CHAPTER 6

MORTALITY, MORBIDITY, AND IMMUNIZATION

This chapter presents mortality rates, particularly for infants and young children, and data on the prevalence of certain diseases (morbidity). It also presents information on the prevention and treatment of diseases, especially those that are life-threatening to young children. The chapter ends with data on women's knowledge of AIDS. This type of information is relevant both to an assessment of the demographic situation and to the design of appropriate health policies and programmes. Mortality estimates are also useful for projecting the future size of the population. Detailed information on mortality and morbidity (by demographic and socioeconomic characteristics) can be used to identify population groups that are at high risk and in need of health services. This chapter primarily presents information on child health, while other chapters of this report, particularly Chapter 8, present information on maternal and reproductive health.

The Government of India has repeatedly taken steps to strengthen maternal and child health services in India, starting during the First and Second Five-Year Plans (1951–56 and 1956–61) under the Ministry of Health, and continuing with the Minimum Needs Programme initiated during the Fifth Five-Year Plan (1974–79). More recently, efforts to improve maternal and child health have been enhanced by activities of the Family Welfare Programme and by the introduction of the Child Survival and Safe Motherhood Programme (Ministry of Health and Family Welfare, 1992). The Ministry of Health and Family Welfare has also sponsored special projects under the Maternal and Child Health Programme, including the Oral Rehydration Therapy (ORT) programme, the establishment of Regional Institutes of Maternal and Child Health in states where infant mortality rates are high, the Universal Immunization Programme, and the Maternal and Child Health Supplemental Programme within the Postpartum Programme (Ministry of Health and Family Welfare, 1992). These programmes are now integrated into the Reproductive and Child Health Programme that was launched in 1996.

Maternal and child health services in rural areas of India are delivered mainly by government-run Primary Health Centres and sub-centres. In urban areas, such services are available mainly through government or municipal hospitals, urban health posts, hospitals and nursing homes operated by nongovernmental organizations (NGOs), and private nursing homes and maternity homes

The second National Family Health Survey (NFHS-2) includes questions on mortality and morbidity on both the Household Questionnaire and the Woman's Questionnaire. The Household Questionnaire has questions on individuals in the household suffering from asthma, tuberculosis, jaundice, and malaria, plus questions on deaths occurring to usual residents of the household during the two years preceding the survey. The Woman's Questionnaire collects information on the survival status of all births and the age at death of children who died. The Woman's Questionnaire also contains questions on child immunization coverage and sources; vitamin A supplementation for children; prevalence of acute respiratory infections, fever, and diarrhoea among children and the treatment of these illnesses; and mothers' knowledge of oral rehydration therapy.

The information on child health and health-care practices was collected from mothers for children born since 1 January 1995. If a woman had more than two live births during that period, the information was collected for only the two most recent births. The information on child health presented in this chapter pertains to children born during the three years preceding the survey.

6.1 Crude Death Rates and Age-Specific Death Rates

Table 6.1 shows crude death rates (CDR) and age-specific death rates by sex for the usual resident (*de jure*) population of Uttar Pradesh from NFHS-2 and the Sample Registration System (SRS). The table also presents crude death rates and age-specific death rates from NFHS-1 for the total population (both sexes combined). The SRS death rates are based on deaths to the usual resident population in 1997. The NFHS-1 and NFHS-2 death rates are based on the average annual number of deaths occurring to usual residents of the household during the two-year period preceding the survey (approximately 1991–92 for NFHS-1 and 1997–98 for NFHS-2). The denominators for the NFHS-2 death rates are obtained by projecting the number of usual residents at the time of the survey backwards to the midpoint of the time period on the basis of the intercensal population growth rate in the state. The rural intercensal growth rate is applied to all rural age and sex groups and the urban intercensal growth rate is applied to all urban age and sex groups.

Questions on the number of deaths occurring to usual residents in each household during a particular time period have been included in demographic surveys in many countries and have often resulted in a substantial underreporting of deaths. The Sample Registration System (SRS), maintained by the Office of the Registrar General of India, provides a useful comparison (Office of the Registrar General, 1999a).

Table 6.1 shows an estimated average annual CDR for Uttar Pradesh of 10.2 deaths per 1,000 population based on NFHS-2 data (covering roughly 1997–98), almost the same as the 1997 SRS rate of 10.3. This suggests that the completeness of reporting of deaths in NFHS-2 is about the same as in the SRS. NFHS-2 age-specific death rates are lower than the SRS rates below age 15 and slightly higher than the SRS rates at ages 60 and above.

The NFHS-2 CDR estimate of 10.2 is slightly higher than the all-India NFHS-2 rate of 9.7 and somewhat lower than the corresponding NFHS-1 estimate of 11.9 for Uttar Pradesh (covering roughly 1991–92). Between NFHS-1 and NFHS-2, death rates declined substantially in the youngest age group (less than five years old), increased at ages 50–59, and did not change much in the other age groups.

In most countries, male death rates are higher than female death rates at nearly all ages. South Asia generally has been an exception in this respect, with higher death rates for females over much of the age span (Tabutin and Willems, 1995; Preston, 1989; Ghosh, 1987). In Uttar Pradesh, according to both NFHS-2 and the SRS, death rates are higher for females than for males among children under age 15. The SRS also estimates the female death rate to be higher than the male death rate at ages 15–49, but the difference is very small. At older ages (50 and above), males have somewhat higher death rates than females according to both NFHS-2 and the SRS.

Table 6.1 Age-specific death rates and crude death rates

Age-specific death rates and crude death rates (CDR) by sex from NFHS-1, NFHS-2, and the SRS, Uttar Pradesh

	NFHS-1 (1991–92)	NFHS-2 (1997–98)			SRS (1997)		
Age	Total	Male	Female	Total	Male	Female	Total
< 5	31.6	21.1	23.7	22.4	27.3	35.3	31.1
5–14	2.5	1.1	2.4	1.7	1.8	2.3	2.0
15–49	3.9	4.5	3.2	3.9	3.5	3.7	3.5
50–59	8.5	16.5	12.2	14.4	15.9	12.7	14.3
60+	54.6	54.5	54.1	54.3	54.6	43.6	49.6
CDR	11.9	10.4	10.1	10.2	10.0	10.6	10.3

Note: Age-specific death rates and crude death rates by sex from NFHS-1 and NFHS-2 are based on the annual number of deaths reported for the *de jure* population during the two years preceding the survey. The SRS rates are also *de jure*, based on deaths during 1997. Rates are specified on a per-thousand basis.
Source for SRS: Office of the Registrar General, 1999b

6.2 Infant and Child Mortality

Infant and child mortality rates reflect a country's level of socioeconomic development and quality of life and are used for monitoring and evaluating population and health programmes and policies. NFHS-2 asked all ever-married women age 15–49 to provide a complete history of their births including, for each live birth, the sex, month and year of birth, survival status, and age at the time of the survey or age at death. Age at death was recorded in days for children dying in the first month of life, in months for other children dying before their second birthday, and in years for children dying at later ages. This information was used to calculate the following direct estimates of infant and child mortality[1]:

Neonatal mortality: The probability of dying in the first month of life
Postneonatal mortality: The probability of dying after the first month of life but before the first birthday
Infant mortality ($_1q_0$): The probability of dying before the first birthday
Child mortality ($_4q_1$): The probability of dying between the first and fifth birthdays
Under-five mortality ($_5q_0$): The probability of dying before the fifth birthday

Assessment of Data Quality

The reliability of mortality estimates calculated from retrospective birth histories depends upon the completeness with which deaths of children are reported and the extent to which birth dates and ages at death are accurately reported and recorded. Estimated rates of infant and child mortality are subject to both sampling and nonsampling errors. While sampling errors for various

[1]A detailed description of the method for calculating the probabilities presented here is given in Rutstein (1984). The mortality estimates are not rates, but are true probabilities, calculated according to the conventional life-table approach. Deaths and exposure in any calendar period are first tabulated for the age intervals 0, 1–2, 3–5, 6–11, 12–23, 24–35, 36–47, and 48–59 months. Then age-interval-specific probabilities of survival are calculated. Finally, probabilities of mortality for larger age segments are produced by multiplying the relevant age-interval survival probabilities together and subtracting the product from one:

$$_nq_x = 1 - \prod_i (1 - q_i)$$

mortality estimates are provided in Appendix A, this section describes the results of various checks for nonsampling errors—in particular, underreporting of deaths in early childhood (which would result in an underestimate of mortality) and misreporting of the date of birth or age at death (which could distort the age pattern of under-five mortality). Both problems are likely to be more pronounced for children born further in the past than for children born recently. Underreporting of infant deaths is usually most serious for deaths that occur very early in infancy. If deaths in the early neonatal period are selectively underreported, there will be an abnormally low ratio of deaths under seven days to all neonatal deaths and an abnormally low ratio of neonatal to infant deaths. Changes in these ratios over time can be examined to test the hypothesis that underreporting of early infant deaths is more common for births that occurred further in the past than for births that occurred more recently. Failure to report deaths will result in mortality figures that are too low and if underreporting is more severe for children born further in the past than children born recently, any decline in mortality will tend to be understated.

Results from Table B.5 (Appendix B) suggest that early neonatal deaths have not been seriously underreported in the Uttar Pradesh NFHS-2, since the ratios of deaths under seven days to all neonatal deaths are consistently high (between 66 and 74 percent) for the different time periods preceding the survey (a ratio of less than 25 percent is often used as a guideline to indicate underreporting of early neonatal deaths). The ratios of infant deaths that occurred during the neonatal period (Appendix Table B.6) are also consistently high (between 63 and 68 percent) for the different time periods preceding the survey.

Another problem inherent in most retrospective surveys is heaping of the age at death on certain digits, e.g., 6, 12, and 18 months. If the net result of age misreporting is the transference of deaths between age segments for which the rates are calculated, misreporting of the age at death will bias estimates of the age pattern of mortality. For instance, an overestimate of child mortality relative to infant mortality may result if children dying during the first year of life are reported as having died at age one year or older. Thus, heaping at 12 months can bias the mortality estimates because a certain fraction of these deaths may have actually occurred during infancy (i.e., at ages 0–11 months). In such cases, heaping would bias infant mortality (${}_1q_0$) downward and child mortality (${}_4q_1$) upward.

In the Uttar Pradesh NFHS-2, there appears to be a preference for reporting age at death at 3, 6, 8, 10, 15, and 20 days (Table B.5 in Appendix B). An examination of the distribution of deaths under age two years during the 15 years preceding the survey by month of death (Appendix Table B.6) indicates a substantial heaping of deaths at 6, 12, and 18 months of age. The amount of heaping on 12 months is particularly pronounced, despite the strong emphasis on this problem during the training of interviewers for the NFHS-2 fieldwork[2]. Nevertheless, even if one-third of the deaths reported at age 12 months actually occurred at less than 12 months of age, the infant mortality rate for the five years before the survey would be underestimated by less than 3 percent.

An examination of the distribution of births and deaths since 1988 (Table B.4 in Appendix B) suggests that there may be some underreporting of deaths in the most recent five-year period. The proportion of deaths to births decreases from 14 percent in 1988 to 8 percent in 1998. Some of this decrease undoubtedly reflects a real reduction in mortality during that period

[2]Interviewers were trained to probe for the exact number of months lived by the child if the age at death was reported as 'one year'.

and some reflects the fact that younger children have had less exposure to the risk of mortality. However, the sharp disjuncture in the proportion of deaths between 1994 and 1995 may be due partly to underreporting of deaths relative to births during the most recent period.

It is seldom possible to establish mortality levels with confidence for a period of more than 15 years before a survey. Even within the recent 15-year period considered here, apparent trends in mortality rates should be interpreted with caution for several reasons. First, there may be differences in the completeness of death reporting related to the length of time before the survey. Second, the accuracy of reports of age at death and of date of birth may deteriorate with time. Third, sampling variability of mortality rates tends to be high, especially for groups with relatively few births. Fourth, mortality rates are truncated as they go back in time because women currently age 50 or above who were bearing children during earlier periods were not included in the survey. This truncation affects mortality trends, in particular. For example, for the period 10–14 years before the survey, the rates do not include any births for women age 40–49 since these women were over age 50 at the time of the survey and were not eligible to be interviewed. Since these excluded births to older women were likely to be at a somewhat greater risk of dying than births to younger women, the mortality rates for the period may be slightly underestimated. Estimates for more recent periods are less affected by truncation bias since fewer older women are excluded. The extent of this bias depends on the proportion of births omitted. Table 4.18 (Chapter 4) shows that only 6 percent of the children born in the three years before the survey were born to women age 35 and above. Given the small proportion of births excluded, selection bias for infant and child mortality statistics as far back as 15 years before the survey should be negligible.

Levels, Trends, and Differentials in Infant and Child Mortality

Table 6.2 and Figure 6.1 present various measures of infant and child mortality by residence for the three five-year periods preceding the survey. Infant mortality in Uttar Pradesh declined from 116 deaths per 1,000 live births during 1984–88 (10–14 years before the survey) to 87 deaths per 1,000 live births during 1994–98 (0–4 years before the survey), an average rate of decline of nearly 3 infant deaths per 1,000 live births per year. A comparison of the infant mortality rate for the period 0–4 years before NFHS-2 (87) with the infant mortality rate 0–4 years before NFHS-1 (100) suggests a somewhat slower decline of 2.2 infant deaths per 1,000 live births over the six years between the two surveys.

All other measures of infant and child mortality presented in Table 6.2 have also declined during the past 15 years. All of the measures declined by 24–28 percent, except for the child mortality rate, which declined by 35 percent. Despite the overall decline in the infant and child mortality rates, however, more than 1 in every 12 children born during the five years before NFHS-2 died within the first year of life, and 1 in every 8 children died before reaching age five. Moreover, according to the NFHS-2 estimates, the infant mortality rate in Uttar Pradesh (87) is much higher than the national IMR of 68 and it is higher than the IMR in any other state except Meghalaya. Clearly, child survival programmes in Uttar Pradesh need to be intensified to achieve further reductions in infant and child mortality.

