

CHAPTER 8

MATERNAL AND REPRODUCTIVE HEALTH

Promotion of maternal and child health has been one of the most important objectives of the Family Welfare Programme in India. The Government of India took steps to strengthen maternal and child health services as early as the First and Second Five-Year Plans (1951–56 and 1956–61). As part of the Minimum Needs Programme initiated during the Fifth Five-Year Plan (1974–79), maternal health, child health, and nutrition services were integrated with family planning services. The primary aim at that time was to provide at least a minimum level of public health services to pregnant women, lactating mothers, and preschool children (Kanitkar, 1979).

In 1992–93, the Child Survival and Safe Motherhood Programme continued the process of integration by bringing together several key child survival interventions with safe motherhood and family planning activities (Ministry of Health and Family Welfare, 1992). In 1996, safe motherhood and child health services were incorporated into the Reproductive and Child Health Programme. This new programme seeks to integrate maternal health, child health, and fertility regulation interventions with reproductive health programmes for both women and men. With regard to maternal and reproductive health (Ministry of Health and Family Welfare, 1997; 1998b), the important elements of the programme include:

- Provision of antenatal care, including at least three antenatal care visits, iron prophylaxis for pregnant and lactating mothers, two doses of tetanus toxoid vaccine, detection and treatment of anaemia in mothers, and management and referral of high-risk pregnancies
- Encouragement of institutional deliveries or home deliveries assisted by trained health personnel
- Provision of postnatal care, including at least three postnatal visits
- Identification and management of reproductive tract and sexually transmitted infections

In rural areas, the government delivers reproductive and other health services through its network of Primary Health Centres (PHCs), sub-centres, and other government health facilities. In addition, pregnant women and children can obtain services from public and private maternity homes, hospitals, private practitioners, and in some cases, nongovernmental organizations (NGOs). In urban areas, reproductive health services are available mainly through government or municipal hospitals, urban health posts, hospitals, and nursing homes operated by NGOs, and private nursing and maternity homes.

In rural areas, a female paramedical worker, called an auxiliary nurse midwife (ANM), is posted at a sub-centre to provide basic maternal health, child health, and family welfare services to women and children either in their homes or in the health clinic. Her work is overseen by the lady health visitor (LHV) posted at the PHC. With regard to safe motherhood, the ANM is responsible for registering pregnant women, motivating them to obtain antenatal and postnatal care, assessing their health throughout pregnancy and in the postpartum period, and providing referrals for women with high-risk pregnancies. The ANM is assisted by a male health worker

whose duties include motivating men to participate in the family welfare programme and educating men about reproductive tract and sexually transmitted infections. The ANM and LHV also assist the medical officer at the PHC where health services including antenatal and postnatal care are provided (Ministry of Health and Family Welfare, 1997; 1998b).

The National Population Policy adopted by the Government of India in 2000 (Ministry of Health and Family Welfare, 2000) reiterates the government's commitment to safe motherhood programmes within the wider context of reproductive health. Among the national sociodemographic goals for 2010 specified by the policy, several goals pertain to safe motherhood, namely that 80 percent of all deliveries should take place in institutions by 2010, 100 percent of deliveries should be attended by trained personnel, and the maternal mortality ratio should be reduced to a level below 100 per 100,000 live births. Empowering women for improved health and nutrition is 1 of the 12 strategic themes identified in the policy to be pursued in stand alone or intersectoral programmes.

An important objective of NFHS-2 is to provide information on the use of safe-motherhood services provided by the public and private sectors. In addition, the survey included questions on the prevalence and treatment of reproductive health problems. Relevant questions on safe motherhood were included in the Woman's Questionnaire. The topics covered include pregnancy complications, antenatal and postnatal care, place of and assistance during delivery, delivery characteristics, and postpartum complications. Although the NFHS-2 in Madhya Pradesh obtained this information for the two most recent live births since 1 January 1995, the information presented in this chapter pertains only to the subset of those births that took place during the three years preceding the woman's interview. With regard to reproductive health, women were asked about their experience of specific symptoms of reproductive health problems, and if problems were reported, whether and where treatment was received.

8.1 Antenatal Problems and Care

Antenatal care (ANC) refers to pregnancy-related health care provided by a doctor or a health worker in a medical facility or at home. The Safe Motherhood Initiative proclaims that all pregnant women must receive basic, professional antenatal care (Harrison, 1990). Ideally, antenatal care should monitor a pregnancy for signs of complications, detect and treat pre-existing and concurrent problems of pregnancy, and provide advice and counselling on preventive care, diet during pregnancy, delivery care, postnatal care, and related issues. The Reproductive and Child Health Programme recommends that as part of antenatal care, women receive two doses of tetanus toxoid vaccine, adequate amounts of iron and folic acid tablets or syrup to prevent and treat anaemia, and at least three antenatal check-ups that include blood pressure checks and other procedures to detect pregnancy complications (Ministry of Health and Family Welfare, 1997; 1998b).

NFHS-2 collected information from women on specific problems they may have had during their pregnancies and whether they received any antenatal check-ups. Women who did not receive antenatal check-ups were asked why they did not. Women who received antenatal check-ups were asked about the care provider, the timing of the first antenatal check-up, the total number of check-ups, the procedures conducted during the check-ups, and the advice given. In addition, the survey asked women whether they received tetanus toxoid injections and iron and

Table 8.1 Health problems during pregnancy			
Among births during the three years preceding the survey, percentage of mothers experiencing specific health problems during pregnancy by residence, Madhya Pradesh, 1998–99			
Problem during pregnancy	Urban	Rural	Total
Night blindness	10.7	22.1	19.7
Blurred vision	32.7	39.1	37.7
Convulsions not from fever	20.1	25.8	24.5
Swelling of the legs, body, or face	31.0	29.4	29.7
Excessive fatigue	51.0	50.6	50.7
Anaemia	44.7	36.6	38.4
Vaginal bleeding	3.9	5.7	5.3
Number of births	613	2,224	2,837

Note: Table includes only the two most recent births during the three years preceding the survey.

folic acid tablets or syrup during the pregnancy. Results from each of these questions are discussed in this chapter.

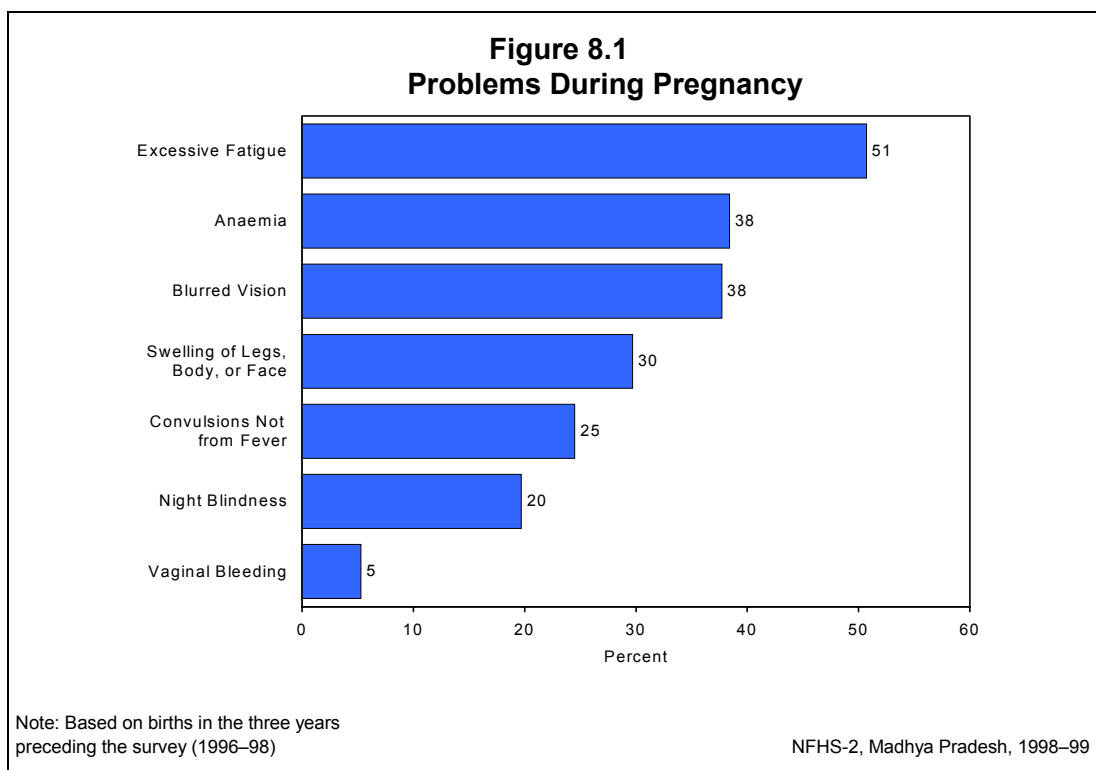
Problems During Pregnancy

For each of the two most recent births in the three years preceding the survey, the mother was asked if at any time during the pregnancy she experienced any of the following pregnancy-related problems: night blindness, blurred vision, convulsions (not from fever), swelling of legs, body, or face, excessive fatigue, anaemia, or vaginal bleeding. Night blindness, or difficulty seeing at dusk, is the result of chronic vitamin A deficiency and is often seen in pregnant women in areas where vitamin A deficiency is endemic. Convulsions accompanied by signs of hypertension can be symptomatic of eclampsia, a potentially fatal condition. The potential health risk posed by vaginal bleeding during pregnancy varies by when in the pregnancy the bleeding takes place. Although documenting the prevalence of the symptoms of pregnancy complications is vital for planning services to reduce maternal morbidity and mortality, the information presented here is based on women's self reports and should be interpreted with care.

As shown in Table 8.1 and Figure 8.1, the pregnancy related problems most commonly reported are excessive fatigue (51 percent), followed by anaemia and blurred vision (each reported by 38 percent of women), swelling of the legs, body, or face (30 percent), convulsions not from fever (25 percent), and night blindness (20 percent). Five percent reported vaginal bleeding during pregnancy. The reported prevalence of both kinds of vision problems and of convulsions (not from fever) is higher in rural than in urban areas (Table 8.1). A slightly higher proportion of urban than rural women reported having anaemia during pregnancy.

Antenatal Check-Ups

A pregnant woman can have an antenatal check-up by visiting a doctor or another health professional in a medical facility, receiving a home visit from a health worker, or both. NFHS-2 asked women who had a birth during the three years preceding the survey whether any health worker had visited them at home to provide antenatal check-ups. The survey also asked whether



women had gone for antenatal check-ups outside the home, and if they had, what type of service provider gave them the check-ups.

Table 8.2 and Figure 8.2 show the percent distribution of births in the three years preceding the survey by the source of antenatal check-ups received during pregnancy according to selected background characteristics. Women who received antenatal check-ups both at home and outside the home are categorized as having received care outside the home. If a woman received check-ups from more than one type of health provider, only the provider with the highest qualification is considered.

NFHS-2 results show that mothers in Madhya Pradesh received antenatal check-ups for only 61 percent of births during the three years preceding the survey, up slightly from 55 percent in NFHS-1. Mothers received antenatal check-ups from doctors for 37 percent of births, from other health professionals (ANMs/nurses/midwives/LHVs and others) for 14 percent of births, and check-ups exclusively at home from a health worker for 10 percent of births.

The likelihood that mothers received antenatal check-ups does not vary much by age but does decrease steadily with birth-order. Mothers of 71 percent of first-order births, but only 53 percent or less of births of order 4–5 or higher received antenatal check-ups. Antenatal check-ups from doctors are also more likely the lower the birth-order. As expected, antenatal check-ups and antenatal check-ups from doctors are much more common in urban areas than in rural areas. By region, antenatal check-ups are most common for births to mothers who live in the Malwa Plateau, South Western, and Central Regions and least common for births to mothers living in the Vindhya Region.

