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In fond memory of the late
Prof. P.N. Mari Bhat

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सत्यमेव जयते

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FOREWORD

The Government has launched the National Rural Health Mission in April 2005 with the objectives of meeting the outcomes envisioned in the National Population Policy 2000, the Eleventh Plan, MDGs and the Vision 2020 India by improving the reproductive and child health delivery system along with the overall preventive and curative and preventable heath care system in the country.

In order to have an effectual set of policies and also to translate that into new programmes and initiatives, there is always a hunt for newer set of evidences of the ground realities. This is where the National Family Health Surveys (NFHS) have always played a crucial role. Like its predecessors, NFHS-1 (1992-93) and NFHS-2 (1998-99), present round, NFHS-3 (2005-06) was conducted when there was the need to have base line information on the crucial reproductive and Child Health, nutrition, life style and HIV/AIDs related indicators, due to the launching of the Phase II of the Reproductive and Child Health programme and the NACP-III programme for control of HIV/AIDS.

National Family Health Survey (2005-06) popularly known as NFHS-3 is not only large in its coverage of newer areas of data collection, it has covered for the first time unmarried women age 15-49 and married and unmarried men age 15-54 in addition to all ever-married women age 15-49. Thus, the number of individuals interviewed has also increased almost twice of that during previous rounds.

I hope that the information set in this round of NFHS would further strengthen India's demographic and health database. The efforts of all in the Ministry of Health & Family Welfare, NACO, International Institute of Population Sciences (IIPS), National AIDS Research Institute, the Chairmen & members of the Technical and Administrative Committees, partners from USAID, UNICEF, UNFPA, DFID, Bill and Melinda Gates Foundation and ORC Macro, USA who have assiduously worked and supported this project are acknowledged with appreciation.

Naresh Dayal

(Naresh Dayal)

PREFACE

The National Family Health Surveys (NFHS) programme, initiated in the early 1990s, has emerged as a nationally important source of data on population, health, and nutrition for India and its states. The 2005-06 National Family Health Survey (NFHS-3), the third in the series of these national surveys, was preceded by NFHS-1 in 1992-93 and NFHS-2 in 1998-99. Like NFHS-1 and NFHS-2, NFHS-3 was designed to provide estimates of important indicators on family welfare, maternal and child health, and nutrition. In addition, NFHS-3 provides information on several new and emerging issues, including family life education, safe injections, perinatal mortality, adolescent reproductive health, high-risk sexual behaviour, tuberculosis, and malaria. Further, unlike the earlier surveys in which only ever-married women age 15-49 were eligible for individual interviews, NFHS-3 interviewed all women age 15-49 and all men age 15-54. Information on nutritional status, including the prevalence of anaemia, is provided in NFHS-3 for women age 15-49, men age 15-54, and young children.

A special feature of NFHS-3 is the inclusion of testing of the adult population for HIV. NFHS-3 is the first nationwide community-based survey in India to provide an estimate of HIV prevalence in the general population. Specifically, NFHS-3 provides estimates of HIV prevalence among women age 15-49 and men age 15-54 for all of India, and separately for Uttar Pradesh and for Andhra Pradesh, Karnataka, Maharashtra, Manipur, and Tamil Nadu, five out of the six states classified by the National AIDS Control Organization (NACO) as high HIV prevalence states. No estimate of HIV prevalence is being provided for Nagaland, the sixth high HIV prevalence state, due to strong local opposition to the collection of blood samples.

NFHS-3 covered all 29 states in India, which comprise more than 99 percent of India's population. NFHS-3 is designed to provide estimates of key indicators for India as a whole and, with the exception of HIV prevalence, for all 29 states by urban-rural residence. Additionally, NFHS-3 provides estimates for the slum and non-slum populations of eight cities, namely Chennai, Delhi, Hyderabad, Indore, Kolkata, Meerut, Mumbai, and Nagpur. NFHS-3 was conducted under the stewardship of the Ministry of Health and Family Welfare (MOHFW), Government of India, and is the result of the collaborative efforts of a large number of organizations. The International Institute for Population Sciences (IIPS), Mumbai, was designated by MOHFW as the nodal agency for the project. Funding for NFHS-3 was provided by the United States Agency for International Development (USAID), DFID, the Bill and Melinda Gates Foundation, UNICEF, UNFPA, and MOHFW. Macro International, USA, provided technical assistance at all stages of the NFHS-3 project. NACO and the National AIDS Research Institute (NARI) provided technical assistance for the HIV component of NFHS-3. Eighteen Research Organizations, including six Population Research Centres, shouldered the responsibility of conducting the survey in the different states of India and producing electronic data files.

The survey used a uniform sample design, questionnaires (translated into 18 Indian languages), field procedures, and procedures for biomarker measurements throughout the

country to facilitate comparability across the states and to ensure the highest possible data quality. The contents of the questionnaires were decided through an extensive collaborative process in early 2005. Based on provisional data, two national-level fact sheets and 29 state fact sheets that provide estimates of more than 50 key indicators of population, health, family welfare, and nutrition have already been released. The basic objective of releasing fact sheets within a very short period after the completion of data collection was to provide immediate feedback to planners and programme managers on key process indicators.

Given the vast amount of information collected in NFHS-3, the national report is being published in two volumes. The first volume contains comprehensive findings from NFHS-3, based on a standard tabulation plan developed at a workshop held at IIPS on 25 May 2006. According to the recommendations of the NFHS-3 Technical Advisory Committee, the tabulation plan was finalized by IIPS and tables and figures were produced for the final report. The second volume of the report includes the three NFHS-3 questionnaires, more detailed information on the sample design, sampling errors for key indicators, and data quality tables. The two volumes of this report were written jointly by authors from IIPS and Macro International.

We take great pride in presenting the NFHS-3 national report. We hope that the report will provide helpful insights into the changes that are taking place in the country and will provide policymakers and programme managers with up-to-date estimates of indicators that can be used for effective management of health and family welfare programmes, with an emphasis on both the reproductive and nutritional health of the population. The report should also contribute to the knowledge of researchers and analysts in the fields of population, health, and nutrition.

S. Lahiri
Officiating Director
International Institute for
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Mumbai

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The 2005-06 National Family Health Survey (NFHS-3) was successfully completed due to the efforts and involvement of numerous organizations and individuals at different stages of the survey. As far as possible, we would like to thank everyone who was involved in the survey and made it a success.

First of all, we are grateful to the Ministry of Health and Family Welfare, Government of India, New Delhi, for their overall guidance and support during the project. Mr. Prasanna Kumar Hota, Secretary, Ministry of Health and Family Welfare, deserves special thanks. He initiated the project and designated the International Institute for Population Sciences (IIPS), Mumbai, as the nodal agency for the survey. He also formed the Steering Committee, the Administrative and Financial Management Committee, and the Technical Advisory Committee for the smooth and efficient functioning of the project. Special thanks are due to Mr. Naresh Dayal, the present Secretary of Health and Family Welfare, who continued to take an active interest in the project and provided timely guidance and support. The contributions of Mr. S.K. Sinha, Additional Director General, Mr. Partha Chattopadhyay, Chief Director, Mr. D.K. Joshi, the then Chief Director, Mr. K.D. Maiti, Adviser (MH/Stats), Ms. Rashmi Verma, Deputy Director, and Mr. K.S. Rejimon, Deputy Director are acknowledged with gratitude.

