

Bolivia

Maternal and Child Health in Bolivia

Report on the In-depth
DHS Survey in Bolivia
1989



Demographic and Health Surveys
Institute for Resource Development/Macro Systems, Inc.

**Maternal and Child Health in Bolivia:
Report on the
In-depth DHS Survey in Bolivia
1989**

A. Elisabeth Sommerfelt
J. Ties Boerma
Luis H. Ochoa
Shea O. Rutstein

Institute for Resource Development/Macro Systems, Inc.
Columbia, Maryland USA

April 1991

This report presents the results of an analysis of health data from the Bolivia In-depth Survey, **Encuesta Nacional de Demografía y Salud 1989 (ENDSA)**, which was implemented in 1989 by the Instituto Nacional de Estadística (INE). The survey is part of the worldwide Demographic and Health Surveys (DHS) program which is administered by the Institute for Resource Development (IRD) under a contract with the United States Agency for International Development (Contract No. DPE-3023-C-00-4083-00).

The Instituto Nacional de Estadística (INE) is part of the Ministry of Planning and Coordination and functions as the administrative and technological arm of the National System of Statistical Information (Sistema Nacional de Información). The INE has the responsibility of directing, planning, coordinating, and carrying out the statistical activities of the System.

Additional information about ENDSA can be obtained from the Instituto Nacional de Estadística, Casilla 20532, La Paz, Bolivia. Additional information about the DHS Program can be obtained from IRD/Macro Systems, 8850 Stanford Boulevard, Suite 4000, Columbia, MD 21045, USA (Telephone 301-290-2800; Telex 87775; Fax 301-290-2999).

CONTENTS

Tables	v
Figures	ix
Preface	xi
Map	xii
1 Background	1
1.1 Geography	1
1.2 Population	1
1.3 Programs and Priorities	1
1.4 Bolivia Demographic and Health Survey	2
1.5 Background Characteristics of Survey Respondents	2
2 Childhood Mortality	5
2.1 Methodology	5
2.2 Findings	6
3 Causes of Death in Childhood	11
3.1 Methodology	11
3.2 Findings	12
4 Morbidity: Diarrhea and its Treatment	19
4.1 Methodology	19
4.2 Findings	19
5 Morbidity: Respiratory Infections and their Treatment	31
5.1 Methodology	31
5.2 Findings	31
6 Nutritional Status	41
6.1 Methodology	41
6.2 Findings	42
7 Infant Feeding	49
7.1 Methodology	49
7.2 Findings	49
8 Childhood Immunizations	59
8.1 Methodology	59
8.2 Findings	59

9	Prenatal Care and Delivery Assistance	67
9.1	Methodology	67
9.2	Findings	67
10	Maternal Mortality	79
10.1	Other Sources of Data on Maternal Mortality	79
10.2	Methodology	79
10.3	Findings	80
	References	85
	Appendix A Accuracy of Diarrhea Recall	91
A.1	Heaping of Responses	91
A.2	Underreporting of Diarrhea	92
	Appendix B Survey Staff	97
	Appendix C Questionnaires	101

TABLES

Table 1.1	Educational level of women	3
Table 2.1	Childhood mortality by calendar period	6
Table 2.2	Childhood mortality by socioeconomic characteristics	8
Table 2.3	Childhood mortality by demographic characteristics	10
Table 3.1	Causes of death in childhood	12
Table 3.2	Symptoms associated with the illness that led to child's death.....	13
Table 3.3	Causes of death derived from reported symptoms	15
Table 3.4	Causes of death from mothers' reports and derived from reported symptoms	16
Table 3.5	Size at birth and infant mortality	17
Table 4.1	Diarrhea prevalence by socioeconomic characteristics	21
Table 4.2	Diarrhea prevalence by demographic characteristics	22
Table 4.3	Diarrhea prevalence by feeding patterns	23
Table 4.4	Treatment practices for children with diarrhea by socioeconomic characteristics	26
Table 4.5	Treatment practices for children with diarrhea by demographic characteristics	27
Table 4.6	Treatment of children with diarrhea by type of health facility visited	28
Table 5.1	Prevalence of cough and cough with breathing problems by socioeconomic characteristics	32
Table 5.2	Prevalence of cough and cough with breathing problems by demographic characteristics	33
Table 5.3	Place of treatment and type of treatment for children with cough and breathing problems by socioeconomic characteristics	35
Table 5.4	Place of treatment and type of treatment for children with cough and breathing problems by demographic characteristics	36
Table 5.5	Type of treatment received for respiratory illness in children according to the place where treatment was sought	39
Table 6.1	Prevalence of undernutrition by socioeconomic characteristics	43

Table 6.2	Prevalence of undernutrition in 1981 and 1989 by residence	45
Table 6.3	Prevalence of undernutrition by demographic characteristics	46
Table 7.1	Initiation and duration of breastfeeding by socioeconomic characteristics	50
Table 7.2	Initiation and duration of breastfeeding by demographic characteristics	51
Table 7.3	Reasons for stopping breastfeeding by survival status of child	53
Table 7.4	Feeding practices for children under three years	55
Table 7.5	Feeding practices for children under three years who were still breastfeeding at the time of the survey	57
Table 7.6	Frequency of breast milk supplements for children under five	57
Table 8.1	Immunization coverage by source of information	60
Table 8.2	Immunization coverage by age 12 months for children 12-59 months of age	62
Table 8.3	Differentials in immunization coverage by socioeconomic characteristics	64
Table 8.4	Differentials in immunization coverage by demographic characteristics	65
Table 9.1	Prenatal care and tetanus toxoid immunization among currently pregnant women	68
Table 9.2	Prenatal care and tetanus toxoid immunization by socioeconomic characteristics	69
Table 9.3	Prenatal care and tetanus toxoid immunization by demographic characteristics	70
Table 9.4	Place of delivery for births by socioeconomic characteristics	71
Table 9.5	Place of delivery for births by demographic characteristics	73
Table 9.6	Maternity care and use of contraception by socioeconomic characteristics	75
Table 9.7	Prevalence of caesarean section by socioeconomic characteristics	77
Table 10.1	Indirect estimates of maternal mortality	81
Table 10.2	Direct estimates of maternal mortality	82
Table 10.3	Relative risk of maternal death by age and parity	83

Table A-1	Length of time since the last episode of diarrhea	91
Table A-2	Incidence and prevalence of diarrhea in the two weeks preceding the survey	93

FIGURES

Figure 2.1	Trends in under-five mortality based on direct and indirect estimates	7
Figure 2.2	Under-five mortality 1979-1988 by socioeconomic characteristics	9
Figure 2.3	Under-five mortality 1979-1988 by demographic characteristics	10
Figure 3.1	Causes of death based on mother's reports and symptoms	16
Figure 3.2	Medical assistance sought before child's death, and place of death	17
Figure 4.1	Diarrhea prevalence in the two weeks preceding the surveys	23
Figure 4.2	Feeding and treatment patterns for children with diarrhea in the two weeks preceding the survey	24
Figure 4.3	Changes in the amount of liquids and solids given to children with diarrhea in the two weeks preceding the surveys	25
Figure 4.4	Reasons for not taking children with diarrhea to a health facility	28
Figure 4.5	Knowledge and use of ORS packets among women with children under five	29
Figure 4.6	Use of ORS packets and cost of packets among women who know about ORS	29
Figure 4.7	Sources of ORS packets among women who know about ORS	30
Figure 5.1	Prevalence of cough with breathing problems among children under five	34
Figure 5.2	Health care received by children with cough by type of cough	37
Figure 5.3	Health care received by children with cough and breathing problems by characteristics of mother	37
Figure 5.4	Treatment received by children with cough and breathing problems by characteristics of mother	38
Figure 5.5	Specific treatment received by children with cough by type of cough	38
Figure 5.6	Specific treatment received by children with cough by type of cough and type of facility	40
Figure 6.1	Nutritional status of children 3-36 months	44
Figure 6.2	Percentage of children 3-36 months classified as undernourished by age	44

Figure 6.3	Percentage of children 3-36 months classified as stunted by age and mother's education	47
Figure 7.1	Reasons for never breastfeeding or for stopping breastfeeding	52
Figure 7.2	Reasons for stopping breastfeeding by survival status of children	53
Figure 7.3	Frequency of breastfeeding over a 24-hour period by mother's education and length of prior birth interval	54
Figure 7.4	Percentage of children still breastfeeding by age of child and type of supplement	55
Figure 7.5	Feeding practices among young children by current age	56
Figure 8.1	Immunization coverage for children 12-23 months by source of data	61
Figure 8.2	Trends in immunization coverage among children immunized by 12 months	63
Figure 8.3	DPT3 coverage differentials for children 12-23 months	65
Figure 8.4	Knowledge of immunization sources among women with children under five	66
Figure 9.1	Type of prenatal care received by women	68
Figure 9.2	Place of delivery and person attending the delivery	72
Figure 9.3	Mother/child contact the first day after delivery by type of health facility	74
Figure 9.4	Maternity care and ever use of a modern family planning method	75
Figure A.1	Daily prevalence of diarrhea among children under five by number of days preceding the survey	93
Figure A.2	Daily incidence of diarrhea among children under five by number of days preceding the survey	94

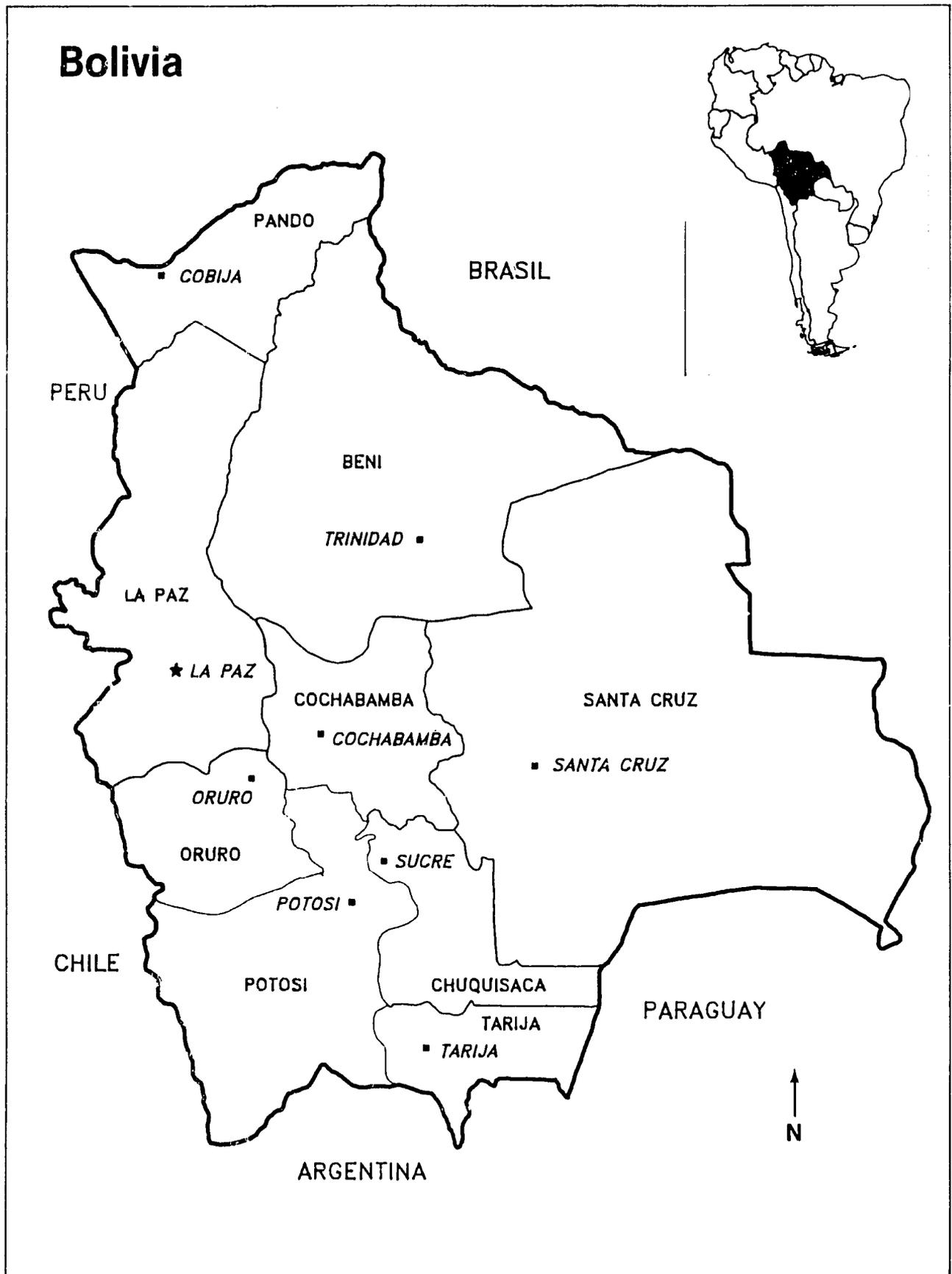
Preface

The Bolivia In-depth Survey, **Encuesta Nacional de Demografía y Salud 1989 (ENDSA)**, was implemented by the Instituto Nacional de Estadística (INE) with technical and financial assistance from the Institute for Resource Development (IRD). The survey is part of the worldwide Demographic and Health Surveys (DHS) program supported by the United States Agency for International Development. UNICEF/Bolivia provided substantial financial support to cover local costs, and OMSS/OPS and UNFPA (through PRONIMA III) also supported the survey.

A nationally representative sample of 7923 women age 15-49 were interviewed in the ENDSA between February and July 1989. Data on women and their children under five were collected using the standard DHS questionnaire with additional health modules. The survey report published by INE and IRD in January 1990 presented the main findings on fertility, family planning, and maternal and child health. This report is an analysis of the health data from the in-depth survey.