Table 8.2 Antenatal check-ups

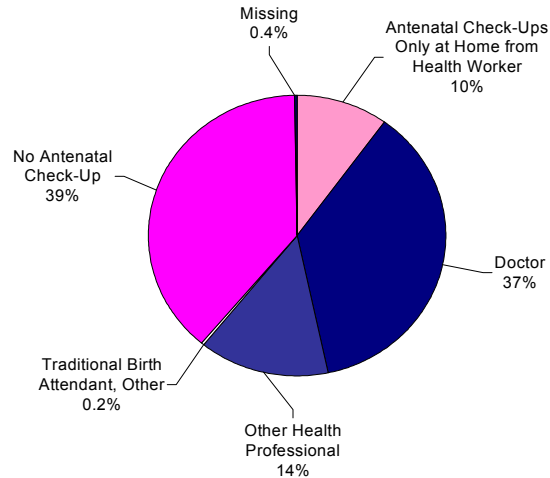
Percent distribution of births during the three years preceding the survey by source of antenatal check-up, according to selected background characteristics, Madhya Pradesh, 1998–99

Background characteristic	Antenatal check-up only at home from health worker	Antenatal check-up outside home ¹ from:				No antenatal check-up	Missing	Total percent	Number of births
		Doctor	Other health professional	Traditional birth attendant, other					
Mother's age at birth									
< 20	12.1	33.5	14.8	0.1	38.7	0.7	100.0	776	
20–34	9.3	38.1	13.9	0.3	38.1	0.4	100.0	1,945	
35–49	7.9	34.2	13.7	0.0	44.2	0.0	100.0	116	
Birth order									
1	9.9	47.5	13.6	0.2	28.3	0.5	100.0	711	
2–3	10.6	37.1	15.6	0.3	36.0	0.5	100.0	1,133	
4–5	9.6	30.6	12.4	0.2	47.0	0.1	100.0	628	
6+	9.1	24.6	13.9	0.0	51.9	0.6	100.0	365	
Residence									
Urban	3.6	64.8	13.4	0.2	17.9	0.0	100.0	613	
Rural	11.7	28.9	14.4	0.2	44.2	0.6	100.0	2,224	
Region									
Chattisgarh	6.2	39.0	12.3	0.0	41.9	0.6	100.0	642	
Vindhya	9.8	21.9	19.5	0.0	48.8	0.0	100.0	466	
Central	12.7	44.4	11.2	0.5	29.9	1.2	100.0	282	
Malwa Plateau	13.3	44.5	12.3	0.7	29.2	0.0	100.0	481	
South Central	6.9	36.7	16.0	0.3	39.6	0.5	100.0	336	
South Western	12.7	40.8	16.4	0.0	29.4	0.7	100.0	279	
Northern	11.4	31.5	11.9	0.0	44.7	0.4	100.0	351	
Mother's education									
Illiterate	11.1	26.3	13.7	0.3	48.0	0.6	100.0	1,950	
Literate, < middle school complete	10.2	46.4	16.8	0.0	26.3	0.3	100.0	479	
Middle school complete	7.1	65.5	15.9	0.0	11.5	0.0	100.0	192	
High school complete and above	1.7	83.1	11.1	0.0	4.1	0.0	100.0	216	
Religion									
Hindu	10.3	34.4	14.4	0.2	40.2	0.5	100.0	2,618	
Muslim	4.6	64.5	14.2	0.0	16.7	0.0	100.0	169	
Caste/tribe									
Scheduled caste	10.2	32.5	18.4	0.6	37.5	0.8	100.0	467	
Scheduled tribe	12.2	19.9	11.2	0.5	55.7	0.5	100.0	697	
Other backward class	9.3	39.8	14.8	0.0	35.8	0.3	100.0	1,191	
Other	8.4	57.5	12.7	0.0	21.2	0.3	100.0	480	
Standard of living index									
Low	9.2	26.8	12.7	0.2	50.6	0.5	100.0	1,030	
Medium	11.4	35.2	15.0	0.2	37.8	0.5	100.0	1,376	
High	7.6	65.5	14.9	0.3	11.5	0.2	100.0	423	
Total	10.0	36.7	14.2	0.2	38.5	0.4	100.0	2,837	

Note: Table includes only the two most recent births during the three years preceding the survey. Total includes 22 and 28 births to mothers belonging to Jain and 'other' religions, respectively, and 1 and 8 births with missing information on caste/tribe and the standard of living index, respectively, which are not shown separately.

¹Includes all births for which the mothers received an antenatal check-up outside the home, even if they also received an antenatal check-up at home from a health worker. If more than one type of antenatal check-up provider was mentioned, only the provider with the highest qualification is considered.

**Figure 8.2
Source of Antenatal Check-Ups
During Pregnancy**



Note: Percents add to more than 100 due to rounding

NFHS-2, Madhya Pradesh, 1998-99

The proportion of births whose mothers received an antenatal check-up and the proportion who received an antenatal check-up from a doctor increase sharply with mother's education. For example, 26 percent of births to illiterate mothers received antenatal check-ups from a doctor compared with 83 percent of births to mothers who have at least completed high school. Conversely, the percentage of births for which mothers received home visits only from a health worker decreases with mother's education from 11 percent for births to illiterate mothers to 2 percent for births to mothers who have completed at least high school. The majority of Hindus and Muslims receive antenatal check-ups; nonetheless, Muslim mothers received an antenatal check-up for 83 percent of births compared with Hindu mothers who received an antenatal check-up for 59 percent of births. Muslims are also much more likely than Hindus to receive antenatal check-ups from a doctor, but are less likely than Hindus to receive antenatal check-ups only at home. By caste/tribe, the likelihood of having received any antenatal check-up, as well as the likelihood of having received an antenatal check-up from a doctor, are lowest for births to scheduled-tribe mothers and highest for births to mothers who do not belong to a scheduled caste, scheduled tribe, or an other backward class. Among births to mothers living in households with a low standard of living, 49 percent received antenatal check-ups and 27 percent received antenatal check-ups from doctors. By contrast, among births to mothers living in households with a high standard of living, 88 percent received antenatal check-ups and 66 percent received check-ups from doctors.

In summary, women in Madhya Pradesh did not receive an antenatal check-up for almost two out of every five births in the three years preceding the survey. Women not receiving antenatal check-ups tend disproportionately to be women of high parity, women from scheduled tribes, illiterate women, women from the Vindhya Region, and poor women. This suggests that

Table 8.3 Reason for not receiving an antenatal check-up			
Percent distribution of births during the three years preceding the survey to mothers who did not receive an antenatal check-up by the main reason for not receiving an antenatal check-up, according to residence, Madhya Pradesh, 1998–99			
Reason for not receiving an antenatal check-up	Urban	Rural	Total
Not necessary	68.1	54.5	55.9
Not customary	3.8	2.7	2.8
Costs too much	13.6	16.7	16.4
Too far/no transport	0.0	6.5	5.8
Poor quality service	1.3	0.7	0.8
No time to go	4.6	2.1	2.3
Family did not allow	3.5	7.6	7.2
Lack of knowledge	5.0	3.9	4.0
No health worker visited	0.0	4.6	4.1
Other	0.0	0.8	0.7
Total percent	100.0	100.0	100.0
Number of births	110	983	1,093

Note: Table includes only the two most recent births during the three years preceding the survey.

improving the coverage of antenatal programmes requires special efforts to reach high-parity women and women who are socioeconomically disadvantaged.

Reasons for Not Receiving Antenatal Check-Ups

Table 8.3 shows the percent distribution of births in the three years preceding the survey whose mothers did not receive any antenatal check-ups in a health facility or at home by the main reason for not receiving check-ups. For more than half (56 percent) of the births to mothers who did not have any antenatal check-ups, mothers did not consider having a check-up to be necessary. For seven percent of births women were not allowed by their families (7 percent) to have one. Costs account for 16 percent of cases and distance and lack of transport account for 6 percent of cases. For 4 percent of births mothers say that they did not receive an antenatal check-up because no health worker visited them and for another 4 percent mothers say that the main reason for not receiving an antenatal check-up was a lack of knowledge. Urban women are more likely than rural women to say that antenatal check-ups were not necessary or customary, and rural women were more likely than urban women to cite costs, transport, or distance as reasons. These results suggest the need to inform mothers and families about the availability and benefits of antenatal check-ups to help overcome traditional attitudes and other hurdles that prevent mothers from seeking antenatal care for their pregnancies. In addition, since about one-fourth of the reasons reported deal with problems of accessibility, quality, and cost of services, utilization of antenatal care services could also be increased by lowering direct and indirect costs, improving quality, and making services more accessible.

Number and Timing of Antenatal Check-Ups

The number of antenatal check-ups and the timing of the first check-up are important for the health of the mother and the outcome of the pregnancy. The conventional recommendation for normal pregnancies is that once pregnancy is confirmed, antenatal check-ups should be scheduled

at four-week intervals during the first seven months, then every two weeks until the last month, and weekly thereafter (MacDonald and Pritchard, 1980). Four antenatal check-ups—one each during the third, sixth, eighth, and ninth months of pregnancy—have been recommended as the minimum necessary (Park and Park, 1989). The conventional recommendation is to schedule the first check-up within six weeks of a woman's last menstrual period. Studies on the timing of the initial antenatal check-up, however, show that even when antenatal care is initiated as late as the third trimester, there is a substantial reduction in perinatal mortality (Ramachandran, 1992).

In India, the Reproductive and Child Health Programme includes the provision of at least three antenatal care visits for pregnant women. Guidelines of the programme require that each pregnancy be registered in the first 12–16 weeks (Ministry of Health and Family Welfare, 1997). Accordingly, the first antenatal check-up should take place at the latest during the second trimester of pregnancy. NFHS-2 asked women who received antenatal check-ups for births in the three years preceding the survey about the total number of check-ups they received and when in their pregnancies they received their first check-up.

Table 8.4 and Figure 8.3 show the percent distribution of births in the three years preceding the survey by the number and timing of antenatal check-ups. In Madhya Pradesh, mothers of only 28 percent of births received at least three antenatal check-ups (down slightly from 30 percent in NFHS-1) and 15 percent had four or more check-ups. The median number of check-ups was 1.9. There are substantial differences in the number of antenatal check-ups by residence. At least three antenatal check-ups were received for 51 percent of births to mothers living in urban areas, but for only 22 percent of births to mothers living in rural areas. The median number of check-ups is also higher in urban areas (2.7) than in rural areas (1.7). The shorter distances to antenatal-care services and the comparative ease of travelling in urban areas, as well as the higher educational attainment of mothers in urban areas, could be important factors for the larger number of antenatal check-ups received by mothers in urban areas.

One-fourth (26 percent) of the births that took place in the three years preceding the survey were to mothers who received their first antenatal check-up in the first trimester of pregnancy (up from about one-fifth of births in NFHS-1), and another one-fourth (24 percent) received their first check-up in the second trimester (Table 8.4 and Figure 8.3). Check-ups during the first trimester were much more common in urban areas (46 percent) than in rural areas (21 percent). Among births to mothers who received an antenatal check-up, the first check-up was received as late as the third trimester in less than one-fifth of the cases. Among births for which the mother received at least one antenatal check-up, the median timing of the first antenatal check-up is 4.1 months, and is about one month later in rural areas (4.5) than in urban areas (3.3).

