

FACT SHEET, CHHATTISGARH

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 all 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

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
Percent of births ³ 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 births ³ whose mothers were assisted at delivery by a:	
Doctor	22.3
ANM/Nurse/midwife/LHV	9.7
Traditional birth attendant	42.7
Percent ⁵ reporting at least one reproductive health problem	37.4

Awareness of AIDS

Percent of women ² who have heard of AIDS	19.6
--	------

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)

Percent of children ¹⁰ with acute respiratory infection in the past 2 weeks taken to a health facility or provider	61.6
---	------

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

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

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 the 26 states at the time of the survey. The eastern part of Madhya Pradesh, from which the new state of Chhattisgarh was created on 1 November 2000, was covered as a part of the state-wide Madhya Pradesh NFHS-2.

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 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. One health investigator on each survey team measured the height and weight of women and young children and took blood samples to assess the prevalence of anaemia.

NFHS-2 field staff collected information from 977 households in Chhattisgarh between 12 December 1998 and 24 April 1999 and interviewed 942 eligible women in these households. In addition, the survey collected information on 340 children born to eligible women during the three years preceding the survey. The overall response rate for the NFHS-2 survey in Chhattisgarh was 94 percent. After discussing briefly the basic socio-demographic features of Chhattisgarh, this report presents the main findings of the NFHS-2 survey for the state of Chhattisgarh. Note that in the discussion below, estimates for Madhya Pradesh are for Madhya Pradesh without Chhattisgarh.

Basic Socio-Demographic Features of Chhattisgarh

Carved out from the eastern part of Madhya Pradesh, the new state of Chhattisgarh, came into existence on 1 November 2000. Prior to the post-independence reorganization of states in India in 1956, Chhattisgarh was included in the Mahakaushal area and was part of the Central Provinces and Berar. At the time of the 1991 Census when it was still a part of Madhya Pradesh, Chhattisgarh comprised only seven districts; by the 2001 Census, it had 16 districts, 97 tehsils, 146 blocks, 20,378 villages, and 97 urban centres.

According to the provisional population totals of India, Chhattisgarh has a population of 20.8 million (Director of Census Operations, Chhattisgarh, 2001). The state contributes 2.03 percent to the total population of the country and is ranked 17 among all the states and union territories of India in terms of population size. With a total area of 1,35,195 km², the state's share in the total area of India is 4.11 percent. The population of Chhattisgarh increased from 4.2 million in 1901 to 7.5 million in 1951, 14.0 million in 1981, and 20.8 million in 2001, but population growth has begun to decline in the state. The decadal population growth rate was 18.1 percent during 1991–2001, lower than the growth rate of 25.7 in the preceding decade. The decadal growth rate during 1991–2001 in Chhattisgarh was also lower than the corresponding growth rate for Madhya Pradesh (24.3 percent), as well as for the country as a whole (21.3

percent). The population density per km² is 154, less than the population density of Madhya Pradesh (196), and only about half the population density of India as a whole (324). In terms of population density, the state is one of the more sparsely populated states in India, ranking 26 among all the Indian states and union territories. The population density in Chhattisgarh increased from 130 in 1991 to 154 in 2001. The population sex ratio of 990 females per 1,000 males is not only higher than the all-India sex ratio (933), but is also somewhat higher than the state sex ratio in 1991 (985). The sex ratio of the child population (0–6 age group) is 975 girls per 1,000 boys, much higher than the corresponding all-India sex ratio of 927, but lower than the corresponding sex ratio of 984 for the state in 1991. The literacy rate for the population age seven and above is 78 percent for males, 52 percent for females, and 65 percent for the total population. Chhattisgarh ranks 23 among the 35 states and union territories in India in terms of literacy. Raipur and Durg are the largest districts in the state in terms of population size (Office of the Registrar General and Census Commissioner, India 2001a and Director of Census Operations, Chhattisgarh 2001b).

Background Characteristics of the NFHS-2 Survey Population

According to the NFHS-2 survey, 81 percent of the population of Chhattisgarh lives in rural areas. The age distribution is typical of high fertility populations that have recently experienced some fertility decline, with a slightly lower proportion of the population in the 0–4 age group (11.2) than in the 5–9 age group (13.4) and declining proportions thereafter. Thirty-seven percent of the population is below age 15, and only 6 percent is age 65 and above. The sex ratio (females per 1,000 males) is 1,031 in rural areas, 929 in urban areas, and 1,011 for the state as a whole.

