NATIONAL FAMILY HEALTH SURVEY, 1999
Sample Size
Households
Ever-married women age 15–49
Characteristics of Households
Percent with electricity80.9
Percent within 15 minutes of safe water supply 1
Percent with flush toilet
Percent with no toilet facility
Percent using govt. health facilities for sickness
Characteristics of Women ²
Percent urban
Percent completed high school and above 19.5
Percent Hindu
Percent Muslim
Percent Christian 2.4
Percent regularly exposed to mass media
Percent working in the past 12 months
State of CWI, and 2
Status of Women ²
Percent involved in decisions about own health
Marriage
Percent never married among women age 15–1968.4
Median age at marriage among women age 20–4917.1
Fertility and Fertility Preferences
Total fertility rate (for the past 3 years)2.13
Mean number of children ever born to women 40–494.15
Median age at first birth among women age 20–4919.2
Percent of births ³ of order 3 and above
Mean ideal number of children ⁴
Percent of women with 2 living children wanting another child
another child
Current Contraceptive Use ⁵
Any method
Any modern method56.5
Pill
IUD2.8
Condom1.0
Female sterilization
Male sterilization0.7
Any traditional method1.7
Rhythm/safe period
Withdrawal
Other traditional or modern method0.1
Unmet Need for Family Planning ⁵
Percent with unmet need for family planning11.5
Percent with unmet need for spacing
1 5

FACT SHEET, KARNATAKA

¹Water from pipes, hand pump, covered well, or tanker truck ²Ever-married women age 15–49 ³For births in the past 3 years ⁴Excluding women giving non-numeric responses ⁵Among currently married women age 15–49

Quality of Family Planning Services ⁶
Percent told about side effects of method
Childhood Mortality Infant mortality rate ⁷ 51.5
Infant mortality rate ⁷ 51.5 Under-five mortality rate ⁷ 69.8
Safe Motherhood and Women's Reproductive Health Percent of births ⁸ within 24 months of previous birth30.3
Percent of births ³ whose mothers received:
Antenatal check-up from a health professional
Two or more tetanus toxoid injections
Iron and folic acid tablets or syrup
Percent of births ³ whose mothers were assisted at delivery by a:
Doctor
ANM/nurse/midwife/LHV21.7
Traditional birth attendant
Percent ⁵ reporting at least one reproductive health problem
r
Awareness of AIDS Percent of women ² who have heard of AIDS58.1
Child Health
Percent of children age 0–3 months exclusively
breastfed
Percent of children ⁹ who received vaccinations: BCG84.8
DPT (3 doses)
Polio (3 doses)
Measles
All vaccinations60.0
Percent of children ¹⁰ with diarrhoea in the past
2 weeks who received oral rehydration salts (ORS)34.3
Percent of children ¹⁰ with acute respiratory infection in
the past 2 weeks taken to a health facility or provider 77.4
Nutrition
Percent of women with anaemia ¹¹
Percent of women with moderate/severe anaemia ¹¹
Percent of women with anaemia ¹¹
Percent of children chronically undernourished (stunted) ¹²
Percent of children acutely undernourished (wasted) ¹² 20.0
Percent of children underweight ¹² 43.9
65

⁶For current users of modern methods
⁷For the 5 years preceding the survey (1994–98)
⁸For births in the past 5 years (excluding first births)
⁹Children age 12–23 months
¹⁰Children under 3 years
¹¹Anaemia–haemoglobin level < 11.0 grams/decilitre (g/dl) for children and pregnant women and < 12.0 g/dl for nonpregnant women. Moderate/severe anaemia –haemoglobin level < 10.0 g/dl.
¹²Stunting assessed by height-for-age, wasting assessed by weight-for-height, underweight assessed by weight-for-age

SUMMARY OF FINDINGS

The second National Family Health Survey (NFHS-2), conducted in 1998–99, provides information on fertility, mortality, family planning, and important aspects of health, nutrition, and health care. The International Institute for Population Sciences (IIPS) coordinated the survey, which collected information from a nationally representative sample of more than 90,000 ever-married women age 15–49 from 26 states of India. These states comprise more than 99 percent of India's population.

