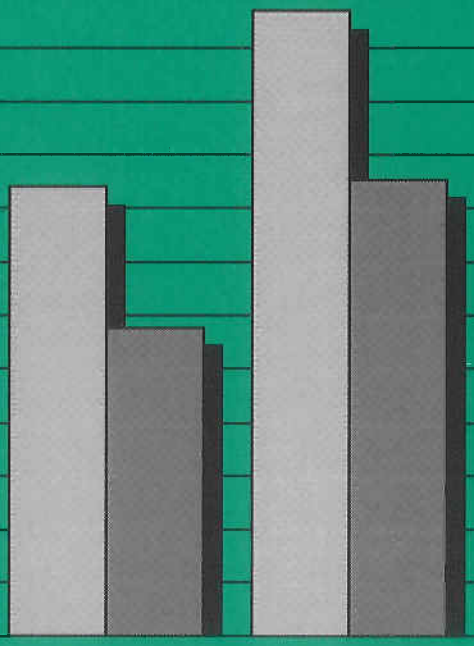
DHS

# Yemen



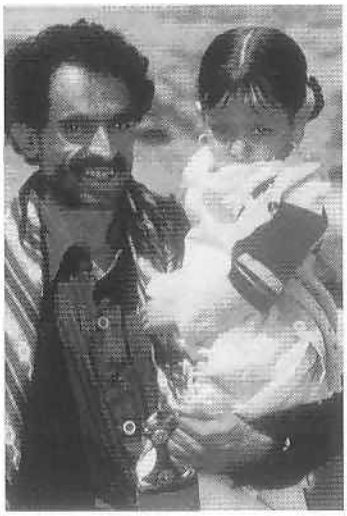
# Demographic and Maternal and Child Health Survey 1997

SUMMARY REPORT

# YEMEN DEMOGRAPHIC AND MATERNAL AND CHILD HEALTH SURVEY 1997

## SUMMARY REPORT





WORLDBANK/C. Carnemark

Central Statistical Organization
Post Box 13434
Sana'a, Yemen

November 1998

This report summarizes the findings of the 1997 Yemen Demographic and Maternal and Child Health Survey (YDMCHS) conducted by the Central Statistical Organization, in cooperation with the Ministry of Public Health. Macro International Inc. provided technical assistance. Funding was provided by the U.S. Agency for International Development and the Republic of Yemen.

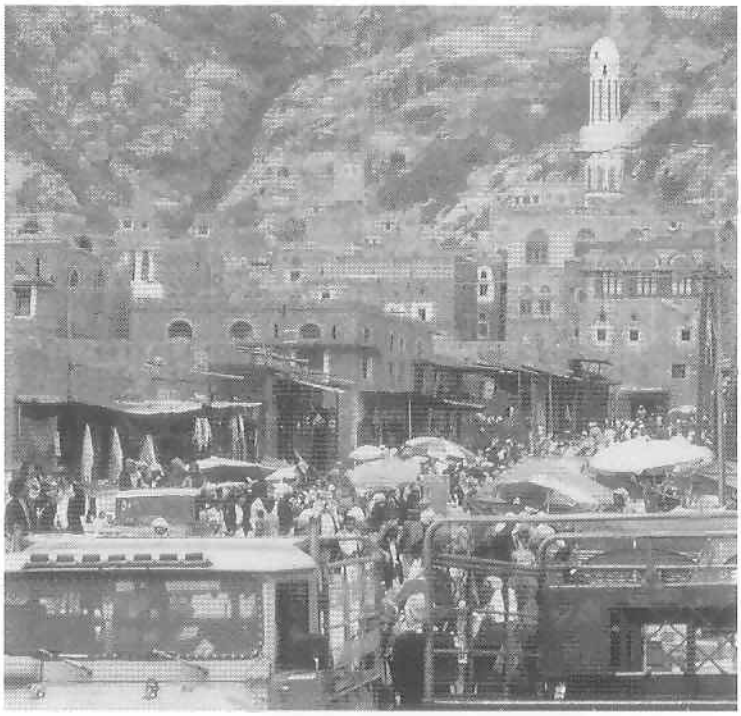
The YDMCHS is part of the worldwide Demographic and Health Surveys (DHS) program. The DHS program is designed to collect data on fertility, family planning, and maternal and child health. Additional information on the Yemen survey may be obtained from the Central Statistical Organization (CSO), Post Box 13434, Sana'a, Yemen (Telephone: 967-1-250108; Fax: 967-1-250-664). Additional information about the DHS program may be obtained by writing to: DHS, Macro International Inc., 11785 Beltsville Drive, Calverton, MD 20705, USA (Telephone: 301-572-0200; and Fax: 301-572-0999).

## Background

The 1997 Yemen Demographic and Maternal and Child Health Survey (YDMCHS) is a nationally representative survey of ever-married women age 15-49 and children under 5. This is the second national survey in the country since the unification of the Yemen Arab Republic and the People's Democratic Republic of Yemen in May 1990 into a single country, the Republic of Yemen (hereafter referred as Yemen); the first survey took place in 1991-92. All governorates and the city of Sana'a were covered by the survey. The objective of the YDMCHS was to gather reliable statistics on fertility, mortality, family planning knowledge and use, and maternal and child health.

Fieldwork for the YDMCHS was conducted over a three-month period between October and December 1997. Information was collected from 10,701 households and 10,414 ever-married women age 15-49.

The survey collected information on marriage, fertility, family planning, reproductive preferences and attitudes, female circumcision, maternal health care, and nutrition. In addition, information was collected on child mortality and children's health including feeding practices, vaccinations, morbidity, and curative measures. Most of these data can be compared with the results obtained during the 1991-92 YDMCHS survey, thus providing useful information on recent trends in population and health in Yemen.



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# Fertility

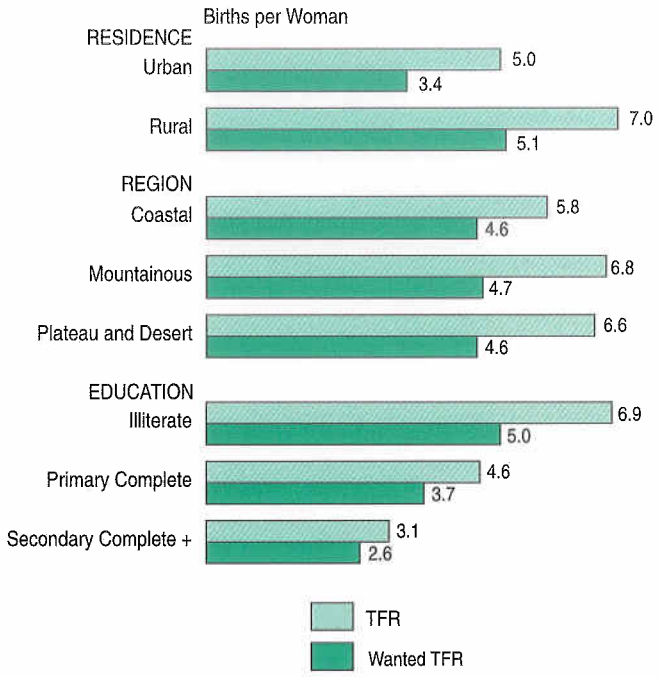
## Levels and Trends

At current fertility levels, Yemeni women will have an average of 6.5 children during their reproductive years. Although this fertility rate is one of the highest in the world, it has declined by more than one child since 1991-92 when the rate was 7.7 children per woman.

A rural woman can expect to have an average of 7.0 children, two children more than her urban counterpart. Illiterate women have a fertility rate of 6.9, or 2.3 children more than women who have completed primary school and 3.8 children more than women who have completed secondary or higher schooling.

