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Demographic and Health Survey 1997

National Committee for
Population and Family Planning

The Population and Family Health Project

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PREFACE

The 1997 Vietnam Demographic and Health Survey (VNDHS-II) was carried out according to a subcontract between the National Committee for Population and Family Planning (NCPFP) and the Futures Group International Inc. in USA within the frame of the Population and Family Health Project. The Macro International Inc. in USA provided technical assistance to the survey.

The execution of the survey and the preparation of this report have gone through several phases, starting March 1997 and ending with the publication of this report in March 1999. These phases included the preparation for the survey, field operations, data processing and tabulation, publication of the preliminary report in January 1998, analysis of the survey data, preparation and editing of the chapters for this report, and publication and dissemination of the report.

It gives us great pleasure to present this report to all planners, policymakers, scholars, researchers and concerned users. The report is a detailed presentation of many aspects of the data collected in the survey. I wish to thank all the institutions and individuals who participated in the execution of this survey and the preparation of this report.

Although this report cannot be free from limitations, I believe that it meets the stated objectives of the survey and will be useful for all planners, policymakers and researchers, both within and outside Vietnam.

Dr. Nguyen Thien Truong
Vice Chairman, NCPFP

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Project Director
Dr. Ngo Khang Cuong

SUMMARY OF FINDINGS

The 1997 Vietnam Demographic and Health Survey (VNDHS-II) is a nationally representative survey of 5,664 ever-married women age 15-49 selected from 205 sampling clusters throughout Vietnam. The VNDHS-II was designed to provide information on levels of fertility, family planning knowledge and use, infant and child mortality, and indicators of maternal and child health. The survey included a Community/Health Facility Questionnaire that was implemented in each of the sample clusters included in the women's survey. Fieldwork for the survey took place from July to October 1997. All provinces were separated into "project" and "non-project" groups to permit separate estimates for about one-third of provinces where the health infrastructure is being upgraded.

VNDHS-II data confirm the patterns of declining fertility and increasing use of contraception that were observed between the 1988 VNDHS-I and the 1994 Intercensal Demographic Survey (ICDS-94).

FERTILITY

Fertility Levels and Trends. The total fertility rate (TFR), which was estimated for the period 1992-96, is 2.7 children per woman. This represents a continuation of the rapid fertility decline indicated by the findings of earlier surveys: 4.0 children per women for 1987 (VNDHS-I) and 3.3 for the period 1989-93 (ICDS-94). The decline in the TFR from 3.3 (ICDS-94) to 2.7 (VNDHS-II) is consistent with the amount of decline that is predicted by the observed increase in the contraceptive prevalence rate (10 percentage points) between the two surveys.

Fertility Differentials. There are substantial differences in fertility levels in Vietnam. The TFR is a full child higher in rural areas than in urban areas (2.9 children per woman compared with 1.8 children per woman). Regional differences are also marked; the highest fertility is in the Central Highlands (4.3 children per woman) while the lowest is in the Southeast region (1.9 children per woman), which includes Ho Chi Minh City. Differences between project and non-project provinces are minimal.

As in most countries, fertility levels are closely linked to women's education. Women with no formal education give birth to an average of 4.0 children during their reproductive years compared with 2.8 children for women with primary school education and 1.9 children for women with higher secondary school education.

Unplanned Fertility. Despite the high level of contraceptive use in Vietnam, the VNDHS-II data indicate that unplanned pregnancies are common. Overall, more than one-fourth of births in the three years preceding the survey were reported as unplanned: 15 percent were mistimed (wanted later) and 12 percent were unwanted. Although many women are not receiving the services they need in order to achieve their reproductive goals, the rate of unplanned pregnancies has decreased since the ICDS-94 survey (33 percent).

FERTILITY REGULATION

Knowledge of Contraception. Knowledge of the IUD among married women has been above 90 percent in Vietnam since the late 1980s. The VNDHS-II found that 98 percent of women know of this method while about 90 percent know about the pill, the condom, and male and female sterilization; 80 percent know about the traditional methods of periodic abstinence and withdrawal. Knowledge of modern methods other than the IUD and of traditional methods has increased substantially since first being measured in 1988 by the VNDHS-I.

Use of Contraception. The decline in fertility in Vietnam over the past decade has been accompanied by a steady increase in the use of contraception. Between 1988 and 1997 the contraceptive prevalence rate among married women increased from 53 to 75 percent. The rise was driven primarily by

increased use of modern methods (up 48 percent) and, secondarily, by increased use of traditional methods (up 25 percent). In the three-year period between the ICDS-94 and the VNDHS-II, the contraceptive prevalence rate increased 10 percentage points among married women, from 65 to 75 percent.

Contraceptive Method Mix. Over the last two decades the IUD has been the most popular method of contraception in Vietnam. The VNDHS-II found that 39 percent of married women are currently using the IUD. Other modern methods used are female sterilization (6 percent), the condom (6 percent), and oral contraception (4 percent). Although less popular than the IUD, these latter methods are the fastest growing segment of method use, increasing fourfold since 1988. The increased use of methods other than the IUD may have implications for service delivery by the family planning program in future years.

Two traditional methods account for a significant amount of current use; these are periodic abstinence (7 percent) and withdrawal (12 percent).

Source of Modern Methods. In Vietnam, provision of modern methods is dominated by the public sector. Eighty-eight percent of current users obtained their last method from the public sector. By far the most important source of contraception is the commune health center (43 percent), followed by government hospitals (27 percent) and mobile clinics (11 percent). Together these three sources supply 80 percent of current users of modern methods.

Differential Contraceptive Use. Given the overall high rate of contraceptive use in Vietnam, there is little room for variation between population subgroups. Nevertheless, the Central Highlands stands out from other regions as having a particularly low level of contraceptive use (64 percent). There are also substantial differences by education, with contraception rates being higher among more educated women. Differentials in contraceptive use by urban-rural residence are small, as are differentials between project and non-project provinces.

Unmet Need for Family Planning. Unmet need for family planning services was low in the IDCS-94 (11 percent) and has continued to decline. The VNDHS-II data indicate that 7 percent of married women have an unmet need for family planning services. Half of this unmet need is comprised of women who want to wait two or more years before their next child (spacers) and half is comprised of women who want no more children (limiters). If all women who say they want to space or limit their births were to use contraception, the contraceptive prevalence rate would increase from 75 to 82 percent among married women.

Discontinuation Rates. The rate of discontinuation of contraceptive use is quite low in Vietnam. Overall, less than one in five women (18 percent) discontinues use within 12 months of adopting a method. The 12-month discontinuation rate for the IUD is particularly low (10 percent) but rates are several times higher for the pill (33 percent), the condom (23 percent), periodic abstinence (29 percent), and withdrawal (19 percent).

Availability of Services. Family planning services are widely available in Vietnam. The VNDHS-II data indicate that over 95 percent of married women live in communities served by both community-based distribution (CBD) workers and family planning fieldworkers. Moreover, virtually all CBD workers and family planning fieldworkers provide pills and condoms. In addition, 70 percent of women live within one kilometer of a health facility that offers family planning services (commune health center, intercommune health center, or hospital) and over 95 percent live within five kilometers of such a facility.

Outreach Activities. Despite the wide availability of family planning services, during the 12 months preceding the survey, two out of three married women who were not using contraception (67 percent) did not receive a visit from a family planning fieldworker and did not visit a health facility where family planning was discussed. This may indicate lost opportunities to provide family planning services.

MATERNAL HEALTH

Maternal Health Care. The VNDHS-II data indicate that substantial increases have occurred in the number of women receiving maternal care. In the three years before VNDHS-II, mothers received antenatal care from a doctor, nurse, or midwife for 71 percent of births compared with only 55 percent of births in the ICDS-94. Mothers reported receiving no antenatal care for 28 percent of births in VNDHS-II compared with 43 percent of births in ICDS-94.

Proper medical attention and hygienic conditions during delivery can reduce the risk of serious illness among mothers and their babies. The VNDHS-II found that three out of five deliveries (62 percent) occurred in health facilities. This is an increase from 56 percent reported in the ICDS-94.

Awareness of AIDS. Knowledge of acquired immunodeficiency syndrome (AIDS) is high among ever-married women in Vietnam: 91 percent reported having heard of AIDS. Radio and television are the primary sources of knowledge about AIDS. More than two-thirds of women have been exposed to a message about AIDS in these two media. Among women who know about AIDS, a large proportion (75 percent) were able to name a valid behavior that would reduce the risk of becoming infected with the virus.

Availability of Services. Maternal and child health services are widely available in Vietnam. The VNDHS-II data indicate that over 55 percent of married women live in communities served by trained midwives and over 80 percent live in communities visited by health fieldworkers. In addition, over 90 percent live within five kilometers of a health facility that offers maternal and child health services (private doctor, commune health center, intercommune health center, or hospital).

CHILD HEALTH

Infant and Child Mortality. Infant and under-five mortality rates estimated from the VNDHS-II data were 27 and 38 deaths per 1,000 live births, respectively, for the period 1992-96. Higher mortality rates were estimated for earlier time periods from the VNDHS-II data as well as from data of other surveys. This indicates that there has been a declining trend in mortality over the past 15 years in Vietnam. The VNDHS-II data also show that births occurring after a short birth interval (less than 24 months), births to very young women (under age 20), and births to women nearing the end of their childbearing years (age 35 and over) are at an elevated risk of dying.

Breastfeeding Practices. Breastfeeding is nearly universal in Vietnam; 98 percent of children are breastfed. The median duration of breastfeeding is 16 to 17 months. The VNDHS-II data indicate that supplementary feeding of children begins early. For example, among newborns less than two months of age, 46 percent are receiving supplementary foods or liquids.

Childhood Vaccination Coverage. In the VNDHS-II, mothers were able to show a health card with immunization data for only 13 percent of children. Accordingly, estimates of coverage are based on both data from health cards and mothers' recall. Estimated vaccination rates among children 12-23 months of age for BCG and the first doses of DPT and polio are 90 percent or higher while the estimate for measles is 77 percent. The estimated rate for full vaccination coverage is 57 percent. This may be an underestimate if, as suspected, mothers' recall of whether their children received the second and third doses of DPT and polio was faulty.

Child Illness and Treatment. Among children under three years of age, 21 percent were reported to have had a fever and 14 percent were reported to have had acute respiratory infection in the two weeks preceding the survey. Of the children with respiratory illness, approximately two out of three (68 percent) were taken to a health facility or provider for treatment. An estimated 10 percent of children had diarrhea in the two weeks preceding the survey. Three out of four children with diarrhea (72 percent) received some type of oral rehydration therapy.

MAP OF VIETNAM

LIST OF PROVINCES/ CITIES

I. Northern Uplands
1. Ha Giang
2. Tuyen Quang
3. Cao Bang
4. Lang Son
5. Lai Chau
6. Lao Cai
7. Yen Bai
8. Bac Can
9. Thai Nguyen
10. Son La
11. Hoa Binh
12. Phu Tho
13. Vinh Phuc
14. Bac Giang
15. Bac Ninh
16. Quang Ninh

II. Red River Delta
17. Ha Noi
18. Hai Phong
19. Ha Tay
20. Hai Duong
21. Hung Yen
22. Thai Binh
23. Ha Nam
24. Nam Dinh
25. Ninh Binh

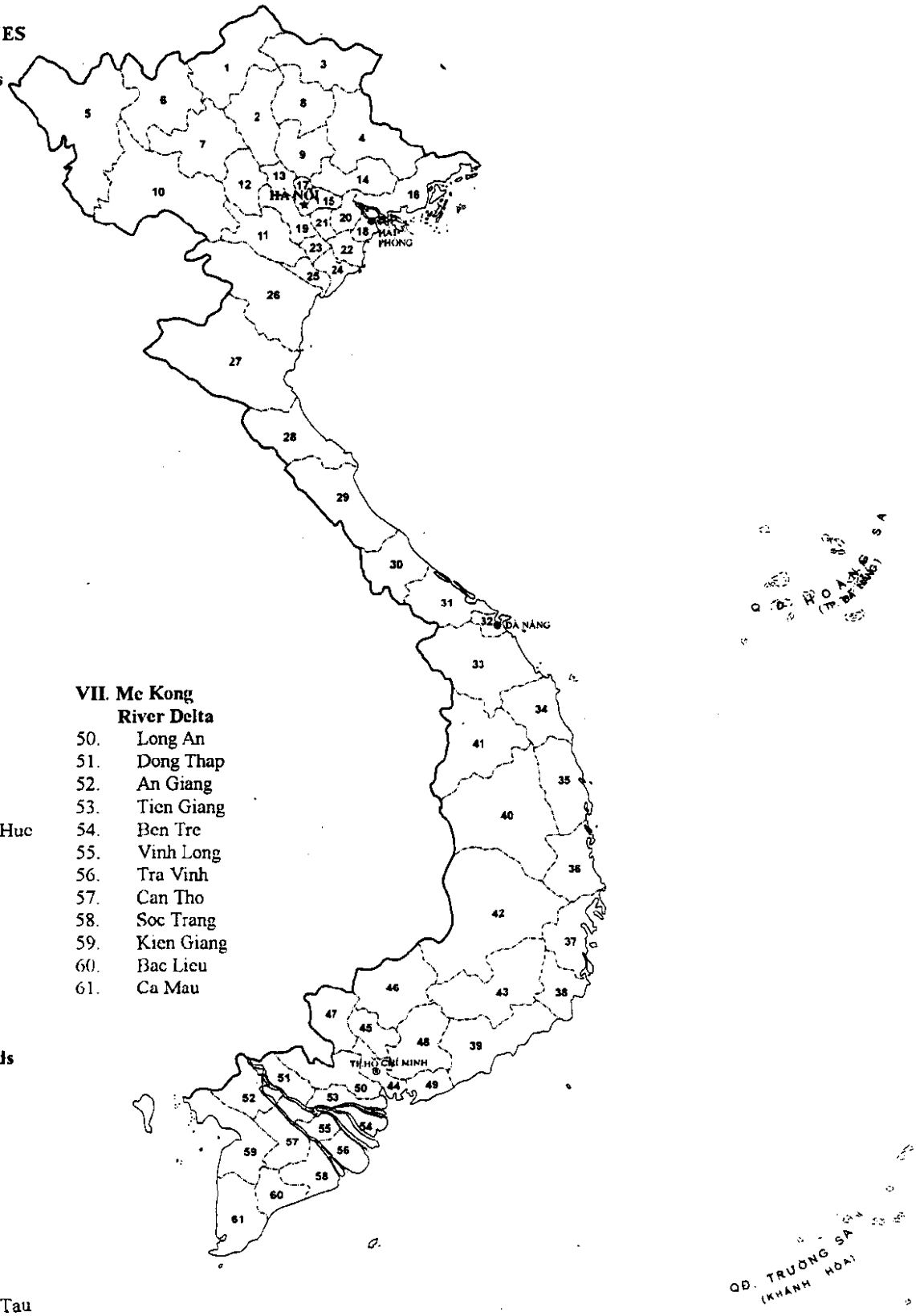
III. North Central
26. Thanh Hoa
27. Nghe An
28. Ha Tinh
29. Quang Binh
30. Quang Tri
31. Thua Thien - Hue

IV. Central Coast
32. Da Nang
33. Quang Nam
34. Quang Ngai
35. Binh Dinh
36. Phu Yen
37. Khanh Hoa
38. Ninh Thuan
39. Binh Thuan

V. Central Highlands
40. Gia Lai
41. Kon Tum
42. Dac Lac
43. Lam Dong

VI. Southeast
44. Ho Chi Minh
45. Binh Duong
46. Binh Phuoc
47. Tay Ninh
48. Dong Nai
49. Ba Ria-Vung Tau

VII. Mc Kong River Delta
50. Long An
51. Dong Thap
52. An Giang
53. Tien Giang
54. Ben Tre
55. Vinh Long
56. Tra Vinh
57. Can Tho
58. Soc Trang
59. Kien Giang
60. Bac Lieu
61. Ca Mau



CHAPTER 1

INTRODUCTION

1.1 Country Setting

The Socialist Republic of Vietnam is located in southeastern Asia between 8°35' and 23°24' north latitude and 102°00' and 109°00' east longitude. The total area is 330,000 square kilometers. Vietnam has a sea territory of about one million square kilometers which includes thousands of islands of various sizes. Some islands exist separately while others are gathered into archipelagos such as Hoang Sa and Truong Sa in the East Sea.

Vietnam is bordered by the Peoples Republic of China in the north and the Peoples Democratic Republic of Laos, and Cambodia in the west. The Pacific Ocean lies to the east. The sea coast from the north to the south is shaped like an elongated "S."

Vietnam includes tropical rain forests, rich agricultural plains, and forested hills and mountains. About 80 percent of Vietnam consists of mountains, high plateaus, and jungles. These areas have low agricultural productivity. The rice producing deltas provide the bulk of food for the population. The climate is tropical in the south with a rainy season and a dry season, and sub-tropical in the north where the winters are cool and dry, and the summers are hot and humid.

1.2 Population

Population Size and Distribution

The latest population census in the Socialist Republic of Vietnam was conducted in 1989. In that year, the resident population of Vietnam was 64.4 million. The estimated population in 1996 was around 75.4 million (GSO, 1998).

At the national level, the population density is about 228 persons per square kilometer (1996), distributed among 60 provinces/cities and the capital, Ha Noi. The provincial level units are divided into 600 districts and these are subdivided into 10,331 communes.

The population is distributed between rural and urban areas. In 1996, 21 percent of the population lived in urban areas. The most densely populated cities are Ha Noi, Ho Chi Minh City, Hai Phong, and Da Nang.

Population Growth

In 1995, the estimated crude birth rate in Vietnam was 23.9 per thousand, while the crude death rate was 6.8 per thousand. The total fertility rate, which is the estimated number of live births a woman will have by the end of her reproductive years, is 2.69 births per woman.

According to the 1994 Intercensal Demographic Survey, the infant mortality rate for the latest cohort (1989-1993) was only 44.2 per thousand (GSO, 1995). Life expectancy at birth in 1989 was estimated at 63 years for men and 67 years for women. In the last decade there was a clear improvement in the standard of living and health conditions, which was reflected in the continuing increase in life expectancy.

1.3 Socioeconomic Conditions

Education

Education is one of the most important measures of social and economic development. Because the government has paid a great deal of attention to education, educational levels are high in Vietnam. According to the 1989 census, 88 percent of the population age 10 years and above were literate. Among the population at least 10 years of age, 93 percent of males and 84 percent of females were literate. The urban literacy rate is 94 percent and the rural rate is 87 percent (GSO, 1994).

The average number of years of schooling in Vietnam is relatively high. At the time of the 1989 census, the average number of years of schooling for the population age 10 years and above was 9.5, 9.8 years for males and 9.3 years for females. The urban-rural differential was wide. In urban areas, the average number of years of schooling was 11.6 years, whereas in rural areas it was only 9.2 years.

Health

Health conditions in any community are the result of various social, economic, cultural, and environmental factors. Despite the poor national economy, Vietnam's health situation is favorable relative to other developing countries. Infant mortality and child mortality rates have decreased considerably in the last few decades due to the emphasis on education and basic health care for all. The Ministry of Health has developed a basic health care system covering the whole country. Most communes have their own commune health center staffed by trained health workers. Problems that cannot be handled at the local level are referred to district, provincial or specialized hospitals. The efficiency of health services has increased. Even in the rural areas, 93 percent of communes have their own health centers (GSO, 1995:7).

Population Activities

In 1989, 28.7 million workers were employed, an increase of 8 million compared with the 1979 census (GSO, 1994). This translates into an increase of 3.4 percent per year, which is much higher than the rate of population growth. Economic activity rates in 1989 were 78 percent for males and 71 percent for females aged 13 years and over.

Workers were mainly employed in agriculture (71 percent) and industry (12 percent). Following these two industries was trade (7 percent). Government policies relating to the development of industrial production - especially consumer goods manufacture - and the encouragement of trade, have increased the share of industry, trade, and transport in the economy since 1979.

Unemployment rates were high in 1989 - 5.8 percent for the total labor force and 13.2 percent for the urban labor force. Unemployment was an especially severe problem among persons under 20 years of age.

1.4 Population Policy and Programs

Vietnam (The Democratic Republic of Vietnam in the North) was among the earliest countries in the developing world to adopt an official policy to reduce rapid population growth. As early as 1961, spurred by the results of the 1960 census, the government of the Democratic Republic of Vietnam (North Vietnam) issued a statement recommending that couples limit their family size and space their births to reduce the excessive rate of population growth. The policy appears to have been motivated by long-standing concerns about pressures on the land and associated chronic food shortages in the North as well as by the related desire to improve women's welfare, part of the strategy to enhance production to meet the needs of the struggle for independence and reunification. In South Vietnam, prior to unification, the

government did not promote family planning until the United States Agency for International Development encouraged it to do so in 1971. Nevertheless, the program in the South remained incomplete through the end of the war.

Following reunification, policies to reduce population growth received increasing political attention from the national government, and efforts to extend coverage of birth control services throughout the country gained greater priority. A series of government decisions and decrees led to the formal adoption at the national level of a policy advocating a family norm of one to two children in late 1988. The 30 June 1989 National Health Law passed by the National Assembly legalized the principle of freedom of choice for couples in their use of family planning practices. It stressed that individuals must be free to choose the family planning method they wished, and "All acts of preventing or forcing the implementation of family planning are prohibited."

In January 1993, the Communist Party Central Committee for the first time approved a resolution on population and family planning. In a strong statement, they identified excessive population growth as contributing to a wide range of social, economic, and ecological problems. The resolution endorsed the recommendation that "each family should have one or two children" so that fertility could be lowered and population stabilization achieved. A comprehensive, official plan - Population and Family Planning Strategy to the Year 2000 - was approved by the Prime Minister in June 1993 to guide efforts to implement the resolution.

1.5 Survey Objectives

The primary objectives of the second Vietnam National Demographic and Health Survey (VNDHS-II) in 1997 were to provide up-to-date information on fertility levels, fertility preferences, awareness and use of family planning methods, breastfeeding practices, early childhood mortality, child health and knowledge of AIDS.

1.6 Survey Implementation

Sample Design[1]

The sample for the VNDHS-II is a subsample of the 1996 Multi-Round Demographic Survey (1996 MRS). The latter is a semi-annual survey of about 243,000 households that the General Statistical Office (GSO) regularly undertakes to collect information on population changes in households. The sample households are located in 1,590 sample areas, or enumeration areas (EAs), spread throughout the 53 provinces of Vietnam, with 30 EAs in each province. On average, an EA comprises about 150 households.

For the VNDHS-II, a subsample of 205 EAs was selected and 26 households from each urban EA and 39 households from each rural EA were selected. The sample households were selected from a listing of households that was conducted as part of the 1996 MRS. A total of 7,150 households were selected.

[1] A full description of the sample design, including an evaluation of the coverage of the 1996 MRS, is given in Appendix A. This section contains only a summary of the design.

The VNDHS-II was designed to provide separate estimates for the whole country, for urban and rural areas, for 18 project provinces, and for the remaining non-project provinces.[2]

Questionnaire Content

Three types of questionnaires were used in the VNDHS-II: the Household Questionnaire, the Individual Questionnaire, and the Community/Health Facility Questionnaire. A draft of the first two questionnaires was prepared using the DHS Model A Questionnaire. A user workshop was organized to discuss the contents of the questionnaires. Additions and modifications to the draft of the questionnaires were made after the user workshop and in consultation with staff from Macro International Inc., and with members of the Technical Working Group, who were convened for the purpose of providing technical assistance to the GSO in planning and conducting the survey. The questionnaires were developed in English and translated into and printed in Vietnamese. The draft questionnaires were pretested in two clusters in Ha Noi City (one urban and one rural cluster).

The Household Questionnaire was used to enumerate all usual members and visitors in selected households and to collect information on age, sex, education, marital status, and relationship to the head of household. The main purpose of the Household Questionnaire was to identify women eligible for the individual interview (ever-married women age 15-49). In addition, the Household Questionnaire collected information on characteristics of the household such as the source of water, type of toilet facilities, material used for the floor and roof, and ownership of various durable goods.

The Individual Questionnaire was used to collect information on ever-married women age 15-49 in the surveyed households. These women were asked questions on the following topics:

Respondent's background characteristics (age, education, residential history, etc.);
Reproductive history;
Contraceptive knowledge and use;
Antenatal and delivery care;
Infant feeding practices;
Child immunization and health;
Fertility preferences and attitudes about family planning;
Husband's background characteristics;
Women's work information; and
Knowledge of AIDS.

The Community/Health Facility Questionnaire was used to collect information on all communes in which the interviewed women lived and on services offered at the nearest health facilities. The questionnaire consisted of four sections. The first two sections collected information from community informants on characteristics such as the major economic activity of residents, distance to civic services, and the location of the nearest sources of health care. The last two sections collected information from the nearest commune health center and the nearest "other" health facility (health center, intercommune health center or hospital), if such facilities were located within 30 kilometers of a sample cluster. For each facility visited information was collected on factors such as the type of services offered and the number of

[2] Project provinces refer to 18 focus provinces targeted for the strengthening of their primary health care systems by the Government's Population and Family Health Project, to be implemented over a period of seven years, from 1996 to 2002. (At the outset of this project there were 15 focus provinces, which became 18 by the creation of 3 new provinces from the initial set of 15.) These provinces were selected according to criteria based on relatively low health and family planning status, no substantial family planning donor presence, and regional spread. These criteria resulted, by and large, in the selection of the country's poorer provinces. Nine of these provinces have significant proportions of ethnic minorities among their population (World Bank, 1995).

days services were offered per week, the type and number of staff assigned and their training, and the equipment and medicines available at the time of the facility visit.

Training and Fieldwork

Data collection for the VNDHS-II was carried out by eight teams, each consisting of four female interviewers for Household and Individual Questionnaires, an interviewer for Community/Health Facility Questionnaire, a field editor, a supervisor, and a driver. The field staff was provided with a Interviewers Instruction and Procedures Manual and were trained by GSO staff in two training courses. Each training course lasted three weeks. The first started on 23 June 1997 in My Tho City, Tien Giang Province and the second started on 14 July 1997 in Ha Noi. Fieldwork began in mid-July 1997 and lasted until October 1997. Field supervision was conducted by the senior staff of GSO, members of the Technical Working Group, and staff from Macro International Inc.

Data Processing

The first stage of data editing was done by the field editors, who checked the questionnaires for completeness and consistency. Supervisors also reviewed the questionnaires in the field. The completed questionnaires were then sent to the GSO by post for data processing. The office editing staff first checked that questionnaires for all households and eligible respondents had been received from the field. The data were then entered and edited using microcomputers and a software program developed for DHS surveys, the Integrated System for Survey Analysis (ISSA). Data entry was 100 percent verified. During the first three weeks of fieldwork, office editors and data processing staff were trained and supervised by a data processing specialist from Macro International Inc. Office editing and data processing activities were initiated immediately after the beginning of the fieldwork and were completed in mid-October 1997.

Survey Response Rates

Table 1.1 presents information on the results of the household and individual interviews. The table shows high response rates. From a total 7,150 households selected in the sample, 7,031 households were occupied at the time of the interview, and 7,001 were successfully interviewed, giving a household response rate of 99.6 percent. The household response rate was high in both urban (99.2 percent) and rural (99.7 percent) areas.

A total of 5,704 eligible women were identified in the interviewed households, and 5,664 (99.3 percent) were successfully interviewed. Non-response was mainly due to the fact that respondents were not at home at the time of interview and during callbacks. Only one woman refused to be interviewed. The individual response rate was high in both urban (99.5 percent) and rural (99.2 percent) areas. The overall response rate for the VNDHS-II was 98.9 percent.

Table 1.1 Sample results

Number of households by urban-rural residence and number of interviews and response rates, Vietnam 1997

Result	Residence		Total	
	Urban	Rural	Number	Percent
Household interviews				
Households selected	1,690	5,460	7,150	100.0
Households occupied	1,644	5,387	7,031	100.0
Households absent for extended period	23	45	68	1.0
Dwelling vacant/destroyed	14	19	33	0.4
Households interviewed	1,631	5,370	7,001	99.6
Households not interviewed	13	17	30	0.4
Individual interviews				
Eligible women	1,323	4,381	5,704	100.0
Women interviewed	1,316	4,348	5,664	99.3
Women not interviewed	7	33	40	0.7
Household response rate	99.2	99.7	99.6	-
Individual response rate	99.5	99.2	99.3	-
Overall response rate	-	-	98.9	-

CHAPTER 2

CHARACTERISTICS OF HOUSEHOLDS AND RESPONDENTS

The purpose of this chapter is to provide a descriptive summary of some socioeconomic characteristics of the households and the individual respondents of the second Vietnam Demographic and Health Survey (VNDHS-II), such as age, sex, residence and education. It also examines some environmental conditions, such as water sources, toilet facilities, and possession of consumer goods. This information is very important for interpreting the survey findings and can provide an approximate indication of the representativeness of the survey.

2.1 Characteristics of the Household Population

In the VNDHS-II, information was collected for usual residents of the selected households and visitors who had spent the previous night in the households. A household was defined as a person living alone or a group of persons who live and eat together.

Age and Sex Composition

The percent distribution of the de facto population by five-year age groups, according to urban-rural residence and sex is presented in Table 2.1. By residence, the distribution of the surveyed population was 18 percent urban and 82 percent rural.

The age distribution is typical of high fertility societies in which a larger proportion of the population is found in the younger age groups than in the older age groups (see Figure 2.1). However, the number of children under five is less than the number age 5-9 and the number of children age 5-9 is slightly less than the number age 10-14, which is evidence of a rapid decline in fertility during the last 10 years.

Table 2.1 Household population by age, residence and sex

Percent distribution of the de facto household population by five-year age groups, according to urban-rural residence and sex, Vietnam 1997

Age	Urban			Rural			Total		
group	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	8.8	7.2	8.0	11.1	9.9	10.5	10.7	9.4	10.0
5-9	9.6	8.8	9.2	13.9	12.3	13.1	13.1	11.6	12.3
10-14	11.0	9.1	10.1	14.8	12.7	13.7	14.1	12.1	13.1
15-19	10.2	9.2	9.7	10.6	10.1	10.3	10.5	9.9	10.2
20-24	9.0	9.8	9.4	7.9	7.9	7.9	8.1	8.3	8.2
25-29	8.7	9.2	8.9	6.9	7.4	7.2	7.3	7.7	7.5
30-34	8.9	8.2	8.5	7.6	8.0	7.8	7.8	8.1	7.9
35-39	8.3	9.1	8.7	6.4	7.0	6.7	6.7	7.4	7.1
40-44	7.2	7.4	7.3	5.4	5.3	5.3	5.7	5.7	5.7
45-49	4.7	4.9	4.8	3.4	3.6	3.5	3.6	3.9	3.8
50-54	2.8	3.4	3.1	2.2	2.5	2.4	2.3	2.7	2.5
55-59	2.9	3.5	3.3	2.2	2.8	2.5	2.3	2.9	2.6
60-64	2.1	2.8	2.5	2.4	2.9	2.7	2.4	2.9	2.6
65-69	2.3	2.7	2.5	2.2	2.4	2.3	2.2	2.4	2.3
70-74	1.6	1.6	1.6	1.5	2.1	1.8	1.5	2.0	1.8
75-79	1.0	1.7	1.4	0.8	1.5	1.2	0.9	1.5	1.2
80+	0.8	1.3	1.1	0.7	1.6	1.2	0.7	1.5	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	2,894	3,080	5,974	12,882	13,669	26,551	15,775	16,750	32,525

There appears to be an excess of males over females at ages under 20. For ages over 20 there are more females than males. The population pyramid shows no excess of women in the age group 50-54, which suggests that there has been no shifting of eligible women out of age group 45-49 by interviewers seeking to reduce their workload (as has occurred in some countries where similar surveys have been conducted).

Table 2.2 compares the broad age structure of the population from the 1989 Population Census, the 1994 Intercensal Demographic Survey (ICDS-94), and the 1997 VNDHS-II. The proportion of the population less than 15 years has declined over the last decade or so and the proportion age 15-64 has risen. The most likely explanation for this change is the recent decline in fertility.

Figure 2.1
Population Pyramid, Vietnam 1997

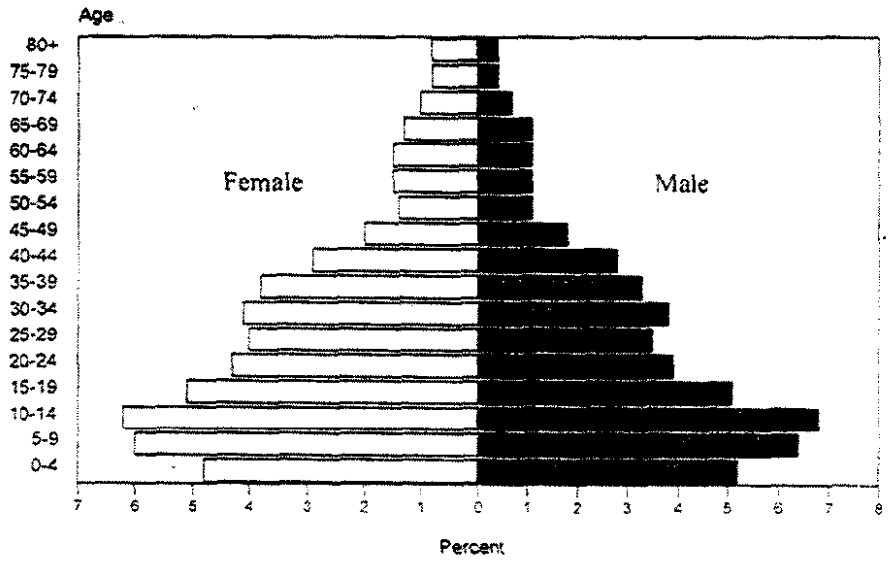


Table 2.2 Population by broad age groups from selected sources

Percent distribution of the population by broad age group, selected sources, Vietnam

Age group	1989 Census	ICDS-94	VNDHS-II
Less than 15	39.8	36.8	35.0
15-64	55.4	57.5	58.6
65+	4.8	5.7	6.3
Total	100.0	100.0	100.0
Median age	19.8	22.1	22.8

Note: Percentages may not add to 100 due to rounding.
Sources: Vietnam Population Census-1989 (GSO, [1991]); Vietnam Intercensal Demographic Survey 1994 (GSO, [1996])

Household Composition

Table 2.3 shows that three-quarters (75 percent) of the households in Vietnam are headed by men, with only one-quarter (25 percent) headed by women. Female-headed households are more common in urbal areas than in rural areas (41 percent versus 21 percent).

The average household size has decreased from 4.8 persons in the ICDS-94 to 4.7 persons in the VNDHS-II, possibly due to a decline in fertility. The average household size in urban areas is slightly less than that in rural areas (4.6 versus 4.8). More than half of households (59 percent) consist of 3 to 5 persons.

As in the ICDS-94, four-person households are most common (24 percent in 1997 compared with 21 percent in 1994). Just half of the population resides in households with 5 or more persons. However, the proportion of these households has decreased from 69 percent in the ICDS-94 to 50 percent in the VNDHS-II. This may be due to improved socioeconomic conditions that have resulted in more young couples moving out to live on their own.

Table 2.3 Household composition

Percent distribution of households by sex of household head and household size, according to urban-rural residence, Vietnam 1997

Background characteristic	Residence		Total
	Urban	Rural	
Head of household			
Male	59.0	79.3	75.4
Female	41.0	20.7	24.6
Number of usual members			
1	3.5	4.0	3.9
2	7.0	7.6	7.5
3	17.5	14.0	14.6
4	28.2	22.6	23.6
5	19.5	20.7	20.4
6	10.7	13.9	13.3
7	5.8	9.0	8.4
8	4.1	4.5	4.4
9	3.6	3.9	3.8
Total	100.0	100.0	100.0
Mean size	4.6	4.8	4.7

Note: Table is based on de jure household members, i.e., usual residents.

Education

Formal education in Vietnam is based on a three-tier system known as the 5-4-3 system. It consists of 5 years of primary school education, 4 years of lower secondary education, and 3 years of higher secondary education. Graduates of higher secondary school may then further their education by enrolling at any of the various national universities or colleges or technical schools throughout the country to acquire more specific skills.

VNDHS-II results show that there is a clear differential in education between males and females in Vietnam (Table 2.4 and Table 2.5). The data indicate that 7 percent of men and 12 percent of women age six and above have not received any formal education. While there is a male-female gap at all levels of education, this gap has narrowed substantially in recent years, which is especially evident in the age group 6-14. Above age 40 the gap widens substantially.

Table 2.4 Educational level of the male household population

Percent distribution of the de facto male household population age six and over by highest level of education attended, and median number of years of schooling, according to selected background characteristics, Vietnam 1997

Background characteristic	Education: No education	Some primary	Completed primary	Completed lower secondary	Completed higher secondary+	Total	Number of men	Median years of schooling
Age[1]								
6-9	20.2	78.9	0.8	0.0	0.0	100.0	1,664	0.9
10-14	2.9	36.5	57.6	3.1	0.0	100.0	2,223	4.6
15-19	3.1	13.2	38.0	37.0	8.7	100.0	1,661	7.6
20-24	5.7	14.0	33.6	29.9	16.8	100.0	1,280	7.5
25-29	4.8	11.4	29.6	31.6	22.6	100.0	1,146	8.2
30-34	2.8	11.9	28.2	36.7	20.4	100.0	1,236	8.2
35-39	1.7	12.1	23.7	40.8	21.6	100.0	1,062	8.4
40-44	2.0	14.1	26.9	35.0	21.9	100.0	899	8.2
45-49	3.5	12.2	24.6	35.9	23.8	100.0	576	8.3
50-54	3.2	14.8	26.9	35.5	19.6	100.0	369	8.2
55-59	5.6	18.2	32.7	23.6	19.9	100.0	364	6.3
60-64	8.5	28.9	34.3	16.4	11.8	100.0	372	4.7
65+	17.6	34.9	29.2	10.8	7.5	100.0	833	3.8
Residence								
Urban	3.2	16.3	28.4	25.1	27.1	100.0	2,572	8.1
Rural	7.3	29.0	31.8	23.0	8.9	100.0	11,116	5.4
Project province								
No	6.0	27.3	31.8	22.4	12.4	100.0	9,629	5.7
Yes	7.5	25.0	29.8	25.7	12.1	100.0	4,059	6.1
Region								
Northern Uplands	8.4	31.2	30.4	21.9	8.1	100.0	2,716	5.0
Red River Delta	3.1	16.1	24.5	37.6	18.6	100.0	2,837	8.2
North Central	4.8	26.7	32.2	27.6	8.7	100.0	1,769	6.0
Central Coast	7.5	25.4	32.8	19.8	14.6	100.0	1,459	5.7
Central Highlands	12.2	34.6	26.4	13.8	13.0	100.0	420	4.4
Southeast	4.0	24.4	34.5	18.9	18.2	100.0	1,705	6.4
Mekong River Delta	9.3	33.6	35.9	13.8	7.4	100.0	2,783	4.5
Total	6.5	26.6	31.2	23.4	12.3	100.0	13,688	5.8

[1] Excludes 4 men for whom age was not reported.

The level of educational attainment in Vietnam is relatively high compared with other developing countries and the high level of education was achieved many years ago. Thus, the data on education do not show a clear trend of improvement in education, except above age 45 compared with younger women and above age 60 compared with younger men.

The last columns of Tables 2.4 and 2.5 show the median number of years of schooling attained by males and females. Overall, males have a median duration of schooling of 5.8 years, a full year longer than females. The gap in the median number of years of schooling between males and females is negligible up to age 40 as noted; then the gap becomes more significant.

The proportion of the population with no education is twice as high in rural areas as in urban areas. As expected, the median number of years of schooling for the male population as well as the female population is higher in urban than in rural areas.

Table 2.5 Educational level of the female household population

Percent distribution of the de facto female household population age 6 and over by highest level of education attended, and median number of years of schooling, according to selected background characteristics, Vietnam 1997

Background characteristic	Education					Total	Number of women	Median years of schooling
	No education	Some primary	Completed primary	Completed lower secondary	Completed higher secondary+			
Age[1]								
6-9	19.3	80.0	0.8	0.0	0.0	100.0	1,580	1.0
10-14	3.2	32.8	60.8	3.2	0.0	100.0	2,021	4.7
15-19	4.3	14.9	38.8	32.6	9.4	100.0	1,660	6.9
20-24	5.6	13.1	36.2	28.5	16.6	100.0	1,385	7.3
25-29	4.0	15.3	28.6	29.7	22.4	100.0	1,290	8.1
30-34	3.3	17.6	28.6	33.7	16.8	100.0	1,349	8.0
35-39	4.1	19.2	26.1	35.6	15.0	100.0	1,243	8.0
40-44	6.5	20.0	26.3	34.1	13.1	100.0	954	6.9
45-49	8.0	24.3	29.8	25.2	12.8	100.0	649	5.7
50-54	14.7	33.7	28.4	14.1	9.2	100.0	452	4.1
55-59	22.2	41.4	22.8	10.3	3.2	100.0	493	2.9
60-64	28.4	49.7	17.4	3.7	0.8	100.0	479	1.9
65+	55.5	34.3	8.0	1.6	0.5	100.0	1,255	0.0
Residence								
Urban	6.4	19.0	26.1	24.6	23.9	100.0	2,796	7.7
Rural	13.4	32.2	30.0	18.6	5.8	100.0	12,015	4.4
Project province[1]								
No	11.1	31.0	30.8	18.8	9.1	100.0	10,461	4.7
Yes	14.3	26.8	27.5	22.0	9.4	100.0	4,349	5.0
Region								
Northern Uplands	15.2	34.0	26.3	18.3	6.1	100.0	2,903	4.1
Red River Delta	8.7	20.4	23.5	33.7	13.6	100.0	3,117	7.3
North Central	11.6	28.6	30.5	22.6	6.7	100.0	1,900	5.0
Central Coast	13.7	31.5	30.1	15.8	8.9	100.0	1,609	4.4
Central Highlands	19.3	31.2	24.4	14.1	11.0	100.0	432	3.9
Southeast	7.9	26.3	32.0	17.0	16.8	100.0	1,911	5.4
Mekong River Delta	13.5	37.1	36.0	9.1	4.2	100.0	2,938	3.9
Total	12.1	29.7	29.3	19.7	9.2	100.0	14,811	4.8

[1] Excludes 1 woman for whom age and place of residence by project province was not reported.

The median number of years of schooling is highest in the Red River Delta region (8.2 for males and 7.3 for females), followed by the Southeast region (6.4 for males and 5.4 for females) and the North Central region (6.0 for males and 5.0 for females). The median number of years of schooling is lowest in the Central Highlands region (4.4 for males and 3.9 for females) and the Mekong River Delta region.

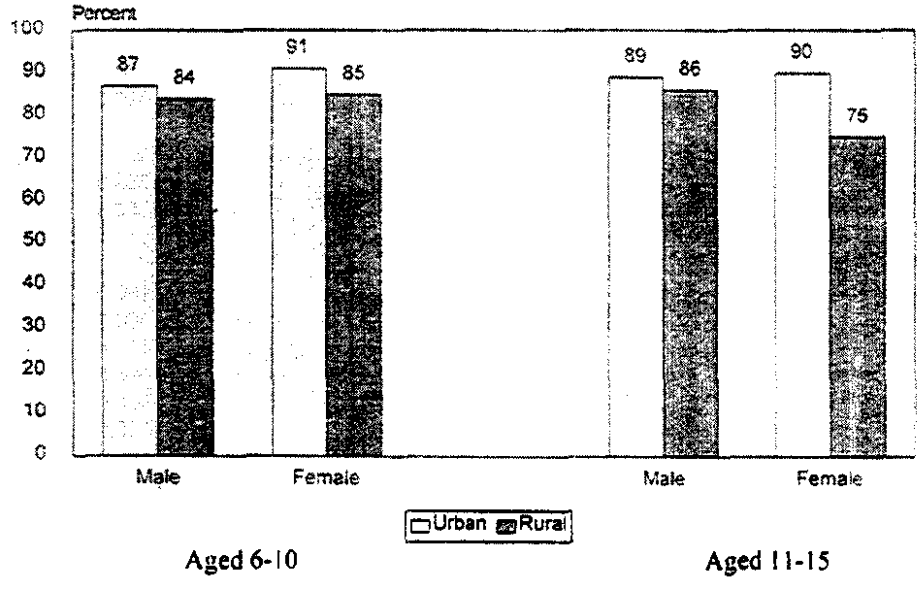
Table 2.6 presents the school enrollment rate for the population age 6-24 by age, sex and urban-rural residence. Four in five children age 6 to 15 years (83 percent) are attending school. School enrollment drops substantially after age 15 to only 28 percent among those age 16-20 years, and to 4 percent among those age 21-24 years. This sudden drop may be partially due to a lack of financial resources to continue schooling and partially due to the need to work to support the family.

Table 2.6 School enrollment

Percentage distribution of the de-facto household population age 6-24 years enrolled in school, by age, sex, and urban-rural residence, Vietnam 1997

	Male			Female			Total		
Age	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
6-10	87.4	83.6	84.1	90.6	85.3	86.0	89.0	84.4	85.0
11-15	88.6	85.5	85.9	89.9	75.3	77.5	89.2	80.6	81.9
6-15	88.1	84.6	85.0	90.2	80.3	81.7	89.1	82.5	83.4
16-20	46.1	28.4	31.5	48.7	19.3	24.5	47.4	23.8	28.0
21-24	9.6	3.6	4.9	11.9	1.6	3.9	10.8	2.6	4.4

.Figure 2.2
School Enrollment among Children Age 6-15 by Age, Sex, and Urban-Rural Residence, Vietnam 1997



2.2 Housing Characteristics

Socioeconomic conditions of the households were assessed by asking respondents questions about their household environment. This information is summarized in Table 2.7.

Electricity is available to 78 percent of households in Vietnam with nearly all households in urban areas being electrified compared with 3 in 4 households in rural areas.

Sources of drinking water differ widely by area of residence. In urban areas, piped water is a major source; 66 percent of households have water piped into their residence and another 4 percent obtain water from a public tap. However, one-fifth of urban households still use well water. In rural areas, only 3 percent of households have piped water. Well water is the main source for rural households (62 percent). Seventeen percent of rural households use rainwater. Nevertheless, for most households (94 percent) the

Table 2.7 Housing characteristics

Percent distribution of households by housing characteristics, according to urban-rural residence, Vietnam 1997

Characteristic	Residence		Total
	Urban	Rural	
Electricity			
Yes	98.6	73.7	78.4
No	1.4	26.3	21.6
Total	100.0	100.0	100.0
Source of drinking water			
Piped water			
Piped into residence	66.2	2.6	14.7
Public tap	4.0	0.6	1.3
Well water			
Well in residence	17.7	53.3	46.5
Public well	2.3	8.5	7.3
Spring	0.4	6.1	5.1
River, stream	4.4	10.2	9.1
Pond, lake	0.1	1.1	0.9
Dam	0.0	0.1	0.1
Rain water	4.8	17.4	15.0
Tanker truck	0.2	0.2	0.2
Total	100.0	100.0	100.0
Time to water source			
Less than 15 minutes	98.8	93.4	94.4
Sanitation facility			
Flush toilet			
Own flush toilet	64.5	5.6	16.8
Shared flush toilet	2.9	0.4	0.9
Pit toilet			
Traditional pit toilet	16.9	58.4	50.5
Vent. imp. pit toilet	7.3	9.4	9.0
No facility, bush	8.3	26.2	22.8
Total	100.0	100.0	100.0
Flooring			
Earth, sand	7.4	43.8	36.9
Rough wood/bamboo	1.9	10.8	9.1
Finished floor	90.7	45.3	54.0
Total	100.0	100.0	100.0
Persons per sleeping room			
1-2	52.3	44.6	46.0
3-4	31.6	31.9	31.8
5-6	11.7	14.7	14.1
7+	3.7	6.9	6.3
Don't know/missing	0.7	2.0	1.7
Total	100.0	100.0	100.0
Mean persons per room	3.0	3.3	3.3
Number of households	1,330	5,671	7,001

average time taken to go to a water source to collect water and return, including waiting time, is less than 15 minutes.

In Vietnam, more than half of all households have either a traditional pit toilet or a pit latrine (60 percent). In urban areas, 65 percent of households have their own flush toilet while 3 percent share a flush toilet. In contrast, a traditional pit toilet or pit latrine is the major type of toilet facility (68 percent) in rural areas. It should be noted that more than one in four households in rural areas has no toilet facility compared with less than one in ten households in urban areas.

Fifty-four percent of households have a finished floor made of ceramic tiles, cement, etc. A finished floor is more common in urban areas (91 percent) than in rural areas (45 percent). More than half of rural households reside in houses with earth, sand, or rough wood flooring (55 percent).

As a way of estimating the extent of crowding, information was gathered on the number of rooms used for sleeping in each household. Forty-six percent of households have 1-2 persons per sleeping room. About one-third (32 percent) of households have 3-4 persons per sleeping room. The mean number of persons per sleeping room is 3.3. This figure differs little between urban and rural areas.

2.3 Household Durable Goods

Respondents were asked about ownership of particular household durable goods such as radios, televisions and telephones (to assess their access to mass media), refrigerators (to assess their access to food storage), bicycles, motorcycles and cars (to assess their access to modes of transportation). The results are presented in Table 2.8.

Table 2.8 shows that more than half of households (54 percent) have a radio, 50 percent have a television, and 7 percent have a telephone. One-third of urban households have a refrigerator (33 percent). The urban-rural difference is marked, especially in terms of possession of a television set, a telephone, and a refrigerator. One in three urban households has a refrigerator compared with 3 percent of rural households.

Table 2.8 Household durable goods

Percentage of households possessing various durable consumer goods, by urban-rural residence, Vietnam 1997

Consumer goods	Residence		Total
	Urban	Rural	
Radio	68.6	50.2	53.7
Television	82.6	42.0	49.7
Telephone	27.3	2.1	6.9
Refrigerator	32.8	2.5	8.3
Bicycle	84.0	72.2	74.4
Motorcycle	53.3	16.5	23.5
Private car	2.2	0.5	0.8
None of the above	4.0	14.6	12.6
Number of households	1,330	5,671	7,001

As expected, urban households have greater access to modes of transport than rural households: 4 in 5 urban households have a bicycle compared with 3 in 4 rural households, and 1 in 2 urban households have a motorcycle compared with less than 1 in 5 of rural households. Overall, very few households have a car. Thirteen percent of households do not own any of these consumer goods: 4 percent of urban households and 15 percent of rural households.

2.4 Background Characteristics of Women Respondents

General Characteristics

Women were asked two questions in the individual interview to assess their age: "In what month and year were you born?" and "How old are you?" Interviewers were trained to probe in situations where a respondent did not know her age or date of birth, and they were instructed as a last resort to record a best estimate of the respondent's age.

Table 2.9 shows the distribution of respondents by selected background characteristics including age, marital status, urban-rural residence, education, religion and ethnic group. Respondents were ever-married women age 15-49 who slept in the selected households the night before the interview. As indicated in Chapter 1, interviews were completed for a total of 5,664 eligible women.

The age distribution of women reveals that one in three women is under age 30 and one in four is 40 or above. Women are mostly concentrated in the age group 20-34. This is because the survey interviewed ever-married women only, and there are fewer ever-married women in the youngest group.

The majority of women are currently married with a very small minority widowed, divorced or separated (6 percent).

Eighty-one percent of women reside in rural areas. The distribution of women by region shows that almost two-thirds (62 percent) are from the Northern Uplands, Red River Delta, and Mekong River Delta regions; and 38 percent are from the other four regions of the country.

The majority of ever-married women (95 percent) have been to school. About one-third of women have completed lower secondary (33 percent); 14 percent of women have completed higher secondary, which is about the same proportion as reported in the ICDS-94 (13 percent).

Table 2.9 Background characteristics of respondents

Percent distribution of ever-married women by selected background characteristics, Vietnam 1997

Background characteristic	Weighted percent	Number of women: Number weighted	Number of women: Number unweighted
Age			
15-19	2.3	129	113
20-24	12.9	732	744
25-29	17.9	1,016	1,023
30-34	21.1	1,197	1,174
35-39	20.0	1,134	1,103
40-44	15.5	876	893
45-49	10.3	581	614
Current marital status			
Married	94.3	5,340	5,331
Widowed	2.8	157	152
Divorced	1.9	110	120
Not living together	1.0	57	61
Residence			
Urban	18.9	1,069	1,316
Rural	81.1	4,595	4,348
Project province			
No	70.2	3,976	3,757
Yes	29.8	1,688	1,907
Region			
Northern Uplands	20.6	1,168	1,092
Red River Delta	22.0	1,247	1,119
North Central	12.0	681	773
Central Coast	10.6	599	554
Central Highlands	3.2	182	219
Southeast	12.2	691	650
Mekong River Delta	19.4	1,097	1,257
Education			
No education	4.8	271	305
Some primary	19.0	1,078	1,002
Completed primary	29.4	1,665	1,662
Completed lower secondary	32.9	1,865	1,866
Completed higher secondary +	13.9	785	869
Currently attending school			
Yes	0.1	7	8
No	99.9	5,657	5,656
Religion			
No religion	75.5	4,278	4,268
Buddhist	15.8	893	944
Catholic	4.6	261	271
Protestant	0.3	19	20
Cao Dai	1.8	102	77
Hoa Hao	0.7	39	48
Other	1.3	73	36
Ethnic Group			
Kinh	83.2	4,715	4,932
Tay	2.9	166	102
Thai	5.3	279	206
Hoa	0.7	42	42
Khmer	1.2	71	69
Dao	0.3	19	28
Sa Pho	0.4	22	35
Ca Tu	0.4	21	24
Muong	1.1	61	62
E De	0.5	31	32
Nung	1.5	85	37
Ho Re	0.7	37	37
Cham	1.3	73	36
Other	0.4	23	22
Total	100.0	5,664	5,664

Differentials in Education

The level of female education is high among ever-married women in Vietnam. As noted in Table 2.9, less than 5 percent of women have no education, one in five women has some primary education, and nearly one in three has completed primary school or lower secondary school, and an impressive 14 percent have completed higher secondary school.

Table 2.10 shows the relationship between respondent's level of education and other background characteristics. Rural women are more disadvantaged in education than urban women; 6 percent of rural women have no education compared with 2 percent of urban women. However, the urban-rural gap becomes smaller at higher levels of education, up to lower secondary, where there is little difference between urban and rural women. Nevertheless, three times as many urban women have completed higher secondary school as rural women. This may be due to a lack of institutes of higher learning in rural areas.

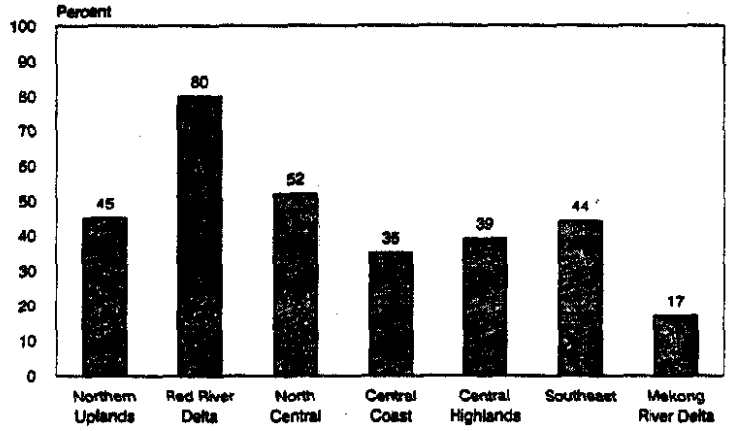
There are also wide differentials in level of education between regions, with women in the Central Highlands being least educated and women in the Red River Delta being most educated (based on the percentage with no education). By another measure, Figure 2.3 shows the distribution of women who have completed at least lower secondary education by region. The percentage of women who have completed primary school is highest in the Red River Delta (80 percent) and lowest in the Mekong River Delta (17 percent).

Table 2.10 Level of education

Percent distribution of ever-married women by the highest level of education attended, according to selected background characteristics, Vietnam 1997

Background characteristic	Education: No education	Some primary	Completed primary	Completed, lower secondary	Completed higher secondary +	Total	Number of women
Age							
15-19	7.3	30.0	40.9	21.9	0.0	100.0	129
20-24	6.5	15.0	38.5	32.3	7.8	100.0	732
25-29	3.7	17.6	28.6	31.0	19.2	100.0	1,016
30-34	3.2	17.7	28.4	34.7	16.1	100.0	1,197
35-39	3.8	19.4	26.1	36.0	14.7	100.0	1,134
40-44	6.2	20.2	26.3	35.4	11.9	100.0	867
45-49	7.1	24.8	30.0	26.3	11.9	100.0	581
Residence							
Urban	1.8	9.2	22.5	33.9	32.6	100.0	1,069
Rural	5.5	21.3	31.0	32.7	9.5	100.0	4,595
Project province							
No	4.1	21.0	31.0	31.0	12.9	100.0	3,976
Yes	6.5	14.3	25.6	37.5	16.1	100.0	1,688
Region							
Northern Uplands	6.1	21.4	27.3	34.2	11.0	100.0	1,168
Red River Delta	0.4	3.8	16.3	58.0	21.5	100.0	1,247
North Central	2.2	12.4	33.1	40.5	11.9	100.0	681
Central Coast	9.1	22.7	32.9	23.1	12.1	100.0	599
Central Highlands	13.6	19.0	28.4	21.6	17.3	100.0	182
Southeast	3.0	19.9	32.9	23.4	20.7	100.0	691
Mekong River Delta	7.3	35.4	40.2	11.6	5.4	100.0	1,097
Total	4.8	19.0	29.4	32.9	13.9	100.0	5,664

Figure 2.3
Percentage of Ever-married Women Who Completed at Least Lower Secondary Education by Region, Vietnam 1997



Female respondents age 15-24 were asked whether they were attending school at the time of the survey, and if they were not, the reason for leaving school. Table 2.11 presents the distribution of women age 15-24 who have ever attended school by reason for leaving school.

Less than 1 percent of ever-married women age 15-24 were in school at the time of survey. The most common reason for dropping out of school was to help in the family (42 percent). Twenty-two percent stopped school because they did not like it, and another 21 percent dropped out to get married; 7 percent left school because they did not pass their exams.

Table 2.11 School attendance and reason for leaving school

Percent distribution of ever-married women 15-24 by whether or not currently attending school and reason for leaving school, according to highest level of education attended, Vietnam 1997

	Educational attainment				
Attendance/Reason for leaving school	Some primary	Completed primary	Completed lower secondary	Completed higher secondary +	Total
Currently attending	2.4	0.2	0.7	1.8	0.9
Reason for leaving school					
Got pregnant	0.0	0.0	0.0	2.5	0.2
Got married	20.8	25.5	15.0	18.6	20.7
Care for younger children	0.0	0.5	0.0	1.3	0.3
Family needed help	54.0	44.2	37.4	22.3	42.2
Could not pay school fees	0.0	0.5	0.0	0.0	0.2
Needed to earn money	2.4	1.8	2.2	1.4	2.0
Graduated/had enough schooling	0.0	0.7	1.5	22.0	2.4
Did not pass exams	0.9	2.0	12.0	22.7	6.5
Did not like school	17.1	21.7	28.6	7.4	22.1
School not accessible	2.5	1.3	2.4	0.0	1.8
Other	0.0	1.1	0.0	0.0	0.5
Don't know/Missing	0.0	0.5	0.3	0.0	0.3
Total	100.0	100.0	100.0	100.0	100.0
Number	148	334	264	57	804

Employment Status

Table 2.12 presents the distribution of ever-married women by employment status according to background characteristics. The data indicate that a large majority of women are currently working (92 percent). One percent of women worked in the last 12 months, but are currently unemployed, and 7 percent of women did not work in the last 12 months.

Rural women are more likely to be employed (94 percent) than urban women (82 percent). There is little difference in terms of current employment between women living in project provinces (95 percent) and women living in non-project provinces (90 percent).

Work status differs by region. Employment is highest in the North Central and Northern Uplands regions (99 percent each) and lowest in the Southeast region where Ho Chi Minh City is located (76 percent). Surprisingly, work status differs little by education, ranging from a high of 94 percent among those who have completed lower secondary education to a low of 89 percent among those who have completed primary school.

Table 2.12 Employment status

Percent distribution of ever-married women by employment status, according to selected background characteristics, Vietnam 1997

Background characteristic	Currently unemployed: Did not work in the last 12 months	Currently unemployed: Worked in the last 12 months	Currently employed	Total	Number of women
Age					
15-19	9.4	2.6	88.0	100.0	129
20-24	9.6	2.5	87.8	100.0	732
25-29	7.7	1.4	90.9	100.0	1,016
30-34	6.9	1.0	92.1	100.0	1,197
35-39	6.0	0.7	93.4	100.0	1,134
40-44	6.4	0.5	93.1	100.0	876
45-49	6.5	0.7	92.8	100.0	581
Residence					
Urban	16.4	1.7	81.9	100.0	1,069
Rural	5.0	1.0	94.0	100.0	4,595
Project province					
No	8.6	1.0	90.4	100.0	3,976
Yes	3.9	1.4	94.7	100.0	1,688
Region					
Northern Uplands	0.8	0.0	99.2	100.0	1,168
Red River Delta	2.9	0.6	96.4	100.0	1,247
North Central	0.1	0.6	99.3	100.0	681
Central Coast	6.0	2.2	91.8	100.0	599
Central Highlands	10.3	7.3	82.5	100.0	182
Southeast	22.1	1.7	76.1	100.0	691
Mekong River Delta	13.9	1.2	85.0	100.0	1,097
Education					
No education	7.4	2.3	90.4	100.0	271
Some primary	7.8	1.4	90.9	100.0	1,078
Completed primary	9.5	1.4	89.1	100.0	1,665
Completed lower secondary	5.1	0.5	94.4	100.0	1,865
Completed higher secondary +	6.1	1.3	92.6	100.0	785
Total	7.2	1.1	91.7	100.0	5,664

Place of Work

Table 2.13 shows that the majority of women (66 percent) work for a family member, 18 percent are self-employed, 7 percent work for the government, 5 percent work in a cooperative, and 3 percent work for someone else.

Rural women are much more likely to work for a family member (69 percent) than urban women (51 percent). On the other hand, 26 percent of urban women work for the government compared with less than 4 percent of rural women. There is little variation in the type of employer between project and non-project provinces.

Table 2.13 Place of work

Percent distribution of currently employed ever-married women by type of employer and background characteristics, Vietnam 1997

Background characteristic	Employer: Family member	Coop-erative	Govern-ment	Someone else	Self-employed	Total	Number of women
Age							
15-19	74.3	7.1	1.2	0.8	16.6	100.0	113
20-24	69.7	6.2	2.5	5.6	16.1	100.0	643
25-29	19.1	4.6	6.7	2.9	19.7	100.0	923
30-34	66.4	5.9	6.6	2.4	18.8	100.0	1,102
35-39	65.5	3.7	9.8	2.7	18.3	100.0	1,059
40-44	65.6	5.9	9.4	2.4	16.7	100.0	815
45-49	62.4	6.2	8.5	2.7	20.2	100.0	539
Residence							
Urban	51.4	0.6	25.5	6.0	16.5	100.0	876
Rural	69.2	6.3	3.6	2.3	18.6	100.0	4,319
Project province							
No	65.2	4.8	7.4	3.3	19.3	100.0	3,595
Yes	68.4	6.5	7.0	2.1	16.0	100.0	1,599
Region							
Northern Uplands	74.5	1.2	5.9	0.6	17.9	100.0	1,158
Red River Delta	52.6	19.7	10.1	1.7	15.9	100.0	1,203
North Central	86.4	1.7	3.2	0.2	8.5	100.0	677
Central Coast	73.8	1.1	6.9	1.3	16.9	100.0	550
Central Highlands	51.0	0.6	11.5	0.0	36.9	100.0	150
Southeast	50.9	0.6	15.2	7.4	25.9	100.0	526
Mekong River Delta	65.4	0.5	3.3	8.3	22.5	100.0	932
Education							
No education	72.3	1.0	0.6	10.4	15.8	100.0	245
Some primary	72.8	2.2	0.6	3.9	20.4	100.0	980
Completed primary	72.0	3.5	1.7	2.5	20.4	100.0	1,483
Completed lower secondary	66.6	9.7	5.2	1.3	17.4	100.0	1,761
Completed higher secondary +	42.5	4.3	34.7	4.0	14.4	100.0	726
Total	66.2	5.3	7.3	2.9	18.3	100.0	5,195

A high proportion of women who live in the Central Highlands are self-employed (37 percent). One in five women living in the Red River Delta region works in a cooperative.

More than one in three women who have at least a higher secondary education work for the government, and one in 10 who have completed lower secondary education work in a cooperative. Level of education is related to type of employer. In general, as the level of education rises, the percentage of

women working for a family member drops. This is especially evident among women who have completed at least lower secondary school.

Cash Earnings

Women earning cash for their work were asked who mainly decides how their earnings will be used. Table 2.14 indicates that 62 percent of respondents reported that they decide jointly with their partner how their earnings will be used, 24 percent of respondents decide by themselves, and 9 percent reported that their partner decides. Among women who are not currently married, most (95 percent) decide themselves how to use their earnings.

Table 2.14 Decision on use of earnings

Percent distribution of employed women who receive cash earnings by person who decides how earnings will be used, according to selected background characteristics, Vietnam 1997

	Person who decides how earnings will be used						
Background characteristic	Respondent	Partner	Jointly with partner	Someone else	Jointly with someone else	Total	Number of women
Age							
15-19	7.5	8.2	36.9	43.6	3.8	100.0	113
20-24	14.8	9.6	58.9	13.7	2.9	100.0	641
25-29	19.6	8.7	66.8	3.3	1.6	100.0	922
30-34	23.2	9.4	65.5	1.6	0.3	100.0	1,101
35-39	23.9	11.2	64.3	0.5	0.1	100.0	1,056
40-44	32.6	8.8	58.4	0.3	0.0	100.0	814
45-49	38.7	5.6	55.6	0.0	0.1	100.0	538
Residence							
Urban	39.8	3.3	54.7	1.8	0.5	100.0	873
Rural	21.3	10.3	63.4	4.1	0.9	100.0	4,311
Project province							
No	24.3	9.0	62.2	3.5	0.9	100.0	3,588
Yes	24.6	9.5	61.1	4.2	0.6	100.0	1,596
Region							
Northern Uplands	17.0	16.9	58.0	7.2	0.9	100.0	1,156
Red River Delta	25.0	10.8	59.2	4.2	0.8	100.0	1,201
North Central	18.0	3.3	76.4	2.3	0.0	100.0	676
Central Coast	27.3	9.6	59.5	2.8	0.8	100.0	547
Central Highlands	21.8	7.7	69.0	1.0	0.4	100.0	149
Southeast	34.8	2.9	60.8	1.0	0.6	100.0	526
Mekong River Delta	30.3	5.2	60.6	2.2	1.6	100.0	929
Education							
No education	21.5	19.4	51.5	6.7	0.9	100.0	243
Some primary	24.2	9.6	61.9	3.4	0.9	100.0	979
Completed primary	24.4	9.9	60.3	4.6	0.7	100.0	1,480
Completed lower secondary	24.7	8.1	63.1	3.1	1.0	100.0	1,758
Completed higher secondary +	25.0	6.2	65.7	2.8	0.4	100.0	725
Current marital status							
Not married	94.8	0.0	0.0	3.3	1.8	100.0	304
Currently married	20.0	9.7	65.8	3.7	0.8	100.0	4,880
Total	24.4	9.2	61.9	3.7	0.8	100.0	5,184

Urban women are more likely to decide themselves on the use of their own cash earnings (40 percent) than rural women (21 percent).

By region, the proportion of women who decide themselves on how to use their cash earnings is highest in the Southeast (35 percent), followed by the Mekong River Delta (30 percent) and Central Coast (27 percent). Sole decisionmaking by women is lowest in the Northern Uplands (17 percent), and North Central (18 percent) regions.

There is a strong relationship between decision making and level of education. The more educated a woman is, the less likely her partner is the sole decisionmaker. While one in five women with no education reported that her partner made the decision how to use her earnings, the percentage drops to 6 percent among women with completed higher secondary education.

Child Care

Table 2.15 presents the distribution of currently employed ever-married women who have a child under 6 years of age by the person who cares for the child while they are at work.

The data indicate that half of currently employed women have a child under 6 years of age (51 percent). These women report that, while they are at work, their children are cared for primarily by relatives (44 percent), by other female children (17 percent), by the women themselves (13 percent) and by the staff of a school or institution that the children attend (13 percent).