Successful implementation of the ENDSA required the effort and cooperation of a large number of people. The names of these persons are listed in Appendix B. Special thanks go to the current Executive Director of INE, Ing. Waldo Cerruto, and the former Executive Director, Lic. Marcelo Mercado. Thanks are also extended to Paul Hartenberger and his staff at the USAID Mission in Bolivia, without whose help the survey could not have been carried out.

Bolivia



CHAPTER 1

BACKGROUND

1.1 Geography

Bolivia is located in central South America and is bordered on the north and east by Brazil, on the south by Paraguay and Argentina, and on the west by Peru and Chile. There are three major ecological regions in its 1,098,591 square kilometer area: the Altiplano, or high plateau, in the west (16 percent); the Valle, or valleys, in the central region, (19 percent); and, the Llanos, or plains, in the north and east (65 percent).

The climate differs greatly in each region, with the result that a diversity of crops are grown throughout the country. In the Altiplano the principal crops are potatoes, oats, beans, beets, and barley. In the Valle, corn is the major crop, but wheat, oats, and other cereals are also grown, along with a variety of fruits and vegetables. In the sub-Andean part of the Llanos the most important crop is coca; citrus and other semi-tropical fruits (bananas, papaya, custard apples) are also grown. In the rest of the Llanos, the predominant crops are yucca, corn, peanuts, cotton, soya, sugar cane, and tobacco.

Bolivia is politically and administratively divided into nine departments: Beni, Chuquisaca, Cochabamba, La Paz, Oruro, Pando, Potosí, Santa Cruz, and Tarija.

1.2 Population

The last national census, which took place in 1976, showed a population of 4.9 million. The estimated population in 1988, according to data from the National Population and Housing Survey, was 6.4 million (Instituto Nacional de Estadística, 1989). The population is concentrated in the Altiplano and Valle regions (49 and 28 percent, respectively). Although far more extensive in size, the Llanos region includes only 23 percent of the population. According to the 1988 survey, 49 percent of the population was in settlements of less than 2,000 inhabitants; 32 percent were in cities of 200,000 or more inhabitants.

In addition to ecological diversity, Bolivia is characterized by ethnic and linguistic diversity. A large segment of the population continues to speak the indigenous pre-Columbian languages and retains much of the traditional Indian culture. The official language is Spanish and, according to data from the present survey, more than three-quarters of women age 15-49 commonly speak Spanish. However, a significant number of persons use Indian languages (Aymara or Quechua) regularly, especially in the Altiplano and Valle regions. In the Altiplano, 19 percent speak Aymara, and 11 percent speak Quechua.

1.3 Programs and Priorities

The strategy of the government regarding maternal and infant health, as expressed in the current National Plan for Child Survival and Maternal Health, focuses on three major areas: social management, primary health care, and the development of local health systems (Sistemas Locales de Salud—SILOS) (Ministerio de Previsión Social y Salud Pública, 1989). In this context, integrated care for eligible women (including reproductive health services, assistance at delivery, prenatal, postnatal and newborn care, and encouragement of breastfeeding) has the highest priority. Likewise, integrated care for children under five gives priority to the promotion of breastfeeding, detection and treatment of nutritional deficiencies and control of diarrheal and respiratory illnesses. The immunization program has also received increasing attention, and in recent years fifteen national immunization campaigns have been conducted (Rance et al., 1989). This report is an analysis of these topics.

An official population policy has not yet been adopted in Bolivia; however, the National Population Council (CONAPO) has presented guidelines for the formulation of such policies (Consejo Nacional de Población, 1988). The right of couples and individuals to freely decide the number and spacing of children is recognized, and CONAPO proposes the introduction of family planning—more for health than demographic reasons—to women for whom a pregnancy could represent a health risk.

1.4 Bolivia Demographic and Health Survey

The Bolivia Demographic and Health Survey (Encuesta Nacional de Demografía y Salud 1989—ENDSA) was carried out by the Instituto Nacional de Estadística (INE) with technical assistance from the Institute for Resource Development (IRD). The survey was part of the worldwide Demographic and Health Surveys Program supported by the United States Agency for International Development. The purpose of the survey was to collect data on a national sample of women (and their children under five), from which estimates could be made regarding fertility levels and trends, fertility preferences, knowledge and use of family planning, indicators of maternal and child health, and infant and child mortality levels.

A nationally representative sample of 7923 women 15-49 years of age were interviewed in the Bolivia DHS survey (ENDSA) between February and July 1989. The information about child health is based on live births to these women during the preceding five years. For purposes of the survey, the sample was designed to provide representative estimates for the nine departments, with the exception of Beni and Pando which, due to their low population density, were treated as one entity. For this report, the departments were grouped according to region: La Paz, Oruro and Potosí in the Altiplano; Cochabamba, Tarija and Chuquisaca in the Valle; and Santa Cruz, Beni and Pando in the Llanos.

The First Country report for the Bolivia DHS survey presented findings on fertility, family planning, and maternal and child health (INE and IRD, 1990). The present report is a more extensive analysis of issues related to maternal and child health. The analysis is possible because the Bolivia survey was specially designed to include many health questions not asked in previous DHS surveys (see Appendix C).

1.5 Background Characteristics of Survey Respondents

Women's level of education is a factor that greatly influences their attitudes and practices regarding their own and their children's health, their reproductive behavior, their attitudes towards ideal family size, and their practice of family planning. However, the number of years of schooling also reflects their socioeconomic status: the higher the level of education, the more favorable the economic situation. Socioeconomic factors, in turn, determine access to health services and the quality of those services. Therefore, the survey respondents' level of education and other characteristics are summarized here.

For the purposes of this study, the level of education is divided into four categories: 1) no education; 2) basic education (1 to 5 years of schooling); 3) intermediate education (6 to 8 years); and 4) secondary or higher education (9 or more years). Table 1.1 presents the distribution of women 15-49 years by level of education according to background characteristics.

Eighteen percent of the women never attended school and 31 percent reached or surpassed the secondary school level. Figures on education by age group show that women's access to schools has improved in recent decades. Among women 45-49 years, almost half never attended school: in contrast, only 4 percent of women 15-19 years had no education. Likewise, only one in ten women age 45-49 reached secondary school, while among those 15-19 years the proportion is four in ten.

As expected, the level of education of rural women is markedly lower than that of urban women. In urban areas, women without education constitute 8 percent of the total, and 46 percent of women have

reached secondary school. Among rural respondents, 32 percent have no education, and only 7 percent reached secondary school.

With respect to regional differences, women from the Llanos have higher levels of education than women from the Altiplano or Valle. Only 9 percent of the women from the Llanos never attended school, compared with about 20 percent of women in the other two regions.

Table 1.1 Educational level of women: Percent distribution of women 15-49 years by level of education, according to selected characteristics, Bolivia ENDSA, 1989

Characteristic	No education	Basic	Intermediate	Secondary school or higher	Total	Number of women
AGE						
15-19	4.3	31.4	26.3	38.1	100.0	1682
20-24	6.8	36.0	16.0	41.2	100.0	1311
25-29	10.5	43.1	13.6	32.8	100.0	1341
30-34	19.1	37.6	12.5	30.9	100.0	1117
35-39	28.3	36.8	12.0	22.8	100.0	1073
40-44	33.7	36.5	10.8	19.1	100.0	740
45-49	47.7	32.9	9.4	10.0	100.0	659
RESIDENCE						
Urban	8.1	27.3	18.6	46.0	100.0	4753
Rural	31.5	49.8	11.3	7.4	100.0	3170
REGION						
Altiplano	20.3	35.6	14.8	29.3	100.0	4104
Valle	19.1	38.2	12.3	30.5	100.0	2129
Llanos	8.5	35.7	22.3	33.6	100.0	1691
TOTAL	17.5	36.3	15.7	30.5	100.0	7923

CHAPTER 2

CHILDHOOD MORTALITY

Based on information from the birth histories, infant mortality was estimated at 96 deaths per 1,000 live births for the period 1979-88. Neonatal mortality was 41 per 1,000 live births, while mortality among children under five years of age was 142 per 1,000 live births. These rates are among the highest in Latin America.

The direct and indirect estimates of infant and child mortality show that mortality declined by about 20 percent over the fifteen-year period preceding the survey.

Large mortality differentials persist in Bolivia. Infant mortality in urban areas was 79 per 1,000 live births, compared with 112 in the rural areas. The Llanos region appeared to have somewhat lower postneonatal and child (age 1-4 years) mortality rates than the other two regions. Mortality among children of mothers with no formal education was almost three times higher than among children of mothers with at least nine years of education. Children in households where the mother did not watch television or radio daily also had much higher mortality rates than other households.

Fertility-related variables had a substantial effect on child mortality. In particular, short birth intervals (less than two years) were associated with a mortality rate three times higher than that for birth intervals of 48 months or longer. Children of birth order 6 and over had higher infant mortality rates than children of lower birth order; first-born children had the lowest mortality rates of all.

2.1 Methodology

All respondents, that is, women 15-49 years of age, in the ENDSA were asked to provide a complete birth history, including the sex, date of birth, survival status, and current age, or age at death, for each live birth. Mothers could report the age at death in days, months, or years, depending on the child's age at death. The reliability of mortality estimates calculated from retrospective birth histories depends on how completely deaths (and births) are reported and how accurately birth dates and ages at death are recalled. Generally, underreporting is most severe for deaths which occur very early in infancy.

In the ENDSA, the age distribution of deaths within the neonatal and postneonatal periods¹ does not suggest severe underreporting of deaths early in infancy. For example, more than 60 percent of deaths within the neonatal period occurred during the first week of life, and more than 40 percent of all infant deaths took place in the first month of life. However, there was substantial heaping at 12 months of age. Since this heaping would affect the estimates of infant mortality, some of these deaths reported at 12 months were redistributed to ages 10-14 months (INE and IRD, 1990).

The direct method of estimation calculates infant and childhood mortality rates from the birth history data (Rutstein, 1984), while indirect estimates of child mortality use data on children ever born and children still alive, by age of the mother (Sullivan and Wilson, 1982; United Nations, 1983). Unless otherwise specified, the mortality rates reported below are direct estimates. Overall mortality rates based on the indirect method are included, however, for purposes of comparison with other data.

¹ Neonatal deaths are defined as deaths among infants who have not yet reached one month of age. The postneonatal mortality rate is calculated as the difference between the infant mortality rate and the neonatal mortality rate.

2.2 Findings

Mortality Levels and Trends

Table 2.1 presents child mortality by age, calculated by the direct method of estimation, for various periods before the survey. The estimates for the period 1979-88 are considered the most reliable for recent mortality levels. Infant mortality during this period was 95.8 per 1,000 live births, and 43 percent of the infant deaths occurred in the neonatal period. The probability of dying between birth and the fifth birthday was 141.8 per 1,000 live births. This level of child mortality is one of the highest in Latin America.

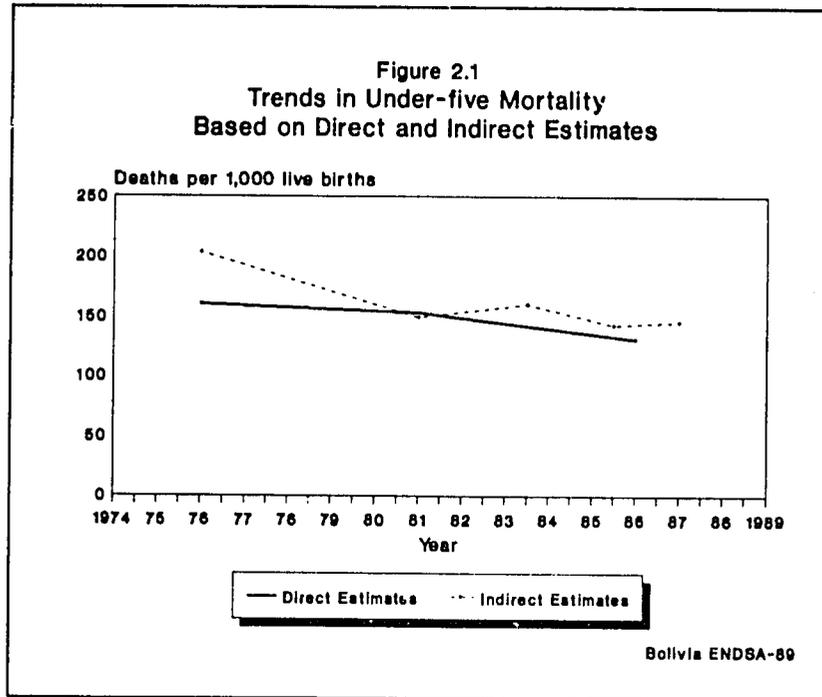
Calendar period	Neonatal (0 months)	Post- neonatal (1-11 months)	Infant (0-11 months)	Child (1-4 years)	Under- five (0-4 years)
Ten-year period 1979-88 ^d	41.0	54.8	95.8	50.9	141.8
Five-year period 1984-88 ^a	37.6	51.5	89.1	46.3	131.3
1979-83	44.4	58.1	102.5	58.1	152.8
1974-78	44.6	52.7	97.3	69.4	160.0

Note: Rates are determined by the direct method (deaths per 1,000 births).
^aIncludes exposure up to the month of interview

The birth history data suggest that under-five mortality has declined from 160 to 131 per 1,000 live births between 1974-78 and 1984-88, with the drop due mainly to a decrease in mortality between ages 1 and 4. Figure 2.1 shows the trends in under-five mortality derived from birth history data (direct method of estimation) and from child survivorship data (indirect method of estimation).² The direct and indirect mortality estimates are generally in agreement, although the indirect method suggests a larger decline in the late 1970s. The indirect estimate of infant mortality, using data from women age 20-34 years, is 102 per 1,000 live births for 1985 (data not shown). The only other source of national child mortality data in the 1980s is the 1983 Contraceptive Prevalence Survey (Coloma and de Ormachea, 1985). Infant mortality was indirectly estimated from these data to be 119 per 1,000 live births, while under-five mortality was 184 per 1,000 live births.³ Several infant mortality surveys were carried out in urban areas during the first half of the 1980s. Those infant mortality estimates ranged from 89 to 140 per 1,000 (Pedersen et al., 1987).