IIPS also coordinated the first National Family Health Survey (NFHS-1) in 1992–93. Most of the types of information collected in NFHS-2 were also collected in the earlier survey, making it possible to identify trends over the intervening period of six and a half years. In addition, the NFHS-2 questionnaire covered a number of new or expanded topics with important policy implications, such as reproductive health, women's autonomy, domestic violence, women's nutrition, anaemia, and salt iodization.

In Karnataka, NFHS-2 field staff collected information from 4,273 households between 22 March and 8 September 1999 and interviewed 4,374 eligible women in these households. In addition, the survey collected information on 1,280 children born to eligible women in the three years preceding the survey. One health investigator on each survey team measured the height and weight of eligible women and young children and took blood samples to assess the prevalence of anaemia.

Background Characteristics of the Survey Population

About two-thirds (65 percent) of the population lives in rural areas. The age distribution is typical of populations that have recently experienced a fertility decline, with relatively low proportions in the younger and older age groups. Thirty-three percent of the population is below age 15, and 5 percent is age 65 and above. The sex ratio is 999 females for every 1,000 males in rural areas and 970 females for every 1,000 males in urban areas, suggesting that more men than women have migrated to urban areas.

The survey provides a variety of demographic and socioeconomic background information. In the state as a whole, 85 percent of household heads are Hindu, 11 percent are Muslim, and 3 percent are Christian. Muslims live disproportionately in urban areas, where they comprise 15 percent of household heads. Seventeen percent of household heads belong to scheduled castes, 6 percent belong to scheduled tribes, and 40 percent belong to other backward classes (OBCs). Slightly more than one-third of household heads do not belong to any of these groups.

Questions about housing conditions and the standard of living of household members indicate that there have been substantial improvements since the time of NFHS-1. Eighty-one percent of households in Karnataka have electricity, and 68 percent have piped drinking water, compared with 64 percent and 49 percent, respectively, in NFHS-1. Sixty-one percent of households do not have any toilet facility, compared with 69 percent in NFHS-1.

Nearly three-quarters (74 percent) of males and more than half (56 percent) of females age six and above are literate, an increase of 6–9 percentage points from literacy rates at the time

of NFHS-1. Eighty percent of children age 6–14 currently attend school, an increase from 71 percent in NFHS-1. The proportion of children attending school has increased for all age groups, particularly for girls, but girls still lag behind boys in school attendance. Moreover, the disparity in school attendance by sex grows with increasing age of children. At age 6–10, 88 percent of boys attend school, compared with 85 percent of girls. By age 15–17, 52 percent of boys attend school, compared with 37 percent of girls.

Women in Karnataka tend to marry at an early age. Thirty-two percent of women age 15–19 are already married. In rural areas, 38 percent women age 15–19 have already married. Older women are more likely than younger women to have married at an early age: 31 percent of women who are now age 45–49 married before they were 15, compared with only 12 percent of women age 15–19. Although this finding indicates that the proportion of women who marry young is declining rapidly, almost half of women in Karnataka still marry before reaching the legal minimum age of 18 years. On average, women are six and a half years younger than the men they marry.

As part of an increasing emphasis on gender issues in NFHS-2, the survey asked women about their participation in household decisionmaking. In Karnataka, 92 percent of women are involved in decisionmaking on at least one of four selected topics. Only half of women (49 percent), however, are involved in making decisions about their own health care. Fifty-two percent of women do work other than housework, and 72 percent of these women work for cash. Only 41 percent of women who earn cash can decide independently how to spend the money that they earn. One-third of working women report that their earnings constitute at least half of total family earnings, including 6 percent who report that the family is entirely dependent on their earnings.

Fertility and Family Planning

Fertility continues to decline in Karnataka. At current fertility levels, women will have an average of 2.1 children each throughout their childbearing years, one of the lowest levels in India. The total fertility rate is down from 2.9 children per woman at the time of NFHS-1 and has now reached the replacement level of just over two children per woman.

Efforts to encourage the trend towards lower fertility might usefully focus on groups within the population that have higher fertility than average. In Karnataka, rural women, women with a low standard of living, illiterate women, Muslim women, and women from scheduled tribes and scheduled castes have somewhat higher fertility than other women, but the differences are not large. A more striking feature is the high level of childbearing among young women. The median age at first childbirth is 19 years, and women age 15–19 account for 26 percent of total fertility. Studies in India and other countries have shown that health and mortality risks—both for the women themselves and for their children—increase when women give birth at such young ages. Family planning programmes focusing on women in this age group could make a significant impact on maternal and child health as well as reducing overall fertility in the state.