Table 2.15 Child care while working

Percent distribution of currently employed women by whether or not they have a child under six years of age and the percent distribution of employed mothers with a child under six by person who cares for the child while mother is at work, according to background characteristics, Vietnam 1997

Background characteristic	Employed women		Child's caretaker, among employed women who have a child <6 years								Respondent has not worked since birth	Other	Total	Number of employed women
	No child < 6	One or more chidren <6	Respondent	Husband/ Partner	Other relative	Neighbor/ Friend	Servant/ hired help	School, inst. care	Other female child	Other male child				
Residence														
Urban	57.4	42.6	19.8	3.4	34.9	1.7	0.9	27.6	8.5	2.7	0.5	0.0	100.0	876
Rural	47.9	52.1	11.7	3.7	45.4	0.8	0.1	10.3	18.1	9.6	0.2	0.1	100.0	4.319
Project province														
No	49.7	50.3	13.4	3.8	44.1	0.7	0.2	12.7	16.6	8.1	0.3	0.1	100.0	3.595
Yes	49.1	50.9	11.6	3.3	43.3	1.4	0.2	12.9	16.9	9.8	0.2	0.2	100.0	1.599
Region														
Northern Uplands	47.6	52.4	7.7	4.9	51.9	0.8	0.1	6.4	19.8	7.9	0.1	0.3	100.0	1.158
Red River Delta	54.4	45.6	5.4	3.2	44.5	1.0	0.2	34.1	6.6	5.0	0.1	0.0	100.0	1.203
North Central	39.9	60.1	5.5	1.7	50.2	0.2	0.0	9.6	20.7	11.6	0.4	0.0	100.0	677
Central Coast	43.7	56.3	22.4	2.5	35.6	0.3	0.0	5.3	19.8	13.7	0.0	0.3	100.0	550
Central Highlands	31.3	68.7	25.6	1.4	19.5	4.1	0.0	7.1	26.4	15.5	0.0	0.0	100.0	150
Southeast	56.9	43.1	18.9	6.1	38.0	1.0	0.6	12.4	15.4	6.2	1.2	0.0	100.0	526
Mekong River Delta	54.9	45.1	23.5	4.2	40.5	1.2	0.6	4.2	17.9	7.5	0.4	0.0	100.0	932
Education														
No education	40.8	59.2	13.5	0.7	44.1	0.0	0.0	0.0	23.7	16.8	0.0	1.3	100.0	245
Some primary	52.7	47.3	11.6	3.8	40.5	0.2	0.5	3.3	28.4	11.6	0.2	0.0	100.0	980
Completed primary	48.3	51.7	14.0	3.0	46.6	1.4	0.0	6.0	18.1	10.5	0.3	0.1	100.0	1.483
Completed lower secondary	51.9	48.1	12.4	3.4	45.2	0.7	0.1	18.7	12.9	6.2	0.3	0.0	100.0	1.761
Completed higher secondary +	44.8	55.2	12.8	6.1	39.7	1.5	0.6	28.6	6.4	3.8	0.4	0.0	100.0	726
Work for family, others, self														
For family member	47.9	52.1	13.3	2.9	45.6	0.7	0.2	10.0	17.9	9.0	0.2	0.2	100.0	3.439
For someone else	54.6	45.4	7.6	5.6	41.0	1.5	0.5	28.7	18.7	5.7	0.3	0.0	100.0	806
Self-employed	51.1	48.9	15.2	4.9	39.6	1.4	0.1	10.8	18.3	9.5	0.4	0.0	100.0	950
Total	49.5	50.5	12.8	3.6	43.9	0.9	0.2	12.8	16.8	8.6	0.3	0.1	100.0	5.195

Rural children are more likely to be looked after by other relatives than urban children, whereas the latter are more likely to attend school or receive institutional care than the former. Urban children are cared for by respondents themselves more often than rural children.

Educated women are more likely to have their children attend school or receive institutional care than women with little or no education. Less educated women are more likely to have a child cared for by another female child.

Access to Media

In order to assess exposure to the mass media, women were asked if they usually read a newspaper, listen to the radio, or watch television at least once a week. This information is important for planning the dissemination of family planning messages. Table 2.16 shows that 31 percent of women read a newspaper, 64 percent listen to the radio and 77 percent watch television at least once a week. Comparable rates from the ICDS-94 are lower, at 27 percent, 59 percent, and 64 percent, respectively. The indication is that exposure to the mass media has increased over the last 5 years, particularly in the case of television.

Table 2.16 Access to mass media

Percent of ever-married women who usually read a newspaper, listen to the radio, or watch television at least once a week by background characteristics, Vietnam 1997

Background characteristic	No media exposure	Media exposure: Reads news-paper	Listens to radio	Watches television	All three media	Number of women
Age						
15-19	23.3	19.9	60.4	62.1	13.9	129
20-24	19.4	25.0	58.4	71.6	18.7	732
25-29	14.0	30.0	59.5	77.2	21.9	1,016
30-34	15.0	32.8	63.5	76.7	24.6	1,197
35-39	12.6	35.2	66.4	78.1	29.1	1,134
40-44	12.7	34.3	68.1	80.7	29.4	876
45-49	15.0	27.0	68.0	77.9	23.6	581
Residence						
Urban	5.5	62.0	69.4	92.1	49.2	1,069
Rural	16.9	23.9	62.5	73.3	18.9	4,595
Project province						
No	14.9	32.3	63.2	76.2	25.5	3,796
Yes	14.3	28.4	65.2	78.3	22.8	1,688
Region						
Northern Uplands	13.8	27.5	67.4	68.8	19.4	1,168
Red River Delta	1.8	39.7	79.1	95.2	33.5	1,247
North Central	11.9	25.7	66.8	79.2	20.8	681
Central Coast	22.2	29.9	57.7	68.6	23.3	599
Central Highlands	32.7	25.8	39.0	59.6	16.4	182
Southeast	16.1	45.2	59.0	80.0	37.3	691
Mekong River Delta	24.3	21.4	51.0	68.3	16.7	1,097
Education						
No education	58.7	0.0	27.6	29.3	0.0	271
Some primary	30.8	9.5	47.5	55.9	6.5	1,078
Completed primary	15.8	24.3	61.7	74.0	18.4	1,665
Completed lower secondary	3.9	37.2	73.6	90.3	29.7	1,865
Completed higher secondary +	1.1	71.5	80.0	95.7	59.2	785
Total	14.7	31.1	63.8	76.8	24.7	5,664

There is a strong association between media exposure and level of education. Fifty-nine percent of women with no education reported no media exposure compared with only 1 percent of women who had completed higher secondary school.

Women in rural areas are less exposed to mass media than urban women. Seventeen percent of rural women have no exposure to mass media compared with 6 percent of urban women.

Another significant finding is that 33 percent of women in the Central Highlands reported no media exposure, which is about twice as high as the national rate (15 percent). The other regions vary greatly in this respect, down to only 2 percent in the Red River Delta.

CHAPTER 3

FERTILITY

An important objective of VNDHS-II is to estimate fertility levels, trends, and differentials. Information on fertility will help to determine the impact of changes in the use of family planning and changes in the proximate determinants of fertility. In addition, fertility estimates will help in monitoring the achievements of the government's population policies and programs.

The fertility measures presented in this chapter are based on the reported reproductive histories of ever-married women age 15-49. Each woman was first asked to report the number of sons and daughters living with her, the number living elsewhere, the number that had died, and the number of pregnancies ending in fetal wastage (i.e., abortion, menstrual regulation, miscarriage or stillbirth). She was then asked to report an event-by-event history of her pregnancies. For each live birth, questions were asked about the sex of the child, date of birth, survivorship status, and current age (for surviving children) or age at death (for deceased children).

3.1 Fertility Levels and Trends

Fertility Levels

Measures of current fertility are presented in Table 3.1 for the five-year calendar period 1992-96. This period was chosen (rather than a shorter or longer period) as a compromise between three criteria: to provide current information, to reduce sampling error, and to avoid problems associated with birth displacement.[1]

Several measures of current fertility are shown. Age-specific fertility rates (ASFR) are calculated by dividing the number of births to women in a specific age group by the number of woman-years lived during a given period.[2] Age-specific fertility rates are useful in order to understand the age pattern of fertility. In an ever-married sample of women such as in the VNDHS-II, the calculation of all-women fertility rates makes the implicit assumption that no births occurred among never-married women.

The total fertility rate (TFR) is a useful summary measure of fertility levels. The TFR is calculated by summing the age-specific fertility rates. It is interpreted as the number of children a

[1] An examination of the distribution of births by calendar year of birth indicated a deficit of births in the years 1994, 1995, and 1996 relative to 1992 and 1993 (see Table 7.1). This pattern could be the result of transference of births by interviewers out of the period for which health data were collected (i.e., health data were collected for children born in 1994 and later). By estimating fertility rates for the five-year period 1992-96, the impact of birth transference on the estimated rates is minimized.

[2] Numerators for the age-specific fertility rates were obtained by classifying births during the period 1992-96 into standard five-year age groups, according to the mother's age at the time of birth, and summing. Denominators for the rates were the number of person-years lived by all women in each five-year age group during the period. Since only ever-married women were interviewed in the VNDHS-II, it was necessary to inflate the number of person-years lived by ever-married women by factors representing the proportion of women who were ever-married in each age group. These factors were calculated from the data collected in the household schedule. Never-married women were presumed not to have given birth. In Vietnam, few births occur outside of marriage so that any underestimation of fertility from this source is negligible.

woman would bear during her lifetime if she were to experience the age-specific fertility rates prevailing during a given period.

Two additional measures of fertility reported in this chapter are the general fertility rate (GFR) which represents the annual number of births per 1,000 women age 15-44, and the crude birth rate (CBR) which represents the annual number of births per 1,000 population. The CBR was estimated using the birth history data in conjunction with the population data collected in the household schedule.

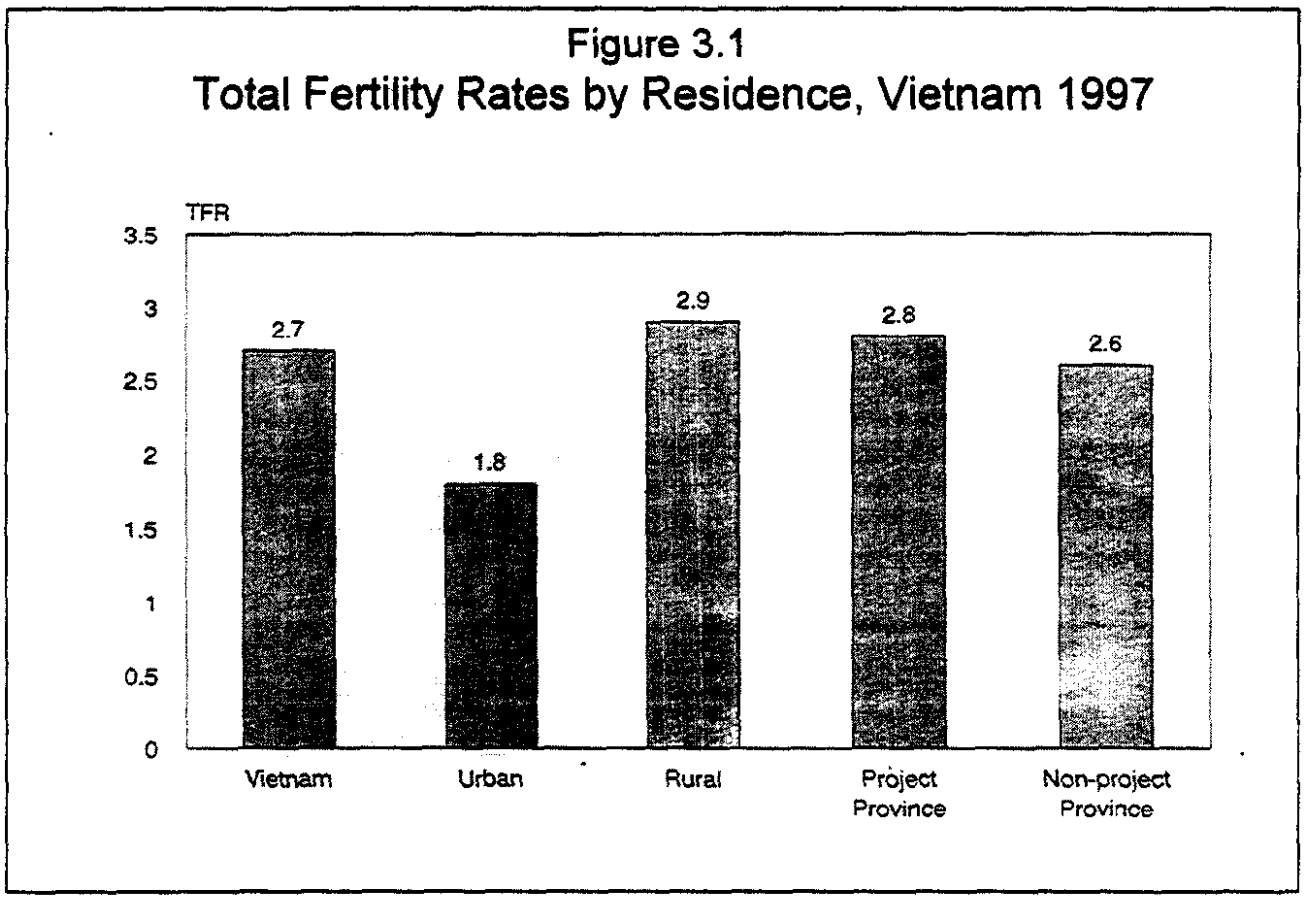
Fertility estimates for Vietnam are shown in Table 3.1 and Figure 3.1. At the national level the TFR is 2.7 children per woman which indicates that, on average, a Vietnamese woman will give birth to 2 to 3 children during her lifetime. In rural areas, the TFR is 2.9 children per woman, about one child higher than the rate for urban areas (1.8 children per woman). On the other hand, the difference in the TFR between project and non-project provinces is relatively minor (2.8 and 2.6 children per woman, respectively).

Table 3.1 Current fertility rates

Age-specific and cumulative fertility rates and crude birth rates for the five-year calendar period 1992-96, by urban-rural residence, Vietnam 1997

	Residence		Project province		
Age group	Urban	Rural	No	Yes	Total
15-19	17	44	37	39	39
20-24	105	199	175	187	178
25-29	117	155	145	153	148
30-34	84	97	94	96	95
35-39	34	58	49	59	52
40-44	10	23	20	20	20
45-49	2	4	2	7	4
TFR 15-49	1.84	2.90	2.62	2.81	2.67
TFR 15-44	1.83	2.88	2.60	2.77	2.65
GFR 15-44	64.0	101.0	92.0	95.0	93.0
CBR	17.2	23.0	21.9	21.9	21.9

Note: Rates for age group 45-49 may be slightly biased due to truncation.
TFR: Total fertility rate, expressed per woman
GFR: General fertility rate (births divided by number of women 15-44), expressed per 1,000 women
CBR: Crude birth rate, expressed per 1,000 population



Fertility Trends

A series of fertility estimates from four national surveys is shown in Table 3.2. The total fertility rate in Vietnam has declined from 4.0 children per woman in 1987 to 3.8 in 1988-89, 3.3 in 1989-93, and 2.7 in 1992-96.

The estimated TFR in the ICDS-94 (3.3) and in the VNDHS-II (2.7) indicate a decline in excess of half a child (0.6) in a period of three years. This is a substantial decline, especially considering the relatively low level of fertility in Vietnam. Much larger declines over time periods of three to five years have been observed in countries with higher fertility levels (Mboup and Saha, 1988). However, even in countries with relatively low fertility declines of half a child or more have been observed over time periods of three to five years.[3] So, while the fertility decline has been rapid in Vietnam, it is within the range of experience observed elsewhere.

[3] Declines in the TFR similar to those observed for Vietnam have occurred in the following countries:

	Initial TFR	Subsequent TFR	Absolute decline	Time period
Thailand	3.2	2.3	0.9	5 years
Sri Lanka	3.4	2.8	0.6	3 years
Turkey	3.2	2.5	0.7	4 years
Morocco	4.0	3.3	0.7	3 years

Sources: Chayovan et al., 1988; DCS and IRD, 1988; Mboup and Saha, 1998; and Azelmat et al., 1996.

Estimates of the TFR from the ICDS-94 and VNDHS-II also appear to be consistent when considering the change in the contraceptive prevalence rate (CPR) between the two surveys. The CPR for currently married women increased by 10 percentage points between the two surveys (65 versus 75 percent, see Chapter 4). Based on the observed relationship between the CPRs and TFRs in twenty-five countries (Rutenberg, et al., 1991), an increase in the CPR of 10 percentage points would predict a decline in the TFR of 0.7 children, almost exactly the observed change in Vietnam. When considering the likely impact on fertility of an increase in contraceptive use, shifts in the method mix should be considered. As discussed in the next chapter, between the ICDS-94 and VNDHS-II the method mix shifted toward the use of more reliable methods. In fact, use of traditional methods actually declined slightly between the two surveys so that all of the increase in the prevalence rate was due to the use of modern methods, primarily the IUD.

A comparison of age-specific fertility rates from the VNDHS-II and from the earlier sources, indicates that fertility declines are proportionately greater for women aged 25 and older than for younger women. This pattern is common and plausible for populations experiencing a fertility decline. It occurs during the fertility transition when older women, who are more likely to have reached their desired family size, make a greater effort to limit their births than do younger women, who are likely to have not yet achieved their desired family size.

Table 3.2 Trends in fertility rates

Age-specific and total fertility rates, selected sources, Vietnam 1987-1996

Age group	VNDHS-I 1987	Census 1988-89	ICDS-94 1989-93	VNDHS-II 1992-96
15-19	20	35	38	39
20-24	235	197	196	178
25-29	243	209	189	148
30-34	151	155	124	95
35-39	85	100	69	52
40-44	51	49	31	20
45-49	11	14	2	4
TFR	3.98	3.80	3.25	2.67

Source: VNDHS-I rates are from NCPFP, 1990; 1989 census rates and ICDS-94 rates are from GSO, 1995:33, Table 3.2.

Fertility Differentials

Table 3.3 presents fertility levels by urban-rural residence, project province status, region, and educational attainment. Two measures of fertility are shown: the total fertility rate and the average number of children ever born to women age 40-49.

Overall, fertility is lower in urban areas (1.8 children per woman) than in rural areas (2.9). The highest fertility was observed in the Central Highlands (4.3 children per woman). This is almost one child greater than observed in the other regions. The lowest fertility levels were observed in the Southeast region, which includes Ho Chi Minh City (1.9), in the Red River Delta, which includes Hanoi City (2.3), and in the Mekong River Delta (2.3).

Fertility differentials by education are substantial and are inversely related to educational attainment. Women who completed higher secondary school have the lowest fertility (1.9 children per woman) while those with no education have the highest fertility (4.0 per woman). There are only minor differences in fertility levels by project and province status.

One procedure for examining fertility trends over time is to compare the total fertility rate with the average number of children ever born to women age 40-49. The former is a measure of the number of

children a woman will have at current age-specific fertility rates while the latter is a measure of the actual fertility performance of women at the end of their childbearing years. Comparison of the two measures provides an indication of the direction and magnitude of changes in fertility during the past 20-25 years.

The results of this comparison in Table 3.3 indicate that there has been a significant fertility decline in Vietnam during the past several decades and that the decline has been broadly experienced throughout the population. At the national level, women age 40-49 have had an average of 3.8 children, a little more than one child greater than the current fertility level of 2.7 children per women. The data for all population subgroups also indicate a fertility decline, although there are differences in the magnitude of the decline. The difference between the two fertility measures is greater for rural areas (1.3) than for urban areas (0.9).

Table 3.3 Fertility by background characteristics

Total fertility rates for the five-year period 1992-96 and the mean numbers of children ever born (CEB) to women 40-49 years of age, by selected background characteristics, Vietnam 1997

	Fertility rates	
Background characteristic	Total fertility rate[1]	Mean CEB (women 40-49)
Residence		
Urban	1.84	2.71
Rural	2.90	4.17
Project province		
No	2.62	3.81
Yes	2.81	3.87
Region		
Northern Uplands	3.14	4.08
Red River Delta	2.28	3.09
North Central	3.26	4.06
Central Coast	3.39	4.24
Central Highlands	4.28	4.65
Southeast	1.87	3.01
Mekong River Delta	2.31	4.65
Education		
No education	4.03	5.13
Some primary	3.13	4.56
Completed primary	2.79	4.22
Completed lower secondary	2.53	3.30
Completed higher secondary +	1.91	2.29
Total	2.67	3.82

[1]Women 15-49 years

3.2 Children Ever Born

The distribution of all women and currently married women by age and number of children ever born is presented in Table 3.4. The table also shows the mean number of children ever born to women in each five-year age group. The data indicate that only 4 percent of all women age 15-19 have given birth.

On average, women in their late twenties have given birth to fewer than two children while women age 45-49 have given birth to a little over four children. The statistics for currently married women do not differ greatly from those for all women at older ages; however, at younger ages the percentage of currently married women who have had children is much higher than the percentage among all women.

Table 3.4 Children ever born and living

Percent distribution of all women and currently married women age 15-49 by number of children ever born (CEB) and mean number ever born and living, according to five-year age groups. Vietnam 1997

Age group	Children ever born 0	1	2	3	4	5	6	7	8	9	10+	Total	Number of women	Mean number of CEB	Mean number of living children
ALL WOMEN															
15-19	96.5	3.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1661	0.04	0.03
20-24	56.1	28.7	13.8	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1377	0.61	0.58
25-29	25.1	25.4	32.2	11.4	4.7	1.2	0.2	0.0	0.0	0.0	0.0	100.0	1288	1.50	1.44
30-34	13.4	11.9	31.3	24.4	11.8	5.1	1.7	0.4	0.0	0.0	0.0	100.0	1343	2.33	2.21
35-39	9.8	7.1	24.0	23.0	16.8	10.7	5.8	1.8	1.0	0.2	0.0	100.0	1243	3.01	2.84
40-44	9.4	5.1	13.5	21.6	18.7	15.4	7.4	3.9	2.1	1.7	1.1	100.0	955	3.64	3.39
45-49	11.5	4.4	11.3	15.8	12.8	16.9	11.9	4.2	5.3	3.5	2.2	100.0	645	4.08	3.75
Total	37.2	13.0	17.9	12.8	8.1	5.5	2.9	1.1	0.8	0.5	0.3	100.0	8511	1.86	1.75
CURRENTLY MARRIED WOMEN															
15-19	54.9	44.2	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	129	0.46	0.45
20-24	17.4	53.7	26.1	2.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	100.0	726	1.14	1.09
25-29	5.0	31.0	41.2	14.8	6.1	1.6	0.3	0.0	0.0	0.0	0.0	100.0	988	1.92	1.84
30-34	2.9	12.5	34.8	28.0	13.6	5.8	2.0	0.5	0.0	0.0	0.0	100.0	1153	2.65	2.51
35-39	0.6	6.5	26.0	25.9	18.8	12.3	6.6	2.0	1.1	0.2	0.0	100.0	1068	3.37	3.19
40-44	1.1	3.9	13.4	23.8	21.6	17.2	8.8	4.4	2.4	2.0	1.4	100.0	785	4.10	3.81
45-49	1.7	3.9	10.5	17.3	14.8	20.7	14.4	4.6	5.9	3.9	2.3	100.0	502	4.65	4.29
Total	5.6	18.9	26.8	19.4	12.4	8.5	4.5	1.6	1.1	0.7	0.4	100.0	5340	2.80	2.64

A comparison of the mean number of children ever born (CEB) reported in the 1989 census (1.94), the ICDS-94 (1.90), and the VNDHS-II (1.86) is shown in Table 3.5. The comparison does not highlight recent changes in fertility, but rather is an indication of the cumulative changes in fertility over the decades prior to the surveys. The difference in the mean number of children ever born during the five-year period between 1989 and 1994 is the same as the difference in the mean number of children ever born during the three-year period between 1994 and 1997 (0.04). Additionally, during the earlier period, change is restricted to women age 30 and older while in the later period change is evident for women age 20 and older.

Table 3.5 Trends in the number of children ever born

Mean number of children ever born and living children by age group, selected sources, Vietnam 1989-1997

Age group	Mean number of CEB 1989	1994	1997	Mean number of children living 1989	1994	1997
15-19	0.05	0.04	0.04	0.04	0.03	0.03
20-24	0.63	0.64	0.61	0.62	0.60	0.58
25-29	1.67	1.66	1.50	1.64	1.56	1.44
30-34	2.77	2.57	2.33	2.61	2.46	2.21
35-39	3.64	3.49	3.01	3.40	3.09	2.84
40-44	4.36	4.12	3.64	4.01	3.73	3.39
45-49	4.94	4.62	4.08	4.48	4.12	3.25
Total	1.94	1.90	1.86	1.81	1.74	1.75

Source: 1989 census statistics and ICDS-94 statistics are from GSO, 1995:42, Table 3.8.

3.3 Birth Intervals

There is a considerable body of research which indicates that short birth intervals are harmful to the health of babies. This is particularly true for babies born at intervals of less than 24 months. Table 3.6 shows the percent distribution of non-first births that occurred in the five-year period before the VNDHS-II by the number of months since the previous birth.

The data show that birth intervals are generally long in Vietnam. Almost half (49 percent) of non-first births occur three or more years after the previous birth, while almost one-third (32 percent) take place 24-35 months after the previous birth. Fewer than 1 in 5 births (19 percent) occur after an interval of less than 24 months. The median birth interval is 36 months. This is somewhat longer than the median birth interval of 32 months reported in ICDS-94 (GSO, 1995).

Younger women, who are more fecund and still in the process of family building, have shorter birth intervals than older women. The median birth interval for women age 20-29 is 30 months, compared with 43 months for women over age 40. A shorter median birth interval also prevails for children whose preceding sibling has died, compared with those whose preceding sibling is living. This pattern presumably reflects a shortened breastfeeding period due to the death of the prior sibling, as well as minimal use of contraception among women who have recently experienced the loss of a child.

Differentials in the length of birth intervals by background characteristics are inversely related to fertility levels. The median duration is greater in urban areas (48 months) than in rural areas (35 months). Birth intervals are longest in the three regions where fertility is lowest: the Red River Delta, the Southeast region and the Mekong River Delta (48, 43, and 42 months, respectively). By level of education, mothers with a higher secondary education have a median birth interval of 48 months, which is 12 to 18 months longer than the interval for mothers with less education.

Table 3.6 Birth intervals

Percent distribution of births in the five years before survey by number of months since the previous birth, according to demographic and background characteristics, Vietnam 1997

Demographic and background characteristics	Months since previous birth					Total	Number	Median
	7-17	18-23	24-35	36-47	48+			
Age of mother								
15-19	*	*	*	*	*	100.0	*	*
20-29	9.4	16.3	40.5	17.0	16.8	100.0	877	29.9
30-39	4.6	9.7	25.9	18.5	41.2	100.0	1,069	42.0
40+	6.4	8.1	22.8	17.1	45.6	100.0	186	43.4
Birth order								
2-3	7.2	11.7	31.6	16.4	33.2	100.0	1,423	35.7
4-6	4.8	13.9	31.7	20.6	29.1	100.0	605	35.9
7+	11.5	11.6	33.0	20.1	23.7	100.0	105	33.1
Sex of prior birth								
Male	6.9	11.8	30.8	16.8	33.6	100.0	1,053	36.3
Female	6.5	12.8	32.6	18.6	29.5	100.0	1,080	35.1
Survival of prior birth								
Living	5.4	12.5	31.6	18.3	32.3	100.0	2,025	36.3
Dead	32.3	9.0	33.7	7.1	17.8	100.0	108	24.9
Residence								
Urban	10.2	8.2	18.1	13.5	50.0	100.0	243	48.0
Rural	6.3	12.8	33.4	18.3	29.2	100.0	1,890	34.8
Project province								
No	7.0	12.5	31.3	19.2	30.1	100.0	1,501	35.6
Yes	6.2	11.9	32.7	14.3	34.9	100.0	632	35.7
Region								
Northern Uplands	7.9	15.7	41.5	18.6	16.3	100.0	495	30.1
Red River Delta	3.4	6.4	25.5	14.2	50.5	100.0	326	48.5
North Central	3.9	12.3	39.1	17.2	27.5	100.0	336	34.2
Central Coast	9.1	13.7	30.0	23.0	24.2	100.0	324	35.2
Central Highlands	8.8	17.5	33.5	8.0	32.2	100.0	128	33.6
Southeast	6.9	8.7	24.6	16.8	43.1	100.0	195	43.1
Mekong River Delta	7.9	11.9	20.8	19.5	40.0	100.0	330	41.7
Education								
No education	10.9	12.5	40.4	17.1	19.2	100.0	151	30.4
Some primary	6.0	14.0	29.9	20.5	29.6	100.0	446	36.0
Completed primary	8.5	13.9	32.0	20.1	25.5	100.0	667	33.9
Completed lower secondary	5.3	11.4	32.9	15.2	35.2	100.0	629	36.3
Completed higher secondary+	4.3	6.7	25.5	13.2	50.2	100.0	239	48.2
Total	6.7	12.3	31.7	17.7	31.6	100.0	2,133	35.6

Note: First births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

3.4 Age at First Birth

The age at which a woman has her first child has implications for her health and the health of her child, as well as for her economic opportunities in life. In many countries, postponement of first births, reflecting an increase in the age at marriage, has contributed to overall fertility decline. Alternatively, early onset of childbearing tends to increase the number of children a woman will have during her reproductive years. Even when family planning is widespread, the timing of first births can affect completed family size.

Table 3.7 presents the distribution of women by age at first birth, according to the current age. For women age 25 years and over, the median age at first birth is shown in the last column of the table. The median age at first birth increases across age cohorts, from 22.6 years among women age 25-29 to 24.0 years among women age 45-49, due perhaps to historical disturbances. Nevertheless, in all age cohorts, the median age at first birth in 1997 is higher than was reported in the ICDS-94 (see Figure 3.2).

Table 3.7 Age at first birth

Percent distribution of women age 15-49 by age at first birth, according to current age. Vietnam 1997

Age group	Women with no birth	Age at first birth						Total	Number of women	Median age at first birth
		<15	15-17	18-19	20-21	22-24	25+			
15-19	96.5	0.0	1.6	1.9	NA	NA	NA	100.0	1,661	a
20-24	56.1	0.3	3.8	14.8	18.1	6.9	NA	100.0	1,377	a
25-29	25.1	0.1	4.4	15.3	25.2	22.3	7.5	100.0	1,288	22.6
30-34	13.4	0.1	4.3	14.5	20.9	28.3	18.5	100.0	1,343	22.9
35-39	9.8	0.2	3.9	11.7	21.0	30.6	22.8	100.0	1,243	23.2
40-44	9.4	0.4	3.4	9.8	19.5	33.1	24.5	100.0	955	23.2
45-49	11.5	0.1	4.4	10.9	16.7	27.0	29.3	100.0	645	24.0

NA = Not applicable

[a] Omitted because less than 50 percent of the women in the age group x to x+4 have had a birth by age x

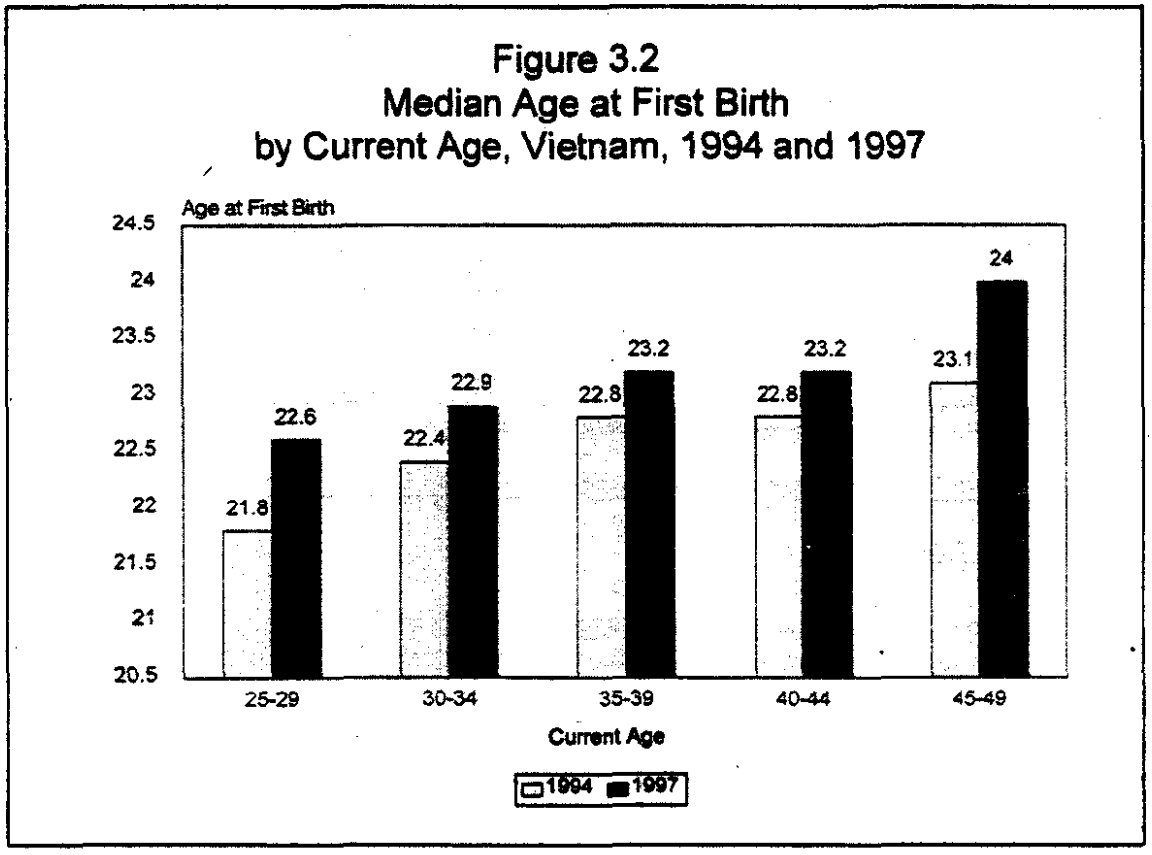


Table 3.8 shows the median age at first birth for different subgroups of the population. The measures are presented for all women age 25-49 and for five-year age groups. There are substantial differences between urban and rural women in the median age at first birth. In all age groups, the median age at first birth is higher for urban women than for rural women.

The median age at first birth is relatively high in the Southeast region (24.9 years), the Central Highlands (23.7 years), and the Red River Delta (23.5 years). Median age at first birth is lowest in the Northern Uplands (22.2 years) and the Mekong River Delta (22.7 years). Median age at first birth is inversely related to women's level of education. It does not differ by project province status.

Table 3.8 Age at first birth by background characteristics

Median age at first birth among women age 25-49 years, by current age and selected background characteristics, Vietnam 1997

	Current age					Ages
Background characteristic	25-29	30-34	35-39	40-44	45-49	25-49
Residence						
Urban	a	25.2	24.9	25.1	24.6	a
Rural	22.0	22.5	22.8	22.8	23.8	22.7
Project province						
No	22.8	22.8	23.1	23.3	24.0	23.1
Yes	22.2	23.1	23.4	23.0	23.9	23.1
Region						
Northern Uplands	20.9	21.7	22.7	23.6	23.9	22.2
Red River Delta	22.5	23.2	23.9	23.3	24.2	23.5
North Central	22.1	23.2	22.8	23.5	24.1	23.0
Central Coast	22.7	22.7	23.0	22.8	24.4	22.9
Central Highlands	22.4	22.6	24.6	24.9	25.5	23.7
Southeast	a	23.7	24.1	25.6	25.0	24.9
Mekong River Delta	23.3	23.2	22.3	22.2	22.4	22.7
Education						
No education	22.3	22.6	22.6	21.4	24.6	22.4
Some primary	20.7	21.4	22.4	22.5	23.0	21.9
Completed primary	22.0	22.4	22.5	22.4	23.0	22.5
Completed lower secondary -	22.6	22.9	23.2	23.7	24.2	23.2
Completed higher secondary +	24.4	25.1	25.2	26.2	25.7	a
Total	22.6	22.9	23.2	23.2	24.0	23.1

Note: The medians for age cohorts 15-19 and 20-24 could not be determined because half the women had not yet had a birth.
[a] Omitted because less than 50 percent of the women in the age group x to x+4 had a birth by age x

3.5 Adolescent Fertility

Table 3.9 shows the percentage of women age 15-19 who are mothers or pregnant with their first child. The sum of these two categories is defined as the percentage of teenage women who have begun childbearing. This statistic is important because of the association between early childbearing and high morbidity and mortality for both mothers and their children. The overall level of teenage childbearing in Vietnam is 5.7 percent, of which 3.5 percent have given birth and 2.2 percent are pregnant with their first child. Among teenage women who have given birth, just under half (1.6 percent) had their first child before age 18 (Table 3.7).

There are significant differences in the level of teenage childbearing by residence. The level in rural areas (6.6 percent) is four times the level in urban areas (1.6 percent). By comparison, the difference in the level of teenage childbearing between project provinces (4.7 percent) and non-project provinces (6.1 percent) is small.

By region, the percentage of teenage childbearing varies from 3.7 percent in the Central Highlands and 3.8 percent in the Mekong River Delta to 9.6 percent in the Northern Uplands.

Table 3.9 Adolescent pregnancy and motherhood

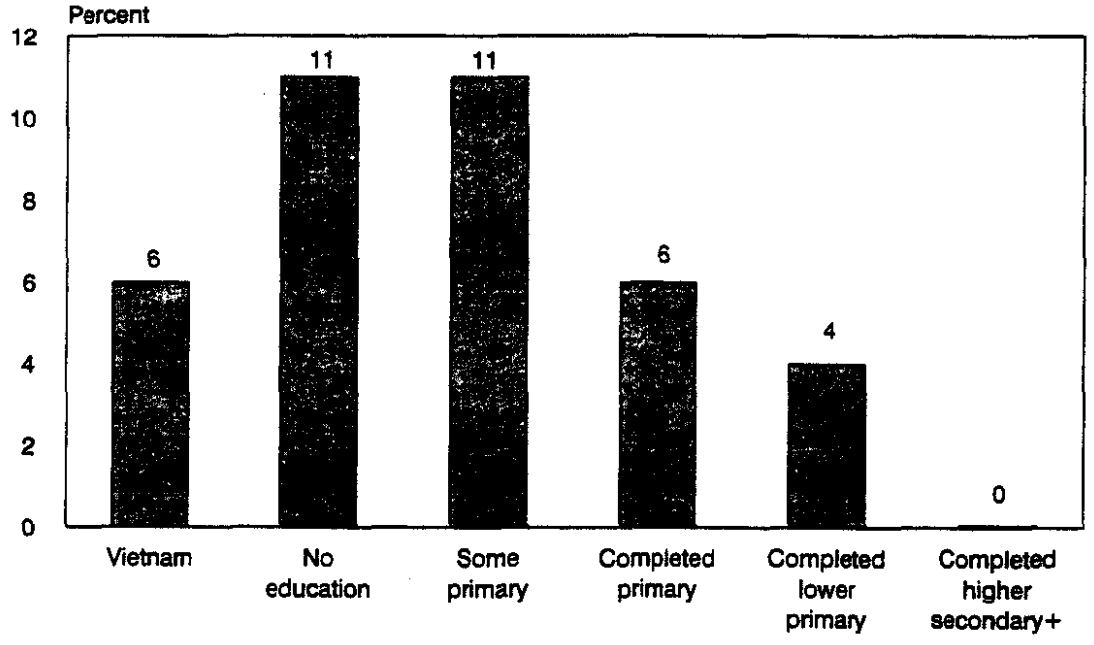
Percentage of women age 15-19 who are mothers or pregnant with their first child by background characteristics, Vietnam 1997

Background characteristic	Percentage who are: Mothers	Pregnant with first child	Percentage who have begun childbearing	Number of women
Age				
16	0.6	0.4	1.0	752[a]
17	1.4	0.6	2.1	327
18	4.2	4.2	8.4	283
19	12.5	6.8	19.3	298
Residence				
Urban	1.3	0.3	1.6	283
Rural	3.9	2.6	6.6	1,379
Project province				
No	3.7	2.4	6.1	1,191
Yes	2.9	1.8	4.7	470
Region				
Northern Uplands	6.9	2.7	9.6	355
Red River Delta	2.2	2.4	4.6	298
North Central	3.0	1.7	4.7	202
Central Coast	3.7	3.6	7.3	190
Central Highlands	(0.0)	(3.7)	(3.7)	37
Southeast	2.2	1.9	4.1	203
Mekong River Delta	2.5	1.2	3.8	375
Education				
No education	8.0	2.9	10.9	69
Some primary	8.2	2.9	11.1	252
Completed primary	3.9	2.4	6.3	640
Completed lower secondary	1.3	2.3	3.6	539
Completed higher secondary +	0.0	0.0	0.0	161
Total	3.5	2.2	5.7	1,661

Note: Figures in parentheses are based on 25-49 unweighted cases.
[a] Including women age 15

Teenage childbearing is strongly and inversely related to mother's level of education. As indicated in Figure 3.3, teenage childbearing is highest among women with no education (11 percent), substantially lower among women who have completed lower secondary school (4 percent), and lowest among those who have completed higher secondary school (0 percent).

Figure 3.3
Percentage of Teenage Women Who Have Begun Childbearing by Education, Vietnam 1997



CHAPTER 4

FERTILITY REGULATION

4.1 Knowledge of Family Planning Methods

Knowledge of family planning methods and places to obtain them are crucial elements in the decision of whether to use a method and which method to use. In the VNDHS-II, the respondent was first asked to report all the methods she had heard of without the interviewer mentioning any specific methods. Once she completed her spontaneous reporting, the interviewer read out the names and a short description of the remaining methods on the list and asked if she knew each of them. All methods recognized by the respondent after the method was described were recorded as known after probing (prompted knowledge).

Information on knowledge was collected for eight modern methods (the pill, IUD, injectables, implants, vaginal methods (foam, jelly, cream and diaphragm), the condom, female sterilization, and male sterilization) and two traditional methods (periodic abstinence and withdrawal). In addition, provision was made in the questionnaire to record any other methods named spontaneously by the respondent.

In this analysis, overall levels of knowledge are presented—i.e., respondents are classified as knowing a method if they recognized it spontaneously or after probing.

Trends in Knowledge of Methods

Table 4.1 indicates that knowledge of at least one method of contraception is practically universal (99 percent) among currently married women of reproductive age. Among modern methods,

Table 4.1 Trends in knowledge of contraceptive methods

Percentage of ever-married women and of currently married women who know of at least one contraceptive method, by specific method, Vietnam 1988-1997

Contraceptive method	Ever-married women			Currently married women		
	VNDHS-I (1988)	ICDS-94 (1994)	VNDHS-II (1997)	VNDHS-I (1988)	ICDS-94 (1994)	VNDHS-II (1997)
Any method	94.1	96.54	98.8	94.7	97.0	98.9
Any modern method	93.6	95.73	98.5	94.3	96.2	98.7
Pill	46.4	68.07	89.0	46.8	69.0	89.5
IUD	91.8	94.15	97.3	92.5	94.7	97.6
Injectables	U	41.79	55.8	U	42.4	55.9
Vaginal methods	U	13.45	10.0	U	13.6	10.1
Condom	44.5	75.66	92.1	45.0	76.6	92.5
Female sterilization	60.2	77.98	91.0	60.4	78.1	91.4
Male sterilization	49.2	73.53	89.0	49.7	74.3	89.5
Implants	U	U	12.3	U	U	12.4
Any traditional method	43.0	61.22	80.0	U	U	80.8
Periodic abstinence	40.3	60.58	68.3	43.6	62.2	69.0
Withdrawal	6.7	8.84	70.4	41.1	61.9	71.5
Other traditional method	U	U	2.0	6.8	8.9	2.0
Number of women	U	10,490	5,664	U	9,796	5,340

U = Unknown (not available)
Source: Vietnam Intercensal Demographic Survey 1994 (GSO, 1995:52, Table 4.1)

the most widely known are the IUD (98 percent), the condom (93 percent), female sterilization (91 percent), and the pill and male sterilization (90 percent each). The proportion of currently married women knowing about injectables is 56 percent. The least recognized modern methods, implants and vaginal methods, were known by 12 and 10 percent of currently married women, respectively.

Comparison of the levels of contraceptive knowledge between the 1988 VNDHS, the 1994 ICDS, and the 1997 VNDHS indicates that the percentage of currently married women knowing specific methods has increased for every method. Knowledge of the IUD was already very high in 1988. Other methods, however, show large increases: the condom, the pill, male sterilization and female sterilization increased by 50 percent or more between 1988 and 1997.

Differentials in Knowledge of Methods

Table 4.2 shows the percentage of currently married women who know any method of contraception and any modern method by background characteristics. Differentials in the VNDHS-II are minimal. The percentage knowing any modern method was less than 96 percent in only two groups: women in the Central Highlands (92 percent) and women with no education (93 percent).

Table 4.2 Knowledge of contraceptive methods by background characteristics

Percentage of currently married women who know at least one method of contraception and who know at least one modern method, by background characteristics, Vietnam 1994-1997

Background characteristic	Any method		Any modern method		Number of currently married women
	ICDS-94 (1994)	VNDHS-II (1997)	ICDS-94 (1994)	VNDHS-II (1997)	
Age group					
15-19	87.3	97.0	86.0	96.4	129
20-24	94.8	97.6	93.3	97.5	716
25-29	97.6	98.9	96.9	98.7	988
30-34	98.1	99.7	98.0	99.6	1,153
35-39	98.4	99.6	97.8	99.4	1,068
40-44	97.5	98.9	96.8	98.3	785
45-49	95.8	98.4	94.8	98.2	502
Residence					
Urban	99.0	99.6	98.7	99.4	997
Rural	96.1	98.8	95.6	98.5	4,343
Project province					
No	U	99.1	U	98.8	3,738
Yes	U	98.5	U	98.4	1,601
Region					
Northern Uplands	95.8	99.1	94.8	98.9	1,110
Red River Delta	99.7	100.0	99.7	100.0	1,197
North Central	97.6	99.9	97.1	99.9	646
Central Coast	98.4	98.4	98.2	97.8	557
Central Highlands	68.9	92.4	67.3	92.4	470
Southeast	98.8	98.0	97.8	97.9	642
Mekong River Delta	96.8	98.8	96.3	98.3	1,017
Education					
No education	80.6	93.6	78.0	92.6	252
Some primary	95.8	98.3	94.6	98.2	990
Completed primary	98.1	98.9	97.3	98.4	1,576
Completed lower secondary	99.5	99.6	99.4	99.6	1,764
Completed higher secondary +	100.0	100.0	99.7	99.9	757
Total	97.0	98.9	96.2	98.7	5,340

U = Unknown (not available)
Source: Vietnam Intercensal Demographic Survey 1994 (GSO, 1995:54, Table 4.2; GSO, 1996d:11, Table 2.2)

4.2 Ever Use of Family Planning Methods

The VNDHS-II included a question asking women whether they had ever used a contraceptive method. Table 4.3 indicates that 84 percent of currently married women have used a method. The IUD is, by far, the most widely used modern method among currently married women (58 percent). Only 13 percent have used the condom, 10 percent have used the pill, and less than 10 percent have used all other modern methods combined. The level of ever use of traditional methods is high in Vietnam. Almost 26 percent of currently married women have used withdrawal and 18 percent have used period abstinence.

Ever-use rates vary by age group and are lowest among the youngest women. However, the fact that 22 percent of currently married women age 15-19 and 62 percent of those age 20-24 have used contraception at some time indicates that women in Vietnam understand the advantages of practicing family planning early in their reproductive years. The level of ever use rises to a high of 95 percent for currently married women age 35-39, then declines to 82 percent among those age 45-49.

Table 4.3 Ever use of contraception

Percentage of ever-married women and currently married women who have ever used a contraceptive method, by specific method and age, Vietnam 1997

	Age of women							
Contraceptive method	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Total
	EVER-MARRIED WOMEN							
Any method	21.7	61.6	81.7	91.1	91.6	84.5	76.3	81.6
Any modern method	16.9	50.4	67.6	77.6	76.5	72.2	62.4	68.3
Pill	3.4	9.0	11.4	13.2	9.0	7.1	6.9	9.7
IUD	11.5	39.5	56.6	63.0	64.2	59.1	49.8	56.0
Injectables	0.5	0.4	0.9	1.3	1.1	0.5	0.6	0.9
Vaginal methods	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Condom	2.5	7.0	11.7	14.8	15.8	13.6	8.1	12.3
Female sterilization	0.0	0.0	1.9	7.4	8.2	10.2	9.7	6.1
Male sterilization	0.0	0.0	0.1	0.9	0.7	0.9	0.5	0.5
Any traditional method	4.8	20.3	30.0	35.4	43.1	34.9	32.6	33.0
Periodic abstinence	1.3	9.1	12.6	17.9	24.5	19.6	16.4	16.9
Withdrawal	3.4	15.3	24.0	27.6	31.8	24.9	24.5	24.9
Other traditional methods	0.0	0.0	0.3	0.6	0.9	0.8	0.3	0.5
Number of women	129	732	1,016	1,197	1,134	876	581	5,664
	CURRENTLY MARRIED WOMEN							
Any method	21.7	62.0	83.0	93.1	94.7	90.3	81.5	84.2
Any modern method	16.9	50.8	68.7	79.4	79.2	76.9	66.4	70.4
Pill	3.4	9.2	11.3	13.5	9.5	7.6	7.6	10.1
IUD	11.5	39.8	57.7	64.4	66.6	63.2	53.5	57.8
Injectables	0.5	0.4	0.9	1.3	1.2	0.6	0.5	0.9
Vaginal methods	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Condom	2.5	7.0	11.9	15.3	16.5	14.4	8.7	12.7
Female sterilization	0.0	0.0	1.9	7.6	8.7	11.1	10.3	6.3
Male sterilization	0.0	0.0	0.1	0.9	0.8	0.9	0.6	0.6
Any traditional method	4.8	20.5	30.6	36.3	44.9	37.7	35.8	34.3
Periodic abstinence	1.3	9.3	12.8	18.5	25.6	21.3	18.1	17.6
Withdrawal	3.4	15.4	24.4	28.3	33.0	26.9	26.8	25.9
Other traditional methods	0.0	0.0	0.4	0.6	1.0	0.9	0.3	0.5
Number of women	129	716	988	1,153	1,068	785	502	5,340

4.3 Current Use of Family Planning

The level of current use of contraception is one of the indicators most frequently used to assess the success of family planning programs. It is also a widely used measure in the analysis of fertility determinants.

Current use of contraception is presented in Table 4.4 for currently married women age 15-49. In the VNDHS-II, 75 percent of currently married women reported use of family planning. This is an increase of 10 percentage points from the rate in the ICDS-94 (65 percent), and 22 percentage points from the rate in the VNDHS-I (53 percent). A contraceptive prevalence rate of 75 percent is high compared with many developing countries in the world.

As in 1988 and 1994, the most commonly used method in Vietnam is the IUD (39 percent of currently married women); the next most common method is withdrawal (12 percent). Current use of modern methods other than the IUD has increased since 1994 but is still very low: female sterilization (6.3 percent), the condom (5.9 percent), the pill (4.3 percent) and male sterilization and injectables (less than 1 percent each).

Rates of current use increase with age, reaching a maximum among women age 35-39 (88 percent). Beginning with age group 20-24, more than half of women are using contraception. Women in all age groups prefer the IUD. The proportion using the IUD peaks at 43 percent among women age 30-34 while the proportion using female sterilization peaks at 11 percent among women age 40-44.

Table 4.4 Current use of contraception

Percent distribution of currently married women by contraceptive method currently used, according to age, Vietnam 1997

	Age of women							
Contraceptive method	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Total
Any method	18.1	55.1	73.4	84.5	88.0	82.2	63.5	75.3
Any modern method	14.9	43.3	57.0	66.0	60.4	58.6	43.9	55.8
Pill	2.9	5.6	6.3	6.1	3.1	2.2	1.1	4.3
IUD	9.6	34.0	42.4	43.1	41.5	37.2	29.5	38.5
Injectables	0.5	0.0	0.2	0.4	0.2	0.0	0.0	0.2
Condom	1.9	3.6	6.0	8.0	6.3	7.1	2.4	5.9
Female sterilization	0.0	0.0	1.9	7.6	8.7	11.1	10.3	6.3
Male sterilization	0.0	0.0	0.1	0.9	0.7	0.9	0.6	0.5
Any traditional method	3.2	11.8	16.2	18.4	26.9	23.1	19.4	19.2
Periodic abstinence	0.7	3.9	4.3	6.4	12.3	10.1	6.8	7.3
Withdrawal	2.5	7.9	11.9	12.0	14.7	13.0	12.7	11.9
Other traditional methods	0.0	0.0	0.3	0.1	0.6	0.5	0.1	0.3
Not currently using	81.9	44.9	26.6	15.5	12.0	17.8	36.5	24.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	129	716	988	1,153	1,068	785	502	5,340

Differentials in Current Use of Methods

Differentials in the use of contraception among currently married women are shown in Table 4.5. Urban women are slightly more likely to use contraception than rural women (79 and 74 percent, respectively); this is because of greater use of traditional methods—particularly periodic abstinence—by urban women (25 and 18 percent, respectively). Women living in project and non-project provinces are about equally likely to be current users (77 and 75 percent, respectively) and their patterns of method use are similar.

Regional variation in the level of current use is similar to that described earlier for ever-use. Currently married women in the Central Highlands report the lowest rate of current use of any method (64 percent) and of modern methods (44 percent). In contrast, the highest level of current use is in the Red River Delta (83 percent for any method and 66 percent for modern methods). The North Central region is the next highest (80 percent for any method and 63 percent for modern methods). There is little difference in current use in the remaining four regions where use of any method varies from 70 to 75 percent. It is worth noting, however, that use of traditional methods is greater in the three regions in the South: Mekong River Delta, Southeast, and Central Highlands (25, 22 and 20 percent, respectively).

A strong positive relationship exists between education and current use of contraception. Significant differences in family planning are observed between women who never attended school and women who did attend school, even if they did not complete the primary level. Overall, the percentage of currently married women currently using contraception varies from 53 percent among women with no education to 82 percent among women who completed at least lower secondary school.

The pattern of contraceptive use by number of living children is as expected. Prevalence is very low among women who have no children (8 percent), rises to a peak among women with three children (86 percent), and declines somewhat among women with four or more children.

Table 4.5 Current use of contraception by background characteristics

Percent distribution of currently married women by contraceptive method currently used, according to selected background characteristics, Vietnam 1997

		Modern method							Traditional method						
Background characteristic	Any method	Any modern method	Pill	IUD	Condom	Injectables	Female sterilization	Male sterilization	Any traditional method	Periodic abstinence	Withdrawal	Other method	Not currently using	Total	Number of women
Residence															
Urban	79.3	54.0	4.1	32.5	0.0	11.8	5.3	0.3	24.9	14.2	10.7	0.4	20.7	100.0	997
Rural	74.4	56.2	4.4	39.9	0.2	4.5	6.6	0.6	17.9	5.7	12.2	0.3	25.6	100.0	4,343
Project province															
No	74.6	55.7	5.0	37.2	0.1	6.4	6.6	0.3	18.5	7.1	11.4	0.4	25.4	100.0	3,738
Yes	77.0	56.1	2.8	41.6	0.2	4.8	5.6	1.1	20.9	7.7	13.1	0.1	23.0	100.0	1,601
Region															
Northern Uplands	71.0	51.7	3.6	37.5	5.2	0.0	5.2	0.1	18.7	7.8	10.9	0.6	29.0	100.0	1,110
Red River Delta	83.3	66.3	2.2	51.6	7.0	0.0	5.0	0.6	16.6	7.1	9.6	0.4	16.7	100.0	1,197
North Central	80.1	63.4	1.0	50.3	3.5	0.0	6.4	2.2	16.7	2.7	14.0	0.0	19.9	100.0	646
Central Coast	70.1	54.4	4.2	33.4	7.8	0.0	9.1	0.0	15.4	3.9	11.5	0.2	29.9	100.0	557
Central Highlands	63.6	43.8	10.2	22.4	5.3	0.0	6.0	0.0	19.8	8.9	10.9	0.0	36.4	100.0	170
Southeast	74.6	52.9	7.0	27.2	7.3	0.3	10.9	0.3	21.5	10.5	11.0	0.2	25.4	100.0	642
Mekong River Delta	72.8	47.6	7.2	29.4	5.1	0.7	4.7	0.5	25.0	9.5	15.6	0.2	27.2	100.0	1,017
Education															
No education	52.9	42.4	4.9	24.2	2.5	1.0	8.5	1.3	10.1	1.8	8.3	0.4	47.1	100.0	252
Some primary	68.7	50.4	6.9	33.4	2.3	0.1	7.2	0.4	17.8	4.6	13.1	0.5	31.3	100.0	990
Completed primary	72.2	52.1	5.1	34.5	5.4	0.2	6.3	0.5	19.9	7.0	12.8	0.2	27.8	100.0	1,576
Completed lower secondary	82.1	62.3	2.7	46.2	6.3	0.1	6.3	0.7	19.5	7.6	11.9	0.3	17.9	100.0	1,764
Completed higher secondary +	82.2	59.8	3.0	40.3	11.8	0.0	4.6	0.1	22.4	12.4	10.0	0.0	17.8	100.0	757
No. of living children															
None	8.1	2.7	0.9	1.6	0.0	0.0	0.2	0.0	5.4	2.3	3.1	0.0	91.9	100.0	321
1	66.3	48.7	5.2	35.6	6.9	0.1	0.9	0.0	17.5	7.8	9.7	0.1	33.7	100.0	1,042
2	85.0	62.5	4.6	46.0	8.5	0.2	3.0	0.2	22.2	9.2	12.9	0.3	15.0	100.0	1,511
3	86.0	63.7	4.5	44.3	6.3	0.1	7.6	1.0	21.9	7.2	14.7	0.4	14.0	100.0	1,086
4+	78.7	59.8	4.1	36.5	3.3	0.2	14.6	1.1	18.5	6.1	12.4	0.4	21.3	100.0	1,379
Total	75.3	55.8	4.3	38.5	5.9	0.2	6.3	0.5	19.2	7.3	11.9	0.3	24.7	100.0	5,340

4.4 Number of Children at First Use of Contraception

In order to investigate when during the family building process couples initiate contraceptive use, the VNDHS-II included a question about the number of living children a woman had when she or her partner first used a method. Table 4.6 shows the percent distribution of ever-married women by the number of living children at the time of first use. Overall, 31 percent of women first used contraception before having their second child and 53 percent first used it before having their third child.

The data in Table 4.6 can be used to investigate changes between age cohorts in the stage of the family building process at which contraception is first used. Such an analysis indicates that younger Vietnamese women began using contraception earlier than older women. For example, almost half (49 percent) of women age 20-24 first used contraception before having the second child while only 25 percent of women age 35-39 and 10 percent of women age 45-49 first used contraception before their second child.

The trend toward earlier use of contraception in the family building process can also be seen by comparing data from the ICDS-94 and the VNDHS-II. For example, focusing on the youngest age cohorts—ever-married women age 15-19 and 20-24—the percentage reporting first use of contraception before their second child is greater in the VNDHS-II (21 and 49 percent, respectively) than in the ICDS-94 (13 and 41 percent, respectively).

Table 4.6 Number of children at first use of contraception

Percent distribution of ever-married women by number of living children at the time of first use of contraception, according to current age, Vietnam 1997

Current age	Never used contraception	Number of living children at first use of contraception					Total	Number of women
		0	1	2	3	4+		
15-19	78.3	4.9	16.3	0.5	0.0	0.0	100.0	129
20-24	38.4	4.5	44.1	12.1	0.8	0.0	100.0	732
25-29	18.3	3.2	42.7	24.9	7.6	3.2	100.0	1,016
30-34	8.9	2.9	33.7	27.3	16.9	10.3	100.0	1,197
35-39	8.4	2.4	23.0	27.4	17.8	20.9	100.0	1,134
40-44	15.5	1.2	13.1	18.5	21.9	29.8	100.0	876
45-49	23.7	0.4	9.6	16.2	15.5	34.7	100.0	581
Total	18.4	2.6	28.5	21.8	13.6	15.1	100.0	5,664

4.5 Knowledge of the Fertile Period

Seven percent of currently married women in the VNDHS-II reported current use of periodic abstinence. For this method to be practiced successfully, a basic understanding of the monthly ovulation cycle and an awareness of the fertile period in that cycle are necessary.

In the VNDHS-II, all respondents were asked when in the ovulatory cycle a woman is at greatest risk of becoming pregnant. The response categories for this question are designed to distinguish the correct response (i.e., the middle of the cycle) from other phases of the cycle. However, it should be noted that respondents had difficulty understanding what this question meant and how it should be answered. Interviewers often had to repeat the question once or twice before the respondent gave an answer. This creates some doubt about whether the question actually measured what it was intended to measure.

Table 4.7 shows the distribution of responses to the question on the ovulatory cycle. Among all ever-married women, only 28 percent correctly identified the fertile period. Among current users of periodic abstinence, 60 percent correctly identified the fertile period. Although current users of periodic abstinence were clearly more knowledgeable about the ovulatory cycle than other women, 40 percent did not correctly identify the period of peak risk of pregnancy.

Table 4.7 Knowledge of the fertile period

Percent distribution of current users of periodic abstinence and of ever-married women by knowledge of the fertile period during the ovulatory cycle, Vietnam 1997

Knowledge of the ovulatory cycle	Current users		Ever-married women
	Periodic abstinence	Calendar rhythm	
During period	0.0	0.0	0.0
After period ends	7.5	7.8	7.4
Middle of the cycle	59.5	59.1	27.8
Before period begins	0.6	0.7	0.9
At any time	20.6	20.9	34.0
Other	0.0	0.0	0.0
Don't know	11.7	11.6	29.9
Total	100.0	100.0	100.0
Number	389	376	5,664

4.6 Age at Sterilization

Information about the number of years since sterilization and the age at which women were sterilized is shown in Table 4.8. Of the 338 sterilized women, 29 percent were sterilized less than two years before the survey, another 42 percent were sterilized 2-5 years before the survey, and the remaining 29 percent were sterilized six or more years before the survey. Overall, the median age at sterilization was 33 years. There is no discernable time trend in the median age at sterilization.

Table 4.8 Timing of sterilization

Percent distribution of currently married sterilized women by age at the time of sterilization, and the number of years since the operation, Vietnam 1997

Number of years since sterilization	Age at sterilization							Number of sterilized women	Median age at sterilization
	<25	25-29	30-34	35-39	40-44	45-49	Total		
<2	2.2	11.2	45.7	29.7	10.5	0.7	100.0	99	33.3
2-3	0.0	24.3	33.2	31.9	10.5	0.0	100.0	81	32.7
4-5	1.6	27.7	36.3	28.3	6.1	0.0	100.0	60	31.7
6-7	3.8	26.4	32.9	29.2	7.7	0.0	100.0	23	32.8
8-9	7.8	27.7	30.9	26.9	6.6	0.0	100.0	16	33.3
10+	3.3	28.2	49.6	18.9	0.0	0.0	100.0	59	-
Total	2.1	22.1	40.2	27.9	7.5	0.2	100.0	338	32.5

4.7 Source of Supply

In order to evaluate the relative importance of various sources of contraceptive methods, current users of modern methods were asked to report the place from which they last obtained their method. Table 4.9 shows results for all methods combined and for specific methods.

Table 4.9 and Figure 4.1 indicate the dominance of the public sector in providing contraceptive services in Vietnam. Eighty-eight percent of current users last obtained their method from the public sector while 12 percent obtained theirs from the private sector. By far the single most important source of contraception was the commune health center (43 percent), followed by government hospitals (27 percent) and mobile clinics (11 percent). In total, these three sources were the source of supply for 80 percent of current users.

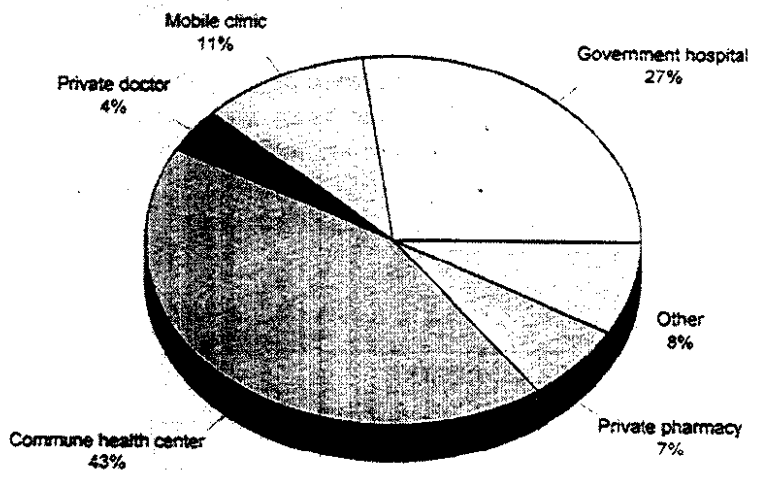
Table 4.9. Source of supply for modern contraceptive methods

Percent distribution of currently married women who are currently using a modern contraceptive method by most recent source of supply, according to specific methods. Vietnam 1997

	Method					
Source of supply	Pill	IUD	Condom	Female sterilization	Male sterilization	Total[1]
Public	60.7	93.9	54.6	99.7	100.0	87.7
Government hospital	3.3	23.1	1.2	87.0	47.9	26.7
Delivery house	0.7	1.3	0.0	0.0	0.0	1.0
Commune health center	38.6	53.0	24.6	3.1	3.2	42.6
Family planning clinic	0.9	2.9	5.0	4.3	6.5	3.2
Mobile clinic	3.4	13.1	2.0	5.2	42.3	10.5
Public fieldworker	13.8	0.3	19.7	0.0	0.0	3.4
Other public	0.1	0.2	2.0	0.2	0.0	0.4
Medical private	36.6	6.1	43.6	0.3	0.0	11.9
Private hospital/clinic	0.5	0.6	0.5	0.0	0.0	0.5
Pharmacy	32.9	0.5	40.6	0.0	0.0	7.3
Private doctor	2.4	4.5	2.2	0.3	0.0	3.7
Other private	0.8	0.6	0.4	0.0	0.0	0.5
Other private	2.7	0.0	1.8	0.0	0.0	0.4
Friends/relatives	2.3	0.0	1.2	0.0	0.0	0.3
Other	0.4	0.0	0.6	0.0	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	232	2,056	315	338	29	2,979

[1] Includes 9 users of injectables.

Figure 4.1
Sources of Family Planning Among Current Users of Modern Contraceptive Methods, Vietnam 1997



For specific methods, the most important sources of supply differed. Women using the IUD and pills obtained their supplies primarily from commune health centers, although pharmacies were also an important source for pills. Sterilization services were almost always provided by government hospitals for women and by government hospitals and mobile clinics for men. For condom users, the leading sources of supply were pharmacies and commune health centers.

4.8 Contraceptive Discontinuation

Two important issues for family planning programs are the rate at which women discontinue use of contraception and their reasons for discontinuation. Life table discontinuation rates calculated from information collected in the five-year, month-by-month calendar in the VNDHS-II questionnaires are presented in Table 4.10. All episodes of contraceptive use between January 1992 and the date of the interview were recorded in the calendar, along with the main reason for discontinuation of use during this period.

The discontinuation rates presented here are based on all segments of use that started between three and 62 months before the interview date for each woman. A segment is an uninterrupted period of use of a particular contraceptive method. The month of interview and the two preceding months are excluded from the analysis in order to avoid the bias likely to be introduced by unrecognized pregnancy.

The rates presented in Table 4.10 are cumulative one-year discontinuation rates and represent the proportion of users who discontinue within 12 months of starting use. In calculating rates, the reasons for discontinuation are treated as competing risks (net rates). The reasons are classified into four mutually exclusive and exhaustive categories: method failure (pregnancy), desire to become pregnant, side effects/health reasons, and all other reasons.

Discontinuation rates are relatively low in Vietnam. For all methods combined, the overall *discontinuation rate at 12 months is 18 percent. Not surprisingly, discontinuation rates for the pill* (33 percent), condom (32 percent), periodic abstinence (29 percent), and withdrawal (19 percent) are higher than the rate for the IUD (10 percent).

Table 4.10 Contraceptive discontinuation rates

One-year discontinuation rates due to method failure, desire for pregnancy, health reasons, or other reasons, according to specific methods, Vietnam 1997

	Reason for discontinuation				
Method	Method failure	Desire to become pregnant	Side effects/ health concerns	All other reasons[1]	All reasons
Pill	7.9	3.7	10.2	11.5	33.2
IUD	1.4	0.8	7.2	0.9	10.3
Condom	11.1	6.0	1.3	13.6	32.0
Periodic abstinence	12.4	6.7	0.2	9.7	28.9
Withdrawal	7.7	1.7	0.1	9.0	18.6
Total	5.2	2.4	4.3	5.7	17.6

[1] Includes discontinuations with missing reasons

For all methods combined, the reasons for discontinuation during the first year of use were method failure (5 percent); desire to become pregnant (2 percent); side effects or health concerns (4 percent); and other reasons (6 percent). However, the relative ranking of reasons for discontinuation varies by method. Women who discontinued use of the pill, condom, periodic abstinence, and withdrawal most frequently reported method failure or other reasons. IUD users most frequently cited side effects or health concerns as the reason for discontinuing use.

Further information on the reasons for discontinuation is presented in Table 4.11 and Figure 4.2. The table shows the percent distribution of all discontinuations in the five years preceding the survey, regardless of whether they occurred during or after the first 12 months of use. For all methods combined, the most common reasons for discontinuation are method failure (26 percent) and desire to become pregnant (27 percent).

For most individual methods, method failure and desire to become pregnant are the most frequently cited reasons for discontinuation. For pill and IUD users, side effects and health concerns are frequently reported reasons. For periodic abstinence and withdrawal users, switching to a more effective method is an important reason; while for condom users, switching to a more effective method and method inconvenience are important reasons for discontinuing using the method.

