

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 women, 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 health facilities. In addition, pregnant women and children can obtain services from 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 a 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 referring 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 the safe motherhood programmes within the wider context of reproductive health. Among the national socio-demographic 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 one of the twelve 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. The Woman's Questionnaire included relevant maternal and safe motherhood information for women age 15–49 who have given birth since 1 January 1996. The topics covered include pregnancy complications, utilization of specific components of antenatal and postnatal care, place of and assistance during delivery, delivery characteristics, and postpartum complications. Although NFHS-2 obtained information for the two most recent live births since 1 January 1996, 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, all women were asked about their experience of specific symptoms of reproductive health problems, and if problems were reported, whether and where they received treatment.

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 counseling 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

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

Problems During Pregnancy

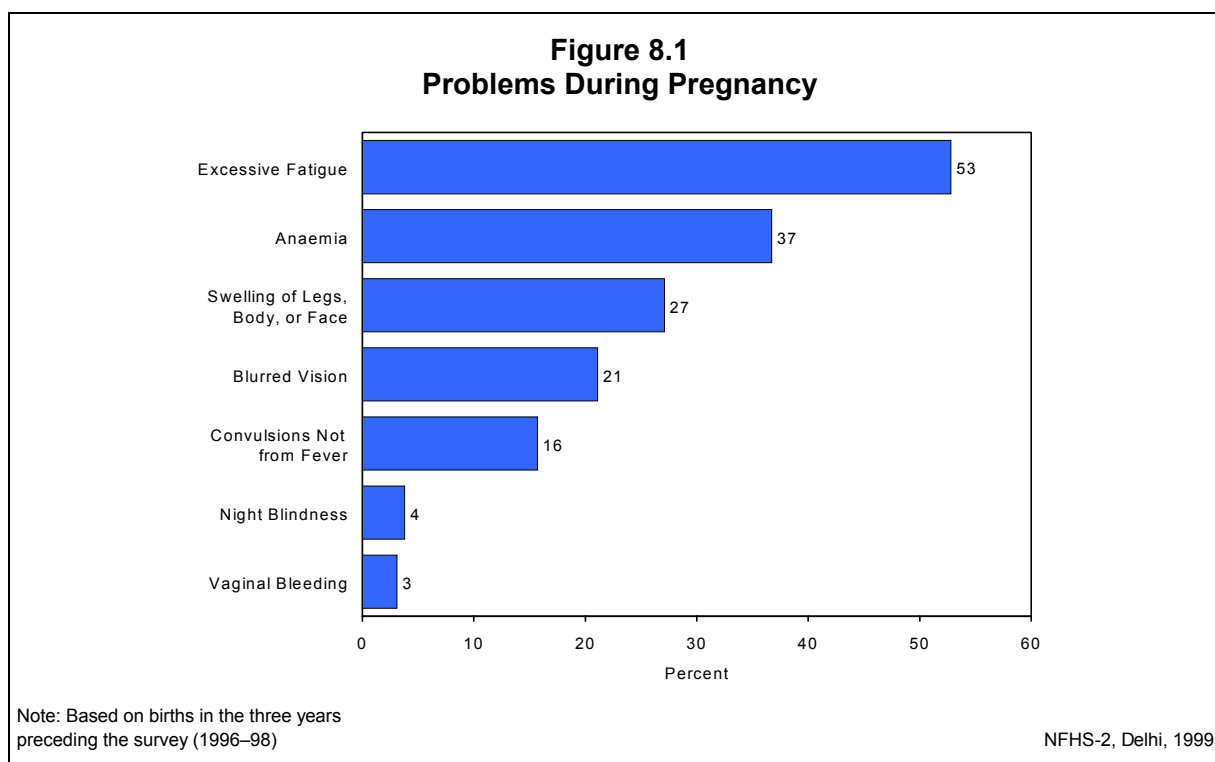
For each of the two most recent births in the three years preceding the survey, the mother was asked if at any time during the pregnancy she experienced any of the following pregnancy-related problems: night blindness, blurred vision, convulsions (not from fever), swelling of the legs, body or face, 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 rather than on medical diagnoses 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 (53 percent of pregnancies), anaemia (37 percent), and swelling of the legs, body, or face (27 percent). Blurred vision was reported for 21 percent of pregnancies, convulsions not from fever for 16 percent, night blindness for 4 percent, and vaginal bleeding for 3 percent. Blurred vision, excessive fatigue, and anaemia were reported much more frequently in urban Delhi than in rural Delhi.

<u>Table 8.1 Health problems during pregnancy</u>			
Among births during the three years preceding the survey, percentage of mothers experiencing specific health problems during pregnancy by residence, Delhi, 1999			
Problem during pregnancy	Urban	Rural	Total
Night blindness	3.8	3.8	3.8
Blurred vision	21.7	15.1	21.1
Convulsions not from fever	15.9	13.9	15.7
Swelling of the legs, body, or face	27.2	26.5	27.1
Excessive fatigue	54.9	33.9	52.8
Anaemia	37.6	27.7	36.7
Vaginal bleeding	3.2	2.5	3.1
Number of births	738	81	820
Note: Table includes only the two most recent births during the three years preceding the survey.			

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 for Delhi show that mothers received antenatal check-ups for 84 percent of births during the three years preceding the survey (the same as in NFHS-1). Seventy-five percent of the mothers received check-ups from doctors, and 6 percent received them from other health professionals outside the home. Only 2 percent of the mothers received check-ups at home from a health worker. The utilization of antenatal check-ups does not vary much by mother's age. However, it does vary substantially by birth order. At least one antenatal check-up was obtained by 92 percent of mothers of first-order births, compared with 71 percent of mothers of fourth- and fifth-order births. This differential probably occurs because higher-order births are disproportionately from the lower socioeconomic strata where antenatal check-ups are less common.