The survey provides a variety of information on demographic and socioeconomic background factors. In the state as a whole, 93 percent of household heads are Hindu, 5 percent are Christian, 1 percent are Muslim, and 1 percent are of other religions, mainly Jain. Muslims are more concentrated in urban areas, where they comprise 5 percent of household heads, whereas Christians are more concentrated in rural areas, where they comprise 6 percent of household heads. A significant proportion of the household population in Chhattisgarh is tribal, with more than one-third (37 percent) of household heads belonging to the scheduled tribes. Thirty-nine percent of the household heads belong to other backward classes (OBCs) and 15 percent belong to the scheduled castes. Only 9 percent of household heads do not belong to any of these groups.

The survey includes several questions on housing conditions and the standard of living of households. Fifty-eight percent of households in Chhattisgarh have electricity (compared with 60 percent in India as a whole and 72 percent in Madhya Pradesh). Thirty-eight percent of households are within 15 minutes from a safe drinking water supply, about the same as in Madhya Pradesh, but much lower than the national average (62 percent). Only 17 percent have piped drinking water. Eighty-five percent of households in Chhattisgarh do not have any toilet facility, which is higher than the percentage of households in Madhya Pradesh with no toilet facility (75 percent). The percentage of households in Chhattisgarh with a flush toilet (14 percent) is also less than the percentage in Madhya Pradesh (23 percent). Two-thirds of households own some land, but only 27 percent own land that is irrigated. About two in five (38 percent) households in Chhattisgarh have a low standard of living, while only about one in ten (13 percent) enjoy a high standard of living.

Seventy-seven percent of males and 48 percent of females age six and above are literate, estimates that are very close to the 2001 Census literacy rates. Educational attainment of the population is very low with the median number of years of education at only five for men and zero for women. Among children age 6–14, only 79 percent are attending school (84 percent of boys and 75 percent of girls). The disparity in school attendance by sex widens with age. At ages 6–10, there is not much disparity between the attendance rate for boys (86 percent) and the attendance rate for girls (82 percent); by age 11–14, the disparity has grown to 16 percentage points (with 81 percent of boys attending school, compared with only 65 percent of girls), and at age 15–17, it is even wider at 27 percentage points (with 53 percent of boys attending school, compared with 26 percent of girls).

As part of an increasing emphasis on gender issues in NFHS-2, the survey asked women about their participation in household decisionmaking. In Chhattisgarh, 92 percent of women are involved in decisionmaking on at least one of four selected topics. A much lower proportion, however, are involved in decisionmaking about their own health care (49 percent), purchasing jewellery or other major household items (54 percent), or going and staying with parents or siblings (53 percent). In Madhya Pradesh, in contrast, only 32 percent of women are involved in decisions about their own health. Women in Chhattisgarh may enjoy somewhat more autonomy than women in Madhya Pradesh, but their autonomy is still very limited. Only about one-fourth of women are allowed to visit friends or relatives without seeking permission, about the same proportion of women are allowed to go to the market without permission, and only about half report that they have access to some money that they can use as they wish. Sixty-four percent of women in Chhattisgarh do work other than housework, and about half of employed women work for cash. One-third of women who earn cash can decide independently how to spend the money that they earn. In the case of two out of five women who work for cash, their own earnings constitute at least half of their family's total earnings.

Marriage Patterns

Women in Chhattisgarh tend to marry at an early age. Thirty-four percent of women age 15–19 are already married (including 1 percent who are married but for whom *gauna* has not yet been performed). The median age at marriage among women age 20–49 in Chhattisgarh is 15.4, only slightly higher than the corresponding median age at marriage in Madhya Pradesh (14.9). The age at marriage has, however, been rising over time. Older women are more likely than younger women to have married at an early age: 54 percent of women who are now age 45–49 married before they were 15, compared with only 19 percent of women who are currently age 15–19. Despite this decline, however, three-fourth (73 percent) of women in Chhattisgarh still marry before reaching the legal minimum age at marriage of 18 years. On average, women are four years younger than the men they marry.

