This report presents findings from the 2000 Malawi Demographic and Health Survey (2000 MDHS), which was implemented by the National Statistical Office. ORC Macro (DHS) furnished technical assistance in the design and implementation of the survey. Funding for the 2000 MDHS survey was provided by the United States Agency for International Development (USAID/Malawi), the Department for International Development (DfID/Malawi), and the United Nations Children’s Fund (UNICEF/Malawi). The 2000 MDHS is part of a worldwide MEASURE Demographic and Health Surveys (DHS+) Project, which is designed to collect, analyse, and disseminate data on fertility, family planning, maternal and child health, HIV/AIDS, and other topics in health and population.

Additional information about the Malawi DHS may be obtained from:

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Information about the MEASURE DHS+ project may be obtained from:

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Calverton, MD 20705
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Fax: 301-572-0999
E-mail: reports@macroint.com
Internet: www.measuredhs.com

Suggested citation:

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FOREWORD

This final report presents the major findings of the 2000 Malawi Demographic and Health Survey (MDHS). The 2000 MDHS survey is the second survey of its kind to be conducted in Malawi; the first MDHS was in 1992. The fieldwork was carried out by the National Statistical Office (NSO) from July to November 2000. In 1996, a similar survey on Knowledge, Attitudes, and Practices in Health (MKAPH) was conducted. All three surveys were designed to provide information on indicators of maternal and child health in Malawi.

The primary objective of the 2000 MDHS survey was to provide up-to-date information for policymakers, planners, researchers, and programme managers that would allow guidance in the development, monitoring, and evaluation of health programmes in Malawi. Specifically, the 2000 MDHS collected information on fertility levels, nuptiality, fertility preferences, knowledge and use of family planning methods, breastfeeding practices, nutritional status of mothers and children, childhood illnesses and mortality, use of maternal and child health services, malaria, maternal mortality, and HIV/AIDS-related knowledge and behaviours.

The 2000 MDHS results present evidence of a decline in fertility, an increase in the use of family planning methods, a decline in infant and under-five mortality, and an increase in adult and maternal mortality since the 1992 MDHS survey. However, the disparity between knowledge and use of family planning remains high. Some of these are critical issues and need to be addressed without delay.

I would like to acknowledge the efforts of a number of organisations and individuals who contributed immensely to the success of the survey. First, I would like to acknowledge the financial assistance from the United States Agency for International Development (USAID), the Department for International Development (DfID), United Kingdom, and the United Nations Children’s Fund (UNICEF/Malawi). I would also like to acknowledge ORC Macro for technical backstopping, and the assistance of the staff of the National Statistical Office and the Ministry of Health and Population. Finally, 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 for Census and Statistics
SUMMARY OF FINDINGS

The 2000 Malawi Demographic and Health Survey (MDHS) is a nationally representative sample survey covering 14,213 households, 13,220 women age 15-49, and 3,092 men age 15-54. The 2000 MDHS is similar, but much expanded in size and scope, to the 1992 MDHS.

The survey was designed to provide information on fertility trends, family planning knowledge and use, early childhood mortality, various indicators of maternal and child health and nutrition, HIV/AIDS, adult and maternal mortality, and malaria control programme indicators. Unlike earlier surveys in Malawi, the 2000 MDHS sample was sufficiently large to allow for estimates of certain indicators to be produced for 11 districts in addition to estimates for national, regional, and urban-rural domains. Twenty-two mobile survey teams, trained and supervised by the National Statistical Office, conducted the survey from July to November 2000.

FERTILITY

Fertility Decline. The 2000 MDHS data indicate that there has been a modest decline in fertility since the 1992 MDHS. The total fertility rate has dropped from 6.7 births per woman, in the period 1990-1992 to 6.3 births in the period 1998-2000. The fertility decline is concentrated amongst older women (age 30 and above); no decline was observed in women under age 30.

Large Fertility Differentials. Fertility levels remain high in Malawi, especially in rural parts of the country. The total fertility rate among rural women is 6.7 births per woman compared with 4.5 births in urban areas. Fertility levels are closely related to the socio-economic status of women. For example, women with no formal education give birth to an average of 7.3 children in their lifetime, compared with 3.0 for women who attended secondary school or higher. Among districts oversampled in the survey, fertility ranges from 4.3 births per woman in Blantyre District to 7.0 or more births in Kasungu, Machinga, and Mangochi districts.

