

**Lesotho
Demographic
and Health
Survey
2004**

**Preliminary
Report**

**Ministry of Health and Social Welfare
Maseru, Lesotho**

**Bureau of Statistics
Maseru, Lesotho**

**MEASURE DHS
ORC Macro**

The 2004 Lesotho Demographic and Health Survey (2004 LDHS) is part of the worldwide MEASURE DHS project which is funded by Government of Lesotho, Development Cooperation Ireland (DCI), World Bank, UNICEF, DFID, WHO, and USAID's Regional HIV/AIDS Program (USAID/RHAP). Additional information about the 2004 LDHS may be obtained from the Ministry of Health and Social Welfare, address. P.O. Box 514, Maseru 100, Lesotho, Southern Africa, Telephone +266-22317707 or +266-22324561, Fax +266-22311014 and the Bureau of Statistics, address P.O. Box 455, Maseru, Lesotho, Southern Africa, Telephone +266-22323852, Fax +266-22310177.

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I. INTRODUCTION

The 2004 Lesotho Demographic and Health Survey (2004 LDHS) was carried out by the Ministry of Health and Social Welfare (MOHSW) and the Bureau of Statistics (BOS) from 28 September 2004 to 18 January 2005 on a nationally representative sample of more than 9,000 households. All women age 15-49 in these households and all men age 15-59 in a subsample of half of the households were individually interviewed. In addition to the data collected through interviews from women and men, blood samples were collected from women age 15-49 years, men age 15-59 years, and children under age 6 in the subsample of households selected for the male survey. The blood samples of women, men, and children were tested in the field for anaemia. In addition, the blood samples of women and men were tested for the Human Immunodeficiency Virus (HIV) at the Lesotho Blood Transfusion Services.

The 2004 LDHS is designed to provide data to monitor the population and health situation in Lesotho. Specifically, the 2004 LDHS collected information on household characteristics, emigration, fertility levels and preferences, awareness and use of family planning methods, childhood mortality, maternal and child health, breastfeeding practices, nutritional status of women and young children, sexual activity, and awareness and behaviour regarding AIDS, other sexually transmitted infections, and tuberculosis in Lesotho.

This preliminary report presents selected results of the 2004 LDHS. A comprehensive analysis of the data will be published in a few months. While considered provisional, the results presented here are not expected to differ significantly from those to be presented in the final report.

II. SURVEY IMPLEMENTATION

A. Sample Design

The sample for the 2004 LDHS covered the population residing in households in the country. A representative probability sample of more than 9,000 households was selected for the 2004 LDHS sample. This sample was constructed to allow for separate estimates for key indicators for each of the ten districts in Lesotho, as well as for urban and rural areas separately.

The survey utilized a two-stage sample design. In the first stage, 405 clusters (109 in the urban and 296 in the rural areas) were selected from a list of enumeration areas from the 1996 Population Census frame. In the second stage, a complete listing of households was carried out in each selected cluster. Households were then systematically selected for participation in the survey.

All women age 15-49 who were either permanent residents of the households in the 2004 LDHS sample or visitors present in the household on the night before the survey were eligible to be interviewed. In addition, in every second household selected for the survey, all men aged 15-59 years were eligible to be interviewed if they were either permanent residents or visitors present in the household on the night before the survey. In the households selected for the men's survey, height and weight measurements were taken for eligible women and children under age 6. Additionally, eligible women, men, and children under age 6 were tested in the field for anaemia, and eligible women and men were asked for an additional blood sample for anonymous testing for HIV.

B. Questionnaires

Three questionnaires were used for the 2004 LDHS: the Household Questionnaire, the Women's Questionnaire, and the Men's Questionnaire. To reflect relevant issues in population and health in Lesotho, the questionnaires were adapted during a series of technical meetings with various stakeholders from government ministries and agencies, nongovernmental organizations and international donors. The final draft of the questionnaire was discussed at a large meeting of the LDHS Technical Committee organized by the MOHSW and BOS. The adapted questionnaires were translated from English into Sesotho and pretested during June 2004.

The Household Questionnaire was used to list all the usual members and visitors in the selected households. The main purpose of the Household Questionnaire was to identify women and men who were eligible for the individual interview. Some basic information was also collected on the characteristics of each person listed, including age, sex, education, residence and emigration, and relationship to the head of the household. For children under 18, survival status of the parents was determined. In addition, the Household Questionnaire collected information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, materials used for the floor of the house, ownership of various durable goods, and access to health facilities. Furthermore, for households selected for the male survey subsample, this questionnaire was used to record height, weight for women and children, and haemoglobin measurements of women, men and children, and the respondents' consent to volunteer to give blood samples for HIV. The HIV testing procedures are discussed in detail in the next section.

The Women's Questionnaire was used to collect information from all women age 15-49. These women were asked questions on the following topics:

- Background characteristics (education, residential history, media exposure, etc.)
- Birth history and childhood mortality
- Knowledge and use of family planning methods
- Fertility preferences

- Antenatal and delivery care
- Breastfeeding and infant feeding practices
- Vaccinations and childhood illnesses
- Marriage and sexual activity
- Woman's work and husband's background characteristics
- Awareness and behaviour regarding AIDS, other sexually transmitted infections (STIs), and Tuberculosis (TB)
- Maternal mortality

The Men's Questionnaire was administered to all men age 15-59 living in every other household in the 2004 LDHS sample. The Men's Questionnaire collected much of the same information found in the Women's Questionnaire, but was shorter because it did not contain a detailed reproductive history or questions on maternal and child health, nutrition, and maternal mortality. Geographic coordinates were also collected for each EA in the 2004 LDHS.

C. Training of Field Staff

Eighty-two people (about half women and half men) were recruited by the MOHSW and BOS to serve as supervisors, field editors, male and female interviewers, and reserves. They all participated in the main interviewer training, which began on 16 August in Roma and lasted for a period of about four weeks. The trainees came from the Bureau of Statistics (BOS) and the Ministry of Health and Social Welfare (MOHSW) from both the central and district level. Most of the participants from the BOS have had prior experience as interviewers in other surveys, while most of the participants from the MOHSW have had experience with blood collection and HIV/AIDS testing and counselling.

The training was conducted mainly in English and included lectures, presentations, practical demonstrations, and practice interviewing in small groups. The training included two days of field practice. The participants also received training relating to height and weight measurements, haemoglobin testing, and blood collection for HIV. The trainers were officers of BOS and MOHSW as well as staff from ORC Macro. In addition to the main trainers, guest lecturers gave presentations in plenary sessions on specialised topics, such as family planning, nutrition, maternal and child health, and HIV/AIDS.

Towards the end of the training course, some interviewers were selected as supervisors and field editors. This group was further trained on how to supervise fieldwork and editing of the questionnaires in the field, as well as on GPS reading.

D. Fieldwork

Data collection began on 28 September 2004 by 12 data collection teams comprised of one supervisor, one field editor, three female interviewers and one male interviewer (with the exception of 2 teams that have two female interviewers and two male interviewers). Fieldwork was completed on 18 January 2005. Fieldwork supervision was coordinated at MOHSW and BOS headquarters; three teams of Regional Coordinators consisting of one representative from the MOHSW and one from the BOS in each team periodically visited the field teams to review their work and monitor data quality. Additionally, close contact between MOHSW and BOS headquarters and the field teams was maintained through mobile phones.

E. Data Processing

The processing of the 2004 LDHS results began shortly after the fieldwork commenced. Completed questionnaires were returned periodically from the field to BOS headquarters, where they were entered and edited by data processing personnel who were specially trained for this task. The data processing personnel included two supervisors, two questionnaire administrators/office editors

who ensured that the expected number of questionnaires from all clusters were received, 16 data entry operators, and two secondary editors. The concurrent processing of the data was an advantage since BOS was able to advise field teams of problems detected during the data entry. In particular, tables were generated to check various data quality parameters. As a result, specific feedback was given to the teams to improve performance. The data entry and editing phase of the survey was completed in May 2005.

III. PRELIMINARY FINDINGS

A. Response Rates

Table 1 shows household and individual response rates for the 2004 LDHS. A total of 9,900 households were selected for the sample, of which 9,025 were found to be occupied during data collection. Of the 9,025 existing households, 8,592 were successfully interviewed, yielding a household response rate of 95 percent.

In these households, 7,522 women were identified as eligible for the individual interview. Interviews were completed with 94 percent of them. Of the 3,305 eligible men identified, 85 percent were successfully interviewed. The response rate for urban women and men is somewhat higher than for rural respondents (96 percent compared with 94 percent for women and 88 percent compared with 84 percent for men).

B. Characteristics of Respondents

The distribution of women age 15-49 and men age 15-59 by background characteristics is shown in Table 2. The proportions of women and men decline with increasing age, which reflects the young age structure of the Lesotho population.

More than half of the women (52 percent) are currently married or living together as are four in ten men (42 percent). The 2004 LDHS results show that 51 percent of men in the sample have never been married as opposed to 33 percent of women. These findings are in line with the 2001 LDS that shows men in Lesotho tend to marry later in life than women. 2004 LDHS data show that about one in four women (26 percent) and men (27 percent) live in Maseru. Only 3 percent of women and 4 percent of men who participated in the 2004 LDHS live in Qacha's Nek. Furthermore, women are somewhat more likely than men to have been divorced, separated or widowed.

More than half of all respondents reported that they have completed at least primary school. Additionally, four in ten women and about three in ten men have attended secondary school or higher. In general, women are more advantaged in terms of educational attainment. For example, only 2 percent of women have no education compared with 17 percent of men.

The majority of the Lesotho population are Roman Catholic (45 percent of women and 47 percent of men), followed by Lesotho Evangelical Church (20 percent of women and 22 percent of men).