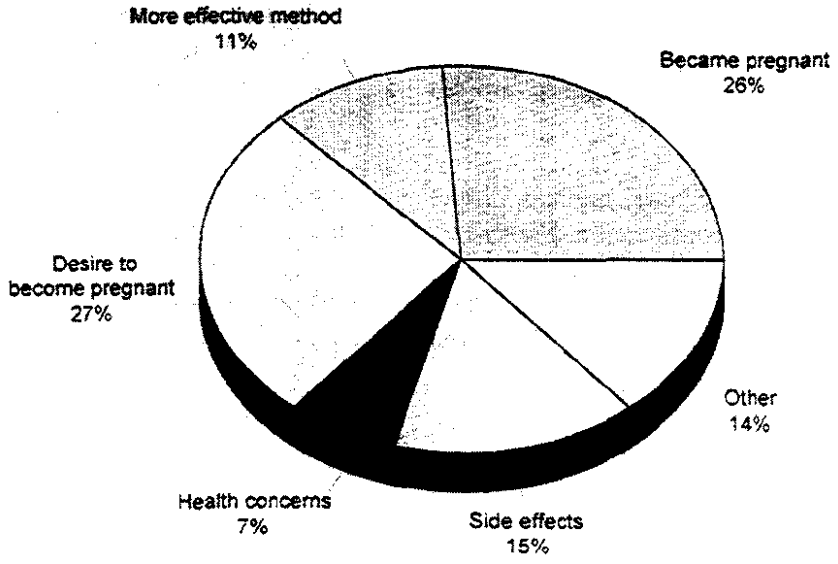
Table 4.11 Reasons for discontinuation

Percent distribution of discontinuations of contraceptive methods in the last five years among currently married women by main reason for discontinuation, according to specific methods, Vietnam 1997

Main reason for discontinuation	Method					
	Pill	IUD	Condom	Periodic abstinence	Withdrawal	Total[1]
Became pregnant	21.3	15.1	31.3	39.0	39.4	26.0
Desire to become pregnant	17.1	30.2	24.8	28.7	25.6	27.1
Husband disapproved	3.3	0.6	3.3	0.5	3.8	1.9
Side effects	16.4	28.9	5.6	0.3	0.0	14.7
Health concerns	15.0	12.0	2.0	0.6	1.4	7.3
Access/Availability	1.9	0.0	0.0	0.0	0.0	0.2
More effective method	3.9	4.0	10.6	21.5	23.8	11.4
Inconvenient to use	8.0	0.2	14.4	0.3	1.9	3.1
Infrequent sex	0.6	1.0	1.3	0.2	0.0	0.7
Cost	0.4	0.0	0.9	0.0	0.0	0.2
Menopause	2.6	1.6	0.4	5.0	1.8	2.1
Marital dissolution	0.0	0.3	0.0	0.0	0.0	0.1
Other	9.6	5.8	4.8	4.0	2.3	5.2
Don't know	0.0	0.3	0.6	0.0	0.0	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of discontinuations	188	835	238	252	421	1,951

[1] Includes discontinued segments of use of injectables (12), vaginal methods (1) and folk methods (4)

Figure 4.2
Reasons for Discontinuing Use of Family Planning Methods, Vietnam 1997



4.9 Nonuse of Contraception

Intentions Regarding Future Use

To obtain information about future use of contraception, currently married women who were not using contraception at the time of the survey were asked about their interest in using family planning methods in the future. Table 4.12 presents the distribution of currently married nonusers by their intention to use in the future according to the number of living children.

Fifty-seven percent of currently married nonusers said that they intended to use family planning in the future: 40 percent within the next 12 months, 15 percent sometime after 12 months, and 3 percent unsure about when. Eight percent of nonusers indicated they were unsure about using contraception at all in the future and 35 percent indicated that did not intend to use in the future.

Among nonusers, the timing of intended use varies with the number of living children; nonusers with no children are much less likely than nonusers with children to express an intention to use within the next 12 months.

Table 4.12 Future use of contraception

Percent distribution of currently married women who are not currently using any contraceptive method by intention to use in the future, according to number of living children, Vietnam 1997

	Number of living children[1]					
Future intention	0	1	2	3	4+	Total
Intend to use in next 12 months	5.5	48.3	58.3	47.7	24.8	39.8
Intend to use later	26.5	18.2	17.2	10.4	4.2	14.7
Unsure about timing	5.9	5.1	1.9	1.4	0.5	2.9
Unsure about use	18.4	9.2	3.8	1.9	6.5	7.5
Does not intend to use	43.7	19.2	18.8	38.2	64.0	35.1
Missing	0.0	0.0	0.0	0.3	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	160	377	298	174	310	1,319

[1] Includes current pregnancy

Reasons for Nonuse

The reasons women do not intend to use family planning are of particular interest to family planning program managers. In the VNDHS-II, currently married women who were not using contraception and who said that they did not intend to use in the future were asked the main reason they did not intend to use family planning. Table 4.13 shows the results. The primary reasons women gave for not intending to use a contraceptive method were that they wanted more children (25 percent), or that they were menopausal or had had a hysterectomy (25 percent).

Other often-mentioned reasons included infrequent sex (15 percent), health concerns (11 percent) and difficulty in becoming pregnant—i.e., subfecund or infecund (7 percent). Relatively few women (1 percent) mentioned their husband's opposition to family planning as the main reason they did not intend to use contraception.

There are significant differences in the answers given by women under age 30 and those age 30 and over. Nonusers under age 30 are more likely than older nonusers to mention the desire to have more children (76 percent and 15 percent, respectively), while infrequent sex is mentioned more by older nonusers than by younger nonusers (18 percent and 4 percent, respectively). The lack of need for contraception because a woman is menopausal or has had a hysterectomy was a reason given almost exclusively by older women.

Table 4.13 Reasons for not using contraception

Percent distribution of currently married women who are not using a contraceptive method and who do not intend to use a method in the future by main reason for not intending to use, according to age, Vietnam 1997

Main reason for not intending to use contraception	Age <30	Age 30+	Total
Infrequent sex	3.9	17.7	15.4
Menopausal/hysterectomy	0.0	30.1	24.9
Subfecund, infecund	1.6	8.4	7.2
Wants more children	76.0	14.5	25.0
Respondent opposed	1.3	0.4	0.5
Husband opposed	4.2	0.5	1.2
Others opposed	2.4	0.5	0.8
Religious prohibition	1.2	0.0	0.2
Know no method	0.0	1.0	0.8
Know no source	0.0	0.6	0.5
Health concerns	5.9	12.0	10.9
Fear side effect	0.0	3.7	3.0
Lack of access	0.0	0.2	0.2
Inconvenient	0.0	0.7	0.6
Interfere with body	0.0	0.8	0.6
Other	1.0	8.4	7.1
Don't know	2.6	0.7	1.1
Total	100.0	100.0	100.0
Number	80.0	384	463

Preferred Methods

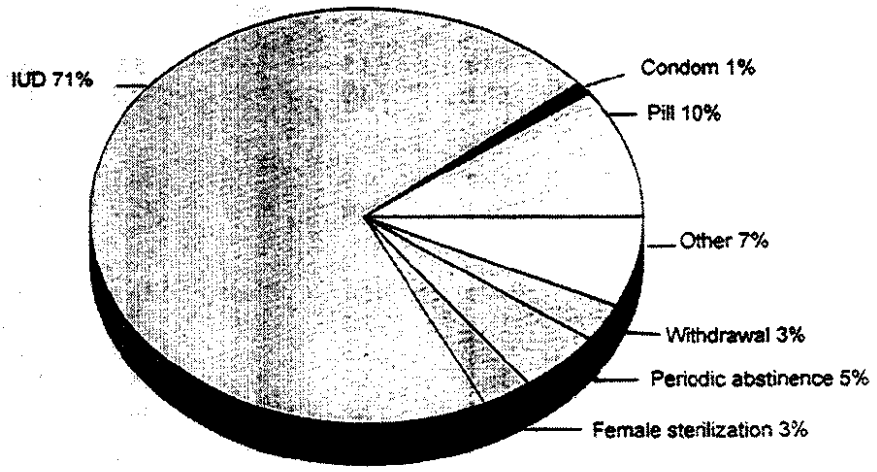
Method preferences among women not using contraception at the time of the survey but who intend to use in the future are shown in Table 4.14. The table indicates that the vast majority of women who intend to use prefer modern methods (91 percent). Given the high level of IUD use in Vietnam, it is not surprising that over 71 percent of nonusers who intend to use in the future reported the IUD as their preferred method (see Figure 4.3). Less than 10 percent said they preferred to use traditional methods: periodic abstinence (4.6 percent), withdrawal (3.1 percent), and folk methods (0.1 percent).

Table 4.14 Preferred method of contraception for future use

Percent distribution of currently married women who are not using a contraceptive method but intend to use in the future by preferred method, according to whether they intend to use in the next 12 months or later, Vietnam 1997

	Intention to use contraception in the next 12 months			
Method	Use in next 12 months	Use after 12 months	Unsure about timing	Total
Pill	10.9	7.5	8.7	9.9
IUD	71.8	69.1	77.2	71.4
Condom	0.5	2.1	0.0	0.9
Injectables	6.2	4.5	2.2	5.6
Female sterilization	1.7	6.0	0.0	2.7
Periodic abstinence	3.7	7.2	4.7	4.6
Withdrawal	3.6	2.4	0.0	3.1
Folk method	0.0	0.5	0.0	0.1
Missing	1.6	0.6	7.1	1.6
Total	100.0	100.0	100.0	100.0
Number of women	524	193	38	756

Figure 4.3
Preferred Method Among Nonusers Who Intend to Use in the Future, Vietnam 1997



4.10 Family Planning Messages

Activities to inform and educate couples about the use of contraception are an important component of the Vietnamese family planning program. The VNDHS-II obtained information on a number of aspects of women's exposure to family planning information. Table 4.15 shows the percentage of ever-married women who had heard a message about family planning on radio or television during the last few months prior to the interview.

At the national level, the effort to spread family planning information through radio and television has succeeded in reaching almost nine in ten ever-married women (87 percent). Table 4.15 also indicates that the majority of ever-married women had been exposed to messages on both radio and television.

Table 4.15 Exposure to family planning messages on radio and television

Percent distribution of ever-married women by whether they had heard a family planning message on radio or television in the last few months prior to interview, according to selected background characteristics, Vietnam 1997

	Heard about family planning on radio or TV					
Background characteristic	Radio and TV	Radio only	TV only	Neither	Total	Number of women
Age group						
15-19	57.6	12.5	7.4	22.5	100.0	129
20-24	64.1	7.4	9.3	19.2	100.0	732
25-29	68.1	7.6	10.5	13.8	100.0	1,016
30-34	70.7	7.1	9.4	12.8	100.0	1,197
35-39	71.2	8.9	9.2	10.7	100.0	1,134
40-44	73.4	6.6	8.6	11.4	100.0	876
45-49	71.7	5.9	8.6	13.9	100.0	581
Residence						
Urban	81.0	1.3	11.9	5.8	100.0	1,069
Rural	67.1	8.9	8.7	15.3	100.0	4,595
Project province						
No	69.4	8.1	8.6	13.8	100.0	3,976
Yes	70.4	6.1	10.9	12.7	100.0	1,688
Region						
Northern Uplands	59.0	15.7	9.0	16.3	100.0	1,168
Red River Delta	81.3	2.2	13.1	3.4	100.0	1,247
North Central	76.5	7.3	10.3	5.9	100.0	681
Central Coast	72.4	8.8	4.8	14.0	100.0	599
Central Highlands	50.5	3.1	18.0	28.4	100.0	182
Southeast	80.2	1.6	6.3	11.7	100.0	691
Mekong River Delta	58.8	8.7	7.4	25.1	100.0	1,097
Education						
No education	29.6	14.7	8.7	47.1	100.0	271
Some primary	50.4	15.3	7.5	26.8	100.0	1,078
Completed primary	69.2	8.2	8.5	14.1	100.0	1,665
Completed lower secondary	79.4	3.9	11.8	5.0	100.0	1,865
Completed higher secondary +	88.1	1.5	7.8	2.6	100.0	785
Total	69.7	7.5	9.3	13.5	100.0	5,664

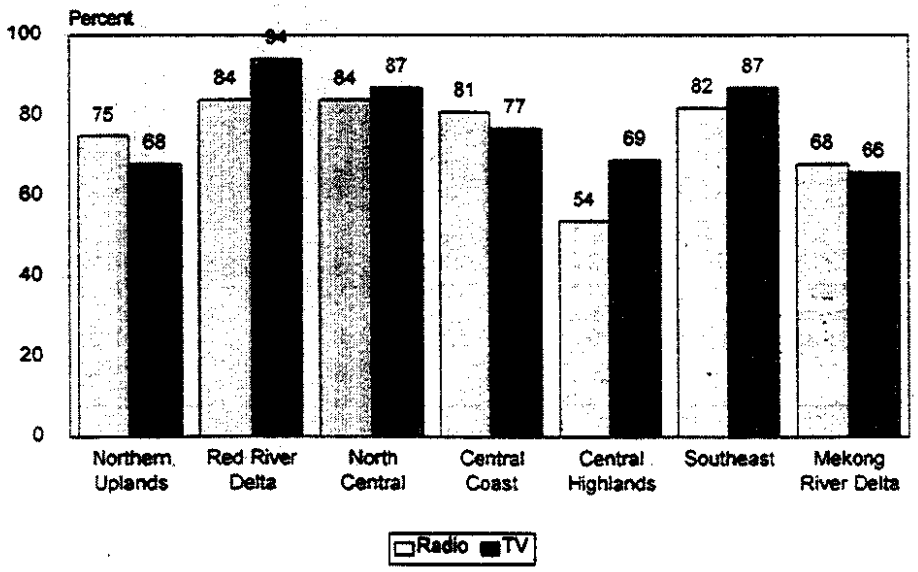
There are some differences in the level of exposure to family planning messages by age. Younger women (under 25) are less likely to have been exposed to broadcast media than older women. Some 22 percent of women age 15-19 and 19 percent of women age 20-24 reported that they had neither heard a family planning message on the radio nor seen one on television, while among women age 25 and older only 11-14 percent reported no exposure to messages via the broadcast media.

There were virtually no differences in exposure to family planning messages between women in project provinces and non-project provinces.

Among regions, the proportion of ever-married women who had been exposed to a family planning message during the months before the interview varied from a high of 97 percent in the Red River Delta and 94 percent in the North Central regions to 75 percent in the Mekong River Delta and 72 percent in the Central Highlands regions.

Exposure to family planning messages was strongly correlated with educational attainment. Only 53 percent of women with no education reported hearing a family planning message on radio or television, whereas 97 percent of women with completed higher secondary education had heard a message.

Figure 4.4
Exposure to Family Planning Messages on Radio and Television by Region, Vietnam 1997



Women were also asked whether or not they considered it acceptable for family planning information to be provided on radio or television. Table 4.16 indicates that 92 percent of the women said that these messages were acceptable. Ambivalence (unsure) was more common among younger women, women in rural areas, women in the Central Highlands, Mekong River Delta, and Northern Uplands regions, and women with little education, regarding the acceptability of broadcasting family planning messages on radio and television.

Table 4.16 Acceptability of media messages on family planning

Percentage of ever-married women who believe that it is acceptable to have messages about family planning on radio and television, by age and selected background characteristics, Vietnam 1997

Background characteristic	Acceptability of media message: Not acceptable	Acceptable	Unsure	Total	Number of women
Age group					
15-19	4.2	85.0	10.8	100.0	129
20-24	0.7	89.7	9.6	100.0	732
25-29	1.1	92.5	6.4	100.0	1,016
30-34	0.5	93.4	6.1	100.0	1,197
35-39	0.6	94.3	5.1	100.0	1,134
40-44	0.5	92.0	7.5	100.0	876
45-49	0.1	90.8	9.1	100.0	581
Residence					
Urban	0.4	96.8	2.8	100.0	1,069
Rural	0.7	91.2	8.0	100.0	4,595
Project province					
No	0.9	92.2	6.9	100.0	3,976
Yes	0.1	92.4	7.5	100.0	1,688
Region					
Northern Uplands	1.7	88.7	9.5	100.0	1,168
Red River Delta	0.2	97.7	2.2	100.0	1,247
North Central	0.0	96.5	3.5	100.0	681
Central Coast	0.1	95.8	4.1	100.0	599
Central Highlands	0.2	81.1	18.7	100.0	182
Southeast	0.9	92.6	6.5	100.0	691
Mekong River Delta	0.8	87.0	12.2	100.0	1,097
Education					
No education	1.3	70.2	28.5	100.0	271
Some primary	2.2	82.7	15.2	100.0	1,078
Completed primary	0.4	92.8	6.8	100.0	1,665
Completed lower secondary	0.2	97.6	2.2	100.0	1,865
Completed higher secondary +	0.1	99.4	0.5	100.0	785
Total	0.7	92.3	7.1	100.0	5,664

Women were also asked if they had read about family planning in a newspaper, magazine, poster, or leaflet during the last few months before the interview. Responses to these questions are presented in Table 4.17.

Few women receive information about family planning through the print media. Overall, only 37 percent of women said that they had read about family planning: 25 percent through newspapers or magazines, 23 percent through posters, and 9 percent through leaflets. As expected, women in rural areas were less likely to have read messages on family planning than urban women (31 and 62 percent, respectively).

Table 4.17 Exposure to family planning messages in print media

Percentage of ever-married women who have received a message about family planning in the print media in the last few months prior to the interview, by type of print media and selected background characteristics, Vietnam 1997

Background characteristic	Any print media source	Newspaper/ magazine	Poster	Leaflet/ brochure	Number of women
Age group					
15-19	25.8	11.6	16.0	6.4	129
20-24	32.1	19.9	21.1	8.4	732
25-29	33.9	22.6	21.0	8.6	1,016
30-34	40.6	26.2	24.9	11.0	1,197
35-39	38.8	28.7	22.4	8.6	1,134
40-44	40.7	27.6	25.0	10.9	876
45-49	34.1	25.0	22.4	9.0	581
Residence					
Urban	62.2	52.4	38.8	14.3	1,069
Rural	31.1	18.6	19.1	8.3	4,595
Project province					
No	37.8	25.3	23.7	10.3	3,976
Yes	35.1	24.4	20.7	7.3	1,688
Region					
Northern Uplands	42.2	23.5	27.1	14.7	1,168
Red River Delta	59.4	36.4	43.3	15.6	1,247
North Central	20.5	17.5	5.3	2.4	681
Central Coast	20.1	17.4	7.9	3.8	599
Central Highlands	24.2	21.1	14.4	8.7	182
Southeast	45.8	38.4	24.5	7.3	691
Mekong River Delta	21.9	14.8	14.1	5.6	1,097
Education					
No education	3.8	0.2	3.6	0.9	271
Some primary	14.9	6.1	9.8	2.3	1,078
Completed primary	27.9	17.5	16.2	7.1	1,665
Completed lower secondary	47.9	30.6	29.7	12.4	1,865
Completed higher secondary +	71.9	62.2	44.7	20.2	785
Total	37.0	25.0	22.8	9.4	5,664

4.11 Family Planning Outreach Activities

Visits by family planning fieldworkers from the Vietnamese Family Planning Program to nonusers are an important outreach activity. Additionally, when women visit health facilities the staff there should inform them about the benefits of family planning and the methods available through the Vietnamese program. Failure to do so represents a missed opportunity to provide services to potential users of contraception.

Overall, 20 percent of nonusers reported being visited by a family planning fieldworker in the last 12 months (Table 4.18). Another 13 percent were not visited by a fieldworker but reported visiting a health facility where they were told about the benefits of family planning. However, two-thirds of nonusers have neither received a visit from a fieldworker nor been informed about family planning by health facility staff in the last year (67 percent).

Table 4.18 Contact of nonusers with family planning providers

Percent distribution of currently married nonusers by whether they were visited by a family planning worker or spoke with a health facility staff member about family planning methods during the 12 months prior to interview, according to selected background characteristics, Vietnam 1997

	Visited by family planning worker			Not visited by family planning worker					
	Visited health facility			Visited health facility					
Background characteristic	Discussed family planning	Did not discuss family planning	Did not visit health facility	Discussed family planning	Did not discuss family planning	Did not visit health facility	No family planning services or information provided	Total	Number of women
Age group									
15-19	4.8	1.7	1.1	6.2	16.8	69.5	86.3	100.0	105
20-24	9.9	2.0	4.0	16.8	19.3	48.1	67.4	100.0	322
25-29	9.0	4.9	10.6	16.1	21.0	38.5	59.4	100.0	262
30-34	12.6	2.2	9.7	5.2	16.1	44.1	60.2	100.0	178
35-39	8.5	5.4	12.9	17.7	7.8	47.6	55.4	100.0	128
40-44	5.8	2.1	8.5	6.7	7.0	70.0	76.9	100.0	140
45-49	5.5	0.9	12.8	6.6	6.5	67.7	74.2	100.0	183
Residence									
Urban	7.3	5.1	14.1	11.2	16.6	45.7	62.3	100.0	206
Rural	8.7	2.3	7.4	13.6	14.4	53.6	68.0	100.0	1,112
Project province									
No	9.0	2.8	8.2	12.5	14.8	52.6	67.5	100.0	951
Yes	7.0	2.7	9.1	15.0	14.6	51.6	66.2	100.0	368
Region									
Northern Uplands	11.9	1.8	3.7	10.6	18.1	54.0	72.1	100.0	322
Red River Delta	10.5	3.9	7.9	13.0	24.6	40.2	64.7	100.0	200
North Central	12.6	0.5	4.3	20.0	12.1	50.4	62.5	100.0	128
Central Coast	2.2	1.7	9.8	10.2	14.6	61.4	76.1	100.0	167
Central Highlands	3.2	3.9	22.9	20.7	3.2	46.1	49.3	100.0	62
Southeast	9.7	4.9	8.7	21.7	7.9	47.1	55.0	100.0	163
Mekong River Delta	3.4	3.4	12.0	8.2	11.9	59.0	70.9	100.0	276
Education									
No education	4.2	2.7	7.3	12.2	12.1	61.5	73.5	100.0	119
Some primary	6.7	2.1	11.1	11.6	9.1	59.3	68.5	100.0	310
Completed primary	7.8	2.7	7.4	14.6	15.8	51.7	67.5	100.0	439
Completed lower secondary	9.0	2.2	6.3	11.7	20.2	50.6	70.8	100.0	316
Completed higher secondary +	17.3	6.0	11.7	16.5	14.3	34.3	48.6	100.0	135
Total	8.5	2.8	8.4	13.2	14.8	52.3	67.1	100.0	1,319

The data indicate that there is a large pool of nonusers who have not been recently contacted by either family planning fieldworkers or heath facility staff. Moreover, most of these women did not visit a health facility during the past year so the primary means of reaching them is through outreach efforts by family planning fieldworkers. However, those workers have contacted only one in five nonusers in the past year. If the nonusers who are not being contacted are primarily women who do not want or need contraception (e.g., young women trying to become pregnant or older menopausal women), the failure of fieldworkers to contact nonusers might be understandable, but that does not appear to be the case. In all age groups, less than 27 percent of nonusers were visited by a family planning fieldworker. The data suggest a need for greater effort by the outreach component of the family planning program.

4.12 Attitudes toward Family Planning among Couples

All currently married women who knew a method of contraception and who were not sterilized were asked how often they talked with their husband about family planning in the past year. These women were also asked whether they approved or disapproved of the use of family planning and their perception about their husband's attitude toward family planning.

Table 4.19 indicates that 80 percent reported discussing family planning with their spouse—50 percent on one or two occasions and 30 percent more frequently. Only one woman in five (20 percent) said she had not discussed the topic with her husband in the previous year. Two age groups of women were less likely to have discussed family planning with their husband than other women: the youngest and the oldest age groups (women age 15-19 and 45-49).

Table 4.19 Discussion of family planning with husband

Percent distribution of currently married non-sterilized women who know a contraceptive method by the number of times they discussed family planning with their husband in the past year, according to current age, Vietnam 1997

	Discussed family planning with husband				
Age group	Never	Once or twice	More than twice	Total	Number of women
15-19	38.0	44.7	17.3	100.0	125
20-24	22.3	46.2	31.6	100.0	699
25-29	17.4	52.7	29.8	100.0	956
30-34	13.8	51.5	34.7	100.0	1,051
35-39	17.5	50.3	32.2	100.0	964
40-44	22.2	49.9	28.0	100.0	681
45-49	31.7	45.7	22.5	100.0	439
Total	19.8	49.8	30.3	100.0	4,915

A positive attitude toward family planning is one of the prerequisites for the successful use of contraception. Data on respondents' attitudes and respondents' perceptions of their partner's attitude toward family planning are shown in Table 4.20. Overall, the data indicate a high degree of approval of family planning among Vietnamese couples. According to women, in 94 percent of couples both the wife and her husband approve of family planning. In only 2 percent of couples do either one partner or both partners disapprove of family planning.

Because of the high level of approval of family planning by both husbands and wives, there is little room for variation by respondents' background characteristics. Nevertheless, it is worth noting that there is a positive correlation between approval by both spouses and respondents' education. Joint approval was reported by 83 percent of women with no education and by 98 percent of women who had completed higher secondary school.

Table 4.20 Attitudes of couples toward family planning

Percent distribution of currently married non-sterilized women who know a contraceptive method by wife's attitude toward family planning and wife's perception of her husband's attitude toward family planning, according to selected background characteristics, Vietnam 1997

Background characteristic	Both approve	Wife approves: Husband disapproves	Wife approves: Husband's attitude unknown	Wife disapproves: Husband approves	Wife disapproves: Husband's attitude unknown	Both disapprove	Wife unsure of her attitude toward family planning	Total
Age group								
15-19	84.9	0.0	6.9	1.7	1.2	0.8	4.4	100.0
20-24	90.7	0.6	3.3	0.2	0.6	0.0	4.6	100.0
25-29	95.3	0.5	1.6	0.1	0.4	0.4	1.8	100.0
30-34	95.9	0.4	1.3	0.3	0.2	0.2	1.8	100.0
35-39	94.0	1.5	1.7	0.5	0.5	0.3	1.5	100.0
40-44	94.1	0.7	2.1	0.2	0.3	0.1	2.5	100.0
45-49	90.0	1.1	2.4	0.1	0.4	0.0	6.0	100.0
Residence								
Urban	95.2	0.7	1.9	0.1	0.5	0.1	1.5	100.0
Rural	93.2	0.8	2.1	0.3	0.4	0.2	2.9	100.0
Project province								
No	93.6	0.8	2.1	0.2	0.4	0.2	2.7	100.0
Yes	93.5	0.6	2.1	0.6	0.4	0.1	2.6	100.0
Region								
Northern Uplands	95.2	0.7	2.4	0.4	0.0	0.3	1.1	100.0
Red River Delta	95.8	0.3	2.7	0.1	0.1	0.0	1.0	100.0
North Central	97.7	1.5	0.6	0.1	0.0	0.1	0.0	100.0
Central Coast	95.6	0.6	2.0	0.0	0.2	0.2	1.4	100.0
Central Highlands	87.1	0.6	1.3	1.0	2.0	1.3	6.7	100.0
Southeast	92.6	0.5	2.0	0.1	0.5	0.3	3.9	100.0
Mekong River Delta	87.2	1.1	2.1	0.6	1.4	0.2	7.5	100.0
Education								
No education	82.5	1.7	2.8	0.6	1.5	2.6	8.2	100.0
Some primary	89.0	0.9	2.7	0.3	0.6	0.1	6.4	100.0
Completed primary	92.9	0.8	2.5	0.4	0.5	0.1	2.8	100.0
Completed lower secondary	96.1	0.7	1.9	0.1	0.2	0.2	0.7	100.0
Completed higher secondary +	98.3	0.2	0.6	0.2	0.1	0.0	0.6	100.0
Total	93.6	0.7	2.1	0.3	0.4	0.2	2.7	100.0

4.13 Abortion and Menstrual Regulation

Childbearing can be regulated by deliberate pregnancy termination as well as by contraception. In Vietnam, pregnancy termination is legal and available at both public and private health facilities. Two procedures are used for pregnancy termination: menstrual regulation (vacuum aspiration) for pregnancies within five weeks of conception, and abortion (dilation and curettage) for pregnancies up to 12 weeks duration and sometimes longer.

Information on pregnancy termination was collected in the reproductive section of the VNDHS-II questionnaire.[1] A word of caution is in order concerning the completeness of the data. International experience with the collection of data on deliberate pregnancy termination in household surveys is poor.

[1] Survey eligibility was limited to ever-married women. The omission of never-married women from the survey is not a serious concern for the calculation of fertility rates because relatively few births occur among never-married women. However, this is not the case when calculating abortion rates where it is estimated that about 10 percent of pregnancy terminations occur among never-married women.

Seriously defective data is virtually guaranteed for countries where pregnancy termination is illegal or where social stigma is attached to its use. While the practice of terminating unwanted pregnancies is legal and widely practiced in Vietnam, reporting of these events appears to have been seriously underreported in previous household surveys (GSO, 1996a and NCPFP and GTZ, 1995). These conclusions are based on a comparison between data from the surveys and data from the Ministry of Health.

Rates of Pregnancy Termination

The lifetime experience of ever-married women with pregnancy termination is shown in Table 4.21. Overall, 15 percent of women reported experience with pregnancy termination: 7 percent with abortion and 9 percent with menstrual regulation. These findings are similar to those of the ICDS-94 where 13 percent of ever-married women reported experience with pregnancy termination.

Table 4.21 Lifetime experience with pregnancy termination

Percentage of ever-married women who have had at least one pregnancy termination (menstrual regulation or abortion) and the mean number of pregnancy terminations by type and selected background characteristics, Vietnam 1997

	Menstrual regulation		Abortion		Total	
Background characteristic	Percent reporting at least one event[1]	Mean number among women with at least one event	Percent reporting at least one event[1]	Mean number among women with at least one event	Percent reporting at least one event[1]	Mean number among women with at least one event
Age group						
<20	2.1	1.7	0.3	1.0	2.4	1.6
20 -24	3.9	1.2	2.7	1.2	6.6	1.2
25-34	9.3	1.5	5.6	1.3	14.5	1.5
35 +	10.3	1.4	9.5	1.4	18.0	1.6
Residence						
Urban	12.5	1.4	6.8	1.3	17.8	1.5
Rural	7.8	1.5	6.8	1.4	13.8	1.5
Project province						
No	8.7	1.4	6.2	1.3	14.1	1.5
Yes	8.7	1.6	8.1	1.3	15.6	1.6
Region						
Northern Uplands	13.6	1.6	12.3	1.3	24.1	1.6
Red River Delta	13.2	1.5	9.6	1.4	21.4	1.6
North Central	2.2	1.2	6.1	1.3	7.5	1.4
Central Coast	0.3	1.0	1.8	1.1	2.1	1.1
Central Highlands	3.5	1.1	3.5	1.0	6.6	1.1
Southeast	8.6	1.3	6.3	1.3	13.2	1.4
Mekóng River Delta	8.0	1.4	2.4	1.2	9.9	1.4
Education						
No education	1.9	1.3	3.9	1.3	5.5	1.32
Some primary	6.6	1.5	4.1	1.1	10.4	1.4
Completed primary	7.2	1.4	5.7	1.4	11.9	1.5
Completed lower secondary	9.9	1.5	8.6	1.4	17.5	1.5
Completed higher secondary +	14.3	1.4	9.3	1.3	22.1	1.5
Total	8.7	1.5	6.8	1.3	14.5	1.5

[1] A few respondents reported having experience with both menstrual regulation and abortion. Thus, the sum of the percentage of women having experience with these two types of pregnancy termination exceeds the percentage of women having experience with either type of event.

An evaluation of the ICDS-94 pregnancy termination data, based on comparison with MOH data, suggests underreporting by a factor of five (GSO, 1996a). While it is possible that events are overreported in the MOH system, it seems unlikely that the degree of overreporting is anything close to a factor of five. The more likely conclusion is one of considerable underreporting of events in both the ICDS-94 and VNDHS-II. There is also the possibility of differential underreporting of events between population subgroups in these surveys.

Table 4.21 indicates that the percentage of ever-married women reporting experience with pregnancy termination increases with age and level of education. There are substantial differences by region with the highest percentages being reported especially in the Northern Uplands (24 percent) and Red River Delta (21 percent); also in the Southeast (13 percent) and Mekong River Delta regions (10 percent). Differences by residence are not large but the rate for urban areas (18 percent) exceeds that for rural areas (14 percent).

Table 4.22 presents abortion rates for the five-year calendar period immediately preceding the survey, i.e., 1992-96. These are total abortion rates (TAR) and they are based on reporting of both menstrual regulation and abortion. The TAR is interpreted as the number of pregnancy terminations a woman would have in her lifetime at the observed age-specific rates in the period 1992-96.[2] The age-specific rates are all women rates and, as was the case with fertility rates, are derived by inflating the respondents to the women questionnaire (ever-married women) by a factor which compensates for never married women.

Table 4.22 Abortion rates by background characteristics

Total abortion rates for the five-year period 1992-96 and the mean number of pregnancy terminations among women age 40-49, by selected background characteristics, Vietnam 1997

Background characteristic	Total abortion rate[1]	Mean number of terminations (women 40-49)
Residence		
Urban	.37	.27
Rural	.59	.20
Project province		
No	.49	.20
Yes	.67	.25
Region		
Northern Uplands	1.14	.34
Red River Delta	.87	.36
North Central	.29	.16
Central Coast	.02	.04
Central Highlands	.21	.07
Southeast	.30	.13
Mekong River Delta	.28	.14
Education		
No education	.17	.06
Some primary	.37	.09
Completed primary	.56	.21
Completed lower secondary	.65	.32
Completed higher secondary +	.66	.30
Total	.54	.22

[1] Women 15-49 years. Includes both menstrual regulation and abortion.

2 Total abortion rates are analogous to total fertility rates and are calculated from age-specific rates of pregnancy termination in the same manner as total fertility rates are calculated from age-specific rates.

The TAR for Vietnam from VNDHS-II is 0.5 pregnancy terminations per woman which is well below the estimated TAR of 2.5 per woman for 1992 based on MOH data (Goodkind, 1994). Thus, these rates appear to suffer from underreporting to a degree similar to that of rates for lifetime experience with pregnancy termination. Nevertheless, Table 4.22 indicates that, in general, the differentials in the TAR occupy the same rank order as the differentials in Table 4.21, except in the case of residence. For residence, there is a reversal of rank order with the TAR for urban areas (0.4 per woman) being less than that for rural areas (0.6 per woman).[3]

Use of Contraception before Pregnancy Termination

Additional questions were included in the VNDHS-II for pregnancy terminations occurring in the three years immediately preceding the survey. These questions concerned the desired status of the pregnancy at the time of conception, whether contraception was used at that time, whether there were any health problems following the termination and, if so, whether in-patient medical treatment was required.

Table 4.23 indicates that half (50 percent) of pregnancy terminations occurred among women who were using contraception at the time of becoming pregnant. The percentage is approximately the same for terminations by menstrual regulation (52 percent) and by abortion (48 percent).

About one-third of all pregnancy terminations occurred among women using one of the following three methods of contraception: the condom (9 percent), periodic abstinence (9 percent), and withdrawal (16 percent). It appears clear that more diligence in the use of these methods, or the use of more reliable methods of contraception, would reduce the need for pregnancy termination.

Table 4.23 Use of contraception prior to pregnancy termination

Percent distribution of pregnancy terminations (menstrual regulation or abortion) among women who were using a contraceptive method by type of method, according to type of pregnancy termination, Vietnam 1997

	Type of pregnancy termination		
Contraceptive method	Menstrual regulation	Abortion	*Total*
No contraception	51.9	47.9	50.4
Any contraceptive method	48.1	52.1	49.6
Any modern method	21.1	30.0	24.4
Pill	2.5	5.1	3.5
IUD	10.1	13.6	11.4
Diaphragm/foam/jelly	0.0	1.0	0.4
Condom	8.5	10.4	9.2
Traditional method	27.0	22.0	25.2
Periodic abstinence	10.5	7.0	9.1
Withdrawal	16.5	15.1	15.8
Total	100.0	100.0	100.0
Number of women	252	148	400

[3] This reversal is due to two factors, a sharper increase in abortions in rural areas than in urban areas in the recent past and fewer never-married women in rural areas than in urban areas. The latter factor means that in deriving the total number of women (for use in estimating age-specific rates) from ever-married women, urban ever-married women are multiplied by a larger conversion factor to compensate for the greater percentage of never-married women as a result of later marriage in urban areas.

Complications and Treatment

Table 4.24 indicates that about one-third of women reported having a heath problem following a pregnancy termination. Approximately half of these women sought medical advice or treatment and 2 percent were admitted to a health facility for treatment. The mean duration of the in-patient stay for these women was 10 days. As expected, fewer complications were associated with menstrual regulation than with abortion.

Table 4.24 Health problems and treatment following pregnancy termination

Percentage of pregnancy terminations followed by health problems and the percentage for which in-patient medical treatment was received. Vietnam 1997

Health problem and treatment	Type of pregnancy termination		Total
	Menstrual regulation	Abortion	
Health problem reported	28.8	40.7	33.3
Sought medical advice or treatment	14.4	20.4	16.8
Received in-patient treatment	0.5	4.7	2.4
Mean duration of in-patient treatment (days)	5.0	10.3	10.0
Number of pregnancy terminations	157	259	416

CHAPTER 5

PROXIMATE DETERMINANTS OF FERTILITY

In many societies, marriage signals the onset of women's exposure to the risk of childbearing; postpartum amenorrhea and sexual abstinence affect the intervals between births; and the onset of menopause marks the end of women's reproductive years. These factors are important for understanding fertility, since they determine the length and pace of reproductive activity. This chapter provides measures of these proximate determinants of fertility.

Questions pertaining to the proximate determinants of fertility were included in the Women's Questionnaire, which was administered to all ever-married women age 15-49. However, in this chapter, a number of tables are based on *all* women, that is, they include both ever-married and never-married women. In constructing these tables, the denominators have been expanded to represent all women by multiplying the number of ever-married women by an inflation factor equal to the ratio of all women to ever-married women reported in the Household Questionnaire. The inflation factors are calculated by single year of age, either for the population as a whole or, in cases where the results are presented by background characteristics, separately for each category of the characteristic in question.

5.1 Marital Status

Table 5.1 shows the distribution of all women age 15-49 by marital status. The data indicate that one in three women of reproductive age has never been married, 63 percent are currently married, 2 percent are widowed and 2 percent are divorced or not living together. Although marriage is universal in Vietnam, the proportion never married declines sharply from 92 percent among women age 15-19 to 47 percent among women age 20-24 and further to 21 percent among women age 25-29. After age 30, the proportion never married is around 10 percent.

The most important cause of marital dissolution is widowhood, with the proportion widowed rising steadily with age from less than 1 percent among women under age 30 to 8 percent among women age 45-49 (Table 5.1). Divorce and separation also rise with age, although the percentage separated by age 45-49 is less than half the percentage divorced.

Table 5.1 Current marital status

Percent distribution of women by current marital status, according to age, Vietnam 1997

	Marital status						
Age	Never married	Married	Widowed	Divorced	Separated	Total	Number of women
15-19	92.3	7.7	0.0	0.0	0.0	100.0	1,661
20-24	46.9	52.0	0.2	0.4	0.5	100.0	1,377
25-29	21.1	76.7	0.6	1.1	0.5	100.0	1,288
30-34	10.9	85.8	1.1	1.2	0.9	100.0	1,343
35-39	8.7	85.9	2.1	2.3	0.9	100.0	1,243
40-44	8.3	82.2	5.6	2.5	1.4	100.0	955
45-49	9.9	77.8	8.0	3.1	1.2	100.0	645
Total	33.5	62.7	1.8	1.3	0.7	100.0	8,511

Data from the 1989 census and various demographic surveys conducted in Vietnam show a general increase in the proportion of never-married women over the last 10 years (Table 5.2). This is especially obvious in the oldest age group, women 45-49. In 1988, only 1 percent of women in this age group remained unmarried compared with 10 percent in 1997.

Table 5.2 Never-married women

Percentage of women who have never married, according to age, Vietnam 1988-1997

Age group	VNDHS-I	1989 census	SPCFP-93	ICDS-94	VNDHS-II
15-19	95.3	89.1	90.2	91.4	92.3
20-24	47.8	43.1	50.9	46.3	46.9
25-29	15.2	18.0	21.1	20.4	21.1
30-34	8.4	11.2	7.6	10.5	10.9
35-39	6.5	8.9	3.3	9.1	8.7
40-44	4.0	6.0	1.8	6.9	8.3
45-49	1.3	3.5	1.2	6.4	9.9

Source: Reproductive Health Survey 1995 (NCPFP and GTZ, 1995:76, Table VI-2 recalculated)

5.2 Age at Marriage

In most cases, marriage marks the point in a woman's life at which childbearing commences. Early age at marriage often implies early age at childbearing and higher fertility since women who marry early will have, on average, longer exposure to the risk of pregnancy. In the VNDHS-II, information on marriage was obtained by asking women the month and year (or age, if year was not known) when they started living together with their husband (or first husband, in the case of women married more than once).

Table 5.3 shows the median age at first marriage, which represents the exact age by which half of the women in a specific age cohort are married. In contrast to the pattern seen in many countries, the median age at first marriage in Vietnam has not risen over the last 25 years. Instead, the median age has been stable at about 21 years for age cohorts 25-29 through 40-44. The recent history of Vietnam may

Table 5.3 Age at first marriage

Percentage of women age 15-49 who were first married by exact age 15, 18, 20, 22, and 25, and median age at first marriage, by current age, Vietnam 1997

	Percentage of women who were first married by exact age:					Percent never married	Number of women	Median age at first marriage
Current age	15	18	20	22	25			
15-19	0.5	NA	NA	NA	NA	92.3	1,661	a
20-24	0.9	12.4	35.9	NA	NA	46.9	1,377	a
25-29	1.9	14.3	37.7	58.9	73.9	21.1	1,288	21.0
30-34	1.3	14.7	34.8	57.6	76.9	10.9	1,343	21.3
35-39	1.0	14.1	34.9	56.5	77.0	8.7	1,243	21.3
40-44	1.3	13.2	34.6	57.7	77.6	8.3	955	21.4
45-49	1.2	11.7	32.5	52.7	74.8	9.9	645	21.7
20-49	1.3	13.5	35.3	55.4	71.5	19.2	6,850	a
25-49	1.4	13.8	35.2	57.1	76.1	12.2	5,474	21.3

NA = Not applicable

[a] Omitted because less than 50 percent of the women in the age group x to $x+4$ were first married by age x

explain this pattern. The long period of war which ended in 1975 may have disrupted the marriage prospects of older women who were in the prime marriage ages during this period. For the same reason, there may have been relatively fewer men to marry during this period. Alternatively, in the years following the war, the availability of more men of marriageable age and improved economic conditions may have contributed to the increasing numbers of women marrying at younger ages.

The median age at first marriage by selected background characteristics is shown in Table 5.4. The almost 3-year difference in age at marriage by urban-rural residence is more pronounced among younger women than older women. The median age at marriage for urban women age 25-29 is 23.7 years compared with 20.5 years for their rural counterparts. There is no difference in the median age at marriage between project and non-project provinces; however, women residing in the Southeast region are more likely to marry late—at least two years later than women residing in the Mekong River Delta and the Northern Uplands regions.

Table 5.4 Median age at first marriage

Median age at first marriage among women age 25-49 years, by current age and selected background characteristics, Vietnam 1997

	Current age					Median for women
Background characteristic	25-29	30-34	35-39	40-44	45-49	25-49
Residence						
Urban	23.7	23.7	23.4	23.9	22.7	23.5
Rural	20.5	20.8	20.9	20.8	21.3	20.8
Project province						
No	21.1	21.2	21.3	21.5	21.6	21.3
Yes	20.8	21.5	21.4	21.1	21.9	21.3
Region						
Northern Uplands	19.2	19.9	20.8	21.1	22.2	20.3
Red River Delta	21.2	21.7	22.2	21.4	21.7	21.6
North Central	20.8	21.4	21.0	21.7	22.2	21.3
Central Coast	21.4	21.2	21.7	21.4	21.1	21.4
Central Highlands	20.8	21.7	22.4	22.5	21.4	21.9
Southeast	24.5	22.3	22.4	22.6	23.0	22.9
Mekong River Delta	21.4	21.5	20.4	20.6	20.2	20.9
Education						
No education	21.6	20.5	20.5	19.3	20.7	20.5
Some primary	19.2	20.1	20.4	20.1	20.6	20.0
Completed primary	20.5	20.8	20.5	20.5	20.8	20.6
Completed lower secondary	21.1	21.3	21.3	21.8	22.1	21.5
Completed higher secondary+	22.9	23.7	24.0	24.3	24.0	23.7
Total	21.0	21.3	21.3	21.4	21.7	21.3

Note: The median for women age 15-19 could not be determined because some women may still get married before reaching age 20. The median for age 20-24 is not shown because less than 50 percent of the women in most of the sub-categories were first married by age 20.

There is a strong relationship between level of education and age at first marriage. The median age at marriage for women with no formal education is 20.5 years compared with 23.7 years for women who have completed higher secondary education.

5.3 Postpartum Amenorrhea, Abstinence and Insusceptibility

The risk of pregnancy is much lower during postpartum amenorrhea, that is, the interval between childbirth and the return of menstruation. The duration and intensity of breastfeeding (which delays the resumption of menstruation) affects the length of this interval, as does the length of time sexual intercourse is delayed following a birth. Women who are not exposed to the risk of pregnancy, either because they are amenorrheic or are still abstaining from sex are considered *insusceptible*. In the VNDHS-II, questions on the duration of postpartum amenorrhea and sexual abstinence were asked of all women who had a birth in the three years preceding the survey.

Table 5.5 shows the percentage of births in the three-year period preceding the survey for which the mother was postpartum amenorrheic, abstaining, and insusceptible, by the number of months since the birth. Postpartum amenorrhea is substantially longer than the period of sexual abstinence and is, therefore, the principal determinant of the length of postpartum insusceptibility to pregnancy in Vietnam. The median duration of amenorrhea is 9 months, the median duration of abstinence is 3 months, and the median period of insusceptibility is 9 months. Virtually all women are insusceptible during the first two months following birth and both amenorrhea and abstinence are contributing factors. However, from the second month onwards, abstinence is less important as more and more women resume sexual relations. At 8-9 months after birth, about two-thirds of women are still amenorrheic while only 5 percent are abstaining. By 16-17 months postpartum, 1 in 5 women is insusceptible (20 percent), largely because of amenorrhea (18 percent).

Table 5.5 Postpartum amenorrhea, abstinence, and insusceptibility

Percentage of births in the three years preceding the survey for which mothers are postpartum amenorrheic, abstaining, and insusceptible, by number of months since birth, and median and mean durations, Vietnam 1997

Months since birth	Amenorrheic	Abstaining	Insusceptible	Number of births
<2	98.3	96.7	100.0	57
2-3	75.5	69.0	90.0	87
4-5	77.0	27.5	77.9	96
6-7	64.6	12.9	69.5	95
8-9	61.7	5.1	63.7	88
10-11	32.2	7.4	33.1	107
12-13	26.0	3.8	28.3	102
14-15	16.3	0.7	16.3	97
16-17	18.3	1.1	19.5	92
18-19	5.0	1.4	6.4	89
20-21	4.2	1.2	5.4	115
22-23	1.3	5.4	6.8	148
24-25	1.9	0.0	1.9	114
26-27	0.9	0.0	0.9	94
28-29	2.7	2.6	5.3	102
30-31	1.1	0.0	1.1	122
32-33	0.0	3.4	3.4	93
34-35	0.0	1.5	1.5	109
Total	23.4	10.5	25.8	1,809
Median	8.8	3.3	9.1	-
Mean	10.0	5.1	10.9	-
Prevalence/Incidence mean[1]	8.3	3.7	9.2	-

[1]The prevalence-incidence mean is defined as the number of children whose mothers are amenorrheic (prevalence) divided by the average number of births per month (incidence).

Postpartum insusceptibility varies little by age of mother (Table.5.6). However, rural women, women who reside in the Northern Uplands region, and women who have not completed primary education have longer periods of insusceptibility than do other women.

Table 5.6 Median duration of postpartum insusceptibility by background characteristics

Median number of months of postpartum amenorrhea, postpartum abstinence, and postpartum insusceptibility, by selected background characteristics, Vietnam 1997

Background characteristic	Postpartum amenorrhea	Postpartum abstinence	Postpartum Insusceptibility	Number of births
Age				
<30	8.7	3.1	9.0	1,173
30+	9.0	3.6	9.3	636
Residence				
Urban	4.6	2.9	5.6	260
Rural	9.3	3.3	9.5	1,549
Project province				
No	8.8	3.2	9.3	1,275
Yes	8.6	3.5	8.8	534
Region				
Northern Uplands	11.2	3.5	11.2	406
Red River Delta	9.1	2.3	9.1	301
North Central	9.7	3.2	10.1	245
Central Coast	9.1	2.7	9.9	245
Central Highlands	7.5	4.2	7.5	100
Southeast	5.5	3.8	6.3	202
Mekong River Delta	7.7	4.0	7.8	309
Education				
No education	9.8	2.6	10.2	125
Some primary	10.3	4.3	10.7	341
Completed primary	8.5	3.0	8.5	596
Completed lower secondary	7.3	2.9	7.5	508
Completed higher secondary+	6.2	3.0	6.8	239
Total	8.8	3.3	9.1	1,809

Note: Medians are based on current status.

5.4 Termination of Exposure to Pregnancy

The risk of pregnancy declines with age as increasing proportions of women become infecund or subfecund. The age at onset of infecundity is difficult to determine for an individual woman, but it can be estimated for a population. One indicator of decreasing exposure to the risk of pregnancy is menopause.

In the VNDHS-II, a woman is considered menopausal if she is neither pregnant nor postpartum amenorrheic and has not had a menstrual period in the six months prior to the survey or if she identifies herself as being menopausal. Table 5.7 shows that the proportion of women who have reached menopause increases with age from 1 percent of women age 30-34 to 24 percent of women age 46-47 and 42 percent of women age 48-49.

Table 5.7 Termination of exposure to the risk of pregnancy

Menopause among currently married women age 30-49, by age, Vietnam 1997

Age	Menopause[1]	
	Percent	Number
30-34	0.8	1,153
35-39	1.4	1,068
40-41	3.0	347
42-43	4.3	306
44-45	7.8	242
46-47	24.0	216
48-49	42.3	175
Total	5.5	3,507

[1]Percentage of non-pregnant, non-amenorrheic currently married women whose last menstrual period occurred six or more months preceding the survey or who report that they are menopausal.

CHAPTER 6

FERTILITY PREFERENCES

The VNDHS-II included a number of questions to ascertain fertility preferences, a useful indicator of general attitudes toward childbearing and of the possible future course of fertility. Data on fertility preferences are also useful for assessing the unmet need for family planning and the number of unwanted or mistimed births in the population. The focus of this chapter is respondents' childbearing attitudes such as desire for more children in the future, ideal number of children they would like to have, and perception of the ideal number of children their husbands would like to have. Total wanted fertility rates are calculated based on desired ideal family size and birth history information.

6.1 Desire for More Children

In order to obtain information on future childbearing intentions, currently married respondents were asked: "Would you like to have another child or would you prefer not to have any more children?" If they did indeed want another child, they were asked: "How long would you like to wait from now before the birth of another child?" If the woman had not yet had any children, these questions were appropriately phrased, and if the woman was pregnant, she was asked about her desire for more children after the baby she was expecting.

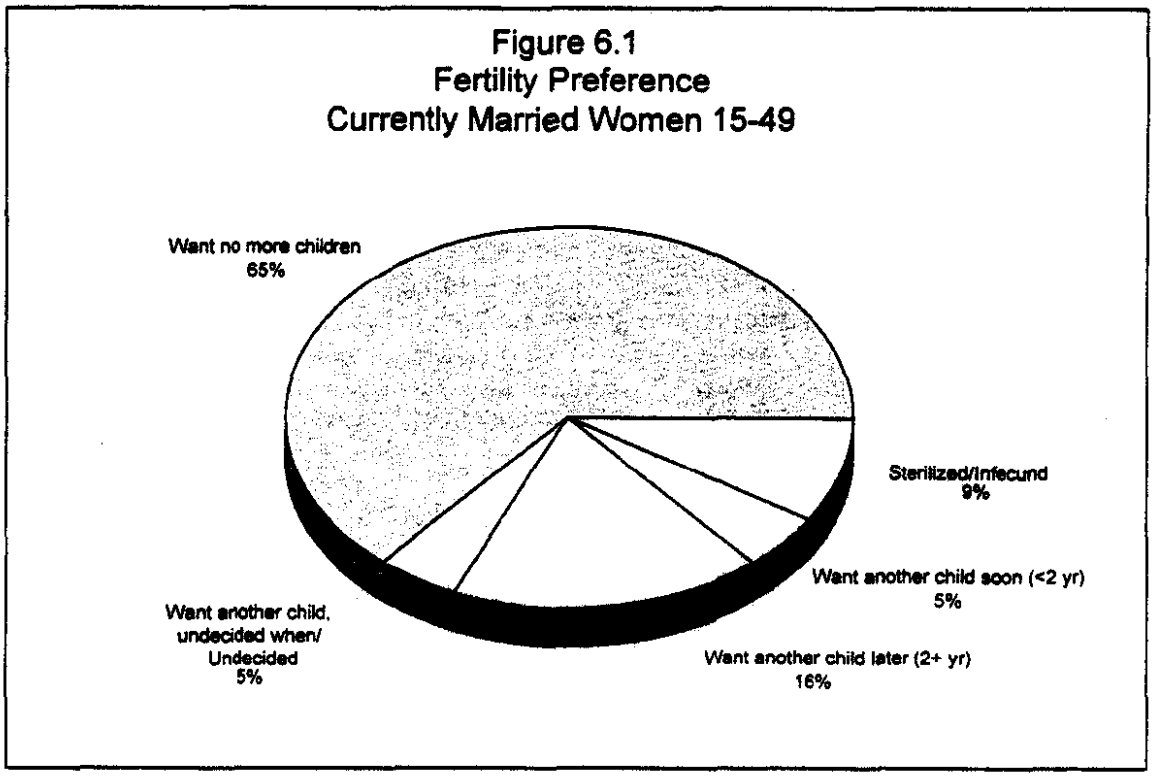
Table 6.1 presents the percent distribution of currently married women by desire for more children, according to the number of living children. Two-thirds of currently married women (66 percent) do not want any more children, 1 percent more than in 1994. Another 9 percent either have been sterilized or say they cannot have any more children. Among women who express a desire for another child, the majority want to delay the next birth by two or more years (16 percent); only 5 percent of currently married women want another child soon (within two years) (see Figure 6.1).

Table 6.1 Fertility preferences by number of living children

Percent distribution of currently married women by desire for more children, according to number of living children, Vietnam 1997

	Number of living children[1]							
Desire for more children	0	1	2	3	4	5	6+	Total
Want another soon[2]	72.2	8.7	1.0	0.5	0.4	0.2	0.8	4.8
Want another later[3]	16.8	64.5	6.3	2.5	0.5	0.9	0.6	16.0
Want another, undecided when	2.0	2.6	0.8	0.7	0.0	0.0	0.3	1.0
Undecided	1.7	8.3	4.5	1.5	1.3	0.4	0.6	3.6
Want no more	0.4	13.8	83.6	85.3	80.3	78.6	77.2	65.9
Sterilized	0.4	0.9	3.0	8.4	15.2	15.7	15.7	6.9
Declared infecund	6.4	1.4	0.7	1.0	2.3	4.0	4.7	1.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	186	1068	1582	1108	677	392	326	5340

[1] Includes current pregnancy
[2] Want next birth within two years
[3] Want to delay next birth for two or more years.



There is a close association between the number of living children and the percentage of women who want no more children. Desire for additional children decreases as the number of living children increases. Less than 1 percent of women who have not yet begun childbearing reported wanting no more children and this increases to 14 percent among women with one living child and reaches a high of 85 percent among women with three children. Not surprisingly, the desire to have a child soon is most prevalent among women who have not yet begun childbearing: 72 percent of women with no children want a child soon. Among women with one child, the majority (65 percent) want to delay the next birth.

Table 6.2 shows the distribution of currently married women by the desire for more children, according to current age. The proportion wanting more children decreases sharply with age. While 83 percent of women in the youngest cohort want more children (7 percent lower than in 1994), only a small

Table 6.2 Fertility preferences and age

Percent distribution of currently married women by desire for more children, according to age, Vietnam 1997

Desire for more children	Age of women							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Want another soon[1]	23.2	9.8	5.6	4.2	2.7	2.5	0.5	4.8
Want another later[2]	59.4	52.5	25.8	9.8	3.2	0.2	0.0	16.0
Want another, undecided when	0.7	2.3	1.8	1.0	0.3	0.2	0.2	1.0
Undecided	3.7	6.6	6.9	4.1	2.1	0.4	0.0	3.6
Want no more	13.0	28.8	57.9	72.1	81.6	82.1	75.5	65.9
Sterilized	0.0	0.0	2.1	8.5	9.3	12.0	10.9	6.9
Declared infecund	0.0	0.0	0.1	0.3	0.7	2.6	12.9	1.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	129	716	988	1153	1068	785	502	5340

[1] Want next birth within two years
[2] Want to delay next birth for two or more years

fraction of those age 30 and over do. The desire to space births is concentrated among young women (under age 25). Interest in limiting childbearing increases rapidly with age, from 13 percent among women age 15-19 to 82 percent among women age 40-44.

The proportion of women who want no more children is an important measure of fertility preference. Table 6.3 presents the percentage of currently married women who want no more children by number of living children. The results indicate that urban women want to limit family size at lower parities than rural women but the difference is not marked. For example, 90 percent of urban women with two children say they do not want another child, compared with 85 percent of rural women.

The proportion of married women who want no more children in Northern Vietnam - the Northern Uplands, Red River Delta, and North Central regions - ranges from 76 to 79 percent compared with less than 70 percent among women living in the remaining four regions.

The data in Table 6.3 also suggest that women in the Southeast and Mekong River Delta regions start wanting to limit family size at lower parities than women in the Central Coast and Central Highlands regions. For example, about 20 percent of women with one living child in the former regions say that they do not want another child compared with about 10 percent of women in the latter regions.

Table 6.3 Want no more children by background characteristics

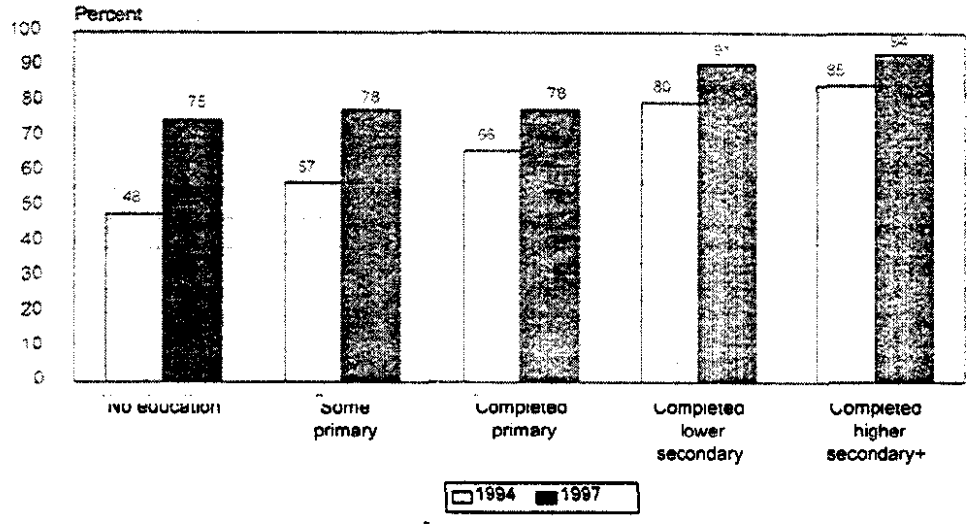
Percentage of currently married women who want no more children by number of living children and selected background characteristics, Vietnam 1997

	Living children							
Background characteristic	0	1	2	3	4	5	6+	Total
Residence								
Urban	0.0	19.8	90.4	95.2	93.6	98.4	98.0	67.4
Rural	1.1	12.8	85.3	93.5	95.7	94.0	92.5	74.0
Project province								
No	1.1	15.6	86.6	93.3	94.8	95.8	93.0	72.5
Yes	0.0	12.3	86.6	94.7	97.0	90.8	92.5	73.4
Region								
Northern Uplands	0.0	11.9	93.9	95.7	95.8	96.7	95.0	79.4
Red River Delta	0.0	12.5	94.6	98.5	98.0	92.5	88.0	76.2
North Central	0.0	5.4	78.8	92.9	96.8	98.4	92.6	76.1
Central Coast	0.0	9.4	72.5	87.8	92.2	90.3	87.2	66.2
Central Highlands	0.0	11.5	62.3	81.4	96.8	67.8	71.0	60.8
Southeast	2.3	21.8	86.4	96.1	97.0	100.0	97.3	69.3
Mekong River Delta	1.6	20.0	80.8	87.9	91.7	95.3	96.5	67.3
Education								
No education	6.9	18.6	74.6	77.6	82.7	80.9	86.0	67.5
Some primary	0.0	19.5	77.7	86.5	95.4	94.7	94.1	75.8
Completed primary	0.0	13.4	78.0	94.3	95.9	95.5	93.4	68.6
Complete lower secondary	1.6	13.1	91.1	97.1	96.1	96.4	97.4	76.3
Completed higher secondary +	0.0	15.2	94.2	99.2	98.7	93.3	100.0	70.9
Total	0.9	14.7	86.6	93.7	95.5	94.4	92.9	72.8

The absence of a definite association between level of education and the proportion wanting no more children among all women is at least partially a result of the concentration of more educated women at lower parities, where women are more likely to express a desire for more children. However, among currently married women with two or more children, there is a strong positive relationship between level of education and the percentage wanting no more children. For example, among women with two children, 94 percent of those who have completed higher secondary school want no more children, compared with 75 percent of women with no education.

There has been an increase at all education levels in the number of women who want no more children. As Figure 6.2 shows, the proportion of currently married women with two children who want no more children increased substantially between 1994 and 1997 for all levels of education.

Figure 6.2
Proportion of Currently Married Women
with Two Children Who Want No More Children
by Level of Education, Vietnam 1994 and 1997



6.2 Need for Family Planning Services

Information on fertility preferences alone is not sufficient to assess the need for family planning services. Many women who do not want to have another child or who want to space the next birth are already using contraception or are not exposed to the risk of pregnancy because they are menopausal or infecund. It is possible to estimate the extent to which couples' need for family planning is being met by examining information about contraceptive practice, desire for additional children, desired timing of the next child for women who want more children, and indicators of women's fecund status.

Currently married women who are fecund and who say that they do not want any more children or that they want to wait two or more years before having another child, but are not using contraception, are considered to have an *unmet need*[1] for family planning. Current users of family planning methods are

[1] A more complete description of the procedure for calculating unmet need is given in Table 6.4, footnote 1.

said to have a *met need* for family planning. The total demand for family planning is the sum of the met and unmet need for family planning.

Table 6.4 shows the percentage of currently married women with unmet need and met need for family planning and the total demand for family planning services by background characteristics. Only 7 percent of currently married women in Vietnam have an unmet need for family planning services. Combined with the 75 percent of currently married women who are currently using a contraceptive method, the total demand for family planning is 83 percent. It is estimated that 92 percent of the total demand for family planning is being met.

Table 6.4 Need for family planning services

Percent of currently married women with unmet need and met need for family planning, and the total demand for family planning, by selected background characteristics, Vietnam 1997

	Unmet need for family planning[1]			Met need for family planning (currently using)[2]			Total demand for family planning				
Background characteristic	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total	Percentage of demand satisfied	Number of women
Age											
15-19	9.0	0.7	9.7	17.4	0.8	18.1	26.3	1.5	27.8	65.1	129
20-24	11.2	2.1	13.3	38.3	16.8	55.1	50.6	18.8	69.5	80.9	716
25-29	5.5	4.0	9.5	27.8	45.6	73.4	34.0	50.0	84.0	88.7	988
30-34	2.4	3.8	6.2	13.5	71.1	84.5	16.0	75.1	91.1	93.2	1.153
35-39	0.6	3.7	4.3	5.5	82.5	88.0	6.3	87.3	93.6	95.4	1.068
40-44	0.5	4.1	4.6	0.7	81.5	82.2	1.2	86.1	87.3	94.8	785
45-49	0.0	3.1	3.1	0.0	63.5	63.5	0.0	66.6	66.6	95.3	502
Residence											
Urban	2.7	3.0	5.7	22.1	57.3	79.3	25.3	60.3	85.6	93.4	997
Rural	3.6	3.6	7.2	13.1	61.3	74.4	17.1	65.3	82.4	91.2	4.343
Project province											
No	3.5	3.6	7.1	15.0	59.5	74.6	18.9	63.5	82.5	91.4	3.738
Yes	3.3	3.3	6.6	14.3	62.8	77.0	17.9	66.4	84.3	92.2	1.601
Region											
Northern Uplands	4.7	5.3	10.1	7.4	63.6	71.0	12.8	69.0	81.7	87.7	1.110
Red River Delta	1.4	2.3	3.7	15.5	67.8	83.3	17.2	70.3	87.5	95.8	1.197
North Central	3.1	2.4	5.5	12.0	68.2	80.1	15.4	71.9	87.4	93.7	646
Central Coast	7.0	2.5	9.5	16.5	53.6	70.1	23.4	57.0	80.4	88.2	557
Central Highlands	4.6	5.5	10.1	17.4	46.2	63.6	22.6	52.3	75.0	86.5	170
Southeast	3.7	3.9	7.6	19.8	54.9	74.6	24.0	58.7	82.7	90.9	642
Mekong R. Delta	2.5	3.5	6.0	19.3	53.6	72.8	21.9	57.4	79.3	92.5	1.017
Education											
No education	6.0	6.3	12.3	7.2	45.7	52.9	13.2	53.0	66.2	81.4	252
Some primary	4.4	5.2	9.6	10.7	58.0	68.7	15.1	63.6	78.7	87.8	990
Completed primary	4.5	3.4	7.9	15.8	56.3	72.2	20.6	60.1	80.7	90.2	1.576
Completed lower secondary	2.2	2.4	4.5	14.4	67.7	82.1	17.1	70.5	87.6	94.8	1.764
Completed higher secondary +	2.2	3.0	5.2	21.3	60.9	82.2	24.3	63.9	88.3	94.1	757
Total	3.5	3.5	6.9	14.8	60.5	75.3	18.6	64.4	83.0	91.6	5.340

[1] Unmet need for *spacing* includes pregnant women whose pregnancy was mistimed, amenorrheic women whose last birth was mistimed, and women who are neither pregnant nor amenorrheic and who are not using any method of family planning but say they want to wait two or more years for their next birth. Also included in unmet need for spacing are women who are unsure whether they want another child or who want another child but are unsure when to have the birth. Unmet need for limiting refers to pregnant women whose pregnancy was unwanted, amenorrheic women whose last child was unwanted, and women who are neither pregnant nor amenorrheic and who are not using any method of family planning but want no more children. Excluded from the unmet need category are menopausal or infecund women.

[2] Using for spacing is defined as women who are using some method of family planning and say they want to have another child or are undecided whether to have another. Using for limiting is defined as women who are using and who want no more children. Note that the specific methods used are not taken into account here.

Unmet need is slightly higher among rural than urban women (7 and 6 percent, respectively). It is also relatively high in the mountain regions (10 percent each in the Northern Uplands and Central Highlands) compared with the plains regions (4 percent in the Red River Delta and 6 percent in the Mekong River Delta). Unmet need in the North Central region is also very low (6 percent). The three latter regions have the highest percentage of demand satisfied (96, 93, and 94 percent, respectively).

There is an inverse relationship between level of education and percentage having an unmet need for family planning. Unmet need varies from a high of 12 percent among women with no education to a low of 5 percent among women who have completed lower secondary school.

6.3 Ideal Family Size

Another attitudinal dimension of childbearing considered in the survey is the total number of children a woman would ideally like to have, if it were entirely up to her. In the VNDHS-II, the ideal family size (preferred number of children) for women is estimated from responses to two questions. Women who had no living children were asked, "If you could choose exactly the number of children to have in your whole life, how many would that be?" For women who had children, the question was rephrased as follows: "If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?"

Table 6.5 shows the distribution of ever-married women by ideal family size, according to the number of living children. In spite of the hypothetical nature of these two questions most women were able to give a numeric response.

Table 6.5 Ideal and actual number of children

Percent distribution of ever-married women by ideal number of children and mean ideal number of children for ever-married women and currently married women, according to number of living children, Vietnam 1997

	Number of living children[1]							
Ideal number of children	0	1	2	3	4	5	6+	Total
0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
1	15.8	13.7	3.3	2.2	1.3	0.4	0.0	5.0
2	78.2	80.5	84.7	53.3	50.3	41.4	27.9	66.3
3	2.9	3.7	7.7	33.3	11.1	16.0	11.8	13.2
4	1.4	1.9	4.1	10.5	34.7	23.5	33.6	11.9
5	0.0	0.1	0.0	0.4	1.7	14.6	2.7	1.6
6+	0.0	0.0	0.1	0.1	0.5	4.2	20.6	1.7
Non-numeric response	1.7	0.1	0.0	0.1	0.4	0.0	3.4	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	202	1,173	1,673	1,155	700	413	347	5,664
Mean ideal number of children								
Ever-married women	1.9	1.9	2.1	2.5	2.9	3.2	3.8	2.4
Number of women	199	1,172	1,672	1,153	698	413	335	5,643
Currently married women	1.9	2.0	2.1	2.5	2.9	3.2	3.9	2.5
Number of women	183	1,067	1,581	1,106	675	392	316	5,321

Note: The means exclude women who gave non-numeric responses.
[1] Includes current pregnancy

Household surveys typically find a correlation between actual family size and the ideal number of children women desire. There are several reasons for this. First, women who desire larger families tend to achieve larger families. Second, women may adjust their ideal family size upwards, as the actual number of children increases. It is possible that women with large families, being on average older than women with small families, have a larger ideal family size, because of attitudes they acquired 20 to 30 years ago. Despite the likelihood that some rationalization occurs, it is common to find that respondents' stated ideal family size is lower than their actual number of living children.