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The difficult task of data collection, office editing, and data entry for NFHS-3 was successfully carried out by 18 Research Organizations (ROs). Our heartfelt thanks are due to the Directors and staff of the Administrative Staff College of India (ASCI), Hyderabad, Centre for Research in Rural and Industrial Development (CRRID), Chandigarh, Centre for Operations Research and Training (CORT), Vadodara, Population Research Centre, Institute of Economic Growth (IEG), New Delhi, Indian Institute of Health Management Research, Jaipur, ORG Centre for Social Research, New Delhi, Research and Development Initiative Pvt. Ltd. (RDI), New Delhi, Economic Information Technology (EIT), Kolkata, State Institute of Health and Family Welfare (SIHFW), Bhubaneshwar, TNS India Pvt. Ltd., New Delhi, MODE Services Pvt. Ltd., New Delhi, TALEEM Research Foundation, Ahmedabad, Gandhigram Institute of Rural Health and Family Welfare Trust (GIRHFWT), Tamil Nadu, Society for Applied Research in Humanities, (SARH), New Delhi, Development and Research Services (DRS), New Delhi, Population Research Centre, Dharwad, Institute for Social and Economic Change (ISEC), Bangalore, and Population Research Centre, Kerala.

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SUMMARY OF FINDINGS

The third National Family Health Survey (NFHS-3), coordinated by the International Institute for Population Sciences (IIPS) under the aegis of the Government of India, was conducted in 2005-06. As did NFHS-1 (1992-93) and NFHS-2 (1998-99), NFHS-3 provides information on fertility, mortality, family planning, HIV-related knowledge, and important aspects of nutrition, health, and health care. Unlike the earlier surveys, however, NFHS-3 interviewed men age 15-54 and never married women age 15-49, as well as ever-married women, and included questions on several emerging issues such as perinatal mortality, male involvement in maternal health care, adolescent reproductive health, higher-risk sexual behaviour, family life education, safe injections, and knowledge about tuberculosis. In addition, NFHS-3 carried out blood testing for HIV to provide, for the first time in India, population-based data on HIV prevalence.

NFHS-3 collected information from a nationally representative sample of 109,041 households, 124,385 women age 15-49, and 74,369 men age 15-54. The NFHS-3 sample covers 99 percent of India's population living in all 29 states. From among all the women and men interviewed nationwide, 102,946 were tested for HIV. NFHS-3 provides estimates of HIV prevalence for adult women and men at the national level, for Uttar Pradesh and for five high HIV prevalence states (Andhra Pradesh, Karnataka, Maharashtra, Manipur, and Tamil Nadu). Additionally, health investigators tested blood haemoglobin levels of women and men and of children age 6-59 months to assess the prevalence of anaemia. NFHS-3 also collected information on population and health indicators for slum and non-slum populations in eight cities, namely Chennai, Delhi, Hyderabad, Indore, Kolkata, Meerut, Mumbai, and Nagpur.

Fieldwork for NFHS-3 was conducted in two phases from November 2005 to August 2006. Eighteen research organizations, including six Population Research Centres, collected the data and conducted data entry and editing operations. The HIV testing of blood samples was done by SRL Ranbaxy, Mumbai. External quality control for the HIV testing of blood samples was done by the National AIDS Research Institute (NARI), Pune.

Characteristics of the Household Population

A total of 515,507 individuals who stayed in the household the night before the interview were enumerated in the 109,041 NFHS-3 sample households. The age distribution of the population is typical of populations that have recently experienced fertility decline. Thirty-five percent of the population is under age 15, and only 5 percent is age 65 and older. Fourteen percent of heads of households are women. Over two-thirds (69 percent) of the population lives in rural areas.

Based on the religion of the household head, 82 percent of households are Hindu, 13 percent are Muslim, 3 percent are Christian, 2 percent are Sikh and 1 percent are Buddhist/Neo-Buddhist. All other religions together account for less than 1 percent of households. Nineteen percent of household heads belong to the scheduled castes, 8 percent to the scheduled tribes, and

40 percent to the other backward classes (OBC). About one-third do not belong to any of these three groups. Twenty-seven percent of households have a below poverty line (BPL) card.

The 2001 Indian census found a sex ratio of 927 girls per 1,000 boys for the population age 0-6 years. Approximately five years after the census, NFHS-3 finds the sex ratio of the population age 0-6 years (girls per 1,000 boys) to be 918 for India as a whole. The under-seven sex ratio in urban areas is the same in NFHS-3 as in the 2001 census; however, in rural areas, NFHS-3 finds a sex ratio for this population of 921, lower than the 934 found in the census.

Seventy-two percent of children of primary-school age attend primary school and 51 percent of secondary-school age children attend secondary school. There is little gender-disparity in age appropriate education at the primary school level; however, a higher proportion of boys (57 percent) than girls (46 percent) age 11-17 are in secondary school. Nationally, more than one in four children age 6-17 years are not in school at all.

Eighty-three percent of children below age 18 live with both their parents, and 4 percent live with neither parent. A slightly higher proportion of urban children live with both parents (87 percent) than rural children (81 percent).

NFHS-3 results suggest some improvements in housing conditions and the standard of living of households since NFHS-2, seven years earlier. Sixty-eight percent of households in India now have electricity. Most households (88 percent) have access to an improved source of drinking water, with greater access in urban areas. The most common improved source of drinking water for urban dwellers is piped water: 71 percent either have water piped into their living area or use a public tap. By contrast, only 28 percent of households in rural areas have access to piped water. Most people in rural areas obtain their drinking water from a tube well or borehole (53 percent). Fifty-three percent of urban households have an improved toilet facility, compared with only 18 percent of rural households. Nationally, 45 percent of households have any toilet facilities, up from 36 percent at the time of NFHS-2. Forty-six percent of households live in a *pucca* house.

Women's and Men's Literacy, Education, and Employment

Just over half (55 percent) of de facto women age 15-49 are literate, compared with 78 percent of de facto men in the same age group. Literacy has increased substantially over time, with recent cohorts being more literate than older cohorts; nonetheless, NFHS-3 shows that even among those in the age group 15-19, only 74 percent of women and 89 percent of men are literate.

Education levels vary widely throughout India. The percentage of women who have at least 12 or more years of education ranges from 5 percent in Bihar; 7 percent in Tripura, Rajasthan, and Chhattisgarh; and 8-9 percent in Jharkhand, Orissa, West Bengal, Andhra Pradesh, and Madhya Pradesh, to 37 percent in Delhi. The corresponding range for men is from 12 percent in Tripura to 38 percent in Delhi. Delhi, Manipur, Himachal Pradesh, Uttaranchal, Goa, and Kerala are the states with the highest proportion of persons who have completed at least 12 years of education. Notably, the gender gap in the proportions with 12 or more

completed years of education is less than 10 percentage points in all states except Manipur (11 percentage points) and Bihar (16 percentage points). In Punjab, Goa, and Kerala, slightly more women than men have completed 12 or more years of education.

Nationally, 35 percent of women and 18 percent of men are not regularly exposed to newspapers/magazines, television, radio, or cinema. For both women and men, media exposure is lowest in Jharkhand and highest in Delhi, Manipur, Goa, and Kerala.