Table 1 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence, Lesotho 2004

Result	Residence		Total
	Urban	Rural	
Household interviews			
Households selected	2,743	7,160	9,903
Households occupied	2,498	6,527	9,025
Households interviewed	2,235	6,357	8,592
Household response rate	89.5	97.4	95.2
Individual interviews: women			
Number of eligible women	2,030	5,492	7,522
Number of eligible women interviewed	1,945	5,150	7,095
Eligible women response rate	95.8	93.8	94.3
Individual interviews: men			
Number of eligible men	791	2,514	3,305
Number of eligible men interviewed	694	2,103	2,797
Eligible men response rate	87.7	83.7	84.6

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Table 2 Background characteristics of respondents

Percent distribution of women and men by background characteristics, Lesotho 2004

Background characteristics	Women			Men		
	Weighted percent	Weighted number	Unweighted number	Weighted percent	Weighted number	Unweighted number
Age						
15-19	24.1	1,708	1,760	26.6	743	752
20-24	20.6	1,463	1,456	18.1	507	508
25-29	14.7	1,043	1,025	13.4	374	367
30-34	11.5	815	805	10.9	305	306
35-39	10.3	728	740	8.3	233	226
40-44	10.4	741	713	5.9	164	163
45-49	8.4	592	591	6.1	170	173
50-54	na	na	na	5.9	164	165
55-59	na	na	na	4.9	137	137
Marital status						
Never married	33.4	2,371	2,357	50.7	1,419	1,403
Married/living together	52.3	3,706	3,722	42.6	1,191	1,207
Divorced/separated	5.7	401	382	4.5	126	122
Widowed	8.6	613	629	2.2	60	64
Residence						
Urban	23.7	1,682	1,944	21.5	603	694
Rural	76.3	5,410	5,146	78.5	2,194	2,103
Ecological zone						
Lowlands	60.6	4,297	3,116	62.0	1,734	1,248
Foothills	11.1	786	998	11.0	307	392
Mountains	22.2	1,571	2,272	20.9	585	877
Senqu River Valley	6.2	437	704	6.1	171	280
District						
Butha-Buthe	6.4	457	772	6.5	182	304
Leribe	15.0	1,065	845	14.1	393	297
Berea	10.9	775	684	12.5	350	330
Maseru	26.3	1,867	1,058	26.5	741	405
Mafeteng	10.6	753	708	10.6	297	285
Mohale's Hoek	9.6	684	803	10.1	281	331
Quthing	6.5	461	574	6.0	167	200
Qacha's Nek	3.3	233	497	3.6	99	213
Mokhotlong	5.1	360	605	4.6	130	238
Thaba-Tseka	6.1	435	544	5.6	156	194
Education						
No education	2.1	145	169	17.1	479	549
Primary incomplete	30.1	2,135	2,243	42.7	1,194	1,165
Primary complete	27.6	1,957	1,962	12.6	352	347
Secondary+	40.2	2,854	2,716	27.6	773	736
Religion						
Roman Catholic Church	44.9	3,183	3,149	46.5	1,300	1,257
Lesotho Evangelical Church	20.3	1,442	1,377	21.6	605	561
Anglican Church	9.7	691	675	9.1	253	264
Other Christian	24.0	1,704	1,813	16.9	473	525
No religion	0.7	52	60	5.6	158	182
Total	100.0	7,091	7,090	100.0	2,797	2,797

Note: Education categories refer to the highest level of education attended, whether or not that level was completed.

na = Not applicable

C. Fertility

Fertility data were collected in the 2004 LDHS by asking each of the women interviewed for a history of her births. The information obtained on each of the woman's births included the month and year of the birth. These data are used to calculate two of the most widely used measures of current fertility, the total fertility rate (TFR) and its component age-specific fertility rates. The TFR, which is the sum of the age-specific fertility rates, is interpreted as the number of children the average woman would bear in her lifetime if she experienced the currently observed age-specific fertility rates throughout her reproductive years.

According to the results of the 2004 LDHS, the TFR is 3.5 (Table 3). Urban-rural differentials are large. On average, rural women will give birth to approximately two more children during their reproductive years than urban women (4.1 versus 1.9). The results also show that urban-rural differences in childbearing rates are evident for all age groups. The absolute difference is especially large in the 20-24 age group. The rate among rural women in this age cohort is 206 births per thousand women, compared to an urban rate of 98 births per thousand.

Table 3 Current Fertility

Age-specific and cumulative fertility rates, the general fertility rate, and the crude birth rate for the three years preceding the survey, by urban-rural residence, Lesotho 2004

Age group	Residence		Total
	Urban	Rural	
15-19	45	103	91
20-24	98	206	177
25-29	92	190	160
30-34	66	142	122
35-39	51	118	101
40-44	33	50	46
45-49	0	11	9
TFR	1.9	4.1	3.5
GFR	69	138	121
CBR	19.3	26.6	25.2

Note: Rates for age group 45-49 may be slightly biased due to truncation.

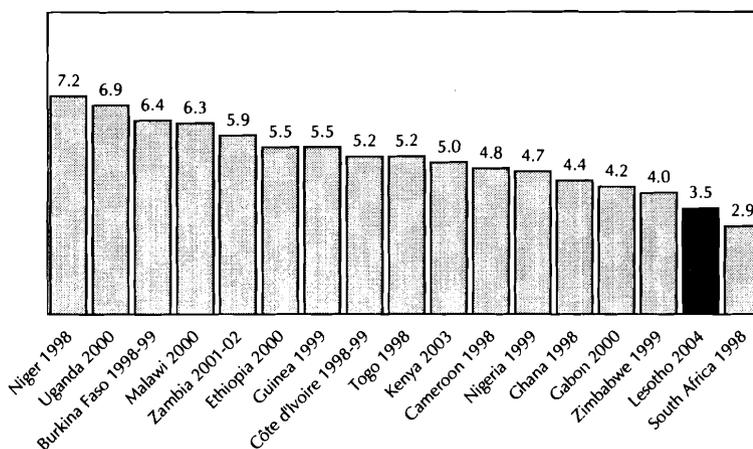
TFR: Total fertility rate for ages 15-49, expressed per woman

GFR: General fertility rate (births divided by the number of women age 15-44), expressed per 1,000 women

CBR: Crude birth rate, expressed per 1,000 population

As the comparison in Figure 1 indicates, Lesotho's fertility rate is among the lowest among countries in Sub-Saharan Africa region.

Figure 1 Total Fertility Rates, Selected Sub-Saharan African Countries



Source: DHS StatCompiler

D. Family Planning

Information about knowledge and use of contraceptive methods was collected from female respondents by asking them to mention any ways or methods by which a couple can delay or avoid a pregnancy. When the respondent failed to mention a method spontaneously, the interviewer described the method and then asked if the respondent knew it. For each method known, the respondent was asked if she had ever used it. Finally, women were asked if they (or their partner) were currently using a method. For analytical purposes, contraceptive methods are grouped into two types in the table: modern and traditional. Modern methods include female sterilization, male sterilization, pill, IUCD, injectables, implants, male condom, diaphragm, and lactational amenorrhoea method (LAM). Traditional methods include rhythm or periodic abstinence, withdrawal, and local traditional methods.

Table 4 shows the level and key differentials in the current use of contraception by method as reported by currently married women. Overall, the 2004 LDHS found that 37 percent are using some method of contraception. The majority of users rely on a modern method (35 percent). The most commonly used modern methods are injectables and the pill (15 percent and 11 percent, respectively).

Background characteristic	Modern method							Traditional method			Total	Number of women	
	Any method	Any modern method	Female sterilization	Pill	IUCD	Injectables	Male condom	Any traditional method	Withdrawal	Local traditional method			Not currently using
Age													
15-19	14.7	14.7	0.0	4.6	0.2	7.7	2.3	0.0	0.0	0.0	85.3	100.0	293
20-24	34.1	32.5	0.5	8.5	0.5	16.5	6.3	1.5	1.1	0.5	65.9	100.0	779
25-29	42.6	40.1	0.8	14.5	1.3	19.4	4.2	2.5	1.5	0.9	57.4	100.0	699
30-34	49.5	47.1	2.3	17.8	3.7	18.0	5.3	2.3	0.5	1.8	50.5	100.0	592
35-39	42.5	40.5	4.3	10.3	3.2	17.4	5.3	2.0	0.8	1.2	57.5	100.0	484
40-44	37.1	33.6	7.0	9.7	3.2	9.6	4.1	3.4	0.3	2.8	62.9	100.0	477
45-49	26.1	23.5	6.3	5.1	2.6	5.4	4.2	2.5	1.6	0.9	73.9	100.0	383
Residence													
Urban	49.9	48.7	2.8	13.3	4.4	17.9	10.0	1.2	0.1	1.1	50.1	100.0	738
Rural	34.1	31.8	2.7	10.2	1.5	13.9	3.5	2.3	1.1	1.2	65.9	100.0	2,969
Ecological zone													
Lowlands	45.7	44.0	2.7	14.0	2.9	18.0	6.3	1.7	0.5	1.1	54.3	100.0	2,132
Foothills	31.5	28.4	4.2	7.1	1.7	12.1	3.2	3.1	0.5	2.6	68.5	100.0	455
Mountains	21.5	19.0	1.8	6.1	0.5	8.3	2.3	2.5	1.8	0.6	78.5	100.0	928
Senqu River Valley	33.9	31.0	4.0	7.3	1.4	14.8	3.5	2.9	2.1	0.8	66.1	100.0	191
District													
Butha-Buthe	45.3	43.6	5.6	11.1	3.2	18.7	5.0	1.7	0.5	1.2	54.7	100.0	249
Leribe	42.5	39.4	2.5	11.5	3.3	16.2	5.9	3.0	1.0	2.0	57.5	100.0	579
Berea	34.0	32.0	3.4	8.2	3.2	12.4	4.8	2.1	0.8	1.3	66.0	100.0	418
Maseru	40.1	37.7	2.4	12.1	1.8	14.1	7.1	2.4	0.7	1.8	59.9	100.0	902
Mafeteng	49.4	48.5	2.6	20.5	1.5	19.6	4.3	0.9	0.1	0.8	50.6	100.0	414
Mohale's Hoek	39.5	37.0	2.3	10.6	2.5	19.1	2.6	2.5	1.4	0.6	60.5	100.0	349
Quthing	29.0	26.5	3.1	5.6	1.6	12.5	3.7	2.5	2.0	0.4	71.0	100.0	215
Qacha's Nek	23.2	21.8	2.3	6.4	0.2	10.7	2.1	1.4	0.7	0.7	76.8	100.0	119
Mokhotlong	15.4	14.3	1.5	2.9	0.1	6.9	2.9	1.2	1.2	0.0	84.6	100.0	203
Thaba-Tseka	21.1	19.4	2.3	6.4	0.5	8.6	1.6	1.7	1.7	0.0	78.9	100.0	257
Education													
No education	9.3	6.6	1.2	1.6	0.7	1.3	1.9	2.7	1.0	1.7	90.7	100.0	86
Primary incomplete	26.8	23.5	2.0	6.5	1.0	11.4	2.5	3.3	1.5	1.7	73.2	100.0	1,153
Primary complete	36.2	34.8	3.0	11.6	1.4	15.3	3.2	1.5	0.7	0.8	63.8	100.0	1,148
Secondary+	49.2	47.5	3.2	14.5	3.6	17.8	8.4	1.7	0.6	1.1	50.8	100.0	1,319
Living children													
0	6.6	6.6	0.0	1.7	0.0	3.8	1.1	0.0	0.0	0.0	93.4	100.0	386
1-2	41.0	39.4	0.6	13.7	1.6	17.4	5.9	1.7	0.9	0.8	59.0	100.0	1,740
3-4	45.8	42.7	5.5	11.8	3.8	16.1	5.4	3.1	1.0	1.9	54.2	100.0	967
5+	32.4	29.2	6.0	6.9	1.8	11.4	3.0	3.3	1.4	1.9	67.6	100.0	613
Total¹	37.3	35.1	2.7	10.8	2.1	14.7	4.8	2.1	0.9	1.2	62.7	100.0	3,706

Note: If more than one method is used, only the most effective method is considered in this tabulation.
 LAM = Lactational amenorrhoea method
¹ Total includes 1 user of the diaphragm, 2 users of LAM, and 1 user of rhythm or periodic abstinence that are not shown in the table.

Contraceptive prevalence peaks among women in the 30-34 age-group and is lowest for women aged 15-19. As expected, contraceptive use increases with educational attainment. Half of women with at least some secondary education use a method, in contrast to 9 percent of women with no education. In general, women do not begin to use contraception until they have had at least one child.