Table 6.5 indicates that, on average, the ideal family size for ever-married women is 2.4 children. This represents a decline of 0.4 children from a mean of 2.8 found in the ICDS-94 and a decline of 0.9 children from a mean of 3.3 found in the VNDHS-I.

Table 6.5 indicates that most women want small families. More than two-thirds of ever-married women (71 percent) prefer the one- or two-child family norm that the government family planning program has been promoting. One-fourth (25 percent) consider a three- or four-child family ideal. Less than 4 percent want five or more children.

As expected, higher parity women show a preference for more children; the mean ideal number of children among ever-married women increases from 1.9 among childless women to 2.5 among women with three children and to about 4 among women with six or more living children.

Table 6.6 presents the mean ideal number of children for ever-married women by age and selected background characteristics. The mean ideal family size increases directly with age, from 2.0 children among ever-married women age 15-19 to 2.4 children among women age 30-34 and to 2.8 children among women age 45-49.

Table 6.6 Ideal number of children by background characteristics

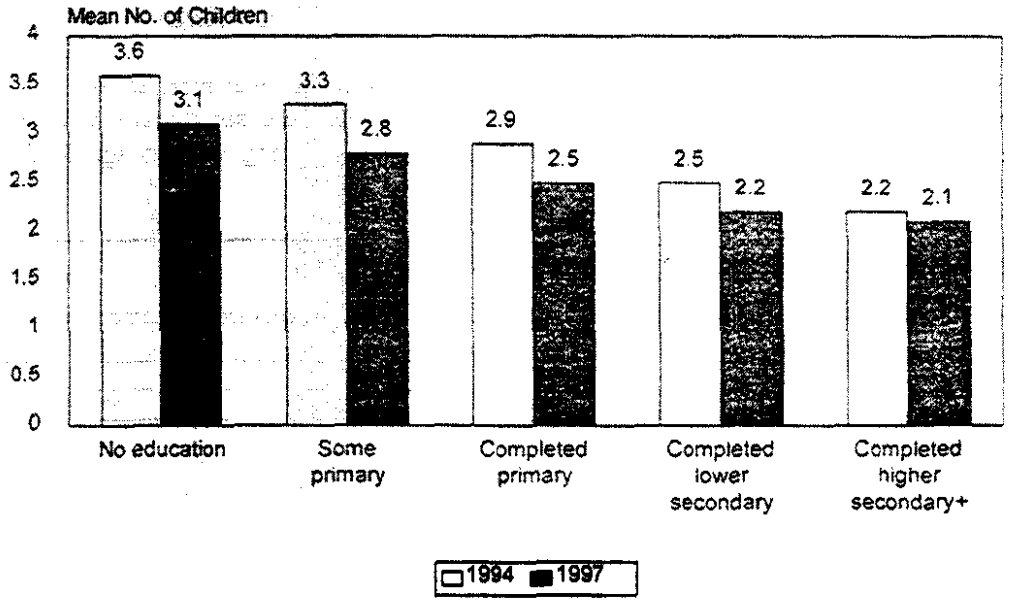
Mean ideal number of children for ever-married women by age and selected background characteristics, Vietnam 1997

Background characteristics	Age							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Residence								
Urban	1.9	1.9	2.1	2.2	2.1	2.3	2.4	2.2
Rural	2.0	2.1	2.3	2.4	2.6	2.8	3.0	2.5
Project provinces								
No	2.0	2.1	2.3	2.4	2.5	2.7	2.9	2.4
Yes	2.0	2.1	2.2	2.4	2.5	2.7	2.8	2.4
Region								
Northern Uplands	2.0	2.0	2.1	2.2	2.2	2.3	2.4	2.2
Red River Delta	2.0	2.0	1.9	2.1	2.1	2.1	2.1	2.1
North Central	2.2	2.2	2.4	2.5	2.6	2.9	3.1	2.6
Central Coast	2.2	2.4	2.6	2.9	3.2	3.2	3.1	2.8
Central Highlands	2.3	2.7	2.8	2.9	3.3	3.8	4.3	3.1
Southeast	1.9	2.1	2.3	2.4	2.5	2.5	3.1	2.4
Mekong River Delta	2.0	2.1	2.2	2.6	2.9	3.4	3.5	2.7
Education								
No education	1.9	2.5	2.6	3.0	3.1	3.7	3.6	3.1
Some primary	2.1	2.2	2.5	2.7	3.0	3.2	3.4	2.8
Completed primary	2.1	2.1	2.3	2.5	2.6	2.8	3.0	2.5
Completed lower secondary	1.9	2.0	2.1	2.2	2.3	2.3	2.3	2.2
Completed higher secondary+	-	1.9	2.0	2.1	2.1	2.2	2.2	2.1
Total	2.0	2.1	2.2	2.4	2.5	2.7	2.8	2.4

Other differentials for ideal number of children in Table 6.6 parallel those observed for fertility. There is little difference by residence, although the mean for rural women is slightly higher than the mean for urban women. Strong regional variations are apparent. The lowest ideal family size is found in the Red River Delta where women want only 2.1 children. In contrast, the highest ideal family size is found in the Central Highlands, where women want to have an average of 3.1 children. Women in the Northern Uplands want only 2.2 children, the second lowest level in the country.

Educational attainment is closely associated with ideal family size: the higher the level of education, the lower the preferred number of children. Thus, women with no education reported an average ideal family size of just over 3 children while women with at least completed lower secondary education want, on average, one child less. In all education categories, the mean ideal number of children for women in 1997 was lower than for women in 1994 (Figure 6.3).

Figure 6.3
Mean Ideal Number of Children for Ever-married Women by Level of Education, Vietnam 1974 and 1997



6.4 Fertility Planning

In order to estimate the levels of unwanted fertility, the VNDHS-II included a question on whether each birth in the three years before the survey was planned (wanted then), mistimed (wanted but at a later time), or unwanted (not wanted at all). Measures based on these data are likely to underestimate unwanted fertility because women may rationalize mistimed and unwanted pregnancies and declare them as wanted once the children are born.

Table 6.7 shows the percent distribution of births in three years before the survey by planning status. Overall, nearly three-fourths (73 percent) of births were planned (compared with 67 percent in 1994), 15 percent were mistimed, and 12 percent were not wanted at all.

As expected, the proportion of unplanned births is smallest for first order births and increases directly with birth order. Only 1 percent of first order births were not wanted while 43 percent of fourth and higher order births were unwanted. Similarly, a large proportion of births to older women were unwanted.

Table 6.7 Fertility planning

Percent distribution of births in the three years preceding the survey by fertility planning status, according to birth order and mother's age at birth, Vietnam 1997

Birth order and mother's age at birth	Planning status of birth: Wanted then	Wanted later	Not wanted	Total	Number of births
Birth order					
1	92.4	6.5	1.1	100.0	790
2	72.6	25.5	1.9	100.0	654
3	57.7	20.5	21.8	100.0	310
4+	47.6	9.5	42.8	100.0	384
Age at birth[1]					
<19	86.7	11.1	2.2	100.0	202
20-24	77.5	19.8	2.7	100.0	780
25-29	72.5	15.5	12.0	100.0	574
30-34	69.1	10.9	20.0	100.0	359
35-39	58.8	5.3	35.9	100.0	175
40-44	(39.0)	(9.0)	(52.0)	100.0	43
Total	73.3	14.9	11.9	100.0	2,138

Note: Figures in parentheses are based on 25-49 births and current pregnancies.
[1] Information for age group 45-49 is suppressed because it is based on fewer than 25 births.

CHAPTER 7

INFANT AND CHILD MORTALITY

This chapter contains information on the levels, trends, and differentials in neonatal, postneonatal, infant, child, and under-five mortality, and the prevalence of high-risk fertility behavior. This information is important for the assessment of the demographic situation in Vietnam. It is also central to the design of policies and programs geared towards the reduction of infant and child mortality and the avoidance of high-risk fertility behavior.

Mortality estimates are calculated from information in the pregnancy history section of the Woman's Questionnaire in the 1997 Vietnam Demographic and Health Survey (VNDHS-II). In this survey, reproductive histories were obtained from all ever-married women age 15-49. Each woman was first asked about the number of sons and daughters living with her, the number living elsewhere, the number who had died, and the number of pregnancies that did not end in a live birth. She was then asked for a history of all her pregnancies, including the type of pregnancy outcome and the month and year of pregnancy termination. For each pregnancy ending in a live birth, the mother was asked the child's name, sex, age (if alive) or age at death (if dead), and whether the child was living with her.

The information on live births is used to directly estimate mortality rates. In this report, infant and child mortality are measured using the following five rates:

Neonatal mortality: the probability of dying within the first month of life;
Postneonatal mortality: the difference between infant and neonatal mortality;
Infant mortality: the probability of dying before the first birthday;
Child mortality: the probability of dying between the first and fifth birthday;
Under-five mortality: the probability of dying before the fifth birthday.

All rates are expressed per 1,000 live births, except in the case of child mortality, which is expressed per 1,000 children surviving to 12 months of age.

7.1 Assessment of Data Quality

The reliability of mortality estimates depends on the completeness of the counts for births and child deaths and the accuracy with which their dates of birth and ages at death are reported. Omission of births and deaths directly affects mortality estimates; displacement of dates has an impact on mortality trends; and misreporting of age at death may distort the age pattern of mortality. This section discusses the quality of the data in the VNDHS-II.

One measure of data quality is the completeness and accuracy of information on dates of birth. Table 7.1 shows the distribution of births by calendar years. Any unusual patterns may indicate that births have been omitted or that dates of birth have been misreported. Complete information on both month and year of birth is available for all children with little difference between living and dead children. Birth history information is, in fact, 100 percent complete for the 10 years prior to the survey, indicating that the completeness of data on birth dates is very high. However, an examination of the distribution of births by calendar year suggests that there is a deficit in the years 1994, 1995, and 1996 relative to 1992 and 1993. This pattern could be the result of transference of births by interviewers out of the period for which health data were collected (i.e., health data were collected for children born after 1993). However, the impact of this transference on mortality estimates shown later in this chapter is probably minimal because those estimates are for broad five-year (1992-96) and ten-year (1987-96) calendar periods.

Table 7.1 Births by calendar years

Distribution of births by calendar years for living (L), dead (D), and all (T) children, according to reporting completeness, and sex ratio at birth, Vietnam 1997

	Number of births			Percentage with complete birth data[1]			Sex ratio at birth[2]		
Year	L	D	T	L	D	T	L	D	T
1997	347	5	352	100.0	100.0	100.0	105.4	66.6	104.8
1996	561	14	575	100.0	100.0	100.0	111.2	344.0	113.8
1995	662	26	688	100.0	100.0	100.0	106.1	152.6	107.5
1994	573	16	589	100.0	100.0	100.0	102.7	97.8	102.6
1993	735	31	766	100.0	100.0	100.0	115.1	277.6	118.9
1992	757	32	788	100.0	100.0	100.0	97.6	136.0	98.9
1991	740	23	763	99.9	100.0	99.9	127.6	225.6	129.7
1990	822	36	858	100.0	100.0	100.0	109.5	134.4	110.5
1989	728	53	781	100.0	100.0	100.0	99.5	91.6	99.0
1988	757	50	807	100.0	100.0	100.0	100.9	173.2	104.2
1993-97	2,878	91	2,969	100.0	100.0	100.0	108.5	180.6	110.2
1988-92	3,802	194	3,996	100.0	100.0	100.0	106.5	137.0	107.8
1983-87	3,810	224	4,034	100.0	100.0	100.0	110.9	131.3	111.9

[1] Both year and month of birth given

[2] $(B_m/B_f) \times 100$, where B_m is the number of male births and B_f is the number of female births

Another indicator of data quality is the sex ratio of births. This indicator is defined as births to male children divided by births to female children times 100. International experience from countries with reliable data indicates that this ratio typically lies between 104 and 107 (Shryock and Siegel, 1973). Table 7.1 shows sex ratios of births somewhat greater than the upper boundary of international experience for the periods 1993-97 (110) and 1988-92 (108), which could indicate underreporting of female births and, in particular, female births that died in infancy.

Another data quality concern in the case of infant mortality data is underreporting of births that terminate early in the early neonatal period (i.e., within the first week of life). Evidence of this type of error can be found by examining the ratio of deaths under the age of seven days to all deaths in the first month of life.[1] Table 7.2 shows that this ratio is above 0.75 for the periods 1992-96 and 1987-91, which suggests that underreporting of births ending in early neonatal deaths was not a problem in the VNDHS-II.

Another possible source of error in retrospective surveys is digit preference in the reporting of age at death. Estimates of age-specific mortality rates could be biased if digit preference results in a net transfer of deaths into or out of an age group. Of particular interest here is the possibility that children who died late in infancy are reported as deaths at 12 months of age, which would result in an underestimate of infant mortality. In an effort to minimize this type of error (and to detect the error if it occurs), interviewers in the 1997 VNDHS were instructed to record deaths in days, if they occurred in the first month of life, and in months, if they occurred under two years of age.

[1]There are no models for mortality patterns during the neonatal period. However, one review of data from several developing countries concluded that, at neonatal mortality levels of 20 per 1,000 or higher, approximately 70 percent of neonatal deaths occur within the first six days of life (Boerma, 1988).

Table 7.2 Reporting of age at death in days

Distribution of reported deaths under one month of age by age at death in days and the percentage of neonatal deaths reported to occur at ages 0-6 days, for five-year calendar periods preceding the survey, Vietnam 1997

	Calendar period preceding survey		
Age at death (in days)	1992-96	1987-91	1982-86
<1	14	23	15
1	15	26	13
2	2	10	3
3	10	11	9
4	1	1	3
5	5	4	4
6	0	3	0
7	7	8	13
8	3	0	4
9	0	1	1
10	1	2	5
11	0	0	1
12	0	2	0
13	0	1	0
14	0	0	3
15	0	2	1
16	0	1	0
17	0	3	0
19	2	0	0
20	1	3	2
22	0	1	0
25	0	0	0
27	1	0	3
28	0	0	1
29	0	0	1
Total 0-30	60	102	82
Percent early neonatal[1]	78.3	76.5	57.3

[1](0-6 days/0-30 days) × 100

Table 7.3 shows the distribution of deaths under two years of age by age in months. There is little or no excess reporting of deaths at 12 months of age in the time periods 1992-96 or 1987-91 suggesting that digit preference was not a problem for the reporting of infant deaths.

Table 7.3 Reporting of age at death in months

Distribution of reported deaths under two years of age by age at death in months and the percentage of infant deaths reported to occur at ages under one month, for five-year calendar periods preceding the survey, Vietnam 1997

	Calendar year preceding survey		
Age at death (in months)	1992-1996	1987-1991	1982-1986
<1[a]	60	102	82
1	1	15	11
2	3	8	8
3	11	9	7
4	1	4	3
5	1	5	1
6	4	6	4
7	3	2	2
8	8	7	2
9	1	1	0
10	1	0	2
11	0	3	1
12	3	4	13
15	3	3	0
17	1	0	2
18	2	1	1
19	0	0	2
21	1	0	0
23	1	0	0
Total 0-11	106	169	140
Percent neonatal[b]	88.7	95.9	87.9

[a] Includes deaths under 1 month reported in days
[b] (<1 month/<1 year) × 100

7.2 Levels and Trends in Infant and Child Mortality

Under-five mortality in the most recent five-year calendar period is 38 per 1,000 births (Table 7.4). This means that about one in every 27 children born in Vietnam dies before reaching age five. Nearly three in four of these deaths occur in the first year of life—infant mortality is 28 deaths per 1,000 births; then child mortality accounts for 10 deaths before age five among 1,000 children who survive to 12 months of age. Similarly, during infancy, the risk of neonatal deaths (19 per 1,000) is approximately double the risk of postneonatal deaths (9 deaths per 1,000).

Table 7.4 Infant and child mortality

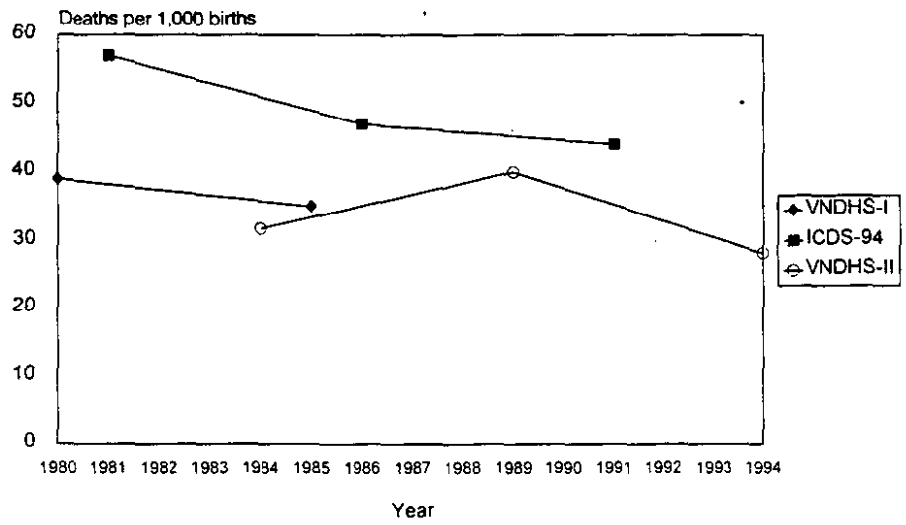
Infant and child mortality rates by five-year calendar periods preceding the survey, Vietnam 1997

Calendar period	Neonatal mortality (NN)	Postneonatal mortality (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
1992-96	19.3	8.9	28.2	9.8	37.7
1987-91	24.5	15.5	40.0	14.0	53.5
1982-86	21.6	10.2	31.8	23.9	54.9

Data collected in the VNDHS-II shows that mortality levels in Vietnam have declined since the early eighties. Under-five mortality is 31 percent lower than it was 10-14 years (1982-86) before the survey, with the pace of decline in child mortality being much faster (59 percent) than infant mortality (11 percent). The corresponding decline in neonatal and postneonatal mortality is 11 percent and 13 percent, respectively.

Mortality trends can also be examined by comparing data from the VNDHS-II with data from other earlier sources. However, these comparisons have to be treated with caution since data quality, method of analysis, time references, and sample coverage vary between sources. Figure 7.1 shows a series of infant mortality estimates derived from the VNDHS-I, the ICDS-94, and the VNDHS-II. In general, this shows a declining trend in mortality over the 10 to 15 years preceding the data collection. This is strong evidence that infant mortality has declined in Vietnam in recent years.

Figure 7.1
Trends in Infant Mortality, Vietnam 1980-94



While each survey indicates declining infant mortality, there are differences in the level of mortality between surveys. The estimates for the VNDHS-I and the VNDHS-II generally agree on levels while the estimates from the ICDS-94 are decidedly higher. For example, the estimate of 44 per 1,000 for 1989-93 from the ICDS survey is at a different level than the estimate of 28 per 1,000 for 1992-96 from the VNDHS-II. This raises the issue of whether the ICDS-94 estimates or the lower estimates from the other two surveys are more accurate. The data quality analysis presented at the beginning of this chapter found no indication of problems with the mortality data from the VNDHS-II, with the possible exception of underreporting of deaths among female births during the period 1992-96. Another possible explanation of the differences in estimates is sampling error. The 95 percent confidence intervals for the estimate of 28 per 1,000 are 21 and 36 per 1,000 (Appendix B) indicating that, given the sample size of the VNDHS-II, the estimate of 28 per 1,000 is possible when the true value is as much as 8 points higher. The survey report for the ICDS-94 does not include sampling errors for infant mortality; therefore, the matter cannot be pursued further here. To resolve the issue would require a more comprehensive analysis of the data from each survey than is possible in this report.

7.3 Socioeconomic Differentials in Infant and Child Mortality

Table 7.5 presents socioeconomic differentials in childhood mortality. Mortality rates are calculated for the 10-year period 1987-96 in order to ensure a sufficient number of cases for statistical reliability.

Table 7.5 Infant and child mortality by socioeconomic characteristics

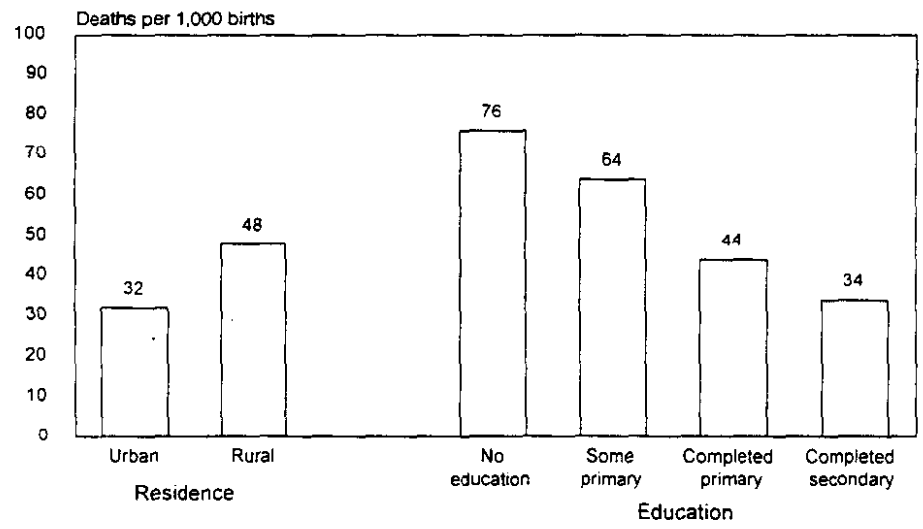
Infant and child mortality rates for the 10-year calendar period 1987-96, by socioeconomic characteristics, Vietnam 1997

Socioeconomic characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Residence					
Urban	18.2	4.5	22.6	9.4	31.9
Rural	22.7	13.7	36.4	12.3	48.2
Project province					
No	24.3	12.8	37.1	12.6	49.2
Yes	17.0	11.6	28.5	10.3	38.6
Mother's education					
No education	(28.7)	(21.0)	(49.7)	(27.8)	(76.1)
Some primary	25.7	17.6	43.3	21.2	63.6
Completed primary	22.5	12.2	34.7	9.1	43.5
Completed lower secondary	17.9	9.0	26.9	6.9	33.7
Completed higher secondary+	(21.8)	(7.7)	(29.6)	(5.0)	(34.4)
Total	22.1	12.4	34.5	11.9	46.0

Note: Figures in parentheses are based on 250-499 births

Mortality is consistently lower in urban areas than in rural areas (Figure 7.2). Infant mortality is 38 percent lower and under-five mortality is 34 percent lower in urban areas than in rural areas. Mortality is also lower in the project provinces compared with the non-project provinces.

Figure 7.2
Under-five Mortality by Residence and Education, Vietnam 1997



As expected, mother's education is strongly related to mortality. Children born to mothers with no education experience much higher levels of mortality than children born to mothers with some education. For example, under-five mortality for children of mothers with no education (76 per 1,000) is 75 percent higher than for children of mothers who have completed primary education (44 per 1,000) and more than double that for children of mothers who have completed lower secondary schooling (34 per 1,000).

7.4 Demographic Differentials in Infant and Child Mortality

Mortality risks are also affected by demographic characteristics. Table 7.6 and Figure 7.3 show the relationship between mortality and sex of the child, mother's age at birth, birth order and birth intervals. As expected, infant mortality is higher for males than females with male neonatal mortality being much higher than female neonatal mortality.

Table 7.6 Infant and child mortality by demographic characteristics

Infant and child mortality rates for the 10-year calendar period 1987-96, by demographic characteristics, Vietnam 1997

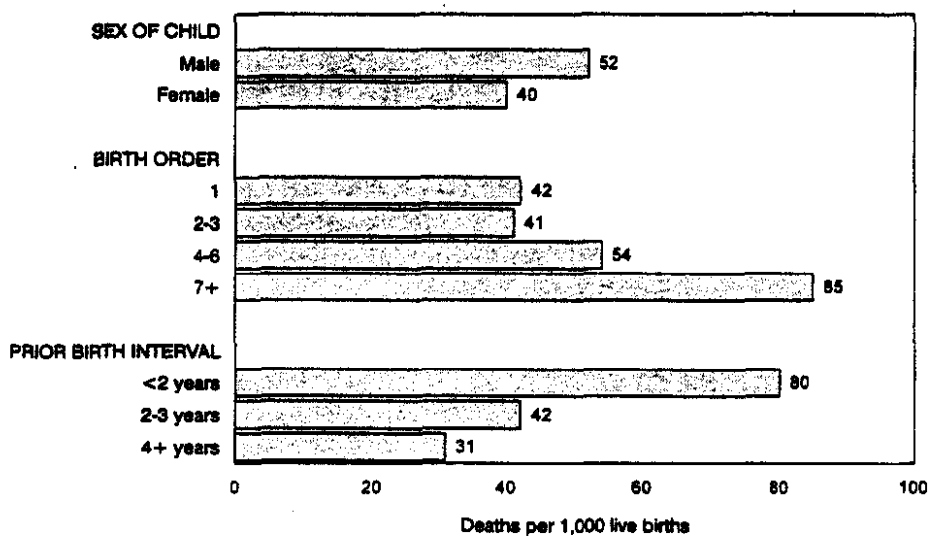
Demographic characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)	Infant mortality ($_1q_0$)	Child Mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Sex of child					
Male	28.0	13.6	41.6	10.5	51.6
Female	15.7	11.2	26.9	13.4	39.9
Age of mother at birth[1]					
<20	37.2	6.8	44.0	6.3	50.0
20-29	22.0	11.3	33.3	11.2	44.1
30-39	17.6	17.6	35.2	15.8	50.4
Birth order					
1	24.9	10.3	35.2	7.3	42.2
2-3	21.9	8.7	30.6	10.8	41.0
4-6	15.7	20.4	36.1	18.8	54.2
7+	(37.1)	(28.4)	(65.5)	(20.9)	(85.0)
Previous birth interval					
<2 years	34.7	23.1	57.7	23.1	79.5
2-3 years	19.4	11.5	30.9	11.2	41.7
4+ years	11.9	9.1	21.0	10.2	31.0

Note: Figures in parentheses are based on 250-499 births
[1]Rates for age group 40-49 are not shown because they are based on fewer than 250 exposed persons

Neonatal mortality is inversely related to mother's age at birth with children born to mothers who are less than 20 years being 25 percent more likely to die early than children born to mothers who are 30-39 years (37 per 1,000 and 18 per 1,000, respectively). On the other hand, child mortality rises with age, and is more than double among children born to mothers age 30-39 compared with children born to mothers under age 20.

As expected, first births and higher order births experience higher mortality, with infant mortality being more than twice as high among births of order 7 and higher (66 per 1,000) than among births of orders 2 and 3 (31 per 1,000). Mortality levels are also higher among children born within two years of a previous birth. For example, infant mortality is 58 per 1,000 for this group compared with 21 per 1,000 for children born after an interval of 4 years or more.

Figure 7.3
Under-five Mortality by Selected Demographic Characteristics, Vietnam 1997



Note: Rates are for the 10-year calendar period preceding the survey.

7.5 High-risk Fertility Behavior

Numerous studies have found a strong relationship between children's chances of dying and certain fertility behaviors. Typically, the probability of dying in infancy is much greater for children born to mothers who are too young or too old, if they are born after a short birth interval, or if they are born to mothers with high parity. For purposes of this analysis a mother is classified as "too young" if she is less than 18 years of age and "too old" if she is over 34 years of age at the time of delivery; a "short birth interval" is defined as a birth occurring within 24 months of a previous birth; and a mother is considered to be of "high parity" if she has three or more living children at the time of birth.

Table 7.7 shows the percent distribution of children born in the five years before the survey by these risk factors. The table also shows the risk ratio of mortality for children by comparing the proportion of dead children in each high-risk category with the proportion of dead children not in any high-risk category.

More than one in three children born in Vietnam in the five years before the survey falls into a high-risk category (36 percent), with 25 percent in a single high-risk category and 11 percent in a multiple high-risk category. The most commu : high-risk factor is high birth order, with one in three children with any risk falling into this category.

The relationship between risk factors and mortality is represented by the risk ratios shown in column 2 of Table 7.7. In general, risk ratios are higher for children in a multiple high-risk category than children in a single high-risk category. Some 7 percent of births occur to mothers who are both more than 34 years old and have had 3 or more births, with these children more than twice as likely to die as children who are not in any high-risk category.

The final column of Table 7.7 addresses the question of what percentage of currently married women have the potential for a high-risk birth. This was obtained by simulating the distribution of currently married women by the risk category in which a birth would fall, if a woman were to conceive at the time of the survey. Overall, 63 percent of currently married women have the potential for having a high-risk birth.

Table 7.7 High-risk fertility behavior

Percent distribution of children born in the five years preceding the survey by category of elevated risk of dying, and the percent distribution of currently married women at risk of conceiving a child with an elevated risk of dying, by category of increased risk, Vietnam 1997

Risk category	Births in the 5 years preceding the survey: Percentage of births	Risk ratio	Percentage of currently married women[a]
Not in any high-risk category	33.3	1.00	31.3[b]
Unavoidable risk category			
First births to women 15-49	30.7	1.57	5.8
Single high-risk category			
Mother's age <18	1.9	0.00	0.1
Mother's age >34	2.6	0.83	10.4
Birth interval <24 months	8.6	1.23	8.9
Birth order >3	11.8	0.95	10.1
Subtotal	24.8	0.97	29.5
Multiple high-risk category			
Age <18 & birth interval <24 months	0.0	*	0.1
Age >34 & birth interval <24 months	0.1	*	0.4
Age >34 & birth order >3	6.5	2.13	29.0
Age >34 & birth interval <24 & birth order >3	1.2	(4.31)	1.2
Birth interval <24 months & birth order >3	3.2	1.75	2.8
Subtotal	11.2	2.31	33.4
In any high-risk category	36.0	1.38	62.9
Total	100.0	NA	100.0
Number of births	3,405	NA	5,271

Note: Risk ratio is the ratio of the proportion dead among births in a specific high-risk category among the proportion dead of births *not in any high-risk category*. Figures in parentheses are based on 25-49 births; an asterisk indicates that a figure is based on fewer than 25 births and has been suppressed.
NA = Not applicable
[a] Women were assigned to risk categories according to the status they would have at the birth of a child if the child was conceived at the time of the survey: age less than 17 years and 3 months; age older than 34 years and 2 months; latest birth less than 15 months ago; and latest birth of order 3 or higher
[b] Includes sterilized women.

CHAPTER 8

MATERNAL AND CHILD HEALTH

This chapter presents findings related to maternal and child health (MCH) including antenatal and delivery care, immunization coverage, and childhood illnesses and treatment (i.e., acute respiratory infection, fever and diarrhea). This information can be used to identify groups of women and children who are "at risk" because of nonuse of services and to develop programs to supply services to those groups. The findings presented in this chapter are based on data obtained from women who had a live birth in the three years preceding the survey.

8.1 Antenatal Care

Coverage and Source of Care

Table 8.1 shows the percent distribution of births in the three years preceding the survey by source of antenatal care received during pregnancy, according to background characteristics. Interviewers were instructed to record all persons a woman had seen for care, but the statistics in Table 8.1 are based on the provider with the highest qualifications. For seven of ten births in Vietnam the mothers received antenatal care from a doctor (25 percent) or trained nurse or midwife (46 percent). Mothers received care from a traditional birth attendant (TBA) in only 1 percent of births. A significant finding is that mothers received no antenatal care for 28 percent of births.

Comparison with the ICDS-94 indicates that the utilization of antenatal services has increased during the last three years. The percentage of women giving birth, who received antenatal services from a doctor, nurse, or midwife, has increased from 55 percent in 1990-94 to 71 percent in 1995-97. The percent receiving no antenatal care decreased over the same period from 43 to 28 percent.

Women in the age group 20-34 are more likely to use antenatal services than older women (age 35 and above) or very young women (age less than 20). This is especially true with regard to care from doctors. Similarly, lower birth order is associated with greater use of services provided by medically trained health workers, especially doctors. Perhaps this pattern occurs because young women tend to be more educated than older women and are more likely to have knowledge about the benefits of antenatal care. It could also be that young primigravidae women are more anxious because of their lack of previous experience and are more likely to seek care from trained professionals.

There are substantial differences in the use of antenatal services between urban and rural areas. Overall, the percentage of women seeing trained medical staff is higher in urban than in rural areas (87 versus 68 percent) and urban women are using doctors much more frequently than rural women. In contrast, rural women are more likely to see trained nurses or midwives for antenatal care. Utilization of antenatal services is slightly higher in the non-project provinces than in the project provinces. Regionally, utilization is highest in the Red River Delta (87 percent of mothers having received antenatal care). The Central Coast and Central Highlands are comparatively underserved (about 40 percent of women having received no antenatal services).

Table 8.1 shows that as a woman's education increases, the likelihood that a woman will receive no antenatal care decreases sharply from 71 percent among births to women with no education to 9 percent among births to women who have completed higher secondary school. Use of a doctor for antenatal care increases

Table 8.1 Antenatal care

Percent distribution of live births in the three years preceding the survey by source of antenatal care during pregnancy, according to background characteristics, Vietnam 1997

Background characteristic	Antenatal care provider[1]				Total	Number of births
	Doctor	Nurse/ Midwife[2]	Traditional birth attendant	No one		
Mother's age at birth						
< 20	13.0	51.5	1.1	34.5	100.0	165
20-34	26.0	46.9	1.2	25.9	100.0	1,463
35+	22.7	35.7	0.4	41.3	100.0	191
Birth order						
1	34.3	42.2	1.2	22.2	100.0	661
2-3	21.2	51.7	1.1	25.9	100.0	816
4-5	12.9	44.7	0.4	42.0	100.0	248
6+	13.6	28.2	1.9	56.3	100.0	94
Residence						
Urban	64.4	22.9	0.0	12.7	100.0	261
Rural	17.8	50.0	1.3	30.9	100.0	1,558
Project province						
No	25.6	46.9	0.9	26.6	100.0	1,283
Yes	21.9	44.1	1.6	32.5	100.0	535
Region						
Northern Uplands	14.7	50.9	1.8	32.6	100.0	406
Red River Delta	26.0	61.3	0.0	12.6	100.0	302
North Central	8.2	61.9	2.1	27.8	100.0	249
Central Coast	22.8	36.8	0.0	40.5	100.0	246
Central Highlands	33.1	30.1	0.0	36.7	100.0	100
Southeast	47.0	34.8	0.0	18.2	100.0	205
Mekong River Delta	32.5	32.4	2.4	32.7	100.0	309
Mother's education						
No education	7.1	21.4	0.7	70.8	100.0	125
Some primary	16.8	32.3	0.9	50.0	100.0	343
Completed primary	24.8	51.6	1.2	22.4	100.0	601
Completed lower secondary	23.3	55.8	1.5	19.3	100.0	511
Completed higher secondary+	46.3	44.1	0.4	9.1	100.0	239
Total	24.5	46.1	1.1	28.3	100.0	1,818

[1] If the respondent mentioned more than one provider, only the most qualified provider is considered.
[2] Includes doctor's assistant.

from 7 percent among births to uneducated women to 46 percent among births to women who have completed higher secondary school.

Antenatal care can be more effective in avoiding adverse pregnancy outcomes when it is sought early in the pregnancy and continues through to delivery. Obstetricians generally recommend that antenatal visits be made on a monthly basis to the 28th week (seventh month), fortnightly to the 36th week (eighth month), and then weekly until the 40th week (i.e., the time of birth). If the first antenatal visit is made at the third month of pregnancy, this optimum schedule translates into a total of 12 or 13 visits during the pregnancy.

Information about the number and timing of antenatal visits made by pregnant women is presented in Table 8.2. The median number of visits among women who received antenatal care is two; 57 percent of women had more than one antenatal visit but only 15 percent had more than three visits. Among women who received antenatal care, the median duration of the pregnancy at the first visit was 4 months.

Table 8.2 Number of antenatal care visits and stage of pregnancy

Percent distribution of live births in the three years preceding the survey by the number of antenatal care (ANC) visits, and by the stage of pregnancy at the time of the first visit, Vietnam 1997

Number of visits and stage of pregnancy	Percent
Number of visits	
None	28.3
1	14.8
2-3	41.6
4+	15.2
Don't know/missing	0.1
Total	100.0
Median	1.9
Number of months pregnant at time of first visit	
No antenatal care	28.3
< 6 months	58.2
6-7 months	10.7
8+ months	2.8
Don't know/missing	0.0
Total	100.0
Median (women receiving ANC)	3.8
Number of births	1,818

Tetanus Toxoid Coverage

An important component of antenatal care is ensuring that pregnant women and children are adequately protected against tetanus. Tetanus toxoid injections are given during pregnancy for the prevention of neonatal tetanus, an important cause of death among infants. For full protection, a pregnant woman should receive two doses of the toxoid. However, if a woman has been vaccinated during a previous pregnancy, she may require only one dose during the current pregnancy.

Table 8.3 provides information on tetanus toxoid coverage during pregnancy for all births in the three years preceding the survey. For about half of all births (55 percent), mothers received two or more doses of tetanus toxoid during pregnancy, while 17 percent received one dose. For over one-quarter of births (28 percent), mothers did not receive any tetanus toxoid injections.

The differentials in tetanus toxoid coverage closely resemble those observed for antenatal care. Births to women in the age group 20-34, women with higher education, urban residence, and residence in the Red River Delta region are all associated with higher levels of tetanus toxoid coverage. Mothers of children who are birth order six or more are about twice as likely to have received no tetanus toxoid injections as mothers of children who are less than birth order six. There is little difference in coverage between project and non-project provinces. Unfortunately, for more than two in five births (44 percent) in the Central Highlands, mothers received no tetanus toxoid injections.

Table 8.3 Tetanus toxoid vaccination

Percent distribution of live births in the three years preceding the survey by number of tetanus toxoid vaccinations received during the pregnancy, according to background characteristics, Vietnam 1997

Background characteristic	None	One dose	Two or more doses	Don't know/ Missing	Total	Number of births
Mother's age at birth						
< 20	42.7	13.3	44.0	0.0	100.0	165
20-34	25.3	17.1	57.2	0.4	100.0	1,463
35+	38.8	17.9	43.3	0.0	100.0	191
Birth order						
1	28.8	14.2	56.9	0.1	100.0	661
2-3	24.4	18.0	57.0	0.7	100.0	816
4-5	29.2	21.4	49.5	0.0	100.0	248
6+	55.8	13.4	30.8	0.0	100.0	94
Residence						
Urban	13.6	17.2	68.8	0.4	100.0	261
Rural	30.7	16.8	52.2	0.3	100.0	1,558
Project province						
No	27.4	16.6	55.6	0.4	100.0	1,283
Yes	30.0	17.4	52.1	0.2	100.0	535
Region						
Northern Uplands	35.7	23.7	40.6	0.0	100.0	406
Red River Delta	12.8	14.1	73.1	0.0	100.0	302
North Central	22.8	16.7	60.5	0.0	100.0	249
Central Coast	27.6	13.0	59.3	0.0	100.0	246
Central Highlands	44.0	20.2	34.8	1.0	100.0	100
Southeast	26.4	14.8	58.1	0.7	100.0	205
Mekong River Delta	34.7	13.8	50.3	1.3	100.0	309
Mother's education						
No education	56.8	19.3	23.1	0.8	100.0	125
Some primary	42.6	18.3	38.9	0.2	100.0	343
Completed primary	26.4	18.8	54.1	0.7	100.0	601
Completed lower secondary	22.9	14.2	62.7	0.1	100.0	511
Completed higher secondary+	8.7	14.1	77.1	0.0	100.0	239
Total	28.3	16.8	54.6	0.4	100.0	1,818

8.2 Delivery Care

Place of Delivery

An important component of the effort to reduce the health risks of mothers and children is to increase the proportion of babies delivered under medical supervision. Proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that can cause the death or serious illness of the mother and/or the baby.

Respondents in the VNDHS-II were asked to report the place of delivery for all births occurring in the three years before the survey (Table 8.4). At the national level, three out of five births (62 percent) were delivered in health facilities, while the remaining births were delivered at home. This represents a modest increase from the statistic reported in the ICDS-94: 56 percent of births in the 10-year period 1984 to 1994 were delivered in a health facility (GSO, 1995).

Table 8.4 Place of delivery

Percent distribution of live births in the three years preceding the survey by place of delivery, according to background characteristics and number of antenatal care visits, Vietnam 1997

Background characteristic	Health facility	At home	Total	Number of births
Mother's age at birth				
< 20	49.9	50.1	100.0	165
20-34	63.6	36.4	100.0	1,463
35+	56.9	43.1	100.0	191
Birth order				
1	72.9	27.1	100.0	661
2-3	61.0	39.0	100.0	816
4-5	44.0	56.0	100.0	248
6+	35.9	64.1	100.0	94
Residence				
Urban	92.0	8.0	100.0	261
Rural	56.6	43.4	100.0	1,558
Project province				
No	62.4	37.6	100.0	1,283
Yes	60.1	39.9	100.0	535
Region				
Northern Uplands	30.2	69.8	100.0	406
Red River Delta	96.1	3.9	100.0	302
North Central	46.4	53.6	100.0	249
Central Coast	49.5	50.5	100.0	246
Central Highlands	47.8	52.2	100.0	100
Southeast	88.8	11.2	100.0	205
Mekong River Delta	78.0	22.0	100.0	309
Mother's education				
No education	31.8	68.2	100.0	125
Some primary	41.9	58.1	100.0	343
Completed primary	58.7	41.3	100.0	601
Completed lower secondary	72.9	27.1	100.0	511
Completed higher secondary+	89.3	10.7	100.0	239
Antenatal care visits				
None	40.7	59.3	100.0	515
1-3 visits	64.3	35.7	100.0	1,025
4+ visits	90.8	9.2	100.0	277
Don't know/missing	*	*	*	1
Total	61.7	38.3	100.0	1,818

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Older women (age 20-34) and low parity women are more likely than young women (less than 20 years) and high parity women (6+) to deliver at a health facility. A child born in an urban area is nearly twice as likely to have been delivered at a health facility than a rural child. There is little difference between project and non-project provinces by place of delivery. Children living in the Northern Uplands are much less likely to be delivered in a health facility than children living in the Red River Delta or the Southeast regions—30 percent compared with 96 percent and 89 percent, respectively. Use of delivery facilities rises sharply with maternal education from 32 percent of births among women with no education to 89 percent of births among women in the highest education category.

Women who receive antenatal services are more likely to deliver in a health facility. While the majority of births among women with no antenatal visits were delivered at home (59 percent), the majority of births among women with one or more antenatal visits were delivered in a health facility. In fact, only 9 percent of women with four or more antenatal visits delivered at home.

Assistance at Delivery

The level of assistance a woman receives during birth has important health consequences for both the mother and the child. Births delivered at home are more likely to be delivered without professional assistance, whereas births delivered at a health facility are more likely to be delivered by trained medical personnel. Table 8.5 shows that three out of four births (77 percent) were delivered under the supervision of a doctor (27 percent) or trained nurse or midwife (50 percent). This has changed only slightly from the 73 percent reported in ICDS-94 (GSO, 1995). Traditional birth attendants assisted in the delivery of 12 percent of births while another 11 percent of births were assisted by relatives and others.

Table 8.5 Assistance during delivery

Percent distribution of live births in the three years preceding the survey by type of assistance during delivery, according to background characteristics and number of antenatal care visits, Vietnam 1997

	Attendant assisting during delivery[1]						
Background characteristic	Doctor	Nurse/ Midwife[2]	Traditional birth attendant	Relative/ Other	No one	Total	Number of births
Mother's age at birth							
< 20	16.2	59.6	11.1	12.6	0.5	100.0	165
20-34	28.3	49.0	11.8	10.8	0.2	100.0	1,463
35+	26.3	50.4	12.9	10.0	0.4	100.0	191
Birth order							
1	38.8	46.3	7.3	7.5	0.1	100.0	661
2-3	21.8	54.7	12.5	10.8	0.2	100.0	816
4-5	17.9	48.7	17.3	15.3	0.7	100.0	248
6+	12.1	40.0	24.0	23.9	0.0	100.0	94
Residence							
Urban	74.7	23.8	0.7	0.8	0.0	100.0	261
Rural	19.0	54.5	13.7	12.6	0.3	100.0	1,558
Project province							
No	28.5	49.5	11.6	10.3	0.2	100.0	1,283
Yes	23.2	51.6	12.5	12.4	0.3	100.0	535
Region							
Northern Uplands	17.9	39.9	7.3	34.8	0.2	100.0	406
Red River Delta	33.7	66.0	0.0	0.4	0.0	100.0	302
North Central	10.8	67.9	12.3	8.6	0.4	100.0	249
Central Coast	19.0	46.4	28.2	6.4	0.0	100.0	246
Central Highlands	24.0	40.5	24.5	11.0	0.0	100.0	100
Southeast	53.1	39.9	5.0	0.9	1.1	100.0	205
Mekong River Delta	35.3	46.4	16.5	1.8	0.0	100.0	309
Mother's education							
No education	14.5	21.6	24.0	39.4	0.5	100.0	125
Some primary	12.9	48.5	18.3	20.0	0.2	100.0	343
Completed primary	24.8	52.5	13.3	9.0	0.4	100.0	601
Completed lower secondary	28.9	58.7	8.0	4.4	0.0	100.0	511
Completed higher secondary+	55.0	42.7	0.8	1.5	0.0	100.0	239
Antenatal care visits							
None	14.5	42.8	21.8	20.4	0.5	100.0	515
1-3 visits	25.9	55.6	9.3	9.0	0.2	100.0	1,025
4+ visits	54.1	42.7	2.9	0.2	0.0	100.0	277
Don't know/missing	*	*	*	*	*	*	1
Total	27.0	50.1	11.9	10.9	0.2	100.0	1,818

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] If the respondent mentioned more than one provider, only the most qualified provider is considered.
[2] Includes doctor's assistant.

Women less than 20 years of age are more likely to have received delivery assistance from a trained nurse or midwife than older women, who are more likely to have been assisted by a doctor. Similarly, first births are more frequently delivered under a doctor's supervision than higher order births.

Urban women are much more likely than rural women to receive the benefit of medical supervision during delivery; births in urban areas are 4 times more likely to be delivered with the assistance of a doctor than births in rural areas. Also, as seen with place of delivery, more educated women and women living in the Southeast region are much more likely to have the advantage of a medically-supervised delivery.

Supervision of births by a doctor is positively related to the number of antenatal care visits. Only 14 percent of births to women who had no antenatal care visits were attended by a doctor, in contrast to 26 percent of births to women who had 1-3 visits and 54 percent of births to women who had 4 or more visits.

Characteristics of Delivery

According to mothers' reports, only 3 percent of babies born in Vietnam are delivered by caesarean section (Table 8.6). Caesarean sections (C-sections) are less common among very young women, women

Table 8.6 Delivery characteristics: Caesarean section, birth weight and birth size

Among births in the three years preceding the survey, the percentage of deliveries by caesarean section, and the percent distribution by birth weight and by mother's estimate of baby's size at birth, according to background characteristics, Vietnam 1997

Background characteristic	Delivery by C-section	Birth weight: Less than 2.5 kg	Birth weight: 2.5 kg or more	Birth weight: Don't know/ Missing	Size of child at birth: Very small	Size of child at birth: Smaller than average	Size of child at birth: Average or larger	Size of child at birth: Don't know/ Missing	Number of births
Mother's age at birth									
< 20	1.4	3.7	43.4	52.9	2.4	15.7	81.9	0.0	165
20-34	3.5	4.6	55.1	40.4	1.7	10.2	87.5	0.6	1,463
35+	4.9	10.3	41.0	48.6	1.9	11.5	86.2	0.4	191
Birth order									
1	5.4	7.0	62.2	30.7	2.2	14.1	83.3	0.3	661
2-3	2.8	3.4	53.7	42.9	1.4	8.4	90.0	0.3	816
4-5	1.1	5.1	32.3	62.6	2.1	10.9	85.4	1.6	248
6+	1.7	6.4	27.8	65.8	2.1	9.1	88.0	0.8	94
Residence									
Urban	12.2	3.9	87.6	8.5	1.2	6.3	92.2	0.3	261
Rural	2.0	5.3	46.7	48.0	1.9	11.6	86.0	0.5	1,558
Project province									
No	3.8	5.3	53.2	41.5	1.5	11.5	86.5	0.5	1,283
Yes	2.5	4.7	51.0	44.4	2.5	9.4	87.6	0.5	535
Region									
Northern Uplands	1.3	1.0	23.5	75.5	0.3	7.5	92.1	0.0	406
Red River Delta	3.2	6.4	84.7	8.9	3.6	11.2	85.3	0.0	302
North Central	1.5	4.3	34.5	61.2	0.4	13.1	86.5	0.0	249
Central Coast	1.4	4.2	42.9	52.9	4.0	15.4	78.9	1.6	246
Central Highlands	1.6	1.4	42.7	55.9	2.7	13.2	81.3	2.8	100
Southeast	11.7	7.4	78.0	14.6	0.4	10.5	89.1	0.0	205
Mekong River Delta	4.9	10.2	67.6	22.1	2.0	8.9	88.4	0.7	309
Mother's education									
No education	2.7	10.7	20.0	69.3	4.6	17.9	76.7	0.8	125
Some primary	1.9	7.7	32.1	60.3	3.3	11.8	83.9	1.1	343
Completed primary	2.7	3.6	50.6	45.8	1.4	8.8	89.1	0.7	601
Completed lower secondary	3.4	4.4	62.9	32.7	0.7	12.5	86.7	0.1	511
Completed higher secondary+	7.9	3.8	81.7	14.6	1.4	7.3	91.3	0.0	239
Total	3.4	5.1	52.5	42.4	1.8	10.8	86.9	0.5	1,818

with a large number of children, rural women, and those with little or no education. The Southeast region had an exceptionally high percentage of births delivered by C-section (12 percent).

Respondents were also asked for the weight of their child at birth. For a significant number of children (42 percent), mothers did not know the birth weight. However, for the children for which birth weight was reported, the birth weight was 2.5 kilograms or more in 9 out of 10 cases. Mothers were also asked for their own subjective assessment of whether their child was very large, larger than average, average, smaller than average, or very small in size at birth. While information of this type is subject to considerable error for individual births, at the population level, the proportion of births that are reported as very small or small is strongly correlated with the prevalence of low birth weight. The VNDHS-II data indicate that about 13 percent of births were reported as being very small or smaller than average at birth, and that such births are associated with low educational level of the mother and residence in the Central Coastal region (Table 8.6).

8.3 Vaccination of Children

The VNDHS-II collected information on vaccination coverage for all surviving children who were born in the three years preceding the survey. The data presented here are for children age 12-23 months, the youngest cohort of children who have reached the age by which they should be fully vaccinated. The Vietnamese Government is closely following the guidelines of the Expanded Program on Immunization set by the World Health Organization. In order to be considered fully vaccinated, a child should receive the following vaccinations: one dose of BCG, three doses each of DPT and polio, and one dose of measles vaccine.[1]

Information on vaccination coverage was collected in two ways: from children's health cards seen by the interviewer and from mothers' verbal reports. If a mother was able to present a health card to the interviewer, this was used as the source of information, with the interviewer recording vaccination dates directly from the card. In addition to collecting vaccination information from cards, there were two ways of collecting the information from the mother herself. Even in cases when the mother had a health card, she was asked if the child had received any vaccinations which were not recorded on the card. If the mother was not able to provide a card for the child at all, she was asked to recall whether or not the child had received BCG, polio and DPT (including the number of doses for each), and measles vaccinations. In the VNDHS-II, mothers were able to provide health cards for only 13 percent of children 12-23 months of age.

Information on vaccination coverage is presented in Table 8.7, according to the source of information used to determine coverage, i.e., the child health card or mother's report. Thirteen percent of children age 12-23 months had a BCG vaccination recorded on their health card. However, not all children who are vaccinated have cards available since health cards are often retained at the health centers; an additional 77 percent of children did not have a card but were reported by their mothers to have received the BCG vaccine. Thus, overall, 90 percent of children age 12-23 months are reported to have been vaccinated against tuberculosis. Vaccinations are most effective when given at the proper age; according to the health cards, 87 percent of children received the BCG vaccine by 12 months of age.

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[1] BCG, which should be given at birth or first clinical contact, protects against tuberculosis. DPT protects against diphtheria, pertussis, and tetanus. DPT and polio require three vaccinations at approximately 6, 10 and 14 weeks of age. (Since this regime is not always followed, emphasis is placed on getting all three doses by the time the child reaches the age of 12 months.) Measles should be given at or soon after reaching nine months. It is recommended that children receive the complete schedule of vaccinations before 12 months of age.

Table 8.7 Vaccinations by source of information

Percentage of children 12-23 months who have received specific vaccines at any time before the survey, by source of information about vaccinations, and the percentage vaccinated by 12 months of age, Vietnam 1997

	Percentage of children who received:												Number of children
		DPT			Polio								
Source of information	BCG	1	2	3+	0	1	2	3+	Measles	All[1]	None	Total	
Vaccinated at any time before the survey	12.6	13.3	12.6	10.4	3.0	13.1	12.6	10.5	11.0	9.3	0.0	13.3	84
Vaccination card	76.9	78.8	74.2	55.5	14.8	82.0	74.3	50.7	66.1	47.4	3.5	86.7	547
Mother's report	89.5	92.1	86.9	65.9	17.8	95.1	86.9	61.2	77.1	56.8	3.5	100.0	631
Either source													
Vaccinated by 12 months of age	87.1	90.7	86.9	65.1	17.8	93.6	86.9	60.4	67.5	50.4	4.9		631

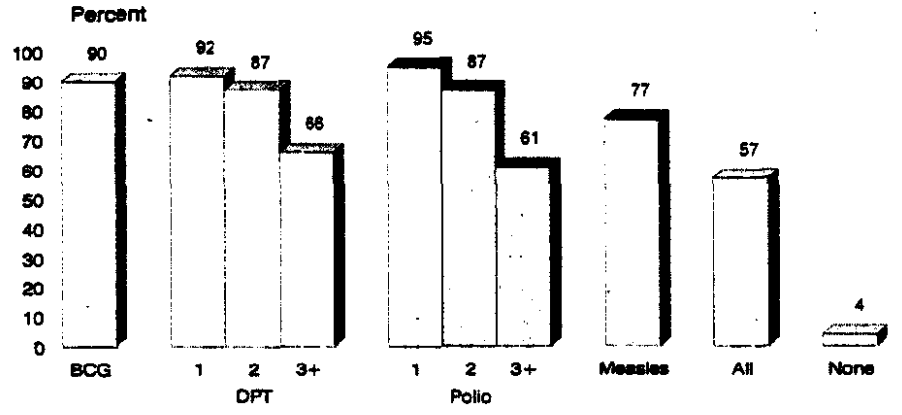
Note: For children whose information was based on mothers' reports, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccination.

[1] Children who are fully vaccinated (i.e., those who have received BCG, measles, and three doses each of DPT and polio).

Coverage for the first doses of DPT and polio is slightly higher than for BCG—92 percent and 95 percent, respectively (Figure 8.1). Coverage declines after the first dose, and dropout rates are high. For polio, coverage falls to 87 percent for the second dose and to 61 percent for the third dose; therefore, one-third of children who start the polio series do not complete it. The dropout rate is similar for the DPT series, which is as expected since polio and DPT are commonly administered together. Seventy-seven percent of children age 12-23 months were vaccinated against measles.

Overall, 57 percent of children age 12-23 months had all the recommended vaccinations, 50 percent before their first birthday. Less than 4 percent of children age 12-23 months had not received any vaccinations.

Figure 8.1
Vaccination Coverage Among Children Age 12-23 Months, Vietnam 1997



Note: Based on health card information and mothers' reports.

Differentials in Vaccination Coverage

Table 8.8 presents vaccination coverage (according to information from health cards and mothers' reports) among children age 12-23 months by selected background characteristics. In general, there is little difference in full immunization coverage by sex of the child or by whether the children lived in a project or non-project province.

The most significant differences in the percentage of children fully immunized are by residence, region, and mother's education. Children in urban areas are much more likely to be fully immunized than rural children (69 versus 54 percent). Coverage is highest in the Red River Delta (69 percent) and lowest in the North Central region (45 percent). Maternal education is strongly linked to immunization status: 70 percent of children whose mothers had completed higher secondary school are fully vaccinated, compared with only 49 percent of children whose mothers had no education.

Table 8.8 Vaccinations by background characteristics

Percentage of children age 12-23 months who have received specific vaccines by the time of the survey (according to the vaccination card or the mother's report), and the percentage with a vaccination card, according to background characteristics, Vietnam 1997

Background characteristic	Percentage of children who received:											Percentage with a card	Number of children
		DPT			Polio				Measles				
	BCG	1	2	3+	0	1	2	3+		All[1]	None		
Child's sex													
Male	88.0	90.6	85.2	63.4	17.8	94.0	84.2	59.0	76.2	55.6	4.8	13.4	340
Female	91.4	93.9	88.8	68.8	17.8	96.4	90.2	63.7	78.2	58.1	2.0	13.2	291
Birth order													
1	95.7	95.2	90.0	70.4	20.4	96.4	89.5	66.2	81.4	62.9	2.1	17.1	231
2-3	88.9	92.7	86.9	64.1	17.7	96.0	86.3	59.2	77.9	53.7	2.4	12.9	270
4-5	80.1	87.2	82.5	59.1	9.7	94.0	86.0	56.3	68.1	50.9	6.0	4.9	96
6+	79.5	79.7	77.4	69.5	23.5	82.3	77.4	56.0	67.2	56.3	14.8	14.3	33
Residence													
Urban	96.5	97.8	94.6	77.5	37.4	97.4	86.3	68.2	85.5	69.4	1.7	25.9	101
Rural	88.2	91.0	85.4	63.7	14.0	94.7	87.1	59.8	75.5	54.3	3.8	10.9	530
Project province													
No	90.8	93.0	88.7	68.5	21.0	96.1	88.3	61.5	77.9	58.9	3.0	16.2	450
Yes	86.4	89.8	82.4	59.5	9.8	92.7	83.5	60.4	75.2	51.4	4.7	6.1	181
Region													
Northern Uplands	88.4	95.5	90.7	66.4	7.4	96.4	91.7	65.9	84.1	57.6	3.0	5.6	135
Red River Delta	93.8	96.9	92.9	70.1	10.3	98.7	94.9	72.9	92.1	68.6	1.3	15.6	97
North Central	92.3	93.6	86.8	58.7	7.0	94.7	86.7	56.4	75.3	44.6	2.5	1.4	71
Central Coast	88.0	90.1	86.1	61.6	16.2	92.2	88.2	59.7	61.3	45.8	7.0	15.6	99
Central Highlands	77.6	80.7	77.6	65.4	14.5	88.1	78.7	66.4	66.9	53.7	8.8	12.1	32
Southeast	93.0	94.6	90.9	70.1	51.7	94.6	78.1	42.1	84.7	62.9	2.0	15.0	76
Mekong River Delta	88.0	86.6	78.4	67.4	22.6	95.5	82.1	61.0	69.2	59.3	3.0	24.4	121
Mother's education													
No education	80.0	78.1	66.2	60.8	11.2	88.2	79.2	63.6	65.1	48.6	9.4	4.2	40
Some primary	80.0	86.2	78.6	56.1	15.7	90.5	77.9	51.6	62.4	46.7	8.7	9.8	119
Completed primary	90.9	93.8	91.3	66.8	15.3	97.0	90.1	64.7	75.0	53.4	1.9	12.6	217
Completed lower secondary	92.0	94.7	87.6	68.3	20.4	95.7	86.3	60.1	85.2	63.3	2.2	16.3	173
Completed higher secondary+	99.2	97.5	95.7	75.3	25.0	98.8	96.8	66.8	93.1	70.4	0.0	18.5	82
Total	89.5	92.1	86.9	65.9	17.8	95.1	86.9	61.2	77.1	56.8	3.5	13.3	631

[1] Children who are fully vaccinated (i.e., those who have received BCG, measles, and three doses each of DPT and polio).

8.4 Childhood Illness and Treatment

Acute Respiratory Infection

Pneumonia, or acute respiratory infection (ARI), is a leading cause of childhood mortality in developing countries. Early diagnosis of ARI and treatment with antibiotics can prevent a large proportion of deaths due to pneumonia. Accordingly, health programs in developing countries place emphasis on the recognition of signs of ARI so that appropriate medical help can be sought.

The symptoms of ARI for a sick child are a cough accompanied by short rapid breathing. In the VNDHS-II, mothers of children under age three were asked if their child had these symptoms in the two weeks preceding the survey and if medical treatment was sought. It should be borne in mind that morbidity data collected in this manner are subjective (i.e., they are based on the mother's perception of illness and not validated by medical personnel) and that the prevalence of ARI is subject to seasonality.

Table 8.9 shows that 14 percent of children under three years of age were reported to have symptoms compatible with ARI at some time in the two weeks preceding the survey. The prevalence of ARI is higher among male children (17 percent) than female children (11 percent). The prevalence of ARI is also higher among children in rural areas than urban areas. Children living in the Central Coast region are least likely to show symptoms of ARI (8 percent) in contrast to children living in the Northern Uplands and the Red River Delta regions (19 and 18 percent, respectively).

Use of a health facility for treatment when a child has symptoms compatible with ARI is high in Vietnam; more than 2 out of 3 children (69 percent) with symptoms were taken to a health facility. Male children are more likely to be treated at a health facility than female children. Children in urban areas and children in the Red River Delta are most likely to be taken to a health facility for treatment. Children of more educated mothers are also more likely to receive treatment in a facility than children of less educated women.

Fever

A major manifestation of acute infection in children is fever. In the VNDHS-II, mothers were asked whether their children under age three had a fever in the two weeks preceding the survey. Table 8.9 shows that 21 percent of children were reported to have had fever in the last two weeks. Prevalence of fever peaks at 26 percent among children age 6-23 months. Differentials by sex, urban-rural residence, project province status, and education are either negligible or show no clear pattern. However, there is significant variation in the prevalence of fever among regions. Fever is most prevalent in the Red River Delta and Northern Uplands regions (nearly 30 percent in each) and much less prevalent in the North Central and Southeast regions (less than 15 percent in each).

Diarrhea

Dehydration caused by severe diarrhea is a major cause of morbidity and mortality among young children. A simple and effective response to dehydration is a prompt increase in fluid intake, that is, oral rehydration therapy (ORT). Rehydration therapy may include the use of a solution prepared from packets of oral rehydration salts (ORS) or recommended home fluids (RHF) such as sugar-salt-water solution.

In Vietnam, the Ministry of Health utilizes both preventive as well as curative strategies to minimize the effect of diarrhea on child health. The Ministry emphasizes health education programs to reduce the incidence of diarrhea among children, and promotes the use of oral rehydration therapy mostly through ORS.

Table 8.9 Prevalence and treatment of acute respiratory infection and prevalence of fever

Percentage of children under three years who were ill with a cough accompanied by rapid breathing during the two weeks preceding the survey, and the percentage of ill children who were taken to a health facility, and the percentage of children with fever, by background characteristics, Vietnam 1997

Background characteristic	Percentage of children with cough accompanied by rapid breathing (ARI)	Among children with ARI symptoms, percentage taken to a health facility or provider	Percentage of children with fever	Number of children
Child's age				
< 6 months	8.9	*	14.8	240
6-11 months	11.8	(55.8)	26.4	289
12-23 months	17.1	74.6	25.7	631
24-35 months	14.3	67.4	16.5	609
Child's sex				
Male	16.9	71.6	22.1	913
Female	11.3	64.5	20.1	856
Birth order				
1	15.9	72.9	22.8	639
2-3	12.5	64.6	20.0	801
4-5	17.1	72.3	24.2	241
6+	7.9	*	11.4	88
Residence				
Urban	11.0	(76.3)	20.6	255
Rural	14.7	67.9	21.2	1,513
Project province				
No	14.0	69.5	20.3	1,249
Yes	14.6	67.3	23.3	520
Region				
Northern Uplands	19.1	53.2	27.3	387
Red River Delta	18.3	82.8	29.7	298
North Central	10.8	(80.1)	13.7	242
Central Coast	8.3	*	15.9	243
Central Highlands	11.0	*	19.2	94
Southeast	10.3	*	14.7	203
Mekong River Delta	14.7	(66.4)	19.9	302
Mother's education				
No education	10.8	*	16.4	118
Some primary	18.4	60.4	23.2	335
Completed primary	12.6	71.0	20.1	581
Completed lower secondary	15.4	76.3	23.3	500
Completed higher secondary+	10.8	(86.7)	18.5	235
Total	14.2	68.9	21.1	1,769

Note: Figures in parentheses are based on 25-49 unweighted cases; an asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

In the VNDHS-II, women who had a birth in the three years preceding the survey were asked about their knowledge of ORS and treatment of diarrhea in general. For all children under three years who experienced a bout of diarrhea in the last two weeks, mothers were asked whether there was blood in the stools, whether fluid intake was increased or decreased, whether the child was given ORS, and what else was given to treat the child's diarrhea. Since the incidence of diarrhea in Vietnam is seasonal, care should be taken in the interpretation of the data.

Table 8.10 presents data on the prevalence of diarrhea in children under three years of age. Ten percent of children had experienced diarrhea at some time in the two weeks preceding the survey; less than 1 percent of children had experienced bloody diarrhea which can be an indication of dysentery. Diarrhea prevalence increases with age to peak at age 6-11 months (17 percent) then falls at older ages. A similar

pattern is observed for bloody diarrhea.

Diarrhea and bloody diarrhea are more prevalent among male children and children living in rural areas. They are least prevalent in the Southeast region (4 percent) and more prevalent in other regions especially in the Northern Uplands, North Central, Central Coastal, and Mekong River Delta regions (11 to 12 percent in each). The relationship between maternal education and diarrheal prevalence in children is marked, especially with regard to bloody diarrhea. It ranges from nil among children of women who have completed higher secondary education to about 3 percent among women with little or no education.

Table 8.10 Prevalence of diarrhea

Percentage of children under three years of age with diarrhea and diarrhea with blood during the two weeks preceding the survey, by background characteristics, Vietnam 1997

Background characteristic	Diarrhea in the preceding two weeks		Number of children[1]
	All diarrhea	Diarrhea with blood	
Child's age			
< 6 months	8.1	0.7	240
6-11 months	16.8	1.9	289
12-23 months	11.4	1.3	631
24-35 months	6.2	0.1	609
Child's sex			
Male	11.7	1.2	913
Female	8.4	0.6	856
Birth order			
1	10.1	0.5	639
2-3	10.3	1.3	801
4-5	10.9	1.2	241
6+	5.8	0.0	88
Residence			
Urban	5.8	0.7	255
Rural	10.8	1.0	1,513
Project province			
No	10.4	1.0	1,249
Yes	9.3	0.8	520
Region			
Northern Uplands	11.6	0.4	387
Red River Delta	9.6	0.0	298
North Central	10.6	0.3	242
Central Coast	11.2	2.0	243
Central Highlands	8.1	0.0	94
Southeast	4.1	0.9	203
Mekong River Delta	11.8	2.6	302
Mother's education			
No education	13.7	2.5	118
Some primary	13.0	2.4	335
Completed primary	8.4	0.6	581
Completed lower secondary	10.3	0.3	500
Completed higher secondary+	7.7	0.0	235
Total	10.1	0.9	1,769

[1] Includes diarrhea in the past 24 hours.

General knowledge of ORS is far from universal among mothers in Vietnam (Table 8.11). Only one in two mothers who gave birth in the last three years knows about ORS (52 percent). Regarding specific eating and drinking regimes for sick children, the findings are not encouraging. Nineteen percent of recent mothers reported that a child should get less to drink. However, 61 percent correctly said that the child should receive more to drink.

Differentials concerning mothers' knowledge of appropriate feeding patterns during a diarrhea episode indicate that the percentage who report that a child should receive greater amounts of liquids is smaller among younger mothers, those living in rural areas and in project provinces, and among women with less education. Additionally, the Northern Uplands stands out as an area where rather few mothers know that children with diarrhea with should be given more liquids than usual.

Table 8.12 presents data on the types of treatment received by children with diarrhea in the two weeks preceding the survey. The VNDHS-II indicates that one out of two children with diarrhea (50 percent) were taken to a health facility or health provider for treatment.

Forty percent of children with diarrhea were given a solution prepared from an ORS packet, while 21 percent were treated with recommended home fluids (RHF). Only 54 percent of children with diarrhea were given more to drink than before the diarrhea. Overall, 28 percent of children received neither oral rehydration therapy (ORS or RHF) nor increased fluids. One in three children with diarrhea was given antibiotics, and 18 percent were provided some sort of home-based traditional remedies.

Because of the relatively few cases of diahrrea in the two weeks preceding the survey for population subgroups, little can be confidently stated about treatment differentials by background characteristics.