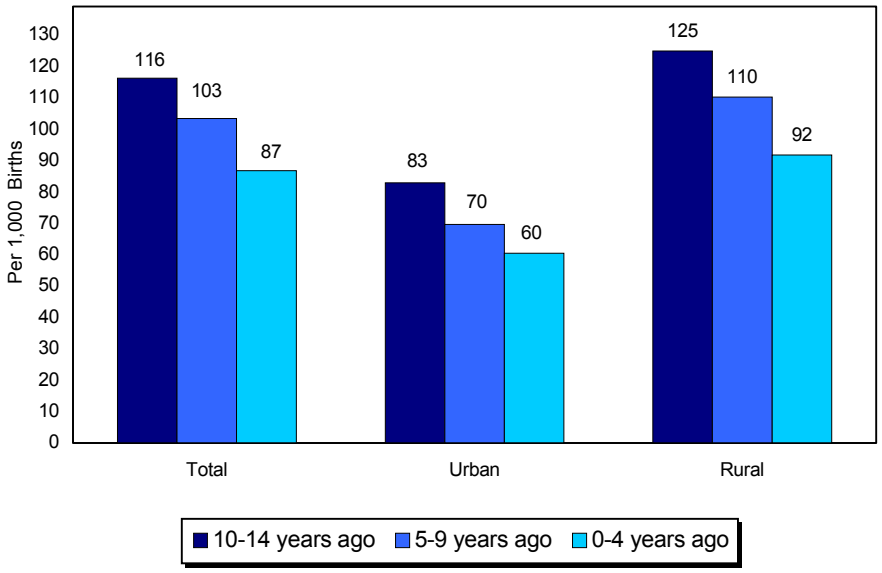
Table 6.2 Infant and child mortality

Neonatal, postneonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey by residence, Uttar Pradesh, 1998–99

Years preceding the survey	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
URBAN					
0–4	38.3	22.1	60.4	27.1	85.8
5–9	48.2	21.5	69.6	27.5	95.3
10–14	49.5	33.3	82.8	36.9	116.7
RURAL					
0–4	56.6	35.2	91.7	41.6	129.5
5–9	74.2	36.0	110.2	45.5	150.7
10–14	78.5	46.5	124.9	67.5	184.0
TOTAL					
0–4	53.6	33.1	86.7	39.2	122.5
5–9	69.8	33.5	103.3	42.0	141.0
10–14	72.5	43.7	116.2	60.7	169.9

Note: The first five-year period preceding the survey does not include the month in which the interview took place. Rates are specified on a per-thousand basis. See text for definition of rates.
[1]Computed as the difference between the infant and neonatal mortality rates

Figure 6.1
Infant Mortality Rates for Five-Year Periods by Residence



Note: Rates are for five-year periods preceding the survey

NFHS-2, Uttar Pradesh, 1998–99

Rural mortality rates are considerably higher than urban mortality rates. For example, in the five years before the survey, both infant and child mortality rates are slightly more than 50 percent higher in rural areas than in urban areas. During the period covered in Table 6.2, all mortality rates declined steadily in rural Uttar Pradesh, and all mortality rates except the postneonatal mortality rate declined steadily in urban areas. The infant mortality rate declined by 27 percent in both urban and rural areas between 1984–88 and 1994–98 and the under-five mortality rate declined slightly faster in rural areas (30 percent) than in urban areas (26 percent). A comparison with corresponding figures from NFHS-1 shows a decline in all rural estimates and most urban estimates of infant and child mortality rates.

The estimated NFHS-2 infant mortality rate of 87 deaths per 1,000 live births during 1994–98 is almost identical to the SRS value of 86 deaths per 1,000 live births averaged for the period 1994–98. The NFHS-2 and average SRS estimates of the infant mortality rate for rural areas over the same period are also in close agreement (92 deaths per 1,000 live births from NFHS-2, compared with 89 deaths per 1,000 live births from the SRS). The NFHS-2 estimate for urban areas (60 deaths per 1,000 live births) is somewhat lower than the average SRS estimate for urban areas (66 deaths per 1,000 live births). However, the difference between NFHS–2 and the average SRS infant mortality rates for urban areas is not statistically significant because of the relatively small urban sample (the lower and upper confidence limits for the NFHS-2 estimate, shown in Appendix Table A.2, are 46 and 74, respectively).

Socioeconomic Differentials in Infant and Child Mortality

The probability of dying in early childhood is higher in some population groups than in others. Table 6.3 presents differentials in infant and child mortality rates for the 10-year period preceding the survey by selected background characteristics. Children in rural areas of Uttar Pradesh experience a 55 percent higher probability of dying before their fifth birthday than urban children, only slightly more than the 51 percent differential in the most recent five-year period shown in Table 6.2. This comparison confirms the finding in Table 6.2 that the under-five mortality rate has been falling at about the same rate in rural areas and urban areas.

The infant and child mortality rates are highest in the Central Region of Uttar Pradesh and the Bundelkhand Region, followed by the Eastern Region and the Western Region. All of the mortality rates are considerably lower in the Hill Region than in any other region.

The overall infant mortality rate declines sharply with increasing education of mothers, from a high of 105 deaths per 1,000 live births for illiterate mothers to a low of 45 deaths per 1,000 live births for mothers who have at least completed high school. Other mortality indicators shown in the table vary similarly with the education of the mother.

All the infant and child mortality rates are much higher for Hindus than for Muslims. The infant mortality rate is 32 percent higher and the child mortality rate is 19 percent higher for Hindu children than for Muslim children. These findings are consistent with those of NFHS-1, which also recorded much higher rates of infant and child mortality for Hindus than Muslims in Uttar Pradesh. Mortality differentials by religion presumably reflect influences other than religion alone (for example, a larger proportion of Muslims than Hindus in Uttar Pradesh live in urban areas, where mortality rates are generally low). This is confirmed by a study based on

Table 6.3 Infant and child mortality by background characteristics

Neonatal, postneonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey by selected background characteristics, Uttar Pradesh, 1998–99

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Residence					
Urban	43.6	21.7	65.3	27.3	90.8
Rural	65.7	35.6	101.3	43.5	140.4
Region					
Hill	31.0	22.6	53.6	15.0	67.8
Western	52.2	29.5	81.8	29.4	108.8
Central	77.5	44.9	122.4	60.3	175.4
Eastern	66.2	31.6	97.8	43.9	137.4
Bundelkhand	73.9	44.3	118.3	55.1	166.8
Mother's education					
Illiterate	68.0	36.8	104.7	46.4	146.3
Literate, < middle school complete	49.0	25.0	74.0	32.8	104.4
Middle school complete	49.1	27.6	76.7	18.4	93.7
High school complete and above	31.0	14.2	45.2	5.6	50.5
Religion					
Hindu	64.7	35.4	100.2	41.8	137.8
Muslim	50.8	25.1	75.9	35.2	108.4
Caste/tribe					
Scheduled caste	69.7	40.3	110.0	54.1	158.1
Scheduled tribe	(51.1)	(32.1)	(83.3)	(45.0)	(124.5)
Other backward class	71.0	34.7	105.7	40.8	142.2
Other	54.1	28.2	82.3	32.5	112.1
Standard of living index					
Low	67.9	44.3	112.2	56.9	162.7
Medium	63.1	29.9	92.9	38.3	127.7
High	45.6	19.9	65.5	11.0	75.8
Total	62.1	33.3	95.4	40.6	132.1

Note: The 10-year period preceding the survey does not include the month in which the interview took place. Rates are specified on a per-thousand basis. See text for definition of rates.
( ) Based on 250–499 children surviving to the beginning of the age interval
[1]Computed as the difference between the infant and neonatal mortality rates

NFHS-1 data, which found that the difference in infant and child mortality rates between Hindu and Muslim children is reduced considerably when other demographic and socioeconomic variables are controlled statistically (Pandey et al., 1998).

Children of women belonging to scheduled castes and other backward classes have higher rates of infant mortality than children of women belonging to scheduled tribes or 'other' women. All indicators of infant and child mortality decline substantially with increases in the household standard of living. For example, for children in households with a high standard of living the under-five mortality rate is 76 deaths per 1,000 live births; the corresponding rate for children in households with a low standard of living (163) is more than twice as high. The child mortality rate is more than five times higher in households with a low standard of living than in households with a high standard of living.

Demographic Differentials in Infant and Child Mortality

This section examines differentials in early childhood mortality by demographic characteristics of the child and the mother. Table 6.4 and Figure 6.2 present various indicators of infant and child mortality for the 10 years preceding the survey by sex of the child, mother's age at childbirth, birth order, length of the previous birth interval, medical care received by the mother during pregnancy, delivery, and the early postpartum period, and the size of the child at the time of birth.

Table 6.4 shows that the mortality rate below age five years is considerably higher for girls than for boys. Excess female mortality occurs in every age group after the neonatal period. The neonatal mortality rate (which largely reflects mortality due to congenital conditions) is slightly higher for boys (65 deaths per 1,000 live births) than for girls (59 deaths per 1,000 live births). However, the postneonatal mortality rate is slightly higher for girls and the child mortality rate (${}_4q_1$) is almost twice as high for girls (53 deaths per 1,000) as for boys (29 deaths per 1,000). This reversal of sex differentials in mortality with increasing age has been observed in other studies in South Asia and is thought to reflect the relative medical and nutritional neglect of the girl child (Das Gupta, 1987; Basu, 1989).

For both social and biological reasons, infant mortality rates and child mortality rates often exhibit a U-shaped pattern with respect to the mother's age at childbirth, with children of the youngest and oldest mothers experiencing higher mortality rates than children whose mothers are in their prime reproductive ages. Children born to young mothers are more likely to be of low birth weight, which is an important factor contributing to their higher neonatal mortality rate. Similarly, children born to mothers above age 30 are at a relatively high risk of experiencing congenital problems. Uttar Pradesh exhibits the expected U-shaped pattern of mortality by mother's age, with higher infant mortality among children of mothers under age 20 (123 deaths per 1,000 live births) and age 30–39 (97 deaths per 1,000) than among children of mothers age 20–29 (83 deaths per 1,000). Similar patterns are observed for neonatal and postneonatal mortality rates. The U-shaped relationship is not observed in the case of child mortality. Mortality rates among children age 1–4 years increase slightly with mother's age at childbirth.

Birth order also tends to have a U-shaped relationship to infant deaths, with first births and high-order births having elevated mortality rates. In Table 6.4, birth order shows the expected U-shaped pattern for neonatal, postneonatal, infant, and under-five mortality rates. This association is likely to reflect not only the effect of birth order but also the effect of the age of the mother at childbirth. The child mortality rate (age 1–4 years) increases steadily with birth order, as with mother's age at childbirth. The increase in the child mortality rate with birth order may reflect a more intense competition faced by higher birth-order children for the caregiver's time, for medical resources, and for nutritious food once children are weaned. It is also likely that higher birth-order children are disproportionately from lower socioeconomic groups, in which mortality tends to be higher.

The timing of successive births has a powerful effect on the survival chances of children in Uttar Pradesh. All the mortality rates decrease sharply as the length of the previous birth interval increases, and all the measures are especially high for children born less than 24 months after a previous birth. The infant mortality rate is three times as high for children with a previous birth interval of less than 24 months as for children with a previous interval of 48 months or

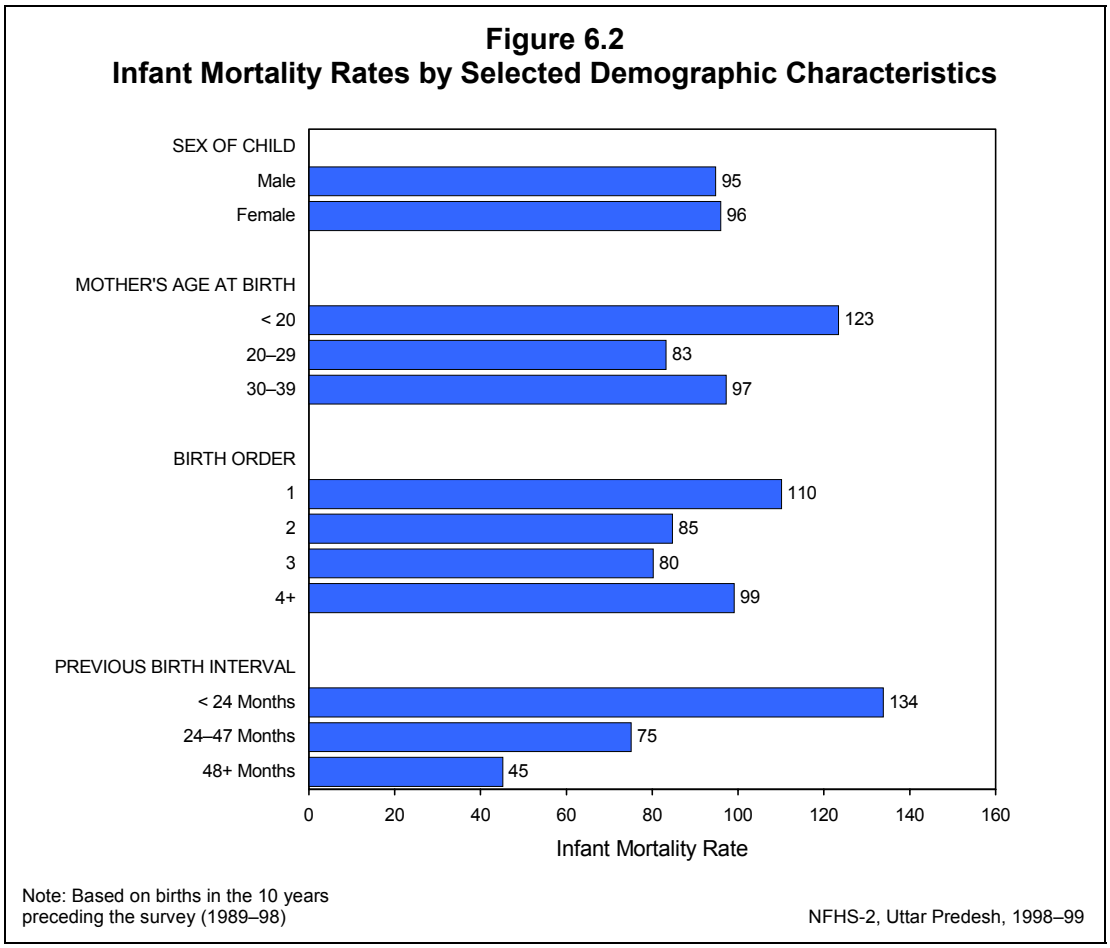
Table 6.4 Infant and child mortality by demographic characteristics

Neonatal, postneonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey by selected demographic characteristics, Uttar Pradesh, 1998–99

Demographic characteristic	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Sex of child					
Male	64.5	30.3	94.8	28.8	120.9
Female	59.4	36.5	96.0	53.4	144.2
Mother's age at birth					
< 20	85.4	38.0	123.4	37.2	156.0
20–29	52.2	31.0	83.2	41.0	120.7
30–39	63.2	34.0	97.2	42.2	135.3
Birth order					
1	77.3	32.9	110.1	24.7	132.1
2	57.8	26.9	84.7	31.6	113.6
3	44.7	35.6	80.2	49.0	125.3
4+	63.5	35.6	99.1	49.2	143.4
Previous birth interval					
< 24 months	86.1	47.7	133.8	61.5	187.0
24–47 months	47.2	27.9	75.1	40.9	112.9
48+ months	27.5	17.7	45.2	14.9	59.5
Medical care[2]					
No care	56.5	41.7	98.2	U	U
One or two types of care	35.8	26.6	62.4	U	U
Birth size[3]					
Large	(44.6)	(39.1)	(83.7)	U	U
Average	38.2	30.7	68.9	U	U
Small	64.7	41.5	106.2	U	U
Very small	(98.9)	(43.5)	(142.3)	U	U

Note: The period preceding the survey does not include the month in which the interview took place. Rates are specified on a per-thousand basis. See text for definition of rates.
U: Not available
( ) Based on 250–499 children surviving to the beginning of the age interval
[1]Computed as the difference between the infant and neonatal mortality rates
[2]Medical care includes (i) antenatal care received from a health worker, (ii) delivery assistance given by a doctor, nurse, trained midwife, or other health professional, and (iii) postnatal care received in a health facility or at home within two months of delivery; rates are for the three-year period preceding the survey.
[3] Birth size as reported by mother; rates are for the three-year period preceding the survey.

more (134 deaths compared with 45 deaths per 1,000 live births). The previous birth interval has a similar effect on all other indicators of infant and child mortality shown in Table 6.4. Although the length of the previous birth interval is likely to affect mortality risks directly, a substantial portion of the association between birth intervals and mortality risks may reflect the effect of factors that are correlated with birth intervals. For example, shorter birth intervals are likely to occur in large families, and large families tend to come from lower socioeconomic groups and are more likely than other families to live in rural areas where medical facilities and other survival-enhancing resources are less readily available. Nevertheless, multivariate analyses of birth-interval effects and child survival commonly find an association between short birth intervals (less than 24 months) and increased mortality even after controlling for other demographic and socioeconomic characteristics (Retherford et al., 1989).



