

FACT SHEET, MADHYA PRADESH*

NATIONAL FAMILY HEALTH SURVEY, 1998–99

Sample Size

Households.....	6,749
Ever-married women age 15–49	6,941

Characteristics of Households

Percent with electricity	68.1
Percent within 15 minutes of safe water supply ¹	37.9
Percent with flush toilet	20.2
Percent with no toilet facility	77.8
Percent using govt. health facilities for sickness	34.0
Percent using iodized salt (at least 15 ppm)	56.7

Characteristics of Women²

Percent urban	25.3
Percent illiterate	68.5
Percent completed high school and above.....	9.4
Percent Hindu.....	92.1
Percent Muslim.....	5.4
Percent Christian.....	1.1
Percent regularly exposed to mass media.....	54.8
Percent working in the past 12 months.....	57.2

Status of Women²

Percent involved in decisions about own health.....	36.6
Percent with control over some money	49.3

Marriage

Percent never married among women age 15–19.....	58.0
Median age at marriage among women age 20–49	15.1

Fertility and Fertility Preferences

Total fertility rate (for the past 3 years).....	3.31
Mean number of children ever born to women 40–49.	5.10
Median age at first birth among women age 20–49	18.7
Percent of births ³ of order 3 and above	52.7
Mean ideal number of children ⁴	2.9
Percent of women with 2 living children wanting another child.....	38.8

Current Contraceptive Use⁵

Any method.....	44.3
Any modern method.....	42.6
Pill.....	1.0
IUD	0.8
Condom.....	2.9
Female sterilization	35.7
Male sterilization.....	2.2
Any traditional method	1.4
Rhythm/safe period.....	1.0
Withdrawal.....	0.4
Other traditional or modern method.....	0.3

Unmet Need for Family Planning⁵

Percent with unmet need for family planning	16.2
Percent with unmet need for spacing.....	8.9

*Includes Chattisgarh

¹Water from pipes, hand pump, covered well, or tanker truck

²Ever-married women age 15–49

³For births in the past 3 years

⁴Excluding women giving non-numeric responses

⁵Among currently married women age 15–49

Quality of Family Planning Services⁶

Percent told about side effects of method	12.1
Percent who received follow-up services.....	77.9

Childhood Mortality

Infant mortality rate ⁷	86.1
Under-five mortality rate ⁷	137.6

Safe Motherhood and Women's Reproductive Health

Percent of births ⁸ within 24 months of previous birth.....	28.5
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Percent of births³ whose mothers received:

Antenatal check-up from a health professional	60.8
Antenatal check-up in first trimester.....	26.1
Two or more tetanus toxoid injections.....	55.0
Iron and folic acid tablets or syrup.....	48.9

Percent of births³ whose mothers were assisted at delivery by a:

Doctor	18.5
ANM/nurse/midwife/LHV.....	10.9
Traditional birth attendant.....	46.7

Percent⁵ reporting at least one reproductive

health problem	44.9
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Awareness of AIDS

Percent of women who have heard of AIDS	22.7
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Child Health

Percent of children age 0–3 months exclusively

breastfed.....	64.2
Median duration of breastfeeding (months).....	25.4

Percent of children⁹ who received vaccinations:

BCG.....	64.9
DPT (3 doses)	37.0
Polio (3 doses)	56.7
Measles	35.5
All vaccinations	22.4

Percent of children¹⁰ with diarrhoea in the past

2 weeks who received oral rehydration salts (ORS)	29.8
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Percent of children¹⁰ with acute respiratory infection in

the past 2 weeks taken to a health facility or provider	57.9
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Nutrition

Percent of women with anaemia ¹¹	54.3
Percent of women with moderate/severe anaemia ¹¹	16.6
Percent of children age 6–35 months with anaemia ¹¹	75.0
Percent of children age 6–35 months with moderate/ severe anaemia ¹¹	53.0
Percent of children chronically undernourished (stunted) ¹²	51.0
Percent of children acutely undernourished (wasted) ¹²	19.8
Percent of children underweight ¹²	55.1

⁶For current users of modern methods

⁷For the 5 years preceding the survey (1994–98)

⁸For births in the past 5 years (excluding first births)

⁹Children age 12–23 months

¹⁰Children under 3 years

¹¹Anaemia—haemoglobin level < 11.0 grams/decilitre (g/dl) for children and pregnant women and < 12.0 g/dl for nonpregnant women. Moderate/severe anaemia—haemoglobin level < 10.0 g/dl.

