8	0.2	1.0	100.0	48.8	2.0	50.8	788
Karonga	82.2	0.4	0.0	1.8	0.4	11.1	1.6	1.1	0.1	0.2	0.0	0.3	0.4	0.4	100.0	16.7	1.1	17.8	393
Kasungu	60.9	3.8	0.0	3.8	0.0	25.3	0.9	2.7	0.0	0.0	0.3	0.6	1.0	0.8	100.0	36.4	2.6	39.1	840
Lilongwe	52.2	6.2	0.1	1.6	0.3	35.9	1.1	0.6	0.0	0.1	0.0	1.5	0.1	0.3	100.0	46.0	1.8	47.8	3,358
Machinga	60.7	3.7	0.2	0.8	0.2	28.9	0.3	0.4	0.0	0.2	0.7	0.7	0.2	2.9	100.0	34.8	4.5	39.3	703
Mangochi	72.4	1.7	0.0	1.0	0.7	20.0	0.6	1.9	0.0	0.0	0.1	0.3	0.3	0.9	100.0	25.9	1.7	27.6	1,640
Mchinji	63.9	3.5	0.0	1.5	0.2	24.3	0.0	2.7	0.0	0.2	0.1	1.6	1.2	0.8	100.0	32.3	3.8	36.1	706
Mulanje	62.2	2.4	0.0	2.6	0.0	30.4	0.3	1.1	0.0	0.1	0.0	0.2	0.0	0.8	100.0	36.9	1.0	37.8	613
Mwanza	48.8	6.7	0.0	4.8	0.1	34.5	0.1	1.4	0.0	0.4	0.4	1.4	1.0	0.3	100.0	48.1	3.1	51.2	297
Mzimba	54.1	7.7	0.0	6.7	0.2	15.7	1.1	5.8	0.2	0.1	0.0	0.5	7.4	0.6	100.0	37.4	8.5	45.9	934
Nkhata Bay	81.4	1.3	0.7	5.8	0.6	8.1	0.3	0.9	0.0	0.2	0.0	0.5	0.2	0.0	100.0	17.9	0.7	18.6	235
Nkhotakota	72.5	6.1	0.0	2.5	0.0	16.6	0.3	0.8	0.0	0.0	0.0	0.2	0.2	1.0	100.0	26.2	1.4	27.5	334
Nsanje	62.0	1.3	0.2	2.1	0.0	32.3	0.3	1.0	0.0	0.0	0.0	0.0	0.0	0.8	100.0	37.2	0.8	38.0	314
Ntcheu	60.7	8.3	0.1	1.6	0.4	27.1	0.6	0.2	0.0	0.0	0.1	0.0	0.0	1.0	100.0	38.3	1.1	39.3	623
Ntchisi	50.3	7.3	0.1	2.2	0.6	35.7	0.5	0.8	0.0	0.0	0.0	1.5	0.0	0.9	100.0	47.3	2.4	49.7	244
Phalombe	65.7	0.5	0.0	2.3	0.2	29.1	0.3	0.5	0.0	0.0	0.0	0.0	0.0	1.3	100.0	32.9	1.3	34.3	365
Rumphi	51.3	8.3	0.0	4.1	0.0	16.4	0.7	8.7	0.0	0.0	0.3	0.7	7.9	1.6	100.0	38.2	10.6	48.7	244
Salima	64.8	5.4	0.0	0.5	0.3	24.8	0.4	0.6	0.0	0.0	2.2	0.1	0.2	0.8	100.0	31.9	3.3	35.2	724
Thyolo	60.4	0.3	0.2	1.4	0.4	34.3	0.4	2.0	0.0	0.0	0.1	0.0	0.0	0.4	100.0	39.1	0.5	39.6	829
Zomba	53.9	1.6	0.0	2.2	0.0	38.2	0.6	1.2	0.0	0.0	0.0	0.2	0.0	2.2	100.0	43.7	2.3	46.1	731

or higher education (36 percent) use injectables than those with primary education (29 percent) or those with no education (26 percent).

There is a positive correlation between the use of contraception and the number of living children. The use of contraception rises with the increasing number of children. Table 9.1b shows that only 3 percent of women with no children use any contraceptive method compared to 48 percent of women with 3 children. Moreover, only 2 percent of women with no children use injections as compared to 38 percent with 3 children. Overall, women with no children are more likely (97 percent) not to use contraceptives compared to those with more than 3 children (52 percent).

Table 9.1b

Use of Contraception – Women

Percentage of women aged 15–49 years married or in union who are using (or whose partner is using) a contraceptive method, Malawi, 2006

Background characteristic	Percent of women (currently married or in union) who are using:														Total	Any modern method	Any traditional method	Any method	Number of women currently married or in union
	Not using any method	Female sterilisation	Male sterilisation	Pill	IUD	Injections	Implants	Condom	Female condom	Diaphragm/foam/jelly	LAM	Periodic abstinence	Withdrawal	Other					
Age																			
15–19	76.0	0.0	0.0	1.4	0.3	17.6	0.2	3.1	0.0	0.0	0.2	0.1	0.6	0.4	100.0	22.7	1.4	24.0	1,708
20–24	57.9	0.1	0.0	2.7	0.1	34.1	0.5	2.2	0.0	0.0	0.3	0.6	0.9	0.7	100.0	39.7	2.5	42.1	5,163
25–29	54.0	1.2	0.1	2.7	0.3	36.9	1.0	1.3	0.0	0.1	0.2	0.7	0.8	0.7	100.0	43.6	2.4	46.0	4,295
30–34	56.0	4.0	0.0	2.8	0.5	31.1	1.3	1.2	0.0	0.1	0.3	0.9	1.0	0.8	100.0	41.0	3.0	44.0	3,076
35–39	57.7	9.6	0.0	2.6	0.6	25.0	0.4	0.8	0.0	0.1	0.3	0.9	1.2	0.6	100.0	39.2	3.0	42.3	2,120
40–44	58.6	18.7	0.1	1.1	0.1	17.0	0.4	0.3	0.0	0.0	0.1	10.2	0.7	1.6	100.0	37.7	3.6	41.4	1,537
45–49	68.5	15.5	0.0	1.0	0.2	11.2	0.5	0.1	0.0	0.0	0.1	0.6	0.4	1.7	100.0	28.6	2.9	31.5	1,105
Number of living children																			
0	96.8	0.0	0.0	0.3	0.0	1.9	0.1	0.6	0.0	0.0	0.0	0.1	0.1	0.0	100.0	3.0	0.2	3.2	1,491
1	64.8	0.3	0.0	2.0	0.2	27.5	0.3	2.9	0.0	0.0	0.2	0.6	0.6	0.4	100.0	33.3	1.9	35.2	3,798
2	53.7	1.2	0.0	3.1	0.2	36.2	1.2	1.8	0.0	0.1	0.3	0.6	0.8	0.7	100.0	43.9	2.4	46.3	3,852
3	51.7	2.5	0.0	2.8	0.2	38.0	0.9	1.1	0.0	0.0	0.2	0.8	1.1	0.7	100.0	45.5	2.9	48.3	3,236
4+	53.8	10.5	0.1	2.4	0.5	27.4	0.7	0.9	0.0	0.1	0.3	0.9	1.1	1.3	100.0	42.6	3.6	46.2	6,628
Woman's education																			
None	63.5	5.2	0.1	1.3	0.2	25.9	0.3	0.7	0.0	0.0	0.4	0.8	0.4	1.1	100.0	33.7	2.8	36.5	4,450
Primary	59.2	4.3	0.0	2.3	0.3	29.0	0.6	1.6	0.0	0.0	0.2	0.7	1.0	0.8	100.0	38.2	2.7	40.8	12,273
Secondary +	48.9	3.1	0.1	5.1	0.5	35.6	2.0	2.7	0.0	0.3	0.2	0.8	0.7	0.2	100.0	49.2	1.9	51.1	2,218
Other	60.7	15.6	0.0	2.4	0.0	18.8	0.0	0.0	0.0	0.0	0.5	0.0	0.0	1.9	100.0	36.8	2.5	39.3	64
Wealth index quintile																			
Lowest	62.0	4.7	0.0	1.6	0.2	26.1	0.4	1.3	0.0	0.0	0.3	0.8	1.5	1.0	100.0	34.4	3.6	38.0	3,722
Second	59.9	3.7	0.0	1.7	0.3	29.0	0.6	1.8	0.0	0.0	0.3	0.8	0.8	1.0	100.0	37.1	2.9	40.1	3,654
Middle	59.3	3.8	0.0	1.8	0.3	30.0	0.7	1.2	0.0	0.0	0.2	0.8	0.9	1.1	100.0	37.8	3.0	40.7	3,996
Fourth	59.8	4.5	0.2	2.4	0.1	28.8	0.4	1.7	0.0	0.0	0.2	0.5	0.6	0.7	100.0	38.2	2.0	40.2	3,693
Highest	54.2	5.4	0.0	4.2	0.4	31.0	1.4	1.5	0.0	0.2	0.2	0.8	0.4	0.2	100.0	44.2	1.6	45.8	3,939

Figure 9.1

Percentage of women aged 15-49 currently married or in union by contraceptive method used, Malawi, 2006

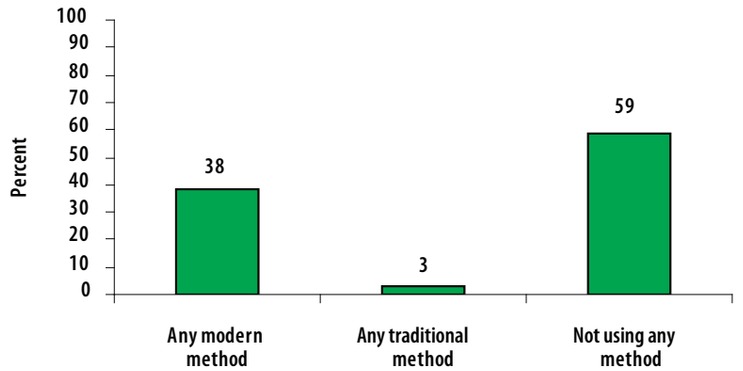
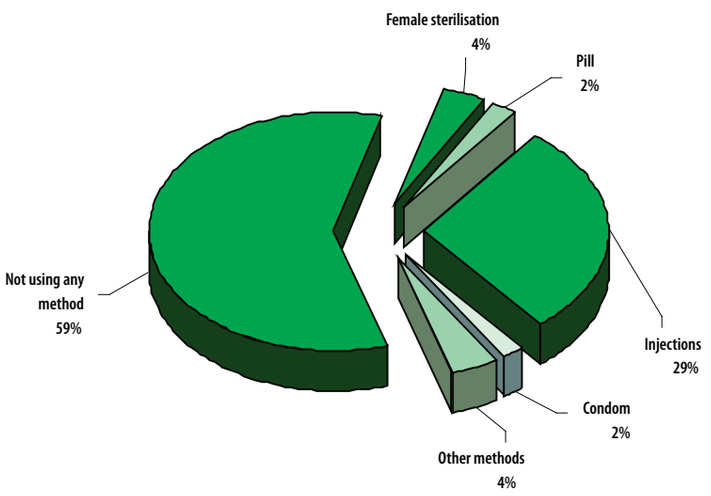


Figure 9.2

Percentage of women aged 15-49 currently married or in union by type of contraceptive method used, Malawi, 2006



In MICS 2006, male respondents were asked about current and past use of contraception. Tables 9.2a and 9.2b show that 55 percent of men currently married or in union report current use of any type of contraception. This is 14 percent higher than their female counterparts. Use of modern contraception was reported by 49 percent of men, which is also 11 percent higher than their female counterparts. Overall, based on MICS 2006, men are more likely to report the use of contraceptives than women. The majority of men reported use of injections (32 percent) and condoms (8 percent). Male sterilisation, IUD, the diaphragm and LAM are the least reported modern contraceptive methods used.

Table 9.2a

Use of Contraception – Men

Percentage of men aged 15–49 years married or in union who are using (or whose partner is using) a contraceptive method, Malawi, 2006

Background characteristic	Percent of men (currently married or in union) who are using:													Total	Any modern method	Any traditional method	Any method	Number of men currently married or in union
	Not using any method	Female sterilisation	Male sterilisation	Pill	IUD	Injections	Implants	Condom	Diaphragm/foam/jelly	LAM	Periodic abstinence	Withdrawal	Other					
Malawi																		
Total	45.1	3.0	0.1	3.6	0.3	32.4	0.7	8.4	0.0	0.2	3.8	1.2	1.1	100.0	48.6	6.3	54.9	4,896
Urban	46.8	2.6	0.0	6.4	0.2	33.8	1.7	4.1	0.1	0.1	2.8	1.0	0.5	100.0	48.9	4.4	53.2	856
Rural	44.8	3.1	0.2	3.1	0.3	32.1	0.5	9.3	0.0	0.2	4.0	1.2	1.2	100.0	48.5	6.7	55.2	4,040
Region																		
Northern	46.5	1.3	0.0	4.3	0.4	13.8	1.8	21.4	0.0	0.1	3.5	6.3	0.7	100.0	43.0	10.5	53.5	542
Central	42.5	4.1	0.2	2.9	0.3	37.9	0.7	6.6	0.0	0.0	3.6	0.5	0.8	100.0	52.6	4.9	57.5	2,340
Southern	47.9	2.3	0.1	4.4	0.2	31.0	0.4	7.0	0.1	0.3	4.2	0.7	1.5	100.0	45.4	6.7	52.1	2,015
District																		
Balaka	62.8	2.1	0.0	2.4	0.0	28.3	0.0	2.3	0.0	0.8	0.9	0.0	0.5	100.0	35.0	2.2	37.2	99
Blantyre	51.6	2.1	0.0	3.1	0.0	36.7	0.7	1.1	0.3	0.0	3.2	0.5	0.7	100.0	44.1	4.3	48.4	361
Chikwawa	41.7	5.5	0.0	8.3	0.4	29.8	0.0	6.6	0.0	0.0	5.3	1.6	0.8	100.0	50.6	7.7	58.3	189
Chiradzulu	23.5	0.6	0.0	5.8	0.0	43.4	2.8	11.7	0.0	5.6	0.0	6.6	0.0	100.0	64.3	12.2	76.5	69
Chitipa	18.5	1.3	0.0	8.8	0.0	17.8	3.7	38.6	0.0	0.0	4.7	6.6	0.0	100.0	70.2	11.3	81.5	64
Dedza	38.3	3.1	0.0	2.9	0.8	52.1	1.1	1.1	0.0	0.0	0.3	0.3	0.0	100.0	61.0	0.7	61.7	271
Dowa	65.0	1.7	0.9	2.3	0.0	14.0	0.4	14.9	0.0	0.0	0.0	0.9	0.0	100.0	34.1	0.9	35.0	225
Karonga	52.4	0.8	0.0	2.9	0.4	16.1	3.7	20.4	0.0	0.2	0.8	1.2	1.1	100.0	44.2	3.4	47.6	107
Kasungu	38.3	4.7	0.0	5.1	0.0	32.0	0.4	12.3	0.0	0.0	3.2	2.3	1.8	100.0	54.4	7.3	61.7	229
Lilongwe	37.8	5.5	0.0	2.3	0.5	45.4	0.7	3.5	0.0	0.0	4.1	0.0	0.3	100.0	57.8	4.4	62.2	953
Machinga	35.3	2.9	0.7	4.3	0.0	39.6	0.0	13.4	0.0	1.1	0.8	0.0	1.8	100.0	60.9	3.7	64.7	171
Mangochi	45.9	0.0	0.0	4.0	0.7	20.7	0.0	13.5	0.0	0.0	13.7	0.0	1.5	100.0	38.8	15.3	54.1	346
Mchinji	26.9	3.5	1.2	4.2	0.0	42.2	0.8	8.1	0.0	0.0	10.0	0.6	2.3	100.0	60.1	12.9	73.1	207
Mulanje	49.8	3.0	0.0	4.2	0.0	35.3	0.5	6.8	0.0	0.0	0.4	0.0	0.0	100.0	49.8	0.4	50.2	168
Mwanza	49.2	6.0	0.0	3.2	0.0	30.3	0.0	5.8	0.4	0.4	4.8	0.0	0.0	100.0	45.6	5.3	50.8	70
Mzimba	50.3	1.7	0.0	5.0	0.5	15.9	1.3	15.1	0.0	0.0	0.6	9.5	0.0	100.0	39.6	10.2	49.7	248
Nkhata Bay	31.5	1.0	0.0	0.4	0.0	0.5	0.0	39.0	0.0	0.0	19.9	3.5	4.3	100.0	40.8	27.6	68.5	63
Nkhotakota	55.0	2.9	0.4	6.5	0.0	20.1	0.6	6.8	0.0	0.0	3.3	1.3	3.1	100.0	37.4	7.7	45.0	83
Nsanje	58.9	2.1	0.0	5.9	1.7	17.6	0.8	6.3	0.0	0.0	0.0	0.0	6.8	100.0	34.4	6.8	41.1	68
Ntcheu	61.7	2.3	0.0	0.8	0.5	19.6	0.0	8.3	0.0	0.4	5.4	0.0	1.0	100.0	31.5	6.8	38.3	129
Ntchisi	46.6	1.6	0.4	3.2	0.0	36.3	1.5	5.8	0.5	0.0	1.6	0.6	2.0	100.0	49.3	4.1	53.4	67
Phalombe	48.5	0.0	0.0	6.1	0.0	31.5	0.0	7.1	0.0	0.0	4.6	0.0	2.2	100.0	44.7	6.8	51.5	94
Rumphi	65.1	0.8	0.0	3.3	0.7	10.6	0.4	12.6	0.3	0.3	1.5	4.2	0.2	100.0	28.7	6.2	34.9	61
Salima	48.0	4.1	0.1	1.8	0.0	31.0	0.6	10.2	0.0	0.0	3.0	0.0	1.3	100.0	47.7	4.3	52.0	175
Thyolo	48.2	2.1	0.0	3.4	0.0	31.9	0.5	7.5	0.0	0.0	2.2	2.1	1.9	100.0	45.5	6.3	51.8	191
Zomba	56.1	3.3	0.0	4.4	0.0	29.2	0.8	2.2	0.0	0.0	0.0	0.0	4.0	100.0	39.9	4.0	43.9	188

Table 9.2b

Use of contraception – Men

Percentage of men aged 15–49 years married or in union who are using (or whose partner is using) a contraceptive method, Malawi, 2006

Background characteristic	Percent of men (currently married or in union) who are using:													Total	Any modern method	Any traditional method	Any method	Number of men currently married or in union
	Not using any method	Female sterilisation	Male sterilisation	Pill	IUD	Injections	Implants	Condom	Diaphragm/foam/jelly	LAM	Periodic abstinence	Withdrawal	Other					
Age																		
15–19	74.3	0.0	0.0	0.0	0.0	1.9	0.0	20.5	0.0	0.0	1.9	1.5	0.0	100.0	22.4	3.3	25.7	33
20–24	58.1	0.0	0.3	2.9	0.0	22.9	0.2	11.6	0.0	0.1	2.8	0.9	0.3	100.0	37.9	4.1	41.9	727
25–29	41.2	0.0	0.0	3.5	0.3	40.3	0.7	9.2	0.0	0.3	2.7	0.9	1.0	100.0	54.0	4.8	58.8	1,186
30–34	37.6	0.8	0.3	3.7	0.7	42.0	0.9	7.8	0.1	0.1	3.2	1.9	0.9	100.0	56.4	6.1	62.4	1,035
35–39	44.0	3.3	0.1	4.4	0.3	30.0	1.4	8.4	0.0	0.1	6.1	1.2	0.8	100.0	47.9	8.2	56.0	774
40–44	44.8	8.2	0.1	4.3	0.0	27.9	0.3	6.3	0.1	0.1	5.4	0.5	2.0	100.0	47.1	8.1	55.2	642
45–49	51.6	12.5	0.2	3.3	0.2	18.7	0.5	4.9	0.0	0.3	3.7	1.8	2.4	100.0	40.2	8.2	48.4	498
Man's education																		
None	46.8	4.5	0.1	3.0	0.4	32.1	0.3	6.8	0.0	0.0	4.3	0.6	1.1	100.0	47.1	6.1	53.2	575
Primary	46.7	3.2	0.2	2.8	0.2	31.8	0.4	8.2	0.0	0.1	4.0	1.3	1.2	100.0	46.7	6.6	53.3	3,174
Secondary +	40.2	2.0	0.1	6.3	0.4	34.3	1.6	9.8	0.1	0.3	2.9	1.3	0.7	100.0	54.6	5.2	59.8	1,141
Other	15.1	0.0	0.0	17.5	0.0	19.7	0.0	0.0	0.0	0.0	19.4	0.0	28.4	100.0	37.1	47.7	84.9	7
Wealth index quintile																		
Lowest	44.3	1.5	0.0	1.9	0.0	33.0	0.2	10.6	0.0	0.0	5.1	2.3	1.0	100.0	47.3	8.5	55.7	902
Second	43.7	2.0	0.2	4.4	0.5	30.8	0.5	9.9	0.0	0.1	4.8	1.2	1.8	100.0	48.4	7.9	56.3	912
Middle	43.9	4.2	0.2	3.7	0.0	35.1	0.5	7.5	0.0	0.2	3.0	0.6	1.4	100.0	51.1	5.1	56.1	1,045
Fourth	47.9	3.1	0.2	3.4	0.3	32.4	0.3	8.4	0.0	0.3	2.3	0.7	0.6	100.0	48.2	3.9	52.1	997
Highest	45.9	4.0	0.1	4.8	0.6	30.5	1.9	6.0	0.1	0.1	4.1	1.2	0.9	100.0	47.8	6.3	54.1	1,040

9.2 ANTENATAL CARE

The antenatal period presents important opportunities for reaching pregnant women with a number of interventions that may be vital to both their health and well being and that of their infants. Better understanding of foetal growth and development and its relationship to a mother's health has resulted in increased attention to the potential of antenatal care as an intervention to improve both maternal and newborn health. For example, if the antenatal period is used to inform women and families about certain danger signs and risks associated with labour and delivery, it may provide the route for ensuring that pregnant women do, in practice, deliver with the assistance of a skilled health care provider. Perhaps more importantly, women can be encouraged to make arrangements for transport to the nearest clinic providing obstetric care should an emergency arise during delivery.

The antenatal period also provides an opportunity to give information on birth spacing, which is recognized as an important factor in improving infant survival. Tetanus immunisation during pregnancy can be life saving for both mother and infant. The prevention and treatment of malaria among pregnant women, management of anaemia during pregnancy and treatment of sexually transmitted illnesses (STIs), all significantly improve both foetal outcomes and maternal health. Adverse outcomes such as low birth weight can be reduced through a combination of interventions to improve women's nutritional status and to prevent infections, such as malaria and STIs, during pregnancy. More recently, the potential of the antenatal period as an entry point for HIV prevention and care, in particular for the prevention of HIV transmission from mother to child, has led to renewed interest in access to and use of antenatal services (please refer to tables 12.13a and 12.13b in chapter 12 on women who receive HIV testing and counselling during antenatal care).

WHO recommends a minimum of four antenatal visits based on a review of the effectiveness of different models of antenatal care. WHO guidelines are specific on the content of antenatal care visits, which should include:

- Blood pressure measurement
- Urine testing for bacteruria and proteinuria
- Blood testing to detect syphilis and severe anaemia
- Weight/height measurement (optional)

Table 9.3a shows the type of personnel providing antenatal care to women aged 15–49 years who gave birth in the two years preceding the survey. Approximately 92 percent of women interviewed reported attendance by a skilled attendant during antenatal care. This represents an extremely high coverage and an opportunity for quality care during pregnancy. Yet the maternal mortality ratio remains very high at about 807 per 100,000 live births (see chapter 13), which indicates that the quality of antenatal care and resulting actions must be low indeed. Results also indicate that only 7 percent of antenatal care providers are doctors while the majority of women receive care from nurses and midwives. Interestingly, care received from a doctor is 2 percent higher amongst rural pregnant women (8 percent) compared to their urban counterparts (6 percent). The highest number of women attended by a skilled attendant during an antenatal visit is reported in the Southern Region, 94 percent. This compares to 82 percent of women within the same category in the Northern Region. Antenatal care provision by skilled attendants is 6 percent points more

Table 9.3a

Antenatal care provider

Percent distribution of women aged 15–49 who gave birth in the two years preceding the survey by type of personnel providing antenatal care, Malawi, 2006

Background characteristic	Person providing antenatal care							Total	Antenatal care by any skilled personnel	Number of women who gave birth in the preceding two years
	Doctor/ Clinical Officer	Nurse/ Midwife	Tradi-tional birth attendant	Comm-unity health worker	Relative/ Friend	Other/ Missing	No antenatal care received			
Malawi										
Total	7.4	84.5	2.4	1.6	0.3	1.0	2.8	100.0	91.9	10,552
Urban	5.8	91.5	0.3	0.4	0.1	0.5	1.6	100.0	97.2	1,507
Rural	7.6	83.4	2.8	1.8	0.3	1.1	3.0	100.0	91.0	9,045
Region										
Northern	9.0	73.4	1.8	7.1	1.7	1.0	6.0	100.0	82.4	1,035
Central	7.7	84.5	2.9	1.2	0.0	1.2	2.5	100.0	92.2	4,959
Southern	6.6	87.1	2.0	0.8	0.2	0.8	2.3	100.0	93.7	4,557
District										
Balaka	4.5	86.5	6.1	0.8	0.0	1.1	1.1	100.0	90.9	231
Blantyre	14.5	80.9	1.4	0.0	0.0	0.3	2.9	100.0	95.4	656
Chikwawa	3.2	89.6	2.6	1.8	0.0	0.6	2.1	100.0	92.9	391
Chiradzulu	10.8	86.1	0.6	0.0	0.0	0.2	2.3	100.0	96.9	196
Chitipa	2.0	77.0	3.3	8.8	0.2	0.2	8.4	100.0	79.0	139
Dedza	18.7	61.3	6.8	4.6	0.0	2.9	5.7	100.0	80.0	675
Dowa	12.6	77.2	3.0	1.0	0.0	1.3	4.8	100.0	89.9	427
Karonga	17.0	48.5	4.4	0.0	8.4	1.0	20.8	100.0	65.5	202
Kasungu	1.1	92.9	1.6	1.0	0.0	0.5	2.9	100.0	94.0	456
Lilongwe	3.1	92.9	1.5	0.2	0.0	0.9	1.4	100.0	95.9	1,907
Machinga	3.3	91.9	1.1	0.9	0.9	0.2	1.8	100.0	95.1	386
Mangochi	6.0	88.7	1.6	0.5	0.0	1.8	1.5	100.0	94.6	988
Mchinji	7.5	89.1	1.1	0.2	0.0	0.6	1.5	100.0	96.6	379
Mulanje	2.2	90.2	3.9	0.0	0.8	0.8	2.1	100.0	92.4	271
Mwanza	2.3	94.1	0.0	0.1	0.0	1.5	1.9	100.0	96.5	180
Mzimba	11.0	84.6	1.1	0.7	0.0	1.3	1.4	100.0	95.6	452
Nkhata Bay	3.5	93.2	0.3	0.9	0.2	1.4	0.5	100.0	96.7	118
Nkhotakota	13.4	72.2	13.3	0.0	0.0	0.5	0.6	100.0	85.6	200
Nsanje	4.2	89.4	0.0	1.4	0.0	1.0	4.0	100.0	93.6	191
Ntcheu	0.5	91.3	2.4	3.1	0.0	1.0	1.7	100.0	91.8	360
Ntchisi	9.1	83.8	2.2	0.7	0.0	2.2	2.0	100.0	92.9	139
Phalombe	10.3	78.4	4.1	3.3	0.2	0.2	3.5	100.0	88.7	226
Rumphi	1.4	94.8	0.2	2.3	0.0	0.2	1.2	100.0	96.2	123
Salima	16.4	78.0	1.9	0.5	0.0	1.2	1.9	100.0	94.4	417
Thyolo	1.3	87.7	2.3	2.0	0.2	1.2	5.4	100.0	89.0	458
Zomba	11.2	84.9	1.8	0.6	1.0	0.0	0.3	100.0	96.2	384

in urban areas than in rural areas. In terms of districts, the highest level of antenatal care is reported in Chiradzulu district (97 percent) while the lowest level is in Karonga district (66 percent). Not much variation can be observed between care received by educated and rich women compared to those who are illiterate and poor.

Tables 9.4a and 9.4b show the distribution of pregnant women who experienced a live birth in the two years preceding the survey, by various components of antenatal care received. About 85 percent of women who gave birth in the two years preceding the survey report that they received at least one tetanus toxoid injection during pregnancy. Women in the Northern Region (82 percent) are less likely to receive tetanus toxoid injections than women in the other regions. Women in urban areas, those with secondary or higher education and women in the highest wealth index quintile are more likely to receive tetanus toxoid injections than other women. The percentages of women who receive at least one tetanus toxoid injection vary by district. Women in Lilongwe, Mulanje, and Ntchisi districts are more likely to receive at least one tetanus

Table 9.3b

Antenatal care provider

Percent distribution of women aged 15–49 who gave birth in the two years preceding the survey by type of personnel providing antenatal care, Malawi, 2006

Background characteristic	Person providing antenatal care							Total	Antenatal care by any skilled personnel	Number of women who gave birth in the preceding two years
	Doctor/ Clinical Officer	Nurse/ Midwife	Tradi-tional birth attendant	Comm-unity health worker	Relative/ Friend	Other/ Missing	No ante-natal care received			
Age										
15–19	8.3	83.4	1.8	1.6	0.3	1.4	3.2	100.0	91.7	1,158
20–24	7.0	85.6	2.5	1.8	0.2	0.6	2.2	100.0	92.7	3,599
25–29	7.4	85.3	1.9	1.4	0.2	1.1	2.7	100.0	92.7	2,670
30–34	7.2	84.1	2.8	1.5	0.7	0.9	2.9	100.0	91.2	1,621
35–39	7.5	82.9	3.4	1.4	0.1	1.0	3.7	100.0	90.4	970
40–44	8.1	80.2	2.2	2.0	0.0	3.9	3.7	100.0	88.2	384
45–49	7.4	79.5	5.3	2.7	0.0	0.8	4.4	100.0	86.9	150
Woman's education										
None	7.3	82.5	3.3	1.3	0.3	1.4	3.9	100.0	89.8	2,407
Primary	7.4	84.6	2.5	1.7	0.2	1.0	2.5	100.0	92.0	6,912
Secondary +	7.4	88.3	0.3	1.5	0.4	0.4	1.7	100.0	95.7	1,213
Other	0.0	80.1	0.0	11.4	0.0	0.0	8.4	100.0	80.1	20
Wealth index quintile										
Lowest	7.4	82.4	3.2	2.1	0.2	1.2	3.5	100.0	89.8	2,442
Second	7.1	82.1	4.0	2.3	0.2	1.3	2.9	100.0	89.2	2,225
Middle	7.7	86.0	1.7	1.6	0.3	0.4	2.4	100.0	93.7	2,164
Fourth	7.8	84.6	1.8	1.5	0.2	1.4	2.7	100.0	92.4	1,899
Highest	6.7	88.5	0.9	0.4	0.5	0.7	2.2	100.0	95.3	1,822

toxoid injection (91 percent or higher) while women in Karonga are least likely to receive at least one tetanus toxoid injection (68 percent).

The table also provides the proportion of women who received ferrous sulphate tablets during the antenatal period in order to reduce prevalence of anaemia during pregnancy. About 81 percent of women who had a live birth in the past two years in Malawi received ferrous sulphate during the antenatal period. The highest distribution of ferrous sulphate is in the Northern Region at 82 percent compared to Central and Southern Regions at 80 percent. Urban-rural variations and those with different levels of education show that these factors have some effect on women receiving iron tablets.

Antenatal care services aim to provide quality care to pregnant women to ensure that women and their babies survive pregnancy and childbirth. Pregnant women receive a range of services at an antenatal clinic, including Information, Education and Communication (IEC), a physical examination, laboratory tests and weight measurement. The MICS 2006 results show that pregnant women are more likely to be weighed and have their blood pressure measured at the antenatal clinic than to have blood and urine samples taken. On average, out of all women aged 15–49 who gave birth in two years preceding the survey, 97 percent attended antenatal care one or more times during pregnancy, 93 percent had their weight measured, 75 percent had their blood pressure measured, 37 percent had blood samples taken and only 16 percent gave urine samples (Figure 9.3). Educated women and those belonging to urban areas and wealthy families had higher proportions of blood and urine testing compared to their counterparts.

Figure 9.3
Antenatal care content, Malawi, 2006

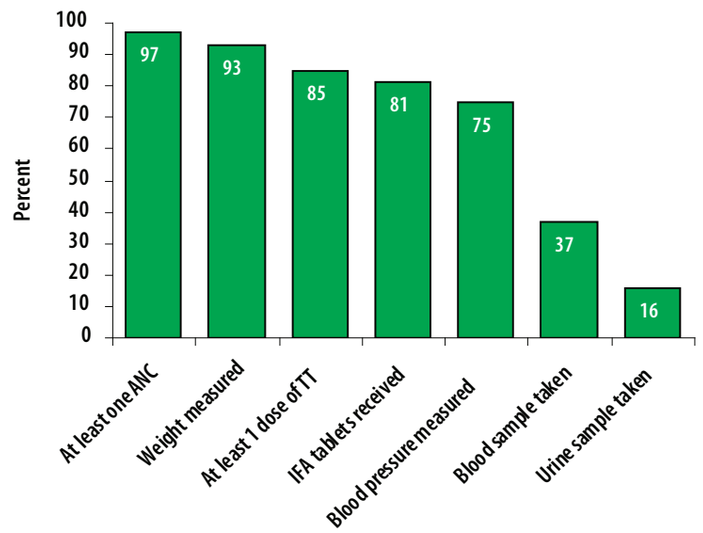


Table 9.4a

Antenatal care content

Percentage of pregnant women receiving antenatal care among women aged 15–49 years who gave birth in the two years preceding the survey and percentage of pregnant women receiving specific care as part of the antenatal care received, Malawi, 2006

Background characteristic	Percent of pregnant women receiving ANC one or more times during pregnancy	Percentage given at least one tetanus toxoid injection	Percentage given iron tablets	Percent of pregnant women who had:				Number of women who gave birth in the preceding two years
				Blood sample taken	Blood pressure measured	Urine specimen taken	Weight measured	
Malawi								
Total	97.2	85.4	80.5	37.4	75.4	16.1	92.6	10,552
Urban	98.4	90.0	87.1	64.6	88.2	37.6	96.0	1,507
Rural	97.0	84.7	79.5	32.9	73.3	12.5	92.0	9,045
Region								
Northern	94.0	81.7	82.3	43.8	81.5	12.2	88.9	1,035
Central	97.5	86.9	80.4	33.1	73.6	19.0	92.3	4,959
Southern	97.7	84.7	80.3	40.6	76.0	13.8	93.6	4,557
District								
Balaka	98.9	78.6	82.5	25.9	82.6	13.4	93.4	231
Blantyre	97.1	86.2	82.2	49.3	75.3	9.8	91.0	656
Chikwawa	97.9	86.0	73.0	42.4	78.4	24.9	94.6	391
Chiradzulu	97.7	82.5	80.1	63.2	70.3	11.9	96.9	196
Chitipa	91.6	75.6	82.4	53.8	74.6	4.8	88.8	139
Dedza	94.3	80.1	75.9	24.3	55.4	9.8	84.0	675
Dowa	95.2	80.6	71.0	51.1	73.3	27.3	87.4	427
Karonga	79.2	68.4	68.5	27.5	67.9	6.5	71.7	202
Kasungu	97.1	84.7	85.8	12.0	81.5	11.3	95.6	456
Lilongwe	98.6	91.3	82.8	38.4	79.2	26.1	95.2	1,907
Machinga	98.2	87.7	82.1	28.8	76.3	23.2	96.6	386
Mangochi	98.5	88.1	72.7	40.8	75.2	12.2	93.9	988
Mchinji	98.5	88.8	93.3	20.8	60.3	6.0	96.3	379
Mulanje	97.9	92.1	91.7	19.9	80.4	3.6	96.4	271
Mwanza	98.1	76.0	91.8	47.9	87.4	7.2	96.0	180
Mzimba	98.6	88.9	86.0	47.9	86.3	19.4	94.3	452
Nkhata Bay	99.5	84.5	87.6	53.5	82.2	9.9	90.6	118
Nkhotakota	99.4	82.9	62.9	39.8	65.6	31.9	82.5	200
Nsanje	96.0	89.4	90.0	60.2	80.0	12.9	93.9	191
Ntcheu	98.3	82.5	79.2	21.7	80.5	15.0	95.3	360
Ntchisi	98.0	91.1	77.2	40.9	63.2	9.6	92.2	139
Phalombe	96.5	77.8	77.7	15.9	51.2	8.9	87.7	226
Rumphi	98.8	81.5	85.9	34.7	93.0	6.0	96.3	123
Salima	98.1	89.5	79.1	43.0	82.5	14.2	92.9	417
Thyolo	94.6	78.4	79.3	24.0	68.6	14.4	89.8	458
Zomba	99.7	81.4	86.0	68.7	88.6	17.6	96.7	384

Table 9.4b

Antenatal care content

Percentage of pregnant women receiving antenatal care among women aged 15–49 years who gave birth in the two years preceding the survey and percentage of pregnant women receiving specific care as part of the antenatal care received, Malawi, 2006

Background characteristic	Percent of pregnant women receiving ANC one or more times during pregnancy	Percentage given at least one tetanus toxoid injection	Percentage given iron tablets	Percent of pregnant women who had:				Number of women who gave birth in the preceding two years
				Blood sample taken	Blood pressure measured	Urine specimen taken	Weight measured	
Age								
15–19	96.8	90.0	82.9	37.3	69.5	15.9	92.1	1,158
20–24	97.8	90.1	83.1	39.2	73.9	16.7	93.2	3,599
25–29	97.3	85.2	79.1	39.0	77.8	18.3	92.7	2,670
30–34	97.1	78.6	80.6	36.9	79.9	15.2	93.2	1,621
35–39	96.3	78.3	77.8	29.8	74.8	11.5	90.7	970
40–44	96.3	79.2	70.9	30.3	75.6	11.2	89.9	384
45–49	95.6	79.4	67.9	40.3	69.9	16.5	88.7	150
Woman's education								
None	96.1	84.6	75.7	31.5	72.4	12.8	91.3	2,407
Primary	97.5	85.1	81.0	36.9	74.7	15.4	92.6	6,912
Secondary +	98.3	89.0	87.7	52.2	85.0	26.6	94.8	1,213
Other	91.6	58.6	87.0	43.2	81.3	18.8	91.6	20
Wealth index quintile								
Lowest	96.5	86.3	80.0	30.4	70.8	10.3	91.5	2,442
Second	97.1	84.8	78.8	30.7	74.1	12.5	91.0	2,225
Middle	97.6	85.2	79.5	33.9	73.5	14.6	93.3	2,164
Fourth	97.3	85.4	79.8	39.8	74.8	16.6	92.7	1,899
Highest	97.8	85.4	85.4	56.6	86.1	29.5	94.8	1,822

Evidence shows that pregnant women living in places where malaria is highly prevalent are four times more likely than other adults to contract malaria and twice as likely to die of the disease. Once infected, pregnant women risk anemia, premature delivery and stillbirth. Their babies are likely to be of low birth weight rendering them less likely to survive their first year of life. For this reason, measures are taken to protect pregnant women by distributing insecticide-treated mosquito nets (ITN) and treatment during antenatal check-ups with drugs that prevent malaria infection (Intermittent Preventive Treatment or IPT). In MICS 2006, women were asked about the medicines they had received to prevent malaria during their last pregnancy in the two years preceding the survey. Women are considered to have received IPT if they received at least two doses of Sulfadoxine-Pyrimethamin/Fansidar during pregnancy. The survey questionnaire also included questions on the use of bednets among women 15–49 who gave birth in the two years preceding the survey.

Tables 9.5a and 9.5b present the percentage of women aged 15–49 who slept under a net during the previous night by various background characteristics. The data shows that on the night prior

Table 9.5a

Women sleeping under bednets

Percentage of women aged 15–49 who gave birth in the two years preceding the survey who slept under an insecticide treated net during the previous night, Malawi, 2006

Background characteristic	Slept under a bednet	Slept under an insecticide treated net	Slept under an untreated net	Slept under a net but don't know if treated	Don't know if slept under a net	Did not sleep under a bednet	Number of women
Malawi							
Total	32.2	25.6	6.0	0.7	0.7	67.1	10,552
Urban	55.1	44.5	9.5	1.1	0.2	44.8	1,507
Rural	28.4	22.5	5.4	0.6	0.8	70.8	9,045
Region							
Northern	37.0	24.4	10.4	2.1	0.9	62.1	1,035
Central	31.7	26.2	5.1	0.4	0.7	67.6	4,959
Southern	31.8	25.3	5.9	0.6	0.6	67.6	4,557
District							
Balaka	44.6	33.9	9.4	1.3	1.1	54.4	231
Blantyre	39.1	33.7	4.8	0.6	0.3	60.6	656
Chikwawa	38.0	30.4	6.3	1.2	0.6	61.4	391
Chiradzulu	21.2	18.5	1.9	0.9	0.2	78.6	196
Chitipa	6.4	4.7	.9	0.8	0.0	93.6	139
Dedza	23.0	18.6	4.2	0.2	1.2	75.8	675
Dowa	17.1	14.8	2.0	0.2	0.5	82.4	427
Karonga	77.6	40.0	33.7	3.9	0.6	21.8	202
Kasungu	26.2	20.1	5.5	0.6	0.5	73.3	456
Lilongwe	34.5	29.2	5.1	0.1	0.9	64.6	1,907
Machinga	20.8	13.9	6.3	0.6	0.2	79.0	386
Mangochi	34.8	25.0	9.7	0.0	0.9	64.3	988
Mchinji	39.0	33.8	5.1	0.1	0.6	60.4	379
Mulanje	23.5	22.1	1.4	0.0	0.9	75.6	271
Mwanza	30.8	25.8	3.5	1.5	1.8	67.4	180
Mzimba	32.0	26.9	4.2	1.0	1.3	66.7	452
Nkhata Bay	33.1	16.6	9.5	7.0	1.8	65.1	118
Nkhotakota	58.6	45.2	12.6	0.7	0.2	41.2	200
Nsanje	40.1	31.5	7.5	1.1	0.0	59.9	191
Ntcheu	24.8	21.3	1.9	1.6	0.7	74.5	360
Ntchisi	17.0	13.8	3.2	0.0	0.3	82.7	139
Phalombe	26.7	18.4	6.7	1.6	0.0	73.3	226
Rumphi	26.9	19.8	6.7	0.4	0.2	72.9	123
Salima	44.9	34.8	9.3	0.8	0.1	55.0	417
Thyolo	23.0	19.2	2.7	1.0	1.2	75.8	458
Zomba	29.7	26.3	3.4	0.0	0.0	70.3	384

Table 9.5b

Women sleeping under bednets

Percentage of women aged 15–49 who gave birth in the two years preceding the survey who slept under an insecticide treated net during the previous night, Malawi, 2006

Background characteristic	Slept under a bednet	Slept under an insecticide treated net	Slept under an untreated net	Slept under a net but don't know if treated	Don't know if slept under a net	Did not sleep under a bednet	Number of women
Woman's education							
None	23.7	19.0	4.5	0.2	1.0	75.3	2,407
Primary	31.2	24.2	6.2	0.8	0.7	68.2	6,912
Secondary +	55.3	47.0	7.3	1.0	0.4	44.4	1,213
Other	27.4	19.1	8.3	0.0	0.0	72.6	20
Wealth index quintile							
Lowest	20.8	14.8	5.5	0.5	0.9	78.3	2,442
Second	27.0	21.4	5.2	0.5	0.7	72.3	2,225
Middle	30.7	24.8	5.5	0.4	0.3	69.0	2,164
Fourth	34.5	28.2	5.5	0.8	0.8	64.7	1,899
Highest	53.4	43.5	8.5	1.4	0.7	45.8	1,822

to the survey, 32 percent of women who gave birth in the two years preceding the survey slept under a bed net and 26 percent under an ITN. There is a marked difference in the use of nets between urban and rural areas. The usage of nets in urban areas (55 percent for bed net and 45 percent for ITN) is double that of rural areas. There are significant variations in usage amongst districts, Karonga having the highest coverage for use of bednets (78 percent), while Chitipa has the lowest, only 6 percent. Women with secondary or higher education and those belonging to wealthy households are more likely to sleep under a net than their counterparts.

IPT for malaria in pregnant women who gave birth in the two years preceding the survey is presented in tables 9.6a and 9.6b. The data does not allow assessment of the timing of doses given relative to stage of pregnancy. The data shows that 83 percent of pregnant women in Malawi take an anti-malarial drug for prevention of malaria during pregnancy. Thirty-four percent of women take sulfadoxine-pyrimethamin for malaria prevention only once during pregnancy, while 47 percent take sulfadoxine-pyrimethamin two or more times. The number of women who take anti-malarials for malaria prevention during pregnancy is higher in urban areas (90 percent) than in rural areas (81 percent). Eighty percent of women in the Northern Region take anti-malarials during pregnancy, whereas the Southern Region has 84 percent and the Central Region, 82 percent. The Central Region has the highest percentage of women taking Sulfadoxine-Pyrimethamin two or more times (50 percent), the lowest occurs in the Northern Region with 40 percent. In the Southern Region, 44 percent of women take sulfadoxine-pyrimethamin two or more times. Over 90 percent of women in Mchijnji, Mwanza and Rumphi receive anti-malarial drugs while women in Dowa (71 percent) and Karonga (72 percent) are less likely to receive anti-malarial drugs. A woman's position in the wealth index does not have a considerable effect on receiving 2 doses of sulfadoxine-pyrimethamin/Fansidar, but the higher a woman's level of education, the more likely she is to receive a second dose (Table 9.6b).

Table 9.6a

Intermittent preventive treatment for malaria

Percent distribution of women aged 15–49 years who gave birth in the two years preceding the survey who received intermittent preventive therapy (IPT) for malaria during pregnancy, Malawi, 2006

Background characteristic	Medicine to prevent malaria during pregnancy	SP/ Fansidar only one time	SP/ Fansidar two or more times	SP/ Fansidar but number of times unknown	Chloro-quine	Other medicines	Don't know medicine	Number of women who gave birth in the preceding two years
Malawi								
Total	82.6	34.0	46.7	0.0	0.1	3.5	0.5	10,552
Urban	89.6	33.8	55.1	0.0	0.0	1.4	0.2	1,507
Rural	81.4	34.0	45.3	0.0	0.1	3.8	0.6	9,045
Region								
Northern	79.9	37.9	39.5	0.1	0.3	3.6	1.4	1,035
Central	81.7	29.2	50.4	0.0	0.0	3.7	0.4	4,959
Southern	84.1	38.3	44.3	0.0	0.2	3.2	0.5	4,557
District								
Balaka	87.5	35.7	51.8	0.0	0.0	0.3	0.0	231
Blantyre	88.1	41.9	45.9	0.0	0.0	1.5	0.2	656
Chikwawa	83.8	48.9	30.7	0.0	0.4	7.1	1.7	391
Chiradzulu	81.5	43.9	37.0	0.0	0.0	4.6	0.6	196
Chitipa	75.4	32.6	35.9	0.4	0.0	22.0	3.8	139
Dedza	75.0	30.7	41.3	0.0	0.0	4.7	0.3	675
Dowa	71.3	28.3	38.4	0.0	0.0	4.8	0.3	427
Karonga	71.7	51.9	19.6	0.0	0.0	0.2	0.0	202
Kasungu	83.9	27.5	54.5	0.0	0.0	1.9	0.0	456
Lilongwe	82.3	26.5	54.8	0.0	0.0	0.7	0.7	1,907
Machinga	84.0	47.9	34.7	0.0	0.2	0.8	0.8	386
Mangochi	79.5	26.9	52.0	0.0	0.0	0.5	0.3	988
Mchinji	92.3	39.1	46.3	0.0	0.0	20.2	0.0	379
Mulanje	83.8	40.0	43.4	0.4	0.0	0.0	0.0	271
Mwanza	92.3	45.9	43.8	0.0	0.0	28.6	0.6	180
Mzimba	81.5	33.9	44.8	0.0	0.7	0.5	1.5	452
Nkhata Bay	81.9	26.8	52.9	0.0	0.0	0.6	2.0	118
Nkhotakota	77.6	35.7	41.5	0.0	0.0	13.8	0.0	200
Nsanje	85.2	30.6	49.8	0.3	0.0	5.8	0.9	191
Ntcheu	85.9	34.2	50.9	0.0	0.0	0.6	0.3	360
Ntchisi	76.6	31.4	42.2	0.0	1.7	1.4	0.3	139
Phalombe	79.1	35.1	39.1	0.0	0.5	6.5	1.2	226
Rumphi	90.7	46.2	43.8	0.3	0.2	2.3	0.0	123
Salima	88.6	25.4	63.2	0.0	0.0	0.5	0.0	417
Thyolo	77.2	37.9	37.0	0.0	0.8	2.6	0.4	458
Zomba	95.5	41.3	54.3	0.0	0.0	0.0	0.0	384

Table 9.6b

Intermittent preventive treatment for malaria

Percent distribution of women aged 15–49 years who gave birth in the two years preceding the survey who received intermittent preventive therapy (IPT) for malaria during pregnancy, Malawi, 2006

Background characteristic	Medicine to prevent malaria during pregnancy	SP/ Fansidar only one time	SP/ Fansidar two or more times	SP/ Fansidar but number of times unknown	Chloro-quine	Other medicines	Don't know medicine	Number of women who gave birth in the preceding two years
Woman's education								
None	76.9	35.4	39.4	0.1	0.3	2.6	0.9	2,407
Primary	83.0	34.4	46.7	0.0	0.1	3.9	0.5	6,912
Secondary +	91.2	29.1	61.0	0.0	0.2	2.6	0.1	1,213
Other	89.8	36.4	53.4	0.0	0.0	12.3	0.0	20
Wealth index quintile								
Lowest	77.9	34.2	41.8	0.0	0.1	3.4	0.5	2,442
Second	81.2	34.5	44.2	0.0	0.1	4.1	0.7	2,225
Middle	82.4	33.2	47.0	0.0	0.3	4.1	0.8	2,164
Fourth	84.1	34.3	48.1	0.0	0.1	3.5	0.4	1,899
Highest	89.1	35.7	54.6	0.0	0.1	2.1	0.2	1,822

The findings in this survey do not necessarily provide exhaustive information on IPT of malaria in pregnancy. Data on use of sulfadoxine-pyrimethamin and other anti-malarials in malaria prevention is available only for mothers whose pregnancies in the last two years ended in live births. Data for women whose pregnancies did not end in live births is unavailable, despite the fact that some of these women took sulfadoxine-pyrimethamin or other preventative anti-malarials during pregnancy.

9.3 ASSISTANCE AT DELIVERY

Three-quarters of all maternal deaths occur during delivery and in the immediate post-partum period. The single most critical intervention for safe motherhood is to ensure the presence of a competent health worker with midwifery skills at every birth and that, in case of an emergency, transport is available to a referral facility for obstetric care. A WFFC goal is to ensure that women have ready and affordable access to skilled attendance at delivery. The indicators are the proportion of births delivered by a skilled attendant and the proportion of institutional deliveries. The indicator for a skilled attendant at delivery is also used to track progress toward the MDG target of reducing the maternal mortality ratio by three quarters between 1990 and 2015.

MICS 2006 included a number of questions to assess the proportion of births where a skilled attendant was present. *A skilled attendant* includes a doctor, clinical officer, medical assistant or nurse/midwife. Tables 9.7a and 9.7b indicate that around 54 percent of births occurring in the two years prior to the survey were assisted by skilled attendants. While doctors assisted only 6 percent of deliveries, the majority of births were assisted by a nurse/midwife (47 percent).

Table 9.7a

Assistance during delivery

Percent distribution of women aged 15–49 who gave birth in the two years preceding the survey by type of personnel assisting at delivery, Malawi, 2006

Background characteristic	Person assisting at delivery							Total	Any skilled personnel	Delivered in health facility	Number of women who gave birth in preceding two years
	Medical doctor	Nurse/Midwife	Traditional birth attendant	Community health worker	Relative/friend	Other/ Missing	No attendant				
Malawi											
Total	6.2	47.4	28.8	0.7	13.0	1.5	2.4	100.0	53.6	53.8	10,552
Urban	9.5	68.3	11.8	0.4	7.4	0.6	2.0	100.0	77.8	78.2	1,507
Rural	5.6	43.9	31.7	0.8	14.0	1.6	2.5	100.0	49.5	49.7	9,045
Region											
Northern	6.9	51.2	20.5	3.5	12.7	1.5	3.7	100.0	58.1	60.6	1,035
Central	6.1	44.4	37.7	0.4	8.2	1.2	2.0	100.0	50.5	50.8	4,959
Southern	6.1	49.8	21.1	0.4	18.3	1.8	2.5	100.0	55.8	55.5	4,557
District											
Balaka	2.8	52.6	24.4	0.3	14.9	1.1	4.0	100.0	55.4	55.9	231
Blantyre	15.8	63.2	8.7	0.2	8.3	0.5	3.3	100.0	79.0	76.4	656
Chikwawa	3.9	52.5	17.9	0.5	18.8	1.1	5.2	100.0	56.4	58.1	391
Chiradzulu	3.9	46.1	34.9	0.0	11.3	1.6	2.3	100.0	49.9	49.9	196
Chitipa	0.5	44.5	27.4	1.4	18.2	0.9	7.1	100.0	45.0	47.4	139
Dedza	10.4	35.1	43.1	2.0	7.0	1.7	0.8	100.0	45.5	47.6	675
Dowa	9.5	36.5	36.7	0.3	16.0	0.7	0.3	100.0	46.0	46.4	427
Karonga	15.7	21.8	28.6	13.1	15.1	2.6	3.1	100.0	37.5	49.0	202
Kasungu	1.7	47.6	41.0	0.1	4.4	0.7	4.5	100.0	49.3	47.3	456
Lilongwe	3.7	48.5	37.8	0.2	6.0	1.5	2.3	100.0	52.2	52.6	1,907
Machinga	2.3	49.8	13.4	0.9	28.4	1.4	3.8	100.0	52.1	52.5	386
Mangochi	5.5	41.2	21.7	0.4	28.8	2.1	0.4	100.0	46.7	46.5	988
Mchinji	8.7	50.4	31.4	0.0	8.0	1.0	0.4	100.0	59.2	57.7	379
Mulanje	3.7	45.7	38.4	0.0	9.7	1.2	1.4	100.0	49.4	49.1	271
Mwanza	4.6	55.7	20.2	0.0	15.9	1.5	2.0	100.0	60.4	60.7	180
Mzimba	6.7	56.0	18.8	1.7	11.4	1.3	4.1	100.0	62.7	62.5	452
Nkhata Bay	3.6	66.3	17.5	0.0	9.3	1.4	1.8	100.0	70.0	69.4	118
Nkhotakota	8.3	37.9	44.7	0.3	6.3	0.2	2.3	100.0	46.2	45.8	200
Nsanje	6.8	51.9	10.9	0.8	20.5	5.8	3.3	100.0	58.7	58.7	191
Ntcheu	3.2	59.3	18.9	0.7	12.7	0.7	4.5	100.0	62.5	63.2	360
Ntchisi	3.8	36.8	44.6	0.2	10.8	2.4	1.4	100.0	40.6	42.8	139
Phalombe	6.5	35.7	32.9	1.4	18.3	2.1	3.0	100.0	42.2	42.4	226
Rumphi	3.4	74.8	8.7	0.4	10.4	1.3	1.0	100.0	78.2	78.9	123
Salima	11.6	32.5	42.0	0.0	12.7	0.6	0.7	100.0	44.0	44.2	417
Thyolo	2.9	52.5	26.2	0.6	11.9	4.4	1.5	100.0	55.4	54.0	458
Zomba	5.2	50.5	22.6	0.0	17.8	0.6	3.3	100.0	55.7	56.1	384

Of all the deliveries assisted by unskilled personnel, 29 percent were overseen by traditional birth attendants and 13 percent of deliveries were assisted by relatives or friends. Women in the Northern and Southern Regions are more likely to be assisted during delivery by a nurse/midwife (50 percent) than those in the Central Region (44 percent). More births in urban areas (78 percent) are delivered by health personnel than rural areas (50 percent). The more educated a woman, the more likely she is to have delivered with the assistance of a skilled attendant (77 percent) compared to 42 percent of women with no education. Wealth also plays a major role in the type of assistance a woman has access to during delivery. Women in the highest wealth quintile are almost twice as likely to be assisted by a skilled attendant (77 percent) compared to women in the lowest wealth quintile (43 percent). Table 9.7a and map 9.1 show that there is a variation in the proportion of pregnant women who receive assistance from a skilled attendant at delivery among districts. Pregnant women in Blantyre, Nkhatabay and Rumphi are most likely to deliver their babies with the assistance of a skilled attendant (70 percent or higher) followed by Mwanza, Mzimba and Ntcheu (60 percent or higher). Women in Karonga are the least likely among all the districts in Malawi to deliver with the assistance of a skilled attendant (38 percent). Karonga represents one of two districts with a relatively high percentage of deliveries that are conducted by doctors (16 percent).

Table 9.7b

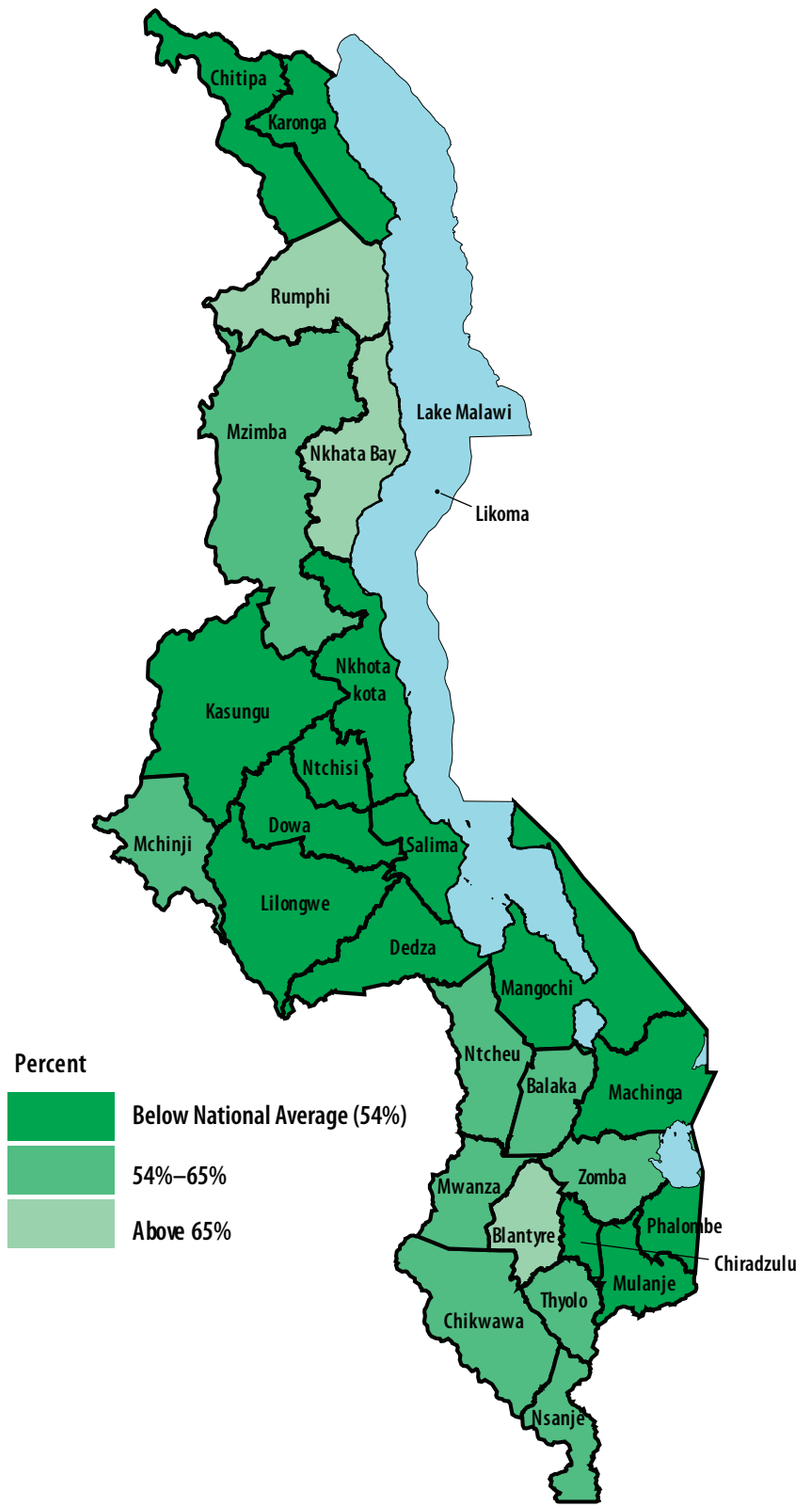
Assistance during delivery

Percent distribution of women aged 15–49 who gave birth in the two years preceding the survey by type of personnel assisting at delivery, Malawi, 2006

Background characteristic	Person assisting at delivery							Total	Any skilled personnel	Delivered in health facility	Number of women who gave birth in preceding two years
	Medical doctor	Nurse/Midwife	Traditional birth attendant	Community health worker	Relative/friend	Other/ Missing	No attendant				
Age											
15–19	9.0	51.3	28.4	0.8	9.0	1.2	0.4	100.0	60.3	60.3	1,158
20–24	6.1	49.9	29.4	0.7	11.8	0.8	1.2	100.0	56.0	56.2	3,599
25–29	6.2	47.4	27.5	0.5	14.1	1.3	2.9	100.0	53.6	53.8	2,670
30–34	5.2	45.2	29.5	0.9	14.1	2.0	3.1	100.0	50.4	50.6	1,621
35–39	5.4	41.0	30.5	0.9	15.3	2.2	4.6	100.0	46.5	47.4	970
40–44	5.1	43.8	23.7	0.7	16.9	4.5	5.3	100.0	49.0	48.8	384
45–49	3.4	30.9	36.7	0.2	17.6	4.6	6.7	100.0	34.3	33.4	150
Woman's education											
None	5.1	36.7	32.9	0.4	19.5	2.3	3.2	100.0	41.7	41.8	2,407
Primary	5.9	47.7	29.5	0.9	12.3	1.4	2.4	100.0	53.6	53.8	6,912
Secondary +	10.1	66.9	16.3	0.7	4.3	0.6	1.0	100.0	77.0	78.0	1,213
Other	1.2	33.3	40.9	0.0	21.8	0.0	2.7	100.0	34.5	34.5	20
Wealth index quintile											
Lowest	4.8	37.8	36.9	0.4	15.2	1.9	3.0	100.0	42.6	43.0	2,442
Second	5.4	42.1	33.1	0.8	14.9	1.5	2.1	100.0	47.5	47.6	2,225
Middle	5.2	47.0	28.9	0.9	14.3	1.0	2.7	100.0	52.2	52.4	2,164
Fourth	6.4	47.4	27.8	1.2	14.1	1.8	1.3	100.0	53.8	54.2	1,899
Highest	9.8	67.2	13.7	0.4	5.1	1.2	2.6	100.0	77.0	77.1	1,822

Map 9.1

Proportion of births attended by skilled health personnel, Malawi, 2006



Young primiparas are slightly more likely to have been delivered by skilled personnel, as should be the case, given their higher risk. These numbers are however, lower than expected.

In Malawi, 54 percent of pregnant women are delivering their babies in a health facility (Table 9.7a). The data for urban women show that they have a 28 percent higher chance of delivering in a health facility than their rural counterparts. Women in the Northern Region compare favourably in their access to health facilities during delivery than those in the Central and Southern Regions (61 percent, 51 percent and 56 percent respectively). No significant variation is observed between districts, but educated and wealthy women are more likely to deliver in a health facility.