*At current fertility levels, Yemeni women will have an average of 6.5 children.*

**Figure 1**
**Total Fertility Rates and Wanted Fertility Rates (Women 15-49)**

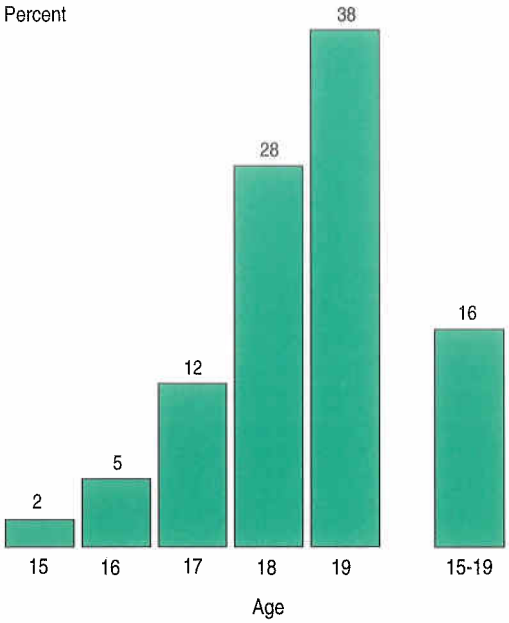



A comparison of the total fertility rate and the total wanted fertility rate indicates the potential demographic impact of avoidance of unwanted births. If all unwanted births could be prevented, a Yemeni woman would have an average of 4.6 children in her lifetime, or almost 2 children less than the current rate.

*If all unwanted births could be prevented, a Yemeni woman would have an average of 4.6 children.*

Births to teens and to women age 35 and over have been shown to put both mothers and children at higher than average risk of illness and death. Half of Yemeni women age 25-49 have had their first birth before age 20. One in six women age 15-19 (16 percent) is already a mother or is pregnant with her first child.

**Figure 2**
**Childbearing Among Teenagers (Women 15-19)**

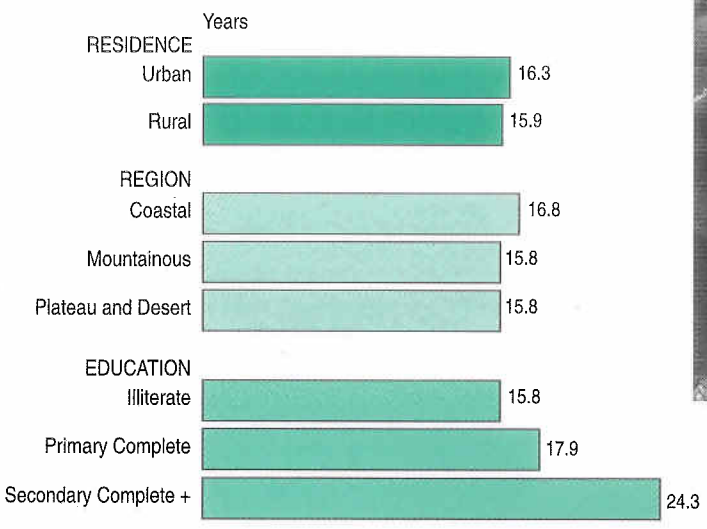


## Marriage

Age at first marriage has increased over the last four decades. At the time of the survey, half of the women in Yemen were married by age 16. But for younger women, such as those age 20-24, the median age at first marriage is much higher—18.2 years—which is more than two years higher than the national figure. On the other hand, half of the women age 45-49 were married by age 15.7 years, or two and a half years younger than women age 20-24. Thus, the trend is toward later age at marriage.

While there are only minor differences in age at marriage by residence and region, increases in women's level of education tend to push the age at marriage upward. Among women age 25-49 who are illiterate the median age at marriage is less than 16 years, while it is over 24 years for women who have completed secondary or higher schooling.

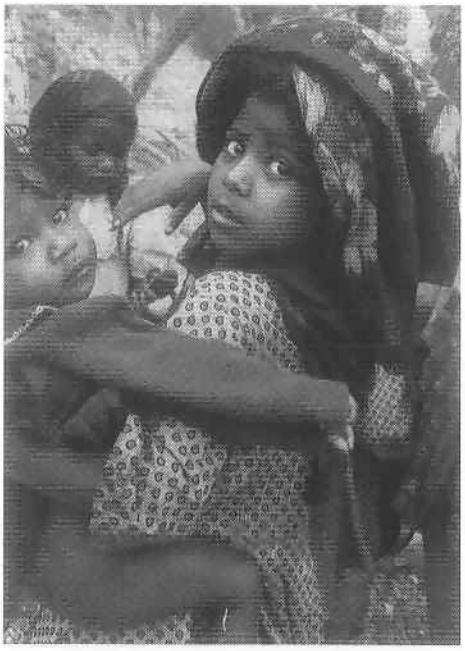
**Figure 3**
**Median Age at Marriage by Selected Characteristics**
**(Women 25-49)**




*Among women age 25-49 who are illiterate, the median age at marriage is less than 16 years, while it is over 24 years for women who have completed secondary or higher schooling.*

Seven percent of currently married women live in a polygynous marriage (i.e., their husband has more than one wife).

Consanguineous marriage is quite common in Yemen and has increased since the last survey. Among ever-married women age 15-49, 40 percent report that they have a blood relationship with their husband. In 1991-92, the proportion was one in three.



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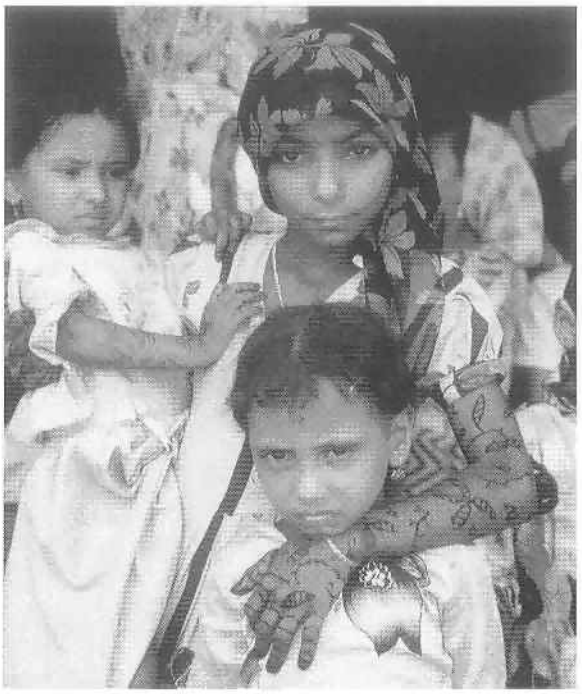
## Fertility Preferences

Overall, two in five currently married women want to have more children. However, almost half (49 percent) of women want no more children, an increase from 36 percent in 1991-92.

While the percentage of women desiring more children decreases steadily with the number of living children, about 20 percent of women with six children report that they still want at least one more child.

Over half (55 percent) of women in urban areas do not want any more children, compared with 47 percent of rural women. The proportions were much lower—47 and 34 percent, respectively—for the 1991-92 survey.

The average ideal family size in Yemen is 4.5 children. It has declined substantially since 1991-92 when ideal family size was 5.4 children. The younger a woman is, the smaller her ideal family size. Women age 15-19 want 3.9 children, one child fewer than women 35-39, and 1.4 children fewer than women 40-44.



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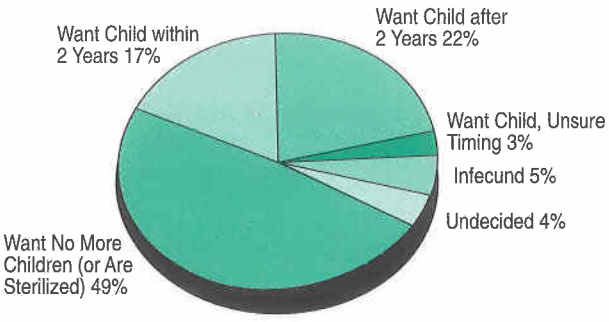
Women with primary or higher education want, on average, about the same number (4 children) as in 1991-92; illiterate women want 4.6 children compared with 5.6 in 1991-92.

*The average ideal family size in Yemen is 4.5 children. It has declined substantially since 1991-92 when ideal family size was 5.4 children.*

Among women who have discussed family size with their husband, 45 percent say their husband wants more children; the same proportion says they and their husband want the same number of children.