Fertility

At current fertility levels, NFHS-2 estimates that women in Chhattisgarh will have an average of 2.8 children each throughout their childbearing years, 0.7 children less than in Madhya Pradesh (3.5). The total fertility rate is about 0.8 children higher in the rural areas of the state than in the urban areas. The percentage of higher-order (birth orders of 3 or higher) births is lower in Chhattisgarh (48 percent) than in Madhya Pradesh (54 percent). About one-quarter (26 percent) of births in Chhattisgarh take place within 24 months of a previous birth. The mean number of

children born to women age 40–49 in Chhattisgarh (4.6) is 0.7 children less than the corresponding mean number in Madhya Pradesh (5.3).

Efforts to lower fertility might usefully focus on groups within the population that have higher fertility than average. In Chhattisgarh, women who have not completed middle school and women from households with a low standard of living have much higher fertility (a total fertility rate of 3.4–3.6) than other women. Women belonging to the scheduled castes, scheduled tribes, and other backward classes have about one child more than women who do not belong to these categories. The median age at first childbirth for women age 20–49 in Chhattisgarh is 18.1 years. Since nearly one-quarter of total fertility is contributed by women age 15–19, there is still some scope for reduction in overall fertility by focusing the family planning programme and MCH services more on these young women.

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. The mean ideal number of children for women in Chhattisgarh (3.2) is almost half a child more than the mean ideal number in Madhya Pradesh (2.8). Among all women who gave a numeric response when asked about their ideal family size, almost one-third said that they would prefer to have four or more children. Despite relatively large family-size preferences in Chhattisgarh, 16 percent of women who already have three living children and 11 percent of women with four or more living children consider the two-child family to be ideal. For 9 percent of births in Chhattisgarh in the three years preceding NFHS-2, mothers report that they did not want the pregnancy at all, and for another 9 percent of these births, mothers say that they would have preferred to delay the pregnancy. This gap between women's actual fertility experience and what they want or would consider ideal indicates that there is a need for expanded or improved family welfare services to help women achieve their fertility goals.

Family Planning

If many women in Chhattisgarh are not using family planning, it is not due to a 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 (86 percent), the pill (68 percent), the condom (55 percent), and the IUD (40 percent). About two out of every five women (43 percent) have knowledge of at least one traditional method. Yet only 45 percent of married women in Chhattisgarh are currently using some method of contraception, about the same as in Madhya Pradesh (44 percent) but less than the national average (48 percent). Contraceptive prevalence in Chhattisgarh is considerably higher in urban areas (59 percent) than in rural areas (42 percent).

Female sterilization is by far the most popular method: 35 percent of currently married women are sterilized. By contrast, only 3 percent of women report that their husbands are sterilized. Overall, sterilization accounts for 85 percent of total contraceptive use. Use rates for the pill (1 percent), the IUD (1 percent), and the condom (2 percent) remain very low. The use of these officially-sponsored spacing methods in Chhattisgarh (4 percent) is lower than the use of these methods in India as a whole (7 percent), but similar to their use in Madhya Pradesh (5

percent). Two percent of women use traditional methods of family planning, primarily the rhythm or safe-period method.

Contraceptive prevalence varies widely among socioeconomic groups. Women belonging to the scheduled tribes, women from households with a low standard of living, women belonging to the scheduled castes, and women who have completed middle school but not high school have much lower levels of contraceptive use than other women. The use of the three modern spacing methods (pill, IUD, and condom) is relatively high only among women from households with a high standard of living (20 percent) and women who have completed at least high school (29 percent).

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 the number of living children. In Chhattisgarh, contraceptive use does indeed go up with age, peaking at 76 percent for women age 40–44, before declining for the oldest age group. Use also goes up with the number of children, peaking at 67 percent for women with three living children. Son preference has a considerable effect on contraceptive use. Women who have one or more sons are more likely to use contraception than are those who have the same number of children but have only daughters. Among women with two living children, for example, contraceptive use is only 19 percent if both children are daughters, 44 percent if there is one daughter and one son, and 51 percent if both children are sons. Contraceptive use is highest (79 percent) among women of parity three who have two sons and one daughter.

