

Zambia



**Demographic and
Health Survey**

2001-2002

World Summit for Children Indicators, Zambia 2001-2002

Childhood mortality	Infant mortality rate	95 per 1,000
	Under-five mortality rate	168 per 1,000
	Maternal mortality rate	729 per 100,000
Childhood undernutrition	Percent stunted (children under 5 years)	46.8
	Percent wasted (children under 5 years)	5.0
	Percent underweight (children under 5 years)	28.1
Clean water supply	Percent of households with safe water supply ¹	51.3
Sanitary excreta disposal	Percent of households with flush toilets, pit toilet/latrine	70.2
Basic education	Proportion of children reaching grade 5 ²	87.7
	Net primary school attendance rate ²	67.1
	Proportion of children entering primary school ²	25.7
Family planning	Contraceptive prevalence rate (any method, currently married women)	34.2
	Contraceptive prevalence rate (any method, all women)	24.6
Antenatal care	Percent of women who received antenatal care from a health professional ³	93.4
Delivery care	Percent of births in the 5 years preceding the survey attended by a health professional	43.4
Low birth weight	Percent of births in the 5 years preceding the survey at low birth weight ⁴	10.7
Iodised salt intake	Percent of households that use iodised salt ⁵	79.8
Vitamin A supplements	Percent of children age 6-59 months who received a vitamin A dose in the 6 months preceding the survey	67.4
	Percent of women age 15-49 who received a vitamin A dose in the 2 months after delivery ³	27.5
Exclusive breastfeeding	Percent of youngest children under 6 months who are exclusively breastfed	40.1
Continued breastfeeding	Percent of children age 12-15 months still breastfeeding	96.8
	Percent of children age 20-23 months still breastfeeding	55.5
Timely complementary feeding	Percent of youngest children age 6-9 months receiving breast milk and complementary foods	87.4
Vaccinations	Percent of children age 12-23 months with BCG vaccination	94.0
	Percent of children age 12-23 months with at least 3 DPT vaccinations	80.0
	Percent of children age 12-23 months with at least 3 polio vaccinations	80.2
	Percent of children age 12-23 months with measles vaccination	84.4
	Percent of mothers who received at least 2 tetanus toxoid vaccinations during pregnancy ³	26.7
Oral rehydration therapy (ORT)	Percent of children age 0-59 months with diarrhoea in the 2 weeks preceding the survey who received oral rehydration salts (ORS)	53.2
Home management of diarrhoea	Percent of children age 0-59 months with diarrhoea in the 2 weeks preceding the interview who took more fluids than usual and continued eating somewhat less, the same or more food	28.3
Treatment of ARI		69.1
	Percent of children age 0-59 months with acute respiratory infection (ARI) in the 2 weeks preceding the survey who were taken to a health provider	
Treatment of illness		60.3
	Percent of children age 0-59 months with diarrhea, fever and/or ARI in the two weeks preceding the survey who were taken to a health provider	
Children in especially difficult situations		16.2
	Percent of children with at least one parent dead ²	15.0
	Percent of children who do not live with either biological parent ²	9.8
Use of impregnated bednets		
	Percentage of children 0-59 months who slept under an impregnated bednet on the previous night ⁶	
Malaria treatment		51.9
	Percent of children age 0-59 months with a fever in the 2 weeks preceding the survey who were treated with an anti-malarial drug	
HIV/AIDS		66.3
		43.3
	Percent of women age 15-49 who correctly stated 2 ways of avoiding HIV infection ⁷	
	Percent of women age 15-49 who correctly identified 2 misconceptions about HIV/AIDS ⁸	55.4
	Percent of women age 15-49 who believe that AIDS can be transmitted from mother to child during pregnancy, delivery and breastfeeding	64.4
	Percent of women age 15-49 who know of a place to get tested for the AIDS virus	9.4
	Percent of women age 15-49 who have been tested for the AIDS virus	

¹Piped water or protected well water

²Based on de jure children

³For the last live birth in the five years preceding the survey

⁴For children without a reported birth weight, the proportion with low birth weight is assumed to be the same as the proportion with low birth weight in each birth size category among children who have a reported birth weight.