Antenatal, delivery, and postnatal care are usually associated with lower infant mortality. Table 6.4 shows that children of women who receive one or two types of care have considerably lower risk of neonatal and postneonatal mortality than those who did not receive any care.

Another important determinant of the survival chances of children is the baby's weight at the time of birth. Many studies have found that low birth weight babies (under 2,500 grams) have a substantially increased risk of mortality. Because most babies in India are not weighed at the time of birth, in addition to birth weight, mothers were asked whether babies born during the three years preceding the survey were "large, average, small, or very small" at birth. The last panel in Table 6.4 shows neonatal, postneonatal, and infant mortality rates by birth size. Children who are perceived by their mothers to be smaller than average at birth experience much higher mortality risks than children perceived to be of average size or larger. Mortality among children perceived to be very small is markedly higher.

6.3 Morbidity

There is only limited experience in collecting morbidity data from population-based demographic sample surveys. NFHS-1 collected data on five major morbidity conditions—partial and complete blindness, tuberculosis, leprosy, physical impairment of the limbs, and malaria—among all persons in the sample households. The results were found to be generally plausible and useful. For this reason, it was decided to include similar morbidity questions in NFHS-2. In NFHS-2, questions on blindness, leprosy, and physical impairment of the limbs were

replaced by questions on asthma and jaundice. The questions on tuberculosis and malaria were retained, and a question on medical treatment of tuberculosis was added to get a better measure of the prevalence of tuberculosis. The household head or other knowledgeable adult in the household reported on morbidity for all household members, and no effort was made to do clinical tests for any of the disease conditions.

Table 6.5 shows the prevalence of asthma, tuberculosis, jaundice, and malaria in the household population by age, sex, and place of residence. There are several reasons why the results of NFHS-2 may understate the prevalence of these conditions. Respondents may underreport diseases carrying a stigma, such as tuberculosis due to intentional concealment. Underestimation may also occur because the household respondents are unaware that they or other members of the household have the condition. It is also possible that the respondents know that a household member suffers from a given condition but fail to report it because they do not recognize the term used by the enumerator to describe the condition. On the other hand, a factor contributing to a possible overestimation of prevalence without clinical verification is that some other disease can be mistaken by the respondent as one of the listed diseases; for example, chronic bronchitis may be reported as asthma or tuberculosis, or common flu as malaria.

Asthma

Asthma is a chronic respiratory disease characterized by sudden attacks of laboured breathing, chest constriction, and coughing. There has been a rapid increase in asthma cases in recent years in many parts of the world. In Uttar Pradesh, 2 percent of the population was reported to be suffering from asthma at the time of NFHS-2. The reported level of asthma (1,979 per 100,000 population) in Uttar Pradesh is lower than the level reported for India as a whole (2,468 per 100,000 population). The prevalence of asthma in Uttar Pradesh is considerably higher in rural areas (2,061 per 100,000 population) than in urban areas (1,667 per 100,000 population), and is higher among males (2,179 per 100,000) than among females (1,763 per 100,000). Age differences are marked, with the prevalence of asthma increasing from 285 per 100,000 at age 0–14 to 11,089 per 100,000 at age 60 and over.

Tuberculosis

Tuberculosis, which is also resurgent worldwide, is an infectious disease that affects the lungs and other body tissues. Tuberculosis of the lungs, the most commonly known form, is characterized by coughing up mucus and sputum, fever, weight loss, and chest pain. According to NFHS-2, the overall prevalence of tuberculosis in Uttar Pradesh is 551 per 100,000 population, almost the same as the national estimate of 544. The prevalence of tuberculosis in Uttar Pradesh is about the same level reported in NFHS-1 (560 per 100,000). The prevalence of tuberculosis is higher in rural areas (566 per 100,000) than in urban areas of Uttar Pradesh (490 per 100,000). The prevalence rate is somewhat higher for males (585 per 100,000) than for females (514 per 100,000). The sex differential in the prevalence of tuberculosis is much larger in urban areas than in rural areas. Probable reasons for the higher prevalence of tuberculosis among males than females are that men are more likely than women to come in contact with people who suffer from active tuberculosis and that men in Uttar Pradesh smoke more than women. The prevalence of tuberculosis increases rapidly with age. It is substantially higher among persons age 60 and above (1,527 per 100,000) than among those age 15–59 (782 per 100,000) or age 0–14 (81 per 100,000).

Table 6.5 Morbidity

Number of persons per 100,000 usual household residents suffering from asthma, tuberculosis, jaundice, or malaria by age, sex, and residence, Uttar Pradesh, 1998–99

Age and sex	Number of persons per 100,000 suffering from: Asthma	Tuberculosis[1]	Medically treated tuberculosis	Jaundice during the past 12 months	Malaria during the past 3 months	Number of usual residents
URBAN						
Age						
< 15	339	111	28	920	1,274	4,100
15–59	1,487	565	405	1,077	1,571	6,382
60+	10,748	1,970	1,645	1,346	1,242	726
Sex						
Male	1,841	567	428	969	1,263	5,822
Female	1,479	407	260	1,111	1,633	5,386
Total	1,667	490	347	1,037	1,441	11,208
RURAL						
Age						
< 15	273	74	43	651	3,906	18,279
15–59	2,100	848	677	1,203	4,177	21,194
60+	11,160	1,435	1,126	901	4,685	3,499
Sex						
Male	2,268	589	451	1,185	4,082	22,297
Female	1,837	542	436	683	4,126	20,676
Total	2,061	566	444	943	4,103	42,973
TOTAL						
Age						
< 15	285	81	40	700	3,424	22,379
15–59	1,958	782	614	1,174	3,573	27,576
60+	11,089	1,527	1,216	978	4,093	4,226
Sex						
Male	2,179	585	446	1,140	3,498	28,119
Female	1,763	514	400	772	3,611	26,061
Total	1,979	551	424	963	3,552	54,181

[1]Includes medically treated tuberculosis

Medically treated tuberculosis is expected to give a more reliable measure of the prevalence of active tuberculosis than the measure based on all reported cases considered in the preceding paragraph. As expected, the prevalence of medically treated tuberculosis is considerably lower (424 per 100,000) than the prevalence based on all reported cases (551 per 100,000). Differentials in the prevalence of medically treated tuberculosis by residence, age, and sex are similar to differentials in the prevalence of all reported cases.

Jaundice

Jaundice is characterized by yellowish discolouration of the eyes and skin, fever, liver enlargement, and abdominal pain. NFHS-2 asked household respondents if any member of the household had suffered from jaundice at any time during the 12 months preceding the survey. In Uttar Pradesh, 963 persons per 100,000 population were reported to have suffered from jaundice during the 12 months preceding the survey, considerably lower than the rate of 1,361 for India as

a whole. People living in urban areas are slightly more likely to have suffered from jaundice (1,037 per 100,000) than those living in rural areas (943 per 100,000). Males are 48 percent more likely to have suffered from jaundice than females. Jaundice is the only condition measured that does not increase steadily with age. The prevalence of jaundice is highest for the age group 15–59 (1,174 per 100,000), followed by the age groups 60 years and above (978 per 100,000) and 0–14 (700 per 100,000).

Malaria

Malaria is characterized by recurrent high fever with shivering. NFHS-2 asked household respondents whether any member of their household suffered from malaria any time during the three months preceding the survey. In Uttar Pradesh, 3,552 persons per 100,000 population were reported to have suffered from malaria during the three months preceding the survey, slightly lower than the national rate of 3,697 per 100,000 population. Since the prevalence of malaria is known to vary considerably by season, the NFHS-2 estimates should not be interpreted as representative of the level throughout the year. It is possible to compare this estimate with the NFHS-1 estimate because the months of the year comprising the reference period for the malaria estimates from the two surveys are almost the same. According to the two surveys, the rate of malaria (which was much higher in Uttar Pradesh than in any other state in NFHS-1, at 7,395 per 100,000 population) was cut in half between 1992–93 and 1998–99.

Rural residents are almost three times as likely to suffer from malaria (4,103 per 100,000) as are urban residents (1,441 per 100,000). The reported prevalence of malaria is higher for females than for males in both urban and rural areas. The prevalence of malaria increases with age, from 3,424 per 100,000 in the population age 0–14 to 4,093 per 100,000 in the population age 60 years and over. The steady increase with age occurs in rural areas but not in urban areas.

6.4 Child Immunization

The vaccination of children against six serious but preventable diseases (tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis, and measles) has been a cornerstone of the child health care system in India. As part of the National Health Policy, the National Immunization Programme is being implemented on a priority basis. The Expanded Programme on Immunization (EPI) was initiated by the Government of India in 1978 with the objective of reducing morbidity, mortality, and disabilities from these six diseases by making free vaccination services easily available to all eligible children. Immunization against poliomyelitis was introduced in 1979–80, and tetanus toxoid for school children was added in 1980–81. Immunization against tuberculosis (BCG) was brought under the EPI in 1981–82. In 1985–86, immunization against measles was added to the programme (Ministry of Health and Family Welfare, 1991).

The Universal Immunization Programme (UIP) was introduced in 1985–86 with the following objectives: to cover at least 85 percent of all infants against the six vaccine-preventable diseases by 1990 and to achieve self-sufficiency in vaccine production and the manufacture of cold-chain equipment (Ministry of Health and Family Welfare, 1991). This scheme has been introduced in every district of the country, and the target now is to achieve 100 percent immunization coverage. Pulse Polio Immunization Campaigns began in December 1995, as part of a major national effort to eliminate polio. The standard immunization schedule developed for the child immunization programme specifies the age at which each vaccine is to be administered, the number of doses to be given, and the route of vaccination (intramuscular, oral,

or subcutaneous). Routine vaccinations received by infants and children are usually recorded on a vaccination card that is issued for the child.

NFHS-2 asked mothers in Uttar Pradesh whether they had a vaccination card for each child born since January 1995. If a card was available, the interviewer was required to copy carefully the dates when the child received vaccinations against each disease. For vaccinations not recorded on the card, the mother's report that the vaccination was or was not given was accepted. If the mother could not show a vaccination card, she was asked whether the child had received any vaccinations. If any vaccination had been received, the mother was asked whether the child had received a vaccination against tuberculosis (BCG); diphtheria, whooping cough (pertussis), and tetanus (DPT); poliomyelitis (polio); and measles. For DPT and polio, information was obtained on the number of doses of the vaccine given to the child. Mothers were not asked the dates of vaccinations. To distinguish Polio 0 (polio vaccine given at the time of birth) from Polio 1 (polio vaccine given about six weeks after birth), mothers were also asked whether the first polio vaccine was given just after birth or later[3].

Table 6.6 gives the percentages of urban and rural children age 12–23 months who received specific vaccinations at any time before the interview and before 12 months of age, according to whether a vaccination card was shown to the interviewer or the mother was the source of all vaccination information. The 12–23 month age group was chosen for analysis because both international and Government of India guidelines specify that children should be fully immunized by the time they complete their first year of life. Because the date of vaccination was not asked of the mother if she could not show a vaccination card, the proportion of vaccinations given during the first year of life to children whose information is based on the mother's report is assumed to be the same as the proportion of vaccinations given during the first year of life to children with an exact date of vaccination on the card.

In NFHS-2, children who have received BCG, measles, and three doses each of DPT and polio (excluding Polio 0) are considered to be fully vaccinated. Based on information obtained from a card or reported by the mother ('either source'), only 21 percent of children age 12–23 months are fully vaccinated, and 30 percent have not received any vaccinations at all. Coverage for each vaccination except Polio 0 is much higher than the percentage fully vaccinated. BCG, the first dose of DPT, and the first and second doses of polio vaccine have each been received by more than half of children (see Figure 6.3). Only one-third of children (34 percent) have received three doses of DPT and 42 percent have received three doses of polio vaccine. Although DPT and polio vaccinations are given at the same time as part of the routine immunization programme, the coverage rates are considerably higher for polio than for DPT, undoubtedly because of the Pulse Polio campaigns.

Not all children who begin the DPT and polio vaccination series go on to complete them. The difference between the percentages of children receiving the first and third doses is 23 percentage points for DPT and 24 percentage points for polio. Moreover, only 35 percent of

[3]Because mothers sometimes report that the first dose was given just after birth even if it was given several weeks later, an adjustment was made to the estimates of the number of polio vaccinations given, based on reports of the number of DPT vaccinations. This adjustment is based on the fact that when children receive a DPT vaccination, they are almost always given a polio vaccination at the same time. Thus, if the number of polio vaccinations was reported to be less than the number of DPT vaccinations and the first polio vaccination was reported to be given just after birth, then Polio 0 is assumed to really be Polio 1, Polio 1 is assumed to be Polio 2, etc. For comparative purposes, this same adjustment was made to the NFHS-1 vaccination estimates.