¹²Stunting assessed by height-for-age, wasting assessed by weight-for-height, underweight assessed by weight-for-age

FACT SHEET, CHATTISGARH

NATIONAL FAMILY HEALTH SURVEY, 1998-99

Sample Size

Households.....	977
Ever-married women age 15-49.....	942

Characteristics of Households

Percent with electricity.....	58.4
Percent within 15 minutes of safe water supply ¹	37.6
Percent with flush toilet.....	13.5
Percent with no toilet facility.....	85.1
Percent using govt. health facilities for sickness.....	47.1
Percent using iodized salt (at least 15 ppm).....	60.4

Characteristics of Women²

Percent urban.....	18.2
Percent illiterate.....	68.5
Percent completed high school and above.....	8.3
Percent Hindu.....	92.9
Percent Muslim.....	1.8
Percent Christian.....	4.1
Percent regularly exposed to mass media.....	58.4
Percent working in the past 12 months.....	64.3

Status of Women²

Percent involved in decisions about own health.....	49.2
Percent with control over some money.....	53.7

Marriage

Percent never married among women age 15-19.....	65.8
Median age at marriage among women age 20-49.....	15.4

Fertility and Fertility Preferences

Total fertility rate (for the past 3 years).....	2.79
Mean number of children ever born to women 40-49.....	4.57
Median age at first birth among women age 20-49.....	18.1
Percent of births ³ of order 3 and above.....	48.1
Mean ideal number of children ⁴	3.2
Percent of women with 2 living children wanting another child.....	42.6

Current Contraceptive Use⁵

Any method.....	45.0
Any modern method.....	42.3
Pill.....	0.8
IUD.....	1.0
Condom.....	2.1
Female sterilization.....	35.1
Male sterilization.....	3.3
Any traditional method.....	2.3
Rhythm/safe period.....	1.7
Withdrawal.....	0.6
Other traditional or modern method.....	0.5

Unmet Need for Family Planning⁵

Percent with unmet need for family planning.....	13.5
Percent with unmet need for spacing.....	8.0

¹Water from pipes, hand pump, covered well, or tanker truck

²Ever-married women age 15-49

³For births in the past 3 years

⁴Excluding women giving non-numeric responses

⁵Among currently married women age 15-49

Quality of Family Planning Services⁶

Percent told about side effects of method.....	15.0
Percent who received follow-up services.....	82.3

Childhood Mortality

Infant mortality rate ⁷	80.9
Under-five mortality rate ⁷	122.7

Safe Motherhood and Women's Reproductive Health

Percent of births ⁸ within 24 months of previous birth.....	25.9
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Percent of births³ whose mothers received:

Antenatal check-up from a health professional.....	57.5
Antenatal check-up in first trimester.....	26.7
Two or more tetanus toxoid injections.....	58.2
Iron and folic acid tablets or syrup.....	54.9

Percent of births³ whose mothers were assisted at delivery by a:

Doctor.....	22.3
ANM/nurse/midwife/LHV.....	9.7
Traditional birth attendant.....	42.7

Percent⁵ reporting at least one reproductive

health problem.....	37.4
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Awareness of AIDS

Percent of women who have heard of AIDS.....	19.6
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Child Health

Percent of children age 0-3 months exclusively breastfed.....	81.7
Median duration of breastfeeding (months).....	≥36.0

Percent of children⁹ who received vaccinations:

BCG.....	74.3
DPT (3 doses).....	40.9
Polio (3 doses).....	57.1
Measles.....	40.0
All vaccinations.....	21.8

Percent of children¹⁰ with diarrhoea in the past

2 weeks who received oral rehydration salts (ORS).....	29.7
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Percent of children¹⁰ with acute respiratory infection in the past 2 weeks taken to a health facility or provider.....

.....	61.6
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Nutrition

Percent of women with anaemia ¹¹	68.7
Percent of women with moderate/severe anaemia ¹¹	22.6
Percent of children age 6-35 months with anaemia ¹¹	87.7
Percent of children age 6-35 months with moderate/severe anaemia ¹¹	63.8
Percent of children chronically undernourished (stunted) ¹²	57.9
Percent of children acutely undernourished (wasted) ¹²	18.5
Percent of children underweight ¹²	60.8

⁶For current users of modern methods

⁷For the 5 years preceding the survey (1994-98)

⁸For births in the past 5 years (excluding first births)

⁹Children age 12-23 months

¹⁰Children under 3 years

¹¹Anaemia-haemoglobin level < 11.0 grams/decilitre (g/dl) for children and pregnant women and < 12.0 g/dl for nonpregnant women. Moderate/severe anaemia-haemoglobin level < 10.0 g/dl.