Contraceptive use also varies markedly according to geographical area. Fifty percent of urban women report using some contraceptive method versus 34 percent of rural women. Similarly, women residing in the Mountains are least likely to report using contraception while women living in the Lowlands are the most likely to be using a method (22 percent versus 46 percent). Contraceptive use also varies significantly by district, from 15 percent in Mokhotlong to 49 percent in Mafeteng.

E. Fertility Preferences

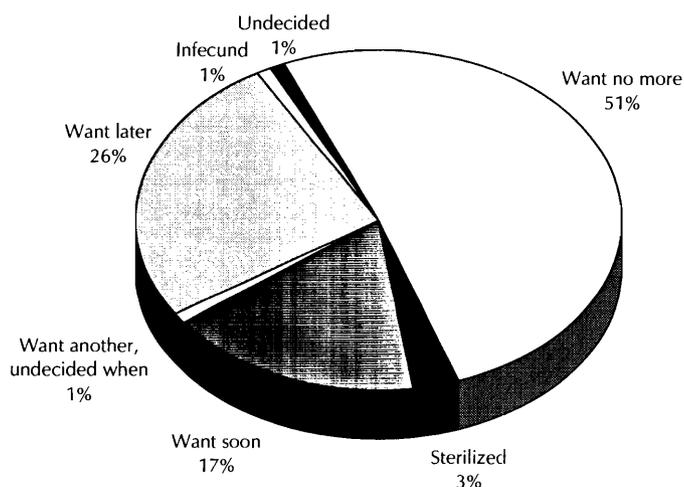
Several questions were asked in the survey concerning a woman's fertility preferences. These questions included: a) whether the respondent wanted another child and b) if so, when she would like to have the next child. The answers to these questions allow an estimation of the potential demand for family planning services either to limit or space births.

Table 5 and Figure 2 indicate that 80 percent of married women say that they want either to delay the birth of their next child for two or more years or to have no more children or are sterilized. Fertility preferences are closely related to the number of living children a woman has. In general, as the number of living children increases, the desire to want another child decreases. The proportion of women who want no more children or are sterilized rises from 24 percent among women with one living child to 92 percent among women with six or more living children.

Desire for children	Number of living children ¹							Total
	0	1	2	3	4	5	6+	
Have another soon ²	83.0	22.3	15.5	6.3	3.0	6.3	2.9	17.4
Have another later ³	8.4	50.5	31.0	19.7	7.9	7.2	2.7	25.8
Have another, undecided when	2.2	0.6	0.7	0.7	0.4	0.1	0.2	0.6
Undecided	0.2	1.5	0.9	0.4	1.6	1.0	0.2	0.9
Want no more	5.8	23.9	50.0	67.7	79.1	76.9	86.3	51.4
Sterilized ⁴	0.0	0.4	0.9	4.6	6.4	6.0	5.7	2.7
Declared infecund	0.5	0.8	0.6	0.5	1.3	2.5	1.5	0.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	267	980	822	618	392	282	346	3,706

¹ Includes current pregnancy
² Wants next birth within 2 years
³ Wants to delay next birth for 2 or more years
⁴ Includes both male and female sterilization

Figure 2 Fertility Preferences among Currently Married Women, Lesotho 2004



F. Maternal Care

Proper care during pregnancy and delivery are important for the health of both the mother and the baby. In the 2004 LDHS, women who had given birth in the five years preceding the survey were asked a number of questions about maternal health care. For the last live birth in that period, the mothers were asked whether they had obtained antenatal care during the pregnancy and whether they had received tetanus toxoid injections or iron supplements during pregnancy. For each birth in the same period, the mothers were also asked what type of assistance they received at the time of delivery and where the delivery took place. Table 6 presents the information on these key maternal care indicators.

Antenatal Care

Antenatal care from a trained provider is important in order to monitor the pregnancy and reduce the risks for the mother and child during pregnancy and at delivery. According to the 2004 LDHS results, 90 percent of women who gave birth in the 5 years preceding the survey received antenatal care from a health professional at least once. With the exception of women with no education, nine out of ten women received care from a trained provider at least once, regardless of background characteristics.

Tetanus Toxoid and Iron Supplements

Tetanus toxoid injections are given during pregnancy to prevent neonatal tetanus, an important cause of infant deaths. Mothers also are given iron supplements during pregnancy since maternal anemia is another frequent cause of both maternal and neonatal mortality.

Table 6 indicates that 81 percent of all pregnant women received at least one tetanus toxoid injection and 38 percent were given iron supplementation during pregnancy. Mothers age 35 or older at the time of birth are the least likely to have received a tetanus toxoid injection during the most recent pregnancy. Overall, women residing in urban areas are slightly more likely than rural women to have received tetanus toxoid injection or iron tablets or syrup. Generally, the likelihood of receiving a tetanus toxoid injection or iron supplements during pregnancy decreases with the number of children the woman has and increases with her educational level.

Table 6. Maternal care indicators

Percentage of women who had a live birth in the five years preceding the survey who received specific maternal health services during pregnancy for the most recent birth, and among all live births in the five years before the survey, percentage delivered by a health professional and percentage delivered in a health facility, by background characteristics, Lesotho 2004-2005

Background characteristic	Percentage with antenatal care from a health professional ¹	Percentage given at least one tetanus toxoid injection	Percentage given iron tablets/syrup during pregnancy	Number of women	Percentage delivered by a health professional ¹	Percentage delivered in a health facility	Number of births
Mother's age at birth							
<20	91.7	83.5	36.2	546	58.4	56.5	724
20-34	91.2	82.5	38.7	1,832	55.7	52.7	2,293
35+	85.8	71.7	36.3	480	50.3	46.0	555
Birth order							
1	94.2	87.8	39.2	963	67.3	65.1	1,238
2-3	91.3	80.7	38.2	1,080	53.6	50.0	1,332
4-5	86.5	76.0	37.2	485	46.9	44.5	596
6+	81.8	68.4	33.8	331	37.1	33.3	405
Residence							
Urban	96.4	86.3	42.6	448	87.8	83.2	503
Rural	89.3	79.8	37.0	2,411	50.1	47.4	3,069
Ecological zone							
Lowlands	91.5	83.4	40.0	1,508	64.8	61.7	1,771
Foothills	85.9	72.0	44.6	351	44.2	42.7	456
Mountains	89.5	79.6	33.4	810	42.5	39.4	1,105
Senqu River Valley	93.5	82.7	26.9	190	66.3	62.1	239
District							
Butha-Buthe	88.0	73.5	45.8	162	56.1	54.3	201
Leribe	90.7	79.6	49.6	446	58.6	55.4	552
Berea	89.7	77.6	47.3	332	53.9	50.2	404
Maseru	90.9	82.6	41.3	594	63.2	60.5	715
Mafeteng	87.4	83.5	30.3	313	55.7	53.6	375
Mohale's Hoek	90.5	84.3	23.1	275	55.2	53.9	345
Quthing	91.9	81.3	24.7	203	60.1	54.1	255
Qacha's Nek	97.2	85.6	43.5	109	56.4	52.1	156
Mokhotlong	90.6	79.8	19.5	183	40.5	39.2	254
Thaba-Tseka	90.2	79.2	38.0	240	40.9	37.1	316
Education							
No education	75.4	67.7	25.9	68	20.8	19.1	94
Primary incomplete	86.9	75.0	33.5	877	41.4	37.4	1,156
Primary complete	90.9	82.3	37.8	890	54.1	51.1	1,128
Secondary+	93.9	85.5	42.4	1,024	72.8	70.8	1,193
Total	90.4	80.9	37.8	2,859	55.4	52.4	3,572

¹ Doctor, nurse, midwife, or nursing assistant

Delivery Care

Proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that can cause the death or serious illness of the mother and/or the baby. Table 6 shows that about half of births (55 percent) in Lesotho are delivered by a health professional and about half (52 percent) are delivered at a health facility.

Women's utilization of delivery services increases significantly with education. For example, 21 percent of women with no education were attended during delivery by a health professional compared to 73 percent of women with secondary or more education. Mother's age at birth and the child's birth order are inversely related to the likelihood of receiving health professional assistance during delivery and delivering in a health facility. For example, one in three births of sixth or higher order is delivered at a health facility, compared with one in two births of 2nd or 3rd order.

There is considerable variation by residence. Urban women are much more likely than rural women to have had a health professional in attendance during delivery (88 percent versus 50 percent) or to have delivered at a health facility (83 percent versus 47 percent). Among districts, the percentage of women who delivered in a health facility ranges from a low of 37 in Thaba-Tseka to a high of 61 in Maseru.

G. Child Health

The 2004 LDHS obtained information on a number of key child health indicators, including childhood mortality rates, immunization of young children, and treatment practices when a child is ill.

Levels of Childhood Mortality

One important objective of the 2004 LDHS was to measure the level and trend of mortality among children, since infant and child mortality rates are basic indicators of a country's socioeconomic situation and quality of life. Estimates of childhood mortality are based on information from the birth history section of the questionnaire administered to individual women. The section began with questions about the aggregate childbearing experience of respondents (i.e., the number of sons and daughters who live with the mother, the number who live elsewhere and the number who have died). For each of these births, information was then collected on sex, month and year of birth, survivorship status and current age, or, if the child had died, age at death. This information is used to estimate the following five mortality rates:

- Neonatal mortality: the probability of dying within the first month of life;
- Postneonatal mortality: the difference between infant and neonatal mortality;
- Infant mortality: the probability of dying before the first birthday;
- Child mortality: the probability of dying between the first and fifth birthday;
- Under-five mortality: the probability of dying between birth and the fifth birthday.

All 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.

Table 7 shows infant and child mortality estimates based on data from the 2004 LDHS. For the five years immediately preceding the survey (approximately calendar years 2000-2004), the infant mortality rate is 91 per 1,000 live births. The estimate of child mortality (age 1 to age 4) is 24 per 1,000 live births and the overall under-five mortality rate for the same period is 113 per 1,000.

Years preceding the survey	Neonatal mortality (NN)	Postneonatal mortality ¹ (PNN)	Infant mortality (₁ q ₀)	Child mortality (₄ q ₁)	Under-five mortality (₅ q ₀)
0-4	46	45	91	24	113
5-9	44	31	75	16	90
10-14	40	32	72	15	86

¹ Computed as the difference between the infant and neonatal mortality rates

Table 7 shows an upward trend in the early childhood mortality rates over time. For example, infant mortality rate increased from 75 deaths per 1,000 live births in the 5-9 year period preceding the survey (approximately 1995-1999) to 91 deaths per 1,000 live births during the 2000-2004 period. Under-five mortality has increased from 90 deaths to 113 deaths per 1,000 live births over the same time period. The increase may be due to several factors including: 1) the impact of AIDS epidemic in Lesotho, and 2) the tendency of mothers to underreport child deaths, particularly those that happened a long time ago (weak vital registration system).

Vaccination of Children

According to the World Health Organization, a child is considered fully vaccinated if he or she has received a BCG vaccination against tuberculosis; three doses of DPT vaccine to prevent diphtheria, pertussis, and tetanus; at least three doses of polio vaccine; and one dose of measles vaccine. These vaccinations should be received during the first year of life. The 2004 LDHS collected information on the coverage for these vaccinations among all children under age five.