Table 6.6 Childhood vaccinations by source of information

Percentage of children age 12–23 months who received specific vaccinations at any time before the interview and before 12 months of age by source of information on vaccination history and residence, Uttar Pradesh, 1998–99

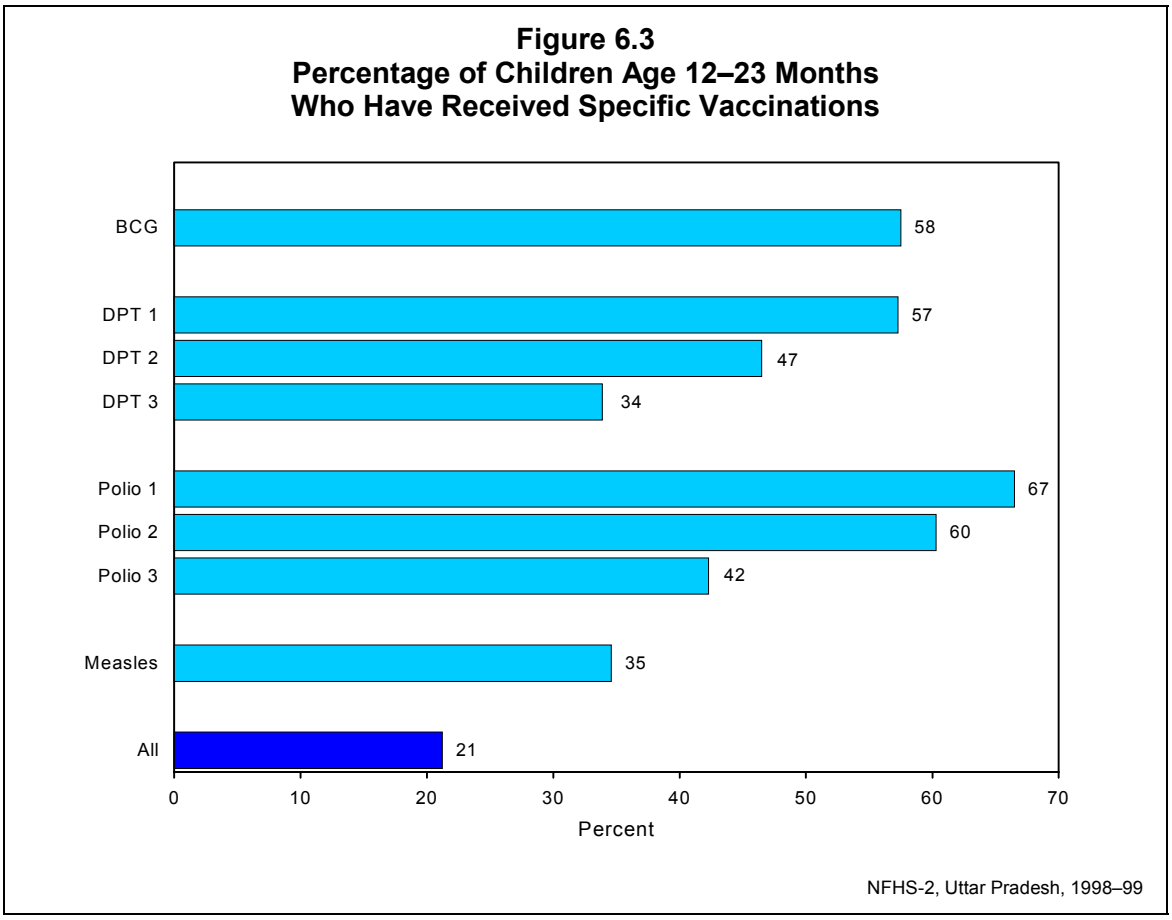
	Percentage vaccinated											
			DPT			Polio						Number of children
Source of information	BCG	Polio 0	1	2	3	1	2	3	Measles	All[1]	None	
URBAN												
Vaccinated at any time before the interview												
Vaccination card	92.2	22.8	100.0	92.6	81.5	97.7	92.4	81.3	64.5	55.5	0.0	53
Mother's report	68.3	3.5	67.7	58.0	38.8	76.1	73.8	52.4	45.2	24.5	22.0	157
Either source	74.3	8.4	75.8	66.7	49.6	81.5	78.5	59.7	50.0	32.3	16.4	210
Vaccinated by 12 months of age[2]	70.8	8.4	71.8	59.9	45.8	77.1	70.5	55.7	42.7	27.8	20.1	210
RURAL												
Vaccinated at any time before the interview												
Vaccination card	94.9	14.6	98.5	90.8	77.5	96.9	89.4	77.0	60.9	54.6	0.5	218
Mother's report	44.5	1.4	43.0	31.1	19.7	55.6	49.0	29.9	24.7	10.6	39.5	901
Either source	54.3	4.0	53.8	42.7	30.9	63.6	56.9	39.1	31.7	19.2	31.9	1,119
Vaccinated by 12 months of age[2]	49.8	4.0	49.9	38.7	28.3	58.8	51.9	35.4	22.4	13.4	36.1	1,119
TOTAL												
Vaccinated at any time before the interview												
Vaccination card	94.3	16.2	98.8	91.2	78.3	97.1	89.9	77.9	61.6	54.8	0.4	271
Mother's report	48.0	1.7	46.7	35.1	22.5	58.6	52.7	33.2	27.7	12.7	36.9	1,058
Either source	57.5	4.7	57.3	46.5	33.9	66.5	60.3	42.3	34.6	21.2	29.5	1,329
Vaccinated by 12 months of age[2]	53.1	4.7	53.3	42.1	31.0	61.7	54.8	38.6	25.6	15.6	33.6	1,329

Note: Table includes only surviving children from among the two most recent births in the three years preceding the survey.
[1]BCG, measles, and three doses each of DPT and polio vaccines (excluding Polio 0)
[2] For children whose information was based on the mother's report, the proportion of vaccinations given by 12 months of age is assumed to be the same as for children with a written record of vaccination.

children 12–23 months have been vaccinated against measles. The relatively low percentages vaccinated against measles and receiving all three doses of DPT vaccine are responsible for the fact that the percentage fully vaccinated is quite low.

There has been almost no improvement in full vaccination coverage in Uttar Pradesh since the time of NFHS-1 when the proportion of children fully vaccinated was 20 percent, but many more children were brought into the programme in the six years between the surveys. The proportion of children who did not receive any vaccinations declined substantially, from 43 percent in NFHS-1 to 30 percent in NFHS-2. The coverage of all vaccinations except DPT3 has also improved considerably since NFHS-1. These data indicate that despite the progress that has been made in immunization coverage for children in Uttar Pradesh, coverage levels are still quite low and a large proportion of children who receive some early vaccinations drop out of the programme before receiving all of the recommended vaccinations.

Government statistics suggest a much higher level of vaccination coverage than NFHS-2 estimates for most vaccinations, although the two sets of estimates are fairly close in the case of



BCG and measles vaccinations. According to government statistics for Uttar Pradesh for 1997–98, 35 percent of children age 12–23 months are fully vaccinated and coverage is 61 percent for BCG, 56 percent for the third dose of DPT vaccine, 53 percent for the third dose of polio vaccine, and 39 percent for measles vaccine (Ministry of Health and Family Welfare, 1999).

According to the immunization schedule, all primary vaccinations, including measles, should be completed by the time a child is 12 months old. Table 6.6 shows that only 16 percent of all children (or 74 percent of fully vaccinated children) were fully vaccinated by age 12 months. The percentages of children who received BCG, the third dose of DPT, and the third dose of polio by age 12 months are only slightly lower than the percentages who received these vaccines at any time before the survey. For measles vaccination, however, which is supposed to be given when the child is nine months old, the gap is wider (35 percent at any time before the survey, compared with 26 percent by age 12 months). Twenty-six percent of children who were vaccinated against measles received the vaccination after their first birthday.

The analysis of vaccine-specific data indicates much higher coverage for each type of vaccine in urban areas than in rural areas. Thirty-two percent of children age 12–23 months in urban areas had received all the recommended vaccinations by the time of the survey, compared with 19 percent in rural areas. The proportion fully vaccinated during the first year of life is also higher in urban areas (28 percent) than in rural areas (13 percent). Dropout rates for DPT and polio (the proportion of children receiving the first dose but not the third dose) are lower in urban areas than in rural areas.

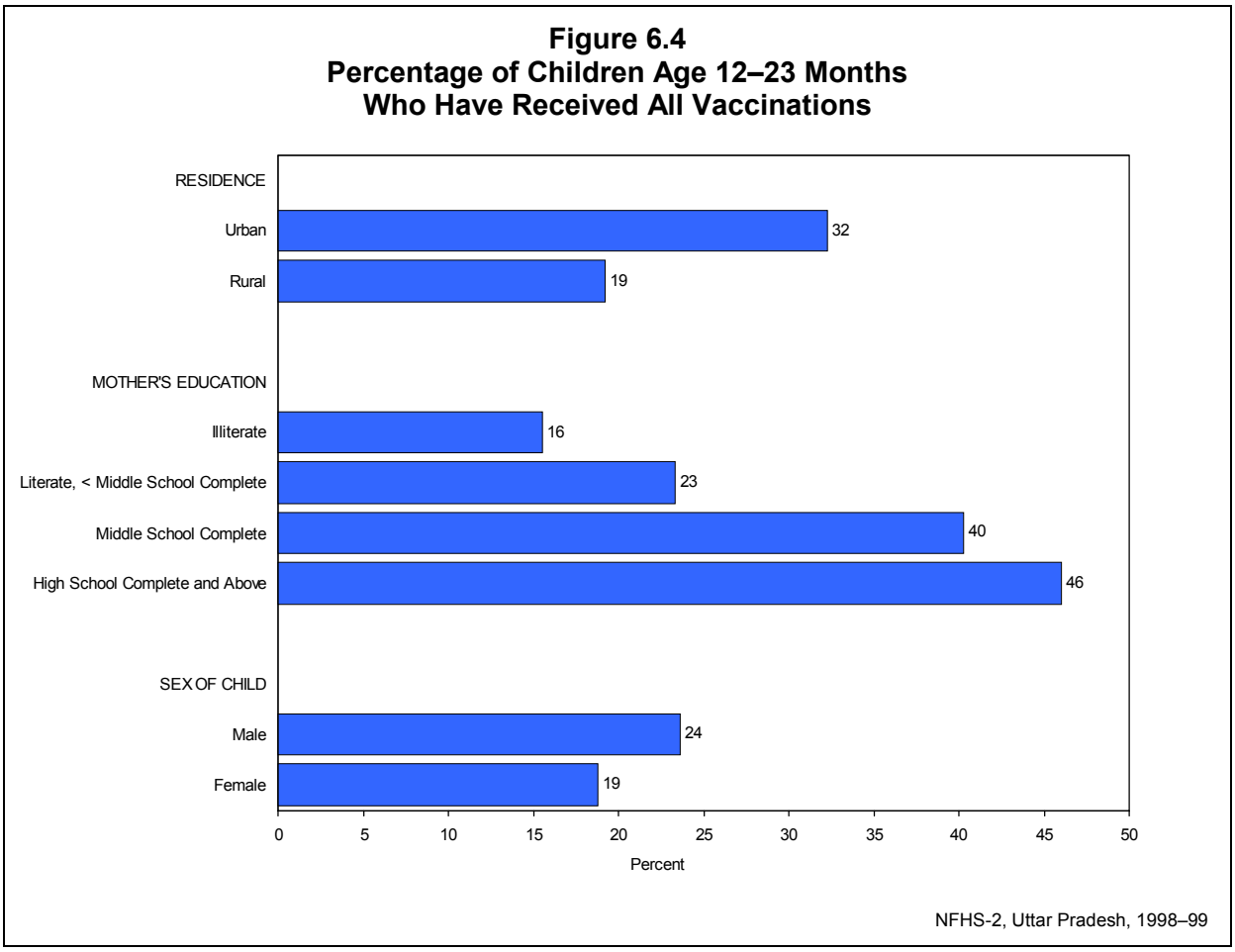


Table 6.7 and Figure 6.4 present vaccination coverage rates (according to the vaccination card or the mother) for children age 12–23 months by selected background characteristics. The table also shows the percentage of children with vaccination cards that were shown to the interviewer. Mothers showed vaccination cards for only 20 percent of children age 12–23 months. Vaccination cards were shown for 25 percent of children in urban areas and 20 percent in rural areas. As expected, vaccination coverage is much higher for children for whom a vaccination card was shown than for other children (see Table 6.6).

Boys (24 percent) are more likely than girls (19 percent) to be fully vaccinated. Boys are also more likely than girls to have received each of the individual vaccinations except Polio 0. Mothers showed vaccination cards for 21 percent of boys and 20 percent of girls. In NFHS-1, vaccination coverage was also higher for boys than for girls and a vaccination card was shown for a higher proportion of boys than girls. Immunization coverage is slightly lower for first-order births than for second-order births, but after the first birth the relationship between vaccination coverage and birth order is consistently negative for all vaccinations. Vaccination coverage is highest in the Hill Region (where 37 percent of children are fully vaccinated), followed by the Central Region (28 percent) and the Eastern Region (25 percent). The Western Region (15 percent) and the Bundelkhand Region (10 percent) lag far behind.

Table 6.7 Childhood vaccinations by background characteristics

Percentage of children age 12–23 months who received specific vaccinations at any time before the interview (according to the vaccination card or the mother) and percentage with a vaccination card that was shown to the interviewer by selected background characteristics, Uttar Pradesh, 1998–99

	Percentage vaccinated												
			DPT			Polio						Percentage showing vaccination card	Number of children
Background characteristic	BCG	Polio 0	1	2	3	1	2	3	Measles	All[1]	None		
Sex													
Male	60.5	3.8	60.6	48.4	35.1	68.4	62.4	43.8	36.1	23.6	27.5	21.0	678
Female	54.3	5.6	53.8	44.6	32.6	64.5	58.1	40.8	33.0	18.8	31.5	19.8	650
Birth order													
1	64.1	6.1	63.6	51.4	40.3	72.9	65.8	46.0	40.3	25.5	23.8	27.8	281
2	67.9	7.4	67.1	56.4	42.3	75.7	69.5	49.5	40.3	27.4	20.8	27.7	271
3	60.7	4.1	59.3	48.2	33.0	66.0	59.3	43.1	38.5	21.2	27.6	17.5	250
4+	47.0	2.7	48.0	38.1	26.6	58.5	53.2	36.3	26.8	15.8	37.8	14.0	527
Residence													
Urban	74.3	8.4	75.8	66.7	49.6	81.5	78.5	59.7	50.0	32.3	16.4	25.2	210
Rural	54.3	4.0	53.8	42.7	30.9	63.6	56.9	39.1	31.7	19.2	31.9	19.5	1,119
Region													
Hill	72.0	10.3	69.9	63.8	51.4	82.7	78.9	58.3	51.2	36.6	16.2	32.4	46
Western	54.1	3.7	52.3	41.3	27.8	65.8	59.2	38.7	31.8	14.5	32.4	14.6	494
Central	61.4	6.6	61.6	51.5	39.3	66.0	58.9	47.3	35.5	27.5	27.4	25.4	207
Eastern	59.0	4.0	60.6	49.4	37.3	65.9	59.8	42.2	36.6	24.9	28.7	23.5	528
Bundelkhand	45.7	7.2	43.8	32.8	21.0	66.6	64.8	44.7	23.8	10.0	29.7	13.5	54
Mother's education													
Illiterate	49.2	2.8	49.2	38.4	26.2	60.0	53.6	35.5	25.8	15.5	35.7	16.8	966
Literate, < middle school complete	69.0	7.2	64.0	53.8	41.5	74.1	66.4	50.4	38.6	23.3	20.6	23.6	128
Middle school complete	76.1	8.8	79.9	64.7	53.1	83.8	78.0	61.1	61.0	40.3	13.7	33.0	97
High school complete and above	92.0	12.3	92.0	83.9	67.5	92.6	89.5	69.7	74.4	46.0	4.7	33.6	137
Religion													
Hindu	59.9	5.1	59.1	48.2	35.3	67.9	62.0	43.3	36.2	22.4	27.8	21.3	1,074
Muslim	46.1	2.0	48.6	38.3	26.6	60.0	52.4	37.3	26.3	14.8	37.0	15.9	248

Contd...