The appropriate design of family planning programmes depends, to a large extent, on women's fertility preferences. Women may have large families because they want many children, or they may prefer small families but, for a variety of reasons, may have more children than they actually want. For 7 percent of births over the three years preceding NFHS-2, mothers

report that they did not want the pregnancy at all, and for another 17 percent of births, mothers say that they would have preferred to delay the pregnancy. When asked about their preferred family size, more than half (59 percent) of women who already have three children and 57 percent of women with four or more children say that they consider the two-child family ideal. This gap between women's actual fertility experience and what they want or would consider ideal suggests a need for expanded or improved family welfare services to help women achieve their fertility goals. In Karnataka, 70 percent of women want at least one son and 68 percent want at least one daughter. A preference for sons among some women is indicated by the fact that 13 percent want more sons than daughters but only 2 percent want more daughters than sons.

If women in Karnataka are not using family planning, it is not due to lack of knowledge. Knowledge of contraception is nearly universal: 99 percent of currently married women know at least one modern family planning method. Women are most familiar with female sterilization (99 percent), followed by male sterilization (77 percent), the IUD (74 percent), the pill (69 percent), and the condom (51 percent). Knowledge of modern spacing methods is about the same as in NFHS-1.

Fifty-eight percent of married women are currently using some method of contraception, an increase from 49 percent at the time of NFHS-1. Contraceptive prevalence is slightly higher in urban areas (60 percent) than in rural areas (57 percent). Female sterilization is by far the most popular method: 52 percent of currently married women are sterilized, a substantial increase from 41 percent at the time of NFHS-1. By contrast, less than 1 percent of women report that their husbands are sterilized. Overall, sterilization accounts for 90 percent of total contraceptive use. Use rates for the pill, IUD, and condom remain very low, only 3 percent for the IUD and 1 percent for each of the other two methods.

Contraceptive prevalence does not vary widely among socioeconomic groups, although Muslim women and women belonging to scheduled tribes are somewhat less likely than other women to use contraception. More-educated women and women from households with a high standard of living are more likely than other women to use the three modern spacing methods (pills, IUDs, and condoms), but the use of these methods does not exceed 15 percent in any group.

Given the near-exclusive emphasis on sterilization, women tend to adopt family planning only after they have achieved their desired family size. As a result, contraceptive use can be expected to rise steadily with age and with the number of living children. In Karnataka, contraceptive use does indeed go up with age, peaking at 78 percent for women age 30–34. Use also goes up with the number of children, peaking at 82 percent for women with three living children. Son preference (which is evident in all population groups but is lower in Karnataka than in many other states) appears to have some effect on contraceptive use. Women who have one or more sons are generally more likely to use contraception than are women who have the same number of children but have only daughters. Yet son preference is not a major obstacle to contraceptive acceptance in Karnataka: Between one-third and two-thirds of women with two or more daughters but no sons have been sterilized.

Eight percent of currently married women are not using contraception but say that they want to wait at least two years before having another child. Another 3 percent are not using contraception although they do not want any more children. These women are described as

having an 'unmet need' for family planning. The unmet need is highest for young women, who are particularly interested in spacing their births. These results underscore the need for strategies that provide spacing as well as terminal methods in order to meet the changing needs of women over their lifecycle.

For many years, the Government of India has been using electronic and other mass media to promote family planning. Exposure to mass media is quite high in Karnataka, where 100 percent of rural residents live in villages that are electrified and 63 percent live in villages that have a cable connection. Among the different types of media, radio and television have the broadest reach across all categories of women. Overall, 58 percent of ever-married women watch television at least once a week and 61 percent listen to the radio at least once a week. Nevertheless, 21 percent of women are not regularly exposed to television, radio, or other types of media. Eighty-four percent of women saw or heard a family planning message in the media during the few months preceding the survey. Given the relatively high level of exposure to radio and television, it is not surprising that women are more likely to have heard or seen a family planning message on radio or television than through any other type of media. Exposure to family planning messages is relatively low among disadvantaged socioeconomic groups, yet messages reached more than 70 percent of illiterate women, women from households with a low standard of living, and women belonging to scheduled castes or scheduled tribes.