Forty-three percent of women age 15-49 are employed, compared with 87 percent of men in the same age group. Men's employment varies little by urban-rural residence; however, urban women are much less likely than rural women to be employed. The majority of employed women are agricultural workers (59 percent); whereas, no single occupation accounts for the majority of employed men. Similar proportions of employed women and men (7 percent, each) are in professional, technical, administrative, and managerial occupations. Two-thirds of employed women earn cash, compared with 91 percent of employed men.

Marriage and Fertility

More than half of women are married before the legal minimum age of 18. Among women age 20-49, the median age at first marriage is 17.2 years. By contrast, men in the same age group get married six years later, at a median age of 23.4 years. Sixteen percent of men age 20-49 are married by age 18, 28 percent by age 20, and 58 percent by age 25.

Women today are waiting slightly longer to marry. In the late 1990s, the median age at first marriage was 16.7 years, 6 months earlier than it is now. The median age at first marriage in India is almost two years higher for women age 20-24 than for women age 40-49. Urban women marry more than two years later than rural women; the median age at marriage among urban women age 20-49 is 18.8 years, compared with 16.4 years among their rural counterparts.

Fertility continues to decline in India. The current total fertility rate (TFR) of 2.7 is down slightly from 2.9 children per woman at the time of NFHS-2, but is still well above the replacement level of just over two children per woman. In urban areas, the TFR has reached replacement levels (2.1), but in rural areas the TFR is 3.0.

Total fertility rates range from 1.8 in Goa, Andhra Pradesh, and Tamil Nadu to 4.0 in Bihar. Besides Bihar, other states with TFRs of 3.0 and above include Uttar Pradesh, Rajasthan, and Madhya Pradesh in the north, Jharkhand in the east, and Arunachal Pradesh, Meghalaya, and Nagaland in the northeast. Fertility is low in the western and southern states: with the exception of Gujarat (with a TFR of 2.4), the states in these regions all have replacement level fertility of 2.1 or fewer children per woman. Delhi, Himachal Pradesh, Punjab and Sikkim have also attained replacement level fertility.

The greatest differences in fertility are by education and household wealth. At current fertility rates, women in the poorest households will have two more children than women in the richest households. The TFR is 3.1 for the scheduled tribes, 2.9 for the scheduled castes, and 2.8 for the other backward classes. The TFR for Muslims (3.4) is higher than the TFR for Hindus

(2.6). Although fertility decreased for both groups in the seven years between NFHS-2 and NFHS-3, the fertility differential did not change over this period.

Unplanned pregnancies are relatively common. Among births in the five years before the survey, 10 percent were mistimed (wanted later) and 11 percent were not wanted at all. Among births to women age 30-49, more than one four births (29 percent) were not wanted at all. If all women were to have only the number of children they wanted, the total fertility rate would be 1.9 instead of 2.7.

Research shows that waiting at least three years between births significantly reduces the risk of infant mortality. In India, the median interval between births is 31 months. Eleven percent of births take place within 18 months of the last birth, and 28 percent occur within 24 months.

Teenage pregnancy is common. Overall, one in six women age 15-19 have begun childbearing: 12 percent have become mothers and 4 percent were pregnant with their first child at the time of the survey. Among women age 20-49, half had a birth before they were 20 years old, and more than one in four before they were 18 years old. Early childbearing is most common in rural areas and among women with no education.

Among currently married women and men with 2 or more children, at least four out of five do not want to have any more children. Two-thirds of Indian women and men consider the ideal family size to be two children or less. Most men and women would like to have at least one son and one daughter. Nonetheless, son preference is widespread; one in five women and men say that they would like more sons than daughters and only 2-3 percent say that they would like more daughters than sons.

Family Planning Knowledge and Use

Knowledge of contraception is nearly universal: 98 percent of women and 99 percent of men age 15-49 know one or more methods of contraception. Over 94 percent of women and men know about female sterilization. Male sterilization, by contrast, is known only by 79 percent of women and 87 percent of men. Ninety-three percent of men know about condoms, compared with 74 percent of women. More than four in five women and men know about contraceptive pills. Knowledge of contraception is widespread even among adolescents: 96 percent of young women and 97 percent of young men have heard of a modern method of contraception.

Two-thirds of currently married women have used a family planning method at some time in their lives. Since NFHS-2, ever use of any method among currently married women has increased by 11 percentage points. The increase is greatest for spacing methods; ever use of condoms and the rhythm method has increased by 6 percentage points each.

The contraceptive prevalence rate for currently married women in India is 56 percent, up from 48 percent in NFHS-2. Female sterilization, with a prevalence of 37 percent, accounts for 66 percent of all contraceptive use, down from 71 percent of all contraceptive use at the time of NFHS-2. The use of female sterilization is higher for women with less education and women who are employed for cash than for most other groups of women. The highest adoption rate of

female sterilization, at 67 percent, is among women with three children who have two sons. The most common spacing methods are condoms and the rhythm method, each used by 5 percent of currently married women.

Contraceptive use among currently married women varies markedly by education, religion, caste, and wealth. Just over half of women with no education (52 percent) use any method, compared with 62 percent of women with 12 or more years of education. Contraceptive prevalence is highest among Jains (75 percent), followed by Buddhists/Neo-Buddhists (68 percent), and Sikhs (67 percent). Contraceptive use ranges from 46 to 58 percent among Muslims, Hindus, and Christians. By caste or tribe, contraceptive prevalence is highest among women who do not belong to any scheduled caste, scheduled tribe, or other backward class (62 percent), followed by women belonging to the scheduled castes (55 percent) and other backward classes (54 percent). Contraceptive use is lowest among women from the scheduled tribes (48 percent). Wealth has a positive effect on contraceptive prevalence, with use increasing from 42 percent among currently married women in the lowest wealth quintile, to 68 percent among those in the highest wealth quintile.

Current use of contraception varies greatly with parity; first increasing from 34 percent for women with one child to 74 percent for women with three children, and then declining to 63 percent for women with 4 or more children. At each parity, women who have sons are much more likely than women who have no sons to be using contraception.

The contraceptive prevalence rate varies from 73 percent in Himachal Pradesh and 71 percent in West Bengal, to 30 percent in Nagaland and 24 percent in Meghalaya. Female sterilization is more prevalent in the South Region, than in any other region. Nationally, the median age at sterilization for women is 25.5 years, similar to the median at the time of NFHS-2 (25.7 years). Median age at sterilization is lowest at 23.3 years in Andhra Pradesh, followed by 23.9 years in Karnataka, and is highest in Manipur (29.9 years). In India as a whole, 77 percent of female sterilization adopters have never used any other method.

Seventy-one percent of modern contraceptive users obtained their method from a public sector source. However, the source of contraception varies greatly by method. Eighty-four percent of sterilized women had the operation in a government facility, usually in a government or municipal hospital. By contrast, just over half of IUD users utilized the private medical sector for their IUD insertion. Almost two-thirds of pill users got their most recent supply from the private medical sector, which is also the most common source for condoms. According to women's reports, 62 percent of pill users and 44 percent of condom users who knew the brand name of their method were using socially-marketed brands. Almost half (47 percent) of men who used a condom the last time they had sex used a socially-marketed brand. The use of socially marketed pills exceeds 80 percent of all current pill use in Manipur, Assam, Nagaland, and Bihar; and is lowest at 40 percent in Chhattisgarh. Less than 60 percent of condom users (according to women's reports) use socially marketed brands in every state except Uttar Pradesh and Orissa.