The information on vaccination coverage was obtained in two ways—from health cards and from mother’s verbal reports. All mothers were asked to show the interviewer the health cards on which the child(ren)’s immunization record was recorded. If the card was available, the interviewer copied the dates on which each vaccination was received. If a vaccination was not recorded on the health card, the mother was asked to recall whether that particular vaccination had been given. If the mother was not able to present a health card for her child, she was asked to recall whether the child had received BCG, polio, DPT and measles. If she indicated that the child had received the polio or DPT vaccines, she was asked about the number of doses that the child received.

Table 8 presents information on vaccination coverage for children 12-23 months; children in this age group ought to have been fully vaccinated against the major preventable childhood illnesses. At the time of the interview, 68 percent of children were fully immunized. At least nine out of ten children receive BCG, DPT 1, DPT 2, Polio 1, and Polio 2. However, the proportion of children receiving the third dose of DPT and Polio is lower (83 percent and 80 percent, respectively), as is the proportion receiving measles (85 percent). Thus, the dropout rate is 12 percent for DPT and 16 percent for polio. This dropout rate represents the proportion of children who receive the first dose of a vaccine but do not go on to get the third dose.

Differentials in coverage levels show that the proportion of children fully vaccinated decreases from 76 percent among first births to 58 percent of children of sixth or higher birth order. Vaccination coverage levels are similar among urban and rural children. By district, the percentage fully vaccinated ranges from a low of 53 percent in Quthing to 79 percent in Mafeteng.

Hepatitis B1, B2, and B3 have recently been added to the Lesotho immunization schedule for children. Table 8 shows that 31 percent of children age 12-23 months received Hepatitis B1 vaccine, 22 percent received Hepatitis B2, and 14 percent received Hepatitis B3. Girls are somewhat less likely than boys to have received any of the Hepatitis B vaccines. As with other vaccines, the proportion of children receiving any of the Hepatitis B vaccines decreases with increasing birth order. Urban children are more likely to receive Hepatitis B vaccines than rural children.

Table 8 Vaccinations by background characteristics

Percentage of children age 12-23 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), and percentage with a vaccination card seen, by background characteristics, Lesotho 2004

Background characteristic	DPT			Polio			Measles	All ²	No vaccinations	Percentage with a vaccination card	Hep B			Number of children		
	BCG	1	2	3	0 ¹	1					2	3	1		2	3
Sex																
Male	95.1	94.0	91.9	82.4	70.1	95.3	90.6	79.2	85.5	67.4	2.7	77.1	26.3	18.3	10.8	326
Female	97.8	95.1	91.3	83.2	72.5	95.5	89.8	80.2	84.3	68.2	2.0	78.3	36.3	25.5	16.4	334
Birth order																
1	99.0	97.2	94.6	88.4	76.0	96.5	90.8	83.6	91.7	76.0	0.1	80.2	35.1	26.2	15.9	229
2-3	98.7	95.0	92.8	81.6	72.8	98.2	92.6	80.7	84.9	64.7	0.3	76.6	34.6	23.5	14.6	246
4-5	90.8	93.1	90.1	82.9	68.2	92.1	90.3	77.4	80.3	63.9	6.2	79.1	26.7	18.6	12.8	112
6+	89.6	86.9	79.9	69.0	56.8	87.4	80.1	67.6	70.8	58.4	10.4	71.3	16.1	8.7	4.6	73
Residence																
Urban	96.4	96.9	95.2	84.4	89.4	99.1	94.9	83.9	91.1	68.0	0.0	78.2	37.0	29.0	18.1	99
Rural	96.4	94.1	90.9	82.5	68.2	94.7	89.4	79.0	83.8	67.8	2.8	77.6	30.4	20.7	12.8	560
Ecological zone																
Lowlands	96.0	94.9	92.4	83.6	78.5	97.4	93.1	84.6	85.4	69.3	1.9	81.1	37.6	27.8	17.4	348
Foothills	94.4	95.5	92.1	86.2	70.2	93.9	85.8	78.0	83.1	67.0	4.5	82.3	28.6	18.5	8.7	76
Mountains	97.3	93.8	89.7	79.6	56.9	92.0	85.9	71.7	85.3	67.1	2.7	71.1	22.5	14.3	10.2	198
Senqu River Valley	100.0	93.4	92.8	85.4	83.9	98.2	94.5	81.1	82.1	59.4	0.0	71.6	26.4	15.9	6.6	38
District																
Butha-Buthe	99.4	98.3	93.9	88.2	82.4	98.2	90.5	76.4	89.9	72.5	0.6	78.6	36.6	23.1	11.6	35
Leribe	94.9	96.6	95.1	86.1	77.2	92.8	88.8	81.5	87.2	69.5	2.6	86.6	34.1	19.9	13.5	117
Berea	90.9	92.8	90.9	77.1	60.0	95.2	90.3	75.8	78.8	55.7	4.8	75.2	38.7	28.5	13.4	67
Maseru	96.0	91.3	86.9	77.3	82.2	96.9	91.3	79.7	85.3	62.8	2.4	76.9	33.1	27.8	15.7	135
Mafeteng	97.7	97.7	90.1	87.4	68.4	97.3	89.6	86.2	85.7	78.7	2.3	81.1	32.8	25.1	22.8	65
Mohale's Hoek	98.8	95.5	94.3	86.6	68.9	95.2	89.9	80.4	80.7	68.2	1.2	75.7	39.2	23.1	11.8	68
Quthing	96.2	91.9	90.0	77.8	78.1	95.2	90.1	75.0	72.0	53.1	3.8	69.5	20.0	11.6	4.4	43
Qacha's Nek	96.5	89.6	88.6	74.8	76.4	88.6	81.7	71.3	88.8	70.5	3.5	80.9	35.4	18.1	11.2	24
Mokhotlong	(100.0)	(100.0)	(99.7)	(94.4)	(63.5)	(100.0)	(96.5)	(87.7)	(92.3)	(83.2)	(0.0)	(86.7)	(9.8)	(7.7)	(7.7)	45
Thaba-Tseka	98.3	93.1	89.4	80.7	47.4	93.1	89.6	75.8	89.4	71.8	1.7	61.2	23.5	20.0	14.8	61
Mother's education																
No education	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	11
Primary incomplete	94.4	91.5	85.8	74.1	60.5	93.1	87.5	72.0	80.6	61.4	4.3	70.8	25.4	14.6	9.4	188
Primary complete	97.3	96.1	94.9	86.9	69.7	96.5	91.4	81.7	89.1	73.0	1.5	76.3	27.0	20.6	14.1	215
Secondary+	97.8	96.0	93.7	87.2	81.5	97.3	92.0	85.1	85.0	69.0	1.0	84.7	40.3	29.3	17.1	246
Total	96.4	94.6	91.6	82.8	71.4	95.4	90.2	79.7	84.9	67.8	2.3	77.7	31.4	22.0	13.6	660

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

¹ Polio 0 is the polio vaccination given at birth.

² BCG, measles and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)

Treatment of Childhood Illnesses

Acute respiratory infections (ARI), fever, and dehydration caused by severe diarrhoea are major causes of childhood mortality in Lesotho. Prompt medical attention when a child has the symptoms of these illnesses is, therefore, crucial in reducing child deaths. To obtain information on how childhood illnesses are treated, the mothers of each child were asked whether the child had experienced the following symptoms in the two weeks before the survey: cough with short, rapid breathing (symptoms of an acute respiratory infection), fever, and diarrhoea.

Table 9 shows that more than half of the children who had an ARI and/or a fever in the last two weeks sought treatment from a health provider. Differences in treatment-seeking behaviour by background characteristics are minimal.

Table 9 also shows the treatment of diarrhoeal diseases. The data indicate that about three in ten children who were ill with diarrhoea in the last two weeks were taken to a health facility or a health provider. Looking at variations by background characteristics, urban children are somewhat more likely to be taken to a health facility or health provider than rural children.

Table 9 Treatment for acute respiratory infection, fever, and diarrhoea						
Among children under five years who were sick with a cough accompanied by short, rapid breathing (symptoms of acute respiratory infection-ARI) or fever in the two weeks preceding the survey, percentage for whom treatment was sought from a health facility or provider, and among children under five years who were sick with diarrhoea during the two weeks preceding the survey, percentage for whom treatment was sought from a health facility or provider, percentage given a solution made from oral rehydration salt (ORS) packets, and percentage given any oral rehydration therapy (ORT), by background characteristics, Lesotho 2004						
Background characteristic	Children with symptoms of ARI or with fever		Children with diarrhoea			
	Percentage for whom treatment was sought from a health facility or provider ¹	Number with ARI/fever	Percentage for whom treatment was sought from a health facility or provider ¹	Percentage given solution from ORS packet	Percentage given any ORT ²	Number of children with diarrhoea
Age in months						
<6	58.8	93	26.9	(14.4)	(62.2)	33
6-11	58.9	156	34.0	42.6	72.0	94
12-23	62.6	235	32.4	46.8	86.8	167
24-35	50.0	184	31.5	45.4	85.6	72
36-47	49.9	154	31.1	(36.0)	(73.5)	37
48-59	47.2	118	21.9	(42.8)	(78.1)	43
Sex						
Male	55.9	480	32.2	42.5	79.6	227
Female	54.4	460	29.8	41.5	79.9	219
Residence						
Urban	59.9	100	41.7	46.8	90.7	41
Rural	54.6	840	30.0	41.5	78.7	405
Ecological zone						
Lowlands	57.1	451	34.5	48.6	85.6	220
Foothills	51.2	144	25.3	32.3	78.2	75
Mountains	53.3	295	30.8	39.1	72.1	122
Senqu River Valley	59.2	50	21.3	(29.4)	(71.5)	29
District						
Butha-Buthe	51.2	59	(35.6)	(31.9)	(79.9)	24
Leribe	61.6	176	35.7	51.4	81.3	82
Berea	50.6	115	(35.7)	(49.1)	(90.0)	58
Maseru	43.8	137	25.3	37.5	78.6	80
Mafeteng	59.1	105	(34.4)	(50.4)	(87.5)	39
Mohale's Hoek	61.6	112	29.9	42.4	80.0	60
Quthing	*	48	*	*	*	23
Qacha's Nek	(48.9)	41	(32.7)	(46.7)	(80.4)	19
Mokhotlong	(62.8)	55	(47.1)	(38.8)	(66.9)	19
Thaba-Tseka	(57.6)	93	(23.1)	(27.7)	(73.0)	43
Mother's education						
No education	*	30	*	*	*	12
Primary incomplete	50.2	335	26.9	37.9	78.2	171
Primary complete	59.4	298	35.0	49.2	80.0	135
Secondary+	58.7	277	33.0	39.8	81.4	127
Total	55.1	940	31.1	42.0	79.8	446

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

¹ Excludes pharmacy, shop, and traditional practitioner

² Includes ORS, recommended home fluid, or increased fluids

The administration of oral rehydration therapy (ORT) is a simple way of counteracting the effects of dehydration in children. A child is given either a solution prepared by mixing water with a commercially prepared packet of oral rehydration salts (ORS) or a homemade sugar-salt-water solution that is recommended by the Lesotho health clinics. While 42 percent of children receive ORS, a total of 80 percent receive some form of ORT. The data indicate that treatment at home is the most common.