9.4 POSTNATAL CARE

Three-quarters of all maternal deaths occur during delivery and in the immediate post-partum period. The single most critical intervention for safe motherhood is to ensure a competent health worker with midwifery skills is present at every birth and that immediate referral to a capable emergency obstetric unit is possible. Follow-up of the newborn and mother within the first week of life is a very useful adjunct to these interventions as a small number of maternal deaths can be prevented by detecting post-partum infection and most problems for the neonate occur then. The postnatal period presents important opportunities for reaching women and neonates with a number of interventions that may be vital to their health and well-being. Promotion of early exclusive breastfeeding is particularly important at this time. The postnatal period also provides an opportunity to supply information on family planning, which is recognized as an important factor in improving infant survival.

MICS 2006 included a number of questions to assess the timing of the postnatal check-up given to women aged 15–49 who gave birth in the two years preceding the survey. In addition, information was collected on the type of personnel providing the postnatal check-up. The questionnaire also included information on the percent distribution of women aged 15–49 who delivered at home in the two years preceding the survey and the type of personnel who checked the baby's health after birth.

Tables 9.8a and 9.8b show the distribution of women who gave birth in the two years preceding the survey by timing of first postnatal check-up according to background characteristics. The results show that only 33 percent of these women received postnatal check-ups within 42 days after birth. About 18 percent received postnatal checks within 48 hours of delivery, 4 percent within 3–6 days after delivery and 10 percent within 7–41 days. The table also shows that a higher proportion of urban women (53 percent) received a postnatal check-up within 42 days, compared to women in the rural areas (29 percent). Women in the Northern Region are less likely to receive a postnatal check-up compared to women in Central and Southern Regions. Among the districts, Balaka, Blantyre, Kasungu, Mchinji and Mwanza reach 40 percent and above coverage of postnatal check-ups for women, whereas in Chitipa, Ntchisi and Phalombe districts, the coverage is less than 20 percent.

Education also plays a major role in determining who attends postnatal check-ups. Women with secondary school education or higher are more likely to go for postnatal check-ups within 42 days after delivery (54 percent) compared to women with no education (29 percent). Similarly, women coming from the highest wealth quintile are more likely to go for postnatal check–ups (50 percent) compared to women coming from the lowest wealth quintile (27 percent).

Table 9.8a

Timing of postnatal care to mothers

Among women aged 15–49 who gave birth in the two years preceding the survey, the percent distribution by timing of postnatal check-up, according to background characteristics, Malawi, 2006

Background characteristic	Timing of first postnatal check-up					Total	Check-up within 42 days after birth	Number of women who gave birth in the preceding two years
	Within 2 days of delivery	3–6 days after delivery	7–41 days after delivery	Don't know/ missing	Did not receive postnatal check-up			
Malawi								
Total	17.7	4.3	10.3	0.4	67.3	100.0	32.7	10,552
Urban	22.3	5.6	23.8	0.9	47.3	100.0	52.7	1,507
Rural	17.0	4.0	8.1	0.3	70.6	100.0	29.4	9,045
Region								
Northern	17.8	2.3	4.3	2.4	73.1	100.0	26.9	1,035
Central	16.1	5.3	12.2	0.2	66.3	100.0	33.7	4,959
Southern	19.5	3.6	9.7	0.2	67.0	100.0	33.0	4,557
District								
Balaka	23.3	6.6	12.1	0.0	58.0	100.0	42.0	231
Blantyre	23.9	2.6	17.9	0.7	54.8	100.0	45.2	656
Chikwawa	7.3	4.0	10.1	0.3	78.3	100.0	21.7	391
Chiradzulu	15.7	2.4	17.6	0.0	64.3	100.0	35.7	196
Chitipa	9.4	0.8	1.0	1.2	87.6	100.0	12.4	139
Dedza	11.3	3.6	8.5	0.0	76.7	100.0	23.3	675
Dowa	12.9	6.8	14.7	0.0	65.6	100.0	34.4	427
Karonga	19.2	2.1	2.0	1.0	75.8	100.0	24.2	202
Kasungu	31.5	8.2	1.9	1.4	57.0	100.0	43.0	456
Lilongwe	16.0	6.3	16.2	0.0	61.5	100.0	38.5	1,907
Machinga	20.5	6.4	5.7	0.5	66.9	100.0	33.1	386
Mangochi	18.4	3.5	6.1	0.0	72.0	100.0	28.0	988
Mchinji	5.8	6.2	29.4	0.0	58.7	100.0	41.3	379
Mulanje	30.6	1.9	3.9	0.0	63.5	100.0	36.5	271
Mwanza	32.0	7.6	5.8	0.0	54.6	100.0	45.4	180
Mzimba	17.5	2.1	6.3	2.5	71.7	100.0	28.3	452
Nkhata Bay	19.8	3.1	2.4	6.9	67.8	100.0	32.2	118
Nkhotakota	17.0	1.0	8.7	0.0	73.4	100.0	26.6	200
Nsanje	7.1	1.7	13.8	0.0	77.5	100.0	22.5	191
Ntcheu	19.3	1.8	4.8	0.3	73.8	100.0	26.2	360
Ntchisi	5.6	3.3	3.8	0.0	87.3	100.0	12.7	139
Phalombe	11.0	1.5	6.7	0.0	80.7	100.0	19.3	226
Rumphi	24.7	4.5	6.0	1.8	63.0	100.0	37.0	123
Salima	20.8	3.2	3.7	0.0	72.3	100.0	27.7	417
Thyolo	25.2	2.9	8.2	0.0	63.7	100.0	36.3	458
Zomba	16.5	4.1	10.3	0.0	69.1	100.0	30.9	384

Table 9.8b

Timing of postnatal care to mothers

Among women aged 15–49 who gave birth in the two years preceding the survey, the percent distribution by timing of postnatal check-up, according to background characteristics, Malawi, 2006

Background characteristic	Timing of first postnatal check-up					Total	Check-up within 42 days after birth	Number of women who gave birth in the preceding two years
	Within 2 days of delivery	3–6 days after delivery	7–41 days after delivery	Don't know/ missing	Did not receive postnatal check-up			
Age								
15–19	16.9	3.9	8.3	0.4	70.4	100.0	29.6	1,158
20–24	18.4	4.3	10.1	0.4	66.8	100.0	33.2	3,599
25–29	18.3	4.3	12.1	0.5	64.9	100.0	35.1	2,670
30–34	17.5	3.8	10.9	0.4	67.4	100.0	32.6	1,621
35–39	15.4	4.8	9.3	0.1	70.3	100.0	29.7	970
40–44	19.0	3.9	5.6	0.1	71.5	100.0	28.5	384
45–49	15.0	9.2	11.4	0.0	64.3	100.0	35.7	150
Woman's education								
None	14.4	5.0	9.5	0.1	71.0	100.0	29.0	2,407
Primary	17.0	3.8	9.2	0.4	69.6	100.0	30.4	6,912
Secondary +	29.0	5.6	18.0	1.0	46.3	100.0	53.7	1,213
Other	14.0	0.0	14.3	0.0	71.7	100.0	28.3	20
Wealth index quintile								
Lowest	14.2	4.3	8.2	0.2	73.0	100.0	27.0	2,442
Second	16.6	4.5	7.2	0.2	71.5	100.0	28.5	2,225
Middle	15.8	4.1	9.3	0.3	70.6	100.0	29.4	2,164
Fourth	18.6	3.4	10.0	0.3	67.7	100.0	32.3	1,899
Highest	25.4	5.1	18.5	1.0	50.1	100.0	49.9	1,822

Tables 9.9a and 9.9b show the percentage distribution of the type of personnel who provided postnatal care to women aged 15–49 years who gave birth in the two years preceding the survey. Approximately 21 percent of postnatal check-ups are conducted by skilled attendants (3 percent by doctors and 18 percent by a nurse/midwives) and 3 percent by traditional birth attendants. Among districts, more mothers in Mchinji district are seen by a skilled attendant (56 percent) compared to Phalombe district (5 percent). Mothers in urban areas are more likely to be seen by a doctor or a nurse/midwife (26 percent) compared to mothers in rural areas (20 percent). Mothers with secondary or higher education are twice as likely to be seen by skilled personnel (51 percent) compared to mothers with no education (25 percent).

Table 9.9a

Person providing postnatal care to mothers

Percent distribution of women aged 15–49 who gave birth in the two years preceding the survey by type of personnel providing postnatal check–up, Malawi, 2006

Background characteristic	Person providing postnatal check-up					Check-up by skilled personnel	Number of women who gave birth in the preceding two years
	Doctor/ Clinical Officer	Nurse/ Midwife	Traditional birth attendant	Community health worker	Other/ Missing		
Malawi							
Total	3.2	17.5	2.7	2.2	0.1	20.7	4,691
Urban	2.6	23.5	3.4	1.3	0.6	26.1	323
Rural	3.3	17.1	2.7	2.3	0.1	20.4	4,367
Region							
Northern	7.0	26.0	3.9	13.3	0.1	33.0	385
Central	2.9	14.5	2.3	0.9	0.1	17.4	2,379
Southern	2.9	19.7	3.0	1.6	0.2	22.6	1,927
District							
Balaka	1.9	25.0	3.4	6.5	0.0	26.9	98
Blantyre	5.8	16.6	4.6	0.0	0.0	22.4	153
Chikwawa	0.6	22.8	1.0	1.2	0.0	23.4	159
Chiradzulu	4.3	19.5	8.5	0.0	0.0	23.8	94
Chitipa	3.4	25.0	1.7	15.1	0.0	28.4	72
Dedza	2.1	7.8	0.0	2.3	0.3	9.9	341
Dowa	4.5	10.6	5.7	1.9	0.0	15.1	224
Karonga	4.3	12.6	3.8	34.0	0.4	16.9	101
Kasungu	1.6	7.1	5.9	0.4	0.0	8.7	237
Lilongwe	1.7	11.6	1.2	0.0	0.0	13.3	878
Machinga	3.1	9.6	1.9	3.7	0.5	12.7	177
Mangochi	2.0	17.2	4.0	1.6	0.4	19.2	496
Mchinji	2.6	53.4	7.2	1.9	0.0	56.0	157
Mulanje	0.0	18.5	0.8	0.0	0.0	18.5	133
Mwanza	3.9	37.0	0.9	2.3	0.8	40.9	67
Mzimba	11.1	32.2	6.2	2.1	0.0	43.3	154
Nkhata Bay	3.8	35.5	1.1	6.9	0.0	39.3	33
Nkhotakota	11.5	23.3	2.7	0.8	0.0	34.8	108
Nsanje	5.6	12.3	1.0	1.0	0.4	17.9	75
Ntcheu	1.3	21.2	1.0	1.4	0.4	22.5	126
Ntchisi	2.4	4.6	1.2	1.5	0.0	7.0	78
Phalombe	0.6	3.9	0.0	1.5	0.0	4.5	125
Rumphi	6.4	32.8	0.0	3.5	0.0	39.2	25
Salima	5.8	15.6	0.4	0.2	0.0	21.4	231
Thyolo	0.7	37.9	3.3	2.5	0.0	38.6	184
Zomba	9.6	23.5	3.5	0.0	0.0	33.1	166

Table 9.9b

Person providing postnatal care to mothers

Percent distribution of women aged 15–49 who gave birth in the two years preceding the survey by type of personnel providing postnatal check-up, Malawi, 2006

Background characteristic	Person providing postnatal check-up					Check-up by skilled personnel	Number of women who gave birth in the preceding two years
	Doctor/ Clinical Officer	Nurse/ Midwife	Traditional birth attendant	Community health worker	Other/ Missing		
Age							
15–19	3.1	25.2	0.6	0.1	0.6	28.3	1,158
20–24	3.7	26.4	2.0	0.3	0.8	30.1	3,599
25–29	5.3	26.8	1.9	0.5	0.6	32.1	2,670
30–34	3.8	25.4	2.6	0.2	0.6	29.2	1,621
35–39	3.4	23.3	2.5	0.3	0.2	26.7	970
40–44	4.4	22.3	1.8	0.0	0.1	26.7	384
45–49	4.9	23.7	7.1	0.0	0.0	28.6	150
Woman's education							
None	3.2	22.2	3.2	0.1	0.2	25.4	2,407
Primary	3.8	23.9	1.7	0.4	0.6	27.7	6,912
Secondary +	7.6	42.9	1.5	0.2	1.5	50.5	1,213
Other	1.2	27.1	0.0	0.0	0.0	28.3	20
Wealth index quintile							
Lowest	2.8	21.2	2.3	0.1	0.6	24.0	2,442
Second	3.4	22.0	2.1	0.4	0.6	25.4	2,225
Middle	3.9	22.4	2.4	0.3	0.4	26.3	2,164
Fourth	4.4	25.2	1.9	0.5	0.3	29.6	1,899
Highest	6.4	41.0	1.2	0.2	1.1	28.3	1,822

Tables 9.10a and 9.10b show the percent distribution by timing of the first check-up given to babies born at home, according to background characteristics. The results show that overall, only a quarter of Malawian children receive a health check-up within 42 days of birth. The majority of children (75 percent) are not checked at all within 42 days after birth and very few receive check-ups within 48 hours after birth. This implies that during the first 48 hours of the postpartum period, a very crucial time for the survival of newborns, the majority of babies born at home are not seen by a health professional. Urban children fare better as 6 percent more receive a postnatal check-up within 42 days after birth, compared to rural children. However, there is no major difference between urban and rural residents in terms of the proportion of children seen within 48 hours of delivery (5 percent and 3 percent respectively). The Northern Region has notably 48 percent of children who received check-up within 42 days after birth, double the national average.

The percentage of newborn babies born at home who received a health-check up is highest in Mchinji district (60 percent) and lowest in Phalombe district (6 percent). Health check-ups for children born at home vary with the educational level and wealth status of the mother. The more educated and wealthier the mother, the more likely that her child will receive a health check-up within 42 days of birth. No association can be seen between a woman's age and the occurrence of the child health check-up.

Table 9.10a

Timing of postnatal check-up to children born at home

Among women aged 15–49 who gave birth at home in the two years preceding the survey, the percent distribution by timing of postnatal check-up for child, according to background characteristics, Malawi, 2006

Background characteristic	Timing of first postnatal check-up child							Total	Check-up within 42 days after birth	Number of women who gave birth at home in the preceding two years
	Less than 4 hours	4–23 hours	1–2 days	3–41 days	Later	Don't know/ missing	Did not receive postnatal check-up			
Malawi										
Total	1.3	0.7	1.4	21.1	1.1	0.1	74.2	100.0	24.5	4,691
Urban	2.6	0.6	2.1	25.4	0.6	0.0	68.7	100.0	30.7	323
Rural	1.2	0.7	1.4	20.8	1.2	0.1	74.6	100.0	24.1	4,367
Region										
Northern	2.0	1.5	3.3	40.7	2.6	0.1	49.7	100.0	47.5	385
Central	1.2	0.4	0.6	17.3	0.9	0.1	79.4	100.0	19.5	2,379
Southern	1.3	1.0	2.1	21.9	1.1	0.0	72.6	100.0	26.3	1,927
District										
Balaka	1.0	1.3	2.3	31.4	0.8	0.0	63.2	100.0	36.0	98
Blantyre	4.7	1.1	3.4	17.9	0.0	0.0	72.9	100.0	27.1	153
Chikwawa	0.0	0.0	1.8	21.2	2.8	0.0	74.3	100.0	23.0	159
Chiradzulu	3.8	1.7	4.3	21.8	0.6	0.0	67.7	100.0	31.6	94
Chitipa	0.4	1.1	0.9	39.4	3.3	0.0	54.9	100.0	41.8	72
Dedza	0.8	0.6	0.2	9.7	1.2	0.0	87.5	100.0	11.3	341
Dowa	2.2	0.9	2.4	17.2	0.0	0.0	77.4	100.0	22.7	224
Karonga	1.2	0.0	1.4	46.8	5.1	0.5	44.9	100.0	49.4	101
Kasungu	3.3	0.8	1.3	8.8	0.4	0.5	85.0	100.0	14.2	237
Lilongwe	0.8	0.4	0.0	12.9	0.3	0.0	85.6	100.0	14.1	878
Machinga	0.7	1.4	0.0	13.0	3.7	0.0	81.3	100.0	15.1	177
Mangochi	2.0	1.6	4.1	17.0	0.5	0.0	74.9	100.0	24.7	496
Mchinji	0.0	0.0	1.5	58.6	4.5	0.5	34.9	100.0	60.1	157
Mulanje	1.0	0.8	0.0	17.5	0.0	0.0	80.7	100.0	19.3	133
Mwanza	0.0	0.8	1.2	41.0	2.0	0.0	55.0	100.0	43.0	67
Mzimba	3.3	2.6	3.1	41.3	1.3	0.0	48.5	100.0	50.3	154
Nkhata Bay	3.6	3.4	10.7	27.8	1.8	0.0	52.6	100.0	45.5	33
Nkhotakota	1.6	0.8	1.4	29.0	5.4	0.0	61.8	100.0	32.8	108
Nsanje	0.0	0.0	1.1	19.1	0.0	0.0	79.7	100.0	20.2	75
Ntcheu	0.5	0.0	1.6	22.9	0.0	0.4	74.7	100.0	25.0	126
Ntchisi	0.4	0.0	0.0	8.7	0.6	0.0	90.3	100.0	9.1	78
Phalombe	0.0	0.5	0.0	5.7	0.0	0.0	93.9	100.0	6.2	125
Rumphi	0.0	0.0	9.3	33.4	0.0	0.0	57.3	100.0	42.7	25
Salima	1.0	0.0	0.0	20.1	0.5	0.4	78.0	100.0	21.1	231
Thyolo	1.0	0.8	0.0	40.5	2.1	0.0	55.7	100.0	42.3	184
Zomba	0.0	0.0	2.1	33.7	0.8	0.0	63.4	100.0	35.8	166

Table 9.10b

Timing of postnatal check-up to children born at home

Among women who gave birth at home in the two years preceding the survey, the percent distribution by timing of postnatal check-up for child, according to background characteristics, Malawi, 2006

Background characteristic	Timing of first postnatal check-up child							Total	Check-up within 42 days after birth	Number of women who gave birth at home in the preceding two years
	Less than 4 hours	4–23 hours	1–2 days	3–41 days	Later	Don't know/ missing	Did not receive postnatal check-up			
Age										
15–19	0.2	1.0	0.6	16.9	1.6	0.0	79.7	100.0	18.7	443
20–24	0.9	0.3	1.7	21.0	1.3	0.1	74.7	100.0	23.9	1,535
25–29	2.1	1.3	1.2	21.6	1.2	0.1	72.5	100.0	26.2	1,191
30–34	1.6	0.2	1.7	21.1	1.0	0.1	74.3	100.0	24.6	762
35–39	1.1	1.4	2.0	23.9	0.4	0.2	70.9	100.0	28.4	490
40–44	0.0	0.3	0.9	19.2	1.2	0.0	78.4	100.0	20.4	180
45–49	4.4	1.1	0.0	24.6	0.0	0.0	69.9	100.0	30.1	89
Mother's education										
None	1.3	0.4	1.1	17.2	0.6	0.0	79.5	100.0	20.0	1,346
Primary	1.2	0.9	1.6	22.1	1.4	0.1	72.8	100.0	25.8	3,076
Secondary +	2.3	1.4	2.0	29.4	1.2	0.5	63.2	100.0	35.1	255
Other	0.0	0.0	0.0	22.7	0.0	0.0	77.3	100.0	22.7	13
Wealth index quintile										
Lowest	0.6	0.8	1.4	17.5	0.8	0.1	78.8	100.0	20.3	1,347
Second	1.3	0.7	1.4	21.6	1.1	0.0	73.9	100.0	25.0	1,121
Middle	0.9	1.1	1.5	22.3	1.8	0.1	72.3	100.0	25.8	989
Fourth	1.4	0.6	0.8	24.4	1.0	0.0	71.8	100.0	27.2	841
Highest	4.4	0.2	3.1	22.0	0.7	0.4	69.2	100.0	29.7	392

Tables 9.11a and 9.11b show data on the type of personnel who conducted postnatal check-ups on babies born at home. Only 21 percent of births that occurred in the two years prior to the survey were checked by skilled personnel (3 percent by a doctor or clinical officer and 18 percent by a nurse/midwife). This implies that a higher percentage of newborn babies born at home (79 percent) are not checked by a skilled birth attendant after birth. The percentage of babies born at home who are checked by skilled personnel is highest in the Northern Region (33 percent) and lowest in the Central and Southern Regions (17 and 23 percent respectively). The more educated a woman is, the more likely she is to have her child checked by a skilled attendant following a home delivery (31 percent) compared to her counterpart with no education (17 percent).

Table 9.11a

Person providing postnatal check-up to children born at home

Percent distribution of women aged 15–49 who gave birth at home in the two years preceding the survey by type of personnel giving a postnatal check-up to the child, Malawi, 2006

Background characteristic	Person who checked child's health after birth					Check-up by skilled personnel	Number of women who gave birth at home in the preceding two years
	Doctor/ Clinical Officer	Nurse/ Midwife	Traditional birth attendant	Community health worker	Other/ Missing		
Malawi							
Total	3.2	17.5	2.7	2.2	0.1	20.8	4,691
Urban	2.6	23.5	3.4	1.3	0.6	26.0	323
Rural	3.3	17.1	2.7	2.3	0.1	20.4	4,367
Region							
Northern	7.0	26.0	3.9	13.3	0.1	33.0	385
Central	2.9	14.5	2.3	0.9	0.1	17.4	2,379
Southern	2.9	19.7	3.0	1.6	0.2	22.6	1,927
District							
Balaka	1.9	25.0	3.4	6.5	0.0	26.9	98
Blantyre	5.8	16.6	4.6	0.0	0.0	22.5	153
Chikwawa	0.6	22.8	1.0	1.2	0.0	23.5	159
Chiradzulu	4.3	19.5	8.5	0.0	0.0	23.8	94
Chitipa	3.4	25.0	1.7	15.1	0.0	28.4	72
Dedza	2.1	7.8	0.0	2.3	0.3	9.9	341
Dowa	4.5	10.6	5.7	1.9	0.0	15.0	224
Karonga	4.3	12.6	3.8	34.0	0.4	16.9	101
Kasungu	1.6	7.1	5.9	0.4	0.0	8.7	237
Lilongwe	1.7	11.6	1.2	0.0	0.0	13.3	878
Machinga	3.1	9.6	1.9	3.7	0.5	12.7	177
Mangochi	2.0	17.2	4.0	1.6	0.4	19.2	496
Mchinji	2.6	53.4	7.2	1.9	0.0	56.1	157
Mulanje	0.0	18.5	0.8	0.0	0.0	18.5	133
Mwanza	3.9	37.0	0.9	2.3	0.8	40.9	67
Mzimba	11.1	32.2	6.2	2.1	0.0	43.2	154
Nkhata Bay	3.8	35.5	1.1	6.9	0.0	39.3	33
Nkhotakota	11.5	23.3	2.7	0.8	0.0	34.8	108
Nsanje	5.6	12.3	1.0	1.0	0.4	17.9	75
Ntcheu	1.3	21.2	1.0	1.4	0.4	22.5	126
Ntchisi	2.4	4.6	1.2	1.5	0.0	7.0	78
Phalombe	0.6	3.9	0.0	1.5	0.0	4.6	125
Rumphi	6.4	32.8	0.0	3.5	0.0	39.2	25
Salima	5.8	15.6	0.4	0.2	0.0	21.4	231
Thyolo	0.7	37.9	3.3	2.5	0.0	38.6	184
Zomba	9.6	23.5	3.5	0.0	0.0	33.1	166

Table 9.11b

Person providing postnatal check-up to children born at home

Percent distribution of women aged 15–49 who gave birth at home in the two years preceding the survey by type of personnel giving a postnatal check-up to the child, Malawi, 2006

Background characteristic	Person who checked child's health after birth					Check-up by skilled personnel	Number of women who gave birth at home in the preceding two years
	Doctor/ Clinical Officer	Nurse/ Midwife	Traditional birth attendant	Community health worker	Other/ Missing		
Age							
15–19	3.7	12.0	2.4	2.0	0.2	15.7	443
20–24	3.5	16.4	3.1	2.3	0.0	19.9	1,535
25–29	3.1	19.4	2.8	2.0	0.3	22.5	1,191
30–34	2.0	18.5	2.2	2.9	0.1	20.6	762
35–39	4.6	21.0	2.3	1.0	0.1	25.6	490
40–44	2.5	15.0	1.1	3.0	0.0	17.5	180
45–49	3.1	17.7	5.8	3.5	0.0	20.8	89
Mother's education							
None	2.7	14.6	1.9	1.1	0.2	17.3	1,346
Primary	3.4	18.1	3.0	2.7	0.1	21.5	3,076
Secondary +	4.4	26.4	3.7	1.9	0.4	30.8	255
Other	2.5	20.1	0.0	0.0	0.0	22.7	13
Wealth index quintile							
Lowest	2.7	13.3	2.3	2.8	0.1	16.0	1,347
Second	2.9	18.0	3.1	1.8	0.3	20.9	1,121
Middle	3.7	19.1	2.3	2.5	0.1	22.8	989
Fourth	2.7	21.3	2.5	1.7	0.0	24.0	841
Highest	5.8	19.1	4.6	1.3	0.0	24.9	392

Tables 9.12a and 9.12b provide information on where children born at home receive their first postnatal check-up. Only 22 percent of births occurring in the 2 years prior to MICS 2006 were checked in a health facility. No marked difference can be seen between urban and rural children, but more children in the Northern Region (44 percent) receive check-ups in health facilities than those in the Central and Southern Regions (18 and 23 percent respectively). More children born to mothers with secondary or higher education (32 percent) are seen in health facilities than those born to illiterate mothers (18 percent).

Table 9.12a

Place of postnatal check-up to children born at home

Percent distribution of women aged 15–49 who gave birth at home in the two years preceding the survey by place of postnatal check-up of the child, Malawi, 2006

Background characteristic	Place of first postnatal check-up child											Total	Check-up in health facility	Number of women who gave birth at home in the preceding two years
	At home	Other home	Govt. hospital	Govt. clinic/health center	CHAM*	Other public	Private hospital	Private clinic	Private maternity home	Other/missing	Did not receive postnatal check-up			
Malawi														
Total	0.6	2.6	3.9	13.6	2.5	1.3	0.3	0.5	0.1	0.5	74.2	100.0	22.2	4,691
Urban	0.6	3.1	9.5	16.4	0.6	0.2	0.0	0.2	0.0	0.8	68.7	100.0	26.8	323
Rural	0.6	2.5	3.5	13.4	2.6	1.4	0.3	0.6	0.1	0.4	74.6	100.0	21.8	4,367
Region														
Northern	0.9	3.0	5.4	26.9	5.1	6.0	0.1	0.7	0.0	2.2	49.7	100.0	44.3	385
Central	0.5	2.4	3.9	10.6	1.9	0.4	0.2	0.6	0.0	0.1	79.4	100.0	17.6	2,379
Southern	0.6	2.7	3.7	14.7	2.7	1.4	0.4	0.4	0.1	0.6	72.6	100.0	23.4	1,927
District														
Balaka	0.0	3.4	6.6	13.8	5.9	5.8	0.0	0.9	0.0	0.5	63.2	100.0	32.9	98
Blantyre	0.0	4.6	0.0	22.5	0.0	0.0	0.0	0.0	0.0	0.0	72.9	100.0	22.5	153
Chikwawa	0.6	1.0	4.1	13.3	2.4	1.2	0.0	1.9	0.0	1.2	74.3	100.0	22.9	159
Chiradzulu	0.7	8.6	4.1	13.3	5.0	0.0	0.0	0.6	0.0	0.0	67.7	100.0	23.0	94
Chitipa	0.0	1.1	9.5	29.0	2.5	2.4	0.0	0.0	0.0	0.6	54.9	100.0	43.5	72
Dedza	0.0	0.6	1.8	5.1	2.7	0.5	1.3	0.6	0.0	0.0	87.5	100.0	11.9	341
Dowa	1.1	4.6	1.4	11.9	1.6	1.2	0.0	0.2	0.0	0.4	77.4	100.0	16.5	224
Karonga	0.0	3.7	3.6	30.1	0.0	15.9	0.0	0.0	0.0	1.8	44.9	100.0	49.6	101
Kasungu	1.0	4.9	3.3	5.2	0.6	0.0	0.0	0.0	0.0	0.0	85.0	100.0	9.1	237
Lilongwe	0.0	1.2	2.5	9.4	0.5	0.0	0.0	0.8	0.0	0.0	85.6	100.0	13.3	878
Machinga	0.9	2.0	0.0	8.9	2.4	3.0	0.0	0.5	0.0	1.0	81.3	100.0	14.8	177
Mangochi	0.9	3.9	4.9	11.5	1.7	0.0	1.5	0.4	0.0	0.4	74.9	100.0	20.0	496
Mchinji	3.0	4.2	11.6	35.0	8.1	2.0	0.0	0.2	0.0	1.0	34.9	100.0	56.9	157
Mulanje	0.0	0.8	3.1	14.8	0.0	0.6	0.0	0.0	0.0	0.0	80.7	100.0	18.5	133
Mwanza	0.9	1.6	11.8	22.0	7.0	0.0	0.0	0.0	0.0	1.6	55.0	100.0	40.8	67
Mzimba	1.9	4.3	1.8	24.2	11.1	2.8	0.0	1.5	0.0	3.9	48.5	100.0	41.5	154
Nkhata Bay	1.1	1.1	18.1	24.9	0.0	0.0	1.2	1.0	0.0	0.0	52.6	100.0	45.1	33
Nkhotakota	1.0	12.5	5.0	14.6	3.4	0.0	1.1	0.6	0.0	0.0	61.8	100.0	24.7	108
Nsanje	1.0	0.0	4.1	11.9	1.2	1.0	0.0	0.0	0.0	1.0	79.7	100.0	18.2	75
Ntcheu	1.0	0.0	5.0	13.0	4.8	1.6	0.0	0.0	0.0	0.0	74.7	100.0	24.3	126
Ntchisi	0.0	1.6	3.9	4.3	0.0	0.0	0.0	0.0	0.0	0.0	90.3	100.0	8.1	78
Phalombe	0.2	0.0	0.7	2.8	0.7	0.4	0.0	0.0	0.0	1.4	93.9	100.0	4.5	125
Rumphi	0.0	0.0	6.7	27.7	2.9	4.1	0.0	0.0	0.0	1.4	57.3	100.0	41.4	25
Salima	0.2	0.4	8.7	9.8	1.4	0.0	0.0	1.5	0.0	0.0	78.0	100.0	21.4	231
Thyolo	1.2	1.2	4.4	26.0	2.5	6.0	0.0	0.6	1.4	0.8	55.7	100.0	41.1	184
Zomba	0.0	3.5	3.4	20.7	8.2	0.7	0.0	0.0	0.0	0.0	63.4	100.0	33.1	166

* Christian Health Association of Malawi

Table 9.12b

Place of postnatal check-up to children born at home

Percent distribution of women aged 15–49 who gave birth at home in the two years preceding the survey by place of postnatal check-up of the child, Malawi, 2006

Background characteristic	Place of first postnatal check-up child											Total	Check-up in health facility	Number of women who gave birth at home in the preceding two years
	At home	Other home	Govt. hospital	Govt. clinic/health center	CHAM*	Other public	Private hospital	Private clinic	Private maternity home	Other/missing	Did not receive postnatal check-up			
Age														
15–19	0.0	2.8	3.5	9.7	2.1	1.2	0.0	0.1	0.3	0.7	79.7	100.0	16.8	443
20–24	0.8	2.7	3.5	13.2	2.2	1.2	0.5	0.5	0.1	0.6	74.7	100.0	21.1	1,535
25–29	0.5	2.7	4.8	13.3	3.4	1.2	0.2	1.0	0.0	0.5	72.5	100.0	23.8	1,191
30–34	0.6	2.0	3.5	14.8	2.3	2.0	0.1	0.2	0.0	0.4	74.3	100.0	22.8	762
35–39	0.4	2.4	4.7	17.7	2.1	0.8	0.5	0.3	0.0	0.3	70.9	100.0	26.0	490
40–44	0.4	.9	2.3	12.3	2.5	1.1	0.0	1.9	0.0	0.3	78.4	100.0	20.1	180
45–49	2.5	5.5	5.1	15.4	0.9	0.6	0.0	0.0	0.0	0.0	69.9	100.0	22.0	89
Mother's education														
None	0.6	1.8	2.9	10.6	2.1	0.7	0.3	1.0	0.1	0.4	79.5	100.0	17.6	1,346
Primary	0.5	2.8	4.3	14.3	2.6	1.5	0.3	0.4	0.0	0.4	72.8	100.0	23.4	3,076
Secondary +	1.0	3.1	5.1	21.7	2.2	1.7	0.0	0.2	0.6	1.2	63.2	100.0	31.5	255
Other	0.0	0.0	0.0	18.9	0.0	0.0	0.0	0.0	0.0	3.8	77.3	100.0	18.9	13
Wealth index quintile														
Lowest	0.6	2.0	3.2	11.7	1.8	1.1	0.3	0.4	0.0	0.1	78.8	100.0	18.5	1,347
Second	0.2	3.1	4.3	12.7	2.2	1.6	0.4	0.8	0.0	0.7	73.9	100.0	22.1	1,121
Middle	0.5	2.8	2.7	14.8	4.3	1.2	0.1	0.5	0.1	0.6	72.3	100.0	23.8	989
Fourth	1.2	1.9	4.3	16.4	2.1	1.0	0.4	0.5	0.1	0.4	71.8	100.0	24.7	841
Highest	0.6	4.1	7.5	14.0	1.6	1.5	0.0	0.8	0.0	0.6	69.2	100.0	25.4	392

* Christian Health Association of Malawi

10 EDUCATION

JOHN KHOZI

Universal access to basic education and the achievement of primary education by the world's children is one of the most important goals of the MDGs and WFFC. Education is a vital prerequisite for combating poverty, empowering women, protecting children from hazardous and exploitative labour and sexual exploitation, promoting human rights and democracy, protecting the environment, and influencing population growth.

10.1 PRIMARY AND SECONDARY SCHOOL PARTICIPATION

In recognition of these benefits, Malawi introduced the Free Primary Education (FPE) policy in 1994 to accelerate and promote the universal access to basic education. Enrolment at primary level almost doubled from 1.8 million in 1993 to 3.2 million in 1994. Despite the FPE framework, there was still need for more and better education facilities and for enhancing the capacity of a qualified teaching workforce. At secondary school level, all District Education Centres were converted in 1999 into government owned Community Day Secondary Schools as part of a unified system of secondary education in Malawi.

The indicators for primary and secondary school attendance include:

- Net intake rate in primary education
- Net and gross primary school attendance rate
- Net and gross secondary school attendance rate
- Net primary school attendance rate of children of secondary school age
- Female to male education ratio, Gender Parity Index (GPI)

The indicators of school progression include:

- Survival rate to grade 5 and grade 8
- Transition rate to secondary school
- Net primary completion rate

The official standard entry age from primary education in Malawi is 6 years. Table 10.1a shows that, of all children aged 6 at the time of survey, only about 67 percent are actually attending grade 1.

The table further illuminates that 68 percent of girls, as compared to 66 percent of boys, enrol in grade 1. Sixty-nine percent of six year-olds in urban areas enrol in grade 1 compared to 67 percent of their rural counterparts. The Northern Region has the highest rate of primary school entry with 74 percent followed by 67 for the Central Region and 65 percent for the Southern Region. Among the districts, Chitipa, with 84 percent, has the highest enrolment rate of six-year olds in grade 1 followed by Balaka, Chiradzulu, Rumphi and Kasungu with more than 75 percent. On the other hand, Phalombe, Nsanje, Dedza and Chikwawa have less than 60 percent enrolment ratios of six-year olds (Map 10.1). Furthermore, a positive correlation can be observed between the enrolment rate of six year-olds in grade 1 with household socio-economic status. For children in wealthy households, the proportion is around 70 percent, while it is 61 percent among children living in the poorest households.

Table 10.1a

Primary school entry

Percentage of children of primary school entry age attending grade 1, Malawi, 2006

Background characteristic	Percentage of children of primary school entry age currently attending grade 1	Number of children of primary school entry age
Malawi		
Total	66.9	4,228
Urban	68.5	496
Rural	66.6	3,732
Region		
Northern	73.7	401
Central	67.1	1,856
Southern	65.2	1,972
District		
Balaka	79.9	104
Blantyre	72.1	281
Chikwawa	50.5	160
Chiradzulu	79.1	63
Chitipa	84.2	51
Dedza	52.3	277
Dowa	73.5	164
Karonga	69.0	79
Kasungu	75.5	174
Lilongwe	69.8	681
Machinga	60.1	195
Mangochi	64.5	445
Mchinji	71.0	139
Mulanje	60.9	124
Mwanza	72.0	70
Mzimba	71.9	163
Nkhata Bay	73.4	49
Nkhotakota	62.7	69
Nsanje	56.6	82
Ntcheu	69.6	131
Ntchisi	67.9	57
Phalombe	58.8	96
Rumphi	76.1	59
Salima	62.3	163
Thyolo	72.5	170
Zomba	62.4	181

This suggests that opportunities for primary pupil participation are not uniformly available or affordable in Malawi. It may, however, reflect later entry into the school system than the recommended school age as a result of parents holding younger children at home for various reasons, but intending to enrol them at an older age. This could be related to the distance a child needs to walk to school, school meals and the cost of sending a child to school. Further studies are needed to clarify the barriers to schooling in districts that lag behind. The Ministry of Education's Policy and Investment Framework (PIF) document recommends specific strategies to improve pupil's access to primary school, some of which are to identify and prioritise the distribution in areas where there is under-provision of facilities and materials.

Table 10.1b

Primary school entry

Percentage of children of primary school entry age attending grade 1, Malawi, 2006

Background characteristic	Percentage of children of primary school entry age currently attending grade 1	Number of children of primary school entry age
Sex		
Male	65.9	2,018
Female	67.8	2,208
Age		
6	66.9	4,228
Mother's education		
None	57.5	1,580
Primary	72.8	2,344
Secondary +	69.2	281
Other	78.1	23
Wealth index quintile		
Lowest	61.0	937
Second	67.3	936
Middle	68.5	829
Fourth	68.3	759
Highest	70.4	767

Map 10.1

Proportion of children of primary school entry age attending grade 1, Malawi, 2006

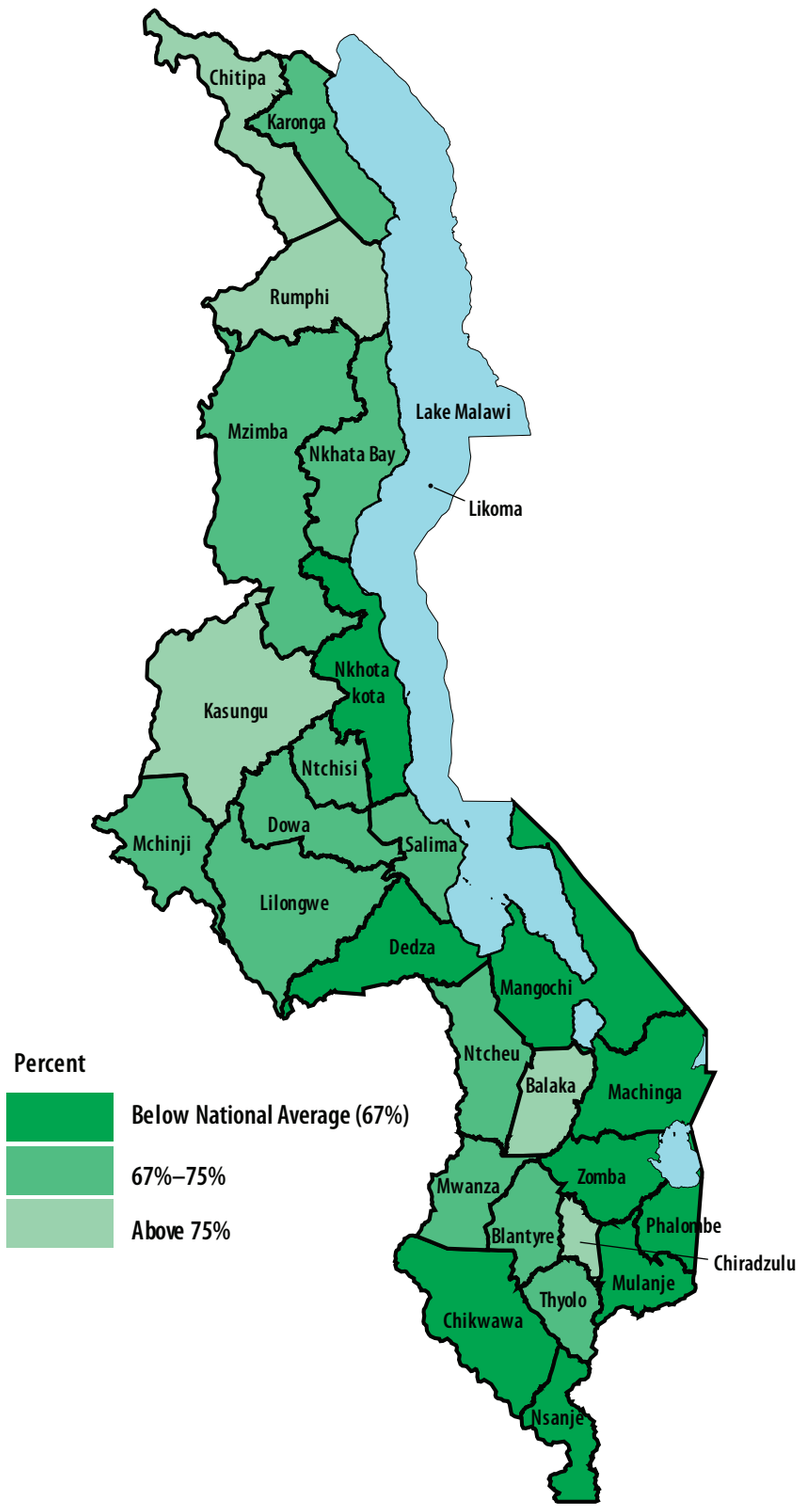


Table 10.2a provides information on the primary school net and gross attendance ratios. The overall net attendance ratio (NAR) is 86 percent, i.e., 86 percent of primary school age are currently attending primary school, while 14 percent of children of primary school age are out of primary school. In terms of gender division, NAR for boys is 86 percent and for girls, 87 percent. The Northern Region has a higher NAR of 95 percent followed by the Central Region with 86 and the Southern Region with 84 percent (Figure 10.1). Rumphi and Chitipa were found to have the highest rates of NAR with 97 percent, followed by Mzimba with 96 percent and Nkata Bay with 94 percent. The NAR is lower in Chikwawa, Dedza, Machinga, Mangochi and Nsanje (below 80 percent).

Table 10.2a

Primary school (6–13 years) attendance ratios

Primary school net attendance ratios (NAR) and gross attendance ratios (GAR), Malawi, 2006

Background characteristic	Net attendance ratio (NAR)			Gross attendance ratio (GAR)			Gender Parity Index*
	Boys	Girls	Total	Boys	Girls	Total	
Malawi							
Total	85.6	86.9	86.2	116.0	106.5	111.2	0.92
Urban	93.5	92.0	92.7	122.0	114.2	118.1	0.94
Rural	84.3	86.0	85.2	110.6	104.3	107.4	0.94
Region							
Northern	94.8	95.0	94.9	127.3	117.3	122.3	0.92
Central	85.4	87.2	86.3	112.7	108.5	110.6	0.96
Southern	83.5	84.6	84.1	107.7	100.2	104.0	0.93
District							
Balaka	91.0	93.0	92.0	119.3	115.6	117.4	0.97
Blantyre	91.9	91.9	91.9	120.4	113.3	116.8	0.94
Chikwawa	79.3	75.5	77.4	107.2	88.3	97.7	0.82
Chiradzulu	91.4	93.0	92.2	120.2	110.9	115.5	0.92
Chitipa	96.2	96.8	96.5	132.2	120.4	126.3	0.91
Dedza	74.9	78.9	76.9	94.0	95.8	94.9	1.02
Dowa	84.6	90.5	87.7	120.1	117.8	118.9	0.98
Karonga	91.5	90.7	91.1	118.6	108.0	113.3	0.91
Kasungu	91.8	93.0	92.4	125.0	114.6	119.8	0.92
Lilongwe	87.3	87.3	87.3	109.7	107.9	108.8	0.98
Machinga	75.7	77.4	76.5	94.8	92.6	93.7	0.98
Mangochi	78.3	79.4	78.8	96.0	92.1	94.0	0.96
Mchinji	85.8	87.4	86.6	124.4	108.8	116.6	0.87
Mulanje	82.3	85.4	84.0	105.3	99.9	102.6	0.95
Mwanza	83.3	92.0	88.0	117.2	105.7	111.5	0.90
Mzimba	95.6	95.9	95.8	131.0	121.2	126.1	0.93
Nkhata Bay	94.2	94.5	94.2	117.9	113.8	115.8	0.97
Nkhotakota	85.1	87.2	86.1	114.2	109.0	111.6	0.95
Nsanje	79.9	77.8	78.9	118.1	98.7	108.4	0.84
Ntcheu	87.0	88.2	87.6	115.2	110.8	113.0	0.96
Ntchisi	84.9	88.6	86.9	120.7	112.2	116.5	0.93
Phalombe	79.5	80.7	80.1	98.7	90.5	94.6	0.92
Rumphi	95.8	97.3	96.6	131.7	119.4	125.6	0.91
Salima	87.0	86.9	86.9	114.9	109.6	112.2	0.95
Thyolo	84.4	86.4	85.5	104.7	100.3	102.5	0.96
Zomba	85.9	88.3	87.2	111.5	103.4	107.4	0.93

* : Ratio of the primary school GAR for girls to the GAR for boys.

Unlike NAR, primary school gross attendance ratio (GAR) is the total number of primary school students, expressed as a percentage of the official primary school age population. The GAR can exceed 100 if there are significant numbers of overage and underage students at a given level of school. It may also be higher than 100 if school children preferentially come from outside the district. This is particularly likely in urban areas. MICS 2006 reported that more boys are in school than girls with a GAR of 116 and 107 respectively. This is supported by a GPI of 0.92, meaning that for every 100 boys in school, 92 girls are in school. The GPI for primary is the ratio of the primary school GAR for girls to the GAR for boys. Among the districts, Dedza is the only district where a higher proportion of girls are in school than boys, with a GPI of 1.02. GPI is worse in Chikwawa, Mchinji and Nsanje.

Globally, many countries use 6–11 as the age group for primary education. Therefore, for international comparison, table 10.2b presents the NAR and GAR by 6–11 years. For this age group, NAR is 78 and GAR is 147 with a GPI of 0.93. This table also shows that the higher the mother's education level, the higher the net and gross attendance ratios. When households are categorised by their economic status, children belonging to the wealthiest category have an NAR of 94 percent, compared to 81 percent for children belonging to poorer households.

Table 10.2b

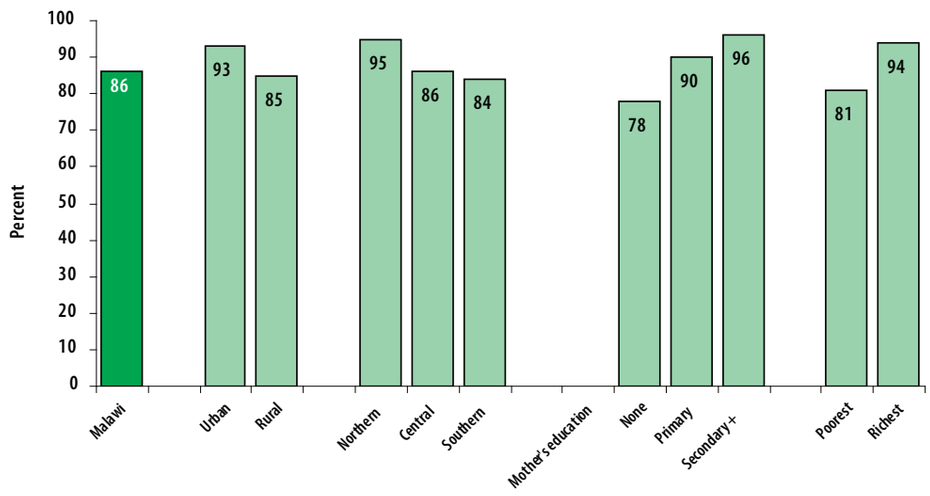
Primary school (6–13 years) attendance ratios

Primary school net attendance ratios (NAR) and gross attendance ratios (GAR), Malawi, 2006

Background characteristic	Net attendance ratio (NAR)			Gross attendance ratio (GAR)			Gender Parity Index*
	Boys	Girls	Total	Boys	Girls	Total	
Age							
6–11	76.3	79.4	77.9	152.6	141.2	146.9	0.93
Mother's education							
None	77.7	78.4	78.1	92.4	89.8	91.1	0.97
Primary	89.2	91.1	90.2	105.2	105.6	105.4	1.00
Secondary +	97.1	95.2	96.1	111.7	113.7	112.7	1.02
Wealth index quintile							
Lowest	79.5	82.0	80.8	101.2	97.6	99.4	0.96
Second	81.8	83.7	82.8	103.5	97.5	100.5	0.94
Middle	84.6	86.3	85.5	112.5	104.4	108.4	0.93
Fourth	87.4	87.8	87.6	116.7	108.8	112.7	0.93
Highest	93.9	93.9	93.9	126.4	120.1	123.3	0.95

* : Ratio of the primary school GAR for girls to the GAR for boys.

Figure 10.1
Primary school net attendance ratio, Malawi, 2006



The secondary school NAR, GAR and GPI are presented in tables 10.3a & 10.3b. Only 13 percent of children of secondary school age (14–17 years) are attending secondary school (Figure 10.2). Of the remaining 87 percent of secondary school age, some are either out of school or attending primary school. The GAR on the other hand, is 26, with boys having a GAR of 29 and girls 23. The GPI for secondary school gross attendance is 0.78, meaning that in Malawi, more boys are in secondary school than girls (100 vs. 78).

The secondary school NAR is almost four times higher in urban (35 percent) than rural areas (9 percent). The ratio is also higher among children in the Northern Region (19 percent) followed by the Southern Region (15 percent) and the Central Region (10 percent). While children aged 14–17 in Blantyre are more likely to be in secondary education or higher (34 percent), for 11 other districts it is less than 10 percent.

Secondary school NAR increases with the increasing age of the child, the mother's educational level and wealth status of the household (Table 10.3b). Children aged 14 years are less likely to be in secondary school (7 percent). The proportion is 12 percent for those aged 15 years, 17 percent for children aged 16 years and 18 percent for those aged 17 years. It seems that girls are likely to drop out of school when they reach 17, which is close to the median age of female marriage in Malawi. Fifty-nine percent of children whose mothers have secondary or higher education attend secondary or higher education compared to only 12 percent for those with primary and 3 percent for those without education. The proportion of girls in secondary school whose mothers have secondary education is higher (66 percent) than for boys (52 percent). Thirty-two percent of children in the wealthiest households are in secondary school or higher compared to 4 percent in poorer households. The poorest households are more likely to keep boys than girls in secondary school.

Table 10.3a

Secondary school (14–17 years) attendance ratios

Secondary school net attendance ratios (NAR) and gross attendance ratios (GAR), Malawi, 2006

Background characteristic	Net attendance ratio (NAR)			Gross attendance ratio (GAR)			Gender parity index*
	Boys	Girls	Total	Boys	Girls	Total	
Malawi							
Total	13.3	12.9	13.1	29.4	22.9	26.1	0.78
Urban	35.5	33.9	34.7	63.0	51.7	57.3	0.82
Rural	9.0	7.9	8.5	19.4	11.6	15.5	0.60
Region							
Northern	17.9	20.0	18.9	36.2	30.5	33.4	0.84
Central	10.1	9.7	9.9	22.5	14.9	18.7	0.66
Southern	15.1	14.3	14.7	26.7	20.6	23.6	0.77
District							
Balaka	14.8	15.4	15.1	25.9	16.7	21.3	0.64
Blantyre	34.6	32.8	33.7	50.0	44.8	47.4	0.90
Chikwawa	6.5	6.9	6.7	17.4	8.7	13.0	0.50
Chiradzulu	13.0	12.8	12.9	31.5	23.5	27.5	0.75
Chitipa	14.8	15.6	15.2	22.6	25.0	23.8	1.11
Dedza	4.0	6.8	5.6	17.1	7.8	12.5	0.46
Dowa	4.8	7.3	5.9	14.1	8.9	11.5	0.63
Karonga	8.7	14.8	11.7	25.9	27.3	26.6	1.05
Kasungu	7.0	10.2	8.4	19.5	13.4	16.5	0.69
Lilongwe	17.4	12.6	14.9	32.2	25.8	29.0	0.80
Machinga	4.4	2.7	3.4	14.4	6.0	10.2	0.42
Mangochi	7.0	3.4	5.4	15.0	7.6	11.3	0.51
Mchinji	7.2	2.9	5.5	20.9	6.4	13.7	0.31
Mulanje	15.1	16.3	15.7	32.5	21.6	27.1	0.66
Mwanza	19.3	14.7	17.4	33.2	24.6	28.9	0.74
Mzimba	20.9	23.9	22.3	41.5	34.9	38.2	0.84
Nkhata Bay	22.8	16.8	20.1	51.9	23.9	37.9	0.46
Nkhotakota	8.6	11.7	10.1	25.4	13.8	19.6	0.54
Nsanje	10.6	7.7	9.4	23.0	11.9	17.4	0.52
Ntcheu	7.6	10.5	8.9	20.4	9.5	15.0	0.47
Ntchisi	3.0	3.0	3.0	7.7	6.8	7.3	0.88
Phalombe	7.4	5.9	6.7	11.9	13.6	12.7	1.14
Rumphi	19.8	19.6	19.7	34.0	29.0	31.5	0.85
Salima	14.6	12.4	13.6	22.0	14.9	18.4	0.68
Thyolo	11.3	9.3	10.3	15.2	17.5	16.4	1.15
Zomba	10.6	15.1	12.6	25.1	20.2	22.7	0.80

* : Ratio of the secondary school GAR for girls to the GAR for boys.

Table 10.3b

Secondary school (14–17 years) attendance ratios

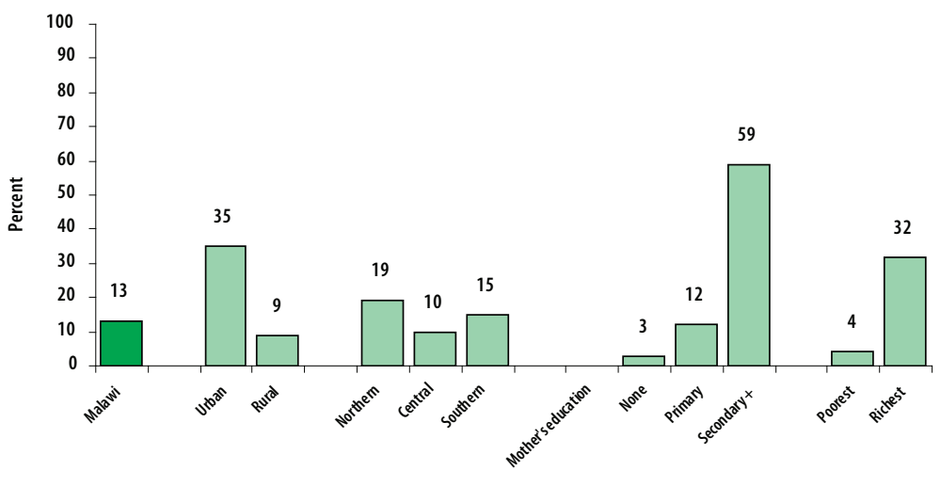
Secondary school net attendance ratios (NAR) and gross attendance ratios (GAR), Malawi, 2006

Background characteristic	Net attendance ratio (NAR)			Gross attendance ratio (GAR)			Gender Parity Index*
	Boys	Girls	Total	Boys	Girls	Total	
Age							
14	5.7	7.9	6.7	2.5	3.0	2.7	1.20
15	8.9	14.6	11.5	5.7	7.9	6.8	1.30
16	17.3	15.8	16.6	8.9	14.6	11.7	1.64
17	22.4	13.8	18.1	17.1	15.2	16.1	0.89
Mother's education							
None	2.7	4.0	3.2	1.7	2.2	2.0	1.29
Primary	10.5	13.8	12.0	7.7	8.6	8.2	1.12
Secondary +	52.3	65.8	58.6	39.1	37.1	38.1	0.95
Wealth index quintile							
Lowest	5.2	2.1	3.7	10.0	5.3	7.6	0.53
Second	7.0	3.6	5.5	14.5	5.5	10.0	0.38
Middle	6.6	5.8	6.2	16.9	8.4	12.7	0.50
Fourth	8.8	10.6	9.6	21.3	13.3	17.3	0.62
Highest	31.1	32.6	31.8	56.6	47.8	52.2	0.84

*: Ratio of the secondary school GAR for girls to the GAR for boys.

Figure 10.2

Secondary school net attendance ratio, Malawi, 2006



Tables 10.4a and 10.4b show the percentage of children of secondary school age attending primary school by sex and background characteristics. The findings indicate that nearly half (49 percent) of secondary school age children are attending primary school. This is not surprising because, as noted above, only 67 percent of children due to have started grade 1 are in school. This presents an indication of late school entry and by the time these children reach age 14, they have not been in school long enough to have reached secondary level. Grade repetition will also result in a situation where older children are still in primary school.

The percentage of secondary school age children attending primary education is higher in rural areas (52 percent) compared to urban areas (36 percent) and in the Northern Region (53 percent) than in the Central (51 percent) and Southern Regions (46 percent). Boys are more likely to start secondary school late compared to girls, regardless of place of residence. At district level, the proportion of secondary school age children in primary school is higher in Kasungu (60 percent) and lower in Blantyre (36 percent).

Table 10.4a

Secondary school age (14–17 years) children attending primary school

Percentage of children of secondary school age attending primary school, Malawi, 2006

Background characteristic	Boys		Girls		Total	
	Percent attending primary school	Number of children	Percent attending primary school	Number of children	Percent attending primary school	Number of children
Malawi						
Total	56.9	4,837	40.2	4,288	49.0	9,125
Urban	43.3	777	29.4	825	36.2	1,602
Rural	59.5	4,060	42.7	3,463	51.8	7,524
Region						
Northern	65.8	546	39.2	478	53.4	1,024
Central	58.2	2,062	43.3	1,882	51.0	3,944
Southern	53.5	2,230	37.4	1,927	46.0	4,157
District						
Balaka	58.9	107	41.7	114	50.0	221
Blantyre	40.7	462	30.3	420	35.8	882
Chikwawa	65.3	196	37.1	136	53.7	333
Chiradzulu	57.0	91	39.7	75	49.1	166
Chitipa	71.8	63	39.5	51	57.3	114
Dedza	56.7	241	37.8	298	46.2	538
Dowa	64.1	249	51.4	190	58.6	439
Karonga	70.2	107	41.1	104	55.9	211
Kasungu	73.6	225	42.3	166	60.3	392
Lilongwe	50.7	583	44.8	621	47.7	1,204
Machinga	55.4	141	45.2	189	49.5	331
Mangochi	53.5	402	38.7	308	47.1	710
Mchinji	62.1	226	47.5	153	56.2	379
Mulanje	59.6	160	39.8	144	50.3	303
Mwanza	52.3	114	40.1	78	47.3	192
Mzimba	65.1	263	37.9	231	52.4	494
Nkhata Bay	52.6	52	39.5	41	46.8	93
Nkhotakota	57.6	87	44.1	83	51.0	171
Nsanje	70.6	106	40.0	70	58.4	176
Ntcheu	54.1	169	31.0	140	43.7	309
Ntchisi	62.8	71	52.6	55	58.3	126
Phalombe	55.9	90	37.7	70	47.9	159
Rumphi	66.4	61	40.9	51	54.8	112
Salima	54.7	210	41.9	176	48.8	386
Thyolo	49.8	142	35.4	141	42.6	283
Zomba	53.5	220	37.4	181	46.2	401

The proportion of secondary school age children attending primary school declines with increasing age. Seventy-one percent of those aged 14 are in primary school as opposed to one-fourth of those aged 17. One in every seven girls aged 17 is likely to be in primary school compared to one in every three boys of the same age. The majority of these girls are likely to be out of school for, as has already been noted, the secondary school NAR among this group is low. Notably, the educational level of the mother has an effect, though limited, on this category. Thirty-five percent of secondary school age children whose mothers have secondary or higher education are in primary school, compared to 63 percent of those whose mothers have no education. The proportion of secondary school age children in primary school is 9 percentage points lower among children belonging to wealthy households, compared to children belonging to poorer households (52 percent).

Table 10.4b

Secondary school age (14–17) children attending primary school

Percentage of children of secondary school age attending primary school, Malawi, 2006

Background characteristic	Boys		Girls		Total	
	Percent attending primary school	Number of children	Percent attending primary school	Number of children	Percent attending primary school	Number of children
Age						
14	74.0	1,,336	67.2	1,105	71.0	2,441
15	66.1	1,227	51.0	1,032	59.2	2,259
16	51.0	1,003	31.1	884	41.7	1,887
17	34.5	1,271	14.0	1,268	24.3	2,539
Mother's education						
None	63.8	915	62.3	573	63.2	1,487
Primary	73.2	1,201	62.6	969	68.5	2,170
Secondary +	41.7	109	27.7	95	35.2	204
Other	88.5	17	70.1	7	83.0	24
Wealth index quintile						
Lowest	60.2	783	43.3	786	51.8	1,569
Second	54.4	894	37.5	741	46.7	1,635
Middle	63.0	899	40.5	769	52.6	1,669
Fourth	61.9	998	42.7	845	53.1	1,843
Highest	48.1	1,263	37.7	1,147	43.2	2,410

The percentage of children entering grade 1 who eventually reach grade 5 and grade 8 is presented in tables 10.5a and 10.5b. Of all the children who start grade 1, the majority of them, 86 percent, eventually reach grade 5. However this data includes children that repeat grades and eventually move up to reach grade 5. The urban setting has a higher rate of children reaching grade 5, (92 percent), than rural areas, (85 percent). Children from the Northern Region are more likely to reach grade 5, 98 percent, while the Central Region has 86 percent and the Southern Region has 83 percent. Almost all children are more likely to reach grade 5 in Chitipa district with 99 percent and Mzimba and Karonga districts at 98 percent. On the other hand, children in Mangochi are the least likely to reach grade 5 with 62 percent.

As primary schools in the education system of Malawi take eight years from grade 1 to grade 8, it is worthwhile to look at the proportion of children entering in grade 1 who eventually reach grade 8. Of all the children who start grade 1 in Malawi, 71 percent of them eventually reach grade 8. Children in urban areas have a higher chance of reaching grade 8 (83 percent) than children in rural areas (68 percent). The Northern Region has still got the highest proportion of children who eventually reach grade 8 (89 percent) compared to the Central Region (69 percent) and the Southern Region (67 percent). Overall variations among the districts in this proportion range from 95 percent in Rumphi district to 42 percent in Mangochi district.

Table 10.5a

Children reaching grade 5 and grade 8

Percentage of children entering first grade of primary school who eventually reach grade 5 and grade 8, Malawi, 2006

Background characteristic	Percent attending 2nd grade who were in 1st grade last year	Percent attending 3rd grade who were in 2nd grade last year	Percent attending 4th grade who were in 3rd grade last year	Percent attending 5th grade who were in 4th grade last year	Percent who reach grade 5 of those who enter 1st grade	Percent who reach grade 8 of those who enter 1st grade
Malawi						
Total	96	98	96	96	86	71
Urban	99	99	95	99	92	83
Rural	96	97	96	95	85	68
Region						
Northern	99	99	100	100	98	89
Central	96	98	95	96	86	69
Southern	95	97	95	94	83	67
District						
Balaka	94	97	97	97	86	65
Blantyre	99	100	95	97	91	78
Chikwawa	95	97	95	96	84	62
Chiradzulu	95	96	98	88	78	60
Chitipa	100	100	100	99	99	93
Dedza	95	97	94	99	85	77
Dowa	91	99	97	95	82	60
Karonga	99	100	99	100	98	92
Kasungu	99	99	98	96	92	79
Lilongwe	97	99	94	97	87	70
Machinga	98	98	98	96	91	73
Mangochi	90	91	90	84	62	42
Mchinji	96	97	98	96	88	69
Mulanje	98	99	99	98	94	83
Mwanza	96	100	94	93	84	72
Mzimba	100	99	100	100	98	88
Nkhata Bay	98	99	100	98	95	81
Nkhotakota	96	97	98	98	89	76
Nsanje	97	97	91	96	82	69
Ntcheu	93	98	94	91	79	55
Ntchisi	97	99	97	95	88	77
Phalombe	94	98	93	92	79	53
Rumphi	99	99	99	99	96	95
Salima	96	94	91	95	78	63
Thyolo	95	99	97	97	89	73
Zomba	96	96	98	99	90	84

Table 10.5b also shows that girls and boys have almost a similar chance of reaching grade 5 (86 percent and 85 percent respectively). Children whose mothers have secondary or higher education have a 99 percent chance of reaching grade 5 followed by those with mothers who have primary education at 91 percent. With regard to the economic status of the households, children from the highest quintile have a 95 percent chance of reaching grade 5. The middle and the lowest quintiles have 87 percent and those in the second quintile have the lowest chance with 76 percent reaching grade 5.