Discontinuation rates for temporary methods are fairly high: 39 percent of users of temporary methods discontinue use within 12 months of initiating use. About half of pill users

discontinue use within the first year of adopting the method, and discontinuation is also high for condoms (45 percent). One-year discontinuation rates are also substantial for users of the rhythm method (32 percent) and withdrawal (35 percent), the methods with the highest failure rates.

Unmet need for family planning among currently married women is 13 percent, down from16 percent in NFHS-2. Unmet need decreases with age, from 27 percent for women age 15-19, to 2 percent for women age 45-49. Younger women (age 15-24) have a greater unmet need for spacing than for limiting. Rural women have higher unmet need than urban women for both spacing and limiting. Unmet need for family planning varies greatly by state, from 5 percent in Andhra Pradesh to 35 percent in Meghalaya. In addition to Meghalaya, more than 20 percent of women have an unmet need for contraception in Nagaland, Jharkhand, Bihar, and Uttar Pradesh.

Slightly more than three in five women heard or saw a family planning message in the few months before the survey, most often on television or radio. By contrast, over 90 percent of men have been exposed to family planning messages in the past few months. Exposure to family planning messages is particularly limited in Nagaland, Jharkhand, Jammu and Kashmir, Rajasthan, Bihar, Uttar Pradesh, and Madhya Pradesh, where less than half the women were exposed to a family planning message in the past few months.

Informed choice of family planning methods is not common. Only about one-third of modern contraceptive users were informed about the side effects or problems of their method, and only one-quarter were told what to do about side effects. Less than 30 percent were ever informed about other types of family planning methods. IUD users were most likely to be provided with each of the three types of information, and users of female sterilization were least likely to be provided with this information. Informed choice is consistently higher in urban areas, and is somewhat more common in private than in public medical facilities.

Most men in India believe that women do not alone bear the responsibility for family planning (78 percent) and reject the idea that women using contraception may become promiscuous (84 percent). Nearly two-thirds of men know that a condom protects against pregnancy most of the time. Half of men, however, incorrectly believe that women who are breastfeeding cannot become pregnant.

Infant and Child Mortality

The infant mortality rate in India is steadily declining. The NFHS-3 estimate of infant mortality is 57 deaths per 1,000 live births, compared with the NFHS-2 estimate of 68 deaths per 1,000 live births and the NFHS-1 estimate of 79. Still, more than one in 18 children die within the first year of life, and more than one in 13 die before reaching age five.

Infant and child mortality rates are higher in rural areas. In 2001-05, the infant mortality rate was 50 percent higher in rural areas (62 deaths per 1,000 births) than in urban areas (42 deaths per 1,000 births). Children whose mothers have no education are more than twice as likely to die before their first birthday as children whose mothers have completed at least 10 years of school. Also, children from scheduled castes and tribes are at greater risk of dying than

other children. The infant mortality rate (deaths per 1,000 births) for births less than 2 years apart is 86, dropping to 50 for births 24-35 months apart, and to 30 for births 36-47 months apart. By state, infant mortality is highest in Uttar Pradesh (73) and lowest in both Kerala and Goa (15). Nationally, a girl child's disadvantage with regard to survival is most evident in the under-five mortality rate: 79 girls per 1,000 births die before their fifth birthday, compared with 70 boys per 1,000 births.

The perinatal mortality rate, which includes stillbirths and very early infant deaths (in the first week of life), is estimated at 49 deaths per 1,000 pregnancies that lasted 7 months or more for the 2001-05 period. The perinatal mortality rate for pregnancies within 15 months after a previous pregnancy is 71, compared with only 30 to 31 when the birth interval is 27 months or more. Perinatal mortality is also very high for very young mothers (67) and for first pregnancies (66). According to socio-economic characteristics, perinatal mortality is highest for rural mothers, mothers with no education and less than 5 years of education, and mothers in the lowest wealth quintile.

Maternal Health Care

Although 76 percent of women who had a live birth in the five years preceding the survey received antenatal care, only 44 percent started antenatal care during the first trimester of pregnancy, as recommended. Another 22 percent had their first visit during the fourth or fifth month of pregnancy. Just over half of mothers (52 percent) had three or more antenatal care visits. Urban women were much more likely to have three or more antenatal visits than rural women. The percentage of women who had three or more ANC visits ranges from 17 percent in Bihar and 27 percent in Uttar Pradesh to at least 90 percent in Kerala, Goa, and Tamil Nadu. Half of men with a child under age three years said that they were at an antenatal care visit with the child's mother; only 37 percent were ever told what to do if the mother had a major complication of pregnancy.

Many women do not receive high quality antenatal care. Less than three in four had their abdomen examined, and less than two in three received other services, including being weighed, having blood pressure measured, and urine and blood samples checked. Only 36 percent received information about pregnancy complications. Sixty-five percent received (or bought) iron and folic acid (IFA) supplements for their most recent birth, and only 23 percent took IFA for at least 90 days, as recommended. Seventy-six percent of mothers received the two or more tetanus toxoid injections during pregnancy for their most recent birth. Only 4 percent of women took a drug for intestinal parasites during their pregnancy.

IFA coverage and tetanus toxoid injections for older women, women with four or more children, women from rural areas, women with no education, and women in households in the lowest wealth quintile are well below the national average. In virtually all categories of women, only a fraction of women who received IFA said that they consumed IFA for at least 90 days as recommended. States where the provision of IFA was far below the national average include Nagaland, Bihar, Arunachal Pradesh, Jharkhand, Uttar Pradesh, and Meghalaya. The percentage of women who received two or more tetanus toxoid injections ranges from a low of 40 percent in

Arunachal Pradesh and 51-52 percent in Nagaland, Mizoram, and Meghalaya, to 90 percent or higher in Delhi, West Bengal, and Tamil Nadu.

One-fourth of all pregnancies in the five years preceding the survey underwent an ultrasound test. Forty-four percent of pregnancies to urban women underwent an ultrasound test, compared with 16 percent in rural areas. Pregnancies to women with at least 12 years of completed education were almost eight times as likely to have an ultrasound test as pregnancies to women with no education. A higher percentage of pregnancies to women with no living son had an ultrasound test, and this percentage declines as the number of living sons increases. An examination of the sex ratio of births after a pregnancy with an ultrasound test provides strong evidence that ultrasound testing is being used for sex determination followed by sex-selective abortions.

Thirty-nine percent of births in the five years preceding the survey took place in health facilities; more than half took place in the woman's own home; and 9 percent took place in parents' homes. For 72 percent of deliveries that took place at home, the mother reported that she did not feel that it was necessary to deliver in a health facility, and for more than a quarter (26 percent), the mother said that delivery in a health facility is too expensive. The more ANC visits that a woman had during pregnancy, the greater the likelihood that her delivery took place in a health facility. First births are more likely to be delivered in an institution than births at higher birth orders. Urban residence, education, and wealth are all strongly and positively associated with the likelihood of an institutional delivery. Only 13 percent of births to women in the lowest wealth quintile and 18 percent of births to both women with no education and to scheduled-tribe women are delivered in an institution. In the case of only one in five births delivered at home was the use of a disposable delivery kit (DDK) reported. However, in more than 9 in 10 home deliveries, the mother reported that a clean blade was used to cut the umbilical cord. Overall, less than 1 in 10 (9 percent) births in the five years preceding the survey were delivered by caesarean section. Among the 34 percent of births that were weighed at birth, over one in five (22 percent) were of low birth weight (less than 2.5 kg).