The proportion of births whose mothers obtained at least one antenatal check-up is higher in urban Delhi (85 percent) than in rural Delhi (70 percent). By mother's education, it ranges from 63 percent for illiterate mothers to 97 percent for mothers who have completed at least high school. More-educated women are also more likely to get their check-up from a doctor. By household standard of living index, the proportion of births for which the mother obtained at least one antenatal check-up ranges from 74 percent for mothers living in households with a

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, Delhi, 1999

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	3.7	70.6	9.1	2.6	11.6	2.5	100.0	77	
20–34	1.9	75.5	5.7	0.1	14.7	2.1	100.0	716	
35–49	(3.7)	(77.0)	(3.6)	(0.0)	(11.7)	(3.9)	100.0	26	
Birth order									
1	2.2	84.6	4.4	1.1	5.8	1.9	100.0	258	
2–3	2.6	74.7	6.5	0.0	14.5	1.8	100.0	385	
4–5	0.0	63.2	7.9	0.0	26.6	2.3	100.0	130	
6+	(4.2)	(59.6)	(4.2)	(0.0)	(25.6)	(6.4)	100.0	47	
Residence									
Urban	2.4	77.1	5.2	0.4	12.7	2.3	100.0	738	
Rural	0.0	56.8	12.7	0.0	29.2	1.2	100.0	81	
Mother's education									
Illiterate	2.0	51.6	9.0	0.8	33.9	2.8	100.0	247	
Literate, < middle school complete	2.8	70.3	12.5	0.7	10.8	2.9	100.0	137	
Middle school complete	0.0	83.3	3.0	0.0	11.7	2.0	100.0	100	
High school complete and above	2.4	92.3	1.8	0.0	2.1	1.5	100.0	334	
Religion									
Hindu	1.5	77.1	6.1	0.3	12.9	2.1	100.0	666	
Muslim	2.8	59.5	4.8	0.9	29.2	2.8	100.0	103	
Sikh	(10.7)	(81.4)	(2.6)	(0.0)	(2.7)	(2.7)	100.0	37	
Caste/tribe									
Scheduled caste	1.0	66.9	7.2	0.0	21.7	3.2	100.0	185	
Other backward class	2.6	67.0	8.7	0.0	20.4	1.3	100.0	153	
Other ²	2.5	81.1	4.4	0.4	9.5	2.1	100.0	474	
Standard of living index									
Low	(0.0)	(38.6)	(10.3)	(0.0)	(47.0)	(4.1)	100.0	47	
Medium	3.2	61.1	8.1	1.1	24.0	2.5	100.0	274	
High	1.7	86.2	4.3	0.0	6.1	1.8	100.0	481	
Total	2.1	75.1	5.9	0.4	14.3	2.2	100.0	820	

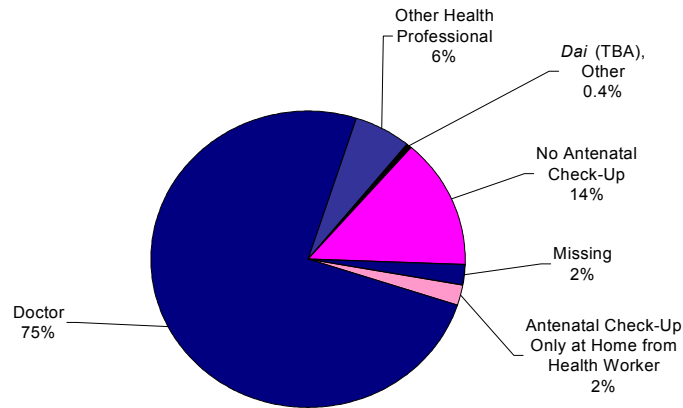
Note: Table includes only the two most recent births during the three years preceding the survey. Total includes 8 births to women belonging to other religions, 8 births to scheduled-tribe women, and 1, 5, and 17 births with missing information on mother's education, religion, and the standard of living index, respectively, which are not shown separately.

() Based on 25–49 unweighted cases

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 shown.

²Not belonging to a scheduled caste, scheduled tribe, or other backward class

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



Note: Percents add to less than 100.0 due to rounding

NFHS-2, Delhi, 1999

medium standard of living to 92 percent for mothers living in households with a high standard of living. Hindu mothers are much more likely than Muslim mothers to get an antenatal check-up, and mothers who do not belong to a scheduled caste, scheduled tribe, or other backward class are much more likely to get an antenatal check-up than mothers from scheduled castes or other backward classes.

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-up in a health facility or at home by the main reason for not receiving any check-up. For sixty-three percent of the births to mothers who did not have any antenatal check-up, mothers reported that antenatal check-ups were not necessary. For 10 percent of the births mothers reported that the check-ups were too costly. For 8 percent of births mothers said that their families did not allow them to get a check-up, and for 6 percent of births mothers reported that they did not have time to go for a check-up. Interestingly, for 5 percent of births mothers reported lack of knowledge as the reason for not getting a check-up.

These results suggest that there are still substantial numbers of women and families in Delhi who need to be educated about the availability and benefits of antenatal check-ups in order to overcome traditional attitudes and beliefs preventing mothers from seeking antenatal care during their pregnancies. Making antenatal care check-ups less costly would also increase utilization of antenatal care services for some women.

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, Delhi, 1999	
Reason for not receiving an antenatal check-up	Percent
Not necessary	63.4
Not customary	1.0
Costs too much	9.5
Too far/no transport	2.6
Poor quality/service	1.7
No time to go	5.9
Family did not allow	7.6
Lack of knowledge	5.0
No health worker visited	0.8
Other	1.8
Missing	0.9
Total percent	100.0
Number of births	117
Note: Table includes only the two most recent births during the three years preceding the survey.	

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 month 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 for 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 antenatal 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 Delhi, mothers of 68 percent of births received at least three antenatal check-ups (compared with 44 percent in India as a whole), and 52 percent had at least four check-ups. The median number of check-ups for those who received at least one check-up was 3.8. The median number of check-ups was 3.1 in rural Delhi and 3.9 in urban Delhi.

Table 8.4 Number and timing of antenatal check-ups and stage of pregnancy

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, Delhi, 1999

Number and timing of check-ups	Urban	Rural	Total
Number of antenatal check-ups			
0	12.7	29.2	14.3
1	4.7	2.6	4.5
2	10.7	8.9	10.5
3	15.7	21.4	16.2
4+	53.6	36.7	51.9
Don't know/missing	2.7	1.2	2.5
Total percent	100.0	100.0	100.0
Median number of check-ups (for those who received at least one antenatal check-up)			
	3.9	3.1	3.8
Stage of pregnancy at the time of the first antenatal check-up			
No antenatal check-up	12.7	29.2	14.3
First trimester	49.8	41.7	49.0
Second trimester	31.0	22.8	30.2
Third trimester	5.0	5.0	5.0
Don't know/missing	1.5	1.2	1.4
Total percent	100.0	100.0	100.0
Median months pregnant at first antenatal check-up (for those who received at least one antenatal check-up)			
	3.2	3.2	3.2
Number of births	738	81	820