There are significant regional differentials in treatment practices. Children of urban mothers are more likely to have been given some form of ORT than children of rural mothers (91 percent compared with 79 percent).

H. Nutrition

Breastfeeding

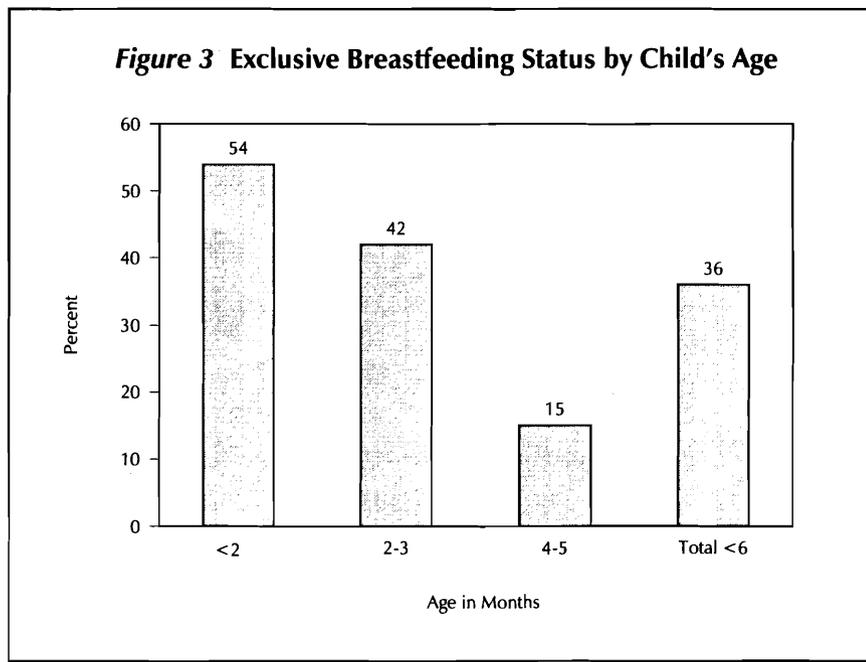
Breast milk is the optimal source of nutrients for infants. Breast milk is uncontaminated and contains all the nutrients needed by children in the first four to six months of life. Supplementing breast milk before four months of age is unnecessary and discouraged because of the likelihood of contamination, which may result in the risk of diarrhoeal diseases. Exclusive breastfeeding is recommended during the first 6 months of a child's life because it limits exposure to disease agents as well as providing all of the nutrients that a baby requires. Children who are exclusively breastfed receive only breast milk.

Table 10 shows that exclusive breastfeeding is a common but not universal practice in Lesotho. Fifty-four percent of children less than two months of age, are exclusively breastfed. Thirty-six percent of children six months of age are exclusively breastfed (Figure 3). The data in Table 10 also show that complementary foods are introduced at a young age in Lesotho.

Table 10 Breastfeeding status by child's age										
Percent distribution of youngest children under three years living with the mother by breastfeeding status and percentage of children under three years using a bottle with a nipple, according to age in months, Lesotho 2004										
Age in months	Breastfeeding and consuming:						Total	Number of children	Percentage using a bottle with a nipple ¹	Number of children
	Not breast-feeding	Exclusively breastfed	Plain water only	Water-based liquids/juice	Other milk	Complementary food				
<2	1.9	53.9	19.0	12.1	10.4	2.8	100.0	111	28.9	112
2-3	2.7	41.5	14.6	6.8	17.0	17.3	100.0	145	35.9	147
4-5	4.1	15.2	3.8	12.4	13.7	50.8	100.0	127	34.0	132
6-7	5.5	7.2	0.0	9.2	7.2	70.9	100.0	107	33.5	109
8-9	3.5	5.5	0.0	2.4	1.4	87.2	100.0	101	20.2	105
10-11	9.9	2.3	0.2	3.8	2.4	81.4	100.0	122	19.9	125
12-15	9.8	0.8	0.3	1.4	0.6	87.1	100.0	260	14.5	265
16-19	25.5	2.1	0.0	0.5	2.7	69.2	100.0	207	14.2	217
20-23	40.5	0.0	0.0	0.0	0.5	59.0	100.0	165	10.9	178
24-27	69.1	0.9	0.0	0.0	0.0	30.1	100.0	198	3.5	236
28-31	91.1	2.0	0.0	0.0	0.0	6.8	100.0	160	0.7	201
32-35	90.1	1.1	0.0	0.0	0.0	8.7	100.0	150	1.9	205
<6	2.9	36.4	12.3	10.2	14.0	24.2	100.0	382	33.3	392
6-9	4.5	6.3	0.0	5.9	4.4	78.8	100.0	208	27.0	214

Note: Breastfeeding status refers to a "24-hour" period (yesterday and last night). Children classified as *breastfeeding and consuming plain water only* consume no liquid or solid supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, water-based liquids/juice, other milk, and complementary foods (solids and semi-solids) are hierarchical and mutually exclusive, and their percentages add to 100 percent. Thus children who receive breast milk and water-based liquids and who do not receive complementary foods are classified in the water-based liquid category even though they may also get plain water. Any children who get complementary food are classified in that category as long as they are breastfeeding as well.

¹ Based on all children under three years



Nutritional Status of Children

Undernutrition places children at increased risk of morbidity and mortality and has also been shown to be related to impaired mental development. Anthropometry provides one of the most important indicators of children's nutritional status. Height and weight measurements were obtained for all children born in the five years before the 2004 LDHS. The height and weight data are used to compute three summary indices of nutritional status: height-for-age; weight-for-height; and weight-for-age. These three indices are expressed as standard deviation (SD) units from the median for the international reference population recommended by the World Health Organization. Children who fall more than two standard deviations below (-2 SD) the reference median are regarded as undernourished, while those who fall more than three standard deviations below (-3 SD) the reference median are considered severely undernourished. Table 11 shows the nutritional status of children under five years of age by selected background characteristics.

Children whose height-for-age is below minus two standard deviations from the median of the reference population are considered stunted or short for their age. Stunting is the outcome of failure to receive adequate nutrition over an extended period and is also affected by recurrent or chronic illness. Thirty-eight percent of children under five are short for their age. This includes 15 percent who are considered to be severely stunted.

Children whose weight-for-height is below minus two standard deviations from the median of the reference population are considered wasted or thin. Wasting represents the failure to receive adequate nutrition in the period immediately before the survey, and typically is the result of recent illness episodes, especially diarrhoea, or of a rapid deterioration in food supplies. In Lesotho, 4 percent of children were wasted at the time of the survey. This includes 1 percent who were severely wasted.

Table 11 Nutritional status of children

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Lesotho 2004

Background characteristic	Height-for-age		Weight-for-height		Weight-for-age		Number of children
	Percentage below -3 SD	Percentage below -2 SD ¹	Percentage below -3 SD	Percentage below -2 SD ¹	Percentage below -3 SD	Percentage below -2 SD ¹	
Age in months							
<6	0.0	15.0	1.4	4.5	0.6	2.3	149
6-9	4.4	11.2	1.1	6.5	0.3	7.5	96
10-11	9.7	29.2	1.3	5.9	5.0	13.2	69
12-23	22.2	45.6	2.2	6.2	5.6	22.4	303
24-35	15.8	40.5	0.5	3.4	4.3	24.4	345
36-47	17.2	42.3	0.6	3.1	2.5	20.1	329
48-59	17.5	45.2	1.4	3.7	4.3	25.3	329
Sex							
Male	16.8	39.4	1.4	4.4	3.8	18.9	828
Female	13.6	37.0	1.0	4.2	3.4	20.8	793
Residence							
Urban	11.1	30.0	1.1	4.0	3.8	16.0	214
Rural	15.9	39.5	1.2	4.4	3.6	20.4	1,406
Ecological zone							
Lowlands	12.0	32.9	0.8	3.7	3.0	14.2	794
Foothills	17.6	38.9	0.7	4.0	3.5	21.0	218
Mountains	18.7	45.0	1.2	4.2	4.1	26.6	488
Senqu River Valley	18.1	44.6	4.1	9.6	6.0	27.4	120
District							
Butha-Buthe	11.2	30.4	0.4	3.7	2.1	16.1	108
Leribe	13.4	30.7	2.3	3.7	6.0	17.2	208
Berea	9.5	28.4	0.9	5.7	2.3	14.6	211
Maseru	15.8	41.4	0.4	1.8	2.1	17.8	290
Maleteng	12.6	36.0	0.0	3.7	0.8	12.6	200
Mohale's Hoek	15.8	35.0	0.8	3.7	4.7	18.6	149
Quthing	17.6	44.2	4.4	10.1	5.7	29.4	131
Qacha's Nek	18.7	45.9	2.4	6.9	6.9	27.0	73
Mokhotlong	22.9	49.2	0.8	4.5	7.6	25.9	106
Thaba-Tseka	21.7	51.9	0.8	3.7	2.5	32.6	145
Mother's education							
No education	(28.0)	(51.3)	(0.0)	(0.0)	(1.1)	(30.0)	37
Primary incomplete	17.7	41.1	1.6	5.5	5.8	24.4	458
Primary complete	14.6	37.9	1.2	4.3	2.7	19.5	409
Secondary+	10.7	32.0	0.9	4.2	3.3	13.7	456
Mother's age							
15-19	10.9	30.1	0.8	3.7	2.6	12.1	116
20-24	16.4	39.2	1.0	4.4	4.3	20.1	518
25-29	14.7	37.9	0.5	3.6	3.6	21.2	363
30-34	13.6	36.2	1.6	4.6	2.4	17.0	264
35-49	16.7	41.2	1.9	4.9	3.9	22.7	359
Mother's status							
Mother interviewed	15.0	36.6	1.3	4.1	3.8	19.5	1,250
Mother not interviewed, but in household ²	11.6	45.9	0.0	9.9	5.7	19.3	110
Mother not interviewed, not in household ³	18.2	42.8	1.1	2.9	2.0	21.7	260
Total	15.2	38.2	1.2	4.3	3.6	19.8	1,620

Note: Figures in parentheses are based on 25-49 unweighted cases. Table is based on children who stayed in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the NCHS/CDC/WHO International Reference Population. The percentage of children who are more than three or more than two standard deviations below the median of the International Reference Population (-3 SD and -2 SD) are shown by background characteristics. Table is based on children who have a valid date of birth (month and year) and valid height and weight measurements.

¹ Includes children who are below -3 SD

² For women who were not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers were not listed in the household schedule

³ Includes children whose mothers are deceased

Children whose weight-for-age is below minus two standard deviations from the median of the reference population are considered underweight. The measure reflects the effects of both acute and chronic undernutrition. One in five children in Lesotho is underweight.

The impact of weaning can be seen in younger children: the nutritional status of children deteriorates after 6 months of age, when children are being weaned. The urban-rural differential in height-for-age is significant—30 percent of urban children are stunted, compared with 40 percent of rural children. Proportion of stunted, wasted, and underweight children is the lowest in the Lowlands and the highest in Senqu River Valley. There are variations in the nutritional status of children by district. For example, proportion of stunted children ranges from 28 percent in Berea to 52 percent in Thaba-Tseka.