Forty-seven percent of births in the five years preceding the survey were assisted by health personnel, including 35 percent by a doctor and 10 percent by an auxiliary nurse midwife, nurse, midwife, or lady health visitor. More than one-third of births (37 percent) were assisted by a traditional birth attendant, and 16 percent were assisted by only friends, relatives, or other persons.

Few fathers with a child less than three years of age were provided information related to delivery care. Only half were told about the importance of proper nutrition for the mother during pregnancy and 43 percent were told about the importance of delivering the baby in a health facility. Among fathers whose child was not delivered in a health facility, 48 percent were told about the importance of using a new or unused blade to cut the umbilical cord, 44 percent were told about the importance of cleanliness at the time of delivery, and only about one-third were told about the importance of breastfeeding the baby (36%) and about keeping the baby warm immediately after birth (33 percent). Younger fathers were much less likely than older fathers to be provided this information.

Postnatal check-ups soon after delivery help safeguard the health of mother and baby, particularly for births occurring outside of health care facilities. Almost 6 in 10 women (58 percent) did not receive any postnatal check-up after their most recent birth. About one-quarter of women (27 percent) received a health check-up in the first four hours after delivery, and 37 percent received a health check-up within the critical first two days after delivery. Although the likelihood of a timely postnatal checkup is closely associated with having an institutional delivery, it is notable that 15-24 percent of births even in institutions did not receive a postnatal check-up. Among births delivered at home, only 9-12 percent of births received a postnatal checkup within two days of delivery.

Several states consistently perform well below the national average on each of the five safe motherhood indicators. These states include Rajasthan in the North Region, all states in the Central Region (Chhattisgarh, Madhya Pradesh, and Uttar Pradesh), Bihar and Jharkhand in the East Region, and Arunachal Pradesh, Assam, Meghalaya, and Nagaland in the Northeast Region. Uttaranchal also performs poorly on all the indicators except antenatal care. By contrast, Mizoram performs above the national average on the delivery care indicators and postnatal care indicators, but poorly on the antenatal care indicator.

Coverage and Utilization of ICDS

To provide information on the coverage of the Integrated Child Development Scheme (ICDS) programme, NFHS-3 collected data on the existence of *anganwadi* centres (AWC) and on the utilization of selected nutrition, health, and education services provided through AWCs by children under six years of age and by their mothers (during pregnancy and while breastfeeding). Nationally, 72 percent of the NFHS-3 sample enumeration areas were found to be covered by an AWC and 62 percent were covered by an AWC that had, by the time of the survey, existed for at least five years. The coverage of enumeration areas by an AWC ranges from 100 percent in Tripura to only 27 percent in Meghalaya. More than four in five children (81 percent) age 0-71 months are in areas covered by an *anganwadi* centre. While the coverage of children under age six years by an AWC is relatively high, only 28 percent of the children have received any service from an AWC in the year preceding the survey. In most states, the proportion of children who received services is less than one out of every three. Only about one in five mothers in areas covered by an *anganwadi* centre received any service from an AWC during pregnancy or during the lactation period. Overall, utilization of AWC services is higher in rural than in urban areas served by an AWC.

Among children under age six years in areas covered by an *anganwadi* centre, one in four (26 percent) received supplementary food from an AWC, one in five received an immunization from an AWC, and one in six went to an AWC for a health check-up in the 12 months preceding the survey. Nearly one-fourth of children age 36-71 months in areas served by an *anganwadi* centre went for early childhood care or preschool education to an AWC, and only 18 percent of children age 0-59 months had their weight measured in an AWC. Mothers of only half of the children age 0-59 months who were weighed received counselling services from an AWC after their child was weighed.

Child Nutrition

While breastfeeding is nearly universal in India, very few children are put to the breast immediately after birth. Only one-quarter of last-born children who were ever breastfed started breastfeeding within half an hour of birth, as is recommended, and almost half (45 percent) did not start breastfeeding within one day of birth. Most mothers (57 percent) gave their last-born child something to drink other than breast milk in the three days after delivery. Only 69 percent of children under two months of age are exclusively breastfed. Exclusive breastfeeding drops to 51 percent at 2-3 months of age and 28 percent at 4-5 months of age. Overall, slightly less than half of children under six months of age are exclusively breastfed.

At age 6-8 months, only about half of children (53 percent) are given timely complementary feeding (breast milk and complementary food). The timely complementary feeding rate increases to 74 percent at age 9-11 months and 81 percent at age 12-17 months. Use of bottles with nipples is not common in India. Bottle feeding increases from 5 percent under age two months to 18 percent at age 9-11 months and declines at older ages.

It is recommended that breastfeeding children age 6-23 months be fed from three or more different food groups, infants age 6-8 months be fed at least twice a day, and children age 9-23 months be fed at least three times a day. Nonbreastfeeding children age 6-23 months should be fed milk or milk products every day; in addition, they should be fed from at least four food groups, and they should be fed four or more times a day. NFHS-3 finds that only 44 percent of breastfed children are fed at least the minimum number of times recommended and only half of them also consume food from three or more food groups. Feeding recommendations are followed even less often for nonbreastfeeding children. Overall only 21 percent of breastfeeding and nonbreastfeeding children are fed according to the infant and young child feeding recommendations.

The Government of India recommends that children should be given vitamin A supplements every six months until they reach three years of age, starting at age 9 months. NFHS-3 found that only one-quarter of children age 12-35 received vitamin A supplements in the six months before the survey. This figure drops further, to only 18 percent, among children age 6-59 months. Compared with other children, those age 12-17 months are most likely to have received vitamin A supplementation in the last six months.

Almost half of children under five years of age (48 percent) are stunted and 43 percent are underweight. The proportion of children who are severely undernourished is also notable: 24 percent are severely stunted and 16 percent are severely underweight. Wasting is quite a serious problem in India, affecting 20 percent of children under five years of age. Very few children under five years of age are overweight.

Overall, girls and boys are about equally likely to be undernourished. Undernutrition is generally lower for first births than for subsequent births, and increases consistently with increasing birth order for all measures of nutritional status. Short birth intervals are associated with higher levels of stunting and underweight. Undernutrition is substantially higher in rural areas than in urban areas. Even in urban areas, however, 40 percent of children are stunted and

33 percent are underweight. Inadequate nutrition is a problem throughout India, but undernutrition is most pronounced in Madhya Pradesh, Bihar, and Jharkhand. Nutritional problems are also substantially higher than average in Meghalaya and (for stunting) in Uttar Pradesh. Nutritional problems are least evident in Mizoram, Sikkim, Manipur, and Kerala, and relatively low levels of undernutrition are also notable in Goa and Punjab. Even in these states, however, levels of undernutrition are unacceptably high.