While two in five women (44 percent) show no gender preference for their first child, 28 percent would rather have a son and 13 percent a daughter. After the birth of their first child, women tend to want the gender composition of their family to be balanced, i.e., their preference alternates between a son and a daughter depending on the actual gender composition at the time. Overall, one in three women prefers a son, 21 percent want a daughter, and 46 percent have no preference or leave that choice to "God's will".

**Figure 4**
**Fertility Preferences**
**(Currently Married Women 15-49)**



## Female Circumcision

Almost one in four ever-married women (23 percent) has been circumcised. Among women with one or more living daughters, 20 percent reported that at least one daughter has been circumcised. Almost half of ever-married women believe the practice should be discontinued while two in five believe it should be continued. Among those who say it should be discontinued, two-thirds regard it as a bad tradition. Among women who think the practice should be continued, 46 percent cite cleanliness as a reason.

Female circumcision varies substantially by region. While only 5 percent of women from the Plateau and Desert region have been circumcised and 15 percent of women from the Mountainous region, 69 percent of women living in the Coastal region have been circumcised. For one in two daughters, circumcision takes place 7 to 10 days after birth. It is generally performed by a traditional birth attendant, or Daya (68 percent), or by a grandmother or other relative (19 percent).

*Almost one in four ever-married women (23 percent) has been circumcised. Prevalence varies by region and is highest in the Coastal region (69 percent).*

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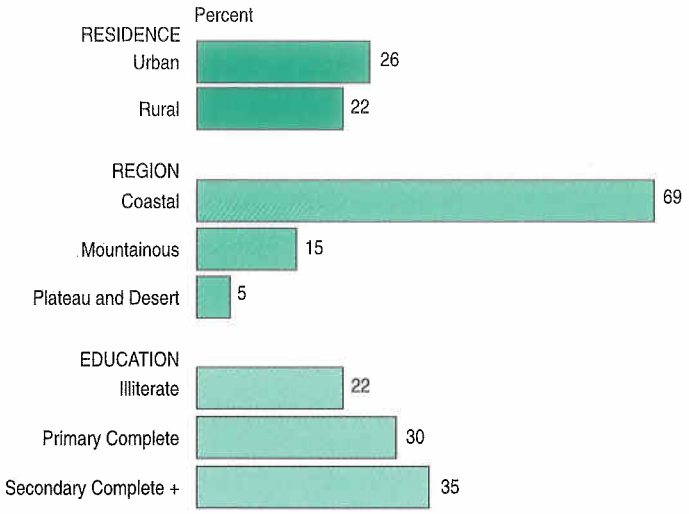
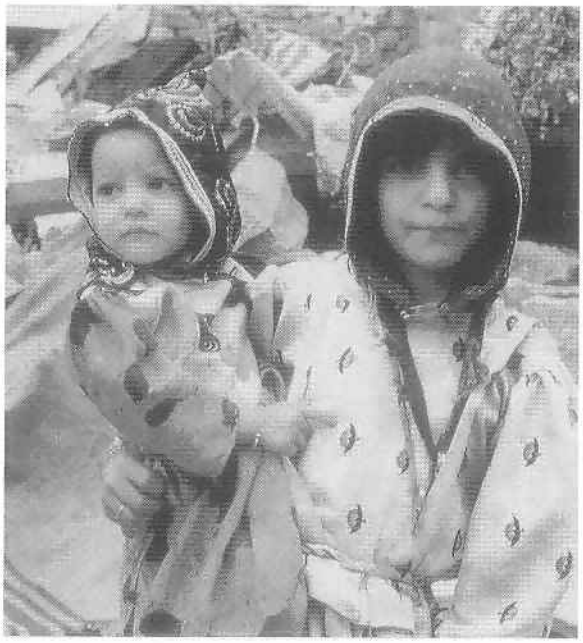
**Figure 5**
**Female Circumcision by Selected Characteristics (Ever-Married Women 15-49)**



# Family Planning

## Contraceptive Knowledge

Knowledge of fertility regulation has increased dramatically since the 1991-92 survey. In 1997, 84 percent of currently married women reported having heard of at least one method of family planning and 79 percent reported knowledge of a modern method. In 1991-92, the figures were 60 percent and 53 percent, respectively. The increase is particularly marked among rural women and illiterate women.



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*In 1997, 84 percent of currently married women reported having heard of at least one method of family planning and 79 percent reported knowledge of a modern method.*

The most widely known methods of family planning are the pill and the IUD, known by 76 and 64 percent of the women, respectively. More than half of women (56 percent) have heard of injectables and 48 percent have heard of female sterilization.

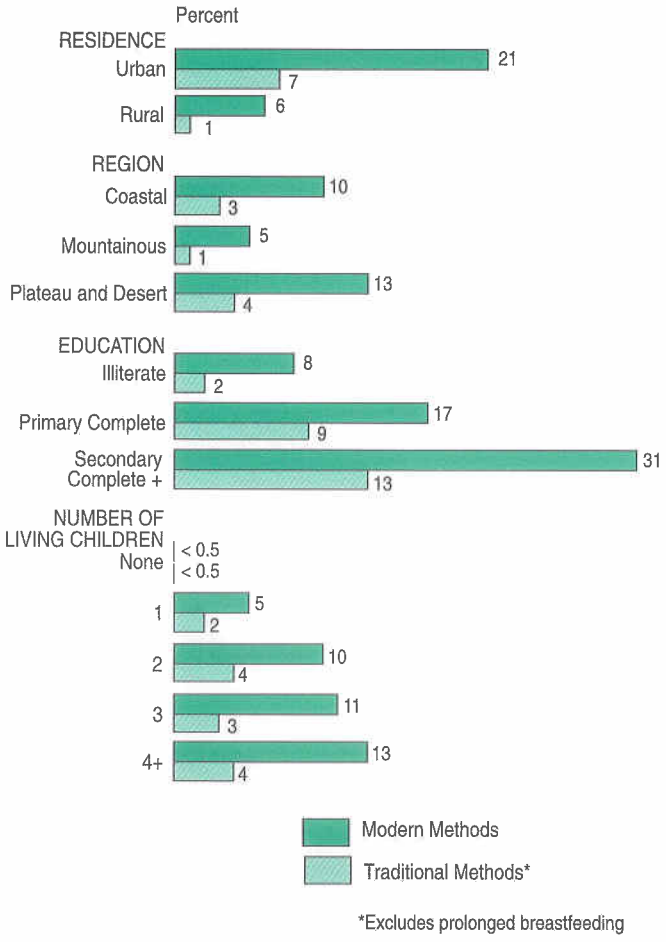
The differentials in knowledge observed in 1991-92 have been greatly reduced; however, younger women, educated women, women living in urban areas, and those in the Coastal and Plateau and Desert regions are more likely to have knowledge of contraceptive methods than other women.

The proportion of women who know a place where family planning services are available has doubled since 1991-92, from 27 to 53 percent.

## Contraceptive Use

Although the level of contraceptive use is still very low in Yemen—especially compared with neighboring countries—it has doubled since 1991-92 from 7 to 13 percent (all methods except prolonged breastfeeding).

**Figure 6**
**Contraceptive Prevalence by Selected Characteristics (Currently Married Women 15-49)**



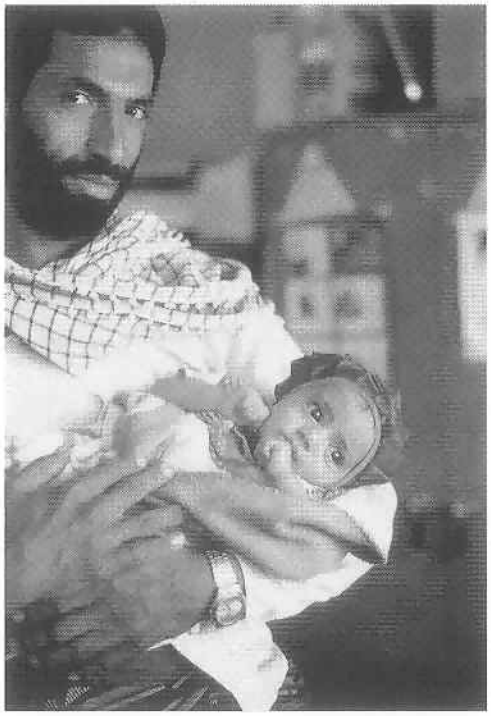

Ten percent of currently married women use a modern contraceptive method, up from 6 percent in 1991-92. The most commonly used methods are the pill (4 percent) and the IUD (3 percent).