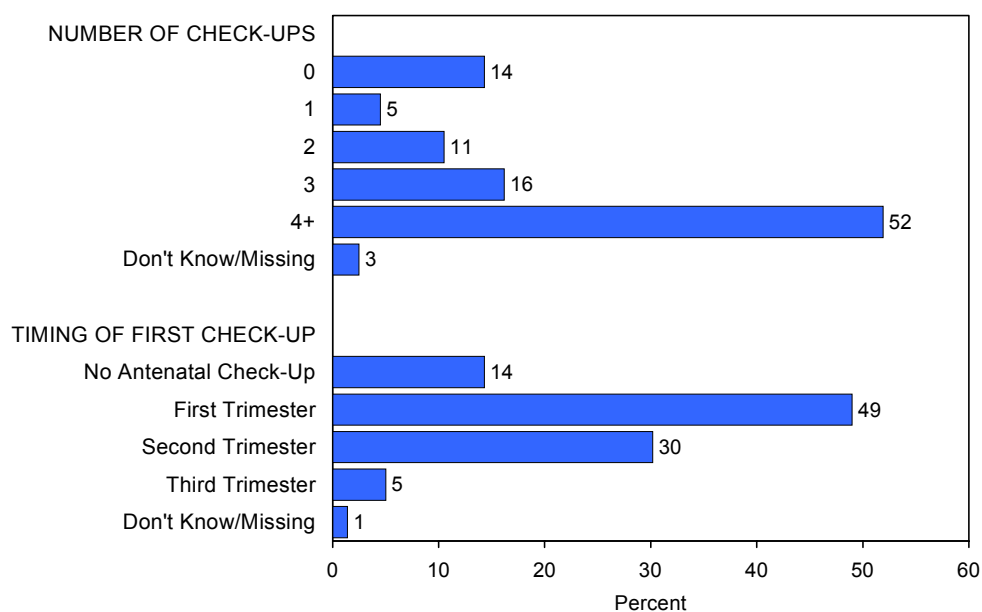
Note: Table includes only the two most recent births during the three years preceding the survey.

Forty-nine percent of 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 36 percent in NFHS-1), and another 30 percent were to mothers who received their first check-up in the second trimester. In Delhi, the first check-up was received in the third trimester for only 5 percent of births. The median timing of the first antenatal check-up in Delhi was 3.2 months, the same in urban Delhi and rural Delhi.

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 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

Figure 8.3
Number and Timing of Antenatal Check-Ups



Note: Based on births in the three years preceding the survey (1996–98)

NFHS-2, Delhi, 1999

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 90 percent of cases and had their blood tested in 86 percent of cases. Other common components of antenatal check-ups were urine tests (87 percent), blood pressure checks (86 percent), weight measurement (88 percent), and internal examinations (50 percent). Mothers of 41 percent of the births had their height measured, and mothers of 41 percent of births had a sonogram or ultrasound check-up. X-ray examinations were done for mothers of 8 percent of births, and amniocentesis was done for mothers of 2 percent of births. Except internal examination all measurements and tests were performed more for urban mothers than rural mothers.

Table 8.5 also presents 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 84 percent of cases). Delivery advice was given to mothers of 72 percent of the births, advice on newborn care to 70 percent, advice on danger signs of pregnancy to 64 percent, and family planning advice to 48 percent.

Tetanus Toxoid Vaccination

In India, an important cause of death in infancy is neonatal tetanus, which is caused by tetanus organisms infecting the newborn infant, usually at the umbilical stump. Neonatal tetanus is most common among children who are delivered in unhygienic environments and when unsterilized

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, Delhi, 1999			
Components of antenatal check-ups	Urban	Rural	Total
Antenatal measurements/tests			
Weight measured	88.7	83.6	88.2
Height measured	42.4	25.1	41.0
Blood pressure checked	86.6	81.7	86.2
Blood tested	86.9	80.0	86.3
Urine tested	86.8	83.7	86.6
Abdomen examined	90.1	83.5	89.6
Internal examination	49.7	52.9	50.0
X-ray	8.6	3.7	8.2
Sonography or ultrasound	42.6	25.4	41.2
Amniocentesis	1.9	0.0	1.8
Antenatal advice			
Diet	83.3	87.3	83.6
Danger signs of pregnancy	64.1	61.8	63.9
Delivery care	72.2	65.4	71.6
Newborn care	70.8	61.8	70.1
Family planning	48.4	45.7	48.2
Number of births for which the mother received at least one antenatal check-up	628	57	685
Note: Table includes only the two most recent births during the three years preceding the survey.			

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.

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 vaccine, 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 women 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 the pregnancy.

Table 8.6 presents the distribution of births by the number of tetanus toxoid injections received by the mothers, according to selected background characteristics. Tetanus toxoid coverage in Delhi is incomplete, but it has increased substantially in recent years. For births in the three years preceding the survey, mothers of 85 percent of the births received at least two tetanus toxoid injections during pregnancy, and another 7 percent received only one injection. The proportion of mothers who received two or more tetanus toxoid injections during their pregnancies rose from 73 to 85 percent between NFHS-1 and NFHS-2. The figure of 85 percent for Delhi is far higher than the average of 67 percent for all India, but still some distance away from complete coverage.

Coverage varies by age of mother and by birth order. Tetanus toxoid coverage is higher for mothers under age 35 (85–86 percent) than for mothers age 35–49 (73 percent). At least two tetanus toxoid injections were received by mothers of 89 percent of first births, compared with 66 percent of mothers of births of order six or higher. Coverage is strongly related to education, ranging from 73 percent of births to illiterate mothers to 93 percent of births to mothers who have completed at least high school. Tetanus toxoid coverage ranges from 63 percent for births to mothers living in households with a low standard of living to 89 percent for births to mothers living in households with a high standard of living. Coverage rates do not vary much by urban-rural residence, religion, or caste/tribe. These results suggest that despite fairly high coverage rates in most socioeconomic groups, coverage for socioeconomically disadvantaged women is somewhat lower than coverage for the state of Delhi 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 tablets of iron and folic acid 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