¹²Stunting assessed by height-for-age, wasting assessed by weight-for-height, underweight assessed by weight-for-age

SUMMARY OF FINDINGS

The second National Family Health Survey (NFHS-2), conducted in 1998–99, provides information on fertility, mortality, family planning, and important aspects of health, nutrition, and health care. The International Institute for Population Sciences (IIPS) coordinated the survey, which collected information from a nationally representative sample of more than 90,000 ever-married women, age 15–49. The NFHS-2 sample covers 99 percent of India's population living in all 26 states.

IIPS also coordinated the first National Family Health Survey (NFHS-1) in 1992–93. Most of the types of information collected in NFHS-2 were also collected in the earlier survey, making it possible to identify trends over the intervening period of six and one-half years. In addition, the NFHS-2 questionnaire covered a number of new or expanded topics with important policy implications, such as reproductive health, women's autonomy, domestic violence, women's nutrition, anaemia, and salt iodization.

In Madhya Pradesh, NFHS-2 field staff collected information from 6,749 households between 26 November 1998 and 24 April 1999, and interviewed 6,941 eligible women in these households. In addition, the survey collected information on 2,837 children born to eligible women in the three years preceding the survey. One health investigator on each survey team measured the height and weight of eligible women and young children and took blood samples to assess the prevalence of anaemia.

Background Characteristics of the Survey Population

About three-quarters (74 percent) of the population lives in rural areas. The age distribution is typical of populations that have recently experienced a fertility decline, with relatively low proportions in the younger and older age groups. Thirty-nine percent of the population is below age 15, and 5 percent is age 65 or older. The sex ratio is 951 females for every 1,000 males in rural areas but only 913 females for every 1,000 males in urban areas, suggesting that more men than women have migrated to urban areas.

The survey provides a variety of demographic and socioeconomic background information. In the state as a whole, 92 percent of household heads are Hindu, 5 percent are Muslim, and 1 percent each are Christian and Jain. Muslims live disproportionately in urban areas, where they comprise 14 percent of household heads. Sixteen percent of household heads belong to the scheduled castes, 24 percent belong to the scheduled tribes, and 40 percent belong to other backward classes (OBCs). One-fifth of household heads do not belong to any of these groups.

Questions about housing conditions and the standard of living of household members indicate some improvements since the time of NFHS-1. Sixty-eight percent of households in Madhya Pradesh have electricity and 27 percent have piped drinking water, compared with 62 percent and 23 percent, respectively, in NFHS-1. Seventy-eight percent of households do not have any toilet facility, almost unchanged from 79 percent in NFHS-1.

Almost three-fourths (72 percent) of males and nearly half (45 percent) of females age six and above are literate, an increase of 8–10 percentage points from literacy rates at the time of

NFHS-1. Seventy-six percent of children age 6–14 currently attend school, an increase from 62 percent in NFHS-1. The proportion of children attending school has increased for all age groups, particularly for girls, but girls still lag behind boys in school attendance. Moreover, the disparity in school attendance by sex grows with increasing age of children. At age 6–10, 83 percent of boys attend school, compared with 77 percent of girls. By age 15–17, 55 percent of boys attend school, compared with 29 percent of girls.

Women in Madhya Pradesh tend to marry at an early age. Forty-two percent of women age 15–19 are already married including 4 percent of women who are married but *gauna* has yet to be performed. In rural areas, half of the women age 15–19 have already married. Older women are more likely than younger women to have married at an early age: 58 percent of women who are now age 45–49 married before they were 15, compared with 25 percent of women who are now age 15–19. Although this indicates that the proportion of women who marry young is declining rapidly, almost two-thirds of even the younger women age 20–24, still marry before reaching the legal minimum age of 18 years. On average, women are almost five years younger than the men they marry.

As part of an increasing emphasis on gender issues in NFHS-2, the survey asked women about their participation in household decisionmaking. In Madhya Pradesh, 88 percent of women are involved in decisionmaking on at least one of four selected topics. A much lower proportion (37 percent), however, is involved in making decisions about their own health care. Fifty-seven percent of women have done work other than housework in the 12 months preceding the survey, but only about half of these women earned money for the work they did. Only 33 percent of women who earn cash can decide independently how to spend the money that they earn. Forty-four percent of working women report that their earnings constitute at least half of total family earnings, including 12 percent who report that the family is entirely dependent on their earnings.

Fertility and Family Planning

Fertility continues to decline in Madhya Pradesh. At current fertility levels, women will have an average of 3.3 children each throughout their childbearing years, compared with the average fertility rate for India as a whole of 2.9 children per woman. The total fertility rate in Madhya Pradesh is down from 3.9 children per woman at the time of NFHS-1 and is still far from the replacement level of just over two children per woman. More than half of the births in the three years preceding the survey were of order 3 or higher. A rural woman in Madhya Pradesh has almost one child more, on average, than an urban woman. Fertility also varies greatly across the different regions of the state from a TFR of 2.8 in the Chattisgarh Region to 3.8 in the Vindhya Region.