Eighty-five percent of women who use modern contraception obtained their method from the public medical sector. Only 13 percent obtained their method from the private medical sector. IUD insertions are done about equally as often by providers in the public sector and the private sector. The private medical sector, along with shops, is the major source of condoms, however. For all users of modern methods, the private sector plays a larger role in urban areas (where it is the source for 26 percent of users) than in rural areas (where it is the source for only 6 percent of users).

An important indication of the quality of family planning services is the information that women receive when they obtain contraception and the extent to which they receive follow-up services after accepting contraception. In Karnataka, only 7 percent of users of modern contraceptives who were motivated by someone to use their method were told about any other method. Only 37 percent were told by a health or family planning worker about possible side effects of the method they adopted, at the time of adopting the method. However, this is a better performance than observed for India as a whole, since only 22 percent of users throughout the country were told about possible side effects of the methods they adopted. Eighty-two percent of contraceptive users have received follow-up services after accepting their method, compared with 69 percent for India as a whole.

From the information provided in NFHS-2, a picture emerges of women marrying early, having their first child soon after marriage, having a second and possibly a third child in close succession, and then being sterilized—all by the time they reach their mid-20s. The median age for female sterilization is only 24 years. Very few women use modern spacing methods that could help them delay their first births and increase intervals between pregnancies. In fact, only 10 percent of sterilized couples used any method of contraception before the sterilization took place.

Infant and Child Mortality

NFHS-2 provides estimates of infant and child mortality and factors associated with the survival of young children. During the five years preceding the survey, the infant mortality rate was 52 deaths at age 0–11 months per 1,000 live births, a decrease from the corresponding rate of 65 per 1,000 live births in NFHS-1. The child mortality rate, at 19 deaths at age 1–4 years per 1,000 children reaching age one, dropped from a level 24 recorded during NFHS-1. Expressed differently, more than 1 in 20 children die in the first year of life, and 1 in 14 die before reaching age five. Child-survival programmes might usefully focus on specific groups of children with particularly high infant and child mortality rates, such as children who live in rural areas, children whose mothers are illiterate, children belonging to scheduled castes or scheduled tribes, and children from households with a low standard of living.

Along with various socioeconomic groups, efforts to promote child survival need to concentrate on very young mothers and mothers whose children are closely spaced. Infant mortality is 40 percent higher among children born to mothers under age 20 than among children born to mothers age 20–29 (74 deaths, compared with 53, per 1,000 live births). Infant mortality is more than three times as high among children born less than 24 months after a previous birth as among children born after a gap of 48 months or more (99 deaths, compared with 32, per 1,000 live births). Clearly, efforts to expand the use of temporary contraceptive methods for delaying and spacing births would help reduce infant mortality as well as fertility.

Health and Health Care

Promotion of maternal and child health is one of the most important components of the Reproductive and Child Health Programme of the Government of India. One goal is for each pregnant woman to receive at least three antenatal check-ups plus two tetanus toxoid injections and a full course of iron and folic acid supplementation. In Karnataka, mothers of 86 percent of the children born in the three years preceding NFHS-2 received at least one antenatal check-up, and mothers of 71 percent of these children received at least three antenatal check-ups. For 75 percent of these children, mothers received the recommended number of tetanus toxoid vaccinations, and for 78 percent of children, mothers received iron and folic acid supplementation. Coverage by each of the three interventions is somewhat lower for women in disadvantaged socioeconomic groups than for other women. Coverage is also low for women who already have four or more children.

The Family Welfare Programme encourages women to deliver in a medical facility or, if at home, with assistance from a trained health professional and to receive at least three check-ups after delivery. During the three years preceding NFHS-2, only half of births in Karnataka were delivered in a medical facility. Among births delivered at home, only 16 percent were assisted by a health professional and 31 percent were assisted by a traditional birth attendant. Only one-third of births outside a medical facility were followed by a postpartum check-up within two months of delivery. Overall, these results show that health services in Karnataka are reaching many more women during pregnancy than during delivery or after childbirth.