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, Delhi, 1999

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	7.7	3.7	86.2	2.5	100.0	75.6	77	86.1	83.0	58
20–34	5.6	6.9	85.2	2.2	100.0	78.4	716	89.5	81.1	562
35–49	(15.7)	(7.8)	(72.6)	(3.9)	100.0	(68.8)	26	*	*	18
Birth order										
1	3.4	5.4	88.9	2.3	100.0	86.9	258	90.6	86.3	224
2–3	4.3	7.7	86.0	2.0	100.0	77.9	385	90.3	79.1	300
4–5	11.4	5.5	80.8	2.3	100.0	68.5	130	82.1	78.8	89
6+	(21.1)	(8.5)	(66.1)	(4.3)	100.0	(53.0)	47	(91.9)	(72.3)	25
Residence										
Urban	6.0	6.7	85.1	2.3	100.0	79.6	738	90.0	81.1	587
Rural	7.7	6.3	83.5	2.5	100.0	61.9	81	(81.7)	(83.6)	50
Mother's education										
Illiterate	14.4	9.3	73.1	3.2	100.0	54.9	247	84.6	77.1	136
Literate, < middle school complete	6.4	7.2	85.6	0.7	100.0	79.0	137	83.3	73.5	108
Middle school complete	2.0	7.9	86.3	3.8	100.0	85.2	100	89.4	74.2	86
High school complete and above	1.2	4.1	92.9	1.8	100.0	92.3	334	93.5	87.9	308
Religion										
Hindu	5.0	6.9	85.9	2.2	100.0	80.5	666	89.2	81.2	536
Muslim	13.7	1.0	81.4	3.9	100.0	58.3	103	90.1	80.0	60
Sikh	(5.3)	(13.2)	(81.5)	(0.0)	100.0	(86.6)	37	(97.1)	(84.2)	32
Caste/tribe										
Scheduled caste	8.3	11.1	76.3	4.2	100.0	69.0	185	87.6	74.5	128
Other backward class	7.8	5.8	85.0	1.4	100.0	70.9	153	86.9	80.6	108
Other ²	4.6	4.9	88.6	1.9	100.0	83.7	474	90.7	84.0	397
Standard of living index										
Low	(18.0)	(10.4)	(63.3)	(8.3)	100.0	(46.7)	47	*	*	22
Medium	11.3	6.1	80.5	2.2	100.0	64.3	274	88.8	78.8	176
High	2.3	6.8	89.0	1.8	100.0	88.6	481	89.8	83.6	426
Total	6.1	6.7	84.9	2.3	100.0	77.8	820	89.3	81.3	638

Note: Table includes only the two most recent births during the three years preceding the survey. Total includes small numbers of births to mothers belonging to other religions, scheduled-tribe mothers, and births with missing information on mother's education, religion, and the standard of living index, which are not shown separately.

() Based on 25–49 unweighted cases

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

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

²Not belonging to a scheduled caste, scheduled tribe, or other backward class

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 Delhi received IFA supplements for 78 percent of births. This level is much higher than the national average of 58 percent. IFA coverage in Delhi is relatively low for socioeconomically disadvantaged mothers (i.e., illiterate mothers, scheduled-caste mothers, mothers from other backward classes, and mothers living in households with a low standard of living), rural mothers, and Muslim mothers.

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 89 percent of births mothers received at least a three-month supply, and for 81 percent of births mothers consumed all the supplements that were given to them. These percentages do not vary much by the demographic and socioeconomic background characteristics included in the table.

These results indicate that the distribution of IFA supplements is still not complete in Delhi, and that many women who receive IFA supplements are not consuming all of what they receive during their pregnancies. This suggests that the Reproductive and Child Health Programme needs to continue its efforts to inform pregnant women about the advantages and importance of IFA supplementation.

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 59 percent of births in Delhi took place in health facilities (up from 45 percent at the time of NFHS-1), 35 percent took place in women's own homes, and 2 percent took place in their parents' homes. Births taking place in health facilities were about equally divided between those that took place in private health facilities and those that took place in public facilities. The NFHS-2 overall estimate of 59 percent of births in health facilities is much lower than the estimate of 70 percent from the Rapid Household Survey under the RCH Programme.

Institutional deliveries are more common for births to mothers age 20–34 (61 percent) than for mothers below age 20 (44 percent). They are also more common for first births (72 percent) than for births of orders 4 and 5 (36 percent). The proportion of deliveries that took place in health facilities is nearly twice as high in urban areas (62 percent) as in rural areas (34 percent). By mother's education, the likelihood of institutional delivery ranges from 26 percent of births to illiterate mothers to 87 percent of births to mothers who have completed at least high school. By standard of living, it is 40 percent for mothers living in households with a medium standard of living and 73 percent for mothers living in households with a high standard of living. The likelihood of institutional delivery is much lower for births to Muslim mothers than for births to Hindu mothers, and much lower for births to scheduled-caste mothers and mothers from other backward classes than for births to mothers who do not belong to a scheduled caste, scheduled tribe, or other backward class.