Efforts to encourage the trend toward lower fertility might usefully focus on groups within the population that have higher fertility than average. In Madhya Pradesh, poor women, illiterate women, and women from scheduled tribes and scheduled castes have much higher fertility than most other women. A striking feature is the high level of childbearing among young women. The median age at first childbirth is 18.5 years, and women age 15–19 account for 21 percent of total fertility. Studies in India and elsewhere have shown that health and mortality risks increase when women give birth at very young ages—both for the women themselves and for their children. Family planning programmes focusing on women in this age group could

make a significant impact on maternal and child health as well as on reducing overall fertility in the state.

The appropriate design of family planning programmes depends, to a large extent, on women's fertility preferences. Women may have large families because they want many children, or they may prefer small families, but, for a variety of reasons, may have more children than they actually want. For 11 percent of births over the three years preceding the survey, mothers report that they did not want the pregnancy at all, and for another 10 percent of births, mothers say that they would have preferred to delay the pregnancy. When asked about their preferred family size, nearly one-third (31 percent) of women who already have three children and nearly one-fifth (21 percent) of women with four or more children respond that they consider the two-child family ideal. A comparison of the wanted fertility rate and the total fertility rate also shows that women in Madhya Pradesh are having almost one child more than they actually desire. This gap between women's actual fertility experience and what they want or would consider ideal suggests a need for expanded or improved family welfare services to help women achieve their fertility goals. Indeed, less than one in five currently married women in Madhya Pradesh, want another child within two years. Seventeen percent want to wait at least two years for another child, and 61 percent do not want another child at all (or are already sterilized).

There is evidence of strong son preference in the fertility preferences of women in Madhya Pradesh. Although a majority of women want at least one son and a majority also want at least one daughter, 43 percent of women want more sons than daughters and only 3 percent want more daughters than sons. Among women who have two children, 78 percent want no more children if they have two sons, whereas only 20 percent want no more children if they have two daughters. Similarly, among women with three children, 91 percent or more want no more children if they have two or more sons, but only 25 percent want no more children if they have only daughters.

If women in Madhya Pradesh are not using family planning, it is not due to lack of knowledge. Knowledge of contraception is nearly universal: 98 percent of currently married women know at least one modern family planning method. Women are most familiar with female sterilization (97 percent), followed by male sterilization (81 percent), the pill (67 percent), the condom (56 percent), and the IUD (50 percent). Knowledge of modern spacing methods has increased by 8–16 percentage points since the time of NFHS-1, although use rates for these methods remain extremely low.

Forty-four percent of married women are currently using some method of contraception, an increase from 37 percent at the time of NFHS-1. Contraceptive prevalence is much higher in urban areas (55 percent) than in rural areas (41 percent). By region, contraceptive prevalence is highest in the Malwa Plateau Region (53 percent) and lowest in the Northern and Vindhya Regions (36 percent). Female sterilization is by far the most popular method: 36 percent of currently married women are sterilized, a substantial increase from 27 percent at the time of NFHS-1. By contrast, only 2 percent of women report that their husbands are sterilized, a decrease from 5 percent at the time of NFHS-1. Overall, sterilization accounts for 86 percent of total contraceptive use. Use rates for modern spacing methods remain very low. Condoms are used by 3 percent of women, and the pill and IUD are each used by only 1 percent of women.

Contraceptive prevalence varies widely among socioeconomic groups. Use rates are particularly low for women belonging to the scheduled tribes and for women who live in households with a low standard of living. About one-quarter of the more-educated women and Jain women use the three modern spacing methods—pills, IUDs, and condoms, but the use of these methods does not exceed 15 percent for any other group. Muslim and Hindu women are about equally likely to be using contraception, but Muslim women are more likely to be using spacing methods and less likely to be using sterilization than Hindu women.

Given the near-exclusive emphasis on sterilization, women tend to adopt family planning only after they have achieved their desired family size. As a result, contraceptive use can be expected to rise steadily with age and with number of living children. In Madhya Pradesh, contraceptive use does indeed go up with age, peaking at 68 percent for women age 35–44. Use first goes up with the number of living children from 3 percent for women with no children to 15 percent for women with one child and 65 percent for women with three children, and then falls slightly. Son preference appears to have a strong effect on contraceptive use. Women who have one or more sons are much more likely to use contraception than are women who have the same number of children but have only daughters. Indeed, son preference appears to be a major obstacle to contraceptive acceptance in Madhya Pradesh: Even among women with four or more children, only about one-tenth of the women with no sons use contraception, compared with two-thirds of the women with two or more sons.