The pattern observed in the proportion of children reaching grade 8 is more or less the same as the one observed for children reaching grade 5 except that more boys (73 percent) than girls (68 percent) reach grade 8. Children whose mothers have secondary or higher education have a better chance of reaching grade 8 (99 percent) than those whose mothers have primary education (84 percent) and with no education (75 percent). Moreover, children from the richest households have a higher chance of reaching grade 8 (87 percent) than those in the poorest households (63 percent).

Table 10.5b

Children reaching grade 5 and grade 8

Percentage of children entering first grade of primary school who eventually reach grade 5 and grade 8, Malawi, 2006

Background characteristic	Percent attending 2nd grade who were in 1st grade last year	Percent attending 3rd grade who were in 2nd grade last year	Percent attending 4th grade who were in 3rd grade last year	Percent attending 5th grade who were in 4th grade last year	Percent who reach grade 5 of those who enter 1st grade	Percent who reach grade 8 of those who enter 1st grade
Sex						
Male	96	98	96	96	85	73
Female	96	98	96	96	86	68
Mother's education						
None	95	97	95	97	84	75
Primary	97	98	98	99	91	84
Secondary +	100	100	100	100	99	99
Wealth index quintile						
Lowest	97	98	95	97	87	63
Second	95	95	95	89	76	56
Middle	95	98	96	97	87	71
Fourth	94	98	93	95	82	66
Highest	99	99	99	99	95	87

The net primary school completion rate and transition rate to secondary education are presented in tables 10.6a and 10.6b. At the time of the survey, only 9 percent of children aged 13, the primary completion age, were attending the last grade (grade 8) of primary school. This value should be distinguished from the gross primary completion rate, which includes children of any age attending the last grade of primary school.

Children in urban areas (23 percent) have a higher chance of completing grade 8 at 13 years of age, while those in rural settings have only a 7 percent chance. In the Northern Region, about 20 percent of 13-year olds complete grade 8, while in the Central Region this declines to 6 percent, which is lower than the national average (9 percent). Amongst the districts, a high net rate of primary school completion is observed in Blantyre and Mzimba (23 percent). On the other hand, children in Dedza have a less than 1 percent chance of completing grade 8 at 13 years of age. In terms of the relationship between the completion of primary education and mother's education, children whose mothers have been educated at secondary level have a 34 percent chance of reaching the target of completing their primary education at 13 years, while those with mothers who have either primary or no educational background have only 10 and 2 percent chances, respectively (Table 10.6b). An analysis of the relationship between the economic status of households and completion of education shows that children from the highest wealth quintile have a 21 percent chance of completing grade 8 by the age of 13. Less than 8 percent of those in the remaining wealth quintiles complete grade 8 by age 13.

The number of pupils selected for secondary education is determined by the number of grade 1 places in secondary schools provided by both the government and the private sector. Unfortunately, only 40 percent of children who successfully complete the final grade of primary school go on to attend the first grade of secondary school (Table 10.6a). Furthermore, the survey shows that 58 percent of children living in urban areas and 33 percent of children belonging to rural areas are attending the first grade of secondary school. In the Southern Region, it is reported that only 46 percent of pupils attending grade 8 of primary school are selected for secondary schools, 39 percent from the Central Region and 27 percent from the Northern Region. Table 10.6b shows that 41 percent of girls are in the first grade of secondary education as compared to 39 percent of boys. With regard to mothers' academic background, the findings reveal that 59 percent of children whose mothers have some secondary and 50 percent of those whose mothers have primary schooling are in the first grade of secondary school. Relatively more children, 48 percent, in the highest wealth quintile are reported to be in the first grade of secondary school, the highest rate amongst the quintiles.

Table 10.6a

Primary school completion and transition to secondary education

Primary school completion rate and transition rate to secondary education, Malawi, 2006

Background characteristic	Net primary school completion rate	Number of children of primary school completion age	Transition rate to secondary education	Number of children who were in the last grade of primary school the previous year
Malawi				
Total	9.1	3,326	40.0	1,033
Urban	22.9	523	58.1	275
Rural	6.6	2,803	33.4	759
Region				
Northern	19.5	396	27.2	183
Central	5.8	1,483	38.8	397
Southern	9.7	1,447	46.2	453
District				
Balaka	4.6	90	(61.8)	20
Blantyre	23.4	256	66.4	152
Chikwawa	3.8	139	(12.2)	27
Chiradzulu	12.0	65	(59.9)	22
Chitipa	17.3	51	39.0	22
Dedza	0.5	184	*	37
Dowa	5.4	174	23.4	47
Karonga	10.8	64	28.3	23
Kasungu	8.5	134	44.3	41
Lilongwe	8.5	438	38.7	130
Machinga	3.0	83	*	18
Mangochi	3.8	242	(19.9)	64
Mchinji	3.1	150	(25.7)	33
Mulanje	11.3	103	(38.7)	33
Mwanza	14.6	50	(71.0)	20
Mzimba	23.1	187	24.7	98
Nkhata Bay	18.8	46	33.1	19
Nkhotakota	6.5	65	31.0	21
Nsanje	3.4	81	(46.8)	16
Ntcheu	6.2	125	(29.3)	31
Ntchisi	5.9	49	(8.6)	11
Phalombe	8.6	53	(21.0)	13
Rumphi	19.6	48	20.1	21
Salima	4.4	163	(59.3)	47
Thyolo	5.7	138	*	29
Zomba	12.0	147	(31.7)	39

Note: Figures in parantheses are based on 25–49 unweighted cases. An asterisk indicates that an estimate is based on fewer than 25 unweighted cases and has been supressed.

Table 10.6b

Primary school completion and transition to secondary education

Primary school completion rate and transition rate to secondary education, Malawi, 2006

Background characteristic	Net primary school completion rate	Number of children of primary school completion age	Transition rate to secondary education	Number of children who were in the last grade of primary school the previous year
Sex				
Male	7.2	1,611	39.4	614
Female	10.9	1,715	40.9	419
Mother's education				
None	2.1	1,229	32.5	64
Primary	9.9	1,763	49.8	256
Secondary +	33.6	306	58.6	105
Other	0.7	29	43.4	186
Wealth index quintile				
Lowest	3.4	639	31.2	116
Second	3.6	577	36.4	113
Middle	5.4	586	34.8	135
Fourth	7.9	677	33.0	207
Highest	20.7	847	47.7	462

The ratio of girls to boys attending primary and secondary education is provided in tables 10.7a and 10.7b. The tables show the GPI for both primary and secondary school NAR by background characteristics. Overall, GPI for primary NAR is slightly more than one for Malawi, which means that more girls of official primary school age are attending primary school than boys. Primary school GPI is the same for both regional and district levels, except for Chikwawa (0.95) and Nsanje (0.97). GPI for secondary school NAR os 0.97 with substantial urban (0.95) and rural (0.88) differential. Among regions, Northern Region has a high GPI of 1.12 compared to Central and Southern Regions Mchinji is the district with the lowest ratio of girls to boys of official secondary school age in secondary school with a GPI of 0.40, followed by Mangochi (0.49). Dedza, Dowa, Karonga, Kasungu, Nkhotakota, Ntcheu and Zomba districts have more girls than boys of appropriate age attending secondary school.

Regarding mother's education and the wealth status of households, mothers with secondary or higher education are marginally more likely to send boys to primary school. The poorest and poor households prioritise boys' education, sending more boys than girls to secondary school at the correct age. Wealth index seems to have no influence on GPI for primary NAR.

Table 10.7a

Education gender parity

Ratio of girls to boys attending primary education and ratio of girls to boys attending secondary education, Malawi, 2006

Background characteristic	Primary school net attendance ratio (NAR), girls	Primary school net attendance ratio (NAR), boys	Gender parity index (GPI) for primary school NAR	Secondary school net attendance ratio (NAR), girls	Secondary school net attendance ratio (NAR), boys	Gender parity index (GPI) for secondary school NAR
Malawi						
Total	86.9	85.6	1.02	12.9	13.3	0.97
Urban	92.0	93.5	0.98	33.9	35.5	0.95
Rural	86.0	84.3	1.02	7.9	9.0	0.88
Region						
Northern	95.0	94.8	1.00	20.0	17.9	1.12
Central	87.2	85.4	1.02	9.7	10.1	0.96
Southern	84.6	83.5	1.01	14.3	15.1	0.95
District						
Balaka	93.0	91.0	1.02	15.4	14.8	1.04
Blantyre	91.9	91.9	1.00	32.8	34.6	0.95
Chikwawa	75.5	79.3	0.95	6.9	6.5	1.06
Chiradzulu	93.0	91.4	1.02	12.8	13.0	0.98
Chitipa	96.8	96.2	1.01	15.6	14.8	1.05
Dedza	78.9	74.9	1.05	6.8	4.0	1.70
Dowa	90.5	84.6	1.07	7.3	4.8	1.52
Karonga	90.7	91.5	0.99	14.8	8.7	1.70
Kasungu	93.0	91.8	1.01	10.2	7.0	1.46
Lilongwe	87.3	87.3	1.00	12.6	17.4	0.72
Machinga	77.4	75.7	1.02	2.7	4.4	0.61
Mangochi	79.4	78.3	1.01	3.4	7.0	0.49
Mchinji	87.4	85.8	1.02	2.9	7.2	0.40
Mulanje	85.4	82.3	1.04	16.3	15.1	1.08
Mwanza	92.0	83.3	1.10	14.7	19.3	0.76
Mzimba	95.9	95.6	1.00	23.9	20.9	1.14
Nkhata Bay	94.5	94.2	1.00	16.8	22.8	0.74
Nkhotakota	87.2	85.1	1.02	11.7	8.6	1.36
Nsanje	77.8	79.9	0.97	7.7	10.6	0.73
Ntcheu	88.2	87.0	1.01	10.5	7.6	1.38
Ntchisi	88.6	84.9	1.04	3.0	3.0	1.00
Phalombe	80.7	79.5	1.02	5.9	7.4	0.80
Rumphi	97.3	95.8	1.02	19.6	19.8	0.99
Salima	86.9	87.0	1.00	12.4	14.6	0.85
Thyolo	86.4	84.4	1.02	9.3	11.3	0.82
Zomba	88.3	85.9	1.03	15.1	10.6	1.42

Table 10.7b

Education gender parity

Ratio of girls to boys attending primary education and ratio of girls to boys attending secondary education, Malawi, 2006

Background characteristic	Primary school net attendance ratio (NAR), girls	Primary school net attendance ratio (NAR), boys	Gender parity index (GPI) for primary school NAR	Secondary school net attendance ratio (NAR), girls	Secondary school net attendance ratio (NAR), boys	Gender parity index (GPI) for secondary school NAR
Mother's education						
None	78.4	77.7	1.01	4.0	2.7	1.48
Primary	91.1	89.2	1.02	13.8	10.5	1.31
Secondary +	95.2	97.1	0.98	65.8	52.3	1.26
Wealth index quintile						
Lowest	82.0	79.5	1.03	2.1	5.2	0.40
Second	83.7	81.8	1.02	3.6	7.0	0.51
Middle	86.3	84.6	1.02	5.8	6.6	0.88
Fourth	87.8	87.4	1.00	10.6	8.8	1.20
Highest	93.9	93.9	1.00	32.6	31.1	1.05

10.2 ADULT LITERACY

One of the WFFC goals is to assure adult literacy. Adult literacy is also an MDG indicator, relating to both men and women. In MICS 2006, literacy was assessed by the ability of men and women to read a short simple statement and on school attendance. Rates of literacy are presented in tables 10.8a and 10.8b.

Table 10.8a below shows that the total literacy rate is 69 percent. The results also show that the literacy rate for women is 67 percent and for men, 77 percent (Figure 10.3). This is an improvement over the Demographic and Health Survey 2000 results, where the same rates were 49 and 72 percent respectively.

Urban respondents have higher level of literacy (86 percent for men and 85 percent for women) than rural respondents (75 percent for men and 63 percent for women). For the total adult literacy rate, the Northern Region has the highest literacy rate (76 percent) compared to the Southern and Central Regions (69 and 68 percent respectively).

In terms of districts, Blantyre and Chitipa have rates above 80 percent, while Nkhata Bay, Mzimba, Chiradzulu, Balaka, Zomba, Rumphi, Lilongwe and Kasungu all have rates above 70 percent. On the other hand, Dedza district has the lowest adult literacy rate (53 percent). Map 10.2 presents female literacy rates by district.

Adult literacy rates for age groups 15–19 and 20–24 are 73 percent and 66 percent respectively (Table 10.8b). The economic position of respondents, once more, is a significant factor, with 87 percent of those in the highest wealth quintile being literate compared to 55 percent of those in the lowest quintile.

Figure 10.3
Adult literacy, Malawi, 2006

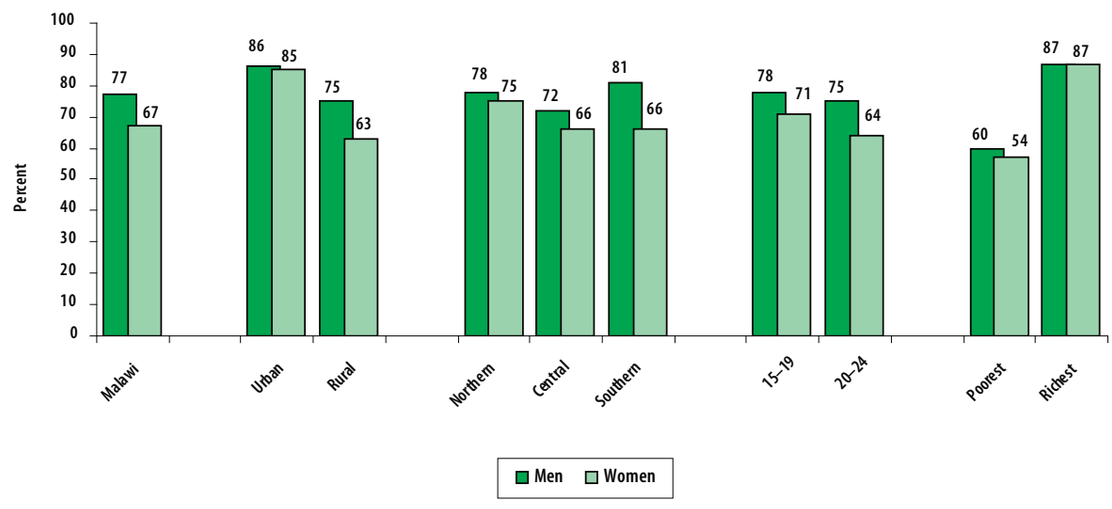


Table 10.8a

Adult literacy

Percentage of women and men aged 15–24 years that are literate, Malawi, 2006

Background characteristic	Women		Men		Total	
	Percent	No. aged 15–24	Percent	No. aged 15–24	Percent	No. aged 15–24
Malawi						
Total	67.3	11,551	76.5	3,031	69.2	14,582
Urban	84.8	2,237	85.6	557	85.0	2,794
Rural	63.1	9,314	74.5	2,474	65.5	11,788
Region						
Northern	75.0	1,221	77.5	350	75.6	1,571
Central	66.4	5,221	71.9	1,334	67.5	6,555
Southern	66.4	5,109	80.8	1,367	69.4	6,456
District						
Balaka	74.7	247	80.8	84	76.2	331
Blantyre	82.9	1,015	95.0	281	85.5	1,296
Chikwawa	50.1	375	78.6	123	57.1	498
Chiradzulu	75.0	223	82.9	62	76.7	285
Chitipa	79.6	137	86.7	29	80.8	166
Dedza	50.7	703	64.4	152	53.1	855
Dowa	67.7	474	75.2	132	69.3	606
Karonga	69.2	258	66.5	65	68.7	323
Kasungu	72.4	486	70.4	161	71.9	647
Lilongwe	73.7	1,931	75.6	461	74.1	2,392
Machinga	63.1	437	64.0	57	63.2	494
Mangochi	53.9	865	73.2	227	57.9	1,092
Mchinji	62.2	458	70.7	117	63.9	575
Mulanje	63.4	384	78.5	81	66.0	465
Mwanza	65.4	214	77.7	66	68.3	280
Mzimba	76.6	548	78.3	177	77.0	725
Nkhata Bay	74.6	141	88.3	39	77.6	180
Nkhotakota	61.2	215	62.8	50	61.5	265
Nsanje	49.0	177	80.3	55	56.4	232
Ntcheu	65.7	377	67.9	97	66.2	474
Ntchisi	64.8	134	65.8	47	65.1	181
Phalombe	62.1	217	75.2	56	64.8	273
Rumphi	75.5	137	74.9	40	75.4	177
Salima	58.8	443	76.6	117	62.5	560
Thyolo	65.6	499	78.4	103	67.8	602
Zomba	74.4	455	79.7	152	75.7	607

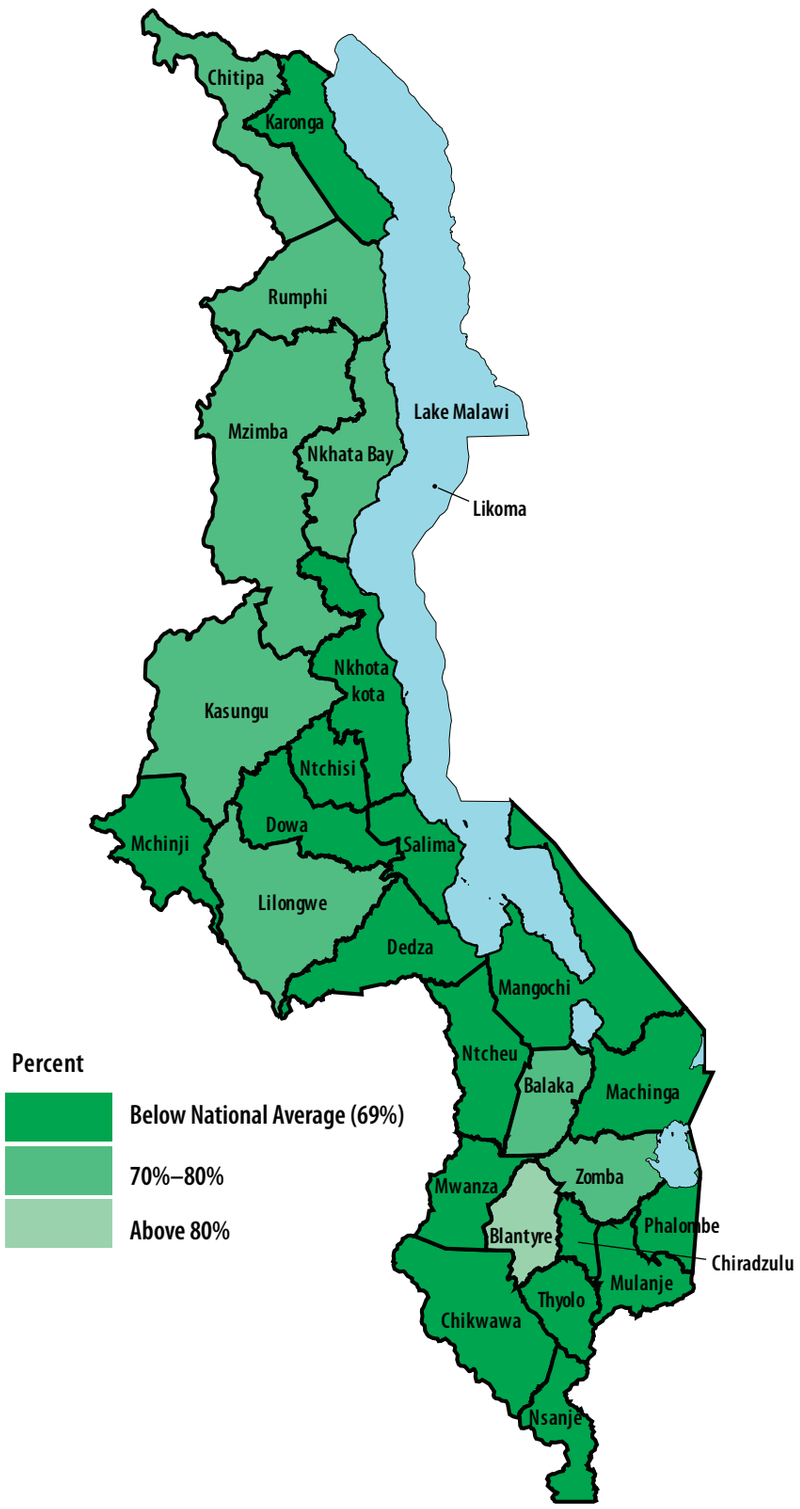
Table 10.8b

Adult literacy

Percentage of women and men aged 15–24 years that are literate, Malawi, 2006

Background characteristic	Women		Men		Total	
	Percent	No. aged 15–24	Percent	No. aged 15–24	Percent	No. aged 15–24
Age						
15–19	71.0	5,124	78.1	1,566	72.7	6,690
20–24	64.3	6,427	74.9	1,465	66.3	7,892
Wealth index quintile						
Lowest	54.0	2,207	60.4	484	55.2	2,691
Second	57.4	2,183	73.8	520	60.6	2,703
Middle	62.4	2,231	75.2	600	65.1	2,831
Fourth	70.7	2,134	78.8	640	72.6	2,774
Highest	87.0	2,796	87.4	787	87.1	3,583

Map 10.2
Adult literacy - Women, Malawi, 2006



11 CHILD PROTECTION

SOPHIE KANG'OMA

11.1 CHILD LABOUR

Article 32 of the Convention on the Rights of the Child states: "State Parties recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development..." WFFC mentions nine strategies to combat child labour and the MDGs call for the protection of children against exploitation. A number of questions in the MICS 2006 survey questionnaire address the issue of child labour, that is, children 5–14 years of age involved in labour activities. A child is considered to be involved in child labour at the time of the survey if during the week preceding the survey the child:

- Aged 5–11 was involved in at least one hour of economic work or 28 hours of domestic work per week.
- Aged 12–14 was involved in at least 14 hours of economic work or 28 hours of domestic work per week.

This definition allows the differentiation of child labour from child work, to identify types of work that should be eliminated. As such, the estimate provided here presents the minimum prevalence of child labour, since some children may be involved in hazardous labour activities for a number of hours that could be less than the numbers specified in the criteria explained before.

There are different types of work that a child might be asked to do, whether at home or outside the home, paid or unpaid. The survey asked mothers/caretakers if the child did any type of work during the week preceding the survey. Tables 11.1a and 11.1b present the results on child labour by the type of work performed and indicates whether the work was done at home or outside of the home.

The findings show that 26 percent of children aged 5–14 in Malawi are involved in child labour. Fifteen percent of children reported doing family business while 5 percent were engaged in household chores. Outside of the household, 8 percent reported doing unpaid work and 3 percent paid work.

There is no variation in the involvement of children in child labour by sex. The results also reveal a small variation in the engagement of children in types of work by sex. Male children are more likely to work in a family business (16 percent) than female children (14 percent). As culturally anticipated, a female child is more likely to perform household chores (6 percent) than a male child (4 percent).

Child labour is more prevalent in the Northern Region than the other regions. One out of every three children is involved in child labour in the Northern Region. In the Southern Region the same is true for about one out of every four children and in the Central Region, about one out of every five. The Northern Region has the highest percentage of children engaged in all types of work, apart from paid work, which involves the least amount of children.

Table 11.1a

Child labour

Percentage of children aged 5–14 years who are involved in child labour activities by type of work, Malawi, 2006

Background characteristic	Working outside household		Household chores for 28+ hours/ week	Working for family business	Total child labour	Number of children aged 5–14 years
	Paid work	Unpaid work				
Malawi						
Total	2.6	8.2	4.6	14.8	25.7	40,326
Urban	1.2	4.4	3.8	5.8	13.9	5,609
Rural	2.9	8.8	4.8	16.3	27.7	34,717
Region						
Northern	0.8	10.0	6.7	19.9	32.7	4,470
Central	2.3	6.7	4.4	13.7	23.0	17,664
Southern	3.4	9.2	4.3	14.7	26.7	18,192
District						
Balaka	1.1	3.0	1.4	11.4	16.0	969
Blantyre	2.3	2.4	3.0	7.2	13.7	2,893
Chikwawa	5.4	12.7	6.1	23.1	36.5	1,570
Chiradzulu	3.8	4.0	0.5	12.4	19.3	713
Chitipa	1.9	3.9	6.9	12.6	22.0	547
Dedza	0.9	0.5	1.1	10.2	12.4	2,364
Dowa	3.7	8.0	6.6	14.0	27.6	1,742
Karonga	0.5	3.1	3.3	35.4	38.7	866
Kasungu	1.3	7.3	7.6	17.7	29.6	1,721
Lilongwe	2.1	6.1	1.1	8.3	15.9	5,983
Machinga	2.3	21.3	10.1	22.5	45.4	1,477
Mangochi	3.7	2.4	1.2	9.2	16.1	3,543
Mchinji	2.2	6.8	2.1	23.3	29.4	1,547
Mulanje	1.1	2.1	0.4	16.9	20.3	1,327
Mwanza	3.2	35.6	18.3	40.8	69.0	695
Mzimba	0.4	17.6	7.5	15.9	35.3	2,037
Nkhata Bay	0.6	2.4	0.6	25.0	27.1	524
Nkhotakota	2.9	2.0	7.0	6.3	15.9	715
Nsanje	2.6	13.6	1.3	11.9	26.4	734
Ntcheu	2.8	12.3	6.4	17.5	32.7	1,409
Ntchisi	7.3	7.2	7.3	24.1	38.6	519
Phalombe	16.5	13.7	22.2	22.3	52.4	837
Rumphi	1.9	5.9	15.7	12.1	29.4	496
Salima	2.3	12.6	13.3	21.9	35.8	1,665
Thyolo	1.6	3.8	0.3	10.0	14.5	1,710
Zomba	2.6	23.4	3.6	16.5	42.1	1,725

Although child labour prevalence is high in the Northern Region, among districts child labour is highly prevalent in Mwanza (69 percent) and Phalombe (52 percent) districts which are in the Southern Region. Child labour is also significantly prevalent in Machinga, Zomba, Karonga, Ntchisi, Chikwawa, Salima and Mzimba and ranges from 35 percent to 46 percent. Dedza, Blantyre and Thyolo have the lowest percent of children involved in child labour (less than 15 percent) (Map 11.1).

Table 11.1b

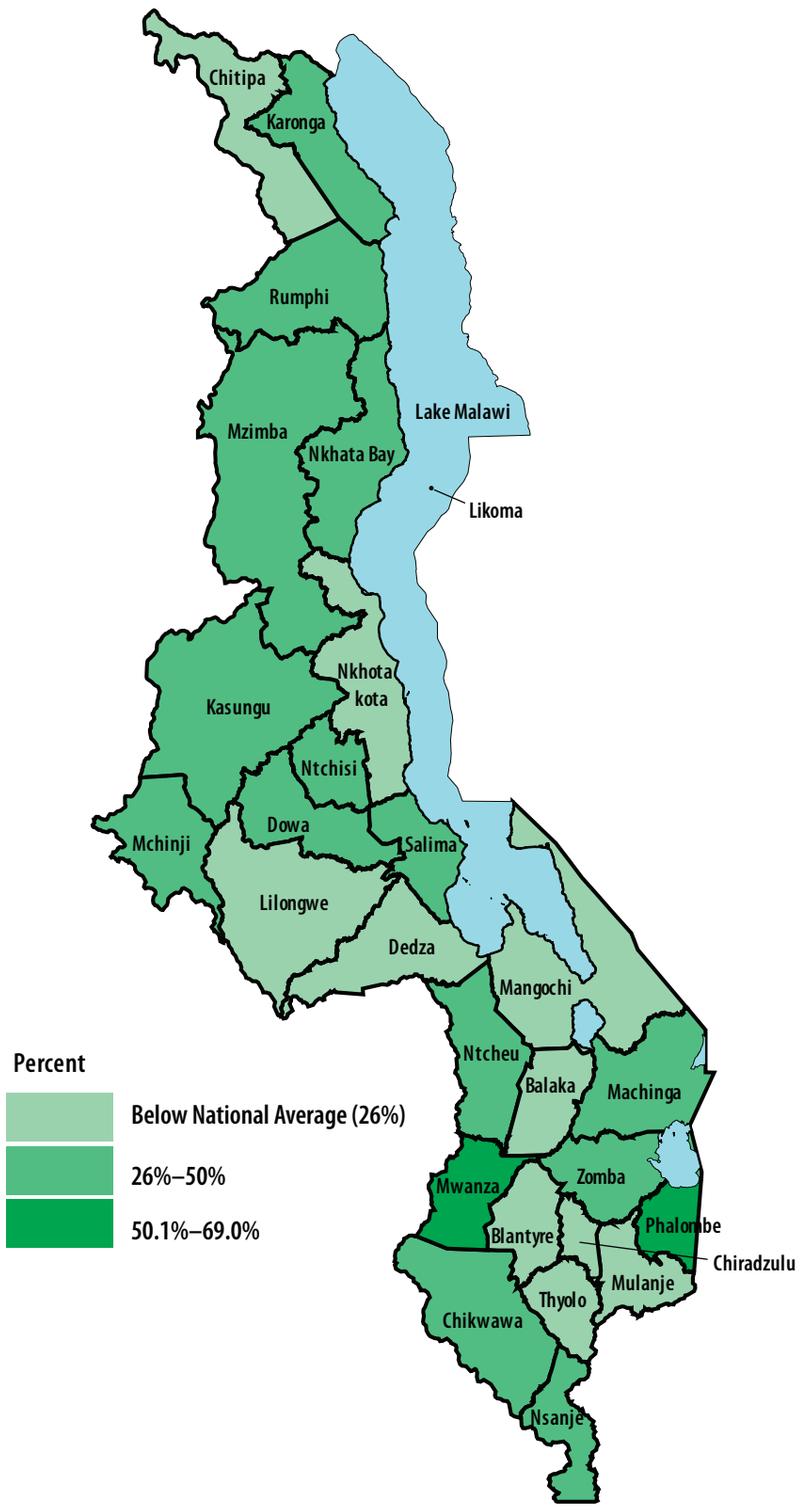
Child labour

Percentage of children aged 5–14 years who are involved in child labour activities by type of work, Malawi, 2006

Background characteristic	Working outside household		Household chores for 28+ hours/ week	Working for family business	Total child labour	Number of children aged 5–14 years
	Paid work	Unpaid work				
Sex						
Male	2.8	7.1	3.6	16.2	25.3	19,633
Female	2.4	9.2	5.6	13.6	26.2	20,686
Missing	2.4	0.0	15.5	17.9	17.9	7
Age						
5–11 years	2.8	10.4	2.7	16.7	27.5	29,151
12–14 years	2.1	2.5	9.6	10.1	21.2	11,175
School participation						
Yes	2.7	8.8	5.1	16.3	27.8	32,047
No	2.3	6.0	2.9	9.1	17.7	8,279
Mother's education						
None	3.3	7.7	4.5	16.4	26.6	14,195
Primary	2.5	8.8	4.7	14.7	26.3	22,751
Secondary +	0.7	5.9	4.6	8.1	17.3	3,158
Other	3.5	10.2	5.9	21.1	34.8	223
Wealth index quintile						
Lowest	2.8	7.0	4.1	17.1	26.3	8,570
Second	3.4	10.5	5.0	16.6	29.8	7,979
Middle	3.0	9.9	4.8	17.1	29.3	7,477
Fourth	3.0	8.6	5.0	14.2	26.2	7,685
Highest	1.1	5.5	4.2	9.6	18.0	8,615

Map 11.1

Proportion of children 5-14 years performing child labour, Malawi, 2006

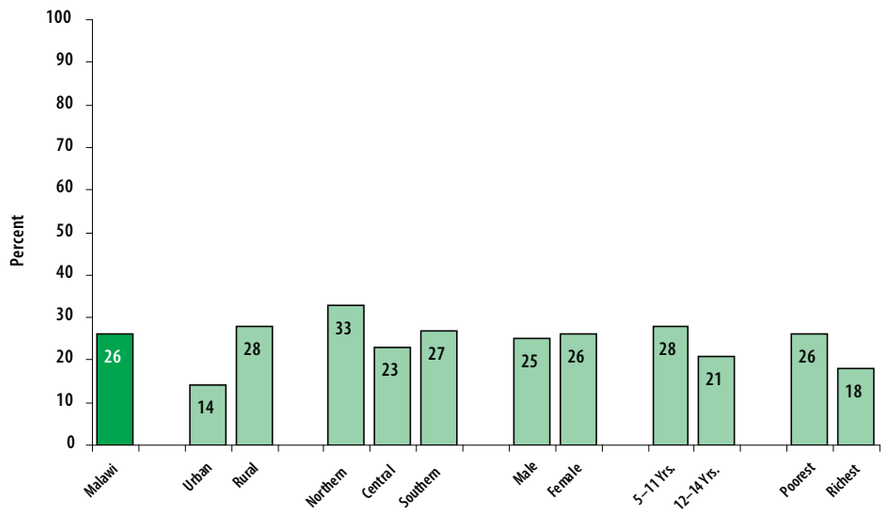


The survey further reveals that child labour is more common in rural (28 percent) than urban areas (14 percent). Yet in both, the majority of children are engaged in unpaid rather than in paid work.

The results indicate that child labour prevalence declines as the age of the child increases. Children aged 5–11 are more likely to be involved in child labour (28 percent) than those aged 12–24 (21 percent). Children aged 5–11 are more likely to be engaged in a family business and doing unpaid work outside of the home, while older children often work in a family business and perform household chores. Surprisingly, school participation increases the likelihood of child labour. Twenty-eight percent of children who participate in school are involved in child labour compared to 18 percent of those who have never participated in school.

Another factor that influences the prevalence of child labour is the mother's educational status. The results show that children whose mothers have secondary or higher education are less likely to be involved in child labour (17 percent) than those whose mothers either no education, or have education at primary level (27 and 26 percent respectively). Observing the wealth status of the household, the results show that children in the wealthiest households are less likely (18 percent) to be involved in child labour than their counterparts (Figure 11.1).

Figure 11.1
Child labour, Malawi, 2006



Tables 11.2a and 11.2b present the percentage of children classified as student labourers, or as labourer students, by background characteristics. Student labourers are those children that are attending school while involved in child labour activities at the time of the survey. The survey findings show that amongst children aged 5–14 years attending school, 28 percent are involved in child labour. On the other hand, out of the 26 percent of children classified as child labourers, the majority are also attending school (86 percent).

These results also reveal no significant difference in rates of school attendance of children involved in labour, by category of sex, nor in the involvement of students in child labour. The Northern Region has the highest percentage of child labourers (33 percent), child labourers in school (93 percent) and student labourers (35 percent) than the other regions. At district level, districts such as Chikwawa, Dedza, Machinga, Mangochi and Nsanje have a relatively lower percentage of labourer students (ranges from 74 to 79 percent) than the other districts. These districts also have lower percentages of children aged 5–14 in school than the other districts. Mwanza district has an extremely high percentage of student labourers (71 percent) and the lowest rate of student labour occurs in Blantyre and Dedza (14 percent). Student labour is less common in urban (14 percent) than rural areas (30 percent). Urban labourers who are in school are 5 percent points higher than their counterparts in rural areas.

Table 11.2a

Labourer students and student labourers

Percentage of children aged 5–14 years who are labourer students and student labourers, Malawi, 2006

Background characteristic	Percentage of children in child labour	Percentage of children attending school	Number of children aged 5–14	Percentage of child labourers who are also attending school	Number of child labourers aged 5–14	Percentage of students who are also involved in child labour	Number of students aged 5–14
Malawi							
Total	25.7	79.5	40,326	85.9	10,384	27.8	32,047
Urban	13.9	89.1	5,609	90.6	781	14.1	5,000
Rural	27.7	77.9	34,717	85.5	9,603	30.4	27,047
Region							
Northern	32.7	86.2	4,470	93.1	1,462	35.3	3,854
Central	23.0	78.5	17,664	87.6	4,061	25.6	13,869
Southern	26.7	78.7	18,192	82.4	4,861	27.9	14,324
District							
Balaka	16.0	85.1	969	92.4	155	17.4	825
Blantyre	13.7	89.2	2,893	88.9	398	13.7	2,582
Chikwawa	36.5	70.4	1,570	79.3	573	41.2	1,105
Chiradzulu	19.3	86.2	713	92.6	137	20.7	615
Chitipa	22.0	88.3	547	94.3	120	23.5	483
Dedza	12.4	66.7	2,364	77.1	292	14.3	1,577
Dowa	27.6	79.9	1,742	89.5	481	30.9	1,391
Karonga	38.7	80.3	866	88.9	335	42.9	695
Kasungu	29.6	84.3	1,721	92.7	509	32.5	1,451
Lilongwe	15.9	79.6	5,983	86.5	954	17.3	4,764
Machinga	45.4	68.6	1,477	74.4	671	49.3	1,012
Mangochi	16.1	75.4	3,543	78.3	570	16.7	2,672
Mchinji	29.4	78.3	1,547	87.6	455	32.9	1,212
Mulanje	20.3	83.7	1,327	91.1	270	22.1	1,110
Mwanza	69.0	82.6	695	85.4	479	71.3	574
Mzimba	35.3	87.3	2,037	94.2	718	38.0	1,778
Nkhata Bay	27.1	86.2	524	94.2	142	29.7	452
Nkhotakota	15.9	80.1	715	87.2	114	17.4	572
Nsanje	26.4	70.9	734	75.1	193	27.9	520
Ntcheu	32.7	80.8	1,409	88.8	460	35.9	1,139
Ntchisi	38.6	79.5	519	85.4	200	41.5	412
Phalombe	52.4	74.9	837	81.9	439	57.3	627
Rumphi	29.4	89.9	496	95.5	146	31.2	446
Salima	35.8	81.1	1,665	88.3	595	38.9	1,350
Thyolo	14.5	78.4	1,710	86.5	249	16.0	1,341
Zomba	42.1	77.8	1,725	83.2	727	45.1	1,341

Table 11.2b

Labourer students and student labourers

Percentage of children aged 5–14 years who are labourer students and student labourers, Malawi, 2006

Background characteristic	Percentage of children in child labour	Percentage of children attending school	Number of children aged 5–14	Percentage of child labourers who are also attending school	Number of child labourers aged 5–14	Percentage of students who are also involved in child labour	Number of students aged 5–14
Sex							
Male	25.3	77.9	19,633	84.5	4,968	27.5	15,288
Female	26.2	81.0	20,686	87.2	5,414	28.2	16,753
Missing	17.9	86.9	7	86.8	1	17.8	6
Age							
5–11 years	27.5	75.8	29,151	86.0	8,014	31.2	22,110
12–14 years	21.2	88.9	11,175	85.4	2,370	20.4	9,937
Mother's education							
None	26.6	71.1	14,195	79.3	3,774	29.7	10,095
Primary	26.3	82.9	22,751	89.3	5,986	28.4	18,852
Secondary +	17.3	92.3	3,158	93.6	545	17.5	2,914
Other	34.8	84.1	221	92.0	77	38.1	187
Wealth index quintile							
Lowest	26.3	72.5	8,570	82.1	2,252	29.8	6,214
Second	29.8	75.2	7,979	83.7	2,380	33.2	6,003
Middle	29.3	77.5	7,477	84.9	2,191	32.1	5,792
Fourth	26.2	82.2	7,685	88.8	2,013	28.3	6,320
Highest	18.0	89.6	8,615	92.6	1,548	18.6	7,718

A child's age plays an important role in determining his/her involvement in student labour. Thirty-one percent of children in the younger age group (5–11 years) are student labourers compared to 20 percent of those in the older group (12–14 years). Child labourers whose mothers have secondary or higher education have higher chances of being sent to school (94 percent) as compared to children whose mother's have primary education or none. The percentage of child labourers who attend school increases with the increasing education of the mother, while the percentage of students who are involved in child labour decreases as the mother's education increases. Almost all child labourers in the wealthiest households are also attending school (93 percent) compared to 82 percent in poorest households.

11.2 EARLY MARRIAGE AND SPOUSAL AGE DIFFERENCE

Marriage before the age of 18 is a reality for many young girls. According to UNICEF estimates, over 60 million women aged 20–24 worldwide were married / in union before the age of 18. Factors that influence child marriage rates include: the state of the country's civil registration system, which provides proof of age for children; the existence of an adequate legislative framework, with an accompanying enforcement mechanism to address cases of child marriage; and the existence of customary or religious laws that condone the practice.

In many parts of the world, parents encourage the marriage of their daughters while they are still children in the hope that marriage will benefit them both financially and socially, while also relieving the family's financial burdens. In actual fact, child marriage is a violation of human rights, compromising the development of girls and often resulting in early pregnancy and social isolation, affording little education and poor vocational training, all of which reinforces the gendered nature of poverty. The right to 'free and full' consent to a marriage is recognized in the Universal Declaration of Human Rights, with the recognition that consent cannot be 'free and full' when one of the parties involved is not sufficiently mature to make an informed decision about a life partner. The Convention on the Elimination of all Forms of Discrimination against Women mentions the right to protection from child marriage in article 16, which states: "The betrothal and the marriage of a child shall have no legal effect, and all necessary action, including legislation, shall be taken to specify a minimum age for marriage..." While marriage is not considered directly in the Convention on the Rights of the Child, child marriage is linked to other rights – such as the right to express views freely, the right to protection from all forms of abuse and the right to be protected from harmful traditional practices – and is frequently addressed by the Committee on the Rights of the Child. Other international agreements related to child marriage are the Convention on Consent to Marriage, Minimum Age for Marriage and Registration of Marriages and the African Charter on the Rights and Welfare of the Child and the Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa. Child marriage is also identified by the Pan-African Forum against the Sexual Exploitation of Children as a type of commercial sexual exploitation of children.

Young married girls are a unique, though often invisible, group. Required to perform heavy amounts of domestic work, under pressure to demonstrate fertility, and responsible for raising children while still children themselves, married girls and child mothers face constrained decision-making and reduced life choices. Boys are also affected by child marriage, but the issue impacts on girls in far larger numbers, with more intensity. Cohabitation, when a couple lives together as if married, raises the same human rights concerns as marriage. Where a girl lives with a man and takes on the role of caregiver for him, the assumption is often that she has become an adult woman, even if she has not yet reached the age of 18. Additional concerns due to the informality of the relationship, such as inheritance, citizenship and social recognition, render girls in informal unions vulnerable in different ways to those who are in formally recognized marriages.

Research suggests that many factors interact to place a child at risk of marriage. Poverty, protection, family honour and the provision of stability during unstable social periods are all considered as significant factors in determining a girl's risk of becoming married while still a child. Women who

marry at a young age are more likely to believe that it is sometimes acceptable for a husband to beat his wife and are more likely to experience domestic violence. The age gap between partners is thought to contribute to these abusive power dynamics and to increase the risk of untimely widowhood.

Closely related to the issue of child marriage is the age at which girls become sexually active. Women who are married before the age of 18 tend to have more children than those who marry later in life. Pregnancy related deaths are known to be a leading cause of mortality for both married and unmarried girls between the ages of 15 and 19, particularly among the youngest of this cohort. There is evidence to suggest that girls who marry at young ages are more likely to marry older men, placing them at increased risk of HIV infection. Parents seek to marry off their girls to protect their honour and men often seek younger women as wives as a means to avoid choosing a wife who might already be infected. The demand for this young wife to reproduce and the power imbalance resulting from the age differential lead to very low condom use among such couples.

11.2.1 Early Marriage

Two indicators of early marriage are the percentage of women and men who marry before 15 years of age and the percentage of those who marry before 18 years. Tables 11.3a and 11.3b present, by background characteristics, the percentages of women and men who marry before reaching these ages, as well as data on those currently in union. Ten percent of women aged 15–49 report to be married by the age of 15 and 50 percent of the women aged 20–49 marry before the age of 18 (Figure 11.2). One in every three teenagers is married or in union. Early marriage is less common for men than it is for women. Only 1 percent of men marry before reaching age 15 and 7 percent of men aged 20–49 marry before reaching 18 years. Among men aged 15–19, only 2 percent are currently married or in union, as compared to 33 percent of women within the same age group.

Early marriages are less common in the Central Region compared to the other regions. Teenage marriages (15–19 currently married/in union) for both men and women are much higher in the Northern Region (4 percent and 40 percent respectively) than the Southern (2 percent and 35 percent respectively) and Central Regions (1 percent and 30 percent respectively). At district level, marriages among women before the age of 15 are high in Phalombe (18 percent), Machinga and Karonga (17 percent) and Dedza has the lowest with 6 percent. The rate of marriage before the age of 18 is high in Machinga (65 percent) and Phalombe and Balaka (60 percent) and lowest in Ntchisi and Lilongwe (42 percent). Phalombe experiences high early marriages for both ages regardless of sex. The survey results also show that Phalombe has the lowest primary school net attendance ratio for both sexes and is also one of the districts with a low secondary school net attendance ratio compared to other districts (see chapter 10). Map 11.2 shows percentage of women aged 15–19 currently married or in union by district. Urban women avoid getting married at an early age compared to their rural counterparts. Forty percent of urban women marry before age 18 compared to 52 percent of rural women aged 20–49 years. There is no substantial urban-rural difference in the percentage of men who marry before ages 15 or 18.

Table 11.3a

Early marriage

Percentage of women and men aged 15–49 in marriage or union before their 15th birthday, percentage of women and men aged 20–49 in marriage or union before their 18th birthday, and the percentage of women and men aged 15–19 currently married or in union, Malawi, 2006

Background characteristic	Married/in union before 15th birthday				Married/in union before 18th birthday				15–19 currently married/ in union			
	Women		Men		Women		Men		Women		Men	
	Percent	Number aged 15–49 years	Percent	Number aged 15–49 years	Percent	Number aged 20–49 years	Percent	Number aged 20–49 years	Percent	Number aged 15–19 years	Percent	Number aged 15–19 years
Malawi												
Total	10.3	26,259	1.1	7,636	49.6	7,636	7.1	6,070	33.3	5,124	2.1	1,566
Urban	7.5	4,624	0.5	1,466	39.6	1,466	5.5	1,172	26.9	1,013	1.3	293
Rural	11.0	21,635	1.2	6,170	51.6	6,170	7.5	4,898	34.9	4,110	2.3	1,273
Region												
Northern	10.8	2,772	1.2	847	52.6	847	4.0	670	39.9	583	4.2	177
Central	8.5	11,665	0.9	3,490	45.7	3,490	6.3	2,828	29.6	2,240	1.3	662
Southern	12.1	11,822	1.2	3,299	52.7	3,299	8.9	2,572	35.3	2,300	2.4	726
District												
Balaka	13.9	571	1.1	171	59.8	171	7.6	131	34.2	139	1.3	39
Blantyre	8.8	2,209	0.2	671	42.7	671	6.1	505	24.9	482	1.8	166
Chikwawa	10.2	885	1.3	299	51.1	299	7.3	232	39.7	161	2.9	67
Chiradzulu	10.6	507	0.4	126	53.1	126	12.0	93	38.9	98	1.4	34
Chitipa	12.9	312	2.0	83	57.4	83	9.2	70	40.4	61	(3.6)	14
Dedza	5.5	1,521	1.0	381	46.7	381	6.2	308	24.8	345	(0.0)	73
Dowa	8.8	1,135	1.0	349	44.8	349	7.7	283	17.4	217	0.0	66
Karonga	16.7	545	0.6	160	49.9	160	5.1	123	40.0	125	3.1	36
Kasungu	10.5	1,079	2.3	375	51.2	375	6.5	291	41.3	211	2.6	84
Lilongwe	7.8	4,252	0.2	1,343	41.9	1,343	4.8	1,128	32.4	748	0.0	215
Machinga	16.8	985	2.5	226	64.5	226	11.8	208	40.9	211	*	19
Mangochi	14.2	2,206	0.3	567	54.5	567	9.5	433	36.7	374	0.2	135
Mchinji	10.2	956	1.6	304	51.2	304	7.4	246	28.4	179	2.0	58
Mulanje	11.0	886	2.8	243	48.7	243	8.0	201	38.5	181	7.8	42
Mwanza	7.4	467	0.5	133	50.6	133	4.4	95	24.0	92	2.9	38
Mzimba	8.0	1,264	0.7	413	52.7	413	1.9	323	39.5	279	3.6	90
Nkhata Bay	11.8	326	4.0	96	51.7	96	5.4	77	38.8	54	11.3	19
Nkhotakota	10.8	465	1.4	130	47.1	130	7.5	102	25.7	95	5.1	27
Nsanje	10.1	422	0.6	120	51.2	120	6.4	89	40.3	85	0.0	32
Ntcheu	8.6	904	0.1	215	49.6	215	5.6	168	35.9	167	0.0	47
Ntchisi	8.8	324	3.6	107	42.3	107	11.9	84	27.5	65	0.0	23
Phalombe	18.2	512	1.0	139	60.3	139	17.8	112	48.4	85	(9.6)	27
Rumphi	8.7	324	0.5	95	53.0	95	5.0	76	42.0	65	2.8	19
Salima	10.1	1,028	0.9	287	47.7	287	8.8	217	27.1	213	5.2	71
Thyolo	13.7	1,101	4.5	268	54.4	268	10.9	221	47.2	181	(2.1)	47
Zomba	10.4	1,072	1.4	335	55.3	335	9.6	254	31.4	211	4.0	81

Note: Figures in parantheses are based on 25–49 unweighted cases. An asterisk indicates that an estimate is based on fewer than 25 unweighted cases and has been supressed

Table 11.3b

Early marriage

Percentage of women and men aged 15–49 in marriage or union before their 15th birthday, percentage of women and men aged 20–49 in marriage or union before their 18th birthday, and the percentage of women and men aged 15–19 currently married or in union, Malawi, 2006

Background characteristic	Married/in union before 15th birthday				Married/in union before 18th birthday				15–19 currently married/ in union			
	Women		Men		Women		Men		Women		Men	
	Percent	Number aged 15–49 years	Percent	Number aged 15–49 years	Percent	Number aged 20–49 years	Percent	Number aged 20–49 years	Percent	Number aged 15–19 years	Percent	Number aged 15–19 years
Age												
15–19	5.9	5,124	0.4	1,566	na	na	na	na	33.3	5,124	2.1	1,566
20–24	9.3	6,427	0.6	1,465	50.2	6,427	8.3	1,465	na	na	na	na
25–29	11.7	5,088	1.1	1,439	48.6	5,088	5.9	1,439	na	na	na	na
30–34	11.9	3,680	1.8	1,143	49.9	3,680	8.4	1,143	na	na	na	na
35–39	13.9	2,550	2.3	825	51.0	2,550	6.8	825	na	na	na	na
40–44	13.5	1,900	0.9	668	52.7	1,900	7.5	668	na	na	na	na
45–49	11.3	1,490	1.1	531	43.5	1,490	4.9	531	na	na	na	na
Woman's education												
None	16.5	5,463	2.7	691	55.8	5,211	12.4	661	53.8	252	6.4	30
Primary	10.2	16,758	1.2	4,958	54.3	12,833	8.3	3,736	35.8	3,925	2.4	1,221
Secondary +	2.4	3,960	0.3	1,979	18.3	3,015	2.5	1,666	17.8	945	0.8	314
Other	14.1	78	0.0	8	61.2	76	9.5	7	0.0	1	0.0	1
Wealth index quintile												
Lowest	11.1	5,161	1.0	1,253	52.6	4,203	5.8	1,013	36.2	959	1.5	240
Second	11.0	5,022	1.2	1,331	52.1	4,121	8.1	1,076	41.1	901	2.3	256
Middle	11.6	5,058	1.4	1,566	53.4	4,130	9.3	1,266	42.0	928	3.1	300
Fourth	10.8	4,915	1.2	1,568	51.6	3,955	8.0	1,241	34.1	960	2.8	327
Highest	7.7	6,103	0.7	1,917	39.7	4,727	4.9	1,474	19.9	1,376	1.2	443

na: not applicable

The survey further shows that early marriage, particularly marriage before the age of 15, was more accepted 25 to 20 years ago, affecting those currently in the age group 35–44 years. In carefully observing the data, there is an indication that early marriages were not as common 30 years ago compared to 20 or 25 years ago and have been on the decline in recent years. The data further shows that the rate of marriage before age 18, by age of the woman, has a similar pattern to that of marriage before age 15, and that it is more prevalent amongst those in the 20–24 age group, where half of these women (50 percent) were married before age 18. This is above the national average. Marriage before age 15 is reported to be high among men aged 30–34 years (2.3 percent). The rate has been declining in recent years, meaning that younger men are less likely to rush into marriage.

The educational level of a woman plays a pivotal role in determining the likelihood of early marriage. The percentage of female teenage marriages before the ages of 15 and 18 declines with a woman's increasing level of education. Only 2 percent of women with secondary education are married by

Map 11.2

Proportion of women aged 15-19 years currently married/in union, Malawi, 2006

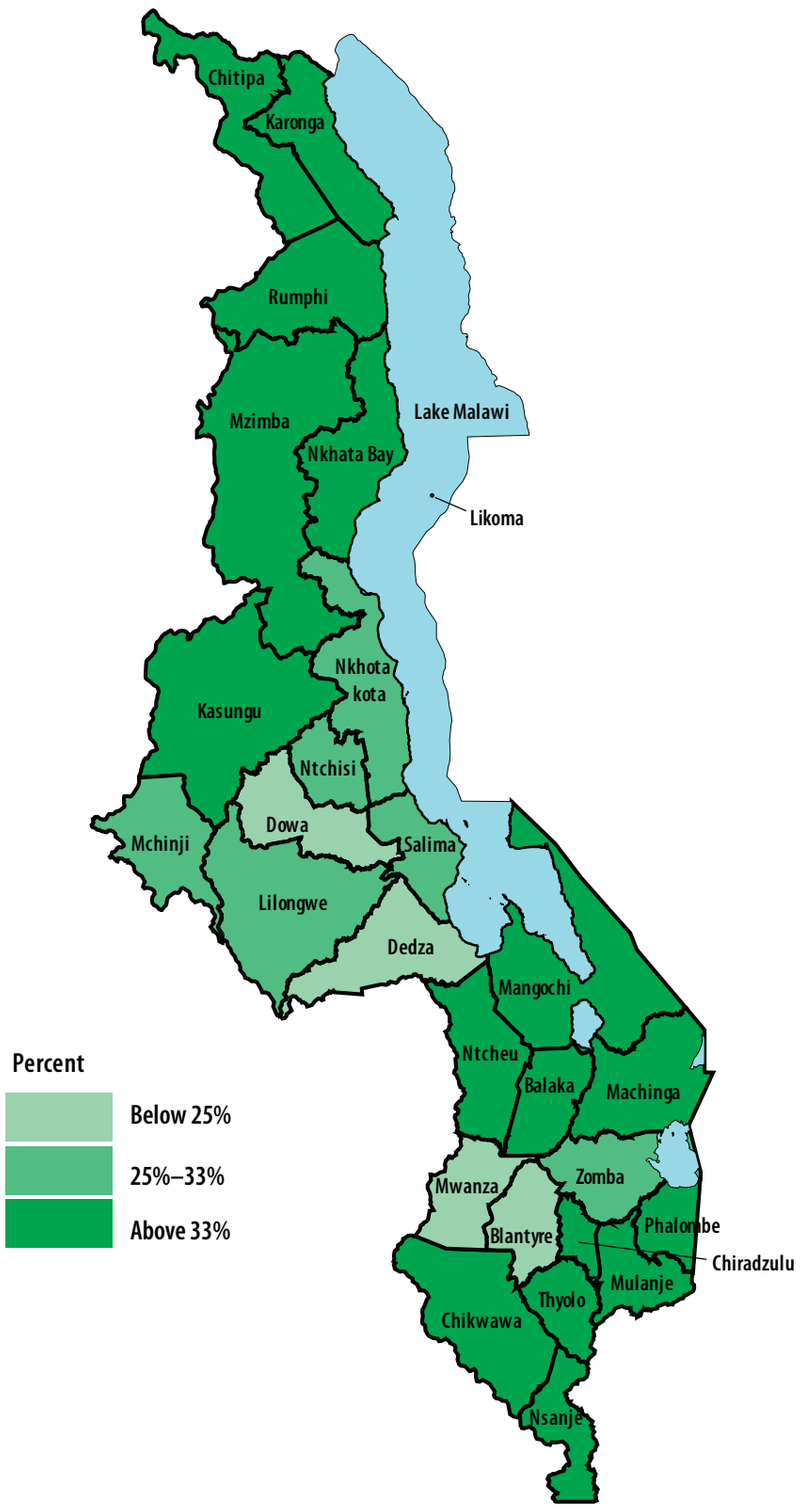
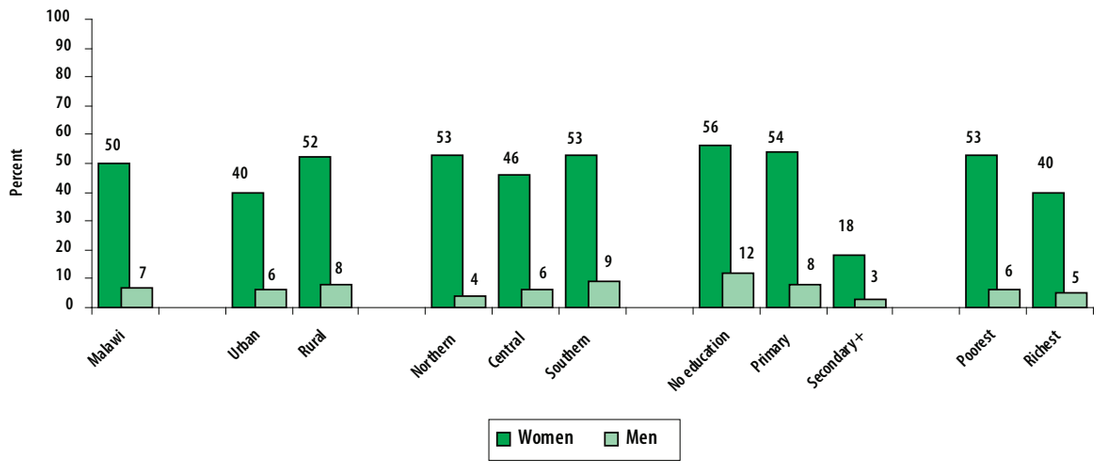


Figure 11.2

Percentage of women and men aged 15-49 married or in union before their 18th birthday, Malawi, 2006



15 years compared to 10 percent of those with primary education and 17 percent of those with no education. Primary education does not seem to have much influence on the marriage rate before 18 years. More than 50 percent of women with primary education are already married or in union. It is also observed that more than half of teenagers with no education are married compared to 36 percent with primary and 18 percent with secondary or higher education. The same trend is observed for men, where early marriage rates decline with increasing level of education.

There is no significant variation in early marriages before the age of 15 among women in households that fall into the first to fourth wealth index quintiles. Only the wealthiest households have lower rates of women married before the age 15 (8 percent) and age 18 (40 percent) compared to their counterparts in the first to fourth quintiles (around 11 percent for age 15 and 52 percent for age 18). For both women and men, teenage marriage is lowest among those in the wealthiest households (20 percent and 1 percent respectively).

11.2.2 Spousal Age Difference

Another component of child protection is spousal age difference. The indicators used to assess these rates are: women and men married/in union with a spousal age difference of 5–9 years and those married/in union to partners 10 years their senior. Tables 11.4a and 11.4b present the results of these age differences for women aged 15–19 and 20–24 by place of residence and background characteristics. Almost half of the women aged 15–19 (46 percent) are either married to or living with a man five or more years their senior (Figure 11.3). Women aged 20–24 are more likely (11 percent) to get married to men older by 10 or more years. A spousal age difference of 10 or more years is more common among urban teenagers aged 15–19 (8 percent) than those in rural areas (5 percent). This rural/urban difference does not exist among women aged 20–24. The percentage of teenagers and women aged 20–24 with a spousal age gap of 5–9 years and 10 or more years is higher in the Northern Region. Rumphi has the highest percentage of teenagers (19 percent) married to men 10 years or more their senior, followed by Blantyre (12 percent), while a higher proportion in the same age gap relationship among women aged 20–24 is observed in Salima (19 percent), Nkhotakota and Nkhata Bay (18 percent).

Table 11.4a

Spousal age difference – Women

Percent distribution of currently married/in union women aged 15–19 and 20–24 according to the age difference with their husband or partner, Malawi, 2006

Background characteristic	Percentage of currently married/ in union women aged 15–19 whose husband or partner is:					Total	Number of women aged 15–19 years currently married/in union	Percentage of currently married/ in union women aged 20–24 whose husband or partner is:					Total	Number of women aged 20–24 years currently married/in union
	Younger	0–4 years older	5–9 years older	10+ years older	Husband/ partner's age unknown			Younger	0–4 years older	5–9 years older	10+ years older	Husband/partner's age unknown		
Malawi														
Total	0.2	50.3	42.3	5.4	1.8	100.0	1,708	1.2	51.4	35.0	10.8	1.7	100.0	5,163
Urban	0.0	37.9	53.5	7.9	0.7	100.0	272	0.5	45.6	42.6	10.8	0.5	100.0	880
Rural	0.3	52.6	40.2	4.9	2.0	100.0	1,436	1.3	52.6	33.4	10.8	2.0	100.0	4,283
Region														
Northern	0.0	42.1	45.8	11.1	1.0	100.0	233	0.6	38.8	43.3	16.5	0.8	100.0	513
Central	0.3	54.2	41.5	2.6	1.3	100.0	664	1.0	55.7	32.1	9.8	1.5	100.0	2,490
Southern	0.2	49.4	42.0	6.0	2.4	100.0	812	1.5	49.4	36.3	10.6	2.2	100.0	2,161
District														
Balaka	0.0	53.5	40.4	4.6	1.5	100.0	47	2.7	48.1	34.1	13.9	1.2	100.0	84
Blantyre	1.2	38.3	48.1	12.4	0.0	100.0	120	1.6	47.9	40.9	9.6	0.0	100.0	351
Chikwawa	0.0	52.2	40.8	4.4	2.6	100.0	64	0.4	47.4	41.5	9.8	0.9	100.0	178
Chiradzulu	1.2	62.6	34.5	0.0	1.7	100.0	38	1.8	61.2	28.7	7.4	0.9	100.0	95
Chitipa	0.0	52.4	39.7	6.8	1.1	100.0	25	1.3	43.9	36.4	16.6	1.8	100.0	64
Dedza	0.0	63.4	34.7	1.9	0.0	100.0	86	2.7	57.8	28.3	10.6	0.5	100.0	298
Dowa	(0.0)	(68.5)	(28.3)	(0.0)	(3.2)	100.0	38	1.5	60.4	25.0	12.4	0.7	100.0	194
Karonga	0.0	39.4	50.0	9.6	1.1	100.0	50	0.5	38.5	42.4	17.7	0.9	100.0	107
Kasungu	1.5	42.9	51.1	2.4	2.1	100.0	87	2.7	48.7	35.3	11.8	1.4	100.0	236
Lilongwe	0.0	48.7	47.3	4.0	0.0	100.0	242	0.2	59.4	33.0	6.3	1.1	100.0	1029
Machinga	0.0	44.6	48.9	6.4	0.0	100.0	86	0.3	39.3	44.5	10.1	5.8	100.0	172
Mangochi	0.0	38.1	52.5	2.5	6.8	100.0	137	1.2	40.5	36.6	14.0	7.7	100.0	388
Mchinji	0.0	56.6	37.7	1.8	3.9	100.0	51	0.0	54.2	28.1	11.5	6.2	100.0	242
Mulanje	0.0	56.9	33.5	7.2	2.4	100.0	69	0.6	59.5	30.1	9.8	0.0	100.0	167
Mwanza	0.0	57.4	36.0	3.0	3.6	100.0	22	0.5	58.3	28.2	11.6	1.4	100.0	89
Mzimba	0.0	44.4	43.4	10.8	1.4	100.0	110	0.5	37.1	45.6	16.8	0.0	100.0	212
Nkhata Bay	0.0	37.1	51.9	11.0	0.0	100.0	21	0.0	36.7	42.9	18.4	2.1	100.0	68
Nkhotakota	0.0	56.8	35.6	5.7	1.8	100.0	25	0.2	43.8	37.6	17.7	0.6	100.0	96
Nsanje	0.0	52.4	41.6	5.3	0.7	100.0	34	1.8	44.6	38.0	15.5	0.0	100.0	76
Ntcheu	0.0	58.3	38.5	2.1	1.1	100.0	60	0.0	52.4	36.6	8.7	2.3	100.0	163
Ntchisi	0.0	68.5	24.6	2.2	4.7	100.0	18	1.0	62.5	31.3	4.5	0.7	100.0	59
Phalombe	0.0	57.5	31.8	6.1	4.5	100.0	41	3.4	50.8	34.8	7.7	3.3	100.0	105
Rumphi	0.0	32.3	48.9	18.7	0.0	100.0	27	1.3	42.1	44.4	11.4	0.8	100.0	62
Salima	1.6	59.1	36.0	0.0	3.2	100.0	58	2.1	43.5	35.5	18.9	0.0	100.0	174
Thyolo	0.0	55.4	39.7	2.3	2.6	100.0	86	3.7	58.1	29.4	8.8	0.0	100.0	262
Zomba	0.0	61.4	26.7	11.8	0.0	100.0	66	0.5	52.1	38.0	9.4	0.0	100.0	195

Note: Figures in parentheses are based on 25–49 unweighted cases.