² The indirect estimates were made using the Trussell variant of the indirect child mortality estimation procedure developed by Brass (United Nations, 1983). Model life tables of the South family were used.

³ The sample consisted of three urban areas and three rural areas (Coloma and de Ormachea, 1985).



Mortality Differentials

Table 2.2 and Figure 2.2 show socioeconomic differentials in infant and child mortality rates. The rates, calculated by the direct method of estimation, cover a ten-year period (1979-1988) to ensure sufficient cases to allow mortality estimates for various population sub-groups. Mortality is higher, at all ages, in rural areas. For infant mortality, rural rates are 1.4 times higher than urban rates. With the exception of the neonatal period, where differences are small, the Llanos has the lowest mortality rates of the three regions. Mortality levels are highest in the Valle.

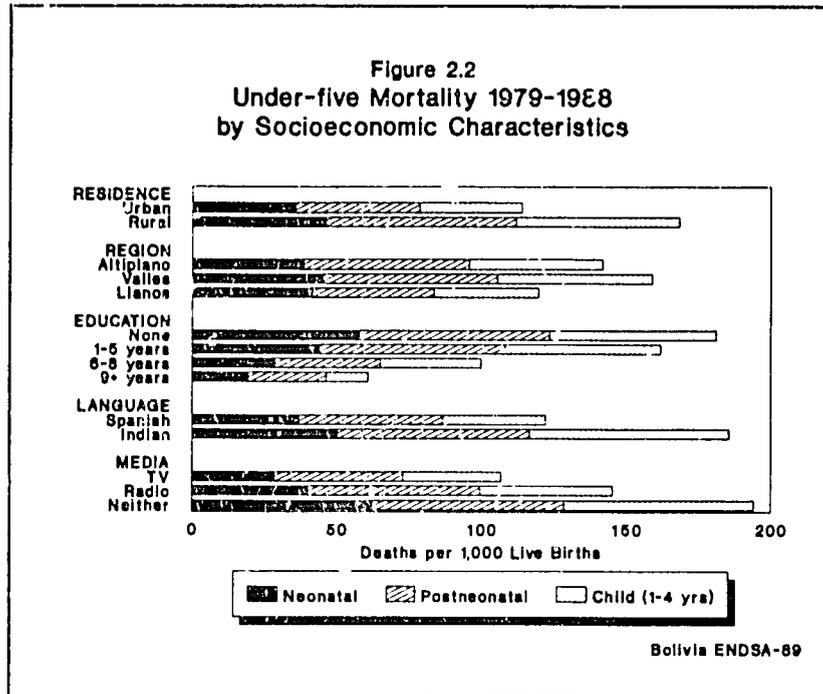
Large differentials can be observed according to the mother's level of education. For all age groups, mortality among children whose mothers have no education is three to four times higher than mortality among children of mothers with at least nine years of schooling. Mortality differentials by the father's level of education generally showed the same pattern, but the differences were less marked (data not shown). Mortality is also substantially lower in families where the father has a white collar job. Mortality is almost twice as high among children of blue collar workers, and more than twice as high among children whose fathers work in agriculture.

The socioeconomic variables are strongly correlated. For example, women who speak an Indian language generally have no formal education. Children of mothers who speak an Indian language have higher mortality rates than children of mothers who speak Spanish. This difference is largest at ages 1-4 years. Exposure to mass media is also related to socioeconomic variables. Media exposure is divided into three categories: viewing television on a daily basis, listening to radio—but not watching television—everyday, and daily exposure to neither medium. Mortality rates are highest for children whose mothers neither watch television nor listen to the radio regularly. If the mother watches television daily, mortality rates are lower. Children of mothers who listen to the radio daily display intermediate mortality rates.

Table 2.2 Childhood mortality by socioeconomic characteristics: Neonatal, postneonatal, infant, child and under-five mortality for the calendar period 1979-1988 by socioeconomic characteristics, Bolivia ENDSA, 1989

Characteristic	Neonatal (0 months)	Post- neonatal (1-11 months)	Infant (0-11 months)	Child (1-4 years)	Under- five (0-4 years)
RESIDENCE					
Urban	35.6	42.9	78.6	38.6	114.1
Rural	46.0	66.0	112.0	63.4	168.4
REGION					
Altiplano	38.6	57.1	95.7	51.2	142.0
Valles	45.0	60.6	105.6	59.9	159.1
Llanos	41.3	42.2	83.5	39.7	119.9
MOTHER'S EDUCATION					
None	57.4	66.2	123.6	65.9	181.3
1-5 years	43.8	64.3	108.1	60.6	162.1
6-8 years	28.8	36.0	64.8	37.6	100.0
9+ years	19.6	26.8	46.4	14.8	60.5
FATHER'S OCCUPATION					
White collar	26.7	35.4	62.1	25.4	85.9
Blue collar	44.4	58.5	102.8	53.7	151.0
Agriculture	49.3	66.5	115.8	69.1	176.9
Other	33.3	44.2	77.5	34.2	109.1
MEDIA EXPOSURE					
TV daily	28.7	44.1	72.8	36.7	106.8
Radio daily	40.1	59.5	99.6	51.0	145.6
Neither	62.2	66.3	128.4	75.4	194.1
LANGUAGE					
Spanish	37.0	49.5	86.5	39.2	122.3
Indian	50.0	66.6	116.6	78.3	185.8
TOTAL	41.0	54.8	95.8	50.9	141.8

Note: Rates are determined by the direct method (deaths per 1,000 live births); includes exposure up to the month of interview.



Mortality differentials according to demographic variables are examined in Table 2.3 and Figure 2.3. As expected, neonatal mortality is higher among boys than girls. However, the disadvantage persists into the postneonatal period, which is less commonly observed. There are no sex differentials at ages 1-4 years.

There are only small mortality differentials according to the mother's age at delivery. Children whose mother is 35 years and older have the highest neonatal mortality rates, but the lowest mortality rates at 1-4 years of age. Children of mothers less than 20 years of age have somewhat higher mortality rates after infancy, but the differences are small.

At all ages, first births have the lowest mortality rates. The mortality rates for children of birth order 6 and above are 60-70 percent higher, at all ages, than rates for first-born children. Children whose birth order is 2 through 5 have only slightly higher mortality rates than first-born children during infancy; between one and four years of age, however, the rates are 60-70 percent higher, that is, similar to the rates for children of the highest birth order.

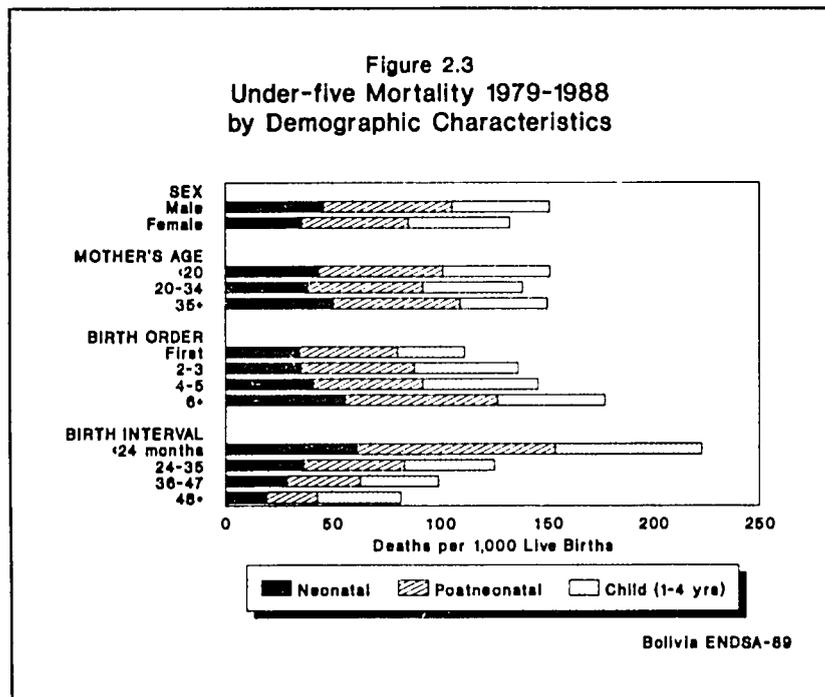
The length of the preceding birth interval has a large effect on mortality. The longer the interval, the lower the mortality. For children born after a short birth interval (less than 24 months), mortality rates during the first year of life are three to four times higher than for children born after an interval of 48 months or longer. At ages 1-4, the mortality rate is twice as high for children born after short intervals than for children born after long intervals. The effect is large in the neonatal and postneonatal periods, which indicates a biological component, but it remains substantial for children age 1-4, suggesting a behavioral component as well.

Finally, infant mortality rates triple in cases of multiple births. The increase is fivefold in the neonatal period and twofold in the postneonatal period. When a child of a multiple birth reaches 12 months of age, no increased mortality risks are observed thereafter.

Table 2.3 Childhood mortality by demographic characteristics: Neonatal, postneonatal, infant, child and under-five mortality for the calendar period 1979-1988 by demographic characteristics, Bolivia ENDSA, 1989

Characteristic	Neonatal (0 months)	Post- neonatal (1-11 months)	Infant (0-11 months)	Child (1-4 years)	Under- five (0-4 years)
SEX					
Male	45.8	59.6	105.5	50.7	150.9
Female	35.8	49.6	85.5	51.1	132.2
MOTHER'S AGE					
15-19 years	43.6	57.8	101.4	55.6	151.4
20-34 years	38.5	53.4	91.9	51.0	138.2
35+ years	50.5	58.5	109.0	45.8	149.8
BIRTH ORDER					
First	34.4	45.9	80.3	33.5	111.1
2-3	35.3	52.8	88.1	52.6	136.1
4-5	41.2	50.7	91.9	59.1	145.6
6+	56.0	70.6	126.6	58.0	177.3
BIRTH INTERVAL^a					
<24 months	61.4	92.4	153.9	81.6	222.9
24-35 months	36.7	46.9	83.7	45.3	125.1
36-47 months	28.9	34.2	62.9	38.9	99.3
48+ months	19.2	23.6	42.7	40.6	81.6
MULTIPLE BIRTH					
	211.3	107.2	318.5	41.3	346.6
TOTAL					
	41.0	54.8	95.8	50.9	141.8

Note: Rates are determined by the direct method (deaths per 1,000 births); rates include exposure up to the month of interview



CHAPTER 3

CAUSES OF DEATH IN CHILDHOOD

Seventy-six percent of the deaths among children who were born in the five years preceding the survey took place at home. Half of the children who died were not taken to any health facility during the illness that led to death.

In order to ascertain the major causes of death, the ENDSA respondents were questioned about the illness leading to death among children born during the past five years. During the neonatal period, birth problems were the leading cause, accounting for one-third of neonatal mortality. Low birth weight, as reported by the mother, increased neonatal mortality rates fourfold compared with normal birth weight. Neonatal tetanus was estimated to have caused 5-10 percent of neonatal deaths.

During the postneonatal period and early childhood, diarrheal disease was prominent as a cause of death. For almost half the children who died at age 1-11 months, the probable main cause of death was diarrheal disease. Acute respiratory infection was associated with about 1 in 5 deaths according to mothers' reports of the main cause of death, but was associated with only 1 in 9 deaths judging by reported symptoms. Measles was a probable cause of death for 3 percent of children 1-11 months (6 percent at ages 1-4 years). In addition, 19 percent of the children 4 months and over had probably had measles (rash and fever) in the three months before the survey, according to the reported symptoms.

3.1 Methodology

Analyzing the medical causes of death in childhood can be useful in identifying priority areas for health programs. In the ENDSA the probable causes of death were ascertained for deceased children born during the five years preceding the survey. This approach to determining the causes of death is often called the verbal autopsy or postmortem interview technique.

Two types of information were used to assess the likely cause of death. First, the respondent was asked to give the main disease or accident causing the death, which was entered by the interviewer in the questionnaire and later coded, using a list of causes of death (Ministerio de Previsión Social y Salud Pública, 1983). Second, for deaths not caused by an accident, inquiries were made into the presence and duration of several specific symptoms and signs during the two-week period preceding the death. These symptoms¹ included diarrhea, diarrhea with blood, difficult breathing, common cold/cough, rash and fever. The mother was also asked whether the baby had been sucking normally during the first days of life, in order to distinguish between neonatal deaths due to tetanus and death due to other causes. The loss of the ability to suckle a few days after birth is typical of neonatal tetanus deaths.

The mother was asked whether the child had died at home or in a health facility, and whether medical care was sought for the illness preceding the death. If diarrhea was one of the signs and symptoms present before death, the use of oral rehydration therapy was determined.

Twenty-six percent of the respondents said they had a death certificate for the deceased child, but in only 2 percent of the cases was the certificate actually shown to the interviewer. Therefore, the death certificates could not be used to assess the causes of death.

Several studies have described the long-term effects of measles on child mortality: children who have had measles are more likely to die from other causes, such as pneumonia, diarrhea, or tuberculosis, in the months afterwards due to reduced resistance to these diseases (Koenig et al., 1990). Therefore,

¹ In this report the term "symptom(s)" includes both signs and symptoms observed and reported by the mother.

mothers were asked whether the dead child had had rash and fever in the six months before death. If so, they were asked the duration of the episode and the time elapsed between this illness and the child's death.