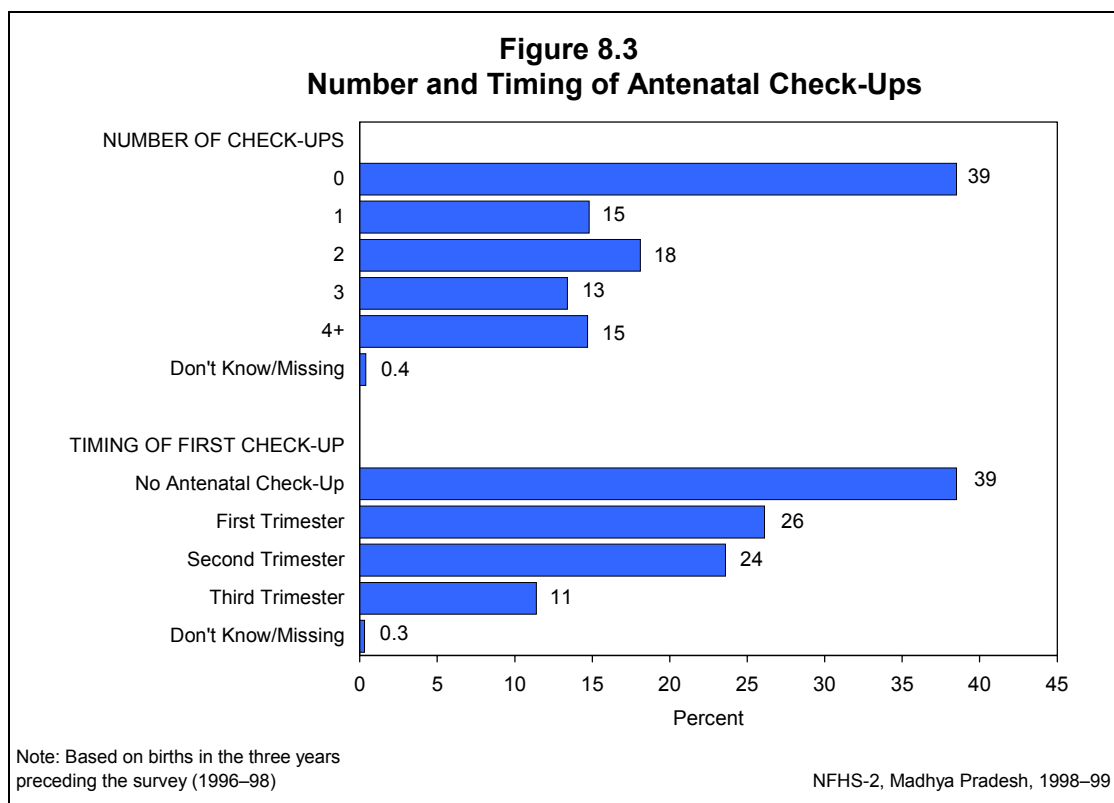
Components of Antenatal Check-Ups

The effectiveness of antenatal check-ups in ensuring safe motherhood depends in part on the tests and measurements done and the advice given during the check-ups. NFHS-2 collected information on this important aspect of antenatal care for the first time by asking mothers who received antenatal check-ups, whether they received each of several components of antenatal check-ups at least once during any of their check-ups during pregnancy. For births during the three years preceding the survey for which antenatal check-ups were received, Table 8.5 presents

Table 8.4 Number and timing of antenatal check-ups			
Percent distribution of births during the three years preceding the survey by number of antenatal check-ups and by the stage of pregnancy at the time of the first check-up, according to residence, Madhya Pradesh, 1998–99			
Number and timing of check-ups	Urban	Rural	Total
Number of antenatal check-ups			
0	17.9	44.2	38.5
1	12.4	15.5	14.8
2	18.4	18.0	18.1
3	15.6	12.8	13.4
4+	35.6	9.0	14.7
Don't know/missing	0.0	0.6	0.4
Total percent	100.0	100.0	100.0
Median number of check-ups (for those who received at least one antenatal check-up)	2.7	1.7	1.9
Stage of pregnancy at the time of the first antenatal check-up			
No antenatal check-up	17.9	44.2	38.5
First trimester	45.8	20.7	26.1
Second trimester	26.0	23.0	23.6
Third trimester	10.2	11.7	11.4
Don't know/missing	0.0	0.4	0.3
Total percent	100.0	100.0	100.0
Median months pregnant at first check-up (for those who received at least one antenatal check-up)	3.3	4.5	4.1
Number of births	613	2,224	2,837
Note: Table includes only the two most recent births during the three years preceding the survey.			

the percentage whose mothers received specific components of check-ups by residence. Except for X-rays (which are not recommended as a standard component of antenatal care), all of the measurements and tests are part of essential obstetric care or are required for monitoring high-risk pregnancies.

Among all births for which mothers received antenatal check-ups, mothers had an abdominal examination in 55 percent of cases and had their blood tested in 42 percent of cases. Other common components of antenatal check-ups were blood pressure checks and urine tests (both performed in 37 percent of cases), measurement of weight (31 percent), and internal examinations (22 percent). Mothers of 12 percent of births had their height measured during any antenatal check-up and mothers of 9 percent of births had a sonogram or ultrasound. X-rays and amniocentesis were rarely performed. All of these measurements or tests were performed at least 1.5 times more often in urban areas than in rural areas. For example, among births for which mothers received an antenatal check-up, the mother's abdomen was examined for 73 percent of births in urban areas but for only 47 percent of births in rural areas, and a sonogram or ultrasound was performed for 19 percent of births in urban areas and only 5 percent of births in rural areas.



Amniocentesis was performed for 4 percent of births in urban areas and for 1 percent of births in rural areas.

Table 8.5 also shows the type of advice received during check-ups by mothers who received antenatal check-ups for births in the three years preceding the survey. Dietary advice was given to mothers most often (in 50 percent of cases). Mothers were much less likely to receive advice on delivery care (26 percent), newborn care (24 percent), family planning (21 percent), and the danger signs of pregnancy (20 percent). The proportion receiving advice on each of these topics is consistently much higher in urban areas than in rural areas. These results show that in Madhya Pradesh even the women who do receive antenatal check-ups are rarely provided with the care or the advice considered to be standard components of antenatal care services.

Tetanus Toxoid Vaccination

In India, an important cause of death in infancy is neonatal tetanus, which is caused by newborn infants becoming infected by tetanus organisms, usually at the umbilical stump. Neonatal tetanus is most common among children who are delivered in unhygienic environments and when unsterilized instruments are used to cut the umbilical cord. Tetanus typically develops during the first or second week of life and is fatal in 70–90 percent of cases (Foster, 1984). If neonatal tetanus infection occurs where expert medical help is not available, as is common in many rural areas in India, death is almost certain. Neonatal tetanus, however, is a preventable disease. Two doses of tetanus toxoid vaccine given one month apart during early pregnancy are nearly 100 percent effective in preventing tetanus among both newborn infants and their mothers. Immunity against tetanus is transferred to the foetus through the placenta when the mother is vaccinated.

Table 8.5 Components of antenatal check-ups			
Among births during the three years preceding the survey for which an antenatal check-up was received, percentage receiving specific components of antenatal check-ups by residence, Madhya Pradesh, 1998–99			
Components of antenatal check-ups	Urban	Rural	Total
Antenatal measurements/tests			
Weight measured	53.6	22.1	31.3
Height measured	20.0	8.8	12.1
Blood pressure checked	59.1	27.7	36.8
Blood tested	63.1	33.1	41.8
Urine tested	60.3	27.7	37.2
Abdomen examined	72.5	47.2	54.5
Internal examination	40.5	14.5	22.1
X-ray	6.5	2.0	3.3
Sonography or ultrasound	19.3	5.1	9.3
Amniocentesis	4.3	0.6	1.7
Antenatal advice			
Diet	63.3	44.0	49.6
Danger signs of pregnancy	30.9	16.0	20.3
Delivery care	38.4	20.4	25.6
Newborn care	35.2	20.0	24.4
Family planning	26.7	18.8	21.1
Number of births for which the mother received at least one antenatal check-up	503	1,228	1,731
Note: Table includes only the two most recent births during the three years preceding the survey.			

In India, the tetanus toxoid immunization programme for expectant mothers was initiated in 1975–76 and was integrated with the Expanded Programme on Immunization (EPI) in 1978 (Ministry of Health and Family Welfare, 1991). To step up the pace of the immunization programme, the Government of India initiated the Universal Immunization Programme (UIP) in 1985–86. An important objective of the UIP was to vaccinate all pregnant women against tetanus by 1990. In 1992–93, the UIP was integrated into the Child Survival and Safe Motherhood Programme, which in turn has been integrated into the Reproductive and Child Health Programme. According to the National Immunization Schedule, a pregnant woman should receive two doses of tetanus toxoid injection, the first when she is 16 weeks pregnant and the second when she is 20 weeks pregnant (Central Bureau of Health Intelligence, 1991). Re-inoculation is recommended every three years. If two doses were received less than three years earlier, a single booster injection is recommended.

For each of the two most recent births during the three years preceding the survey, NFHS-2 asked mothers whether they were given an injection in the arm to prevent them and their baby from getting tetanus. Women who said they had received a tetanus injection were asked how many times they had received the injection during pregnancy.

Table 8.6 shows the distribution of births by the number of tetanus toxoid injections given to mothers, according to selected background characteristics. Tetanus toxoid coverage for pregnancies is far from complete in Madhya Pradesh. For births in the three years preceding the survey, 30 percent of the mothers did not receive any tetanus toxoid injections during pregnancy, and another 14 percent received only one injection. The proportion of births for which mothers

Table 8.6 Tetanus toxoid vaccination and iron and folic acid tablets or syrup

Percent distribution of births during the three years preceding the survey by the number of tetanus toxoid injections received by the mother, percentage of births for which the mothers were given iron and folic acid (IFA) tablets or syrup during pregnancy, and among those who received iron and folic acid tablets or syrup, percentage who received enough for three months or longer and percentage who consumed all the supply given, according to selected background characteristics, Madhya Pradesh, 1998–99

Background characteristic	Number of tetanus toxoid injections					Percent- age given iron and folic acid tablets or syrup	Number of births	Percent- age who received supply for 3+ months ¹	Percent- age who consumed all the supply ¹	Number of births whose mothers received IFA
	None	One	Two or more	Don't know/ missing	Total percent					
Mother's age at birth										
< 20	30.3	15.7	53.6	0.4	100.0	48.2	776	75.3	69.0	374
20–34	29.1	13.6	56.4	0.9	100.0	50.0	1,945	80.0	78.0	972
35–49	39.7	19.6	40.0	0.6	100.0	36.7	116	(69.2)	(76.1)	43
Birth order										
1	22.7	12.3	64.5	0.6	100.0	56.2	711	80.9	75.1	399
2–3	26.8	14.6	58.1	0.6	100.0	51.1	1,133	77.8	75.6	579
4–5	33.3	16.8	48.9	1.0	100.0	46.5	628	77.5	76.4	292
6+	47.6	13.9	37.1	1.4	100.0	32.3	365	75.0	74.4	118
Residence										
Urban	12.9	12.4	73.7	1.0	100.0	66.1	613	76.2	74.3	406
Rural	34.5	15.0	49.8	0.7	100.0	44.2	2,224	79.3	76.0	982
Region										
Chattisgarh	28.3	12.6	58.2	0.9	100.0	54.9	642	79.7	75.9	353
Vindhya	48.2	14.5	37.1	0.2	100.0	32.7	466	84.6	78.6	152
Central	20.4	16.3	60.5	2.8	100.0	55.3	282	71.0	65.0	156
Malwa Plateau	19.1	14.0	66.8	0.0	100.0	54.6	481	79.3	76.2	263
South Central	27.4	18.6	53.2	0.8	100.0	49.6	336	81.9	81.4	167
South Western	32.2	15.6	51.3	0.9	100.0	54.7	279	82.0	76.5	153
Northern	31.1	11.6	56.7	0.6	100.0	41.3	351	67.4	73.8	145
Mother's education										
Illiterate	38.2	15.5	45.5	0.8	100.0	40.2	1,950	75.4	73.9	783
Literate, < middle school complete	18.1	15.0	66.3	0.7	100.0	58.9	479	80.1	76.0	283
Middle school complete	6.0	9.4	84.6	0.0	100.0	75.1	192	81.9	76.2	144
High school complete and above	1.8	7.6	89.2	1.4	100.0	82.7	216	85.9	81.6	178
Religion										
Hindu	31.4	14.8	53.1	0.8	100.0	47.5	2,618	78.5	75.9	1,244
Muslim	10.3	11.6	77.3	0.9	100.0	66.4	169	80.0	70.0	112
Caste/tribe										
Scheduled caste	29.9	13.3	56.1	0.7	100.0	49.0	467	71.7	74.9	229
Scheduled tribe	47.8	17.5	33.8	1.0	100.0	35.7	697	78.0	81.1	249
Other backward class	25.8	12.9	60.9	0.4	100.0	51.7	1,191	81.0	73.3	616
Other	13.7	14.8	70.1	1.5	100.0	61.2	480	78.5	75.9	294
Standard of living index										
Low	41.0	16.4	41.7	0.9	100.0	37.3	1,030	70.6	73.1	384
Medium	28.5	14.8	56.0	0.6	100.0	50.4	1,376	79.8	76.6	693
High	6.9	8.5	83.7	0.9	100.0	72.7	423	84.8	76.0	308
Total	29.9	14.4	55.0	0.8	100.0	48.9	2,837	78.4	75.5	1,388