The Government of India recommends that breastfeeding should begin immediately after childbirth and that infants should be exclusively breastfed for about the first four months of life. Although breastfeeding is nearly universal in Karnataka, very few children begin breastfeeding immediately after birth—only 19 percent in the first hour and 42 percent in the first day. Two-thirds of children under four months of age are exclusively breastfed. The median duration of breastfeeding is 20 months, and the median duration of exclusive breastfeeding is 3 months. At age 6–9 months, all children should be receiving solid or mushy food in addition to breast milk. However, only 38 percent of children age 6–9 months receive the recommended combination of breast milk and solid/mushy foods.

NFHS-2 uses three internationally recognized standards to assess children's nutritional status—weight-for-age, height-for-age, and weight-for-height. Children who are more than two standard deviations below the median of an international reference population are considered underweight (measured in terms of weight-for-age), stunted (height-for-age), or wasted (weight-for-height). Stunting is a sign of chronic, long-term undernutrition, wasting is a sign of acute, short-term undernutrition, and underweight is a composite measure that takes into account both chronic and acute undernutrition.

Based on international standards, 44 percent of children under age three years are underweight, 37 percent are stunted, and 20 percent are wasted. Child nutritional status has improved in Karnataka since the time of NFHS-1, when 51 percent of young children were underweight and 40 percent were stunted, but poor nutrition is still a serious problem. In fact, the prevalence of wasting has not changed since NFHS-1. Undernutrition is much higher in rural areas than in urban areas and is particularly high among children from disadvantaged socioeconomic groups. The prevalence of undernutrition is about the same for girls as for boys. Nearly three-quarters (71 percent) of children age 6–35 months are anaemic, including a large majority of children in every subgroup of the population.

Child immunization is an important component of child-survival programmes in India, with efforts focussing on six serious but preventable diseases—tuberculosis, diphtheria, pertussis, tetanus, polio, and measles. The objective of the Universal Immunization Programme (UIP), launched in 1985–86, was to extend immunization coverage against these diseases to at least 85 percent of infants by 1990. In Karnataka, 60 percent of children age 12–23 months are fully vaccinated, another 32 percent have received some but not all of the recommended vaccinations, and 8 percent have not been vaccinated at all.

Immunization coverage, although far from complete, has improved substantially since NFHS-1, when 52 percent of children were fully vaccinated and 15 percent had not been vaccinated at all. Coverage of individual vaccines in Karnataka is also much higher than would appear from information on full coverage alone. Eighty-five percent of children age 12–23 months have been vaccinated against tuberculosis, 75 percent have received three doses of DPT vaccine, and 78 percent have received three doses of polio vaccine. The largest increases in vaccination coverage between NFHS-1 and NFHS-2 are for the measles vaccine and for the first two doses of the polio vaccine, undoubtedly because of the introduction of the Pulse Polio Immunization Campaign in 1995. Full immunization coverage is not as high as it might be primarily because only 67 percent of children have been vaccinated against measles. Dropout rates for the series of DPT and polio vaccinations are also a problem. Eighty-seven percent of children received the first DPT vaccination, but 75 percent received all three doses; similarly, 92 percent received the first polio vaccination, but 78 percent received all three doses. It is recommended that children under age five years should receive oral doses of vitamin A every six months starting at age nine months. However, only 48 percent of children age 12–35 months

have received any vitamin A supplementation and only 23 percent received a dose of vitamin A in the six months preceding the survey. At the national level, only 16 percent received any vitamin A supplementation.

NFHS-2 collected information on the prevalence and treatment of three health problems that cause considerable mortality in young children—fever, acute respiratory infection (ARI), and diarrhoea. In Karnataka, 26 percent of children under age three were ill with fever during the two weeks preceding the survey, 8 percent were ill with ARI, and 14 percent had diarrhoea. About two-thirds of the children who became ill with diarrhoea were taken to a health facility or health-care provider, as were more than three-quarters of children who were sick with ARI. Knowledge of the appropriate treatment for diarrhoea is inadequate. Twenty-one percent of mothers of children age less than three years do not know about oral rehydration salt (ORS) packets, and 24 percent of mothers incorrectly believe that when children are sick with diarrhoea, they should be given less to drink than usual. Fifty-eight percent of children with diarrhoea received some form of oral rehydration therapy (ORT), including 34 percent who received ORS. The percentage of children with diarrhoea who received ORS has increased since NFHS-1, when it was only 27 percent, suggesting that there has been an improvement in the management of childhood diarrhoea.