Table 8.11 Knowledge of diarrhea care

Percentage of women with births in the three years preceding the survey who know about the use of oral rehydration salts (ORS) for treatment of diarrhea, and the percent distribution by opinion on appropriate feeding practices during diarrhea, according to background characteristics, Vietnam 1997

		Quantities that should be given during diarrhea								
		Liquids				Solid foods				
Background characteristic	Know about ORS packets	Less	Same	More	Don't know/ Missing	Less	Same	More	Don't know/ Missing	Number of women
Age										
15-19	29.7	20.4	18.9	49.5	11.2	65.0	18.7	5.2	11.2	58
20-24	47.2	20.1	14.6	58.8	6.5	51.5	34.0	8.3	6.3	495
25-29	56.8	20.2	16.5	60.8	2.5	59.2	29.8	8.4	2.6	506
30-34	57.9	19.0	14.8	62.1	4.0	56.1	33.9	5.7	4.3	361
35+	51.1	15.9	16.4	66.2	1.5	61.3	32.5	4.4	1.9	240
Residence										
Urban	71.1	8.1	12.9	77.8	1.2	51.3	37.1	10.7	0.9	245
Rural	49.2	21.2	16.1	58.0	4.7	57.7	31.1	6.4	4.8	1,416
Project province										
No	53.2	16.3	15.3	64.9	3.5	56.6	32.0	7.4	3.9	1,165
Yes	50.4	26.4	16.4	51.4	5.8	56.9	31.8	6.2	5.0	496
Region										
Northern Uplands	40.2	35.0	21.8	39.1	4.1	54.2	37.2	5.0	3.6	360
Red River Delta	69.2	25.8	9.0	61.7	3.5	63.5	22.8	10.2	3.5	287
North Central	61.2	28.9	16.8	53.2	1.1	51.1	42.9	4.7	1.4	231
Central Coast	31.5	7.4	14.1	75.0	3.5	68.8	21.0	6.3	3.9	223
Central Highlands	24.9	14.9	20.5	53.4	11.3	48.6	35.1	6.0	10.2	85
Southeast	57.3	5.0	10.1	83.1	1.8	59.7	26.0	12.5	1.8	187
Mekong River Delta	64.9	5.2	16.8	70.5	7.5	48.7	37.1	6.0	8.2	288
Mother's education										
No education	22.8	16.9	26.4	46.5	10.2	53.0	32.3	4.4	10.3	106
Some primary	33.3	22.0	17.4	55.9	4.7	62.0	27.4	5.2	5.4	313
Completed primary	47.1	18.3	16.8	60.1	4.9	57.3	32.8	5.3	4.6	544
Completed lower secondary	64.8	21.2	15.1	60.4	3.3	54.5	34.2	8.3	3.0	471
Completed higher secondary+	79.5	15.0	6.5	77.7	0.8	54.5	31.3	12.5	1.7	227
Total	52.4	19.3	15.6	60.9	4.2	56.7	31.9	7.1	4.3	1,661

Table 8.12 Treatment of diarrhea

Among children under three years who had diarrhea in the two weeks preceding the survey, the percentage taken for treatment to a health facility or provider, the percentage who received oral rehydration therapy (ORT), the percentage who did not receive ORT, and the percentage given other treatments, according to background characteristics, Vietnam 1997

Background characteristic	Percentage taken to a health facility or provider	Oral rehydration therapy (ORT)			Increased fluids	Neither ORT nor increased fluids	Other treatment			No treatment	Number of children
		ORS packet	RHF	Either ORS or RHF			Antibiotics	Injection	Home remedy/ Other		
Child's age											
< 6 months	*	*	*	*	*	*	*	*	*	*	19
6-11 months	(43.6)	(29.8)	(15.9)	(43.8)	(57.0)	(27.8)	(26.0)	(4.1)	(19.2)	(18.3)	48
12-23 months	41.2	46.5	19.3	54.8	54.5	31.2	27.3	6.5	18.1	14.6	72
24-35 months	(76.1)	(44.4)	(36.9)	(58.1)	(51.5)	(19.1)	(53.4)	(0.0)	(11.1)	(9.9)	38
Child's sex											
Male	54.5	41.4	26.1	54.6	49.2	29.0	33.8	2.6	20.2	15.3	106
Female	44.3	37.1	13.6	45.3	62.0	26.2	32.7	5.4	13.6	14.9	72
Birth order											
1	62.1	43.9	18.0	55.3	53.1	26.4	39.0	4.1	15.1	12.8	64
2-3	41.0	32.8	27.0	48.0	63.3	21.8	27.3	0.9	20.1	13.1	82
4-5	(54.5)	(52.5)	(13.9)	(52.5)	(37.3)	(45.1)	(39.3)	(12.6)	(19.2)	(22.1)	26
6+	*	*	*	*	*	*	*	*	*	*	5
Project province											
No	51.0	39.2	24.6	51.5	52.9	26.2	33.4	3.2	17.6	13.2	129
Yes	48.9	41.1	11.6	49.1	58.1	32.3	33.2	5.1	17.5	20.3	49
Total	50.4	39.7	21.0	50.8	54.3	27.9	33.3	3.8	17.6	15.1	178

Note: Figures in parentheses are based on 25-49 unweighted cases; an asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
ORS = Oral rehydration salts
RHF = Recommended home fluids

CHAPTER 9

INFANT FEEDING

Infant feeding practices have important and well-established consequences for the health of a child and the fecundity status of its mother. Worldwide, breastfeeding is advocated by health personnel for young infants because it is more nutritious, more hygienic, and cheaper than alternative feeding methods. Moreover, breastfeeding following childbirth may have the effect of extending a woman's postpartum anovulatory period thus affording temporary protection against prematurely becoming pregnant again.

To measure breastfeeding practices, mothers were asked a series of questions for each birth occurring in the three years preceding the survey. Mothers were asked if the child was breastfed and, if so, how long after childbirth breastfeeding was initiated. For surviving children additional questions were asked to determine if the mother was still breastfeeding, and, if not, how long she had breastfed each child and why she stopped. Mothers who were still breastfeeding were asked questions about the frequency of breastfeeding and about supplemental feeding.

9.1 Prevalence of Breastfeeding

The data in Table 9.1 indicate that breastfeeding is very common in Vietnam. Overall, 98 percent of Vietnamese children are breastfed for some period of time (1 percentage point higher than was reported in ICDS-94). Differentials in the proportion of children breastfed are small; at least 94 percent of children in every subgroup are breastfed.

An important aspect of breastfeeding is the timing of its initiation. Early initiation of breastfeeding is important for both the mother and the child. From the mother's perspective, early suckling stimulates the release of a hormone that helps the uterus achieve a contracted state. From the child's perspective, the first breast milk (colostrum) is important since it is very rich in antibodies. Thus, health professionals advocate starting breastfeeding within the first hour after the child is born. This practice is advocated by the Ministry of Health as part of its breastfeeding promotion campaign and has been part of earlier activities, including those of the Primary Health Care Program.

The timing of initiation of breastfeeding is also examined in Table 9.1. In VNDHS-II, 28 percent of recent mothers reported initiating breastfeeding within an hour of giving birth and 83 percent reported initiating breastfeeding within one day of birth. The proportion of women who reported starting breastfeeding within an hour after childbirth is significantly higher in the VNDHS-II than in the ICDS-94 (18 percent, General Statistical Office, 1996f).

The most striking differentials in the initiation of breastfeeding are by region and educational attainment. Only 16 percent of children in the Mekong River Delta and 18 percent children in the Central Highlands were breastfed within an hour following childbirth compared with 40 percent of children in the Red River Delta. By educational attainment, only 15 percent of children of women with no education or with some primary education breastfed their children in the first hour after childbirth compared with 36 percent of children of women who had completed higher secondary education.

Table 9.1 Time at initiation of breastfeeding

Percent of all children born in the three years before the survey who were ever breastfed and who started breastfeeding within one hour and one day of birth, according to background characteristics, Vietnam 1997

Background characteristic	Percentage ever breastfed	Percentage who started breastfeeding: Within 1 hour of birth	Within 1 day of birth	Number of children
Sex				
Male	97.0	29.6	81.2	945
Female	98.6	26.2	84.5	874
Residence				
Urban	94.3	27.4	85.6	261
Rural	98.3	28.0	82.4	1558
Project province				
No	97.8	29.0	83.8	1283
Yes	97.7	25.3	80.6	535
Region				
Northern Uplands	98.2	33.3	87.6	406
Red River Delta	99.4	40.3	86.9	302
Complete lower secondary	98.2	32.9	87.3	511
Completed higher secondary +	97.6	36.0	90.3	239
Place of delivery				
Health facility	97.0	29.8	83.4	1122
At home	99.0	24.9	81.9	697
Total	97.8	27.9	82.8	1818

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9.2 Supplementation

Breast milk alone is considered to be a nutritionally ideal food during the first four to six months of infancy. Neither plain water, other liquids, or solid or semi-solid foods are recommended by health specialists during early infancy. Children who follow these recommendations and receive breast milk only are defined as exclusively breastfed. Children who are given breast milk and plain water only are defined as fully breastfed. The breastfeeding promotion campaign in Vietnam recommends that children be exclusively breastfed during the first four months of life and that no solid food be given before 6 months of age.

9.2 Supplementation

months of life and that no solid food be given before 6 months of age.

In the VNDHS-II, mothers who were breastfeeding a child were asked whether various types of liquids or solid foods were given to the child at any time during the preceding day or night. This information is used to determine the proportion of children who are exclusively breastfeeding, breastfeeding and receiving supplemental foods, or not breastfeeding at all, by age in months.

Information on exclusive breastfeeding and the supplementary feeding status of children is presented in Table 9.2 and Figure 9.1 by age in months. The data indicate that 54 percent of children less

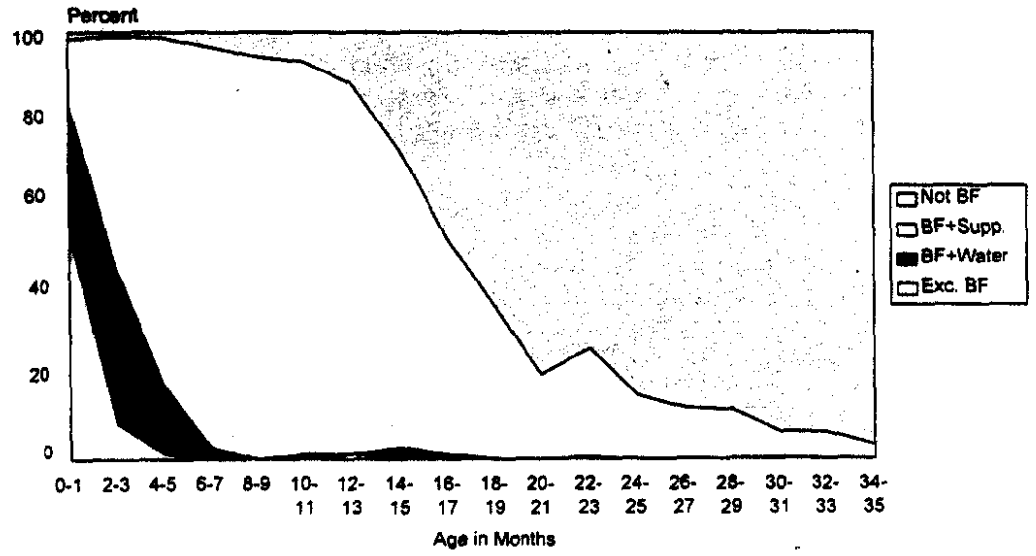
Table 9.2 Breastfeeding status

Percent distribution of living children by breastfeeding status, according to child's current age in months, Vietnam 1997

	Percentage of living children who are:					
			Breastfeeding and:			
Age in months	Not breast-feeding	Exclusively breastfed	Plain water only	Supple-ments	Total	Number of living children
0-1	1.6	53.5	29.6	15.2	100.0	59
2-3	1.1	8.6	35.6	54.7	100.0	85
4-5	1.4	1.3	16.2	81.2	100.0	96
6-7	3.5	0.0	2.8	93.7	100.0	96
8-9	5.8	0.0	0.0	94.2	100.0	88
10-11	7.0	0.0	1.2	91.8	100.0	106
12-13	12.5	0.0	0.0	86.3	100.0	100
14-15	27.5	0.0	2.9	69.7	100.0	96
16-17	48.5	0.0	1.1	50.4	100.0	88
18-19	64.3	0.0	0.0	35.7	100.0	86
20-21	80.2	0.0	0.0	19.8	100.0	115
22-23	74.0	0.0	0.4	25.6	100.0	146
24-25	84.8	0.0	0.0	15.2	100.0	109
26-27	87.9	0.0	0.0	12.1	100.0	85
28-29	88.4	0.0	0.0	11.6	100.0	101
30-31	93.5	0.0	0.3	6.2	100.0	118
32-33	93.7	0.0	0.0	6.3	100.0	91
34-35	96.6	0.0	0.0	3.4	100.0	106
0-3	1.3	27.1	33.1	38.5	100.0	144
4-6	2.5	0.8	10.9	85.8	100.0	152
7-9	4.7	0.0	1.3	94.0	100.0	127

Note: Breastfeeding status refers to 24 hours preceding the survey interview. Children classified as breastfeeding and plain water only receive no other supplements.

Figure 9.1
Distribution of Children by Breastfeeding Status According to Age, Vietnam 1997



than two months of age were exclusively breastfed. This percentage drops sharply to 9 percent for children 2-3 months of age and to 1 percent for children 4-5 months of age. After 5 months of age, no children receive only breast milk.

The percentage of children who are fully breastfed (breast milk and plain water only) increases from 30 percent for children less than 2 months of age to 36 percent for children 2-3 months of age. After 4 months of age, relatively few children are given breast milk and water only (e.g., 3 percent for children 6-7 months of age).

In Vietnam, supplemental foods other than plain water are given to children at an early age. Among children less than two months of age, 15 percent are given supplements and that proportion increases to 81 percent among children 4-5 months of age.

9.3 Duration and Frequency of Breastfeeding

Estimates of the median duration of breastfeeding are shown in Table 9.3. At the national level, the median duration of breastfeeding is 16.7 months. The early introduction of supplements is reflected in the short duration of exclusive breastfeeding (0.9 months). Relatively few children receive only plain water in addition to breast milk so that the median duration of full breastfeeding (2.2 months) also is quite short.

Differentials in the median duration of breastfeeding by background characteristics are not large. The median duration for each population subgroup is within one or two months of the national median (16.7 months), although breastfeeding appears to be somewhat longer in rural areas than in urban areas and somewhat longer for women with no education than for women with some schooling. Relative differentials in exclusive breastfeeding are much more pronounced, differing by as much as a factor of two or more between regions and between women with no education (0.6 months) and women with a secondary education (1.3 months).

Health specialists generally recommend that throughout the first six months of infancy mothers breastfeed frequently and allow the infant to feed whenever it is hungry, both day and night, rather than feeding on a fixed schedule. Frequent suckling stimulates milk production and tends to increase the birth spacing impact of breastfeeding.

Table 9.3 also shows information on the frequency of breastfeeding for children under six months of age during the 24 hours preceding the survey interview. Overall, 95 percent of children under six months of age were breastfed six or more times in the 24 hours preceding the survey. There are only small differences in this indicator between population subgroups.

Table 9.3 Median duration and frequency of breastfeeding

Median duration of any breastfeeding, exclusive breastfeeding, and full breastfeeding among children under three years of age, and the percentage of children under 6 months of age who were breastfed 6 or more times in the 24 hours preceding the interview, according to background characteristics, Vietnam 1997

Background characteristic	Median duration in months[1]			Number of children under 3 years of age	Children under 6 months	
	Any breast-feeding	Exclusive breast-feeding	Full breast-feeding[2]		Percent breastfed 6+ times in preceding 24 hours	Number of children
Sex						
Male	17.3	0.6	1.9	945	91.6	118
Female	16.1	1.3	2.4	874	97.3	122
Residence						
Urban	14.5	0.7	0.9	261	(88.1)	26
Rural	17.1	0.9	2.2	1.558	.95.3	215
Project province						
No	16.5	1.0	2.2	1.283	94.3	167
Yes	17.8	0.7	2.2	535	95.4	73
Region						
Northern Uplands	16.2	1.9	2.1	406	(91.3)	46
Red River Delta	18.1	0.6	1.5	302	(93.9)	37
North Central	17.4	1.9	2.5	249	(96.0)	32
Central Coast	17.0	0.5	1.9	246	(100.0)	29
Central Highlands	15.5	1.3	2.1	100	(100.0)	19
Southeast	15.6	0.5	0.7	205	(87.1)	27
Mekong River Delta	16.2	0.5	3.0	309	95.8	50
Education						
No education	19.0	0.6	2.0	125	(97.1)	22
Some primary	16.7	0.6	3.1	343	(95.9)	38
Completed primary	16.0	0.9	1.9	601	92.6	93
Completed lower secondary	17.3	1.3	2.2	511	94.5	61
Completed higher secondary+	16.1	1.3	2.2	239	(97.2)	26
Total	16.7	0.9	2.2	1.818	94.5	240
Mean	18.4	2.0	3.5	-	-	-
Prevalence/incidence[3]	16.8	0.8	2.2	-	-	-

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Medians and means are based on current status
[2] Either exclusive breastfeeding or breastfeeding and plain water only
[3] Prevalence-incidence mean

CHAPTER 10

KNOWLEDGE OF AIDS

The VNDHS-II included a series of questions on Acquired Immunodeficiency Syndrome (AIDS) in order to assess the knowledge and attitudes of respondents regarding prevention of infection with the AIDS virus. Respondents were first asked if they had ever heard of AIDS and, if so, from what source. They were then asked whether they thought that it was possible to prevent AIDS and, if so, how.

10.1 AIDS Knowledge

Table 10.1 shows the percentage of women reporting knowledge of AIDS and the source of their information. In the VNDHS-II, 91 percent of ever-married women said they had heard of AIDS. Urban women were more likely to have heard of AIDS than rural women (97 versus 89 percent).

The level of knowledge of AIDS is quite high in all regions. However, women in the Red River Delta, North Central, and Southeast regions are more likely to know of AIDS than women in other regions, while women in Central Highlands are least likely to have heard of AIDS (78 percent).

The largest differentials in knowledge of AIDS are by level of education. While only 54 percent of women with no education reported knowing of AIDS, virtually all women (99 percent) with completed higher secondary education had heard of AIDS.

10.2 Source of Information

In Vietnam, dissemination of AIDS information is the responsibility of the National AIDS Control Program of the National Committee for AIDS Prevention. The messages channeled to the public include information about modes of transmission and prevention strategies. This information is received by the Vietnamese people through various sources. Table 10.1 shows the responses obtained when respondents who had heard of AIDS were asked to indicate the source of their information. Respondents were asked to report all sources from which they had heard of AIDS.

Table 10.1 indicates that AIDS information is quite widely disseminated. The most frequently cited source of information was television, with 76 percent of women citing it as a source. More urban women than rural women had obtained AIDS information from television (92 versus 72 percent, respectively).

Two-thirds of ever-married women (68 percent) reported hearing about AIDS on the radio. Women in the Red River Delta were most likely to have received AIDS information from radio (79 percent), while the figure for the Central Highlands is much lower (35 percent).

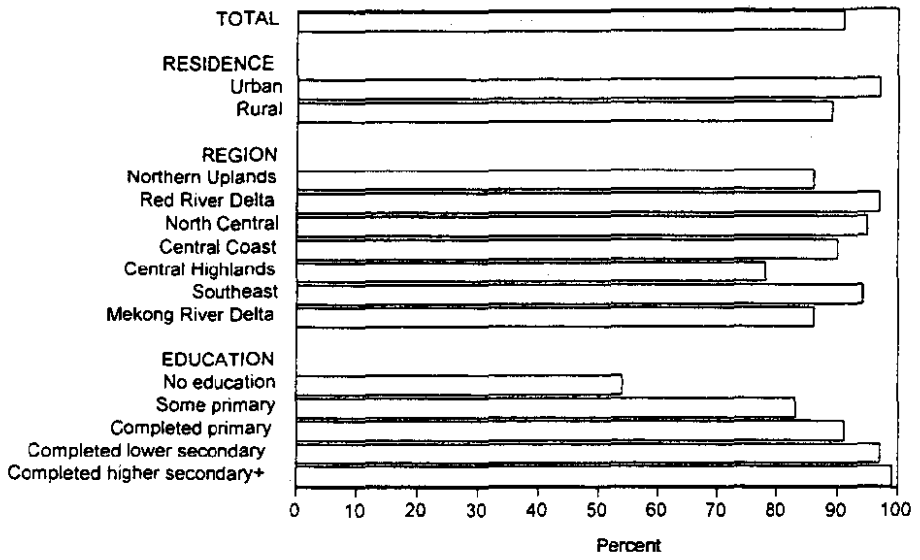
Twenty-two percent of women received information on AIDS from newspapers. Urban women were three times more likely to have received information from newspapers than rural women (50 versus 16 percent, respectively).

Table 10.1 Knowledge of AIDS

Percentage of ever-married women by knowledge of AIDS and source of knowledge, according to background characteristics, Vietnam 1997

Background characteristic	Knows of AIDS	Source of knowledge: Radio	TV	News -paper	Pam-phlet	Heath worker	Church/ Temple	School	Community meeting	Friend/ Relative	Work place	Other source	Number of women
Age													
15-19	78.6	54.9	59.6	13.7	2.7	1.9	0.0	0.0	6.8	10.2	1.8	0.0	129
20-24	89.4	67.0	71.9	17.5	4.5	2.8	0.0	0.6	4.3	12.6	0.6	0.7	732
25-29	91.3	66.6	74.4	19.3	4.4	2.8	0.1	1.0	5.3	16.9	2.6	0.2	1.016
30-39	92.6	69.1	78.0	24.5	5.9	3.0	0.1	1.2	7.6	13.9	1.7	0.4	2.331
40-49	89.3	69.9	77.6	24.2	6.0	3.0	0.1	2.0	7.8	11.1	2.0	0.1	1.457
Current marital status													
Currently married	91.2	68.9	76.4	22.6	5.5	3.0	0.1	1.3	6.8	13.5	1.7	0.3	5.340
Formerly married	83.0	58.7	70.6	18.5	3.8	1.6	0.0	1.6	6.0	12.6	3.3	0.6	324
Residence													
Urban	97.2	76.5	91.9	50.0	12.4	4.5	0.4	2.7	6.5	12.9	4.3	0.5	1.069
Rural	89.3	66.4	72.4	15.9	3.8	2.6	0.0	0.9	6.9	13.6	1.2	0.3	4.595
Project province													
No	91.3	68.2	75.9	23.0	6.0	2.9	0.1	1.2	7.0	14.1	1.8	0.2	3.976
Yes	89.5	68.4	76.3	20.6	4.1	2.9	0.0	1.4	6.3	12.0	1.7	0.5	1.688
Region													
Northern Uplands	86.1	68.5	64.7	18.7	4.6	4.0	0.0	1.7	13.0	14.9	1.5	0.3	1.168
Red River Delta	97.2	79.3	93.0	29.0	10.0	1.4	0.0	1.4	7.8	5.5	1.3	0.5	1.247
North Central	95.4	72.6	83.2	22.0	1.3	3.4	0.0	1.3	5.8	21.7	3.9	0.1	681
Central Coast	90.2	61.5	77.6	22.4	3.7	2.4	0.0	0.9	5.1	7.5	0.1	0.1	599
Central Highlands	78.1	35.0	61.1	16.1	2.7	3.5	0.0	3.1	4.8	11.2	0.7	0.8	182
Southeast	94.1	71.4	83.3	33.5	6.0	5.4	0.7	1.2	2.8	13.8	4.1	0.6	691
Mekong River Delta	85.9	60.1	61.5	12.7	4.6	1.8	0.1	0.7	3.5	19.2	0.9	0.0	1.097
Education													
No education	53.9	28.4	29.3	1.1	1.8	2.3	0.0	0.2	3.8	13.5	0.0	0.0	271
Some primary	82.6	53.7	51.9	5.3	2.2	1.8	0.1	0.1	6.0	16.7	0.8	0.3	1.078
Completed primary	91.1	67.8	74.8	15.0	3.9	3.6	0.0	0.1	4.4	13.7	1.4	0.3	1.665
Completed lower secondary	96.9	76.0	89.4	26.7	5.9	2.4	0.0	0.7	8.5	12.2	1.5	0.5	1.865
Completed higher secondary +	99.3	84.8	96.3	58.3	13.2	4.5	0.5	7.3	10.0	11.3	5.4	0.1	785
Total	90.8	68.3	76.1	22.3	5.4	2.9	0.1	1.3	6.8	13.5	1.8	0.3	5.664

Figure 10.1
Percentage of Ever-married Women Who Know of AIDS According to Background Characteristics, Vietnam 1997



10.3 AIDS Prevention

A question was also asked to determine what a person could do to avoid becoming infected with the human immunodeficiency virus. Table 10.2 shows the responses received when respondents were asked if they believed that AIDS can be prevented and, if so, how. Respondents were asked to report all methods or behaviors that would reduce their risk of contracting AIDS.

Only 4 percent of women think that there is no way to avoid AIDS. More than two-thirds (70 percent) say that staying with only one sexual partner can help prevent the spread of the disease, whereas about one in five respondents (21 percent) mentioned avoiding prostitutes as a way of prevention. Thirty-two percent of women cited condom use as a way to prevent AIDS. Also, a substantially larger proportion of urban than rural respondents mentioned condom use and avoidance of prostitutes as ways to avoid contracting AIDS. One in four (27 percent) respondents cited avoiding injections as a way of avoiding AIDS.

Table 10.2 AIDS prevention

Percent of ever-married women by knowledge of ways to avoid AIDS and the percentage of women with misinformation about AIDS prevention, according to background characteristics, Vietnam 1997

Background characteristic	No way to avoid	Ways to avoid AIDS: Abstain from sex	Use condom	One sexual partner	Avoid prosti-tutes	Avoid injection	Don't know any way	Percentage with misinformation[1]
Age								
15-19	4.1	1.5	29.4	67.8	11.6	17.0	14.7	1.9
20-24	5.2	4.2	29.5	68.8	16.1	22.3	17.0	2.4
25-29	2.5	3.3	34.4	68.4	18.6	25.6	14.4	2.7
30-39	4.2	3.2	32.8	72.2	21.9	27.5	13.0	3.2
40-49	3.1	3.1	29.0	68.2	24.0	29.7	15.2	4.6
Marital status								
Currently married	3.7	3.4	32.0	70.5	20.8	26.9	14.0	3.3
Formerly married	4.2	0.9	25.2	59.3	23.6	25.1	21.0	3.4
Residence								
Urban	1.9	4.6	40.3	75.2	32.5	37.2	7.6	3.4
Rural	4.2	2.9	29.5	68.6	18.0	24.2	16.1	3.3
Project province								
No	3.9	3.4	33.4	68.2	21.0	26.4	15.4	2.9
Yes	3.3	2.9	27.3	74.1	20.7	27.9	11.9	4.4
Region								
Northern Uplands	3.5	1.6	37.4	79.6	12.3	30.9	7.9	3.6
Red River Delta	1.2	1.4	35.3	85.3	20.3	32.7	4.2	8.0
North Central	0.3	6.8	36.9	72.3	14.1	20.9	8.1	1.2
Central Coast	7.1	8.0	34.6	55.1	21.5	20.0	20.4	1.3
Central Highlands	16.3	0.7	15.0	53.6	23.5	33.0	27.8	1.9
Southeast	6.4	2.8	31.7	62.7	30.3	20.5	19.3	0.2
Mekong River Delta	3.9	3.1	17.9	54.2	28.4	26.4	29.8	2.2
Education								
No education	11.3	5.7	12.6	35.8	12.9	8.9	47.7	1.2
Some primary	6.0	3.5	16.8	55.0	16.8	15.5	30.4	1.3
Completed primary	5.3	2.9	31.1	64.0	19.2	22.4	18.1	2.1
Completed lower secondary	1.8	2.6	34.3	78.6	21.5	30.2	5.7	4.3
Completed higher secondary+	0.9	4.9	47.2	84.9	29.1	44.0	2.6	6.2
Total	3.7	3.3	31.6	69.9	20.9	26.8	14.4	3.3

[1] Includes avoiding kissing and mosquito bites; seeking protection from a traditional healer.

10.4 AIDS-related Perceptions

The VNDHS-II also included the following questions: "Is it possible for a healthy-looking person to have the AIDS virus?" and "Do you think that persons with AIDS almost never die from the disease, sometimes die, or almost always die from the disease?" The results are presented in Table 10.3.

More than two-thirds (69 percent) of respondents believe it is possible for a healthy-looking person to be carrying the AIDS virus. Urban women were more likely to answer in the affirmative than rural women (79 and 66 percent, respectively). Responses to this question vary by region. Women in the Red River Delta were most likely to believe that a healthy-looking person can have AIDS (82 percent), while the percentage in the Mekong River Delta is much lower (43 percent).

Table 10.3 AIDS perceptions

Percent distribution of ever-married women who know of AIDS by responses to questions on perceptions of AIDS, according to background characteristics, Vietnam 1997

Background characteristic	Can a health-looking person have AIDS?				Is AIDS a fatal disease?					Number of women [1]
	Yes	No	Don't know	Total	Almost never	Some-times	Almost always	Don't know	Total	
Age										
15-19	63.6	4.2	32.2	100.0	3.1	7.4	77.9	11.6	100.0	101
20-24	65.9	8.7	25.4	100.0	4.1	6.3	71.2	18.4	100.0	654
25-29	68.1	10.0	21.9	100.0	3.1	5.5	76.6	14.8	100.0	928
30-39	70.9	8.4	20.7	100.0	3.3	5.9	76.7	14.1	100.0	2,158
40-49	68.4	8.8	22.9	100.0	3.6	6.0	75.2	15.2	100.0	1,300
Marital status										
Currently married	69.5	8.7	21.7	100.0	3.5	5.9	76.1	14.5	100.0	4,872
Formerly married	58.7	8.9	32.4	100/0	2.1	6.8	67.4	23.7	100/0	269
Residence										
Urban	79.3	7.3	13.4	100.0	2.5	4.0	84.0	9.5	100.0	1,039
Rural	66.4	9.1	24.6	100.0	3.7	6.4	73.5	16.4	100.0	4,102
Project province										
No	68.6	7.5	23.8	100.0	3.8	5.4	73.7	17.1	100.0	3,632
Yes	69.8	11.6	18.6	100.0	2.6	7.1	80.2	10.1	100.0	1,510
Region										
Northern Uplands	73.6	11.8	14.7	100.0	1.6	6.0	85.2	7.3	100.0	1,005
Red River Delta	82.0	8.8	9.2	100.0	1.6	4.3	90.9	3.3	100.0	1,212
North Central	75.6	4.6	19.8	100.0	8.1	9.8	69.5	12.6	100.0	650
Central Coast	71.4	5.1	23.5	100.0	9.4	11.7	59.4	19.5	100.0	540
Central Highlands	63.9	9.4	26.7	100.0	1.4	9.6	62.6	26.3	100.0	142
Southeast	67.6	6.8	25.6	100.0	1.8	4.1	71.0	23.1	100.0	650
Mekong River Delta	43.1	11.5	45.4	100.0	2.7	2.7	64.6	30.0	100.0	942
Education										
No education	29.6	6.2	64.2	100.0	5.0	4.6	46.8	43.6	100.0	146
Some primary	45.2	9.1	45.8	100.0	3.7	5.8	59.9	30.6	100.0	891
Completed primary	64.0	11.1	24.9	100.0	4.5	6.4	69.8	19.3	100.0	1,517
Completed lower. secondary	80.2	7.5	12.3	100.0	2.8	5.3	85.1	6.7	100.0	1,808
Completed higher secondary +	87.3	7.0	5.7	100.0	2.1	6.8	88.4	2.7	100.0	779
Total	69.0	8.7	22.3	100.0	3.4	5.9	75.6	15.0	100.0	5,142

[1] Number of women who have heard of AIDS

Highly educated women are more likely to think that a healthy-looking person can be carrying the AIDS virus. For example, 87 percent women with completed higher secondary answered in the affirmative to this question, compared with only 30 percent of women with no education.

Thirty-one percent of women replied "No" or "Don't know" to the question "Can a healthy-looking person have AIDS?" A larger proportion of rural than urban respondents gave those responses (34 and 21 percent, respectively). A very high percentage of women with no education or some primary schooling reported either "No" or "Don't know" (70 and 55 percent, respectively).

About three-quarters (76 percent) of women believe that AIDS is almost always a fatal disease. Only 3 percent of women think that AIDS almost never leads to death while 6 percent believe that AIDS sometimes results in death.

Educated women are more likely than uneducated women to think that AIDS is almost always fatal. For example, 88 percent of women with completed higher secondary reported that AIDS is almost always fatal compared with 47 percent of women with no education.

10.5 Knowledge of Where to Obtain Condoms

Table 10.4 shows the percentage of women with knowledge of condoms and, among these, the percentage who know of a source for obtaining them. Almost all women know about condoms (95 percent). There are only small differences in this percentage by background characteristics.

Table 10.4 Knowledge of where to obtain condoms

Percentage of ever-married women who know about condoms and among these the percent distribution by knowledge of a source for condoms, according to background characteristics, Vietnam 1997

Background characteristic	Knows about condoms	Knowledge of a source for condoms: Public source	Private medical	Pharmacy	Other source	Don't know a source	Number of women[1]
Age							
15-19	91.7	45.4	0.0	10.2	3.9	40.5	101
20-24	92.3	53.4	0.4	12.3	0.3	33.6	654
25-29	94.9	58.0	0.3	12.5	0.0	29.1	928
30-39	96.0	61.8	0.7	13.2	0.2	24.1	2,158
40-49	94.2	54.6	0.2	11.7	0.1	33.4	1,300
Marital status							
Currently married	95.1	59.2	0.5	12.7	0.3	27.4	4,872
Formerly married	89.3	34.8	0.0	9.4	0.0	55.8	269
Residence							
Urban	97.0	46.7	1.0	29.4	0.3	22.6	1,039
Rural	94.3	60.7	0.3	8.2	0.2	30.5	4,102
Project province							
No	94.2	55.8	0.3	12.5	0.3	31.1	3,632
Yes	96.2	63.0	0.8	12.5	0.2	23.5	1,510
Region							
Northern Uplands	98.0	77.8	0.1	5.6	0.4	16.0	1,005
Red River Delta	99.3	70.9	0.8	15.4	0.5	12.4	1,221
North Central	98.9	72.1	0.1	5.0	0.2	22.7	650
Central Coast	93.0	44.8	0.4	6.9	0.0	47.9	540
Central Highlands	85.3	33.9	0.0	9.3	0.0	56.7	142
Southeast	88.8	34.3	0.4	23.3	0.1	41.8	650
Mekong River Delta	89.4	37.5	0.8	17.6	0.0	44.0	942
Education							
No education	84.7	35.9	0.0	6.0	0.0	58.1	146
Some primary	89.5	46.2	0.4	8.6	0.0	44.8	891
Completed primary	92.5	54.7	0.4	11.2	0.3	33.4	1,517
Completed lower secondary	98.4	65.6	0.5	12.6	0.3	21.0	1,808
Completed higher secondary +	98.9	64.0	0.7	20.6	0.3	14.4	779
Total	94.8	57.9	0.5	12.5	0.2	28.9	5,142

[1] Number of women who have heard of AIDS

Table 10.4 indicates that the main source for condoms is the public sector (58 percent). The proportion of women who do not know a source for condoms is quite high (29 percent). This figure is higher for rural women than for urban women (31 versus 23 percent, respectively).

Lack of knowledge of a source for condoms is highest among women in the Central Highlands (57 percent), while women in the Red River Delta are least likely to not know a source for condoms (12 percent).

The proportion of respondents not knowing a source for condoms varies by education. For example, only 14 percent of women with completed higher secondary education do not know where to obtain condoms, compared with 58 percent of women with no education.

CHAPTER 11

AVAILABILITY OF HEALTH SERVICES

A separate questionnaire was included in the VNDHS-II to investigate the availability of health services to women and children. The Community/Health Facility Questionnaire (Appendix C), was applied at the level of the sample enumeration areas (EAs): that is, one questionnaire was filled out for each sample cluster in which the Individual Questionnaire was administered to female respondents.[1]

The questionnaire consisted of four sections. The first two sections were completed in a sample cluster by obtaining information from "knowledgeable" community informants. Section one contained questions to determine the characteristics of the community and the types of health workers serving the community (community-based family planning distribution (CBD) workers, family planning field workers, mobile family planning clinics, etc.). Section two collected information on the location of the nearest health facilities (commune health center, pharmacy, private doctor, etc.) and the services offered at those facilities.

The third and fourth sections of the questionnaire were completed when visiting a) the nearest commune health center and b) the nearest health center or hospital, if those facilities were located within 30 kilometers of a sample cluster. For each facility visited, information was collected about the services offered, hours of operation and the staff, equipment, and medicines available at the facility.

This chapter focuses on the information collected in the first two sections of the Community/Health Facility Questionnaire. For analysis purposes, the information collected for each sample cluster was linked to the data from the Individual Questionnaires. This linkage allows the analysis to be presented in terms of the percentage of women and children having access to various types of health services.[2]

11.1 Availability of Family Planning Services

Community-based Services

Information on the kinds of family planning services provided at the community level is shown in Table 11.1. The table indicates that family planning services are available to nearly all currently married women in the community in which they live. In the project provinces, a high proportion of currently married women reside in communities visited by a CBD worker (100 percent), a family planning field worker (100 percent), and a mobile family planning clinic (77 percent). In the non-project provinces, coverage of currently married women is similarly high: a CBD worker (97 percent), a family planning field worker (98 percent) and a mobile family planning clinic (80 percent).

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[1] There were a total of 205 sample clusters in the VNDHS-II. The Community/Health Facility Questionnaire was completed for 204 clusters.

[2] The analysis of this chapter is presented in terms of the population-based statistics. However, the number of independent data observations is the number of sample clusters in the various reporting domains: 44 in rural project areas, 95 in rural non-project areas, 25 in urban project areas and 40 in urban non-project areas. One Community/Health Facility Questionnaire was conducted per sample cluster so that the health services data are the same for all women and children in the sample cluster. As a result of the relatively small number of independent observations, estimates pertaining to access to health facilities have relatively large sampling variance.

Table 11.1 Availability of family planning services in the community

Percentage of currently married women age 15-49 with community-based family planning services available by family planning provider, residence, and whether the province is a project province (PP) or non-project province (NPP), Vietnam 1997

Family planning provider and services offered	Urban		Rural		Total	
	PP	NPP	PP	NPP	PP	NPP
Community-based distribution (CBD) worker present in community	100.0	96.0	100.0	97.0	100.0	96.8
CBD worker distributes:						
Pill	95.3	100.0	91.7	96.1	92.2	96.9
Condom	100.0	100.0	95.2	99.1	95.9	99.2
CBD worker in community 1 year or less	0.0	2.4	2.1	2.8	1.8	2.8
CBD worker in community 1 to 5 years	46.6	43.3	67.5	49.7	64.5	48.4
Family planning field worker present in community	100.0	97.2	100.0	98.3	100.0	98.0
Field worker provides:						
Counseling	100.0	100.0	100.0	99.1	100.0	99.3
Pill	95.3	100.0	77.6	94.8	80.1	95.9
Condom	100.0	100.0	83.0	97.5	85.5	98.0
Field worker visits at least quarterly	86.9	93.9	73.3	83.4	75.2	85.6
Field worker available 1 year or less	0.0	2.4	0.0	1.0	0.0	1.3
Field worker available 1 to 5 years	60.8	56.3	74.9	65.6	72.9	63.7
Mobile family planning clinic visits community	56.3	75.2	80.0	81.4	76.6	80.2
Mobile clinic provides:						
Pill	91.6	91.3	88.3	86.8	88.7	87.6
IUD	100.0	82.1	100.0	96.3	100.0	93.5
Female sterilization	14.3	12.7	46.4	38.5	43.0	33.5
Injection	6.9	4.5	7.5	8.3	7.5	7.5
Mobile clinic visits at least quarterly	57.0	58.1	75.7	55.1	73.7	55.7
Mobile clinic available 1 year or less	0.0	3.1	2.1	3.8	1.9	3.7
Mobile clinic available 1 to 5 years	52.5	42.6	62.4	55.2	61.4	52.7
Number of women	225	771	1,346	2,967	1,571	3,738
Number of clusters	25	40	44	95	69	135

CBD workers almost always provide pills and condoms to women in the communities they visit, so that those methods are available from CBD workers to more than 90 percent of currently married women. Similarly, the vast majority of family planning field workers provide pills and condoms so that they are an additional source of supply to the majority of women in the communities visited by these workers (more than 70 percent of currently married women). Mobile family planning clinics primarily provide pills and IUDs and sometimes perform female sterilizations. In the communities visited by mobile clinics, pills and IUDs are available to 85 percent of currently married women, while female sterilization is available to approximately 35 percent of women and injections to less than 10 percent of women.

Table 11.2 indicates that the vast majority of currently married women live in communities in which there was a family planning campaign in the year preceding the VNDHS-II (more than 90 percent of women). The family planning campaigns covered a broad range of topics with the most prominent being education concerning the advantages of child spacing and the use of family planning.

Table 11.2 Family planning and health campaigns in the year preceding the survey

Percentage of currently married women age 15-49 who reside in communities in which family planning and health campaigns were conducted in the year preceding the survey, by residence and project province status, Vietnam 1997

	Urban		Rural		Total	
Family planning campaign characteristic	Project province	Non-project province	Project province	Non-project province	Project province	Non-project province
Family planning campaign conducted in last year	100.0	100.0	92.5	94.9	93.6	96.0
Message						
Child spacing	68.7	72.3	74.9	65.6	74.0	67.1
Benefits of birth control	50.5	57.3	62.5	51.2	60.7	52.5
Use of family planning	92.1	62.3	78.6	80.5	80.7	76.6
Breastfeeding	55.6	59.7	64.4	55.0	63.1	56.0
Specific method promotion	44.1	58.8	57.0	49.3	55.0	51.4
Where methods available	34.0	39.1	47.3	28.3	45.2	30.7
Health campaign conducted in last year	100.0	100.0	100.0	94.1	100.0	95.3
Message						
Benefits of breastfeeding	60.4	56.5	47.9	52.4	49.7	53.3
Immunization	87.5	68.8	75.6	80.5	77.3	77.9
Diarrheal disease control	74.6	56.2	74.7	70.7	74.7	67.6
AIDS	55.1	57.8	43.2	45.2	44.9	47.9
Drug abuse	42.1	36.3	41.8	40.2	41.9	39.4
Growth promotion/nutrition	42.0	60.2	38.0	41.4	38.6	45.5
Vitamin A	91.0	69.1	82.2	82.1	83.5	79.3
Iodine deficiency	63.6	54.8	75.9	54.9	74.1	54.9
Sanitation	68.1	73.1	70.3	54.3	70.0	58.4
Number of women	225	771	1,346	2,967	1,571	3,738
Number of clusters	25	40	44	95	69	135

Facility-based Services

In section two of the Community/Health Facility Questionnaire, information was collected on the distance and travel time to the nearest private doctor, pharmacy, commune health center, and hospital or intercommune health center from which a woman could obtain family planning supplies. Table 11.3 shows the percent distribution of currently married women by distance to the nearest of these facilities. Overall in the project provinces, 60 percent of currently married women reside within one kilometer of a family planning provider and another 29 percent are 1 to 4 kilometers from a provider. The situation is not greatly different in the non-project provinces where 78 percent of women reside within one kilometer of a provider and another 21 percent are 1 to 4 kilometers from a provider.

As expected, urban women live closer to a facility providing family planning services than rural women. In urban areas, for both project and non-project provinces, more than 90 percent of currently married women reside within one kilometer of a provider. In rural areas this statistic ranged from 54 percent in project provinces to 74 percent in non-project provinces.

Table 11.3 Distance to nearest family planning services

Percent distribution of currently married women age 15-49 by distance (in kilometers) to the nearest facility providing family planning services, by residence and project province status, Vietnam 1997

Distance to nearest facility providing family planning services	Urban		Rural		Total	
	PP	NPP	PP	NPP	PP	NPP
Under 1 km	100.0	92.9	53.6	74.3	60.2	78.1
1-4 km	0.0	7.1	33.3	24.2	28.5	20.6
5-9 km	0.0	0.0	8.7	1.6	7.4	1.2
10-14 km	0.0	0.0	2.4	0.0	2.1	0.0
15-29 km	0.0	0.0	2.0	0.0	1.7	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	225	771	1,346	2,967	1,571	3,738
Number of clusters	25	40	44	95	69	135

Availability of Specific Methods

The Community/Health Facility Questionnaire also obtained information on the distance to the nearest facility from which a woman could obtain specific modern contraceptive methods. As indicated in Table 11.4, not all methods are equally accessible. The pill, the IUD, and condoms are more readily available to women than are injection and female sterilization. Overall, the median distance for currently married women to a facility providing the pill, the IUD, or condoms is less than two kilometers while the median distance to a facility providing injection and female sterilization is six kilometers or more.

Table 11.4 Distance to nearest provider of specific contraceptive methods

Percent distribution of currently married women age 15-49 by distance (in kilometers) to the nearest facility providing specific contraceptive methods, by residence and project province status, Vietnam 1997

Distance to nearest provider	Pill		IUD		Condom		Injection		Female sterilization	
	PP	NPP	PP	NPP	PP	NPP	PP	NPP	PP	NPP
Urban										
Under 1 km	72.4	73.5	51.0	52.8	86.3	76.5	18.3	22.1	21.0	26.6
1-4 km	27.6	23.2	43.6	44.7	13.7	21.0	48.1	35.6	69.6	54.0
5-14 km	0.0	3.3	5.4	2.5	0.0	2.5	14.5	16.4	9.4	17.4
15-29 km	0.0	0.0	0.0	0.0	0.0	0.0	5.6	4.9	0.0	1.9
30+ km	0.0	0.0	0.0	0.0	0.0	0.0	13.4	20.9	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Median distance	<1	<1	<1	<1	<1	<1	2.5	2.5	1.8	1.9
Rural										
Under 1 km	34.8	47.0	31.7	27.4	47.2	62.4	10.7	4.5	5.1	6.3
1-4 km	39.0	35.5	48.9	57.6	35.3	24.1	11.9	17.9	34.5	18.8
5-14 km	12.9	12.6	14.9	15.0	13.2	8.6	14.5	35.2	37.5	44.9
15-29 km	11.0	3.8	4.5	0.0	2.0	3.8	22.0	10.6	17.7	23.1
30+ km	2.3	1.0	0.0	0.0	2.3	1.0	40.9	31.9	5.2	7.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Median distance	1.9	1.4	1.8	2.7	1.2	<1	15.6	8.5	7.7	9.9
Total										
Under 1 km	40.2	52.5	34.5	32.7	52.8	65.3	11.8	8.1	7.4	10.5
1-4 km	37.4	33.0	48.2	54.9	32.2	23.5	17.1	21.6	39.5	26.1
5-14 km	11.0	10.7	13.5	12.4	11.3	7.4	14.5	31.3	33.5	39.2
15-29 km	9.4	3.0	3.9	0.0	1.7	3.0	19.6	9.4	15.2	18.8
30+ km	2.0	0.8	0.0	0.0	2.0	0.8	37.0	29.6	4.4	5.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Median distance	1.5	<1	1.7	2.2	<1	<1	10.2	7.4	5.9	7.0

Availability and Use of Methods

This section examines the relationship between the distance to a facility-based family planning provider and contraceptive use. The information addresses the question: Do women who live in communities which are closer to a facility-based family planning provider have higher rates of contraceptive use? This information can be used as an indication of the extent to which lack of proximity to methods is inhibiting the practice of contraception in Vietnam.

Table 11.5 shows the percent distribution of all currently married women as well as women using various contraceptive methods and nonusers by their distance to the nearest facility providing family planning services. The results show that the majority of family planning users reside close to a facility-based provider and that the proportion of users decreases as the distance to a provider increases. Overall,74 percent of all users live less than one kilometer from a provider and another 23 percent live one to four kilometers from a provider. Similar distributions apply for users of various of types of methods (clinical methods, supply methods, sterilization, and traditional methods) and for nonusers and all women. The similarity of all these distributions indicates that distance to a facility-based provider is not a primary determinant of contraceptive use. This does not mean that access to family planning methods, as measured by distance to a facility, is irrelevant. Rather, it means that, given the current situation in Vietnam regarding the availability of CBD workers, other family planning workers, and mobile clinics, and the wide distribution of facility-based providers, distance to a facility-based provider does not substantially inhibit contraceptive use.

Table 11.5 Use of contraception and distance to nearest facility providing family planning services

Percent distribution of currently married women age 15-49 by project province status and distance to the nearest facility providing family planning services, according to type of method used, Vietnam 1997

Distance to nearest facility providing family planning services	Type of method used				All users	Non-users	All women
	Clinical	Supply	Sterilization	Traditional			
Project province							
Under 1 km	55.2	67.6	67.4	65.8	60.4	59.7	60.2
1-4 km	36.4	20.5	19.4	22.0	29.4	25.5	28.5
5-9 km	4.0	9.3	6.7	11.4	6.8	9.7	7.4
10-14 km	2.8	0.0	6.4	0.6	2.3	1.4	2.1
15-29 km	1.5	2.6	0.0	0.2	1.1	3.7	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percentage of women	42.3	7.7	6.8	21.3	78.1	21.9	100.0
Non-project province							
Under 1 km	77.2	85.9	74.4	81.4	79.4	74.4	78.1
1-4 km	21.9	13.9	23.5	17.7	19.7	23.3	20.6
5-9 km	0.8	0.2	2.1	0.9	0.9	2.3	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percentage of women	37.2	11.5	6.9	18.9	74.6	25.4	100.0
Total							
Under 1 km	70.1	81.2	72.4	76.4	73.6	70.5	72.8
1-4 km	26.6	15.3	22.3	19.0	22.7	23.9	23.0
5-9 km	1.9	2.2	3.4	4.3	2.7	4.3	3.1
10-14 km	0.9	0.0	1.9	0.2	0.7	0.4	0.6
15-29 km	0.5	0.6	0.0	0.1	0.3	1.0	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percentage of women	38.7	10.4	6.9	19.6	75.6	24.4	100.0
Number of women	2,055	552	367	1,041	4,015	1,295	5,310

11.2 Availability of Other Health Services

Community-based Services

Information on the kinds of health workers (traditional birth attendants, trained midwives and health field workers) who provide services in the sample clusters is shown in Table 11.6. Overall, the proportion of women residing in communities served by a traditional birth attendant is smaller in urban areas (10 percent for project province areas and 1 percent for non-project province areas) than in rural areas (21 percent for project areas and 35 percent for non-project areas). Similarly, the proportion of women in communities where there is a trained midwife tends to be smaller in urban areas. The proportions of women in communities served by a health field worker are similar in urban and rural areas of non-project provinces but lower in urban areas of project provinces. Almost all communities that are visited by health field workers are visited at least quarterly (more than 95 percent).

In Vietnam there is an active program of promoting beneficial health practices by conducting community-level health campaigns. Table 11.2 indicates that the vast majority of currently married women live in communities in which there was a health campaign in the year preceding the VNDHS-II (more than 90 percent). The health campaigns covered a broad range of topics. The main messages of the campaigns were related to vitamin A, immunization, iodine deficiency, and diarrhea disease control.

Table 11.6 Availability of health services in the community

Percentage of currently married women age 15-49 with community-based health care available by residence and project province status (project province (PP) and non-project province (NPP)), Vietnam 1997

	Urban		Rural		Total	
Health provider and services offered	PP	NPP	PP	NPP	PP	NPP
Traditional birth attendant serves community	9.6	0.8	20.8	34.5	19.2	27.6
Characteristics of birth attendant:						
Trained	58.5	0.0	73.2	50.5	72.1	50.2
Gives iron supplements	0.0	0.0	0.0	9.5	0.0	9.5
Trained midwife serves community	48.1	49.1	73.1	51.4	69.5	50.9
Midwife gives iron supplements	84.3	75.9	68.4	81.0	70.0	80.0
Health field worker serves community	61.3	79.8	86.7	82.3	83.0	81.8
Health worker provides:						
Basic medicines	79.2	73.1	77.3	80.5	77.5	79.0
ORS instruction/packets	100.0	95.0	92.1	95.6	92.9	95.5
Vitamin A	88.6	89.7	94.5	87.9	93.9	88.3
Growth promotion	79.4	92.9	81.2	79.5	81.0	82.2
Iron tablets	83.2	77.0	62.4	70.6	64.6	71.8
Iodized oil capsules/injections	0.0	14.2	4.3	12.9	3.8	13.2
Antenatal care	87.1	78.2	84.2	67.1	84.5	69.3
Immunization	87.1	84.0	88.9	78.9	88.7	79.9
Health field worker visits at least quarterly	96.9	94.0	97.5	97.5	97.5	96.8
Number of women	225	771	1,346	2,967	1,571	3,738
Number of clusters	25	40	44	95	69	135

Facility-based Services

The availability of maternal and child health (MCH) services from fixed facilities is investigated in terms of the distance women travel to reach such services. The analysis looks at both distance to facilities and distance to specific types of services.

Table 11.7 shows the percentage of currently married women age 15-49 by whether the nearest facility of a specific type provides MCH services. For a large proportion of women, MCH services were offered by the nearest hospital or intercommune health center (92 percent) and the nearest commune health center (99 percent). A much smaller proportion of women were able to obtain MCH services from the nearest private doctor (18 percent). This is not surprising because private doctors practice many different medical specialties. Considering all facilities combined, the median distance to a facility providing MCH services is 1.4 kilometers.

Table 11.7 also shows the percent distribution of women by distance to the nearest facility of a particular type if that facility provides MCH services. Overall, a hospital or intercommune health center offering MCH services was located within four kilometers of 47 percent of women age 15-49. The distance to the nearest commune health center offering services was considerably less, with 92 percent of women residing within four kilometers. Although relatively few private doctors offer MCH services, 85 percent of women live in communities where the nearest doctor offering MCH services is within four kilometers. Considering all facilities combined, more than 9 out of 10 women (94 percent) live within four kilometers of a facility offering MCH services.

Table 11.7 Distance to nearest facility providing maternal and child health services

Percentage of currently married women age 15-49 for whom the nearest health facility provides MCH services, and percent distribution of women by project province status and distance to the nearest health facilities providing MCH services, Vietnam 1997

Availability of services/ Distance to nearest facility providing MCH services	Type of facility: Hospital or inter-commune health center	Commune health center	Private doctor	Nearest facility
Project province				
MCH services available	91.2	98.7	16.5	100.0
Distance to services				
Under 1 km	7.2	37.1	23.2	41.5
1-4 km	44.3	52.2	48.7	51.0
5-9 km	21.3	10.7	8.4	7.6
10-14 km	9.8	0.0	19.7	0.0
15-29 km	14.4	0.0	0.0	0.0
30+ km	3.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0
Median distance	4.8	1.5	2.5	1.3
Non-project province				
MCH services available	94.4	100.0	21.6	100.0
Distance to services				
Under 1 km	9.6	37.4	64.8	44.4
1-4 km	35.8	55.0	27.3	49.9
5-9 km	23.5	6.9	6.7	3.9
10-14 km	15.7	0.8	0.0	1.8
15-29 km	13.9	0.0	1.2	0.0
30+ km	1.5	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0
Median distance	5.7	1.9	<1	1.4
Total				
MCH services available	92.1	99.1	18.0	100.0
Distance to services				
Under 1 km	8.9	37.3	50.0	43.5
1-4 km	38.4	54.2	34.9	50.2
5-9 km	22.8	8.0	7.3	5.0
10-14 km	13.9	0.6	7.0	1.3
15-29 km	14.1	0.0	0.8	0.0
30+ km	1.9	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0
Median distance	5.4	1.7	<1	1.4

Table 11.8 shows the percentage of currently married women by distance to the nearest provider of antenatal and delivery care. Overall, approximately 90 percent of women live within four kilometers of a facility that offers antenatal and delivery care. There is little difference in the proportion of women within four kilometers of these facilities by whether they live in urban or rural areas or by whether they live in project or non-project provinces (i.e., the percentage is consistently around 90 percent). The most significant difference in Table 11.8 is that a substantially greater proportion of urban women than rural women live *within 1 kilometer* of antenatal and delivery services.

Table 11.8 Distance to nearest health facility providing antenatal and delivery care

Percent distribution of currently married women 15-49 by residence and distance to the nearest facility providing antenatal and delivery care, according to project province status, Vietnam 1997

Distance to nearest facility providing antenatal and delivery care	Antenatal care		Delivery care	
	Project province	Non-project province	Project province	Non-project province
Urban				
Under 1 km	64.7	80.4	44.4	53.4
1-4 km	35.3	19.6	55.6	35.6
5-9 km	0.0	0.0	0.0	11.0
Total	100.0	100.0	100.0	100.0
Median distance	<1	<1	1.1	<1
Rural				
Under 1 km	36.2	34.4	34.0	31.5
1-4 km	52.6	62.8	52.9	59.1
5-9 km	8.8	1.6	8.8	7.1
10-14 km	0.0	1.3	0.0	2.2
15-29 km	0.0	0.0	2.0	0.0
30+ km	2.3	0.0	2.3	0.0
Total	100.0	100.0	100.0	100.0
Median distance	1.5	1.5	1.6	2.2
Total				
Under 1 km	40.3	43.9	35.5	36.0
1-4 km	50.1	53.9	53.3	54.3
5-9 km	7.6	1.2	7.6	7.9
10-14 km	0.0	1.0	0.0	1.8
15-29	0.0	0.0	1.7	0.0
30+	2.0	0.0	2.0	0.0
Total	100.0	100.0	100.0	100.0
Median distance	1.4	1.4	1.5	1.9
Number of women	1,571	3,738	1,571	3,738
Number of clusters	69	135	69	135

Table 11.9 presents the distribution of children less than 36 months of age by distance to the nearest facility providing child health care. A large proportion of children live in communities that are within four kilometers of a facility offering immunization services for children, ORS treatment for diarrhea, and treatment for children with a cough. At least 70 percent of children in both project and non-project provinces live within four kilometers of a facility that provides these child health services.

Children in urban areas generally live closer to a facility offering immunization, ORS, and treatment of cough than rural children. The median distance to the nearest health facility providing these services is less than one kilometer in urban areas. In rural areas of project provinces the median distance to a facility providing child care is 1.7 kilometers for immunization, 1.8 kilometers for ORS and 3.4 kilometers for treatment of cough.

The data on distance to health facilities and services available at those facilities indicate that physical proximity to maternal and child health services is not a major problem in Vietnam. Of course, there are other dimensions of access than physical proximity and some of those (e.g., staff, equipment, and medicines at the health facilities) could be investigated through a more extensive analysis of the data collected by the Community/Health Facility Questionnaire.

Table 11.9 Distance to nearest health facility providing health services for children

Percent distribution of children under 36 months by residence and distance to nearest facility providing health care for children, according to type of service and project province status, Vietnam 1997

Distance to nearest facility providing health services for children	Immunization		ORS treatment for diarrhea		Treatment for cough	
	Project province	Non-project province	Project province	Non-project province	Project province	Non-project province
Urban						
Under 1 km	70.7	72.7	71.9	75.8	68.1	72.2
1-4 km	29.3	27.3	28.1	20.0	31.9	23.5
5-9 km	0.0	0.0	0.0	4.2	0.0	4.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Median distance	<1	<1	<1	<1	<1	<1
Rural						
Under 1 km	29.7	43.0	32.4	42.4	23.2	30.4
1-4 km	57.2	51.0	42.7	49.4	43.3	57.3
5-9 km	13.0	3.0	14.9	4.3	22.3	7.8
10-14 km	0.0	2.0	2.1	3.2	6.1	4.6
15-29 km	0.0	1.0	4.5	0.0	5.2	0.0
30+ km	0.0	0.0	3.4	0.6	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Median distance	1.7	1.6	1.8	2.0	3.4	2.6
Total						
Under 1 km	35.1	47.6	37.6	47.6	29.0	36.8
1-4 km	53.6	47.4	40.8	44.9	41.8	52.0
5-9 km	11.3	2.5	13.0	4.3	19.4	7.3
10-14 km	0.0	1.7	1.8	2.7	5.3	3.8
15-29 km	0.0	0.8	3.9	0.0	4.5	0.0
30+ km	0.0	0.0	2.9	0.5	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Median distance	1.6	1.2	1.6	1.3	2.8	2.2
Number of children	489	1,227	489	1,227	489	1,227
Number of clusters	69	135	69	135	69	135

ORS = Oral rehydration salts (commercially prepared packets of salts and carbohydrates that are mixed with water for use in treating deydration due to diarrhea)

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APPENDIX A

SAMPLE DESIGN

APPENDIX A

SAMPLE DESIGN

A.1 Introduction

The Second Vietnam Demographic and Health Survey (VNDHS-II) covers the population residing in private households in the country. The design for the VNDHS-II calls for a representative probability sample of approximately 5,500 completed individual interviews of ever-married women between the ages of 15 and 49. It was designed principally to produce reliable estimates of demographic rates (particularly fertility and childhood mortality rates), of maternal and child health indicators, and of contraceptive knowledge and use, for the country as a whole, for urban and the rural areas separately, and for the group of 18 project provinces. These 18 provinces are in the following geographic regions:

Northern Uplands:	Tuyen Quang, Lai Chau, Lao Cai, Bac Can and Thai Nguyen.
Red River Delta:	Hai Phong, Hai Duong, Hung Yen, Nam Dinh and Ha Nam.
North Central:	Thanh Hoa and Thua Thien-Hue.
Central Highlands:	Dac Lac and Lam Dong.
Mekong River Delta:	Dong Thap, Vinh Long, Tra Vinh and Kien Giang.

Six of the 18 project provinces are new provinces that will, in the near future, be formed out of three old provinces: Bac Can and Thai Nguyen from Bac Thai; Hai Duong and Hung Yen from Hai Hung; Nam Dinh and Ha Nam from Nam Ha. Since the formation of the new provinces has not been formalized and no population data exist for them, this report will only refer to 15 project provinces out of 53 provinces in Vietnam (instead of 18 project provinces out of 61 provinces).

A.2 Sampling Frame

The sampling frame for the VNDHS-II was the sample of the 1996 Vietnam Multi-Round Survey (VNMRS), conducted bi-annually by the General Statistical Office (GSO). A thorough evaluation of this sample was necessary to ensure that the sample was representative of the country, before it was used for the VNDHS-II.

The sample design for the VNMRS was developed by GSO with technical assistance provided by Mr. Anthony Turney, sampling specialist of the United Nations Statistics Division. The VNMRS sample was stratified and selected in two stages. Within each province, stratification was geographic by urban-rural residence. Sample selection was done independently for each province.

In the first stage, primary sampling units (PSUs) corresponding to communes (rural areas) and blocks (urban areas) were selected using equal probability systematic random selection (EPSEM), since no recent population data on communes and blocks existed that could be used for selection with probability proportional to size. The assumption underlying the decision to use EPSEM was that, within each province, the majority of communes and blocks vary little in population size, with the exception of a few communes; i.e., within each province, most communes and blocks have a population size that is close to the average for the province. In each province, the number of selected communes/blocks was proportional to the urban-rural population in the province. The total number of communes/blocks selected for the VNMRS was 1,662 with the number of communes/blocks in each province varying from 26 to 43 according to the size of the province.

After the communes/blocks were selected, a field operation was mounted by GSO to create enumeration areas (EAs) in each selected commune/block. The number of EAs that was created in each commune/block was based on the number of households in the commune/block divided by the standard EA size which was set at 150 households. The list of EAs for the whole province was then ordered geographically by commune/block and used for the second stage selection. Thirty EAs were selected in each province with equal probability from a random start, for a total of 1,590 EAs. Because of this method of systematic random selection, communes/blocks that were large in size had one or more EAs selected into the sample while communes/blocks that were very small in size were excluded from the sample. In each selected EA, all households were interviewed for the VNMRS.

To evaluate the representativity of the VNMRS, EA weights were calculated based on the selection probability at the various sampling stages of the VNMRS; also, the percent distribution of households in the VNMRS across urban/rural strata and provinces was estimated and compared with the percent distribution of the 1996 population across the same strata. The distribution obtained from the VNMRS agrees closely with that of the 1996 population as shown in Table A.1.

Table A.1 Vietnam population 1996

Percent distribution of the population and percent distribution of households estimated from the VNMRS

Region	Project province		1996 population distribution (%)			1996 household distribution estimated from VNMRS (%)		
			Urban	Rural	Total	Urban	Rural	Total
		Viet Nam	20.94	79.06	100.00	20.26	79.74	100.00
		Project Provinces	15.57	84.43	29.41	15.03	84.97	29.11
		Other Provinces	23.18	76.82	70.59	22.41	77.59	70.89
		Region 1 – Northern Uplands	13.94	86.06	17.24	13.91	86.09	18.04
		Region 2 – Red River Delta	18.40	81.60	19.59	18.31	81.69	22.40
		Region 3 – North Central	11.79	88.21	13.50	11.00	89.00	13.39
		Region 4 – Central Coast	25.21	74.79	10.54	23.25	76.75	10.78
		Region 5 – Central Highlands	23.75	76.25	4.31	23.48	76.52	4.28
		Region 6 – Southeast	47.24	52.76	12.79	46.43	53.57	12.32
		Region 7 – Mekong River Delta	16.43	83.57	22.03	15.67	84.33	18.79
		Province						
1	1	5 Lai Chau	13.19	86.81	0.73	12.70	87.30	0.50
1	1	6 Lao Cai	11.01	88.99	0.77	13.19	86.81	0.77
1	1	2 Tuyen Quang	10.61	89.39	0.90	9.94	90.06	1.07
1	1	8 Bac Thai	18.46	81.54	1.63	20.22	79.78	1.66
2	1	15 TP Hai Phong	34.68	65.32	2.25	32.73	67.27	2.28
2	1	17 Hai Hung	5.99	94.01	3.77	6.42	93.58	4.21
2	1	19 Nam Ha	13.25	86.75	3.67	9.84	90.16	4.53
3	1	21Thanh Hoa	7.44	92.56	4.72	10.20	89.80	4.68
3	1	26 Thua Thien Hue	28.14	71.86	1.38	27.11	72.89	1.23
5	1	36 Dac Lac	18.86	81.14	1.74	16.67	83.33	1.72
5	1	37 Lam Dong	34.09	65.91	1.11	33.26	66.74	1.24
7	1	44 Dong Thap	18.16	81.84	2.05	16.82	83.18	1.35
7	1	52 Kien Giang	21.39	78.61	1.91	19.97	80.03	1.67
7	1	48 Vinh Long	14.14	85.83	1.47	14.14	85.86	1.17
7	1	49 Tra Vinh	5.85	94.15	1.33	6.66	93.34	1.04
1	0	Ha Giang	10.13	89.87	0.75	10.38	89.62	0.64
1	0	3 Cao Bang	11.68	88.32	0.84	10.09	89.91	0.76
1	0	4 Lang Son	13.47	86.53	0.97	12.83	87.17	0.98
1	0	7 Yen Bai	17.69	82.31	0.92	13.93	83.07	1.08
1	0	9 Son La	20.26	79.74	1.11	13.18	86.82	1.25
1	0	11 Vinh Phu	7.39	92.61	3.15	6.50	93.50	3.22
1	0	13 Quang Ninh	47.72	52.28	1.24	41.91	58.09	1.89
1	0	12 Ha Bac	4.90	95.10	3.22	3.36	96.64	3.18
1	0	10 Hoa Binh	14.80	85.20	1.02	17.18	82.82	1.04
2	0	14 TP Ha Noi	52.53	47.47	3.06	52.11	47.89	4.05
2	0	16 Ha Tay	6.79	93.21	3.17	6.56	93.44	3.09
2	0	18 Thai Binh	6.69	93.31	2.47	6.72	93.28	2.96
2	0	20 Ninh Binh	10.49	89.51	1.21	9.93	90.07	1.29
3	0	22 Nghe An	10.20	89.80	3.81	6.89	93.11	3.52
3	0	23 Ha Tinh	13.35	89.65	1.79	6.50	93.50	2.01
3	0	24 Quang Binh	9.59	90.41	1.06	13.46	86.54	1.14
3	0	25 Quang Tri	16.73	83.27	0.74	16.68	83.32	0.80
4	0	27 Quang Nam-Da Nang	35.11	64.89	2.72	29.96	70.04	3.10

Table A.1 Vietnam population 1996

Percent distribution of the population and percent distribution of households estimated from the VNMRS

Region	Project province		1996 population distribution (%)			1996 household distribution estimated from VNMRS (%)		
			Urban	Rural	Total	Urban	Rural	Total
4	0	28 Quang Ngai	9.27	90.73	1.62	10.19	89.81	1.83
4	0	29 Binh Dinh	19.28	80.72	1.96	16.24	83.76	2.10
4	0	30 Phu Yen	19.92	80.08	1.02	19.70	80.30	0.56
4	0	31 Khanh Hoa	41.48	58.52	1.32	37.63	62.37	1.39
4	0	32 Nink Thuan	18.90	81.10	0.63	23.65	76.35	0.50
4	0	33 Binh Thuan	23.90	76.10	1.26	22.98	77.02	1.30
5	0	35 Kon Tum	20.80	79.20	0.36	23.28	76.72	0.38
5	0	34 Gia Lai	21.99	78.01	1.11	23.15	76.85	0.94
6	0	38 TP HCM	75.75	24.25	6.44	73.49	26.51	6.13
6	0	39 Song Be	5.29	94.71	1.57	3.45	96.55	1.49
6	0	40 Tay Ninh	12.54	87.46	1.25	13.38	86.62	1.23
6	0	41 Dong Nai	21.89	78.11	2.57	27.23	72.77	2.62
6	0	42 Ba Ria-Vung Tau	37.73	62.27	0.96	33.87	66.13	0.84
7	0	43 Long An	13.79	86.21	1.73	13.26	86.74	1.83
7	0	45 An Giang	20.25	79.75	2.73	19.93	80.07	2.28
7	0	46 Tien Giang	13.18	86.82	2.29	12.90	87.10	2.11
7	0	50 Can Tho	21.30	78.70	2.53	19.59	80.41	2.14
7	0	47 Ben Tre	8.49	91.51	1.85	7.27	92.73	1.90
7	0	51 Soc Trang	16.59	83.41	1.67	17.59	82.41	1.46
7	0	53 Minh Hai	19.72	80.28	2.46	19.86	80.14	1.84

Note: The numbers in the first column on the left identify the region in which the province is located; the numbers in the second column indicate project province status (1 = project province, 0 = non-project province). The 15 project provinces were targeted for strengthening of their primary health care system at the outset of the Population and Family Health Project.
Source for population by province: *Impetus and present situation of Vietnam society and economy after ten years of Doi Moi* (GSO, 1996)
Source for population by urban-rural: *Population Change and Family Planning Survey* (March 1, 1995), NCPFP/GSO

A.3 Characteristics of the VNDHS-II Sample

The sample for the VNDHS-II was stratified and selected in two stages. There were two principal sampling domains: the group of 15 project provinces and the group of other provinces. In the group of project provinces, all 15 provinces were included in the sample. At the first stage, 70 PSUs corresponding to the EAs as defined in the VNMRS were selected from the VNMRS with equal probability, the size of the EA in the VNMRS being very uniform[1], and hence sampling with probability proportional to size (PPS) was not necessary. The list of households interviewed for the VNMRS (updated when necessary) were used as the frame for the second-stage sampling, in which households were selected for interview during the main survey fieldwork. Ever-married women between the ages of 15 and 49 were identified in these households and interviewed.