⁵15 parts per million or more

⁶Refers to ever-impregnated bednets

⁷Having sex with only one partner who has no other partners and using a condom every time they have sex

⁸They say that AIDS cannot be transmitted through mosquito bites and that a healthy-looking person can have the AIDS virus.

Zambia

Demographic and Health Survey

2001-2002

Central Statistical Office
Lusaka, Zambia

Central Board of Health
Lusaka, Zambia

ORC Macro
Calverton, Maryland, USA

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Central
Statistical Office



Central Board
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ORC Macro

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Additional information about the ZDHS may be obtained from the Central Statistical Office, P.O. Box 31908, Lusaka, Tel: 260-1-251377/85; fax: 260-1253468. Additional information about the MEASURE *DHS*+ project may be obtained by contacting: MEASURE *DHS*+, ORC Macro, 11785 Beltsville Drive, Suite 300, Calverton, MD 20705 (telephone 301-572-0200; fax 301-572-0999; e-mail: reports@macroint.com; internet: www.measuredhs.com).

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PREFACE

The Zambia Demographic and Health Surveys is an important part of the surveillance system providing indicators for the strategic management and monitoring of the health sector in Zambia. Indicators from the surveys show the current status and trends in important areas of health care delivery such as environmental health, reproductive health, maternal health, child health, sexually transmitted infections and HIV/AIDS. The surveys are also a major source of information about health seeking behaviour regarding individuals and communities. Fertility and mortality indicators, which gauge the overall health status of the population are also provided by the surveys.

Three Demographic and Health Surveys have been carried out in Zambia, the first in 1992, the second in 1996, and the most recent in 2001-2002. Institutional collaboration has been the hallmark of the implementation of these surveys. As in the previous surveys, the Central Board of Health mobilised resources for the 2001-2002 ZDHS while the Central Statistical Office played the key role in the implementation of the survey. Other participating institutions were the Tropical Diseases Research Centre, which was in charge of syphilis and HIV testing; the University Teaching Hospital, which made important contributions towards the development of the syphilis and HIV testing protocol; the National Food and Nutrition Commission, which was responsible for the nutrition components; and the University of Zambia Demography Division, which assisted with the training of field staff.

Key people in the implementation of the 2001-2002 ZDHS were Mr David Diangamo, Director of Census and Statistics; Dr Musonda Rosemary Sunkutu, Director of Public Health and Research in the Central Board of Health; Mr Bornwell Sikateyo, Manager for Health Management Information Systems in the Central Board of Health; Mr Kumbutso Dzekedzeke, Survey Co-ordinator from the Central Statistical Office; Mr Patrick Mumba Chewa, Assistant Survey Co-ordinator from the Central Statistical Office; Dr Rosemary Musonda, Deputy Director at the Tropical Diseases Research Centre; and Ms Arlinda Zhuzhuni, Project Manager from ORC Macro.

A number of donors contributed towards the survey costs. The Government of Japan provided vehicles for the survey teams in addition to providing financial support for other components of the survey. Part of the support from the Government of Japan was channelled through the United Nations Development Programme. Other donors who contributed were the U.S. Agency for International Development, which provided financial and technical support through ORC Macro, the United Nations Population Fund, and the Danish Agency for International Development.

We owe an immense gratitude to the Field Coordinators, Interviewers, Nurse/Nurse Counsellors, Laboratory Technicians, Supervisors, Field Editors, Provincial Statistical Officers, and Drivers for their hard work and dedication. We have printed a list of names in Appendix D as a sign of our appreciation for their help and kindness. We are also grateful to all the respondents for their patience and generosity with their time.

It will only be worth the effort to have compiled all the indicators in this report if stakeholders in the health sector use them to improve health care delivery and efforts to prevent the spread of HIV and other infectious diseases in Zambia.