Anaemia is very common in India. Almost 7 in 10 children age 6-59 months are anaemic, including 40 percent who are moderately anaemic and 3 percent who are severely anaemic. The prevalence of anaemia does not vary by sex of the child. Anaemia is considerably higher in rural areas, among children of women with no education, among scheduled castes and tribes, and among children in households in the lower wealth quintiles. Children's anaemia status is closely linked with the anaemia status of the mother. Although state differentials in the prevalence of anaemia are marked, a high prevalence of anaemia is found in every state. The only states in which less than half of children are anaemic are Goa (38 percent), Manipur (41 percent), Mizoram (44 percent), and Kerala (45 percent). The prevalence of anaemia among children 6-35 months has increased from 74 percent in NFHS-2 to 79 percent in NFHS-3. This increase is largely due to a sharp increase in anaemia among young children in rural areas.

Child Health

Children are considered fully immunized if they receive one BCG injection to protect against tuberculosis, three doses each of DPT (diphtheria, pertussis, tetanus) and polio vaccines, and one measles vaccine. In India, only 44 percent of children age 12-23 months are fully vaccinated, and 5 percent have not received any vaccinations. Less than one-third of children are fully vaccinated in Nagaland, Uttar Pradesh, Rajasthan, Arunachal Pradesh, and Assam. At the other end of the spectrum, at least three-quarters of children have received all the recommended vaccinations in Tamil Nadu, Goa, and Kerala.

Immunization coverage has improved substantially since NFHS-1, when only 36 percent of children were fully vaccinated and 30 percent had not been vaccinated at all. There is very little change, however, in full immunization coverage between NFHS-2 (42 percent) and NFHS-3 (44 percent).

Coverage of individual vaccines has increased considerably and is much higher than would appear from information on full coverage alone. Coverage for BCG, DPT, and polio (except Polio 0) vaccinations is much higher than the coverage of all required vaccinations combined. BCG, the first dose of DPT, and all three doses of polio vaccine have each been received by at least 76 percent of children. Fifty-five percent of children have received three doses of DPT. The relatively low percentages of children vaccinated with the third dose of DPT and with the measles vaccine are mainly responsible for the low proportion of children fully vaccinated.

NFHS-3 collected information on the prevalence and treatment of three health problems in children—acute respiratory infection (ARI), fever, and diarrhoea. Six percent of children under age five years showed symptoms of ARI in the two weeks preceding the survey. Treatment

was sought from a health facility or provider for 69 percent of children with symptoms of ARI, and 13 percent received antibiotics. Fifteen percent of children under age five years had a fever during the two weeks before the survey. Eight percent of children with fever took an antimalarial drug and 13 percent took an antibiotic drug.

Nationally, 9 percent of children under age five had diarrhoea in the two weeks preceding the survey. Sixty percent of children with diarrhoea were taken to a health facility; 43 percent were treated with oral rehydration therapy (ORT) or increased fluids, including 20 percent who received oral rehydration salts (ORS). More than a quarter (26 percent) of children with diarrhoea did not receive any type of treatment at all. Treatment of diarrhoea with any ORT ranges from 81 percent in Kerala and 70 percent in Himachal Pradesh to 21 percent in Rajasthan, 22 percent in Uttar Pradesh, and 25 percent in Assam. Only 10 percent received more liquids than normal, as recommended. Almost 4 in 10 children with diarrhoea received less to drink than normal, increasing the risk of dehydration. Children with diarrhoea should be treated with ORT, given increased fluids, and receive continued feeding. However, the recommended guidelines were followed in the case of only one in three children with diarrhoea.

Women's and Men's Nutrition

NFHS-3 collected information on the height and weight of women age 15-49 and men age 15-54. The height and weight measurements provide an estimate of the body mass index (BMI), a measure of nutritional status. The BMI is defined as weight in kilograms divided by height in metres squared (kg/m^2). A cut-off point of 18.5 is used to define thinness or acute undernutrition, and a BMI of 25 or above indicates overweight or obesity.

More than one-third (36 percent) of women age 15-49 in India have a BMI below 18.5 indicating chronic nutritional deficiency, including 16 percent who are moderately to severely thin. The proportion of ever-married women who are thin (33 percent) has decreased slightly from 36 percent in NFHS-2. Women who are undernourished themselves are also much more likely than other women to have children who are undernourished. The proportion of women who are undernourished is highest in Bihar (45 percent), Chhattisgarh (43 percent), Madhya Pradesh (42 percent), and Orissa (41 percent). It is lowest in Sikkim (11 percent) and Mizoram (14 percent).

Nationally, 34 percent of men age 15-49 have a BMI below18.5, and more than half of these men are moderately to severely undernourished. The highest proportion of undernourished men, two in five, are in Madhya Pradesh and Rajasthan.

Obesity, the other side of poor nutrition, is a substantial problem among several groups of women in India, particularly urban women, well-educated women, women from households with a high standard of living, and among Sikhs. Fifteen percent of ever-married women are overweight or obese, up from 11 percent in NFHS-2. Obesity is particularly prevalent for both men and women in Delhi, Kerala, and Punjab.

Anaemia is a major health problem for adults as well as children, affecting 55 percent of women and 24 percent of men. The prevalence of anaemia for ever-married women has

increased from 52 percent in NFHS-2 to 56 percent in NFHS-3. Pregnant women are much more likely than nonpregnant women to be moderately to severely anaemic.

Using iodized salt prevents iodine deficiency, a condition which can lead to miscarriage, goitre (enlargement of the thyroid gland), and mental retardation. Just over half of households in India (51 percent) were using sufficiently iodized salt at the time of the survey, virtually the same as the percentage observed at the time of NFHS-2 (50 percent). Use of iodized salt varies greatly by region; it is highest in the Northeast Region, in some states in the North Region, and in Kerala, and is over 90 percent in Manipur.

The consumption of a wide variety of nutritious foods is important for women's and men's health. NFHS-3 asked women and men how often they consume various types of food. In general, women's food consumption is less balanced than that of men. Ninety percent or more women and men consume dark green, leafy vegetables and pulses or beans weekly; however, 55 percent of women, compared with 67 percent of men, consume milk or curd weekly. Consumption of fruits and other foods is less common among both women and men. Only 40 percent of women, compared with 47 percent of men, consume fruits weekly; 32 percent of women, compared with 41 percent of men, consume eggs weekly; and 35 percent of women, compared with 41 percent of men, consume fish or chicken/meat weekly. Gender differentials in the daily consumption of most of these foods are even more marked.

Adult Health and Health Care

NFHS-3 collected information on the prevalence of tuberculosis (TB) based on reports from household heads. The survey found that 418 out of every 100,000 persons have been medically treated for TB. Tuberculosis is more common in rural than in urban areas, and in the East (except for Orissa) and Northeast Regions of the country than in other regions. Both sex and age differentials are more pronounced in rural areas than in urban areas.

NFHS-3 also asked individuals several questions on TB-related knowledge and attitudes. Despite being a curable disease, TB is still a stigmatizing illness, due mainly to people's ignorance of its aetiology and transmission. NFHS-3 finds that knowledge of TB is common, but not universal. Eighty-five percent of women and 92 percent of men age 15-49 have heard of TB. However, only about half the population that has heard of TB knows that it is spread through the air by coughing or sneezing. While correct knowledge of transmission varies by population subgroups, misconceptions occur across all subgroups. About half the population that has heard of TB has some misconceptions regarding its transmission. Further, one in every six women and men report they would want the TB positive status of a family member to remain a secret. Seventy-nine percent of women and 86 percent of men who have heard of TB know that it can be cured.