Anaemia

Anaemia is a major problem in Lesotho, especially among young children and pregnant women. Determining anaemia levels among women and their children was an important component of the 2004 LDHS because little was known about the prevalence of the anaemia among the general population.

Anaemia levels were determined by measuring the level of haemoglobin in the blood, a decreased concentration characterizes anaemia. For haemoglobin measurement, capillary blood was taken from the finger using sterile, one-time-use lancets that allowed a relatively painless puncture. The concentration of haemoglobin in the blood was measured in the field using the HemoCue system. Data collection personnel were specially trained for this procedure. Prior to participating in the study, respondents were informed of their right not to participate in the anaemia testing and were asked for their permission for the collection of a blood droplet from them (and the eligible children). Levels of anaemia were classified as severe, moderate, or mild according to criteria developed by the World Health Organization (DeMaeyer et al., 1989).

Respondents were informed of their anaemia status. Additionally, an informational brochure on anaemia was printed and distributed among respondents eligible for anaemia testing.

Tables 12.1 and 12.2 present the anaemia levels for children under six years of age, for women age 15-49, and for men age 15-59. Anaemia is common among children in Lesotho; approximately half of the children (49 percent) are anaemic. About half of children who suffer from anaemia are classified as having moderate anaemia (25 percent) while 1 percent are severely anaemic. Table 12.2 data show that anaemia is quite common among women; 32 percent show any evidence of anaemia, and the majority of these women—22 percent of all women—are mildly anaemic. The prevalence of anaemia is somewhat less common among men age 15-59; one in five men have anaemia, and one in ten has moderate anaemia. Two percent of men are classified as severely anaemic.

The prevalence of anaemia among women varies by residence. Urban women and men are more likely to have anaemia than their rural counterparts. The urban-rural differentials are not clear for children. Children of mothers with no education are more likely to have any type of anaemia than children of mothers with primary, secondary, or higher education. Women with no education have higher rates of anaemia when compared with those with any kind of educational attainment.

Table 12.1 Anaemia among children

Percentage of children age 6-59 months classified as having anaemia, by background characteristics, Lesotho 2004

Background characteristic	Any anaemia	Percentage with anaemia			Number
		Mild anaemia	Moderate anaemia	Severe anaemia	
Residence					
Urban	48.7	26.8	20.2	1.7	160
Rural	48.8	21.6	25.8	1.4	1,275
Ecological zone					
Lowlands	49.6	22.9	25.3	1.4	682
Foothills	52.5	22.6	28.4	1.5	197
Mountains	45.3	20.2	23.7	1.4	450
Senqu River Valley	51.2	25.4	24.4	1.4	106
District					
Butha-Buthe	38.2	14.0	23.5	0.7	85
Leribe	51.7	23.0	27.6	1.1	189
Berea	63.2	28.1	34.0	1.2	197
Maseru	52.8	20.1	29.6	3.0	233
Mafeteng	39.2	20.6	17.8	0.8	178
Mohale's Hoek	47.4	21.0	24.8	1.7	124
Quthing	43.6	23.3	19.6	0.6	123
Qacha's Nek	51.8	21.7	24.6	5.4	68
Mokhotlong	61.9	27.3	34.5	0.0	110
Thaba-Tseka	29.0	19.6	9.3	0.1	129
Mother's education					
No education	(56.2)	(24.9)	(26.1)	(5.2)	33
Primary incomplete	47.2	21.1	24.9	1.2	403
Primary complete	49.1	21.5	26.0	1.6	363
Secondary+	51.2	22.7	27.5	1.0	367
Total	48.8	22.2	25.2	1.4	1,435

Note: Figures in parentheses are based on 25-49 cases. Table is based on children who stayed in the household the night before the interview. Prevalence is adjusted for altitude using CDC formulas (CDC, 1998). Children with <7.0 g/dl of haemoglobin have severe anaemia, children with 7.0-9.9 g/dl have moderate anaemia, and children with 10.0-10.9 g/dl have mild anaemia.

Table 12.2 Anaemia among women and men

Percentage of women age 15-49 years and men age 15-59 years classified as having anaemia, by background characteristics, Lesotho 2004

Background characteristic	Any anaemia	Percentage with anaemia			Number
		Mild anaemia	Moderate anaemia	Severe anaemia	
WOMEN					
Residence					
Urban	39.7	25.7	11.4	2.5	591
Rural	29.8	21.1	6.9	1.8	2,414
Ecological zone					
Lowlands	33.2	22.6	8.7	1.9	1,770
Foothills	30.7	22.2	5.7	2.8	325
Mountains	27.6	20.1	5.7	1.9	705
Senqu River Valley	35.8	23.6	10.0	2.2	204
District					
Butha-Buthe	28.0	19.3	6.5	2.1	194
Leribe	32.8	23.4	7.6	1.8	425
Berea	37.9	28.2	7.1	2.5	376
Maseru	33.7	21.7	10.6	1.4	662
Mafeteng	27.6	18.7	6.0	2.9	361
Mohale's Hoek	31.5	19.9	10.0	1.6	301
Quthing	32.6	20.2	8.9	3.5	221
Qacha's Nek	34.0	27.2	4.2	2.7	110
Mokhotlong	32.4	24.2	7.2	1.1	164
Thaba-Tseka	19.8	17.2	2.0	0.6	190
Education					
No education	35.2	30.7	3.4	1.1	70
Primary incomplete	29.2	21.0	6.4	1.7	981
Primary complete	32.4	21.5	8.6	2.2	792
Secondary+	33.3	22.6	8.6	2.1	1,161
Total	31.8	22.0	7.8	2.0	3,004
MEN					
Residence					
Urban	24.8	9.2	12.4	3.2	351
Rural	19.1	8.2	9.2	1.7	1,820
Ecological zone					
Lowlands	18.7	7.3	9.6	1.9	1,274
Foothills	20.6	12.2	8.0	0.4	224
Mountains	21.8	9.0	10.3	2.5	519
Senqu River Valley	23.5	10.2	11.2	2.0	154
District					
Butha-Buthe	15.8	10.2	5.0	0.7	151
Leribe	17.6	4.2	11.5	2.0	294
Berea	20.8	7.6	10.6	2.6	268
Maseru	23.5	10.6	11.6	1.3	439
Mafeteng	14.2	7.4	4.8	2.0	284
Mohale's Hoek	17.7	6.9	9.2	1.6	227
Quthing	26.9	9.6	13.0	4.3	146
Qacha's Nek	21.5	11.8	8.8	0.8	101
Mokhotlong	27.0	10.8	13.5	2.7	122
Thaba-Tseka	17.9	8.4	7.8	1.7	140
Education					
No education	28.4	9.6	16.9	1.9	151
Primary incomplete	20.1	8.8	8.8	2.5	831
Primary complete	18.1	8.1	9.3	0.7	430
Secondary+	18.6	7.4	9.1	2.0	623
Total	20.0	8.4	9.7	1.9	2,172

Note: Table is based on women and men who stayed in the household the night before the interview. Prevalence is adjusted for altitude and smoking (for women) using CDC formulas (CDC, 1998). Nonpregnant women with <8.0 g/dl of haemoglobin, pregnant women with <7.0 g/dl and men with <9.0 g/dl have severe anaemia, nonpregnant women with 8.0-9.0 g/dl, pregnant women 7.0-9.9 g/dl, and men with 9.0-11.0 g/dl have moderate anaemia, and nonpregnant women with 10.0-11.9 g/dl, pregnant women with 10.0-10.9 g/dl, and men with 12.0-12.9 g/dl have mild anaemia.

I. HIV/AIDS

The HIV/AIDS epidemic is a serious threat to Lesotho's social and economic development. The 2004 LDHS included a series of questions that addressed respondents' knowledge about AIDS and their awareness of modes of transmission of the Human Immunodeficiency Virus that causes AIDS, and of behaviours that can prevent the spread of HIV.

HIV/AIDS Awareness

Table 13 shows that the majority of women and men say that they have heard of AIDS (94 percent and 93 percent, respectively). A somewhat lower proportion of both women and men say that they believe there is a way to avoid HIV/AIDS (81 percent and 74 percent, respectively). The proportions of women and of men who have heard of AIDS are lowest among respondents with no education and among those living in the Mountains zone.

Table 13 Knowledge of AIDS								
Percentage of women and men who have heard of AIDS and believe there is a way to avoid HIV/AIDS, by background characteristics, Lesotho 2004								
Background characteristic	Women				Men			
	Has heard of AIDS	Believes there is a way to avoid HIV/AIDS	Knows HIV status	Number	Has heard of AIDS	Believes there is a way to avoid HIV/AIDS	Knows HIV status	Number
Age								
15-19	92.1	77.1	4.3	1,708	92.5	72.0	1.3	743
20-24	92.5	83.0	13.6	1,463	92.5	73.7	6.4	507
25-29	94.4	82.9	17.2	1,043	93.8	80.1	13.3	374
30-39	94.8	84.2	16.0	1,544	93.3	77.0	16.2	538
40-49	94.5	80.0	11.3	1,333	94.9	72.7	14.1	334
50-59	na	na	na	na	92.4	68.4	6.5	301
Marital status								
Never married	94.8	83.2	7.8	2,371	92.0	73.2	4.4	1,419
Married or living together	92.7	79.6	13.6	3,706	94.4	76.3	14.2	1,191
Divorced/separated/widowed	93.8	82.8	16.1	1,014	93.0	65.8	7.5	186
Residence								
Urban	99.5	93.3	16.6	1,682	99.5	91.0	13.2	603
Rural	91.7	77.5	10.6	5,410	91.3	69.4	7.6	2,194
Ecological zone								
Lowlands	97.5	88.3	13.9	4,297	96.3	82.0	10.3	1,734
Foothills	89.5	73.7	11.1	786	89.6	62.7	6.6	307
Mountains	84.4	65.4	7.8	1,571	84.6	55.7	5.7	585
Senqu River Valley	95.8	82.0	10.6	437	95.9	76.7	7.5	171
District								
Butha-Buthe	97.9	85.0	14.9	457	97.7	77.2	7.9	182
Leribe	96.6	84.7	12.5	1,065	95.2	78.5	12.8	393
Berea	96.2	82.0	13.5	775	92.4	70.3	9.5	350
Maseru	96.2	87.5	14.2	1,867	95.7	81.2	10.5	741
Mafeteng	92.2	83.3	11.8	753	90.3	76.0	5.0	297
Mohale's Hoek	89.5	76.7	9.8	684	93.5	70.2	7.0	281
Quthing	90.5	75.7	8.8	461	94.5	72.5	7.4	167
Qacha's Nek	90.4	64.6	10.5	233	87.2	56.1	9.8	99
Mokhotlong	91.9	73.6	6.4	360	93.0	66.6	5.5	130
Thaba-Tseka	80.9	65.5	8.4	435	78.2	55.9	4.0	156
Education								
No education	80.1	49.5	4.7	145	82.4	48.8	5.8	479
Primary incomplete	87.7	7.2	67.2	2,135	91.7	6.2	68.2	1,194
Primary complete	93.9	12.2	81.2	1,957	97.6	8.6	82.0	352
Secondary+	98.5	15.9	93.4	2,854	99.8	14.7	95.1	773
Total	93.6	81.2	12.0	7,091	93.1	74.1	8.8	2,797

na = Not applicable

The table also shows the proportion of respondents who said they had ever been tested for HIV and that they got the results of the test. Twelve percent of women and 9 percent of men are presumed to know their HIV status (or at least to have known it at some time). The proportions who were tested and received the results are higher among older respondents, those living in urban areas, and respondents with more education. The level is also higher among ever-married respondents or those living with a partner than among those who have never married.