Dr. Ben U. Chirwa
Director General
Central Board of Health

SUMMARY OF FINDINGS

The 2001-2002 Zambia Demographic and Health Survey (ZDHS) was carried out by the Central Statistical Office and the Central Board of Health. It is a nationally representative sample of 7,658 women age 15-49 and 2,145 men age 15-59. The principal objective of the survey was to provide data to policymakers and planners on the population and health situation in Zambia. Most of the information collected in the 2001-2002 ZDHS represents updated estimates of basic demographic and health indicators covered in the 1992 ZDHS and 1996 ZDHS surveys. Specifically, the 2001-2002 ZDHS collected detailed information on fertility and family planning, child mortality and maternal mortality, maternal and child health and nutritional status, and knowledge, awareness and behaviour regarding HIV/AIDS and other sexually transmitted infections. New features of the 2001-2002 ZDHS include the collection of information on violence against women and testing of individuals for HIV and syphilis.

FERTILITY

Survey results indicate that the total fertility rate (TFR) in Zambia is 5.9. This means that at current fertility levels, the average Zambian woman who is at the beginning of her childbearing years will give birth to 5.9 children by the end of her reproductive period. Results from the 2001-2002 ZDHS show that fertility is highest in Northern province (6.9 births per woman) and lowest in Lusaka (4.3 births per woman). Education has a marked effect on fertility, with uneducated women having three and one-half more births than women with at least some secondary education (7.4 births versus 3.9 births).

Zambia's fertility continues to decline although comparatively slowly. The TFR has declined from a level of 6.5 births per woman in 1992 and 6.1 births per woman in 1996 to the current level of 5.9. Despite the decline, fertility in Zambia remains one of the highest in sub-Saharan Africa.

A drop in urban childbearing is the principal reason for overall decline in fertility levels. Between the 1992 and 2001-2002 surveys, the urban TFR fell by 1.5 births, from a rate of 5.8 to 4.3 births per woman. In contrast, the rural TFR remained essentially stable over this period (7.1 and 6.9 births per woman, respectively). Women who have at least some secondary education experienced a steady decline in fertility, with the TFR for such women dropping by one birth over the period covered by the three ZDHS surveys.

The length of the interval between births influences the overall fertility level, as well as the health status of the mother and child. There is now a new international consensus that the optimal interval between births is at least 36 months. In Zambia, 41 percent of births occur at least 36 months after a previous birth. Although 16 percent of births occur less than 24 months after a previous birth, this is an improvement from 1996 when almost one in five births (19 percent) occurred less than two years after a previous birth. The median birth interval is 33 months, 3 months shorter than the "safe" birth interval. This represents a one-month increase from the 1996 ZDHS median birth interval (32 months).

Childbearing begins early in Zambia. By age 18 almost half of women age 45-49 have had their first birth. Most women typically become mothers before the age of 20, with 60 to 70 percent of women in all age groups having given birth by that age. The median age at first birth for women age 25-49 is 18.7 years. Three in ten teenage women (age 15-19) have begun childbearing, with 26 percent having had a child and 6 percent pregnant with their first child.

A comparison of the data from the 1996 and 2001-2002 ZDHS surveys indicates that there has been an increase in the median duration of postpartum amenorrhoea from 11.5 months to 13.3 months. There has been little change in the median duration of sexual abstinence or insusceptibility to the risk of pregnancy following childbirth.

FAMILY PLANNING

Knowledge of contraceptive methods is almost universal in Zambia, with 98 percent of all women and men knowing at least one method of family planning. The male condom and the pill are the most widely known methods among both women and men. Knowledge of family planning methods has increased steadily over the last decade. For example, knowledge of at least one contraceptive method has increased among women from 89 percent in 1992 to 96 percent in 1996 to the current level of 98 percent. Since 1996, the mean number of family planning methods known has increased from 5.3 to 6.8 for women and from 5.0 to 6.1 for men.

Mass media are important sources of information on family planning. Almost half of women (49 percent) and six in ten men (62 percent) have heard or seen a family planning message on the radio, television or in a newspaper/magazine. Radio is the most frequent source of family planning messages for both women (46 percent) and men (57 percent).

The 2001-2002 ZDHS data indicate that 70 percent of currently married women and 81 percent of currently married men have used a family planning method at least once in their lifetime. There is a noticeable discrepancy between ever use and current use, with slightly more than one-third of currently married women (34 percent) currently using some method of contraception. Modern methods of contraception are more commonly used than traditional methods; almost one-fourth of currently married women use modern methods (23 percent) compared with about one in ten who use traditional methods (12 percent). The pill is the most widely used modern method (12 percent), while withdrawal is the most popular traditional method (5 percent).