Table 11.4b

Spousal age difference – Women

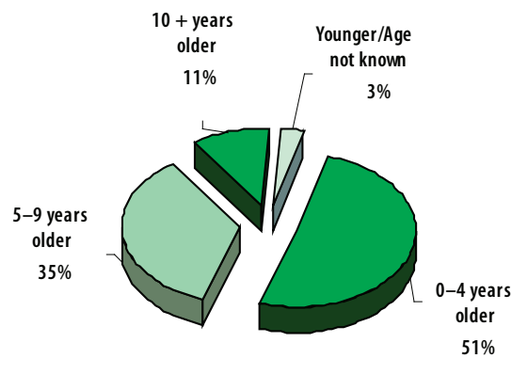
Percent distribution of currently married/in union women aged 15–19 and 20–24 according to the age difference with their husband or partner, Malawi, 2006

Background characteristic	Percentage of currently married/ in union women aged 15–19 whose husband or partner is:					Total	Number of women aged 15–19 years currently married/in union	Percentage of currently married/ in union women aged 20–24 whose husband or partner is:					Total	Number of women aged 20–24 years currently married/in union
	Younger	0–4 years older	5–9 years older	10+ years older	Husband/ partner's age unknown			Younger	0–4 years older	5–9 years older	10+ years older	Husband/partner's age unknown		
Age														
15–19	0.2	50.3	42.3	5.4	1.8	100.0	1,708	na	na	na	na	na	na	na
20–24	na	na	na	na	na	na	na	1.2	51.4	35.0	10.8	1.7	100.0	5,163
Woman's education														
None	0.0	49.7	39.1	9.0	2.2	100.0	136	0.9	48.6	36.9	10.9	2.6	100.0	621
Primary	0.3	51.9	41.0	4.9	1.9	100.0	1,405	1.3	51.5	34.2	11.2	1.8	100.0	3,706
Secondary +	0.0	37.1	56.3	6.6	0.0	100.0	168	0.9	53.0	37.1	8.5	0.6	100.0	832
Other	0.0	0.0	0.0	0.0	0.0	100.0	0	0.0	41.3	0.0	58.7	0.0	100.0	5
Wealth index quintile														
Lowest	0.4	57.9	36.9	3.9	1.0	100.0	347	1.6	52.8	33.9	10.6	1.2	100.0	1,053
Second	0.7	55.0	37.5	4.0	2.9	100.0	370	1.5	51.8	33.8	10.3	2.5	100.0	1,058
Middle	0.1	50.9	43.8	4.5	0.8	100.0	390	1.4	52.2	34.8	9.4	2.1	100.0	1,130
Fourth	0.0	50.7	41.5	5.6	2.2	100.0	327	0.5	54.0	32.7	10.8	1.9	100.0	961
Highest	0.0	32.8	54.8	10.2	2.2	100.0	274	0.6	45.7	39.8	13.1	0.7	100.0	961

na: not applicable

Figure 11.3

Spousal age difference of women aged 20–24, Malawi, 2006



The percentage of teenagers whose partners are 10 or more years older is higher amongst teenagers with no education (9 percent) and lower among those with primary education (5 percent). The percentage of teenagers whose partners are either 10 + years older or 5–9 years older increases with the increasing wealth index quintile of the teenager's household. The data shows that more than half (55 percent) of teenagers from the wealthiest households are married to men 5–9 years their senior as compared to 37 percent in the poorest households. For the same cohort, 10 percent are married to men 10 or more years older. MICS 2006 shows that the more educated and wealthy the woman, the more likely she is to have a partner who is five or more years her senior.

12 HIV AND AIDS, SEXUAL BEHAVIOUR AND ORPHANED AND VULNERABLE CHILDREN

DEREK ZANERA

The most important prerequisite for reducing the rate of HIV infection is the dissemination of accurate knowledge of how HIV is transmitted along with strategies for preventing transmission. Correct information is the first step toward raising awareness and giving people the tools to protect them from infection. The UN General Assembly Special Session on HIV and AIDS (UNGASS) called on governments to improve the knowledge and skills of young people to protect themselves from HIV. The indicators to measure this goal and the MDG of reducing HIV infections by a half include improving the level of knowledge of HIV and its prevention and changing behaviours to prevent further spread of the disease. To obtain such information, the HIV module was administered to both women and men of 15–49 years of age.

12.1 KNOWLEDGE OF PREVENTING HIV TRANSMISSION

The percentage of young women and men who have comprehensive and correct knowledge of HIV prevention and transmission is an indicator for both the MDGs and UNGASS. In MICS 2006, women and men aged 15–45 were asked questions on whether risk of HIV infection can be reduced by using condoms every time they have sex, having one sexual partner who is not infected and who has no other partner and by not having sex at all. Tables 12.1a to 12.2b present the percentage of women and men who report selected ways that people can reduce the risk of getting the HIV virus. Overall, 97 percent of women and almost all men have heard of AIDS in Malawi. Among districts, only Chikwawa and Dedza have less than 90 percent women who have heard of AIDS. No variation is found by age, education and wealth. On ways to reduce transmission of the virus, both women (81 percent) and men (89 percent) give abstinence from sex as the most cited way of avoiding HIV transmission. Having only one faithful, uninfected sexual partner is the second most cited way mentioned by both the sexes. However, the percentage of women and men who know all three main ways of preventing HIV transmission is low (55 percent). People in the Southern Region seem to be more knowledgeable on prevention and transmission. Amongst the districts, Mulanje has the highest proportion of women who know all three ways of preventing HIV, while Ntchisi district has the lowest. For men, the highest proportion is recorded in Balaka while the lowest is again in Ntchisi district. Education and wealth have some impact on the knowledge levels of women, but no variation occurs within these categories for men.

Table 12.1a

Knowledge of preventing HIV transmission – Women

Percentage of women aged 15–49 years who know the main ways of preventing HIV transmission, Malawi, 2006

Background characteristic	Heard of AIDS	Percentage who know HIV transmission can be prevented by:			Knows all three ways	Knows at least one way	Doesn't know any way	Number of women
		Having only one faithful uninfected sex partner	Using a condom every time	Abstaining from sex				
Malawi								
Total	97.2	78.2	68.1	81.3	54.5	92.5	7.5	26,259
Urban	99.7	85.8	75.2	89.4	65.0	96.4	3.6	4,624
Rural	96.6	76.5	66.7	79.5	52.3	91.6	8.4	21,635
Region								
Northern	98.2	79.6	62.8	80.3	52.4	92.5	7.5	2,772
Central	96.1	74.6	63.4	80.2	48.7	91.6	8.4	11,665
Southern	98.0	81.3	74.1	82.5	60.8	93.3	6.7	11,822
District								
Balaka	98.9	84.0	71.1	84.1	58.0	96.9	3.1	571
Blantyre	99.8	91.2	82.1	91.5	72.1	98.6	1.4	2,209
Chikwawa	88.5	75.1	72.7	77.9	59.6	87.1	12.9	885
Chiradzulu	99.2	91.7	85.1	90.9	76.5	98.2	1.8	507
Chitipa	99.5	75.2	64.0	78.8	49.9	90.7	9.3	312
Dedza	88.0	65.4	54.5	71.7	38.2	84.1	15.9	1,521
Dowa	90.1	74.2	63.7	77.4	52.9	86.7	13.3	1,135
Karonga	94.1	73.5	67.4	85.0	61.9	91.4	8.6	545
Kasungu	99.8	91.9	75.1	88.3	65.5	98.4	1.6	1,079
Lilongwe	97.1	81.8	66.7	86.8	54.8	95.4	4.6	4,252
Machinga	100.0	73.9	68.5	66.2	51.7	87.3	12.7	985
Mangochi	98.2	78.4	75.0	84.8	61.0	92.9	7.1	2,206
Mchinji	98.6	65.6	64.2	71.2	42.0	92.2	7.8	956
Mulanje	99.7	87.8	90.0	92.5	79.8	98.1	1.9	886
Mwanza	99.7	64.5	62.3	66.7	50.5	80.4	19.6	467
Mzimba	99.4	85.8	65.9	89.3	55.7	97.4	2.6	1,264
Nkhata Bay	97.4	63.8	51.1	58.5	36.1	79.4	20.6	326
Nkhotakota	99.9	66.7	47.6	70.4	39.8	77.7	22.3	465
Nsanje	91.2	79.3	72.6	80.5	59.1	89.6	10.4	422
Ntcheu	99.8	62.1	60.2	72.0	34.9	90.3	9.7	904
Ntchisi	93.8	62.9	51.1	79.8	30.5	88.6	11.4	324
Phalombe	98.9	62.0	58.9	66.8	36.4	85.8	14.2	512
Rumphi	99.7	86.0	53.2	60.7	42.5	90.1	9.9	324
Salima	99.7	67.3	63.3	80.4	44.2	92.9	7.1	1,028
Thyolo	97.2	76.5	66.1	78.4	51.6	90.8	9.2	1,101
Zomba	100.0	89.6	66.6	84.8	51.5	99.2	0.8	1,072

Table 12.1b

Knowledge of preventing HIV transmission – Women

Percentage of women aged 15–49 years who know the main ways of preventing HIV transmission, Malawi, 2006

Background characteristic	Heard of AIDS	Percentage who know HIV transmission can be prevented by:			Knows all three ways	Knows at least one way	Doesn't know any way	Number of women
		Having only one faithful uninfected sex partner	Using a condom every time	Abstaining from sex				
Age								
15–19	96.7	75.8	66.2	80.1	52.8	91.2	8.8	5,124
20–24	97.8	78.7	70.2	81.6	55.4	93.5	6.5	6,427
25–29	97.2	79.5	70.2	82.6	58.1	92.8	7.2	5,088
30–34	97.3	77.4	68.5	81.2	53.5	92.5	7.5	3,680
35–39	97.1	78.4	67.7	81.2	54.0	92.6	7.4	2,550
40–44	96.9	81.7	65.4	81.7	54.1	92.7	7.3	1,900
45–49	96.4	76.3	62.3	79.0	48.8	90.4	9.6	1,490
Woman's education								
None	93.2	72.4	63.0	76.4	48.9	87.5	12.5	5,463
Primary	97.8	78.7	68.6	81.2	54.8	93.1	6.9	16,758
Secondary +	99.8	83.8	73.2	88.2	61.2	96.7	3.3	3,960
Other	100.0	83.2	77.6	84.5	63.8	96.3	3.7	78
Wealth index quintile								
Lowest	94.8	72.9	62.7	78.5	46.8	90.1	9.9	5,161
Second	97.1	75.7	66.1	79.3	51.9	91.3	8.7	5,022
Middle	97.1	78.2	68.3	78.5	53.8	92.0	8.0	5,058
Fourth	97.1	80.3	70.4	81.9	58.3	92.7	7.3	4,915
Highest	99.3	83.0	72.5	87.1	60.8	95.6	4.4	6,103

Table 12.2a

Knowledge of preventing HIV transmission – Men

Percentage of men aged 15–49 years who know the main ways of preventing HIV transmission, Malawi, 2006

Background characteristic	Heard of AIDS	Percentage who know HIV transmission can be prevented by:			Knows all three ways	Knows at least one way	Doesn't know any way	Number of men
		Having only one faithful uninfected sex partner	Using a condom every time	Abstaining from sex				
Malawi								
Total	99.5	80.5	68.4	88.5	55.2	96.6	3.4	7,636
Urban	99.4	86.9	68.5	92.8	59.4	98.5	1.5	1,466
Rural	99.6	78.9	68.3	87.5	54.2	96.1	3.9	6,170
Region								
Northern	99.0	79.4	70.5	85.1	55.0	95.2	4.8	847
Central	99.7	78.1	63.5	89.6	49.8	96.8	3.2	3,490
Southern	99.5	83.2	73.0	88.2	60.9	96.7	3.3	3,299
District								
Balaka	100.0	93.6	90.9	97.9	88.0	98.6	1.4	171
Blantyre	100.0	93.9	72.9	90.4	66.5	99.5	0.5	671
Chikwawa	98.0	93.6	67.3	95.5	64.6	97.1	2.9	299
Chiradzulu	99.2	90.7	76.8	85.5	64.2	98.3	1.7	126
Chitipa	99.7	59.3	49.3	56.6	32.9	76.4	23.6	83
Dedza	99.6	87.5	61.1	87.3	49.6	98.6	1.4	381
Dowa	99.3	68.1	66.2	87.1	43.3	96.7	3.3	349
Karonga	95.3	67.2	68.0	88.6	48.2	94.2	5.8	160
Kasungu	99.7	92.1	63.8	91.6	56.4	98.7	1.3	375
Lilongwe	100.0	86.5	63.7	97.5	56.0	99.7	0.3	1,343
Machinga	98.8	48.4	43.0	52.4	19.3	77.2	22.8	226
Mangochi	99.1	61.2	69.9	81.9	41.8	95.1	4.9	567
Mchinji	99.7	39.7	57.8	81.4	23.5	91.9	8.1	304
Mulanje	100.0	94.0	84.3	93.2	76.6	99.7	0.3	243
Mwanza	99.8	84.6	84.5	93.4	69.3	98.8	1.2	133
Mzimba	100.0	95.1	78.3	91.5	69.2	99.2	0.8	413
Nkhata Bay	99.6	34.4	64.0	75.5	19.9	92.2	7.8	96
Nkhotakota	99.6	72.6	72.6	88.9	53.1	97.1	2.9	130
Nsanje	100.0	66.1	72.0	82.1	46.4	95.0	5.0	120
Ntcheu	100.0	74.6	59.2	77.4	37.4	97.5	2.5	215
Ntchisi	98.8	21.0	31.0	41.2	10.3	55.7	44.3	107
Phalombe	100.0	81.9	70.3	92.0	56.1	98.8	1.2	139
Rumphi	100.0	94.9	66.3	86.0	59.7	98.7	1.3	95
Salima	99.4	87.8	79.1	92.8	71.1	98.0	2.0	287
Thyolo	99.5	90.2	72.8	95.8	66.3	99.0	1.0	268
Zomba	99.8	98.1	81.7	96.7	80.4	99.8	0.2	335

Table 12.2b

Knowledge of preventing HIV transmission – Men

Percentage of men aged 15–49 years who know the main ways of preventing HIV transmission, Malawi, 2006

Background characteristic	Heard of AIDS	Percentage who know HIV transmission can be prevented by:			Knows all three ways	Knows at least one way	Doesn't know any way	Number of men
		Having only one faithful uninfected sex partner	Using a condom every time	Abstaining from sex				
Age								
15–19	98.8	76.5	69.5	87.4	53.7	95.7	4.3	1,566
20–24	99.9	80.4	69.9	87.4	55.9	96.1	3.9	1,465
25–29	99.8	81.9	70.9	89.5	57.3	97.0	3.0	1,439
30–34	99.5	81.7	68.2	87.9	55.8	97.2	2.8	1,143
35–39	99.4	79.5	64.3	89.5	54.6	96.3	3.7	825
40–44	100.0	82.8	66.8	90.4	54.5	97.7	2.3	668
45–49	99.8	84.4	62.6	89.6	52.7	96.7	3.3	531
Woman's education								
None	98.9	77.6	64.9	85.1	51.3	94.9	5.1	691
Primary	99.5	79.4	68.4	87.9	54.2	96.3	3.7	4,958
Secondary +	99.9	84.2	69.6	91.2	59.2	97.8	2.2	1,979
Other	100.0	61.8	36.3	95.5	29.9	95.5	4.5	8
Wealth index quintile								
Lowest	99.4	79.4	66.2	86.4	52.8	95.3	4.7	1,253
Second	99.5	78.1	67.1	87.3	53.8	95.1	4.9	1,331
Middle	99.5	78.8	70.6	89.0	56.0	96.7	3.3	1,566
Fourth	99.5	81.6	68.8	86.7	54.4	96.8	3.2	1,568
Highest	99.7	83.3	68.5	91.7	57.8	98.0	2.0	1,917

12.2 MISCONCEPTIONS ABOUT HIV AND AIDS

Misconceptions about HIV are common and can confuse people, hindering prevention efforts. Different regions are likely to have variations in misconceptions, although some appear to be universal (for example that sharing food with an infected person can transmit HIV). Information on misconceptions among women and men about HIV and AIDS is presented in tables 12.3a to 12.4b. Indicators are based on the two most common and relevant misconceptions in Malawi – (a) HIV can be transmitted by supernatural means and mosquito bites and (b) a healthy looking person can be infected. The table also provides information on whether respondents know that sharing food cannot transmit HIV and that sharing needles can. Table 12.3a shows that 63 percent of women aged 15–49 correctly identify misconceptions about HIV and AIDS, whereas for men it is 67 percent (Table 12.4a). Beliefs regarding HIV transmission vary by place of residence. In urban areas, 94 percent of women believe that HIV cannot be transmitted by supernatural means, 85 percent know that HIV cannot be transmitted by mosquito bites and 95 percent correctly say that a healthy looking person can be infected. Higher knowledge among urban men can also be seen from table 12.4a. The urban-rural difference is higher among women compared to men when

Table 12.3a

Identifying misconceptions about HIV & AIDS – Women

Percentage of women aged 15–49 years who correctly identify misconceptions about HIV & AIDS, Malawi, 2006

Background characteristic	Percent who know that:			Reject two most common mis-conceptions and know a healthy-looking person can be infected	Percent who know that:		Number of women
	HIV cannot be transmitted by super-natural means	HIV cannot be transmitted by mosquito bites	A healthy looking person can be infected		HIV cannot be transmitted by sharing food	HIV can be transmitted by sharing needles	
Malawi							
Total	85.5	75.2	86.8	63.3	87.0	87.5	26,259
Urban	93.5	85.0	94.6	78.5	94.4	94.2	4,624
Rural	83.8	73.1	85.2	60.0	85.4	86.0	21,635
Region							
Northern	88.2	72.8	84.0	60.6	83.8	88.7	2,772
Central	84.1	74.8	85.2	61.7	88.4	86.9	11,665
Southern	86.4	76.2	89.2	65.5	86.4	87.7	11,822
District							
Balaka	89.7	81.4	92.3	72.6	89.8	91.0	571
Blantyre	91.1	79.4	97.0	73.2	91.1	94.7	2,209
Chikwawa	71.3	53.9	77.6	44.5	72.1	78.3	885
Chiradzulu	89.5	75.1	95.3	68.0	91.6	92.2	507
Chitipa	85.8	63.6	81.8	49.9	84.3	90.7	312
Dedza	74.0	68.0	78.2	55.1	82.0	79.3	1,521
Dowa	77.4	65.5	76.0	52.4	77.7	80.4	1,135
Karonga	88.2	82.6	82.4	72.2	85.3	84.3	545
Kasungu	91.1	74.2	86.6	60.6	89.5	91.8	1,079
Lilongwe	88.4	81.2	88.2	70.6	93.6	91.8	4,252
Machinga	79.9	79.1	80.9	59.5	77.6	80.1	985
Mangochi	86.4	80.9	84.6	64.2	85.9	85.5	2,206
Mchinji	81.2	68.2	88.6	54.7	82.4	89.9	956
Mulanje	96.9	91.8	94.4	85.9	93.5	98.0	886
Mwanza	80.2	68.7	74.1	46.6	82.5	77.0	467
Mzimba	88.8	67.5	85.8	56.5	84.6	91.7	1,264
Nkhata Bay	82.1	72.2	73.4	50.8	70.5	75.9	326
Nkhotakota	84.7	77.5	85.3	59.3	90.1	83.3	465
Nsanje	81.9	74.3	82.8	63.3	75.4	76.5	422
Ntcheu	82.3	72.1	90.7	57.6	88.7	89.5	904
Ntchisi	80.8	68.1	74.1	47.8	85.1	72.6	324
Phalombe	83.9	65.9	91.1	56.5	84.9	73.7	512
Rumphi	94.0	86.3	92.1	77.4	91.2	95.3	324
Salima	86.2	78.2	87.1	61.3	92.5	81.4	1,028
Thyolo	82.6	65.3	92.1	58.6	85.6	89.0	1,101
Zomba	92.3	81.0	96.1	73.7	94.8	94.4	1,072

reported on a composite index, namely by rejecting two of the most common misconceptions plus knowledge that a seemingly healthy person can be infected. Though there are no significant regional disparities, some variation can be observed amongst districts.

Tables 12.3b and 12.4b show that there is a strong relationship between respondents' education and wealth status and misconceptions about HIV and AIDS. For example, 83 percent of women and men with secondary or higher education are able to correctly identify misconceptions, compared to 52 percent of women and men with no education. Similarly, knowledge levels are nearly 20 percentage points higher in respondents belonging to the highest wealth quintile compared to those in the lowest wealth quintile.

Data also provide information on the knowledge levels of the respondents in terms of sharing food or needles and transmission of HIV. Though knowledge levels are slightly higher among urban residents compared to rural, the data do not show any significant differences across regions and districts.

Table 12.3b

Identifying misconceptions about HIV & AIDS – Women

Percentage of women aged 15–49 years who correctly identify misconceptions about HIV & AIDS, Malawi, 2006

Background characteristic	Percent who know that:			Reject two most common misconceptions and know a healthy-looking person can be infected	Percent who know that:		Number of women
	HIV cannot be transmitted by supernatural means	HIV cannot be transmitted by mosquito bites	A healthy looking person can be infected		HIV cannot be transmitted by sharing food	HIV can be transmitted by sharing needles	
Age							
15–19	86.7	78.7	84.9	65.1	87.0	86.2	5,124
20–24	87.1	76.0	88.2	65.6	89.4	88.3	6,427
25–29	87.0	75.9	88.1	64.9	87.0	89.2	5,088
30–34	84.6	72.2	87.5	61.0	86.1	88.3	3,680
35–39	82.8	74.0	86.4	60.1	86.4	86.0	2,550
40–44	82.8	70.6	86.7	59.1	84.3	85.9	1,900
45–49	80.5	72.8	82.8	57.7	83.1	84.5	1,490
Woman's education							
None	77.1	67.5	78.5	51.8	79.3	79.2	5,463
Primary	86.0	74.6	87.4	62.5	87.6	88.1	16,758
Secondary +	95.3	88.6	96.1	83.0	95.2	96.1	3,960
Other	76.5	66.7	83.3	42.5	88.6	85.0	78
Wealth index quintile							
Lowest	81.3	71.5	79.8	55.8	82.9	82.7	5,161
Second	83.6	72.7	85.1	58.9	85.6	85.9	5,022
Middle	83.7	71.3	85.9	58.8	85.1	86.0	5,058
Fourth	85.7	75.1	87.5	63.6	86.9	87.5	4,915
Highest	92.1	83.8	94.5	76.6	93.2	94.0	6,103

Table 12.4a

Identifying misconceptions about HIV & AIDS – Men

Percentage of men aged 15–49 years who correctly identify misconceptions about HIV & AIDS, Malawi, 2006

Background characteristic	Percent who know that:			Reject two most common mis-conceptions and know a healthy-looking person can be infected	Percent who know that:		Number of men
	HIV cannot be transmitted by super-natural means	HIV cannot be transmitted by mosquito bites	A healthy looking person can be infected		HIV cannot be transmitted by sharing food	HIV can be transmitted by sharing needles	
Malawi							
Total	90.3	74.4	93.0	66.7	91.0	93.9	7,636
Urban	91.8	81.9	95.2	75.5	93.5	95.6	1,466
Rural	90.0	72.6	92.4	64.6	90.4	93.5	6,170
Region							
Northern	91.4	74.0	89.5	64.5	89.1	95.1	847
Central	89.9	70.8	93.2	63.8	93.1	93.6	3,490
Southern	90.5	78.4	93.6	70.2	89.1	94.0	3,299
District							
Balaka	96.9	92.9	97.5	89.4	99.7	98.2	171
Blantyre	91.5	78.2	93.6	70.1	89.1	94.6	671
Chikwawa	89.4	79.1	94.4	72.0	92.5	94.7	299
Chiradzulu	93.8	76.0	95.2	70.9	91.0	94.5	126
Chitipa	91.9	66.3	86.5	56.3	89.3	94.3	83
Dedza	87.4	67.8	88.2	55.9	85.2	89.4	381
Dowa	91.4	66.8	90.4	58.1	95.1	93.3	349
Karonga	82.5	59.1	83.4	48.1	83.3	87.5	160
Kasungu	90.9	62.3	95.9	56.4	94.4	96.6	375
Lilongwe	93.6	78.1	94.5	74.3	98.3	96.2	1,343
Machinga	81.2	79.4	85.4	58.2	73.7	82.2	226
Mangochi	85.2	68.2	88.9	58.0	81.8	91.6	567
Mchinji	89.6	66.2	97.4	60.2	92.4	94.9	304
Mulanje	94.9	90.7	98.9	86.4	92.7	97.7	243
Mwanza	96.6	83.5	86.8	72.0	91.3	93.3	133
Mzimba	95.7	80.0	96.0	74.0	90.3	98.6	413
Nkhata Bay	80.5	66.2	67.6	38.9	90.5	92.6	96
Nkhotakota	88.3	72.9	94.1	63.3	95.7	93.6	130
Nsanje	94.7	83.0	92.2	73.5	93.8	88.7	120
Ntcheu	65.6	54.3	85.9	37.3	71.7	84.9	215
Ntchisi	92.7	75.1	89.8	66.5	85.5	81.2	107
Phalombe	89.2	72.0	93.9	62.6	92.1	96.3	139
Rumphi	98.0	87.0	96.2	84.0	92.2	96.4	95
Salima	90.9	70.5	95.6	65.1	93.8	93.4	287
Thyolo	85.6	70.7	97.7	62.1	88.7	95.1	268
Zomba	97.5	84.3	99.8	83.6	96.8	99.2	335

Table 12.4b

Identifying misconceptions about HIV & AIDS – Men

Percentage of men aged 15–49 years who correctly identify misconceptions about HIV & AIDS, Malawi, 2006

Background characteristic	Percent who know that:			Reject two most common mis-conceptions and know a healthy-looking person can be infected	Percent who know that:		Number of men
	HIV cannot be transmitted by super-natural means	HIV cannot be transmitted by mosquito bites	A healthy looking person can be infected		HIV cannot be transmitted by sharing food	HIV can be transmitted by sharing needles	
Age							
15–19	88.9	74.8	88.2	65.2	89.6	91.4	1,566
20–24	91.6	73.6	93.6	67.1	92.0	94.1	1,465
25–29	91.5	75.5	94.2	67.5	93.2	94.9	1,439
30–34	90.2	74.4	95.8	67.7	91.9	94.7	1,143
35–39	89.9	73.6	94.0	65.0	89.1	94.3	825
40–44	88.8	75.7	93.6	68.6	90.3	95.2	668
45–49	90.3	72.3	93.2	65.6	87.7	94.6	531
Man's education							
None	84.9	61.2	88.3	52.2	82.3	92.0	691
Primary	89.1	70.9	91.7	62.2	90.3	93.3	4,958
Secondary +	95.2	88.0	97.7	83.1	95.5	96.3	1,979
Other	84.2	42.4	96.2	42.4	95.5	94.2	8
Wealth index quintile							
Lowest	89.6	66.9	90.5	57.5	89.9	92.1	1,253
Second	89.8	70.9	90.5	63.1	88.6	94.8	1,331
Middle	88.1	72.0	93.3	64.2	91.1	93.1	1,566
Fourth	90.3	74.8	93.7	67.1	90.1	93.2	1,568
Highest	92.9	83.4	95.4	76.8	93.9	95.9	1,917

12.3 COMPREHENSIVE KNOWLEDGE

Tables 12.5a to 12.6b provide information on women and men in Malawi, aged 15–49, who have comprehensive knowledge of HIV transmission. Overall, 41 percent of women reported having comprehensive knowledge by correctly identifying 2 preventive methods and 3 misconceptions. The results in table 12.5a show that place of residence plays an important role in this category. Sixty-eight percent of urban women and 57 percent of rural women say they know two ways to prevent HIV transmission; 79 percent of urban women and 60 percent of rural women correctly identify three misconceptions about HIV transmission. The table also shows that while 56 percent of urban women have comprehensive knowledge of HIV transmission, only 38 percent of their rural counterparts possess the same level of knowledge. Across regions, women in the Southern Region score highly on their knowledge of these three indicators followed by Central and Northern Region women. There are considerable variations across districts in Malawi (Map 12.1), with 74 percent of women in Mulanje having comprehensive knowledge, followed by Blantyre and Chikawa (59 percent). The lowest comprehensive knowledge is observed in Ntchisi district (19 percent). Table 12.5b shows that there is a positive relationship between comprehensive knowledge, the level of education of the respondent and their position in the wealth index quintiles. Data shows that slightly over half of women with secondary education and above have comprehensive knowledge,

Table 12.5a

Comprehensive knowledge of HIV & AIDS transmission – Women

Percentage of women aged 15–49 years who have comprehensive knowledge of HIV & AIDS transmission, Malawi, 2006

Background characteristic	Knows 2 ways to prevent HIV transmission	Correctly identify 3 misconceptions about HIV transmission	Have comprehensive knowledge* (identify 2 prevention methods and 3 misconceptions)	Number of women
Malawi				
Total	59.2	63.3	41.2	26,259
Urban	68.4	78.5	55.8	4,624
Rural	57.2	60.0	38.1	21,635
Region				
Northern	56.9	60.6	36.9	2,772
Central	53.1	61.7	35.9	11,665
Southern	65.7	65.5	47.3	11,822
District				
Balaka	63.6	72.6	51.1	571
Blantyre	76.2	73.2	58.9	2,209
Chikwawa	64.1	44.5	34.9	885
Chiradzulu	79.8	68.0	58.5	507
Chitipa	55.5	49.9	31.8	312
Dedza	42.8	55.1	28.7	1,521
Dowa	57.0	52.4	36.0	1,135
Karonga	65.5	72.2	50.8	545
Kasungu	70.8	60.6	44.3	1079
Lilongwe	58.7	70.6	42.8	4,252
Machinga	59.5	59.5	38.4	985
Mangochi	64.9	64.2	46.4	2,206
Mchinji	47.7	54.7	33.3	956
Mulanje	82.5	85.9	73.6	886
Mwanza	53.7	46.6	32.1	467
Mzimba	58.8	56.5	34.0	1,264
Nkhata Bay	42.5	50.8	27.3	326
Nkhotakota	41.7	59.3	28.3	465
Nsanje	64.3	63.3	46.9	422
Ntcheu	42.0	57.6	23.7	904
Ntchisi	33.1	47.8	18.7	324
Phalombe	42.3	56.5	24.8	512
Rumphi	50.6	77.4	39.4	324
Salima	48.7	61.3	31.6	1,028
Thyolo	55.9	58.6	34.5	1,101
Zomba	60.0	73.7	45.9	1,072

*: Respondents with comprehensive knowledge say that use of condom for every sexual intercourse and having just one uninfected and faithful partner can reduce the chance of getting the AIDS virus, say that a healthy-looking person can have the AIDS virus, and reject the two most common local misconceptions (mosquito bites & supernatural means).

compared to 33 percent with no education. While 52 percent of women from the highest wealth quintile have comprehensive knowledge, only 33 percent from poorer families have comprehensive knowledge of HIV prevention.

Table 12.5b

Comprehensive knowledge of HIV & AIDS transmission – Women

Percentage of women aged 15–49 years who have comprehensive knowledge of HIV & AIDS transmission, Malawi, 2006

Background characteristic	Knows 2 ways to prevent HIV transmission	Correctly identify 3 misconceptions about HIV transmission	Have comprehensive knowledge* (identify 2 prevention methods and 3 misconceptions)	Number of women
Age				
15–19	57.1	65.1	41.7	5,124
20–24	60.7	65.6	42.5	6,427
15–24	**59.1**	**65.4**	**42.1**	**11,551**
25–29	61.9	64.9	44.6	5,088
30–34	58.6	61.0	38.5	3,680
35–39	58.6	60.1	39.2	2,550
40–44	58.2	59.1	37.6	1,900
45–49	54.0	57.7	36.7	1,490
Woman's education				
None	53.3	51.8	32.5	5,463
Primary	59.7	62.5	40.9	16,758
Secondary +	64.6	83.0	54.6	3,960
Other	70.6	42.5	36.5	78
Wealth index quintile				
Lowest	52.0	55.8	32.7	5,161
Second	56.8	58.9	37.2	5,022
Middle	59.4	58.8	38.5	5,058
Fourth	62.5	63.6	43.5	4915
Highest	64.3	76.6	52.0	6,103

*: Respondents with comprehensive knowledge say that use of condom for every sexual intercourse and having just one uninfected and faithful partner can reduce the chance of getting the AIDS virus, say that a healthy-looking person can have the AIDS virus, and reject the two most common local misconceptions (mosquito bites & supernatural means).

Tables 12.6a and 12.6b present knowledge levels amongst men aged 15–49. Forty-two percent of men reported having comprehensive knowledge of HIV and AIDS (correctly identify 2 preventive methods and 3 misconceptions) which is almost identical to women's knowledge reported earlier. Approximately 62 percent of urban men and 58 percent of rural men report to know two ways to prevent HIV transmission. Seventy-six percent of urban men and 65 percent of rural men correctly identify three misconceptions about HIV transmission. The table also shows that 48 percent of urban men have comprehensive knowledge of HIV transmission, compared to 41 percent of their rural counterparts. The pattern across regions is similar to that for women, with men in the Southern Region scoring highly on knowledge of the three indicators. Over 80 percent of men in Balaka, Zomba and Mulanje know two ways to prevent HIV transmission. Again, Ntchisi is the district with the lowest level of knowledge. Men belonging to higher education levels and wealthy families show higher knowledge levels (Table 12.6b).

Map 12.1

Proportion of women aged 15-49 years who have comprehensive knowledge of HIV and AIDS, Malawi, 2006 (Identify 2 prevention methods and 3 misconceptions)

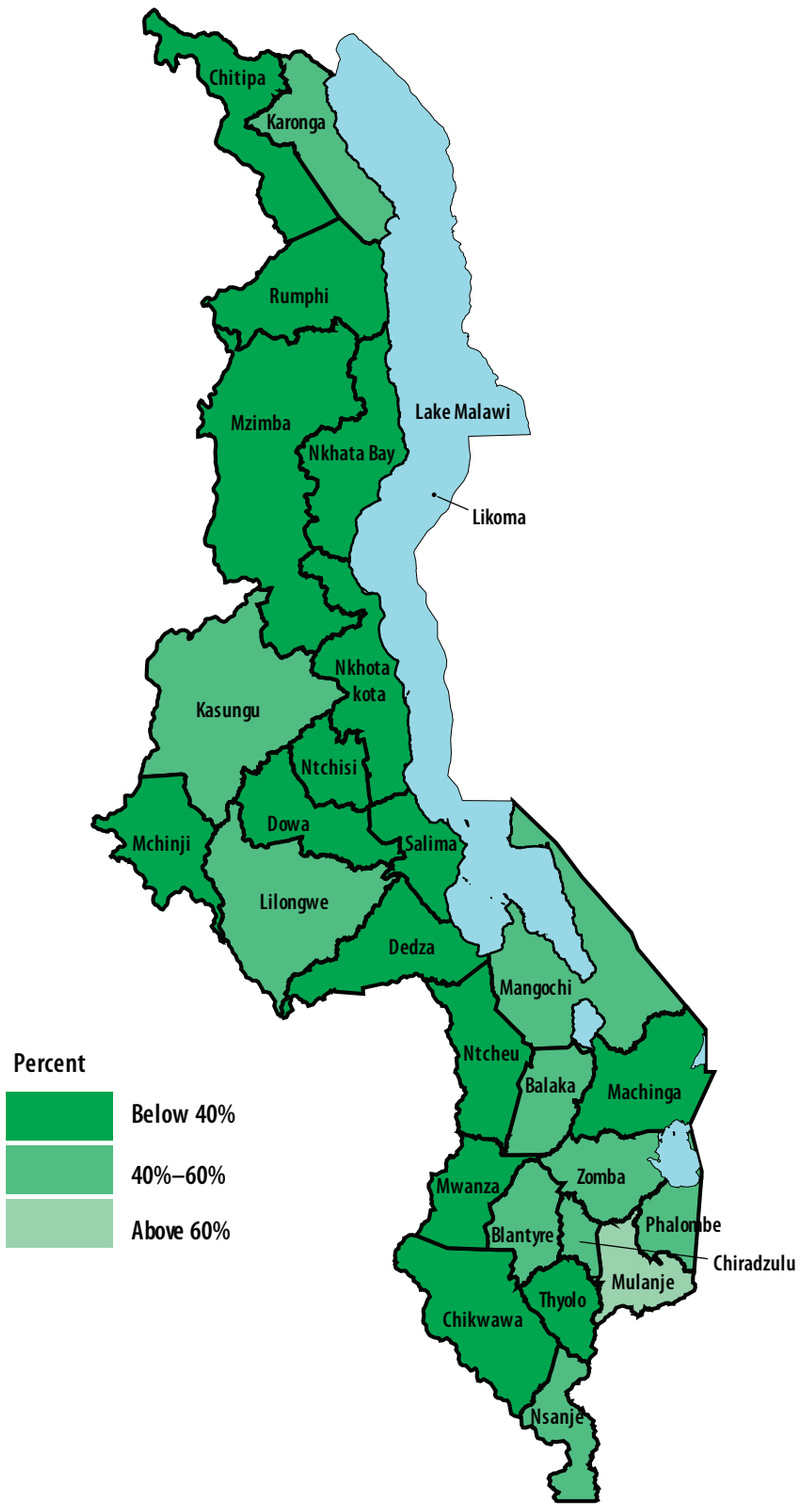


Table 12.6a

Comprehensive knowledge of HIV & AIDS transmission – Men

Percentage of men aged 15–49 years who have comprehensive knowledge of HIV & AIDS transmission, Malawi, 2006

Background characteristic	Knows 2 ways to prevent HIV transmission	Correctly identify 3 misconceptions about HIV transmission	Have comprehensive knowledge* (identify 2 prevention methods and 3 misconceptions)	Number of men
Malawi				
Total	58.7	66.7	42.0	7,636
Urban	61.6	75.5	48.2	1,466
Rural	58.0	64.6	40.5	6,170
Region				
Northern	59.7	64.5	42.6	847
Central	52.8	63.8	35.2	3,490
Southern	64.6	70.2	49.0	3,299
District				
Balaka	88.3	89.4	81.1	171
Blantyre	70.1	70.1	53.8	671
Chikwawa	65.5	72.0	54.5	299
Chiradzulu	72.4	70.9	50.9	126
Chitipa	37.5	56.3	24.0	83
Dedza	54.8	55.9	31.0	381
Dowa	47.4	58.1	27.5	349
Karonga	50.7	48.1	26.3	160
Kasungu	59.5	56.4	35.5	375
Lilongwe	57.1	74.3	43.7	1,343
Machinga	29.0	58.2	16.5	226
Mangochi	47.2	58.0	26.8	567
Mchinji	27.7	60.2	17.3	304
Mulanje	80.7	86.4	72.4	243
Mwanza	72.4	72.0	57.1	133
Mzimba	75.1	74.0	57.3	413
Nkhata Bay	23.9	38.9	11.7	96
Nkhotakota	57.7	63.3	39.4	130
Nsanje	51.4	73.5	41.8	120
Ntcheu	43.3	37.3	18.6	215
Ntchisi	13.2	66.5	8.3	107
Phalombe	59.2	62.6	35.1	139
Rumphi	63.4	84.0	54.0	95
Salima	73.3	65.1	49.3	287
Thyolo	68.1	62.1	43.5	268
Zomba	81.1	83.6	70.1	335

*: Respondents with comprehensive knowledge say that use of condom for every sexual intercourse and having just one uninfected and faithful partner can reduce the chance of getting the AIDS virus, say that a healthy-looking person can have the AIDS virus, and reject the two most common local misconceptions (mosquito bites & supernatural means).

Table 12.6b

Comprehensive knowledge of HIV & AIDS transmission – Men

Percentage of men aged 15–49 years who have comprehensive knowledge of HIV & AIDS transmission, Malawi, 2006

Background characteristic	Knows 2 ways to prevent HIV transmission	Correctly identify 3 misconceptions about HIV transmission	Have comprehensive knowledge* (identify 2 prevention methods and 3 misconceptions)	Number of men
Age				
15–19	57.0	65.2	42.1	1,566
20–24	59.9	67.1	41.6	1,465
15–24	**58.4**	**66.1**	**41.9**	**3,031**
25–29	61.1	67.5	43.8	1,439
30–34	59.9	67.7	45.3	1,143
35–39	56.8	65.0	39.5	825
40–44	57.8	68.6	39.3	668
45–49	54.8	65.6	37.9	531
Woman's education				
None	54.9	52.2	32.1	691
Primary	58.0	62.2	38.9	4,958
Secondary +	61.7	83.1	53.3	1,979
Other	29.9	42.4	5.8	8
Wealth index quintile				
Lowest	56.9	57.5	35.4	1,253
Second	56.9	63.1	38.2	1,331
Middle	59.6	64.2	41.3	1,566
Fourth	58.7	67.1	42.9	1,568
Highest	60.2	76.8	48.7	1,917

*: Respondents with comprehensive knowledge say that use of condom for every sexual intercourse and having just one uninfected and faithful partner can reduce the chance of getting the AIDS virus, say that a healthy-looking person can have the AIDS virus, and reject the two most common local misconceptions (mosquito bites & supernatural means).

12.4 KNOWLEDGE OF MOTHER-TO-CHILD TRANSMISSION

Tables 12.7a to 12.8b provide information on percentages of women and men in Malawi, aged 15–49, who correctly identify routes of HIV transmission from mother to child, by background characteristics. Table 12.7a shows that overall, 91 percent of mothers know that AIDS can be transmitted from mother to child and 65 percent women have knowledge on all the three ways of mother-to-child HIV transmission. Eighty-seven percent reported transmission through breastmilk, 78 percent through delivery and 75 percent during pregnancy. Ninety-four percent of urban women know that HIV can be transmitted from mother to child, compared to 91 percent from rural areas. There are no significant variations across regions and districts. In terms of knowledge of specific routes of transmission, most of the women agree that HIV can be transmitted by breastfeeding. Knowledge of HIV transmission from mother to child is marginally higher among women with secondary education (98 percent) and those belonging to wealthy families (95 percent).

Table 12.7a

Knowledge of mother-to-child HIV transmission – Women

Percentage of women aged 15–49 who correctly identify means of HIV transmission from mother to child, Malawi, 2006

Background characteristic	Know AIDS can be transmitted from mother to child	Percent who know AIDS can be transmitted:				Did not know any specific way	Number of women
		During pregnancy	At delivery	Through breast milk	All three ways		
Malawi							
Total	91.2	74.7	77.8	86.6	65.4	6.0	26,259
Urban	93.6	75.8	82.6	88.8	67.9	6.1	4,624
Rural	90.7	74.5	76.8	86.1	64.8	5.9	21,635
Region							
Northern	93.4	79.4	83.8	89.5	72.3	4.7	2,772
Central	89.9	73.2	76.9	85.3	63.8	6.1	11,665
Southern	92.0	75.1	77.3	87.2	65.3	6.0	11,822
District							
Balaka	95.9	77.7	86.4	90.2	70.9	3.0	571
Blantyre	95.8	76.1	81.8	91.4	66.6	4.0	2,209
Chikwawa	79.3	68.8	63.2	67.7	54.1	9.2	885
Chiradzulu	95.4	80.4	81.1	92.2	71.7	3.8	507
Chitipa	95.7	78.0	84.1	87.7	67.1	3.8	312
Dedza	82.9	70.9	69.8	78.5	61.5	5.1	1,521
Dowa	86.1	74.7	75.9	82.2	65.9	3.9	1,135
Karonga	83.8	76.6	77.2	81.4	72.9	10.4	545
Kasungu	93.7	66.1	81.5	90.2	57.8	6.1	1,079
Lilongwe	89.5	74.2	76.4	84.7	65.1	7.6	4,252
Machinga	73.6	57.5	64.8	68.5	53.3	26.4	985
Mangochi	92.0	72.4	73.4	89.6	63.3	6.2	2,206
Mchinji	96.9	76.7	78.9	92.0	61.2	1.7	956
Mulanje	99.2	93.6	82.8	96.4	79.9	0.5	886
Mwanza	98.3	86.8	84.1	80.6	66.9	1.4	467
Mzimba	97.0	79.8	86.4	93.6	71.7	2.4	1,264
Nkhata Bay	91.0	75.5	76.9	85.9	66.9	6.4	326
Nkhotakota	94.8	82.4	86.1	89.6	74.4	5.1	465
Nsanje	86.4	64.8	70.5	81.0	53.3	4.7	422
Ntcheu	94.4	69.1	82.0	89.9	62.3	5.4	904
Ntchisi	88.0	75.7	76.3	80.3	63.7	5.8	324
Phalombe	90.0	65.2	65.9	84.2	54.1	8.9	512
Rumphi	96.0	88.0	91.1	92.6	83.8	3.7	324
Salima	90.2	73.7	75.4	85.2	64.2	9.5	1,028
Thyolo	95.4	78.3	83.1	91.6	69.6	1.8	1,101
Zomba	98.6	81.2	86.9	97.0	74.1	1.4	1,072

Table 12.7b

Knowledge of mother-to-child HIV transmission – Women

Percentage of women aged 15–49 who correctly identify means of HIV transmission from mother to child, Malawi, 2006

Background characteristic	Know AIDS can be transmitted from mother to child	Percent who know AIDS can be transmitted:				Did not know any specific way	Number of women
		During pregnancy	At delivery	Through breast milk	All three ways		
Age							
15–19	87.3	70.5	69.4	81.8	58.3	9.3	5,124
20–24	92.7	75.7	79.3	87.6	66.1	5.1	6,427
25–29	92.7	77.2	81.1	89.3	69.6	4.5	5,088
30–34	92.0	74.1	80.3	88.2	66.4	5.3	3,680
35–39	92.1	75.3	79.4	86.8	66.5	5.0	2,550
40–44	91.1	75.8	78.9	86.3	67.1	5.8	1,900
45–49	89.9	74.9	78.4	84.8	65.3	6.4	1,490
Woman's education							
None	84.8	69.0	70.3	80.1	59.6	8.4	5,463
Primary	91.7	75.0	77.5	86.9	65.3	6.2	16,758
Secondary +	98.0	81.1	89.3	93.9	73.6	1.8	3,960
Other	98.4	80.4	87.8	95.2	73.2	1.6	78
Wealth index quintile							
Lowest	87.5	71.5	73.2	82.8	61.5	7.3	5,161
Second	89.2	72.4	74.2	84.7	62.5	7.9	5,022
Middle	91.7	74.2	76.9	87.0	64.7	5.5	5,058
Fourth	92.4	77.4	79.0	87.6	68.0	4.7	4,915
Highest	94.7	77.5	84.4	90.2	69.4	4.6	6,103

Tables 12.8a and 12.8b provide information on the percentage of men aged 15–49 who correctly identify means of HIV transmission from mother to child by background characteristics. Overall, 95 percent of men know that HIV can be transmitted from mother to child, with a high proportion citing breastmilk as a means of transmission. No variation can be seen across regions and districts. Table 12.8b shows that men's knowledge on HIV transmission from mother to child is not dependent on education levels or position in wealth index quintiles.

Table 12.8a

Knowledge of mother-to-child HIV transmission – Men

Percentage of men aged 15–49 who correctly identify means of HIV transmission from mother to child, Malawi, 2006

Background characteristic	Know AIDS can be transmitted from mother to child	Percent who know AIDS can be transmitted:				Did not know any specific way	Number of men
		During pregnancy	At delivery	Through breast milk	All three ways		
Malawi							
Total	95.3	78.2	78.7	85.8	62.4	4.2	7,636
Urban	93.5	69.8	76.3	82.8	54.0	5.8	1,466
Rural	95.7	80.2	79.2	86.5	64.3	3.8	6,170
Region							
Northern	93.5	74.9	76.7	79.3	55.7	5.5	847
Central	94.9	77.3	78.7	84.4	61.0	4.8	3,490
Southern	96.2	80.0	79.2	89.0	65.5	3.3	3,299
District							
Balaka	97.6	81.2	91.2	83.8	72.5	2.4	171
Blantyre	94.3	61.8	72.3	87.8	48.4	5.7	671
Chikwawa	96.1	84.0	67.3	90.1	59.9	1.9	299
Chiradzulu	98.2	87.9	86.7	89.6	74.0	1.1	126
Chitipa	94.4	57.6	75.2	82.8	44.6	5.3	83
Dedza	96.1	77.3	75.1	92.5	64.9	3.5	381
Dowa	97.3	79.8	77.8	86.1	60.1	2.0	349
Karonga	87.3	64.2	60.4	77.1	42.4	8.0	160
Kasungu	97.4	78.2	82.4	86.3	63.2	2.3	375
Lilongwe	93.9	76.5	82.1	81.4	61.6	6.1	1,343
Machinga	95.1	87.8	84.6	88.1	77.9	3.7	226
Mangochi	94.0	77.8	78.4	87.4	64.5	5.0	567
Mchinji	96.2	72.4	73.7	87.6	52.9	3.5	304
Mulanje	100.0	96.3	93.6	96.0	88.9	0.0	243
Mwanza	92.9	83.8	60.5	75.4	51.8	6.8	133
Mzimba	94.7	83.1	82.7	76.5	62.2	5.3	413
Nkhata Bay	94.5	71.2	75.5	86.0	55.8	5.1	96
Nkhotakota	97.1	80.5	79.0	87.6	63.6	2.5	130
Nsanje	92.5	83.2	78.9	89.0	73.6	7.5	120
Ntcheu	85.7	72.1	69.4	75.3	55.8	14.3	215
Ntchisi	94.3	80.4	69.1	77.6	52.3	4.5	107
Phalombe	98.4	78.3	76.9	86.7	59.4	1.6	139
Rumphi	97.0	76.2	80.8	85.4	59.1	3.0	95
Salima	97.2	83.3	79.6	87.7	65.2	2.3	287
Thyolo	99.5	83.8	84.4	92.9	71.4	0.0	268
Zomba	99.0	90.6	85.8	93.9	75.2	0.8	335

Table 12.8b

Knowledge of mother-to-child HIV transmission – Men

Percentage of men aged 15–49 who correctly identify means of HIV transmission from mother to child, Malawi, 2006

Background characteristic	Know AIDS can be transmitted from mother to child	Percent who know AIDS can be transmitted:				Did not know any specific way	Number of men
		During pregnancy	At delivery	Through breast milk	All three ways		
Age							
15–19	91.8	76.2	70.8	80.3	55.6	7.0	1,566
20–24	97.2	79.3	80.6	87.7	63.1	2.7	1,465
25–29	95.4	77.5	79.2	87.2	62.5	4.3	1,439
30–34	96.8	79.9	84.0	87.6	66.4	2.7	1,143
35–39	95.9	80.4	82.0	86.6	66.3	3.5	825
40–44	95.6	75.7	80.1	89.2	64.1	4.4	668
45–49	95.8	79.2	76.8	83.8	62.7	4.0	531
Man's education							
None	92.9	76.6	72.5	84.3	61.9	6.0	691
Primary	94.9	79.9	76.2	85.8	62.5	4.6	4,958
Secondary +	97.2	74.4	87.0	86.5	62.2	2.7	1,979
Other	87.5	77.3	55.8	81.8	55.8	12.5	8
Wealth index quintile							
Lowest	95.4	80.9	74.4	85.5	60.7	4.1	1,253
Second	96.4	79.6	77.8	85.4	62.3	3.2	1,331
Middle	94.5	79.8	78.1	86.8	64.6	5.0	1,566
Fourth	95.6	79.4	80.6	87.2	64.5	3.9	1,568
Highest	95.0	73.1	81.0	84.3	59.8	4.7	1,917

12.5 STIGMA AND DISCRIMINATION

Data in tables 12.9a through 12.10b provide information on stigma and discrimination among women and men in Malawi towards people living with HIV and AIDS. Stigma and discrimination are present if respondents indicate acceptance of any of the following four statements: (1) would not care for family member sick with AIDS; (2) would want to keep HIV status of a family member a secret; (3) thinks that a female teacher who is HIV positive should not be allowed to teach in school; and (4) would not buy food from a person with HIV and AIDS.

Table 12.9a shows that nearly 80 percent of women agree with at least one discriminatory statement. Three percent say they would not care for a family member who was sick with AIDS; 64 percent say if a family member had HIV, they would want to keep it a secret; 22 percent believe that a female teacher with HIV should not be allowed to work; and 26 percent would not buy food from a person with HIV and AIDS. However, these proportions are lower amongst male respondents, with 56 percent of men agreeing with at least one discriminatory statement (Table 12.10a). Amongst regions, fewer men (48 percent) in the Southern Region agree with at least one discriminatory statement compared to the Northern and Central Regions. Wide variations can be observed across districts on women and men's attitudes towards people living with HIV and AIDS. Fewer women and men with higher levels of education, or those belonging to higher income groups, agree with at least one discriminatory statement.

Table 12.9a

Attitudes toward people living with HIV & AIDS – Women

Percentage of women aged 15–49 years who have heard of AIDS who express a discriminatory attitude towards people living with HIV & AIDS, Malawi, 2006

Background characteristic	Percent of women who:						Number of women who have heard of AIDS
	Would not care for a family member who was sick with AIDS	If a family member had HIV, would want to keep it a secret	Believe that a female teacher with HIV should not be allowed to work	Would not buy food from a person with HIV & AIDS	Agree with at least one discrim-inatory statement	Agree with none of the discrim-inatory statements	
Malawi							
Total	3.4	63.9	22.1	26.1	79.7	20.3	25,515
Urban	1.2	69.6	10.3	13.6	76.4	23.6	4,610
Rural	3.9	62.7	24.7	28.9	80.4	19.6	20,905
Region							
Northern	2.6	68.5	19.0	19.0	80.7	19.3	2,721
Central	5.2	55.3	27.0	31.3	77.5	22.5	11,205
Southern	1.9	71.2	18.1	22.8	81.7	18.3	11,589
District							
Balaka	2.1	71.1	28.1	18.2	83.2	16.8	564
Blantyre	1.1	68.2	10.2	12.1	74.4	25.6	2,205
Chikwawa	1.9	67.8	17.4	24.1	78.3	21.7	783
Chiradzulu	1.4	69.8	12.8	14.6	80.2	19.8	503
Chitipa	2.7	67.1	20.7	20.7	77.0	23.0	310
Dedza	8.2	47.7	35.5	46.6	81.0	19.0	1,339
Dowa	3.9	53.1	27.0	29.0	72.9	27.1	1,022
Karonga	2.6	77.5	9.1	15.1	84.8	15.2	514
Kasungu	2.5	74.0	26.8	27.5	89.1	10.9	1,077
Lilongwe	4.7	53.8	21.9	27.0	75.7	24.3	4,129
Machinga	8.0	79.8	16.4	35.0	93.1	6.9	985
Mangochi	1.4	76.2	25.6	33.1	87.5	12.5	2,167
Mchinji	2.8	48.5	22.3	25.3	62.2	37.8	943
Mulanje	0.8	87.9	9.9	14.4	92.1	7.9	883
Mwanza	1.8	88.0	23.2	32.0	96.2	3.8	466
Mzimba	2.5	60.3	23.9	20.6	75.2	24.8	1,257
Nkhata Bay	4.3	69.9	23.7	29.5	88.2	11.8	317
Nkhotakota	7.0	51.5	26.1	31.2	73.2	26.8	464
Nsanje	2.5	58.8	34.3	31.7	74.5	25.5	385
Ntcheu	3.1	66.2	24.7	29.8	83.2	16.8	902
Ntchisi	12.0	51.0	35.7	35.4	80.4	19.6	304
Phalombe	1.0	66.1	22.7	29.5	81.0	19.0	506
Rumphi	1.1	86.4	9.2	6.8	92.1	7.9	323
Salima	9.0	53.5	40.8	40.3	82.5	17.5	1,025
Thyolo	1.2	59.7	16.1	19.1	73.6	26.4	1,070
Zomba	0.7	59.5	17.0	18.4	72.7	27.3	1,072

Table 12.9b

Attitudes toward people living with HIV & AIDS – Women

Percentage of women aged 15–49 years who have heard of AIDS who express a discriminatory attitude towards people living with HIV & AIDS, Malawi, 2006

Background characteristic	Percent of women who:						Number of women who have heard of AIDS
	Would not care for a family member who was sick with AIDS	If a family member had HIV, would want to keep it a secret	Believe that a female teacher with HIV should not be allowed to work	Would not buy food from a person with HIV & AIDS	Agree with at least one discrim-inatory statement	Agree with none of the discrim-inatory statements	
Age							
15–19	4.5	64.5	24.5	27.9	81.3	18.7	4,952
20–24	3.1	63.7	20.2	25.6	79.2	20.8	6,285
25–29	3.1	65.7	19.6	21.9	78.9	21.1	4,945
30–34	3.3	63.4	23.6	26.6	78.6	21.4	3,581
35–39	2.3	64.1	21.4	27.2	80.9	19.1	2,475
40–44	4.0	60.3	25.0	28.0	78.8	21.2	1,840
45–49	3.6	62.7	24.4	30.4	81.6	18.4	1,436
Woman's education							
None	5.6	61.3	31.7	39.3	84.7	15.3	5,094
Primary	3.4	63.8	23.1	26.5	80.1	19.9	16,392
Secondary +	0.6	67.7	5.6	7.4	71.5	28.5	3,952
Other	2.5	74.8	23.7	27.4	86.1	13.9	78
Wealth index quintile							
Lowest	5.6	58.1	31.2	36.3	82.5	17.5	4,891
Second	4.3	60.6	27.6	32.2	80.5	19.5	4,877
Middle	4.1	65.0	24.7	29.6	82.3	17.7	4,913
Fourth	2.4	66.8	19.6	22.4	79.2	20.8	4,772
Highest	1.2	68.2	10.3	13.1	75.2	24.8	6,061

Table 12.10a

Attitudes toward people living with HIV & AIDS – Men

Percentage of men aged 15–49 years who have heard of AIDS who express a discriminatory attitude towards people living with HIV & AIDS, Malawi, 2006

Background characteristic	Percent of men who:						Number of men who have heard of AIDS
	Would not care for a family member who was sick with AIDS	If a family member had HIV would want to keep it a secret	Believe that a female teacher with HIV should not be allowed to work	Would not buy food from a person with HIV & AIDS	Agree with at least one discrim-inatory statement	Agree with none of the discrim-inatory statements	
Malawi							
Total	2.2	40.6	17.1	14.1	55.7	44.3	7,601
Urban	1.1	37.5	6.8	6.6	45.2	54.8	1,456
Rural	2.5	41.3	19.5	15.9	58.2	41.8	6,145
Region							
Northern	0.3	51.8	13.9	11.4	61.1	38.9	839
Central	2.6	44.7	20.8	15.4	61.6	38.4	3,481
Southern	2.3	33.4	13.9	13.4	48.2	51.8	3,281
District							
Balaka	7.3	37.2	9.2	11.7	48.4	51.6	171
Blantyre	3.1	35.6	7.0	7.7	41.9	58.1	671
Chikwawa	1.5	37.7	18.2	13.0	57.7	42.3	293
Chiradzulu	1.1	38.0	5.0	6.4	45.2	54.8	125
Chitipa	0.5	56.6	21.8	19.6	69.5	30.5	83
Dedza	2.5	39.8	29.5	29.6	69.9	30.1	379
Dowa	0.2	36.8	21.6	14.9	57.9	42.1	347
Karonga	0.4	62.6	23.9	16.3	73.0	27.0	152
Kasungu	4.2	52.9	25.8	15.6	68.8	31.2	374
Lilongwe	1.2	46.9	14.7	8.9	56.1	43.9	1,343
Machinga	8.0	47.6	18.7	20.5	66.2	33.8	224
Mangochi	1.1	37.0	28.0	21.4	61.4	38.6	562
Mchinji	7.6	34.9	28.0	15.9	60.4	39.6	303
Mulanje	0.4	30.6	3.8	8.8	36.6	63.4	243
Mwanza	1.7	22.7	27.7	24.6	52.3	47.7	133
Mzimba	0.0	43.0	7.0	8.9	51.3	48.7	413
Nkhata Bay	0.5	73.2	19.5	10.0	80.7	19.3	95
Nkhotakota	1.9	46.5	15.2	14.3	60.1	39.9	129
Nsanje	0.8	33.3	16.1	18.5	55.6	44.4	120
Ntcheu	3.8	47.6	18.4	21.7	64.3	35.7	215
Ntchisi	6.8	30.6	27.1	20.0	57.8	42.2	105
Phalombe	1.3	27.5	17.6	14.3	45.8	54.2	139
Rumphi	1.0	47.2	15.5	8.7	58.1	41.9	95
Salima	3.1	51.8	24.4	21.4	72.1	27.9	285
Thyolo	0.9	42.5	8.2	10.3	52.6	47.4	267
Zomba	1.1	7.7	7.0	9.4	20.7	79.3	334

Table 12.10b

Attitudes toward people living with HIV & AIDS – Men

Percentage of men aged 15–49 years who have heard of AIDS who express a discriminatory attitude towards people living with HIV & AIDS, Malawi, 2006

Background characteristic	Percent of men who:						Number of men who have heard of AIDS
	Would not care for a family member who was sick with AIDS	If a family member had HIV would want to keep it a secret	Believe that a female teacher with HIV should not be allowed to work	Would not buy food from a person with HIV & AIDS	Agree with at least one discrim-inatory statement	Agree with none of the discrim-inatory statements	
Age							
15–19	3.6	37.8	23.3	20.7	59.5	40.5	1,547
20–24	2.2	42.1	17.2	12.3	57.0	43.0	1,463
25–29	1.4	40.4	12.8	10.2	51.9	48.1	1,435
30–34	2.0	42.0	14.7	13.0	54.6	45.4	1,137
35–39	1.7	43.4	15.5	12.5	56.3	43.7	820
40–44	2.3	41.7	15.4	14.8	55.4	44.6	668
45–49	1.9	36.2	19.5	14.2	53.9	46.1	530
Man's education							
None	3.7	35.7	31.9	28.7	65.8	34.2	683
Primary	2.7	39.8	20.6	16.3	57.5	42.5	4,933
Secondary +	0.6	44.2	3.1	3.5	47.8	52.2	1,977
Other	0.0	44.3	12.2	5.8	50.0	50.0	8
Wealth index quintile							
Lowest	3.8	43.8	26.8	20.8	68.0	32.0	1,246
Second	2.6	41.8	21.0	17.0	59.3	40.7	1,325
Middle	2.1	39.2	17.1	14.7	54.8	45.2	1,558
Fourth	2.1	38.9	15.3	12.9	52.8	47.2	1,560
Highest	1.2	40.1	9.3	8.1	48.5	51.5	1,912

Table 12.11a

Knowledge of a facility for HIV testing – Women

Percentage of women aged 15–49 years who know where to get an HIV test, percentage of women who have been tested and of those tested, the percentage who have been told the result, Malawi, 2006

Background characteristic	Know a place to get tested	Have been tested	Number of women	If tested, have been told result	Number of women who have been tested for HIV
Malawi					
Total	86.9	25.2	26,259	91.6	6,623
Urban	96.3	39.8	4,624	94.4	1,842
Rural	84.9	22.1	21,635	90.6	4,781
Region					
Northern	89.4	32.3	2,772	92.7	894
Central	84.8	24.5	11,665	92.4	2,858
Southern	88.4	24.3	11,822	90.6	2,871
District					
Balaka	89.6	22.1	571	91.1	126
Blantyre	97.5	32.3	2,209	91.8	714
Chikwawa	79.0	26.6	885	93.2	235
Chiradzulu	95.2	43.6	507	93.7	221
Chitipa	88.4	37.9	312	90.6	118
Dedza	64.9	14.2	1,521	92.1	216
Dowa	78.4	28.0	1135	89.7	317
Karonga	76.2	13.8	545	88.1	75
Kasungu	90.9	17.4	1079	90.5	188
Lilongwe	90.5	31.4	4,252	95.1	1,334
Machinga	75.0	14.3	985	78.7	141
Mangochi	85.1	14.5	2,206	83.1	320
Mchinji	88.8	21.0	956	90.9	200
Mulanje	95.7	10.9	886	86.0	97
Mwanza	95.5	35.9	467	95.5	168
Mzimba	94.5	38.7	1264	93.9	489
Nkhata Bay	87.0	31.7	326	89.8	103
Nkhotakota	86.4	23.1	465	83.1	107
Nsanje	81.8	18.9	422	86.5	80
Ntcheu	84.9	14.6	904	91.0	132
Ntchisi	74.5	21.7	324	83.5	70
Phalombe	73.6	13.4	512	72.2	68
Rumphi	94.9	33.3	324	95.3	108
Salima	89.8	28.4	1,028	91.6	292
Thyolo	92.7	35.1	1,101	97.1	387
Zomba	89.1	29.4	1,072	91.9	315

12.6 KNOWLEDGE OF HIV TESTING FACILITY

Another important indicator on HIV & AIDS is knowledge about where to be tested for HIV and use of such services. Data relating to knowledge among women and men about facilities for HIV testing and whether they have ever been tested are presented in tables 12.11a through 12.12b. Table 12.11a shows that of the 26,259 women interviewed, 87 percent reported knowing a place to get an HIV test but only 25 percent reported having been tested for HIV. Ninety-two percent of those tested, however, received the result of their HIV status. Regarding urban-rural differential, 96 percent of urban women know of a place where they can be tested and 40 percent have been tested, compared to 85 percent of rural women who say they know a place to get tested but only 22 percent that have actually been tested. Among those tested, 94 percent in urban areas and 91 percent in rural areas actually collected their results. Amongst regions, more women in the Northern Region have been tested compared to other regions. Table 12.11b shows a strong relationship between levels of education and wealth index quintiles vis-à-vis knowledge of testing centres, willingness to get tested and collection of results.