Table 6.7 Childhood vaccinations by background characteristics (contd.)

Percentage of children age 12–23 months who received specific vaccinations at any time before the interview (according to the vaccination card or the mother) and percentage with a vaccination card that was shown to the interviewer by selected background characteristics, Uttar Pradesh, 1998–99

	Percentage vaccinated											Percentage showing vaccination card	Number of children
			DPT			Polio							
Background characteristic	BCG	Polio 0	1	2	3	1	2	3	Measles	All[1]	None		
Caste/tribe													
Scheduled caste	54.5	5.9	53.0	43.8	31.4	63.8	56.7	39.8	32.9	21.7	30.8	23.0	271
Scheduled tribe	(35.7)	(3.5)	(33.8)	(24.5)	(18.2)	(42.9)	(35.0)	(32.2)	(23.3)	(14.1)	(55.6)	(19.6)	34
Other backward class	56.2	2.3	58.1	46.7	32.5	67.0	61.2	43.3	27.4	16.9	29.4	19.9	386
Other	61.9	6.3	60.7	49.6	37.9	69.4	63.9	44.7	41.3	24.7	26.7	19.9	570
Standard of living index													
Low	43.8	3.5	43.5	32.7	22.3	53.5	47.4	30.9	23.6	13.3	41.9	11.7	429
Medium	58.6	4.1	59.0	48.3	35.9	69.2	62.6	44.1	32.8	22.3	27.0	24.4	681
High	84.6	9.7	83.7	71.7	54.5	86.7	81.5	61.2	65.2	36.0	10.2	26.4	197
Total	57.5	4.7	57.3	46.5	33.9	66.5	60.3	42.3	34.6	21.2	29.5	20.4	1,329

Note: Table includes only surviving children from among the two most recent births in the three years preceding the survey. Total includes 6 and 2 children of Sikh mothers and mothers belonging to 'other' religions, respectively, and 69 and 21 children with missing information on caste/tribe and the standard of living index, respectively, who are not shown separately.

( ) Based on 25–49 unweighted cases

[1]BCG, measles, and three doses each of DPT and polio vaccines (excluding Polio 0)

Only 16 percent of children of illiterate mothers are fully vaccinated, compared with 46 percent of children whose mothers have at least completed high school. Hindu children are much more likely than Muslim children to have received each of the recommended vaccinations, a pattern that is also evident at the national level. Children from scheduled castes, scheduled tribes, or other backward classes are less likely than other children to have received each vaccination. The small number of scheduled-tribe children are least likely to have received the recommended vaccinations; more than half of those children have not received any vaccinations at all. The standard of living of the household has a strong positive relationship with vaccination coverage. Only 13 percent of children from households with a low standard of living are fully vaccinated, compared with 36 percent of children from households with a high standard of living.

Table 6.8 shows the percentage of children age 12–35 months with a vaccination card that was shown to the interviewer and the percentage who received various vaccinations during the first year of life by current age of the child and place of residence. The table shows that there has been some improvement in vaccination coverage over a short period of time. The proportion vaccinated during the first year of life is estimated separately for children in each age group. The row labelled 'No vaccinations' indicates the percentage of children that have not received any vaccination by 12 months of age.

The proportion of children whose vaccination status was determined from a vaccination card declines substantially with the age of children. This may reflect an upward trend in the use of vaccination cards as well as an upward trend in overall vaccination coverage. On the other hand, vaccination cards may have been lost or discarded, especially for older children who have received all their vaccinations. The proportion of children fully vaccinated by age 12 months increases slightly from 14 percent for children age 24–35 months to 16 percent for children age 12–23 months. This pattern is also observed for all vaccines except measles in rural areas, but for only half of the vaccines in urban areas.

Table 6.9 and Figure 6.5 give the percent distribution of children under age three years who have received any vaccinations by the source of most of the vaccinations, according to selected background characteristics. The public sector is the primary provider of childhood vaccinations in Uttar Pradesh. Eighty-two percent of all children who have received vaccinations received most of them from a public sector source and only 13 percent received them from a private sector medical source (the same percentages as in India as a whole). The percentage of vaccinated children receiving vaccinations from the private medical sector is more than twice as high in urban areas (23 percent), where private-sector services tend to be concentrated, as in rural areas (10 percent). Even in urban areas, however, 73 percent of children received their vaccinations from the public sector. The public medical sector is used for vaccinations by a large majority of vaccinated children in every region (from 74 percent in the Bundelkhand Region to 86 percent in the Eastern Region).

Table 6.8 Childhood vaccinations received by 12 months of age

Percentage of children age 12–23 months and 24–35 months with a vaccination card that was shown to the interviewer and percentage who received specific vaccinations by 12 months of age, according to residence and child's current age, Uttar Pradesh, 1998–99

	Urban		Rural		Total	
Vaccination status	12–23 months	24–35 months	12–23 months	24–35 months	12–23 months	24–35 months
Vaccination card shown to interviewer	25.2	16.4	19.5	11.0	20.4	12.0
Percentage vaccinated by 12 months of age[1]						
BCG	70.8	67.4	49.8	45.9	53.1	49.7
Polio 0	8.4	7.4	4.0	2.1	4.7	3.0
DPT						
1	71.8	68.0	49.9	46.1	53.3	50.0
2	59.9	60.8	38.7	36.7	42.1	40.9
3	45.8	45.3	28.3	23.2	31.0	27.1
Polio						
1	77.1	82.1	58.8	52.6	61.7	57.9
2	70.5	77.1	51.9	47.8	54.8	53.0
3	55.7	61.5	35.4	32.7	38.6	37.9
Measles	42.7	46.8	22.4	23.6	25.6	27.8
All vaccinations[2]	27.8	22.5	13.4	12.6	15.6	14.4
No vaccinations	20.1	17.8	36.1	41.4	33.6	37.0
Number of children	210	234	1,119	1,098	1,329	1,331

Note: Table includes only surviving children from among the two most recent births in the three years preceding the survey.
[1]Information was obtained either from the vaccination card or from the mother if there was no written record. For children whose information was based on the mother's report, the proportion of vaccinations given by 12 months of age is assumed to be the same as for children with a written record of vaccinations.
[2]BCG, measles, and three doses each of DPT and polio vaccines (excluding Polio 0)

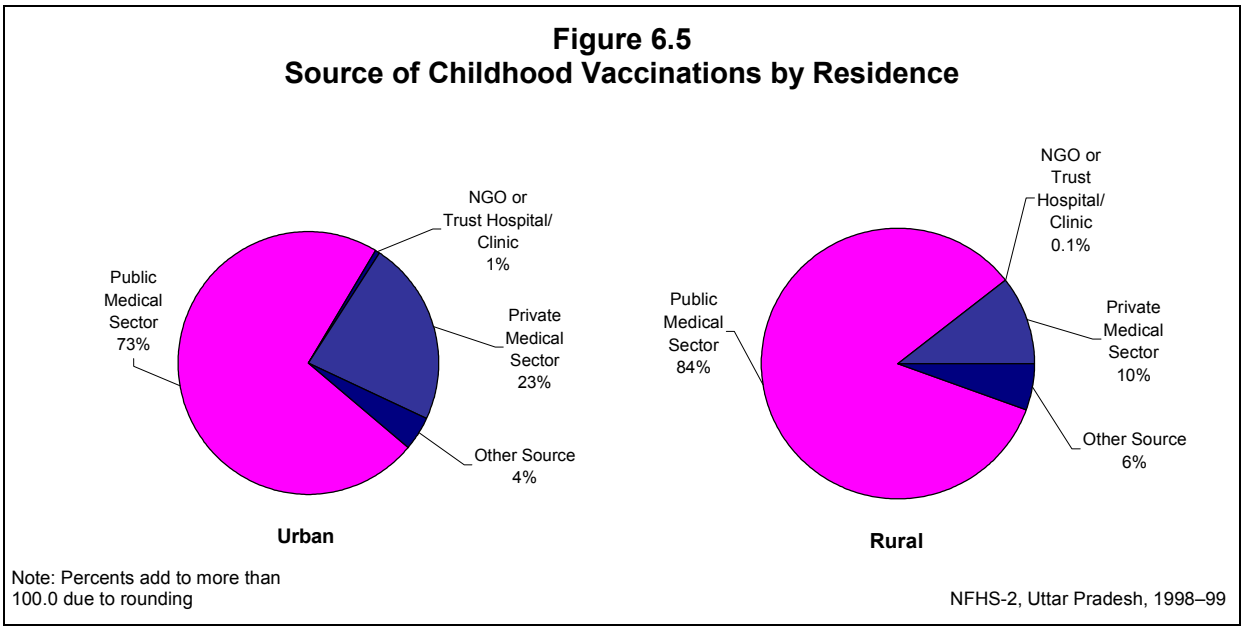
Children of more educated mothers and those belonging to households with a high standard of living are more likely than other children to receive vaccinations from the private medical sector. Muslim children are more likely to receive vaccinations from the private medical sector than Hindu children, perhaps because Muslims are disproportionately concentrated in urban areas. Children from scheduled castes, scheduled tribes, and other backward classes are somewhat less likely than other children to receive vaccinations from the private medical sector.

Table 6.9 Source of childhood vaccinations

Percent distribution of children under age 3 who have received any vaccinations by source of most of the vaccinations, according to selected background characteristics, Uttar Pradesh, 1998–99

Background characteristic	Source: Public medical sector	NGO or trust hospital/ clinic	Private medical sector	Other	Total percent	Number of children
Age of child						
< 12 months	79.7	0.1	14.5	5.7	100.0	737
12–23 months	82.1	0.3	12.4	5.3	100.0	943
24–35 months	82.7	0.1	12.2	5.0	100.0	970
Sex of child						
Male	80.3	0.2	14.1	5.4	100.0	1,429
Female	83.2	0.1	11.5	5.2	100.0	1,220
Birth order						
1	78.0	0.2	17.3	4.4	100.0	638
2	81.5	0.3	12.7	5.6	100.0	583
3	81.3	0.0	13.1	5.5	100.0	499
4+	84.4	0.1	9.9	5.5	100.0	930
Residence						
Urban	72.5	0.5	22.8	4.2	100.0	544
Rural	84.0	0.1	10.4	5.6	100.0	2,106
Region						
Hill	83.4	0.0	11.5	5.1	100.0	101
Western	76.1	0.1	18.7	5.1	100.0	971
Central	85.4	0.0	12.9	1.7	100.0	453
Eastern	86.0	0.2	8.4	5.4	100.0	1,007
Bundelkhand	74.1	0.4	5.4	20.1	100.0	117
Mother's education						
Illiterate	84.6	0.1	9.5	5.8	100.0	1,722
Literate, < middle school complete	81.0	0.0	12.4	6.6	100.0	315
Middle school complete	82.6	0.0	13.5	3.9	100.0	228
High school complete and above	68.6	0.4	28.3	2.7	100.0	385
Religion						
Hindu	83.1	0.1	11.7	5.1	100.0	2,139
Muslim	76.1	0.3	17.3	6.3	100.0	482
Caste/tribe						
Scheduled caste	86.0	0.0	10.1	3.9	100.0	524
Scheduled tribe	83.8	0.0	8.6	7.5	100.0	49
Other backward class	84.6	0.2	9.2	6.0	100.0	704
Other	77.5	0.2	16.9	5.3	100.0	1,266
Standard of living index						
Low	84.0	0.2	10.0	5.8	100.0	712
Medium	84.4	0.1	9.9	5.5	100.0	1,405
High	71.2	0.2	25.0	3.6	100.0	487
Total	81.6	0.2	12.9	5.3	100.0	2,649

Note: Table includes only surviving children from among the two most recent births in the three years preceding the survey. Total includes 14 and 8 children of Sikh mothers and mothers belonging to 'other' religions, respectively, and 7, 107, and 45 children with missing information on religion, caste/tribe, and the standard of living index, respectively, who are not shown separately.
NGO: Nongovernmental organization



6.5 Vitamin A Supplementation

Vitamin A deficiency is one of the most common nutritional deficiency disorders in the world, affecting more than 250 million children worldwide (Bloem et al., 1997). The National Programme on Prevention of Blindness targets children under age five years and administers oral doses of vitamin A every six months starting at age nine months. NFHS-2 asked mothers of children born during the three years before the survey whether their children ever received a dose of vitamin A. Those who said that their child had received at least one dose of vitamin A were asked how long ago the last dose of vitamin A was given. Table 6.10 shows the percentage of children age 12–35 months who received at least one dose of vitamin A and who received a dose of vitamin A within the past six months by selected background characteristics. In the state as a whole, only 14 percent of children age 12–35 months received at least one dose of vitamin A, and only 10 percent received a dose within the past six months. This indicates that a large majority of children in Uttar Pradesh have not received vitamin A supplementation at all and even fewer children receive vitamin A supplementation regularly.

Children living in urban areas, children living in the Hill Region, children whose mothers completed at least a high school education, and children living in households with a high standard of living are considerably more likely than other children to receive vitamin A supplementation. There is no other group in which more than 20 percent of children received vitamin A. Boys are more likely than girls to receive vitamin A supplementation, providing more evidence of son preference in Uttar Pradesh. Children from groups that are less likely to have received at least one dose of vitamin A supplementation are also less likely to have received a dose in the past six months.