Six in ten women currently using modern methods obtain their method from the public sector (61 percent), 20 percent from the private medical sector, and 17 percent from other sources such as shops and community-based agents.

Contraceptive use in Zambia has increased over the past decade from 15 percent in

1992 to 26 percent in 1996 and 34 percent in 2001-2002. Considering specific methods, the largest gains in use during the ten-year period are observed for contraceptive pills and injectables.

The large majority of currently married women who know of family planning approve of its use (87 percent). Moreover, two-thirds of married women who know of a contraception method believe their husband approves of family planning.

The majority of currently married women (71 percent) and currently married men (58 percent) either want to space their next child or want no more children, and thus have a potential need for family planning. In Zambia, almost one in three currently married women has an unmet need for family planning (27 percent) – 17 percent for spacing their next birth and 11 percent for limiting births. If the unmet need for family planning of all currently married women who say they want to space or limit their births were met, the contraceptive prevalence rate in Zambia would increase from 34 to 62 percent.

MATERNAL HEALTH

Use of professional maternity care is common in Zambia: more than nine in ten mothers who had a live birth in the five years preceding the survey received antenatal care from a health professional; only 2 percent received antenatal care from a traditional birth attendant or other person. Almost three-quarters of these women had four or more antenatal care visits during their pregnancy (72 percent).

Among mothers who received antenatal care, over three-fourths were given at least one tetanus toxoid injection during pregnancy for their most recent birth (75 percent). Over the past 10 years, there has been a decrease in the proportion of women who received at least one tetanus toxoid injection during their most recent pregnancy, from 81 percent in 1992 and 85 percent in 1996 to the current level of 75 percent. The 2001-2002 ZDHS data show that seven in ten mothers receive iron tablets, syrup or folic acid during pregnancy. Ninety-four percent of mothers have their height measured during antenatal care visits, while 25 percent are weighed. Eighty-seven percent of mothers had their blood pressure measured during their antenatal care, and urine and blood sampling was done for 25 and 44 percent of mothers, respectively.

The 2001-2002 ZDHS results show that slightly more than four in ten births are delivered in a health facility. A similar proportion are delivered by a health professional: 39 percent by a nurse/midwife and the remaining 5 percent by a doctor or clinical officer. Almost four in ten births are delivered with assistance from a relative or friend. A comparison between the three ZDHS surveys shows a steady decline in the proportion of births that are delivered in a health facility, from 51 percent in 1992 and 47 percent in 1996 to the current level of 44 percent.

Postnatal care is not common in Zambia. Less than one in four women who deliver outside a health facility receive postnatal care (23 percent).

The 2001-2002 ZDHS collected data allowing measurement of maternal mortality. The maternal mortality ratio during the seven-year period prior to the 2001-2002 ZDHS was estimated at 729 maternal deaths per 100,000 live births. This represents a rise from 649 maternal deaths per 1000,000 live births estimated from the 1996 ZDHS.

CHILD HEALTH

At current mortality levels, one in six Zambian children die before the fifth birthday, (under-five mortality rate of 168 deaths per 1,000 birth), with slightly more than half of these deaths occurring during the first year of life (infant mortality rate of 95 deaths per 1,000 births). A comparison of the three ZDHS surveys, however, shows that mortality among young children has declined from the fairly stable levels observed in the late 1980s and early to mid-1990s. Infant mortality, which had shown a modest increase from 107 to 109 deaths per 1,000 births between the 1992 and 1996 surveys, fell to 95 deaths per 1,000 births in the 2001-2002 ZDHS. Under-five mortality is 15 percent lower now than it was five to nine years ago, with the pace of decline very similar to the decline in infant mortality over the same time period (13 percent).

Early childhood mortality is consistently lower in urban areas than in rural areas. Maternal education is strongly correlated with childhood mortality. Infant mortality is 32 percent

lower and under-five mortality 48 percent lower among mothers with some secondary education than among uneducated mothers.