In the group of other provinces, an additional stage was added in order to reduce field costs although this might increase sampling errors. In the first stage, 20 provinces, serving as PSUs, were selected with PPS, the size being the population of the provinces estimated in 1997. In the second stage, 135 secondary sampling units corresponding to the EAs were selected in the same manner as for the project provinces.

[1]An evaluation of the sample of the VNMRS shows that the average size of the EAs was 53 households, with a standard deviation of 9 households and coefficient of variation of 6 percent.

A.4 Sample Allocation

Table A.2 shows the distribution of the population in Vietnam as projected to 1997 for the two principal sampling domains and by urban and rural areas.

Table A.2 Projected population to 1997

	Urban	Rural	Total
Vietnam			
Population size	15,883,362	59 887 090	75,760 452
Percent of population	21	79	100
Project provinces			
Population size	3,478,487	18 797 083	22,275,570
Percent of population	16	84	29
Other provinces			
Popuilation size	12,404,875	41,080 007	53,484,882
Percent of population	23	77	71

The two groups of provinces, stratified by urban-rural residence, constituted the primary sampling strata. There were thus four primary sampling strata. A proportional allocation of the target number of 5,500 ever-married women to the four strata would yield the sample distribution in Table A.3.

Table A.3 Proportional sample allocation

	Urban	Rural	Total
Vietnam	1,152	4,348	5,500
Project provinces	251	1,367	1,618
Other provinces	901	2,981	3,882

The proportional allocation in Table A.3 would result in a completely self-weighting sample but with a small sample for the urban areas, especially for the project provinces. Even though separate estimates for the urban areas of the project provinces were not called for, it was decided to oversample the urban areas of the project provinces somewhat so that estimates of contraceptive prevalence rates could be obtained (however, the survey did not attempt to estimate separate urban and rural fertility rates or childhood mortality rates for the two groups of provinces). It was decided to allocate a sample of 500 women to the urban areas of the project provinces by rearranging the allocation as shown in Table A.4.

Table A.4 Proposed non-proportional sample allocation

	Urban	Rural	Total
Vietnam	1,300	4 ,200	5,500
Project provinces	500	1,350	1,850
Other provinces	800	2,850	3,650

The number of households (HHs) that would yield the target number of 5,500 ever-married women (EMW) with complete interviews was calculated as follows:

$$\text{Number of HHs} = \frac{\text{Target number of EMW 15 - 49}}{\text{Number of EMW 15 - 49 per HH} \times \text{Overall response rate}}$$

According to the results of the 1994 Intercensal Demographic Survey, the number of ever-married women 15-49 per household was estimated to be 0.8. The overall response rate found in the same survey was 98 percent. Using 0.8 ever-married women 15-49 per household and a more conservative response rate of 95 percent in the above equation, we would expect to select approximately 7,200 households in order to yield the target sample of respondents.

Table A.5 Number of households to yield the target number of respondents

	Urban	Rural	Total
Vietnam	1,711	5,526	7,237
Project provinces	658	1,776	2,434
Other provinces	1,053	3,750	4,803

The number of sample points (or clusters) to be selected for each stratum was calculated by dividing the number of women allocated to the stratum by the desired cluster size in the stratum. Analytical studies of fertility/family planning surveys suggest that the optimum number of women to be interviewed is around 20-25 in each urban cluster and 30-35 in each rural cluster. If we expect, on average, 20 women in each urban cluster and 30 women in each rural cluster (i.e., selecting, on average, 26 households in each urban cluster and 39 households in each rural cluster), the distribution of clusters would be as shown in Table A.6.

Table A.6 Number of clusters to be selected

	Urban	Rural	Total
Vietnam	65	140	205
Project provinces	25	45	70
Other provinces	40	95	135

A.5 Stratification and Systematic Selection of Provinces, and Clusters

A.5.1 Stratification and selection of EAs for the project provinces

The number of urban EAs in each project province is proportional to the urban population of the project province relative to the urban areas of the whole group of project provinces, and similarly for the rural areas.

After each project province was stratified into urban and rural areas, only geographic stratification was employed. Within each secondary stratum (urban or rural of a province), the EAs were arranged following the order of the VNMRS. The selection of EAs within each stratum was based on systematic random sampling with equal probability. The procedure was as follows:

(1) Calculate the sampling interval for stratum h :

$$I_h = \frac{A_h}{a_h}$$

where A_h is the total number of EAs in stratum h according to the VNMRS and a_h is the number of EAs to be selected in stratum h;

(2) Find a random number r between 1 and I_h. The EAs selected were the rth EA and every I_h^{th} EA thereafter.

A.5.2 Stratification and selection of other provinces

Among the other provinces, only 20 were selected into the sample. The number of provinces was allocated to the seven regions in proportion to the population size of each region (after removing the project provinces). Within each region, the provinces were ordered geographically before selection. The specified number of provinces in the region was then selected with probability proportional to the size of the province. The PPS selection procedure was as followed:

(1) Calculate the sampling interval for region h:

$$I_h = \frac{\sum_i M_{hi}}{a_h}$$

where M_{hi} is the population size of province i in region h, $\sum_i M_{hi}$ is the total population size of region h, and a_h is the number of provinces to be selected in region h;

(2) Calculate the cumulated size of each province;

(3) Calculate the series of sampling numbers R_h, R_h+I_h, R_h+2I_h, ..., $R_h+(a_h-1)I_h$, where R_h is a random number between 1 and I_h;

(4) Compare each sampling number with the cumulated sizes.

The first province selected was the first province in the region whose cumulated size was equal or greater than the first sampling number. The second province selected was the next province on the list (after the first selected one) whose cumulated size was equal or greater than the second sampling number, and so on.

A.5.3 Stratification and selection of EAs for the other 20 provinces

First, the provinces were stratified into regions by urban-rural status. Since there were no provinces selected in Region 5, this resulted in 12 strata for the other six regions. Then, working independently in the urban and rural areas, the number of clusters was allocated to each stratum in proportion to the stratum population size (after removing the project provinces). Finally, the number of EAs within each stratum was allocated to the urban or rural areas of each province in proportion to the urban or rural population size of the province.

The procedure for selection of EAs within each province is as described in section A.5.2.

A.6 Selection of Households

The selection of households in each cluster was systematic and with equal probabilities. The interval for household selection for the ith cluster was calculated as follows:

$$I_i = \frac{M_i}{b}$$

where M_i is the number of households that exist in the ith cluster and $b = 26$ if it is an urban cluster, and $b = 39$ if it is a rural cluster.

To select the households using an interval I, find a random number r between 1 and I. The households to be selected will be the rth household and every I^{th} household thereafter. For example, if $I = 5$ and $r = 3$, then one will select the 3rd, the 8th, the 13th, the 18th households, etc. After selection, one must check that the number of households selected is equal to 26 or 39, with an error of not more than 1 (±1) due to rounding errors.

A.7 Sampling Probabilities

To simplify notations, the same symbols may be used to designate different things in the different sub-sections that follow. Effort has been made to keep the different sub-sections independent of each other. Any reference to notations used previously will be clearly indicated.

A.7.1 VNMRS sampling probabilities

The sampling probabilities were calculated separately for each sampling stage, and independently for each stratum, the strata being the provinces. The following notations were used:

P_1: first-stage sampling probability (communes/blocks)
P_2: second-stage sampling probability (EAs)

The sampling probabilities were calculated as follows:

$$P_{1ij} = \frac{a_i}{A_i}$$

where P_{1ij} is the (first-stage) selection probability of the jth commune/block in province i, a_i is the number of communes/blocks selected in province i and A_i is the total number of communes/blocks in province i, and

$$P_{2ijk} = \frac{30}{B_i}$$

where P_{2ijk} is the (second-stage) selection probability of the kth EA in the jth commune/block in province i, 30 is the number of EAs selected in the jth commune/block, and B_i is the number of EAs created in the selected communes/blocks in province i.

The overall selection probability of the kth EA in the VNMRS is the product $P_k = P_{1ij} \times P_{2ijk}$.

A.7.2 VNDHS-II sampling probabilities

p_1: first-stage sampling probability (provinces)
p_2: second-stage sampling probability (EAs)
p_3: third-stage sampling probability (households)

The sampling probabilities for the VNDHS-II were calculated as follows:

$$p_{1hi} = \frac{A_h \times M_{hi}}{\sum_i M_{hi}}$$

where p_{1hi} is the (first-stage) selection probability of the ith province in region h, A_h is the number of provinces selected in region h, M_{hi} is the population size of the ith province in region h and $\sum_i M_{hi}$ is the total population of region h. For the project provinces that were selected with certainty, $p_{1hi} = 1$.

After the selection of provinces, each province was stratified by urban-rural status, and the second-stage selection of the EAs for the VNDHS-II was done separately for each urban and rural stratum. The (second-stage) selection probability of the kth EA was calculated as follows:

$$p_{2hijk} = \frac{b_{hij}}{B_{hij}}$$

where b_{hij} is the number of EAs selected in (urban or rural) stratum j of province i in region h, and B_{hij} is the number of EAs that exist for the VNMRS in (urban or rural) stratum j of province i in region h.

The overall selection probability of the kth EA for the VNDHS-II was calculated as follows:

$$P_k = P_k \times p1hij \times p2hijk$$

where P_k is as described in section A.7.1.

In the third stage, the selection of households was systematic with equal probability and the probability of selection of the households within the kth EA was calculated as follows:

$$p_{3k} = \frac{d_k}{m_k}$$

where $d_k = 26$ if it is an urban EA, $d_k = 39$ if it is a rural EA and m_k is the number of households interviewed for the VNMRS in the kth EA.

A.8 Cluster Weights

Weights at the cluster level were calculated and applied to all data analyses. The cluster design weight was calculated as the inverse of the selection probabilities:

$$w_k = \frac{m_k}{P_k \times p_{1hij} \times p_{2hijk} \times d_k}$$

APPENDIX B

ESTIMATES OF SAMPLING ERRORS

APPENDIX B

ESTIMATES OF SAMPLING ERRORS

The estimates from a sample survey are affected by two types of errors: (1) nonsampling errors, and (2) sampling errors. Nonsampling errors are the results of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the VNDHS-II to minimize this type of error, nonsampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the VNDHS-II is only one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

A sampling error is usually measured in terms of the *standard error* for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95 percent of all possible samples of identical size and design.

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulas for calculating sampling errors. However, the VNDHS-II sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use more complex formulae. The computer software used to calculate sampling errors for the VNDHS-II is the ISSA Sampling Error Module. This module used the Taylor linearization method of variance estimation for survey estimates that are means or proportions. The Jackknife repeated replication method is used for variance estimation of more complex statistics such as fertility and mortality rates.

The Taylor linearization method treats any percentage or average as a ratio estimate, $r = y/x$, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below, with the standard error being the square root of the variance:

$$var(r) = \frac{1-f}{x^2} \sum_{h=1}^{H} \left[\frac{m_h}{m_h - 1} \left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h} \right) \right]$$

in which

$$z_{hi} = y_{hi} - rx_{hi}, \text{ and } z_h = y_h - rx_h$$

where h represents the stratum which varies from 1 to H,

m_h is the total number of clusters selected in the hth stratum,

y_{hi} is the weighted sum of the values of variable y in the ith cluster in the hth stratum,

x_{hi} is the weigthed sum of the number of cases in the ith cluster in the hth stratum, and
f is the overall sampling fraction, which is so small that it is ignored.

The Jackknife repeated replication method derives estimates of complex rates from each of several replications of the parent sample, and calculates standard errors for these estimates using simple formulae. Each replication considers *all but one* clusters in the calculation of the estimates. Pseudo-independent replications are thus created. In the VNDHS-II, there were 205 non-empty clusters. Hence, 205 replications were created. The variance of a rate r is calculated as follows:

$$var(r) = \frac{1}{k(k-1)} \sum_{i=1}^{k} (r_i - r)^2$$

in which

$$r_i = kr - (k-1)r_{(i)}$$

is the value estimate of the ith peudo-independent replication

and where

r is the estimate computed from the full sample of 205 clusters,
$r_{(i)}$ is the estimate computed from the reduced sample of 204 clusters (i^{th} cluster excluded), and
k is the total number of clusters.

In addition to the standard error, ISSA computes the design effect (DEFT) for each estimate, which is defined as the ratio between the standard error using the given sam ple design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design. ISSA also computes the relative error and confidence limits for the estimates.

Sampling errors for the VNDHS-II are calculated for selected variables considered to be of primary interest. The results are presented in this appendix for the country as a whole, for urban and rural areas, for seven survey regions, and for two groups of provinces. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table B.1. Tables B.2 to B.13 present the value of the statistic (R), its standard error (SE), the number of unweighted (N) and weighted (WN) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits (R±2SE), for each variable. The DEFT is considered undefined when the standard error considering simple random sample is zero (when the estimate is close to 0 or 1). Estimates and sampling errors of childhood mortality rates are presented only for the country as a whole, the urban and rural areas, and for the groups of project and non-project provinces. In the case of the total fertility rate, the number of unweighted cases is not relevant, as there is no known unweighted value for woman-years of exposure to child-bearing.

The confidence interval (e.g., as calculated for *children ever born to women age 15-49*) can be interpreted as follows: the overall average from the national sample is 1.86 and its standard error is 0.08. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate, i.e., 1.86±2×0.08. There is a high probability (95 percent) that the *true* average number of children ever born to all women aged 15 to 49 is between 1.7 and 2.02.

Sampling errors are analyzed for the national sample and for two separate groups of estimates: (1) means and proportions, and (2) complex demographic rates. The relative standard errors (SE/R) for the means and proportions range between 0.2 percent and 13.8 percent, with an average of 4.4 percent; the highest relative standard errors are for estimates of very low values (*e.g., no education).* If estimates of very low values (less than 10 percent) are removed, then the average drops to 3.5 percent. So, in general, the relative standard errors for most estimates for the country as a whole are small, except for estimates of very small proportions. The relative standard error for the total fertility rate is small, 2.9 percent. However, for childhood mortality rates, the average relative standard error is much higher, 16.2 percent.

There are differentials in the relative standard error for the estimates of sub-populations. For example, for the variable *knowing any contraceptive method*, the relative standard errors as a percentage of the estimated mean for the whole country, for urban areas, and for the Central Highlands region are 0.2 percent, 0.4 percent, and 4.0 percent, respectively.

For the total sample, the value of the design effect (DEFT), averaged over all variables, is 1.5 which means that, due to multi-stage clustering of the sample, the average standard error is increased by a factor of 1.5 over that of an equivalent simple random sample.

Table B.1 List of selected variables for sampling errors, Vietnam 1997

Variable	Estimate	Base population
Urban residence	Proportion	Ever-married women 15-49
No education	Proportion	Ever-married women 15-49
With secondary education or higher	Proportion	Ever-married women 15-49
Currently married (in union)	Proportion	Ever-married women 15-49
Married before age 20	Proportion	Ever-married women 25-49
Children ever born	Mean	Ever-married women 15-49
Children ever born to women over 40	Mean	Ever-married women 40-49
Children ever born to women 35 - 39	Mean	Ever-married women 35-39
Children ever born to women 40 - 44	Mean	Ever-married women 40-44
Children ever born to women 45 - 49	Mean	Ever-married women 45–49
Children surviving	Mean	Ever-married women 15-49
Knowing any contraceptive method	Proportion	Currently married women 15-49
Knowing any modern contraceptive method	Proportion	Currently married women 15-49
Ever used any contraceptive method	Proportion	Currently married women 15-49
Currently using any method	Proportion	Currently married women 15-49
Currently using a modern method	Proportion	Currently married women 15-49
Currently using pill	Proportion	Currently married women 15-49
Currently using IUD	Proportion	Currently married women 15-49
Currently using condom	Proportion	Currently married women 15-49
Currently using female sterilization	Proportion	Currently married women 15-49
Currently using periodic abstinence	Proportion	Currently married women 15-49
Currently using withdrawal	Proportion	Currently married women 15-49
Using public sector source	Proportion	Current users of modern methods
Want no more children	Proportion	Currently married women 15-49
Want to delay at least 2 years	Proportion	Currently married women 15-49
Ideal number of children	Mean	Ever-married women 15-49
Mothers received tetanus injection	Proportion	Births in last 3 years
Mothers received medical care at birth	Proportion	Births in last 3 years
Had diarrhea in the last 2 weeks	Proportion	Children under 3
Treated with ORS packets	Proportion	Children under 3 with diarrhea in last 2 weeks
Consulted medical personnel	Proportion	Children under 3 with diarrhea in last 2 weeks
Having health card, seen	Proportion	Children 12-23 months
Received BCG vaccination	Proportion	Children 12-23 months
Received DPT vaccination (3 doses)	Proportion	Children 12-23 months
Received polio vaccination (3 doses)	Proportion	Children 12-23 months
Received measles vaccination	Proportion	Children 12-23 months
Fully immunized	Proportion	Children 12-23 months
Total fertility rate	Rate	Woman-years of exposure to child-bearing
Neonatal mortality rate	Rate	Number of births
Infant mortality rate	Rate	Number of births
Child mortality rate	Rate	Number of births
Under-five mortality rate	Rate	Number of births
Postneonatal mortality rate	Rate	Number of births

Table B.2 Sampling errors - National sample, Vietnam 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban residence	0.189	0.006	5664	5664	1.134	0.031	0.177	0.201
No education	0.048	0.007	5664	5664	2.333	0.138	0.035	0.061
With secondary education or higher	0.468	0.013	5664	5664	1.966	0.028	0.442	0.494
Currently married (in union)	0.943	0.004	5664	5664	1.277	0.004	0.935	0.951
Married before age 20	0.437	0.012	5551	5535	1.764	0.027	0.414	0.461
Children ever born	1.857	0.082	8290	8511	1.242	0.044	1.694	2.020
Children ever born to women over 40	3.822	0.064	1655	1600	1.299	0.017	3.695	3.949
Children ever born to women 35-39	3.007	0.059	1209	1243	1.361	0.019	2.890	3.125
Children ever born to women 40-44	3.644	0.085	974	955	1.444	0.023	3.474	3.815
Children ever born to women 45-49	4.085	0.088	681	645	1.067	0.022	3.909	4.261
Children surviving	1.747	0.077	8290	8511	1.252	0.044	1.592	1.901
Knowing any contraceptive method	0.989	0.002	5331	5340	1.533	0.002	0.985	0.994
Knowing any modern contraceptive method	0.987	0.002	5331	5340	1.289	0.002	0.983	0.991
Ever used any contraceptive method	0.842	0.008	5331	5340	1.509	0.009	0.827	0.857
Currently using any method	0.753	0.008	5331	5340	1.396	0.011	0.737	0.770
Currently using a modern method	0.558	0.013	5331	5340	1.853	0.023	0.533	0.583
Currenty using pill	0.043	0.005	5331	5340	1.870	0.120	0.033	0.054
Currently using IUD	0.385	0.014	5331	5340	2.165	0.037	0.356	0.414
Currently using condom	0.059	0.005	5331	5340	1.491	0.082	0.049	0.069
Currently using female sterilization	0.063	0.006	5331	5340	1.847	0.097	0.051	0.076
Currently using periodic abstinence	0.073	0.005	5331	5340	1.326	0.065	0.063	0.082
Currently using withdrawal	0.119	0.008	5331	5340	1.777	0.066	0.104	0.135
Using public sector source	0.877	0.010	2951	2979	1.650	0.011	0.857	0.897
Want no more children	0.659	0.009	5331	5340	1.393	0.014	0.641	0.677
Want to delay at least 2 years	0.160	0.006	5331	5340	1.147	0.036	0.149	0.172
Ideal number of children	2.440	0.021	5642	5643	1.655	0.009	2.397	2.482
Mothers received tetanus injection	0.714	0.016	1775	1818	1.460	0.023	0.681	0.746
Mothers received medical care at birth	0.770	0.032	1775	1818	2.967	0.042	0.706	0.834
Had diarrhea in the last 2 weeks	0.101	0.008	1724	1769	1.056	0.076	0.085	0.116
Treated with ORS packets	0.397	0.047	170	178	1.250	0.117	0.304	0.490
Consulted medical personnel	0.504	0.061	170	178	1.627	0.120	0.383	0.625
Having health card. seen	0.133	0.016	615	631	1.171	0.119	0.101	0.165
Received BCG vaccination	0.895	0.016	615	631	1.290	0.018	0.863	0.927
Received DPT vaccination (3 doses)	0.659	0.019	615	631	1.012	0.029	0.621	0.698
Received polio vaccination (3 doses)	0.696	0.019	615	631	1.013	0.027	0.658	0.733
Received measles vaccination	0.771	0.020	615	631	1.205	0.026	0.731	0.812
Fully immunized	0.568	0.023	615	631	1.161	0.040	0.522	0.614
Total fertility rate (1992-96)	2.672	0.077	NA	37678	1.663	0.029	2.518	2.827
Neonatal mortality rate (1992-96)	19.261	2.985	3364	3455	1.206	0.155	13.291	25.231
Infant mortality rate (1992-96)	28.172	3.800	3367	3457	1.209	0.135	20.573	35.771
Child mortality rate (1992-96)	9.777	1.882	3373	3466	1.100	0.192	6.013	13.541
Under-five mortality rate (1992-96)	37.673	4.475	3383	3472	1.261	0.119	28.724	46.623
Postneonatal mortality rate (1992-96)	8.911	1.841	3360	3453	1.086	0.207	5.229	12.593

NA = Not applicable

Table B.3 Sampling errors - Urban sample, Vietnam 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban residence	1.000	0.000	1316	1069	Und	0.000	1.000	1.000
No education	0.018	0.005	1316	1069	1.470	0.296	0.008	0.029
With secondary education or higher	0.665	0.023	1316	1069	1.759	0.034	0.619	0.710
Currently married (in union)	0.932	0.006	1316	1069	0.836	0.006	0.920	0.943
Married before age 20	0.262	0.019	1304	1061	1.546	0.072	0.224	0.299
Children ever born	1.306	0.099	2232	1772	0.998	0.076	1.108	1.503
Children ever born to women over 40	2.710	0.105	468	379	1.429	0.039	2.500	2.920
Children surviving	1.249	0.094	2232	1772	1.001	0.076	1.060	1.438
Know any contraceptive method	0.996	0.004	1226	997	2.121	0.004	0.987	1.000
Know any modern contraceptive method	0.994	0.004	1226	997	1.953	0.004	0.985	1.000
Ever used any contraceptive method	0.900	0.011	1226	997	1.315	0.013	0.878	0.923
Currently using any method	0.793	0.013	1226	997	1.160	0.017	0.766	0.820
Currently using a modern method	0.540	0.022	1226	997	1.579	0.042	0.495	0.585
Currenty using pill	0.041	0.010	1226	997	1.773	0.244	0.021	0.062
Currently using IUD	0.325	0.017	1226	997	1.288	0.053	0.291	0.360
Currently using condom	0.118	0.017	1226	997	1.813	0.142	0.084	0.151
Currently using female sterilization	0.053	0.008	1226	997	1.288	0.156	0.036	0.069
Currently using periodic abstinence	0.142	0.011	1226	997	1.126	0.079	0.120	0.164
Currently using withdrawal	0.107	0.013	1226	997	1.422	0.117	0.082	0.133
Using public sector source	0.768	0.027	647	538	1.634	0.035	0.714	0.823
Want no more children	0.619	0.016	1226	997	1.166	0.026	0.586	0.651
Want to delay at least 2 years	0.187	0.011	1226	997	0.969	0.058	0.166	0.209
Ideal number of children	2.167	0.030	1312	1065	1.452	0.014	2.107	2.227
Mothers received tetanus injection	0.861	0.025	338	261	1.290	0.029	0.810	0.911
Mothers received medical care at birth	0.985	0.009	338	261	1.032	0.009	0.968	1.000
Had diarrhea in the last 2 weeks	0.058	0.020	330	255	1.481	0.338	0.019	0.097
Treated with ORS packets	0.654	0.100	20	15	0.896	0.153	0.454	0.853
Consulted medical personnel	0.316	0.097	20	15	0.890	0.307	0.122	0.510
Having health card, seen	0.259	0.059	129	101	1.496	0.227	0.142	0.377
Received BCG vaccination	0.965	0.017	129	101	1.004	0.017	0.932	0.998
Received DPT vaccination (3 doses)	0.775	0.039	129	101	1.029	0.050	0.698	0.852
Received polio vaccination (3 doses)	0.787	0.036	129	101	0.981	0.046	0.715	0.859
Received measles vaccination	0.855	0.038	129	101	1.209	0.045	0.778	0.931
Fully immunized	0.694	0.043	129	101	1.031	0.061	0.609	0.779
Total fertility rate (1992-96)	1.842	0.075	NA	8077	1.082	0.040	1.693	1.991
Neonatal mortality rate (1987-96)	18.152	5.721	1270	1019	1.350	0.315	6.710	29.593
Infant mortality rate (1987-96)	22.619	5.959	1270	1019	1.296	0.263	10.700	34.538
Child mortality rate (1987-96)	9.447	2.892	1270	1020	1.073	0.306	3.664	15.230
Under-five mortality rate (1987-96)	31.852	5.929	1273	1022	1.179	0.186	19.994	43.711
Postneonatal mortality rate (1987-96)	4.467	2.280	1267	1018	1.209	0.510	0.000	9.027

NA = Not applicable
Und = Undefined

Table B.4 Sampling errors - Rural sample, Vietnam 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban residence	0.000	0.000	4348	4595	Und	Und	0.000	0.000
No education	0.055	0.008	4348	4595	2.336	0.147	0.039	0.071
With secondary education or higher	0.422	0.015	4348	4595	1.996	0.035	0.392	0.452
Currently married (in union)	0.945	0.005	4348	4595	1.353	0.005	0.936	0.955
Married before age 20	0.479	0.014	4247	4474	1.794	0.029	0.452	0.507
Children ever born	2.003	0.102	6201	6736	1.254	0.051	1.798	2.208
Children ever born to women over 40	4.167	0.075	1194	1221	1.282	0.018	4.017	4.316
Children surviving	1.878	0.097	6201	6736	1.263	0.051	1.685	2.071
Know any contraceptive method	0.988	0.002	4105	4343	1.454	0.003	0.983	0.993
Know any modern contraceptive method	0.985	0.002	4105	4343	1.198	0.002	0.981	0.990
Ever used any contraceptive method	0.828	0.009	4105	4343	1.499	0.011	0.811	0.846
Currently using any method	0.744	0.010	4105	4343	1.409	0.013	0.725	0.763
Currently using a modern method	0.562	0.015	4105	4343	1.889	0.026	0.533	0.591
Currenty using pill	0.044	0.006	4105	4343	1.872	0.136	0.032	0.056
Currently using IUD	0.399	0.017	4105	4343	2.268	0.043	0.364	0.433
Currently using condom	0.045	0.004	4105	4343	1.379	0.099	0.037	0.054
Currently using female sterilization	0.066	0.007	4105	4343	1.894	0.112	0.051	0.080
Currently using periodic abstinence	0.057	0.005	4105	4343	1.469	0.093	0.046	0.068
Currently using withdrawal	0.122	0.009	4105	4343	1.815	0.076	0.104	0.141
Using public sector source	0.900	0.011	2304	2441	1.684	0.012	0.879	0.921
Want no more children	0.669	0.011	4105	4343	1.433	0.016	0.647	0.690
Want to delay at least 2 years	0.154	0.007	4105	4343	1.178	0.043	0.141	0.167
Ideal number of children	2.503	0.025	4330	4578	1.672	0.010	2.452	2.554
Mothers received tetanus injection	0.689	0.018	1437	1558	1.451	0.027	0.653	0.726
Mothers received medical care at birth	0.734	0.037	1437	1558	2.922	0.050	0.661	0.808
Had diarrhea in the last 2 weeks	0.108	0.008	1394	1513	1.007	0.078	0.091	0.125
Treated with ORS packets	0.374	0.049	150	163	1.248	0.132	0.275	0.472
Consulted medical personnel	0.521	0.065	150	163	1.623	0.124	0.391	0.651
Having health card, seen	0.109	0.014	486	530	1.026	0.131	0.080	0.137
Received BCG vaccination	0.882	0.019	486	530	1.266	0.021	0.845	0.919
Received DPT vaccination (3 doses)	0.637	0.021	486	530	0.985	0.033	0.595	0.680
Received polio vaccination (3 doses)	0.678	0.021	486	530	0.999	0.031	0.636	0.720
Received measles vaccination	0.755	0.023	486	530	1.171	0.030	0.710	0.801
Fully immunized	0.543	0.026	486	530	1.143	0.047	0.492	0.595
Total fertility rate (1992-96)	2.904	0.093	NA	29607	1.643	0.032	2.718	3.091
Neonatal mortality rate (1987-96)	22.731	3.473	5997	6446	1.701	0.153	15.785	29.677
Infant mortality rate (1987-96)	36.417	3.998	5999	6448	1.537	0.110	28.422	44.413
Child mortality rate (1987-96)	12.272	1.872	6016	6465	1.291	0.153	8.528	16.016
Under-five mortality rate (1987-96)	48.242	4.562	6022	6469	1.546	0.095	39.118	57.367
Postneonatal mortality rate (1987-96)	13.686	1.720	5995	6445	1.132	0.126	10.246	17.126

NA = Not applicable
Und = Undefined

Table B.5 Sampling errors - Northern Uplands region sample, Vietnam 1997

Variable	Value (R)	Standard error (SE)	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.100	0.005	1092	1168	0.544	0.050	0.090	0.109
No education	0.061	0.016	1092	1168	2.226	0.265	0.028	0.093
With secondary education or higher	0.452	0.018	1092	1168	1.171	0.039	0.417	0.487
Currently married (in union)	0.950	0.006	1092	1168	0.848	0.006	0.939	0.961
Married before age 20	0.531	0.031	1064	1124	2.043	0.059	0.469	0.594
Children ever born	2.148	0.213	1414	1616	1.316	0.099	1.722	2.574
Children ever born to women over 40	4.081	0.158	266	252	1.238	0.039	3.765	4.397
Children surviving	1.996	0.188	1414	1616	1.253	0.094	1.620	2.372
Know any contraceptive method	0.991	0.003	1028	1110	1.105	0.003	0.985	0.998
Know any modern contraceptive method	0.989	0.002	1028	1110	0.579	0.002	0.985	0.992
Ever used any contraceptive method	0.811	0.014	1028	1110	1.130	0.017	0.784	0.839
Currently using any method	0.710	0.015	1028	1110	1.034	0.021	0.680	0.739
Currently using a modern method	0.517	0.030	1028	1110	1.900	0.057	0.458	0.576
Currenty using pill	0.036	0.016	1028	1110	2.727	0.439	0.004	0.068
Currently using IUD	0.375	0.052	1028	1110	3.461	0.140	0.270	0.479
Currently using condom	0.052	0.012	1028	1110	1.724	0.229	0.028	0.076
Currently using female sterilization	0.052	0.020	1028	1110	2.886	0.384	0.012	0.092
Currently using periodic abstinence	0.078	0.015	1028	1110	1.758	0.189	0.048	0.107
Currently using withdrawal	0.109	0.024	1028	1110	2.471	0.220	0.061	0.157
Using public sector source	0.932	0.030	546	574	2.785	0.032	0.872	0.992
Want no more children	0.741	0.025	1028	1110	1.848	0.034	0.690	0.791
Want to delay at least 2 years	0.121	0.008	1028	1110	0.814	0.068	0.105	0.138
Ideal number of children	2.183	0.038	1092	1168	1.960	0.018	2.107	2.260
Mothers received tetanus injection	0.643	0.041	341	406	1.619	0.063	0.562	0.724
Mothers received medical care at birth	0.578	0.107	341	406	3.862	0.185	0.364	0.791
Had diarrhea in the last 2 weeks	0.116	0.021	327	387	1.240	0.181	0.074	0.158
Treated with ORS packets	0.311	0.073	43	45	1.019	0.234	0.166	0.457
Consulted medical personnel	0.547	0.162	43	45	2.106	0.296	0.224	0.871
Having health card, seen	0.056	0.018	115	135	0.897	0.328	0.019	0.093
Received BCG vaccination	0.884	0.043	115	135	1.501	0.048	0.799	0.970
Received DPT vaccination (3 doses)	0.664	0.026	115	135	0.615	0.039	0.613	0.716
Received polio vaccination (3 doses)	0.677	0.027	115	135	0.648	0.040	0.623	0.731
Received measles vaccination	0.841	0.044	115	135	1.367	0.053	0.752	0.930
Fully immunized	0.576	0.045	115	135	1.026	0.078	0.486	0.667
Total fertility rate (1992-96)	3.139	0.254	NA	7038	2.150	0.081	2.631	3.646

NA = Not applicable

Table B.6 Sampling errors - Red River Delta region sample, Vietnam 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban residence	0.181	0.016	1119	1247	1.398	0.089	0.149	0.214
No education	0.004	0.003	1119	1247	1.488	0.716	0.000	0.009
With secondary education or higher	0.795	0.028	1119	1247	2.304	0.035	0.740	0.851
Currently married (in union)	0.960	0.005	1119	1247	0.856	0.005	0.950	0.970
Married before age 20	0.369	0.022	1102	1226	1.541	0.061	0.324	0.413
Children ever born	1.692	0.148	1597	1764	0.919	0.087	1.396	1.988
Children ever born to women over 40	3.087	0.060	363	402	0.915	0.020	2.966	3.207
Children surviving	1.619	0.145	1597	1764	0.940	0.089	1.330	1.908
Know any contraceptive method	1.000	0.000	1073	1197	0.622	0.000	0.999	1.000
Know any modern contraceptive method	1.000	0.000	1073	1197	0.622	0.000	0.999	1.000
Ever used any contraceptive method	0.918	0.012	1073	1197	1.440	0.013	0.894	0.942
Currently using any method	0.833	0.016	1073	1197	1.444	0.020	0.800	0.866
Currently using a modern method	0.663	0.023	1073	1197	1.597	0.035	0.617	0.709
Currenty using pill	0.022	0.008	1073	1197	1.883	0.384	0.005	0.039
Currently using IUD	0.516	0.024	1073	1197	1.593	0.047	0.467	0.565
Currently using condom	0.070	0.012	1073	1197	1.491	0.166	0.046	0.093
Currently using female sterilization	0.050	0.008	1073	1197	1.131	0.151	0.035	0.065
Currently using periodic abstinence	0.071	0.009	1073	1197	1.104	0.122	0.053	0.088
Currently using withdrawal	0.096	0.013	1073	1197	1.436	0.135	0.070	0.121
Using public sector source	0.935	0.015	684	794	1.625	0.016	0.904	0.966
Want no more children	0.706	0.017	1073	1197	1.211	0.024	0.673	0.740
Want to delay at least 2 years	0.162	0.011	1073	1197	0.977	0.068	0.140	0.184
Ideal number of children	2.059	0.020	1119	1247	1.310	0.010	2.018	2.100
Mothers received tetanus injection	0.872	0.022	273	302	1.033	0.025	0.828	0.916
Mothers received medical care at birth	0.996	0.004	273	302	1.014	0.004	0.989	1.000
Had diarrhea in the last 2 weeks	0.096	0.021	269	298	1.187	0.223	0.053	0.138
Treated with ORS packets	0.331	0.059	27	28	0.635	0.179	0.212	0.449
Consulted medical personnel	0.490	0.088	27	28	0.892	0.180	0.314	0.667
Having health card, seen	0.156	0.050	85	97	1.276	0.319	0.056	0.255
Received BCG vaccination	0.938	0.039	85	97	1.275	0.041	0.860	1.000
Received DPT vaccination (3 doses)	0.701	0.053	85	97	1.046	0.076	0.595	0.806
Received polio vaccination (3 doses)	0.744	0.046	85	97	0.952	0.062	0.651	0.836
Received measles vaccination	0.921	0.040	85	97	1.216	0.044	0.841	1.000
Fully immunized	0.686	0.057	85	97	1.125	0.084	0.571	0.801
Total fertility rate (1992-96)	2.276	0.097	NA	7906	1.085	0.043	2.081	2.471

NA = Not applicable

Table B.7 Sampling errors - North Central region sample, Vietnam 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban residence	0.087	0.005	773	681	0.485	0.057	0.077	0.097
No education	0.022	0.010	773	681	1.924	0.464	0.002	0.042
With secondary education or higher	0.524	0.038	773	681	2.116	0.073	0.448	0.600
Currently married (in union)	0.948	0.015	773	681	1.879	0.016	0.918	0.978
Married before age 20	0.384	0.032	754	669	1.805	0.083	0.320	0.448
Children ever born	2.022	0.189	1237	1017	0.755	0.094	1.643	2.400
Children ever born to women over 40	4.061	0.167	212	179	1.374	0.041	3.728	4.394
Children surviving	1.922	0.187	1237	1017	0.787	0.097	1.547	2.297
Know any contraceptive method	0.999	0.001	735	646	0.837	0.001	0.997	1.000
Know any modern contraceptive method	0.999	0.001	735	646	0.837	0.001	0.997	1.000
Ever used any contraceptive method	0.877	0.017	735	646	1.415	0.020	0.843	0.911
Currently using any method	0.801	0.027	735	646	1.816	0.033	0.748	0.855
Currently using a modern method	0.634	0.054	735	646	3.057	0.086	0.525	0.743
Currenty using pill	0.010	0.006	735	646	1.507	0.546	0.000	0.021
Currently using IUD	0.503	0.041	735	646	2.231	0.082	0.421	0.585
Currently using condom	0.035	0.008	735	646	1.214	0.236	0.018	0.051
Currently using female sterilization	0.064	0.021	735	646	2.371	0.335	0.021	0.107
Currently using periodic abstinence	0.027	0.007	735	646	1.093	0.241	0.014	0.041
Currently using withdrawal	0.140	0.031	735	646	2.386	0.218	0.079	0.201
Using public sector source	0.955	0.007	476	409	0.698	0.007	0.942	0.969
Want no more children	0.675	0.020	735	646	1.155	0.030	0.635	0.715
Want to delay at least 2 years	0.145	0.024	735	646	1.863	0.167	0.096	0.193
Ideal number of children	2.587	0.068	773	681	1.994	0.026	2.451	2.722
Mothers received tetanus injection	0.772	0.042	271	249	1.678	0.055	0.687	0.857
Mothers received medical care at birth	0.787	0.055	271	249	2.231	0.070	0.678	0.897
Had diarrhea in the last 2 weeks	0.106	0.019	260	242	1.024	0.181	0.068	0.144
Treated with ORS packets	0.503	0.076	26	26	0.823	0.152	0.350	0.655
Consulted medical personnel	0.561	0.187	26	26	2.026	0.333	0.188	0.935
Having health card, seen	0.014	0.014	87	71	1.080	1.007	0.000	0.042
Received BCG vaccination	0.923	0.028	87	71	0.954	0.031	0.866	0.980
Received DPT vaccination (3 doses)	0.587	0.082	87	71	1.497	0.140	0.423	0.752
Received polio vaccination (3 doses)	0.604	0.080	87	71	1.468	0.132	0.444	0.764
Received measles vaccination	0.753	0.048	87	71	0.997	0.064	0.658	0.849
Fully immunized	0.446	0.072	87	71	1.303	0.162	0.301	0.590
Total fertility rate (1992-96)	3.262	0.141	NA	4471	1.069	0.043	2.980	3.545

NA = Not applicable

Table B.8 Sampling errors - Central Coast region sample, Vietnam 1997

Variable	Value (R)	Standard error (SE)	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.224	0.029	554	599	1.648	0.131	0.165	0.282
No education	0.091	0.034	554	599	2.804	0.376	0.023	0.160
With secondary education or higher	0.353	0.064	554	599	3.130	0.180	0.225	0.480
Currently married (in union)	0.931	0.020	554	599	1.844	0.021	0.891	0.970
Married before age 20	0.456	0.058	541	582	2.721	0.128	0.339	0.572
Children ever born	1.949	0.154	822	931	1.008	0.079	1.640	2.257
Children ever born to women over 40	4.243	0.340	167	180	1.979	0.080	3.562	4.923
Children surviving	1.817	0.164	822	931	1.161	0.090	1.489	2.146
Know any contraceptive method	0.984	0.010	517	557	1.825	0.010	0.963	1.000
Know any modern contraceptive method	0.978	0.007	517	557	1.070	0.007	0.964	0.992
Ever used any contraceptive method	0.773	0.032	517	557	1.729	0.041	0.709	0.837
Currently using any method	0.701	0.030	517	557	1.495	0.043	0.640	0.761
Currently using a modern method	0.544	0.042	517	557	1.899	0.076	0.461	0.628
Currenty using pill	0.042	0.010	517	557	1.191	0.251	0.021	0.063
Currently using IUD	0.334	0.032	517	557	1.562	0.097	0.269	0.399
Currently using condom	0.078	0.017	517	557	1.423	0.215	0.044	0.112
Currently using female sterilization	0.091	0.021	517	557	1.638	0.228	0.049	0.132
Currently using periodic abstinence	0.039	0.016	517	557	1.855	0.403	0.008	0.071
Currently using withdrawal	0.115	0.020	517	557	1.441	0.176	0.075	0.155
Using public sector source	0.843	0.022	275	303	1.001	0.026	0.799	0.887
Want no more children	0.571	0.029	517	557	1.335	0.051	0.513	0.630
Want to delay at least 2 years	0.178	0.018	517	557	1.068	0.101	0.142	0.214
Ideal number of children	2.847	0.101	553	598	2.114	0.035	2.646	3.048
Mothers received tetanus injection	0.724	0.037	223	246	1.196	0.051	0.650	0.797
Mothers received medical care at birth	0.654	0.055	223	246	1.647	0.085	0.543	0.765
Had diarrhea in the last 2 weeks	0.112	0.012	220	243	0.541	0.108	0.088	0.137
Treated with ORS packets	0.389	0.219	21	27	2.157	0.563	0.000	0.828
Consulted medical personnel	0.373	0.145	21	27	1.637	0.390	0.082	0.663
Having health card, seen	0.156	0.049	85	99	1.282	0.312	0.058	0.253
Received BCG vaccination	0.880	0.032	85	99	0.954	0.037	0.815	0.945
Received DPT vaccination (3 doses)	0.616	0.050	85	99	0.973	0.080	0.517	0.715
Received polio vaccination (3 doses)	0.684	0.033	85	99	0.686	0.049	0.618	0.751
Received measles vaccination	0.613	0.037	85	99	0.734	0.061	0.539	0.688
Fully immunized	0.458	0.056	85	99	1.078	0.123	0.346	0.571
Total fertility rate (1992-96)	3.387	0.247	NA	4097	1.457	0.073	2.893	3.882

NA = Not applicable

Table B.9 Sampling errors - Central Highlands region sample, Vietnam 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.234	0.020	219	182	0.714	0.088	0.193	0.275
No education	0.136	0.095	219	182	4.075	0.695	0.000	0.326
With secondary education or higher	0.389	0.090	219	182	2.726	0.231	0.209	0.569
Currently married (in union)	0.936	0.021	219	182	1.294	0.023	0.893	0.979
Married before age 20	0.413	0.048	216	179	1.433	0.117	0.317	0.509
Children ever born	2.225	0.226	323	250	0.681	0.102	1.773	2.678
Children ever born to women over 40	4.654	0.315	51	40	0.989	0.068	4.025	5.284
Children surviving	2.086	0.208	323	250	0.670	0.100	1.670	2.501
Know any contraceptive method	0.924	0.037	203	170	1.984	0.040	0.850	0.998
Know any modern contraceptive method	0.924	0.037	203	170	1.984	0.040	0.850	0.998
Ever used any contraceptive method	0.709	0.122	203	170	3.830	0.173	0.464	0.954
Currently using any method	0.636	0.106	203	170	3.142	0.167	0.423	0.849
Currently using a modern method	0.438	0.076	203	170	2.182	0.174	0.286	0.591
Currenty using pill	0.102	0.059	203	170	2.764	0.577	0.000	0.220
Currently using IUD	0.224	0.050	203	170	1.701	0.223	0.124	0.323
Currently using condom	0.053	0.024	203	170	1.533	0.457	0.005	0.101
Currently using female sterilization	0.060	0.017	203	170	1.006	0.280	0.026	0.094
Currently using periodic abstinence	0.089	0.008	203	170	0.422	0.095	0.072	0.106
Currently using withdrawal	0.109	0.051	203	170	2.312	0.466	0.007	0.210
Using public sector source	0.831	0.091	86	75	2.241	0.109	0.649	1.000
Want no more children	0.548	0.049	203	170	1.394	0.089	0.450	0.646
Want to delay at least 2 years	0.211	0.035	203	170	1.231	0.168	0.140	0.281
Ideal number of children	3.121	0.239	216	179	2.470	0.077	2.643	3.600
Mothers received tetanus injection	0.550	0.090	113	100	1.937	0.164	0.370	0.730
Mothers received medical care at birth	0.645	0.194	113	100	3.823	0.301	0.257	1.000
Had diarrhea in the last 2 weeks	0.081	0.021	105	94	0.830	0.263	0.038	0.124
Treated with ORS packets	0.497	0.124	8	8	0.747	0.249	0.250	0.745
Consulted medical personnel	0.376	0.031	8	8	0.193	0.082	0.314	0.437
Having health card, seen	0.121	0.078	36	32	1.482	0.647	0.000	0.277
Received BCG vaccination	0.776	0.052	36	32	0.771	0.067	0.672	0.880
Received DPT vaccination (3 doses)	0.654	0.062	36	32	0.801	0.094	0.530	0.777
Received polio vaccination (3 doses)	0.712	0.029	36	32	0.391	0.040	0.655	0.769
Received measles vaccination	0.669	0.016	36	32	0.216	0.025	0.637	0.702
Fully immunized	0.537	0.055	36	32	0.687	0.103	0.426	0.648
Total fertility rate (1992-96)	4.285	0.703	NA	1159	2.011	0.164	2.880	5.690

NA = Not applicable

Table B.10 Sampling errors – Southeast region sample, Vietnam 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban residence	0.450	0.021	650	691	1.055	0.046	0.408	0.491
No education	0.030	0.012	650	691	1.769	0.393	0.006	0.054
With secondary education or higher	0.441	0.036	650	691	1.824	0.081	0.370	0.512
Currently married (in union)	0.929	0.013	650	691	1.305	0.014	0.903	0.956
Married before age 20	0.385	0.016	639	679	0.834	0.042	0.353	0.417
Children ever born	1.431	0.107	1115	1177	0.869	0.075	1.217	1.644
Children ever born to women over 40	3.007	0.137	215	225	1.022	0.046	2.732	3.281
Children surviving	1.373	0.105	1115	1177	0.893	0.076	1.163	1.583
Know any contraceptive method	0.980	0.007	604	642	1.317	0.008	0.965	0.995
Know any modern contraceptive method	0.979	0.008	604	642	1.336	0.008	0.963	0.994
Ever used any contraceptive method	0.848	0.015	604	642	1.047	0.018	0.817	0.878
Currently using any method	0.746	0.017	604	642	0.987	0.023	0.711	0.781
Currently using a modern method	0.529	0.023	604	642	1.141	0.044	0.483	0.576
Currenty using pill	0.070	0.008	604	642	0.733	0.109	0.055	0.085
Currently using IUD	0.272	0.021	604	642	1.162	0.077	0.230	0.314
Currently using condom	0.073	0.015	604	642	1.424	0.206	0.043	0.104
Currently using female sterilization	0.109	0.015	604	642	1.175	0.137	0.079	0.139
Currently using periodic abstinence	0.105	0.014	604	642	1.096	0.130	0.078	0.132
Currently using withdrawal	0.110	0.014	604	642	1.088	0.126	0.083	0.138
Using public sector source	0.775	0.031	320	340	1.305	0.039	0.714	0.836
Want no more children	0.581	0.017	604	642	0.847	0.029	0.547	0.616
Want to delay at least 2 years	0.177	0.016	604	642	1.018	0.089	0.145	0.209
Ideal number of children	2.447	0.031	645	685	0.808	0.013	2.385	2.508
Mothers received tetanus injection	0.729	0.054	198	205	1.572	0.074	0.621	0.837
Mothers received medical care at birth	0.930	0.023	198	205	1.021	0.024	0.885	0.975
Had diarrhea in the last 2 weeks	0.041	0.014	196	203	0.979	0.338	0.013	0.068
Treated with ORS packets	0.343	0.202	7	8	1.186	0.588	0.000	0.746
Consulted medical personnel	0.668	0.155	7	8	0.920	0.232	0.358	0.979
Having health card, seen	0.150	0.056	69	76	1.310	0.371	0.039	0.261
Received BCG vaccination	0.930	0.030	69	76	0.982	0.032	0.870	0.989
Received DPT vaccination (3 doses)	0.701	0.046	69	76	0.843	0.066	0.609	0.793
Received polio vaccination (3 doses)	0.719	0.060	69	76	1.130	0.084	0.598	0.840
Received measles vaccination	0.847	0.068	69	76	1.597	0.081	0.710	0.983
Fully immunized	0.629	0.052	69	76	0.904	0.083	0.525	0.734
Total fertility rate (1992-96)	1.867	0.181	NA	5357	1.553	0.097	1.506	2.228

NA = Not applicable

Table B.11 Sampling errors - Mekong River Delta region sample, Vietnam 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban residence	0.165	0.010	1257	1097	0.977	0.062	0.144	0.185
No education	0.073	0.013	1257	1097	1.752	0.176	0.047	0.099
With secondary education or higher	0.170	0.019	1257	1097	1.799	0.112	0.132	0.209
Currently married (in union)	0.928	0.008	1257	1097	1.096	0.009	0.912	0.944
Married before age 20	0.478	0.019	1235	1076	1.338	0.040	0.440	0.516
Children ever born	1.851	0.268	1997	1748	1.031	0.145	1.315	2.388
Children ever born to women over 40	4.648	0.129	375	320	1.083	0.028	4.390	4.906
Children surviving	1.716	0.252	1997	1748	1.046	0.147	1.212	2.219
Know any contraceptive method	0.988	0.004	1171	1017	1.293	0.004	0.980	0.996
Know any modern contraceptive method	0.983	0.005	1171	1017	1.195	0.005	0.974	0.992
Ever used any contraceptive method	0.819	0.013	1171	1017	1.134	0.016	0.793	0.845
Currently using any method	0.728	0.015	1171	1017	1.121	0.020	0.699	0.757
Currently using a modern method	0.476	0.021	1171	1017	1.428	0.044	0.434	0.518
Currenty using pill	0.072	0.013	1171	1017	1.653	0.173	0.047	0.097
Currently using IUD	0.294	0.016	1171	1017	1.237	0.056	0.261	0.327
Currently using condom	0.051	0.008	1171	1017	1.251	0.158	0.035	0.067
Currently using female sterilization	0.047	0.007	1171	1017	1.069	0.140	0.034	0.061
Currently using periodic abstinence	0.095	0.008	1171	1017	0.946	0.085	0.079	0.111
Currently using withdrawal	0.156	0.012	1171	1017	1.114	0.076	0.132	0.179
Using public sector source	0.749	0.025	564	484	1.341	0.033	0.700	0.798
Want no more children	0.621	0.018	1171	1017	1.289	0.029	0.584	0.657
Want to delay at least 2 years	0.181	0.013	1171	1017	1.175	0.073	0.155	0.208
Ideal number of children	2.719	0.051	1244	1085	1.494	0.019	2.617	2.820
Mothers received tetanus injection	0.640	0.040	356	309	1.485	0.063	0.560	0.721
Mothers received medical care at birth	0.817	0.037	356	309	1.664	0.045	0.743	0.891
Had diarrhea in the last 2 weeks	0.118	0.019	347	302	1.076	0.161	0.080	0.156
Treated with ORS packets	0.479	0.093	38	36	1.163	0.195	0.292	0.666
Consulted medical personnel	0.509	0.088	38	36	1.100	0.173	0.333	0.685
Having health card. seen	0.244	0.034	138	121	0.919	0.137	0.177	0.311
Received BCG vaccination	0.880	0.041	138	121	1.490	0.047	0.798	0.963
Received DPT vaccination (3 doses)	0.674	0.045	138	121	1.142	0.067	0.583	0.765
Received polio vaccination (3 doses)	0.722	0.052	138	121	1.374	0.072	0.618	0.827
Received measles vaccination	0.692	0.055	138	121	1.394	0.079	0.582	0.801
Fully immunized	0.593	0.052	138	121	1.251	0.088	0.489	0.698
Total fertility rate (1992-96)	2.313	0.111	NA	7709	1.060	0.048	2.090	2.536

NA = Not applicable

Table B.12 Sampling errors - Non-project provinces sample. Vietnam 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.208	0.008	3757	3976	1.173	0.037	0.193	0.224
No education	0.041	0.007	3757	3976	2.146	0.170	0.027	0.054
With secondary education or higher	0.439	0.015	3757	3976	1.876	0.035	0.409	0.469
Currently married (in union)	0.940	0.005	3757	3976	1.342	0.006	0.930	0.951
Married before age 20	0.446	0.015	3675	3877	1.869	0.034	0.415	0.477
Children ever born	1.832	0.084	5579	6048	1.192	0.046	1.663	2.000
Children ever born to women over 40	3.810	0.080	1101	1114	1.293	0.021	3.651	3.969
Children surviving	1.717	0.080	5579	6048	1.210	0.047	1.557	1.876
Know any contraceptive method	0.991	0.002	3525	3738	1.501	0.002	0.986	0.996
Know any modern contraceptive method	0.988	0.002	3525	3738	1.153	0.002	0.984	0.992
Ever used any contraceptive method	0.836	0.009	3525	3738	1.383	0.010	0.818	0.853
Currently using any method	0.746	0.010	3525	3738	1.352	0.013	0.726	0.766
Currently using a modern method	0.557	0.016	3525	3738	1.903	0.029	0.525	0.589
Currenty using pill	0.050	0.007	3525	3738	1.820	0.134	0.037	0.063
Currently using IUD	0.372	0.019	3525	3738	2.323	0.051	0.334	0.410
Currently using condom	0.064	0.006	3525	3738	1.506	0.097	0.051	0.076
Currently using female sterilization	0.066	0.008	3525	3738	1.963	0.124	0.050	0.083
Currently using periodic abstinence	0.071	0.005	3525	3738	1.116	0.068	0.061	0.081
Currently using withdrawal	0.114	0.010	3525	3738	1.817	0.085	0.095	0.134
Using public sector source	0.862	0.013	1964	2081	1.670	0.015	0.836	0.888
Want no more children	0.656	0.011	3525	3738	1.403	0.017	0.633	0.678
Want to delay at least 2 years	0.161	0.007	3525	3738	1.126	0.043	0.147	0.175
Ideal number of children	2.442	0.026	3738	3957	1.620	0.010	2.391	2.494
Mothers received tetanus injection	0.721	0.020	1172	1283	1.452	0.027	0.682	0.761
Mothers received medical care at birth	0.780	0.042	1172	1283	3.204	0.054	0.696	0.864
Had diarrhea in the last 2 weeks	0.104	0.010	1141	1249	1.083	0.095	0.084	0.123
Treated with ORS packets	0.392	0.059	117	129	1.309	0.151	0.274	0.510
Consulted medical personnel	0.510	0.079	117	129	1.771	0.156	0.351	0.668
Having health card. seen	0.162	0.022	412	450	1.210	0.134	0.119	0.205
Received BCG vaccination	0.908	0.019	412	450	1.389	0.021	0.869	0.947
Received DPT vaccination (3 doses)	0.685	0.022	412	450	0.966	0.032	0.642	0.729
Received polio vaccination (3 doses)	0.720	0.021	412	450	0.947	0.029	0.678	0.761
Received measles vaccination	0.779	0.026	412	450	1.278	0.033	0.727	0.830
Fully immunized	0.589	0.028	412	450	1.179	0.048	0.533	0.646
Total fertility rate (1992-96)	2.616	0.094	NA	26666	1.656	0.036	2.428	2.804
Neonatal mortality rate (1987-96)	24.287	4.204	4800	5235	1.767	0.173	15.879	32.695
Infant mortality rate (1987-96)	37.104	4.845	4800	5235	1.665	0.131	27.415	46.794
Child mortality rate (1987-96)	12.568	2.114	4814	5251	1.321	0.168	8.340	16.797
Under-five mortality rate (1987-96)	49.206	5.407	4820	5254	1.652	0.110	38.392	60.021
Postneonatal mortality rate (1987-96)	12.817	2.025	4794	5232	1.266	0.158	8.768	16.867

NA = Not applicable

Table B.13 Sampling errors - Project provinces sample, Vietnam 1997

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban residence	0.143	0.007	1907	1688	0.825	0.046	0.129	0.156
No education	0.065	0.015	1907	1688	2.705	0.235	0.035	0.096
With secondary education or higher	0.536	0.025	1907	1688	2.186	0.047	0.486	0.586
Currently married (in union)	0.949	0.005	1907	1688	1.010	0.005	0.939	0.959
Married before age 20	0.417	0.016	1876	1658	1.389	0.038	0.386	0.449
Children ever born	1.923	0.129	2796	2457	1.056	0.067	1.665	2.182
Children ever born to women over 40	3.867	0.103	551	484	1.273	0.027	3.661	4.073
Children surviving	1.824	0.124	2796	2457	1.066	0.068	1.577	2.072
Know any contraceptive method	0.985	0.005	1806	1601	1.615	0.005	0.976	0.995
Know any modern contraceptive method	0.984	0.005	1806	1601	1.546	0.005	0.975	0.993
Ever used any contraceptive method	0.856	0.015	1806	1601	1.820	0.018	0.826	0.886
Currently using any method	0.770	0.015	1806	1601	1.486	0.019	0.741	0.800
Currently using a modern method	0.561	0.020	1806	1601	1.687	0.035	0.521	0.600
Currenty using pill	0.028	0.008	1806	1601	1.984	0.275	0.013	0.043
Currently using IUD	0.416	0.020	1806	1601	1.713	0.048	0.376	0.455
Currently using condom	0.048	0.007	1806	1601	1.390	0.146	0.034	0.062
Currently using female sterilization	0.056	0.007	1806	1601	1.332	0.129	0.041	0.070
Currently using periodic abstinence	0.077	0.011	1806	1601	1.732	0.141	0.056	0.099
Currently using withdrawal	0.131	0.013	1806	1601	1.636	0.099	0.105	0.157
Using public sector source	0.911	0.015	987	898	1.619	0.016	0.881	0.940
Want no more children	0.667	0.015	1806	1601	1.339	0.022	0.637	0.697
Want to delay at least 2 years	0.159	0.010	1806	1601	1.189	0.064	0.139	0.180
Ideal number of children	2.433	0.038	1904	1685	1.725	0.016	2.356	2.510
Mothers received tetanus injection	0.696	0.028	603	535	1.452	0.040	0.640	0.751
Mothers received medical care at birth	0.748	0.043	603	535	2.237	0.057	0.662	0.834
Had diarrhea in the last 2 weeks	0.093	0.011	583	520	0.952	0.123	0.070	0.116
Treated with ORS packets	0.411	0.066	53	49	0.997	0.161	0.278	0.543
Consulted medical personnel	0.489	0.068	53	49	1.003	0.138	0.354	0.625
Having health card, seen	0.061	0.018	203	181	1.048	0.288	0.026	0.096
Received BCG vaccination	0.864	0.028	203	181	1.137	0.033	0.807	0.921
Received DPT vaccination (3 doses)	0.595	0.042	203	181	1.199	0.070	0.512	0.678
Received polio vaccination (3 doses)	0.636	0.040	203	181	1.170	0.063	0.556	0.716
Received measles vaccination	0.752	0.031	203	181	1.020	0.042	0.689	0.815
Fully immunized	0.514	0.043	203	181	1.214	0.083	0.428	0.599
Total fertility rate (1992-96)	2.805	0.149	NA	12924	1.799	0.053	2.508	3.102
Neonatal mortality rate (1987-96)	16.981	2.774	2467	2230	1.023	0.163	11.434	22.528
Infant mortality rate (1987-96)	28.542	3.354	2469	2232	0.930	0.118	21.834	35.251
Child mortality rate (1987-96)	10.327	2.568	2472	2235	1.257	0.249	5.190	15.464
Under-five mortality rate (1987-96)	38.575	4.348	2475	2237	1.113	0.113	29.878	47.271
Postneonatal mortality rate (1987-96)	11.561	2.041	2468	2231	0.917	0.177	7.479	15.643

NA = Not applicable

APPENDIX C

QUESTIONNAIRES

VIETNAM DEMOGRAPHIC AND HEALTH SURVEY - II
HOUSEHOLD SCHEDULE

GENERAL STATISTICAL OFFICE

IDENTIFICATION

PROVINCE/MUNICIPALITY _____

DISTRICT _____

COMMUNE _____

CLUSTER NAME _____

CLUSTER NUMBER .....

NAME OF HOUSEHOLD HEAD _____

HOUSEHOLD NUMBER .....

ADDRESS _____

URBAN/RURAL (URBAN=1, RURAL=2) .....

LARGE CITY/SMALL CITY/TOWN/COUNTRYSIDE .....
(large city=1, small city=2, town=3, countryside=4)

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY MONTH YEAR 1 9 9 7
INTERVIEWER'S NAME				NAME
RESULT*				RESULT*
NEXT VISIT: DATE				TOTAL NO. OF VISITS
TIME				

*RESULT CODES:

1 COMPLETED
2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4 POSTPONED
5 REFUSED
6 DWELLING VACANT OR ADDRESS NOT A DWELLING
7 DWELLING DESTROYED
8 DWELLING NOT FOUND
9 OTHER _____
(SPECIFY)

TOTAL IN HOUSEHOLD

TOTAL ELIGIBLE WOMEN

LINE NO. OF RESP. TO HOUSEHOLD SCHEDULE

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

HOUSEHOLD SCHEDULE

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	RESIDENCE		SEX	MONTH AND YEAR OF BIRTH	AGE	EDUCATION			MARITAL STATUS	ELIGIBILITY
								IF AGE 5 YEARS OR OLDER			IF AGE 13 YEARS OR OLDER	
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household.	What is the relationship of (NAME) to the head of the household?	Does (NAME) usually live here?	Did (NAME) stay here last night?	Is (NAME) male of female?	In what month and year was (NAME) born?	How old is (NAME)? IF AGE 95 OR ABOVE, WRITE '95'.	Has (NAME) ever been to school?	IF ATTENDED SCHOOL: What is the highest grade of education (NAME) completed? USE EQUIVALENCY TABLE	IF ATTENDED SCHOOL: IF AGE <25 YEARS: Is (NAME) still in school?	What is the current marital status of (NAME)?	CIRCLE LINE NUMBER OF EVER-MARRIED WOMEN AGE 15-49
(1)	(2)	(3)	(4)	(5)	(6)	(6A)	(7)	(8)	(9)	(10)	(11)	(15)
			YES NO	YES NO	M F		IN YEARS	YES NO	GRADE	YES NO	CM W D S NM	
01			1 2	1 2	1 2	MO. YR.		1 2		1 2	1 2 3 4 5	01
02			1 2	1 2	1 2	MO. YR.		1 2		1 2	1 2 3 4 5	02
03			1 2	1 2	1 2	MO. YR.		1 2		1 2	1 2 3 4 5	03
04			1 2	1 2	1 2	MO. YR.		1 2		1 2	1 2 3 4 5	04
05			1 2	1 2	1 2	MO. YR.		1 2		1 2	1 2 3 4 5	05
06			1 2	1 2	1 2	MO. YR.		1 2		1 2	1 2 3 4 5	06
07			1 2	1 2	1 2	MO. YR.		1 2		1 2	1 2 3 4 5	07
08			1 2	1 2	1 2	MO. YR.		1 2		1 2	1 2 3 4 5	08
09			1 2	1 2	1 2	MO. YR.		1 2		1 2	1 2 3 4 5	09

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	RESIDENCE		SEX	MONTH AND YEAR OF BIRTH	AGE	EDUCATION (IF AGE 5 YEARS OR OLDER)			MARITAL STATUS (IF AGE 13 YEARS OR OLDER)	ELIGIBILITY
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household.	What is the relationship of (NAME) to the head of the household?	Does (NAME) usually live here?	Did (NAME) stay here last night?	Is (NAME) male of female?	In what month and year was (NAME) born?	How old is (NAME)? IF AGE 95 OR ABOVE, WRITE '95'.	Has (NAME) ever been to school?	IF ATTENDED SCHOOL: What is the highest grade of education (NAME) completed? USE EQUIVALENCY TABLE	IF AGE <25 YEARS: Is (NAME) still in school?	What is the current marital status of (NAME)?	CIRCLE LINE NUMBER OF EVER-MARRIED WOMEN AGE 15-49
(1)	(2)	(3)	(4)	(5)	(6)	(6A)	(7)	(8)	(9)	(10)	(11)	(15)
			YES NO	YES NO	M F		IN YEARS	YES NO	GRADE	YES NO	CM W D S NM	
10			1 2	1 2	1 2	MO. YR.		1 2		1 2	1 2 3 4 5	10
11			1 2	1 2	1 2	MO. YR.		1 2		1 2	1 2 3 4 5	11
12			1 2	1 2	1 2	MO. YR.		1 2		1 2	1 2 3 4 5	12
13			1 2	1 2	1 2	MO. YR.		1 2		1 2	1 2 3 4 5	13
14			1 2	1 2	1 2	MO. YR.		1 2		1 2	1 2 3 4 5	14

TICK HERE IF CONTINUATION SHEET USED ☐

Just to make sure that I have a complete listing:

1) Are there any other persons such as small children or infants that we have not listed? YES ☐ → ENTER EACH IN TABLE NO ☐

2) In addition, are there any other people who may not be members of your family, such as domestic servants, lodgers or friends who usually live here? YES ☐ → ENTER EACH IN TABLE NO ☐

3) Are there any guests or temporary visitors staying here, or anyone else who slept here last night that have not been listed? YES ☐ → ENTER EACH IN TABLE NO ☐

CODES FOR Q.3 (RELATIONSHIP TO HOUSEHOLD HEAD):
01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DTR.-IN-LAW
05 = GRANDCHILD
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
10 = OTHER RELATIVE
12 = NOT RELATED, 98=DON'T KNOW

CODES FOR Q.9 EDUCATION GRADE
00 = LESS THAN 1 YEAR
98 = DON'T KNOW

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
16	What is the main source of drinking water for members of your household?	PIPED INTO RESIDENCE/PLOT ..... 11 PIPED TO PUBLIC TAP ..... 12 WELL IN RESIDENCE/PLOT ..... 21 PUBLIC WELL ..... 22 SPRING ..... 31 RIVER/STREAM ..... 32 POND/LAKE ..... 33 DAM ..... 34 RAINWATER ..... 41 TANKER TRUCK ..... 51 BOTTLED WATER ..... 61 OTHER _____ 96 (SPECIFY)	→ 18 → 18 → 18 → 18
17	How long does it take you to go there, get water, and come back?	MINUTES ..... [ ][ ][ ]	
18	What kind of toilet facility does your household have?	OWN FLUSH TOILET ..... 11 SHARED FLUSH TOILET ..... 12 TRADITIONAL PIT TOILET/LATRINE . 21 VENTILATED IMPROVED PIT (VIP) TOILET/ LATRINE ..... 22 NO FACILITY/BUSH/FIELD ..... 31 OTHER _____ 96 (SPECIFY)	
19	Does your household have: Electricity? A radio? A television? A telephone? A refrigerator? A sewing machine?	YES NO ELECTRICITY ..... 1 2 RADIO ..... 1 2 TELEVISION ..... 1 2 TELEPHONE ..... 1 2 REFRIGERATOR ..... 1 2 SEWING MACHINE 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
20	How many rooms in your household are used for sleeping?	ROOMS ..... [ ][ ]	
21	MAIN MATERIAL OF THE FLOOR. RECORD OBSERVATION.	EARTH/SAND ..... 11 ROUGH WOOD/BAMBOO ..... 21 FINISHED FLOOR (POLISHED WOOD/CERAMIC TILES/STONE/ ETC.) OTHER _____ 96 (SPECIFY)	
21A	MAIN MATERIAL OF THE ROOF. RECORD OBSERVATION.	CONCRETE ..... 1 TILE/FIBRO/ASBESTOS ..... 2 GALVANIZED IRON/ALUMINUM/TIN .... 3 GRASS/STRAW ..... 4 OTHER _____ 6 (SPECIFY)	
22	Does any member of your household own: A bicycle? A motorcycle? A car? A boat? A ploughing machine? A motor scooter?	YES NO BICYCLE ..... 1 2 MOTORCYCLE ..... 1 2 CAR ..... 1 2 BOAT ..... 1 2 PLOUGHING MACHINE ..... 1 2 MOTOR SCOOTER 1 2	
23	What type of salt is usually used for cooking in your household? (ASK TO SEE SALT PACKAGE).	LOCAL SALT ..... 01 PACKAGED SALT (IODIZED) ..... 02 PACKAGED SALT (NOT IODIZED) ..... 03 LOOSE SALT ..... 05 OTHER _____ 96 (SPECIFY)	

VIETNAM DEMOGRAPHIC AND HEALTH SURVEY - II
WOMAN'S QUESTIONNAIRE

GENERAL STATISTICAL OFFICE

IDENTIFICATION

PROVINCE/MUNICIPALITY _____

DISTRICT _____

COMMUNE _____

CLUSTER NAME _____

CLUSTER NUMBER .....