*Although the level of contraceptive use is still very low in Yemen—expecially compared with neighboring countries—it has doubled since 1991-92 from 7 to 13 percent (all methods except prolonged breastfeeding).*

Contraceptive use (excluding breastfeeding) varies substantially by background characteristics of women. Among currently married women, contraceptive use is 6 percent in the Mountainous region, 13 percent in the Coastal region, and 17 percent in the Plateau and Desert region. It varies from 7 percent among rural women to 28 percent among urban women. In terms of education, only 10 percent of illiterate women use any method, compared with 26 percent of women who have completed primary schooling and 44 percent who have completed secondary or higher education.

### Provision of Family Planning Services

The public sector, including Maternal and Child Health (MCH) Centers and facilities operated by the Ministry of Public Health, is a major provider of modern contraceptive methods in Yemen, supplying 49 percent of users. Forty-eight percent of users rely on the private sector for contraceptive methods. Hospitals, doctors, and dispensaries are increasingly popular among women who want the pill, the IUD, injectables, condoms, or sterilization. Pharmacies are a source for one in five users (21 percent).



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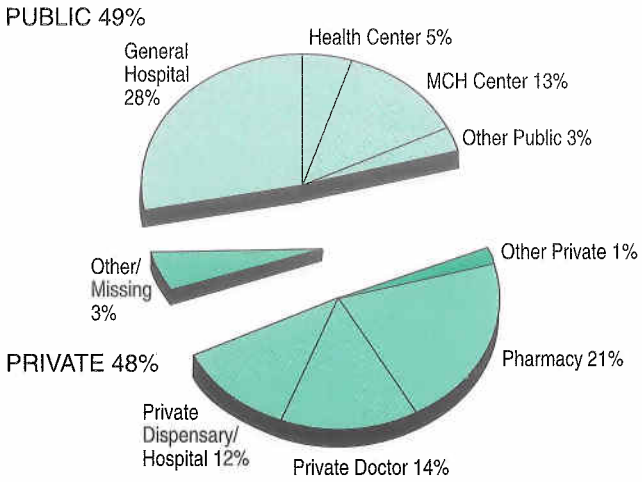
*The public sector, including Maternal and Child Health Centers and facilities operated by the Ministry of Public Health, is a major provider of modern contraceptive methods, supplying 49 percent of users in Yemen.*

IUD users look equally to public (48 percent) or private (51 percent) sources to obtain their method while pill users prefer public sources (51 percent) to private (45 percent). Condom and injectables users are two to four times more likely to rely on the private sector than the public sector. Finally, female sterilization is performed three times more often in a general hospital (74 percent) than in a private facility (22 percent).

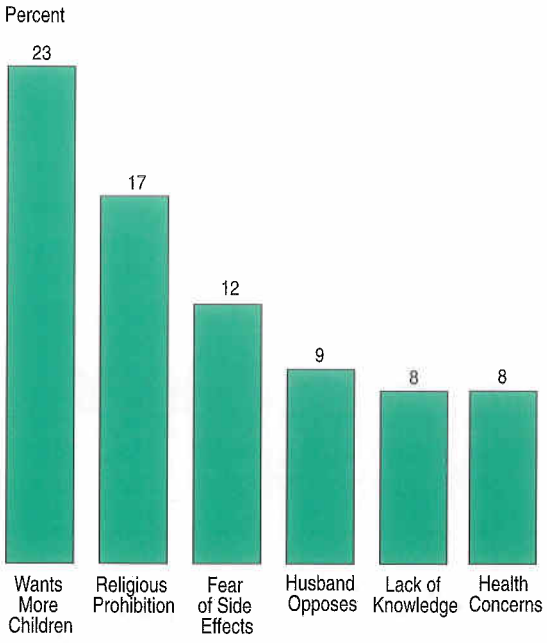
**Figure 7**
**Source of Family Planning Among Current Users of Modern Contraceptive Methods**



## Intention to Use Family Planning in the Future

The intention to use family planning among currently married women has more than doubled since 1991-92, from 16 to 36 percent. Conversely, the proportion of women who do not intend to use family planning has dropped from 83 to 64 percent. More than three in ten nonusers (34 percent) who intend to use a method in the future say their method of choice is the pill, while 20 percent of women would rather use the IUD. The popularity of the pill as a method for future use has declined since 1991-92 from 44 to 34 percent while the popularity of the IUD has increased from 12 to 20 percent.

**Figure 8**
**Reasons for Not Intending to Use a Contraceptive Method in the Future**
**(Women 15-49 Who Are Currently Not Using a Method)**




Interest in adopting family planning may be greater than the figures indicate. One in five women cited fear of side effects or health concerns as the main reason for not intending to use a method in the future. Lack of knowledge of a method or a source for a method, which was the main reason in 1991-92 (23 percent), has dropped to 8 percent. Husbands disapproval has also declined sharply from 16 to 9 percent. Almost one in four women (23 percent) said she did not intend to use a method of family planning because she desired to have more children.

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## Attitudes Toward Family Planning

Currently married women were more likely to talk to their husbands about family planning in 1997 (58 percent) than they were in 1991-92 (45 percent). A majority of women (57 percent) approve of the use of radio to disseminate messages on family planning. The acceptability of television is slightly lower (55 percent).

# Maternal and Child Health

## Infant and Child Mortality and Maternal Mortality

Infant and child mortality levels are still high in Yemen, but are declining. During the two decades preceding the survey, infant mortality dropped from 138 to 75 deaths per 1,000 births, a decline of 46 percent. Infant mortality, as well as under-five mortality, are much higher among boys than girls. For instance, in the five years preceding the survey, infant mortality for boys was 85 deaths per 1,000 births while the rate for girls was 65 per 1,000. The gender gap is greater in rural areas where the respective rates are 90 and 66 deaths per 1,000 births.

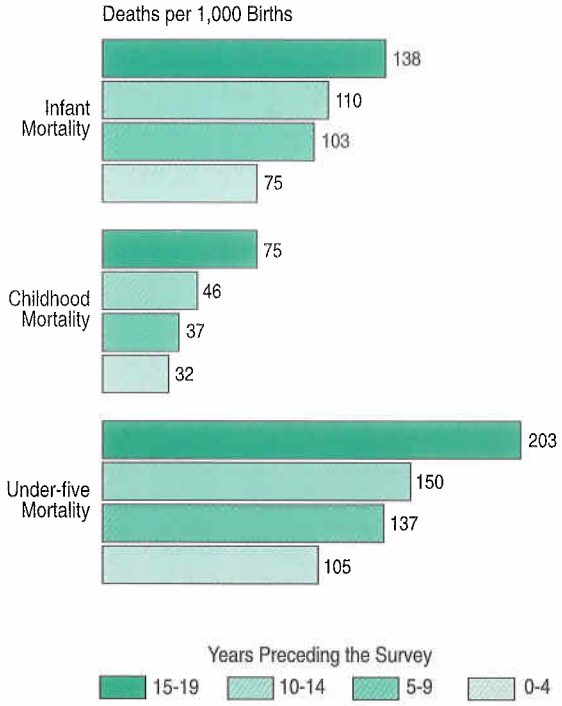
*During the two decades preceding the survey, infant mortality dropped from 138 to 75 deaths per 1,000 births, a decline of 46 percent.*

UNICEF/R. Massey

For the 10-year period preceding the survey, the infant mortality rate was 75 deaths per 1,000 births in urban areas and 94 deaths per 1,000 in rural areas; the under-five mortality rate was 96 in urban areas and 128 in rural areas. Children of educated mothers have a greater chance of survival than children of illiterate or uneducated mothers.