Unplanned Fertility. One reason for the persistently high fertility levels is that unplanned pregnancies are still common. Overall, 40 percent of births in the five years prior to the survey were reported to be unplanned; 18 percent were mistimed (wanted later) and 22 percent were unwanted. Unwanted births are disproportionately high among older women who already have several children. If births associated with mistimed and unwanted pregnancies were avoided altogether, the total fertility rate in Malawi would be 5.2 births per woman instead of the actual level of 6.3.

Ideal Family Size. Although a reduction in the number of unplanned births would reduce fertility substantially, the average married Malawian woman age 15-49 or man age 15-54 reports that they would like to have more than five children. Even among those who have yet to start family formation, the reported ideal family size exceeds four children.

Childbearing at Young Ages. One-third of adolescent females (age 15-19) have either already had a child or are currently pregnant. This proportion has not changed significantly since the 1992 MDHS. The median age of women at first birth is 19.1 years, meaning that more than half of women have had a child by the time they reach age 20.

FAMILY PLANNING

Increasing Use of Contraception. A principle cause of the fertility decline in Malawi is the steady increase in contraceptive use over the last decade. The contraceptive prevalence rate (current use of a modern family planning method) has more than tripled since 1992, from 7 to 26 percent of all married women.
Less effective, traditional methods have become less frequently used during the 1990s.

**Changing Method Mix.** Currently, the most widely used methods among married women are injectable contraceptives (16 percent), female sterilisation (5 percent), and the pill (3 percent). This method mix represents a shift in contraceptive use among Malawian women. The rapid increase in use of injectables (from 2 percent in 1992) has made it the predominant method. This, combined with small rises in the use of condoms and female sterilisation, have more than offset small drops in pill and IUD use. Thus, acceptance of new methods of contraception, as well as some method switching, have characterised the 1992-2000 intersurvey period.

**Differentials in Family Planning Use.** Differentials in current use of family planning are large. Urban women are nearly 60 percent more likely than rural women to be using a modern contraceptive method (38 versus 24 percent). Among districts oversampled in the 2000 MDHS, use of modern contraception is highest in Blantyre District (38 percent) and lowest in Salima District (16 percent).

**Source of Family Planning Methods.** The survey results show that government-run facilities remain the major source for contraceptives in Malawi—providing family planning methods to 68 percent of the current users. This represents an increase from 59 percent based on the 1996 MKAPHS survey results. The increase in public-sector participation is due in large part to the rapid increase in use of injectables, which are provided mostly at government health centres. Twenty-eight percent of users get their methods from private medical sources, and 4 percent get their methods from other private sources (mostly shops). Community-based distribution agents are involved in providing contraceptives to 2 percent of current users.

**Unmet Need for Family Planning.** Women who are exposed to the risk of pregnancy but who say they would like to delay or limit childbearing and are not using contraception are considered to have an unmet need for family planning services. Unmet need for family planning services has declined from 36 to 30 percent of married women since 1992. Fifty-eight percent of the unmet need is composed of women who want to space their next birth, while the remainder is made up of women who do not want any more children. Although much progress has been made in satisfying women’s need for family planning, half of the total “demand” for contraception remains unmet.

**Child Health and Survival**

**Progress in Reducing Early Childhood Mortality.** The 2000 MDHS data indicate that mortality of children under age 5 has declined since the early 1990s. During the period 1988-1992, the under-five mortality rate was 234 deaths per 1,000 live births, compared with 189 per 1,000 for the period 1996-2000. Although this represents important progress, the rate of the downward trend is modest and childhood mortality remains at a very high level. Factors discussed as potentially associated with the improved child survival picture are better access to clean water sources, malaria control activities, and progress in the education of women (primary caregivers).

The risk of child death is not spread evenly across Malawi’s geographic and social landscape. Low educational attainment, young age of mother at birth, and residence in a rural area are factors associated with higher child mortality.