Note: Table includes only the two most recent births during the three years preceding the survey. Total includes a small number of births to mothers belonging to Jain and 'other' religions and births with missing information on caste/tribe and the standard of living index, which are not shown separately.

() Based on 25–49 unweighted cases

¹ Among births whose mother received iron and folic acid tablets or syrup

received two or more tetanus toxoid injections during pregnancy rose from 45 percent in NFHS-1 to 55 percent in NFHS-2, but is lower than the all-India average of 67 percent.

Tetanus toxoid injections are much more common in urban areas than in rural areas. By region, they are most common in the Malwa Plateau Region and least common in the Vindhya Region where mothers of almost half the births did not receive any tetanus toxoid injections and mothers of only 37 percent of births received two or more tetanus toxoid injections. Tetanus toxoid coverage (two or more injections) is higher for births to mothers under age 35 (54–56 percent) than for the small number of births to older mothers (40 percent). Coverage varies inversely by birth order. At least two tetanus toxoid injections were received by mothers for 65 percent of first births, but for only 49 percent of fourth and fifth-order births and 37 percent of higher-order births. Tetanus toxoid coverage is much higher for births to Muslim mothers (77 percent) than for births to Hindu mothers (53 percent). Coverage is substantially lower for births to scheduled-tribe mothers (34 percent) than for births to mothers in all other caste and class groups, especially mothers who do not belong to a scheduled caste, scheduled tribe, or an other backward class (70 percent). For almost one-half of their births, scheduled-tribe mothers did not receive any tetanus toxoid vaccine. Illiterate mothers received two or more tetanus toxoid injections for 46 percent of births, whereas mothers who have at least completed middle school received two or more tetanus toxoid injections for 85–89 percent of births. Tetanus toxoid coverage increases sharply with an increasing standard of living of the household. Notably, among births to mothers living in households with a low standard of living, in only two cases out of every five (42 percent) did the mother receive at least two doses of tetanus toxoid. These results suggest that despite generally improving coverage of tetanus toxoid vaccinations, the coverage for socioeconomically disadvantaged women lags far behind the level for the state as a whole.

Iron and Folic Acid Supplementation

Nutritional deficiencies in women are often exacerbated during pregnancy because of the additional nutrient requirements of foetal growth. Iron deficiency anaemia is the most common micronutrient deficiency in the world. It is a major threat to safe motherhood and to the health and survival of infants because it contributes to low birth weight, lowered resistance to infection, impaired cognitive development, and decreased work capacity. Studies in different parts of India have estimated that the proportion of births with a low birth weight (less than 2,500 grams) ranges from 15 percent in Trivandrum to 46 percent in Baroda (Nutrition Foundation of India, 1993). Overall, about one-third of newborn children in India are of low birth weight, indicating that many pregnant women in India suffer from nutritional deficiencies. Improvement in a woman's nutritional status, coupled with proper health care during pregnancy, can substantially increase her child's birth weight (Ramachandran, 1992). To this end, the provision of iron and folic acid (IFA) tablets to pregnant women to prevent nutritional anaemia forms an integral part of the safe-motherhood services offered earlier as part of the MCH activities of the Family Welfare Programme (Ministry of Health and Family Welfare, 1991) and now offered as part of the Reproductive and Child Health Programme. The programme recommendation is that pregnant women consume 100 iron and folic acid tablets during pregnancy.

For each birth during the three years preceding the survey, NFHS-2 collected information on whether the mother received IFA tablets or syrup during pregnancy. IFA syrup was included in the question along with IFA tablets since IFA syrup is sometimes prescribed in the private

sector, and may even be prescribed in the public sector, when and where tablets are not available. Table 8.6 shows that mothers in Madhya Pradesh received IFA supplements for 49 percent of their births (a proportion which is lower than the all-India average of 58 percent). Older mothers (35–49) are less likely than younger mothers to receive any iron and folic acid supplementation during pregnancy. IFA coverage is well below average for mothers of births of order six and above, illiterate mothers, mothers in the Vindhya Region, scheduled-tribe mothers, and mothers from households with a low standard of living. IFA coverage is also lower in rural areas (44 percent) than in urban areas (66 percent) and for births to Hindu mothers (48 percent) than for births to Muslim mothers (66 percent). Overall, however, for Madhya Pradesh as a whole, IFA coverage changed little between NFHS-1 (47 percent) and NFHS-2 (49 percent), even though IFA syrup was included in the measurement of IFA coverage in NFHS-2 but not in NFHS-1.

Not all mothers who received IFA received the recommended three-month supply of tablets or syrup. Among births to mothers who received IFA during pregnancy, for 78 percent of births mothers received at least a three-month supply and for 76 percent of births mothers consumed all the supplements that they were given. Differentials by background characteristics in the proportion that received at least a three-month supply and the proportion that consumed the supply received are similar for only some background variables. Both indicators vary little by residence and by birth order, and are positively related to the mother's level of education. Hindu women are about as likely as Muslim mothers to have received a three-month supply of IFA supplements, but are somewhat more likely than Muslim mothers to have consumed all the supply they received. By age, the oldest mothers (age 35–49) are the least likely to receive the recommended supply of IFA but it is the youngest mothers (age less than 20) who are least likely to consume the entire supply they receive. By caste/tribe, scheduled-caste women are least likely to receive the recommended supply and scheduled-tribe women are most likely to consume all the supply they receive. By region too, the two indicators do not vary in the same way. Nonetheless, it is notable that among births to mothers who received any IFA (with the exception of births to women age 35–49 and to women in the Northern Region), for at least 70 percent of births, mothers received the recommended three-month supply. However, mothers consumed all the supply they received for 65 percent to 81 percent of births only. Thus, despite some success in ensuring that pregnant women receive the recommended dosage of IFA, some women are not actually consuming an adequate amount of IFA during their pregnancies. This suggests that the Reproductive and Child Health Programme needs to do a better job of informing pregnant women about the advantages of IFA, trying to understand why many women do not consume all the IFA they receive, and overcoming resistance to the consumption of IFA.

8.2 Delivery Care

Place of Delivery

Another important thrust of the Reproductive and Child Health Programme is to encourage deliveries under proper hygienic conditions under the supervision of trained health professionals. For each birth during the three years preceding the survey, NFHS-2 asked the mother where she gave birth and who assisted during the delivery. Table 8.7 and Figure 8.4 show that 20 percent of births in Madhya Pradesh took place in health facilities (much lower than the national average of 34 percent for the country as a whole), up only slightly from 16 percent at the time of NFHS-1. The NFHS-2 estimate for births that took place in institutions is slightly higher than the corresponding 1997 SRS estimate, at 15 percent, but is lower than the estimate of 24 percent

Table 8.7 Place of delivery

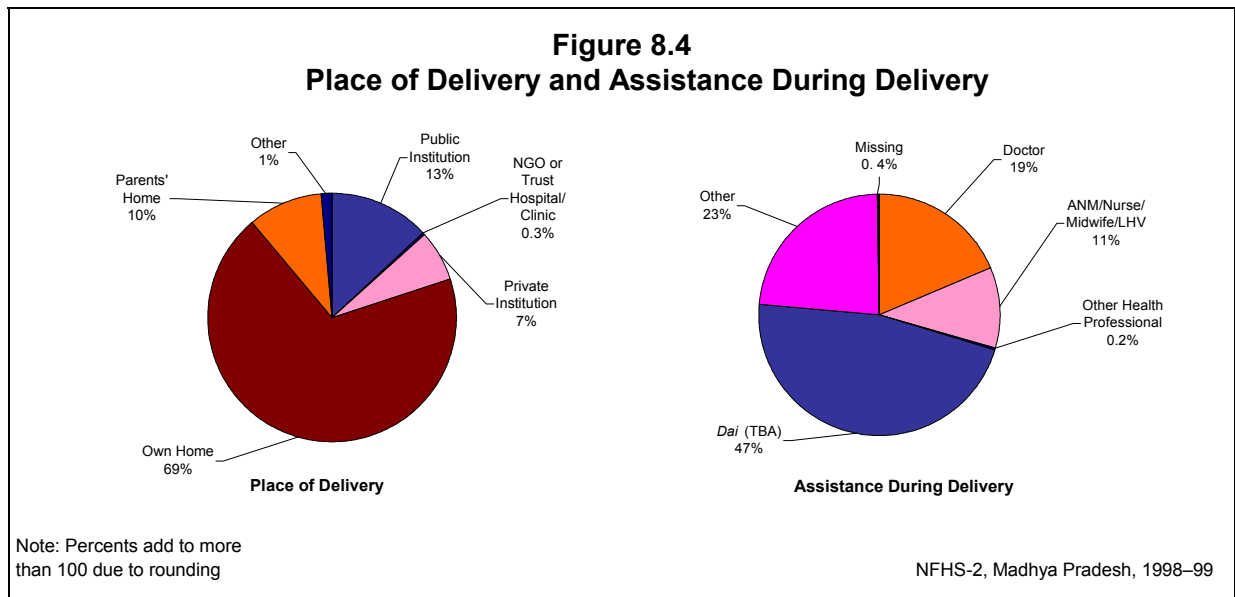
Percent distribution of births during the three years preceding the survey by place of delivery, according to selected background characteristics, Madhya Pradesh, 1998–99