Eight 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 6 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. Fourteen percent of women in Chhattisgarh have an unmet need for family planning, compared with 17 percent in Madhya Pradesh. The unmet need for spacing declines from 23 percent among women age 15–19 to less than 1 percent among women age 35–49. The unmet need for limiting first increases with age from 1 percent among women age 15–19 to 7–8 percent among women age 25–39, and then declines for women at older ages. 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. In Chhattisgarh, 85 percent of rural residents live in villages that are electrified and 20 percent live in villages that have a cable connection. Two out of five ever-married women listen to the radio at least once a week and the same proportion watch television at least once a week. More than two out of five women (42 percent), however, are not regularly exposed to radio, television, or other types of media. Exposure to each type of media is relatively high only among more-educated women, women from households with a high standard of living, women who do not belong to a scheduled caste, scheduled tribe, or other backward class, and urban women. More than half of ever-married women in Chhattisgarh (56 percent) saw or heard a family planning message in the media during the few months preceding the survey. In addition to radio and television, wall paintings and hoardings and newspapers and magazines are also important sources of exposure to family planning messages. As with exposure to mass media itself, exposure to family planning messages is much lower among women from households with

a low standard of living, women who belong to the scheduled tribes, illiterate women, and rural women. Only 20 percent of currently married women in Chhattisgarh have discussed family planning with their husbands in the past few months.

Nearly nine out of ten (89 percent) women who use modern contraception obtained their method from a government hospital or other source in the public sector. Only 3 percent obtained their method from the private medical sector. These data show that the private medical sector plays a minor role in Chhattisgarh as a source of modern contraceptive methods; notably, however, its role in urban areas (6 percent) though small, is twice as large as in rural areas (3 percent).

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 Chhattisgarh, only 43 percent of current users of modern contraceptive methods were motivated by someone to use their current method, and only 18 percent of these users who were motivated by someone were told about any other method. Only 15 percent of women in Chhattisgarh, somewhat higher than in Madhya Pradesh (11 percent), were told by a health or family planning worker about possible side effects of the method they adopted at the time of adopting the method. Eighty-two percent of contraceptive users in Chhattisgarh, however, received follow-up services after adopting their method, compared with 76 percent in Madhya Pradesh.

From the information provided in NFHS-2, a picture emerges of women marrying three years earlier than the legal age at marriage, having their first child about three years after marriage, having three or more children, and then getting sterilized. The median age for female sterilization is now 26 years. Very few women use modern spacing methods that could help them delay their first birth or increase the interval between pregnancies.

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 81 (deaths of infants per 1,000 live births), much higher than the infant mortality rate of 68 in India as a whole but somewhat lower than the infant mortality rate of 88 in Madhya Pradesh. The child mortality rate in Chhattisgarh was 45 (deaths of children age 1–4 years per 1,000 children reaching age one). In all, among 1,000 children born, 123 die before reaching age five. Expressed differently, 1 in 12 children die in the first year of life, and 1 in 8 die before reaching age five. Child-survival programmes might usefully focus on specific groups of children with particularly high infant and child mortality rates, such as children who belong to the scheduled tribes, children whose mothers are illiterate, children living in rural areas, and children from households with a low to medium standard of living.

Along with various socioeconomic groups, efforts to promote child survival need to concentrate on very young mothers and mothers whose children are closely spaced. For example, infant mortality is 70 percent higher among children born to mothers under age 20 than among children born to mothers age 20–29 (133 compared with 78 deaths, per 1,000 births). Infant mortality among children born less than 24 months after a previous birth is 27–55 percent higher than infant mortality among children born after a gap of 2–4 years or more (89 compared with 58–70 deaths, 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.

Reproductive Health

Promotion of maternal and child health has been one of the most important components of the Family Welfare Programme of the Government of India. One goal is for each pregnant woman to receive at least three antenatal check-ups plus two tetanus toxoid injections and a full course of iron and folic acid supplementation. In Chhattisgarh, mothers of 58 percent of the children born in the three years preceding NFHS-2 received at least one antenatal check-up, compared with 65 percent in India as a whole. For one-third of births during the three years preceding the survey mothers received at least three antenatal check-ups. Mothers received the recommended number of tetanus toxoid vaccinations for 58 percent of children in Chhattisgarh (compared with 54 percent in Madhya Pradesh). Mothers received iron and folic acid supplementation for 55 percent of children in Chhattisgarh (compared with 47 percent in Madhya Pradesh). Coverage by all three interventions is much lower for illiterate women and women living in households with a low standard of living than for other women.