In addition, the mother's assessment of the neonate's size at birth—available for all live births during the five years preceding the survey—was used to estimate the impact of low birth weight on mortality.²

3.2 Findings

Main Cause of Death Reported by Mothers

Table 3.1 summarizes the data on the main cause of death as reported by the mother, according to the age of the child at death. The deaths are divided into three age groups: neonatal (less than 1 month), postneonatal (1-11 months), and 12 months and over. The latter group consists mainly of deaths among children 1 and 2 years old. Mothers reported a cause of death for 91 percent of the deceased children.

Table 3.1 Causes of death in childhood: Percent distribution of deaths among children born in the five years preceding the survey by age at death, according to main causes of death (mothers' reports), Bolivia ENDSA, 1989

Main cause of death (mother's report)	Age at death			All deaths
	< 1 month	1-11 months	12+ months	
Birth problems	32.9	3.8	0.5	13.3
Prematurity	7.7	0.0	0.0	2.7
Tetanus	5.7	2.0	1.9	3.3
Congenital anomaly	1.0	1.1	0.0	0.8
Diarrhea	13.1	39.1	63.8	35.7
Respiratory illness	17.2	25.7	15.9	20.5
Measles	0.2	2.1	1.2	1.2
Other infections	3.1	1.3	1.7	2.0
Other diseases	4.0	4.4	3.1	4.0
Accidents	7.9	8.4	4.8	7.4
No cause given	7.4	12.1	6.8	9.2
TOTAL	100.0	100.0	100.0	100.0
NUMBER OF DEATHS	199	234	134	567

² Subjective assessments of the relative size of the infant at birth have been shown to be reasonable indicators of actual size at birth (Moreno and Goldman, 1990).

In the neonatal period, problems associated with the delivery, primarily traumatic delivery and neonatal asphyxia, were mentioned by almost one-third of the respondents. Respiratory illness was the next most frequently cited cause of death (17 percent), followed by diarrhea (13 percent). Eight percent mentioned prematurity, and 6 percent tetanus. An unusually high proportion (8 percent) also mentioned accidents as a cause of neonatal death. This is likely to be due to the structure of the questionnaire and its interpretation by both interviewers and respondents. In several cases, deaths due to birth trauma were classified as accidental deaths, and there was not always sufficient detail to distinguish perinatal causes of death (mainly birth problems) from accidents.

During the postneonatal period, diarrhea was reported to be the leading cause of death, cited in 39 percent of the 234 deaths, followed by respiratory infection (26 percent). For children 12 months of age and older, gastrointestinal infections were most common, reportedly causing 64 percent of all deaths. Eight percent of deaths in the postneonatal period and 5 percent of deaths among children 12 months and older were attributed to an accident.³ According to the mothers' reports, measles did not appear to be a leading cause of death.

Cause of Death Derived from Symptoms

Table 3.2 presents the symptoms and signs, as reported by the mother, associated with the illness that led to the death of the child. Fever, diarrhea, and breathing difficulties were the most common symptoms. On average, mothers responded that three out of the list of eight symptoms were present. For example, of the children with diarrhea, 73 percent also had fever and 25 percent had breathing difficulties.

Table 3.2 Symptoms associated with the illness that led to child's death: Among children born in the last five years who died of disease, the percentage with specific symptoms and combinations of symptoms, Bolivia ENDSA, 1989

Symptom	Percent with symptom ^a	Mean number of other symptoms	Combinations of symptoms			
			With diarrhea	With dyspnea	With rash	With fever
Fever	54.2	1.7	54.6	35.1	13.0	--
Diarrhea	40.7	1.7	--	24.6	12.6	72.7
Diarrhea with blood	10.4	2.1	--	40.2	16.8	75.6
Dyspnea	33.8	2.1	29.7	--	14.4	56.3
Common cold/cough	27.0	2.1	43.4	56.1	16.8	72.0
Rash	10.9	2.2	47.0	44.8	--	65.0
Convulsions	3.6	1.9	18.7	37.9	21.4	58.8
Other	33.0	1.2	39.5	15.8	5.6	43.2

^aBased on 505 children

³ This represents a total of 26 deaths (unweighted) for these two age groups. The number of deaths reportedly caused by specific accidents were as follows: 6 from falls, 4 from birth trauma causing death in the postneonatal period, 1 from burns, 1 from a motor vehicle accident, and 3 from other causes. Information was missing for 11 cases.

This short list of symptoms can be used to assess the probable cause of death. Verbal autopsy validation studies have been carried out in other countries, and their results are used to determine the most probable causes of child death in Bolivia (Garenne and Fontaine, 1986; Kalter et al., 1990). Since a limited number of symptoms were included in the ENDSA, only a few leading causes of death can be identified. These include diarrheal diseases, acute lower respiratory tract infections (primarily pneumonia), measles, and neonatal tetanus. The first three illnesses are of particular importance after the neonatal period and will be analyzed for all postneonatal and early childhood deaths combined.

Initially, three criteria were used to identify deaths due to neonatal tetanus: death occurring between 2 and 30 days after birth, normal sucking during the first days after birth, and the presence of convulsions. The ENDSA question on the presence of convulsions was not very clear, however, and a number of positive responses may have been missed. No deaths met all three criteria. Hence, alternative criteria for identifying babies with possible neonatal tetanus are used in this report. Omitting the question on convulsions and restricting the age range at death to 4-14 days, the period during which most neonatal tetanus deaths occur, 40 deaths were found, which is 20 percent of all neonatal deaths. In five of these cases (2.5 percent of neonatal mortality), the mother had also mentioned tetanus as the cause of her child's death. Using the mothers' diagnoses, 5.7 percent of all neonatal deaths were due to tetanus (see Table 3.1).

All deaths occurring among children age 1 month and over were grouped to examine the importance of diarrheal diseases, acute respiratory infections, and measles as causes of death. Diarrhea was considered a cause if the child had had diarrhea (with or without blood in the stool) for at least two days. If the child had had cough for at least four days and breathing difficulties for at least two days before death, pneumonia was listed as a cause (Kalter et al., 1990). Measles was considered a cause if the child's age at death was at least 4 months, a rash was present for at least three days, and the child had fever for at least three days.

Table 3.3 shows the percentage of deaths among children born in the five years preceding the survey (excluding neonatal deaths) due to the three causes (derived from the reported symptoms). Diarrheal diseases were considered a probable cause of death in 48 percent of the cases. Chronic diarrhea appeared to play an important role: 38 percent of the children who had diarrhea before death had diarrhea for at least two weeks. In most cases, diarrhea was not associated either with pneumonia or measles. In only 6 percent of all deaths did diarrhea cause or contribute to the child's death in combination with pneumonia or measles.

Based on mothers' reports of their children's symptoms, lower respiratory tract infections caused fewer deaths than diarrheal diseases: pneumonia was the probable cause of 12 percent of all deaths. Measles, as defined above and occurring during the last two weeks before death, was a probable cause of 3 percent of the deaths and was associated with 6 percent of all deaths at age 12 months and over.

The proportion of deaths preceded by a presumed measles infection was estimated using questions about an illness consisting of rash and fever during the six months preceding the interview (data not shown). Using the same criteria for the diagnosis of measles as above, that is, an illness with a rash lasting three days or longer and with a fever for at least three days, 14 percent of children had a history of measles in the four weeks preceding death, 19 percent in the three months preceding death, and 21 percent in the six months preceding death. For children who died of respiratory diseases, according to the mother's report, 22 percent had had measles in the three months before death. The corresponding figure for diarrheal deaths was 15 percent. This suggests that measles may be more important as a cause of death than the data in Table 3.1 show.

Table 3.3 Causes of death derived from reported symptoms: Among children born in the last five years, the percentage of deaths (excluding neonatal deaths) associated with one or more cause derived from symptoms, Bolivia ENDSA, 1989

Cause of death based on symptom algorithm	Diarrheal disease	Acute lower respiratory tract infection	Measles
Death associated with each cause	48.4	11.7	3.2
"Cause" was the only cause	42.7	6.1	0.5
"Cause" plus diarrheal diseases	--	3.8	0.8
"Cause" plus acute respiratory infection	3.8	--	0.7
"Cause" plus measles	0.8	0.7	--
All three causes	1.2	1.2	1.2

Note: "Cause" refers to diarrhea, acute lower respiratory tract infection and measles, respectively. Forty-four percent of deaths were not associated with diarrheal disease, ARI, or measles according to the reported symptom algorithm.

Causes of Death: A Comparison of the Findings

Both analyses of the causes of death highlight the importance of diarrheal diseases after the neonatal period. For about half of the deaths among children older than 4 weeks, diarrhea was either the only cause of death or was an associated cause. In 39 percent of the deaths, diarrhea was listed as the main cause of death by the mother, and the child was reported to have had the symptoms and signs of the illness (Table 3.4 and Figure 3.1).

Acute respiratory infection was associated with about 1 in 5 deaths according to the mother's report of the main cause of death, but with only 1 in 9 deaths based on the reported symptoms. In part, this difference may be related to the greater difficulty in identifying pneumonia, as has been observed in other studies.

Measles was mentioned as the main cause of death by mothers for only 2 percent of deaths among children age 1 month and over. However, based on the symptoms, measles was a probable cause for 5 percent of the deaths.

Size at Birth

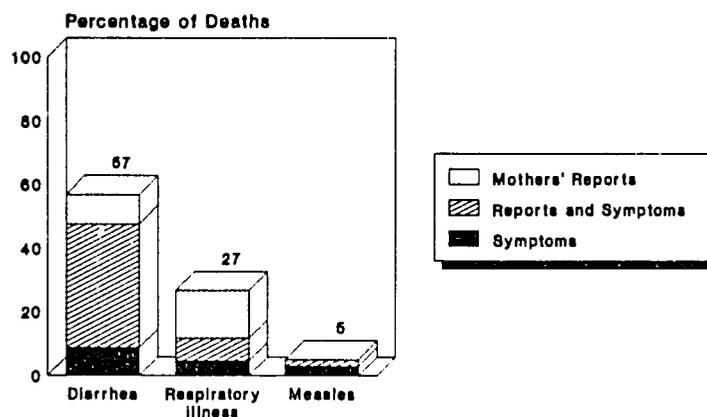
Low birth weight has been identified as an important risk factor for neonatal and, to a lesser extent, postneonatal mortality. In Bolivia, birth weights are generally not available, partly because most deliveries occur at home and partly because there is no adequate registration of birth weights on the records kept by mothers. Building upon the positive reports from the DHS experimental survey in Peru (Moreno and Goldman, 1990), mothers were asked to give their subjective assessment of each baby's size at birth for all infants born in the last five years. The results are given in Table 3.5.

Table 3.4 Causes of death from mothers' reports of the main cause and derived from reported symptoms: Among children born in the five years preceding the survey, the percentage of deaths (excluding neonatal deaths), according to symptom algorithm and the main cause reported by mothers, Bolivia, ENDSA, 1990

Source for cause of death	Diarrheal diseases	Acute lower respiratory tract infection	Measles
CAUSE ACCORDING TO:			
Symptom algorithm only	9.2	4.6	3.2
Mother's report only	8.8	15.1	1.7
Both symptom algorithm and mother's report	39.2	7.1	--
Symptom algorithm and/or mother's report	57.3	26.8	4.9

Note: Multiple causes are possible (N=367).

Figure 3.1
Causes of Death Based on Mothers' Reports and Symptoms



Note: Includes deaths among children under five, except for neonatal deaths.

Bolivia ENDSA-89

Table 3.5 Size at birth and infant mortality: Percent distribution of births in the five years preceding the survey according to size reported by mother, and neonatal and postneonatal mortality rates, Bolivia ENDSA, 1989

Size at birth	Births	Neonatal mortality ^a	Postneonatal mortality ^b	Number of births
Very small	9.5	108.9	46.6	551
Smaller than average	20.3	31.5	43.8	1174
Average	56.0	25.5	38.9	3235
Larger than average/ very large ^c	13.2	16.9	37.7	763
Don't know	0.4			21
TOTAL	100.0	34.0	43.3	5780

Note: Rates are for deaths per 1,000 live births.

^aExcludes births in 1989

^bExcludes births in 1988 and 1989

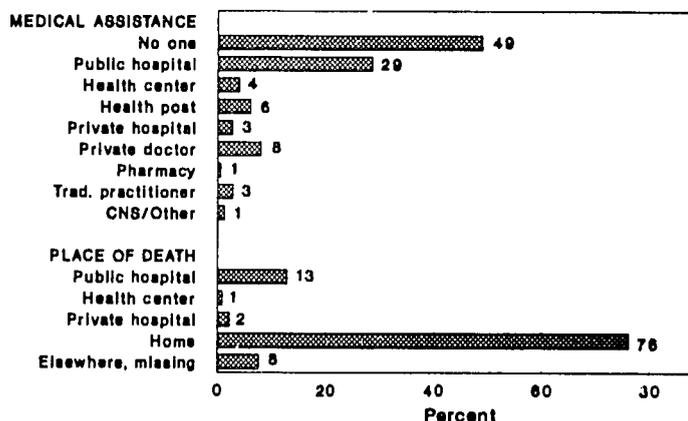
^cTwenty-four births were in the very large category (0.4 percent of the total)

Almost 10 percent of all neonates were considered "very small" by the respondents, and 20 percent were "smaller than average." Neonatal mortality rates varied by size at birth. Neonatal mortality was 109 per 1,000 live births for "very small" babies, which was four times higher than for babies of "average" size. Postneonatal mortality rates decreased moderately with increasing size at birth, but the differences were small. These mortality rates are consistent with the higher mortality rates reported elsewhere for low birth weight babies and suggest that the mother is able to give a valid estimate of the baby's size at birth even if the exact birth weight is not known.

Medical Care

Figure 3.2 shows the types of medical assistance sought for children during their terminal illness. For almost half the children, no medical assistance was sought. The public hospital was by far the most frequently visited source of medical assistance (29 percent). It is notable that 40 percent of the children who died from diarrhea (either as a primary or associated cause) were reported to have received oral rehydration solution before death. The majority of children, 76 percent, died at home.