Table 6.10 Vitamin A supplementation for children

Percentage of children age 12–35 months who received at least one dose of vitamin A and who received at least one dose of vitamin A within the six months preceding the survey by selected background characteristics, Uttar Pradesh, 1998–99

Background characteristic	Percentage who received vitamin A: At least one dose	Percentage who received vitamin A: At least one dose within past six months	Number of children
Age of child			
12–23 months	14.3	10.6	1,329
24–35 months	13.6	8.5	1,331
Sex of child			
Male	16.0	11.4	1,378
Female	11.7	7.6	1,282
Birth order			
1	14.2	9.6	570
2	17.2	10.8	551
3	16.0	10.0	488
4+	11.1	8.6	1,051
Residence			
Urban	21.1	14.0	444
Rural	12.5	8.7	2,216
Region			
Hill	29.5	21.3	89
Western	15.2	12.4	1,007
Central	12.3	6.2	447
Eastern	11.6	6.5	1,004
Bundelkhand	17.7	15.1	113
Mother's education			
Illiterate	10.6	7.7	1,896
Literate, < middle school complete	17.7	10.7	293
Middle school complete	18.6	12.1	180
High school complete and above	29.0	18.9	291
Religion			
Hindu	13.2	8.5	2,114
Muslim	15.4	12.0	525
Caste/tribe			
Scheduled caste	10.5	6.8	557
Scheduled tribe	11.9	10.2	58
Other backward class	12.3	8.3	732
Other	17.0	12.0	1,194
Standard of living index			
Low	9.6	7.0	853
Medium	13.5	9.1	1,363
High	25.2	16.7	392
Total	13.9	9.5	2,660

Note: Table includes only surviving children from among the two most recent births in the three years preceding the survey. Total includes 12 and 5 children of Sikh mothers and mothers belonging to 'other' religions, respectively, and 3, 119, and 53 children with missing information on religion, caste/tribe, and the standard of living index, respectively, who are not shown separately.

6.6 Child Morbidity and Treatment

This section discusses the prevalence and treatment of acute respiratory infection (ARI), fever, and diarrhoea. Mothers of children less than three years old were asked if their children suffered from cough, fever, or diarrhoea during the two weeks preceding the survey, and if so, the type of treatment given. Accuracy of all these measures is affected by the reliability of the mother's recall of when the disease episode occurred. The two-week recall period is thought to be most suitable for ensuring that there will be an adequate number of cases to analyze and that recall errors will not be too serious. Table 6.11 shows the percentage of children with cough accompanied by fast breathing (symptoms of acute respiratory infection), fever, and diarrhoea during the two weeks preceding the survey and the percentage with acute respiratory infection who were taken to a health facility or provider, by selected background characteristics.

Acute Respiratory Infection

Acute respiratory infection, primarily pneumonia, is a major cause of illness among infants and children and the leading cause of childhood mortality throughout the world (Murray and Lopez, 1996). Early diagnosis and treatment with antibiotics can prevent a large proportion of ARI/pneumonia deaths. NFHS-2 found that 21 percent of children under age three in Uttar Pradesh suffered from acute respiratory infection (cough accompanied by short, rapid breathing) at some time during the two-week period before the survey. Table 6.11 shows that ARI was somewhat more common among boys than girls and among children living in rural areas than urban areas. ARI was also more prevalent among children 6–11 months of age, children living in the Central and Eastern Regions, first-order births, Muslim children, and children from scheduled tribes.

Table 6.11 also shows the percentage of children suffering from ARI symptoms in the two weeks before the survey who were taken to a health facility or provider. Sixty-one percent of children received advice or treatment from a health facility or health provider when ill with ARI. As expected, this percentage is relatively low for children whose mothers are illiterate, children in rural areas, and children living in households with a low standard of living. Children in the Central and Eastern Regions are least likely to receive medical care for their illness. Muslim children are more likely than Hindu children to be taken to a health facility or health provider when they have ARI and, once again, discrimination against girls is evident in the utilization of health services.

Fever

Fever is the most common of the three conditions examined in Table 6.11, with 28 percent of children suffering from fever during the two weeks preceding the survey. The prevalence of fever is lower among children age 1–5 months (20 percent) than among older children (26–32 percent). Fever is less prevalent in urban areas than in rural areas and in the Hill Region and the Bundelkhand Region than in other regions. Fever is also less common for girls than for boys and for children whose mothers completed at least high school. Fever is relatively high for Muslim children, scheduled-tribe children, and children from households with a low standard of living. Children living in households with piped drinking water have a lower prevalence of fever than children in any other category in the table.

Table 6.11 Prevalence of acute respiratory infection, fever, and diarrhoea

Percentage of children under age 3 who were ill with a cough accompanied by fast breathing (symptoms of acute respiratory infection—ARI), fever, or diarrhoea during the two weeks preceding the survey and percentage with ARI who were taken to a health facility or provider, by selected background characteristics, Uttar Pradesh, 1998–99

Background characteristic	Percentage of children suffering in past two weeks from: Cough accompanied by fast breathing (ARI)	Fever	Diarrhoea: Any diarrhoea[1]	Diarrhoea: Diarrhoea with blood	Number of children	Percentage with ARI taken to a health facility or provider	Number of children with ARI
Age of child							
1–5 months	17.5	20.0	23.2	1.1	711	56.7	124
6–11 months	26.0	32.0	25.7	3.6	612	65.7	159
12–23 months	21.1	31.6	25.7	3.6	1,329	61.1	281
24–35 months	20.8	26.3	19.9	5.4	1,331	60.9	277
Sex of child							
Male	22.7	28.9	23.8	3.9	2,076	64.5	471
Female	19.4	26.6	22.8	3.6	1,906	57.1	370
Birth order							
1	23.9	28.8	24.4	2.8	844	67.1	202
2	20.4	25.9	23.0	4.7	815	63.0	166
3	20.9	24.6	23.7	3.5	733	59.4	153
4+	20.1	29.8	22.8	3.9	1,590	57.5	319
Residence							
Urban	18.9	23.1	19.4	1.5	659	70.2	125
Rural	21.5	28.7	24.1	4.2	3,324	59.7	716
Region							
Hill	18.0	19.7	15.7	2.6	137	68.2	25
Western	17.3	27.4	22.2	4.2	1,533	75.1	265
Central	27.4	31.8	22.8	4.4	651	54.1	178
Eastern	23.0	28.0	26.0	3.1	1,492	53.8	343
Bundelkhand	17.5	20.3	17.8	3.8	170	61.9	30
Mother's education							
Illiterate	20.5	28.8	23.4	4.4	2,842	58.8	582
Literate, < middle school complete	23.8	26.9	27.6	3.7	454	64.8	108
Middle school complete	25.0	28.0	22.5	1.9	268	68.7	67
High school complete and above	19.9	22.2	18.4	0.8	419	67.8	83
Religion							
Hindu	20.2	26.8	22.2	3.4	3,169	60.4	640
Muslim	25.1	32.5	28.2	5.2	783	64.9	196
Caste/tribe							
Scheduled caste	18.2	26.4	22.8	4.8	831	61.7	151
Scheduled tribe	33.0	36.8	30.4	7.0	89	(64.7)	29
Other backward class	21.4	29.1	22.4	4.0	1,095	61.1	235
Other	21.9	27.8	24.1	3.2	1,793	62.7	392
Standard of living index							
Low	21.3	29.5	23.4	4.3	1,272	56.3	271
Medium	21.5	27.4	24.5	4.0	2,060	61.6	442
High	19.3	25.1	19.2	1.6	570	70.9	110

Contd...

Table 6.11 Prevalence of acute respiratory infection, fever, and diarrhoea (contd.)

Percentage of children under age 3 who were ill with a cough accompanied by fast breathing (symptoms of acute respiratory infection—ARI), fever, or diarrhoea during the two weeks preceding the survey and percentage with ARI who were taken to a health facility or provider, by selected background characteristics, Uttar Pradesh, 1998–99

Background characteristic	Percentage of children suffering in past two weeks from: Cough accompanied by fast breathing (ARI)	Fever	Diarrhoea: Any diarrhoea[1]	Diarrhoea: Diarrhoea with blood	Number of children	Percentage with ARI taken to a health facility or provider	Number of children with ARI
Source of drinking water							
Piped water	17.2	18.4	18.4	2.4	403	77.5	69
Hand pump	21.8	29.3	24.3	4.2	3,016	60.2	657
Well water	20.4	27.2	22.0	2.1	510	57.0	104
Surface water	19.7	24.7	16.1	3.6	48	*	9
Purification of water							
Straining by cloth	(31.1)	(32.9)	(31.8)	3.2	34	*	11
Water filter	(16.8)	(22.2)	(26.8)	2.7	41	*	7
Boiling	23.9	29.4	30.5	1.8	61	*	15
Nothing	21.0	27.8	23.2	3.8	3,841	60.8	806
Total	21.1	27.8	23.3	3.8	3,983	61.3	841

Note: Table includes only surviving children age 1–35 months from among the two most recent births in the three years preceding the survey. Total includes a small number of children of Sikh mothers and mothers belonging to 'other' religions, children in households having other source of drinking water or using alum or electronic water purifier or 'other' method to purify water, and children with missing information on religion, caste/tribe, the standard of living index, and source of drinking water, who are not shown separately.
( ) Based on 25–49 unweighted cases
*Percentage not shown; based on fewer than 25 unweighted cases
[1]Includes diarrhoea with blood

Diarrhoea

Diarrhoea is the second most important killer of children under age five worldwide, following acute respiratory infection. Deaths from acute diarrhoea are most often caused by dehydration due to loss of water and electrolytes. Nearly all dehydration-related deaths can be prevented by prompt administration of rehydration solutions. Because deaths from diarrhoea are a significant proportion of all child deaths, the Government of India has launched the Oral Rehydration Therapy Programme as one of its priority activities for child survival. One major goal of this programme is to increase awareness among mothers and communities about the causes and treatment of diarrhoea. Oral rehydration salt (ORS) packets are made widely available and mothers are taught how to use them. NFHS-2 asked mothers of children less than three years old a series of questions about episodes of diarrhoea suffered by their children in the two weeks before the survey, including questions on feeding practices during diarrhoea, the treatment of diarrhoea, and their knowledge and use of ORS.

Table 6.11 shows that 23 percent of children under age three suffered from diarrhoea in the two-week period before the survey. There are seasonal variations in the prevalence of diarrhoea, however, so that the percentages shown in Table 6.11 cannot be assumed to reflect the situation throughout the year.

Among children age 1–35 months, those age 24–35 months are least susceptible to diarrhoea. The prevalence of diarrhoea is also relatively low in urban areas, the Hill Region and the Bundelkhand Region, among Hindu children, among children whose mothers completed at

least high school, and among children living in households with a high standard of living. Differentials by sex and birth order are small. Consistent with expectations, the prevalence of diarrhoea is relatively low among children living in households that use piped water for drinking, but it is also low among children living in the small number of households that use surface water for drinking.

Four percent of all children age 1–35 months (16 percent of children who suffered from diarrhoea in the two weeks preceding the survey) had diarrhoea with blood, a symptom of dysentery. The prevalence of diarrhoea with blood rises with the child's age and falls with the level of education of the mother. Children living in rural areas, children in the Western and Central Regions, Muslim children, scheduled-tribe and scheduled-caste children, and children living in households using a hand pump to draw water for drinking all have a slightly elevated risk of having diarrhoea with blood.

Table 6.12 shows that 59 percent of mothers with births during the three years preceding the survey know about ORS packets, up sharply from 36 percent among women who gave birth during the three years before NFHS-1, and almost as high as the national average of 62 percent. Knowledge of ORS packets is somewhat lower among mothers age 15–19 and among mothers age 35–49 years than among mothers in the middle age groups. As expected, knowledge is considerably higher among urban mothers than rural mothers, and among more educated mothers. Knowledge of ORS is highest in the Central and Eastern Regions where the prevalence of diarrhoea is also high. Knowledge of ORS is slightly lower among Hindu mothers (58 percent) than Muslim mothers (61 percent). Knowledge of ORS packets is much lower among mothers who are not regularly exposed to any mass media than among mothers who are exposed to some media. Mothers belonging to scheduled castes are less likely to know about ORS (55 percent) than mothers from any other caste or tribe group (59–62 percent).

In order to assess mothers' knowledge of children's need for extra fluids during episodes of diarrhoea, all mothers of children born in the three years preceding the survey were asked: 'When a child has diarrhoea, should he/she be given less to drink than usual, about the same amount, or more than usual?' Table 6.12 shows the responses of mothers to this question by selected background characteristics. In Uttar Pradesh, only 25 percent of mothers report that children should be given more to drink than usual during an episode of diarrhoea and, contrary to the standard recommendation, 35 percent report that children should be given less to drink. This suggests that mothers in Uttar Pradesh need much more education in the proper management of diarrhoea. The proportion reporting correctly that children with diarrhoea should be given more to drink is particularly low among teenage mothers, rural mothers, mothers in the Central Region, illiterate mothers, Muslim mothers, mothers belonging to a scheduled tribe, and mothers not regularly exposed to any mass media.