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, Delhi, 1999

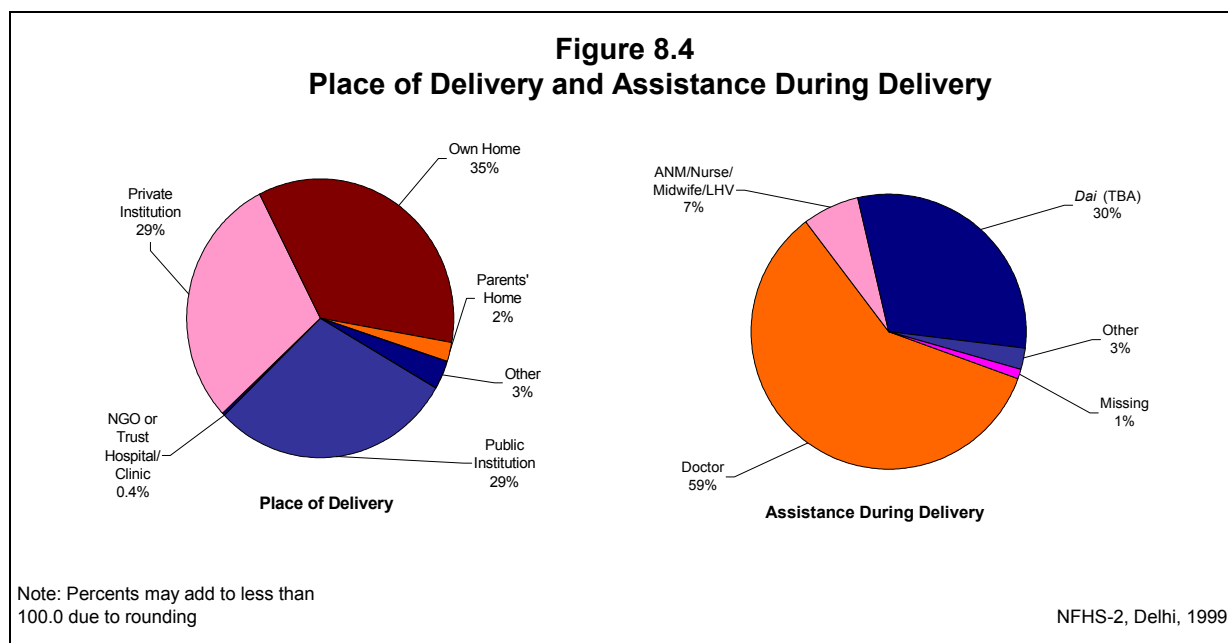
Background characteristic	Place of delivery						Total percent	Number of births
	Health facility/institution			Home				
	Public	NGO/trust	Private	Own home	Parents' home	Other ¹		
Mother's age at birth								
< 20	23.1	0.0	20.7	41.0	3.9	11.3	100.0	77
20–34	30.0	0.4	30.1	35.1	2.0	2.4	100.0	716
35–49	(30.9)	(0.0)	(34.6)	(27.0)	(3.7)	(3.9)	100.0	26
Birth order								
1	31.0	0.8	40.1	23.6	1.9	2.7	100.0	258
2–3	31.3	0.0	29.9	33.1	2.9	2.8	100.0	385
4–5	25.0	0.7	10.7	58.3	0.8	4.5	100.0	130
6+	(17.1)	(0.0)	(17.1)	(55.4)	(2.0)	(8.4)	100.0	47
Residence								
Urban	30.8	0.4	30.6	32.9	1.9	3.4	100.0	738
Rural	16.4	0.0	17.7	58.3	5.1	2.5	100.0	81
Mother's education								
Illiterate	16.1	0.0	10.2	64.6	2.8	6.4	100.0	247
Literate, < middle school complete	33.9	0.0	16.0	42.2	4.4	3.5	100.0	137
Middle school complete	36.9	1.9	21.6	33.7	3.0	3.0	100.0	100
High school complete and above	35.2	0.3	51.4	11.6	0.6	0.9	100.0	334
Religion								
Hindu	30.4	0.3	30.1	33.2	2.5	3.5	100.0	666
Muslim	14.7	0.0	21.3	59.1	1.0	3.8	100.0	103
Sikh	(49.1)	(0.0)	(42.9)	(8.0)	(0.0)	(0.0)	100.0	37
Caste/tribe								
Scheduled caste	28.2	0.0	12.2	49.6	1.1	9.0	100.0	185
Other backward class	22.3	0.6	21.6	46.3	7.9	1.4	100.0	153
Other ²	32.2	0.4	38.4	26.5	0.8	1.6	100.0	474
Standard of living index								
Low	(13.8)	(0.0)	(8.3)	(65.6)	(4.1)	(8.1)	100.0	47
Medium	24.5	0.3	14.9	52.7	1.1	6.4	100.0	274
High	34.0	0.4	39.0	22.9	2.7	1.0	100.0	481
Number of antenatal check-ups								
0	8.2	0.0	10.2	74.0	3.3	4.2	100.0	117
1	(24.5)	(0.0)	(13.9)	(61.5)	(0.0)	(0.0)	100.0	37
2	34.7	0.0	13.9	44.6	4.6	2.2	100.0	86
3	28.7	0.0	17.5	47.2	1.6	5.1	100.0	133
4+	36.0	0.7	42.6	18.2	1.9	0.7	100.0	426
Total	29.4	0.4	29.3	35.4	2.2	3.3	100.0	820

Note: Table includes only the two most recent births during the three years preceding the survey. Total includes 8 births to mothers belonging to other religions, 8 births to scheduled-tribe mothers, and 1, 5, 17, and 21 births with missing information on mother's education, religion, the standard of living index, and number of antenatal check-ups, respectively, which are not shown separately. NGO: Nongovernmental organization

() Based on 25–49 unweighted cases

¹Includes missing

²Not belonging to a scheduled caste, scheduled tribe, or other backward class



The higher the number of antenatal check-ups that a mother has had, the more likely she is to have given birth in an institution. Several factors are likely to contribute to the positive relationship between antenatal check-ups and delivery in a health facility. In some cases, women who receive antenatal check-ups are more likely than other women to deliver in a health facility because their antenatal-care providers advised them to do so. In other cases, women who register with a health facility for delivery are more likely than other women to be called for regular antenatal 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. Another contributing factor may be the growing awareness of the benefits of professional medical care during both pregnancy and delivery, especially among women with higher education and higher standards of living.

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 shown. Sixty-six percent of births in the three years preceding the survey were attended by a health professional, including 59 percent by a doctor and 7 percent by an ANM (auxiliary nurse midwife), nurse, midwife, or LHV (lady health visitor). Comparable estimates at the national level are 42 percent by a health professional, including 30 percent by a doctor and 11 percent by an ANM, nurse, midwife, or LHV. In Delhi, 30 percent of births were attended by a traditional birth attendant, and only 3 percent by other persons such as friends or relatives. According to the two NFHS surveys, the proportion of deliveries attended by a health professional increased from 54 percent in NFHS-1 to 66 percent in NFHS-2.

The proportion of births attended by a doctor varies from 44 percent for mothers age less than 20 to 61 percent for mothers age 20–34. By birth order, it ranges from 36 percent for births

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, Delhi, 1999

Background characteristic	Attendant assisting during delivery ¹					Total percent	Number of births
	Doctor	ANM/nurse/ midwife/ LHV	Dai (TBA)	Other	Missing		
Mother's age at birth							
< 20	43.8	6.5	44.7	2.6	2.5	100.0	77
20–34	60.9	6.6	29.0	2.9	0.7	100.0	716
35–49	(57.7)	(11.7)	(26.7)	(0.0)	(3.9)	100.0	26
Birth order							
1	71.4	5.9	20.8	1.2	0.7	100.0	258
2–3	61.3	6.7	27.7	3.5	0.8	100.0	385
4–5	37.1	7.8	51.3	3.1	0.8	100.0	130
6+	(36.1)	(8.4)	(47.1)	(4.0)	(4.3)	100.0	47
Residence							
Urban	61.4	6.8	28.0	2.9	0.9	100.0	738
Rural	39.1	6.4	52.0	1.2	1.2	100.0	81
Mother's education							
Illiterate	26.2	4.0	61.8	6.0	2.0	100.0	247
Literate, < middle school complete	53.5	11.7	31.4	2.7	0.7	100.0	137
Middle school complete	58.4	12.1	26.5	1.9	1.0	100.0	100
High school complete and above	86.4	5.1	7.7	0.6	0.3	100.0	334
Religion							
Hindu	61.0	5.9	29.4	2.5	1.2	100.0	666
Muslim	35.1	11.7	47.7	5.6	0.0	100.0	103
Sikh	(91.9)	(8.1)	(0.0)	(0.0)	(0.0)	100.0	37
Caste/tribe							
Scheduled caste	43.1	7.0	43.0	4.2	2.7	100.0	185
Other backward class	44.3	11.3	43.7	0.0	0.7	100.0	153
Other ²	70.4	5.3	20.8	3.1	0.4	100.0	474
Standard of living index							
Low	(24.1)	(4.3)	(57.4)	(12.1)	(2.1)	100.0	47
Medium	40.1	6.4	47.3	4.3	1.8	100.0	274
High	73.4	6.7	18.5	1.0	0.4	100.0	481
Number of antenatal check-ups							
0	18.4	4.3	71.4	5.9	0.0	100.0	117
1	(35.8)	(13.1)	(51.1)	(0.0)	(0.0)	100.0	37
2	53.3	13.8	28.6	4.3	0.0	100.0	86
3	46.8	8.4	42.5	2.3	0.0	100.0	133
4+	78.8	5.0	14.9	1.4	0.0	100.0	426
Place of delivery							
Public health facility	93.7	5.8	0.4	0.0	0.0	100.0	241
Private health facility	97.5	1.3	0.4	0.9	0.0	100.0	240
Own home	6.5	12.4	76.0	5.1	0.0	100.0	290
Other ³	(3.7)	(0.0)	(50.1)	(17.1)	(29.1)	100.0	27
Total	59.2	6.7	30.4	2.7	1.0	100.0	820