Background characteristic	Place of delivery						Total percent	Number of births
	Health facility/institution			Home				
	Public	NGO/trust	Private	Own home	Parents' home	Other ¹		
Mother's age at birth								
< 20	12.1	0.2	5.6	65.1	15.4	1.6	100.0	776
20–34	13.9	0.2	7.2	69.5	8.1	1.1	100.0	1,945
35–49	6.8	2.3	5.5	81.1	2.7	1.6	100.0	116
Birth order								
1	19.3	0.7	12.0	52.7	14.3	0.9	100.0	711
2–3	13.2	0.3	6.9	65.9	12.6	1.2	100.0	1,133
4–5	9.2	0.0	3.0	81.3	4.8	1.7	100.0	628
6+	7.6	0.0	2.2	87.3	1.5	1.5	100.0	365
Residence								
Urban	30.4	0.7	18.0	43.0	7.1	0.7	100.0	613
Rural	8.3	0.2	3.6	75.9	10.6	1.4	100.0	2,224
Region								
Chattisgarh	7.6	0.9	5.3	75.1	8.8	2.3	100.0	642
Vindhya	8.2	0.0	2.6	84.3	4.6	0.2	100.0	466
Central	17.6	0.5	9.7	66.5	4.5	1.2	100.0	282
Malwa Plateau	19.1	0.3	10.0	48.2	21.5	1.0	100.0	481
South Central	8.5	0.0	8.4	70.4	11.6	1.1	100.0	336
South Western	10.7	0.0	6.6	67.4	14.2	1.1	100.0	279
Northern	24.1	0.0	6.4	66.0	2.2	1.3	100.0	351
Mother's education								
Illiterate	9.2	0.1	2.5	77.1	9.9	1.2	100.0	1,950
Literate, < middle school complete	16.8	0.0	8.1	62.4	11.4	1.3	100.0	479
Middle school complete	22.7	0.0	13.0	49.8	11.6	2.9	100.0	192
High school complete and above	31.7	3.0	36.3	24.2	4.5	0.3	100.0	216
Religion								
Hindu	12.1	0.3	6.0	70.3	10.0	1.3	100.0	2,618
Muslim	29.2	0.0	12.3	47.0	10.0	1.5	100.0	169
Caste/tribe								
Scheduled caste	9.9	0.0	6.2	75.3	7.8	0.9	100.0	467
Scheduled tribe	7.0	0.0	0.3	82.0	9.0	1.7	100.0	697
Other backward class	14.1	0.3	7.5	65.7	11.0	1.4	100.0	1,191
Other	22.8	1.0	14.6	50.6	10.3	0.8	100.0	480
Standard of living index								
Low	7.3	0.0	2.8	79.6	9.0	1.3	100.0	1,030
Medium	13.6	0.1	4.1	69.8	10.9	1.4	100.0	1,376
High	25.5	1.1	24.7	39.3	8.6	0.8	100.0	423
Number of antenatal check-ups								
0	4.4	0.0	1.3	84.0	9.2	1.1	100.0	1,093
1	15.2	0.0	2.9	71.3	9.2	1.4	100.0	420
2	14.3	0.4	5.9	67.9	11.1	0.4	100.0	513
3	19.4	0.0	8.6	60.7	10.4	1.0	100.0	380
4+	26.9	1.5	24.2	36.6	10.1	0.6	100.0	418
Total	13.1	0.3	6.7	68.8	9.9	1.3	100.0	2,837

Note: Table includes only the two most recent births during the three years preceding the survey. Total includes 22 and 28 births to mothers belonging to Jain and 'other' religions, respectively, and 1, 8, and 12 births with missing information on caste/tribe, the standard of living index, and number of antenatal check-ups, respectively, which are not shown separately.

NGO: Nongovernmental organization

¹Includes missing



obtained by the national Rapid Household Survey under the Reproductive and Child Health Project (IIPS, 2000), which was carried out at about the same time as NFHS-2.

Most deliveries in Madhya Pradesh took place at home: 69 percent in the women's own homes and 10 percent in their parents' homes. Thirteen percent of births took place in public institutions (such as government-operated district, *tehsil*, town, or municipal hospitals, and Primary Health Centres), 7 percent took place in a private health facility, and less than 1 percent took place in facilities operated by nongovernmental organizations or trusts. The proportion of deliveries that took place in health facilities is four times as high in urban areas (49 percent) as in rural areas (12 percent). Older women (age 35-49) are less likely than younger women to deliver in a health facility. The likelihood of an institutional delivery declines sharply by birth order from 32 percent for first-order births to 12 percent or less for births at orders 4-5 or higher. Institutional deliveries in both public and private facilities increase sharply with mother's education and with household standard of living. Births to Muslim mothers are much more likely to take place in a health facility than are births to Hindu mothers (42 percent compared with 18 percent, respectively). Only 7 percent of births to scheduled-tribe mothers are institutional deliveries, whereas 38 percent of births to mothers who do not belong to a scheduled caste, scheduled tribe, or an other backward class are institutional deliveries. By region, institutional deliveries are more common in the North, Central, and Malwa Plateau Regions and least common in the Vindhya Region. In the Vindhya Region, 89 percent of births are delivered at home.

Institutional deliveries are at least three times more common among births to mothers who had one or more antenatal check-ups (at least 18 percent) than among births to mothers who had no antenatal check-up (6 percent). In addition, the likelihood of having an institutional delivery increases sharply with the number of antenatal visits, from 18 percent for births to mothers who had only one antenatal check-up to 53 percent for those who had four or more antenatal check-ups. Several factors are likely to contribute to the positive relationship between antenatal check-ups and delivery in a health facility. Women who receive antenatal check-ups are more likely than other women to deliver in a health facility because their antenatal care providers

are likely to have advised them to do so. Conversely, women who register with a health facility for delivery may be called for regular check-ups by the facility. Another important factor may be pregnancy complications, because women with complications are more likely than other women to have antenatal check-ups and also to deliver in a health facility. Yet another contributing factor may be the growing awareness of the benefits of professional medical care during both pregnancy and delivery, especially among urban, young, and educated women.

With regard to deliveries at home, the proportion of deliveries in a woman's own home increases and the proportion in her parents' home decreases with age and birth order. Mother's education and standard of living are both negatively associated with deliveries at home.

Assistance During Delivery

Table 8.8 and Figure 8.4 provide information on assistance during delivery by selected background characteristics. If more than one type of attendant assisted at delivery, only the most qualified attendant is considered. Thirty percent of births in the three years preceding the survey were attended by a health professional (much lower than the national average of 42 percent of deliveries attended by a health professional), including 19 percent by a doctor and 11 percent by an ANM, nurse, midwife, or LHV. Almost half of the births were attended by a traditional birth attendant (47 percent) and almost one-fourth (23 percent) were attended by friends, relatives, or other persons. A comparison of NFHS-1 and NFHS-2 estimates on deliveries attended by a health professional shows only slight improvement in the six and one-half years between the surveys. The proportion of deliveries attended by a health professional rose from 26 percent in NFHS-1 to 30 percent in NFHS-2.

Eighty-three percent of deliveries in private institutions were attended by a doctor, compared with only 63 percent of deliveries in public institutions. Among deliveries at home (the respondents' or their parents' homes), 59 percent were attended by a traditional birth attendant (TBA) and only 11–19 percent were attended by a health professional. As with deliveries, the likelihood of having a delivery attended by a health professional increases sharply with the number of antenatal check-ups received during pregnancy. Only 10 percent of births to women who did not have any antenatal check-ups were attended by a health professional compared with 70 percent of births to women who had four or more antenatal check-ups.

The percentage of births attended by a doctor does not vary much by age of mother, but it decreases steadily by birth order. Nearly one-third (31 percent) of first-order births were attended by a doctor compared with one-tenth (11 percent) or less of births of order 4–5 or higher. Deliveries are much more likely to be attended by a doctor in urban areas (40 percent) than in rural areas (13 percent). The proportion of births attended by doctors increases steadily with both education of the mother and the household standard of living. Only 11 percent of births to illiterate mothers were attended by a doctor compared with 58 percent of births to mothers who have at least completed high school. Similarly, a doctor attended 10 percent of births to mothers who live in households with a low standard of living, but 43 percent of births to mothers who live in households with a high standard of living. Births to Muslim mothers (31 percent) are more likely to be attended by a doctor than births to Hindu mothers (17 percent). By caste/tribe, births to women who do not belong to any scheduled caste, scheduled tribe, or other backward class are much more likely to be attended by a doctor than are other births. Only 7 percent of births to

Table 8.8 Assistance during delivery

Percent distribution of births during the three years preceding the survey by attendant assisting during delivery, according to selected background characteristics, Madhya Pradesh, 1998–99

Background characteristic	Attendant assisting during delivery ¹						Total percent	Number of births
	Doctor	ANM/nurse/ midwife/ LHV	Other health professional	Dai (TBA)	Other	Missing		
Mother's age at birth								
< 20	19.0	9.6	0.1	45.1	25.7	0.4	100.0	776
20–34	18.4	11.8	0.3	47.0	22.1	0.4	100.0	1,945
35–49	16.9	5.0	0.6	52.7	24.8	0.0	100.0	116
Birth order								
1	30.7	15.5	0.2	34.5	18.7	0.3	100.0	711
2–3	18.8	11.5	0.1	46.7	22.4	0.5	100.0	1,133
4–5	11.0	8.0	0.4	54.5	26.0	0.1	100.0	628
6+	6.6	5.5	0.2	57.2	29.7	0.9	100.0	365
Residence								
Urban	40.3	20.8	0.4	29.1	9.4	0.0	100.0	613
Rural	12.5	8.2	0.2	51.6	27.0	0.5	100.0	2,224
Region								
Chattisgarh	22.3	9.7	0.3	42.7	24.7	0.3	100.0	642
Vindhya	8.2	7.4	0.0	52.6	31.5	0.2	100.0	466
Central	23.1	10.2	0.5	40.7	24.4	1.0	100.0	282
Malwa Plateau	25.2	13.0	0.0	54.4	7.4	0.0	100.0	481
South Central	16.3	6.5	0.5	51.4	24.4	0.8	100.0	336
South Western	16.1	11.4	0.2	60.2	11.4	0.7	100.0	279
Northern	16.3	19.6	0.2	25.1	38.3	0.4	100.0	351
Mother's education								
Illiterate	10.7	7.5	0.2	54.1	27.0	0.5	100.0	1,950
Literate, < middle school complete	26.9	12.2	0.0	39.4	21.2	0.3	100.0	479
Middle school complete	32.8	25.1	0.5	30.6	11.0	0.0	100.0	192
High school complete and above	58.1	27.0	0.8	10.1	4.1	0.0	100.0	216
Religion								
Hindu	17.3	10.1	0.2	47.5	24.4	0.4	100.0	2,618
Muslim	31.0	22.8	0.4	37.0	8.8	0.0	100.0	169
Caste/tribe								
Scheduled caste	17.6	8.1	0.0	49.6	24.0	0.7	100.0	467
Scheduled tribe	7.1	6.7	0.1	59.5	26.0	0.7	100.0	697
Other backward class	19.2	13.0	0.4	43.2	24.2	0.1	100.0	1,191
Other	34.3	14.9	0.3	33.9	16.0	0.5	100.0	480
Standard of living index								
Low	10.3	6.5	0.4	52.2	29.9	0.7	100.0	1,030
Medium	16.9	10.4	0.1	49.2	23.1	0.3	100.0	1,376
High	43.2	23.7	0.2	25.1	7.6	0.2	100.0	423

Contd...