Children born to mothers less than age 20 are at a much greater risk of dying within a year of birth than those born to mothers in their thirties—128 and 79 deaths per 1,000 births, respectively. Also, when the preceding birth interval is less than two years, the infant mortality rate is three and a half times greater than when the birth interval is four years or more.

**Figure 9**
**Trends in Infant and Child Mortality**

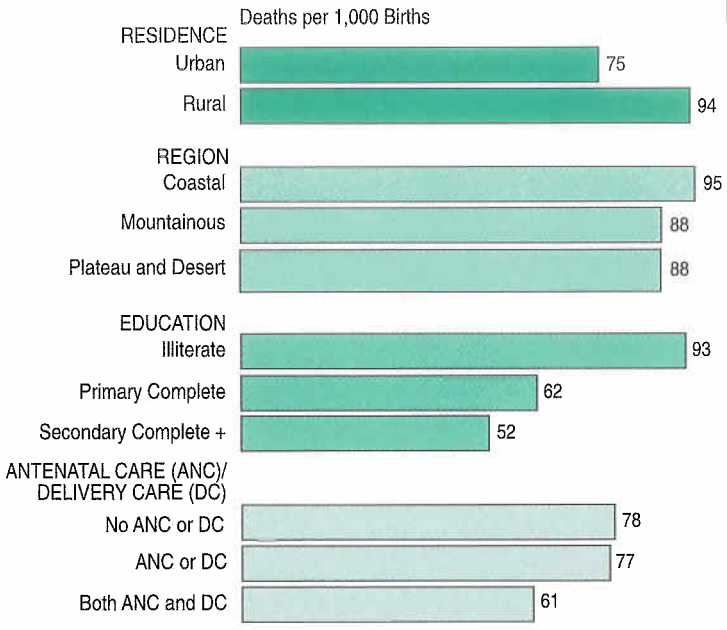


Environmental factors, such as better flooring material, access to piped water, use of flush toilets, sanitary conditions around the house, and less crowding per room are all associated with lower rates of mortality among children.

Many deaths among young children may be preventable. Fever, diarrhea, vomiting, and cough with rapid (or difficult) breathing are common symptoms preceding the death of children under five years. Greater use of oral rehydration therapy (ORT) for treatment of diarrhea and early detection and treatment of acute respiratory illnesses would contribute to a reduction of infant and child mortality in Yemen.

*Greater use of oral rehydration therapy for treatment of diarrhea and early detection and treatment of acute respiratory illnesses would contribute to a reduction of infant and child mortality in Yemen.*

**Figure 10**
**Infant Mortality by Selected Characteristics (Based on the 10 Years Preceding the Survey)**




Pregnancy and childbearing can be life threatening for Yemeni women. Maternal deaths account for 42 percent of all deaths among women age 15-49. For the decade before the survey, the maternal mortality ratio was estimated to be 351 deaths per 100,000 live births.

*Pregnancy and childbearing can be life threatening for Yemni women. Maternal deaths accounted for 42 percent of all deaths among women age 15-49.*

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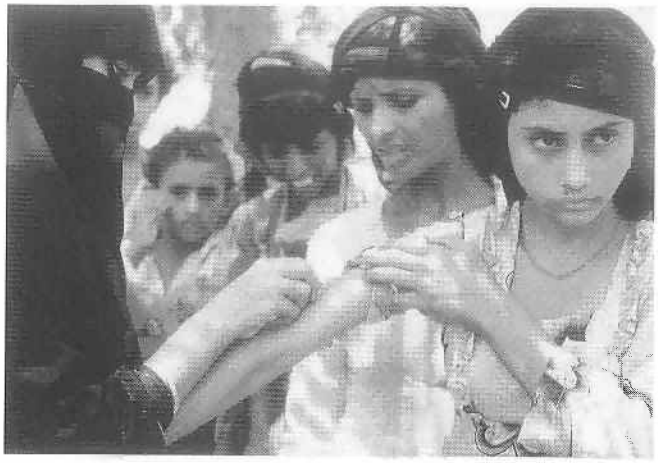
## Antenatal Care

Although most Yemeni women (65 percent) do not receive medical care during pregnancy, the situation has improved slightly since 1991-92, when 74 percent received no care. In the five years preceding the survey, mothers received antenatal care (ANC) for only one-third of births—31 percent from a doctor and 3 percent from a trained nurse/midwife. When mothers did receive ANC, the median number of visits was only 1.9.

ANC is more than twice as common among women living in urban areas (61 percent) as those in rural areas (27 percent). It also differs greatly by region: Coastal region (43 percent), Mountainous region (22 percent), and Plateau and Desert region (38 percent). The differentials are even greater by level of education; while only 29 percent of illiterate women received ANC, 68 percent of those who completed primary school and 87 percent of those with secondary or higher education received ANC.



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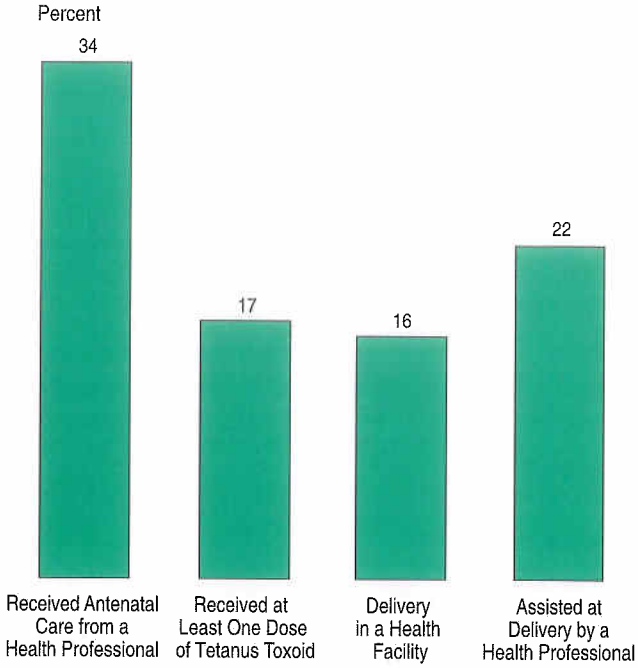
*In the five years preceding the survey, mothers received antenatal care (ANC) for only one-third of births—31 percent from a doctor and 3 percent from a trained nurse/midwife.*

Protection against tetanus, a major killer of infants, can be provided to newborns when their mother receives a tetanus toxoid injection during pregnancy. In Yemen, 17 percent of births in the five years preceding the survey were to women who had received one or two doses of tetanus toxoid. Urban women are three times more likely to receive at least one injection than rural women. Children of women residing in the Mountainous region are less protected against tetanus than those whose mothers reside in other regions.

**Figure 11**
**Antenatal and Delivery Care**
**(Births in the Last Five Years)**

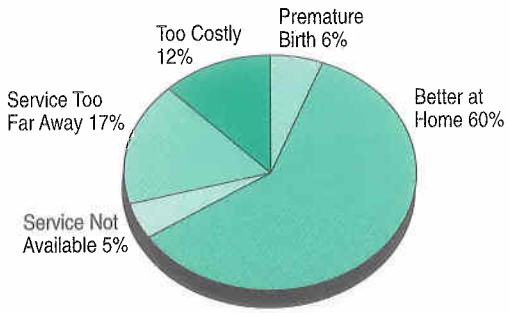


## Delivery Care and Assistance

Complications during delivery are common among Yemeni women. These include prolonged labor (experienced by 33 percent of women), vaginal infection (25 percent), excessive bleeding (17 percent), and convulsions (10 percent). At the same time, most women (84 percent) deliver at home and only 22 percent receive trained medical assistance during delivery. Over half of births are assisted by a relative or someone else.

*Complications during delivery are common among Yemeni women. These include prolonged labor, vaginal infection, excessive bleeding and convulsions.*

**Figure 12**
**Reasons for Not Delivering in a Health Facility (Births in the Last Five Years)**




Three in five deliveries (60 percent) do not take place in a health facility because the mother prefers delivering at home. Other reasons women give for not delivering in a health facility are that the facility is too far away (17 percent), too costly (12 percent), or not available (5 percent).