Note: Table includes only the two most recent births during the three years preceding the survey. Total includes 8 births to mothers belonging to other religions, 8 births to scheduled-tribe mothers, 3 and 18 births delivered in nongovernmental organization or trust hospitals/clinics and parents' home, respectively, and 1, 5, 17, and 21 births with missing information on mother's education, religion, the standard of living index, and number of antenatal check-ups, respectively, which are not shown separately.

ANM: Auxiliary nurse midwife; LHV: Lady health visitor; TBA: Traditional birth attendant

() Based on 25–49 unweighted cases

¹If the respondent mentioned more than one attendant, only the most qualified attendant is shown.

²Not belonging to a scheduled caste, scheduled tribe, or other backward class

³Includes missing

of order six or higher to 71 percent for first-order births, probably because higher-parity mothers tend to come from lower socioeconomic groups in which attendance by a doctor is less common. The proportion of births delivered by a doctor increases sharply with the mother's level of education and by her household's standard of living. Births to Hindu mothers are much more likely to be attended by a doctor than births to Muslim mothers. Attendance by a doctor is much less likely for births to scheduled-caste mothers and mothers from other backward classes than for births to mothers who do not belong to a scheduled caste, scheduled tribe, or other backward class. Only 18 percent of births to mothers who did not have any antenatal check-up were attended by a doctor, compared with 79 percent of births to mothers who had four or more antenatal check-ups. Seventy-one percent of births to women who did not have any antenatal check-ups were attended by a TBA. Ninety-eight percent of births in private institutions were attended by a doctor, compared with 94 percent of births in public institutions. Seventy-six percent of births delivered in the mother's own home were attended by a TBA and 19 percent by a health professional.

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 birth weight and the mother's estimate of the baby's size at birth. Based on mothers' reports, 13 percent of children born in Delhi in the past three years were delivered by caesarian section, up from 5 percent in NFHS-1.

Babies of low birth weight 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,

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, Delhi, 1999			
Characteristic of births	Urban	Rural	Total
Percentage delivered by caesarian section	14.4	5.1	13.4
Birth weight			
< 2.5 kg	10.9	6.3	10.4
2.5 kg or more	30.9	15.0	29.4
Don't know/missing	18.0	15.2	17.8
Not weighed	40.2	63.4	42.5
Total percent	100.0	100.0	100.0
Size at birth			
Large	6.3	9.0	6.6
Average	76.7	66.9	75.7
Small	12.7	19.1	13.4
Very small	2.9	3.8	2.9
Don't know/missing	1.4	1.2	1.4
Total percent	100.0	100.0	100.0
Number of births	738	81	820
Note: Table includes only the two most recent births during the three years preceding the survey.			

respondents were asked the baby's birth weight. Because babies delivered at home are unlikely to be weighed and because the mother might not remember the birth weight even if the baby was weighed, the survey also asked mothers to estimate the size of each baby at birth (large, average, small, or very small).

In Delhi, 43 percent of babies born in the three years preceding the survey were not weighed at birth. Even for babies that were weighed, mothers of about one-third of the births did not remember the weight. Therefore, the resulting sample of births for which weights are reported is subject to a potentially large selection bias, so that the results should be interpreted with caution. Among children for whom birth weights are reported, 26 percent weighed less than 2.5 kilograms. According to mothers' estimates, 7 percent of births in the three years preceding the survey were large, 76 percent were of average size, 13 percent were small, and 3 percent were very small.

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 births in the three years 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 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.

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, Delhi, 1999	
Timing and type of check-up	Percent
Postpartum check-up within two months of birth	19.5
Number of births	325
Percentage seen within two days of birth ¹	10.7
Percentage seen within one week of birth ¹	20.1
Components of postpartum check-up	
Abdominal examination	55.4
Family planning advice	39.7
Breastfeeding advice	56.3
Baby care advice	59.5
Number of births followed by a postpartum check-up	63
Note: Table includes only the two most recent births during the three years preceding the survey.	
¹ Among those who had a postpartum check-up within two months of birth	

Only 20 percent of noninstitutional births were followed by a check-up within two months of delivery. Among births that were followed by a check-up, only 11 percent of check-ups took place within two days of birth, and only 20 percent took place within one week of birth.

Mothers who did not deliver in a health facility but who received a postpartum check-up were asked whether they received specific components of postpartum care, including an abdominal examination and advice on family planning, breastfeeding, and baby care. For 55 percent of births, mothers reported an abdominal examination, for 60 percent they received advice on baby care, for 56 percent they received advice on breastfeeding, and for 40 percent they received advice on family planning.

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. For 10 percent of births the mother reported a very high fever, and for 9 percent of births the mother reported massive vaginal bleeding following the birth (Table 8.11). These proportions vary little by age or birth order, except that the incidence of very high fever tends to increase with birth order. Very high fever and massive vaginal bleeding are slightly more common for home deliveries than for institutional deliveries, and more common when the birth is attended by a TBA than when it is attended by a doctor or other health professional. This is not surprising, inasmuch as the medical proficiency of doctors and health professionals is expected to lower the likelihood of postpartum complications.