NAME OF HOUSEHOLD HEAD _____

HOUSEHOLD NUMBER .....

ADDRESS _____

URBAN/RURAL (URBAN=1, RURAL=2) .....

LARGE CITY/SMALL CITY/TOWN/COUNTRYSIDE .....
(large city=1, small city=2, town=3, countryside=4)

NAME AND LINE NUMBER OF WOMAN _____

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY MONTH YEAR 1 9 9 7
INTERVIEWER'S NAME	_____	_____	_____	NAME
RESULT*	_____	_____	_____	RESULT
NEXT VISIT: DATE	_____	_____		TOTAL NO. OF VISITS
TIME	_____	_____		

*RESULT CODES:

1 COMPLETED
2 NOT AT HOME
3 POSTPONED
4 REFUSED
5 PARTLY COMPLETED
6 INCAPACITATED
7 OTHER _____ (SPECIFY)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR ..... [ ][ ] MINUTES ..... [ ][ ]	
102	First I would like to ask some questions about you and your household. For most of the time until you were 12 years old, did you live in a city, in a town, or in the countryside?	CITY ..... 1 TOWN ..... 2 COUNTRYSIDE 3	
103	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)?	YEARS ..... [ ][ ] ALWAYS ..... 95 VISITOR 96	105
104	Just before you moved here, did you live in a city, in a town, or in the countryside?	CITY ..... 1 TOWN ..... 2 COUNTRYSIDE 3	
105	In what month and year were you born?	MONTH ..... [ ][ ] DON'T KNOW MONTH ..... 98 YEAR ..... [ ][ ][ ][ ] DON'T KNOW YEAR 9998	
106	How old were you at your last birthday? COMPARE AND CORRECT 105 AND/OR 106 IF INCONSISTENT.	AGE IN COMPLETED YEARS .. [ ][ ]	
106A	What is your current marital status?	CURRENTLY MARRIED ..... 1 WIDOWED ..... 2 DIVORCED ..... 3 SEPARATED 4	
107	Have you ever attended school?	YES ..... 1 NO 2	114
108	What is the highest grade of education you completed? USE EQUIVALENCY TABLE.	GRADE ..... [ ][ ] COLLEGE/UNIVERSITY 15	
110	CHECK 106: AGE 24 OR BELOW [ ] AGE 25 OR ABOVE [ ]		113
111	Are you currently attending school?	YES ..... 1 NO 2	113

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
112	What was the main reason you stopped attending school?	GOT PREGNANT ..... 01 GOT MARRIED ..... 02 TO CARE FOR YOUNGER CHILDREN ..... 03 FAMILY NEEDED HELP ON FARM OR IN BUSINESS ..... 04 COULD NOT PAY SCHOOL FEES ..... 05 NEEDED TO EARN MONEY ..... 06 GRADUATED/HAD ENOUGH SCHOOLING ..... 07 DID NOT PASS ENTRANCE EXAMS .. 08 DID NOT LIKE SCHOOL ..... 09 SCHOOL NOT ACCESSIBLE/ TOO FAR ..... 10 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
113	CHECK 108: LESS THAN GRADE 6 ☐ GRADE 6 OR HIGHER ☐		→115
114	Can you read and understand a letter or newspaper easily, with difficulty, or not at all?	EASILY ..... 1 WITH DIFFICULTY ..... 2 NOT AT ALL 3	→116
115	Do you usually read a newspaper or magazine at least once a week?	YES ..... 1 NO 2	
116	Do you usually listen to a radio every day?	YES ..... 1 NO 2	
117	Do you usually watch television at least once a week?	YES ..... 1 NO 2	
118	What is your religion?	NO RELIGION ..... 01 BUDDHIST ..... 02 CATHOLIC ..... 03 PROTESTANT ..... 04 CAO DAI ..... 05 HOA HAO ..... 06 ISLAM ..... 07 OTHER _____ 96 (SPECIFY)	
119	What ethnic group do you belong to?	VIETNAMESE ..... 1 CHINESE ..... 2 KHMER ..... 3 TAY ..... 4 OTHER _____ 6 (SPECIFY)	
120	CHECK Q.4 IN THE HOUSEHOLD QUESTIONNAIRE THE WOMAN INTERVIEWED IS NOT A USUAL RESIDENT ☐ THE WOMAN INTERVIEWED IS A USUAL RESIDENT ☐		→201
121	Now I would like to ask about the place in which you usually live. What is the name of the place in which you usually live? _____ (NAME OF PLACE) Is that a city, town, or in the countryside?	LARGE CITY ..... 1 SMALL CITY ..... 2 TOWN ..... 3 COUNTRYSIDE 4	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
122	In which province is that located? _____ (NAME OF PROVINCE/MUNICIPALITY)	PROVINCE/MUNICIPALITY ..... [ ][ ]	
123	Now I would like to ask about the household in which you usually live. What is the main source of drinking water for members of your household?	PIPED INTO RESIDENCE/PLOT ..... 11 PIPED TO PUBLIC TAP ..... 12 WELL IN RESIDENCE/PLOT ..... 21 PUBLIC WELL ..... 22 SPRING ..... 31 RIVER/STREAM ..... 32 POND/LAKE ..... 33 DAM ..... 34 RAINWATER ..... 41 TANKER TRUCK ..... 51 BOTTLED WATER ..... 61 OTHER _____ 96 (SPECIFY)	→125 →125 →125 →125
124	How long does it take to go there, get water, and come back?	MINUTES ..... [ ][ ][ ]	
125	What kind of toilet facility does your household have?	OWN FLUSH TOILET ..... 11 SHARED FLUSH TOILET ..... 12 TRADITIONAL PIT TOILET/LATRINE . 21 VENTILATED IMPROVED PIT (VIP) TOILET/LATRINE ..... 22 NO FACILITY/BUSH/FIELD ..... 31 OTHER _____ 96 (SPECIFY)	
126	Does your household have:	YES NO	
	Electricity? A radio? A television? A telephone? A refrigerator? A sewing machine?	ELECTRICITY ..... 1 2 RADIO ..... 1 2 TELEVISION ..... 1 2 TELEPHONE ..... 1 2 REFRIGERATOR ..... 1 2 SEWING MACHINE 1 2	
126A	How many rooms in your household are used for sleeping?	NUMBER OF ROOMS ..... [ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
127	Could you describe the main material of the floor of your home?*	EARTH/SAND ..... 11 ROUGH WOOD/BAMBOO ..... 21 FINISHED FLOOR (POLISHED WOOD/CERAMIC TILES/STONE/ ETC.) OTHER _____ 96 (SPECIFY)	
127A	Could you describe the main material of the roof of your home?	CONCRETE ..... 1 TILE/FIBRO/ASBESTOS ..... 2 GALVANIZED IRON/ALUMINUM/TIN .... 3 GRASS/STRAW ..... 4 OTHER _____ 6 (SPECIFY)	
128	Does any member of your household own:	YES NO	
	A bicycle?	BICYCLE 1 2	
	A motorcycle?	MOTORCYCLE 1 2	
	A car?	CAR 1 2	
	A boat?	BOAT 1 2	
	A ploughing machine?	PLOUGHING MACHINE 1 2	
	A motor scooter?	MOTOR SCOOTER 1 2	

SECTION 2. REPRODUCTION

Now I would like to ask you about all the pregnancies that you have had in your lifetime. By this I mean all the children born to you, whether they were born alive or dead, whether still living or not, whether living with you or elsewhere, and all the pregnancies that you have had that did not result in a live birth. I understand that it is not easy to talk about children who have died, or pregnancies that have terminated before full term, but it is extremely important that you tell us about all of them, so that we can develop programs that will help the Government of Vietnam improve children's health in the future.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	First I would like to ask about all the births you have had during your life. Have you ever given birth?	YES ..... 1 NO 2	→206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES ..... 1 NO 2	→204
203	How many sons live with you? And how many daughters live with you? ..... IF NONE, RECORD '00'.	SONS AT HOME ..... [ ][ ] DAUGHTERS AT HOME ..... [ ][ ]	
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES ..... 1 NO 2	→206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? ..... IF NONE, RECORD '00'.	SONS ELSEWHERE ..... [ ][ ] DAUGHTERS ELSEWHERE .... [ ][ ]	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but survived only a few hours or days?	YES ..... 1 NO 2	→208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD ..... [ ][ ] GIRLS DEAD ..... [ ][ ]	
208	Women sometimes have pregnancies that do not result in a live born child. That is, a pregnancy can end early, in an induced abortion or through menstrual regulation. A pregnancy may also end in a miscarriage or a stillbirth. Have you had any such pregnancy that did not result in a live birth?	YES ..... 1 NO 2	→210
209	In all, how many such pregnancies have there been?	PREGNANCY LOSSES ..... [ ][ ]	
210	SUM ANSWERS TO 203, 205, 207 AND 209, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL ..... [ ][ ]	
211	CHECK 210: Just to make sure that I have this right: you have had in TOTAL _____ pregnancies during your life. Is that correct? YES [ ] NO [ ] → PROBE AND CORRECT 201-210 AS NECESSARY.		
212	CHECK 210: ONE OR MORE PREGNANCIES [ ] NO PREGNANCIES [ ]		→229

213 Now I would like to ask you about all of your pregnancies, whether born alive, born dead, or lost before full term, starting with your most recent live birth or terminated pregnancy.
RECORD ALL THE PREGNANCIES. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.

214 Think back to the time of your (last/ next to last/ etc.) pregnancy. In what month and year did that pregnancy end? PROBE: In what season did the pregnancy end?	215 Was that a single or multiple pregnancy?	216 Did that pregnancy end in a live birth, an induced abortion, menstrual regulation, a miscarriage or a stillbirth?	217 How many months did the pregnancy last? RECORD IN COMPLETED MONTHS. RECORD '00' IF LESS THAN ONE FULL MONTH	218 What was the name given to that child?	219 Is (NAME) a boy or girl?
01 MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	SINGLE ..... 1 MULTIPLE . 2	LIVE BIRTH ..... 1 (SKIP TO 218) INDUCED ABORTION ..... 2 MENSTRUAL REGULATION .... 3 MISCARRIAGE ..... 4 STILLBIRTH 5	[ ][ ] (NEXT PREGNANCY)	(NAME) _____ _____	BOY.....1 GIRL.....2
02 MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	SINGLE ..... 1 MULTIPLE . 2	LIVE BIRTH ..... 1 (SKIP TO 218) INDUCED ABORTION ..... 2 MENSTRUAL REGULATION .... 3 MISCARRIAGE ..... 4 STILLBIRTH 5	[ ][ ] (SKIP TO 223)	(NAME) _____ _____	BOY.....1 GIRL.....2
03 MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	SINGLE ..... 1 MULTIPLE . 2	LIVE BIRTH ..... 1 (SKIP TO 218) INDUCED ABORTION ..... 2 MENSTRUAL REGULATION .... 3 MISCARRIAGE ..... 4 STILLBIRTH 5	[ ][ ] (SKIP TO 223)	(NAME) _____ _____	BOY.....1 GIRL.....2
04 MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	SINGLE ..... 1 MULTIPLE . 2	LIVE BIRTH ..... 1 (SKIP TO 218) INDUCED ABORTION ..... 2 MENSTRUAL REGULATION .... 3 MISCARRIAGE ..... 4 STILLBIRTH 5	[ ][ ] (SKIP TO 223)	(NAME) _____ _____	BOY.....1 GIRL.....2
05 MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	SINGLE ..... 1 MULTIPLE . 2	LIVE BIRTH ..... 1 (SKIP TO 218) INDUCED ABORTION ..... 2 MENSTRUAL REGULATION .... 3 MISCARRIAGE ..... 4 STILLBIRTH 5	[ ][ ] (SKIP TO 223)	(NAME) _____ _____	BOY.....1 GIRL.....2
06 MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	SINGLE ..... 1 MULTIPLE . 2	LIVE BIRTH ..... 1 (SKIP TO 218) INDUCED ABORTION ..... 2 MENSTRUAL REGULATION .... 3 MISCARRIAGE ..... 4 STILLBIRTH 5	[ ][ ] (SKIP TO 223)	(NAME) _____ _____	BOY.....1 GIRL.....2
07 MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	SINGLE ..... 1 MULTIPLE . 2	LIVE BIRTH ..... 1 (SKIP TO 218) INDUCED ABORTION ..... 2 MENSTRUAL REGULATION .... 3 MISCARRIAGE ..... 4 STILLBIRTH 5	[ ][ ] (SKIP TO 223)	(NAME) _____ _____	BOY.....1 GIRL.....2

	IF BORN ALIVE AND STILL LIVING		IF BORN ALIVE BUT NOW DEAD:		
220 Is (NAME) still alive?	221 How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS.	221A Is (NAME) living with you?	222 How old was (NAME) when he/she died? IF ' 1 YR .' PROBE: How many months old was (NAME)? RECORD DAYS IF UNDER ONE MONTH; MONTHS IF UNDER TWO YEARS; OR YEARS.	223 FROM THE YEAR OF TERMINATION OF THE PREGNANCY LISTED ABOVE SUBTRACT THE YEAR OF TERMINATION OF THIS PREGNANCY. IS THE DIFFERENCE 3 OR MORE YEARS?	224 PROBE: Were there any other pregnancies between this pregnancy and the previous pregnancy you told me about?
01 YES ..... 1 NO ..... 2 → 222	AGE IN YEARS	YES ..... 1 NO ..... 2 (NEXT PREGNANCY)	DAYS ..... 1 MONTHS .. 2 YEARS 3		
02 YES ..... 1 NO ..... 2 → 222	AGE IN YEARS	YES ..... 1 NO ..... 2 (GO TO 223)	DAYS ..... 1 MONTHS .. 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT PREGNANCY)	YES ..... 1 NO 2
03 YES ..... 1 NO ..... 2 → 222	AGE IN YEARS	YES ..... 1 NO ..... 2 (GO TO 223)	DAYS ..... 1 MONTHS .. 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT PREGNANCY)	YES ..... 1 NO 2
04 YES ..... 1 NO ..... 2 → 222	AGE IN YEARS	YES ..... 1 NO ..... 2 (GO TO 223)	DAYS ..... 1 MONTHS .. 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT PREGNANCY)	YES ..... 1 NO 2
05 YES ..... 1 NO ..... 2 → 222	AGE IN YEARS	YES ..... 1 NO ..... 2 (GO TO 223)	DAYS ..... 1 MONTHS .. 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT PREGNANCY)	YES ..... 1 NO 2
06 YES ..... 1 NO ..... 2 → 222	AGE IN YEARS	YES ..... 1 NO ..... 2 (GO TO 223)	DAYS ..... 1 MONTHS .. 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT PREGNANCY)	YES ..... 1 NO 2
07 YES ..... 1 NO ..... 2 → 222	AGE IN YEARS	YES ..... 1 NO ..... 2 (GO TO 223)	DAYS ..... 1 MONTHS .. 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT PREGNANCY)	YES ..... 1 NO 2

214	215	216	217	218	219
Think back to the time of your (last/ next to last/ etc.) pregnancy. In what month	Was that a single or multiple	Did that pregnancy end in a live birth, an induced abortion, menstrual regulation, a	How many months did the pregnancy last?	What was the name given to that	Is (NAME) a boy or a girl?

08 MONTH ..... YEAR	SINGLE ..... 1 MULTIPLE . 2	LIVE BIRTH ..... 1 (SKIP TO 218) INDUCED ABORTION ..... 2 MENSTRUAL REGULATION .... 3 MISCARRIAGE ..... 4 STILLBIRTH 5	(SKIP TO 223)	(NAME) _____ _____	BOY. . . . . .1 GIRL. 2
09 MONTH ..... YEAR	SINGLE ..... 1 MULTIPLE . 2	LIVE BIRTH ..... 1 (SKIP TO 218) INDUCED ABORTION ..... 2 MENSTRUAL REGULATION .... 3 MISCARRIAGE ..... 4 STILLBIRTH 5	(SKIP TO 223)	(NAME) _____ _____	BOY. . . . . .1 GIRL. 2
10 MONTH ..... YEAR	SINGLE ..... 1 MULTIPLE . 2	LIVE BIRTH ..... 1 (SKIP TO 218) INDUCED ABORTION ..... 2 MENSTRUAL REGULATION .... 3 MISCARRIAGE ..... 4 STILLBIRTH 5	(SKIP TO 223)	(NAME) _____ _____	BOY. . . . . .1 GIRL. 2
11 MONTH ..... YEAR	SINGLE ..... 1 MULTIPLE . 2	LIVE BIRTH ..... 1 (SKIP TO 218) INDUCED ABORTION ..... 2 MENSTRUAL REGULATION .... 3 MISCARRIAGE ..... 4 STILLBIRTH 5	(SKIP TO 223)	(NAME) _____ _____	BOY. . . . . .1 GIRL. 2
12 MONTH ..... YEAR	SINGLE ..... 1 MULTIPLE . 2	LIVE BIRTH ..... 1 (SKIP TO 218) INDUCED ABORTION ..... 2 MENSTRUAL REGULATION .... 3 MISCARRIAGE ..... 4 STILLBIRTH 5	(SKIP TO 223)	(NAME) _____ _____	BOY. . . . . .1 GIRL. 2
13 MONTH ..... YEAR	SINGLE ..... 1 MULTIPLE . 2	LIVE BIRTH ..... 1 (SKIP TO 218) INDUCED ABORTION ..... 2 MENSTRUAL REGULATION .... 3 MISCARRIAGE ..... 4 STILLBIRTH 5	(SKIP TO 223)	(NAME) _____ _____	BOY. . . . . .1 GIRL. 2
14 MONTH ..... YEAR	SINGLE ..... 1 MULTIPLE . 2	LIVE BIRTH ..... 1 (SKIP TO 218) INDUCED ABORTION ..... 2 MENSTRUAL REGULATION .... 3 MISCARRIAGE ..... 4 STILLBIRTH 5	(SKIP TO 223)	(NAME) _____ _____	BOY. . . . . .1 GIRL. 2

	IF BORN ALIVE AND STILL LIVING		IF BORN ALIVE BUT NOW DEAD:		
220 Is (NAME) still alive?	221 How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS.	221A Is (NAME) living with you?	222 How old was (NAME) when he/she died? IF '1 YR .' PROBE: How many months old was (NAME)? RECORD DAYS IF UNDER ONE MONTH; MONTHS IF UNDER TWO YEARS; OR YEARS.	223 FROM THE YEAR OF TERMINATION OF THE PREGNANCY LISTED ABOVE SUBTRACT THE YEAR OF TERMINATION OF THIS PREGNANCY. IS THE DIFFERENCE 3 OR MORE YEARS?	224 PROBE: Were there any other pregnancies between this pregnancy and the previous pregnancy you told me about?

08 YES ..... 1 NO ..... 2 → 222	AGE IN YEARS	YES ..... 1 NO ..... 2 (GO TO 223)	DAYS ..... 1 MONTHS .. 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT PREGNANCY)	YES ..... 1 NO 2
09 YES ..... 1 NO ..... 2 → 222	AGE IN YEARS	YES ..... 1 NO ..... 2 (GO TO 223)	DAYS ..... 1 MONTHS .. 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT PREGNANCY)	YES ..... 1 NO 2
10 YES ..... 1 NO ..... 2 → 222	AGE IN YEARS	YES ..... 1 NO ..... 2 (GO TO 223)	DAYS ..... 1 MONTHS .. 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT PREGNANCY)	YES ..... 1 NO 2
11 YES ..... 1 NO ..... 2 → 222	AGE IN YEARS	YES ..... 1 NO ..... 2 (GO TO 223)	DAYS ..... 1 MONTHS .. 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT PREGNANCY)	YES ..... 1 NO 2
12 YES ..... 1 NO ..... 2 → 222	AGE IN YEARS	YES ..... 1 NO ..... 2 (GO TO 223)	DAYS ..... 1 MONTHS .. 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT PREGNANCY)	YES ..... 1 NO 2
13 YES ..... 1 NO ..... 2 → 222	AGE IN YEARS	YES ..... 1 NO ..... 2 (GO TO 223)	DAYS ..... 1 MONTHS .. 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT PREGNANCY)	YES ..... 1 NO 2
14 YES ..... 1 NO ..... 2 → 222	AGE IN YEARS	YES ..... 1 NO ..... 2 (GO TO 223)	DAYS ..... 1 MONTHS .. 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT PREGNANCY)	YES ..... 1 NO 2

COMPARE 210 WITH NUMBER OF PREGNANCIES IN HISTORY ABOVE AND MARK:

NUMBERS ARE SAME

NUMBERS ARE DIFFERENT → (PROBE AND RECONCILE)

CHECK:

FOR EACH PREGNANCY: YEAR OF BIRTH IS RECORDED IN 214.

FOR EACH PREGNANCY LOSS: DURATION IS RECORDED 217.

FOR EACH LIVING CHILD: CURRENT AGE IS RECORDED IN 221.

FOR EACH DEAD CHILD: AGE AT DEATH IS RECORDED IN 222.

FOR AGE AT DEATH 12 MONTHS OR 1 YEAR: PROBE TO DETERMINE EXACT NUMBER OF MONTHS.

CHECK 214 AND 216, AND ENTER THE NUMBER OF LIVE BIRTHS SINCE JANUARY 1994.
IF NONE, RECORD '0'.

227	FOR EACH LIVE BIRTH SINCE JANUARY 1992 ENTER 'B' IN THE MONTH OF BIRTH IN COLUMN 1 OF THE CALENDAR AND 'P' IN EACH OF THE 8 PRECEDING MONTHS. WRITE THE NAME TO THE LEFT OF THE 'B' CODE.
228	FOR EACH NON-LIVE BIRTH SINCE 1992, ENTER 'T' IN THE MONTH OF PREGNANCY TERMINATION IN COLUMN 1 OF THE CALENDAR AND 'P' IN EACH PRECEDING MONTH OF PREGNANCY.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
229	CHECK 106A: CURRENTLY ~~MARRIED~~ ☐ ~~WIDOWED, DIVORCED,~~ SEPARATED ☐		→233
230	Are you pregnant?	YES ..... 1 NO ..... 2 UNSURE 8	→233
231	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'P's IN COLUMN 1 OF CALENDAR, BEGINNING WITH THE MONTH OF INTERVIEW AND FOR TOTAL NUMBER OF COMPLETED MONTHS.	MONTHS ..... ☐☐	
232	At the time you became pregnant, did you want to become pregnant <u>then</u>, did you want to wait until <u>later</u>, or did you <u>not want</u> to become pregnant at all?	THEN ..... 1 LATER ..... 2 NOT AT ALL 3	
233	When did your last menstrual period start? _____ (DATE, IF GIVEN)	DAYS AGO ..... 1 ☐☐ WEEKS AGO ..... 2 ☐☐ MONTHS AGO ..... 3 ☐☐ YEARS AGO ..... 4 ☐☐ IN MENOPAUSE ..... 994 BEFORE LAST BIRTH ..... 995 NEVER MENSTRUATED 996	
234	Between the first day of a woman's period and the first day of her <u>next</u> period, are there certain times when she has a greater chance of becoming pregnant than other times?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→301
235	During which times of the monthly cycle does a woman have the greatest chance of becoming pregnant?	DURING HER PERIOD ..... 01 RIGHT AFTER HER PERIOD HAS ENDED . 02 IN THE MIDDLE OF THE CYCLE ..... 03 JUST BEFORE HER PERIOD BEGINS ..... 04 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	

Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy.

CIRCLE CODE 1 IN 301 FOR EACH METHOD MENTIONED SPONTANEOUSLY.
THEN PROCEED DOWN COLUMN 302, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 2 IF METHOD IS RECOGNIZED, AND CODE 3 IF NOT RECOGNIZED.
THEN, FOR EACH METHOD WITH CODE 1 OR 2 CIRCLED IN 301 OR 302, ASK 303.

301	Which ways or methods have you heard about?	302 Have you ever heard of (METHOD)? SPONTANEOUS YES	PROBED YES	NO	303 Have you ever used (METHOD)?
01	PILL Women can take a pill every day.	1	2	3	YES ..... 1 NO 2
02	IUD Women can have a loop or coil placed inside them by a doctor or a nurse.	1	2	3	YES ..... 1 NO 2
03	INJECTIONS Women can have an injection by a doctor or nurse which stops them from becoming pregnant for several months.	1	2	3	YES ..... 1 NO 2
04	*IMPLANTS* Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for several years.	1	2	3	YES ..... 1 NO 2
05	*DIAPHRAGM, FOAM, JELLY* Women can place a sponge, suppository, diaphragm, jelly, or cream inside themselves before intercourse.	1	2	3	YES ..... 1 NO 2
06	CONDOM Men can put a rubber sheath on their penis during sexual intercourse.	1	2	3	YES ..... 1 NO 2
07	FEMALE STERILIZATION Women can have *an operation to avoid having any more children.*	1	2	3	Have you ever had an *operation to avoid having* any more children? YES ..... 1 NO 2
08	*MALE STERILIZATION Men can have an* operation to avoid having any more children.	1	2	3	*Have you ever had a* partner who had an operation to avoid having children? YES ..... 1 NO 2
09	RHYTHM, PERIODIC ABSTINENCE Every month that a woman is sexually active she can avoid having sexual intercourse on the days of the month she is most likely to get pregnant.	1	2	3	YES ..... 1 NO 2
10	WITHDRAWAL Men can be careful and pull out before climax.	1	2	3	YES ..... 1 NO 2
11	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	1 _____ (SPECIFY) _____ (SPECIFY)		3	YES ..... 1 NO ..... 2 YES ..... 1 NO 2

304	CHECK 303: NOT A SINGLE "YES" (NEVER USED) ☐	AT LEAST ONE "YES" (EVER USED) ☐ → SKIP TO 308

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
305	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES ..... 1 NO 2	→307
306	ENTER '0' IN COLUMN 1 OF CALENDAR IN EACH BLANK MONTH.		→330
307	What have you used or done? CORRECT 303 AND 304 (AND 302 IF NECESSARY).		
308	Now I would like to ask you about the first time that you did something or used a method to avoid getting pregnant. What was the first method you ever used?	PILL ..... 01 IUD ..... 02 INJECTIONS ..... 03 IMPLANTS ..... 04 DIAPHRAGM/FOAM/JELLY ..... 05 CONDOM ..... 06 FEMALE STERILIZATION ..... 07 MALE STERILIZATION ..... 08 PERIODIC ABSTINENCE ..... 09 WITHDRAWAL ..... 10 OTHER _____ 96 (SPECIFY)	
309	How many living children did you have at that time, if any? IF NONE, RECORD '00'.	NUMBER OF CHILDREN ..... [ ][ ]	
310	CHECK 106A: CURRENTLY MARRIED [ ] ↓ WIDOWED, DIVORCED, SEPARATED [ ]		→337
311	CHECK 303: WOMAN NOT STERILIZED [ ] ↓ WOMAN STERILIZED [ ]		→314A
312	CHECK 230: NOT PREGNANT OR UNSURE [ ] ↓ PREGNANT [ ]		→325
313	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES ..... 1 NO 2	→325
314 314A	Which method are you using? CIRCLE '07' FOR FEMALE STERILIZATION.	PILL ..... 01 IUD ..... 02 INJECTIONS ..... 03 IMPLANTS ..... 04 DIAPHRAGM/FOAM/JELLY ..... 05 CONDOM ..... 06 FEMALE STERILIZATION ..... 07 MALE STERILIZATION ..... 08 PERIODIC ABSTINENCE ..... 09 WITHDRAWAL ..... 10 OTHER _____ 96 (SPECIFY)	→324 →318 →323 →324
317	How much does one packet (cycle) of pills cost you?	COST (DONG) ..... [ ][ ][ ][ ][ ] FREE ..... 99996 DON'T KNOW 99998	→324

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
318	Where did the sterilization take place? IF SOURCE IS HOSPITAL OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL ..... 10 DELIVERY HOUSE ..... 11 COMMUNE HEALTH CENTER ..... 12 FAMILY PLANNING CENTER ..... 13 MOBILE CLINIC ..... 14 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PRIVATE DOCTOR ..... 23 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→319 →319 →319
318A	How long does it take to travel from your house to this place? IF LESS THAN 2 HOURS, RECORD MINUTES. OTHERWISE, RECORD HOURS.	MINUTES ..... 1 [ ][ ][ ] HOURS ..... 2 [0][ ][ ] DK 9998	
318B	Is it easy or difficult to get there?	EASY ..... 1 DIFFICULT 2	
319	Do you regret that (you/your husband) had the operation not to have any (more) children?	YES ..... 1 NO 2	→321
320	Why do you regret the operation?	RESPONDENT WANTS ANOTHER CHILD ..... 01 HUSBAND WANTS ANOTHER CHILD ..... 02 SIDE EFFECTS ..... 03 CHILD DIED ..... 04 OTHER _____ 96 (SPECIFY)	
321	*In what month and year was the sterilization performed?*	MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	
322	CHECK 321: STERILIZED BEFORE JANUARY 1992 [ ] ENTER CODE FOR STERILIZATION IN MONTH OF INTERVIEW IN COLUMN 1 OF THE CALENDAR AND EACH MONTH BACK TO JANUARY 1992. THEN SKIP TO →334 STERILIZED IN OR AFTER JANUARY 1992 [ ] ENTER CODE FOR STERILIZATION IN MONTH OF INTERVIEW IN COLUMN 1 OF THE CALENDAR AND IN EACH MONTH BACK TO THE DATE OF THE OPERATION. THEN SKIP TO →325		
323	How do you determine which days of your monthly cycle not to have sexual relations?	BASED ON CALENDAR ..... 01 BASED ON BODY TEMPERATURE ..... 02 BASED ON CERVICAL MUCUS (BILLINGS METHOD) ..... 03 BASED ON BODY TEMPERATURE AND CERVICAL MUCUS ..... 04 NO SPECIFIC SYSTEM ..... 05 OTHER _____ 96 (SPECIFY)	
324	ENTER METHOD CODE FROM 314 IN CURRENT MONTH IN COLUMN 1 OF CALENDAR. THEN DETERMINE WHEN SHE STARTED USING METHOD THIS TIME. ENTER METHOD CODE IN EACH MONTH OF USE. *ILLUSTRATIVE QUESTIONS:* • When did you start using continuously? • How long have you been using this method continuously?		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
325	I would like to ask you some questions about the times you or your partner may have used a method to avoid getting pregnant during the last few years. USE CALENDAR TO PROBE FOR EARLIER PERIODS OF USE AND NONUSE, STARTING WITH MOST RECENT USE, BACK TO JANUARY 1992. USE NAMES OF CHILDREN, DATES OF BIRTH, AND PERIODS OF PREGNANCY AS REFERENCE POINTS. IN COLUMN 1, ENTER CODE IN EACH MONTH OF METHOD USE OR '0' FOR NONUSE. ILLUSTRATIVE QUESTIONS: COLUMN 1: • When was the last time you used a method? Which method was that? • When did you start using that method? How long after the birth of (NAME)? • How long did you use the method then? IN COLUMN 2, ENTER CODES FOR DISCONTINUATION NEXT TO LAST MONTH OF USE. NUMBER OF CODES IN COL.2 MUST BE SAME AS NUMBER OF INTERRUPTIONS OF METHOD USE IN COLUMN 1. ASK WHY SHE STOPPED USING THE METHOD. IF A PREGNANCY FOLLOWED, ASK WHETHER SHE BECAME PREGNANT UNINTENTIONALLY WHILE USING THE METHOD OR DELIBERATELY STOPPED USING TO GET PREGNANT. ILLUSTRATIVE QUESTIONS: COLUMN 2: • Why did you stop using the (METHOD)? • Did you become pregnant while using (METHOD), or did you stop to get pregnant, or did you stop for some other reason? IF DELIBERATELY STOPPED TO BECOME PREGNANT, ASK: • How many months did it take you to get pregnant after you stopped using (METHOD)? AND ENTER '0' IN EACH SUCH MONTH IN COLUMN 1.		
327	CHECK 314: CIRCLE METHOD CODE:	NOT ASKED ..... 00 PILL ..... 01 IUD ..... 02 INJECTIONS ..... 03 IMPLANTS ..... 04 DIAPHRAGM/FOAM/JELLY ..... 05 CONDOM ..... 06 FEMALE STERILIZATION ..... 07 MALE STERILIZATION ..... 08 PERIODIC ABSTINENCE ..... 09 WITHDRAWAL ..... 10 OTHER METHOD 96	00 → 330 07, 08 → 334 09, 10, 96 → 332
328	Where did you obtain (METHOD) the last time? IF SOURCE IS HOSPITAL OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL ..... 10 DELIVERY HOUSE ..... 11 COMMUNE HEALTH CENTER ..... 12 FAMILY PLANNING CENTER ..... 13 MOBILE CLINIC ..... 14 FIELD WORKER ..... 15 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PHARMACY ..... 22 PRIVATE DOCTOR ..... 23 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) OTHER SOURCE FRIEND/RELATIVE ..... 33 OTHER _____ 36 (SPECIFY)	15 → 334 33 → 334 36 → 334
328A	How long does it take to travel from your house to this place? IF LESS THAN 2 HOURS, RECORD MINUTES. OTHERWISE, RECORD HOURS.	MINUTES ..... 1 [ ][ ][ ] HOURS ..... 2 [0][ ][ ] DK 9998	
328B	Is it easy or difficult to get there?	EASY ..... 1 DIFFICULT 2	1, 2 → 334

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
330	CHECK 230: NOT PREGNANT OR UNSURE ☐ ▼ PREGNANT ☐		→334
330A	CHECK 106A: CURRENTLY MARRIED ☐ ▼ WIDOWED, DIVORCED, SEPARATED ☐		→337
331	What is the main reason you are not using a method of contraception to avoid pregnancy?	FERTILITY-RELATED REASONS NOT HAVING SEX ..... 21 INFREQUENT SEX ..... 22 MENOPAUSAL/HYSTERECTOMY ..... 23 SUBFECUND/INFECUND ..... 24 POSTPARTUM/BREASTFEEDING ..... 25 WANTS (MORE) CHILDREN ..... 26 OPPOSITION TO USE RESPONDENT OPPOSED ..... 31 HUSBAND OPPOSED ..... 32 OTHERS OPPOSED ..... 33 RELIGIOUS PROHIBITION ..... 34 LACK OF KNOWLEDGE KNOWS NO METHOD ..... 41 KNOWS NO SOURCE ..... 42 METHOD-RELATED REASONS HEALTH CONCERNS ..... 51 FEAR OF SIDE EFFECTS ..... 52 LACK OF ACCESS/TOO FAR ..... 53 COST TOO MUCH ..... 54 INCONVENIENT TO USE ..... 55 INTERFERES WITH BODY'S NATURAL PROCESSES ..... 56 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→334
332	Do you know of a place where you can obtain a method of family planning?	YES ..... 1 NO 2	→334
333	Where is that? IF SOURCE IS HOSPITAL OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL ..... 10 DELIVERY HOUSE ..... 11 COMMUNE HEALTH CENTER ..... 12 FAMILY PLANNING CENTER ..... 13 MOBILE CLINIC ..... 14 FIELD WORKER ..... 15 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PHARMACY ..... 22 PRIVATE DOCTOR ..... 23 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) OTHER SOURCE FRIENDS/RELATIVES ..... 33 OTHER _____ 36 (SPECIFY)	
333A	How long does it take to travel from your house to this place? IF LESS THAN 2 HOURS, RECORD MINUTES. OTHERWISE, RECORD HOURS.	MINUTES ..... 1 [ ][ ][ ] HOURS ..... 2 [0][ ][ ] DK 9998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
333B	Is it easy or difficult to get there?	EASY ..... 1 DIFFICULT 2	
334	Were you visited by a family planning program worker in the last 12 months?	YES ..... 1 NO 2	→335
334A	Do you feel that the family planning staff treated you with respect?	YES ..... 1 NO 2	
334B	Were you satisfied with the family planning field worker?	YES ..... 1 NO 2	
335	Have you visited a health facility for any reason in the last 12 months?	YES ..... 1 NO 2	→337
336	Did any staff member at the health facility speak to you about family planning methods?	YES ..... 1 NO 2	→337
336A	Do you feel that the family planning staff treated you with respect?	YES ..... 1 NO 2	
336B	Were you satisfied with the health worker?	YES ..... 1 NO 2	
337	Do you think that breastfeeding can affect a woman's chance of becoming pregnant?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→343
338	Do you think a woman's chance of becoming pregnant is increased or decreased by breastfeeding?	INCREASED ..... 1 DECREASED ..... 2 DEPENDS ..... 3 DON'T KNOW 8	→343
339	CHECK 216: ONE OR MORE BIRTHS ☐ NO BIRTHS ☐		→343
340	Have you ever relied on breastfeeding as a method of avoiding pregnancy?	YES ..... 1 NO 2	→343
341	CHECK 227 AND 311: NOT PREGNANT OR UNSURE AND NOT STERILIZED ☐ EITHER PREGNANT OR STERILIZED ☐		→343
342	Are you currently relying on breastfeeding to avoid getting pregnant?	YES ..... 1 NO 2	
343	CHECK 216 AND 214: ONE OR MORE INDUCED ABORTIONS OR MENSTRUAL REGULATIONS SINCE JAN. 1994 ☐ NO INDUCED ABORTIONS OR M.R. SINCE JAN. 1994 ☐		→401
344	IN Q345, ENTER THE LINE NUMBER OF EACH PREGNANCY SINCE JANUARY 1994 WHICH ENDED IN AN INDUCED ABORTION OR MENSTRUAL REGULATION. ASK THE QUESTIONS ABOUT ALL OF THESE PREGNANCY OUTCOMES BEGINNING WITH THE LAST ONE. (IF THERE ARE MORE THAN 2 PREGNANCY OUTCOMES SINCE 1994, USE ADDITIONAL QUESTIONNAIRES). Now I would like to ask you some questions about pregnancies which ended in an induced abortion or menstrual regulation in the last three years. (We will talk about your most recent [INDUCED ABORTION/MENSTRUAL REGULATION] first).		

345	ENTER LINE NUMBER FROM Q214	LAST INDUCED ABORTION OR MENSTRUAL REGULATION LINE NUMBER ..... ☐☐	NEXT-TO-LAST INDUCED ABORTION OR MENSTRUAL REGULATION LINE NUMBER ..... ☐☐

346	At the time you became pregnant with the pregnancy which ended in your (LAST/NEXT-TO-LAST INDUCED ABORTION/MENSTRUAL REGULATION), did you want to become pregnant then, did you want to wait until later, or did you want no (more) children at all?	THEN ..... 1 (SKIP TO 348) LATER ..... 2 NO MORE ..... 3 (SKIP TO 348)	THEN ..... 1 (SKIP TO 348) LATER ..... 2 NO MORE ..... 3 (SKIP TO 348)
347	How much longer would you like to have waited?	MONTHS ..... 1 [ ][ ] YEARS ..... 2 [ ][ ] DON'T KNOW 998	MONTHS ..... 1 [ ][ ] YEARS ..... 2 [ ][ ] DON'T KNOW 998
348	At the time you became pregnant, were you using a method of contraception?	YES ..... 1 NO ..... 2 (SKIP TO 350)	YES ..... 1 NO ..... 2 (SKIP TO 350)
349	Which method were you using?	PILL ..... 01 IUD ..... 02 INJECTIONS ..... 03 IMPLANTS ..... 04 DIAPHRAGM/FOAM/JELLY .... 05 CONDOM ..... 06 FEMALE STERILIZATION ..... 07 MALE STERILIZATION ..... 08 PERIODIC ABSTINENCE ..... 09 WITHDRAWAL ..... 10 OTHER _____ 96 (SPECIFY)	PILL ..... 01 IUD ..... 02 INJECTIONS ..... 03 IMPLANTS ..... 04 DIAPHRAGM/FOAM/JELLY .... 05 CONDOM ..... 06 FEMALE STERILIZATION ..... 07 MALE STERILIZATION ..... 08 PERIODIC ABSTINENCE ..... 09 WITHDRAWAL ..... 10 OTHER _____ 96 (SPECIFY)
350	Can you tell me what procedure was used to terminate the pregnancy?	DILATION AND CURATAGE .... 1 MENSTRUAL REGULATION .... 2 CAESARIAN SECTION ..... 3 TRADITIONAL METHOD _____ 4 (SPECIFY) OTHER _____ 6 (SPECIFY) DON'T KNOW 8	DILATION AND CURATAGE .... 1 MENSTRUAL REGULATION .... 2 CAESARIAN SECTION ..... 3 TRADITIONAL METHOD _____ 4 (SPECIFY) OTHER _____ 6 (SPECIFY) DON'T KNOW 8
		LAST INDUCED ABORTION OR MENSTRUAL REGULATION	NEXT-TO-LAST INDUCED ABORTION OR MENSTRUAL REGULATION
351	Sometimes a woman has a health problem after (AN INDUCED ABORTION/MENSTRUAL REGULATION). Did you have any health problems afterwards?	YES ..... 1 NO ..... 2 (SKIP TO 357) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 357) DON'T KNOW 8
352	What health problems did you have: sterility, infection, lack of menstruation, excessive bleeding or another problem? RECORD ALL REPORTED PROBLEMS.	STERILITY ..... A INFECTION ..... B LACK OF MENSTRUATION ..... C BLEEDING ..... D PELVIC PAIN ..... E OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	STERILITY ..... A INFECTION ..... B LACK OF MENSTRUATION ..... C BLEEDING ..... D PELVIC PAIN ..... E OTHER _____ X (SPECIFY) DON'T KNOW ..... Z
353	Did you seek advice or treatment because of these problems?	YES ..... 1 NO ..... 2 (SKIP TO 357)	YES ..... 1 NO ..... 2 (SKIP TO 357)

354	Where did you seek advice or treatment? Anywhere else? RECORD ALL MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL ..... A DELIVERY HOUSE ..... B COMMUNE HEALTH CENTER ..... C COMM. HEALTH WORKER D OTHER PUBLIC _____ E (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC .... F PRIVATE DOCTOR ..... G PRIVATE DOCTOR'S ASSISTANT ..... H PHARMACY ..... I OTHER PRIVATE MEDICAL _____ J (SPECIFY) OTHER SOURCE SHOP ..... K TRAD. PRACTITIONER ..... L OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT. HOSPITAL ..... A DELIVERY HOUSE ..... B COMMUNE HEALTH CENTER ..... C COMM. HEALTH WORKER D OTHER PUBLIC _____ E (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC .... F PRIVATE DOCTOR ..... G PRIVATE DOCTOR'S ASSISTANT ..... H PHARMACY ..... I OTHER PRIVATE MEDICAL _____ J (SPECIFY) OTHER SOURCE SHOP ..... K TRAD. PRACTITIONER ..... L OTHER _____ X (SPECIFY)
355	Because of these problems, did you become an in-patient (stay over night) at any health facility?	YES ..... 1 NO ..... 2 (SKIP TO 357)	YES ..... 1 NO ..... 2 (SKIP TO 357)
356	For how many nights?	NIGHTS ..... [ ][ ] DON'T KNOW 98	NIGHTS ..... [ ][ ] DON'T KNOW 98
357		GO BACK TO 346 IN NEXT COLUMN; OR, IF NO MORE EVENTS, GO TO 401	GO BACK TO 346 IN NEXT COLUMN; OR, IF NO MORE EVENTS, GO TO 401

SECTION 4A. PREGNANCY AND BREASTFEEDING

401	CHECK 226: ONE OR MORE BIRTHS SINCE JAN. 1994 ☐ NO BIRTHS SINCE JAN. 1994 ☐ → (SKIP TO 465)
402	ENTER THE NAME, LINE NUMBER, AND SURVIVAL STATUS OF EACH BIRTH SINCE JANUARY 1994 IN THE TABLE. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 2 BIRTHS, USE ADDITIONAL QUESTIONNAIRES). Now I would like to ask you some questions about the health of all your children born in the last three years. (We will talk about one child at a time.)

		LAST BIRTH	NEXT-TO-LAST BIRTH
403	LINE NUMBER FROM Q214	LINE NUMBER ..... ☐☐	LINE NUMBER ..... ☐☐
404	FROM Q218 AND Q220	NAME _____ ALIVE ☐ DEAD ☐	NAME _____ ALIVE ☐ DEAD ☐
405	At the time you became pregnant with (NAME), did you want to become pregnant then, did you want to wait until later, or did you want no (more) children at all?	THEN ..... 1 (SKIP TO 407) LATER ..... 2 NO MORE ..... 3 (SKIP TO 407)	THEN ..... 1 (SKIP TO 407) LATER ..... 2 NO MORE ..... 3 (SKIP TO 407)
406	How much longer would you like to have waited?	MONTHS ..... 1 ☐☐ YEARS ..... 2 ☐☐ DON'T KNOW 998	MONTHS ..... 1 ☐☐ YEARS ..... 2 ☐☐ DON'T KNOW 998
407	When you were pregnant with (NAME), did you *see anyone for antenatal care for this pregnancy?* IF YES: Whom did you see? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS SEEN.	HEALTH PROFESSIONAL DOCTOR ..... A DOCTOR'S ASSISTANT ..... B MIDWIFE ..... C NURSE ..... D OTHER PERSON TRADITIONAL BIRTH ATTENDANT ..... E OTHER_____ (SPECIFY) X NO ONE ..... Y (SKIP TO 410)	HEALTH PROFESSIONAL DOCTOR ..... A DOCTOR'S ASSISTANT ..... B MIDWIFE ..... C NURSE ..... D OTHER PERSON TRADITIONAL BIRTH ATTENDANT ..... E OTHER_____ (SPECIFY) X NO ONE ..... Y (SKIP TO 410)
408	How many months pregnant were you when you first received antenatal care?	MONTHS ..... ☐☐ DON'T KNOW 98	MONTHS ..... ☐☐ DON'T KNOW 98
409	How many times did you receive antenatal care during this pregnancy?	NO. OF TIMES ..... ☐☐ DON'T KNOW 98	NO. OF TIMES ..... ☐☐ DON'T KNOW 98
410	When you were pregnant with (NAME) were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?*	YES ..... 1 NO ..... 2 (SKIP TO 412) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 412) DON'T KNOW 8
411	During this pregnancy, how many times did you get this injection?	TIMES ..... ☐ DON'T KNOW 8	TIMES ..... ☐ DON'T KNOW 8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
412	Where did you give birth to (NAME)?	HOME YOUR HOME ..... 11 OTHER HOME ..... 12 PUBLIC SECTOR CENTRAL HOSPITAL ..... 21 PROVINCIAL HOSPITAL .. 22 DISTRICT HOSPITAL/ HEALTH CENTER ..... 23 COMMUNE HEALTH CENTER ..... 24 DELIVERY HOUSE ..... 25 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC .. 31 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	HOME YOUR HOME ..... 11 OTHER HOME ..... 12 PUBLIC SECTOR CENTRAL HOSPITAL ..... 21 PROVINCIAL HOSPITAL .. 22 DISTRICT HOSPITAL/ HEALTH CENTER ..... 23 COMMUNE HEALTH CENTER ..... 24 DELIVERY HOUSE ..... 25 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC .. 31 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)
413	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS ASSISTING.	HEALTH PROFESSIONAL DOCTOR ..... A DOCTOR'S ASSISTANT ..... B MIDWIFE ..... C NURSE ..... D OTHER PERSON TRADITIONAL BIRTH ATTENDANT ..... E RELATIVE/FRIEND ..... F OTHER _____ X (SPECIFY) NO ONE ..... Y	HEALTH PROFESSIONAL DOCTOR ..... A DOCTOR'S ASSISTANT ..... B MIDWIFE ..... C NURSE ..... D OTHER PERSON TRADITIONAL BIRTH ATTENDANT ..... E RELATIVE/FRIEND ..... F OTHER _____ X (SPECIFY) NO ONE ..... Y
414	Around the time of the birth of (NAME), did you have any of the following problems:	YES NO	YES NO
	Long labor, that is, did your regular contractions last more than 12 hours?	LABOR MORE THAN 12 HOURS 1 2	LABOR MORE THAN 12 HOURS 1 2
	Excessive bleeding that was so much that you feared it was life threatening?	EXCESSIVE BLEEDING ... 1 2	EXCESSIVE BLEEDING ... 1 2
	A high fever with bad smelling vaginal discharge?	FEVER/BAD SMELLING VAG. DISCHARGE 1 2	FEVER/BAD SMELLING VAG. DISCHARGE 1 2
	Convulsions not caused by a fever?	CONVULSIONS 1 2	CONVULSIONS 1 2
415	Was (NAME) delivered by caesarian section?	YES ..... 1 NO 2	YES ..... 1 NO 2
416	When (NAME) was born, was he/she: very large, larger than average, average, smaller than average, or very small?	VERY LARGE ..... 1 LARGER THAN AVERAGE ..... 2 AVERAGE ..... 3 SMALLER THAN AVERAGE ..... 4 VERY SMALL ..... 5 DON'T KNOW 8	VERY LARGE ..... 1 LARGER THAN AVERAGE ..... 2 AVERAGE ..... 3 SMALLER THAN AVERAGE ..... 4 VERY SMALL ..... 5 DON'T KNOW 8
417	Was (NAME) weighed at birth?	YES ..... 1 NO ..... 2 (SKIP TO 419) ←	YES ..... 1 NO ..... 2 (SKIP TO 420) ←
418	How much did (NAME) weigh? RECORD WEIGHT FROM BIRTH NOTIFICATION CARD, IF AVAILABLE.	GRAMS FROM CARD ..... 1 [ ][ ][ ][ ] GRAMS FROM RECALL ..... 2 [ ][ ][ ][ ] DON'T KNOW 99998	GRAMS FROM CARD ..... 1 [ ][ ][ ][ ] GRAMS FROM RECALL ..... 2 [ ][ ][ ][ ] DON'T KNOW 99998

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
419	Has your period returned since the birth of (NAME)?	YES ..... 1 (SKIP TO 421) NO ..... 2 (SKIP TO 422)	
420	Did your period return between the birth of (NAME) and your next pregnancy?		YES ..... 1 NO ..... 2 (SKIP TO 424)
421	For how many months after the birth of (NAME) did you not have a period?	MONTHS ..... [ ][ ] DON'T KNOW 98	MONTHS ..... [ ][ ] DON'T KNOW 98
422	CHECK 230: RESPONDENT PREGNANT?	NOT PREG-NANT [ ] PREGNANT OR UNSURE [ ] (SKIP TO 424)	
423	Have you resumed sexual relations since the birth of (NAME)?	YES ..... 1 NO ..... 2 (SKIP TO 425)	
424	For how many months after the birth of (NAME) did you not have sexual relations?	MONTHS ..... [ ][ ] DON'T KNOW 98	MONTHS ..... [ ][ ] DON'T KNOW 98
425	Did you ever breastfeed (NAME)?	YES ..... 1 NO ..... 2 (SKIP TO 431)	YES ..... 1 NO ..... 2 (SKIP TO 431)
426	How long after birth did you first put (NAME) to the breast? IF LESS THAN 1 HOUR, RECORD '00' HOURS. IF LESS THAN 24 HOURS, RECORD HOURS. OTHERWISE, RECORD DAYS.	IMMEDIATELY ..... 000 HOURS ..... 1 [ ][ ] DAYS ..... 2 [ ][ ]	IMMEDIATELY ..... 000 HOURS ..... 1 [ ][ ] DAYS ..... 2 [ ][ ]
427	CHECK 404: CHILD ALIVE?	ALIVE [ ] DEAD [ ] (SKIP TO 429)	ALIVE [ ] DEAD [ ] (SKIP TO 429)
428	Are you still breastfeeding (NAME)?	YES ..... 1 (SKIP TO 432) NO 2	YES ..... 1 (SKIP TO 432) NO 2
429	For how many months did you breastfeed (NAME)?	MONTHS ..... [ ][ ] DON'T KNOW 98	MONTHS ..... [ ][ ] DON'T KNOW 98
430	Why did you stop breastfeeding (NAME)?	MOTHER ILL/WEAK ..... 01 CHILD ILL/WEAK ..... 02 CHILD DIED ..... 03 NIPPLE/BREAST PROBLEM .. 04 NOT ENOUGH MILK ..... 05 MOTHER WORKING ..... 06 CHILD REFUSED ..... 07 WEANING AGE/AGE TO STOP ..... 08 BECAME PREGNANT ..... 09 STARTED USING CONTRACEPTION ..... 10 OTHER_____ 96 (SPECIFY)	MOTHER ILL/WEAK ..... 01 CHILD ILL/WEAK ..... 02 CHILD DIED ..... 03 NIPPLE/BREAST PROBLEM .. 04 NOT ENOUGH MILK ..... 05 MOTHER WORKING ..... 06 CHILD REFUSED ..... 07 WEANING AGE/AGE TO STOP ..... 08 BECAME PREGNANT ..... 09 STARTED USING CONTRACEPTION ..... 10 OTHER_____ 96 (SPECIFY)

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
431	CHECK 404: CHILD ALIVE?	ALIVE ☐ (SKIP TO 434) DEAD ☐ (GO BACK TO 405 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 440)	ALIVE ☐ (SKIP TO 434) DEAD ☐ (GO BACK TO 405 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 440)
432	How many times did you breastfeed last night between sunset and sunrise? IF ANSWER IS NOT NUMERIC PROBE FOR APPROXIMATE NUMBER.	NUMBER OF NIGHTTIME FEEDINGS ..... ☐☐	NUMBER OF NIGHTTIME FEEDINGS ..... ☐☐
433	How many times did you breastfeed yesterday during the daylight hours? IF ANSWER IS NOT NUMERIC PROBE FOR APPROXIMATE NUMBER.	NUMBER OF DAYLIGHT FEEDINGS ..... ☐☐	NUMBER OF DAYLIGHT FEEDINGS ..... ☐☐
434	Did (NAME) drink anything from a bottle with a nipple yesterday or last night?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
435	At any time yesterday or last night, was (NAME) given any of the following: Plain water, filtered water or boiled water? Sugar water? Juice? Herbal tea? Baby formula? Tinned or powdered milk? Fresh milk? Any other liquid? Any solid or semi-solid foods?	YES NO DK PLAIN WATER ..... 1 2 8 SUGAR WATER ..... 1 2 8 JUICE ..... 1 2 8 HERBAL TEA ..... 1 2 8 BABY FORMULA ..... 1 2 8 TINNED/ POWDERED MILK 1 2 8 FRESH MILK ..... 1 2 8 OTHER LIQUIDS ..... 1 2 8 SOLID/SEMI-SOLID FOODS 1 2 8	YES NO DK PLAIN WATER ..... 1 2 8 SUGAR WATER ..... 1 2 8 JUICE ..... 1 2 8 HERBAL TEA ..... 1 2 8 BABY FORMULA ..... 1 2 8 TINNED/ POWDERED MILK 1 2 8 FRESH MILK ..... 1 2 8 OTHER LIQUIDS ..... 1 2 8 SOLID/SEMI-SOLID FOODS 1 2 8
439		GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 440.	GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 440.

SECTION 4B. IMMUNIZATION AND HEALTH

440	*ENTER THE NAME, LINE NUMBER, AND SURVIVAL STATUS OF EACH BIRTH SINCE JANUARY 1994 IN THE TABLE.* ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 2 BIRTHS, USE ADDITIONAL QUESTIONNAIRES).		
441	LINE NUMBER FROM Q214	LAST BIRTH LINE NUMBER ..... [ ][ ]	NEXT-TO-LAST BIRTH LINE NUMBER ..... [ ][ ]
442	FROM Q218 AND Q220	NAME _____ ALIVE ☐ DEAD ☐ (GO TO 442 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 465.)	NAME _____ ALIVE ☐ DEAD ☐ (GO TO 442 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 465.)
443	Do you have a card where (NAME'S) vaccinations are written down? IF YES: May I see it please?	YES, SEEN ..... 1 (SKIP TO 445) YES, NOT SEEN ..... 2 (SKIP TO 447) NO CARD 3	YES, SEEN ..... 1 (SKIP TO 445) YES, NOT SEEN ..... 2 (SKIP TO 447) NO CARD 3
444	Did you ever have a vaccination card for (NAME)?	YES ..... 1 (SKIP TO 447) NO 2	YES ..... 1 (SKIP TO 447) NO 2
445	(1) COPY VACCINATION DATE FOR EACH VACCINE FROM THE CARD. (2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A VACCINATION WAS GIVEN, BUT NO DATE IS RECORDED. *IF INJECTION WAS NOT GIVEN, LEAVE THE CORRESPONDING LINE BLANK.*	DAY MONTH YEAR	DAY MONTH YEAR
	BCG	BCG	BCG
	Polio 0	P0 ...	P0 ...
	Polio 1	P1 ...	P1 ...
	Polio 2	P2 ...	P2 ...
	Polio 3	P3 ...	P3 ...
	DPT 1	D1 ...	D1 ...
	DPT 2	D2 ...	D2 ...
	DPT 3	D3 ...	D3 ...
	Measles	MEA	MEA
446	Has (NAME) received any vaccinations that are not recorded on this card? RECORD '1' ONLY IF RESPONDENT MENTIONS BCG, POLIO 0-3, DPT 1-3, AND/OR MEASLES VACCINE(S).	YES ..... 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 445) (SKIP TO 449) NO ..... 2 (SKIP TO 449) DON'T KNOW 8	YES ..... 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 445) (SKIP TO 449) NO ..... 2 (SKIP TO 449) DON'T KNOW 8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
447	Did (NAME) ever receive any vaccinations to prevent him/her from getting diseases?	YES ..... 1 NO ..... 2 (SKIP TO 449) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 449) DON'T KNOW 8
448	Please tell me if (NAME) received any of the following vaccinations:		
448A	A BCG vaccination against tuberculosis, that is, an injection in the left arm or shoulder that caused a scar?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
448B	Polio vaccine, that is, drops in the mouth?	YES ..... 1 NO ..... 2 (SKIP TO 448E) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 448E) DON'T KNOW 8
448C	How many times?	NUMBER OF TIMES ..... [ ]	NUMBER OF TIMES ..... [ ]
448D	When was the first polio vaccine given, just after birth or later?	JUST AFTER BIRTH ..... 1 LATER 2	JUST AFTER BIRTH ..... 1 LATER 2
448E	DPT vaccination, that is, an injection usually given at the same time as polio drops?	YES ..... 1 NO ..... 2 (SKIP TO 448G) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 448G) DON'T KNOW 8
448F	How many times?	NUMBER OF TIMES ..... [ ]	NUMBER OF TIMES ..... [ ]
448G	An injection to prevent measles?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
449	Has (NAME) been ill with a fever at any time in the last 2 weeks?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
450	Has (NAME) been ill with a cough at any time in the last 2 weeks?	YES ..... 1 NO ..... 2 (SKIP TO 454) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 454) DON'T KNOW 8
451	When (NAME) was ill with a cough, did he/she breathe faster than usual with short, fast breaths?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
452	Did you seek advice or treatment for the cough?	YES ..... 1 NO ..... 2 (SKIP TO 454)	YES ..... 1 NO ..... 2 (SKIP TO 454)

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
453	Where did you seek advice or treatment? Anywhere else? RECORD ALL MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL ..... A COMMUNE HEALTH CENTER ..... B MCH/FP MOBILE TEAM ..... C VILLAGE HEALTH WORKER D OTHER PUBLIC _____ E (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... F PRIVATE DOCTOR ..... G PRIVATE DOCTOR'S ASSISTANT ..... H PHARMACY ..... I OTHER PRIVATE MEDICAL _____ J (SPECIFY) OTHER SOURCE SHOP ..... K TRAD. PRACTITIONER ..... L OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT. HOSPITAL ..... A COMMUNE HEALTH CENTER ..... B MCH/FP MOBILE TEAM ..... C VILLAGE HEALTH WORKER D OTHER PUBLIC _____ E (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... F PRIVATE DOCTOR ..... G PRIVATE DOCTOR'S ASSISTANT ..... H PHARMACY ..... I OTHER PRIVATE MEDICAL _____ J (SPECIFY) OTHER SOURCE SHOP ..... K TRAD. PRACTITIONER ..... L OTHER _____ X (SPECIFY)
454	Has (NAME) had diarrhea in the last 2 weeks?	YES ..... 1 NO ..... 2 (SKIP TO 464) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 464) DON'T KNOW 8
455	Was there any blood in the stools?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
456	On the worst day of the diarrhea, how many bowel movements did (NAME) have?	NUMBER OF BOWEL MOVEMENTS ..... [ ][ ] DON'T KNOW 98	NUMBER OF BOWEL MOVEMENTS ..... [ ][ ] DON'T KNOW 98
457	Was he/she given the same amount to drink as before the diarrhea, or more, or less?	SAME ..... 1 MORE ..... 2 LESS ..... 3 DON'T KNOW 8	SAME ..... 1 MORE ..... 2 LESS ..... 3 DON'T KNOW 8
458	Was he/she given the same amount of food to eat as before the diarrhea, or more, or less?	SAME ..... 1 MORE ..... 2 LESS ..... 3 DON'T KNOW 8	SAME ..... 1 MORE ..... 2 LESS ..... 3 DON'T KNOW 8
459	When (NAME) had diarrhea, was he/she given any of the following to drink:	YES NO DK	YES NO DK
	A fluid, made from a special packet called Oredon?	FLUID FROM ORS PKT 1 2 8	FLUID FROM ORS PKT 1 2 8
	Porridge?	PORRIDGE 1 2 8	PORRIDGE 1 2 8
	Soup?	SOUP 1 2 8	SOUP 1 2 8
	Home-made sugar-salt-water solution?	SUG.-SALT-WAT. SOL. 1 2 8	SUG.-SALT-WAT. SOL. 1 2 8
	Milk or infant formula?	MILK/INFANT FORM. 1 2 8	MILK/INFANT FORM. 1 2 8
	Drinking water?	WATER 1 2 8	WATER 1 2 8
	Any other liquid?	OTHER LIQUID 1 2 8	OTHER LIQUID 1 2 8
460	Was anything (else) given to treat the diarrhea?	YES ..... 1 NO ..... 2 (SKIP TO 462) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 462) DON'T KNOW 8
461	What was given to treat the diarrhea? Anything else? RECORD ALL MENTIONED.	PILL OR SYRUP ..... B INJECTION ..... C (I.V.) INTRAVENOUS ..... D HOME REMEDIES/ HERBAL MEDICINES ..... E OTHER _____ X (SPECIFY)	PILL OR SYRUP ..... B INJECTION ..... C (I.V.) INTRAVENOUS ..... D HOME REMEDIES/ HERBAL MEDICINES ..... E OTHER _____ X (SPECIFY)

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
462	Did you seek advice or treatment for the diarrhea?	YES ..... 1 NO ..... 2 (SKIP TO 464)	YES ..... 1 NO ..... 2 (SKIP TO 464)
463	Where did you seek advice or treatment? Anywhere else? RECORD ALL MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL ..... A COMMUNE HEALTH CENTER ..... B MCH/FP MOBILE TEAM ..... C VILLAGE HEALTH WORKER D OTHER PUBLIC _____ E (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... F PRIVATE DOCTOR ..... G PRIVATE DOCTOR'S ASSISTANT ..... H PHARMACY ..... I OTHER PRIVATE MEDICAL _____ J (SPECIFY) OTHER SOURCE SHOP ..... K TRAD. PRACTITIONER ..... L OTHER_____ X (SPECIFY)	PUBLIC SECTOR GOVT. HOSPITAL ..... A COMMUNE HEALTH CENTER ..... B MCH/FP MOBILE TEAM ..... C VILLAGE HEALTH WORKER D OTHER PUBLIC _____ E (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... F PRIVATE DOCTOR ..... G PRIVATE DOCTOR'S ASSISTANT ..... H PHARMACY ..... I OTHER PRIVATE MEDICAL _____ J (SPECIFY) OTHER SOURCE SHOP ..... K TRAD. PRACTITIONER ..... L OTHER_____ X (SPECIFY)
464		GO BACK TO 442 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 465.	GO BACK TO 442 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 465.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
465	When a child has diarrhea, should he/she be given less to drink than usual, about the same amount, or more than usual?	LESS TO DRINK ..... 1 ABOUT SAME AMOUNT TO DRINK ..... 2 MORE TO DRINK ..... 3 DON'T KNOW 8	
466	When a child has diarrhea, should he/she be given less to eat than usual, about the same amount, or more than usual?	LESS TO EAT ..... 1 ABOUT SAME AMOUNT TO EAT ..... 2 MORE TO EAT ..... 3 DON'T KNOW 8	
467	When a child is sick with diarrhea, what signs of illness would tell you that he or she should be taken to a health facility or health worker? RECORD ALL MENTIONED.	REPEATED WATERY STOOLS ..... A ANY WATERY STOOLS ..... B REPEATED VOMITING ..... C ANY VOMITING ..... D BLOOD IN STOOLS ..... E FEVER ..... F MARKED THIRST ..... G NOT EATING/NOT DRINKING WELL .. H GETTING SICKER/VERY SICK ..... I NOT GETTING BETTER ..... J OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	
468	When a child is sick with a cough, what signs of illness would tell you that he or she should be taken to a health facility or health worker? RECORD ALL MENTIONED.	FAST BREATHING ..... A DIFFICULT BREATHING ..... B NOISY BREATHING ..... C FEVER ..... D UNABLE TO DRINK ..... E NOT EATING/NOT DRINKING WELL ... F GETTING SICKER/VERY SICK ..... G NOT GETTING BETTER ..... H OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	
469	CHECK 459, ALL COLUMNS: NO CHILD RECEIVED ORS ☐ ↓ ANY CHILD RECEIVED ORS ☐		→501
470	Have you ever heard of a special product called Oredon you can use for the treatment of diarrhea?	YES ..... 1 NO 2	

SECTION 5. MARRIAGE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	PRESENCE OF OTHERS AT THIS POINT.	YES NO CHILDREN UNDER 10 ..... 1 2 HUSBAND ..... 1 2 OTHER MALES ..... 1 2 OTHER FEMALES 1 2	
502	CHECK 106A: CURRENTLY MARRIED ☐ ▼ WIDOWED, DIVORCED, SEPARATED ☐		→511
507	Is your husband living with you now or is he staying elsewhere?	LIVING WITH HER ..... 1 STAYING ELSEWHERE 2	
511	Have you been married only once, or more than once?	ONCE ..... 1 MORE THAN ONCE 2	
512	CHECK 511: MARRIED ONLY ONCE ☐ ▼ In what month and year did you start living with your husband? MARRIED MORE THAN ONCE ☐ ▼ Now we will talk about your first husband. In what month and year did you start living with him?	MONTH ..... ☐☐ DON'T KNOW MONTH ..... 98 YEAR ..... ☐☐☐☐ DON'T KNOW YEAR 9998	→514
513	How old were you when you started living with him?	AGE ..... ☐☐	
514	DETERMINE MONTHS MARRIED SINCE JANUARY 1992. ENTER 'X' IN COLUMN 3 OF CALENDAR FOR EACH MONTH MARRIED, AND ENTER '0' FOR EACH MONTH NOT MARRIED, SINCE JANUARY 1992. FOR WOMEN WITH MORE THAN ONE MARRIAGE: PROBE FOR DATE WHEN CURRENT MARRIAGE STARTED AND, IF APPROPRIATE, FOR STARTING AND TERMINATION DATES OF ANY PREVIOUS MARRIAGES. FOR WOMEN NOT CURRENTLY MARRIED: PROBE FOR DATE WHEN LAST MARRIAGE STARTED AND FOR TERMINATION DATE AND, IF APPROPRIATE, FOR THE STARTING AND TERMINATION DATES OF ANY PREVIOUS MARRIAGES.		
516	CHECK 301 AND 302: KNOWS CONDOM ☐ ▼ The last time you had sex, was a condom used? DOES NOT KNOW CONDOM ☐ ▼ Some men use a condom, which means that they put a rubber sheath on their penis during sexual intercourse. The last time you had sex, was a condom used?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
517	Do you know of a place where you can get condoms?	YES ..... 1 NO 2	→600

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
518	**Where is that?** IF SOURCE IS HOSPITAL OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL ..... 10 DELIVERY HOUSE ..... 11 COMMUNE HEALTH CENTER ..... 12 FAMILY PLANNING CENTER ..... 13 MOBILE CLINIC ..... 14 FIELD WORKER ..... 15 OTHER PUBLIC _____16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PHARMACY ..... 22 PRIVATE DOCTOR ..... 23 OTHER PRIVATE MEDICAL _____26 (SPECIFY) OTHER SOURCE FRIENDS/RELATIVES ..... 33 OTHER_____36 (SPECIFY)	

SECTION 6. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
600	CHECK 106A: CURRENTLY MARRIED ☐ WIDOWED, DIVORCED, SEPARATED ☐		→612
601	CHECK 314: NEITHER STERILIZED ☐ HE OR SHE STERILIZED ☐		→612
602	CHECK 230: NOT PREGNANT OR UNSURE ☐ Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? PREGNANT ☐ Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD ..... 1 NO MORE/NONE ..... 2 SAYS SHE CAN'T GET PREGNANT ..... 3 UNDECIDED/DON'T KNOW 8	 →604 →606 →604
603	CHECK 230: NOT PREGNANT OR UNSURE ☐ How long would you like to wait from now before the birth of (a/another) child? PREGNANT ☐ After the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS ..... 1 ☐☐ YEARS ..... 2 ☐☐ SOON/NOW ..... 993 SAYS SHE CAN'T GET PREGNANT . 994 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	 →606
604	CHECK 230: NOT PREGNANT OR UNSURE ☐ PREGNANT ☐		→607
605	If you became pregnant in the next few weeks, would you be happy, unhappy, or would it not matter very much?	HAPPY ..... 1 UNHAPPY ..... 2 WOULD NOT MATTER 3	
606	CHECK 313: NOT ASKED ☐ NOT CURRENTLY USING ☐ CURRENTLY USING ☐		→612
607	Do you think you will use a method to delay or avoid pregnancy within the next 12 months?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→609
608	Do you think you will use a method to delay or avoid pregnancy at any time in the future?	YES ..... 1 NO ..... 2 DON'T KNOW 8	 →610
609	Which method would you prefer to use?	PILL ..... 01 IUD ..... 02 INJECTIONS ..... 03 IMPLANTS ..... 04 DIAPHRAGM/FOAM/JELLY ..... 05 CONDOM ..... 06 FEMALE STERILIZATION ..... 07 MALE STERILIZATION ..... 08 PERIODIC ABSTINENCE ..... 09 WITHDRAWAL ..... 10 OTHER _____ 96 (SPECIFY) UNSURE 98	→612

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
610	What is the main reason that you think you will never use a method?	FERTILITY-RELATED REASONS INFREQUENT SEX ..... 22 MENOPAUSAL/HYSTERECTOMY . 23 SUBFECUND/INFECUND ..... 24 WANTS MORE CHILDREN ..... 26 OPPOSITION TO USE RESPONDENT OPPOSED ..... 31 HUSBAND OPPOSED ..... 32 OTHERS OPPOSED ..... 33 RELIGIOUS PROHIBITION ..... 34 LACK OF KNOWLEDGE KNOWS NO METHOD ..... 41 KNOWS NO SOURCE ..... 42 METHOD-RELATED REASONS HEALTH CONCERNS ..... 51 FEAR OF SIDE EFFECTS ..... 52 LACK OF ACCESS/TOO FAR ..... 53 COST TOO MUCH ..... 54 INCONVENIENT TO USE ..... 55 INTERFERES WITH BODY'S NORMAL PROCESSES ..... 56 OTHER_____ 96 (SPECIFY) DON'T KNOW 98	
612	CHECK 220: HAS LIVING CHILDREN ☐ If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NUMBER ..... ☐☐ OTHER_____ 96 (SPECIFY)	→614
613	How many of these children would you like to be boys, how many would you like to be girls and for how many would it not matter?	BOYS ..... ☐☐ GIRLS ..... ☐☐ EITHER ..... ☐☐ OTHER_____ 999996 (SPECIFY)	
614	Would you say that you approve or disapprove of couples using a method to avoid getting pregnant?	APPROVE ..... 1 DISAPPROVE ..... 2 NO OPINION 3	
615	Is it acceptable or not acceptable to you for information on family planning to be provided: On the radio? On the television?	ACCEPTABLE / NOT ACCEPTABLE / DK RADIO ..... 1 2 8 TELEVISION 1 2 8	
616	In the last few months have you heard (read) about family planning: On the radio? On the television? In a newspaper or magazine? From a poster? From leaflets or brochures?	YES / NO RADIO ..... 1 2 TELEVISION ..... 1 2 NEWSPAPER OR MAGAZINE .. 1 2 POSTER ..... 1 2 LEAFLETS OR BROCHURES ... 1 2	
618	In the last few months have you discussed the practice of family planning with your friends, neighbors, or relatives?	YES ..... 1 NO 2	→620

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
619	With whom? Anyone else? RECORD ALL MENTIONED.	HUSBAND ..... A MOTHER ..... B FATHER ..... C SISTER(S) ..... D BROTHER(S) ..... E DAUGHTER ..... F MOTHER-IN-LAW ..... G FRIENDS/NEIGHBORS ..... H OTHER_____X (SPECIFY)	
620	CHECK 106A: CURRENTLY MARRIED ☐ ▼ WIDOWED, DIVORCED, SEPARATED ☐		→701
621	Spouses do not always agree on everything. Now I want to ask you about your husband's views on family planning. Do you think that your husband approves or disapproves of couples using a method to avoid pregnancy?	APPROVES ..... 1 DISAPPROVES ..... 2 DON'T KNOW 8	
622	How often have you talked to your husband about family planning in the past year?	NEVER ..... 1 ONCE OR TWICE ..... 2 MORE OFTEN 3	
623	Do you think your husband wants the same number of children that you want, or does he want more or fewer than you want?	SAME NUMBER ..... 1 MORE CHILDREN ..... 2 FEWER CHILDREN ..... 3 DON'T KNOW 8	

SECTION 7. HUSBAND'S BACKGROUND, WOMAN'S WORK AND RESIDENCE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	CHECK 106A: CURRENTLY MARRIED ☐ ▼ WIDOWED, DIVORCED, SEPARATED ☐		→703
702	How old was your husband on his last birthday?	AGE ..... ☐☐	
703	Did your (last) husband ever attend school?	YES ..... 1 NO 2	→706
704	What was the highest grade of education he completed? USE EQUIVALENCY TABLE.	GRADE ..... ☐☐ COLLEGE/UNIVERSITY ..... 15 DON'T KNOW GRADE 98	
706	*What (is/was) your (last) husband's occupation?* That is, what kind of work (does/did) he mainly do?	☐☐ _____ _____ _____	
709	Aside from your own housework, are you currently working?	YES ..... 1 NO 2	→712
710	As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. Are you currently doing any of these things or any other work?	YES ..... 1 NO 2	→712
711	Have you done any work in the last 12 months?	YES ..... 1 NO 2	→726
712	What is your occupation, that is, what kind of work do you mainly do?	☐☐ _____ _____ _____	
715	Do you do this work for a family member, a cooperative, the *government, someone else, or are you self-employed?*	A FAMILY MEMBER ..... 1 A COOPERATIVE ..... 2 THE GOVERNMENT ..... 3 SOMEONE ELSE ..... 4 SELF-EMPLOYED 5	
717	During the last 12 months, how many months did you work?	NUMBER OF MONTHS ..... ☐☐	
720	Do you earn cash for your work? PROBE: Do you make money for working?	YES ..... 1 NO 2	→723
722	CHECK 106A: CURRENTLY MARRIED ☐ ▼ WIDOWED, DIVORCED, SEPARATED ☐ ▼ Who mainly decides how the money you earn will be used: you, your husband, you and your husband jointly, or someone else? Who mainly decides how the money you earn will be used: you, someone else, or you and someone else jointly?	RESPONDENT DECIDES ..... 1 HUSBAND DECIDES ..... 2 JOINTLY WITH HUSBAND ..... 3 SOMEONE ELSE DECIDES ..... 4 JOINTLY WITH SOMEONE ELSE 5	
723	Do you usually work at home or away from home?	HOME ..... 1 AWAY 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
724	CHECK 221 AND 221A: IS A CHILD LIVING AT HOME WHO IS LESS THAN AGE 6 YEARS? YES ☐ NO ☐		→726
725	Who usually takes care of (NAME OF YOUNGEST CHILD AT HOME) while you are working?	RESPONDENT ..... 01 HUSBAND ..... 02 OLDER FEMALE CHILD ..... 03 OLDER MALE CHILD ..... 04 OTHER RELATIVE ..... 05 NEIGHBOR ..... 06 FRIEND ..... 07 SERVANT/HIRED HELP ..... 08 CHILD IS IN SCHOOL ..... 09 INSTITUTIONAL CHILD CARE ..... 10 HAS NOT WORKED SINCE LAST BIRTH ..... 95 OTHER_____ 96 (SPECIFY)	
726	Have you lived in only one community or in more than one community since January 1992?	ONE COMMUNITY ..... 1 MORE THAN ONE COMMUNITY 2	→728
727	IN COLUMN 4 OF CALENDAR, ENTER THE APPROPRIATE CODE FOR CURRENT COMMUNITY, ('1' CITY, '2' TOWN, '3' COUNTRYSIDE). BEGIN IN THE MONTH OF INTERVIEW AND CONTINUE WITH ALL PRECEDING MONTHS BACK TO JANUARY 1992. THEN SKIP TO_____		→801
728	In what month and year did you move to (NAME OF CURRENT COMMUNITY)? IN COLUMN 4 OF CALENDAR, ENTER 'X' IN THE MONTH AND YEAR OF THE MOVE. IN SUBSEQUENT MONTHS ENTER THE APPROPRIATE CODE FOR THE TYPE OF COMMUNITY, ('1' CITY, '2' TOWN, '3' COUNTRYSIDE). CONTINUE PROBING FOR PREVIOUS COMMUNITIES, AND RECORD MOVES AND TYPE OF COMMUNITIES ACCORDINGLY. ILLUSTRATIVE QUESTIONS: • Where did you live before.....? • In what month and year did you arrive there? • Is that place a city, a town, or in the countryside?		