Tables 12.12a and 12.12b present knowledge of facilities for HIV testing among men. The results show more or less similar patterns in men as depicted for women.

Table 12.11b

Knowledge of a facility for HIV testing – Women

Percentage of women aged 15–49 years who know where to get an HIV test, percentage of women who have been tested and of those tested, the percentage who have been told the result, Malawi, 2006

Background characteristic	Know a place to get tested	Have been tested	Number of women	If tested, have been told result	Number of women who have been tested for HIV
Age					
15–19	82.4	15.6	5,124	92.0	801
20–24	89.8	31.0	6,427	93.0	1,993
25–29	89.1	31.3	5,088	92.0	1,590
30–34	88.8	27.9	3,680	91.0	1,027
35–39	85.7	22.8	2,550	87.2	583
40–44	83.8	20.6	1,900	91.0	391
45–49	83.8	16.0	1,490	91.1	239
Woman's education					
None	77.5	17.7	5,463	87.7	968
Primary	87.4	24.5	16,758	90.9	4,105
Secondary +	97.7	38.7	3,960	96.2	1,532
Other	92.1	22.5	78	90.6	17
Wealth index quintile					
Lowest	80.0	21.2	5,161	89.5	1,094
Second	83.8	20.4	5,022	90.2	1,025
Middle	86.0	21.7	5,058	90.7	1,096
Fourth	87.7	25.1	4,915	91.1	1,235
Highest	95.3	35.6	6,103	94.1	2,172

Table 12.12a

Knowledge of a facility for HIV testing – Men

Percentage of men aged 15–49 years who know where to get an HIV test, percentage of men who have been tested and of those tested, the percentage who have been told the result, Malawi, 2006

Background characteristic	Know a place to get tested	Have been tested	Number of men	If tested, have been told result	Number of men who have been tested for HIV
Malawi					
Total	91.6	26.4	7,636	91.8	2,014
Urban	97.4	32.4	1,466	92.7	475
Rural	90.2	24.9	6,170	91.6	1,539
Region					
Northern	93.6	29.9	847	94.3	253
Central	90.9	26.7	3,490	89.3	933
Southern	91.7	25.1	3,299	93.9	827
District					
Balaka	95.9	30.4	171	97.2	52
Blantyre	91.0	30.2	671	99.4	203
Chikwawa	95.6	30.9	299	94.3	92
Chiradzulu	90.8	30.4	126	89.9	38
Chitipa	94.5	37.8	83	92.6	31
Dedza	91.4	15.6	381	(93.4)	60
Dowa	91.0	27.4	349	87.3	96
Karonga	80.9	30.5	160	87.3	49
Kasungu	84.2	27.2	375	88.6	102
Lilongwe	94.6	30.1	1,343	89.7	404
Machinga	87.2	16.6	226	(86.7)	38
Mangochi	86.5	16.8	567	(90.3)	95
Mchinji	82.7	32.4	304	87.6	98
Mulanje	92.9	30.8	243	85.3	75
Mwanza	91.8	26.7	133	97.8	35
Mzimba	98.8	26.1	413	96.4	108
Nkhata Bay	89.4	30.7	96	96.7	29
Nkhotakota	84.4	26.0	130	93.4	34
Nsanje	89.9	21.1	120	94.3	25
Ntcheu	92.5	16.6	215	88.8	36
Ntchisi	89.8	29.0	107	84.5	31
Phalombe	92.5	20.3	139	92.3	28
Rumphi	95.5	37.6	95	97.2	36
Salima	92.8	25.6	287	90.2	73
Thyolo	97.9	29.2	268	97.1	78
Zomba	94.2	20.0	335	90.2	67

Note: Figures in parentheses are based on 25–49 unweighted cases

Table 12.12b

Knowledge of a facility for HIV testing – Men

Percentage of men aged 15–49 years who know where to get an HIV test, percentage of men who have been tested and of those tested, the percentage who have been told the result, Malawi, 2006

Background characteristic	Know a place to get tested	Have been tested	Number of men	If tested, have been told result	Number of men who have been tested for HIV
Age					
15–19	84.5	12.2	1,566	92.7	190
20–24	93.8	28.3	1,465	91.7	415
25–29	94.7	36.8	1,439	90.9	529
30–34	93.8	28.3	1,143	94.6	324
35–39	94.1	31.0	825	95.5	256
40–44	91.1	26.8	668	85.0	179
45–49	89.4	22.9	531	90.2	122
Man's education					
None	84.5	18.8	691	93.7	130
Primary	89.8	21.9	4,958	90.6	1,084
Secondary +	98.6	40.3	1,979	93.2	799
Other	53.9	19.0	8	100.0	2
Wealth index quintile					
Lowest	88.1	24.6	1,253	92.7	308
Second	87.8	25.0	1,331	91.8	333
Middle	91.8	25.0	1,566	87.9	391
Fourth	91.2	24.8	1,568	90.0	389
Highest	96.5	31.0	1,917	95.2	594

12.7 COUNSELING AND TESTING COVERAGE DURING ANTENATAL CARE

The percentage of women who gave birth in the two years preceding the survey and received counselling and HIV testing during antenatal care is presented in tables 12.13a and 12.13b. The tables show that of the 92 percent of women who received antenatal care from a health professional for the last pregnancy, 63 percent were provided with information about HIV prevention during the antenatal visit, 27 percent were tested for HIV during the visit and 24 percent received results of an HIV test at the visit. The proportions across the same indicators among urban women are higher compared to rural women, despite the fact that 91 percent of rural women received antenatal care from a health professional. Though women in the Northern Region are less likely than women in the other two regions to report receiving antenatal care in this region from a health professional for their last pregnancy, those who do receive antenatal care in this region are more likely not only to be tested for HIV, but also to receive results of an HIV test. There are no significant variations across districts in Malawi regarding HIV testing and counselling coverage during antenatal care.

Table 12.13b shows that in general, HIV testing and counselling increase with women's education level and wealth status. No notable differentials are apparent across age groups.

Table 12.13a

HIV testing and counseling coverage during antenatal care

Percentage of women aged 15–49 years who gave birth in the two years preceding the survey who were offered HIV testing and counseling during their antenatal care, Malawi, 2006

Background characteristic	Percent of women who:				Number of women who gave birth in the two years preceding the survey
	Received antenatal care from a health professional for last pregnancy	Were provided information about HIV prevention during ANC visit	Were tested for HIV at ANC visit	Received results of HIV test at ANC visit	
Malawi					
Total	91.9	63.0	27.4	24.3	10,552
Urban	97.2	78.5	54.0	50.0	1,507
Rural	91.0	60.4	23.0	20.0	9,045
Region					
Northern	82.4	65.6	31.9	28.3	1,035
Central	92.2	57.5	27.1	24.5	4,959
Southern	93.7	68.3	26.7	23.1	4,557
District					
Balaka	90.9	63.1	21.6	19.2	231
Blantyre	95.4	78.2	41.3	36.5	656
Chikwawa	92.9	69.8	26.5	23.9	391
Chiradzulu	96.9	79.6	41.2	36.1	196
Chitipa	79.0	65.6	40.7	35.6	139
Dedza	80.0	41.1	11.9	9.9	675
Dowa	89.9	54.6	27.7	25.5	427
Karonga	65.5	54.9	11.6	10.0	202
Kasungu	94.0	67.5	13.1	11.4	456
Lilongwe	95.9	61.6	39.7	37.1	1,907
Machinga	95.1	62.7	17.4	12.0	386
Mangochi	94.6	49.8	15.3	11.7	988
Mchinji	96.6	78.6	18.1	15.8	379
Mulanje	92.4	83.2	16.7	13.5	271
Mwanza	96.5	83.1	44.3	41.6	180
Mzimba	95.6	65.9	35.8	31.8	452
Nkhata Bay	96.7	70.2	43.9	38.9	118
Nkhotakota	85.6	54.4	23.0	17.2	200
Nsanje	93.6	57.7	21.0	18.3	191
Ntcheu	91.8	53.2	10.8	9.9	360
Ntchisi	92.9	25.8	16.0	12.3	139
Phalombe	88.7	61.1	11.7	6.6	226
Rumphi	96.2	77.7	29.8	27.3	123
Salima	94.4	54.4	37.0	32.2	417
Thyolo	89.0	78.6	34.2	33.0	458
Zomba	96.2	80.7	37.3	33.4	384

Table 12.13b

HIV testing and counseling coverage during antenatal care

Percentage of women aged 15–49 years who gave birth in the two years preceding the survey who were offered HIV testing and counseling during their antenatal care, Malawi, 2006

Background characteristic	Percent of women who:				Number of women who gave birth in the two years preceding the survey
	Received antenatal care from a health professional for last pregnancy	Were provided information about HIV prevention during ANC visit	Were tested for HIV at ANC visit	Received results of HIV test at ANC visit	
Age					
15–19	91.7	58.9	26.8	23.6	1,158
20–24	92.7	63.6	28.3	25.7	3,599
25–29	92.7	64.2	29.3	26.4	2,670
30–34	91.2	63.8	28.7	25.3	1,621
35–49	89.5	61.7	20.8	16.7	1,504
Woman's education					
None	89.8	54.6	20.4	17.4	2,407
Primary	92.0	63.2	26.9	23.7	6,912
Secondary +	95.7	78.5	44.0	41.5	1,213
Other	80.1	54.1	30.0	24.2	20
Wealth index quintile					
Lowest	89.8	52.4	22.0	19.1	2,442
Second	89.2	58.1	21.9	19.0	2,225
Middle	93.7	65.0	23.9	21.0	2,164
Fourth	92.4	65.8	27.5	24.1	1,899
Highest	95.3	77.8	45.5	41.7	1,822

12.8 SEXUAL BEHAVIOUR

Promoting safer sexual behaviour is critical for reducing HIV prevalence. The use of condoms during sex, especially with non-regular partners, is especially important for reducing the spread of HIV. In most countries, over half of new HIV infections occur amongst young people aged 15–24 years, indicating that influencing the behaviour of this age group is key to reducing new infections. In MICS 2006, a series of questions were administered to women and men 15–24 years of age to assess their risk of HIV infection. Risk factors for HIV include sex at an early age, sex with older men, sex with a non-marital, non-cohabiting partner and failure to use a condom.

12.8.1 Sex at an early age and with a partner 10 or more years older

Tables 12.14a through 12.15b and figures 12.1 and 12.2 show the sexual behaviours that increase the risk of HIV infection among women and men. Table 12.4a shows the percentage of women aged 15–19, at the time of the survey, who had sex before age 15; women aged 20–24 who had sex before age 18; and the percentage of women who had sex in the 12 months preceding the survey with a man 10 or more years their senior. Overall, 14 percent of women aged 15–19 had sex before age 15 and two-thirds had sex before age 18. Eight percent of women reported having sex in the 12 months preceding the survey with a man 10 or more years older. Rural women are slightly more likely to engage in early first sex than urban women - while 15 percent of rural women aged 15–19 have sex before aged 15, the same is true of 13 percent of women in urban areas. The table also shows that

Table 12.14a

Sexual behaviour that increases risk of HIV infection – Women

Percentage of young women aged 15–19 years who had sex before age 15, percentage of young women aged 20–24 who had sex before age 18 and percentage of young women aged 15–24 who had sex with a man 10 or more years older, Malawi, 2006

Background characteristic	Percentage of women aged 15–19 who had sex before age 15	Number of women aged 15–19 years	Percentage of women aged 20–24 who had sex before age 18	Number of women aged 20–24 years	Percentage who had sex in the 12 months preceding the survey with a man 10 or more years older	Number of women aged 15–24 who had sex in the 12 months preceding the survey
Malawi						
Total	14.1	5,124	65.0	6,427	8.0	8,194
Urban	12.6	1,013	58.9	1,223	8.5	1,487
Rural	14.5	4,110	66.5	5,204	7.9	6,706
Region						
Northern	7.4	583	61.2	638	13.2	799
Central	11.6	2,240	57.7	2,981	7.1	3,697
Southern	18.2	2,300	73.7	2,809	7.8	3,697
District						
Balaka	17.5	139	72.5	108	8.0	179
Blantyre	22.2	482	68.5	533	8.0	669
Chikwawa	8.1	161	71.7	214	7.2	281
Chiradzulu	17.0	98	69.9	125	4.8	161
Chitipa	11.2	61	58.3	76	12.7	97
Dedza	8.4	345	56.8	358	7.0	463
Dowa	8.6	217	60.5	256	8.8	280
Karonga	14.5	125	74.2	134	13.0	178
Kasungu	7.3	211	57.5	275	8.9	350
Lilongwe	12.8	748	52.8	1,184	5.1	1,469
Machinga	24.9	211	85.5	225	7.8	322
Mangochi	17.9	374	75.3	491	9.5	620
Mchinji	10.2	179	64.5	279	8.8	331
Mulanje	14.8	181	73.3	204	7.9	271
Mwanza	12.6	92	65.2	121	7.1	156
Mzimba	3.4	279	56.4	268	12.8	336
Nkhata Bay	6.7	54	62.1	87	15.1	96
Nkhotakota	10.4	95	64.6	120	12.8	152
Nsanje	3.3	85	60.7	92	10.2	122
Ntcheu	19.0	167	70.1	210	5.7	267
Ntchisi	1.7	65	33.4	69	4.2	81
Phalombe	15.4	85	76.0	133	7.1	173
Rumphi	7.6	65	57.3	72	13.1	92
Salima	18.4	213	66.2	230	10.4	303
Thyolo	24.1	181	75.0	318	6.1	411
Zomba	19.4	211	81.2	244	8.5	333

Table 12.14b

Sexual behaviour that increases risk of HIV infection – Women

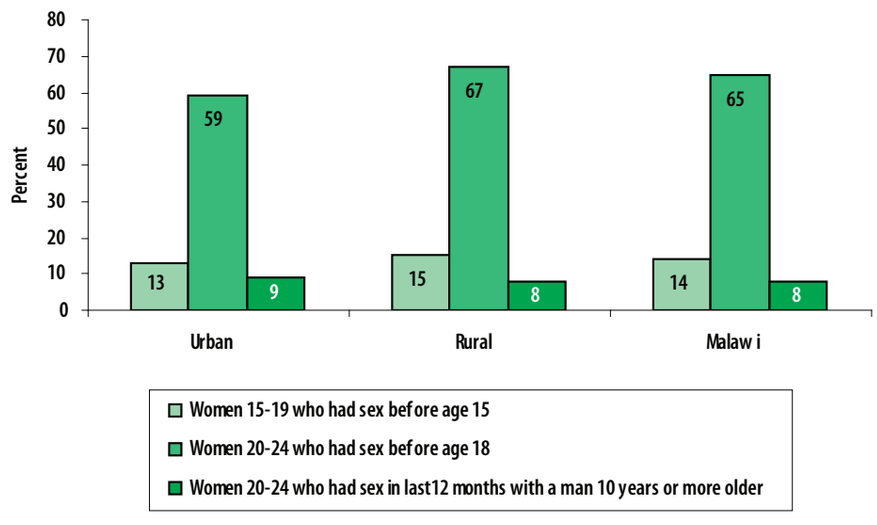
Percentage of young women aged 15–19 years who had sex before age 15, percentage of young women aged 20–24 who had sex before age 18 and percentage of young women aged 15–24 who had sex with a man 10 or more years older, Malawi, 2006

Background characteristic	Percentage of women aged 15–19 who had sex before age 15	Number of women aged 15–19 years	Percentage of women aged 20–24 who had sex before age 18	Number of women aged 20–24 years	Percentage who had sex in the 12 months preceding the survey with a man 10 or more years older	Number of women aged 15–24 who had sex in the 12 months preceding the survey
Age						
15–19	14.1	5,124	na	na	4.3	2,445
20–24	na	na	65.0	6,427	9.6	5,749
Woman's education						
None	21.2	252	77.3	738	9.4	865
Primary	15.3	3,925	70.9	4,303	8.2	5,928
Secondary +	7.1	945	40.2	1,381	6.3	1,396
Other	0.0	1	100.0	6	28.4	5
Wealth index quintile						
Lowest	13.1	959	67.1	1,248	7.7	1,620
Second	17.2	901	67.6	1,282	7.4	1,691
Middle	15.8	928	69.3	1,303	7.2	1,744
Fourth	13.1	960	68.4	1,174	7.9	1,494
Highest	12.2	1,376	54.3	1,420	9.9	1,644

na: not applicable

Figure 12.1

Sexual behaviour that increases risk of HIV infection – Women, Malawi, 2006



the Southern Region rates highest in all of the three indicators except the percentage of those who had sex with a partner 10 or more years older. Machinga district has the highest proportion of women aged 15–19 years (25 percent) that report to have had sex before the age of 15. Machinga (86 percent) and Zomba (81 percent) have the highest proportion of women aged 20–24 reporting to have had sex before age 18. Nkhata Bay on the other hand, reported the highest proportion (15 percent) of women aged 15–24 having sex with a man 10 years or more older in the 12 months preceding the survey. As expected, while there is a strong relationship between education and age at first sex among women, there is no evidence of an association between the wealth status of women and age at first sex.

Tables 12.15a and 12.15b and figure 12.2 provide information on sexual behaviours that increase the risk of HIV infection in men. The results in table 12.15a show that compared to women, 2 percent more men aged 15–19 had sex before age 15 (16 percent). However, only 52 percent of men aged 20–49 reported having sex before age 18 as compared to 65 percent women in the same age group. Higher numbers of urban men (59 percent) report to have sex before the age of 18 compared to their rural counterparts (50 percent). Men in the Southern Region are more likely to indulge in sex before 18 than men in the other two regions. However, the incidence of first sex before the age of 15 varies considerably amongst the districts, ranging from 4 percent in Rumphi to 43 percent in Mulanje. Similarly, sex before the age of 18 ranges from 21 percent in Rumphi to 85 percent in Mulanje. Men having sex with a woman 10 or more years younger is almost negligible across the background characteristics. Table 12.15b shows that an educated man is 10 percentage points less likely to have first sex before age 18 than an illiterate man (53 percent). Not much variation in the sexual behaviour of men is observed by wealth status.

Table 12.15a

Sexual behaviour that increases risk of HIV infection – Men

Percentage of young men aged 15–19 years who had sex before age 15, percentage of young men aged 20–49 who had sex before age 18 and percentage of young men aged 20–49 who had sex with a woman 10 or more years younger, Malawi, 2006

Background characteristic	Percentage of men aged 15–19 who had sex before age 15	Number of men aged 15–19 years	Percentage of men aged 20–49 who had sex before age 18	Number of men aged 20–49 years	Percentage who had sex in the 12 months preceding the survey with a woman 10 or more years younger	Number of men aged 20–49 who had sex in the 12 months preceding the survey
Malawi						
Total	16.1	1,566	51.6	1,465	0.1	1,662
Urban	17.1	293	58.5	263	0.3	262
Rural	15.9	1,273	50.1	1,202	0.1	1,399
Region						
Northern	11.3	177	47.2	173	0.0	178
Central	17.2	662	46.6	671	0.2	695
Southern	16.4	726	58.3	621	0.0	788
District						
Balaka	11.3	39	46.1	44	0.0	48
Blantyre	18.7	166	70.2	115	0.0	132
Chikwawa	10.7	67	64.7	57	0.0	69
Chiradzulu	7.8	34	55.9	28	0.0	31
Chitipa	(8.8)	14	36.5	16	0.0	15
Dedza	(10.6)	73	(29.9)	79	0.0	102
Dowa	23.4	66	43.0	66	(0.0)	55
Karonga	9.3	36	33.8	29	0.0	29
Kasungu	24.4	84	40.2	78	0.0	73
Lilongwe	10.4	215	45.7	246	0.0	247
Machinga	*	19	(68.2)	39	(0.0)	45
Mangochi	15.8	135	(57.5)	92	0.0	137
Mchinji	14.8	58	60.0	59	2.5	66
Mulanje	(42.7)	42	(84.8)	39	0.0	67
Mwanza	4.9	38	26.4	28	0.0	44
Mzimba	14.1	90	63.1	87	0.0	102
Nkhata Bay	11.0	19	32.6	20	0.0	19
Nkhotakota	29.8	27	65.5	23	0.0	30
Nsanje	23.4	32	61.3	23	0.8	29
Ntcheu	22.0	47	72.8	50	0.0	44
Ntchisi	10.8	23	43.6	24	0.0	24
Phalombe	(30.0)	27	51.5	29	0.0	31
Rumphi	4.3	19	21.4	21	(0.0)	13
Salima	26.5	71	(42.1)	46	0.0	53
Thyolo	(4.6)	47	(45.3)	56	(0.0)	51
Zomba	7.7	81	48.0	71	0.0	106

Note: Figures in parantheses are based on 25–49 unweighted cases. An asterisk indicates that an estimate is based on fewer than 25 unweighted cases and has been supressed.

Table 12.15b

Sexual behaviour that increases risk of HIV infection – Men

Percentage of young men aged 15–19 years who had sex before age 15, percentage of young men aged 20–49 who had sex before age 18 and percentage of young men aged 20–49 who had sex with a woman 10 or more years younger, Malawi, 2006

Background characteristic	Percentage of men aged 15–19 who had sex before age 15	Number of men aged 15–19 years	Percentage of men aged 20–24 who had sex before age 18	Number of men aged 20–24 years	Percentage who had sex in the 12 months preceding the survey with a woman 10 or more years older	Number of men aged 20–49 who had sex in the 12 months preceding the survey
Age						
15–19	16.1	1,566	na	na	0.0	501
20–24	na	na	51.6	1,465	0.2	1,160
Man's education						
None	(15.0)	30	53.1	60	0.0	66
Primary	15.6	1,221	56.0	941	0.1	1,160
Secondary +	18.2	314	42.5	646	0.1	435
Other	50.0	1	100.0	0	0.0	0
Wealth index quintile						
Lowest	14.6	240	50.6	244	0.0	274
Second	22.4	256	50.7	264	0.3	306
Middle	12.4	300	47.6	300	0.0	356
Fourth	15.7	327	54.1	313	0.0	350
Highest	16.2	443	54.3	344	0.3	377

na: not applicable.

Note: Figures in parentheses are based on 25–49 unweighted cases.

12.8.2 Condom use at last high risk sex

Tables 12.16a to 12.16b provide information on percentages of young women aged 15–24 who had high risk sex in the previous year and who used a condom at last high risk sex. Table 12.16a shows that 14 percent women aged 15–24 reported having sex with non-marital, non-cohabiting partners in the last 12 months and of these only 40 percent of women used a condom. While 1 percent of rural women and urban women have had sex with more than one partner in the last 12 months preceding the survey, urban women are more likely to have sex with non-marital, non-cohabiting partners (21 percent) than rural women (12 percent). The table also shows that one in two urban women used a condom at last sex with a non-marital, non-cohabiting partner, while 36 percent of rural women reported the same. Women from the Southern Region are more likely to have sex with non-marital, non-cohabiting partners than women in the other regions and those from the Northern Region had higher condom usage at last sex with a non-marital, non-cohabiting partner. Among districts, women from Dowa and Zomba (4 percent) are more likely to have sex with more than one partner. Women from Blantyre (26 percent) are most likely to have sex with a non-marital, non-cohabiting partner and women from Salima (60 percent) are most likely to use a condom at last sex with a non-marital, non-cohabiting partner.

Table 12.16b shows that 26 percent of women with secondary education had sex with a non-marital, non-cohabiting partner while 48 percent used a condom at last sex with a non-marital,

Table 12.16a

Condom use at last high-risk sex - Women

Percentage of young women aged 15–24 who had high risk sex in the previous year and who used a condom at last high risk sex, Malawi, 2006

Background characteristic	Ever had sex	Had sex in the last 12 months	Had sex with more than one partner in the last 12 months	Number of women aged 15–24	Percent who had sex with non-marital, non-cohabiting partner	Number of women aged 15–24 years who had sex in last 12 months	Percent who used a condom at last sex with a non-marital, non-cohabiting partner	Number of women aged 15–24 years who ad sex in last 12 months with a non-marital, non-cohabiting partner
Malawi								
Total	77.4	70.9	1.1	11,551	13.7	8,194	39.5	1,121
Urban	73.6	66.5	0.5	2,237	21.4	1,487	49.6	318
Rural	78.3	72.0	1.2	9,314	12.0	6,706	35.5	803
Region								
Northern	72.7	65.4	1.0	1,221	7.7	799	51.8	61
Central	75.8	70.8	1.0	5,221	12.8	3,697	35.9	472
Southern	80.1	72.4	1.2	5,109	15.9	3,697	41.2	587
District								
Balaka	78.3	72.3	1.9	247	20.1	179	23.1	36
Blantyre	74.5	65.9	0.9	1,015	26.1	669	46.9	174
Chikwawa	80.8	75.0	0.6	375	10.5	281	(42.6)	29
Chiradzulu	80.4	72.1	0.3	223	14.1	161	(41.3)	23
Chitipa	75.7	70.4	0.5	137	5.4	97	*	5
Dedza	75.2	65.9	0.2	703	16.2	463	(28.8)	75
Dowa	64.7	59.1	3.9	474	16.1	280	(28.4)	45
Karonga	73.5	68.8	3.0	258	13.4	178	(44.9)	24
Kasungu	76.9	72.1	0.0	486	3.1	350	*	11
Lilongwe	78.0	76.1	0.3	1,931	12.2	1,469	32.3	179
Machinga	80.8	73.7	0.7	437	14.4	322	(14.2)	46
Mangochi	83.6	71.7	1.3	865	16.0	620	(43.7)	99
Mchinji	77.9	72.3	1.0	458	8.8	331	(48.8)	29
Mulanje	73.7	70.6	0.2	384	7.6	271	*	21
Mwanza	79.5	72.8	1.2	214	24.6	156	44.6	38
Mzimba	69.7	61.4	0.6	548	6.1	336	*	20
Nkhata Bay	80.6	68.2	0.4	141	9.5	96	(54.9)	9
Nkhotakota	77.5	70.6	1.6	215	15.6	152	20.6	24
Nsanje	74.8	68.8	0.1	177	8.3	122	*	10
Ntcheu	80.8	70.8	0.0	377	12.7	267	(19.3)	34
Ntchisi	62.7	60.5	0.5	134	3.5	81	*	3
Phalombe	85.8	79.6	0.7	217	8.5	173	(31.2)	15
Rumphi	71.8	67.3	0.0	137	3.1	92	*	3
Salima	74.0	68.5	4.0	443	24.1	303	60.2	73
Thyolo	87.4	82.3	1.4	499	8.9	411	(47.3)	37
Zomba	82.8	73.2	4.4	455	17.7	333	54.8	59

Note: Figures in parantheses are based on 25–49 unweighted cases. An asterisk indicates that an estimate is based on fewer than 25 unweighted cases and has been supressed.

Table 12.16b

Condom use at last high-risk sex – Women

Percentage of young women aged 15–24 who had high risk sex in the previous year and who used a condom at last high risk sex, Malawi, 2006

Background characteristic	Ever had sex	Had sex in the last 12 months	Had sex with more than one partner in the last 12 months	Number of women aged 15–24	Percent who had sex with non-marital, non-cohabiting partner	Number of women aged 15–24 years who had sex in last 12 months	Percent who used a condom at last sex with a non-marital, non-cohabiting partner	Number of women aged 15–24 years who ad sex in last 12 months with a non-marital, non-cohabiting partner
Age								
15–19	53.9	47.7	1.4	5,124	28.7	2,445	37.4	702
20–24	96.1	89.4	0.9	6,427	7.3	5,749	43.2	418
Woman's education								
None	92.3	87.3	1.3	991	7.4	865	30.1	64
Primary	77.6	72.1	1.2	8,228	11.7	5,928	36.0	691
Secondary +	69.9	60.0	0.7	2,326	26.1	1,396	48.0	364
Other	100.0	65.5	0.0	7	30.0	5	0.0	1
Wealth index quintile								
Lowest	78.5	73.4	1.5	2,207	11.2	1,620	28.3	181
Second	84.0	77.5	1.6	2,183	12.0	1,691	35.2	204
Middle	83.3	78.2	1.3	2,231	10.7	1,744	41.5	187
Fourth	75.8	70.0	0.4	2,134	11.2	1,494	33.6	168
Highest	67.7	58.8	0.8	2,796	23.1	1,644	48.9	380

non-cohabiting partner. While 49 percent of women in the highest wealth index quintile used a condom at last sex with a non-marital non-cohabiting partner, only 28 percent from the lowest wealth index quintile reported the same. The table also depicts the high risk behaviour of youth during last high risk sex, in that only 37 percent of young women aged 15–19 used condoms compared to 43 percent of condom use by women aged 20–24.

Tables 12.17a and 12.17b provide information on percentages of young men aged 15–24 who had high risk sex in the previous year and who used a condom at last high risk sex. Men aged 15–24 are more likely to have sex with non-marital, non-cohabiting partners compared to women in the same age group (57 percent versus 14 percent). However, men reported a higher rate of condom use at last sex with a non-marital, non-cohabiting partner (58 percent) as compared to women who reported a condom use rate of 40 percent only. Table 12.17a also shows that urban men are more likely to have had sex with a non-marital, non-cohabiting partner (69 percent) than rural men (55 percent). However, 63 percent of urban men used a condom at last sex with a non-marital, non-cohabiting partner against 56 percent of rural men. More men from the Southern Region (63 percent) had sex with a non-marital, non-cohabiting partner, while men from the Northern Region (63 percent) had higher condom usage at last sex with a non-marital, non-cohabiting partner. The table further shows that men from Mangochi (18 percent), Nkhotakota (78 percent) and Balaka (79 percent) are more likely to have sex with more than one partner, indulge in sex with a non-marital, non-cohabiting partner and use condoms at last sex with a non-marital, non-cohabiting partner respectively which are the highest rates observed for the three indicators.

Table 12.17a

Condom use at last high-risk sex – Men

Percentage of young men aged 15–24 who had high risk sex in the previous year and who used a condom at last high risk sex, Malawi, 2006

Background characteristic	Ever had sex	Had sex in the last 12 months	Had sex with more than one partner in the last 12 months	Number of men aged 15–24	Percent who had sex with non-marital, non-cohabiting partner	Number of men aged 15–24 years who had sex in last 12 months	Percent who used a condom at last sex with a non-marital, non-cohabiting partner	Number of men aged 15–24 years who ad sex in last 12 months with a non-marital, non-cohabiting partner
Malawi								
Total	67.9	54.8	5.6	3,031	56.9	1,662	57.5	946
Urban	68.2	47.1	5.9	557	69.2	262	62.5	182
Rural	67.8	56.5	5.5	2,474	54.6	1,399	56.4	764
Region								
Northern	62.1	50.9	2.6	350	54.3	178	63.3	97
Central	67.0	52.1	3.8	1,334	50.2	695	53.1	349
Southern	70.3	58.5	8.1	1,347	63.4	788	59.5	500
District								
Balaka	69.9	56.9	5.7	84	50.8	48	78.7	24
Blantyre	66.7	46.9	2.9	281	72.1	132	(68.7)	95
Chikwawa	60.9	55.9	5.0	123	53.7	69	(58.0)	37
Chiradzulu	61.8	49.7	11.3	62	66.4	31	(50.7)	20
Chitipa	67.1	52.6	3.2	29	36.1	15	*	6
Dedza	84.1	67.2	2.4	152	49.6	102	(23.8)	51
Dowa	64.0	41.7	3.2	132	(49.8)	55	(71.2)	27
Karonga	53.0	43.9	2.6	65	33.2	29	*	10
Kasungu	68.8	45.3	4.5	161	44.4	73	(58.5)	32
Lilongwe	61.4	53.6	1.9	461	46.2	247	(61.6)	114
Machinga	83.2	78.9	4.5	57	(45.4)	45	(63.1)	21
Mangochi	72.0	60.3	17.7	227	73.5	137	(52.3)	101
Mchinji	69.6	56.8	4.8	117	54.7	66	(52.2)	36
Mulanje	90.7	82.6	8.8	81	56.0	67	45.4	37
Mwanza	69.0	66.1	8.2	66	72.5	44	73.6	32
Mzimba	70.0	57.6	1.8	177	66.8	102	59.5	68
Nkhata Bay	57.9	49.3	7.9	39	(57.3)	19	(57.8)	11
Nkhotakota	77.0	60.8	15.2	50	78.3	30	63.2	24
Nsanje	69.0	52.2	16.6	55	71.3	29	(43.1)	20
Ntcheu	66.9	45.8	4.3	97	52.3	44	(39.1)	23
Ntchisi	61.6	50.5	5.2	47	49.6	24	(52.8)	12
Phalombe	73.8	54.6	10.8	56	53.0	31	(56.6)	16
Rumphi	41.8	32.9	0.5	40	(20.7)	13	*	3
Salima	63.6	45.1	6.1	117	54.7	53	(52.5)	29
Thyolo	61.4	49.8	4.4	103	(41.5)	51	(47.4)	21
Zomba	75.9	69.7	5.6	152	71.0	106	63.0	75

Note: Figures in parantheses are based on 25–49 unweighted cases. An asterisk indicates that an estimate is based on fewer than 25 unweighted cases and has been supressed.

Table 12.17b shows that 67 percent of men with secondary education had sex with non-marital, non-cohabiting partners, compared to 30 percent of illiterate men. However, use of a condom is higher amongst educated men (67 percent) at last sex with a non-marital, non-cohabiting partner. A similar pattern emerges in terms of position in the wealth index quintiles. Furthermore, the data for men aged 15–19 indicate that a higher proportion (92 percent) of young men have sex with non-marital, non-cohabiting partners compared to men aged 20–24 (42 percent) but slightly over 50 percent of these men in the 15–19 age group are using condoms compared to men aged 20–24 (61 percent).

Table 12.17b

Condom use at last high-risk sex - Men

Percentage of young men aged 15-24 who had high risk sex in the previous year and who used a condom at last high risk sex, Malawi, 2006

Background characteristic	Ever had sex	Had sex in the last 12 months	Had sex with more than one partner in the last 12 months	Number of men aged 15-24	Percent who had sex with non-marital, non-cohabiting partner	Number of men aged 15-24 years who had sex in last 12 months	Percent who used a condom at last sex with a non-marital, non-cohabiting partner	Number of men aged 15-24 years who ad sex in last 12 months with a non-marital, non-cohabiting partner
Age								
15-19	46.0	32.0	3.8	1,566	91.6	501	53.8	459
20-24	91.3	79.2	7.5	1,465	41.9	1,160	61.1	486
Man's education								
None	76.9	73.2	4.4	90	30.1	66	(41.8)	20
Primary	65.2	53.7	5.4	2,162	54.6	1,161	53.6	634
Secondary +	74.4	55.9	6.1	778	67.2	435	67.2	292
Other	61.4	22.9	0.0	1	.0	0	.	0
Wealth index quintile								
Lowest	66.5	56.5	3.0	484	38.3	274	52.9	105
Second	71.5	58.8	5.6	520	48.3	306	55.7	148
Middle	70.4	59.4	5.8	600	55.2	356	56.1	197
Fourth	65.6	54.6	7.4	640	58.6	350	55.6	205
Highest	66.5	47.9	5.6	787	77.4	377	62.5	292

Note: Figure in parentheses is based on 25–49 unweighted cases.

12.9 ORPHANS AND VULNERABLE CHILDREN

As the HIV and AIDS epidemic progresses, more and more children are becoming orphaned and vulnerable. Children who are orphaned or in vulnerable households may be at increased risk of neglect or exploitation if their parents are not available to assist them. Monitoring the variations in different outcomes for orphans and vulnerable children and comparing them to their peers gives us a measure of how well communities and governments are responding to their needs.

In order to monitor these variations, it was necessary to create a measurable definition of orphaned and vulnerable children. The UNAIDS Monitoring and Evaluation Reference Group (MERG) developed a proxy definition of children who have been affected by adult morbidity and mortality. This should capture many of the children affected by AIDS in countries where a significant proportion of the adults are HIV infected. This definition of orphanhood and vulnerability of a child under the age of 18 years is defined as follows:

a) A child is an orphan if:

The child has experienced the death of either parent.

b) A child is vulnerable if:

1. Either parent is chronically ill, or
2. An adult aged 18–59 in the household either died (after being chronically ill), or
3. An adult aged 18–59 in the household was chronically ill in the year prior to the survey.

The National AIDS Commission has estimated the prevalence of HIV in Malawi amongst those aged 15–49 at 14 percent. This prevalence is one of the highest in the sub-Saharan region. Therefore, as a consequence of adult mortality partly due to HIV related infections, the number of orphans has increased in recent years.

Table 12.18a and 12.18b and map 12.2 show the percentage of orphaned and vulnerable children by background characteristics. Of the 70,276 children aged 0–17 surveyed in MICS 2006, 12 percent are orphaned (9 percent are single orphans and 3 percent are double orphans) and nearly 7 percent are vulnerable. Based on orphanhood and vulnerability status, the percent of orphaned and vulnerable children is estimated at 18 percent.

The table also shows that 23 percent of orphaned and vulnerable children are from the Southern Region, 15 percent from the Northern Region and 14 percent from the Central Region. The Southern Region reported more vulnerable children (10 percent) and a high proportion with one or both parents dead (15 percent). Amongst the districts, Phalombe has the highest number of orphaned and vulnerable children (27 percent) and the lowest is recorded in Chitipa and Mchinji districts (11 percent). Differentials in orphanhood by background characteristics are not significant by sex or wealth status. However, older children are more likely to be orphans than young children (Table 12.18b).

Table 12.18a

Prevalence of orphanhood and vulnerability among children

Percentage of children aged 0-17 years who are orphaned or vulnerable, Malawi, 2006

Background characteristic	Orphan (One or both parents dead)	Single orphan (One parent dead)	Double orphan (Both parents dead)	Chronically ill parent	Adult death in household	Chronically ill adult in household	Vulnerable children	Orphans and vulnerable children (OVC)	Number of children aged 0-17 years
Malawi									
Total	12.4	9.5	2.8	0.7	1.9	5.3	7.4	18.0	70,276
Urban	13.8	9.8	3.9	0.5	2.0	4.7	6.5	18.5	10,185
Rural	12.2	9.5	2.7	0.7	1.9	5.4	7.6	17.9	60,091
Region									
Northern	11.2	9.1	2.1	0.4	1.5	3.9	5.4	15.2	7,542
Central	9.8	7.7	2.1	0.5	1.2	3.7	5.1	13.9	31,224
Southern	15.3	11.4	3.7	0.9	2.7	7.2	10.2	22.7	31,511
District									
Balaka	16.8	12.2	4.4	0.6	2.3	5.6	8.2	22.6	1,642
Blantyre	16.8	11.7	4.9	1.3	5.0	7.5	12.5	25.9	5,101
Chikwawa	14.7	10.8	3.8	0.4	1.4	6.1	7.6	19.9	2,635
Chiradzulu	18.8	13.8	4.6	1.5	2.5	6.4	9.8	25.4	1,282
Chitipa	9.3	7.3	1.8	0.2	0.7	1.2	2.1	10.7	942
Dedza	11.1	8.1	2.9	0.3	0.9	3.2	4.2	14.3	4,125
Dowa	10.2	8.1	2.0	0.6	1.4	5.1	7.0	15.9	3,016
Karonga	13.3	11.0	2.3	1.1	1.9	7.9	10.0	20.2	1,480
Kasungu	9.4	7.8	1.7	0.3	1.6	2.7	4.3	12.6	3,046
Lilongwe	8.1	6.3	1.8	0.6	0.8	3.8	4.8	12.3	10,838
Machinga	11.7	9.1	2.6	0.2	2.0	1.0	3.2	13.3	2,594
Mangochi	14.3	11.3	2.9	1.7	2.4	9.5	13.0	25.2	6,301
Mchinji	9.2	6.8	2.3	0.6	0.7	1.4	2.6	11.3	2,695
Mulanje	17.8	13.1	4.7	0.4	2.2	1.9	4.0	19.9	2,191
Mwanza	17.5	12.9	4.5	0.6	1.2	4.1	5.8	21.9	1,255
Mzimba	11.0	9.3	1.6	0.3	1.8	3.8	5.5	15.3	3,388
Nkhata Bay	11.9	8.3	3.5	0.4	1.0	2.9	3.7	14.8	864
Nkhotakota	12.2	10.0	1.9	0.7	1.5	3.7	5.9	16.1	1,276
Nsanje	17.6	13.6	4.0	0.2	2.2	5.6	7.5	22.3	1,277
Ntcheu	14.8	11.4	3.4	0.4	1.5	2.8	4.5	17.9	2,437
Ntchisi	7.6	6.1	1.4	0.7	0.7	4.7	5.5	12.0	914
Phalombe	15.5	11.9	3.6	2.2	2.8	13.2	16.9	27.1	1,437
Rumphi	10.1	7.5	2.5	0.2	0.8	1.4	2.4	11.6	867
Salima	10.5	8.4	2.0	0.2	2.9	6.2	8.9	16.9	2,876
Thyolo	10.5	7.7	2.7	0.3	1.2	9.1	10.2	18.8	2,933
Zomba	16.8	13.2	3.6	0.7	3.8	10.6	14.2	26.3	2,863

Table 12.18b

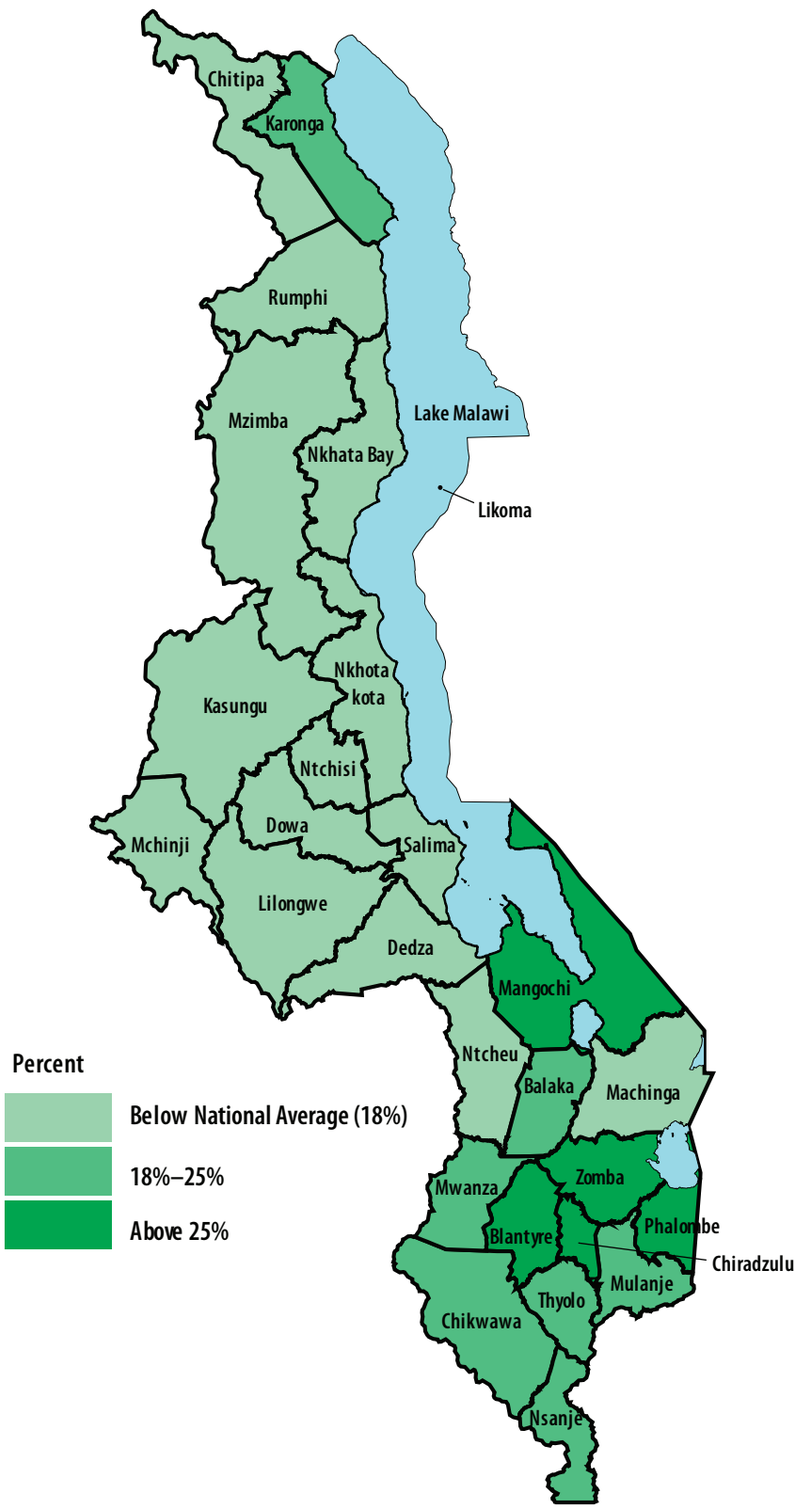
Prevalence of orphanhood and vulnerability among children

Percentage of children aged 0-17 years who are orphaned or vulnerable, Malawi, 2006

Background characteristic	Orphan (One or both parents dead)	Single orphan (One parent dead)	Double orphan (Both parents dead)	Chronically ill parent	Adult death in household	Chronically ill adult in household	Vulnerable children	Orphans and vulnerable children (OVC)	Number of children aged 0-17 years
Sex									
Male	12.6	9.7	2.9	0.7	1.9	5.3	7.4	18.1	34,752
Female	12.2	9.3	2.8	0.7	1.9	5.3	7.5	17.8	35,516
Age									
0-4 years	3.1	2.9	0.3	0.4	1.3	4.9	6.3	8.8	23,363
5-9 years	11.5	9.4	2.1	0.7	2.0	5.0	7.2	17.1	21,918
10-14 years	20.9	15.4	5.3	0.9	2.3	5.8	8.5	26.4	18,408
15-17 years	24.6	16.9	7.4	1.1	2.5	6.0	9.0	30.1	6,587
Wealth index quintile									
Lowest	11.9	10.0	1.9	0.7	1.3	5.0	6.8	17.4	14,883
Second	13.1	10.6	2.4	1.0	2.2	5.2	8.0	18.8	13,914
Middle	9.8	7.1	2.7	0.5	1.6	6.3	7.9	15.9	13,491
Fourth	13.1	9.7	3.3	0.7	2.2	5.3	7.6	19.0	13,334
Highest	14.0	10.0	3.9	0.5	2.2	4.7	6.8	18.8	14,654

Map 12.2

Proportion of children aged 0-17 years who are orphaned and/or vulnerable, Malawi, 2006



Tables 12.19a and 12.19b present the current status of living arrangements of children 0–17 years. The living arrangements have been categorized as, (a) living with both parents, (b) living with neither parent, (3) living with mother only and (d) living with father only. Of the 70,276 children under the age of 18 recorded in MICS 2006, only 59 percent of children live with both their parents, 18 percent do not live with either parent, 20 percent live with mother only and 2 percent live with father only. There are no significant urban/rural differentials. However, a lesser proportion of children are living with both parents in the Southern Region (53 percent) compared to 60 percent or above in the Northern and Central Regions.

Table 12.19b shows that there are no significant differentials on the status of living with both parents by sex of the child. Older children are less likely to be living with both parents. No association is found between children's living status with both parents and wealth status of family.

12.9.1 School attendance

One of the measures developed for the assessment of the status of orphaned and vulnerable children, relative to their peers, looks at the school attendance of children aged 10–14 who have lost both parents (double orphans) versus children whose parents are alive (and who live with at least one of these parents). If children whose parents have died do not have the same access to school as their peers, families and schools are not ensuring that the rights of these children are being met.

Table 12.19a

Children's living arrangements

Percent distribution of children aged 0-17 years according to living arrangements, Malawi, 2006

Background characteristic	Living with both parents	Living with neither parent					Living with mother only			Living with father only			Impossible to determine	Total	Number of children
		Only father alive	Only mother alive	Both are alive	Both are dead	Total	Father alive	Father dead	Total	Mother alive	Mother dead	Total			
Malawi															
Total	59.1	1.9	2.1	11.3	2.8	18.1	14.7	5.0	19.7	1.9	0.5	2.4	0.7	100.0	70,276
Urban	59.4	1.8	2.6	11.4	3.9	19.7	11.6	4.8	16.4	2.9	0.6	3.5	0.9	100.0	10,185
Rural	59.0	1.9	2.0	11.2	2.7	17.8	15.2	5.0	20.2	1.7	0.5	2.2	0.6	100.0	60,091
Region															
Northern	59.8	0.9	2.6	12.1	2.1	17.6	12.1	4.8	16.9	4.1	0.9	5.0	0.8	100.0	7,542
Central	64.7	1.6	1.7	10.4	2.1	15.8	12.7	4.0	16.7	1.8	0.4	2.2	0.6	100.0	31,224
Southern	53.4	2.4	2.4	11.9	3.7	20.5	17.4	6.0	23.4	1.5	0.6	2.1	0.7	100.0	31,511
District															
Balaka	51.1	3.2	2.2	11.8	4.4	21.6	18.1	6.6	24.7	1.7	0.3	2.0	0.7	100.0	1,642
Blantyre	54.5	2.1	2.8	11.9	4.9	21.7	14.1	6.0	20.1	1.6	0.7	2.3	1.3	100.0	5,101
Chikwawa	62.7	1.7	2.3	9.3	3.8	17.1	10.9	5.1	16.0	1.9	1.8	3.7	0.5	100.0	2,635
Chiradzulu	47.6	3.3	3.0	11.0	4.6	21.9	21.3	7.0	28.3	0.6	0.5	1.1	1.1	100.0	1,282
Chitipa	66.7	0.9	1.5	6.3	1.8	10.6	13.2	3.8	17.0	3.7	1.0	4.7	0.9	100.0	942
Dedza	63.5	1.9	2.0	10.2	2.9	16.9	14.0	4.2	18.2	0.6	0.0	0.6	0.8	100.0	4,125
Dowa	67.1	1.2	2.2	7.7	2.0	13.1	12.3	3.6	15.9	2.1	1.0	3.1	0.7	100.0	3,016
Karonga	61.9	1.5	2.7	11.5	2.3	18.0	9.1	6.1	15.2	3.1	0.7	3.8	1.1	100.0	1,480
Kasungu	66.4	1.2	1.8	10.9	1.7	15.6	10.7	4.2	14.9	2.3	0.6	2.9	0.3	100.0	3,046
Lilongwe	66.7	1.6	1.3	11.9	1.8	16.7	10.9	3.2	14.1	2.0	0.1	2.1	0.5	100.0	10,838
Machinga	52.2	1.9	1.9	14.4	2.6	20.8	20.0	5.2	25.2	1.4	0.1	1.5	0.3	100.0	2,594
Mangochi	47.5	3.0	2.3	14.1	2.9	22.4	21.9	5.4	27.3	1.5	0.6	2.1	0.7	100.0	6,301
Mchinji	67.0	1.0	1.5	9.3	2.3	14.2	11.6	3.9	15.5	2.3	0.3	2.6	0.7	100.0	2,695
Mulanje	53.8	3.0	1.9	13.6	4.7	23.2	13.5	7.6	21.1	0.9	0.6	1.5	0.5	100.0	2,191
Mwanza	55.5	1.9	2.4	7.7	4.5	16.5	17.8	7.7	25.5	1.1	0.8	1.9	0.6	100.0	1,255
Mzimba	59.4	0.5	2.9	12.2	1.6	17.3	11.9	4.7	16.6	4.8	1.1	5.9	0.7	100.0	3,388
Nkhata Bay	49.6	0.7	2.3	17.8	3.5	24.4	17.3	4.9	22.2	2.8	0.4	3.2	0.7	100.0	864
Nkhotakota	61.1	1.4	2.9	8.9	1.9	15.1	14.1	5.0	19.1	3.2	0.7	3.9	0.9	100.0	1,276
Nsanje	58.2	1.2	2.4	5.9	4.0	13.5	14.7	8.5	23.2	2.9	1.5	4.4	0.7	100.0	1,277
Ntcheu	50.4	2.2	1.9	8.9	3.4	16.3	23.5	7.0	30.5	1.4	0.4	1.8	1.0	100.0	2,437
Ntchisi	72.4	0.8	1.0	5.8	1.4	9.0	10.9	3.3	14.2	3.3	1.0	4.3	0.2	100.0	914
Phalombe	55.6	2.2	2.3	9.2	3.6	17.3	18.1	7.1	25.2	0.8	0.3	1.1	0.8	100.0	1,437
Rumphi	59.8	1.1	2.2	12.8	2.5	18.5	11.9	3.7	15.6	4.8	0.6	5.4	0.7	100.0	867
Salima	63.7	2.1	1.1	12.2	2.0	17.4	12.0	4.6	16.6	1.1	0.6	1.7	0.5	100.0	2,876
Thyolo	57.0	2.0	2.2	12.1	2.7	19.0	18.0	3.3	21.3	1.8	0.2	2.0	0.7	100.0	2,933
Zomba	52.5	2.8	2.7	12.1	3.6	21.2	17.5	7.4	24.9	0.8	0.3	1.1	0.3	100.0	2,863

Table 12.19b

Children's living arrangements

Percent distribution of children aged 0-17 years according to living arrangements, Malawi, 2006

Background characteristic	Living with both parents	Living with neither parent					Living with mother only			Living with father only			Impossible to determine	Total	Number of children
		Only father alive	Only mother alive	Both are alive	Both are dead	Total	Father alive	Father dead	Total	Mother alive	Mother dead	Total			
Sex															
Male	60.0	1.9	2.0	10.1	2.9	16.9	14.6	5.2	19.8	2.2	0.6	2.8	0.6	100.0	34,752
Female	58.3	1.9	2.1	12.4	2.8	19.3	14.8	4.8	19.6	1.7	0.5	2.2	0.7	100.0	35,516
Age															
0-4 years	74.4	0.4	0.2	3.6	0.3	4.5	18.3	2.1	20.4	0.4	0.1	0.5	0.2	100.0	23,363
5-9 years	58.2	1.7	2.0	13.1	2.1	18.9	14.6	5.3	19.9	2.2	0.4	2.6	0.4	100.0	1,918
10-14 years	47.4	3.3	3.7	16.2	5.3	28.5	12.0	7.4	19.4	3.0	1.0	4.0	0.7	100.0	18,408
15-17 years	40.3	3.4	4.5	18.9	7.4	34.1	10.2	7.9	18.1	3.2	1.2	4.4	3.1	100.0	6,587
Wealth index quintile															
Lowest	57.2	1.9	2.0	10.5	1.9	16.4	18.4	5.6	24.0	1.4	0.5	1.9	0.5	100.0	14,883
Second	56.1	1.8	2.0	11.8	2.4	17.9	17.4	6.5	23.9	1.1	0.3	1.4	0.6	100.0	13,914
Middle	65.0	1.4	1.4	9.3	2.7	14.8	13.7	3.9	17.6	1.8	0.4	2.2	0.5	100.0	13,491
Fourth	60.1	2.2	2.2	12.0	3.3	19.7	12.5	4.6	17.1	1.6	0.7	2.3	0.6	100.0	13,334
Highest	57.5	2.1	2.8	12.7	3.9	21.5	11.4	4.3	15.7	3.5	0.8	4.3	1.1	100.0	14,654

Tables 12.20a and 12.20b show that 18,408 children aged 10–14 years were covered in MICS 2006, representing 5 percent of the population. Amongst this group, 5 percent are double orphans (8 percent in urban areas and 5 percent in rural areas). The school attendance rate of children whose mothers or fathers have died is 89 percent, 95 percent in urban areas and 87 percent in rural areas. Attendance rates are higher in the Northern Region at 96 percent, while it is 88 percent both in the Central and Southern Regions. While Machinga district has the lowest school attendance rate among this group of orphans (65 percent), Rumphi has the best rate of attendance (100 percent). The table also shows that in Malawi there are no significant differentials in school attendance between children who are orphaned and those who are not. These minimal differentials may suggest that communities in Malawi attach similar importance to encouraging orphans to enrol in school as they do with non-orphans.

Table 12.20a

School attendance of orphaned and vulnerable children

School attendance of children aged 10-14 years by orphanhood and vulnerability, Malawi, 2006

Background characteristic	Percent of children whose mother and father have died	School attendance rate of children whose mother and father have died	Percent of children of whom both parents are alive and child is living with at least one parent	School attendance rate of children of whom both parents are alive and child is living with at least one parent	Double orphans to non orphans school attendance ratio	Percent of children who are orphaned or vulnerable	School attendance of children who are orphaned or vulnerable	Percent of children who are not orphans or vulnerable	School attendance of children who are not orphans or vulnerable	OVC vs non-OVC school attendance ratio	Total number of children aged 10-14 years
Malawi											
Total	5.3	88.6	62.4	91.2	1.0	26.4	88.8	73.6	90.2	0.98	18,408
Urban	7.5	95.2	57.7	96.9	1.0	28.5	93.8	71.5	93.2	1.01	2,726
Rural	5.0	86.8	63.2	90.3	1.0	26.0	87.8	74.0	89.7	0.98	15,682
Region											
Northern	3.9	96.4	64.3	97.1	1.0	23.1	95.3	76.9	96.7	0.99	2,065
Central	4.0	88.3	67.2	91.3	1.0	21.1	87.7	78.9	90.1	0.97	8,052
Southern	7.0	87.6	57.2	89.4	1.0	32.4	88.3	67.6	88.4	1.00	8,291
District											
Balaka	7.4	93.7	55.6	93.5	1.0	34.6	92.2	65.4	93.4	0.99	448
Blantyre	9.6	96.0	53.3	95.5	1.0	37.5	93.1	62.5	93.2	1.00	1,408
Chikwawa	5.6	78.6	61.8	86.7	0.9	26.6	83.3	73.4	86.1	0.97	729
Chiradzulu	8.2	96.7	53.2	92.5	1.1	37.7	92.1	62.3	93.3	0.99	336
Chitipa	4.3	96.0	72.4	97.5	1.0	18.6	97.2	81.4	97.3	1.00	259
Dedza	5.1	78.6	65.9	83.6	0.9	23.1	78.3	76.9	82.8	0.95	1,069
Dowa	2.8	95.6	72.3	92.6	1.0	22.1	88.3	77.9	91.9	0.96	872
Karonga	4.3	95.5	62.8	95.4	1.0	26.9	92.8	73.1	94.5	0.98	400
Kasungu	3.3	89.4	67.8	96.1	0.9	18.3	94.0	81.7	95.7	0.98	801
Lilongwe	3.9	97.9	64.7	92.7	1.1	19.7	92.1	80.3	89.8	1.03	2,581
Machinga	4.9	65.1	63.2	86.7	0.8	19.5	75.2	80.5	85.0	0.88	559
Mangochi	5.4	85.6	56.2	85.4	1.0	33.5	85.6	66.5	82.1	1.04	1,580
Mchinji	4.3	72.4	70.0	91.6	0.8	20.3	83.0	79.7	92.1	0.90	715
Mulanje	7.9	83.9	51.9	93.0	0.9	29.6	89.3	70.4	92.3	0.97	626
Mwanza	8.9	90.6	61.6	93.1	1.0	32.4	91.3	67.6	92.1	0.99	327
Mzimba	2.9	95.1	65.5	97.5	1.0	22.9	95.7	77.1	97.3	0.98	932
Nkhata Bay	5.8	97.4	54.4	96.5	1.0	25.0	95.1	75.0	96.4	0.99	239
Nkhotakota	3.8	93.4	68.4	91.6	1.0	22.9	81.6	77.1	91.5	0.89	341
Nsanje	6.7	82.3	66.0	84.1	1.0	31.3	83.5	68.7	84.1	0.99	352
Ntcheu	6.0	82.7	63.5	90.4	0.9	25.9	87.7	74.1	89.2	0.98	635
Ntchisi	2.9	79.9	79.1	90.8	0.9	17.6	86.1	82.4	91.0	0.95	261
Phalombe	7.5	83.4	59.1	88.4	0.9	36.4	83.6	63.6	86.7	0.96	360
Rumphi	5.1	100.0	62.6	98.1	1.0	20.5	97.8	79.5	97.6	1.00	236
Salima	3.2	90.3	67.2	91.0	1.0	21.8	89.0	78.2	90.6	0.98	777
Thyolo	5.4	89.1	61.7	87.1	1.0	29.4	87.2	70.6	88.5	0.99	768
Zomba	7.7	85.1	53.9	90.1	0.9	35.9	91.7	64.1	91.3	1.00	796

Table 12.20b

School attendance of orphaned and vulnerable children

School attendance of children aged 10-14 years by orphanhood and vulnerability, Malawi, 2006

Background characteristic	Percent of children whose mother and father have died	School attendance rate of children whose mother and father have died	Percent of children of whom both parents are alive and child is living with at least one parent	School attendance rate of children of whom both parents are alive and child is living with at least one parent	Double orphans to non orphans school attendance ratio	Percent of children who are orphaned or vulnerable	School attendance of children who are orphaned or vulnerable	Percent of children who are not orphans or vulnerable	School attendance of children who are not orphans or vulnerable	OVC vs non-OVC school attendance ratio	Total number of children aged 10-14 years
Sex											
Male	5.4	85.9	64.3	91.2	0.9	26.0	87.5	74.0	90.2	0.97	8,933
Female	5.3	91.1	60.6	91.2	1.0	26.8	89.9	73.2	90.2	1.00	9,471
Wealth index quintile											
Lowest	3.8	83.9	64.3	87.6	1.0	25.2	83.0	74.8	87.4	0.95	3,713
Second	4.5	86.2	60.6	88.2	1.0	27.6	85.7	72.4	87.3	0.98	3,529
Middle	5.1	84.3	69.1	89.8	0.9	24.1	89.3	75.9	89.8	0.99	3,248
Fourth	5.6	88.5	61.1	92.2	1.0	27.4	90.4	72.6	90.6	1.00	3,604
Highest	7.3	94.1	58.2	97.5	1.0	27.4	94.1	72.6	95.0	0.99	4,314

12.9.2 Support of orphaned and vulnerable children

In many countries, few services are available to families that take in children who are orphaned or vulnerable. Community based organisations and governments need to ensure that families are supported to care for these children. The level and types of support provided to households caring for children orphaned and vulnerable due to AIDS is presented in tables 12.21a and 12.21b.