Nine percent of currently married women are not using contraception but say that they want to wait at least two years before having another child. Another 7 percent are not using contraception although they do not want any more children. These women are described as having an ‘unmet need’ for family planning. The unmet need is highest for young women and women with one birth, who are particularly interested in spacing their births. These results underscore the need for strategies that provide spacing as well as terminal methods in order to meet the changing needs of women over their lifecycle.

For many years, the Government of India has been using electronic and other mass media to promote family planning. Exposure to mass media is low in Madhya Pradesh, where only one-fourth of rural residents live in villages that have a cable connection. Among the different types of media, television has the broadest reach across all categories of women, including those who are poor or illiterate. Overall, 45 percent of ever-married women watch television at least once a week. Nevertheless, almost half of the women (45 percent) are not regularly exposed to television, radio, or other types of media. About half of the women saw or heard a family planning message in the media during the few months preceding the survey. Given the relatively high level of exposure to television, it is not surprising that women are more likely to have seen or heard a family planning message on television than through any other type of media. Exposure to family planning messages is very low, however, among disadvantaged socioeconomic groups. Messages reached only one-third each of scheduled-tribe women and women from households with a low standard of living and only about one-fourth of illiterate women.

Eighty-seven percent of women who use a modern contraceptive method obtained their method from a government hospital or other medical source in the public sector. Only 7 percent obtained their method from the private medical sector. The private medical sector, along with shops, is the major source of pills and condoms, however. The private sector plays a larger role

in urban areas (where it is the source of modern methods for 17 percent of users) than in rural areas (where it is the source of modern methods for only 3 percent of users).

An important indication of the quality of family planning services is the information that women receive when they obtain contraception and the extent to which they receive follow-up services after accepting contraception. In Madhya Pradesh, only 12 percent of users of modern contraceptives who were motivated by someone to use their method were told about any other method. Similarly, only 12 percent of users were told by a health or family planning worker about possible side effects of their current method at the time of adopting the method. Seventy-eight percent of contraceptive users, however, have received follow-up services.

From the information provided in NFHS-2, a picture emerges of women marrying very early, having their first child fairly soon after marriage, having three or more children, and then, in more than a third of the cases, getting sterilized—all before they reach the age of 30. The median age for female sterilization has been more or less constant in recent years at about 26 years. Very few women use modern spacing methods that could help them delay their first births and increase intervals between pregnancies. Currently, 28 percent of women had their last birth less than 24 months after a previous birth.

Infant and Child Mortality

NFHS-2 provides estimates of infant and child mortality and factors associated with the survival of young children. During the five years preceding the survey, the infant mortality rate was 86 deaths per 1,000 live births and the under-five mortality rate was at 138 deaths per 1,000 live births. Expressed differently, 1 in 12 children die in the first year of life and 1 in 7 die before reaching age five. A comparison of these mortality rates with rates estimated for the period 10–14 years preceding the survey indicates large declines in mortality; however, a comparison with the corresponding rates for NFHS-1 shows little or no change in these rates.

Infant and child mortality remain among the highest in India. Indeed, the infant mortality rate in Madhya Pradesh is 27 percent higher than the corresponding all-India rate of 68 per 1,000 live births, and the under-five mortality rate is 45 percent higher than the corresponding all-India rate of 95 per 1,000 live births. Further, most children in Madhya Pradesh, irrespective of their background characteristics, have a much higher risk of dying before age one than in the country as a whole. The risk of dying is exceptionally high for children from households with a low standard of living, children from scheduled-caste or scheduled-tribe households, rural children, and for children whose mothers are illiterate. Only children who live in the urban areas of Madhya Pradesh, children whose mothers have completed at least high school, and children who live in households with a high standard of living have a lower risk of dying before reaching the age of one than children in the country as a whole. In Madhya Pradesh, boys have a higher risk of dying than girls only in the first month of life; thereafter, girls face a much higher risk of dying during childhood. Specifically, girls are 20 percent more likely to die between the ages of 1–11 months than boys and 34 percent more likely to die between the ages of 1–4 years than boys.

Notably, infant mortality rates are about two times as high for children of mothers who did not receive any of the recommended types of maternity related medical care than for mothers who received only some of the recommended types of care. Along with various socioeconomic

groups, efforts to promote child survival need to concentrate on very young mothers and mothers whose children are closely spaced. Infant mortality is 52 percent higher among children born to mothers under age 20 than among children born to mothers age 20–29 (125 deaths, compared with 82, per 1,000 live births) Infant mortality is more than two and one-half times as high among children born less than 24 months after a previous birth as among children born after a gap of 48 months or more (129 deaths, compared with 50, per 1,000 live births) Clearly, efforts to expand the use of temporary contraceptive methods for delaying and spacing births would help reduce infant mortality as well as fertility.