Table 8.8 Assistance during delivery (contd.)								
Percent distribution of births during the three years preceding the survey by attendant assisting during delivery, according to selected background characteristics, Madhya Pradesh, 1998–99								
Background characteristic	Attendant assisting during delivery ¹						Total percent	Number of births
	Doctor	ANM/nurse/ midwife/ LHV	Other health professional	<i>Dai</i> (TBA)	Other	Missing		
Number of antenatal check-ups								
0	6.5	3.6	0.2	57.8	31.8	0.1	100.0	1,093
1	14.3	9.6	0.0	48.8	27.1	0.2	100.0	420
2	17.9	15.9	0.3	48.4	17.4	0.0	100.0	513
3	25.3	16.8	0.0	40.7	17.2	0.0	100.0	380
4+	49.2	20.4	0.8	20.3	9.3	0.0	100.0	418
Place of delivery								
Public health facility	62.9	36.2	0.2	0.7	0.0	0.0	100.0	372
Private health facility	82.8	16.8	0.5	0.0	0.0	0.0	100.0	190
Own home	5.3	5.8	0.2	58.6	30.1	0.1	100.0	1,950
Parents' home	7.6	10.9	0.3	59.3	21.8	0.0	100.0	280
Other ²	(0.0)	(3.8)	(0.0)	(39.4)	(29.2)	(27.6)	100.0	36
Total	18.5	10.9	0.2	46.7	23.2	0.4	100.0	2,837
<p>Note: Table includes only the two most recent births during the three years preceding the survey. Total includes 22 and 28 births to mothers belonging to Jain and 'other' religions, respectively, 8 births delivered in nongovernmental organization or trust hospitals/clinics, and 1, 8, and 12 births with missing information on caste/tribe, the standard of living index, and number of antenatal check-ups, respectively, which are not shown separately.</p> <p>ANM: Auxiliary nurse midwife; LHV: Lady health visitor; TBA: Traditional birth attendant</p> <p>() Based on 25–49 unweighted cases</p> <p>¹ If the respondent mentioned more than one attendant, only the most qualified attendant is shown.</p> <p>² Includes missing</p>								

women who belong to the scheduled tribes were attended by a doctor compared with 18 percent or more of births to women in all other groups.

Assistance during delivery varies widely by region. Births to women in the Malwa Plateau Region are about two and one-half times more likely to be attended by a health professional than are births to women in the Vindhya Region. Births to women in the Northern Region are more likely than births to women in all other regions to be attended by an ANM, nurse, midwife, or LHV or by relatives or other persons. However, deliveries attended by a *dai* (TBA) are least common in the Northern Region (25 percent). Such assistance at delivery is most common in the South Western Region, where 60 percent of deliveries are assisted by a *dai* (TBA).

Delivery Characteristics

Table 8.9 shows the percentage of births during the three years preceding the survey that were delivered by caesarian section and the percent distribution of births by weight and the mother's estimate of the baby's size at birth. Based on mothers' reports, 3 percent of children born in Madhya Pradesh in the three years preceding the survey were delivered by caesarian section. The proportion of deliveries by caesarian section was much higher in urban areas (9 percent) than in rural areas (2 percent). The proportion of all births delivered by caesarian section increased substantially from NFHS-1 to NFHS-2, from 1 percent to 3 percent.

Table 8.9 Characteristics of births			
Percentage of births during the three years preceding the survey that were delivered by caesarian section and percent distribution of births by birth weight and by the mother's estimate of the baby's size at birth, according to residence, Madhya Pradesh, 1998–99			
Characteristic of births	Urban	Rural	Total
Percentage delivered by caesarian section	9.2	1.6	3.3
Birth weight			
< 2.5 kg	11.3	2.3	4.3
2.5 kg or more	22.1	5.4	9.0
Don't know/missing	9.0	3.4	4.6
Not weighed	57.6	88.8	82.1
Total percent	100.0	100.0	100.0
Size at birth			
Large	15.5	15.8	15.7
Average	51.1	48.1	48.7
Small	20.3	26.7	25.3
Very small	13.2	9.0	9.9
Don't know/missing	0.0	0.4	0.3
Total percent	100.0	100.0	100.0
Number of births	613	2,224	2,837
Note: Table includes only the two most recent births during the three years preceding the survey.			

Low-birth weight babies face substantially higher risks of dying than do babies of normal birth weight. For each birth that took place in the three years preceding the survey, respondents were asked the baby's birth weight. Since babies delivered at home are unlikely to be weighed, the survey also asked mothers about the size of each baby at birth (large, average, small, or very small).

In Madhya Pradesh, 82 percent of babies born in the three years preceding the survey were not weighed at birth. The proportion not weighed is 58 percent in urban areas and 89 percent in rural areas. Even for babies that were weighed, some mothers did not remember the weight. Therefore, the resulting sample of births for which weights are reported is subject to a potentially large selection bias, and the results should be interpreted with caution. Among children for whom birth weights were reported, one-third weighed less than 2.5 kilograms. The proportion weighing less than 2.5 kilograms is slightly higher in urban areas (34 percent) than in rural areas (30 percent).

According to mothers' estimates, 49 percent of births in the three years preceding the survey were of average size, 16 percent were large, 25 percent were small, and 10 percent were very small. The proportion of babies reported as small or very small was similar in urban (34 percent) and rural (36 percent) areas.

8.3 Postnatal Care

The health of a mother and her newborn child depends not only on the health care she receives during her pregnancy and delivery, but also on the care she and the infant receive during the first few weeks after delivery. Postpartum check-ups within two months after the delivery are

particularly important for births that take place in noninstitutional settings. Recognizing the importance of postpartum check-ups, the Reproductive and Child Health Programme recommends three postpartum visits (Ministry of Health and Family Welfare, 1998b).

Table 8.10 gives the percentage of noninstitutional deliveries in the 2–35 months preceding the survey that were followed by a postpartum check-up within two months of delivery. Among births that were followed by a postpartum check-up, the table also shows the percentage with a postpartum check-up within two days of delivery (which is the most crucial period) and within one week of delivery, and the percentage whose mothers received specific recommended components of care during the check-up.

In Madhya Pradesh, only 10 percent of the noninstitutional births were followed by a check-up within two months of the delivery. Among births that were followed by a check-up, few check-ups took place shortly after birth—only 5 percent within two days and 18 percent within one week. The likelihood of receiving a postpartum check-up increases with the number of antenatal check-ups received: from 5 percent for births to mothers who did not receive any antenatal check-up to 19 percent for births to mothers who received three or more. Also, births delivered with the assistance of a health professional are more likely to be followed by a postpartum check-up (20 percent) than are births delivered with the assistance of a TBA (9 percent) or other person (7 percent). These results clearly indicate that, even for women who did not give birth in a health facility, the likelihood of a postpartum check-up is greater the more is women’s interaction with health providers during pregnancy and delivery.

With a few exceptions, the variation in the likelihood of a postpartum check-up by other background characteristics is extremely limited: between 6 and 16 percent. The only exceptions are: births to mothers who have at least completed high school, births to Muslim mothers, and births to urban mothers. Mothers of at least 20 percent of these births received a postpartum check-up within two months. By region, postpartum check-ups for noninstitutional births are most common in the South Western Region (15 percent) and least common in the Vindhya Region (6 percent).

Mothers who did not deliver in a health facility but who received a postpartum check-up were asked whether they had received specific components of postpartum care, including an abdominal examination and advice on family planning, breastfeeding, and baby care. For 33 percent of these births, mothers who received a postpartum check-up said that their abdomen was examined during the check-up. For 35 percent of births mothers received advice on baby care, for 30 percent they received advice on breastfeeding, and for 25 percent they received advice on family planning. Rural mothers were more likely than urban mothers to have their abdomen examined but similar proportions of rural and urban mothers received advice on family planning, breast feeding, and baby care. With the exception of advice on baby care, mothers who were age 20–34 were more likely than younger mothers to receive all components of the postpartum check-up. Women having their first birth were more likely than other women to receive advice on breastfeeding and baby care and less likely to receive advice on family planning. Notably, mothers received advice on family planning during postpartum check-ups after only 14 percent of first births, although these mothers are particularly likely to need advice on birth spacing. The likelihood of receiving most of the components of the postpartum check-up increases with the number of antenatal check-ups received during pregnancy. Mothers of births assisted by a TBA are much less likely to receive each component of the postpartum check-up than are mothers of

Table 8.10 Postpartum check-ups

Percentage of noninstitutional births during the three years preceding the survey for which a postpartum check-up was received within two months of birth and among those receiving a postpartum check-up, percentage seen within two days and one week of birth and percentage receiving specific components of check-ups by selected background characteristics, Madhya Pradesh, 1998–99

Background characteristic	Percentage with a postpartum check-up within two months of birth	Number of births	Among those with postpartum check-up						Number of births followed by a postpartum check-up
			Percentage seen within two days of birth	Percentage seen within one week of birth	Components of postpartum check-up (%)				
					Abdominal examination	Family planning advice	Breast-feeding advice	Baby care advice	
Mother's age at birth									
< 20	10.5	633	5.2	16.4	30.4	12.5	23.8	38.3	67
20–34	9.8	1,524	5.3	19.6	33.5	30.9	32.9	33.2	149
35–49	9.5	99	*	*	*	*	*	*	9
Birth order									
1	13.1	481	4.4	18.8	38.8	13.7	36.8	47.8	63
2–3	8.7	898	7.5	26.3	26.9	18.8	27.4	28.8	78
4–5	10.9	551	3.5	12.0	41.8	38.4	29.1	30.2	60
6+	7.3	327	(2.8)	(6.0)	(15.8)	(42.0)	(22.4)	(31.5)	24
Residence									
Urban	21.6	312	5.0	18.8	29.8	23.7	32.0	36.6	67
Rural	8.1	1,945	5.1	18.0	34.4	25.6	29.1	34.0	158
Region									
Chattisgarh	11.6	552	(2.9)	(20.5)	(47.1)	(23.4)	(29.4)	(35.3)	64
Vindhya	5.6	416	(0.0)	(8.0)	(24.0)	(12.0)	(28.1)	(36.1)	23
Central	9.1	201	(7.9)	(15.8)	(46.4)	(26.7)	(30.7)	(34.6)	18
Malwa Plateau	10.6	340	(3.3)	(16.7)	(23.5)	(33.3)	(40.2)	(43.3)	36
South Central	7.0	277	*	*	*	*	*	*	20
South Western	14.9	229	7.5	18.7	32.0	32.1	35.9	37.7	34
Northern	12.3	242	(5.1)	(23.5)	(17.9)	(20.3)	(20.4)	(23.0)	30
Mother's education									
Illiterate	8.5	1,712	3.5	17.4	29.8	26.0	26.2	32.1	145
Literate, < middle school complete	14.1	358	(3.7)	(10.0)	(30.9)	(17.5)	(26.4)	(30.7)	50
Middle school complete	11.0	123	*	*	*	*	*	*	14
High school complete and above	24.9	63	*	*	*	*	*	*	16
Religion									
Hindu	9.5	2,126	4.6	18.0	34.3	25.2	31.9	35.7	201
Muslim	21.6	99	*	*	*	*	*	*	21
Caste/tribe									
Scheduled caste	10.0	389	(1.9)	(11.6)	(32.7)	(24.0)	(32.6)	(34.4)	39
Scheduled tribe	7.3	643	(9.0)	(16.4)	(41.0)	(39.2)	(28.9)	(38.4)	47
Other backward class	10.7	929	3.1	20.6	29.3	20.5	29.3	33.1	99
Other	13.5	295	(8.5)	(20.8)	(33.3)	(20.8)	(30.5)	(35.1)	40
Standard of living index									
Low	9.2	920	1.2	9.5	31.7	23.0	17.6	27.6	85
Medium	9.5	1,126	6.8	20.9	30.3	26.9	37.0	40.4	107
High	15.9	205	(9.3)	(31.9)	(45.7)	(24.2)	(38.9)	(35.1)	33

Contd...

Table 8.10 Postpartum check-ups (contd.)