Use of Condoms

Condom use, particularly in higher risk sexual relationships, is one of the most important means of preventing the spread of HIV/AIDS. Men and women who reported they were sexually active were asked a number of questions about condom use during the year before the survey. Table 14.1 and 14.2 present the level of condom use among women and men during their last sexual encounter.

Table 14.1 Use of condoms by type of partner: women						
Among women who have had sexual intercourse in the past year, percentage who used a condom ¹ during last sexual intercourse with spouse or cohabiting partner, with noncohabiting partner, and with any partner, by background characteristics, Lesotho 2004						
Background characteristic	Spouse or cohabiting partner		Noncohabiting partner		Any partner	
	Percent	Number	Percent	Number	Percent	Number
Age						
15-19	7.6	278	47.7	309	28.3	571
20-24	12.0	727	51.4	373	24.9	1,049
25-29	13.7	669	47.0	303	22.1	909
30-39	11.8	1,035	31.5	421	16.3	1,330
40-49	6.9	804	18.8	355	9.3	1,069
Marital status						
Never married	34.1	28	54.3	779	53.8	804
Married or living together	10.5	3,367	30.5	426	10.7	3,462
Divorced/separated/widowed	12.4	118	23.0	556	20.7	663
Residence						
Urban	20.7	707	60.6	517	36.5	1,172
Rural	8.3	2,807	29.6	1,245	13.6	3,757
Ecological zone						
Lowlands	13.8	2,073	47.3	1,068	24.2	2,973
Foothills	7.2	427	24.5	151	10.7	539
Mountains	5.1	829	22.3	392	9.1	1,102
Senqu River Valley	10.3	185	34.3	151	20.0	315
District						
Butha-Buthe	9.8	231	40.3	89	16.8	303
Leribe	14.4	568	36.0	227	19.5	742
Berea	8.6	413	32.8	138	13.8	517
Maseru	14.9	862	53.7	551	29.0	1,336
Mafeteng	10.2	400	38.5	169	17.2	531
Mohale's Hoek	8.0	328	27.8	171	14.2	468
Quthing	9.7	201	32.9	156	18.7	333
Qacha's Nek	4.8	109	31.2	78	14.6	170
Mokhotlong	5.8	173	16.5	89	8.0	238
Thaba-Tseka	3.7	228	20.4	93	7.5	291
Education						
No education	3.1	82	5.7	49	4.0	119
Primary incomplete	5.0	1,066	18.5	504	8.4	1,437
Primary complete	7.5	1,077	31.5	462	13.2	1,432
Secondary+	18.7	1,287	58.9	746	32.3	1,941
Total	10.8	3,513	38.7	1,762	19.1	4,929

¹ Condoms could mean either male or female condoms.

Table 14.2 Use of condoms by type of partner: men

Among men who have had sexual intercourse in the past year, percentage who used a condom¹ during last sexual intercourse with spouse or cohabiting partner, with noncohabiting partner, and with any partner, by background characteristics, Lesotho 2004

Background characteristic	Spouse or cohabiting partner		Noncohabiting partner		Any partner	
	Percent	Number	Percent	Number	Percent	Number
Age						
15-19	56.0	12	49.2	270	48.8	278
20-24	14.7	82	47.2	304	41.2	366
25-29	19.1	187	52.7	180	34.1	321
30-39	13.7	336	41.0	228	20.4	479
40-49	8.4	216	20.0	114	11.5	292
50-59	3.8	199	8.9	95	5.1	260
Marital status						
Never married	66.6	24	49.6	720	49.6	736
Married or living together	10.8	997	31.6	340	12.8	1,123
Divorced/separated/widowed	21.1	10	24.4	129	23.7	136
Residence						
Urban	20.6	269	65.8	276	41.5	472
Rural	9.3	763	34.4	914	22.6	1,524
Ecological one						
Lowlands	16.0	630	49.4	714	32.4	1,213
Foothills	8.3	107	28.9	130	20.1	218
Mountains	4.9	241	26.8	245	14.7	425
Senqu River Valley	9.7	55	39.8	102	29.6	141
District						
Butha-Buthe	13.0	64	43.7	74	27.9	129
Leribe	10.9	158	43.7	157	25.8	276
Berea	17.3	132	33.2	114	22.8	225
Maseru	17.0	291	53.7	341	36.2	560
Mafeteng	12.4	75	31.3	120	23.9	183
Mohale's Hoek	6.3	103	37.7	136	24.2	215
Quthing	6.6	55	34.7	99	24.3	141
Qacha's Nek	10.4	34	51.5	53	31.4	78
Mokhotlong	5.1	62	25.6	44	12.5	92
Thaba-Tseka	4.0	59	22.8	52	13.3	96
Education						
No education	5.3	251	12.6	177	7.6	379
Primary incomplete	6.9	413	28.0	476	17.6	799
Primary complete	13.2	111	50.6	174	34.9	260
Secondary+	27.2	257	69.6	363	50.2	558
Total	12.2	1,032	41.7	1,190	27.1	1,997

¹ Condoms could mean either male or female condoms.

Regardless of partner status, men are more likely than women to report use of condoms during a sexual encounter (27 percent versus 19 percent). Both men and women are less likely to use a condom during a sexual encounter with a cohabiting partner (12 percent and 11 percent, respectively) than with a noncohabiting partner (42 percent and 39 percent, respectively).

Looking at the information on condom use with noncohabiting partners, urban women are significantly more likely to use a condom than rural women (61 percent compared with 30 percent). Condom use during sexual encounters with noncohabiting partners drops steadily with women's age. As expected, educational level has a strong impact on condom use. For example, condom use with a noncohabiting partner rises sharply from 6 percent among women with no education to 59 percent among those with secondary or higher education, while for men it rises significantly from 13 percent to 70 percent. Urban residence, age, and educational level are also associated with higher condom use among men.

J. Results of HIV Testing

In all the households for the man's survey, all eligible women and men were asked to voluntarily provide some drops of blood for HIV testing. The protocol for the blood specimen collection and analysis was based on the anonymous linked protocol developed by DHS and approved by ORC Macro's Institutional Review Board. The Lesotho Protocol for the HIV Prevalence of the 2004 LDHS was reviewed and approved by the Lesotho Ministry of Health and Social Welfare Ethics Committee. The protocol allowed for the merging of the HIV results to the socio-demographic data collected in the individual questionnaires, provided that the information that could potentially identify an individual was destroyed before linking is effected. This required that identification codes be deleted from the data file and that the back page of the Household Questionnaire that contained the bar code labels and names of respondents be destroyed prior to merging the HIV results with the individual data file.

In the 2004 LDHS, all interviewers were trained on anthropometry, anaemia and HIV informed consent forms, and blood collection. As part of the procedure to obtain informed consent for blood taking for HIV testing, the interviewer described the testing procedures, the confidentiality of the data, including the fact that test results could not be linked or made available to the subject, and gave information on where to go for VCT services to establish their HIV status. For never-married respondents age 15-17, consent was first obtained from the parent or guardian and then from the respondent him/herself. For respondents who consented, the interviewer collected 3 to 5 dried blood spots (DBS) samples on a filter paper card from a finger prick using a single-use, spring-loaded, sterile lancet. Each DBS sample was given a bar code label, with a duplicate label attached to the Household Questionnaire on the line showing consent for that respondent. A third copy of the same bar code label was affixed to a Blood Transmittal Form in order to track the blood samples from the field to the BOS and then to the laboratory. Filter papers were dried overnight in a plastic drying box, after which the interviewer packed them in individual Ziploc bags with desiccants and a humidity indicator card and placed them in a larger Ziploc bag for that particular EA. Blood samples were periodically collected in the field along with the completed questionnaires and transported to BOS headquarters in Maseru for logging in, after which they were taken to the Lesotho Blood Transfusion Services for HIV testing.

At the Lesotho Blood Transfusion Services all samples were tested using the first test, an ELISA, Vironostika HIV Uni-Form II Plus O. A negative result was considered negative. All positives were tested with a second ELISA test, originally Genscreen HIV1/2, and later with a more accurate test, Enzygnost. Positive samples on the second test were considered positive. If the results from the two tests were discordant, the samples were retested again with both tests. If on the repeat of both tests, the results were negative, the samples were rendered negative; if results were positive, the samples were rendered positive. However, in the rare event of discordant results on the repeat of both tests, a third test, Abbot Determine was used the tie breaker. The same steps were also followed for 10 percent of the samples testing negative on the first test. Additional internal quality control measures included testing a number of CDC known panels in each plate. This was done to check the accuracy of the laboratory technicians. About 5 percent randomly selected samples were sent for retesting to NICD in South Africa as part of the external quality control.

Initial findings from the HIV testing are presented below. The summary is limited to eligible men and women in the age group 15-49 to facilitate comparisons between the male and female results. A more detailed analysis of the results will be included in the final report.

HIV Coverage Rates

Three in four eligible respondents in the 2004 LDHS provided blood samples for HIV testing (Table 15). Women were more likely to give blood samples for HIV testing than men (81 percent versus 68 percent).

Among women respondents, refusal to be tested accounts for 62 percent of the cases not tested, while among men, absence and other factors account for slightly more of the nonresponse than refusals. Nonresponse is higher in urban than in urban areas.

HIV Prevalence Rates

Table 16 presents the findings from HIV testing. The table shows that 24 percent of the respondents tested were found to be HIV positive. Women are more likely to be HIV positive than men (26 percent versus 19 percent). There are distinct differences between women and men in the age pattern of HIV infection. For both women and men, the infection rate increases sharply with age; for women, it peaks at age group 35-39 (43 percent), while, for men, it peaks at age group 30-34 (41 percent). The infection rates are lower for men than women at every age group except for the two oldest groups. Gender differences are most pronounced in younger age groups. In the 20-24 year age group, 24 percent of women and 12 percent of men are infected, while in the 25-29 age group, 40 percent of women and 24 percent of men are infected.

Generally, HIV prevalence is higher in urban areas than in rural areas (29 percent and 22 percent, respectively). Districts with prevalence levels at or above the national average are Leribe (30 percent), Maseru (26 percent), and Berea (24 percent). HIV prevalence rates in Mokhotlong and Thaba-Tseka (18 percent each) are the lowest in the country.

Thus, the 2004 LDHS confirms that Lesotho has a severe, generalized HIV epidemic and provides useful information on the distribution of HIV in the population. Further analysis in the final report of the 2004 LDHS will provide additional information on the links between behaviour, knowledge, and HIV infection in Lesotho.