Health and Health Care

Promotion of maternal and child health is one of the most important components of the Reproductive and Child Health Programme of the Government of India. One goal is for each pregnant woman to receive at least three antenatal check-ups, two tetanus toxoid injections, and at least three months of iron and folic acid supplementation. In Madhya Pradesh, mothers of 61 percent of the children born in the three years preceding NFHS-2 received at least one antenatal check-up, and mothers of 28 percent of these children received at least three antenatal check-ups. Among those who received an antenatal check-up, less than half received the first check-up in the first trimester. For 55 percent of children born in the three years preceding the survey, mothers received the recommended number of tetanus toxoid vaccinations, and for 49 percent of children, mothers received iron and folic acid supplementation. Among those who receive iron and folic acid supplementation more than three-fourths received supplementation for three or more months, and three-fourths consumed all the supply they were given. Coverage by all three interventions is somewhat lower for women in disadvantaged socioeconomic groups than for other women. Coverage is also low for women who already have four or more children.

The Reproductive and Child Health Programme encourages women to deliver in a medical facility under the supervision of a trained health professional and to receive at least three check-ups after delivery. During the three years preceding NFHS-2, only one-fifth of births in Madhya Pradesh were delivered in a medical facility and only 30 percent were attended by a health professional. Fifty-nine percent of births that took place at home were attended by a traditional birth attendant (*dai*), 29 percent were attended only by friends and relatives, and only 12 percent were attended by a health professional. Women who had even one antenatal check-up were much more likely to deliver in a medical health facility than women who had no antenatal check-up. Only one-tenth of all births outside a medical facility were followed by a postpartum check-up within two months of delivery. The probability of receiving a postpartum check-up more than doubles if the mother received three or more antenatal check-ups or if a doctor assisted at the delivery. Thus, contact with medical professionals during pregnancy or delivery increases the probability that even non-institutional births receive a check-up after delivery. Overall, however, these results show that health services in Madhya Pradesh are reaching many more women during pregnancy than during delivery or after childbirth. They also point to the important role of traditional birth attendants for the substantial proportion of births that occur at home.

Based on a weight-for-height index (the body mass index), more than one-third (38 percent) of women in Madhya Pradesh are undernourished. Nutritional deficiency is particularly serious for women in rural areas and women in disadvantaged socioeconomic groups. Overall, 54 percent of women in Madhya Pradesh have some degree of anaemia, and 17 percent are

moderately to severely anaemic. By region, anaemia varies from 38 percent in the Malwa Plateau Region to 69 percent in the Chattisgarh Region. Anaemia is a serious problem among women in every other population group also, with prevalence rates ranging from 42 to 62 percent. Pregnant women are much more likely than non-pregnant women to be moderately to severely anaemic, whereas breastfeeding women are most likely to have any anaemia.

NFHS-2 also contains information on the diet of women in Madhya Pradesh. Most women (80 percent or more) eat pulses or beans and vegetables, including green, leafy vegetables, at least weekly. However, only one-third consume milk or curd at least weekly and less than one-fourth consume fruits at least weekly. Only about one in ten women consume chicken, meat or fish or eggs at least once a week. Half of the women in Madhya Pradesh never eat chicken, meat, fish, or eggs.

Child-survival programmes are an integral part of the Reproductive and Child Health Programme. The guidelines provided by the Programme recommend that breastfeeding of children should begin immediately after childbirth and that infants should be exclusively breastfed for about the first four months of life. Although breastfeeding is nearly universal in Madhya Pradesh, very few children begin breastfeeding immediately after birth—only 10 percent in the first hour and 29 percent in the first day. About two-thirds (64 percent) of children under four months of age are exclusively breastfed. The median duration of breastfeeding is 25 months, or slightly over two years, but the median duration of exclusive breastfeeding is only 2.6 months. At age 6–9 months, all children should be receiving solid or mushy food in addition to breast milk. However, only 39 percent of children age 6–9 months receive the recommended combination of breast milk and solid/mushy foods.

NFHS-2 uses three internationally recognized standards to assess children's nutritional status—weight-for-age, height-for-age, and weight-for-height. Children who are more than two standard deviations below the median of an international reference population are considered underweight (measured in terms of weight-for-age), stunted (height-for-age), or wasted (weight-for-height). Stunting is a sign of chronic, long-term undernutrition, wasting is a sign of acute, short-term undernutrition, and underweight is a composite measure that takes into account both chronic and acute undernutrition.