*Three in five deliveries do not take place in a health facility because the mother prefers delivering at home. Other reasons women give for not delivering in a health facility are that the facility is too far away, too costly, or not available.*

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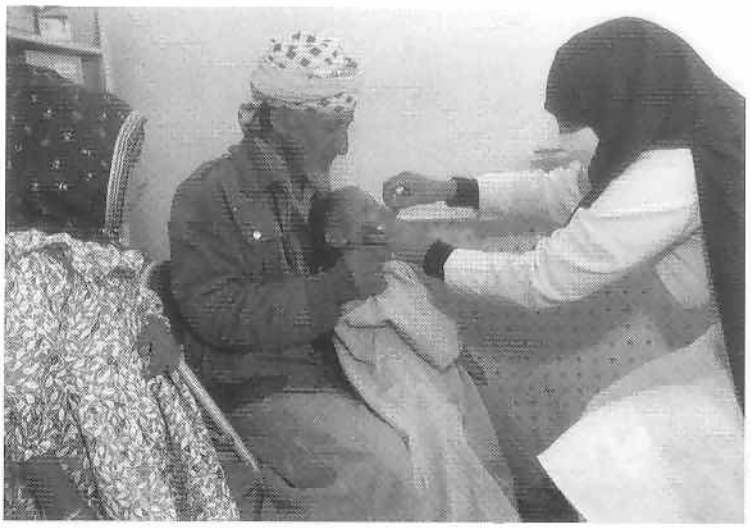
## Child Immunization

While the proportion of children who have received no vaccinations has declined sharply since 1991-92 (from 37 to 12 percent), the proportion of children who have received all the recommended vaccinations—i.e., BCG, measles, and the three doses each of polio and DPT—has also declined (from 45 to 28 percent).

To be fully immunized, children should receive three doses each of polio and DPT vaccines. In 1997, 87 percent of children received the first dose of polio vaccine, compared with 61 percent in 1991-92. However, only 46 percent of children received the third dose—a dropout rate of 47 percent. Thus, despite high coverage for the first dose of polio vaccine, fewer children actually received the third dose in 1997 than in 1991-92. A similar pattern was seen for DPT immunizations. The health consequences of these high dropout rates could pose a serious problem.



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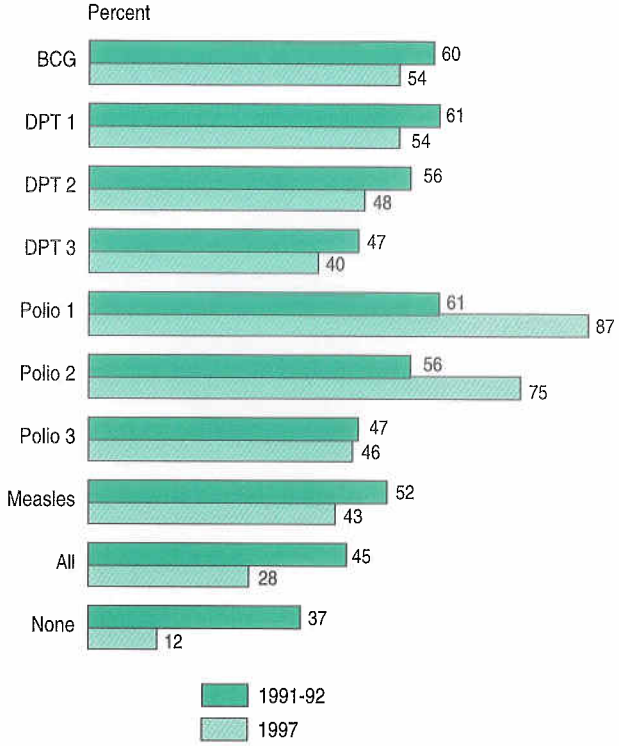
*In 1997, 87 percent of children received the first dose of polio vaccine, compared with 61 percent in 1991-92. However, only 46 percent of children received the third dose—a dropout rate of 47 percent.*

In urban areas, more than half of children age 12- 23 months are fully immunized against the major childhood diseases, compared with one in five in rural areas. One-third of children in the Coastal and Plateau and Desert regions are fully vaccinated, compared with only 15 percent in the Mountainous region.

**Figure 13**
**Vaccination Coverage Among Children Age 12-23 Months, 1991-92 and 1997 YDMCHS**

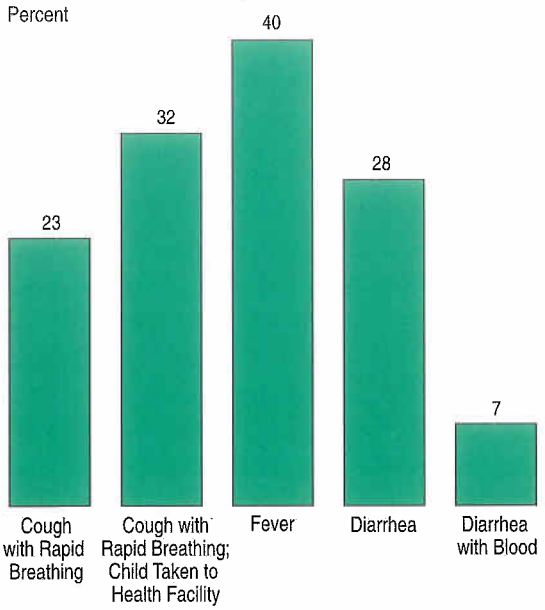


## Child Health and Diseases

During the two weeks preceding the interview, 40 percent of children under five experienced fever and 23 percent had a cough with short, rapid breathing, a symptom of acute respiratory infection (ARI). The percentage of children with a cough varies little by residence or region. Only a third of children with a cough were taken to a health facility for treatment. Seeking medical advice is more common in urban areas than in rural areas, and increases with mother's level of education.

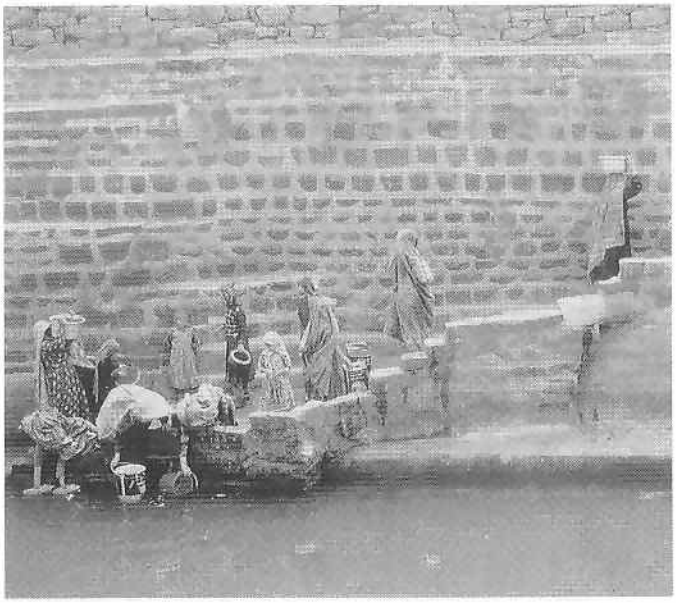
*During the two weeks preceding the interview, 40 percent of children under five experienced fever and 23 percent had a cough with short, rapid breathing, a symptom of acute respiratory infection (ARI).*

**Figure 14**
**Child Morbidity in the Two Weeks Preceding the Survey**
**(Children Under Five)**




Diarrheal disease is among the leading causes of infant and child deaths in Yemen. Overall, 28 percent of children under age five were reported to have had an episode of diarrhea in the two weeks preceding the interview; this is down from 34 percent in 1991-92. The prevalence of diarrhea is higher among children living in rural areas, the Coastal and Mountainous regions, and for those whose mothers are illiterate.

Although 75 percent of mothers reported knowing about the use of oral rehydration salts (ORS) to treat children with diarrhea, only a third of women used ORS packets when their child was sick. Medical advice was sought for slightly less than three in ten children with diarrhea. Home remedies and other types of treatments were given to almost half of children, and one in four children received no treatment for the diarrhea, compared with three in five in 1991-92.