The Family Welfare Programme encourages women to deliver in a medical facility or, if at home, with assistance from a trained health professional, and to receive at least three check-ups after delivery. During the three years preceding NFHS-2, only 14 percent of births in Chhattisgarh were delivered in a medical facility and only one in three births were assisted by a health professional (43 percent were assisted by a traditional birth attendant). Among births delivered at home, only about one in four were assisted by a health professional. Notably, women who receive even one antenatal check-up are more likely than women who receive none to deliver in a health facility. Only one out of eight births outside a medical facility were followed by a postpartum check-up within two months of delivery. Overall, these results show that utilization of health services in Chhattisgarh during pregnancy, during delivery, and after childbirth remains very low. They also point to the important role of traditional birth attendants for the large majority of births that occur at home.

Thirty-seven percent of currently married women in Chhattisgarh report some type of reproductive-health problem, including abnormal vaginal discharge, symptoms of a urinary tract infection, and pain or bleeding associated with intercourse. The situation in Chhattisgarh is somewhat better than in Madhya Pradesh, where 47 percent report some reproductive health problem. Among women in Chhattisgarh with a reproductive health problem, 68 percent have not sought any advice or treatment. Those who sought advice or treatment were about equally likely to go to private sector health facilities as to public sector health facilities. 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.

Nutrition of Children and Women

The Government of India recommends that breastfeeding should begin immediately after childbirth and that infants should be exclusively breastfed for the first four months of life. It is also recommended that the first breast milk (colostrum) should be given to the child rather than squeezed from the breast and discarded, because it provides natural immunity to the child. Although breastfeeding is nearly universal in Chhattisgarh, most children do not begin breastfeeding

immediately after birth—only 14 percent begin breastfeeding in the first hour after birth and 30 percent do so within one day of birth. Moreover, for 75 percent of children, mothers squeezed the first milk from the breast before feeding the baby, contrary to recommended feeding practices. Eighty-two percent of children under four months of age are exclusively breastfed and the median duration of any breastfeeding is 36 months or more. At age 6–9 months, all children should be receiving solid or mushy food in addition to breast milk. However, only 41 percent of children age 6–9 months receive the recommended combination of breast milk and solid or 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, 61 percent of children under age three years in Chhattisgarh are underweight, 58 percent are stunted, and 19 percent are wasted. In Madhya Pradesh, the percentages of underweight, stunted, and wasted children are 53, 49, and 20, respectively. Undernourishment tends to increase with age, with the proportion of undernourished children being much higher according to all three indicators among children age 12–35 months, than among those still in their first year of life. In Chhattisgarh, female children are much more likely to be undernourished than male children according to all three measures. Other groups of children with much higher than average rates of undernutrition are children at birth orders 4 or higher, children of illiterate mothers, children belonging to the scheduled castes or scheduled tribes, and children from households with a low standard of living. Children of undernourished mothers and children born less than two years after a previous birth are also more likely than other children to be undernourished according to most indicators.

Almost nine out of ten children age 6–35 months are anaemic, and this proportion is never less than 80 percent in any sub-group of the population. Most children who are anaemic have moderate to severe anaemia. Anaemia among children is much more common in Chhattisgarh (88 percent) than in Madhya Pradesh (71 percent) and in India as a whole (74 percent).

While overall rates of anaemia do not vary by sex of the child in Chhattisgarh, female children are more likely than male children to be moderately to severely anaemic. Despite the very high proportions of anaemic children in every group of the population, rates of anemia do vary by selected characteristics of children and their mothers. The prevalence of anaemia is higher among children age 12–23 months than among older or younger children. It is higher among children of illiterate mothers than among children of literate mothers, and decreases with household standard of living. Children whose mothers are anaemic are more likely to be anaemic themselves than are other children.