To assess whether mothers are aware of one or more signs associated with diarrhoea which suggest the need for medical treatment, mothers were also asked: 'When a child is sick with diarrhoea, what signs of illness would tell you that he or she should be taken to a health facility or health worker?' All answers given by the respondent were recorded. The signs warranting medical treatment include repeated watery stools, repeated vomiting, blood in the stools, fever, marked thirst, not eating or drinking well, getting sicker or very sick, and not getting better. Table 6.12 shows that only 36 percent of mothers were able to name two or more signs that indicate that a child with diarrhoea should be given medical treatment. The

Table 6.12 Knowledge of diarrhoea care

Among mothers with births during the three years preceding the survey, percentage who know about oral rehaydration salt (ORS) packets, percent distribution by quantity to be given to drink during diarrhoea, and percentage who know two or more signs of diarrhoea that indicate the need for medical treatment by selected background characteristics, Uttar Pradesh, 1998–99

Background characteristic	Percentage who know about ORS packets	Reported quantity to be given to drink					Percentage who know two or more signs for medical treatment of diarrhoea[1]	Number of mothers
		Less	Same	More	Don't know/ missing	Total percent		
Age								
15–19	53.6	40.3	26.5	18.4	14.8	100.0	32.7	483
20–24	61.2	36.0	27.6	26.2	10.2	100.0	37.3	1,231
25–29	61.0	33.6	30.9	26.3	9.2	100.0	37.0	1,098
30–34	60.8	33.7	29.4	27.0	9.9	100.0	35.9	634
35–49	50.7	33.2	28.7	25.1	13.0	100.0	36.8	386
Residence								
Urban	78.0	32.5	29.1	32.1	6.3	100.0	29.9	619
Rural	55.4	35.7	28.7	23.9	11.6	100.0	37.6	3,213
Region								
Hill	53.6	21.3	29.7	31.4	17.6	100.0	36.7	131
Western	50.1	32.6	29.0	25.5	12.9	100.0	33.1	1,427
Central	69.3	36.8	33.6	21.7	7.9	100.0	41.4	641
Eastern	64.5	39.2	26.3	26.1	8.3	100.0	36.6	1,466
Bundelkhand	52.7	27.2	29.7	24.4	18.8	100.0	42.2	168
Education								
Illiterate	52.4	36.8	29.0	21.8	12.4	100.0	36.0	2,785
Literate, < middle school complete	72.3	33.9	31.3	27.8	7.0	100.0	35.8	423
Middle school complete	69.2	30.2	29.0	31.5	9.3	100.0	40.3	250
High school complete and above	86.7	28.0	24.7	43.8	3.5	100.0	37.2	374
Religion								
Hindu	58.4	35.2	28.8	25.9	10.1	100.0	36.9	3,072
Muslim	61.2	35.6	28.9	22.3	13.2	100.0	34.0	730
Caste/tribe								
Scheduled caste	54.7	39.8	30.0	21.7	8.4	100.0	38.1	818
Scheduled tribe	58.6	40.7	31.9	15.2	12.2	100.0	34.0	83
Other backward class	58.6	36.1	27.4	26.3	10.2	100.0	36.6	1,075
Other	61.5	31.4	29.5	27.0	12.1	100.0	35.5	1,679
Exposure to media								
Exposed to any media	69.2	35.4	27.2	30.0	7.4	100.0	38.4	1,529
Watches television weekly	73.9	33.5	27.7	31.9	6.9	100.0	36.3	1,010
Listens to radio weekly	67.8	35.8	25.7	30.3	8.3	100.0	41.3	990
Visits cinema/theatre monthly	72.7	37.9	24.6	29.9	7.6	100.0	36.0	106
Reads newspaper/magazine weekly	81.7	33.0	27.4	34.9	4.7	100.0	40.0	378
Not regularly exposed to any media	52.3	35.1	29.8	22.1	12.9	100.0	35.0	2,303
Total	59.1	35.2	28.8	25.3	10.7	100.0	36.4	3,832

Note: Total includes 16 and 8 Sikh women and women belonging to 'other' religions, respectively, and 7 and 176 women with missing information on religion and caste/tribe, respectively, who are not shown separately.
[1]Percentage who know two or more signs of illness that indicate that a child should be taken to a health facility or health worker

percentage is lower among teenage mothers than older mothers and, contrary to expectation, the percentage is much lower among urban than rural mothers. The percentage is also relatively low in the Western Region, among Muslim mothers, among scheduled-tribe mothers, and among mothers who are not regularly exposed to mass media, although the differences are generally quite small. In fact, knowledge of two or more signs of diarrhoea that suggest the need for medical treatment is universally low across all demographic and socioeconomic groups. This lack of knowledge suggests a need for further educating mothers about children's diarrhoea so that they are better able to recognize the signs of diarrhoea for which a health provider should be consulted.

Table 6.13 shows the percentage of children under age three with diarrhoea during the two weeks preceding the survey who were taken to a health facility or provider, the percentage who received various types of oral rehydration therapy (ORT), and the percentage who received other types of treatment, by selected background characteristics. Sixty-two percent of children in Uttar Pradesh who suffered from diarrhoea during the two weeks preceding the survey were taken to a health facility or provider for medical advice or treatment (almost the same as the national level of 63 percent). Thirty percent of children with diarrhoea did not receive any treatment at all. Boys with diarrhoea were slightly less likely than girls to be taken to a health facility or provider, the opposite of the pattern for the treatment of ARI. The likelihood of seeking treatment is particularly high for children living in households with a high standard of living, children whose mothers completed at least a middle school education, children in urban areas, and children in the Western Region.

Only 16 percent of the children age 1–35 months who suffered from diarrhoea during the two weeks preceding the survey were treated with a solution made from ORS packets. This is up from 13 percent in NFHS-1, indicating a slight improvement in the use of ORS packets in Uttar Pradesh for the treatment of childhood diarrhoea. However, it is much lower than the NFHS-2 national level of 27 percent and it is also lower than the level in any other state except Bihar. Only 19 percent of children in Uttar Pradesh received increased fluids when sick with diarrhoea, and only 11 percent received gruel. Almost two-thirds of children with diarrhoea (64 percent) did not receive any of the various types of oral rehydration therapy (ORT).

The youngest children (age 1–11 months), children living in rural areas or in the Eastern Region of the state, and children from other backward classes are less likely than other children to receive oral rehydration therapy. The use of oral rehydration is most common for children living in households with a high standard of living and children whose mothers completed at least high school.

The use of antibiotics and other antidiarrhoeal drugs is not generally recommended for the treatment of childhood diarrhoea. Yet 59 percent of the children who had diarrhoea in the two weeks before NFHS-2 were treated with pills or syrup, and 15 percent received an injection. These figures indicate poor knowledge about the proper treatment of diarrhoea not only among mothers but also among health-care providers. The results underscore the need for informational programmes for mothers and supplemental training for health-care providers that emphasizes the importance of ORT, increased fluid intake, and continued feeding, and discourages the use of drugs to treat childhood diarrhoea. The use of unnecessary antidiarrhoeal drugs is widespread across all socioeconomic groups, and is particularly common for children of more educated mothers and for children living in the Central Region.

Table 6.13 Treatment of diarrhoea

Among children under age 3 who had diarrhoea in the past two weeks, percentage taken to a health facility or provider, percentage who received various types of oral rehydration therapy (ORT), and percentage who received other treatments by selected background characteristics, Uttar Pradesh, 1998–99

Background characteristic	Taken to a health facility or provider	Oral rehydration					Other treatment					No treat-ment	Number of children with diarrhoea
		Oral rehydration salt (ORS) packets	Gruel	Homemade sugar-salt-water solution	Increased fluids	ORT not given	Pill or syrup	Injection	Intrave-nous (IV/drip/bottle)	Home remedy/herbal medicine	Other		
Age of child													
1–11 months	57.7	11.1	5.3	2.0	17.3	71.1	46.3	11.2	2.2	3.5	0.3	43.3	322
12–23 months	65.2	19.9	13.4	2.3	18.3	59.5	66.0	17.4	3.3	2.1	0.0	23.8	342
24–35 months	63.5	16.0	13.0	1.4	21.4	60.3	64.7	15.2	2.5	1.9	0.4	22.7	265
Sex of child													
Male	60.6	15.6	11.5	1.7	19.0	63.1	58.0	14.4	3.5	3.2	0.0	30.2	494
Female	63.8	15.9	9.3	2.2	18.5	64.6	59.6	14.8	1.8	1.8	0.5	30.3	435
Residence													
Urban	68.0	15.2	22.5	2.1	22.5	54.0	64.0	9.6	4.3	2.7	0.0	23.8	128
Rural	61.2	15.9	8.6	1.9	18.2	65.3	57.9	15.4	2.4	2.5	0.3	31.3	801
Region													
Hill	(54.1)	(29.2)	(26.7)	(6.4)	(20.9)	(49.6)	(38.0)	(4.4)	(2.2)	(2.2)	(0.0)	(30.3)	22
Western	71.8	16.5	17.9	3.9	25.7	52.9	56.0	17.7	6.3	2.6	0.3	29.8	340
Central	58.9	16.2	7.9	0.0	22.7	62.6	64.9	21.6	0.0	0.8	0.7	24.8	148
Eastern	54.9	13.3	4.0	0.9	11.1	74.8	60.1	10.1	0.5	3.2	0.0	32.4	388
Bundelkhand	65.9	28.1	11.6	0.0	19.5	60.5	57.8	9.9	3.3	1.7	0.0	33.9	30
Mother's education													
Illiterate	60.1	14.9	8.9	2.0	16.5	66.1	59.0	14.8	2.8	1.8	0.0	31.1	666
Literate, < middle school complete	57.0	15.4	9.1	1.8	20.3	65.0	54.0	15.7	1.9	5.3	1.8	32.5	125
Middle school complete	82.7	12.6	10.5	1.8	22.1	64.2	61.6	11.8	0.8	0.0	0.0	29.3	60
High school complete and above	71.6	26.4	26.2	1.5	34.1	41.5	62.3	12.7	4.4	5.9	0.0	20.1	77

Contd...

Table 6.13 Treatment of diarrhoea (contd.)

Among children under age 3 who had diarrhoea in the past two weeks, percentage taken to a health facility or provider, percentage who received various types of oral rehydration therapy (ORT), and percentage who received other treatments by selected background characteristics, Uttar Pradesh, 1998–99

		Oral rehydration					Other treatment						
Background characteristic	Taken to a health facility or provider	Oral rehydration salt (ORS) packets	Gruel	Homemade sugar-salt-water solution	Increased fluids	ORT not given	Pill or syrup	Injection	Intrave-nous (IV/drip/ bottle)	Home remedy/ herbal medicine	Other	No treat-ment	Number of children with diarrhoea
Religion													
Hindu	61.2	16.0	10.2	1.6	19.7	63.3	57.8	15.5	2.2	2.4	0.2	31.4	702
Muslim	65.3	14.9	11.3	3.2	15.5	65.3	62.6	12.0	4.5	3.0	0.5	25.9	220
Caste/tribe													
Scheduled caste	63.8	15.8	14.5	1.2	21.0	60.9	57.7	16.7	3.5	2.3	0.6	29.3	189
Scheduled tribe	(59.8)	(18.1)	(10.8)	(4.3)	(16.1)	(57.1)	(59.7)	(12.7)	(0.0)	(0.0)	(0.0)	(33.8)	27
Other backward class	59.5	15.2	6.5	1.4	13.9	68.7	57.1	14.5	2.0	2.7	0.0	34.2	245
Other	63.7	15.4	11.2	2.6	20.6	63.0	60.3	13.4	3.1	2.8	0.3	27.7	433
Standard of living index													
Low	58.4	15.4	7.6	1.7	16.8	66.6	59.6	14.6	2.6	1.5	0.0	30.7	298
Medium	61.7	15.4	9.7	2.4	17.0	65.4	58.9	15.1	3.0	2.8	0.2	30.8	505
High	69.5	20.5	20.3	1.0	33.7	47.7	57.5	12.9	2.1	4.6	1.0	24.8	109
Total	62.1	15.8	10.5	2.0	18.8	63.8	58.8	14.6	2.7	2.5	0.2	30.2	929

Note: Table includes only surviving children age 1–35 months from among the two most recent births in the three years preceding the survey. Total includes 2 Sikh children and 2 children of mothers belonging to 'other' religions, respectively, and 2, 34, and 17 children with missing information on religion, caste/tribe, and the standard of living index, respectively, who are not shown separately.
( ) Based on 25–49 unweighted cases

Table 6.14 Source of ORS packets

Among children under age 3 who were treated with a solution made from oral rehydration salt (ORS) packets for diarrhoea in the two weeks preceding the survey, percent distribution of children by source of ORS packets, Uttar Pradesh, 1998–99

Source	Percent
Public medical sector	25.5
Government/municipal hospital	7.6
Government dispensary	0.8
CHC/rural hospital/PHC	14.2
Sub-centre	1.4
Other public medical sector	1.6
NGO or trust	0.8
NGO worker	0.8
Private medical sector	55.7
Private hospital/clinic	8.4
Private doctor	33.2
Private paramedic	3.1
Pharmacy/drugstore	8.7
Other private medical sector	2.3
Other source	18.0
Shop	15.7
Husband	2.3
Total percent	100.0
Number of children treated with ORS	146

Note: Table includes only surviving children age 1–35 months from among the two most recent births in the three years preceding the survey. Table excludes children with missing information on source of ORS packets.
CHC: Community health centre; PHC: Primary Health Centre;
NGO: Nongovernmental organization

Table 6.14 shows the percent distribution of children who were treated with ORS for diarrhoea in the two weeks before NFHS-2 by the source of the ORS packets. For 26 percent of children who were treated with ORS, the packets were obtained from public-sector medical sources, for 56 percent the packets were obtained from private-sector medical sources, and for 18 percent the packets were obtained from other sources (primarily shops). NGO workers were the source of ORS packets for less than 1 percent of children who received ORS. Among the public-sector medical sources, community health centres (CHC), rural hospitals, or Primary Health Centres (PHC) are mentioned most often, followed by government or municipal hospitals. Among the private-sector medical sources, ORS packets were usually obtained from a private doctor. The pharmacy or drugstore category accounts for 9 percent of all cases. If this category is added to the 'shop' category, the proportion purchasing ORS packets from shops, pharmacies, or drugstores becomes 24 percent.

6.7 HIV/AIDS

Acquired Immune Deficiency Syndrome (AIDS) is an illness caused by the HIV virus, which weakens the immune system and leads to death through secondary infections such as tuberculosis or pneumonia. The virus is generally transmitted through sexual contact, through the placenta of HIV-infected women to their unborn children, or through contact with contaminated needles (injections) or blood. HIV and AIDS prevalence in India have been on the rise for more

than a decade and have reached alarming proportions in recent years. The Government of India established a National AIDS Control Organization (NACO) under the Ministry of Health and Family Welfare in 1989 to deal with the epidemic. Since then there have been various efforts to prevent HIV transmission, such as public health education through the media and the activities of many nongovernmental organizations (NGOs).

NFHS-2 included a set of questions on knowledge of AIDS and AIDS prevention. Ever-married women age 15–49 were first asked if they had ever heard of an illness called AIDS. Respondents who had heard of AIDS were asked further questions about their sources of information on AIDS, whether they believe that AIDS is preventable, and if so, what precautions, if any, a person can take to avoid infection.

Knowledge of AIDS

Table 6.15 shows the percentage of women who have heard about AIDS by background characteristics. Eighty percent of women in Uttar Pradesh have never heard of AIDS, much higher than the national level of 60 percent. NFHS-1 did not include AIDS-awareness questions for Uttar Pradesh so it is not possible to assess the trend in AIDS awareness in the state between NFHS-1 and NFHS-2.