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 different 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 or sterilization; 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; Gulati, 1996) have shown that a substantial proportion of 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 poor acceptance and low continuation rates of contraceptive methods such as the IUD. Bhatia and Cleland (1995) found a higher incidence of gynaecological

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, Delhi, 1999			
Background characteristic	Massive vaginal bleeding	Very high fever	Number of births
Residence			
Urban	9.0	10.7	722
Rural	4.0	6.7	76
Mother's age at birth			
< 20	10.3	9.1	76
20–34	8.1	10.4	697
35–49	(16.1)	(11.7)	25
Birth order			
1	6.3	5.5	252
2–3	10.7	11.0	377
4–5	8.7	16.8	126
6+	(2.4)	(13.6)	44
Place of delivery			
Public health facility	7.9	9.6	237
Private health facility	7.2	6.3	237
Own home	9.5	14.2	280
Other ¹	(23.1)	(19.0)	25
Assistance during delivery			
Doctor	7.3	7.9	478
ANM/nurse/midwife/LHV	8.8	10.7	55
Dai (TBA)	11.2	14.7	238
Other ¹	(6.9)	(13.8)	27
Total	8.5	10.3	799
<p>Note: Table includes only the two most recent births during 2–35 months preceding the survey. Total includes 3 and 17 births delivered in nongovernmental organization or trust hospitals/clinics and parents' home, 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 Includes missing</p>			

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: establishment of 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, intercourse-related pain (often), and bleeding after intercourse when

not menstruating (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 women in Delhi by background characteristics. Thirty percent of ever-married women reported at least one type of problem related to vaginal discharge, and 14 percent reported symptoms of a urinary tract infection. Overall, 34 percent of women reported either problems with vaginal discharge or symptoms of a urinary tract infection. Among problems related to vaginal discharge, abdominal pain was mentioned most frequently (19 percent), followed by itching or irritation (15 percent) and bad odour (11 percent).

Table 8.12 and Figure 8.5 show that 37 percent of currently married women report one or more reproductive health problems (marginally lower than the national average of 39 percent). Nine percent report painful intercourse, and only 1 percent report bleeding after intercourse.

Reproductive health problems are more common among women in the younger age groups than in the middle or higher age groups within the reproductive age span. The prevalence of reproductive health problems varies little by urban-rural residence. Prevalence is lower among women who have completed at least high school than among women with less education. Every type of reproductive health problem except painful intercourse is more common among Muslim