Based on a weight-for-height measure (the body mass index), 39 percent of women in Karnataka are undernourished. Nutritional deficiency is particularly serious for women in rural areas, illiterate women, and women in disadvantaged socioeconomic groups. Women who are undernourished themselves are also much more likely than other women to have children who are undernourished. Overall, 42 percent of women in Karnataka have some degree of anaemia, and 16 percent are moderately to severly anaemic. Anaemia is a serious problem among women in every population group, with prevalence rates ranging from 32 to 51 percent. Pregnant women are much more likely than nonpregnant women to be moderately to severely anaemic.

Less than half of households (43 percent) use cooking salt that is iodized at the recommended level of 15 parts per million, suggesting that iodine deficiency disorders are likely to be a serious problem. Rural households, households with a scheduled-tribe head, and households with a low standard of living are much less likely than other households to be using adequately iodized cooking salt.

About one-fifth (19 percent) of currently married women in Karnataka report some type of reproductive-health problem, including abnormal vaginal discharge, symptoms of urinary tract infections, and pain or bleeding associated with intercourse, the lowest level of any state in India. Among these women, only half sought any advice or treatment. These results suggest a need to expand reproductive-health services and information programmes that encourage women to discuss their problems with a health-care provider.

In recent years, there has been growing concern about domestic violence in India. NFHS-2 found that in Karnataka, there is widespread acceptance among ever-married women that the beating of wives by husbands is justified under some circumstances. Half of women accept at least one of six reasons as a justification for a husband beating his wife. Domestic violence is also fairly common. Twenty-two percent of ever-married women in Karnataka have experienced beatings or physical mistreatment since age 15 and 10 percent experienced such violence in the

12 months preceding the survey. Most of these women have been beaten or physically mistreated by their husbands.

Overall, only 17 percent of women received a home visit from a health or family planning worker during the 12 months preceding the survey. Women who received visits were visited rather regularly—five times, on average, in the year preceding the survey. A large majority of the women who received a home visit expressed satisfaction with the amount of time that the worker spent with them and with the way the worker talked to them.

The survey collected information on the prevalence of tuberculosis, asthma, malaria, and jaundice among all household members. Disease prevalence is based on reports from household heads and, therefore, it should be interpreted with caution. The survey found that 2 percent of the population suffers from asthma, and less than 1 percent of the population suffers from each of the other three diseases. Prevalence of all four conditions is higher in rural areas than in urban areas, although there is hardly any difference in the case of asthma. Men are more likely than women to suffer from all of the conditions.

Most households in Karnataka (56 percent) use private hospitals or clinics for treatment when a family member is ill. Only one-third normally use the public medical sector. Even among households with a low standard of living, more than half normally use the private medical sector when members become ill. Most respondents are generally satisfied with the health care they receive. Ratings on the quality of services are consistently better for private-sector facilities than for public-sector facilities.

NFHS-2 also collected information on selected lifestyle indicators for household members. According to household respondents, 26 percent of men and less than 1 percent of women smoke, 16 percent of men and 8 percent of women drink alcohol, and 14 percent of men and 15 percent of women chew *paan masala* or tobacco.

Although the spread of HIV/AIDS is a major concern in India, 42 percent of women in Karnataka have not heard of AIDS. Awareness of AIDS is particularly low among women in rural areas, women living in households with a low standard of living, scheduled-tribe and scheduled-caste women, Muslim women, and women who are illiterate. Among women who have heard of AIDS, 81 percent learned about the disease from television and 68 percent from the radio, suggesting that government efforts to promote AIDS awareness through the electronic mass media have achieved considerable success. Among women who have heard of AIDS, however, more than one-third (36 percent) do not know of any way to avoid infection. Survey results suggest that health personnel could play a much larger role in promoting AIDS awareness. In Karnataka, only 4 percent of women who know about AIDS learned about the disease from a health worker.