Knowledge of AIDS does not vary much by women's age, but there are substantial differentials for all other background characteristics. More than half of women in urban areas (56 percent) have heard of AIDS, compared with only 11 percent of women in rural areas. Among the regions, knowledge of AIDS is highest in the Hill Region and lowest in the Eastern Region and the Bundelkhand Region. The difference in the knowledge of AIDS by women's educational level is dramatic. Knowledge of AIDS increases from only 7 percent for illiterate women to 81 percent for women who have completed at least a high school education. There is also a strong positive relationship between knowledge of AIDS and household standard of living. Sikhs are much more likely to know about AIDS (42 percent) than either Muslims (25 percent) or Hindus (19 percent). Knowledge of AIDS is very low among women from scheduled castes, scheduled tribes, and other backward classes (only 9–12 percent). The effect of media exposure on knowledge of AIDS is very powerful. Only 4 percent of women who are not regularly exposed to radio, television, cinema, theatre, or print media say that they have heard about AIDS, whereas 72 percent of women who either go to the cinema/theatre monthly or read a newspaper or magazine weekly know about AIDS.

Source of Knowledge About AIDS

As part of its AIDS prevention programme, the Government of India has been using mass media, especially electronic media, extensively to create awareness among the general public about AIDS and its prevention. NFHS-2 asked women who had heard of AIDS about their sources of AIDS information. Table 6.15 shows the percentage of ever-married women who have heard about AIDS from specific sources. Television is by far the most important source of information about AIDS among ever-married women in Uttar Pradesh. Ninety percent of women who know about AIDS received information from that source. Other important sources of information about AIDS are radio (39 percent) and newspapers or magazines (22 percent). Only 1 percent report that they received information about AIDS from a health worker.

Table 6.15 Source of knowledge about AIDS

Percentage of ever-married women who have heard about AIDS and among women who have heard about AIDS, percentage who received information from specific sources by selected background characteristics, Uttar Pradesh, 1998–99

Background characteristic	Percentage who have heard about AIDS	Number of women	Among those who have heard about AIDS, percentage who received information from:										Number of women who have heard about AIDS
			Radio	Television	Cinema	Newspaper/ magazine	Poster/ hoarding	Health worker	Adult education programme	Friend/ relative	School teacher	Other source	
Age													
15–24	20.2	2,942	42.6	90.6	5.6	20.6	6.2	1.0	0.1	10.4	0.4	1.7	595
25–34	21.7	3,277	40.1	89.8	8.2	22.5	5.4	0.9	0.1	12.2	0.2	2.0	710
35–49	18.7	3,073	35.2	90.9	8.3	24.3	7.6	1.6	0.0	10.6	0.2	2.1	575
Residence													
Urban	55.8	1,860	35.4	96.6	9.2	26.6	7.0	0.7	0.0	6.2	0.2	1.3	1,039
Rural	11.3	7,432	44.3	82.7	5.2	17.3	5.5	1.7	0.1	17.2	0.3	2.7	842
Region													
Hill	34.4	420	40.9	92.9	9.0	28.0	7.6	1.3	0.3	7.3	1.2	1.2	144
Western	21.8	3,320	36.8	93.1	7.0	23.0	7.4	0.5	0.0	8.7	0.2	2.4	724
Central	23.4	1,620	50.5	93.3	9.6	23.4	5.3	1.1	0.0	6.4	0.3	1.7	379
Eastern	16.0	3,505	32.8	85.6	4.7	20.2	4.4	1.6	0.0	17.9	0.0	1.8	562
Bundelkhand	16.6	427	55.4	79.8	17.3	18.0	13.8	4.2	0.7	15.2	0.7	1.4	71
Education													
Illiterate	6.7	6,523	28.9	82.0	1.5	3.1	1.2	0.9	0.1	16.8	0.0	2.0	439
Literate, < middle school complete	29.0	1,101	32.2	88.4	4.1	10.7	2.2	1.0	0.0	15.9	0.2	0.7	319
Middle school complete	45.5	635	39.3	87.6	3.1	15.4	9.0	2.0	0.1	13.9	0.5	2.0	289
High school complete and above	80.8	1,032	47.7	96.5	13.3	39.6	9.6	1.1	0.0	5.4	0.3	2.4	834
Religion													
Hindu	19.0	7,715	41.5	90.1	8.6	24.1	6.7	1.3	0.0	11.0	0.3	2.2	1,467
Muslim	25.4	1,483	29.9	91.0	3.3	16.4	5.0	0.6	0.1	12.1	0.0	0.9	376
Sikh	41.8	55	(36.7)	(100.0)	(2.0)	(12.2)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	23
Caste/tribe													
Scheduled caste	10.5	1,805	42.9	84.3	4.6	13.9	3.8	3.2	0.0	8.5	0.0	2.3	189
Scheduled tribe	9.0	191	(30.6)	(100.0)	(5.2)	(27.6)	(13.5)	(6.2)	(0.0)	(14.3)	(4.9)	(13.1)	17
Other backward class	12.0	2,591	46.3	86.2	6.0	19.5	3.5	0.5	0.0	15.1	0.4	1.8	310
Other	30.8	4,276	37.8	92.1	8.2	24.6	7.3	1.0	0.1	10.4	0.2	1.8	1,316

Contd...

Table 6.15 Source of knowledge about AIDS (contd.)

Percentage of ever-married women who have heard about AIDS and among women who have heard about AIDS, percentage who received information from specific sources by selected background characteristics, Uttar Pradesh, 1998–99

Background characteristic	Percentage who have heard about AIDS	Number of women	Among those who have heard about AIDS, percentage who received information from:										Number of women who have heard about AIDS
			Radio	Television	Cinema	Newspaper/ magazine	Poster/ hoarding	Health worker	Adult education programme	Friend/ relative	School teacher	Other source	
Standard of living index													
Low	4.1	2,598	36.7	70.5	4.3	7.3	3.3	1.4	0.4	22.4	0.0	3.0	107
Medium	16.3	4,887	34.3	86.6	4.1	12.4	5.3	1.1	0.0	12.5	0.1	2.5	799
High	58.3	1,612	43.7	95.8	10.7	32.5	7.5	1.2	0.1	8.6	0.3	1.4	939
Exposure to mass media													
Exposed to any media	40.4	4,206	40.5	93.5	7.8	23.9	6.8	1.1	0.1	8.3	0.3	1.6	1,699
Listens to radio weekly	39.4	2,739	55.0	92.3	9.8	27.3	6.5	1.3	0.1	9.2	0.1	1.8	1,080
Watches television weekly	51.3	2,981	38.7	97.5	8.0	23.9	6.6	0.9	0.1	6.9	0.3	1.5	1,530
Goes to cinema/theatre monthly	71.8	329	57.6	96.5	20.8	37.9	10.8	1.2	0.0	7.6	0.4	1.4	236
Reads newspaper/magazine weekly	71.5	1,174	48.6	95.0	12.9	39.2	11.0	1.5	0.0	7.6	0.3	2.0	840
Not regularly exposed to any media	3.6	5,086	28.5	60.9	3.5	9.1	2.0	1.2	0.0	37.6	0.0	5.3	181
Total	20.2	9,292	39.4	90.4	7.4	22.4	6.3	1.2	0.0	11.1	0.3	1.9	1,881

Note: Total includes a small number of women belonging to other religions, and women with missing information on religion, caste/tribe, and the standard of living index, who are not shown separately.
( ) Based on 25–49 unweighted cases

Television is the most important source of information about AIDS in all of the groups shown in Table 6.15 and a substantial percentage of women in all groups received information about AIDS from the radio. Friends and relatives are an important source of AIDS information for women who live in households with a low standard of living and women who are not regularly exposed to any media.

Knowledge of Ways to Avoid AIDS

Respondents who have heard of AIDS were asked if a person can do anything to avoid becoming infected. Those who reported that something can be done were asked what a person can do to avoid AIDS. Table 6.16 shows the percentage of ever-married women who know of no way to avoid AIDS and the percentages who report that AIDS can be avoided in specific ways, by selected background characteristics.

Among women who have heard about AIDS, 45 percent do not know any way to avoid infection, compared with 33 percent for India as a whole. The percentage is higher among rural women than among urban women, among women living in the Bundelkhand Region than elsewhere in Uttar Pradesh, and among women not regularly exposed to mass media. The percentage is also considerably higher among Muslim women (52 percent) than among Hindu women (44 percent). Scheduled-caste women are more likely than other women not to know any way to avoid AIDS. Lack of knowledge of ways to avoid becoming infected with AIDS decreases sharply with increasing levels of education and household standard of living.

Among women who report that something can be done to prevent AIDS, the most commonly mentioned ways of avoiding AIDS are having only one sex partner (28 percent), using condoms (25 percent), and avoiding injections or using clean needles (23 percent). Substantial proportions of respondents (10–15 percent) also mention avoiding blood transfusions, avoiding sex with commercial sex workers, and abstaining from sex completely. Only 3 percent of women mention avoiding sex with homosexuals as a way of avoiding AIDS and even fewer women mention avoiding intravenous drug use. The percentage reporting most specific ways of avoiding AIDS is lower among rural than among urban women and women not regularly exposed to mass media than other women. The level of education and the household standard of living are positively associated with women mentioning almost every way of avoiding AIDS. The use of condoms as a way of avoiding AIDS is mentioned most often by women in the Hill Region and the Central Region, women who have at least completed high school, women from households with a high standard of living, and women who are regularly exposed to cinema, print media, and radio broadcasts.

The lack of knowledge of AIDS, its modes of transmission, and ways to avoid infection among women in Uttar Pradesh is a major challenge to efforts to avoid the spread of AIDS. Most ever-married women in their childbearing years have never heard of AIDS, and almost half of those who have heard of AIDS do not know even one way to avoid infection. It is clear that AIDS prevention organizations need to strengthen the educational components of their programmes, in addition to trying to reduce high-risk behaviour, since even basic information about AIDS is seriously deficient among women in Uttar Pradesh.

Table 6.16 Knowledge about avoidance of AIDS

Among ever-married women who have heard about AIDS, percentage who believe AIDS can be avoided in specific ways by selected background characteristics, Uttar Pradesh, 1998–99

Background characteristic	Percentage who believe AIDS can be avoided by:									Knows no way to avoid AIDS	Number of women
	Abstaining from sex	Using condoms	Having only one sex partner	Avoiding sex with commercial sex workers	Avoiding sex with homo-sexuals	Avoiding blood transfusions	Avoiding injections/ using clean needles	Avoiding IV drug use	Other ways		
Age											
15–24	10.7	25.3	24.9	11.8	3.5	13.1	20.5	1.0	4.4	45.3	595
25–34	9.4	27.0	30.1	11.3	2.2	14.8	22.9	1.8	4.9	43.3	710
35–49	9.8	21.4	28.2	10.6	2.9	16.5	24.2	1.5	4.5	47.0	575
Residence											
Urban	10.2	29.6	31.2	12.1	2.8	17.5	26.3	1.7	4.3	41.2	1,039
Rural	9.7	18.7	23.7	10.2	2.9	11.4	18.0	1.1	5.1	49.8	842
Region											
Hill	9.5	39.7	37.6	20.6	7.5	18.2	23.2	2.4	4.6	36.6	144
Western	9.6	23.8	29.6	12.4	4.4	14.2	14.5	2.0	2.7	48.4	724
Central	8.1	33.6	35.1	8.0	1.9	16.8	31.6	1.3	4.7	36.8	379
Eastern	11.7	17.9	19.2	10.2	0.4	14.0	28.8	0.8	7.2	45.9	562
Bundelkhand	10.4	11.0	20.6	5.5	1.4	8.9	5.6	0.7	3.5	65.5	71
Education											
Illiterate	6.1	8.5	13.4	8.0	2.4	7.5	9.1	0.8	2.5	67.4	439
Literate, < middle school complete	7.2	14.0	17.6	7.6	0.5	11.0	15.2	0.7	3.9	58.3	319
Middle school complete	7.9	19.0	23.9	9.8	3.5	12.8	25.1	1.1	5.9	47.1	289
High school complete and above	13.8	39.4	40.8	14.8	3.8	20.8	31.6	2.2	5.6	27.4	834
Religion											
Hindu	10.2	25.5	28.5	11.6	3.0	15.7	22.8	1.6	4.8	43.8	1,467
Muslim	9.0	21.1	23.5	9.1	2.3	10.7	21.0	0.9	4.5	52.3	376
Sikh	(6.1)	(32.5)	(41.0)	(22.5)	(0.0)	(25.8)	(35.2)	(2.0)	(0.0)	(15.2)	23
Caste/tribe											
Scheduled caste	4.4	17.0	21.9	13.1	3.3	15.6	18.6	2.0	3.8	55.1	189
Scheduled tribe	(9.0)	(26.1)	(44.8)	(25.9)	(12.8)	(20.1)	(34.8)	(0.0)	(2.4)	(27.9)	17
Other backward class	15.8	22.8	25.4	10.7	3.1	18.0	25.1	0.8	3.6	41.9	310
Other	9.5	26.6	29.9	11.0	2.6	14.0	22.8	1.6	5.0	43.6	1,316

Contd...

Table 6.16 Knowledge about avoidance of AIDS (contd.)

Among ever-married women who have heard about AIDS, percentage who believe AIDS can be avoided in specific ways by selected background characteristics, Uttar Pradesh, 1998–99

Background characteristic	Percentage who believe AIDS can be avoided by:									Knows no way to avoid AIDS	Number of women
	Abstaining from sex	Using condoms	Having only one sex partner	Avoiding sex with commercial sex workers	Avoiding sex with homo-sexuals	Avoiding blood transfusions	Avoiding injections/ using clean needles	Avoiding IV drug use	Other ways		
Standard of living index											
Low	10.2	7.7	12.6	5.9	3.9	8.8	8.6	0.8	4.8	66.5	107
Medium	7.3	17.8	23.5	11.2	2.6	12.1	18.3	1.1	3.7	52.6	799
High	12.1	33.1	33.4	12.1	2.8	17.4	27.5	1.9	5.2	36.2	939
Exposure to mass media											
Exposed to any media	10.3	26.5	29.2	11.3	2.8	15.3	23.7	1.4	4.9	42.8	1,699
Listens to radio weekly	11.6	30.5	32.0	11.0	3.3	16.1	24.3	2.0	5.7	39.7	1,080
Watches television weekly	10.5	27.9	30.4	11.6	2.7	15.9	24.9	1.5	4.9	41.2	1,530
Goes to cinema/theatre monthly	12.0	38.7	34.7	10.4	5.2	24.1	27.3	1.2	7.3	36.5	236
Reads newspaper/magazine weekly	13.5	37.7	36.9	14.2	4.3	21.0	30.2	2.2	6.6	30.6	840
Not regularly exposed to any media	6.8	8.6	15.6	10.8	3.2	9.7	11.5	2.0	2.2	66.3	181
Total	10.0	24.8	27.9	11.2	2.8	14.8	22.5	1.5	4.6	45.0	1,881

Note: Total includes11 women belonging to other religions and 4, 48, and 35 women with missing information on religion, caste/tribe, and the standard of living index, respectively, who are not shown separately.
( ) Based on 25–49 unweighted cases