All women and men interviewed with the Individual Questionnaire were asked whether they have diabetes, asthma, or goitre or any other thyroid disorder. Diabetes affects all ages but increases markedly with age. According to self reports, over two percent of women and men age 35-49 are suffering from diabetes. By age 50-54, over five percent of men are suffering from diabetes. Prevalence of diabetes for persons in the highest wealth quintile is far greater than prevalence for persons in the lowest wealth quintile. Less than two percent of adults suffer from

asthma (1,600 persons per 100,000). The highest levels of asthma are seen among older persons and those who are less educated. The prevalence of goitre or other thyroid disorders is 2.5 times higher among women than among men (949 per 100,000 women, compared with 383 per 100,000 men). The number of persons with goitre or other thyroid disorders increases with age, especially among women.

Accessibility and availability of health care is important for ensuring a community's general health status and reflects the coverage of health facilities. Nearly two-thirds of all households (65 percent) in India generally seek health care from the private medical sector, while one-third of households use the public medical sector. Forty-six percent of urban households and 36 percent of rural households go to a private doctor or private clinic for health care. The next most common sources for health care are public and private hospitals, followed by community health centres. The most common reason given for not using public sector health care facilities is poor quality of the service, followed by non-availability of a facility nearby. While most respondents are generally satisfied with the health care they receive, ratings on quality of services are lower for both urban and rural public-sector facilities than for private sector and NGO facilities.

Despite the emergence of a number of health insurance programmes and health schemes, only 5 percent of households report that any household member is covered by any kind of health insurance. Medical coverage is about five times as common in urban areas as in rural areas.

Tobacco use is much more prevalent among men than among women age 15-49; 57 percent of men, compared with 11 percent of women use some form of tobacco. One-third of men smoke cigarettes or *bidis*, and 37 percent use *paan* (betel quid), *paan masala*, *gutkha*, or other chewing tobaccos. By contrast, only 1 percent of women smoke cigarettes or *bidis*, and 8 percent chew *paan*, *paan masala*, *gutkha*, or other tobacco products. Almost one-third of men drink alcohol, compared with only two percent of women.

HIV/AIDS Knowledge and Sexual Behaviour

Although the spread of HIV/AIDS is a major concern in India, only 61 percent of women age 15-49 and 84 percent of men age 15-49 have heard of AIDS. While awareness of AIDS has increased over time among both rural and urban women, awareness still remains low among women who are not regularly exposed to media, scheduled-tribe women, women with no education, women living in households with a low standard of living, and rural women.

Knowledge of HIV/AIDS prevention methods differs markedly between women and men age 15-49. Overall, approximately 4 in 10 women and 7 in 10 men know each of the three ABC methods of prevention—abstinence, being faithful, and condoms. Knowledge of each prevention method rises with increasing education and wealth. Women and men with regular exposure to mass media are twice as likely to know each of the three methods of prevention as do adults without access to media.

Nationwide, only 17 percent of women and 33 percent of men have 'comprehensive knowledge' of HIV/AIDS. 'Comprehensive knowledge' means they know that a healthy-looking

person can have HIV, that HIV/AIDS cannot be transmitted through mosquito bites or by sharing food, and that condom use and fidelity help prevent HIV/AIDS. Knowledge about HIV/AIDS is relatively widespread in Mizoram (where two-thirds of both women and men have comprehensive knowledge of HIV/AIDS) and in Delhi and Manipur (where more than two in five women and three in five men have comprehensive knowledge). At the other extreme, in Assam, West Bengal, and Meghalaya, less than 15 percent of men—and even fewer women—have comprehensive knowledge of HIV/AIDS.

Misconceptions about HIV/AIDS are common. Only 38 percent of women and 61 percent of men know that a healthy-looking person can have HIV/AIDS. About two-thirds of women and half of men erroneously believe that HIV/AIDS can be transmitted by mosquito bites. Larger proportions of women and men are aware that HIV/AIDS cannot be transmitted by hugging someone who has AIDS (43 and 64 percent, respectively) and by sharing food with a person who has HIV/AIDS. However, only a minority of women (31 percent) and men (45 percent) reject all three misconceptions.

Less than half of women age 15-49 (47 percent) and almost two-thirds of men (63 percent) know that HIV can be transmitted from a mother to her baby, but only one-fifth of women and men know that the risk of such transmission can be reduced with the use of certain drugs. Particularly notable is the comparatively low level of knowledge of transmission from a mother to her child even among currently pregnant women. Only 40 percent of currently pregnant women know that HIV/AIDS can be transmitted from a mother to her child and only 15 percent are aware that transmission from a mother to her baby can be reduced by taking certain drugs.

Knowledge and beliefs about HIV/AIDS affect how people treat those they know to be living with the infection. In NFHS-3, respondents were asked a number of questions to assess their attitudes toward HIV-infected people. About three out of four women and men are willing to take care of a relative sick with HIV/AIDS in their own household and to allow a female teacher with HIV/AIDS who is not sick to continue teaching; less than two-thirds are willing to buy fresh vegetables from a vegetable seller who has HIV/AIDS. About two-thirds of women (64 percent) and men (65 percent) say that they would not want to keep secret that a family member was infected with HIV/AIDS. The percentage expressing accepting attitudes on all four of these indicators is low (34 percent among women and 37 percent among men).

NFHS-3 asked women and men whether they had ever been tested for HIV/AIDS (prior to NFHS-3) and, if tested, whether they got the result. Only 3 percent of women and 4 percent of men had ever been tested for HIV, and some who were tested did not get the result of the test. The proportion of women age 15-49 who had ever been tested for HIV/AIDS and got the results ranges from only 0.2 percent in Rajasthan to 15 percent in Goa. Coverage of HIV/AIDS testing among men reveals a similar variation across states, with a minimum in Rajasthan, Assam, Uttar Pradesh, and Meghalaya (1 percent each) and a maximum in Goa (14 percent).

In the context of HIV/AIDS prevention, limiting the number of sexual partners and having protected sex are crucial for combating the epidemic. Among women and men age 15-49 who had sex in the 12 months preceding the survey, only 1 in every 1,000 women (0.1 percent)

and 2 in every 100 men (2 percent) report having had two or more sexual partners in the previous 12 months. While reported prevalence of multiple sex partners is very low, the proportion of women and men who had sexual intercourse with someone other than a spouse or cohabiting partner in the 12 months prior to the survey is somewhat higher (1 in every 500 women and 5 in every 100 men). Men who had sex with a non-marital and non-cohabiting partner during the year before the survey were more than twice as likely as women to report condom use at such sex (38 percent). Men who have ever had sex report an average of 1.49 lifetime sexual partners and women who have ever had sex report an average of only 1.02 lifetime sexual partners. The mean number of sexual partners for men who ever had sex is highest among never married men (2.5) and men who have been married more than once (2.3).

Less than 1 percent of men reported engaging in paid sex in the 12 months preceding the survey. Overall, 62 percent of men who reported having engaged in paid sex in the 12 months preceding the survey used a condom the last time they paid for sex. Condom use during paid sex is higher for men with 10 or more years of education and men in the highest wealth quintile.