SECTION 8. AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	Have you ever heard of an illness called AIDS?	YES ..... 1 NO 2	→811
802	From which sources of information have you learned most about AIDS? Any other sources? RECORD ALL MENTIONED.	RADIO ..... A TELEVISION ..... B NEWSPAPERS/MAGAZINES ..... C PAMPHLETS/POSTERS ..... D HEALTH WORKERS ..... E CHURCHES/TEMPLES ..... F SCHOOLS/TEACHERS ..... G COMMUNITY MEETINGS ..... H FRIENDS/RELATIVES ..... I WORK PLACE ..... J OTHER_____ X (SPECIFY)	
803	Is there anything a person can do to avoid getting AIDS or the virus that causes AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→807
804	What can a person do? Any other ways? RECORD ALL MENTIONED.	SAFE SEX ..... A ABSTAIN FROM SEX ..... B USE CONDOMS ..... C HAVE ONLY ONE SEX PARTNER ..... D AVOID SEX WITH PROSTITUTES ..... E AVOID SEX WITH HOMOSEXUALS ..... F AVOID BLOOD TRANSFUSIONS ..... G AVOID INJECTIONS ..... H AVOID KISSING ..... I AVOID MOSQUITO BITES ..... J SEEK PROTECTION FROM TRADITIONAL HEALER ..... K OTHER_____ W (SPECIFY) OTHER_____ X (SPECIFY) DON'T KNOW ..... Z	
805	CHECK 804: MENTIONED SAFE SEX ☐ ▼ DID NOT MENTION SAFE SEX ☐		→807
806	What does "safe sex" mean to you? RECORD ALL MENTIONED.	ABSTAIN FROM SEX ..... B USE CONDOMS ..... C HAVE ONLY ONE SEX PARTNER ..... D AVOID SEX WITH PROSTITUTES ..... E AVOID SEX WITH HOMOSEXUALS ..... F OTHER_____ X (SPECIFY) DON'T KNOW ..... Z	
807	Is it possible for a healthy-looking person to have the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
808	Do you think that persons with AIDS almost never die from the disease, sometimes die, or almost always die from the disease?	ALMOST NEVER ..... 1 SOMETIMES ..... 2 ALMOST ALWAYS ..... 3 DON'T KNOW 8	
809	Do you think your chances of getting AIDS are small, moderate, great, or no risk at all?	SMALL ..... 1 MODERATE ..... 2 GREAT ..... 3 NO RISK AT ALL ..... 4 HAS AIDS 5	
811	RECORD THE TIME.	HOUR ..... ☐☐ MINUTES ..... ☐☐	

INTERVIEWER'S OBSERVATIONS

To be filled in after completing interview

Comments about Respondent: _____

_____

_____

Comments on Specific Questions: _____

_____

_____

Any other Comments: _____

_____

_____

SUPERVISOR'S OBSERVATIONS

_____

_____

_____

Name of Supervisor: _____ Date: _____

EDITOR'S OBSERVATIONS

_____

_____

_____

Name of Editor: _____ Date: _____

INSTRUCTIONS:
ONLY ONE CODE SHOULD APPEAR IN ANY BOX.
FOR COLUMNS 3 AND 4, ALL MONTHS SHOULD BE FILLED IN. FOR COLUMN 1, ALL MONTHS SHOULD BE FILLED IN FOR CURRENTLY MARRIED WOMEN.

INFORMATION TO BE CODED FOR EACH COLUMN

COL.1: Births, Pregnancies, Contraceptive Use

B BIRTHS
P PREGNANCIES
T TERMINATIONS

0 NO METHOD
1 PILL
2 IUD
3 INJECTIONS
4 IMPLANTS
5 DIAPHRAGM/FOAM/JELLY
6 CONDOM
7 FEMALE STERILIZATION
8 MALE STERILIZATION
9 PERIODIC ABSTINENCE
A WITHDRAWAL
X OTHER _____
(SPECIFY)

COL.2: Discontinuation of Contraceptive Use

0 INFREQUENT SEX/HUSBAND AWAY
1 BECAME PREGNANT WHILE USING
2 WANTED TO BECOME PREGNANT
3 HUSBAND DISAPPROVED
4 WANTED MORE EFFECTIVE METHOD
5 HEALTH CONCERNS
6 SIDE EFFECTS
7 LACK OF ACCESS/TOO FAR
8 COST TOO MUCH
9 INCONVENIENT TO USE
F FATALISTIC
A DIFFICULT TO GET PREGNANT/MENOPAUSE
D MARITAL DISSOLUTION/SEPARATION
X OTHER _____
(SPECIFY)
Z DON'T KNOW

COL.3: Marriage

X MARRIED
0 SINGLE, WIDOWED, DIVORCED, SEPARATED

COL.4: Moves and Types of Communities

X CHANGE OF COMMUNITY
1 CITY
2 TOWN
3 COUNTRYSIDE

	12	DEC	01						01	DEC	
	11	NOV	02						02	NOV	
	10	OCT	03						03	OCT	
	09	SEP	04						04	SEP	
1	08	AUG	05						05	AUG	1
9	07	JUL	06						06	JUL	9
9	06	JUN	07						07	JUN	9
7	05	MAY	08						08	MAY	7
	04	APR	09						09	APR	
	03	MAR	10						10	MAR	
	02	FEB	11						11	FEB	
	01	JAN	12						12	JAN	
	12	DEC	13						13	DEC	
	11	NOV	14						14	NOV	
	10	OCT	15						15	OCT	
	09	SEP	16						16	SEP	
1	08	AUG	17						17	AUG	1
9	07	JUL	18						18	JUL	9
9	06	JUN	19						19	JUN	9
6	05	MAY	20						20	MAY	6
	04	APR	21						21	APR	
	03	MAR	22						22	MAR	
	02	FEB	23						23	FEB	
	01	JAN	24						24	JAN	
	12	DEC	25						25	DEC	
	11	NOV	26						26	NOV	
	10	OCT	27						27	OCT	
	09	SEP	28						28	SEP	
1	08	AUG	29						29	AUG	1
9	07	JUL	30						30	JUL	9
9	06	JUN	31						31	JUN	9
5	05	MAY	32						32	MAY	5
	04	APR	33						33	APR	
	03	MAR	34						34	MAR	
	02	FEB	35						35	FEB	
	01	JAN	36						36	JAN	
	12	DEC	37						37	DEC	
	11	NOV	38						38	NOV	
	10	OCT	39						39	OCT	
	09	SEP	40						40	SEP	
1	08	AUG	41						41	AUG	1
9	07	JUL	42						42	JUL	9
9	06	JUN	43						43	JUN	9
4	05	MAY	44						44	MAY	4
	04	APR	45						45	APR	
	03	MAR	46						46	MAR	
	02	FEB	47						47	FEB	
	01	JAN	48						48	JAN	
	12	DEC	49						49	DEC	
	11	NOV	50						50	NOV	
	10	OCT	51						51	OCT	
	09	SEP	52						52	SEP	
1	08	AUG	53						53	AUG	1
9	07	JUL	54						54	JUL	9
9	06	JUN	55						55	JUN	9
3	05	MAY	56						56	MAY	3
	04	APR	57						57	APR	
	03	MAR	58						58	MAR	
	02	FEB	59						59	FEB	
	01	JAN	60						60	JAN	
	12	DEC	61						61	DEC	
	11	NOV	62						62	NOV	
	10	OCT	63						63	OCT	
	09	SEP	64						64	SEP	
1	08	AUG	65						65	AUG	1
9	07	JUL	66						66	JUL	9
9	06	JUN	67						67	JUN	9
2	05	MAY	68						68	MAY	2
	04	APR	69						69	APR	
	03	MAR	70						70	MAR	
	02	FEB	71						71	FEB	
	01	JAN	72						72	JAN	

VIETNAM DEMOGRAPHIC AND HEALTH SURVEY II
COMMUNITY/HEALTH FACILITY QUESTIONNAIRE

IDENTIFICATION

PROVINCE/MUNICIPALITY _____

DISTRICT _____

COMMUNE _____

CLUSTER NAME _____

CLUSTER NUMBER.....

URBAN/RURAL (urban=1, rural=2).....

LARGE CITY/SMALL CITY/TOWN/COUNTRYSIDE.....
(large city=1, small city=2, town=3, countryside=4)

DATE OF VISIT _____

INTERVIEWER NAME _____

RESULT*.....

DAY
MONTH
YEAR
NAME
RESULT

*RESULT CODES:
1=COMPLETED
2=UNABLE TO COMPLETE (SPECIFY REASON BELOW)

_____

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

SECTION 1A. LOCALITY CHARACTERISTICS

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
101	TYPE OF LOCALITY IN WHICH CLUSTER IS LOCATED	LARGE CITY.....1 SMALL CITY.....2 TOWN.....3 VILLAGE.....4	
102	What are the major economic activities of the people living in this locality? *RECORD UP TO THREE ACTIVITIES*	AGRICULTURE.....A LIVESTOCK.....B FISHING.....C TRADING/MARKETING.....D MANUFACTURING.....E MINING.....F GOVERNMENT.....G OTHER_____X (SPECIFY)	
103	Is there telephone service in the locality?	YES.....1 NO.....2	

SECTION 1B. COMMUNITY CHARACTERISTICS

THE FOLLOWING QUESTIONS PERTAIN TO THE IMMEDIATE COMMUNITY IN WHICH THE SAMPLE CLUSTER IS LOCATED. THIS COULD BE A NEIGHBORHOOD IN THE CASE OF AN URBAN AREA (CITY OR TOWN) OR A VILLAGE IN THE CASE OF A RURAL AREA.

104	CHECK 101: TYPE OF LOCALITY IN WHICH CLUSTER IS LOCATED	LARGE CITY.....1 → 109 SMALL CITY.....2 → 109 TOWN.....3 → 109 VILLAGE.....4	
105	What is the name of the nearest urban area (town or city)?	_____	
106	How far is it in kilometers to this place?	KM. TO NEAREST URBAN CENTER..... [ ][ ][ ]	
107	What are the most commonly used types of transportation to go from this place to the nearest urban center? (CIRCLE ALL APPLICABLE) [MODIFY RESPONSE CATEGORIES TO BE APPROPRIATE FOR VIETNAM]	MOTORIZED.....A BICYCLE.....B ANIMAL.....C BOAT.....D WALKING.....E OTHER_____X (SPECIFY)	
108	What is the main access route to this village?	ALL WEATHER ROAD.....1 SEASONAL ROAD.....2 OTHER (RIVER/RAILWAY).....3 PATH.....4	

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
109	Sometimes children who play normally in the day have difficulty seeing and moving around in the twilight after the sun goes down. In the evening these children may sit alone, hold onto their mother's clothes, be unable to find their toys, or see to eat. Are you familiar with this condition?	YES.....1 NO.....2	→112
110	What do you call this condition? TRY TO GET THE LOCAL NAME OF THIS CONDITION	_____ [ ][ ] _____	
111	Do you know of any children in the community who have had this condition in the past month?	YES.....1 NO.....2	
112	How far from this community are the following things?	KILOMETERS	
	A primary school?	PRIMARY SCHOOL..... [ ][ ]	
	A lower secondary school?	LOWER SECONDARY SCHOOL... [ ][ ]	
	A secondary school?	SECONDARY SCHOOL..... [ ][ ]	
	A post office?	POST OFFICE..... [ ][ ]	
	A local market?	LOCAL MARKET..... [ ][ ]	
	A cinema?	CINEMA..... [ ][ ]	
	A bank?	BANK..... [ ][ ]	
	Public transportation?	PUBLIC TRANSPORTATION.... [ ][ ]	
	IF IN LOCALITY, WRITE "00". IF NOT, WRITE KILOMETERS. IF MORE THAN 95 KM, WRITE "95". IF DO NOT KNOW, WRITE "98".		

SECTION 1C. HEALTH AND FAMILY PLANNING PROGRAMS IN THE COMMUNITY

113	Does a community-based family planning distribution program cover this community?	YES.....1 NO.....2	→115
113A	In what year did the community-based family planning distribution program first cover this community?	YEAR..... [ ][ ][ ][ ] DON'T KNOW.....9998	

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
114	Are the following methods available from the community based distribution program? a: Pill? b: Condom?	PILL: YES.....1 NO.....2 CONDOM: YES.....1 NO.....2	
115	Does a family planning field worker visit this community?	YES.....1 NO.....2	→120
116	How often does a family planning field worker visit?	NO. OF TIMES [ ][ ] PER MONTH..1 YEAR...2	
116A	In what year did family planning field workers first provide services to this community?	YEAR..... [ ][ ][ ][ ] DON'T KNOW.....9998	
117	Does a family planning field worker provide family planning counselling?	YES.....1 NO.....2	
118	Are the following methods available from the family planning field worker? a: Pill? b: Condom?	PILL: YES.....1 NO.....2 CONDOM: YES.....1 NO.....2	
119	How many family planning field workers visit this community?	TOTAL NO. OF FP WORKERS..... [ ][ ]	
120	Is this community visited regularly by a mobile family planning team?	YES.....1 NO.....2	→123
121	How often does the mobile family planning team visit?	NO. OF TIMES [ ][ ] PER MONTH..1 YEAR...2	
121A	In what year did the mobile family planning team first make regular visits to this community?	YEAR..... [ ][ ][ ][ ] DON'T KNOW.....9998	

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
122	Are the following methods available from the mobile family planning team? a: Pill? b: IUD? c: Female Sterilization? d: Male Sterilization? e: Injection?	PILL: YES.....1 NO.....2 IUD: YES.....1 NO.....2 FEMALE STERILIZATION: YES.....1 NO.....2 MALE STERILIZATION: YES.....1 NO.....2 INJECTION: YES.....1 NO.....2	
123	Have there been any family planning campaigns in this community in the last year?	YES.....1 NO.....2	→125
124	What specifically was this campaign promoting? (CIRCLE ALL APPLICABLE)	CHILD SPACING.....A BENEFITS OF BIRTH CONTROL.....B USE OF FAMILY PLANNING.....C BREAST FEEDING.....D SPECIFIC METHOD(S) PROMOTION....E WHERE METHODS AVAILABLE.....F OTHER (SPECIFY)_____.X	
125	Where do women who live in this community usually give birth?	AT HOME.....1 AT HEALTH CENTER/HOSPITAL.....2	
126	Is there a traditional birth attendant available to women here who regularly assists during delivery?	YES.....1 NO.....2	→129
127	Does the traditional birth attendant provide iron supplements?	YES.....1 NO.....2	
128	Has the traditional birth attendant had any special training from the government or Ministry of Health or other organization?	YES.....1 NO.....2 DON'T KNOW.....8	
129	Is the area covered by a trained midwife?	YES.....1 NO.....2	→131
130	Does the trained midwife provide iron supplements?	YES.....1 NO.....2	
131	Is there a health worker in this area?	YES.....1 NO.....2	→134

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
132	Does the health worker provide: a: Basic medications?	BASIC MEDICATIONS: YES.....1 NO.....2	
	b: ORT instruction or ORS packets?	ORT/ORS: YES.....1 NO.....2	
	c: Vitamin A capsules?	VITAMIN A: YES.....1 NO.....2	
	d: Growth promotion?	GROWTH PROMOTION: YES.....1 NO.....2	
	e: Iron tablets?	IRON TABLETS: YES.....1 NO.....2	
	f: Iodized oil capsules/injections?	IODIZED OIL: YES.....1 NO.....2	
	g: Antenatal care?	ANTENATAL CARE: YES.....1 NO.....2	
	h: Immunizations?	IMMUNIZATIONS: YES.....1 NO.....2	
	i: Family planning services?	FAMILY PLANNING: YES.....1 NO.....2	
133	How often does the health worker visit?	NO. OF TIMES [ ][ ] PER MONTH..1 YEAR...2	
134	Have there been any health campaigns in this (LOCALITY) in last year?	YES.....1 NO.....2	→SECT 2
135	What was the health campaign promoting? (CIRCLE ALL APPLICABLE)	BENEFITS OF BREASTFEEDING.....A IMMUNIZATION.....B DIARRHEAL DISEASE CONTROL.....C AIDS.....D DRUG ABUSE.....E GROWTH PROMOTION/NUTRITION.....F VITAMIN A.....G IODINE DEFICIENCY.....H SANITATION.....I OTHER (SPECIFY)_____.X	

SECTION 2. FACILITY IDENTIFICATION SECTION

What is the name of the nearest doctor with a private practice to this community?

_____

What is the name of the nearest pharmacy to this community?

_____

What is the name of the nearest commune health center?

_____

Aside from the commune health center, what is the name of the nearest health center, intercommune health center, or hospital to this community?

_____

SECTION 2A. PRIVATE DOCTOR

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
A201	NAME OF PRIVATE DOCTOR (COPY FROM SECTION 2 COVER PAGE).	PRIVATE DOCTOR'S NAME _____ NOT APPLICABLE.....000	→B201
A203	How far is this practice (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	
A204	What is the most common type of transport to the doctor's practice?	MOTORIZED (E.G. BUS).....1 BICYCLE.....2 ANIMAL.....3 BOAT.....4 WALKING.....5 OTHER_____6 (SPECIFY)	
A205	How long does it take to get from here to (PRIVATE DOCTOR'S NAME) using the most common type of transport? IF LESS THAN ONE HOUR, RECORD MINUTES. OTHERWISE, RECORD HOURS.	HOURS.....1 [ ][ ] MINUTES.....2 [ ][ ]	
A205A	In what year did (PRIVATE DOCTOR'S NAME) first offer services to this community?	YEAR..... [ ][ ][ ][ ] DON'T KNOW.....9998	
A206	Does this private doctor provide : antenatal care? delivery care? child immunization? family planning services?	YES NO DK ANTENATAL CARE.....1 2 8 DELIVERY CARE.....1 2 8 CHILD IMMUNIZATION...1 2 8 FAMILY PLANNING.....1 2 8	→B201
A207	Who is the nearest doctor with a private practice who provides family planning services to this community?	PRIVATE DOCTOR'S NAME _____ DON'T KNOW.....98	→B201
A209	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	
A210	What is the most common type of transport to the doctor's practice?	MOTORIZED (E.G. BUS).....1 BICYCLE.....2 ANIMAL.....3 BOAT.....4 WALKING.....5 OTHER_____6 (SPECIFY)	

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
A211	How long does it take to get from here to (PRIVATE DOCTOR'S NAME) using the most common type of transport? IF LESS THAN ONE HOUR, RECORD MINUTES. OTHERWISE, RECORD HOURS.	HOURS.....1 [ ][ ] MINUTES.....2 [ ][ ]	
A211A	In what year did (PRIVATE DOCTOR'S NAME) first offer services to this community?	YEAR..... [ ][ ][ ][ ] DON'T KNOW.....9998	

SECTION 2B. PHARMACY

B201	NAME OF PHARMACY (COPY FROM SECTION 2 COVER PAGE).	PHARMACY NAME _____ NOT APPLICABLE.....000	→C201
B202	Is that a government pharmacy or is it operated by a non-government organization ?	GOVERNMENT .....1 NON-GOVERNMENT.....2	
B203	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	
B204	What is the most common type of transport to the pharmacy?	MOTORIZED (E.G. BUS).....1 BICYCLE.....2 ANIMAL.....3 BOAT.....4 WALKING.....5 OTHER_____6 (SPECIFY)	
B205	How long does it take to get from here to (PHARMACY NAME) using the most common type of transport? IF LESS THAN ONE HOUR, RECORD MINUTES. OTHERWISE, RECORD HOURS.	HOURS.....1 [ ][ ] MINUTES.....2 [ ][ ]	
B205A	In what year did (PHARMACY NAME) first sell supplies to this community?	YEAR..... [ ][ ][ ][ ] DON'T KNOW.....9998	
B206	Does this pharmacy sell family planning supplies?	YES.....1 NO.....2 DON'T KNOW.....8	→C201
B207	What is the name of the nearest pharmacy which sells family planning supplies to this community?	PHARMACY NAME _____ DON'T KNOW.....98	→C201

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
B208	Is that a government pharmacy or is it operated by a non-government organization ?	GOVERNMENT .....1 NON-GOVERNMENT.....2	
B209	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	
B210	What is the most common type of transport to the pharmacy?	MOTORIZED (E.G. BUS).....1 BICYCLE.....2 ANIMAL.....3 BOAT.....4 WALKING.....5 OTHER_____6 (SPECIFY)	
B211	How long does it take to get from here to (PHARMACY NAME) using the most common type of transport? IF LESS THAN ONE HOUR, RECORD MINUTES. OTHERWISE, RECORD HOURS.	HOURS.....1 [ ][ ] MINUTES.....2 [ ][ ]	
B211A	In what year did (PHARMACY NAME) first sell supplies to this community?	YEAR..... [ ][ ][ ][ ] DON'T KNOW.....9998	

SECTION 2C. COMMUNE HEALTH CENTER

C201	NAME OF COMMUNE HEALTH CENTER (FROM SECTION 2 COVER PAGE).	COMMUNE HEALTH CENTER NAME _____ NOT APPLICABLE.....000	→D201
C203	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	
C204	What is the most common type of transport to the commune health center?	MOTORIZED (E.G. BUS).....1 BICYCLE.....2 ANIMAL.....3 BOAT.....4 WALKING.....5 OTHER_____6 (SPECIFY)	
C205	How long does it take to get from here to (COMMUNE HEALTH CENTER NAME) using the most common type of transport? IF LESS THAN ONE HOUR, RECORD MINUTES. OTHERWISE, RECORD HOURS.	HOURS.....1 [ ][ ] MINUTES.....2 [ ][ ]	

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
C206	Does this facility provide: antenatal care? delivery care? growth promotion? child immunization? family planning services?	YES NO DK ANTENATAL CARE.....1 2 8 DELIVERY CARE.....1 2 8 GROWTH PROMOTION.....1 2 8 CHILD IMMUNIZATION...1 2 8 FAMILY PLANNING.....1 2 8	→D201
C207	What is the name of the nearest commune health center providing family planning services to this community?	COMMUNE HEALTH CENTER NAME _____	
C209	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	
C210	What is the most common type of transport to that facility?	MOTORIZED (E.G. BUS).....1 BICYCLE.....2 ANIMAL.....3 BOAT.....4 WALKING.....5 OTHER_____6 (SPECIFY)	
C211	How long does it take to get from here to that facility using the most common type of transport? IF LESS THAN ONE HOUR, RECORD MINUTES. OTHERWISE, RECORD HOURS.	HOURS.....1 [ ][ ] MINUTES.....2 [ ][ ]	

SECTION 2D. NEAREST HEALTH CENTER (ASIDE FROM COMMUNE HEALTH CENTER)

D201	NAME OF NEAREST HEALTH CENTER (COPY FROM SECTION 2 OF COVER PAGE)	NEAREST HEALTH CENTER NAME _____ NOT APPLICABLE.....000	→E201
D203	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
D204	What is the most common type of transport to this facility?	MOTORIZED (E.G. BUS).....1 BICYCLE.....2 ANIMAL.....3 BOAT.....4 WALKING.....5 OTHER_____6 (SPECIFY)	
D205	How long does it take to get from here to (HEALTH CENTER NAME) using the most common type of transport? IF LESS THAN ONE HOUR, RECORD MINUTES. OTHERWISE, RECORD HOURS.	HOURS.....1 [ ][ ] MINUTES.....2 [ ][ ]	
D206	Does this facility provide : antenatal care? delivery care? growth promotion? child immunization? family planning services?	YES NO DK ANTENATAL CARE.....1 2 8 DELIVERY CARE.....1 2 8 GROWTH PROMOTION.....1 2 8 CHILD IMMUNIZATION...1 2 8 FAMILY PLANNING.....1 2 8	→E201
D207	What is the name of the nearest health center, aside from the commune health center, providing family planning services to this community?	HEALTH CENTER NAME _____	
D209	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	
D210	What is the most common type of transport to this facility?	MOTORIZED (E.G. BUS).....1 BICYCLE.....2 ANIMAL.....3 BOAT.....4 WALKING.....5 OTHER_____6 (SPECIFY)	
D211	How long does it take to get from here to (HEALTH CENTER NAME) using the most common type of transport? IF LESS THAN ONE HOUR, RECORD MINUTES. OTHERWISE, RECORD HOURS.	HOURS.....1 [ ][ ] MINUTES.....2 [ ][ ]	

SECTION 2E. NEAREST PLACE OFFERING CONTRACEPTIVE METHODS AND HEALTH SERVICES

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
E201	What is the name of the nearest place where birth control pills can be obtained?	NEAREST PILL PROVIDER NAME _____	
E202	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	
E203	What is the name of the nearest place or provider to this community where condoms can be obtained?	NEAREST CONDOM PROVIDER NAME _____	
E204	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	
E205	What is the name of the nearest place to this community where family planning injections can be obtained?	NEAREST INJECTION PROVIDER NAME _____	
E206	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	
E207	What is the name of the nearest facility or provider to this community where IUDs can be inserted?	NEAREST IUD PROVIDER NAME _____	
E208	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	
E209	What is the name of the nearest facility or provider to this community where female sterilization can be obtained?	NEAREST STERILIZATION PROVIDER NAME _____	
E210	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
E211	What is name of the nearest place to this community where immunizations for children can be obtained?	NEAREST IMMUNIZATION PROVIDER NAME _____	
E212	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	
E213	What is the name of the nearest place to this community where Oredon packets can be obtained?	NEAREST ORS PLACE NAME _____	
E214	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	
E215	If child is sick with cough (respiratory illness), what is the name of the nearest place where treatment can be obtained?	NEAREST RESP. DISEASE TREATMENT PLACE _____	
E216	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	
E217	What is the name of the nearest place to this community where antenatal care can be obtained?	NEAREST ANTENATAL PROVIDER NAME _____	
E218	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	
E219	If a woman has a complication in delivery, what is the name of the nearest place she can be treated?	NEAREST DELIVERY PLACE NAME _____	
E220	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN NUMBER AS GIVEN. IF 95 KILOMETERS OR MORE, WRITE IN '95'.)	KILOMETERS..... [ ][ ]	

E221.	CLUSTER INFORMANTS	
	NAME	POSITION/TITLE/OCCUPATION
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
E222.	TOTAL NUMBER OF INFORMANTS IN THE CLUSTER.....	[ ][ ]

END OF CLUSTER INTERVIEW.

SECTION 3. **COMMUNE HEALTH CENTER VISIT**

NAME OF FACILITY _____ DATE: _____

IF THE COMMUNE HEALTH CENTER IS WITHIN 30 KILOMETERS, IT IS TO BE VISITED. COMPLETE QUESTIONS 300, 301 AND 302 UPON ARRIVAL AT THE FACILITY BASED ON YOUR OWN OBSERVATIONS. THEN FIND A KNOWLEDGEABLE STAFF PERSON AT THE FACILITY TO ANSWER THE REMAINING QUESTIONS.

IF THIS FACILITY HAS ALREADY BEEN VISITED FOR A DIFFERENT CLUSTER, RECORD DHS CLUSTER NUMBER HERE: [ ][ ][ ]
IF THE FACILITY HAS ALREADY BEEN VISITED, A SECOND VISIT IS NOT NEEDED. END YOUR VISIT.

300	IF THIS IS THE FIRST FACILITY VISITED AFTER THE CLUSTER VISIT RECORD DISTANCE FROM CLUSTER FROM THE ODOMETER.	DISTANCE FROM CLUSTER.... [ ][ ] NOT FIRST FACILITY VISITED.....95 CHC IN CLUSTER.....96	
301	DO YOU THINK THAT THE ESTIMATE OF DISTANCE TO THE FACILITY GIVEN IN THE CLUSTER IS REASONABLE?	REASONABLE.....1 OVERESTIMATED.....2 UNDERESTIMATED.....3	
302	DO YOU THINK THAT THE ESTIMATE OF THE TIME TO THE FACILITY GIVEN IN THE CLUSTER IS REASONABLE?	REASONABLE.....1 OVERESTIMATED.....2 UNDERESTIMATED.....3	

QUESTIONS TO BE ASKED OF STAFF PERSON AT FACILITY:

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
303	In what year did this commune health center open?	YEAR OPENED..... [ ][ ][ ][ ]	
306	How many beds does this commune health center have?	NUMBER OF BEDS..... [ ][ ][ ]	
307	On average, how many outpatients are seen daily at this facility? (Outpatients are people seen for preventive care and sick people who go home the same day)	NUMBER OF DAILY OUTPATIENTS..... [ ][ ][ ][ ]	
308	How many regular staff of the following types does this commune health center have?	NUMBER OF:	
	Doctors	DOCTORS..... [ ][ ]	
	Doctor's assistants	DOCTOR'S ASSISTANTS..... [ ][ ]	
	Nurses	NURSES..... [ ][ ]	
	Midwives	MIDWIVES..... [ ][ ]	
	MCH/FP workers	MCH/FP WORKDERS..... [ ][ ]	
	Other staff	OTHER STAFF..... [ ][ ]	

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
309	Does this facility normally use disposable needles when giving injections for MCH immunizations?	YES.....1 NO.....2	→312
310	Is this facility out now or has it run out of its supply of disposable needles at any time in the last 6 months?	YES.....1 NO.....2	
311	Does this facility ever reuse disposable needles?	YES.....1 NO.....2	
312	Does this facility normally use disposable gloves?	YES.....1 NO.....2	→314
313	Is this facility out now or has it run out of its supply of disposable gloves at any time in the last 6 months?	YES.....1 NO.....2	
314	What is the method MOST frequently used for the sterilization of medical instruments? (CIRCLE ONE)	ELECTRIC STERILIZER.....1 AUTOCLAVE.....2 STEAM PRESSURE STERILIZER.....3 BOIL OVER KEROSENE STOVE.....4 BOIL OVER CHARCOAL/WOOD STOVE.....5 NONE.....6 OTHER_____7 (SPECIFY)	→316
315	Has the facility NOT been able to sterilize medical instruments for any reason (e.g. equipment broken, no electricity, no fuel) at any time in the last six months?	HAS NOT BEEN ABLE.....1 HAS BEEN ABLE.....2	
316	Does the facility have the following items in working order/ in stock: Running water? Electricity? Refrigerator? Kerosene? Telephone or radio transmitter? Vehicle? Motorbike? Bicycle? Delivery bed? Delivery kit? Waiting area for women in labor? Blood bank? Examination couch? Examination light for gynecological examination? IUCD (loop insertion) kit? Vacuum aspiration kit for menstrual regulation? Weighing scales for children? Adult weighing scale? Growth cards? Linens? Gauze? Cotton wool? Antiseptics? Blood pressure machine? Talquist method for diagnosis of anemia? Microscope? AIDS test (Elisa test)?	YES NO RUNNING WATER.....1 2 ELECTRICITY.....1 2 REFRIGERATOR.....1 2 KEROSENE.....1 2 TELEPHONE.....1 2 VEHICLE.....1 2 MOTORBIKE.....1 2 BICYCLE.....1 2 DELIVERY BED.....1 2 DELIVERY KIT.....1 2 WAITING AREA.....1 2 BLOOD BANK.....1 2 EXAM COUCH.....1 2 LIGHT-GYN EXAMS.....1 2 IUCD KIT.....1 2 VACUUM ASPIRATION KIT.....1 2 WEIGHING SCALE-CHILD.....1 2 ADULT SCALE.....1 2 GROWTH CARDS.....1 2 LINENS.....1 2 GAUZE.....1 2 COTTON WOOL.....1 2 ANTISEPTICS.....1 2 BLOOD PRESSURE MACHINE....1 2 TALQUIST METHOD.....1 2 MICROSCOPE.....1 2 AIDS TEST.....1 2	

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
317	Do you have an outreach program?	YES.....1 NO.....2	→319
318	How many villages/communities do you regularly visit?	NUMBER OF SITES..... [ ][ ]	

SERVICES AVAILABLE AT THE COMMUNE HEALTH CENTER:
Now I would like to ask you about maternal and child health services available at this commune health center.

ASK Q.320 FOR THE FIRST SERVICE. IF THIS SERVICE IS AVAILABLE, CONTINUE ACROSS THE TABLE, IF NOT, ASK ABOUT THE NEXT SERVICE.

	SERVICE	320 Is (SERVICE) available?	321 How many days per week is (SERVICE) available?	322 In what year was (SERVICE) first offered here?
1	Antenatal care	YES.....1 NO.....2	[ ]	[ ][ ][ ][ ]
2	Delivery care	YES.....1 NO.....2	→	[ ][ ][ ][ ]
3	Postnatal care	YES.....1 NO.....2	[ ]	[ ][ ][ ][ ]
4	Child immunization	YES.....1 NO.....2	[ ]	[ ][ ][ ][ ]
5	Child growth monitoring	YES.....1 NO.....2 323←	[ ]	[ ][ ][ ][ ]

MEDICATION AVAILABILITY AT THE FACILITY:
Now I would like to ask you about medications and other supplies available at this facility. When I have finished, I will need to see the medications you have in stock.

ASK Q. 323 FOR EACH MEDICATION. IF THE MEDICATION IS AVAILABLE, ASK Q. 324, IF NOT AVAILABLE, ASK Q.325. IF THE MEDICATION HAS AT SOME TIME BEEN AVAILABLE, ASK Q.326. IF Q. 323 IS YES, RECORD WHETHER YOU SAW THE MEDICATION.

	MEDICATION	323 Is (MEDICATION) available now?	324 At any time in the last 6 months did you run out of (MEDICATION)?	325 Have you ever had (MEDICATION)?	326 Why do you not have (MEDICATION) now?	327 MEDICATION SEEN/NOT SEEN
1	Chloroquine	YES.....1 NO.....2 → 325	YES.....1 NO.....2 → 327	YES.....1 NO.....2 → 323	☐ → 323	SEEN.....1 NOT SEEN..2 → 323
2	Quinine or similar medication	YES.....1 NO.....2 → 325	YES.....1 NO.....2 → 327	YES.....1 NO.....2 → 323	☐ → 323	SEEN.....1 NOT SEEN..2 → 323
3	Penicillin	YES.....1 NO.....2 → 325	YES.....1 NO.....2 → 327	YES.....1 NO.....2 → 323	☐ → 323	SEEN.....1 NOT SEEN..2 → 323
4	Iron tablets	YES.....1 NO.....2 → 325	YES.....1 NO.....2 → 327	YES.....1 NO.....2 → 323	☐ → 323	SEEN.....1 NOT SEEN..2 → 323
5	Folic acid	YES.....1 NO.....2 → 325	YES.....1 NO.....2 → 327	YES.....1 NO.....2 → 323	☐ → 323	SEEN.....1 NOT SEEN..2 → 323
6	Oredon	YES.....1 NO.....2 → 325	YES.....1 NO.....2 → 327	YES.....1 NO.....2 → 323	☐ → 323	SEEN.....1 NOT SEEN..2 → 323
7	Vitamin A	YES.....1 NO.....2 → 325	YES.....1 NO.....2 → 327	YES.....1 NO.....2 → 323	☐ → 323	SEEN.....1 NOT SEEN..2 → 323
8	Condoms	YES.....1 NO.....2 → 325	YES.....1 NO.....2 → 327	YES.....1 NO.....2 → 329	☐ → 329	SEEN.....1 NOT SEEN..2 → 329

CODES FOR Q.326: 1= INSUFFICIENT FUNDS
2= UNABLE TO GET RESUPPLY
3= NOT DESIGNATED TO CARRY
4= OUT OF CURRENT MONTH'S SUPPLY
5= OTHER

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
329	Are immunizations available for children now?	YES.....1 NO.....2	→332
330	At any time in the last 6 months have you run out of vaccines?	YES.....1 NO.....2	
331	I need to see your supply of vaccines now.	VACCINES SEEN IN REFRIGERATOR.....1 VACCINES SEEN NOT IN REFRIGERATOR.2 VACCINES NOT SEEN.....3	
332	Does this facility perform induced abortions?	YES.....1 NO.....2	→ 335
332A	In what year were abortion services first offered at this facility?	YEAR..... [ ][ ][ ][ ] DON'T KNOW.....9998	
333	Are the following types of staff, if available, trained in providing abortion services? IF YES: Have any of these staff received training in the last three years?	YES, LESS THAN 3 YRS / YES, 3 YRS OR MORE / NO / NA	
	Doctors?	DOCTORS.....1 2 3 7	
	Doctor's assistants?	DOC. ASSTS.....1 2 3 7	
	Nurses?	NURSES.....1 2 3 7	
	Midwives?	MIDWIVES.....1 2 3 7	
	Family planning workers?	FP WORKDERS....1 2 3 7	
334	During an average month, how many women come to this facility for an induced abortion?	PATIENTS..... [ ][ ][ ]	
335	Does this facility provide menstrual regulation services?	YES.....1 NO.....2	→ 338
335A	In what year were menstrual regulation services first offered at this facility?	YEAR..... [ ][ ][ ][ ] DON'T KNOW.....9998	
336	Are the following types of staff, if available, trained in providing menstrual regulation services? IF YES: Have any of these staff received training in the last three years?	YES, LESS THAN 3 YRS / YES, 3 YRS OR MORE / NO / NA	
	Doctors?	DOCTORS.....1 2 3 7	
	Doctor's assistants?	DOC. ASSTS.....1 2 3 7	
	Nurses?	NURSES.....1 2 3 7	
	Midwives?	MIDWIVES.....1 2 3 7	
	Family planning workers?	FP WORKDERS....1 2 3 7	
337	During an average month, how many women come to this facility for menstrual regulation?	PATIENTS..... [ ][ ][ ]	
338	Does this facility provide family planning services?	YES.....1 NO.....2	→ 354

No.	QUESTIONS	CODING CATEGORIES				SKIP TO
340	Are the following types of staff, if available, trained in providing family planning services? IF YES: Have any of these staff received training in the last three years?		YES, LESS THAN 3 YRS	YES, 3 YRS OR MORE	NO	NA
	Doctors?	DOCTORS.....1	2	3		7
	Doctor's assistants?	DOC. ASSTS.....1	2	3		7
	Nurses?	NURSES.....1	2	3		7
	Midwives?	MIDWIVES.....1	2	3		7
	Family planning workers?	FP WORKERS.....1	2	3		7
341	Are the following types of staff, if available, trained in IUCD (loop) insertion? IF YES: Have any of these staff received training in the last three years?		YES, LESS THAN 3 YRS	YES, 3 YRS OR MORE	NO	NA
	Doctors?	DOCTORS.....1	2	3		7
	Doctor's assistants?	DOC. ASSTS.....1	2	3		7
	Nurses?	NURSES.....1	2	3		7
	Midwives?	MIDWIVES.....1	2	3		7
	Family planning workers?	FP WORKERS.....1	2	3		7
342	During an average month, how many women come to get family planning for the first time?	NEW PATIENTS..... [ ][ ][ ]				
343	During an average month, how many women come because they need more family planning (resupply)?	RESUPPLY PATIENTS..... [ ][ ][ ]				
343A	Does this facility have educational materials (posters, flip charts) which are used to educate women about family planning?	YES.....1 NO.....2				
343B	Have any group education meetings been held by staff from this facility in the last 12 months?	YES.....1 NO.....2				

344. CONTRACEPTIVE METHOD AVAILABILITY:

Now I would like to ask you about which family planning methods are available at this facility. I must also see the methods when we are finished.

ASK ABOUT THE FIRST METHOD. IF THIS METHOD IS AVAILABLE AT THIS FACILITY, MOVE ACROSS THE TABLE.
IF THE METHOD IS NOT AVAILABLE NOW, ASK Q.350.

METHOD	345 Is (METHOD) available now?	346 How many days per week is (METHOD) available?	347 In what year did you first offer (METHOD)?	348 Is your stock of (METHOD) in date or out of date?	349 METHOD SEEN/ NOT SEEN STATUS	350 Have you ever stocked (METHOD)?	351 How many weeks ago did you run out of (METHOD)?
01 Pill	YES.....1 NO.....2 350 ↵			IN DATE.....1 OUT OF DATE.2 BOTH.....3	SEEN.....1 NOT SEEN.2	YES....1 NO.....2 345 ↵	wks.
02 IUD (LOOP)	YES.....1 NO.....2 350 ↵			IN DATE.....1 OUT OF DATE.2 BOTH.....3	SEEN.....1 NOT SEEN.2	YES....1 NO.....2 345 ↵	wks.
03 Injection	YES.....1 NO.....2 350 ↵			IN DATE.....1 OUT OF DATE.2 BOTH.....3	SEEN.....1 NOT SEEN.2	YES....1 NO.....2 345 ↵	wks.
04 Foaming tablets/ foam/jelly	YES.....1 NO.....2 350 ↵			IN DATE.....1 OUT OF DATE.2 BOTH.....3	SEEN.....1 NOT SEEN.2	YES....1 NO.....2 345 ↵	wks.
06 Other SPECIFY	YES.....1 NO.....2 352 ↵						

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
352	Do you have your contraceptives delivered or must you go get them?	DELIVERED.....1 PICK THEM UP.....2	→ 354
353	How far (in kilometers) must you go to get them?	KM. TO PICK UP CONTRACEPTIVES.....	
354	What is your position or title here?	_____	

QUESTIONS 355 AND 356 ARE TO BE ANSWERED BY THE INTERVIEWER AFTER THE FACILITY VISIT IS COMPLETE.

355	DID THE INFORMANT SEEM KNOWLEDGEABLE?	YES.....1 NO.....2	
356	INTERVIEWER COMMENTS:		

SECTION 4. **VISIT TO NEAREST HEALTH CENTER**

NAME OF FACILITY _____ Date: _____

IF THE NEAREST HEALTH CENTER (OTHER THAN THE COMMUNE HEALTH CENTER IS WITHIN 30 KILOMETERS, IT IS TO BE VISITED. COMPLETE QUESTIONS 400, 401 AND 402 UPON ARRIVAL AT THE FACILITY BASED ON YOUR OWN OBSERVATIONS. THEN FIND A KNOWLEDGEABLE STAFF PERSON AT THE FACILITY ANSWER THE REMAINING QUESTIONS.

IF THIS FACILITY HAS ALREADY BEEN VISITED FOR A DIFFERENT CLUSTER, RECORD DHS CLUSTER NUMBER HERE: [ ][ ][ ]
IF THE FACILITY HAS ALREADY BEEN VISITED, A SECOND VISIT IS NOT NEEDED. END YOUR VISIT.

400	IF THIS IS THE FIRST FACILITY VISITED AFTER THE CLUSTER VISIT RECORD DISTANCE FROM CLUSTER FROM THE ODOMETER.	DISTANCE FROM CLUSTER.... [ ][ ] NOT FIRST FACILITY VISITED.....95	
401	DO YOU THINK THAT THE ESTIMATE OF DISTANCE TO THE FACILITY GIVEN IN THE CLUSTER IS REASONABLE?	REASONABLE.....1 OVERESTIMATED.....2 UNDERESTIMATED.....3	
402	DO YOU THINK THAT THE ESTIMATE OF THE TIME TO THE FACILITY GIVEN IN THE CLUSTER IS REASONABLE?	REASONABLE.....1 OVERESTIMATED.....2 UNDERESTIMATED.....3	

QUESTIONS TO BE ASKED OF STAFF PERSON AT FACILITY:

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
403	In what year did this facility open?	YEAR OPENED..... [ ][ ][ ][ ]	
406	How many beds does this facility have?	NUMBER OF BEDS..... [ ][ ][ ]	
407	On average, how many outpatients are seen daily at this facility? (Outpatients are people seen for preventive care and sick people who go home the same day)	NUMBER OF DAILY OUTPATIENTS..... [ ][ ][ ][ ]	
408	How many regular staff of the following types does this commune health center have?	NUMBER OF:	
	Doctors	DOCTORS..... [ ][ ]	
	Doctor's assistants	DOCTOR'S ASSISTANTS..... [ ][ ]	
	Nurses	NURSES..... [ ][ ]	
	Midwives	MIDWIVES..... [ ][ ]	
	MCH/FP workers	MCH/FP WORKERS..... [ ][ ]	
	Other staff	OTHER STAFF..... [ ][ ]	

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
409	Does this facility normally use disposable needles when giving injections for MCH immunizations?	YES.....1 NO.....2	→412
410	Is this facility out now or has it run out of its supply of disposable needles at any time in the last 6 months?	YES.....1 NO.....2	
411	Does this facility ever reuse disposable needles?	YES.....1 NO.....2	
412	Does this facility normally use disposable gloves?	YES.....1 NO.....2	→414
413	Is this facility out now or has it run out of its supply of disposable gloves at any time in the last 6 months?	YES.....1 NO.....2	
414	What is the method MOST frequently used for the sterilization of medical instruments? (CIRCLE ONE)	ELECTRIC STERILIZER.....1 AUTOCLAVE.....2 STEAM PRESSURE STERILIZER.....3 BOIL OVER KEROSENE STOVE.....4 BOIL OVER CHARCOAL/WOOD STOVE.....5 NONE.....6 OTHER_____7 (SPECIFY)	→416
415	Has the facility NOT been able to sterilize medical instruments for any reason (e.g. equipment broken, no electricity, no fuel) at any time in the last six months?	HAS NOT BEEN ABLE.....1 HAS BEEN ABLE.....2	
416	Does the facility have the following items in working order/ in stock:	YES NO	
	Running water?	RUNNING WATER.....1 2	
	Electricity?	ELECTRICITY.....1 2	
	Refrigerator?	REFRIGERATOR.....1 2	
	Kerosene?	KEROSENE.....1 2	
	Telephone or radio transmitter?	TELEPHONE.....1 2	
	Vehicle?	VEHICLE.....1 2	
	Motorbike?	MOTORBIKE.....1 2	
	Bicycle?	BICYCLE.....1 2	
	Delivery bed?	DELIVERY BED.....1 2	
	Delivery kit?	DELIVERY KIT.....1 2	
	Waiting area for women in labor?	WAITING AREA.....1 2	
	Blood bank?	BLOOD BANK.....1 2	
	Examination couch?	EXAM COUCH.....1 2	
	Examination light for gynecological examination?	LIGHT-GYN EXAMS.....1 2	
	IUCD (loop insertion) kit?	IUCD KIT.....1 2	
	Vacuum aspiration kit for menstrual regulation?	Vacuum aspiration kit.....1 2	
	Weighing scales for children?	WEIGHING SCALE-CHILD.....1 2	
	Adult weighing scale?	ADULT SCALE.....1 2	
	Growth cards?	GROWTH CARDS.....1 2	
	Linens?	LINENS.....1 2	
	Gauze?	GAUZE.....1 2	
	Cotton wool?	COTTON WOOL.....1 2	
	Antiseptics?	ANTISEPTICS.....1 2	
	Blood pressure machine?	BLOOD PRESSURE MACHINE....1 2	
	Talquist method for diagnosis of anemia?	TALQUIST METHOD.....1 2	
	Microscope?	MICROSCOPE.....1 2	
	AIDS test (Elisa test)?	AIDS TEST.....1 2	

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
417	Do you have an outreach program?	YES.....1 NO.....2	→419
418	How many villages/communities do you regularly visit?	NUMBER OF SITES..... [ ][ ]	

SERVICES AVAILABLE AT THE FACILITY:
Now I would like to ask you about maternal and child health services available at this facility.

ASK Q.420 FOR THE FIRST SERVICE. IF THIS SERVICE IS AVAILABLE, CONTINUE ACROSS THE TABLE, IF NOT, ASK ABOUT THE NEXT SERVICE.

SERVICE	420 Is (SERVICE) available?	421 How many days per week is (SERVICE) available?	422 In what year was (SERVICE) first offered here?
1 Antenatal care	YES.....1 NO.....2	[ ]	[ ][ ][ ][ ]
2 Delivery care	YES.....1 NO.....2	→	[ ][ ][ ][ ]
3 Postnatal care	YES.....1 NO.....2	[ ]	[ ][ ][ ][ ]
4 Child immunization	YES.....1 NO.....2	[ ]	[ ][ ][ ][ ]
5 Child growth monitoring	YES.....1 NO.....2 →423	[ ]	[ ][ ][ ][ ]

MEDICATION AVAILABILITY AT THE FACILITY:
Now I would like to ask you about medications and other supplies available at this facility. When I have finished, I will need to see the medications you have in stock.

ASK Q. 423 FOR EACH MEDICATION. IF THE MEDICATION IS AVAILABLE, ASK Q. 424, IF NOT AVAILABLE, ASK Q.425. IF THE MEDICATION HAS AT SOME TIME BEEN AVAILABLE, ASK Q.426. IF Q. 423 IS YES, RECORD WHETHER YOU SAW THE MEDICATION.

	MEDICATION	423 Is (MEDICATION) available now?	424 At any time in the last 6 months did you run out of (MEDICATION)?	425 Have you ever had (MEDICATION)?	426 Why do you not have (MEDICATION) now?	427 MEDICATION SEEN/NOT SEEN
1	Chloroquine	YES.....1 NO.....2 → 425	YES.....1 NO.....2 → 427	YES.....1 NO.....2 → 423	[ ] → 423	SEEN.....1 NOT SEEN..2 → 423
2	Quinine or similar medication	YES.....1 NO.....2 → 425	YES.....1 NO.....2 → 427	YES.....1 NO.....2 → 423	[ ] → 423	SEEN.....1 NOT SEEN..2 → 423
3	Penicillin	YES.....1 NO.....2 → 425	YES.....1 NO.....2 → 427	YES.....1 NO.....2 → 423	[ ] → 423	SEEN.....1 NOT SEEN..2 → 423
4	Iron tablets	YES.....1 NO.....2 → 425	YES.....1 NO.....2 → 427	YES.....1 NO.....2 → 423	[ ] → 423	SEEN.....1 NOT SEEN..2 → 423
5	Folic acid	YES.....1 NO.....2 → 425	YES.....1 NO.....2 → 427	YES.....1 NO.....2 → 423	[ ] → 423	SEEN.....1 NOT SEEN..2 → 423
6	Oredon	YES.....1 NO.....2 → 425	YES.....1 NO.....2 → 427	YES.....1 NO.....2 → 423	[ ] → 423	SEEN.....1 NOT SEEN..2 → 423
7	Vitamin A	YES.....1 NO.....2 → 425	YES.....1 NO.....2 → 427	YES.....1 NO.....2 → 423	[ ] → 423	SEEN.....1 NOT SEEN..2 → 423
8	Condoms	YES.....1 NO.....2 → 425	YES.....1 NO.....2 → 427	YES.....1 NO.....2 → 429	[ ] → 429	SEEN.....1 NOT SEEN..2 → 429

CODES FOR Q.426: 1= INSUFFICIENT FUNDS
2= UNABLE TO GET RESUPPLY
3= NOT DESIGNATED TO CARRY
4= OUT OF CURRENT MONTH'S SUPPLY
5= OTHER

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
429	Are immunizations available for children now?	YES.....1 NO.....2	→432
430	At any time in the last 6 months have you run out of vaccines?	YES.....1 NO.....2	
431	I need to see your supply of vaccines now.	VACCINES SEEN IN REFRIGERATOR.....1 VACCINES SEEN NOT IN REFRIGERATOR.2 VACCINES NOT SEEN.....3	
432	Does this facility perform induced abortions?	YES.....1 NO.....2	→ 435
432A	In what year were abortion services first offered at this facility?	YEAR..... [ ][ ][ ][ ] DON'T KNOW.....9998	
433	Are the following types of staff, if available, trained in providing abortion services? IF YES: Have any of these staff received training in the last three years?	YES, LESS THAN 3 YRS / YES, 3 YRS OR MORE / NO / NA	
	Doctors?	DOCTORS.....1 2 3 7	
	Doctor's assistants?	DOC. ASSTS.....1 2 3 7	
	Nurses?	NURSES.....1 2 3 7	
	Midwives?	MIDWIVES.....1 2 3 7	
	Family planning workers?	FP WORKDERS....1 2 3 7	
434	During an average month, how many women come to this facility for an induced abortion?	PATIENTS..... [ ][ ][ ]	
435	Does this facility provide menstrual regulation services?	YES.....1 NO.....2	→ 438
435A	In what year were menstrual regulation services first offered at this facility?	YEAR..... [ ][ ][ ][ ] DON'T KNOW.....9998	
436	Are the following types of staff, if available, trained in providing menstrual regulation services? IF YES: Have any of these staff received training in the last three years?	YES, LESS THAN 3 YRS / YES, 3 YRS OR MORE / NO / NA	
	Doctors?	DOCTORS.....1 2 3 7	
	Doctor's assistants?	DOC. ASSTS.....1 2 3 7	
	Nurses?	NURSES.....1 2 3 7	
	Midwives?	MIDWIVES.....1 2 3 7	
	Family planning workers?	FP WORKDERS....1 2 3 7	
437	During an average month, how many women come to this facility for menstrual regulation?	PATIENTS..... [ ][ ][ ]	
438	Does this facility provide family planning services?	YES.....1 NO.....2	→ 454

No.	QUESTIONS	CODING CATEGORIES				SKIP TO
440	Are the following types of staff, if available, trained in providing family planning services? IF YES: Have any of these received training in the last three years?		YES, LESS THAN 3 YRS	YES, 3 YRS OR MORE	NO	NA
	Doctors?	DOCTORS.....1	2	3		7
	Doctor's assistants?	DOC. ASSTS.....1	2	3		7
	Nurses?	NURSES.....1	2	3		7
	Midwives?	MIDWIVES.....1	2	3		7
	Family planning workers?	FP WORKERS.....1	2	3		7
441	Are the following types of staff, if available, trained in IUD (loop) insertion? IF YES: Have any of these staff received training in the last three years?		YES, LESS THAN 3 YRS	YES, 3 YRS OR MORE	NO	NA
	Doctors?	DOCTORS.....1	2	3		7
	Doctor's assistants?	DOC. ASSTS.....1	2	3		7
	Nurses?	NURSES.....1	2	3		7
	Midwives?	MIDWIVES.....1	2	3		7
	Family planning workers?	FP WORKERS.....1	2	3		7
442	During an average month, how many women come to get family planning for the first time?	NEW PATIENTS..... [ ][ ][ ]				
443	During an average month, how many women come because they need more family planning (resupply)?	RESUPPLY PATIENTS..... [ ][ ][ ]				
443A	Does this facility have educational materials (posters, flip charts) which are used to educate women about family planning?	YES.....1 NO.....2				
443B	Have any group education meetings been held by staff from this facility in the last 12 months?	YES.....1 NO.....2				

444. CONTRACEPTIVE METHOD AVAILABILITY:

Now I would like to ask you about which family planning methods are available at this facility. I must also see the methods when we are finished.

ASK ABOUT THE FIRST METHOD. IF THIS METHOD IS AVAILABLE AT THIS FACILITY, MOVE ACROSS THE TABLE.
IF THE METHOD IS NOT AVAILABLE NOW, ASK Q.450.

METHOD	445 Is (METHOD) available now?	446 How many days per week is (METHOD) available?	447 In what year did you first offer (METHOD)?	448 Is your stock of (METHOD) in date or out of date?	449 METHOD SEEN/ NOT SEEN STATUS	450 Have you ever stocked (METHOD)?	451 How many weeks ago did you run out of (METHOD)?
01 Pill	YES.....1 NO.....2 450 ↵			IN DATE.....1 OUT OF DATE.2 BOTH.....3	SEEN.....1 NOT SEEN.2	YES....1 NO.....2 445 ↵	wks.
02 IUD (LOOP)	YES.....1 NO.....2 450 ↵			IN DATE.....1 OUT OF DATE.2 BOTH.....3	SEEN.....1 NOT SEEN.2	YES....1 NO.....2 445 ↵	wks.
03 Injection	YES.....1 NO.....2 450 ↵			IN DATE.....1 OUT OF DATE.2 BOTH.....3	SEEN.....1 NOT SEEN.2	YES....1 NO.....2 445 ↵	wks.
04 Foaming tablets/ foam/jelly	YES.....1 NO.....2 450 ↵			IN DATE.....1 OUT OF DATE.2 BOTH.....3	SEEN.....1 NOT SEEN.2	YES....1 NO.....2 445 ↵	wks.
06 Other SPECIFY	YES.....1 NO.....2 452 ↵						

No.	QUESTIONS	CODING CATEGORIES	SKIP TO
452	Do you have your contraceptives delivered or must you go get them?	DELIVERED.....1 PICK THEM UP.....2	→ 454
453	How far (in kilometers) must you go to get them?	KM. TO PICK UP CONTRACEPTIVES.....	
454	*What is your position or title here?*	_____	

QUESTIONS 455 AND 456 ARE TO BE ANSWERED BY THE INTERVIEWER AFTER THE FACILITY VISIT IS COMPLETE.

455	DID THE INFORMANT SEEM KNOWLEDGEABLE?	YES.....1 NO.....2	
456	INTERVIEWER COMMENTS:		

APPENDIX D

PERSONS INVOLVED IN THE 1997 VIETNAM DEMOGRAPHIC AND HEALTH SURVEY

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PERSONS INVOLVED IN THE 1997 VIETNAM DEMOGRAPHIC AND HEALTH SURVEY

Mrs. Chu Thi Loan – Chairman
Mr. Nguyen Van Phai – Executive Director

Technical Working Group

1. Ngo Khang Cuong
2. Nguyen Minh Thang
3. Nguyen Dinh Loan
4. Khong Van Man
5. Nguyen Hong Anh

Senior Survey Staff

Technical Coordinators

1. Nguyen Van Phai
2. Dong Ba Huong

Field Coordinators

1. Hoang Xuyen
2. Nguyen Van Minh

Data processing Coordinators

1. Mai Van Cam

Macro International Staff

1. Mrs. Thanh Le, Sampling Specialist
2. Dr. Fred Arnold, Qustionnaire Editor
3. Dr. Pavalavalli Govindasamy, Country Monitor (Report Editor)
4. Dr. Han Raggers, Data Processing Specialist
5. Dr. Jeremiah Sullivan, Country Monitor (Report Editor/Reviewer)

Team Leaders

1. Nguyen Duc An
2. Nguyen Huu Ba
3. Pham Van Ky
4. Nguyen Van Minh
5. To Thi Oanh
6. Le Thi Rom
7. Le Thanh Son
8. Nguyen Duc Tung

Supervisors

1. Duong Tien Bich
2. Nguyen Thi Hang
3. Nguyen Thi Hue
4. Quach Thi Mui
5. Mai Xuan Thanh
6. Trinh Thi The
7. Nguyen Chiem Thep
8. Tran Thi Thanh Xuan

Interviewers

1. Du Thi An
2. Tran Thi Be
3. Nguyn Van Cam
4. Vu Thi Chung
5. Nguyen Thi Chuyen
6. Nguyen Thi Dao
7. Le Thi Dung
8. Vu Thi Dung
9. Nguyen Thi Gieng
10. Hoang Thi Hanh
11. Pham Thi Minh Hien
12. Truong Thi Hoa
13. Nguyen Thi Hien Hoa
14. Pham Thi Hoi
15. Ngo Thi Hong
16. Nguyen Thi Hue
17. Chu Thi Lien
18. Nguyen Thi Lieu
19. Ho Thi Hoang Long
20. Nguyen Thi Ly
21. Thai Minh Man
22. Tran Thi Mon
23. Nguyen Thi Mui
24. Do Thi Ngan

25. Pham Thi Nhai
26. Cu Thi Nhan
27. Ly Thi Phuong
28. Nguyen Thi Suu
29. Nguyen Quang Tai
30. Tran Thi Thanh Tam
31. Chu Thi Tam
32. Nguyen Thi Minh Tam
33. Nguyen Thi Thuoc
34. Nguyen Thi Tuat
35. Nguyen Thi Tuu
36. Nguyen Thi Tuy
37. Nguyen Thi Vy

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