Percentage of noninstitutional births during the three years preceding the survey for which a postpartum check-up was received within two months of birth and among those receiving a postpartum check-up, percentage seen within two days and one week of birth and percentage receiving specific components of check-ups by selected background characteristics, Madhya Pradesh, 1998–99

Background characteristic	Percentage with a postpartum check-up within two months of birth	Number of births	Among those with postpartum check-up						Number of births followed by a postpartum check-up
			Percentage seen within two days of birth	Percentage seen within one week of birth	Components of postpartum check-up (%)				
					Abdominal examination	Family planning advice	Breast-feeding advice	Baby care advice	
Number of antenatal check-ups									
0	5.3	1,031	2.6	20.4	14.6	16.4	18.4	28.7	55
1	9.8	344	(8.3)	(29.2)	(30.3)	(20.3)	(19.6)	(27.3)	34
2	11.6	408	7.4	18.5	31.4	27.3	30.7	29.4	47
3+	18.8	472	4.1	12.5	46.4	31.0	40.7	44.3	89
Assistance during delivery									
Doctor/nurse/midwife ¹	19.8	274	7.4	24.5	50.5	29.4	41.2	42.4	54
<i>Dai</i> (TBA)	9.4	1,323	5.1	20.0	22.1	24.3	29.8	35.4	124
Other	7.1	658	(2.2)	(6.1)	(41.9)	(22.1)	(17.4)	(24.2)	47
Total	10.0	2,256	5.1	18.2	33.0	25.1	30.0	34.8	225

Note: Table includes only the two most recent births during the 2–35 months preceding the survey. Total includes a small number of births to women belonging to Jain and 'other' religions and births with missing information on caste/tribe, the standard of living index, number of antenatal check-ups, and assistance during delivery, which are not shown separately.

TBA: Traditional birth attendant

() Based on 25–49 unweighted cases

*Percentage not shown; based on fewer than 25 unweighted cases

¹Includes other health professionals

births assisted by a health professional. Even among births attended by a health professional or births whose mothers had three or more antenatal check-ups, however, advice on family planning was given to mothers of less than one-third of births with a postpartum check-up and about half or less of the mothers of these births received each of the other components of postpartum check-ups. Due to the small number of births in each category, it is not possible to draw conclusions about the effects of most other background characteristics.

Postpartum Complications

Every woman who had a birth in the three years preceding the survey was asked if she had massive vaginal bleeding or a very high fever—both symptoms of possible postpartum complications—at any time during the two months after delivery (Table 8.11). Since the prevalence of these postpartum complications is not clinically determined but is based on women's self-reports, the results should be interpreted with caution.

Mothers reported massive vaginal bleeding for 13 percent of births and a very high fever in the postpartum period for 18 percent of births. The prevalence of both complications does not vary much by most background characteristics. Both complications were only slightly more common among rural than urban mothers. While the likelihood of massive vaginal bleeding did

Table 8.11 Symptoms of postpartum complications

Among births during the three years preceding the survey, percentage for which the mother had massive vaginal bleeding or very high fever within two months after the delivery by selected background characteristics, Madhya Pradesh, 1998–99

Background characteristic	Massive vaginal bleeding	Very high fever	Number of births
Residence			
Urban	11.7	15.7	570
Rural	13.4	18.3	2,114
Region			
Chattisgarh	21.6	20.0	612
Vindhya	6.6	12.4	437
Central	11.7	18.8	266
Malwa Plateau	10.7	18.3	458
South Central	14.1	22.6	319
South Western	7.3	15.1	264
Northern	13.6	16.4	327
Mother's age at birth			
< 20	14.0	16.6	747
20–34	12.5	18.4	1,827
35–49	15.8	14.2	111
Birth order			
1	15.9	16.2	684
2–3	11.6	17.1	1,063
4–5	13.1	20.7	594
6+	11.8	17.9	343
Place of delivery			
Public health facility	11.6	14.3	346
Private health facility	12.6	16.3	181
Own home	13.5	18.8	1,848
Parents' home	13.1	17.3	266
Other ¹	(5.4)	(8.2)	35
Assistance during delivery			
Doctor	15.0	16.3	491
ANM/nurse/midwife	11.4	14.6	297
Dai (TBA)	12.2	17.5	1,257
Other ¹	14.1	20.9	635
Total	13.0	17.7	2,684

Note: Table includes only the two most recent births during the 2–35 months preceding the survey. Total includes 8 births delivered in nongovernmental organization or trust hospitals/clinics, and 5 births assisted by other health professionals, which are not shown separately.
ANM: Auxiliary nurse midwife TBA: Traditional birth attendant
() Based on 25–49 unweighted cases
¹Includes missing

not vary much by mother's age, very high fever was somewhat more likely to be reported for births to younger (age <35) than older mothers (35–49). By birth order, first births were most likely to be followed by massive vaginal bleeding and births at higher birth orders were most likely to be followed by fever. Massive vaginal bleeding and very high fever during the postpartum period are both less common in the Vindhya Region than in most other regions. Massive vaginal bleeding is most common in the Chattisgarh Region and very high fever is most

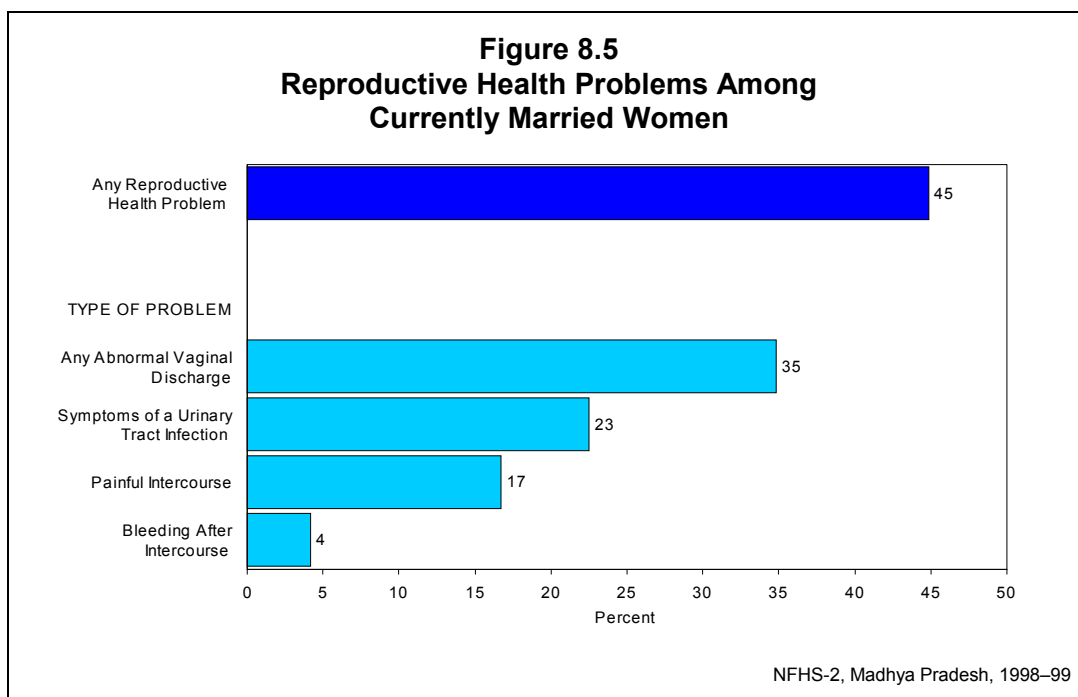
common in the South Central Region. Mothers of births that were delivered at home are slightly more likely to report very high fever than those delivered in an institution. Very high fever is also reported slightly more often in the case of births that were delivered by persons other than a doctor, ANM, nurse, midwife or a *dai*. Massive vaginal bleeding and high fever are both least likely, however, if the delivery was conducted by an ANM, nurse, or midwife than by anyone else.

8.4 Reproductive Health Problems

Absence of reproductive-tract infections (RTIs) is essential for the reproductive health of both women and men, and is critical for their ability to meet their reproductive goals. There are three types of reproductive-tract infections for women: endogenous infections that are caused by the multiplying of organisms normally present in the vagina; iatrogenic infections caused by the introduction of bacteria or other infection-causing micro-organisms through medical procedures such as an IUD insertion; and sexually transmitted infections (STIs). Endogenous infections and several of the iatrogenic and sexually transmitted infections are often easily cured if detected early and given proper treatment. If left untreated, RTIs can cause pregnancy-related complications, congenital infections, infertility, and chronic pain. They are also a risk factor for pelvic inflammatory disease and HIV (Population Council, 1999).

A number of studies (Bang et al., 1989; Bang and Bang, 1991; Pachauri and Gittlesohn, 1994; Jeejeebhoy and Rama Rao, 1992) have shown that many Indian women suffer from RTIs. Several researchers have also shown that women in India often bear the symptoms of RTIs silently, without seeking health care. RTIs and their sequellae are an important component of programmes for family planning, child survival, women's health, safe motherhood, and HIV prevention. RTIs have profound implications for the success of each of these initiatives, and conversely, these initiatives provide a critical opportunity for the prevention and control of RTIs (Germain et al., 1992). Studies have demonstrated that RTIs are an important reason for the poor acceptance and low continuation rates of contraceptive methods such as the IUD. Bhatia and Cleland (1995) found a higher incidence of gynaecological symptoms among women who had undergone a tubectomy than among other women. The Government of India recognized the importance of RTIs and STIs in undermining the health and welfare of individuals and couples in a policy statement on the Reproductive and Child Health Programme, which states that couples should be 'able to have sexual relations free of fear of pregnancy and contracting diseases' (Ministry of Health and Family Welfare, 1997:2). The Reproductive and Child Health Programme includes the following interventions: RTI/STI clinics at district hospitals (where not already available), provision of technicians for laboratory diagnosis of RTIs/STIs, and in selected districts, screening and treatment of RTIs/STIs (Ministry of Health and Family Welfare, 1997).

NFHS-2 collected information from women on some common symptoms of RTIs, namely problems with abnormal vaginal discharge or urinary tract infections in the three months preceding the survey, and intercourse-related pain (often) and bleeding (ever). Specifically, the prevalence of reproductive health problems among ever-married women is estimated from women's self-reported experience with each of the following problems: vaginal discharge accompanied by itching, by irritation around the vaginal area, by bad odour, by severe lower abdominal pain, by fever, or by any other problem; pain or burning while urinating or frequent or difficult urination; and (among currently married women only) painful intercourse or bleeding



after intercourse. Women who experience one or more of these reproductive health problems could either have, or be at risk, of getting an RTI/STI. However, since information on health problems is based on self-reports rather than clinical tests or examinations, the results should be interpreted with caution.

Table 8.12 shows the prevalence of different reproductive health problems among ever-married women in Madhya Pradesh during the three months preceding the survey by background characteristics. Thirty-four percent of ever-married women reported at least one type of problem related to vaginal discharge, and 22 percent reported symptoms of a urinary-tract infection. Overall, 41 percent of ever-married women reported either problems with vaginal discharge or symptoms of a urinary-tract infection. Among problems related to vaginal discharge, itching or irritation (22 percent) was mentioned most frequently, followed by severe lower abdominal pain (20 percent). Since a large majority of ever-married women are also currently married, there is almost no difference in the estimates of prevalence of problems related to vaginal discharge and symptoms of urinary tract infections for currently married women and ever-married women.