Table 12.21a shows that in the three months prior to the survey, 6 percent of orphans and vulnerable households in Malawi received medical support, 4 percent received emotional and psychological support and 9 percent received social/material support. Six percent received educational support in the 12 months prior to the survey. Urban households with orphans are more likely to receive emotional and psychological support (6 percent) and social/material support (11 percent) while rural households with orphans are more likely to receive medical (6 percent) and educational support (6 percent). Amongst districts, households with orphans in Phalombe district are more likely to receive medical support (15 percent). In Lilongwe, they were more likely to receive emotional and psychological support (13 percent), in Dowa, social/material support (24 percent) and in Machinga, educational support (24 percent).

Table 12.21b shows that the kind of support received by households with orphans does not vary significantly by sex, age and wealth status.

Table 12.21a

Support for children orphaned and vulnerable due to AIDS

Percentage of children aged 0-17 years orphaned or made vulnerable due to AIDS whose households receive free basic external support in caring for child, Malawi, 2006

Background characteristic	Percent of orphans and vulnerable children whose households received							Number of children orphaned or vulnerable aged 0-17 years
	Medical support (in last 12 months)	Emotional and psycho-social support (in last 3 months)	Social/ material support (in last 3 months)	Educational support (in last 12 months)	Any support	All types of support	No support at all	
Malawi								
Total	5.5	4.0	8.8	5.8	18.5	0.2	81.5	12,639
Urban	4.0	6.1	11.2	4.4	17.9	0.6	82.1	1,883
Rural	5.7	3.7	8.4	6.0	18.6	0.1	81.4	10,756
Region								
Northern	2.6	1.8	4.3	3.2	8.7	0.3	91.3	1,147
Central	6.2	6.7	12.8	4.4	23.1	0.2	76.9	4,327
Southern	5.5	2.8	7.1	7.1	17.2	0.2	82.8	7,165
District								
Balaka	7.6	5.0	7.2	12.5	25.4	0.7	74.6	371
Blantyre	2.2	2.0	5.5	2.4	8.7	0.3	91.3	1,323
Chikwawa	6.1	4.2	20.7	4.1	29.9	0.0	70.1	524
Chiradzulu	6.8	2.5	4.1	2.8	13.3	0.0	86.7	326
Chitipa	1.5	0.6	2.4	3.2	6.0	0.0	94.0	101
Dedza	5.6	0.2	2.3	1.1	8.9	0.0	91.1	590
Dowa	3.0	3.6	23.7	4.4	31.1	0.0	68.9	479
Karonga	4.6	2.6	5.6	4.2	11.6	0.1	88.4	299
Kasungu	1.6	3.0	0.9	1.1	6.1	0.0	93.9	384
Lilongwe	9.3	12.9	22.5	3.1	33.8	0.5	66.2	1,331
Machinga	4.8	6.2	14.5	24.4	34.6	0.0	65.4	344
Mangochi	3.0	1.1	2.0	4.2	9.1	0.0	90.9	1,589
Mchinji	10.1	7.2	6.3	7.8	23.0	0.1	77.0	304
Mulanje	8.9	2.5	5.2	5.8	17.7	0.0	82.3	437
Mwanza	2.6	1.5	2.6	3.9	8.9	0.2	91.1	275
Mzimba	1.9	1.4	4.9	2.6	8.5	0.3	91.5	518
Nkhata Bay	2.1	2.3	3.0	3.6	7.0	0.8	93.0	128
Nkhotakota	9.0	8.5	19.2	7.5	31.8	0.2	68.2	205
Nsanje	12.8	5.5	7.5	13.3	26.1	0.3	73.9	284
Ntcheu	6.1	5.7	6.0	12.5	24.6	0.7	75.4	437
Ntchisi	3.3	6.0	5.3	3.7	15.5	0.0	84.5	109
Phalombe	14.9	4.3	13.8	23.6	41.1	0.2	58.9	389
Rumphi	1.5	1.8	1.7	2.0	6.2	0.0	93.8	101
Salima	2.2	3.5	6.7	3.6	13.8	0.0	86.2	487
Thyolo	7.6	1.0	1.5	3.4	9.8	0.7	90.2	551
Zomba	4.8	4.5	12.1	8.2	22.2	0.0	77.8	752

Table 12.21b

Support for children orphaned and vulnerable due to AIDS

Percentage of children aged 0-17 years orphaned or made vulnerable due to AIDS whose households receive free basic external support in caring for child, Malawi, 2006

Background characteristic	Percent of orphans and vulnerable children whose households received							Number of children orphaned or vulnerable aged 0-17 years
	Medical support (in last 12 months)	Emotional and psycho-social support (in last 3 months)	Social/ material support (in last 3 months)	Educational support (in last 12 months)	Any support	All types of support	No support at all	
Sex								
Male	5.6	4.2	8.3	5.5	18.0	0.3	82.0	6,306
Female	5.3	3.8	9.3	6.1	18.9	0.1	81.1	6,327
Age								
0-4 years	9.6	3.8	4.4	0.0	15.2	0.3	84.8	2,056
5-9 years	5.1	3.9	9.0	6.2	18.6	0.2	81.4	3,738
10-14 years	4.5	4.2	9.9	7.4	19.6	0.1	80.4	4,860
15-17 years	4.4	4.2	10.2	6.9	18.8	0.2	81.2	1,985
Wealth index quintile								
Lowest	4.7	2.8	8.8	4.3	16.3	0.0	83.7	2,592
Second	5.0	2.3	8.3	5.8	17.7	0.0	82.3	2,622
Middle	7.7	4.8	9.9	8.5	22.2	0.3	77.8	2,142
Fourth	6.4	5.3	8.5	7.0	21.3	0.2	78.7	2,529
Highest	4.1	5.1	8.6	3.9	15.8	0.5	84.2	2,754

Table 12.22 shows the prevalence of malnutrition among orphans and vulnerable children under the age of five. The results show that the ratio of orphaned and vulnerable children to children who are not orphaned and vulnerable is 1.14 for underweight, 1.10 for stunting and 1.08 for wasting. These indicate higher malnutrition levels amongst orphaned and vulnerable children compared to those who are not orphaned and vulnerable.

Research suggests that in some areas, children who are orphaned are more likely to have negative sexual and reproductive health outcomes than other children. Table 12.23 shows that the percentage of women aged 15–17 who had sex before the age of 15 is higher among orphaned and vulnerable children (16 percent) compared to the children who are not orphaned and vulnerable (12 percent), resulting in an OVC to non-OVC ratio of 1.35. This certainly suggests a lack of parental protection and increased vulnerability of these girls and should prompt a social service response.

Table 12.22

Malnutrition among orphaned and vulnerable children

Percent of children aged 0-4 years who are moderately or severely underweight, stunted or wasted by orphanhood and vulnerability due to AIDS, Malawi, 2006

Category	% of children aged 0-4 years who are moderately or severely:			Number of children aged 0-4 years
	Underweight	Stunted	Wasted	
Orphaned	23.35	50.07	2.87	612
Vulnerable	23.16	50.90	4.22	1,250
Orphaned or vulnerable	23.12	50.16	3.78	1,737
Not orphaned or vulnerable	20.25	45.59	3.49	18,667
Total	20.49	45.98	3.52	20,404
Ratio OVC to non-OVC	1.14	1.10	1.08	.

Table 12.23

Sexual behaviour among young women by orphanhood and vulnerability status

Percentage of young women aged 15-17 years who had sex before age 15 by vulnerability status and survival status of parents, Malawi, 2006

Category	Percentage of young women aged 15-17 years who had sex before age 15	Number of young women aged 15-17 years
Orphaned	15.67	657
Vulnerable	15.51	212
Orphaned or vulnerable	15.71	788
Not orphaned or vulnerable	11.65	2,024
Total	13.08	2,868
Ratio OVC to non-OVC	1.35	.

13 ADULT AND MATERNAL MORTALITY

ANGELA MSOSA

The availability of mortality data, particularly with respect to adult mortality, is important for monitoring any country's health policies and programmes.

Data collected in MICS 2006 allowed for a direct estimation of adult and maternal mortality. The information used in estimation procedures is based on details on survivorship of all live births to the natural mother. For each of the female respondents, questions were asked on age of surviving siblings, age at death of sibling who died and number of years ago that the sibling died. The data is then aggregated to determine the number of person-years of exposure to mortality risk and the number of maternal deaths occurring within defined calendar periods.

13.1 DATA

To collect the data needed for this method of estimation, each female respondent was asked to give information on the total number of her mother's live births. She was then asked to report on the number of siblings born ahead of her. Furthermore, she was asked to provide a list of all children born to her mother, starting with the first born and detailing whether or not each sibling was still alive at the time of the survey. The current age of living siblings was collected. For deceased siblings, information was collected on age at death and years since death occurred. Where respondents were unable to provide precise information on ages and duration since death of sibling, interviewers were instructed to accept approximate answers. For sisters who died at age 10 years or older, the following questions were used to determine if the death was maternity related: Was [name of sister] pregnant when she died? and if negative, 'Did she die during childbirth?' and if negative, 'Did she die within six weeks of a birth of a child or pregnancy termination?'

The estimation of adult and maternal mortality requires reasonably accurate reporting of the number of siblings that the respondent ever had, the number that died and the number of sisters who died of maternity related causes. Table 13.1 shows the number of siblings reported by the respondents and the completeness of the reported data on current age, age at death and years since death.

The survey results show that the respondents are very knowledgeable about the survival status of their siblings, with only 75 out of 136,569 siblings having missing information. The sex ratio of the respondent's siblings (the ratio of brothers to sisters) enumerated is 0.98, which is low. This may indicate some level of underreporting of male births by the respondents. In very few cases (0.1 percent) the current age of a sibling is not indicated. Respondents are also able to report the age at death of their sibling with only 0.3 percent having no information on years since death.

Table 13.1

Completeness of reported data on siblings

Number of siblings reported by female survey respondents and completeness of the reported data on age, age at death and years since death, Malawi, 2006

Sibling status and completeness of reporting	All		Males		Females	
	Percent	Number	Percent	Number	Percent	Number
Total siblings reported	100.0	136,569	100.0	67,470	100.0	69,099
Surviving	80.3	109,695	80.4	54,221	80.3	55,474
Deceased	19.6	26,799	19.6	13,203	19.7	13,596
Missing information	0.1	75	0.1	46	0.0	30
Surviving siblings	100.0	109,695	100.0	54,221	100.0	55,474
Age reported	99.9	109,538	99.9	54,146	99.9	55,392
Age missing	0.1	157	0.1	75	0.1	82
Deceased siblings	100.0	26,799	100.0	13,203	100.0	13,596
AD and YSD reported	99.7	26,721	99.7	13,164	99.7	13,557
Missing only YSD	0.3	78	0.3	39	0.3	39

AD = Age at death; YSD= Years Since Death/Year of Death

13.2 DIRECT ESTIMATES OF ADULT MORTALITY

Another way to assess the quality of data used to estimate maternal mortality is to evaluate the plausibility of adult mortality rates obtained. If the overall adult mortality rates display a generally stable, plausible pattern, it lends credence to the maternal mortality estimates. This is because maternal mortality is a subset of adult mortality.

Table 13.2

Adult mortality rates

Direct estimates of age specific mortality rates for women and men aged 15–49 for the periods 0–6 years prior to the MICS 2006, Malawi, 2006

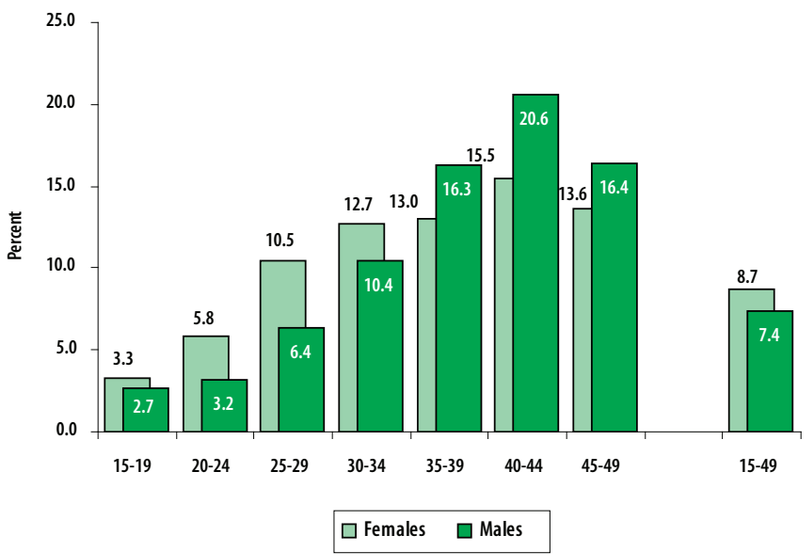
Age group	All			Males			Females		
	Deaths	Exposure	Mortality rates	Deaths	Exposure	Mortality rates	Deaths	Exposure	Mortality rates
15–19	374	123,853	3.0	166	60,406	2.7	208	63,447	3.3
20–24	615	135,736	4.5	214	66,883	3.2	401	68,853	5.8
25–29	963	113,769	8.5	361	56,538	6.4	602	57,231	10.5
30–34	942	81,445	11.6	422	40,627	10.4	520	40,817	12.7
35–39	771	52,868	14.6	422	25,963	16.3	349	26,905	13.0
40–44	554	30,784	18.0	308	14,925	20.6	246	15,859	15.5
45–49	254	16,949	15.0	134	8,173	16.4	120	8,776	13.6
15 –49	**4,474**	**555,404**	**8.1**	**2,028**	**273,515**	**7.4**	**2,446**	**281,889**	**8.7**

Table 13.2 shows age-specific mortality rates for men and women aged 15–49, for the calendar period 0–6 years before the survey (2000–2006). Age specific death rates are computed by dividing the number of deaths in each age group by the total person-months of exposure in that age group during a specified reference period.

The rates are based on 2,028 male deaths and 2,446 female deaths, which subjects the age specific rates to a large sampling variability. The centre of the survey mortality estimate is mid-2003. Data in table 13.2 shows that the adult male mortality rate is 7 per 1,000 and that for females it is 9 per 1,000.

Figure 13.1 shows age specific mortality between males and females. As can be seen from the graph, female mortality is consistently higher, which could be a reflection of excess female mortality due to childbearing. Mortality for both males and females peaks in the early forties, even though more males start dying from the mid-thirties (usually related to occupational risks, trauma and early cardiovascular events). However, the peak at 40–44 is not expected and may be due to age misreporting from the next highest age group. The small sample at upper ages may also contribute to this unexpected variation. The estimates of maternal mortality, presented in table 13.3a, show that 19 percent of female deaths in the age group 15–49 are pregnancy related, consistent with the graph in figure 13.1.

Figure 13.1
Age specific mortality rates, Malawi 2006



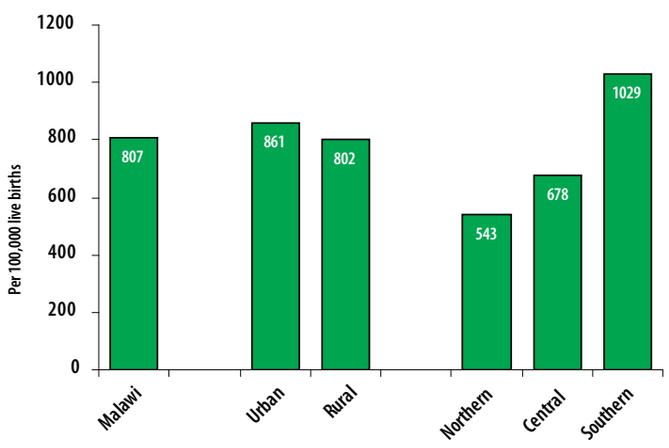
13.3 MATERNAL MORTALITY

Complications of pregnancy and childbirth are a leading cause of death and disability among women of reproductive age in developing countries. It is estimated worldwide that around 529,000 women die each year from maternal causes. For every woman who dies, approximately 20 more suffer injuries, infection and disabilities in pregnancy or childbirth. This means that at least 10 million women a year incur this type of damage.

The most common fatal complication is post-partum haemorrhage. Sepsis, complications of unsafe abortion, prolonged or obstructed labour and hypertensive disorders of pregnancy, especially eclampsia, claim further lives. These complications, which can occur at any time during pregnancy and childbirth without forewarning, require prompt access to quality obstetric services that are equipped to provide lifesaving drugs, antibiotics, transfusions and to perform caesarean sections and other surgical interventions that prevent deaths from obstructed labour, eclampsia and intractable haemorrhage. One of the MDG targets is to reduce the maternal mortality ratio by three quarters, between 1990 and 2015.

Maternal mortality is defined as the death of a woman from pregnancy-related causes, when pregnant or within 42 days of termination of pregnancy. The maternal mortality rate is the number of maternal deaths per 1,000 women in a defined age group per year. The more commonly used measure – the maternal mortality ratio (MMR) – is the number of maternal deaths per 100,000 live births. In MICS 2006, the maternal mortality ratio was estimated by using the direct sisterhood method, the same approach used to estimate adult mortality in this report.

Figure 13.2
Maternal mortality ratio, Malawi 2006



MICS 2006 results on maternal mortality are shown in tables 13.3a and 13.3b. It may be noted that a large sample size is required to obtain a precise current estimate. However, even in countries like Malawi, where the maternal mortality ratio is high, a maternal death is such a rare event that survey data are not able to give a sufficient sample for most recent estimates. As a result, the estimates in MICS 2006 refer to the period 0–6 years before the survey (2001–2006). The total number of maternal deaths in the survey is 469. Due to the small number, age specific rates are subject to very large sampling errors and should be interpreted with caution. The preferred approach is to calculate an estimate for the childbearing ages (15–49 years). The proportion of all female deaths that are maternity related, in the period 0–6 years preceding the survey, is 19 percent.

Using direct sisterhood estimation procedures, the maternal mortality ratio during the period 2000–2006 is estimated at 807 per 100,000 live births. This rate is extremely high and is amenable to substantial reduction by improved antenatal, delivery and postnatal care.

The maternal mortality ratio (MMR) estimate, particularly in relation to the previous estimate of MDHS 2004, needs to be interpreted with caution. The confidence interval (CI) for MICS MMR estimate of 807 is (696, 918), which means that the MMR could be anywhere between 696 and 918. This CI overlaps with the CI (822, 1145) of MDHS 2004 MMR estimate of 984, which suggests that the implied reduction from 984 in one survey to 807 in the other is not statistically significant. Likewise, one needs to exercise caution in the interpretation of relative levels of MMR in the three regions and urban-rural areas. The MMR CIs for regions and urban-rural areas are provided in Annex C on standard errors.

Table 13.3a

Maternal Mortality

Direct estimates of maternal mortality rates and maternal mortality ratio for the periods 0–6 years prior to MICS 2006, Malawi, 2006

TOTAL				
Maternal age	**Deaths**	**Exposure**	**Mortality rates**	**Mort. adj. by age**
15–19	29	63,447	0.460	0.090
20–24	106	68,853	1.541	0.377
25–29	122	57,231	2.125	0.412
30–34	93	40,817	2.281	0.320
35–39	56	26,905	2.085	0.203
40–44	41	15,859	2.614	0.189
45–49	21	8,776	2.449	0.139
15–49	**469**	**281,889**	**1,664**	**1.729**
Maternal Mortality Ratio	-	-	-	**807**

URBAN				
Maternal age	**Deaths**	**Exposure**	**Mortality rates**	**Mort. adj. by age**
15–19	4	12,902	0.326	0.071
20–24	29	13,402	2.133	0.564
25–29	25	10,576	2.350	0.491
30–34	12	6,957	1.759	0.245
35–39	5	4,228	1.186	0.095
40–44	1	2,306	0.304	0.015
45–49	1	1,112	1.207	0.045
15–49	**77**	**51,482**	**1.494**	**1.527**
Maternal Mortality Ratio	-	-	-	**861**

RURAL				
Maternal age	**Deaths**	**Exposure**	**Mortality rates**	**Mort. adj. by age**
15–19	25	50,545	0.494	0.094
20–24	78	55,451	1.398	0.336
25–29	97	46,656	2.074	0.395
30–34	81	33,861	2.388	0.335
35–39	51	22,677	2.253	0.227
40–44	41	13,553	3.007	0.232
45–49	20	7,665	2.629	0.160
15–49	**392**	**230,406**	**1.702**	**1.779**
Maternal Mortality Ratio	-	-	-	**802**

Table 13.3b

Maternal Mortality

Direct estimates of maternal mortality rates and maternal mortality ratio for the periods 0–6 years prior to MICS 2006, Malawi, 2006

NORTHERN				
Maternal age	**Deaths**	**Exposure**	**Mortality rates**	**Mort. adj. by age**
15–19	6	6,511	0.858	0.181
20–24	9	6,825	1.253	0.288
25–29	8	5,605	1.387	0.249
30–34	4	4,213	0.985	0.142
35–39	4	3,071	1.211	0.119
40–44	3	1,966	1.494	0.127
45–49	0	1,046	0.000	0.000
15–49	**33**	**29,236**	**1.119**	**1.106**
Maternal Mortality Ratio	-	-	-	**543**

CENTRAL				
Maternal age	**Deaths**	**Exposure**	**Mortality rates**	**Mort. adj. by age**
15–19	9	29,202	0.300	0.058
20–24	40	32,320	1.250	0.319
25–29	40	26,952	1.470	0.268
30–34	45	19,330	2.308	0.322
35–39	22	12,754	1.696	0.175
40–44	23	7,497	3.051	0.221
45–49	12	4,050	2.963	0.163
15–49	**190**	**132,105**	**1.438**	**1.526**
Maternal Mortality Ratio	-	-	-	**678**

SOUTHERN				
Maternal age	**Deaths**	**Exposure**	**Mortality rates**	**Mort. adj. by age**
15–19	15	27,734	0.534	0.104
20–24	57	29,708	1.923	0.457
25–29	74	24,675	3.009	0.627
30–34	44	17,274	2.567	0.359
35–39	31	11,081	2.776	0.252
40–44	16	6,396	2.446	0.170
45–49	9	3,681	2.580	0.153
15–49	**246**	**120,548**	**2.044**	**2.122**
Maternal Mortality Ratio	-	-	-	**1,029**

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APPENDICES

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  Sample design

- **APPENDIX B**
  List of personnel involved in the survey

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  Estimates of sampling errors

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  MICS indicators: numerators and denominators

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  Questionnaires

- **APPENDIX G**
  Millennium Development Goals (MDG) indicators

A SAMPLE DESIGN

The major features of sample design are described in this appendix. Sample design features include target sample size, sample allocation, sample frame and listing, choice of domains, sampling stages, and the calculation of sample weights.

The primary objective of the sample design for the Malawi Multiple Indicator Cluster Survey was to produce statistically reliable estimates at district level for several key indicators on children and women. A weighted average of the estimates from the 26 districts provide estimates at national level, for urban and rural areas, and for the three regions - Northern, Central and Southern - of the country. A multi-stage, stratified cluster sampling approach was used for the selection of the survey sample.

Each district was considered as a sampling domain and an equal allocation of 1200 households was made. Presently there are 28 districts in Malawi; however, 26 districts were included in the survey and two districts (namely Likoma islands and Neno) were merged with other districts for the following reasons: The district of Likoma is too small an island to draw 1,200 households out of the total available households. Therefore the population of Likoma was merged with Nkhata Bay district and the few selected clusters that have fallen in Likoma island have been canvassed. In the Southern Region, Neno district was part of Mwanza district as per the census frame used for sample selection. Therefore, Neno was not considered as a separate district, but rather, was merged with Mwanza.

Sample Size and Sample Allocation

The target sample size for the Malawi MICS was calculated as 1200 households per district. For the calculation of the sample size, the key indicator used was 'children aged 12-23 month fully immunised'. The following formula was used to estimate the required sample size for this indicator:

$$n = \frac{[\,4\,(r)\,(1\text{-}r)\,(f)\,(1.1)\,]}{[\,(0.12r)2\,(p)\,(nh)\,]}$$

Where:

- n is the required sample size, expressed as number of households
- 4 is a factor to achieve the 95 per cent level of confidence
- r is the predicted or anticipated prevalence (coverage rate) of the indicator. Children aged 12-23 months fully immunised is 0.64 (MDHS 2004)
- 1.1 is the factor necessary to raise the sample size by 10 per cent for non-response
- f is the shortened symbol for deff (design effect) = 1.4 (MDHS 2004)
- 0.12r is the margin of error to be tolerated at the 95 per cent level of confidence, defined as 12 per cent of r (relative sampling error of r)
- p is the proportion of the total population upon which the indicator, r, is based. Percentage of m children aged 12-23 months in total population is about 4 percent = 0.04
- nh is the average household size = 5.0

$$n = \frac{[\,4\,(0.64)\,(1\text{-}0.64)\,(1.4)\,(1.1)\,]}{[\,(0.12\ X\ 0.64)2\,(0.04)\,(5.0)\,]} \approx 1200$$

The resulting number of households from this exercise was 1200 households which is the sample size needed in each district – thus yielding about 31,200 households in total (1200 HHs X 26 Districts). The average cluster size in the Malawi MICS was determined as 30 households, based on a number of considerations, including the budget available, and the time that would be needed per team to complete one cluster. Dividing the total number of households by the number of households per cluster, it was calculated that a selection of a total number of 40 clusters would be needed in each district. The total number of clusters for all the 26 districts was, therefore, 1040 (40 Clusters X 26 Districts).

Sampling Frame and Selection of Clusters

The 1998 Malawi Population Census frame was used for the selection of clusters. Census Enumeration Areas (EAs) were defined as primary sampling units (PSUs), and were selected from each of the sampling domains by using systematic PPS (probability proportional to size) sampling procedures, based on the estimated sizes of the enumeration areas from the 1998 Population Census. The first stage of sampling was thus completed by selecting the required number of enumeration areas from each of the 26 districts.

As the survey was not aiming at obtaining the rural and urban estimates separately, and because the urban population is insignificant (less than 15%) in the majority of the districts, no fixed quota of EAs was allotted to rural and urban areas. Instead, the required 40 EAs were selected in proportion to the rural and urban population of the district using PPS sampling methodology to obtain the estimates for the district as a whole.

Listing Activities

Since the sample frame of 1998 Population Census was not up-to-date, household listing was carried out in all the selected EAs prior to the selection of HHs. Ideally it would have been preferred that the listing teams and interviewing teams be completely independent and these operations take place separately. However, since EAs (villages) in Malawi are quite scattered and not easily accessible by road due to poor public transport system in the country, it is quite expensive and time consuming to have two rounds of field operations. Instead, the EA listing exercise and the canvassing of the questionnaires were done at the same time by the same team. A team of 6 members (4 enumerators + 1 data editor + 1 supervisor) was assigned per district. Each team completed the EA listing and selection of HHs on the first day of the field work and canvassing the questionnaires in the selected households in the next two days.

Selection of Households

After listing the households in each cluster, the households were sequentially numbered from 1 to n (the total number of households in each enumeration area) and selection of 30 households in each enumeration area was carried out using systematic random sampling procedures.

Calculation of Sample Weights

The Malawi Multiple Indicator Cluster Survey sample is not a self-weighted one. Essentially, by allocating equal numbers of households to each of the districts, different sampling fractions were used in each district since the size of the districts varied. For this reason, sample weights were calculated and these were used in the subsequent analyses of the survey data.

The major component of the weight is the reciprocal of the sampling fraction employed in selecting the number of sample households in that particular sampling domain:

Wh = 1 / fh
The term fh, the sampling fraction at the h-th stratum, is the product of probabilities of selection at every stage in each sampling domain:

fh = P1h * P2h * P3h

where Pih is the probability of selection of the sampling unit in the i-th stage for the h-th sampling domain.

Since the estimated numbers of households per enumeration area prior to the first stage selection (selection of primary sampling units) and the updated number of households per enumeration area were different, individual sampling fractions for households in each enumeration area (cluster) were calculated. The sampling fractions for households in each enumeration area (cluster) therefore included the probability of selection of the enumeration area in that particular sampling domain and the probability of selection of a household in the sample enumeration area (cluster).

A second component which has to be taken into account in the calculation of sample weights is the level of non-response for the household and individual interviews. The adjustment for household non-response is equal to the inverse value of:

RR = Number of interviewed households / Number of occupied households listed

After the completion of fieldwork, response rates were calculated for each sampling domain. These were used to adjust the sample weights calculated for each cluster. Response rates in the Malawi Multiple Indicator Cluster Survey are shown in Table 3.1 in this report.

Similarly, the adjustment for non-response at the individual level (under-5 children, women and men) is equal to the inverse value of:

RR = Completed under-5s (or eligible women's and men's) questionnaires / Under-5s (or eligible women's and men's)

Numbers of eligible under-5 children, women and men were obtained from the household listing in the Household Questionnaire in households where interviews were completed.

The unadjusted weights for the households were calculated by multiplying the above factors for each enumeration area. These weights were then standardized (or normalized), one purpose of which is to make the sum of the interviewed sample units equal the total sample size at the national level. Normalization is performed by multiplying the aforementioned unadjusted weights by the ratio of the number of completed households to the total unadjusted weighted number of households. A similar standardization procedure was followed in obtaining standardized weights for women's, children under 5 and men's questionnaires.

Sample weights were appended to all data sets and analyses were performed by weighting each household, under-5, women's, or men's with these sample weights.

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C ESTIMATES OF SAMPLING ERRORS

The sample of respondents selected in the Malawi Multiple Indicator Cluster Survey is only one of the samples that could have been selected from the same population, using the same design and size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. The extent of variability is not known exactly, but can be estimated statistically from the survey results.

The following sampling error measures are presented in this appendix for each of the selected indicators:

- Standard error (*se*): Sampling errors are usually measured in terms of standard errors for particular indicators (means, proportions etc.). Standard error is the square root of the variance. The Taylor linearisation method is used for the estimation of standard errors.

- Coefficient of variation (*se*/*r*) is the ratio of the standard error to the value of the indicator

- Design effect (*deff*) is the ratio of the actual variance of an indicator, under the sampling method used in the survey, to the variance calculated under the assumption of simple random sampling. The square root of the design effect (*deff*) is used to show the efficiency of the sample design. A *deff* value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a *deff* value above 1.0 indicates the increase in the standard error due to the use of a more complex sample design.

- Confidence limits are calculated to show the interval within which the true value for the population can be reasonably assumed to fall. For any given statistic calculated from the survey, the value of that statistics will fall within a range of plus or minus two times the standard error ($p + 2.se$ *or* $p - 2.se$) of the statistic in 95 percent of all possible samples of identical size and design.

For the calculation of sampling errors from MICS data, SPSS Version 14 Complex Samples module has been used. The results are shown in the tables that follow. In addition to the sampling error measures described above, the tables also include weighted and unweighted counts of denominators for each indicator.

Sampling errors are calculated for indicators of primary interest, for the national total, for the regions, and for urban and rural areas. Two of the selected indicators are based on households, 8 are based on household members, 13 are based on women, and 18 are based on children under 5. All indicators presented here are in the form of proportions. The first table shows the list of indicators for which sampling errors are calculated, including the base population (denominator) for each indicator. The remaining tables show the calculated sampling errors.

Indicators selected for sampling error calculations

List of indicators selected for sampling error calculations, and base populations (denominators) for each indicator, Malawi, 2006

	MICS INDICATOR	BASE POPULATION
HOUSEHOLDS		
1	Iodised salt consumption	All households
2	Household availability of ITNs	All households
HOUSEHOLD MEMBERS		
3	Use of improved drinking water sources	All household members
4	Use of improved sanitation facilities	All household members
5	Net primary school (6-13) attendance rate	Children of primary school age
6	Net secondary school (14-17) attendance rate	Children of secondary school age
7	Primary school completion rate	Children of primary school completion age
8	Child labour	Children aged 5-14 years
9	Prevalence of orphans	Children aged under 18
10	Prevalence of vulnerable children	Children aged under 18
UNDER-5s		
11	Neonatal mortality rate	Children exposed to the risk of mortality
12	Post-neonatal mortality rate	Children exposed to the risk of mortality
13	Infant mortality rate	Children exposed to the risk of mortality
14	Child (1-4) mortality rate	Children exposed to the risk of mortality
15	Under-5 mortality rate	Children exposed to the risk of mortality
16	Underweight prevalence	Children under age 5
17	Tuberculosis immunisation coverage	Children aged 12-23 months
18	Polio immunisation coverage	Children aged 12-23 months
19	Immunisation coverage for pentavalent	Children aged 12-23 months
20	Measles immunisation coverage	Children aged 12-23 months
21	Fully immunised children	Children aged 12-23 months
22	Diarrhoea in last two weeks	Children under age 5
23	Received ORT or increased fluids and continued feeding	Children under age 5 with diarrhoea in the last 2 weeks
24	Acute respiratory infection in last two weeks	Children under age 5
25	Antibiotic treatment of suspected pneumonia	Children under age 5 with suspected pneumonia in the last 2 weeks
26	Under-fives sleeping under insecticide treated nets	Children under age 5
27	Fever in last two weeks	Children under age 5
28	Antimalarial treatment	Children under age 5 with fever in the last 2 weeks
WOMEN		
29	Total fertility rate	All women
30	Contraceptive prevalence	Women aged 15-49 currently married/in union
31	Antenatal care	Women aged 15-49 years with a live birth in the last 2 years
32	Skilled attendant at delivery	Women aged 15-49 years with a live birth in the last 2 years
33	Adult (15-24) literacy	Women aged 15-24 years
34	Marriage before age 18	Women aged 20-49 years
35	Comprehensive knowledge about HIV prevention among young people	Women aged 15-24 years
36	Knowledge of mother-to-child transmission of HIV	Women aged 15-49 years
37	Attitude towards people with HIV and AIDS	Women aged 15-49 years
38	Age at first sex among young people	Women aged 15-24 years
39	Condom use with non-regular partners	Women aged 15-24 years that had a non-marital, non-cohabiting partner in the last 12 months
40	Women who have been tested for HIV	Women aged 15-49 years
41	Maternal mortality ratio	Women aged 15-49 years

APPENDIX C: SAMPLING ERRORS – TOTAL SAMPLE

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
HOUSEHOLDS											
1	Iodised salt consumption	6.9	0.4970	0.00432	0.009	2.240	1.497	30,100	30,052	0.4885	0.5055
2	Household availability of ITNs	7.11	0.3785	0.00609	0.016	4.814	2.194	30,553	30,553	0.3665	0.3904
HOUSEHOLD MEMBERS											
3	Use of improved drinking water sources	8.1	0.7522	0.00894	0.012	13.102	3.620	131,021	30,553	0.7347	0.7698
4	Use of improved sanitation facilities	8.6	0.2042	0.00544	0.027	5.567	2.359	131,021	30,553	0.1935	0.2149
5	Net primary school (6-13) attendance rate	10.2	0.8621	0.00397	0.005	4.179	2.044	30,573	31,538	0.8543	0.8699
6	Net secondary school (14-17) attendance rate	10.3	0.1310	0.00573	0.044	2.732	1.653	9,125	9,477	0.1197	0.1423
7	Primary school completion rate	10.6	0.0910	0.00646	0.071	1.781	1.335	3,326	3,537	0.0784	0.1037
8	Child labour	11.1	0.2575	0.00451	0.018	4.399	2.097	40,326	41,322	0.2486	0.2664
9	Prevalence of orphans	12.18	0.1242	0.00305	0.025	6.090	2.468	70,276	71,425	0.1182	0.1302
10	Prevalence of vulnerable children	12.18	0.0743	0.00264	0.036	7.258	2.694	70,276	71,425	0.0691	0.0795
UNDER-5s											
11	Neonatal mortality rate	5.1	33.346	2.081	0.062	2.706	1.645	25,135	24,878	29.184	37.508
12	Post-neonatal morality rate	5.1	39.391	1.886	0.048	1.940	1.393	25,213	24,950	35.619	43.164
13	Infant mortality rate	5.1	72.737	2.289	0.031	1.631	1.277	25,219	24,958	68.159	77.316
14	Child (1-4) mortality rate	5.1	53.227	2.077	0.039	1.656	1.287	25,623	25,311	49.073	57.380
15	Under-5 mortality rate	5.1	122.092	2.995	0.025	1.672	1.293	25,713	25,399	116.102	128.083

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
16	Underweight prevalence	6.1	0.2049	0.00610	0.030	0.4668	2.161	20,404	20,471	0.1930	0.2169
17	Tuberculosis immunisation coverage	7.1	0.9566	0.00377	0.004	1.741	1.319	5,073	5,081	0.9492	0.9640
18	Polio immunisation coverage	7.1	0.8127	0.00907	0.011	2.745	1.657	5,070	5,078	0.7948	0.8305
19	Immunisation coverage for pentavalent	7.1	0.8639	0.00782	0.009	2.640	1.625	5,069	5,079	0.8485	0.8792
20	Measles immunisation coverage	7.1	0.8437	0.00835	0.010	2.674	1.635	5,044	5,058	0.8273	0.8601
21	Fully immunised children	7.1	0.7039	0.01060	0.015	2.736	1.654	5,066	5,073	0.6831	0.7248
22	Diarrhoea in last two weeks	7.4	0.2406	0.00398	0.017	1.996	1.413	22,994	22,994	0.2328	0.2484
23	Received ORT or increased fluids and continued feeding	7.5	0.2648	0.01018	0.038	2.876	1.696	5,532	5,398	0.2448	0.2848
24	Acute respiratory infection in last two weeks	7.6	0.0849	0.00359	0.042	3.811	1.952	22,994	22,994	0.0778	0.0919
25	Antibiotic treatment of suspected pneumonia	7.7	0.2952	0.01559	0.053	2.007	1.417	1,952	1,719	0.2646	0.3259
26	Under-fives sleeping under insecticide treated nets	7.12	0.2466	0.00806	0.033	8.038	2.835	22,994	22,994	0.2308	0.2624
27	Fever in last two weeks	7.13	0.3475	0.00480	0.014	2.338	1.529	22,994	22,994	0.3380	0.3569
28	Antimalarial treatment	7.13	0.2111	0.00896	0.042	3.886	1.971	7,990	8,057	0.1934	0.2287

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
WOMEN											
29	Total fertility rate (1-Year)	4.1	6.271	0.157	0.025	3.334	1.826	179,596	181,871	5.956	6.585
30	Contraceptive prevalence	9.1	0.4102	0.00510	0.012	2.017	1.420	19,005	18,762	0.4001	0.4202
31	Antenatal care	9.3	0.9188	0.00453	0.005	2.857	1.690	10,552	10,374	0.9099	0.9277
32	Skilled attendant at delivery	9.7	0.5356	0.01025	0.019	4.384	2.094	10,552	10,374	0.5155	0.5558
33	Adult (15-24) literacy	10.8	0.6731	0.0082	0.012	3.513	1.874	11,551	11,496	0.6570	0.6892
34	Marriage before age 18	11.3	0.4959	0.00556	0.011	2.606	1.614	21,135	21,046	0.4850	0.5068
35	Comprehensive knowledge about HIV prevention among young people	12.5	0.4118	0.00598	0.015	3.871	1.968	26,259	26,259	0.4001	0.4235
36	Knowledge of mother- to-child transmission of HIV	12.7	0.6536	0.00496	0.008	2.855	1.690.	26,259	26,259	0.6439	0.6634
37	Attitudes towards people with HIV and AIDS	12.9	0.2028	0.00466	0.023	3.436	1.854	25,515	25,550	0.1936	0.2119
38	Age at first sex among young people	12.14	0.1408	0.00699	0.05	2.108	1.452	5,124	5,213	0.1270	0.1545
39	Condom use with non-regular partners	12.16	0.3954	0.01667	0.042	1.210	1.100	1,121	1,042	0.3625	0.4283
40	Women who have been tested for HIV	12.13	0.2522	0.00676	0.027	6.357	2.521	26,259	26,259	0.2389	0.2655
41	Maternal mortality ratio	13.3	807	55.499	0.069	-	-	-	-	696	918

APPENDIX C: SAMPLING ERRORS – URBAN SAMPLE

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
HOUSEHOLDS											
1	Iodised salt consumption	6.9	0.6315	0.01405	0.022	2.824	1.680	4,413	3,331	0.6031	0.6600
2	Household availability of ITNs	7.11	0.5522	0.01325	0.024	2.420	1.556	4,481	3,409	0.5254	0.5790
HOUSEHOLD MEMBERS											
3	Use of improved drinking water sources	8.1	0.9596	0.01231	0.013	13.326	3.650	19,899	3,409	0.9347	0.9846
4	Use of improved sanitation facilities	8.6	0.4466	0.02119	0.047	6.193	2.489	19,899	3,409	0.4037	0.4895
5	Net primary school (6-13) attendance rate	10.2	0.9267	0.00831	0.009	3.616	1.901	4,308	3,560	0.9099	0.9435
6	Net secondary school (14-17) attendance rate	10.3	0.3466	0.02241	0.065	2.888	1.699	1,602	1,303	0.3013	0.3920
7	Primary school completion rate	10.6	0.2286	0.02127	0.093	1.180	1.086	523	461	0.1853	0.2718
8	Child labour	11.1	0.1392	0.01205	0.087	5.573	2.361	5,609	4,603	0.1148	0.1636
9	Prevalence of orphans	12.18	0.1384	0.01189	0.086	9.370	3.061	10,184	7,902	0.1143	0.1625
10	Prevalence of vulnerable children	12.18	0.0646	0.00763	0.118	7.616	2.760	10,184	7,902	0.0492	0.0801
UNDER-5s											
11	Neonatal mortality rate	5.1	29.793	7.865	0.264	4.335	2.082	3,617	2,549	14.063	45.524
12	Post-neonatal morality rate	5.1	39.727	6.739	0.170	2.673	1.635	3,626	2,555	26.250	53.204
13	Infant mortality rate	5.1	69.520	4.965	0.071	0.976	0.988	3,626	2,555	59.590	79.450
14	Child (1-4) mortality rate	5.1	47.212	6.286	0.133	1.656	1.287	3,700	2,589	34.639	59.784
15	Under-5 mortality rate	5.1	113.450	7.063	0.062	0.846	0.980	3,707	2,595	99.323	127.576

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
16	Underweight prevalence	6.1	`0.1903	0.03122	0.164	13.518	3.677	3,113	2,138	0.1271	0.2535
17	Tuberculosis immunisation coverage	7.1	0.9813	0.00649	0.007	1.115	1.056	723	486	0.9682	0.9945
18	Polio immunisation coverage	7.1	0.8687	0.01470	0.017	0.913	0.956	720	483	0.8389	0.8985
19	Immunisation coverage for pentavalent	7.1	0.9289	0.01607	0.017	1.888	1.374	720	484	0.8964	0.9614
20	Measles immunisation coverage	7.1	0.8664	0.01725	0.020	1.236	1.112	720	482	0.8315	0.9013
21	Fully immunised children	7.1	0.7680	0.01936	0.025	1.012	1.006	719	482	0.7288	0.8072
22	Diarrhoea in last two weeks	7.4	0.2205	0.00926	0.042	1.171	1.082	3,366	2,347	0.2017	0.2392
23	Received ORT or increased fluids and continued feeding	7.5	0.3566	0.03252	0.091	2.217	1.489	742	482	0.2904	0.4227
24	Acute respiratory infection in last two weeks	7.6	0.0865	0.01794	0.207	9.556	3.091	3,366	2,347	0.0502	0.1228
25	Antibiotic treatment of suspected pneumonia	7.7	0.3755	0.05065	0.135	1.597	1.264	291	147	0.2681	0.4829
26	Under-fives sleeping under insecticide treated nets	7.12	0.4232	0.01930	0.046	3.580	1.892	3,366	2,347	0.3842	0.4623
27	Fever in last two weeks	7.13	0.2949	0.01176	0.040	1.561	1.250	3,366	2,347	0.2711	0.3187
28	Antimalarial treatment	7.13	0.2727	0.03978	0.146	5.402	2.324	992	678	0.1920	0.3534

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
WOMEN											
29	Total fertility rate (1-Year)	4.1	4.529	0.562	0.124	8.952	2.992	31,729	25,337	3.405	5.653
30	Contraceptive prevalence	9.1	0.4469	0.00806	0.018	0.581	0.763	3,058	2,216	0.4306	0.4632
31	Antenatal care	9.3	0.9725	0.00639	0.007	1.555	1.247	1,507	1,022	0.9595	0.9854
32	Skilled attendant at delivery	9.7	0.7780	0.02733	0.035	4.416	2.101	1,507	1,022	0.7227	0.8334
33	Adult (15-24) literacy	10.8	0.8481	0.00870	0.010	0.960	0.980	2,237	1,637	0.8305	0.8657
34	Marriage before age 18	11.3	0.3960	0.01345	0.034	2.078	1.441	3,611	2,749	0.3688	0.4233
35	Comprehensive knowledge about HIV prevention among young people	12.5	0.5576	0.01515	0.027	3.282	1.812	4,624	3,526	0.5269	0.5883
36	Knowledge of mother- to-child transmission of HIV	12.7	0.6786	0.00875	0.013	1.238	1.113	4,624	3,526	0.6609	0.6963
37	Attitudes towards people with HIV and AIDS	12.9	0.2357	0.01145	0.049	2.550	1.597	4,610	3,503	0.2125	0.2588
38	Age at first sex among young people	12.14	0.1257	0.01368	0.109	1.321	1.150	1,013	777	0.0980	0.1534
39	Condom use with non-regular partners	12.16	0.4961	0.03931	0.079	1.416	1.190	318	230	0.4145	0.5776
40	Women who have been tested for HIV	12.13	0.3984	0.02289	0.057	7.707	2.776	4,624	3,526	0.3521	0.4448
41	Maternal mortality ratio	13.3	861	184.396	0.214	-	-	-	-	492	1230

APPENDIX C: SAMPLING ERRORS – RURAL SAMPLE

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
HOUSEHOLDS											
1	Iodised salt consumption	6.9	0.4739	0.00416	0.009	1.850	1.360	25,686	26,721	0.4657	0.4821
2	Household availability of ITNs	7.11	0.3486	0.00623	0.018	4.634	2.153	26,072	27,144	0.3364	0.3609
HOUSEHOLD MEMBERS											
3	Use of improved drinking water sources	8.1	0.7151	0.00964	0.013	12.388	3.520	111,122	27,144	0.6961	0.7340
4	Use of improved sanitation facilities	8.6	0.1608	0.00403	0.025	3.261	1.806	111,122	27,144	0.1528	0.1687
5	Net primary school (6-13) attendance rate	10.2	0.8515	0.00415	0.005	3.811	1.952	26,265	27,978	0.8433	0.8596
6	Net secondary school (14-17) attendance rate	10.3	0.0851	0.00401	0.047	1.689	1.300	7,523	8,174	0.0772	0.0930
7	Primary school completion rate	10.6	0.0654	0.00616	0.094	1.912	1.383	2,803	3,076	0.0533	0.0775
8	Child labour	11.1	0.2766	0.00429	0.015	3.371	1.836	34,717	36,719	0.2682	0.2850
9	Prevalence of orphans	12.18	0.1218	0.00287	0.024	4.877	2.208	60,091	63,523	0.1162	0.1274
10	Prevalence of vulnerable children	12.18	0.0759	0.00265	0.035	6.337	2.517	60,091	63,523	0.0707	0.0811
UNDER-5s											
11	Neonatal mortality rate	5.1	33.945	2.096	0.062	2.465	1.570	21,518	22,329	29.753	38.138
12	Post-neonatal morality rate	5.1	39.335	1.943	0.049	1.836	1.355	21,587	22,395	35.449	43.221
13	Infant mortality rate	5.1	73.280	2.556	0.035	1.796	1.340	21,593	22,403	68.168	78.392
14	Child (1-4) mortality rate	5.1	54.209	2.195	0.040	1.698	1.303	21,923	22,722	49.819	58.600
15	Under-5 mortality rate	5.1	123.517	3.289	0.027	1.860	1.364	22,004	22,804	116.940	130.094

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
16	Underweight prevalence	6.1	0.2076	0.00475	0.023	2.517	1.587	17,291	18,333	0.1982	0.2169
17	Tuberculosis immunisation coverage	7.1	0.9525	0.00401	0.004	1.630	1.277	4,349	4,595	0.9446	0.9604
18	Polio immunisation coverage	7.1	0.8034	0.00982	0.012	2.804	1.674	4,350	4,595	0.7841	0.8227
19	Immunisation coverage for pentavalent	7.1	0.8531	0.00759	0.009	2.110	1.453	4,348	4,595	0.8382	0.8682
20	Measles immunisation coverage	7.1	0.8400	0.00926	0.011	2,917	1.708	4,324	4,576	0.8218	0.8582
21	Fully immunised children	7.1	0.6933	0.01181	0.017	3.009	1.735	4,346	4,591	0.6701	0.7165
22	Diarrhoea in last two weeks	7.4	0.2441	0.00419	0.017	1.966	1.402	19,628	20,647	0.2358	0.2523
23	Received ORT or increased fluids and continued feeding	7.5	0.2506	0.00964	0.038	2.433	1.560	4,790	4,916	0.2316	0.2695
24	Acute respiratory infection in last two weeks	7.6	0.0846	0.00272	0.032	0.1977	1.406	19,627	20,647	0.0792	0.0900
25	Antibiotic treatment of suspected pneumonia	7.7	0.2812	0.01698	0.060	2.242	1.497	1,660	1,572	0.2477	0.3146
26	Under-fives sleeping under insecticide treated nets	7.12	0.2163	0.00590	0.027	4.234	2.058	19,628	20,647	0.2047	0.2279
27	Fever in last two weeks	7.13	0.3565	0.00473	0.013	2.015	1.420	19,628	20,647	0.3472	0.3658
28	Antimalarial treatment	7.13	0.2023	0.00713	0.035	2.324	1.524	6,996	7,379	0.1883	0.2163

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
WOMEN											
29	Total fertility rate (1-Year)	4.1	6.618	0.150	0.023	2.605	1.614	147,870	156,140	6.317	6.918
30	Contraceptive prevalence	9.1	0.4031	0.00561	0.014	2.165	1.471	15,947	16,546	0.3921	0.4141
31	Antenatal care	9.3	0.9099	0.00469	0.005	2.508	1.584	9,044	9,352	0.9007	0.9191
32	Skilled attendant at delivery	9.7	0.4953	0.01040	0.021	4.048	2.012	9,044	9,352	0.4748	0.5157
33	Adult (15-24) literacy	10.8	0.6311	0.00930	0.015	3.661	1.913	9,314	9,859	0.6128	0.6493
34	Marriage before age 18	11.3	0.5165	0.00498	0.010	1.817	1.348	17,524	18,297	0.5067	0.5263
35	Comprehensive knowledge about HIV prevention among young people	12.5	0.3806	0.00514	0.013	2.546	1.596	21,635	22,733	0.3705	0.3907
36	Knowledge of mother- to-child transmission of HIV	12.7	0.6483	0.00558	0.009	3.104	1.762	21,635	22,733	0.6373	0.6593
37	Attitudes towards people with HIV and AIDS	12.9	0.1955	0.00503	0.026	3.544	1.883	20,905	22,047	0.1856	0.2054
38	Age at first sex among young people	12.14	0.1445	0.00793	0.055	2.254	1.501	4,110	4,436	0.1289	0.1601
39	Condom use with non-regular partners	12.16	0.355	0.01740	0.049	1.072	1.036	802	812	0.3211	0.3899
40	Women who have been tested for HIV	12.13	0.2210	0.00467	0.021	2.880	1.697	21,635	22,733	0.2118	0.2301
41	Maternal mortality ratio	13.3	802	56.561	0.070	-	-	-	-	689	915

APPENDIX C: SAMPLING ERRORS – NORTHERN REGION

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
HOUSEHOLDS											
1	Iodised salt consumption	6.9	0.5839	0.00850	0.015	1.694	1.302	3,068	5,702	0.5670	0.6007
2	Household availability of ITNs	7.11	0.3889	0.01044	0.027	2.690	1.640	3,132	5,871	0.3682	0.4096
HOUSEHOLD MEMBERS											
3	Use of improved drinking water sources	8.1	0.7934	0.01719	0.022	10.578	3.252	13,990	5,871	0.7594	0.8275
4	Use of improved sanitation facilities	8.6	0.1508	0.01536	0.102	10.821	3.289	13,990	5,871	0.1203	0.1812
5	Net primary school (6-13) attendance rate	10.2	0.9477	0.00380	0.004	1.875	1.369	3,368	6,425	0.9402	0.9552
6	Net secondary school (14-17) attendance rate	10.3	0.1886	0.01842	0.098	4.195	2.048	1,024	1,892	0.1520	0.2251
7	Primary school completion rate	10.6	0.1946	0.01711	0.088	1.416	1.190	3,961	759	0.1606	0.2286
8	Child labour	11.1	0.3270	0.01104	0.034	4.697	2.167	4,470	8,481	0.3051	0.3489
9	Prevalence of orphans	12.18	0.1125	0.00610	0.054	5.382	2.320	7,542	14,446	0.1004	0.1246
10	Prevalence of vulnerable children	12.18	0.0539	0.00434	0.081	5.337	2.310	7,542	14,446	0.0453	0.0625
UNDER-5s											
11	Neonatal mortality rate	5.1	33.467	4.554	0.136	2.313	1.521	2,470	4,835	24.358	42.575
12	Post-neonatal morality rate	5.1	23.888	2.654	0.111	1.270	1.127	2,474	4,843	18.580	29.196
13	Infant mortality rate	5.1	57.354	5.044	0.088	1.874	1.369	2,475	4,845	47.266	67.443
14	Child (1-4) mortality rate	5.1	32.695	3.647	0.112	1.409	1.187	2,504	4,901	25.402	39.988
15	Under-5 mortality rate	5.1	88.174	6.369	0.072	1.902	1.379	2,510	4,913	75.436	100.912

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
16	Underweight prevalence	6.1	0.1655	0.00889	0.054	2.441	1.553	2,139	4,214	0.1479	0.1831
17	Tuberculosis immunisation coverage	7.1	0.9437	0.00840	0.009	1.322	1.150	511	996	0.9270	0.9603
18	Polio immunisation coverage	7.1	0.8450	0.01760	0.021	2.348	1.532	510	994	0.8101	0.8799
19	Immunisation coverage for pentavalent	7.1	0.8978	0.01495	0.017	2.421	1.556	511	996	0.8681	0.9274
20	Measles immunisation coverage	7.1	0.8630	0.01493	0.017	1.851	1.361	504	983	0.8334	0.8926
21	Fully immunised children	7.1	0.7350	0.02144	0.029	2.334	1.528	508	990	0.6924	0.7775
22	Diarrhoea in last two weeks	7.4	0.1869	0.00974	0.052	2.851	1.689	2,315	4,572	0.1676	0.2062
23	Received ORT or increased fluids and continued feeding	7.5	0.2313	0.01487	0.064	0.975	0.987	433	785	0.2018	0.2609
24	Acute respiratory infection in last two weeks	7.6	0.0805	0.00508	0.063	1.591	1.262	2,315	4,572	0.0705	0.0906
25	Antibiotic treatment of suspected pneumonia	7.7	0.4071	0.03108	0.076	1.117	1.057	186	280	0.3445	0.4698
26	Under-fives sleeping under insecticide treated nets	7.12	0.2372	0.01374	0.058	4.767	2.183	2,315	4,572	0.2099	0.2644
27	Fever in last two weeks	7.13	0.2891	0.00956	0.033	2.033	1.426	2,315	4,572	0.2702	0.3081
28	Antimalarial treatment	7.13	0.1958	0.01164	0.059	1.089	1.044	669	1,266	0.1726	0.2189

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
WOMEN											
29	Total fertility rate (1-Year)	4.1	5.532	0.234	0.042	1.817	1.348	18,961	36,575	5.064	6.001
30	Contraceptive prevalence	9.1	0.3952	0.01406	0.036	3.221	1.795	2,046	3,898	0.3673	0.4231
31	Antenatal care	9.3	0.8238	0.01184	0.014	1.952	1.397	1,035	2,021	0.8003	0.8473
32	Skilled attendant at delivery	9.7	0.5806	0.02018	0.035	3.377	1.838	1,035	2,021	0.5406	0.6206
33	Adult (15-24) literacy	10.8	0.7502	0.01219	0.016	1.836	1.355	1,221	2,316	0.7260	0.7744
34	Marriage before age 18	11.3	0.5262	0.01203	0.023	2.453	1.566	2,188	4,225	0.5023	0.5500
35	Comprehensive knowledge about HIV prevention among young people	12.5	0.3693	0.00957	0.026	2.086	1.444	2,772	5,301	0.3503	0.3882
36	Knowledge of mother- to-child transmission of HIV	12.7	0.7227	0.00872	0.012	2.012	1.418	2,772	5,301	0.7054	0.7400
37	Attitudes towards people with HIV and AIDS	12.9	0.1926	0.00888	0.046	2.630	1.622	2,721	5,192	0.1749	0.2102
38	Age at first sex among young people	12.14	0.0737	0.00937	0.127	1.382	1.176	583	1,076	0.0551	0.0923
39	Condom use with non-regular partners	12.16	0.5176	0.02762	0.053	0.357	0.598	614	118	0.4584	0.5768
40	Women who have been tested for HIV	12.13	0.3225	0.01315	0.041	4.196	2.048	2,772	5,301	0.2964	0.3486
41	Maternal mortality ratio	13.3	543	109.056	0.201	-	-	-	-	325	761

APPENDIX C: SAMPLING ERRORS – CENTRAL REGION

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
HOUSEHOLDS											
1	Iodised salt consumption	6.9	0.4756	0.00773	0.016	2.495	1.579	12,949	10,417	0.4604	0.4909
2	Household availability of ITNs	7.11	0.3851	0.01146	0.030	5.850	2.419	13,121	10,551	0.3625	0.4077
HOUSEHOLD MEMBERS											
3	Use of improved drinking water sources	8.1	0.6948	0.01549	0.022	11.931	3.454	58,035	10,551	0.6643	0.7254
4	Use of improved sanitation facilities	8.6	0.2188	0.00824	0.038	4.186	2.046	58,035	10,551	0.2025	0.2350
5	Net primary school (6-13) attendance rate	10.2	0.8628	0.00645	0.007	3.990	1.997	13,302	11,357	0.8501	0.8755
6	Net secondary school (14-17) attendance rate	10.3	0.0989	0.00842	0.085	2.760	1.661	3,944	3,468	0.0822	0.1155
7	Primary school completion rate	10.6	0.0574	0.01066	0.186	2.779	1.667	1,483	1,324	0.0364	0.0785
8	Child labour	11.1	0.2299	0.00745	0.032	4.652	2.157	17,664	14,844	0.2152	0.2446
9	Prevalence of orphans	12.18	0.0982	0.00473	0.048	6.546	2.559	31,224	25,891	0.0888	0.1075
10	Prevalence of vulnerable children	12.18	0.0514	0.00334	0.065	5.933	2.436	31,224	25,891	0.0448	0.0580
UNDER-5s											
11	Neonatal mortality rate	5.1	35.390	3.757	0.106	2.993	1.730	11,614	9,147	27.876	42.903
12	Post-neonatal morality rate	5.1	38.201	2.958	0.077	1.858	1.363	11,644	9,173	32.286	44.117
13	Infant mortality rate	5.1	73.591	3.494	0.047	1.462	1.209	11,646	9,176	66.604	80.578
14	Child (1-4) mortality rate	5.1	60.070	3.451	0.057	1.320	1.149	11,877	9,333	53.169	66.971
15	Under-5 mortality rate	5.1	129.241	4.866	0.038	1.578	1.256	11,912	9,365	119.509	138.973

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
16	Underweight prevalence	6.1	0.2260	0.01060	0.047	4.756	2.181	9,357	7,408	0.2051	0.2469
17	Tuberculosis immunisation coverage	7.1	0.9456	0.00686	0.007	1.742	1.320	2,388	1,905	0.9321	0.9592
18	Polio immunisation coverage	7.1	0.7716	0.01689	0.022	3.083	1.756	2,388	1,905	0.7383	0.8050
19	Immunisation coverage for pentavalent	7.1	0.8336	0.01487	0.018	3.037	1.743	2,388	1,906	0.8043	0.8630
20	Measles immunisation coverage	7.1	0.8060	0.01485	0.018	2.678	1.637	2,371	1,901	0.7767	0.8353
21	Fully immunised children	7.1	0.6488	0.01896	0.029	3.004	1.733	2,387	1,905	0.6114	0.6862
22	Diarrhoea in last two weeks	7.4	0.2658	0.00695	0.026	2.081	1.442	10,569	8,405	0.2521	0.2795
23	Received ORT or increased fluids and continued feeding	7.5	0.2445	0.01763	0.072	3.854	1.963	2,809	2,292	0.2097	0.2793
24	Acute respiratory infection in last two weeks	7.6	0.0995	0.00634	0.064	3.770	1.942	10,569	8,405	0.0870	0.1120
25	Antibiotic treatment of suspected pneumonia	7.7	0.2497	0.02460	0.098	2.402	1.550	1,051	745	0.2010	0.2984
26	Under-fives sleeping under insecticide treated nets	7.12	0.2437	0.01523	0.062	10.577	3.252	10,569	8,405	0.2137	0.2738
27	Fever in last two weeks	7.13	0.3667	0.00772	0.021	2.158	1.469	10,569	8,405	0.3514	0.3819
28	Antimalarial treatment	7.13	0.2140	0.01669	0.078	5.381	2.320	3,875	3,251	0.1810	0.2469

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
WOMEN											
29	Total fertility rate (1-Year)	4.1	6.517	0.270	0.041	3.721	1.929	79,912	65,383	5.978	7.057
30	Contraceptive prevalence	9.1	0.4345	0.00770	0.018	1.641	1.281	8,690	6,802	0.4193	0.4496
31	Antenatal care	9.3	0.9219	0.00789	0.009	3.330	1.825	4,959	3,854	0.9064	0.9375
32	Skilled attendant at delivery	9.7	0.5053	0.01754	0.035	4.741	2.177	4,959	3,854	0.4707	0.5399
33	Adult (15-24) literacy	10.8	0.6636	0.01554	0.023	4.475	2.115	5,221	4,139	0.6330	0.6943
34	Marriage before age 18	11.3	0.4572	0.00950	0.021	2.730	1.652	9,425	7,506	0.4384	0.4759
35	Comprehensive knowledge about HIV prevention among young people	12.5	0.3594	0.1179	0.033	5.651	2.377	11,665	9,368	0.3361	0.3826
36	Knowledge of mother- to-child transmission of HIV	12.7	0.6377	0.00912	0.014	3.370	1.836	11,665	9,368	0.6197	0.6557
37	Attitudes towards people with HIV and AIDS	12.9	0.2253	0.00882	0.039	4.023	2.006	11,205	9,020	0.2079	0.2427
38	Age at first sex among young people	12.14	0.1156	0.1066	0.092	2.066	1.438	2,240	1,862	0.0946	0.1367
39	Condom use with non-regular partners	12.16	0.3593	0.02584	0.072	1.056	1.028	472	365	0.3076	0.4110
40	Women who have been tested for HIV	12.13	0.2450	0.01368	0.056	9.472	3.078	11,665	9,368	0.2180	0.2720
41	Maternal mortality ratio	13.3	678	74.787	0.110	-	-	-	-	529	828