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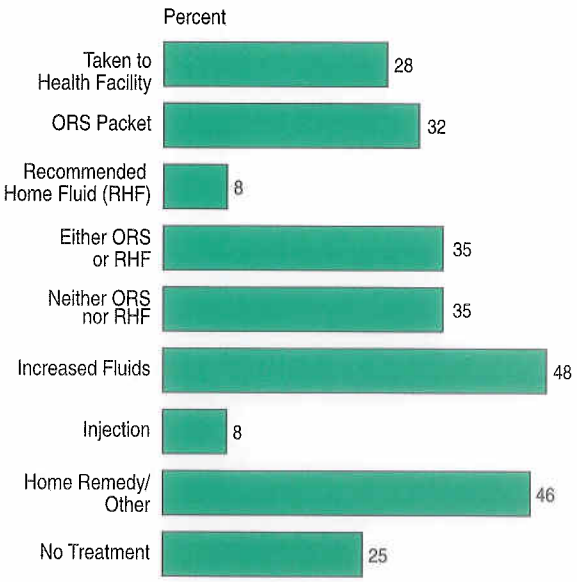
*Overall, 28 percent of children under age five were reported to have had an episode of diarrhea in the two weeks preceding the interview; this is down from 34 percent in 1991-92.*

Children with diarrhea should receive more fluids than normal during their illness. In Yemen, half of the children received either the same amount of fluids or less than the normal amount during their illness.

**Figure 15**
**Treatment of Diarrhea**
**(Children Under Five)**




*Although 75 percent of mothers reported knowing about the use of oral rehydration salts (ORS) to treat children with diarrhea, only a third of women used ORS packets when their child was sick.*

UNICEF/1702-86/R. Massey

## Infant Feeding Practices

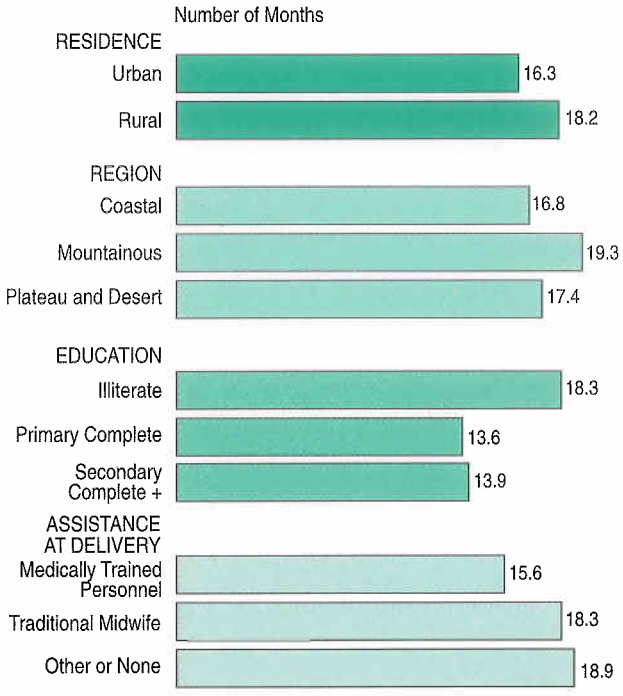
Exclusive breastfeeding, recommended for babies until the age of six months, is not a common practice in Yemen although almost all Yemeni children (97 percent) are breastfed for a period of time. Child death is the main reason for not breastfeeding a child.

Yemeni women breastfeed their children for a relatively long time. The average duration of breastfeeding is 18 months, one month longer than reported in 1991-92. While no substantial differences are observed in the prevalence of breastfeeding by residence or mother's education, there are significant differences in the median duration of breastfeeding. Breastfeeding is shorter for children in urban areas (16.3 months) than in rural areas (18.2 months), and shorter for children of mothers who completed primary or secondary school (13.6 and 13.9 months, respectively) compared with children of illiterate or literate mothers (18.3 and 18.4 months, respectively).

On average, supplemental foods and liquids are introduced too early to Yemeni children. Only a fourth of children under four months are exclusively breastfed; the other children receive other types of milk (33 percent) or are given other liquids (25 percent).

*On average, supplemental foods and liquids are introduced too early to Yemeni children.*

**Figure 16**
**Mean Duration of Breastfeeding by Selected Characteristics (Children 0-35 Months)**

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For young children, bottle-feeding brings the added risk of contracting diarrhea and other diseases. It also has a direct effect on the mother's exposure to pregnancy because the period of amenorrhea is shortened for non-breastfeeding mothers. Overall, bottle-feeding has declined sharply in Yemen, from 52 percent in 1991-92 to 40 percent (among non-breastfed children) and 33 percent (among breastfed children) in 1997.

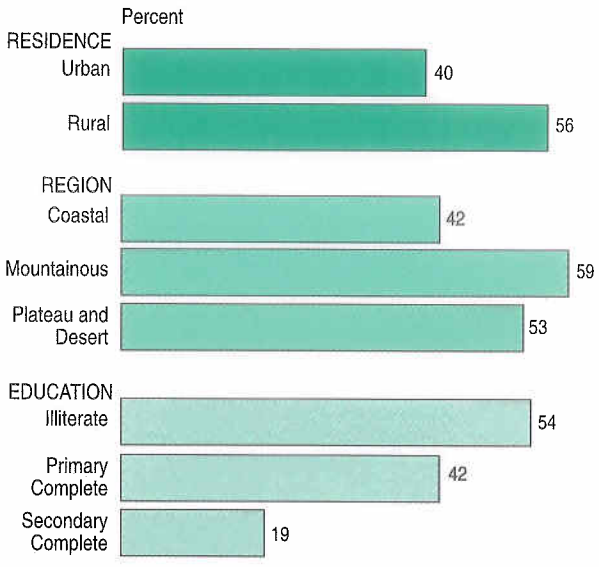
UNICEF/1696-86/R. Massey

## Nutritional Status of Children

Half of children under five are stunted (short for their age), a condition that reflects chronic malnutrition, and 13 percent are wasted (thin for their height), indicating an acute food deficit due to illness or recent food shortages. Stunting is higher in the Mountainous region (59 percent), rural areas (56 percent), and among children whose mothers are illiterate (54 percent), than in the Coastal region (42 percent), urban areas (40 percent) and among children whose mothers have completed secondary schooling (19 percent).

*Half of children under five are stunted (short for their age), and 13 percent are wasted (thin for their height).*

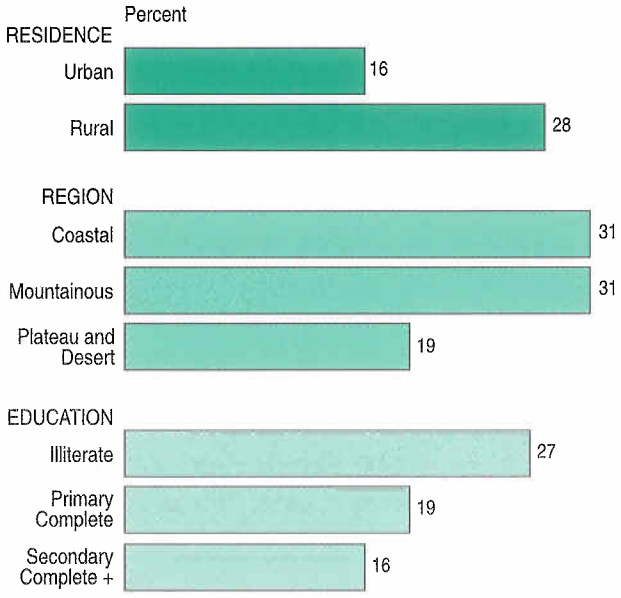
**Figure 17**
**Prevalence of Stunting by Selected Characteristics (Children Under Five)**



## Nutritional Status of Mothers

Among mothers with children born in the five years preceding the survey, 9 percent are shorter than 145 cm, the height below which a woman is considered to be at a nutritional risk. Another indicator, the Body Mass Index (BMI), a measure of thinness, indicates that 25 percent of women are below 18.5, reflecting a high nutritional deficit.