Figure 3.2
Medical Assistance Sought
before Child's Death, and Place of Death



Note: Based on deaths among children born in the 8 years preceding the survey

Bolivia ENDSA-89

CHAPTER 4

MORBIDITY: DIARRHEA AND ITS TREATMENT

Diarrheal disease is common in children under five years of age. According to the ENDSA, 28 percent of all children under five had had diarrhea in the two weeks immediately preceding the survey. After correcting for seasonality, this corresponds to 5.8 episodes of diarrhea per child per year. For children age 6-23 months the prevalence of diarrhea was as high as 40 percent. Differentials in prevalence were moderate for most socioeconomic variables and for water source and sanitation variables. The differentials were greatest for the level of education of the mother.

There were only minor differentials in the prevalence of diarrhea by mode of infant feeding. Neither the early introduction of supplements nor the use of bottle feeding appeared to be associated with a higher prevalence of diarrhea during the two weeks preceding the survey.

About half of the mothers gave their children more liquids during diarrheal episodes. Examining the use of oral rehydration therapy (ORT), it was found that one in 4 mothers used a fluid prepared from a packet of oral rehydration salts (ORS); 1 in 9 mothers prepared a homemade sugar and salt solution; and 1 in 4 children were taken for treatment to a health facility. Children were less likely to receive ORS from a private facility than from a public facility. There were marked differentials in patterns for most socioeconomic variables; for example, mothers with little or no education were less likely to treat diarrhea with ORS packets or to seek medical assistance than mothers with higher levels of education.

Lack of knowledge of ORS contributed to its low rate of use. Only 70 percent of the mothers with children under five years had heard of ORS packets, while just 61 percent had ever seen a packet. Mothers with low levels of education and those living in rural areas had less knowledge of ORS packets than other women.

4.1 Methodology

Mothers with children under the age of five were asked if their children had had diarrhea in the last 24 hours (defined as a current episode) and how many days previous this episode had begun. If the response was negative, the mother was asked when the last time was that the child had had diarrhea (defined as the terminated episode). The answers were recorded in days, weeks, or months. The respondent was also asked how long the terminated episode had lasted. Finally, the mother was asked whether there was blood in the stool during the episode. Diarrhea with blood is a symptom of dysentery, a gastrointestinal infection frequently caused by bacteria, which requires a different treatment from the more common viral diarrheas.

All mothers whose children had been ill with diarrhea in the preceding two weeks were asked whether the child had been taken anywhere for treatment, and what type of treatment had been given. The mother was also asked whether the child had received any oral rehydration therapy (ORT), whether in the form of a fluid prepared from a packet of oral rehydration salts (ORS) or as a homemade sugar and salt solution, or both. In addition, the mother was asked whether the quantity of liquids and solid foods given to the child during the diarrheal episode was increased, decreased, or unchanged. Mothers who had not used ORS were asked whether they knew about the packets; those who had used ORS at least once were asked how they prepared the solution. Finally, mothers were asked to list the places where ORS packets could be obtained, and the cost of the packets.

4.2 Findings

Prevalence

The questions about current and terminated diarrheal episodes and their duration can be used to assess data quality and the effects of memory loss within a two-week recall period. An analysis of the

accuracy of diarrhea recall is presented in Appendix A (page 91). The general conclusion is that there is substantial underreporting when recall periods are more than three days in length.

Tables 4.1 and 4.2 present the prevalence of diarrhea in the two weeks preceding the survey according to socioeconomic and demographic variables. The overall prevalence of diarrhea among children under age five was 28 percent, while 16 percent had had diarrhea in the last 24 hours. By comparison, a 1983 survey in Bolivia found the two-week prevalence of diarrhea among 66,827 children under five to be 24 percent (Murillo and Coloma, 1984).

There was considerable variation in prevalence by the age of the child (Figure 4.1). Prevalence increased during infancy, peaking at 41 percent at age 12-23 months, and then declined for older children, to less than 15 percent at age 48-59 months. This age pattern has been observed in many other studies and is thought to be associated with the weaning period.

The differentials in the prevalence of diarrhea shown in Tables 4.1 and 4.2 were small for most other variables.¹ The largest differences were observed by mother's age and by mother's level of education. Urban-rural differences and regional differences were minor. Piped drinking water and a flush toilet were associated with somewhat lower prevalence, but the prevalence of diarrhea was no lower among children in households with latrines than among children in households without sanitary facilities.²

The proportion of children with blood in their stools during the diarrheal episode was 3.6 percent and varied from 1 to 5 percent. The prevalence was very low among children less than 6 months of age (0.9 percent) and was highest at age 12-23 months. Differentials were largest according to the mother's education and, to a lesser extent, the household's sanitation. Prevalence was slightly higher among rural than urban children.

The mean duration of an acute diarrheal episode in longitudinal studies is usually on the order of 5 to 6 days. In Bolivia, the mean duration of an episode was 3.8 days (standard deviation 3.5 days) for children whose diarrhea had ended during the two weeks before the interview. This is shorter than expected, but it may be that mothers recall only the days when the diarrhea is at its worst and do not count the first or last days. Considering the duration-to-date for current cases of diarrhea, consistent variation was observed by socioeconomic variables and for those having poorer sanitary environments (data not shown). A direct estimate of mean duration from the current status data is not possible.³

To estimate the number of episodes of diarrhea per child per year from prevalence and duration, seasonality of diarrhea needs to be known as well (WHO, 1989). Seasonality of diarrhea can be assessed by using data on the prevalence of diarrhea from health facilities in Bolivia between 1975 and 1985 (Pedersen et al., 1987). During that period diarrhea was at its peak from October through November and reached its lowest level from June through July. After correcting for seasonal fluctuations, the average number of episodes per child per year was 5.8, based on ENDSA data collected from February through June. The mean duration of diarrheal episodes was assumed to be 5.5 days (WHO, 1989). This corresponds to 32 days with diarrhea per child per year.

¹ This is true particularly if sampling errors are taken into account. For example, the confidence limits (plus or minus 2 standard errors) for diarrhea prevalence among all children are 26.5-29.5 percent.

² The ENDSA questionnaire did not distinguish between other facilities (other than flush toilet or latrine) and no facilities. The majority in the other/none category is assumed to be households without facilities.

³ This is because there is "length-biased sampling" in the durations of diarrhea episodes in the sample of children with current diarrhea (called a prevalence series). The mean duration of diarrhea episodes estimated from the prevalence series is 7.1 days. For details, see Freeman and Hutchison, 1980.

Table 4.1 Diarrhea prevalence by socioeconomic characteristics: Among children under five, the percentage who had diarrhea in the two weeks preceding the survey by socioeconomic characteristics, Bolivia ENDSA, 1989

Characteristic	Diarrhea in the two weeks preceding the survey		Number of children
	All diarrhea ^a	Diarrhea with blood in stools	
RESIDENCE			
Urban	28.1	2.9	2535
Rural	28.1	4.2	2626
REGION			
Altiplano	27.0	3.2	2603
Valle	29.2	3.6	1422
Llanos	29.2	4.5	1137
MOTHER'S EDUCATION			
None	28.9	5.0	1061
1-5 years	30.6	4.3	2354
6-8 years	27.0	2.5	707
9+ years	22.3	1.4	1040
FATHER'S OCCUPATION			
White collar	27.3	3.1	1448
Blue collar	29.3	3.3	1494
Agriculture	28.7	4.6	1860
Other	23.1	1.9	360
MOTHER WORKING			
Yes	25.6	2.0	983
No	28.7	4.0	4178
MEDIA EXPOSURE			
TV daily	27.5	3.0	2242
Radio daily	26.9	4.2	1694
Neither	30.9	3.9	1226
LANGUAGE			
Spanish	28.6	3.2	3663
Indian	26.9	4.5	1499
DRINKING WATER			
Piped	26.8	3.4	3101
Non-piped	30.0	3.9	2060
SANITATION			
Flush toilet	24.1	2.6	1344
Latrine	33.4	4.9	892
Other, none	28.3	3.6	2926
TOTAL	28.1	3.6	5161

Note: Figures are for children born 1-59 months before the survey.

^a Includes diarrhea with blood in stools.

Table 4.2 Diarrhea prevalence by demographic characteristics: Among children under five, the percentage who had diarrhea in the two weeks preceding the survey by demographic characteristics, Bolivia ENDSA, 1989

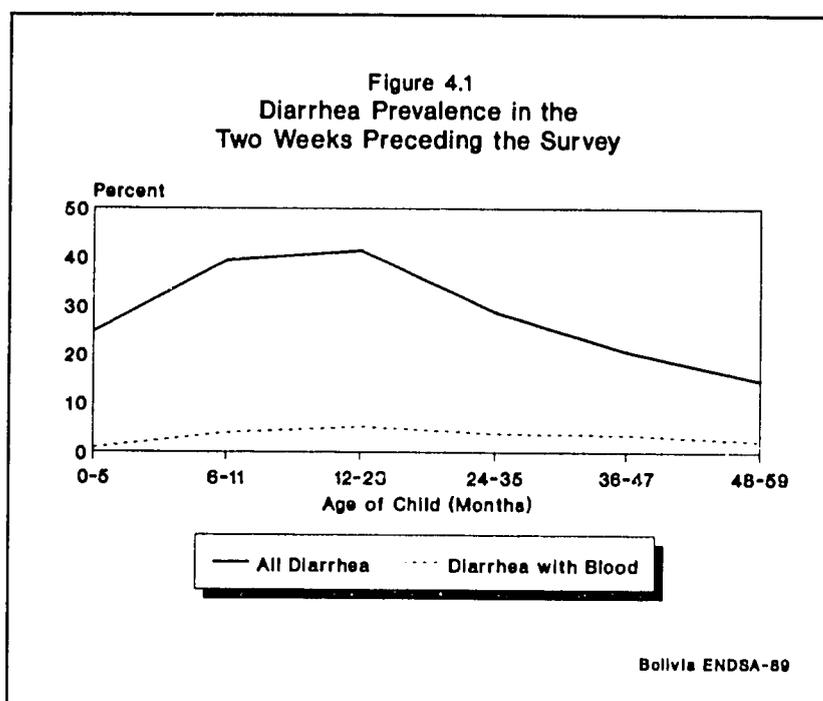
Characteristic	Diarrhea in the two weeks preceding the survey		Number of children
	All diarrhea ^a	Diarrhea with blood in stools	
SEX			
Male	27.5	3.2	2582
Female	28.7	4.0	2580
CHILD'S AGE			
0-5 months	24.7	0.9	483
6-11 months	39.4	4.1	572
12-23 months	41.4	5.3	1110
24-35 months	28.8	3.9	1017
36-47 months	20.8	3.6	993
48-59 months	14.9	2.4	986
MOTHER'S AGE			
15-19 years	34.8	2.4	256
20-34 years	28.9	3.7	3616
35+ years	24.6	3.7	1289
BIRTH ORDER			
First	28.0	2.3	1053
2-3	25.9	2.7	1742
4-5	30.0	4.4	1188
6+	29.5	5.3	1179
BIRTH INTERVAL			
<24 months	29.5	4.3	1093
24-35 months	29.5	4.8	1429
36-47 months	26.9	3.1	704
48+ months	25.1	2.5	877
TOTAL	28.1	3.6	5161

Note: Figures are for children born 1-59 months before the survey.

^a Includes diarrhea with blood in stools

Many studies have found that the prevalence of diarrhea is lower among children who are completely breastfed than among children who are partially breastfed or not breastfed at all (Feachem and Koblinsky, 1984). The lower prevalence of diarrhea found among children younger than 6 months, as compared with children 6-23 months old, also suggests an effect of breastfeeding.

In the ENDSA, the mother was asked if she was still breastfeeding the child and, if so, if she had given water, herbal tea, juice or sugar water, powdered milk, goat's milk or cow's milk, other fluids, mushy food, or solid food in the last 24 hours. In addition, the mother was asked whether any of the liquids had been given in a bottle with a nipple. This information was only collected for the last-born child.



The data on feeding is limited, however, because it refers only to the last 24 hours. Mothers may change feeding patterns in response to diarrhea. Keeping this in mind, Table 4.3 shows no strong association between breastfeeding and the prevalence of diarrhea. Only at age 3-5 and 6-11 months is the prevalence of diarrhea moderately lower among children exclusively breastfed compared with children who were partially breastfed or not breastfed at all. Among children younger than 3 months, the prevalence of diarrhea was lower for those receiving supplements than for those breastfed exclusively. The use of a bottle to give supplements did not have an effect on the prevalence of diarrhea in any of the three age groups in Table 4.3.

Table 4.3 Diarrhea prevalence by feeding patterns: Among children under 12 months, the percentage who had diarrhea in the two weeks preceding the survey by feeding patterns and age, Bolivia ENDSA, 1989

Feeding pattern	Children 2 months and under		Children 3-5 months		Children 6-11 months	
	Diarrhea	Number	Diarrhea	Number	Diarrhea	Number
BREASTFEEDING						
Breastfeeding only	22.8	126	24.8	106	33.4	69
With supplements	12.3	76	33.9	153	40.7	424
With bottle	12.4	55	31.5	144	41.7	172
NO BREASTFEEDING	a	3	a	19	37.8	79

Note: Figures are for children born 1-11 months before the survey.
^aLess than 20 cases

While these results do not unequivocally show the beneficial effects of breastfeeding, a number of factors were not available for consideration. As already mentioned, information about supplemental foods is only available for the 24-hour period immediately preceding the survey. In addition, there are no data on the severity of the diarrhea, and the number of young infants who received no breast milk is small.