Survival of children is strongly associated with proper immunisation and treatment of childhood illnesses. According to the World Health Organization, a child is considered fully vaccinated if he or she has received a BCG vaccine, three doses of DPT vaccine, at least three doses of polio vaccine, and one dose of measles vaccine. Only 57 percent of Zambian children are fully vaccinated by 12 months of age; however, 70 percent of children 12-23 months are fully vaccinated, with only 3 percent of children not having received any vaccine.

Looking at coverage for specific vaccines, 94 percent of children 12-23 months received the BCG vaccine, 84 percent received measles vaccine, and 80 percent received the recommended three doses of DPT and polio vaccines.

Comparing the three ZDHS surveys, there was a substantial rise in vaccination coverage in the early to mid-1990s. In contrast, between 1996 and 2001-2002, there was an 11 percent decline in the proportion of children 12-23 months who are fully immunised.

Vitamin A is a micronutrient found in very small quantities in some foods. It is considered essential for normal sight, growth, and development. Zambia has recently introduced a programme of vitamin A supplementation for children 6 to 72 months through health services and community campaigns. Data from the 2001-2002 ZDHS show that two-thirds of children 6-59 months are reported to have received a vitamin A supplement in the previous 6 months.

Fifteen percent of children under five years of age had symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey. Seven out of ten children with ARI symptoms were taken to a health facility or provider for treatment.

Forty-three percent of children under five were reported to have been ill with fever and/or convulsions in the two-week period preceding the survey. Among these children, more than half took antimalarial drugs (52 percent) and almost four in ten took antimalarial drugs the same or next day (37 percent).

According to mothers' reports, around 20 percent of children under age five had diarrhoea at some time in the two weeks before the survey. Slightly more than four in ten children who were ill with diarrhoea were taken to a health facility (43 percent). Mothers reported that almost two-thirds of children with diarrhoea (67 percent) were treated with some form of oral rehydration therapy; more than half (53 percent) were given a solution prepared with oral rehydration salts (ORS); and four in ten were given increased fluids. Twenty-one percent of children with diarrhoea did not receive any type of treatment.

BREASTFEEDING AND NUTRITION

Breastfeeding is nearly universal in Zambia: 98 percent of children born in the five years preceding the survey were breastfed. More than half of infants are put to breast within an hour of delivery and 90 percent are breastfed within the first day. The median duration of breastfeeding is 21 months, a slight increase from 1996 (20 months).

Despite the high prevalence of breastfeeding in Zambia, the majority of infants are not exclusively breastfed for the first six months of life. Only four in ten infants under 6 months of age are exclusively breastfed in Zambia. Complementary feedings starts early; more than one-third of children under 6 months of age are given complementary foods.

According to the 2001-2002 ZDHS findings, the level of malnutrition among children under five is significant, with almost half of Zambian children (47 percent) stunted (short for their age), 5 percent wasted (thin for their age), and more than one-fourth underweight (28 percent). Generally, children who live in rural areas and children of uneducated mothers are more likely to be malnourished than other children.

The nutritional status of women is another issue of importance. The mean height of Zambian women is 158 cm. Only 2 percent of women are shorter than the critical height of 145 cm. Fifteen percent of women fall below the cut-off of 18.5 for the body mass index (BMI) - an indicator used to measure the level of chronic energy deficiency among adults. In general, very

young women (age 15-19) and rural women are more likely than other women to suffer from chronic energy deficiency.

WOMEN'S STATUS AND VIOLENCE AGAINST WOMEN

The 2001-2002 ZDHS provides information on the status of women in Zambia, and on physical and sexual violence against women. Overall, more than one in ten women age 15-49 have no education (12 percent) and women are generally less educated than men. Four in ten women in Zambia are illiterate.

More than half of women were working at the time of the survey (55 percent). Most women work seasonally (53 percent). Agriculture is the predominant sector of the economy, employing 54 percent of women in the 12 months preceding the survey. Forty-two percent of all working women in Zambia are either paid in kind or not paid at all. Women working in the non-agricultural sector are more likely to earn cash than women working in agriculture. Among currently married women who earn cash for their work, 41 percent report that they alone make decisions about how their earnings will be used and 32 percent report that they decide jointly with their husband.