Table 8.12 and Figure 8.5 show that 45 percent of currently married women report that they have at least one reproductive health problem. Forty-one percent have problems with vaginal discharge or urinary tract infections, 17 percent report painful intercourse, and 4 percent report bleeding after intercourse. The prevalence of reproductive health problems among currently married women first increases slightly with age from 41 percent for women age 15–19 to 49 percent for women age 35–39 and then declines to 39 percent for women age 45–49. Differences in prevalence by rural-urban residence are small: Forty-six percent of rural women report reproductive health problems compared with 42 percent of urban women. By region, prevalence is highest, in the Central, Malwa Plateau, and the South Central Regions, at about 50 percent, and is lowest in the Chattisgarh Region, at 37 percent. Prevalence of reproductive health problems is higher for illiterate women and women who have not completed middle school (46–47 percent) than for women who have at least completed middle school (39 percent). Muslim

Table 8.12 Symptoms of reproductive health problems

Percentage of ever-married women reporting abnormal vaginal discharge or symptoms of a urinary tract infection during the three months preceding the survey and percentage of currently married women reporting painful intercourse or bleeding after intercourse by selected background characteristics, Madhya Pradesh, 1998–99

Background characteristic	Ever-married women								Number of ever-married women	Currently married women			Number of currently married women
	Any abnormal vaginal discharge	Vaginal discharge accompanied by:					Symptoms of a urinary tract infection ²	Any abnormal vaginal discharge or symptoms of a urinary tract infection ²		Painful intercourse (often)	Bleeding after intercourse (ever) ¹	Any reproductive health problem	
		Itching or irritation	Bad odour	Severe lower abdominal pain ¹	Fever	Other problem							
Age													
15–19	29.4	17.5	13.1	18.0	10.6	5.4	20.2	35.4	894	19.5	5.3	41.3	868
20–24	32.1	20.2	12.5	18.0	9.7	7.5	22.6	38.7	1,297	16.6	5.0	43.0	1,254
25–29	36.5	22.8	14.6	22.4	12.4	9.3	22.4	43.0	1,377	18.3	4.3	46.6	1,315
30–34	38.6	24.9	15.0	23.7	12.7	10.6	23.3	43.5	1,167	16.9	4.3	47.8	1,110
35–39	39.8	26.0	16.5	21.7	14.0	10.3	22.8	45.4	960	16.3	3.7	49.0	904
40–44	33.9	22.5	14.0	18.9	13.0	9.6	22.1	40.2	707	14.1	3.2	44.3	651
45–49	24.7	17.6	9.4	14.6	7.5	6.7	19.6	34.2	539	11.6	1.8	38.7	469
Residence													
Urban	31.8	19.3	9.2	18.9	9.0	8.0	19.1	37.3	1,756	16.3	2.5	41.8	1,653
Rural	35.3	22.9	15.5	20.6	12.5	8.9	23.1	41.8	5,185	16.9	4.8	46.0	4,919
Region													
Chhattisgarh	27.4	13.8	11.0	14.4	8.2	6.3	17.5	34.4	1,779	11.3	5.7	37.4	1,658
Vindhya	35.9	27.4	16.3	16.8	10.4	6.9	25.2	43.0	1,030	16.2	3.7	46.5	1,000
Central	38.8	26.9	15.3	26.3	17.3	13.6	22.6	44.8	667	21.9	4.8	49.6	638
Malwa Plateau	36.6	24.7	17.6	22.0	10.7	6.5	26.6	43.2	1,155	19.7	2.9	49.1	1,093
South Central	39.2	23.5	16.4	24.8	18.6	12.1	24.9	44.6	841	24.3	6.5	50.6	786
South Western	36.3	23.0	17.0	23.7	13.4	11.9	22.9	42.2	620	18.8	3.4	47.0	585
Northern	34.8	22.9	6.2	22.0	8.7	8.9	18.2	39.2	848	11.7	1.3	42.3	812
Education													
Illiterate	35.3	23.2	15.2	20.8	12.5	8.7	23.3	41.7	4,753	16.5	4.6	45.8	4,478
Literate, < middle school complete	35.6	22.0	13.4	21.2	13.3	10.3	24.2	42.6	1,133	18.4	3.9	47.2	1,078
Middle school complete	30.9	16.6	8.3	15.6	6.4	7.0	15.2	34.3	398	16.0	1.8	38.7	389
High school complete and above	28.3	16.3	8.4	16.6	5.7	6.6	14.2	33.6	656	16.2	2.9	38.8	627
Religion													
Hindu	33.8	21.8	13.8	19.5	11.2	8.4	21.7	40.0	6,396	16.4	4.3	44.4	6,058
Muslim	43.8	27.1	16.0	30.1	18.0	13.9	28.8	49.9	372	22.0	3.2	54.4	349
Jain	37.6	23.0	7.0	23.2	5.9	3.7	19.1	42.9	70	15.4	0.0	46.3	69
Other	34.3	14.4	15.3	22.5	20.0	8.3	27.4	44.3	103	17.5	5.9	44.5	96

Contd...

Table 8.12 Symptoms of reproductive health problems (contd.)

Percentage of ever-married women reporting abnormal vaginal discharge or symptoms of a urinary tract infection during the three months preceding the survey and percentage of currently married women reporting painful intercourse or bleeding after intercourse by selected background characteristics, Madhya Pradesh, 1998–99

Background characteristic	Ever-married women							Number of ever-married women	Currently married women			Number of currently married women	
	Vaginal discharge accompanied by:						Symptoms of a urinary tract infection ²		Any abnormal vaginal discharge or symptoms of a urinary tract infection ²	Painful intercourse (often)	Bleeding after intercourse (ever) ¹		Any reproductive health problem
	Any abnormal vaginal discharge	Itching or irritation	Bad odour	Severe lower abdominal pain ¹	Fever	Other problem							
Caste/tribe													
Scheduled caste	35.7	23.3	14.3	21.3	12.4	8.4	23.6	43.3	1,050	20.1	3.7	47.7	996
Scheduled tribe	32.8	20.2	16.7	21.0	13.1	7.4	22.8	39.2	1,571	14.6	6.7	42.8	1,471
Other backward class	34.3	21.6	13.2	19.3	11.1	9.5	21.7	40.5	2,863	16.7	4.0	45.4	2,719
Other	35.3	23.7	11.7	19.9	10.3	8.4	21.0	40.5	1,452	16.4	2.1	44.2	1,383
Standard of living index													
Low	34.9	22.4	16.3	20.5	14.2	8.6	23.0	40.8	2,149	18.0	5.5	45.0	2,018
Medium	34.6	22.2	14.2	20.1	11.4	9.0	23.1	41.3	3,491	16.1	4.2	45.8	3,302
High	33.3	20.8	8.9	19.7	7.8	7.8	18.0	38.7	1,283	16.3	2.0	42.6	1,234
Work status													
Working in family farm/business	37.9	25.2	16.5	21.8	12.1	9.0	26.0	45.1	1,817	16.8	6.6	50.0	1,722
Employed by someone else	35.4	21.9	16.3	22.2	13.8	9.4	23.5	42.0	1,901	18.7	4.6	45.8	1,765
Self-employed	34.7	23.1	13.1	21.6	14.6	12.3	20.8	38.8	249	20.1	5.1	46.0	225
Not worked in past 12 months	31.6	20.0	10.8	17.8	9.6	7.6	19.0	37.3	2,973	15.2	2.4	41.3	2,859
Number of children ever born													
0	36.1	22.6	16.2	22.7	13.3	8.0	23.5	42.0	819	23.5	8.3	49.2	739
1	28.8	17.6	12.7	16.8	9.3	5.8	20.0	35.6	865	18.4	4.2	41.2	809
2–3	32.9	20.3	13.0	19.6	10.3	8.2	21.9	39.3	2,313	15.6	4.0	42.8	2,202
4–5	38.3	24.8	14.6	22.0	13.2	10.3	22.6	44.1	1,811	16.9	3.8	47.7	1,745
6+	34.4	24.0	13.7	19.1	12.2	9.6	22.5	40.9	1,134	12.6	2.3	44.7	1,077
All ever-married women	34.4	22.0	13.9	20.2	11.6	8.6	22.1	40.7	6,941	NA	NA	NA	NA
All currently married women	34.8	22.4	14.0	20.5	11.6	8.6	22.5	41.2	6,572	16.7	4.2	44.9	6,572

Note: Total includes a small number of women with missing information on education, caste/tribe, the standard of living index, and work status, who are not shown separately.

NA: Not applicable

¹Not related to menstruation

²Includes pain or burning while urinating or more frequent or difficult urination

women (54 percent) are more likely to have reproductive health problems than women of all other religions (44–46 percent). By caste/tribe status, scheduled-caste women (48 percent) are somewhat more likely to report any reproductive health problems than are other women (43–45 percent).

By employment, women who are employed on a family farm or in a family business are most likely to report reproductive health problems (50 percent) followed by women who are either self-employed or employed by someone else (both 46 percent). Women who have not worked in the 12 months preceding the survey are least likely to report any reproductive health problem (41 percent). Women with no children are slightly more likely than women with one or more children to have reproductive health problems. Among women with at least one child, the likelihood of having a reproductive health problem first increases with parity from 41 percent for women with one child to 48 percent for women with four or five children and then declines. The most notable fact about these results, however, is the small variation in prevalence of reproductive health problems by background characteristics. Prevalence does not fall below 37 percent for any group of women. These results underscore the high prevalence of reported reproductive health problems across all women.

Among women who report any reproductive health problem, more than two-thirds (69 percent) have not seen anyone for advice or treatment (Table 8.13). The proportion of women who have not obtained advice or treatment is substantially higher in rural areas (73 percent) than in urban areas (55 percent). Overall, more than two-thirds of women who have obtained advice or treatment were seen by someone in the private medical sector, and more than one-third sought advice or treatment from someone in the public medical sector. Among women who sought advice or treatment, 60 percent saw a private doctor and 29 percent saw a government doctor. The main sources of advice or treatment do not vary by urban-rural residence.

In summary, NFHS-2 results show that although two-fifths of ever-married women in Madhya Pradesh report at least one reproductive health problem related to vaginal discharge or urination, and almost half of currently married women report at least one reproductive health problem related to vaginal discharge, urination, or intercourse that could be symptomatic of a more serious reproductive tract infection, the majority of them bear the problems silently without seeking advice or treatment. Given the silence that surrounds reproductive health problems, the consistently high self-reported prevalence suggests that reproductive health problems are widespread among all groups of women. Moreover, women who seek advice or treatment for reproductive health problems do not usually go to government health professionals. These findings highlight the need to educate women regarding the symptoms and consequences of reproductive health problems and the urgent need to expand counselling and reproductive health services in both rural and urban areas, particularly through the public sector.

Table 8.13 Treatment of reproductive health problems

Among women with a reproductive health problem, the percentage who sought advice or treatment from specific providers by residence, Madhya Pradesh, 1998–99

Provider	Urban	Rural	Total
Public medical sector	16.5	10.3	11.7
Government doctor	13.4	7.7	9.0
Public health nurse	0.3	1.3	1.0
ANM/LHV	1.3	1.7	1.6
Male MPW/supervisor	0.0	0.2	0.1
<i>Anganwadi</i> worker	0.2	0.2	0.2
Village health guide	0.0	0.2	0.1
Other public medical sector	1.7	0.4	0.7
NGO worker	0.3	0.3	0.3
Private medical sector	30.6	18.0	20.9
Private doctor	27.6	16.0	18.7
Private nurse	0.8	0.4	0.5
Compounder/pharmacist	0.4	0.2	0.2
<i>Vaidya/hakim/homeopath</i>	2.0	0.8	1.0
<i>Dai</i> (TBA)	0.5	0.7	0.6
Traditional healer	0.1	0.6	0.5
Other private medical sector	0.2	0.4	0.4
Other	0.7	1.1	1.0
None	54.8	73.4	69.0
Number of women	712	2,346	3,058

Note: Table includes currently married women who report abnormal vaginal discharge, symptoms of a urinary tract infection, painful intercourse, or bleeding after intercourse and women who are ever married but not currently married who report abnormal vaginal discharge or symptoms of a urinary tract infection. Percentages may add to more than 100.0 because women could report treatment from multiple providers.
ANM: Auxiliary nurse midwife; LHV: Lady health visitor; MPW: Multipurpose health worker; NGO: Nongovernmental organization; TBA: Traditional birth attendant