Case Management

Figures 4.2 and 4.3 summarize the feeding and treatment patterns for diarrheal episodes occurring in the two weeks before the survey.⁴ Overall, more than 90 percent of mothers who were breastfeeding their children continued to do so during the diarrheal episode: 88 percent in urban areas and 96 percent in the rural areas. Almost half the mothers reported increasing the amount of liquids given to the child, but 11 percent cut back on liquids. Thirty-two percent reduced the amount of solid foods given to the child.

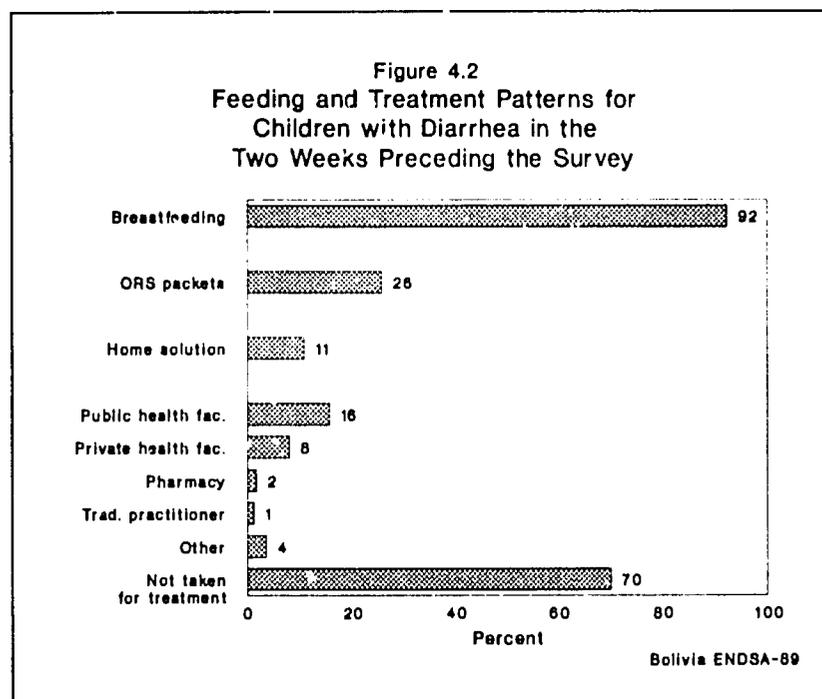
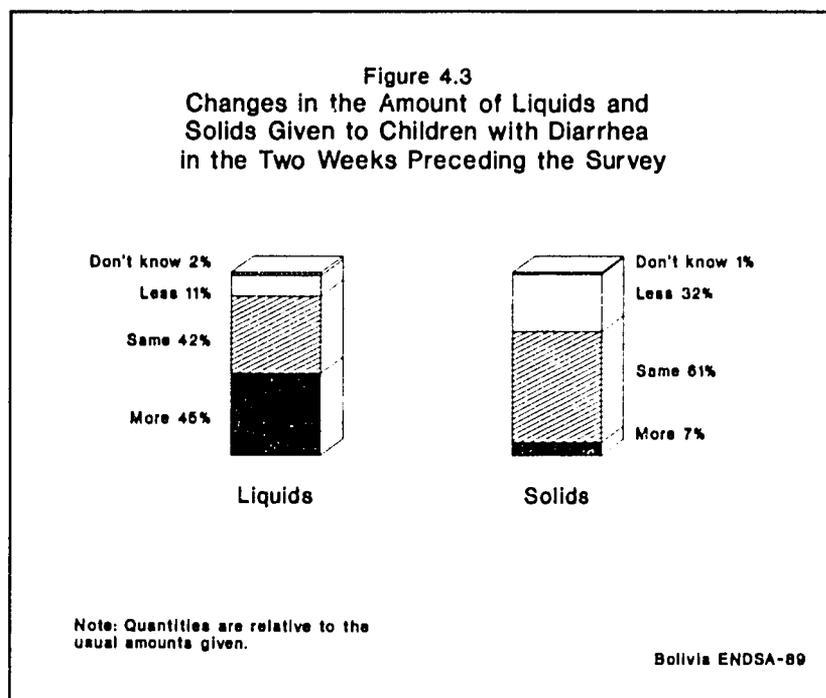


Figure 4.2 also shows the extent to which ORS packets and homemade sugar and salt solutions were used to prevent diarrheal dehydration. ORS packets were given to 1 in 4 children who had diarrhea in the preceding two weeks, while homemade sugar and salt solutions were used in 11 percent of the episodes. Mothers used the oral rehydration solutions for an average of three days.

Almost a quarter of the children with diarrhea were taken to a medical facility for treatment. Public hospitals and health centers were the most frequently visited facilities, followed by private doctors

⁴ The analysis of the accuracy of diarrhea recall presented in Appendix A found that reporting errors and memory loss were important even within the two-week recall period. These problem may also affect the recall of treatment patterns. Therefore, the feeding and treatment patterns were initially analyzed for children who had diarrhea in the 24 hours preceding the survey and whose diarrheal episode had started at least two days before the interview. The resulting patterns of diarrhea case management were very similar to the results obtained when using a two-week recall period. Since the number of children with diarrhea is cut in half if only current cases are included, the two-week recall period has been used in this report.



and hospitals. Pharmacies and traditional medical practitioners were less frequently consulted in cases of childhood diarrhea. Of the children with blood in their stools, 44 percent were taken to a health facility (data not shown).

Tables 4.4 and 4.5 examine socioeconomic and demographic differentials in diarrhea case management. While both ORS packets and homemade solutions appeared to be used somewhat more in the Llanos than in the Altiplano and Valle regions, there were no urban-rural differentials. There was considerable variation by age of the child, however: ORT was rarely used for children under 6 months and was most frequently used for children 12-23 months. Changes in fluid intake and the utilization of health services varied by mother's education and, to a lesser extent, by most other socioeconomic variables. In general, mothers with higher levels of education were more likely to give additional fluids to children with diarrhea, to use ORS, and to take a child with diarrhea to a health facility for treatment.

The reasons for not taking children suffering from diarrhea to a health facility for treatment are shown in Figure 4.4. In urban areas, most mothers said the diarrhea was not serious; only 2 percent said the facility was too far away. In contrast, the distance to medical facilities was the main reason given in rural areas for not taking a child for treatment.

Table 4.4 Treatment practices for childhood diarrhea by socioeconomic characteristics: Among children under five who had diarrhea in the two weeks preceding the survey, the percentage who were treated with ORS, homemade solutions, increased liquids, or were taken to a medical facility, by socioeconomic characteristics, Bolivia ENDSA, 1990

Characteristic	Treatment received			Taken to health facility	Not taken for treatment	Number of children with diarrhea
	ORS packets	Homemade solution	Increased liquids			
RESIDENCE						
Urban	26.6	11.7	52.9	28.9	64.0	715
Rural	24.6	10.0	36.7	18.6	75.5	737
REGION						
Altiplano	20.7	9.6	40.0	18.5	76.3	704
Valle	29.8	8.3	49.3	29.6	62.9	414
Llanos	30.6	16.6	48.9	27.2	64.8	334
MOTHER'S EDUCATION						
None	19.7	12.2	24.6	14.7	81.6	307
1-5 years	25.4	8.8	45.4	20.8	72.2	722
6-8 years	31.2	11.1	54.5	28.1	63.5	192
9+ years	29.4	15.2	61.0	40.8	52.0	232
FATHER'S OCCUPATION						
White collar	29.0	11.3	58.2	31.6	63.6	395
Blue collar	27.1	9.5	49.6	29.5	62.4	439
Agriculture	22.5	11.8	30.9	13.2	81.0	535
Other	21.2	9.4	43.5	22.5	66.7	83
MOTHER WORKING						
Yes	33.8	12.3	53.5	27.6	64.8	252
No	23.9	10.5	42.8	22.8	70.9	1201
MEDIA EXPOSURE						
TV daily	30.2	13.5	55.7	35.7	58.6	618
Radio daily	25.1	8.6	41.2	17.3	75.7	456
Neither	18.6	9.2	30.9	11.7	81.1	379
LANGUAGE						
Spanish	27.7	11.7	50.3	28.7	64.4	1049
Indian	20.0	8.5	30.1	10.6	83.8	403
DRINKING WATER						
Piped drink water	28.8	12.0	49.5	29.7	63.2	833
Non-piped	21.3	9.3	38.3	15.6	78.8	619
SANITATION						
Flush toilet	33.6	13.5	57.7	40.6	51.5	325
Latrine	23.9	11.3	52.7	24.5	66.8	298
Other, none	23.0	9.6	36.7	16.7	78.1	828
TOTAL	25.6	10.8	44.7	23.7	69.8	1452

Note: Figures are for children born 1-59 months before the survey.

Table 4.5 Treatment practices for childhood diarrhea by demographic characteristics: Among children under five who had diarrhea in the two weeks preceding the survey, the percentage who were treated with ORS, homemade solutions, increased liquids, or were taken to a medical facility, by demographic characteristics, Bolivia ENDSA, 1990

Characteristic	Treatment received			Taken to health facility	Not taken for treatment	Number of children with diarrhea
	ORS packets	Homemade solution	Increased liquids			
SEX						
Male	26.1	12.2	49.8	24.3	68.1	712
Female	25.1	9.6	39.8	23.0	71.4	740
CHILD'S AGE						
0-5 months	12.1	3.4	30.7	18.7	77.0	121
6-11 months	19.2	10.5	39.1	25.0	68.8	225
12-23 months	34.6	11.7	44.8	27.8	63.2	459
24-35 months	23.5	12.1	48.4	25.1	71.5	293
36-47 months	25.0	11.6	52.2	20.9	72.0	206
48-59 months	23.1	11.3	46.4	13.6	79.7	147
MOTHER'S AGE						
15-19 years	22.6	6.3	42.1	32.0	56.2	89
20-34 years	26.5	11.0	45.7	23.8	70.8	1046
35+ years	23.4	11.6	42.2	20.7	70.6	317
BIRTH ORDER						
First	24.1	8.2	47.5	29.5	61.4	295
2-3	23.8	10.2	47.2	24.8	70.5	451
4-5	28.4	10.6	44.5	23.2	72.5	356
6+	26.2	14.1	39.2	17.6	73.3	350
BIRTH INTERVAL						
< 24 months	25.7	9.1	42.5	24.2	69.1	324
24-35 months	27.5	12.8	45.4	21.9	73.6	421
36-47 months	24.2	13.2	44.9	19.6	75.3	190
48+ months	25.2	11.3	42.2	22.2	70.0	220
TOTAL	25.6	10.8	44.7	23.7	69.8	1452

Note: Figures are for children born 1-59 months before the survey.

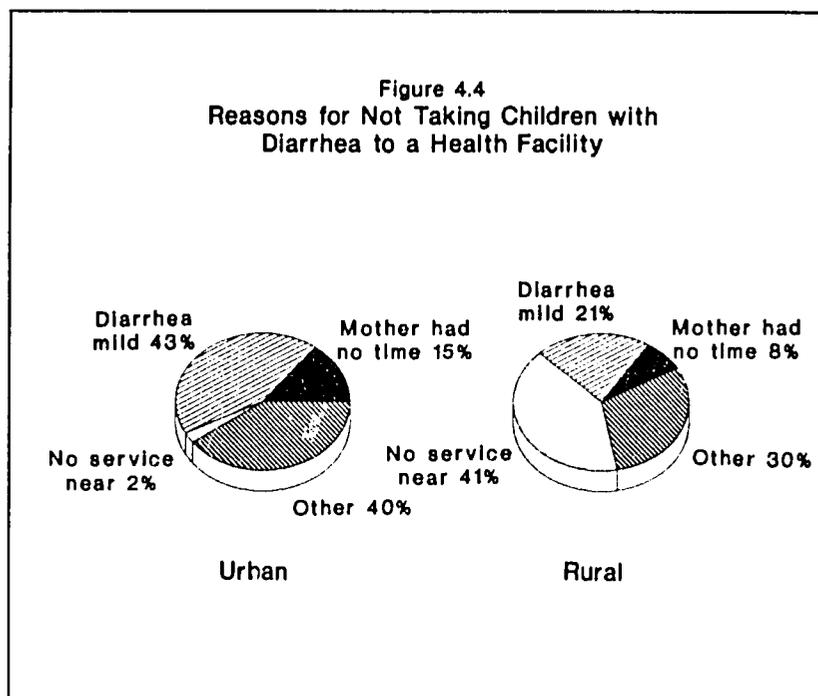


Table 4.6 examines the treatments given at health facilities as reported by the mothers. Overall, 46 percent of the children with diarrhea who visited a health facility received ORS packets. In public facilities, this proportion rose to 59 percent, but in private facilities (doctors and private hospitals), only 21 percent received ORS packets. Syrups were the single most commonly given treatment: 54 percent in public facilities and 74 percent in private facilities. Injection was more common in private health facilities.