Women in the 2001-2002 ZDHS were asked about their beliefs on wife-beating. A large majority of women (85 percent) believe that a husband is justified in beating his wife for at least one reason. Almost eight in ten women believe that a husband is justified in beating his wife if she goes out with another man. A slightly smaller proportion agree that if a woman neglects her children (61 percent), or argues with her husband (52 percent), then he is justified in beating her.

The 2001-2002 ZDHS found that more than half of women report having experienced beatings or physical mistreatment since the age of 15, and almost one in four women (24 percent) experienced physical violence in the 12 months preceding the survey. Among physically abused women currently in union, almost eight in ten report their current husband/partner as a perpetrator of the violence, while among never-married women who experienced physical abuse, the mother or father is the most commonly reported perpetrator (35 percent).

Overall, 15 percent of women report having experienced sexual violence by a man and 8 percent reported such experience in the 12 months preceding the survey. Among ever-married women who ever experienced sexual violence, the current husband/partner is reportedly the most common perpetrator of such violence (37 percent). More than four in ten never-married women report their current boyfriend as the perpetrator of sexual violence.

HIV/AIDS AND STI-RELATED KNOWLEDGE AND BEHAVIOUR

General awareness of HIV/AIDS is nearly universal among men and women of reproductive age in Zambia. A large majority of respondents (79 percent of women and 76 percent of men) know someone personally who has HIV/AIDS or has died of AIDS.

Given the high levels of HIV/AIDS awareness, it is not surprising that 78 percent of women and 86 percent of men know two or more effective ways to avoid HIV infection. More specifically, 72 percent of women and 79 percent of men mention the use of the condom as a specific way to avoid HIV infection, while 82 percent of women and 86 percent of men mention limiting the number of sexual partners/staying faithful to one partner – all of which are considered to be programmatically important ways of avoiding HIV/AIDS. Respondents who live in urban areas and those with more education are more likely to know about HIV/AIDS and ways to avoid getting infected with HIV.

Knowledge of ways that HIV can be transmitted is important in preventing the spread of the disease in a population. Most women recognize that the HIV virus can be transmitted from a mother to a child during pregnancy (79 percent), during delivery (65 percent), and by breastfeeding (71 percent). Almost eight in ten women and men know that a healthy-looking person can have the AIDS virus.

Overall, only 9 percent of women and 14 percent of men have been tested for HIV. The more educated women and men and those living in urban areas are more likely to have been tested for HIV than other respondents. Roughly

two-thirds of women and men who have not been tested for AIDS say they want to be tested.

One in ten women and men do not know of any sexually transmitted infections (STIs) other than HIV. Only 3 percent of women and 5 percent of men who have ever had sex reported having an STI or symptoms associated with an STI in the 12 months before the survey. More than half of women and men who had an STI in the 12 months preceding the survey sought advice or treatment from a clinic, hospital, or private doctor. Twenty-two percent of women and 32 percent of men with an STI or associated symptoms did not inform their partner, and one in three women and men with an STI took no action to protect their partner.

SYPHILIS AND HIV TESTING

The 2001-2002 ZDHS was the first nationally representative survey in Zambia to include voluntary syphilis and HIV testing. Syphilis test results were linked to the ZDHS interview data with precautions taken to ensure confidentiality of the respondents. HIV testing was carried out anonymously and the test results could not be linked to the respondent's individual information, except for age, sex, residence (urban-rural), and province.

Overall, 6 percent of women and 8 percent of men age 15-49 in Zambia tested positive for syphilis. The syphilis prevalence rate is slightly higher among urban residents of Copperbelt and Lusaka than among those living in rural areas and other provinces. Sixty-three percent of men and 28 percent of women who were found to be syphilis positive have used a condom at some time in their life.

The 2001-2002 ZDHS data on HIV testing found that of the individuals tested, 16 percent were HIV positive. Women are more likely to be HIV-positive than men (18 percent and 13 percent, respectively). Overall, the proportion HIV-positive rises with age from a level of 5 percent among respondents 15-19 to 25 percent among those 30-34, before dropping to 17 percent among those age 45-49. HIV prevalence is more than twice as high in urban areas as in rural areas (23 percent and 11 percent, respectively).

ZAMBIA