APPENDIX C: SAMPLING ERRORS – SOUTHERN REGION

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
HOUSEHOLDS											
1	Iodised salt consumption	6.9	0.4978	0.00574	0.012	1.833	1.345	14,083	13,933	0.4865	0.5091
2	Household availability of ITNs	7.11	0.3701	0.00729	0.020	3.222	1.795	14,300	14,131	0.3558	0.3845
HOUSEHOLD MEMBERS											
3	Use of improved drinking water sources	8.1	0.7989	0.01252	0.016	13.796	3.714	58,996	14,131	0.7742	0.8236
4	Use of improved sanitation facilities	8.6	0.2025	0.00803	0.040	5.637	2.374	58,996	14,131	0.1867	0.2183
5	Net primary school (6-13) attendance rate	10.2	0.8407	0.00595	0.007	3.635	1.907	13,903	13,756	0.8289	0.8524
6	Net secondary school (14-17) attendance rate	10.3	0.1473	0.00846	0.057	2.345	1.531	4,157	4,117	0.1306	0.1640
7	Primary school completion rate	10.6	0.0971	0.00904	0.093	1.354	1.164	1,447	1,454	0.0793	0.1150
8	Child labour	11.1	0.2672	0.00587	0.022	3.170	1.780	18,192	17,997	0.2556	0.2788
9	Prevalence of orphans	12.18	0.1528	0.00417	0.027	4.177	2.044	31,511	31,088	0.1446	0.1610
10	Prevalence of vulnerable children	12.18	0.1018	0.00437	0.043	6.482	2.546	31,511	31,088	0.0932	0.1104
UNDER-5s											
11	Neonatal mortality rate	5.1	31.166	2.450	0.079	1.825	1.351	11,051	10,896	26.267	36.065
12	Post-neonatal morality rate	5.1	44.104	2.827	0.064	1.654	1.286	11,096	10,934	38.449	49.758
13	Infant mortality rate	5.1	75.270	3.543	0.047	1.538	1.240	11,097	10,937	68.184	82.355
14	Child (1-4) mortality rate	5.1	51.005	2.947	0.058	1.690	1.300	11,242	11,077	45.112	56.898
15	Under-5 mortality rate	5.1	122.436	4.221	0.034	1.383	1.176	11,290	11,121	113.995	130.877

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
16	Underweight prevalence	6.1	0.1922	0.00659	0.034	2.478	1.574	8,907	8,849	0.1793	0.2052
17	Tuberculosis immunisation coverage	7.1	0.9717	0.00450	0.005	1.602	1.266	2,174	2,180	0.9628	0.9805
18	Polio immunisation coverage	7.1	0.8502	0.00937	0.011	1.500	1.225	2,173	2,179	0.8317	0.8687
19	Immunisation coverage for pentavalent	7.1	0.8891	0.00856	0.010	1.618	1.272	2,171	2,177	0.8723	0.9060
20	Measles immunisation coverage	7.1	0.8806	0.00854	0.010	1.506	1.227	2,168	2,174	0.8638	0.8974
21	Fully immunised children	7.1	0.7572	0.01065	0.014	1.343	1.159	2,171	2,178	0.7362	0.7782
22	Diarrhoea in last two weeks	7.4	0.2266	0.00564	0.025	1.820	1.349	10,111	10,017	0.2154	0.2377
23	Received ORT or increased fluids and continued feeding	7.5	0.2960	0.01208	0.041	1.624	1.274	2,291	2,321	0.2722	0.3198
24	Acute respiratory infection in last two weeks	7.6	0.0706	0.00391	0.055	2.328	1.526	10,111	10,017	0.0629	0.0783
25	Antibiotic treatment of suspected pneumonia	7.7	0.3331	0.01944	0.058	1.179	1.086	714	694	0.2946	0.3715
26	Under-fives sleeping under insecticide treated nets	7.12	0.2518	0.00868	0.034	4.006	2.001	10,111	10,017	0.2347	0.2689
27	Fever in last two weeks	7.13	0.3407	0.00719	0.021	2.307	1.519	10,111	10,017	0.3266	0.3549
28	Antimalarial treatment	7.13	0.2108	0.00840	0.040	1.502	1.226	3,445	3,540	0.1942	0.2273

#	Indicator	Table	Value (R)	Standard Error (SE)	Coefficient of Variation (SE/R)	Design Effect (Deff)	Square root of design effect (Deft)	Weighted Count	Unweighted Count	Confidence Limits	
										R-2SE	R+2SE
WOMEN											
29	Total fertility rate (1-Year)	4.1	6.208	0.218	0.035	2.384	1.544	80,718	79,832	5.772	6.645
30	Contraceptive prevalence	9.1	0.3883	0.00767	0.020	1.994	1.412	8,269	8,062	0.3732	0.4034
31	Antenatal care	9.3	0.9371	0.00516	0.006	2.030	1.425	4,557	4,499	0.9269	0.9472
32	Skilled attendant at delivery	9.7	0.5585	0.01407	0.025	3.609	1.900	4,557	4,499	0.5308	0.5862
33	Adult (15-24) literacy	10.8	0.6643	0.00933	0.014	1.967	1.402	5,109	5,041	0.6459	0.6827
34	Marriage before age 18	11.3	0.5273	0.00659	0.012	1.623	1.274	9,522	9,315	0.5143	0.5403
35	Comprehensive knowledge about HIV prevention among young people	12.5	0.4735	0.00680	0.014	2.148	1.466	11,822	11,590	0.4601	0.4869
36	Knowledge of mother- to-child transmission of HIV	12.7	0.6531	0.00588	0.009	1.767	1.329	11,822	11,590	0.6416	0.6647
37	Attitudes towards people with HIV and AIDS	12.9	0.1834	0.00542	0.030	2.228	1.493	11,589	11,338	0.1727	0.1941
38	Age at first sex among young people	12.14	0.1823	0.01139	0.062	1.978	1.406	2,300	2,275	0.1599	0.2047
39	Condom use with non-regular partners	12.16	0.4116	0.02463	0.060	1.397	1.182	587	559	0.3627	0.4605
40	Women who have been tested for HIV	12.13	0.2429	0.00611	0.025	2.352	1.534	11,822	11,590	0.2309	0.2549
41	Maternal mortality ratio	13.3	1029	94.070	0.081	-	-	-	-	840	1217

D DATA QUALITY TABLES

Table DQ.1: Age distribution of household population
Single-year distribution of household population by sex (weighted), Malawi, 2006

Age	Male		Female		Missing	
	Number	Percent	Number	Percent	Number	Percent
0	2,544	4.0	2,719	4.0	0	0.0
1	2,501	3.9	2,576	3.8	1	11.9
2	2,483	3.9	2,554	3.8	0	0.0
3	2,295	3.6	2,285	3.4	0	0.0
4	1,730	2.7	1,676	2.5	0	0.0
5	2,291	3.6	2,386	3.5	1	15.3
6	2,482	3.9	2,593	3.8	0	3.5
7	2,018	3.2	2,208	3.3	1	17.5
8	2,026	3.2	2,139	3.2	0	0.0
9	1,882	3.0	1,889	2.8	0	0.0
10	2,144	3.4	2,059	3.1	1	18.1
11	1,433	2.3	1,595	2.4	0	0.0
12	2,173	3.4	2,226	3.3	1	6.6
13	1,572	2.5	1,876	2.8	1	14.9
14	1,611	2.5	1,715	2.5	1	12.2
15	1,336	2.1	1,105	1.6	0	0.0
16	1,227	1.9	1,032	1.5	0	0.0
17	1,003	1.6	884	1.3	0	0.0
18	1,271	2.0	1,268	1.9	0	0.0
19	929	1.5	1,071	1.6	0	0.0
20	1,001	1.6	1,576	2.3	0	0.0
21	912	1.4	1,232	1.8	0	0.0
22	988	1.6	1,283	1.9	0	0.0
23	1,059	1.7	1,255	1.9	0	0.0
24	1,053	1.7	1,281	1.9	0	0.0
25	1,235	1.9	1,266	1.9	0	0.0
26	977	1.5	1,172	1.7	0	0.0
27	864	1.4	966	1.4	0	0.0
28	1,038	1.6	980	1.5	0	0.0
29	772	1.2	781	1.2	0	0.0
30	1,140	1.8	1,022	1.5	0	0.0
31	767	1.2	682	1.0	0	0.0
32	922	1.5	805	1.2	0	0.0
33	607	1.0	679	1.0	0	0.0
34	614	1.0	596	0.9	0	0.0
35	888	1.4	653	1.0	0	0.0
36	613	1.0	609	0.9	0	0.0
37	493	0.8	416	0.6	0	0.0
38	635	1.0	604	0.9	0	0.0
39	411	0.6	334	0.5	0	0.0
40	601	0.9	498	0.7	0	0.0
41	291	0.5	280	0.4	0	0.0
42	590	0.9	523	0.8	0	0.0
43	338	0.5	306	0.5	0	0.0

Table DQ.1: Age distribution of household population
Single-year distribution of household population by sex (weighted), Malawi, 2006

Age	Male		Female		Missing	
	Number	Percent	Number	Percent	Number	Percent
44	342	0.5	303	0.4	0	0.0
45	432	0.7	349	0.5	0	0.0
46	367	0.6	344	0.5	0	0.0
47	238	0.4	210	0.3	0	0.0
48	373	0.6	377	0.6	0	0.0
49	284	0.4	229	0.3	0	0.0
50	256	0.4	462	0.7	0	0.0
51	200	0.3	493	0.7	0	0.0
52	288	0.5	597	0.9	0	0.0
53	217	0.3	355	0.5	0	0.0
54	346	0.5	393	0.6	0	0.0
55	267	0.4	313	0.5	0	0.0
56	290	0.5	328	0.5	0	0.0
57	275	0.4	271	0.4	0	0.0
58	259	0.4	360	0.5	0	0.0
59	224	0.4	259	0.4	0	0.0
60	369	0.6	460	0.7	0	0.0
61	190	0.3	213	0.3	0	0.0
62	225	0.4	317	0.5	0	0.0
63	106	0.2	183	0.3	0	0.0
64	164	0.3	219	0.3	0	0.0
65	166	0.3	246	0.4	0	0.0
66	125	0.2	116	0.2	0	0.0
67	139	0.2	145	0.2	0	0.0
68	141	0.2	204	0.3	0	0.0
69	135	0.2	205	0.3	0	0.0
70	217	0.3	240	0.4	0	0.0
71	78	0.1	98	0.1	0	0.0
72	132	0.2	169	0.3	0	0.0
73	67	0.1	96	0.1	0	0.0
74	125	0.2	157	0.2	0	0.0
75	101	0.2	111	0.2	0	0.0
76	92	0.1	102	0.2	0	0.0
77	28	0.0	65	0.1	0	0.0
78	70	0.1	116	0.2	0	0.0
79	51	0.1	113	0.2	0	0.0
80+	404	0.6	523	0.8	0	0.0
DK/Missing	21	0.0	57	0.1	0	0.0
Total	**63,561**	**100.0**	**67,452**	**100.0**	**8**	**100.0**

Table DQ.2: Age distribution of eligible and interviewed women
Household population of women age 10-54, interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted), by five-year age group, Malawi, 2006

Age	Household population of women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
	Number	Number	Percent	
10-14	9,471	.	.	.
15-19	5,359	5,114	19.5	95.4
20-24	6,627	6,440	24.6	97.2
25-29	5,164	5,057	19.3	97.9
30-34	3,785	3,696	14.1	97.7
35-39	2,617	2,535	9.7	96.8
40-44	1,910	1,858	7.1	97.3
45-49	1,509	1,459	5.6	96.7
50-54	2,301	.	.	.
Total	**26,971**	**26,159**	**100.0**	**97.0**

Table DQ.3: Age distribution of eligible and interviewed under-5s
Household population of children age 0-7, children whose mothers/caretakers were interviewed and percentage of under-5 children whose mothers/caretakers were interviewed (weighted), by five-year age group, Malawi, 2006

Age	Household population of children age 0-7	Interviewed children age 0-4		Percentage of eligible children interviewed
	Number	Number	Percent	
0	5,263	5,217	22.5	99.1
1	5,078	5,036	21.7	99.2
2	5,037	4,994	21.6	99.2
3	4,579	4,546	19.6	99.3
4	3,407	3,365	14.5	98.8
5	4,678	.	.	.
6	5,075	.	.	.
7	4,228	.	.	.
0-4	**23,363**	**23,158**	**100.0**	**99.1**

Table DQ.4: Age distribution of under-5 children
Age distribution of under-5 children by 3-month groups (weighted), Malawi, 2006

Age in months	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
0-2	548	4.8	593	5.1	1,141	5.0
3-5	566	5.0	646	5.6	1,212	5.3
6-8	653	5.7	587	5.0	1,240	5.4
9-11	676	5.9	757	6.5	1,433	6.2
12-14	722	6.3	667	5.7	1,389	6.0
15-17	604	5.3	678	5.8	1,283	5.6
18-20	590	5.2	630	5.4	1,220	5.3
21-23	586	5.2	602	5.2	1,188	5.2
24-26	658	5.8	664	5.7	1,322	5.7
27-29	648	5.7	686	5.9	1,335	5.8
30-32	553	4.9	647	5.6	1,200	5.2
33-35	594	5.2	576	5.0	1,170	5.1
36-38	697	6.1	696	6.0	1,393	6.1
39-41	663	5.8	643	5.5	1,306	5.7
42-44	513	4.5	552	4.7	1,066	4.6
45-47	402	3.5	372	3.2	775	3.4
48-50	486	4.3	465	4.0	951	4.1
51-53	447	3.9	410	3.5	857	3.7
54-56	439	3.9	408	3.5	847	3.7
57-59	321	2.8	346	3.0	667	2.9
Total	**11,368**	**100.0**	**11,626**	**100.0**	**22,994**	**100.0**

Table DQ.5: Heaping on ages and periods
Age and period ratios at boundaries of eligibility by type of information collected (Household questionnaire, weighted), Malawi, 2006

	Age and period ratios			
	Male	Female	Missing	Total
Age in household questionnaire				
1	1.00	0.98	.	0.99
2	1.02	1.03	.	1.03
3	1.06	1.05	.	1.05
4	0.82	0.79	.	0.81
5	1.06	1.08	.	1.07
6	1.10	1.08	0.29	1.09
.	.	.	.	.
8	1.03	1.03	.	1.03
9	0.93	0.93	.	0.93
10	1.18	1.11	.	1.15
.	.	.	.	.
13	0.88	0.97	1.33	0.93
14	1.07	1.10	.	1.08
15	0.96	0.86	.	0.91
16	1.03	1.02	.	1.03
17	0.86	0.83	.	0.85
18	0.94	0.82	.	0.88
.	.	.	.	.
23	1.02	0.99	.	1.00
24	0.94	1.01	.	0.98
25	1.13	1.02	.	1.07
.	.	.	.	.
48	1.25	1.39	.	1.31
49	0.93	0.64	.	0.78
50	1.04	1.17	.	1.12
Age in women's questionnaire				
23		1.00		
24		1.01		
25		1.00		
Months since last birth in women's questionnaire				
6-11		1.06		
12-17		1.05		
18-23		0.94		
24-29		1.08		
30-35		0.95		

Table DQ.6: Percentage of observations missing information for selected questions and indicators, Malawi, 2006

	Percent with missing information	Number
Household Questionnaire		
Salt testing	0.5	30,553
Women's Questionnaire		
Month of birth only	20.3	26,259
Month and year of birth	0.0	26,259
Month of first marriage only	5.5	22,130
Month and year of first marriage	3.9	22,130
Age at first marriage/union	0.6	22,130
Age at first intercourse	0.1	11,551
Time since last intercourse	0.0	8,936
Women's Birth History Module		
Month of birth only - all children	0.9	78,230
Month and year of birth - all children	0.1	78,230
Age at death missing	0.2	12,663
Under-5 Questionnaire		
Month of birth under-5 only	0.1	22,994
Month and year of birth under-5	0.0	22,994
Weight	2.6	22,994
Height	3.9	22,994
Height or weight	4.0	22,994

Table DQ.7: Presence of mother in the household and the person interviewed for the under-5 questionnaire
Distribution of children under five by whether the mother lives in the same household, and the person interviewed for the under-5 questionnaire (weighted), Malawi, 2006

Age	Mother in the household					Mother not in the household				Total	Number of children aged 0-4 years
	Mother interviewed	Father interviewed	Other adult female interviewed	Other adult male interviewed	Child (<15) interviewed	Father interviewed	Other adult female interviewed	Other adult male interviewed	Child (<15) interviewed		
0	98.8	0.2	0.4	0.0	0.1	0.0	0.4	0.0	0.0	100.0	5,263
1	97.4	0.7	0.4	0.0	0.2	0.0	1.3	0.0	0.0	100.0	5,078
2	93.5	0.4	0.7	0.0	0.2	0.1	5.1	0.0	0.0	100.0	5,037
3	89.9	0.4	0.3	0.0	0.2	0.3	8.6	0.2	0.1	100.0	4,579
4	87.1	0.4	0.5	0.0	0.1	0.6	10.9	0.3	0.1	100.0	3,407
Total	**93.9**	**0.4**	**0.4**	**0.0**	**0.2**	**0.2**	**4.7**	**0.1**	**0.0**	**100.0**	**23,363**

Table DQ.8: School attendance by single age
Distribution of household population age 5-24 by educational level and grade attended in the current year, Malawi, 2006

Age	Primary									Secondary					Higher	Non-standard curriculum	DK	Not attending school	Total	Total No. of Children
	1	2	3	4	5	6	7	8	99	1	2	3	4	99						
5	29.3	2.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	67.4	100.0	4,678
6	48.9	7.8	1.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	41.3	100.0	5,075
7	51.4	19.0	5.1	0.9	0.6	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	22.5	100.0	4,228
8	38.3	30.1	14.0	3.6	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	13.1	100.0	4,166
9	24.1	33.2	22.4	6.9	1.9	0.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7	100.0	3,771
10	16.6	26.8	25.7	11.9	6.2	2.1	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	100.0	4,204
11	8.9	20.5	28.1	17.0	10.6	5.2	2.0	0.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	6.9	100.0	3,029
12	4.5	15.0	24.3	20.0	14.0	8.0	3.1	1.2	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	9.5	100.0	4,399
13	3.3	7.7	18.8	17.8	17.9	12.3	6.6	4.4	0.0	0.5	0.3	0.1	0.0	0.0	0.0	0.1	0.1	10.0	100.0	3,450
14	1.9	4.7	11.2	16.0	16.4	14.5	11.7	6.7	0.0	1.3	1.1	0.3	0.1	0.0	0.0	0.0	0.0	14.1	100.0	3,326
15	2.0	1.9	6.0	9.8	14.9	14.3	13.0	8.9	0.0	3.0	3.2	0.4	0.1	0.0	0.0	0.0	0.1	22.2	100.0	2,441
16	2.8	1.3	2.8	7.1	10.7	10.7	13.2	10.4	0.1	4.1	4.5	1.9	1.0	0.0	0.0	0.0	0.2	29.1	100.0	2,259
17	1.9	0.9	2.0	2.7	5.6	7.3	9.6	11.7	0.0	3.8	7.0	4.0	1.4	0.0	0.4	0.0	0.0	41.7	100.0	1,887
18	2.4	0.6	0.9	1.2	2.0	4.0	4.8	8.5	0.0	2.7	5.9	3.5	4.7	0.0	0.3	0.1	0.1	58.4	100.0	2,539
19	0.9	0.6	0.9	0.8	0.6	1.7	2.9	5.7	0.0	1.4	5.6	4.7	4.7	0.0	1.0	0.0	0.0	68.6	100.0	2,001
20	0.6	0.2	0.2	0.1	0.5	0.5	1.1	3.4	0.0	1.0	2.8	2.2	3.1	0.0	0.3	0.0	0.0	84.1	100.0	2,577
21	0.6	0.0	0.2	0.2	0.1	0.6	0.5	1.0	0.0	0.5	2.2	2.3	2.8	0.0	0.5	0.2	0.0	88.2	100.0	2,144
22	0.2	0.3	0.1	0.3	0.1	0.1	0.4	1.0	0.0	0.5	1.3	1.2	2.1	0.0	0.8	0.1	0.0	91.6	100.0	2,271
23	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.3	0.0	0.1	0.5	1.3	1.2	0.0	1.0	0.1	0.0	95.2	100.0	2,315
24	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.3	0.3	0.4	0.7	0.0	0.9	0.1	0.0	96.7	100.0	2,334
Total	**15.4**	**10.8**	**9.8**	**6.5**	**5.4**	**4.0**	**3.1**	**2.6**	**0.0**	**0.8**	**1.3**	**0.8**	**0.8**	**0.0**	**0.2**	**0.0**	**0.1**	**38.5**	**100.0**	**63,092**

Table DQ.9: Sex ratio at birth among children ever born and living
Sex ratio at birth among children ever born, children living, and deceased children by age of women (weighted), Malawi, 2006

Age	Number of sons ever born	Number of daughters ever born	Sex ratio of children ever born	Number of sons living	Number of daughters living	Sex ratio of living children	Number of deceased sons	Number of deceased daughters	Sex ratio of deceased children	Number of women
15-19	813	762	1.07	733	694	1.06	82	69	1.19	5,124
20-24	5,195	5,113	1.02	4,580	4,638	0.99	617	476	1.30	6,427
25-29	7,503	7,659	0.98	6,467	6,676	0.97	1,038	985	1.05	5,088
30-34	7,833	7,858	1.00	6,593	6,747	0.98	1,243	1,116	1.11	3,680
35-39	6,853	6,934	0.99	5,566	5,827	0.96	1,288	1,106	1.16	2,550
40-44	6,113	5,895	1.04	4,921	4,683	1.05	1,192	1,214	0.98	1,900
45-49	4,859	4,840	1.00	3,817	3,681	1.04	1,042	1,159	0.90	1,490
Total	**39,170**	**39,060**	**1.00**	**32,677**	**32,946**	**0.99**	**6,502**	**6,125**	**1.06**	**26,259**

Table DQ.10: Distribution of women by time since last birth
Distribution of women aged 15-49 years with at least one live birth (weighted), by months since last birth, Malawi, 2006

Months since last birth	Number	Percent
0	370	2.6
1	460	3.3
2	393	2.8
3	408	2.9
4	408	2.9
5	400	2.8
6	403	2.9
7	470	3.4
8	427	3.0
9	545	3.9
10	503	3.6
11	463	3.3
12	493	3.5
13	473	3.4
14	486	3.5
15	437	3.1
16	418	3.0
17	426	3.0
18	396	2.8
19	379	2.7
20	389	2.8
21	362	2.6
22	326	2.3
23	380	2.7
24	341	2.4
25	380	2.7
26	373	2.7
27	352	2.5
28	382	2.7
29	362	2.6
30	350	2.5
31	289	2.1
32	257	1.8
33	264	1.9
34	241	1.7
35	232	1.7
Total	**14,036**	**100.0**

E MICS INDICATORS: NUMERATORS AND DENOMINATORS

#	INDICATOR	NUMERATOR	DENOMINATOR
1	Under-five mortality rate	Probability of dying by exact age 5 years	
2	Infant mortality rate	Probability of dying by exact age 1 year	
3	Skilled attendant at delivery	Number of women aged 15-49 years with a birth in the 2 years preceding the survey that were attended during childbirth by skilled health personnel	Total number of women surveyed aged 15-49 years with a birth in the 2 years preceding the survey
4	Institutional deliveries	Number of women aged 15-49 years with a birth in the 2 years preceding the survey that delivered in a health facility	Total number of women surveyed aged 15-49 years with a birth in 2 years preceding the survey
5	Underweight prevalence	Number of children under age five that fall below minus two standard deviations from the median weight for age of the NCHS/ WHO standard (moderate and severe); number that fall below minus three standard deviations (severe)	Total number of children under age five that were weighed
6	Stunting prevalence	Number of children under age five that fall below minus two standard deviations from the median height for age of the NCHS/WHO standard (moderate and severe); number that fall below minus three standard deviations (severe)	Total number of children under age five measured
7	Wasting prevalence	Number of children under age five that fall below minus two standard deviations from the median weight for height of the NCHS/ WHO standard (moderate and severe); number that fall below minus three standard deviations (severe)	Total number of children under age five weighed and measured
8	Low-birth weight infants	Number of last live births in the 2 years preceding the survey weighing below 2,500 grams	Total number of last live births in the 2 years preceding the survey
9	Infants weighed at birth	Number of last live births in the 2 years preceding the survey that were weighed at birth	Total number of last live births in the 2 years preceding the survey
10	Use of improved drinking water sources	Number of household members living in households using improved sources of drinking water	Total number of household members in households surveyed
11	Use of improved sanitation facilities	Number of household members using improved sanitation facilities	Total number of household members in households surveyed
12	Water treatment	Number of household members using water that has been treated	Total number of household members in households surveyed
13	Disposal of child's faeces	Number of children under age three whose (last) stools were disposed of safely	Total number of children under age three surveyed
14	Exclusive breastfeeding rate	Number of infants aged 0-5 months that are exclusively breastfed	Total number of infants aged 0-5 months surveyed

#	INDICATOR	NUMERATOR	DENOMINATOR
15	Continued breastfeeding rate	Number of infants aged 12-15 months, and 20-23 months, that are currently breastfeeding	Total number of children aged 12-15 months and 20-23 months surveyed
16	Timely complementary feeding rate	Number of infants aged 6-9 months that are receiving breastmilk and complementary foods	Total number of infants aged 6-9 months surveyed
17	Frequency of complementary feeding	Number of infants aged 6-11 months that receive breastmilk and complementary food at least the minimum recommended number of times per day (two times per day for infants aged 6-8 months, three times per day for infants aged 9-11 months)	Total number of infants aged 6-11 months surveyed
18	Adequately fed infants	Number of infants aged 0-11 months that are appropriately fed: infants aged 0-5 months that are exclusively breastfed and infants aged 6-11 months that are breastfed and ate solid or semi-solid foods the appropriate number of times (see above) yesterday	Total number of infants aged 0-11 months surveyed
19	Antenatal care	Number of women aged 15-49 years that were attended at least once during pregnancy in the 2 years preceding the survey by skilled health personnel	Total number of women surveyed aged 15-49 years with a birth in the 2 years preceding the survey
20	Contraceptive prevalence	Number of women currently married or in union aged 15-49 years that are using (or whose partner is using) a contraceptive method (either modern or traditional)	Total number of women aged 15-49 years that are currently married or in union
21	Antibiotic treatment of suspected pneumonia	Number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks receiving antibiotics	Total number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks
22	Care-seeking for suspected pneumonia	Number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks that are taken to an appropriate health provider	Total number of children aged 0-59 months with suspected pneumonia in the previous 2 weeks
23	Solid fuels	Number of residents in households that use solid fuels (wood, charcoal, crop residues and dung) as the primary source of domestic energy to cook	Total number of residents in households surveyed
24	Tuberculosis immunisation coverage	Number of children aged 12-23 months receiving BCG vaccine before their first birthday	Total number of children aged 12-23 months surveyed
25	Polio immunisation coverage	Number of children aged 12-23 months receiving OPV3 vaccine before their first birthday	Total number of children aged 12-23 months surveyed
26	Immunisation coverage for diphtheria, pertussis and tetanus (DPT)	Number of children aged 12-23 months receiving DPT3 vaccine before their first birthday	Total number of children aged 12-23 months surveyed
27	Measles immunisation coverage	Number of children aged 12-23 months receiving measles vaccine before their first birthday	Total number of children aged 12-23 months surveyed
28	Hepatitis B immunisation coverage	Number of children aged 12-23 months immunised against hepatitis before their first birthday	Total number of children aged 12-23 months surveyed
29	Fully immunised children	Number of children aged 12-23 months receiving DPT1-3, OPV-1-3, BCG and measles vaccines before their first birthday	Total number of children aged 12-23 months surveyed
30	Neonatal tetanus protection	Number of mothers with live births in the previous year that were given at least two doses of tetanus toxoid (TT) vaccine within the appropriate interval prior to giving birth	Total number of women surveyed aged 15-49 years with a birth in the year preceding the survey

#	INDICATOR	NUMERATOR	DENOMINATOR
31	Use of oral rehydration therapy (ORT)	Number of children aged 0-59 months with diarrhoea in the previous 2 weeks that received oral rehydration salts and/or an appropriate household solution	Total number of children aged 0-59 months with diarrhoea in the previous 2 weeks
32	Home management of diarrhoea	Number of children aged 0-59 months with diarrhoea in the previous 2 weeks that received more fluids AND continued eating somewhat less, the same or more food	Total number of children aged 0-59 months with diarrhoea in the previous 2 weeks
33	Received ORT or increased fluids and continued feeding	Number of children aged 0-59 months with diarrhoea that received ORT (oral rehydration salts or an appropriate household solution) or received more fluids AND continued eating somewhat less, the same or more food	Total number of children aged 0-59 months with diarrhoea in the previous 2 weeks
34	Household availability of insecticide-treated nets (ITNs)	Number of households with at least one mosquito net, either permanently treated or treated within the previous year	Total number of households surveyed
35	Under-fives sleeping under insecticide-treated nets	Number of children aged 0-59 months that slept under an insecticide-treated mosquito net the previous night	Total number of children aged 0-59 months surveyed
36	Under-fives sleeping under mosquito nets	Number of children aged 0-59 months that slept under a mosquito net the previous night	Total number of children aged 0-59 months surveyed
37	Antimalarial treatment (under-fives)	Number of children aged 0-59 months reported to have had fever in the previous 2 weeks that were treated with an appropriate antimalarial within 24 hours of onset	Total number of children aged 0-59 months reported to have had fever in the previous 2 weeks
38	Intermittent preventive malaria treatment (pregnant women)	Number of women receiving appropriate intermittent medication to prevent malaria (defined as at least 2 doses of SP/Fansidar) during the last pregnancy, leading to a live birth within the 2 years preceding the survey	Total number of women that have had a live birth within the 2 years preceding the survey
39	Iodised salt consumption	Number of households with salt testing 15 parts per million or more of iodine/iodate	Total number of households surveyed
40	Vitamin A supplementation (under-fives)	Number of children aged 6-59 months receiving at least one high-dose vitamin A supplement in the previous 6 months	Total number of children aged 6-59 months surveyed
41	Vitamin A supplementation (post-partum mothers)	Number of women with a live birth in the 2 years preceding the survey that received a high-dose vitamin A supplement within 8 weeks after birth	Total number of women that had a live birth in the 2 years preceding the survey
42	Content of antenatal care	Number of women with a live birth in the 2 years preceding the survey that received antenatal care during the last pregnancy	Total number of women with a live birth in the 2 years preceding the survey
43	Timely initiation of breastfeeding	Number of women with a live birth in the 2 years preceding the survey that put the newborn infant to the breast within 1 hour of birth	Total number of women with a live birth in the 2 years preceding the survey
44	Net intake rate in primary education	Number of children of school-entry age that are currently attending first grade	Total number of children of primary-school entry age surveyed
45	Net primary school attendance rate	Number of children of primary-school age currently attending primary or secondary school	Total number of children of primary-school age surveyed
46	Net secondary school attendance rate	Number of children of secondary-school age currently attending secondary school or higher	Total number of children of secondary-school age surveyed
47	Children reaching grade 5/ grade 8	Proportion of children entering the first grade of primary school that eventually reach grade 5/ grade 8	
48	Transition rate to secondary school	Number of children that were in the last grade of primary school during the previous school year that attend secondary school	Total number of children that were in the last grade of primary school during the previous school year surveyed

#	INDICATOR	NUMERATOR	DENOMINATOR
49	Primary completion rate	Number of children (of any age) attending the last grade of primary school (excluding repeaters)	Total number of children of primary school completion age (age appropriate to final grade of primary school) surveyed
50	Adult literacy rate	Number of women aged 15-24 years that are able to read a short simple statement about everyday life	Total number of women aged 15-24 years surveyed
51	Gender parity index	Proportion of girls in primary and secondary education	Proportion of boys in primary and secondary education
52	Marriage before age 15 and age 18	Number of women that were first married or in union by the exact age of 15 and the exact age of 18, by age groups	Total number of women aged 15-49 years and 20-49 years surveyed, by age groups
53	Young women aged 15-19 years currently married or in union	Number of women aged 15-19 years currently married or in union	Total number of women aged 15-19 years surveyed
54	Spousal age difference	Number of women married/in union aged 15-19 years and 20-24 years with a difference in age of 10 or more years between them and their current spouse	Total number of women aged 15-19 and 20-24 years surveyed that are currently married or in union
55	Child labour	Number of children aged 5-14 years that are involved in child labour	Total number of children aged 5-14 years surveyed
56	Labourer students	Number of children aged 5-14 years involved in child labour activities that attend school	Total number of children aged 5-14 years involved in child labour activities
57	Student labourers	Number of children aged 5-14 years attending school that are involved in child labour activities	Total number of children aged 5-14 years attending school
58	Prevalence of orphans	Number of children under age 18 with at least one dead parent	Total number of children under age 18 surveyed
59	Prevalence of vulnerable children	Number of children under age 18 that have a chronically ill parent, that live in a household where an adult aged 18-59 years has died in the past year, or that live in a household where an adult aged 18-59 years has been chronically ill in the past year	Total number of children under age 18 surveyed
60	School attendance of orphans versus non-orphans	Proportion of double orphans (both mother and father dead) aged 10-14 years attending school	Proportion of children aged 10-14 years, both of whose parents are alive, that are living with at least one parent and are attending school
61	Children's living arrangements	Number of children aged 0-17 years not living with a biological parent	Total number of children aged 0-17 years surveyed
62	Malnutrition among children orphaned and made vulnerable by HIV and AIDS	Proportion of orphaned or vulnerable children under age five that are moderately or severely underweight, of all orphaned and vulnerable children under age five that are weighed	Proportion of children not classified as orphaned or vulnerable under age five that are moderately or severely underweight, of all children not classified as orphaned or vulnerable under age five that are weighed
63	Early sex among children orphaned and made vulnerable by HIV and AIDS	Proportion of orphaned and vulnerable children aged 15-17 years that had sex before age 15, of all orphaned and vulnerable children aged 15-17 years surveyed	Proportion of children not classified as orphaned or vulnerable aged 15-17 years that had sex before age 15, of all children not classified as orphaned or vulnerable aged 15-17 years surveyed
64	External support to children orphaned and made vulnerable by HIV and AIDS	Number of orphaned and vulnerable children under age 18 whose households received free basic external support in caring for the child	Number of orphaned and vulnerable children under age 18 surveyed
65	Comprehensive knowledge about HIV prevention among young people	Number of women aged 15-24 years that correctly identify two ways of avoiding HIV infection and reject three common misconceptions about HIV transmission	Total number of women aged 15-24 years surveyed

#	INDICATOR	NUMERATOR	DENOMINATOR
66	Condom use with non-regular partners	Number of women aged 15-24 years reporting the use of a condom during sexual intercourse with their last non-marital, non-cohabiting sex partner in the previous 12 months	Total number of women aged 15-24 years surveyed that had a non-marital, non-cohabiting partner in the previous 12 months
67	Age at first sex among young people	Number of women aged 15-24 years that have had sex before age 15	Total number of women aged 15-24 surveyed
68	Higher risk sex in the last year	Number of sexually active women aged 15-24 years that have had sex with a non-marital, non-cohabitating partner in the previous 12 months	Total number of women aged 15-24 that were sexually active in the previous 12 months
69	Attitude towards people with HIV and AIDS	Number of women expressing acceptance on all four questions about people with HIV or AIDS	Total number of women surveyed
70	Women who know where to be tested for HIV	Number of women that state knowledge of a place to be tested	Total number of women surveyed
71	Women who have been tested for HIV	Number of women that report being tested for HIV	Total number of women surveyed
72	Knowledge of mother-to-child transmission of HIV	Number of women that correctly identify all three means of vertical transmission	Total number of women surveyed
73	Counselling coverage for the prevention of mother-to-child transmission of HIV	Number of women that gave birth in the previous 24 months and received antenatal care reporting that they received counselling on HIV and AIDS during this care	Total number of women that gave birth in the previous 24 months surveyed
74	Testing coverage for the prevention of mother-to-child transmission of HIV	Number of women that gave birth in the previous 24 months and received antenatal care reporting that they received the results of an HIV test during this care	Total number of women that gave birth in the previous 24 months surveyed
75	Age-mixing among sexual partners	Number of women aged 15-24 years that had sex in the past 12 months with a partner who was 10 or more years older than they were	Total number of sexually active women aged 15-24 years surveyed
76	Source of supplies	Number of children (or households) for whom supplies were obtained from public providers, presented separately for each type of supply: insecticide-treated mosquito nets, oral rehydration salts, antibiotics and antimalarials	Total number of children (or households) for whom supplies were obtained
77	Cost of supplies	Median cost of supplies obtained, presented separately for each type of supply and whether sourced from public or private providers: insecticide-treated mosquito nets, oral rehydration salts, antibiotics and antimalarials	Total number of children (or households) for whom supplies were obtained
78	Unmet need for family planning	Number of women that are currently married or in union that are fecund and want to space their births or limit the number of children they have and that are not currently using contraception	Total number of women interviewed that are currently married or in union
79	Demand satisfied for family planning	Number of women currently married or in union that are currently using contraception	Number of women currently married or in union that have an unmet need for contraception or that are currently using contraception
80	Maternal mortality ratio	Number of female siblings of respondents who died during pregnancy, delivery or within two months of delivery by five- year age group of respondent	Number of years of sister-units of exposure of female siblings of respondents by five-year age group of respondent

#	INDICATOR	NUMERATOR	DENOMINATOR
81	Source Suppliers	Number of children (or households) for whom supplies were obtained from public providers, presented separately for each type of supply: insecticide-treated mosquito nets, oral rehydration salts, antibiotics and antimalarials	Total number of children (or households) for whom supplies were obtained
82	Cost of supplies	Median cost of supplies obtained, presented separately for each type of supply and whether sourced from public or private providers: insecticide-treated mosquito nets, oral rehydration salts, antibiotics and antimalarials	Total number of children (or households) for whom supplies were obtained
83	Unmet need for family planning	Number of women that are currently married or in union that are fecund and want to space their births or limit the number of children they have and that are not currently using contraception	Total number of women interviewed that are currently married or in union
84	Demand satisfied for family planning	Number of women currently married or in union that are currently using contraception	Number of women currently married or in union that have an unmet need for contraception or that are currently using contraception

F QUESTIONNAIRES

MICS

HOUSEHOLD FORM

Household (HH) Information Panel					HH
#	Question			Options	
HH0	District No.				
HH1	Cluster No.				
HH2	HH No.				
HH3	Enumerator Name & No.				
HH4	Supervisor Name & No.				
HH5	Day/Month/Year of Interview			/ /	
HH6	Urban/Rural (Urban=1, Rural=2)				
HH7	Name of the Head of the HH (To be filled-in after completing HL Module)				
HH8 to HH15C be filled-in after all questions for the HH have been completed					
HH8	Result of HH interview			Completed 1 Not at home 2 Refused 3 Other (specify) 6	
HH9	Respondent to HH Form: Name			Line No.:	
HH10	Total No. of HH members				
HH11	No. of women 15–49 for interview		HH12	No. of women 15–49 Forms completed	
HH13	No. of children < 5 for interview		HH14	No. of children < 5 Forms completed	
HH15	No. of men 15–49 for interview		HH16	Is this HH selected for the male interview?	Yes.....1 No.....2
HH17	No. of men 15–49 Forms completed		HH18	Data Entry Clerk Name & No.	

1) HH Listing Module

HL

First, please tell me the name of each person who usually lives here, starting with the head of the HH.
List the head of the HH in line 01. List all HH members (HL2), their relationship to the HH head (HL3), and their sex (HL4)
Then ask: Are there any others who live here, even if they are not at home now? (These may include children in school or at work). If yes, complete listing.
Then, ask questions starting with HL5 for each person at a time. Add a continuation sheet if there is not enough room on this page. Tick here if continuation sheet used ☐

					Eligible for :				If age 18–59	For children age 0-17 year ask HL9 to HL12A					
					Women Interview	Child Labor Module	Under-5 Interview	Men Interview							
HL1 Line No.	HL2 Name	HL3 What is the relation-ship of (Name) to the head of the HH?	HL4 Is (Name) male or female? 1 Male 2 Female	HL5 How old is (Name)? How old was (Name) on his/ her last birthday? Record in completed years 98=DK*	HL6 Circle Line No. if woman is age 15–49	HL7 For each child age 5–14 Who is the mother or primary caretaker of this child? Record Line No. of mother/ caretaker	HL8 For each child < 5 Who is the mother or primary caretaker of this child? Record Line No. of mother/ caretaker	HL8B Circle Line No. if man is age 15–49	HL8A Has (Name) been very sick for at least 3 months during the past 12 months?	HL9 Is (Name's) natural mother alive? 1 Yes 2 No ↘ HL11 8 DK ↘ HL11	HL10 If alive: Does (Name's) natural mother live in this HH? Record line no. of mother or 00 for 'No'	HL10A If mother does not live in HH: (for 00 in HL10) Has (Name's) mother been very sick for at least 3 months in the past 12 months	HL11 Is (Name's) natural father alive? 1 Yes 2 No ↘ next line 8 DK ↘ next line	HL12 If alive: Does (Name) s natural father live in this HH? Record line no. of father or 00 for 'No'	HL12A If father does not live in HH: (for 00 in HL12) Has (Name's) father been very sick for at least 3 months in the past 12 months
Line	Name	Relation	M	F	Age	15–49	Mother	Mother	15–49	Y N DK	Y N DK	Mother	Y N DK	Y N DK	Father	Y N DK
01		0 1	1	2		01			01	1 2 8	1 2 8		1 2 8	1 2 8		1 2 8
02			1	2		02			02	1 2 8	1 2 8		1 2 8	1 2 8		1 2 8
03			1	2		03			03	1 2 8	1 2 8		1 2 8	1 2 8		1 2 8
04			1	2		04			04	1 2 8	1 2 8		1 2 8	1 2 8		1 2 8
05			1	2		05			05	1 2 8	1 2 8		1 2 8	1 2 8		1 2 8
06			1	2		06			06	1 2 8	1 2 8		1 2 8	1 2 8		1 2 8
07			1	2		07			07	1 2 8	1 2 8		1 2 8	1 2 8		1 2 8

1) HH Listing Module — HL

First, please tell me the name of each person who usually lives here, starting with the head of the HH.
List the head of the HH in line 01. List all HH members (HL2), their relationship to the HH head (HL3), and their sex (HL4)
Then ask: Are there any others who live here, even if they are not at home now? (These may include children in school or at work). If yes, complete listing.
Then, ask questions starting with HL5 for each person at a time. Add a continuation sheet if there is not enough room on this page. Tick here if continuation sheet used ☐

					Eligible for :				If age 18–59	For children age 0-17 year ask HL9 to HL12A					
					Women Interview	Child Labor Module	Under-5 Interview	Men Interview							
HL1 Line No.	HL2 Name	HL3 What is the relation-ship of (Name) to the head of the HH?	HL4 Is (Name) male or female? 1 Male 2 Female	HL5 How old is (Name)? How old was (Name) on his/ her last birthday? Record in completed years 98=DK*	HL6 Circle Line No. if woman is age 15–49	HL7 For each child age 5–14 Who is the mother or primary caretaker of this child? Record Line No. of mother/ caretaker	HL8 For each child < 5 Who is the mother or primary caretaker of this child? Record Line No. of mother/ caretaker	HL8B Circle Line No. if man is age 15–49	HL8A Has (Name) been very sick for at least 3 months during the past 12 months?	HL9 Is (Name's) natural mother alive? 1 Yes 2 No ↘ HL11 8 DK ↘ HL11	HL10 If alive: Does (Name's) natural mother live in this HH? Record line no. of mother or 00 for 'No'	HL10A If mother does not live in HH: (for 00 in HL10) Has (Name's) mother been very sick for at least 3 months in the past 12 months	HL11 Is (Name's) natural father alive? 1 Yes 2 No ↘ next line 8 DK ↘ next line	HL12 If alive: Does (Name) s natural father live in this HH? Record line no. of father or 00 for 'No'	HL12A If father does not live in HH: (for 00 in HL12) Has (Name's) father been very sick for at least 3 months in the past 12 months
Line	Name	Relation	M	F	Age	15–49	Mother	Mother	15–49	Y N DK	Y N DK	Mother	Y N DK	Y N DK	Father	Y N DK
08		☐☐	1	2	☐☐	08	☐☐	☐☐	08	1 2 8	1 2 8	☐☐	1 2 8	1 2 8	☐☐	1 2 8

1) HH Listing Module…Contd.

HL

					Eligible for :				If age 18-59	For children age 0-17 year ask HL9 to HL12A					
					Women Interview	Child Labor Module	Under-5 Interview	Men Interview							
HL1 Line No.	HL2 Name	HL3 What is the relation-ship of (Name) to the head of the HH?	HL4 Is (Name) male or female? 1 Male 2 Female	HL5 How old is (Name)? How old was (Name) on his/ her last birthday? Record in completed years 98=DK*	HL6 Circle Line No. if woman is age 15–49	HL7 For each child age 5–14 Who is the mother or primary caretaker of this child? Record Line No. of mother/ caretaker	HL8 For each child under 5 Who is the mother or primary caretaker of this child? Record Line No. of mother/ caretaker	HL8B Circle Line No. if man is age 15–49	HL8A Has (Name) been very sick for at least 3 months during the past 12 months?	HL9 Is (Name's) natural mother alive? 1 Yes 2 No ↘ HL11 8 DK ↘ HL11	HL10 If alive: Does (Name's) natural mother live in this HH? Record line no. of mother or 00 for 'No'	HL10A If mother does not live in HH: (for 00 in HL10) Has (Name's) mother been very sick for at least 3 months in the past 12 months	HL11 Is (Name's) natural father alive? 1 Yes 2 No ↘ next line 8 DK ↘ next line	HL12 If alive: Does (Name) s natural father live in this HH? Record line no. of father or 00 for 'No'	HL12A If father does not live in HH: (for 00 in HL12) Has (Name's) father been very sick for at least 3 months in the past 12 months
Line	Name	Relation	M	F	Age	15–49	Mother	Mother	15–49	Y N DK	Y N DK	Mother	Y N DK	Y N DK	Father	Y N DK
09			1	2		10			10	1 2 8	1 2 8		1 2 8	1 2 8		1 2 8
10			1	2		11			11	1 2 8	1 2 8		1 2 8	1 2 8		1 2 8
11			1	2		12			12	1 2 8	1 2 8		1 2 8	1 2 8		1 2 8

Are there any other persons living here - even if they are not members of your family or do not have parents living in this HH? Including children at school or work? It yes, insert child's name and complete the form. Fill in the totals below:

* : See instructions: To be used for only for elderly HH members (code meaning "do not know/over age 50")

	Women 15–49	Children 5–14	Children Under 5	Men 15–49	Very sick (=1)	Mother Dead (=2)		Mother very sick (=1)	Father Dead (=2)		Father very sick (=1)
TOTALS											

Codes for HL3 : Relationship to the Head of HH:

01 - Head
02 - Wife or Husband
03 - Son or Daughter
04 - Son-in-law or Daughter-in-law
05 - Grand child
06 - Parent
07 - Parent-in-law
08 - Brother or Sister
09 - Brother-in-law or Sister-in-law
10 - Uncle/Aunt
11 - Niece/Nephew by blood
12 - Niece/Nephew by marriage
13 - Other relative
14 - Adopted/Foster/Step child
15 - Not related
98 - Don't know

2) Education Module

ED

For HH members age 5 and above										For HH members age 5–24 years						
ED1 Line No.	ED1A Name	ED1B How old is (Name)? How old was (Name) on his/her last birthday? Record in completed years 98=DK*	ED2 Has (Name) ever attended school or pre-school? 1 Yes⇨ED3 2 No⇨ Next Line		ED3 What is the highest level of school (Name) attended? What is the highest class (Name) completed at this level? Level: 0 Pre-school 1 Primary 2 Secondary 3 Higher 6 Non standard Curriculum 8 DK Class: 98 DK If < 1 grade, enter 00		ED4 During 2006 school year, did (Name) attend school or pre-school any time? 1 Yes 2 No ⇨ED7		ED5 Since last (day of the week), how many days did (Name) attend school? Insert no. of days	ED6 During this school year 2006, which level and class is (Name) attending? Level: 0 Pre-school 1 Primary 2 Secondary 3 Higher 6 Non-standard Curriculum 8 DK Class: 98 DK		ED7 Did (Name) attend school or preschool at any time during the previous school year 2005? 1 Yes 2 No ⇨Next Line 8 DK ⇨Next Line			ED8 During that previous school year 2005, which level and class did (Name) attend? Level: 0 Pre-school 1 Primary 2 Secondary 3 Higher 6 Non standard Curriculum 8 DK Class: 98 DK	
Line	Name	Age	Y	N	Level	Class	Y	N	Days	Level	Class	Y	N	DK	Level	Class
			1	2⇨NL	0 1 2 3 6 8		1	2		0 1 2 3 6 8		1	2	8	0 1 2 3 6 8	
			1	2⇨NL	0 1 2 3 6 8		1	2		0 1 2 3 6 8		1	2	8	0 1 2 3 6 8	
			1	2⇨NL	0 1 2 3 6 8		1	2		0 1 2 3 6 8		1	2	8	0 1 2 3 6 8	
			1	2⇨NL	0 1 2 3 6 8		1	2		0 1 2 3 6 8		1	2	8	0 1 2 3 6 8	
			1	2⇨NL	0 1 2 3 6 8		1	2		0 1 2 3 6 8		1	2	8	0 1 2 3 6 8	
			1	2⇨NL	0 1 2 3 6 8		1	2		0 1 2 3 6 8		1	2	8	0 1 2 3 6 8	
			1	2⇨NL	0 1 2 3 6 8		1	2		0 1 2 3 6 8		1	2	8	0 1 2 3 6 8	
			1	2⇨NL	0 1 2 3 6 8		1	2		0 1 2 3 6 8		1	2	8	0 1 2 3 6 8	
			1	2⇨NL	0 1 2 3 6 8		1	2		0 1 2 3 6 8		1	2	8	0 1 2 3 6 8	
			1	2⇨NL	0 1 2 3 6 8		1	2		0 1 2 3 6 8		1	2	8	0 1 2 3 6 8	

3) Water & Sanitation Module — WS

#	Question	Options	Skip
WS1	What is the main source of drinking water for members of your HH?	Piped water Piped into dwelling....11 Piped into yard or plot....12 Public tap/standpipe....13 Tubewell/borehole with hand-pump....21 Tubewell/borehole with powered pump ...22 Dug well Protected well....31 Unprotected well....32 Water from spring Protected spring....41 Unprotected spring....42 Rainwater collection....51 Tanker-truck....61 Cart with small tank/drum....71 Surface water (river, stream, dam, lake, pond, canal, irrigation channel)....81 Bottled water....91 Other (*specify*) ____ 96	11⇨WS4A 12⇨WS4A ⇨WS3 91⇨WS2 96⇨WS3
WS2	What is the main source of water used by your HH for other purposes such as cooking & hand washing?	Piped water Piped into dwelling....11 Piped into yard or plot....12 Public tap/standpipe....13 Tubewell/borehole with hand-pump....21 Tubewell/borehole with powered pump ...22 Dug well Protected well....31 Unprotected well32 Water from spring Protected spring....41 Unprotected spring....42 Rainwater collection....51 Tanker-truck....61 Cart with small tank/drum....71 Surface water (river, stream, dam, lake, pond, canal, irrigation channel)....81 Other (*specify*) ____ 96	11⇨WS5 12⇨WS5
WS3	How long does it take to go there, get water and come back?	No. of minute.... ☐☐☐ Water on premises ....995 DK 998	 995⇨WS4A
WS4	Who usually goes to this source to fetch the water for your HH? Probe: Is this person under age 15? What sex?	Adult woman....1 Adult man ....2 Female child (under 15)....3 Male child (under 15)....4 DK 8	
WS4A	How do you store the water in the HH?	Jerry can/Narrow neck container with lid....1 Jerry can/Narrow neck container without lid....2 Open container with lid....3 Open container without lid....4 Others (*specify*) ____ 6	
WS5	Do you treat your water in any way to make it safer to drink?	Yes ....1 No ....2 DK 8	 2⇨WS7 8⇨WS7

3) Water & Sanitation Module			WS
#	Question	Options	Skip
WS6	What do you usually do to the water to make it safer to drink? Anything else? (Record all items mentioned)	Boil....A Add bleach/chlorine....B Strain it through a cloth....C Use water filter (ceramic, sand, composite, etc.)....D Solar disinfection....E Let it stand and settle....F Other (*specify*) ____ X DK....Z	
WS7	What kind of toilet facility do members of your HH usually use? If "flush" or "pour flush": probe where does it flush to? **Ask for permission & observe the facility.**	<u>Flush / pour flush</u> Flush to piped sewer system....11 Flush to septic tank....12 Flush to pit (latrine)....13 Flush to somewhere else....14 Flush to unknown place/not sure/DK where to flush....15 <u>Pit latrine</u> Ventilated Improved Pit latrine (VIP)....21 Pit latrine with slab....22 Pit latrine without slab/open pit....23 Pit latrine with slab & cover....24 Pit latrine with slab & foot rest....25 Pit latrine with slab, cover & foot rest....26 Composting toilet....31 Bucket....41 Hanging toilet/hanging latrine....51 No facilities or bush or field....95 Other (*specify*) ____ 96	95⇨ WS11
WS8	Do you share this facility with other HHs?	Yes....1 No....2	2⇨ WS10
WS9	How many HHs in total use this toilet facility?	No. of HHs (if less than 10) ____ Ten or more HHs....10 DK....98	
WS10	Do you have a hand-washing facility outside the toilet? **Ask for permission & observe the facility.**	Seen the facility filled with water....1 Seen the facility but no water....2 Not seen....3 No facility....4	
WS11	Does your HH have soap (or washing powder/ liquid) at present?	Yes....1 No....2	2 ⇨ NM
WS12	Can I see it? **Ask them to show you**	Seen....1 Not seen....2	

4) HH Characteristics Module			HC
#	Question	Options	Skip
HC1A	What is the religion of the Head of this HH?	Catholic.....01 CCAP.....02 Anglican.....03 Seventh Day Advent/Baptist.....04 Other Christian.....05 Muslim.....06 Hindu.....07 No Religion.....08 Others (*Specify*)_____ 96	
HC1B	What is your (HH) tribe or ethnic group?	Chewa.....01 Tumbuka.....02 Lomwe.....03 Tonga.....04 Yao.....05 Sena.....06 Nkonde.....07 Ngoni.....08 Others (*Specify*)_____ 96	
HC2	How many rooms in this HH are used for sleeping?	No. of rooms..... ☐☐	
HC3	Main material of the dwelling floor: **Record observation**	<u>Natural floor</u> Earth/sand.....11 Dung.....12 <u>Rudimentary floor</u> Wood planks.....21 Palm/bamboo.....22 <u>Finished floor</u> Parquet or polished wood.....31 Vinyl or asphalt strips.....32 Ceramic tiles.....33 Cement.....34 Carpet.....35 Other (*specify*)_____ 96	
HC4	Main material of the roof: **Record observation**	<u>Natural roofing</u> No Roof.....11 Thatch/palm leaf.....12 Sod.....13 <u>Rudimentary Roofing</u> Rustic mat.....21 Palm/bamboo.....22 Wood planks.....23 <u>Finished roofing</u> Metal.....31 Wood.....32 Calamine/cement fiber.....33 Ceramic tiles.....34 Cement.....35 Roofing shingles.....36 Other (*specify*)_____ 96	

4) HH Characteristics Module — HC

#	Question	Options	Skip
HC5	Main material of the walls: Record observation	Natural walls No walls ....11 Cane/palm/trunks ....12 Dirt....13 Rudimentary walls Bamboo with mud....21 Stone with mud ....22 Uncovered adobe....23 Plywood....24 Carton....25 Reused wood....26 Finished walls Cement ....31 Stone with lime/cement....32 Bricks....33 Cement blocks....34 Covered adobe....35 Wood planks/shingles ....36 Other (*specify*) ____ 96	
HC6	What type of fuel does your HH mainly use for cooking?	Electricity....01 Liquid Propane Gas (LPG)....02 Natural gas....03 Biogas ....04 Kerosene ....05 Coal / Lignite ....06 Charcoal ....07 Wood....08 Straw/shrubs/grass ....09 Animal dung ....10 Agricultural crop residue....11 Other (*specify*) ____ 96	01⇨HC8 02⇨HC8 03⇨HC8 04⇨HC8
HC7	In this HH, is food cooked on an open fire, an open stove or a closed stove? Probe for type	Open fire ....1 Open stove ....2 Closed stove....3 Other (*specify*) ____ 6	3⇨HC8 6⇨HC8
HC7A	Does the fire/stove have a chimney or a hood?	Yes ....1 No 2	
HC8	Is the cooking usually done in the house, in a separate building or outdoors?	In the house ....1 In a separate building....2 Outdoors ....3 Other (*specify*) ____ 6	
HC9	Does your HH have: Electricity? Radio? Television? Mobile Telephone? Telephone (Landline)? Refrigerator? Computer? An Internet Connection?	Yes / No Electricity....1 2 Radio ....1 2 Television....1 2 Mobile Telephone ....1 2 Telephone (Landline) ....1 2 Refrigerator....1 2 Computer ....1 2 Internet Connection....1 2	2⇨HC10
HC10	Does any member of your HH own: A. Watch? B. Bicycle? C. Motorcycle or Scooter? D. An animal-drawn Cart? E. A Car or Truck? F. A Boat with a Motor?	Yes / No Watch....1 2 Bicycle ....1 2 Motorcycle/Scooter ....1 2 Animal drawn-cart....1 2 Car/Truck ....1 2 Boat with motor....1 2	
HC11	Does any member of this household own any land that can be used for agriculture?	Yes ....1 No 2	2⇨HC13

4) HH Characteristics Module			HC
#	Question	Options	Skip
HC12	How many hectares of agricultural land do members of this household own? If more than 97, record '97'. If unknown, record '98'.	Acres..... 1 ☐☐.☐ (Or) Hectares ..... 2 ☐☐.☐	
HC13	Does this HH own any livestock, herds, or farm animals?	Yes .....1 No 2	2⇨NM
HC14	How many of the following animals does this HH have? Cattle? Horses, donkeys, or mules? Goats? Sheep? Pigs? Chickens? If none, record '00'. If more than 97, record '97'. If unknown, record '98'.	Cattle..... ☐☐ Horses, donkeys, or mules ..... ☐☐ Goats..... ☐☐ Sheep..... ☐☐ Pigs..... ☐☐ Chickens..... ☐☐	

5) ITN Module			TN
#	Question	Options	Skip
TN1	Does your HH have any mosquito net that can be used while sleeping?	Yes .....1 No 2	2⇨NM
TN2	How many mosquito nets does your HH have? If 7 or more nets, record '7'.	Number of nets.....	
TN2A	Where did you get the mosquito net? If there is more than one net in the HH, ask question referring to the most recently obtained net.	<u>Public sector</u> Govt. hospital.....11 Govt. health centre.....12 Govt. health post.....13 Village health worker(HSA) .....14 Mobile/outreach clinic .....15 Other public (*specify*) 16 Village Health Committee.....17 <u>Private medical sector</u> Private hospital/clinic .....21 Private physician .....22 Private pharmacy .....23 Mobile clinic .....24 Other private medical (*specify*) 26 <u>Other source</u> Relative or friend .....31 Shop .....32 Traditional practitioner .....33 Other (*specify*) 96 DK 98	
TN5	When you got the (most recent) net, was it already treated with an insecticide to kill or repel mosquitoes?	Yes .....1 No .....2 DK/Not sure.....8	
TN6	How many months ago was the (most recent) net obtained? If less than 1 month ago, record '00'. If answer is "12 months" or "1 year", probe to determine if net was obtained exactly 12 months ago or earlier or later.	Months ago ..... More than 24 months ago.....95 Not sure 98	
TN7	Since you got the net(s) has it (have any of these nets) ever been soaked or dipped in a liquid to kill/repel mosquitoes?	Yes .....1 No .....2 DK 8	2⇨NM 8⇨NM
TN8	How long ago was the most recent soaking/dipping done? If less than 1 month, record '00'. If answer is "12 months" or "1 year", probe to determine if net was treated exactly 12 months ago or earlier or later.	Months ago ..... More than 24 months ago.....95 Not sure 98	

6) Orphan-hood Module — OV

#	Question	Options	Skip
OV1	Check HL5: Any children 0–17? ☐ Yes ⇨ Continue to OV2 ☐ No ⇨ Next Module		
OV2	I would like you to think back over the past 12 months. Has any usual member of your HH died in the last 12 months?	Yes .....1 No 2	2⇨OV5
OV3	(Of those who died in the past 12 months) were any of these people between the ages of 18 and 59 Yrs.?	Yes .....1 No 2	2⇨OV5
OV4	(Of those who died in the past 12 months and were between the ages of 18 and 59 Yrs.) were any of these people seriously ill for 3 of the 12 months before he/she died?	Yes .....1 No 2	1⇨OV8
OV5	Return to the HH Listing and check the following ☐ Check totals for HL9 and HL11 ☐ At least one mother or father dead ⇨ OV8 ☐ No mother or father dead ☐ Check totals for HL8A ☐ At least one adult aged 18–59 very sick 3 of last 12 months ⇨ OV8 ☐ No adult aged 18–59 very sick 3 of last 12 months ☐ Check totals for HL10A and HL12A ☐ At least one mother or father ill 3 of last 12 months ⇨ OV8 ☐ No mother or father ill 3 of last 12 months ⇨ Go to Next Module		
OV8	List all children aged 0-17 Yrs. below. Record names, line numbers and ages of all children, beginning with the first child and continue in order in which listed in the HH Listing Module. Use a continuation sheet if there are more than 4 children age 0–17 in the HH. Ask all questions for one child before moving to the next child.		