**Childhood Vaccination Coverage Declines.** The 2000 MDHS results show that 70 percent of children age 12-23 months are fully vaccinated. This represents a decline in coverage from 82 percent based on the 1992 MDHS. More detailed examination of the data indicates that the level of vaccination card retention has fallen from 86 to 81 percent suggesting lower levels of contact with child health care providers generally. Furthermore, dropout rates in the polio and DPT multi-dose schedules have worsened. Last, measles vaccine and BCG coverage have declined slightly from levels in the early 1990s.
**Childhood Illnesses.** The survey also provides data on some of the more common childhood illnesses and their treatment. A little more than 1 in 4 children under age five had a cough with short, rapid breathing, signs of acute respiratory infection (ARI), in the two weeks before the survey. Of these, 27 percent were taken to a health facility for treatment. In the 1992 MDHS, only 15 percent of children under five were reported to have had ARI in the preceding 2 weeks, and 49 percent of these were taken to health facilities for treatment. One explanation for the rise in reported morbidity and decline in use of health facilities for treatment is that caregivers (mostly mothers) are increasingly recognising and reporting less severe cases of ARI in their young children. Further in-depth study is required.

Eighteen percent of children under age five were reported to have had diarrhoea in the two weeks preceding the survey, and of these, 62 percent received oral rehydration therapy (either solution prepared from oral rehydration salts (ORS) or increased fluids of some other kind). Most mothers (86 percent) know about the use of ORS packets.

**Improved Breastfeeding Practices.** The 2000 MDHS results show that exclusive breastfeeding of children under 4 months of age has increased to 63 percent from only 3 percent in the 1992 MDHS. Further, the overall median duration of breastfeeding has risen from 21 to 24 months during the same period.

**Patterns of Feeding in Early Childhood.** After a child is weaned from the breast, which occurs for most children between 18 and 24 months of age, the daily diet tends to stabilize at the following pattern: virtually all children receive grain or cereal-based foods regularly; 80 to 85 percent of children receive some fruits or vegetables; 85 to 90 percent get foods rich in vitamin A; about 50 percent receive meats, poultry, fish or eggs; one-third of children receive beans or other legumes; and 50 to 55 percent get tubers, roots, or plantains. Only 10 to 15 percent of children get some oils or fats added to their daily diet.

**Micronutrient Supplements.** The importance of adequate intake of vitamin A in mitigating the severity of childhood illnesses, and thereby reducing mortality, is well documented. Supplementing young children and postpartum women with a capsule containing a high dose of vitamin A is an easy way to ensure adequate intake. The 2000 MDHS data show that 65 percent of children under age five received a vitamin A supplement in the six months preceding the survey, and 42 percent of women delivering a baby in the past five years received a vitamin A supplement within two months after the last birth.

The iodine content of salt used in the household was measured in the 2000 MDHS. The results show that 49 percent of children under age five live in households that use salt containing an adequate level of iodine, but this varies from only 22 percent in Machinga District to over 62 percent in Kasungu, Blantyre and Thyolo districts.

**Nutritional Status of Children.** The results show no appreciable change in the nutritional status of children in Malawi since 1992; still, nearly half (49 percent) of the children under age five are chronically malnourished or stunted in their growth. Malawi’s Central Region has especially high levels of stunting. Acute malnutrition or wasting remains at 5 to 6 percent of children under age five in Malawi.

**Malaria Control Programme Indicators**

**Bednets.** The use of insecticide-treated bednets (mosquito nets) is a primary health intervention proven to reduce malaria transmission. The 2000 MDHS found that 13 percent of households own at least 1 bednet, and among these households, the average number of bednets owned is 1.6. Bednet possession is more common in the Northern Region and in households of higher socioeconomic status.

The data also show that 8 percent of women age 15-49, 7 percent of pregnant
women, 8 percent of children under age five, and 6 percent of men age 15-54 slept under a bednet on the night before the survey. (Note: Most of the survey was conducted during the dry season, when bednet use was probably lower than average.)

**Intermittent Antimalarial Treatment during Pregnancy.** In Malawi, as a protective measure against various adverse outcomes of pregnancy, it is recommended that pregnant women receive a dose of sulphapyrimethamine (SP or Fansidar) in the second trimester and then again in the third trimester. The 2000 MDHS findings show that among women who recently gave birth, 68 percent received at least one dose of SP and 29 percent received two doses of SP during the last pregnancy.

**Treatment of Fever in Children Under Age Five.** The survey found that 42 percent of children under age five had a fever in the two weeks preceding the survey. Among febrile children, 35 percent were reported to have been taken to a health facility for treatment and 27 percent of children were given an antimalarial, mostly SP (23 percent). Of those given an antimalarial, 83 percent were given the treatment within zero to one day of the onset of fever.