Based on international standards, 55 percent of children under age three years are underweight, a similar proportion (51 percent) are stunted, and 20 percent are wasted. Child nutritional status has remained unchanged in Madhya Pradesh since the time of NFHS-1, when 56 percent of young children were underweight. Underweight and stunting are both more common in the Chattisgarh Region than in other regions, whereas wasting is somewhat more common in the Malwa Plateau Region than in other regions. In the state as a whole, children living in rural areas are more likely than children living in urban areas to suffer from undernutrition.

Undernutrition among children increases with age, and peaks (or in the case of underweight, plateaus) in the age group 12–23 months. Girls are more likely than boys to be underweight or stunted, but there is no difference by sex with regard to wasting. Undernutrition tends to increase with birth order, and underweight and stunting are more common among children born within a period of less than two years after a previous birth. Nonetheless, about half of even first born children are underweight or stunted. Undernutrition is particularly high

among children of illiterate mothers, scheduled-tribe children, children from households with a low standard of living and children of mothers who work. Children of mothers who are undernourished are also more likely to be undernourished.

Three-quarters of children age 6–35 months are anaemic and more than half (53 percent) are moderately to severely anaemic. Children are not only more likely to be anaemic than women, but are also three times as likely to be moderately to severely anaemic as women. A large majority of children, at least 60 percent, are anaemic in every subgroup of the population. Almost nine out of ten children in the Chhatisgarh Region are anaemic. Seventy percent of children whose mothers are moderately anaemic are themselves moderately to severely anaemic. However, even among children whose mothers are not anaemic, about half are moderately to severely anaemic.

Child immunization is an important component of child-survival programmes in India, with efforts focussing on six serious but preventable diseases—tuberculosis, diphtheria, pertussis, tetanus, polio, and measles. The objective of the Universal Immunization Programme (UIP), launched in 1985–86, was to extend immunization coverage against these diseases to at least 85 percent of infants by 1990. In Madhya Pradesh, only 22 percent of children age 12–23 months are fully vaccinated, another 64 percent have received some but not all of the recommended vaccinations, and 14 percent have not been vaccinated at all. The public medical sector is the source of vaccinations for the vast majority (92 percent) of children who received any vaccinations.

Full immunization coverage in Madhya Pradesh, appears to have deteriorated substantially since NFHS-1, when 29 percent of children were fully vaccinated. However, the proportion of children who have not received any vaccinations has been more than halved from its level of 34 percent in NFHS-1. Coverage of individual vaccines in Madhya Pradesh is also much higher than would appear from information on full coverage alone. Sixty-five percent of children age 12–23 months have been vaccinated against tuberculosis and 57 percent have received three doses of polio vaccine. The largest increases in vaccination coverage between NFHS-1 and NFHS-2 are for the first two doses of polio vaccine, undoubtedly because of the Pulse Polio Immunization Campaign introduced in 1995. Full immunization coverage is not as high as it might be primarily because only 37 percent of children have received three doses of DPT and only 36 percent have been vaccinated against measles. Dropout rates for the series of DPT and polio vaccinations are also a problem. Sixty-three percent of children received the first DPT vaccination, but only 37 percent received all three doses; 85 percent received the first polio vaccination, but only 57 percent received all three doses. It is also recommended that children under age five years should receive oral doses of vitamin A every six months starting at age nine months. However, only 24 percent of children age 12–35 months have received any vitamin A supplementation and only 15 percent have received a dose of vitamin A in the six months preceding the survey.

NFHS-2 collected information on the prevalence and treatment of three health problems that cause considerable mortality in young children—fever, acute respiratory infection (ARI), and diarrhoea. In Madhya Pradesh, 31 percent of children under age three were ill with fever during the two weeks preceding the survey, 29 percent were ill with ARI, 23 percent had diarrhoea, and 4 percent had diarrhoea with blood. About three-fifths of the children who became ill with ARI or diarrhoea were taken to a health facility or health-care provider. Knowledge of

the appropriate treatment of diarrhoea remains low. Fifty-six percent of mothers of children age less than 3 years know about oral rehydration salt (ORS) packets and 30 percent of mothers incorrectly believe that when children are sick with diarrhoea, they should be given less to drink than usual. Forty-six percent of children with diarrhoea received some form of oral rehydration therapy (ORT), including 30 percent who received ORS. The percentage of mothers who know about ORS and the percentage of children with diarrhoea who received ORS have both increased substantially since NFHS-1. At the time of NFHS-1, only 24 percent of mothers knew about ORS and only 22 percent of children with diarrhoea received ORS, suggesting that there has been substantial improvement in the management of childhood diarrhoea.