Based on a weight-for-height index (the body mass index), almost half the women in Chhattisgarh (48 percent) are undernourished. The proportion of women undernourished is much higher for women age 20–29 than for older or younger women. Nutritional deficiency is much

more prevalent among scheduled-tribe women, women from households with a low standard of living, illiterate women, and rural women, than among other women.

Overall, 69 percent of women in Chhattisgarh have some degree of anaemia, compared with 52 percent in India as a whole and 49 percent in Madhya Pradesh. Twenty-three percent of women in Chhattisgarh are moderately to severely anaemic, compared with 15 percent of women in Madhya Pradesh. Anaemia is a serious problem among women in every population group in Chhattisgarh, with prevalence rates ranging from 54 to 86 percent across groups. Pregnant women (43 percent) are much more likely than non-pregnant women (20–22 percent) to be moderately to severely anaemic.

In Chhattisgarh, 91 percent of women consume green, leafy vegetables at least once a week, 88 percent consume other vegetables at least once a week, and 84 percent consume pulses or beans at least once a week, but only 24 percent consume fruits at least once a week and 23 percent consume milk or curd at least once a week. Fifteen percent of women eat chicken, meat, or fish at least once a week, and 20 percent of women never eat chicken, meat, or fish.

Only 60 percent of households in Chhattisgarh use cooking salt that is iodized at the recommended level of 15 parts per million (ppm), suggesting that iodine deficiency disorders are likely to be a problem in the state. In Madhya Pradesh, 55 percent of households use cooking salt that is iodized at the recommended level. Households belonging to the scheduled-tribes, households with a low standard of living, and rural households are less likely than other households in Chhattisgarh to use adequately iodized cooking salt.

Children's Immunizations

Immunization of children 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, and the target now is to achieve 100 percent immunization. However, in Chhattisgarh, only 22 percent of children age 12–23 months are fully vaccinated, 73 percent have received some but not all of the recommended vaccinations, and 6 percent have not received any of the recommended vaccinations. The percentage of children fully vaccinated in Chhattisgarh is similar to the proportion fully vaccinated in Madhya Pradesh (23 percent) but much lower than in India as a whole (42 percent).

One reason that less than one-fourth of children age 12–23 have been fully immunized is the very limited reach of the measles vaccine and the third dose of the DPT vaccine. Only 40 percent of children have received the measles vaccine and 41 percent have received all three doses of the DPT vaccine. Not only is the dropout rate for the series of DPT vaccinations a problem, but the dropout rate for the polio vaccinations is also very high. Sixty-eight percent of children received the first DPT vaccination, but only 41 percent received all three doses and 94 percent received the first polio vaccination, but only 57 percent received all three doses. However, the effect of the Pulse Polio Immunization Campaign is quite evident. Although polio and DPT vaccinations are typically given at the same time as part of the routine immunization programme, the proportion of children receiving polio vaccinations is considerably higher than the proportion receiving DPT vaccinations due to the Pulse Polio Programme. The percentage of

children receiving all three doses of the DPT vaccine in Chhattisgarh is slightly higher than in Madhya Pradesh (36 percent) and the percentage receiving all three doses of the polio vaccine is about the same as in Madhya Pradesh (57 percent). Children least likely to receive all of the recommended vaccinations are those that live in households with a low standard of living. The public sector is the major source of childhood vaccinations in Chhattisgarh: 92 percent of children who received one or more vaccinations received most of their vaccinations from a public sector source.

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, in Chhattisgarh, only one-third (35 percent) of children age 12–35 months have received any vitamin A supplementation and only 22 percent received a dose of vitamin A in the six months preceding the survey.

Childhood Diseases

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 Chhattisgarh, 26 percent of children under age three were ill with fever during the two weeks preceding the survey, the same percentage were ill with ARI, and 21 percent had diarrhoea. Sixty-two percent of children who were ill with ARI were taken to a health facility, compared with 57 percent in Madhya Pradesh. Among children in Chhattisgarh who were ill with diarrhoea, 59 percent were taken to a health facility or health-care provider. Knowledge of the appropriate treatment of diarrhoea remains inadequate. Only 59 percent of mothers of children age less than three years know about oral rehydration salt (ORS) packets and 20 percent of mothers incorrectly believe that when children are sick with diarrhoea, they should be given less to drink than usual. Forty-eight percent of children with diarrhoea received some form of oral rehydration therapy (ORT), including 30 percent who received ORS.