**Women’s Health**

**Maternal Health Care.** The survey findings indicate that use of antenatal services remains high in Malawi. Ninety-one percent of mothers with births in the last five years received antenatal care from a health professional (doctor, trained nurse or midwife) at least once. In the 1992 MDHS, the figure was 90 percent. For 56 percent of births, mothers visited antenatal services four or more times. Antenatal care can be more effective in avoiding adverse pregnancy outcomes when it is sought early in pregnancy. By the start of the sixth month of pregnancy, 50 percent of pregnant women have not had a single antenatal care visit. The 2000 MDHS also points to a wide disparity in the quality of antenatal services among Malawi’s districts and socioeco-

emonic strata.

Delivery under hygienic conditions and where medical assistance is available decreases the risk of maternal morbidity and mortality. At the national level, 55 percent of births in the five years before the survey were delivered in a health facility. This figure is identical to that reported from the 1992 data. For 7 percent of births occurring outside of a health facility, mothers received a postnatal check on their health.

The survey results indicate that 3 percent of births were delivered by caesarean section (C-section). A C-section rate below 5 percent is generally thought to be a reflection of limited access to maternal health services and potentially life-saving emergency obstetrical care.

**Constraints to Use of Health Services.** Women in the 2000 MDHS were asked whether certain circumstances constrain their access to and use of health services for themselves. By far, the most serious problems women face regarding use of health services involve transportation and cost.

**Nutritional Status of Women.** The 2000 MDHS collected information on the height and weight of all women age 15-49, which allows assessment of the body mass index (BMI), a measure of a woman’s weight relative to her height. The findings point to two important issues in women’s health. First, about 1 in 11 women have a low BMI (too thin), indicating chronic energy (calorie) deficiency, with rural women and women in the Southern Region having the highest prevalence of low BMI. Second, about 1 in 8 women have a very high BMI level, indicating these women are overweight or obese. Nearly 1 in 4 urban women are overweight or obese, which places them at increased risk of cardiovascular disease, pregnancy-related complications, and other health problems.

**Rising Maternal Mortality.** The survey collected data allowing measurement of mater-
nal mortality. For the period 1994-2000, the maternal mortality ratio was estimated at 1,120 maternal deaths per 100,000 live births. This represents a rise from 620 maternal deaths per 100,000 estimated from the 1992 MDHS for the period 1986-1992.

**HIV/AIDS**

**Impact of the Epidemic on Adult Mortality.** All-cause mortality has risen by 76 percent among men and 74 percent among women age 15-49 during the 1990s. The age patterns of the increase are consistent with causes related to HIV/AIDS.

**Improved Knowledge of AIDS Prevention Methods.** The 2000 MDHS results indicate that practical AIDS prevention knowledge has improved since the 1996 MKAPH survey. For example, unprompted awareness that use of condoms prevents HIV transmission has risen from 23 to 55 percent among women and from 47 to 71 percent among men. Generally, knowledge of means to prevent HIV/AIDS is lowest in the young, sexually inexperienced, and rural population.

**Sexual Activity Outside of Marriage.** Among married men, 18 percent reported having had sex with someone other than their wives in the last 12 months. Only 1 percent of married women reported having extramarital sex.

Among unmarried men who have had sex in the last 12 months, about 1 in 4 reported two or more partners. In contrast, only 1 in 20 unmarried women who have had sex in the last 12 months reported more than 1 partner. First sexual activity continues to occur at a young age. The median age of girls at first sex is 17 years; for boys, first sex occurs at 18 years of age. Patterns in the MDHS data suggest that age at first sex is unchanged or slightly rising for girls but falling for boys.

Men in the 2000 MDHS were asked whether they had paid for sex in the last 12 months. The findings indicate that 21 percent of men engage in this high-risk activity, with married men as likely as unmarried men to be involved.

**Condom Use.** One of the main objectives of the National AIDS Control Programme is to encourage consistent and correct use of condoms, especially in high-risk sexual encounters. The 2000 MDHS data show that condom use with extramarital partners has increased slightly since 1996, but that use within marriage has actually declined by a small margin. Among men reporting having had commercial sex (for cash) in the last 12 months, only 35 percent reported using a condom on the last occasion.

**HIV-testing Experience.** The 2000 MDHS data show that 9 percent of women and 15 percent of men have been tested for HIV. However, more than 70 percent of both men and women, while not yet tested, said that they would like to be tested. This represents a very large pool of men and women with an unmet need for HIV-testing services. Knowledge of one’s own HIV status is considered crucial to the adoption of AIDS prevention behaviours and the appropriate responses to mitigate the impact of the epidemic.