**Figure 18**
**Body Mass Index (BMI) <18.5 by Selected Characteristics**
**(Women 15-49 Who Had a Birth in the Five Years Preceding the Survey)**




*The Body Mass Index (BMI), a measure of thinness, indicates that 25 percent of women are below 18.5, reflecting a high nutritional deficit.*

UNICEF/91-031/N. Toutounji

# Conclusions

## Fertility and Family Planning

Fertility in Yemen remains high, especially in rural areas. Although Yemeni women still desire large families, the average family size has declined since 1991-92. Contraceptive knowledge has increased dramatically and use of family planning has doubled. A number of indicators point to the potential for increased use of family planning: the total desired fertility rate is two children lower than the total fertility rate, half of currently married women want no more children, and 39 percent of women have an unmet need for family planning. Furthermore, intention to use family planning in the future has doubled since 1991-92. Efforts are needed to address the fear of side effects and health concerns, a major obstacle to women's adoption of family planning.

Women marry at a young age in Yemen, but recent trends indicate a decline in early marriage. For instance, median age at first marriage for women age 20-24 is 18.2 years, as opposed to 15.7 years for women age 45-49. Increasing the level of women's education and implementing gradual changes in the tradition of early marriage would contribute to an increase in the average age at marriage, thereby reducing fertility and, especially, teenage pregnancy, which increases the health risks for both mothers and their children.

## Maternal and Child Health

Infant and under-five mortality rates—75 and 105 deaths per 1,000 births, respectively—have been declining in Yemen but are still high. If Yemen is to achieve the United Nations target of an under-five mortality rate of 70 deaths per 1,000 births by the year 2000, greater effort and resources must be committed to preventive and curative health measures for mothers and children. Here are a few examples.

Results of the YDMCHS suggest that spacing births by four years or more as opposed to less than two years, can reduce infant mortality by three and a half times. Reducing the number of births to women under age 20 can also lower the number of deaths among young children. Increasing the utilization of antenatal care services, which only a small fraction of Yemeni women currently receive, will not only increase child survival but also reduce maternal mortality. Two in five deaths among women age 15-49 in Yemen are related to pregnancy and childbearing. An increase in antenatal care coverage would provide an opportunity for health professionals to detect and treat illnesses related to pregnancy. Both ignorance of the need for antenatal care and limited access to services are major factors that must be addressed in order to increase the use of antenatal care services.

IEC campaigns should be organized to encourage women to receive tetanus toxoid injections to protect their children against tetanus. An additional advantage of expanding the utilization of maternal care services is that it will provide an opportunity for health services personnel to offer information and services about family planning.

Another mechanism for improving child survival is increasing the proportion of children vaccinated against the major preventable childhood diseases (tuberculosis, diphtheria, whooping cough, tetanus, polio, and measles). Full vaccination coverage has dropped substantially since 1991-92 due to the high polio vaccine dropout rate and, to a lesser extent, the DPT vaccine dropout rate. Efforts are especially needed to increase vaccination coverage in rural areas and to immunize children before their first birthday.

Acute respiratory infection and diarrheal diseases are among the leading causes of infant and child deaths in Yemen. The YDMCHS results indicate that providing information about oral rehydration therapy and greater use of oral rehydration salts (ORS) for treatment of diarrhea, as well as early detection and treatment of acute respiratory illnesses, would contribute to a reduction in infant and child mortality. The majority of children suffering from these illnesses remain untreated, and medical treatment is sought infrequently. Although knowledge of oral rehydration therapy has greatly increased since 1991-92, use of ORS packets for the treatment of diarrhea is still relatively uncommon.

Special attention should be given to educating mothers to adopt better nutritional practices since a quarter of mothers suffer from high nutritional deficit, which affects not only their health but also their children's health.

WORLDBANK/C. Carnemark

# Fact Sheet

## 1997 Population Data[1]

| | |
|---|---|
| Total population (millions) | 16.5 |
| Urban population (percent) | 25.1 |
| Annual natural increase (percent) | 3.5 |
| Population doubling time (years) | 18.9 |
| Crude birth rate (per 1,000 population) | 47.0 |
| Crude death rate (per 1,000 population) | 11.3 |
| Life expectancy at birth male (years) | 56.7 |
| Life expectancy at birth female (years) | 59.9 |

## Yemen Demographic and Maternal and Child Health Survey 1997

### Sample Population

| | |
|---|---|
| Ever-married women age 15-49 | 10,414 |

### Background Characteristics of Women Interviewed

| | |
|---|---|
| Percent urban | 25.2 |
| Percent illiterate | 84.2 |
| Percent completed more than primary | 4.2 |

### Marriage and Other Fertility Determinants

| | |
|---|---|
| Percent of women 15-49 currently married[2] | 67.4 |
| Percent of women 15-49 ever married[2] | 71.7 |
| Median age at first marriage among women age 25-49 | 16.0 |
| Median duration of breastfeeding (in months)[3] | 17.8 |
| Median duration of postpartum amenorrhea (in months)[3] | 6.1 |

### Fertility

| | |
|---|---|
| Total fertility rate[4] | 6.5 |
| Mean number of children ever born to women age 45-49 | 8.8 |

### Desire for Children

| | |
|---|---|
| Percent of currently married women who want no more children | 49.3 |
| Mean ideal number of children among women 15-49[5] | 4.5 |
| Percent of women giving a non-numeric response to ideal family size | 29.8 |

### Knowledge and Use of Family Planning

| | |
|---|---|
| Percent of currently married women: | |
| Knowing any method[6] | 83.8 |
| Knowing a modern method | 79.2 |
| Knowing a modern method and knowing a source for the method | 52.5 |
| Have ever used any method | 38.6 |
| Currently using any method[7] | 12.8 |
| Currently using a modern method | 9.8 |
| Percent of currently married women currently using: | |
| Pill | 3.8 |
| IUD | 3.0 |
| Injectables | 1.2 |
| Vaginal methods | 0.1 |
| Condom | 0.3 |
| Female sterilization | 1.4 |
| Male sterilization | 0.1 |
| Safe period. | 1.1 |
| Withdrawal | 1.7 |
| Prolonged breastfeeding | 8.0 |
| Other traditional method | 0.2 |

### Mortality and Health

| | |
|---|---|
| Infant mortality rate[8] | 75.3 |
| Under-five mortality rate[8] | 104.8 |
| Percent of births[9] whose mothers: | |
| Received antenatal care | 34.3 |
| Received 2 or more tetanus toxoid injections | 8.9 |
| Percent of births[9] whose mothers were assisted at delivery by: | |
| Doctor | 15.0 |
| Trained nurse/midwife | 6.6 |
| Traditional birth attendant | 21.2 |
| Percent of children 0-1 month who are breastfeeding | 96.8 |
| Percent of children 4-5 months who are breastfeeding | 93.3 |
| Percent of children 10-11 months who are breastfeeding | 78.5 |
| Percent of children 12-23 months who received:[10] | |
| BCG | 53.7 |
| DPT (three doses) | 39.7 |
| Polio (three doses) | 45.8 |
| Measles | 42.8 |
| All vaccinations | 28.2 |
| Percent of children under 5 years who: | |
| Had diarrhea in the 2 weeks preceding the survey | 27.5 |
| Had a cough accompanied by rapid breathing in the 2 weeks preceding the survey | 23.4 |

1 Projections for 1997, Statistical Yearbook, Central Statistical Organization, Sana'a, Yemen; percentage of the annual natural increase and the crude birth rate come from the 1994 Census

2 Based on all women

3 Current status estimate based on births during the 36 months preceding the survey

4 Based on births to women 15-49 years during the three years preceding the survey

5 Based on ever-married women 15-49. Excludes women who gave a non-numeric response to ideal family size

6 Includes prolonged breastfeeding

7 Does not include prolonged breastfeeding

8 Rates are for the period 0-4 years preceding the survey

9 Based on births in the period 0-59 months preceding the survey

10 Based on information from vaccination records and reports of mother/respondent