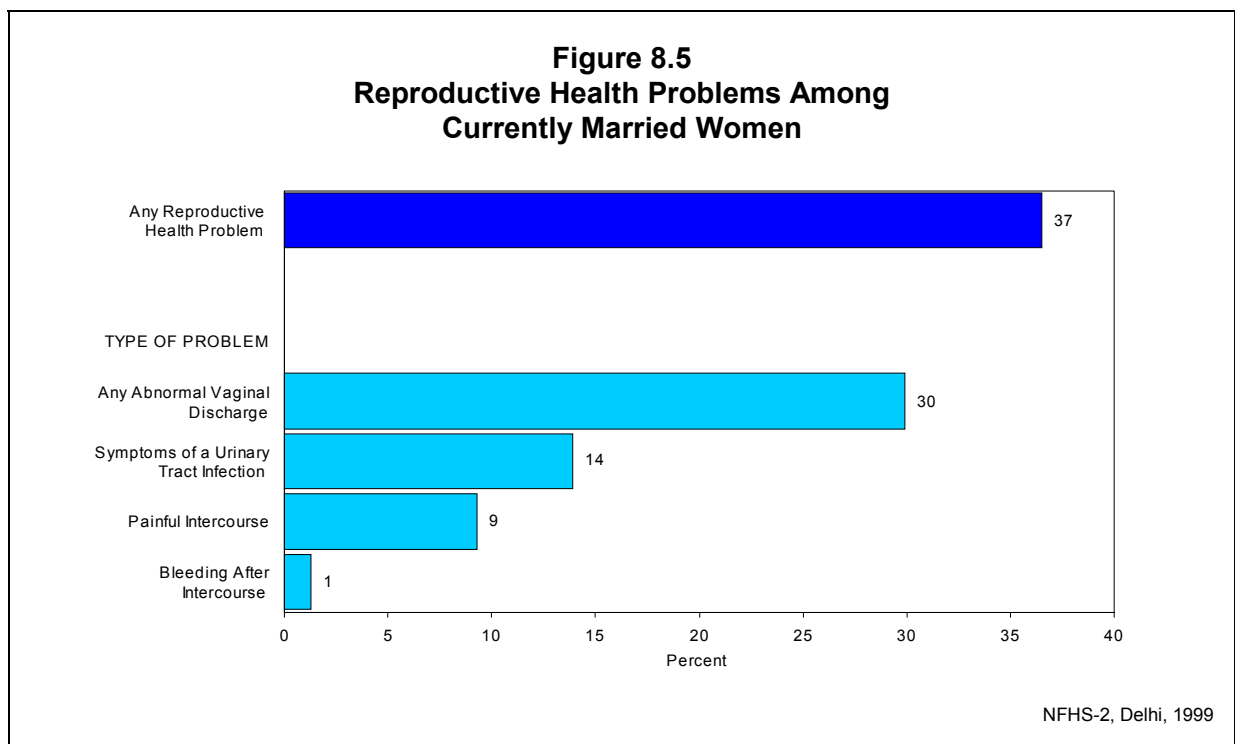


Table 8.12 Symptoms of reproductive health problems

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, Delhi, 1999

Background characteristic	Ever-married women								Number of ever-married women	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 ¹ (ever)	Any reproductive health problem	Number of currently married women
		Itching or irritation	Bad odour	Severe lower abdominal pain ¹	Fever	Other problem							
Age													
15-19	32.1	17.7	11.2	25.6	6.3	1.6	19.6	38.8	62	17.6	5.2	48.5	62
20-24	29.6	13.5	9.4	21.4	7.7	3.0	12.0	32.7	387	13.7	2.1	37.1	384
25-29	31.4	12.9	10.7	22.3	7.6	2.6	15.4	36.4	504	12.4	0.8	39.3	497
30-34	34.3	17.8	13.3	21.0	10.5	3.9	15.3	37.2	483	9.2	1.2	39.8	475
35-39	29.7	15.5	10.7	16.4	7.3	3.4	13.8	33.8	466	7.3	0.7	36.8	440
40-44	25.6	14.3	8.8	14.4	7.7	3.3	11.6	29.7	339	4.1	1.3	30.4	312
45-49	17.2	8.8	6.8	10.9	4.2	0.9	9.6	22.7	237	3.0	1.0	25.6	203
Residence													
Urban	29.0	14.4	10.4	18.7	7.9	2.7	13.6	33.1	2,282	9.3	1.2	36.2	2,178
Rural	32.6	14.1	9.9	18.9	6.8	5.9	13.1	35.7	195	9.0	1.6	39.1	194
Education													
Illiterate	33.8	15.3	13.8	22.7	10.6	3.7	13.4	36.5	721	11.4	0.9	40.5	678
Literate, < middle school complete	32.9	18.3	11.2	21.1	9.9	4.0	18.2	39.2	378	9.2	2.2	43.3	357
Middle school complete	33.8	16.0	11.1	21.1	9.7	4.9	18.7	39.2	284	13.0	2.3	43.3	273
High school complete and above	23.8	12.0	7.7	14.6	4.7	1.6	10.8	27.7	1,093	6.9	0.9	29.9	1,064
Religion													
Hindu	29.1	14.1	10.1	18.7	7.6	2.9	13.9	33.3	2,106	9.6	1.2	36.5	2,017
Muslim	37.5	21.9	15.9	21.8	13.4	5.1	15.0	41.5	199	9.4	2.1	44.5	191
Sikh	25.0	9.5	8.4	18.2	3.4	0.8	9.4	29.3	116	7.0	0.9	31.2	112
Other	13.7	9.8	6.0	7.8	4.0	1.9	6.1	13.7	50	(2.1)	(0.0)	(16.8)	47
Caste/tribe													
Scheduled caste	37.7	17.2	14.9	27.1	11.6	4.4	16.0	40.6	451	16.1	2.8	45.2	432
Other backward class	32.9	15.7	12.2	20.0	9.6	2.9	15.5	37.0	385	9.1	0.5	40.5	360
Other ³	25.8	13.3	8.7	15.8	6.2	2.7	12.2	30.1	1,616	7.2	1.0	32.8	1,556

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, Delhi, 1999

Background characteristic	Ever-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	Currently married women				
	Any abnormal vaginal discharge	Itching or irritation	Bad odour	Severe lower abdominal pain ¹	Fever	Other problem			Number of ever-married women	Painful intercourse (often)	Bleeding after intercourse (ever) ¹	Any reproductive health problem	Number of currently married women
Standard of living index													
Low	56.5	31.7	24.5	45.9	19.8	4.5	21.0	59.5	63	18.2	0.0	64.5	58
Medium	38.4	18.5	13.6	24.7	12.2	5.1	17.1	42.0	695	12.9	2.0	46.7	660
High	24.8	12.2	8.7	15.4	5.6	2.2	12.0	29.1	1,638	7.5	1.0	31.6	1,577
Work status													
Working in family farm/business	42.0	21.5	18.1	25.0	12.5	2.2	7.8	42.0	88	14.8	3.7	49.2	79
Employed by someone else	27.4	13.3	8.1	17.1	8.2	3.7	13.3	30.4	331	8.7	1.1	32.7	287
Self-employed	35.0	16.3	9.2	24.8	10.2	2.0	20.3	41.1	97	11.1	2.1	45.5	90
Not worked in past 12 months	28.7	14.1	10.5	18.4	7.4	3.0	13.5	33.0	1,960	9.0	1.1	36.1	1,916
Number of children ever born													
0	25.6	11.3	10.4	19.6	6.9	1.5	14.8	30.1	200	14.1	1.6	34.6	198
1	24.4	11.1	6.5	17.1	4.9	2.1	10.8	29.3	368	10.4	1.4	32.6	356
2-3	29.1	14.0	10.5	17.9	7.0	2.7	12.7	32.5	1,204	7.8	0.9	35.2	1,157
4-5	30.2	16.0	10.9	18.7	9.0	3.7	16.0	35.4	527	8.7	1.1	38.9	500
6+	41.3	22.0	16.5	26.0	16.5	6.3	16.3	44.6	178	12.9	3.1	48.6	163
All ever-married women	29.2	14.4	10.4	18.7	7.8	3.0	13.6	33.3	2,477	NA	NA	NA	NA
All currently married women	29.9	14.7	10.7	19.1	7.9	3.1	13.9	34.0	2,372	9.3	1.3	36.5	2,372

Note: Total includes small numbers of scheduled-tribe women and women with missing information on education, religion, caste/tribe, the standard of living index, and work status, who are not shown separately.
NA: Not applicable
() Based on 25-49 unweighted cases
¹ Not related to menstruation
² Includes pain or burning while urinating or more frequent or difficult urination
³ Not belonging to a scheduled caste, scheduled tribe, or other backward class

women than among Hindu women. By caste/tribe, the prevalence of reproductive health problems is somewhat higher among scheduled-caste women and women in other backward classes than among women who do not belong to a scheduled caste, scheduled tribe, or other backward class. By standard of living index, prevalence ranges from 32 percent among women living in households with a high standard of living to 65 percent among women living in households with a low standard of living. Prevalence is somewhat higher among women who are working in a family farm/business or who are self-employed than among women who work for someone else or who are not employed. Prevalence is higher among women of parity 6+ than among women of lower parities.

Among women who report any reproductive health problems, 50 percent have not seen anyone for advice or treatment (Table 8.13). Overall, 74 percent of women who obtained advice or treatment were seen by someone in the private medical sector. Among women who sought advice or treatment, 62 percent saw a private doctor and 25 percent saw a government doctor.

The NFHS–2 results for Delhi show that although almost 4 in every 10 currently married women report at least one reproductive health problem that could be symptomatic of a more serious reproductive tract infection, one-half of them bear the problems silently without seeking advice or treatment. 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 Delhi.

Table 8.13 Treatment of reproductive health problems			
Among women with a reproductive health problem, percentage who sought advice or treatment from specific providers by residence, Delhi, 1999			
Provider	Urban	Rural	Total
Public medical sector	14.4	13.8	14.4
Government doctor	12.6	12.5	12.6
Public health nurse	1.4	1.4	1.4
ANM/LHV	0.2	0.0	0.2
Male MPW/supervisor	0.1	0.0	0.1
Anganwadi worker	0.1	0.0	0.1
Private medical sector	38.0	31.5	37.4
Private doctor	31.7	24.7	31.1
Private nurse	3.5	1.4	3.3
Compounder/pharmacist	1.3	0.0	1.2
Vaidya/hakim/homeopath	1.6	0.0	1.5
Dai (TBA)	2.8	8.2	3.3
Traditional healer	0.1	0.0	0.1
Other	0.5	0.0	0.4
None	49.1	54.6	49.5
Number of women	805	75	880
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; TBA: Traditional birth attendant			