NHFS-3 asked women and men questions on whether they had ever received a blood transfusion and the number of injections, if any, they had received from health personnel in the 12 months preceding the survey. Nationally, 4 percent of women and 3 percent of men age 15-49 have ever received a blood transfusion. Women are somewhat more likely than men to have received at least one injection (39 percent and 36 percent, respectively) given by health personnel in the 12 months preceding the survey. The average number of injections received from health personnel was 2.1 among women and 1.8 among men.

Information about the incidence of sexually transmitted infections (STIs) is not only useful as a marker of unprotected sexual intercourse, but also as a co-factor for HIV transmission. NFHS-3 asked respondents who had ever had sex whether they had an STI, had a genital sore or ulcer, or had experienced any abnormal (for men) or bad smelling abnormal (for women) genital discharge in the 12 months prior to the survey. Based on self reports, 11 percent of women and 5 percent of men age 15-49 who have ever had sex had an STI or STI symptom in the 12 months preceding the survey.

HIV Prevalence

All women age 15-49 and all men age 15-54 living in sample households in Andhra Pradesh, Karnataka, Maharashtra, Manipur, Nagaland, Tamil Nadu, and Uttar Pradesh were eligible for the HIV testing component of NFHS-3. However, blood for HIV testing could not be collected in Nagaland due to local opposition. In the remaining 22 states, six households per enumeration area were chosen for HIV testing, and all women age 15-49 and all men age 15-54 in those six households were eligible for HIV testing. HIV tests were conducted for 85 percent of the 62,182 eligible women and 78 percent of the 64,175 eligible men in India. For both sexes combined, coverage was 82 percent. Six percent of women and 14 percent of men did not complete individual interviews, so they were not eligible for blood tests. In addition, 6 percent of women and 5 percent of men who completed individual interviews refused to provide blood for HIV testing. Only a small number of interviewed women (1 percent) and interviewed men (2 percent) were not at home at the time of the blood collection.

Nationwide, the HIV prevalence rate for the population age 15-49 is 0.28 percent. This translates into 1.7 million HIV positive persons age 15-49 in India in April 2006, the midpoint of the NFHS-3 survey. The HIV prevalence rate is 0.22 percent for women and 0.36 percent for men age 15-49. The prevalence rates for the six states are: Manipur: 1.13 percent; Andhra Pradesh: 0.97 percent; Karnataka: 0.69 percent; Maharashtra: 0.62 percent; Tamil Nadu: 0.34 percent; and Uttar Pradesh: 0.07 percent.

This important new information about HIV prevalence has spurred the Government of India and international agencies to greatly reduce the official estimate of HIV prevalence for India to 2.47 million Indians, down from the official estimate of 5.2 million for the previous year. This new national estimate reflects the availability of improved data (from NFHS-3 and an expanded surveillance system) rather than a substantial decrease in actual HIV prevalence in India.

Family Life Education

For the first time, NFHS-3 has collected information on the acceptability of providing information in schools on HIV/AIDS and related family-life topics. Virtually all Indian adults agree that children should be taught moral values in school, and a large majority also agree that children should be taught in school about the changes that occur during puberty. Women and men differ somewhat on whether children should be taught about contraception in school. About half of women and two-thirds of men think that girls should learn about contraception in school. Both women and men are slightly less likely to think contraception should be part of boys' education in school. Most women (63 percent) and men (81-82 percent) believe information on HIV/AIDS should be part of the school curriculum for both boys and girls. More than 60 percent of men say that boys and girls should be taught about sex and sexual behaviour in school, but less than half of women feel that this is an appropriate topic to be taught to girls or boys in school.

Women's Empowerment

As part of an increasing emphasis on women's empowerment, NFHS-3 asked married women who in their household usually makes decisions on their health care, on making large household purchases, making purchases for daily household needs, and on visiting their family or relatives. Questions were also asked about access to money and credit, freedom of movement, and gender-role attitudes.

Only 37 percent of currently married women participate (make the decision alone or jointly with their husband) in making all four decisions. There is no decision for which a majority of currently married women alone are the main decision makers. Women's participation in decision making is highest in all of the states in the northeast except Tripura, as well as in Delhi, Tamil Nadu, Kerala, and Goa. Half of currently married men say that, in a couple, the wife should have at least an equal say in five decisions they were asked about, and only 4 percent say that the wife should not participate in any of the decisions.

Forty-five percent of women say they have some money that they can use; 15 percent have a bank or savings account they themselves use; 39 percent know of a programme that gives money to women to start or expand a business of their own; and 4 percent of all women have ever taken a loan from such a programme. Only one-third of women are allowed to go by themselves to the market, to a health facility, and to places outside their own community.

More than half of women in India (54 percent) believe that it is justifiable for a husband to beat his wife. Women are most likely to say wife-beating is justified if the woman shows disrespect for her in-laws (41 percent) or if she neglects the house or children (35 percent). Men are only slightly less likely to agree: 51 percent say wife-beating is justified, including 37 percent who believe disrespect to in-laws is justification for wife-beating. The percentage of women who agree with one or more reasons for wife beating ranges from 28 percent in Himachal Pradesh to 90 percent in Manipur; the percentage of men who agree with one or more reasons for wife beating ranges from 23 percent in Uttaranchal to 85 percent in Manipur.

Most women and men believe a woman is justified in refusing her husband sex if she knows he has a sexually transmitted disease, if she knows he has sex with other women, or if she is tired or not in the mood. Nationally, about three in four women agree with each of the three reasons asked about, 68 percent agree with all three, and 13 percent do not agree with any of the three. The percentage of men agreeing with all three reasons, 70 percent, is only slightly higher than the percentage of women doing so.

Domestic Violence

More than a third (34 percent) of women age 15-49 have experienced physical violence, and 9 percent have experienced sexual violence. In all, 35 percent of women age 15-49 in India have experienced physical or sexual violence. By state, women's experience of physical or sexual violence ranges from a low of 6 percent in Himachal Pradesh to 40 percent or more in Rajasthan, Madhya Pradesh, and Tripura, and to a high of 56 percent in Bihar.

Thirty-seven percent of ever-married women have experienced spousal physical or sexual violence and 16 percent have experienced spousal emotional violence. One percent of ever-married women have initiated violence against their husbands. The percentage of women initiating violence against their husband is higher for women who have experienced spousal violence (2 percent), than for women who have never experienced spousal violence (0.2 percent).

Slapping is the most common form of physical violence experienced by ever-married women at the hands of their husband. The majority of ever-married women who report having experienced spousal emotional violence or having experienced spousal physical or sexual violence have also experienced such violence in the 12 months preceding the survey. Spousal violence, if it occurs, starts early in marriage: 62 percent of ever-married women who report having experienced spousal physical or sexual violence started experiencing such violence within two years of marriage. Among all ever-married women who reported ever experiencing physical or sexual violence, 36 percent report cuts, bruises, or aches, 9 percent report eye injuries, sprains, dislocations or burns, 7 percent report deep wounds, broken bones, broken teeth, or other serious injury, and 2 percent report severe burns. All of these percentages are

higher for women who report violence in the 12 months preceding the survey. Notably, 38 percent of women experiencing physical or sexual violence report having experienced at least one of these groups of injuries.

One in four abused women have ever sought help to end the violence they have experienced. A large majority of women who have experienced sexual violence, but not physical violence, have never told anyone about the violence (85 percent), and only 8 percent have ever sought help. Abused women most often seek help from their own families.