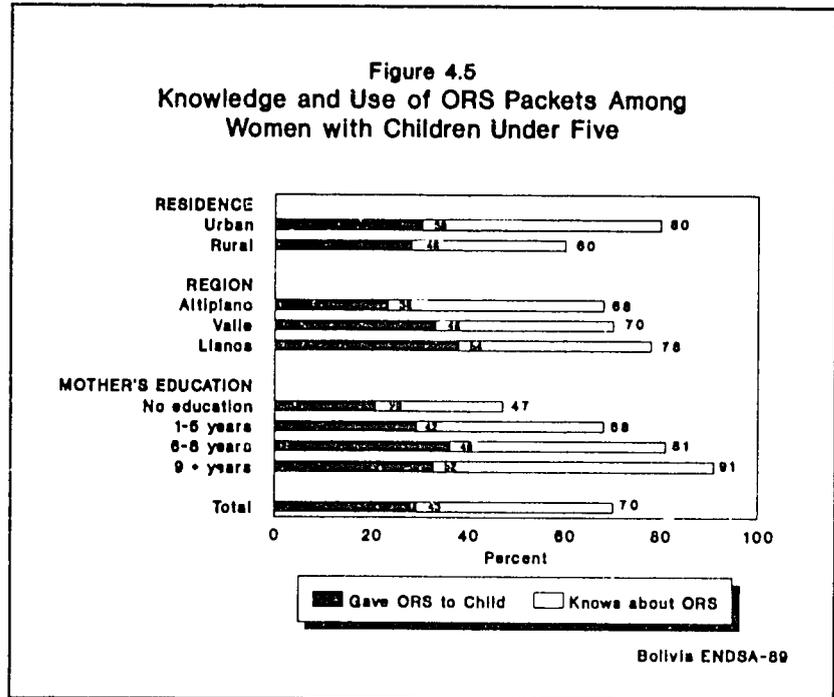
Table 4.6 Treatment of childhood diarrhea by type of health facility visited: Among children under five who had diarrhea in the two weeks preceding the survey, the percentage who received specific treatments by type of health facility visited (public/private), Bolivia ENDSA, 1989

Type of treatment	All health facilities	Public health facility	Private health facility
ORS packets	46.1	59.2	20.7
Syrup	60.9	54.0	73.8
Tablets	19.2	21.4	15.0
Injection	17.7	15.1	23.1
Intravenous fluids	0.7	0.5	1.0
Other	8.4	5.2	14.8
Nothing	1.6	1.0	2.6
NUMBER OF CHILDREN	343	227	115

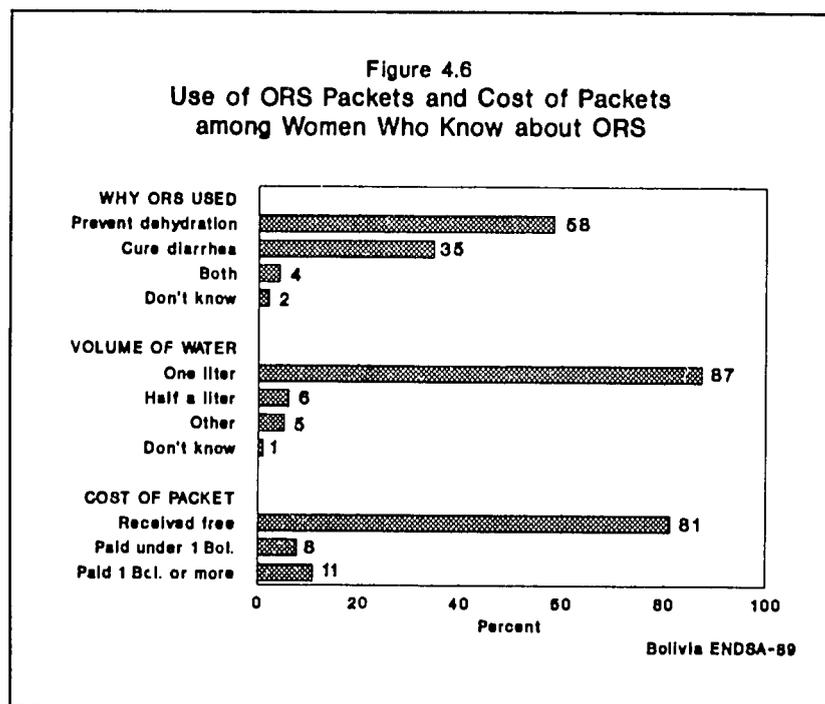
Note: Figures are for children born 1-59 months before the survey who were taken to a health facility.

Knowledge and Preparation of ORS Packets

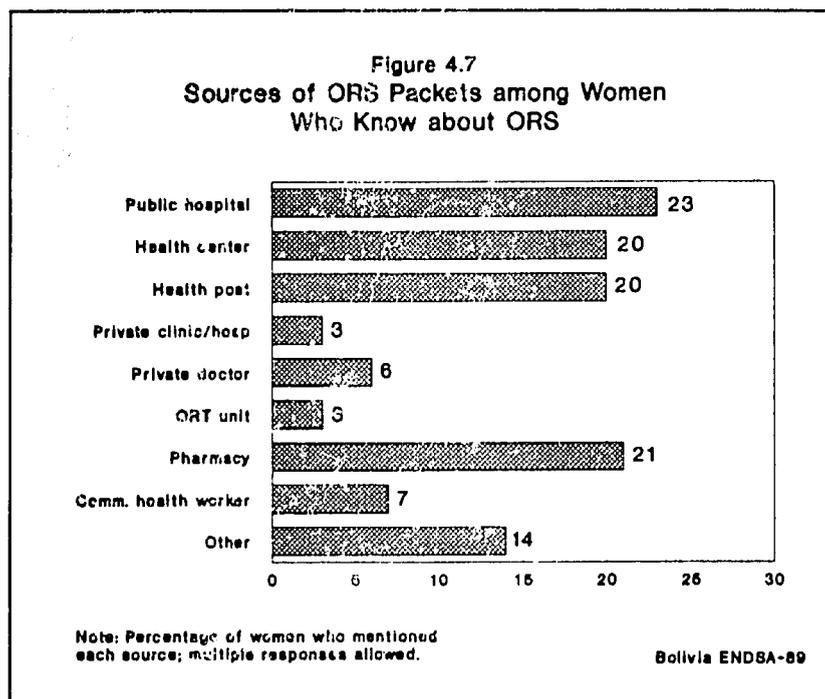
Some 70 percent of the 3,563 mothers with children under five knew of ORS packets (Figure 4.5), including 9 percent who had never seen a packet, but had heard of it. Forty-three percent of the mothers had used ORS packets at least once to treat a child. Knowledge of ORS packets was substantially higher in urban areas and among more educated women. Differences between the three regions of Bolivia were smaller, with the Llanos having slightly higher levels of knowledge of ORS. Women were also asked if they had a packet in the house: 11 percent said they had a packet, but only 6 percent could show it to the interviewer (data not shown).



Almost two-thirds of the women who knew of ORS packets said that it was used to prevent dehydration, while about one-third thought they were given to cure diarrhea (Figure 4.6). A large majority, 87 percent, used one liter of water to prepare the solution, and fully 99 percent reported boiling the water before adding the contents of the ORS packet. One in ten women used the same batch of ORS solution for more than one day, but the majority prepared a new solution each day. About 1 in 5 women paid for the ORS packets, most of them 1 Boliviano (about U.S. \$0.35) or more per packet.



Virtually all the women who had heard of ORS packets knew of a source for them (see Figure 4.7). The most frequently mentioned sources were public health facilities (hospitals, health centers, and health posts) and pharmacies. The community health worker (RPS) was mentioned by about 7 percent of the respondents.



CHAPTER 5

MORBIDITY: RESPIRATORY INFECTIONS AND THEIR TREATMENT

Acute respiratory infection, (cough accompanied by breathing problems) occurred among 20 percent of children under five years of age during the two weeks preceding the survey. The prevalence rate was about 25 percent among children under two years and 14 percent among children four years of age.

There were large differences in the proportion of sick children for whom health care was sought according to socioeconomic and demographic characteristics. Background variables associated with lower socioeconomic status were correlated with lower rates of health care utilization and lower treatment rates. For example, half of the children whose mothers had nine or more years of schooling were taken for treatment to a health facility or provider, compared with only one in eight children whose mothers had no education.

5.1 Methodology

Acute lower respiratory infection (ALRI), primarily pneumonia, is a common cause of morbidity and death among young children in Bolivia. In an effort to reduce the morbidity and mortality caused by ALRI, the government of Bolivia has embarked on a program for early diagnosis and treatment of these infections, following the guidelines suggested by the World Health Organization (1990a). An important element of the ALRI control program is the early diagnosis of pneumonia in children and prompt initiation of antibiotic therapy. As part of this program, peripheral health workers are taught to identify children who are likely to have pneumonia, using a few simple clinical signs such as cough accompanied by a rapid respiratory rate and difficulty breathing. Although only some of the children with cough and rapid or difficult breathing have pneumonia, while the remainder have an upper respiratory infection (i.e., the common cold), all these children should be evaluated by a health worker, and antibiotic therapy should be begun for those who fulfill specified diagnostic criteria. It is crucial to have estimates of the prevalence of cough accompanied by difficult or rapid breathing in order to assess the demands which will be placed on the health care services as a result of the new ALRI control programs and to help in manpower planning. The questions about cough and other symptoms of respiratory infection in the ENDSA questionnaire aim to provide such an estimate.¹

The respondents were asked whether their children under five years had been sick with a cough during the 24 hours preceding the survey. If there was no cough during the last 24 hours, the mother was asked how much time had elapsed since the last time the child was sick with a cough. The answer was recorded in number of days, weeks or months. For all children with a cough, the mother was asked whether the cough was accompanied by difficult breathing, and whether the child had been breathing faster than usual. The duration of the cough and of the difficult breathing was also ascertained and recorded in number of days. The questions about difficult and rapid breathing were asked in order to provide an indication of the severity of the illness. All mothers whose children had been ill with a cough were also asked whether the child had been taken anywhere for treatment and what type of treatment the child had received when he or she was sick.

5.2 Findings

Prevalence

Tables 5.1 and 5.2 show the prevalence of cough according to socioeconomic and demographic characteristics. The results are shown separately for children who had a cough accompanied by difficult

¹ Other studies indicate that mothers are able to report the rapid breathing and dyspnea (difficulty breathing) which is associated with pneumonia in children (Campbell et al., 1988; Cherian et al., 1988).

Table 5.1 Prevalence of cough and cough with breathing problems by socio-economic characteristics: Percentage of children under five with cough and cough with breathing problems in the two weeks preceding the survey, by socioeconomic characteristics, Bolivia ENDSA, 1989

Characteristic	Cough only	Cough with breathing problems	Any cough	Number of children
RESIDENCE				
Urban	17.0	21.2	38.2	2535
Rural	24.4	19.6	40.9	2626
REGION				
Altiplano	21.7	17.0	38.7	2603
Valle	26.4	14.5	40.9	1422
Llanos	11.5	35.6	47.1	1137
MOTHER'S EDUCATION				
None	24.0	17.3	41.3	1061
1-5 years	19.8	22.0	41.8	2354
6-8 years	21.5	24.5	46.0	706
9+ years	19.1	17.2	36.3	1040
FATHER'S OCCUPATION				
White collar	17.9	22.1	40.0	1447
Blue collar	22.1	21.5	43.6	1495
Agriculture	21.9	18.6	40.5	1860
Other	20.6	18.6	39.2	360
MOTHER WORKING				
Yes	21.2	17.0	38.2	983
No	20.6	21.2	41.8	4178
MEDIA EXPOSURE				
TV daily	19.5	20.9	40.4	2242
Radio daily	17.8	21.6	39.4	1694
Neither	27.2	18.0	45.2	1226
LANGUAGE				
Spanish	18.3	23.2	41.5	3663
Indian	26.9	13.7	40.6	1499
DRINKING WATER				
Piped	19.7	20.5	40.2	3101
Non-piped	22.4	20.3	42.7	2060
SANITATION				
Flush toilet	18.4	20.7	39.1	1343
Latrine	16.9	29.8	46.7	892
Other, none	23.0	17.4	40.4	2926
TOTAL	20.8	20.4	41.2	5161

Note: Figures are for children born 1-59 months before the survey. *Breathing problems* refers to rapid and/or difficult breathing.

Table 5.2 Prevalence of cough and cough with breathing problems by demographic characteristics: Percentage of children under five with cough and cough with breathing problems in the two weeks preceding the survey, by demographic characteristics, Bolivia ENDSA, 1989

Characteristic	Cough only	Cough with breathing problems	Any cough	Number of children
SEX				
Male	20.8	21.0	41.8	2582
Female	20.7	19.8	40.5	2580
CHILD'S AGE				
0-5 months	16.2	22.9	39.1	483
6-11 months	27.1	25.9	53.0	572
12-23 months	23.9	26.0	47.9	1110
24-35 months	21.1	19.2	40.3	1017
36-47 months	17.7	17.9	35.6	993
48-59 months	18.5	13.5	32.0	987
MOTHER'S AGE				
15-19 years	24.5	25.3	49.8	256
20-34 years	20.3	21.0	41.3	3616
35+ years	21.3	17.7	39.0	1289
BIRTH ORDER				
1	22.2	20.0	42.2	1053
2-3	21.2	19.1	40.3	1742
4-5	19.5	21.7	41.2	1188
6+	20.1	21.5	41.6	1179
BIRTH INTERVAL				
<24 months	22.7	22.6	45.3	1093
24-35 months	20.4	21.7	42.1	1429
36-47 months	17.6	17.7	35.3	704
48+ months	19.8	18.2	38.0	877
TOTAL	20.8	20.4	41.2	5161

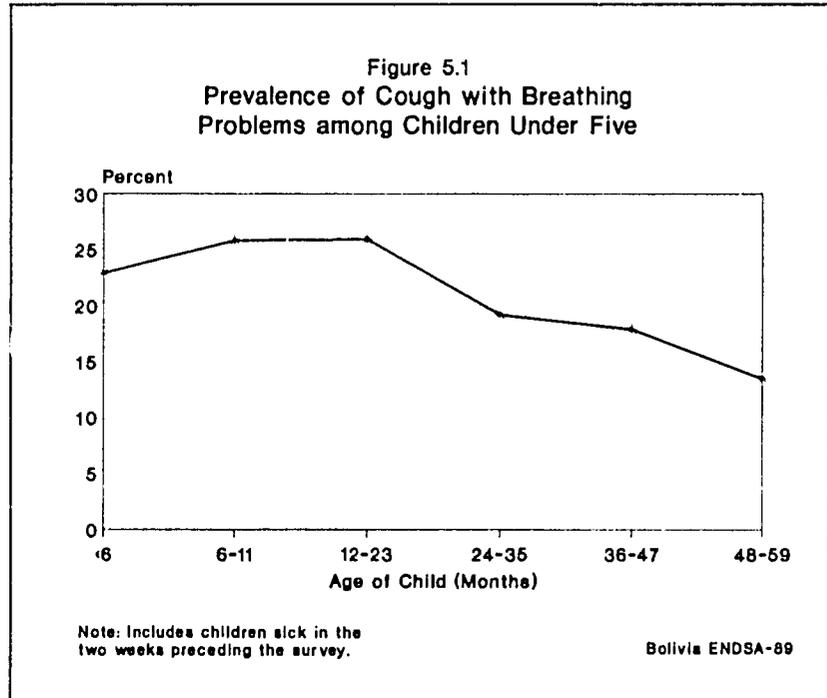
Note: Figures are for children born 1-59 months before the survey. *Breathing problems* refers to rapid and/or difficult breathing.

and/or rapid breathing and for children who only had a cough. The prevalence rate refers to all children who were reported to have had a cough during the two weeks preceding the survey, including the children with a cough in the past 24 hours.