Table 15 Coverage of HIV testing

Percent distribution of de facto women and men age 15-49 eligible for HIV testing by testing status, according to residence (unweighted), Lesotho 2004

Sex/Test result	Residence		Total
	Urban	Rural	
Women			
Tested	73.3	83.4	80.7
Not tested	26.7	16.6	19.3
Refused	21.7	8.4	12.0
Absent	1.8	2.7	2.4
Interviewed	0.2	0.3	0.2
Not interviewed	1.6	2.4	2.2
Other	3.3	5.5	4.9
Total	100.0	100.0	100.0
Number	1,011	2,747	3,758
Men			
Tested	60.4	70.1	67.7
Not tested	39.6	29.9	32.3
Refused	27.5	13.3	16.8
Absent	5.0	8.0	7.3
Interviewed	0.4	0.4	0.4
Not interviewed	4.6	7.7	6.9
Other	7.1	8.5	8.2
Total	100.0	100.0	100.0
Number	717	2,250	2,967
Total			
Tested	67.9	77.4	75.0
Not tested	32.1	22.6	25.0
Refused	24.1	10.6	14.1
Absent	3.1	5.1	4.6
Interviewed	0.3	0.3	0.3
Not interviewed	2.8	4.8	4.3
Other	4.9	6.9	6.3
Total	100.0	100.0	100.0
Number	1,728	4,997	6,725

Table 16 HIV prevalence by socioeconomic characteristics

Percentage HIV positive among women and men age 15-49 who were tested, by background characteristics, Lesotho 2004

Background characteristic	Women				Men				Total			
	Percent tested	Unweighted number eligible	Percent HIV positive	Weighted number tested	Percent tested	Unweighted number eligible	Percent HIV positive	Weighted number tested	Percent tested	Unweighted number eligible	Percent HIV positive	Weighted number tested
Age												
15-19	80.7	944	7.9	724	70.8	895	2.3	624	75.9	1,839	5.3	1,348
20-24	82.8	761	24.2	623	66.7	606	12.2	404	75.6	1,367	19.5	1,027
25-29	76.4	542	39.8	436	65.3	444	23.9	301	71.4	986	33.3	737
30-34	85.9	434	39.3	389	69.1	353	41.1	251	78.4	787	40.0	640
35-39	81.1	380	43.3	317	66.1	274	39.1	187	74.8	654	41.8	504
40-44	76.6	376	29.1	297	64.4	194	33.9	128	72.5	570	30.6	424
45-49	80.1	321	16.8	245	65.7	201	26.2	123	74.5	522	20.0	368
Residence												
Urban	73.3	1,011	33.0	735	60.4	717	22.0	407	67.9	1,728	29.1	1,142
Rural	83.4	2,747	24.3	2,295	70.1	2,250	18.5	1,611	77.4	4,997	21.9	3,906
Ecological zone												
Lowlands	77.9	1,673	28.0	1,843	65.2	1,321	20.4	1,238	72.3	2,994	24.9	3,081
Foothills	78.2	533	24.2	333	62.2	434	16.9	231	71.0	967	21.2	565
Mountains	83.6	1,169	23.3	663	71.4	919	17.6	428	78.2	2,088	21.0	1,092
Senqu River Valley	87.5	383	25.1	192	76.1	293	17.6	119	82.5	676	22.2	311
District												
Butha-Buthe	80.3	406	25.3	195	67.9	318	12.3	129	74.9	724	20.1	324
Leribe	81.1	424	30.6	433	63.6	308	28.3	270	73.8	732	29.7	704
Berea	80.5	390	25.2	356	72.5	353	22.3	269	76.7	743	24.0	625
Maseru	65.0	583	29.9	796	50.8	461	18.8	522	58.7	1,044	25.5	1,318
Mafeteng	85.2	384	25.8	324	75.4	305	15.5	225	80.8	689	21.5	549
Mohale's Hoek	82.2	432	20.9	298	65.8	351	20.4	204	74.8	783	20.7	502
Quthing	89.7	310	25.7	198	69.1	223	18.9	115	81.1	533	23.2	312
Qacha's Nek	87.1	256	25.2	99	83.7	203	13.6	70	85.6	459	20.4	170
Mokhotlong	84.7	307	20.6	153	71.2	243	13.0	97	78.7	550	17.7	250
Thaba-Tseka	85.0	266	20.5	179	74.3	202	14.5	116	80.3	468	18.2	295
Total	80.7	3,758	26.4	3,031	67.7	2,967	19.2	2,017	75.0	6,725	23.5	5,048

With the inclusion of HIV testing in 2004 LDHS, Lesotho is one of several countries in Africa to conduct a nationally representative, population-based HIV prevalence survey. Demographic and Health Surveys in other countries, such as Mali (CPS/MS, 2002), Zambia (CSO et al., 2003), Kenya (CBS et al., 2004), Ghana (GSS et al., 2004), Tanzania (TACAIDS et al., 2005), Uganda (MOH et al., 2005), and the Nelson Mandela/HSRC survey in South Africa (Shisana and Simbayi, 2002) included testing for HIV and have demonstrated that it is possible to have plausible estimates from population-based surveys. In Lesotho, as in most sub-Saharan Africa, national HIV prevalence estimates have been derived primarily from sentinel surveillance in pregnant women. Prior to the 2004 LDHS, ANC surveillance has provided the data on which the national seroprevalence estimates for the adult population have been based. The use of ANC data for this purpose is based on the assumption that the HIV level among pregnant women provides a reasonable estimate of the HIV level in the general population. The HIV prevalence rate among pregnant women attending antenatal care for the first time based on the 2003 Lesotho HIV Sentinel Survey (MOHSW, 2004) is 29 percent, higher than the 2004 LDHS estimate of 24 percent.

In looking at issues that might cause the difference between the two estimates, potential biases and differences in methodology between HIV Sentinel Survey and LDHS need to be recognized. HIV Sentinel Survey collects HIV prevalence data by testing currently pregnant women age 15-49 who attend antenatal care clinics during their pregnancy. These data are then used to derive estimates of HIV prevalence in the general population. It is recognized that there are a number of

potential problems with this approach (UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance, 2000). First, there is a gender gap due to the fact that men are not tested in ANC clinics, and HIV prevalence levels typically differ between men and women. Furthermore, women who attend antenatal care clinics are de facto sexually active. Thus, the HIV prevalence will necessarily be higher in this group than in the female population as a whole, where some women are not sexually active and hence not exposed to the virus. HIV prevalence levels also vary with age, and women who attend antenatal care clinics have a different age distribution than the female population at large. Table 17 shows that in the 2003 Lesotho HIV Sentinel Survey, more than nine in ten women fall between ages 15-34, while less than one in ten are in the older age groups. Data from the 2004 LDHS show a different age distribution of women who were tested for HIV; more than seven in ten women are age 15-34, while about three in ten are in the older age groups. The skewing towards the younger age groups in the 2003 Lesotho HIV Sentinel Survey could be a major factor explaining why the HIV rate is higher than the 2004 LDHS estimate, since younger women have higher infection rates than their older counterparts. Geographic coverage could be another issue with the 2003 Lesotho HIV Sentinel Survey data. The data came from six antenatal care clinic sites that are somewhat more concentrated in urban or semi-urban areas, where HIV rates are higher. Table 17 shows that 55 percent of women in the 2003 Lesotho HIV Sentinel Survey live in urban areas and 45 percent live in rural areas. On the other hand, in the 2004 LDHS 24 percent of women who were tested for HIV live in urban areas and 76 percent live in rural areas. Data from the 2002 Lesotho Demographic Survey (BOS, 2002) are in line with the 2004 LDHS distribution of women age 15-49 by residence; 81 percent are urban residents, while 19 percent live in rural areas.

Table 17. Selected background characteristics of women tested for HIV				
Percent distribution of women tested for HIV by age and residence, Lesotho, 2003 and 2004				
Background characteristics	2003 Lesotho HIV Sentinel Survey		2004 LDHS	
	Percent	Number of women tested	Weighted percent	Weighted number of women tested
Age				
15-19	18.4	490	23.9	737
20-24	38.7	1033	20.4	630
25-29	21.1	562	14.5	447
30-34	13.1	350	12.8	395
35-39	6.2	165	10.5	329
40-44	2.3	62	9.7	300
45-49	0.2	4	8.1	251
Residence				
Urban	55.0	1,466	24.1	745
Rural	45.0	1,200	75.9	2,340
Total	100.0	2,666	100.0	3,085

Sources: Ministry of Health and Social Welfare, 2004; Ministry of Health and Social Welfare, Bureau of Statistics, and ORC Macro, 2004

References

- Bureau of Statistics (BOS) [Lesotho]. 2002. *Lesotho Demographic Survey, 2001, Volume 1*. Maseru: BOS.
- Cellule de Planification et de Statistique du Ministère de la Santé (CPS/MS), Direction Nationale de la Statistique et de l'Informatique (DNSI) [Mali], et ORC Macro. 2002. *Enquête Démographique et de Santé au Mali 2001*. Calverton, Maryland, USA: CPS/MS, DNSI, et ORC Macro.
- Centers for Disease Control and Prevention (CDC). 1998. Recommendations to prevent and control iron deficiency in the United States. *Morbidity and Mortality Weekly Report* 47(RR-3) :1-29.
- Central Bureau of Statistics (CBS) [Kenya], Ministry of Health (MOH) [Kenya], and ORC Macro. 2004. *Kenya Demographic and Health Survey 2003*. Calverton, Maryland: CBS, MOH, and ORC Macro.
- Central Statistical Office (CSO) [Zambia], Central Board of Health [Zambia], and ORC Macro, 2003. *Zambia Demographic and Health Survey 2001-2002*. Calverton, Maryland, USA: Central Statistical Office, Central Board of Health and ORC Macro.
- DeMaeyer, E. et al. 1989. *Preventing and controlling iron deficiency anaemia through primary health care: A guide for health administrators and programme managers*. Geneva: World Health Organization.
- Ghana Statistical Service (GSS), Noguchi Memorial Institute for Medical Research (NMIMR), and ORC Macro. 2004. *Ghana Demographic and Health Survey 2003*. Calverton, Maryland: GSS, NIMR, and ORC Macro.
- Ministry of Health and Social Welfare (MOHSW) [Lesotho], 2004. *HIV Sentinel Survey 2003*. Maseru: MOHSW.
- Ministry of Health (MOH) [Uganda], ORC Macro, and CDC/Uganda. 2005. *Uganda HIV/AIDS Sero-Behavioral Survey 2004-05: Preliminary report*. Calverton, Maryland: MOH and ORC Macro.
- Shisana, O. and L. Simbayi. 2002. *Nelson Mandela/HSRC Study of HIV/AIDS: South African National Prevalence, Behavioural Risks and Mass Media: Household Survey 2002*. Cape Town, South Africa: Human Sciences Research Council.
- Tanzania Commission for AIDS (TACAIDS), National Bureau of Statistics (NBS), and ORC Macro. 2005. *Tanzania HIV/AIDS Indicator Survey 2003-04*. Calverton, Maryland, USA: TACAIDS, NBS, and ORC Macro.
- UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance. 2000. *Second generation surveillance for HIV: The next decade*. WHO/CDS/CSR/EDC/2000.5, UNAIDS/00.03E, p. 13.

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