Domestic Violence

In recent years, there has been growing concern about domestic violence in India. NFHS-2 found that in Chhattisgarh there is widespread acceptance among ever-married women that the beating of wives by husbands is justified under some circumstances. Almost two-third of ever-married women (62 percent) accept at least one of six reasons as a justification for a husband beating his wife. Seventeen percent of ever-married women in Chhattisgarh have experienced beatings or physical mistreatment since age 15, and 9 percent experienced such violence in the 12 months preceding the survey. Most of these women have been beaten or physically mistreated by their husbands.

Morbidity

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 2 percent of the population in Chhattisgarh suffer from asthma, 11 percent suffered from malaria during the three months preceding the survey, and 1 percent suffered from jaundice during the 12 months preceding the survey. The prevalence of any tuberculosis (0.6 percent) and medically treated tuberculosis (0.5 percent) is marginally higher in the state than in India as a whole (0.5 percent any tuberculosis and 0.4 percent of medically treated tuberculosis). The prevalence of

tuberculosis, jaundice, and malaria is much higher in rural areas than in urban areas, whereas the prevalence of asthma is about the same in urban and rural areas. Men are more likely than women to suffer from each of these diseases.

Quality of Health Care

Forty-five percent of households in Chhattisgarh use the private medical sector, mainly private doctors or private hospitals or clinics for treatment when a family member is ill. A slightly higher proportion (47 percent) normally use the public medical sector. Use of the private medical sector when household members become ill does not vary much by household standard of living but is higher among urban households than among rural households. Most respondents are generally satisfied with the health care they receive. When asked about the quality of care received during the last visit to a health facility, almost all respondents (98 percent) reported receiving the service they went for, 93 percent said that the staff spent enough time with them, and the median waiting time to receive the service was about 15 minutes. However, only 53 percent rated the facility they visited as very clean, only 65 percent said that the staff spoke nicely to them, and 73 percent said that their need for privacy was respected. Ratings on the quality of services are much lower for public-sector health facilities than for private sector health facilities. In particular, women whose last visit was to a public sector health facility are much less likely to say that the facility was very clean, that their need for privacy was respected, and that the staff spoke to them nicely, than women whose last visit was to a private sector health facility.

Overall, only 7 percent of women received at least one home visit from a health or family planning worker during the 12 months preceding the survey and the few who did receive home visits were not visited regularly. A large majority of the women who received a home visit expressed satisfaction with the amount of time that the worker spent with them and with the way the worker talked to them.

Lifestyle Indicators

NFHS-2 also collected information on selected lifestyle indicators for household members. According to household respondents, 15 percent of adult men and 1 percent of adult women smoke, 27 percent of adult men and 7 percent of adult women drink alcohol, and 34 percent of adult men and 16 percent of adult women chew *paan masala* or tobacco.

HIV/AIDS

Although the spread of HIV/AIDS is a major concern in India, four out of five women in Chhattisgarh (80 percent) have not heard of AIDS, much more than the estimate of 60 percent for India as a whole. Awareness of AIDS is particularly low among women who are not regularly exposed to mass media, illiterate women, women living in households with a low standard of living, scheduled-tribe women, and women living in rural areas. Among women who have heard of AIDS, 93 percent received information about the disease from television, 47 percent from the radio, and 30 percent from newspapers or magazines. Among women who have heard of AIDS, 55 percent do not know of any way to avoid infection. Only 21 percent of women who know about AIDS mention the use of a condom as a way of avoiding the disease. NFHS-2 results suggest that health personnel could play a much larger role in promoting AIDS

awareness. In Chhattisgarh, only 4 percent of women who know about AIDS received information about the disease from a health worker.

REFERENCE

Office of the Registrar General and Census Commissioner. 2001a. *Census of India 2001, Series-1, India, Provisional Population Totals Paper-1 of 2001*. New Delhi: Office of the Registrar General, India.

Director of Census Operations, Chhattisgarh. 2001b. *Census of India 2001, Series-23, Chhattisgarh, Provisional Population Totals, Paper-1 of 2001*. Bhopal: Director of Census Operations, Chhattisgarh.