	1st child	2nd child	3rd child	4th child
Name (from HL2)				
Line number (from HL1)				
Age (from HL5)				

OV9	I would like to ask you about any formal, organized help or support that your HH may have received for (Name) and for which you did not have to pay. By formal organized support I mean help provided by someone working for a program. This program could be government, private, religious, charity, or community-based. Remember this should be support for which you did not pay.				
OV10	Now I would like to ask you about the support your HH received for (Name). In the last 12 months, has your HH received any medical support for (Name), such as medical care, supplies or medicine?	Yes .....1 No .....2 DK 8	Yes .....1 No .....2 DK 8	Yes .....1 No .....2 DK 8	Yes .....1 No .....2 DK 8
OV11	In the last 12 months, has your HH received any emotional or psychological support for (Name), such as companionship, counseling from a trained counselor, or spiritual support, which you received at home?	Yes .....1 No .....2 2⇨OV13 DK 8	Yes .....1 No .....2 2⇨OV13 DK 8	Yes .....1 No .....2 2⇨OV13 DK 8	Yes .....1 No .....2 2⇨OV13 DK 8
OV12	Did your HH receive any of this support in the past 3 months?	Yes .....1 No .....2 DK 8	Yes .....1 No .....2 DK 8	Yes .....1 No .....2 DK 8	Yes .....1 No .....2 DK 8
OV13	In the last 12 months, has your HH received any material support for (Name), such as clothing, food or financial support?	Yes .....1 No .....2 2⇨OV15 DK 8	Yes .....1 No .....2 2⇨OV15 DK 8	Yes .....1 No .....2 2⇨OV15 DK 8	Yes .....1 No .....2 2⇨OV15 DK 8
OV14	Did your HH receive any of this support in the past 3 months?	Yes .....1 No .....2 DK 8	Yes .....1 No .....2 DK 8	Yes .....1 No .....2 DK 8	Yes .....1 No .....2 DK 8

6) Orphan-hood Module					OV
OV15	In the last 12 months, has your HH received any social support for (Name), such as help in HH work, training for a caregiver, or legal services?	Yes .....1 No .....2 2⇨OV17 DK 8	Yes .....1 No .....2 2⇨OV17 DK 8	Yes .....1 No .....2 2⇨OV17 DK 8	Yes .....1 No .....2 2⇨OV17 DK 8
OV16	Did your HH receive any of this support in the past 3 months?	Yes .....1 No .....2 DK 8	Yes .....1 No .....2 DK 8	Yes .....1 No .....2 DK 8	Yes .....1 No .....2 DK 8
OV17	Check OV8: Age of the child 5–17 Yr?	Yes ⇨ OV18 No ⇨ OV19	Yes ⇨ OV18 No ⇨ OV19	Yes ⇨ OV18 No ⇨ OV19	Yes ⇨ OV18 No ⇨ OV19
OV18	In the last 12 months, has your HH received any support for (name's) schooling, such as allowance, free admission, books or supplies?	Yes .....1 No .....2 DK 8	Yes .....1 No .....2 DK 8	Yes .....1 No .....2 DK 8	Yes .....1 No .....2 DK 8
OV19	Check HL3: Is code 15?	Yes ⇨ OV20 No ⇨ Next Child	Yes ⇨ OV20 No ⇨ Next Child	Yes ⇨ OV20 No ⇨ Next Child	Yes ⇨ OV20 No ⇨ Next Child
OV20	Length of stay of the child in this HH (Record in months)	☐☐☐	☐☐☐	☐☐☐	☐☐☐
OV20A	No. of previous homes/institutes where the child stayed before coming to this HH (Exclude his/her parents' home)	☐ DK 8	☐ DK 8	☐ DK 8	☐ DK 8

7) Child Labour Module CL

To be administered to mother/caretaker of each child in the HH age 5 through 14 years. For HH members below age 5 or above age 14, leave rows blank. Now I would like to ask about any work children in this HH may do.

CL1 Line no.	CL2 Name	CL3 During the past week, did (Name) do any kind of work for someone who is not a member of this HH? If Yes: For pay in cash or kind? 1 Yes, for pay (cash or kind) 2 Yes, unpaid 3 No ⇨ CL5			CL4 If Yes: Since last (day of the week), about how many hours did he/she do this work for someone who is not a member of this HH? If more than one job, include all hours at all jobs. Record resporesponse then ⇨ CL6	CL5 At any time during the past year, did (Name) do any kind of work for someone who is not a member of this HH? If Yes: For pay in cash or kind? 1 Yes, for pay (cash or kind) 2 Yes, unpaid 3 No			CL6 During the past week, did (Name) help with HH chores such as shopping, collecting firewood, cleaning, fetching water or caring for children? 1 Yes 2 No ⇨ CL8		CL7 If Yes: Since last (day of the week), about how many hours did he/she spend doing these chores?	CL8 During the past week, did (Name) do any other family work (on the farm or in a business or selling goods in the street?) 1 Yes 2 No ⇨Next Line		CL9 If Yes: Since last (day of the week), about how many hours did he/she do this work?
Line No.	Name	Yes		No	No. of hours	Yes		No	Yes	No	No. of hours	Yes	No	No. of hours
		Paid	Un paid			Paid	Un paid							
		1	2	3		1	2	3	1	2		1	2	
		1	2	3		1	2	3	1	2		1	2	
		1	2	3		1	2	3	1	2		1	2	
		1	2	3		1	2	3	1	2		1	2	
		1	2	3		1	2	3	1	2		1	2	
		1	2	3		1	2	3	1	2		1	2	
		1	2	3		1	2	3	1	2		1	2	
		1	2	3		1	2	3	1	2		1	2	

8) Salt Iodisation Module — SI

#	Question	Options	Skip
SI1A	Did you hear about iodised salt?	Yes .....1 No 2	2⇨SI1
SI1B	Where did you hear about iodised salt? A. On the radio? B. On the television? C. News paper? D. On a poster? E. On salt packet itself? F. On clothing (ie., Cap, Chitenji, T-Shirt)? G. In a drama H. Somewhere else? (Specify)	Yes No Radio .....1 .....2 Television.....1 .....2 News paper.....1 .....2 Poster .....1 .....2 Salt packet itself.....1 . 2 Clothing.....1 .....2 Drama.....1 .....2 Others (*Specify*) _____ 1 2	
SI1C	Where do you store the salt at home?	Container with lid .....1 Container without lid .....2 Same packet in which salt was bought.....3 Lying on a surface (open) .....4 Lying on a surface (covered) .....5 Other (*Specify*) _____ 6	
SI1	We would like to check whether the salt used in your HH is iodised. May I see a sample of the salt used to cook the main meal eaten by members of your HH last night? **Once you have examined the salt, circle number that corresponds to test outcome.**	Not iodised .....1 Less than 15 ppm.....2 15 ppm and more.....3 No salt at home .....6 Salt not tested.....7	2⇨ SI2 3⇨ SI2 6⇨ SI2 7⇨ SI2
SI4	Check SI1A and SI1: ☐ If 1 in both SI1A and SI1 ⇨ Continue to SI5 ☐ Otherwise ⇨ SI2		
SI5	Test showed that this salt is not iodised. What is the main reason for not using the iodised salt by your HH?	Too expensive .....1 Not available in the market .....2 Doesn't taste good.....3 Not considered necessary.....4 Did not know that salt is not iodised.....5 Others _____ 6	
SI2	Does any eligible woman age 15-49 reside in the HH? Check HL6 of HH Listing Module. You should have a Form with the Woman Information Panel filled in for each eligible woman. ☐ Yes ⇨ Go to WOMAN 15–49 FORM to administer the questions to the first eligible woman. ☐ No ⇨ Continue to SI3.		
SI3	Does any child under the age of 5 reside in the HH? Check HL8 of HH Listing Module. You should have a Form with the Under-Five Information Panel filled in for each eligible child. ☐ Yes ⇨ Go to CHILD < 5 FORM to administer the Form to mother or caretaker of the first eligible child. ☐ No ⇨ End the interview by thanking the respondent for his/her cooperation. Gather together all Forms for this household and tally the number of interviews completed on the cover page.		

Under-Five Child Information Panel		UF
This Form is to be administered to all mothers or caretakers (See Column HL8 of HH Listing Module) who care for a child that lives with them and is under the age of 5 years (See Column HL5 of HH Listing Module). Use a separate Form for each eligible child.		
UF0	District No.	☐☐
UF1	Cluster No.	☐☐☐
UF2	HH No.	☐☐
UF3	Child Name	
UF4	Child Line No.	☐☐
UF5	Mother/Caretaker Name	
UF6	Mother/Caretaker Line No.	☐☐
UF7	Enumerator Name & No.	☐☐☐
UF8	Day/Month/Year of interview	☐☐/☐☐/☐☐☐☐
UF9	Result of interview for children under 5 (Codes refer to mother/caretaker)	Completed ..... 1 Not at home ..... 2 Refused ..... 3 Partly completed ..... 4 Incapacitated ..... 5 Other (Specify) 6
UF10	Now I would like to ask you some questions about the health of each child under the age of 5 in your care, who lives with you now. Now I want to ask you about (Name). In what month and year was (Name) born? Probe: What is his/her birthday? If the mother/caretaker knows the exact birth date, also enter the day; otherwise, circle 98 for day.	Date of birth: Day ..... ☐☐ DK day ..... 98 Month ..... ☐☐ Year ..... ☐☐☐☐
UF11	How old was (Name) at his/her last birthday? Record age in completed years.	Age in completed years ..... ☐

9) Vitamin A Module — VA

#	Question	Options	Skip
VA1	Has (Name) ever received a Vitamin A capsule (supplement) like this one? Show capsule or dispenser for different doses: 100,000 IU for those 6–11 months old (Blue) 200,000 IU for those 12–59 months old (Red)	Yes ..... 1 No ..... 2 DK 8	 2⇨NM 8⇨NM
VA2	How many months ago did (Name) take the last dose?	Months ..... ☐☐ DK 98	
VA3	Where did (Name) get this last dose?	On routine visit to health facility ..... 1 Sick child visit to health facility ..... 2 National Immunisation/Vit. A Campaign ..... 3 Other (Specify) ..... 6 DK 8	

10) Breastfeeding Module — BF

#	Question	Options	Skip
BF1	Has (Name) ever been breastfed?	Yes .....1 No .....2 DK 8	2⇨ BF3 8⇨ BF3
BF2	Is he/she still being breastfed?	Yes .....1 No .....2 DK 8	
BF3	Since this time yesterday, did he/she receive any of the following: Read each item aloud and record response before proceeding to the next item.		

	Item	Yes	No	DK	
BF3A	Vitamin, mineral supplements or medicine?	1	2	8	
BF3B	Plain water?	1	2	8	
BF3C	Sweetened, flavoured water or fruit juice or tea or infusion?	1	2	8	
BF3D	Oral rehydration solution (ORS)?	1	2	8	
BF3E	Infant formula?	1	2	8	
BF3F	Tinned, powdered or fresh milk?	1	2	8	
BF3G	Any other liquids?	1	2	8	
BF3H	Solid or semi-solid (mushy) food?	1	2	8	

BF4	Check BF3H. Child received solid or semi-solid (mushy) food? ☐ Yes ⇨ Continue to BF5 ☐ No or DK ⇨ Next Module		
BF5	Since this time yesterday, how many times did (Name) eat solid, semisolid or soft foods other than liquids? If 7 or more times, record 7	No. of times ..... ☐☐ DK 8	

11) Care of Illness Module — CA

#	Question	Options	Skip
CA1	Has (Name) had diarrhoea in the last two weeks, that is, since (day of the week) of the week before last? Diarrhoea is determined as perceived by mother or caretaker, or as three or more loose or watery stools per day, or blood in stool.	Yes ..... 1 No ..... 2 DK 8	2⇨CA5 8⇨CA5
CA2	During this last episode of diarrhoea, did (Name) drink any of the following: Read each item aloud and record response before proceeding to the next item.		

Item		Yes	No	DK	
CA2A	A fluid made from a special packet called Thanzi (local name for ORS packet solution)?	1	2	8	
CA2B	Government recommended homemade fluid:				
CA2C	Fresh Juice?	1	2	8	
CA2D	Tea?	1	2	8	
CA2E	Porridge?	1	2	8	
CA3	Fresh Thobwa?	1	2	8	

CA4	During (name's) illness, did he/she drink much less, about the same, or more than usual?	Much less or none ..... 1 About the same (or somewhat less) ..... 2 More ..... 3 DK 8	
CA5	During (name's) illness, did he/she eat less, about the same, or more food than usual? If "less", probe: much less or a little less?	None ..... 1 Much less ..... 2 Somewhat less ..... 3 About the same ..... 4 More ..... 5 DK 8	
CA6	Has (Name) had an illness with a cough at any time in the last two weeks, that is, since (day of the week) of the week before last?	Yes ..... 1 No ..... 2 DK 8	2⇨CA12 8⇨CA12
CA7	When (Name) had an illness with a cough, did he/she breathe faster than usual with short, quick breaths or have difficulty breathing?	Yes ..... 1 No ..... 2 DK 8	2⇨CA12 8⇨CA12
CA8	Were the symptoms due to a problem in the chest or a blocked nose?	Problem in chest ..... 1 Blocked nose ..... 2 Both ..... 3 Other (specify) ..... 6 DK 8	2⇨CA12 6⇨CA12
CA9	Did you seek advice or treatment for the illness outside the home?	Yes ..... 1 No ..... 2 DK 8	2⇨CA10 8⇨CA10
	From where did you seek care? Anywhere else? Circle all providers mentioned, but do NOT prompt with any suggestions. If source is hospital, health center, or clinic, write the name of the place below. Probe to identify the type of source and circle the appropriate code. (Name of place) _____	<u>Public sector</u> Govt. hospital ..... A Govt. health centre ..... B Govt. health post ..... C Village health worker ..... D Mobile/outreach clinic ..... E Other public (specify) ..... H <u>Private medical sector</u> Private hospital/clinic ..... I Private physician ..... J Private pharmacy ..... K Mobile clinic ..... L Other private medical (specify) ..... O <u>Other source</u> Relative or friend ..... P Shop ..... Q Traditional practitioner ..... R Other (specify) X	

11) Care of Illness Module			CA
CA10	Was (Name) given medicine to treat this illness?	Yes ..... 1 No ..... 2 DK 8	 2⇨CA12 8⇨CA12
CA11	What medicine was (Name) given? Circle all medicines given.	Antibiotic ..... A Paracetamol/Panadol/Acetaminophen ..... P Aspirin ..... Q Ibupropfen ..... R Other (*specify*) ..... X DK ..... Z	
CA12	Check UF11: Child age under 3? ☐ Yes ⇨ Continue to CA13 ☐ No ⇨ CA14		
CA13	The last time (Name) passed stools, what was done to dispose of the stools?	Child used toilet/latrine ..... 01 Put/rinsed into toilet or latrine ..... 02 Put/rinsed into drain or ditch ..... 03 Thrown into garbage (solid waste) ..... 04 Buried ..... 05 Left in the open ..... 06 Other (*specify*) _____ 96 DK 98	
CA14	Ask this question ONLY ONCE for each mother/ caretaker (even if she has more children). Sometimes children have severe illnesses and should be taken immediately to a health facility. What types of symptoms would cause you to take your child to a health facility right away? Keep asking for more signs or symptoms until the mother/caretaker cannot recall any additional symptoms. Circle all symptoms mentioned. DO NOT PROMPT WITH ANY SUGGESTIONS	Child not able to drink or breastfeed ..... A Child becomes sicker ..... B Child develops a fever ..... C Child has fast breathing ..... D Child has difficult breathing ..... E Child has blood in stool ..... F Child is drinking poorly ..... G Other (*specify*) _____ X Other (*specify*) _____ Y Other (*specify*) _____ Z	

12) Malaria for Under-Fives Module — ML

#	Question	Options	Skip
ML1	In the last two weeks, that is, since (day of the week) of the week before last, has (Name) been ill with a fever?	Yes ..... 1 No ..... 2 DK 8	 2⇨ML10 8⇨ML10
ML2	Was (Name) taken to a health facility during this illness?	Yes ..... 1 No ..... 2 DK 8	 2⇨ML6 8⇨ML6
ML3	Did (Name) take a medicine for fever or malaria that was provided or prescribed at the health facility?	Yes ..... 1 No ..... 2 DK 8	 2⇨ML5 8⇨ML5
ML4	What medicine did (Name) take that was provided or prescribed at the health facility? Circle all medicines mentioned.	Anti-malarials: SP/Fansidar ..... A Chloroquine ..... B Amodiaquine ..... C Quinine ..... D Artemisinin-based combinations ..... E Other anti-malarial (*specify*) _____ H Other medications: Paracetamol/Panadol/Acetaminophen ..... P Aspirin ..... Q Ibuprofen ..... R Other (*specify*) _____ X DK ..... Z	
ML5	Was (Name) given medicine for the fever or malaria before being taken to the health facility?	Yes ..... 1 No ..... 2 DK 8	1⇨ML7 2⇨ML8 8⇨ML8
ML6	Was (Name) given medicine for fever or malaria during this illness?	Yes ..... 1 No ..... 2 DK 8	 2⇨ML8 8⇨ML8
ML7	What medicine was (Name) given? Circle all medicines given. Ask to see the medication if type is not known. If type of medication is still not determined, show typical anti-malarials to respondent.	Anti-malarials: SP/Fansidar ..... A Chloroquine ..... B Amodiaquine ..... C Quinine ..... D Artemisinin-based combinations ..... E Other anti-malarial (*specify*) _____ H Other medications: Paracetamol/Panadol/Acetaminophen ..... P Aspirin ..... Q Ibuprofen ..... R Other (*specify*) _____ X DK ..... Z	
ML8	Check ML4 and ML7: Anti-malarial mentioned (Codes A-H)? ☐ Yes ⇨ Continue to ML9 ☐ No ⇨ ML10		
ML9	How long after the fever started did (Name) first take (name of anti-malarial from ML4 or ML7)? If multiple anti-malarials mentioned in ML4 or ML7, name all anti-malarial medicines mentioned. Record the code for the day on which the first anti-malarial was given.	Same day ..... 0 Next day ..... 1 2 days after the fever ..... 2 3 days after the fever ..... 3 4 or more days after the fever ..... 4 DK 8	
ML10	Did (Name) sleep under a mosquito net last night?	Yes ..... 1 No ..... 2 DK 8	 2⇨ NM 8⇨ NM

12) Malaria for Under-Fives Module			ML
ML11	How long ago did your household obtain the mosquito net? If less than 1 month, record '00'. If answer is "12 months" or "1 year", probe to determine if net was obtained exactly 12 months ago or earlier or later.	Months ago ☐☐ More than 24 months ago ..... 95 Not sure 98	
ML13	When you got that net, was it already treated with an insecticide to kill or repel mosquitoes?	Yes ..... 1 No ..... 2 DK/not sure 8	
ML14	Since you got the mosquito net, was it ever soaked or dipped in a liquid to kill/repel mosquitoes?	Yes ..... 1 No ..... 2 DK 8	2⇨ NM 8⇨ NM
ML15	How long ago was the net last soaked or dipped? If less than 1 month, record '00'. If answer is "12 months" or "1 year", probe to determine if net was treated exactly 12 months ago or earlier or later.	Months ago ☐☐ More than 24 months ago ..... 95 DK 98	

13) Immunisation Module — IM

#	Question	Options	Skip
	If an immunisation card is available, copy the dates in IM2-IM8B for each type of immunisation or vitamin A dose recorded on the card. IM9 is for recording vaccinations that are not recorded on the card. IM10-IM17 will only be asked when a card is not available.		
IM1	Is there a vaccination card for (Name)?	Yes, seen ..... 1 Yes, not seen ..... 2 No 3	 2⇨IM10 3⇨IM10
	(a) Copy dates for each vaccination from the card. (b) Write '44' in day column if card shows that vaccination was given but no date recorded.	Date of Immunisation Day | Month | Year	
IM2	BCG — BCG		
IM3A	Polio 0 — OPV 0		
IM3B	Polio 1 — OPV 1		
IM3C	Polio 2 — OPV 2		
IM3D	Polio 3 — OPV 3		
IM5A	DPT - HepB + Hib: 1 (Pentavalent 1) — DPT 1		
IM5B	DPT - HepB + Hib: 2 (Pentavalent 2) — DPT 2		
IM5C	DPT - HepB + Hib: 3 (Pentavalent 3) — DPT 3		
IM6	Measles (or MMR) — Measles		
IM8A	Vitamin A (1) — Vit A1		
IM8B	Vitamin A (2) — Vit A2		
IM9	In addition to the vaccinations and vitamin A capsules shown on this card, did (Name) receive any other vaccinations – including vaccinations received in campaigns or immunisation days? Record 'Yes' only if respondent mentions BCG, OPV 0-3, DPT 1-3, Measles or Vitamin A supplements.	Yes ..... 1 (Probe for vaccinations and write '66' in the corresponding day column on IM2 to IM8B.) No ..... 2 DK 8	1⇨IM19 2⇨IM19 8⇨IM19
IM10	Has (Name) ever received any vaccinations to prevent him/her from getting diseases, including vaccinations received in a campaign or immunisation day?	Yes ..... 1 No ..... 2 DK 8	2⇨IM19 8⇨IM19
IM11	Has (Name) ever been given a BCG vaccination against tuberculosis – that is, an injection in the arm or shoulder that caused a scar?	Yes ..... 1 No ..... 2 DK 8	
IM12	Has (Name) ever been given any "vaccination drops in the mouth" to protect him/her from getting diseases – that is, polio?	Yes ..... 1 No ..... 2 DK 8	2⇨IM15 8⇨IM15
IM13	How old was he/she when the first dose was given – just after birth (within two weeks) or later?	Just after birth (within two weeks) ..... 1 Later 2	
IM14	How many times has he/she been given these drops?	No. of times ..... ☐☐	
IM15	Has (Name) ever been given "DPT 1-3" – that is, an injection in the thigh or buttocks – to prevent him/her from getting tetanus, whooping cough, diphtheria, Hepatitis & influenza ?	Yes ..... 1 No ..... 2 DK 8	2⇨IM17 8⇨IM17
IM16	How many times?	No. of times ..... ☐☐	

13) Immunisation Module						IM
IM17	Has (Name) ever been given "Measles vaccination injections" or MMR – that is, a shot in the arm at the age of 9 months or older - to prevent him/her from getting measles?	Yes ..... 1 No ..... 2 DK 8				
IM19	Please tell me if (Name) has participated in any of the following campaigns, national immunisation days and/or vitamin A or child health days:		Yes	No	DK	
IM19A	Child Health Days (May 2005) - Vit. A campaign	Campaign A	1	2	8	
IM19B	Measles & Vitamin A Campaign (Sept. 2005)	Campaign B	1	2	8	
IM19C	Child Health Days (5–9 June 2006) - Vit. A & Deworming campaign	Campaign C	1	2	8	
IM19D	Has (Name) taken any drug for intestinal worms in the last 6 months?	Yes ..... 1 No ..... 2 DK 8				2⇨IM20 8⇨IM20
IM19E	Where did (Name) get this last dose?	On routine visit to health facility ..... 1 Sick child visit to health facility ..... 2 National Campaign ..... 3 Other (Specify) ..... 6 DK 8				
IM20	Does another eligible child reside in the HH for whom this respondent is mother/caretaker? Check HH listing, column HL8. ☐ Yes ⇨ End the current Form and go for another 'Child < 5 Form' to administer the Form for the next eligible child. ☐ No ⇨ End the interview with this respondent by thanking him/her cooperation. If this the last eligible child in the HH, go on to Anthropometry Module.					

14) Anthropometry Module — AN

#	Question	Options	Skip
	After Forms for all children are complete, the measurer weighs and measures each child. Record weight and length/height below, taking care to record the measurements on the correct Form for each child. Check the child's name and line number on the HH Listing Module before recording measurements.		
AN1	Child's Weight	Kilograms (Kg) ☐☐.☐	
AN2	Child's length or height. Check age of child in UF11:		
	☐ Child under 2 years old. ⇨ Measure length (lying down).	Length (cm) Lying down 1 ☐☐☐.☐	
	☐ Child age 2 or more years ⇨ Measure height (standing up).	Height (cm) Standing up 2 ☐☐☐.☐	
AN3	Measurer's identification code	Measurer Code ☐☐☐	
AN4	Result of Measurement	Measured .....1 Not present .....2 Refused .....3 Others (Specify) 6	
AN5	Is there another child in the HH who is eligible for measurement? ☐ Yes ⇨ Record measurements for next child. ☐ No ⇨ End the interview with this household by thanking all participants for their cooperation. Gather together all Forms for this HH and check that all identification numbers are inserted on each page. Tally on the Household Information Panel the number of interviews completed.		

Woman Information Panel — WM

This module is to be administered to all women age 15 through 49 (See Column HL6 of HH Listing Module). Fill in one form for each eligible woman.

WM0	District No.	☐☐
WM1	Cluster No.	☐☐☐
WM2	HH No.	☐☐
WM3	Woman Name	
WM4	Woman Line No.	☐☐
WM5	Enumerator Name & No.	☐☐☐
WM6	Day/Month/Year of interview	☐☐/☐☐/☐☐☐☐
WM7	Result of interview for woman	Completed ..... 1 Not at home ..... 2 Refused ..... 3 Partly completed ..... 4 Incapacitated ..... 5 Other (Specify) ☐ 6

#	Question	Options	Skip
WM8	In what month and year were you born?	Date of birth: Month ☐☐ DK Month ..... 98 Year ☐☐☐☐ DK Year 9998	
WM9	How old were you at your last birthday?	Age in completed years ☐☐	
WM10	Have you ever attended school?	Yes ..... 1 No 2	2⇨WM14
WM11	What is the highest level of school you attended: primary, secondary, or higher?	Primary ..... 1 Secondary ..... 2 Higher ..... 3 Non-standard curriculum 6	
WM12	What is the highest Class/Form you completed at that level?	Class/Form ☐☐	
WM13	Check WM11: ☐ Secondary or higher ⇨ Next Module. ☐ Primary or non-standard curriculum ⇨ Continue to WM14		
WM14	Now I would like you to read this sentence to me. Show sentences the following to respondent.	Cannot read at all ..... 1 Able to read only parts of sentence ..... 2 Able to read whole sentence ..... 3 No sentence in required language ..... 4 (specify language) _____ Blind/mute, visually/speech impaired 5	

CHICHEWA
1. Mwana akuwerenga bukhu.
2. Chaka chino mvula inabwera mochedwa.
3. Makolo ayenera kusamalira ana awo.

TUMBUKA
Mwana wakuberenga buku
Chaka chino vula yangwiza mwakuchedwa
Bapapi bakwenera kupwelera banabawo

ENGLISH
The child is reading a book.
The rains came late this year.
Parents must take for their children.

15) Child Mortality Module — CM

#	Question	Options	Skip
To be administered to all women age 15–49. All questions refer only to LIVE births.			
CM1	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	Yes ..... 1 No 2	2⇨CM7
CM3	Do you have any sons or daughters to whom you have given birth who are now living with you?	Yes ..... 1 No 2	2⇨CM5
CM4	How many sons live with you? How many daughters live with you?	Sons at home ..... ☐☐ Daughters at home ..... ☐☐	
CM5	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	Yes ..... 1 No 2	2⇨CM7
CM6	How many sons are alive but do not live with you? How many daughters are alive but do not live with you?	Sons elsewhere ..... ☐☐ Daughters elsewhere ..... ☐☐	
CM7	Have you ever given birth to a boy or girl who was born alive but later died? If "No" probe by asking: Any baby who ever breathed or cried or showed other signs of life but did not survive – even if he or she lived only a few minutes or hours?	Yes ..... 1 No 2	2⇨CM9
CM8	How many boys have died? How many girls have died?	Boys dead ..... ☐☐ Girls dead ..... ☐☐	
CM9	Sum answers to CM4, CM6, and CM8.	Sum ..... ☐☐	
CM10	Just to make sure that I have this right, you have had in total _____ births during you life. Is this correct? ☐ Yes ⇨ Continue to CM11. ☐ No ⇨ Check responses and make corrections before proceeding to CM11.		
CM11	Check CM9 ☐ One or more births ⇨ BH1 of Birth History Module. ☐ No births ⇨ BH13 of Birth History Module.		

16) Birth History Module — BH

Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had. Record names of all the births in BH1. Record twins and triplets on separate lines.

	BH1	BH2	BH3	BH4	BH5	BH6	BH7	BH8	BH9	BH10
#	What name was given to your (First/ next) baby?	Were any of these births twins?	Is (name) a boy or girl?	In what month and year was (Name) born? Probe: What is his/ her birthday?	Is (Name) still alive?	If Alive: How old was (Name) at his/her last birthday? (Record age in completed years)	If Alive: Is (Name) living with you?	If Alive: Record HH line number of child (Record '00' if child not listed in HH)	IF Dead: How old was (Name) when he/she died? How many months old was (Name)? Record days if less than 1 month; months if less than 2 years; or years	Were there any other live births between (Name of previous birth) and (Name)
01		Sing.....1 Mult 2	Boy.....1 Girl 2 Boy.....1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes .....1 No .....2 ⇨ BH9	☐☐	Yes .....1 No 2	☐☐ ⇨ next line	Days.....1 ☐☐ Months.....2 ☐☐ Year.....3 ☐☐	
02		Sing.....1 Mult 2	Boy.....1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes .....1 No .....2 ⇨ BH9	☐☐	Yes .....1 No 2	☐☐ ⇨BH 10	Days.....1 ☐☐ Months.....2 ☐☐ Year.....3 ☐☐	Yes .....1 No 2

16) Birth History Module — BH

Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had. Record names of all the births in BH1. Record twins and triplets on separate lines.

	BH1	BH2	BH3	BH4	BH5	BH6	BH7	BH8	BH9	BH10
03		Sing.....1 Mult 2	Boy.....1 Girl 2	Month ☐☐ Year ☐☐	Yes .....1 No .....2 ⇨ BH9	☐☐	Yes .....1 No 2	☐☐ ⇨BH 10	Days.....1 ☐☐ Months.....2 ☐☐ Year.....3 ☐☐	Yes .....1 No 2
04		Sing.....1 Mult 2	Boy.....1 Girl 2	Month ☐☐ Year ☐☐	Yes .....1 No .....2 ⇨ BH9	☐☐	Yes .....1 No 2	☐☐ ⇨BH 10	Days.....1 ☐☐ Months.....2 ☐☐ Year.....3 ☐☐	Yes .....1 No 2
05		Sing.....1 Mult 2	Boy.....1 Girl 2	Month ☐☐ Year ☐☐	Yes .....1 No .....2 ⇨ BH9	☐☐	Yes .....1 No 2	☐☐ ⇨BH 10	Days.....1 ☐☐ Months.....2 ☐☐ Year.....3 ☐☐	Yes .....1 No 2
06		Sing.....1 Mult 2	Boy.....1 Girl 2	Month ☐☐ Year ☐☐	Yes .....1 No .....2 ⇨ BH9	☐☐	Yes .....1 No 2	☐☐ ⇨BH 10	Days.....1 ☐☐ Months.....2 ☐☐ Year.....3 ☐☐	Yes .....1 No 2

16) Birth History Module — BH

Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had. Record names of all the births in BH1. Record twins and triplets on separate lines.

	BH1	BH2	BH3	BH4	BH5	BH6	BH7	BH8	BH9	BH10
07		Sing.....1 Mult 2	Boy.....1 Girl 2	Month ☐☐ Year ☐☐	Yes .....1 No .....2 ⇨ BH9	☐☐	Yes .....1 No 2	☐☐ ⇨BH 10	Days.....1 ☐☐ Months.....2 ☐☐ Year.....3 ☐☐	Yes .....1 No 2
08		Sing.....1 Mult 2	Boy.....1 Girl 2	Month ☐☐ Year ☐☐	Yes .....1 No .....2 ⇨ BH9	☐☐	Yes .....1 No 2	☐☐ ⇨BH 10	Days.....1 ☐☐ Months.....2 ☐☐ Year.....3 ☐☐	Yes .....1 No 2
09		Sing.....1 Mult 2	Boy.....1 Girl 2	Month ☐☐ Year ☐☐	Yes .....1 No .....2 ⇨ BH9	☐☐	Yes .....1 No 2	☐☐ ⇨BH 10	Days.....1 ☐☐ Months.....2 ☐☐ Year.....3 ☐☐	Yes .....1 No 2
10		Sing.....1 Mult 2	Boy.....1 Girl 2	Month ☐☐ Year ☐☐	Yes .....1 No .....2 ⇨ BH9	☐☐	Yes .....1 No 2	☐☐ ⇨BH 10	Days.....1 ☐☐ Months.....2 ☐☐ Year.....3 ☐☐	Yes .....1 No 2

16) Birth History Module — BH

Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had. Record names of all the births in BH1. Record twins and triplets on separate lines.

	BH1	BH2	BH3	BH4	BH5	BH6	BH7	BH8	BH9	BH10
11		Sing.....1 Mult 2	Boy.....1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes .....1 No .....2 ⇨ BH9	☐☐	Yes .....1 No 2	☐☐ ⇨BH 10	Days.....1 ☐☐ Months.....2 ☐☐ Year.....3 ☐☐	Yes .....1 No 2
12		Sing.....1 Mult 2	Boy.....1 Girl 2	Month ☐☐ Year ☐☐☐☐	Yes .....1 No .....2 ⇨ BH9	☐☐	Yes .....1 No 2	☐☐ ⇨BH 10	Days.....1 ☐☐ Months.....2 ☐☐ Year.....3 ☐☐	Yes .....1 No 2

16) Birth History Module — BH

BH11	Have you had any live births since the birth of (Name of last birth)?	Yes ..... 1 No 2	
BH12	Compare CM9 with number of births in history above and mark: ☐ Numbers are different ⇨ Probe and reconcile ☐ Numbers are same <u>For each birth, Check:</u> Year of birth is recorded ☐ For each living child: Current age is recorded ☐ For each dead child: Age of death is recorded ☐ For age at death 12 months or 1 year: ☐ Probe to determine exact number of months		
BH13	Some pregnancies end before full term as a miscarriage or an abortion, while others may result in a stillbirth. Have you had a miscarriage or abortion?	Yes ..... 1 No 2	2⇨ BH15
BH14	In all how many pregnancies did you have that ended in a miscarriage or an abortion	Miscarriages/abortions ..... ☐☐ DK 98	
BH15	Have you had a stillbirth?	Yes ..... 1 No 2	2⇨CM12
BH16	In all how many pregnancies did you have that ended in a stillbirth?	Stillbirths..... ☐☐ DK 98	
BH17	Check BH4 of last birth: Did the woman's last birth occur within the last 2 years, that is, since (day and month of interview in 2004)? If child has died, take special care when referring to this child by name in the following modules. ☐ No live birth in last 2 years. ⇨ MARRIAGE/UNION module. ☐ Yes, live birth in last 2 years. ⇨ Continue to CM13 Name of child_____		
BH18	At the time you became pregnant with (name), did you want to become pregnant then, did you want to wait until later, or did you want no (more) children at all?	Then..... 1 Later ..... 2 No more 3	

17) Tetanus Toxoid (TT) Module — TT

#	Question	Options	Skip
This module is to be administered to all women with a live birth in the 2 years preceding the date of interview.			
TT1	Do you have a card or other document with your own immunisations listed? If a card is presented, use it to assist with answers to the following questions.	Yes (card seen).....1 Yes (card not seen).....2 No.....3 DK.....8	
TT2	When you were pregnant with your last child, did you receive any injection to prevent him or her from getting tetanus, which is convulsions after birth (an anti–tetanus shot, an injection at the top of the arm or shoulder)?	Yes.....1 No.....2 DK.....8	2⇨TT5 8⇨TT5
TT3	If yes: How many times did you receive this anti-tetanus injection during your last pregnancy?	No. of times..... ☐☐ DK.....98	98⇨TT5
TT4	How many TT doses during last pregnancy were reported in TT3?	At least 2 TT inj. during last preg……..1 Fewer than 2 TT inj. during last preg…….2	1 ⇨ NM
TT5	Did you receive any tetanus toxoid injection at any time before your last pregnancy?	Yes.....1 No.....2 DK.....8	2⇨NM 8⇨NM
TT6	How many times did you receive it?	No. of times..... ☐☐	
TT7	In what month and year did you receive the last anti-tetanus injection before that last pregnancy? Skip to next module only if year of injection is given. Otherwise, continue with TT8.	Month..... ☐☐ DK month.....98 Year..... ☐☐☐☐ DK year.....9998	⇨ NM ⇨ TT8
TT8	How many years ago did you receive the last anti-tetanus injection before that last pregnancy?	Years ago..... ☐☐	

18) Maternal and Newborn Health (MNH) Module — MN

#	Question	Options	Skip
	This module is to be administered to all women with a live birth in the 2 years preceding date of interview. Check child mortality module CM12 and record name of last-born child here _____. Use this child's name in the following questions, where indicated.		
MN1	In the first two months after your last birth [the birth of Name], did you receive a Vitamin A dose like this? Show 200,000 IU capsule or dispenser (Red).	Yes ..... 1 No ..... 2 DK 8	
MN2	Did you see anyone for antenatal care for this pregnancy? If yes: Whom did you see? Anyone else? Probe for the type of person seen and circle all answers given.	<u>Health professional</u>: Doctor/Clinical Officer ..... A Nurse/Midwife ..... B <u>Other person</u>: Traditional birth attendant ..... F Community health worker ..... G Relative/friend ..... H Other (*specify*) ..... X No one ..... Y	Y⇨MN6A
MN2A	How many times did you receive antenatal care during this pregnancy?	No. of times ..... ☐☐ DK 98	
MN2B	During this pregnancy, were you given or did you buy any iron tablets? Show Tablets.	Yes ..... 1 No ..... 2 DK 8	2⇨MN3 8⇨MN3
MN2C	During the whole pregnancy, for how many days did you take the tablets? If the answer is not numeric, probe for approximate number of days.	No. of days ..... ☐☐☐ DK 998	

			Y	N	
MN3	As part of your antenatal care, were any of the following done at least once?				
MN3A	Were you weighted?	Weight	1	2	
MN3B	Was your blood pressure measured?	Blood pressure	1	2	
MN3C	Did you give a urine sample?	Urine sample	1	2	
MN3D	Did you give a blood sample?	Blood sample	1	2	

MN4	During any of the antenatal visits for the pregnancy, were you given any information or counseled about AIDS or the AIDS virus?	Yes ..... 1 No ..... 2 DK 8	
MN5	I don't want to know the results, but were you tested for HIV and AIDS as part of your antenatal care?	Yes ..... 1 No ..... 2 DK 8	2⇨MN6A 8⇨MN6A
MN6	I don't want to know the results, but did you get the results of the test?	Yes ..... 1 No ..... 2 DK 8	
MN6A	During this pregnancy, did you take any medicine in order to prevent you from getting malaria?	Yes ..... 1 No ..... 2 DK 8	2⇨MN6E 8⇨MN6E
MN6B	Which medicines did you take to prevent malaria? Circle all medicines taken. If type of medicine is not determined, show typical anti-malarial to the respondent.	SP/Fansidar ..... A Chloroquine ..... B Others (*Specify*) ..... X DK ..... Z	
MN6C	Check MN6B for medicine taken: ☐ SP/Fansidar taken ⇨ Continue to MN6D. ☐ SP/Fansidar not taken ⇨ MN6E.		
MN6D	How many times did you take SP/Fansidar during this pregnancy to prevent malaria?	Number of times ..... ☐☐	

18) Maternal and Newborn Health (MNH) Module			MN
MN6E	Did you sleep under a mosquito net last night?	Yes ..... 1 No ..... 2 DK 8	 2⇨MN7 8⇨MN7
MN6F	How long ago did your household obtain the mosquito net? If less than 1 month, record '00'. If answer is "12 months" or "1 year", probe to determine if net was obtained exactly 12 months ago or earlier or later.	Months ago ☐☐ More than 24 months ago ..... 95 Not sure 98	
MN6G	When you got that net, was it already treated with an insecticide to kill or repel mosquitoes?	Yes ..... 1 No ..... 2 DK/not sure 8	
MN6H	Since you got the mosquito net, was it ever soaked or dipped in a liquid to kill/repel mosquitoes?	Yes ..... 1 No ..... 2 DK 8	 2⇨MN7 8⇨MN7
MN6I	How long ago was the net last soaked or dipped? If less than 1 month, record '00'. If answer is "12 months" or "1 year", probe to determine if net was treated exactly 12 months ago or earlier or later.	Months ago ..... ☐☐ More than 24 months ago ..... 95 DK 98	
MN7	Who assisted with the delivery of your last child (Name)? Anyone else? Probe for the type of person assisting and circle all answers given.	Health professional: Doctor/Clinical Officer ..... A Nurse/Midwife ..... B Other person: Traditional birth attendant ..... F Community health worker ..... G Relative/friend ..... H Other (*specify*) ..... X No one ..... Y	
MN8	Where did you give birth to (Name)? If source is hospital, health center, or clinic, write the name of the place below. Probe to identify the type of source and circle the appropriate code. (Name of place) ☐	<u>Home</u> Your home ..... 11 Other home ..... 12 <u>Public sector</u> Govt. hospital ..... 21 Govt. clinic/health center ..... 22 CHAM ..... 23 Other public (*specify*) ☐ 26 <u>Private Medical Sector</u> Private hospital ..... 31 Private clinic ..... 32 Private maternity home ..... 33 Other private medical (*specify*) ☐ 36 Other (*specify*) ☐ 96	
MN8A	After (Name) was born, did a health professional or a traditional birth attendant check on your health?	Yes ..... 1 No ..... 2 DK 8	 2⇨MN8D8 ⇨MN8D
MN8B	How many days or weeks after delivery did the first check take place? Record '00' days if same day.	Days after delivery ..... 1 ☐☐ Weeks after delivery ..... 2 ☐☐ Don't Know 998	

18) Maternal and Newborn Health (MNH) Module			MN
MN8C	Who checked on your health at that time? Probe for most qualified person	Health professional: Doctor/Clinical Officer....11 Nurse/Midwife....12 Other person: Traditional birth attendant....21 Community health worker....22 Other (*specify*) ____ 96	
MN8D	Check MN8 for place of birth: ☐☐ Place of birth is home (Code 11 or 12) ⇨ Continue to MN8E. ☐☐ Otherwise ⇨ MN9		
MN8E	In the two months after (Name) was born, did any health care provider or a traditional birth attendant check on his/her health?	Yes....1 No....2 DK....8	2⇨MN9 8⇨MN9
MN8F	How many hours, days or weeks after the birth of (Name) did the first check take place? If less than one day, record hours. If than on week, record days.	Hours after birth....1 ☐☐ Days after birth....2 ☐☐ Weeks after birth....3 ☐☐ Don't Know....998	
MN8G	Who checked on (Name)'s health at that time? Probe for most qualified person.	Health professional: Doctor/Clinical Officer....11 Nurse/Midwife....12 Other person: Traditional birth attendant....21 Community health worker....22 Other (*specify*) ____ 96	
MN8H	Where did this first check of (Name) take place? Probe to identify the type of source and circle the appropriate code. If unable to determine if a hospital, health centre or clinic is public or private medical, write the name of the place. (Name of place) ____	Home Your home....11 Other home....12 Public sector Govt. hospital....21 Govt. clinic/health center....22 CHAM....23 Other public (*specify*) ____ 26 Private Medical Sector Private hospital....31 Private clinic....32 Private maternity home....33 Other private medical (*specify*) ____ 36 Other (*specify*) ____ 96	
MN9	When your last child (Name) was born, was he/she very large, larger than average, average, smaller than average, or very small?	Very large....1 Larger than average....2 Average....3 Smaller than average....4 Very small....5 DK....8	
MN10	Was (Name) weighed at birth?	Yes....1 No....2 DK....8	2⇨MN12 8⇨MN12
MN11	How much did (Name) weigh? Record weight from health card, if available.	Card....1 (Kg.) ☐☐.☐☐ Recall....2 (Kg.) ☐☐.☐☐ DK....99998	

18) Maternal and Newborn Health (MNH) Module			MN
MN12	Did you ever breastfeed (Name)?	Yes .....1 No 2	 2⇨ MN14
MN13	How long after birth did you first put (Name) to the breast? If less than 1 hour, record '00' hours. If less than 24 hours, record hours. Otherwise, record days.	Immediately.....000 Hours.....1 ☐☐ or Days.....2 ☐☐ Don't know/remember.....998	
MN14	Have you used soap yesterday or today?	Yes .....1 No .....2 Do not have soap 3	 2⇨NM 3⇨NM
MN15	When you used soap today or yesterday, what did you use it for? If for washing my hands are mentioned, probe what was the occasion, but do not read the answers. (Do not read the answers, ask to be specific, encourage "what else" until nothing further is mentioned and check all that apply)	Washing cloths.....A Washing my body.....B Washing my children.....C Washing child's bottoms.....D Washing my children's hands.....E Washing hands after defecating.....F Washing hands after cleaning child.....G Washing hands before feeding child.....H Washing hands before preparing food .....I Washing hands before eating.....J Other (*Specify*).....X	

19) Marriage/Union Module - Woman			MA
#	Question	Options	Skip
MA1	Are you currently married or living together with a man as if married?	Yes, currently married ..... 1 Yes, living with a man ..... 2 No, not in union 3	 3⇨MA3
MA2	How old was your husband/partner on his last birthday?	Age in years ..... ☐☐ DK 98	⇨MA5 98⇨MA5
MA3	Have you ever been married or lived together with a man?	Yes, formerly married ..... 1 Yes, formerly lived with a man ..... 2 No 3	 3⇨NM
MA4	What is your marital status now: are you widowed, divorced or separated?	Widowed ..... 1 Divorced ..... 2 Separated 3	
MA5	Have you been married or lived with a man only once or more than once?	Only once ..... 1 More than once 2	
MA6	In what month and year did you first marry or start living with a man as if married?	Month ..... ☐☐ DK month ..... 98 Year ..... ☐☐☐☐ DK year 9998	
MA7	Check MA6: ☐ Both Month and year of marriage known? ⇨ Next Module. ☐ Either month or year of marriage/union not known? ⇨ Continue to MA8.		
MA8	How old were you when you started living with your first husband/partner?	Age in years ..... ☐☐	

20) Contraception Module - Woman			CP
#	Question	Options	Skip
CP1	I would like to talk with you about another subject – family planning – and your reproductive health. Are you pregnant now?	Yes, currently pregnant....1 No....2 Unsure or DK....8	1⇨ NM
CP2	Some people use various ways or methods to delay or avoid a pregnancy. Are you currently doing something or using any method to delay or avoid getting pregnant?	Yes....1 No....2	2⇨ NM
CP3	Which method are you using? DO NOT PROMPT. If more than one method is mentioned, circle each one.	Female sterilization....A Male sterilization....B Pill....C IUD....D Injections....E Implants....F Condom....G Female condom....H Diaphragm....I Foam/jelly....J Lactational amenorrhoea method (LAM)....K Periodic abstinence....L Withdrawal....M Other (*specify*) _____ X	

21) Sexual Behaviour Module - Woman — SB

#	Question	Options	Skip
	Check for the presence of others. Before continuing, ensure privacy. Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. The information you supply will remain strictly confidential.		
SB1	How old were you when you first had sexual intercourse (if ever)?	Never had intercourse ..... 00 Age in years ..... ☐☐ First time when started living with(first) husband/partner 95	00⇨NM
SB2	When was the last time you had sexual intercourse? Record 'years ago' only if last intercourse was one or more years ago. If 12 months or more the answer must be recorded in years.	Days ago ..... 1 ☐☐ Weeks ago ..... 2 ☐☐ Months ago ..... 3 ☐☐ Years ago ..... 4 ☐☐	4⇨ NM
SB3	The last time you had sexual intercourse, was a condom used?	Yes ..... 1 No 2	
SB4	What is your relationship to the man with whom you last had sexual intercourse? If man is 'boyfriend' or 'fiancée', ask: Was your boyfriend/fiancée living with you when you last had sex? If 'yes', circle 1 ; 'no', circle 2.	Spouse /Cohabiting partner ..... 1 Man is boyfriend/fiancée ..... 2 Other friend ..... 3 Casual acquaintance ..... 4 Other (*specify*) 6	1⇨SB6
SB5	How old is this person (at the time of sexual encounter)? If response is DK, probe: About how old is this person?	Age of sexual partner ..... ☐☐ DK 98	
SB6	Have you had sex with any other man in the last 12 months?	Yes ..... 1 No 2	2⇨ NM
SB7	The last time you had sexual intercourse with this other man, was a condom used?	Yes ..... 1 No 2	
SB8	What is your relationship to this man? If man is 'boyfriend' or 'fiancée', ask: Was your boyfriend/fiancée living with you when you last had sex? If 'yes', circle 1. If 'no', circle 2.	Spouse/Cohabiting partner ..... 1 Man is boyfriend/fiancée ..... 2 Other friend ..... 3 Casual acquaintance ..... 4 Other (*specify*) 6	1⇨SB10
SB9	How old is this person (at the time of sexual encounter)? If response is DK, probe: About how old is this person?	Age of sexual partner ..... ☐☐ DK 98	
SB10	Other than these two men, have you had sex with any other man in the last 12 months?	Yes ..... 1 No 2	2⇨ NM
SB11	In total, with how many different men have you had sex in the last 12 months?	No. of partners ..... ☐☐	

22) HIV and AIDS Module - Woman — HA

#	Question	Options	Skip
HA1	Now I would like to talk with you about something else. Have you ever heard of the virus HIV or an illness called AIDS?	Yes ..... 1 No 2	2⇨ NM
HA2	Can people protect themselves from getting infected with the AIDS virus by having one sex partner who is not infected and also has no other partners?	Yes ..... 1 No ..... 2 DK 8	
HA3	Can people get infected with the AIDS virus because of witchcraft or other supernatural means?	Yes ..... 1 No ..... 2 DK 8	
HA4	Can people reduce their chance of getting the AIDS virus by using a condom every time they have sex?	Yes ..... 1 No ..... 2 DK 8	
HA5	Can people get the AIDS virus from mosquito bites?	Yes ..... 1 No ..... 2 DK 8	
HA6	Can people reduce their chance of getting infected with the AIDS virus by not having sex at all?	Yes ..... 1 No ..... 2 DK 8	
HA7	Can people get the AIDS virus by sharing food with a person who has AIDS?	Yes ..... 1 No ..... 2 DK 8	
HA7A	Can people get the AIDS virus by getting injections with a needle that was already used by someone else?	Yes ..... 1 No ..... 2 DK 8	
HA8	Is it possible for a healthy-looking person to have the AIDS virus?	Yes ..... 1 No ..... 2 DK 8	

			Yes	No	DK	
HA9	Can the AIDS virus be transmitted from a mother to a baby?					
HA9A	During pregnancy?	During pregnancy	1	2	8	
HA9B	During delivery?	During delivery	1	2	8	
HA9C	By breastfeeding?	By breastfeeding	1	2	8	

HA10	If a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in school?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	
HA11	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	
HA12	If a member of your family became infected with the AIDS virus, would you want it to remain a secret?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	
HA13	If a member of your family became sick with the AIDS virus, would you be willing to care for him or her in your HH?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	
HA14	Check MN5: Tested for HIV during antenatal care? ☐ Yes ⇨ HA18A. ☐ No ⇨ Continue to HA15.		

22) HIV and AIDS Module - Woman			HA
HA15	I do not want to know the results, but have you ever been tested to see if you have HIV, the virus that causes AIDS?	Yes .....1 No 2	2⇨HA18
HA16	I do not want you to tell me the results of the test, but have you been told the results?	Yes .....1 No 2	
HA17	Did you, yourself, ask for the test, was it offered to you and you accepted, or was it required?	Asked for the test.....1 Offered and accepted .....2 Required 3	1⇨NM 2⇨NM 3⇨NM
HA18	At this time, do you know of a place where you can go to get such a test to see if you have the AIDS virus?	Yes .....1 No 2	1⇨NM 2⇨NM
HA18A	If tested for HIV during antenatal care: Other than at the antenatal clinic, do you know of a place where you can go to get a test to see if you have the AIDS virus?	Yes .....1 No 2	

23) MATERNAL MORTALITY MODULE — MM

Now I would like to ask you some questions about your brothers and sisters, that is, all of the children born to your natural mother, including those who are living with you, those living elsewhere and those who have died.

#	Question	Options	Skip
	How many children did your mother give birth to, including you?	No. of births to natural mother ☐☐	
	Check MM1: ☐ Two or more births ⇨ Continue to MM3. ☐ Only one birth (Respondent only) ⇨ End		
	How many of these births did your mother have before you were born?	No. of preceding births ☐☐	

Sl. No.	MM4 What was the name given to your older (next oldest) brother or sister?	MM5 Is (Name) male or female? 1.Male 2.Female	MM6 Is (Name) still alive? 1.Yes 2.No⇨MM8 8.DK⇨Next Line	MM7 How old is (Name)? Record age & Go to Next Line	MM8 How many years ago did (Name) die?	MM9 How old was (Name) when he/she died? If male or died before age 12 years, Go to Next Line	MM10 Was (Name) pregnant when she died? 1.Yes⇨MM13 2.No	MM11 Did (Name) die during child birth? 1.Yes⇨MM13 2.No	MM12 Did (Name) die within two months after the end of a pregnancy or childbirth? 1.Yes 2.No	MM13 How many live born children did (Name) give birth to during her lifetime (before this pregnancy)?
#	Name	M F	Y N DK	Age	Years	Age	Y N	Y N	Y N	Live Births
1		1 2	1 2 8	☐☐	☐☐	☐☐	1 2	1 2	1 2	☐☐
2		1 2	1 2 8	☐☐	☐☐	☐☐	1 2	1 2	1 2	☐☐
3		1 2	1 2 8	☐☐	☐☐	☐☐	1 2	1 2	1 2	☐☐
4		1 2	1 2 8	☐☐	☐☐	☐☐	1 2	1 2	1 2	☐☐
5		1 2	1 2 8	☐☐	☐☐	☐☐	1 2	1 2	1 2	☐☐
6		1 2	1 2 8	☐☐	☐☐	☐☐	1 2	1 2	1 2	☐☐
7		1 2	1 2 8	☐☐	☐☐	☐☐	1 2	1 2	1 2	☐☐

MM14	Check MM10, MM11 and MM12 for all sisters: Just to make sure I have this right, you told me that your sister(s) _____ (Name) died when she was (pregnant/delivering/just delivered). Is that correct? ☐ Yes ⇨ End. ☐ No ⇨ Correct the MMR Module

Man Information Panel		MP
This module is to be administered to all men age 15 through 49 (See HH Listing Module). Fill in one form for each eligible man.		
MP0	District No.	☐☐
MP1	Cluster No.	☐☐☐
MP2	HH No.	☐☐
MP3	Man Name	
MP4	Man Line No.	☐☐
MP5	Enumerator Name & No.	☐☐☐
MP6	Day/Month/Year of interview	☐☐/☐☐/☐☐☐☐
MP7	Result of interview for man	Completed ..... 1 Not at home ..... 2 Refused ..... 3 Partly completed ..... 4 Incapacitated ..... 5 Other (Specify) ☐ 6

#	Question	Options	Skip
MP8	In what month and year were you born?	Date of birth: Month ..... ☐☐ DK Month ..... 98 Year ..... ☐☐☐☐ DK Year 9998	
MP9	How old were you at your last birthday?	Age in completed years ..... ☐☐	
MP10	Have you ever attended school?	Yes ..... 1 No 2	2⇨ MP14
MP11	What is the highest level of school you attended: primary, secondary, or higher?	Primary ..... 1 Secondary ..... 2 Higher ..... 3 Non-standard curriculum 6	
MP12	What is the highest Class/Grade you completed at that level?	Class/Grade ..... ☐☐	
MP13	Check MP11: ☐ Secondary or higher ⇨ Next Module. ☐ Primary or non-standard curriculum ⇨ Continue to MP14		
MP14	Now I would like you to read this sentence to me. Show the following sentences to respondent. If respondent cannot read whole sentence, probe: Can you read part of the sentence to me?	Cannot read at all ..... 1 Able to read only parts of sentence ..... 2 Able to read whole sentence ..... 3 No sentence in required language ..... 4 (specify language) ☐ Blind/mute, visually/speech impaired 5	

CHICHEWA
1. Mwana akuwerenga bukhu.
2. Chaka chino mvula inabwera mochedwa.
3. Makolo ayenera kusamalira ana awo.

TUMBUKA
Mwana wakuberenga buku
Chaka chino vula yangwiza mwakuchedwa
Bapapi bakwenera kupwelera banabawo

ENGLISH
The child is reading a book.
The rains came late this year.
Parents must take for their children.

24) Marriage/Union Module - Man — MU

#	Question	Options	Skip
MU1	Are you currently married or living together with a woman as if married?	Yes, currently married ..... 1 Yes, living with a woman ..... 2 No, not in union 3	3⇨ MU3
MU2	How old was your wife/partner on his last birthday?	Age in years ..... ☐☐ DK 98	⇨ MU5 98⇨ MU5
MU3	Have you ever been married or lived together with a woman?	Yes, formerly married ..... 1 Yes, formerly lived with a woman ..... 2 No 3	3⇨ NM
MU4	What is your marital status now: are you widowed, divorced or separated?	Widowed ..... 1 Divorced ..... 2 Separated 3	
MU5	Have you been married or lived with a woman only once or more than once?	Only once ..... 1 More than once 2	
MU6	In what month and year did you first marry or start living with a woman as if married?	Month ..... ☐ DK month ..... 98 Year ..... ☐☐☐☐ DK year 9998	
MU7	Check MU6: ☐ Both month and year of marriage known? ⇨ Next Module. ☐ Either month or year of marriage/union not known? ⇨ Continue to MU8.		
MU8	How old were you when you started living with your first wife/partner?	Age in years ..... ☐☐	

25) Contraception Module - Man			MC
#	Question	Options	Skip
MC1	I would like to talk with you about another subject – family planning. Some people use various ways or methods to delay or avoid a pregnancy. Are you currently doing something or using any method to delay or avoid getting your wife/ partner pregnant?	Yes ..... 1 No 2	2⇨ NM
MC2	Which method are you using? DO NOT PROMPT. If more than one method is mentioned, circle each one.	Female sterilization ..... A Male sterilization ..... B Pill ..... C IUD ..... D Injections ..... E Implants ..... F Condom ..... G Female condom ..... H Diaphragm ..... I Foam/jelly ..... J Lactational amenorrhoea method (LAM) ..... K Periodic abstinence ..... L Withdrawal ..... M Other (*specify*) X	

21) Sexual Behaviour Module - Man — SB

Check for the presence of others. Before continuing, ensure privacy.

Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. The information you supply will remain strictly confidential.

#	Question	Options	Skip
SM1	How old were you when you first had sexual intercourse (if ever)?	Never had intercourse ..... 00 Age in years ..... ☐☐ First time when started living with(first) Wife/partner 95	00⇨NM
SM2	When was the last time you had sexual intercourse? Record 'years ago' only if last intercourse was one or more years ago. If 12 months or more the answer must be recorded in years.	Days ago ..... 1 ☐☐ Weeks ago ..... 2 ☐☐ Months ago ..... 3 ☐☐ Years ago ..... 4 ☐☐	4⇨ NM
SM3	The last time you had sexual intercourse, was a condom used?	Yes ..... 1 No 2	
SM4	What is your relationship to the woman with whom you last had sexual intercourse? If man is 'girlfriend' or 'fiancée', ask: Was your girlfriend/fiancée living with you when you last had sex? If 'yes', circle 1 ; 'no', circle 2.	Spouse /Cohabiting partner ..... 1 Woman is girlfriend/fiancée ..... 2 Other friend ..... 3 Casual acquaintance ..... 4 Other (*specify*) ☐ 6	1⇨ SM6
SM5	How old is this person (at the time of sexual encounter)? If response is DK, probe: About how old is this person?	Age of sexual partner ..... ☐☐ DK 98	
SM6	Have you had sex with any other woman in the last 12 months?	Yes ..... 1 No 2	2⇨ NM
SM7	The last time you had sexual intercourse with this other woman, was a condom used?	Yes ..... 1 No 2	
SM8	What is your relationship to this woman? If woman is 'girlfriend' or 'fiancée', ask: Was your girlfriend/fiancée living with you when you last had sex? If 'yes', circle 1. If 'no', circle 2.	Spouse/Cohabiting partner ..... 1 Woman is girlfriend/fiancée ..... 2 Other friend ..... 3 Casual acquaintance ..... 4 Other (*specify*) 6	1⇨ SM10
SM9	How old is this person (at the time of sexual encounter)? If response is DK, probe: About how old is this person?	Age of sexual partner ..... ☐☐ DK 98	
SM10	Other than these two women, have you had sex with any other woman in the last 12 months?	Yes ..... 1 No 2	2⇨ NM
SM11	In total, with how many different women have you had sex in the last 12 months?	No. of partners ..... ☐☐	

27) HIV and AIDS Module - Man — HM

#	Question	Options	Skip
HM1	Now I would like to talk with you about something else. Have you ever heard of the virus HIV or an illness called AIDS?	Yes ..... 1 No 2	2⇨ NM
HM2	Can people protect themselves from getting infected with the AIDS virus by having one sex partner who is not infected and also has no other partners?	Yes ..... 1 No ..... 2 DK 8	
HM3	Can people get infected with the AIDS virus because of witchcraft or other supernatural means?	Yes ..... 1 No ..... 2 DK 8	
HM4	Can people reduce their chance of getting the AIDS virus by using a condom every time they have sex?	Yes ..... 1 No ..... 2 DK 8	
HM5	Can people get the AIDS virus from mosquito bites?	Yes ..... 1 No ..... 2 DK 8	
HM6	Can people reduce their chance of getting infected with the AIDS virus by not having sex at all?	Yes ..... 1 No ..... 2 DK 8	
HM7	Can people get the AIDS virus by sharing food with a person who has AIDS?	Yes ..... 1 No ..... 2 DK 8	
HM7A	Can people get the AIDS virus by getting injections with a needle that was already used by someone else?	Yes ..... 1 No ..... 2 DK 8	
HM8	Is it possible for a healthy-looking person to have the AIDS virus?	Yes ..... 1 No ..... 2 DK 8	
HM9	Can the AIDS virus be transmitted from a mother to a baby:	Yes / No / DK	
HM9A	During pregnancy?	During pregnancy: 1 / 2 / 8	
HM9B	During delivery?	During delivery: 1 / 2 / 8	
HM9C	By breastfeeding?	By breastfeeding: 1 / 2 / 8	
HM10	If a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in school?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	
HM11	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	
HM12	If a member of your family became infected with the AIDS virus, would you want it to remain a secret?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	
HM13	If a member of your family became sick with the AIDS virus, would you be willing to care for him or her in your HH?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	
HM14	I do not want to know the results, but have you ever been tested to see if you have HIV, the virus that causes AIDS?	Yes ..... 1 No 2	2⇨ HM17
HM15	I do not want you to tell me the results of the test, but have you been told the results?	Yes ..... 1 No 2	
HM16	Did you, yourself, ask for the test, was it offered to you and you accepted, or was it required?	Asked for the test ..... 1 Offered and accepted ..... 2 Required 3	1⇨ End 2⇨ End 3⇨ End
HM17	At this time, do you know of a place where you can go to get such a test to see if you have the AIDS virus?	Yes ..... 1 No 2	

G MILLENNIUM DEVELOPMENT GOALS (MDG) INDICATORS

Goal No.	MDG Indicator No.	Indicator	2006 MICS	MDG Target by 2015	Baseline	
					Value	Year
1	**4**	Prevalence of underweight children under five years of age	**21**	14	28	1992
2	**6**	Net enrolment ratio in primary education	**86**	100	58	1992
	7	Proportion of pupils starting grade 1 who reach grade 5	**86**	100	64	1992
	8	Literacy rate of 15–24 year-olds	**69**	100	63	1998
3	**9**	Ratio of girls to boys in				
		a) Primary school	**0.92**	1.00	0.87	1992
		b) Secondary School	**0.78**	1.00	0.50	1992
	10	Ratio of literate women to literate men, 15–24 years old	**0.87**	1.00	0.84	1998
4	**13**	Under-five mortality rate	**122**	78	234	1992
	14	Infant mortality rate	**72**	45	134	1992
	15	Proportion of 1 year-old children immunized against measles	**84**	95	86	1992
5	**16**	Maternal mortality ratio	**807**	155	620	1992
	17	Proportion of births attended by skilled health personnel	**54**	100	55	1992
6	**19**	Condom use rate of the contraceptive prevalence rate	**2**	NA	2	1992
	19.a	Condom use at last high-risk sex	**40**	NA	29	2000
	19.b	Percentage of population aged 15–24 years with comprehensive correct knowledge of HIV and AIDS	**41**	NA	22	2004
	19.c	Contraceptive prevalence rate	**41**	NA	13	1992
	20	Ratio of school attendance of orphans to school attendance of non-orphans aged 10–14 years	**0.98**	NA	1.0	2004
	22	a) HHs with a bednet	**51**	NA	13	2000
		b) % children under 5 sleeping under a bednet	**31**	NA	8	2000
		c) % children under 5 given any appropriate anti-malarial drug	**25**	NA	27	2000
		d) % pregnant women sleeping under a bednet	**32**	NA	8	2000
		e) % pregnant women received 2 doses of SP/Fansidar	**47**	NA	29	2000

Goal No.	MDG Indicator No.	Indicator	2006 MICS	MDG Target by 2015	Baseline	
					Value	Year
7	**29**	Proportion of population using solid fuels	**99**	0	98	2005
	30	Proportion of population with sustainable access to an improved water source	**75**	74	47	1992
	31	Proportion of population with access to improved sanitation (including pit latrine)	**88**	86	72	1992

Sources:
1. Data for the years 1992, 2000 and 2004 are from Malawi Demographic and Health Surveys (MDHS)
2. Data for the years 1998 and 2005 are from Integrated Households Survey (IHS)