Almost half (45 percent) of currently married women in Madhya Pradesh report some type of reproductive-health problem, including abnormal vaginal discharge, symptoms of urinary tract infections, and pain or bleeding associated with intercourse. Among these women, 69 percent have not sought any advice or treatment. These results suggest a need to expand reproductive-health services and information programmes that encourage women to discuss their problems with a health-care provider.

In recent years, there has been growing concern about domestic violence in India. NFHS-2 found that in Madhya Pradesh, there is widespread acceptance among ever-married women that the beating of wives by husbands is justified under some circumstances. Seventy-two percent of women accept at least one of six reasons as a justification for a husband beating his wife. Domestic violence is also fairly common. Twenty-one percent of ever-married women in Madhya Pradesh have experienced beatings or physical mistreatment since age 15, and 12 percent experienced such violence in the 12 months preceding the survey. Most of these women have been beaten or physically mistreated by their husbands. The proportion of women who have experienced domestic violence does not vary much by background characteristics, except for a few notable exceptions. Women in the South Western and South Central Regions of the state and ever-married women who are currently not married are much more likely than other women to have experienced domestic violence, whereas, women who have completed at least high school are much less likely than other women to have experienced domestic violence.

Overall, only 9 percent of women received a home visit from a health or family planning worker during the 12 months preceding the survey. Women who received a home visit, received on average 2 visits in the preceding 12 months, with an average duration of two months since the last visit. A large majority of the women who received a home visit expressed satisfaction with the amount of time that the worker spent with them, but only about two-thirds were satisfied with the way the worker talked to them. Satisfaction was higher among women visited by a private sector worker than among women visited by a sector worker.

Most households in Madhya Pradesh (63 percent) go to private hospitals or clinics or private doctors for treatment when a family member is ill. Only 34 percent normally use the public medical sector. Even among rural or poor households, only about one-third normally use the public medical sector when members become ill. Most respondents are generally satisfied with the health care they receive. Almost all ever-married women who visited a health facility, got the service they last went to the facility for, with an average waiting time of 19 minutes. Ninety-five percent said that the staff spent enough time with them, 66 percent said that the staff spoke to them nicely, 71 percent said that the staff respected their need for privacy, and 57 percent rated the facility as very clean. Ratings on quality of services are lowest for public-sector

facilities used by women in rural areas and highest for private sector facilities used by women in urban areas.

More than half (57 percent) of households in Madhya Pradesh use cooking salt that is iodized at the level of 15 parts per million, suggesting that iodine deficiency disorders are likely to be a serious problem. Rural households, scheduled-tribe households, and households with a low standard of living are much less likely than other households to be using adequately iodized cooking salt.

The survey collected information on the prevalence of tuberculosis, asthma, malaria, and jaundice among all household members. Disease prevalence based on reports from household heads must be interpreted with caution, however. The survey found that less than 1 percent of the population suffers from tuberculosis, 2 percent suffers from asthma, 10 percent suffered from malaria during the three months preceding the survey, and 2 percent suffered from jaundice during the 12 months preceding the survey. Prevalence of all four conditions is much higher in rural areas than in urban areas. The prevalence of all of these diseases is higher among men than among women, and increases with age for all diseases except jaundice. The prevalence of jaundice is highest for the age group 15–59.

NFHS-2 also collected information on selected lifestyle indicators for household members. According to household respondents, 30 percent of adult men and 1 percent of adult women smoke, 21 percent of adult men and 3 percent of adult women drink alcohol, and 41 percent of adult men and 15 percent of adult women chew *paan masala* or tobacco.

Although the spread of HIV/AIDS is a major concern in India, only 23 percent of women in Madhya Pradesh have heard of AIDS. Awareness of AIDS is particularly low among women in rural areas, women in the Vindhya Region, illiterate women, poor women, and scheduled-tribe women. Among women who have heard of AIDS, 94 percent learned about the disease from television, suggesting that government efforts to promote AIDS awareness through electronic mass media have achieved some success. Among women who are not regularly exposed to any media, only 3 percent have heard of AIDS. Among women who have heard of AIDS, however, almost half (45 percent) do not know of any way to avoid infection. Using condoms, avoiding injections/using clean needles, and having only one sex partner are the most commonly known means of avoiding AIDS. However, each of these ways of avoiding AID is mentioned by no more than about one-quarter of the women who have heard about AIDS. Survey results suggest that health personnel could play a much larger role in promoting AIDS awareness. In Madhya Pradesh, only 3 percent of women who know about AIDS learned about the disease from a health worker.