Approximately half of all the children with cough were also reported to have had breathing problems (i.e., difficult and/or rapid breathing). Only a few differences from this pattern emerge when the prevalence rates are examined according to socioeconomic characteristics. A higher proportion of cough episodes are accompanied by breathing problems among children under six months of age, from the Llanos region, and from households without a latrine. A lower proportion of breathing problems is found among children from the Valle region, from families with least media exposure, and from families reporting an Indian language as their primary language.

The following discussion of differences in prevalence rates refers to the children who were reported to have had both a cough and breathing problems. As seen in Tables 5.1 and 5.2, 20 percent of all children under five years were reported to have had a cough accompanied by breathing problems during the two weeks preceding the survey. Three-quarters of these children were ill during the 24 hours preceding the survey (data not shown).

There were differences in prevalence by the age of the child, with illness reported for about 25 percent of children under two years of age compared with only 14 percent of children four years of age (Figure 5.1). There were also marked regional differences, with a prevalence rate of 36 percent among children from the Llanos compared with 15 percent in the Valle and 17 percent in the Altiplano. There was also a higher reported prevalence rate among children from families with a latrine as opposed to those with either a flush toilet or no facilities. Lower prevalence rates were reported among respondents who spoke an Indian language as their primary tongue than among Spanish-speakers. There were only small differences in prevalence for the remaining variables, including sex, urban-rural residence, and the mother's level of education.



Treatment

Children with cough and breathing problems were much more likely to have been in contact with the health system (29 percent, see Tables 5.3 and 5.4) than children reported to have only cough (16 percent, data not shown). Figure 5.2 shows the proportion of children who were taken somewhere for treatment according to whether the child had cough only, or cough with breathing problems. Pharmacies and traditional practitioners were rarely mentioned as sources of care. Overall, public hospitals were visited most frequently, followed by private physicians, health centers, and private hospitals.

Treatment patterns vary markedly by socioeconomic characteristics (Table 5.3). Children of mothers with higher levels of education were much more likely to be taken for treatment to a health facility than children of mothers with little or no education. Figure 5.3 shows that among children with cough and breathing problems, there is a strong positive relationship between the level of the mother's education and the utilization rates of health services. Half the children of mothers with the highest level of education (nine or more years of schooling) were taken for health care, compared with only 12 percent of the children of mothers with no education. More urban children receive health care for cough and breathing problems (37 percent) than do children from rural areas (20 percent). An even greater differential is observed according to the respondent's primary language: among those who usually speak one of the Indian languages, only 7 percent of the sick children were taken for care, compared with 34 percent of those who usually speak Spanish.

Table 5.3 Place of treatment and type of treatment for children with cough and breathing problems by socioeconomic characteristics: Among children under five with cough and breathing problems in the two weeks preceding the survey, the percentage who were taken to a health facility and the type of treatment received, by socioeconomic characteristics, Bolivia ENDSA, 1990

Characteristic	Percentage taken to a health facility ^a	Place of treatment				Type of treatment			Number of children
		Public hospital	Health center	Physician	Private hospital	Injection	Tablets	Syrup	
RESIDENCE									
Urban	37.3	11.7	10.5	11.1	4.1	16.3	6.8	32.3	537
Rural	19.8	9.8	4.5	4.9	0.6	6.7	6.9	17.1	515
REGION									
Altiplano	23.8	6.7	7.8	6.9	2.5	8.1	7.4	17.9	441
Valle	28.0	16.4	4.1	5.9	1.7	12.4	9.1	24.6	207
Llanos	34.5	12.3	9.2	10.5	2.5	15.0	5.2	32.6	405
MOTHER'S EDUCATION									
None	12.4	8.3	3.6	0.2	0.4	6.8	3.6	10.1	184
1-5 years	25.1	11.4	5.7	6.0	2.0	10.8	5.7	22.4	517
6-8 years	33.5	11.6	10.6	8.8	2.4	12.1	11.4	27.7	173
9+ years	51.4	10.5	14.4	21.5	5.3	18.2	9.3	44.5	179
FATHER'S OCCUPATION									
White collar	41.8	11.1	12.2	13.5	5.2	15.5	8.8	36.3	320
Blue collar	33.5	12.8	8.4	10.2	2.2	14.9	8.1	28.5	321
Agriculture	13.9	8.1	3.5	2.0	0.3	5.8	3.9	11.7	345
Other	20.3	13.5	3.4	3.5	0.0	6.4	6.4	20.7	67
MOTHER WORKING									
Yes	38.0	16.8	8.3	12.1	1.1	15.1	9.2	34.7	167
No	27.0	9.6	7.5	7.3	2.6	10.9	6.4	23.0	886
MEDIA EXPOSURE									
TV daily	39.3	11.2	10.8	13.2	4.2	14.7	7.7	33.3	467
Radio daily	25.8	13.2	6.8	5.2	0.6	12.1	8.0	21.4	365
Neither	11.2	5.8	2.1	1.8	1.5	4.0	3.1	12.7	220
LANGUAGE									
Spanish	34.0	11.8	9.4	10.0	2.9	13.6	7.6	29.7	848
Indian	7.0	6.6	0.3	0.0	0.0	3.0	3.6	4.9	205
DRINKING WATER									
Piped	35.9	13.3	9.4	10.2	3.2	13.9	8.3	30.0	635
Non-piped	17.8	6.9	4.9	4.9	1.1	8.0	4.7	17.1	418
SANITATION									
Flush toilet	44.7	11.8	10.6	19.2	3.1	18.6	6.8	38.9	279
Latrine	34.5	13.1	9.0	10.1	2.3	15.6	5.8	32.0	155
Other, none	17.0	9.0	5.2	0.9	2.0	5.6	7.4	13.5	509
TOTAL	28.7	10.8	7.6	8.1	2.4	11.6	6.9	24.9	1053

Note: Figures are for children born 1-59 months before survey. *Breathing problems* refers to rapid and/or difficult breathing.

^aPublic or private hospital, health center, and/or private doctor

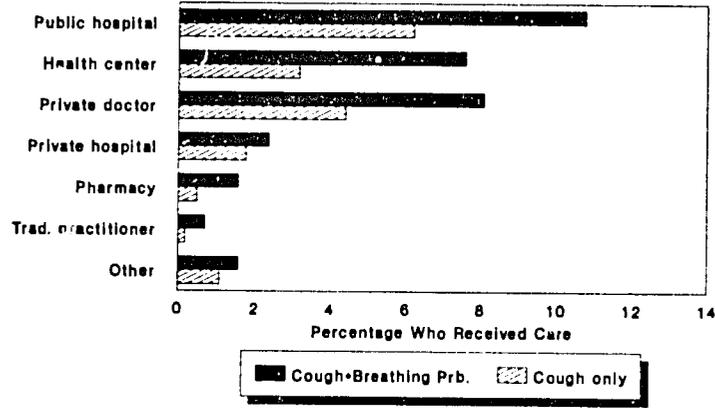
Table 5.4 Place of treatment and type of treatment for children with cough and breathing problems by demographic characteristics: Among children under five with cough and breathing problems in the two weeks preceding the survey, the percentage who were taken to a health facility and the type of treatment received, by demographic characteristics, Bolivia ENDSA, 1990

Characteristic	Percentage taken to a health facility ^a	Place of treatment				Type of treatment			Number of children
		Public hospital	Health center	Physician	Private hospital	Injection	Tablets	Syrup	
SEX									
Male	28.7	11.9	7.2	7.9	1.7	11.6	7.2	26.5	542
Female	28.8	9.5	8.0	8.2	3.1	11.6	6.5	23.1	511
CHILD'S AGE									
0-5 months	32.2	6.9	8.1	12.5	4.6	10.5	8.3	25.2	111
6-11 months	35.2	13.5	10.7	8.5	2.4	13.2	6.7	26.4	148
12-23 months	26.2	10.4	6.5	7.6	1.9	13.4	4.4	24.3	288
24-35 months	29.4	9.4	11.8	5.0	3.2	9.3	10.7	27.3	195
36-47 months	29.0	12.7	4.8	10.2	1.3	9.4	8.0	28.5	178
48-59 months	22.9	11.0	3.7	6.7	1.6	12.9	3.8	15.9	133
MOTHER'S AGE									
15-19 years	38.0	21.2	8.6	8.3	0.0	9.9	10.3	33.0	65
20-34 years	30.6	10.5	7.6	9.8	2.8	12.4	7.1	26.3	760
35+ years	19.8	8.7	7.3	2.2	1.6	9.2	4.9	18.0	228
BIRTH ORDER									
First	36.1	15.0	7.8	12.5	0.8	9.1	9.2	31.9	210
2-3	31.7	10.0	9.3	8.8	3.6	14.4	6.1	25.5	332
4-5	29.3	10.6	7.1	9.1	2.7	12.9	6.7	26.6	258
6+	18.3	8.4	5.8	2.4	1.7	8.9	6.0	16.5	253
BIRTH INTERVAL									
<24 months	26.2	13.0	7.1	4.0	2.1	12.7	6.0	25.7	246
24-35 months	26.8	8.9	6.7	9.0	2.4	11.1	7.8	22.4	310
36-47 months	22.5	4.6	7.6	6.8	3.5	11.8	6.0	16.4	125
48+ months	32.0	10.1	9.9	7.9	4.0	14.0	3.9	26.2	159
TOTAL	28.7	10.8	7.6	8.1	2.4	11.6	6.9	24.9	1053

Note: Figures are for children born 1-59 months before survey. *Breathing problems* refers to rapid and/or difficult breathing.

^aPublic or private hospital, health center, and/or private doctor.

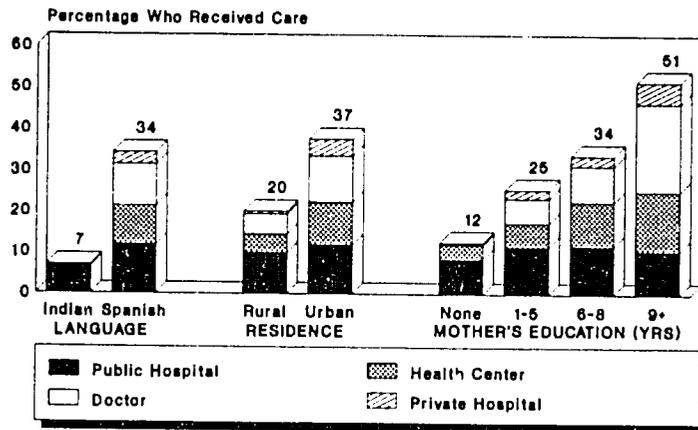
Figure 5.2
Health Care Received by Children with Cough by Type of Cough



Note: Includes children sick in the two weeks preceding the survey.

Bolivia ENDSA-89

Figure 5.3
Health Care Received by Children with Cough and Breathing Problems by Characteristics of Mother



Note: Includes children sick in the two weeks preceding the survey.

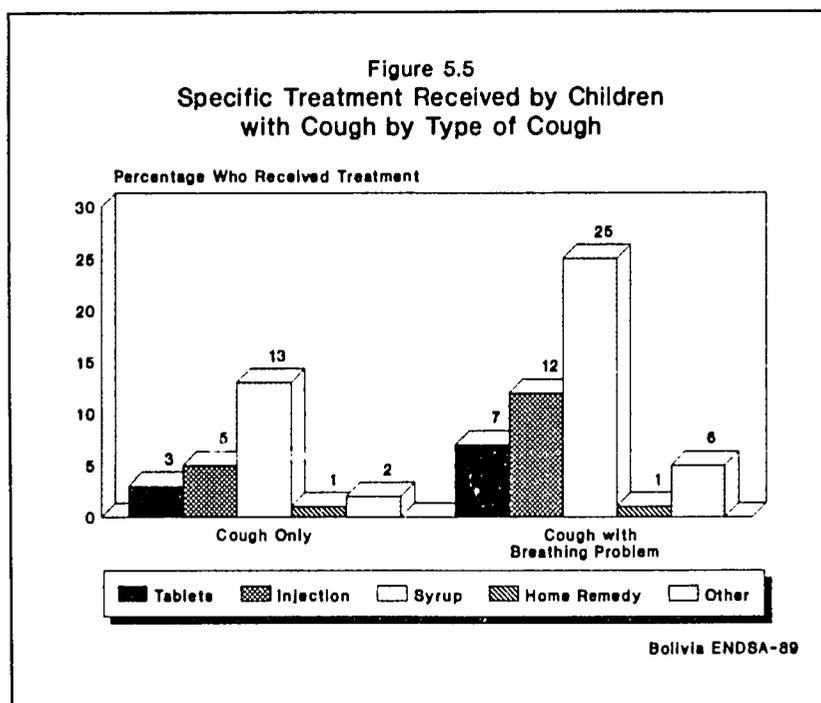
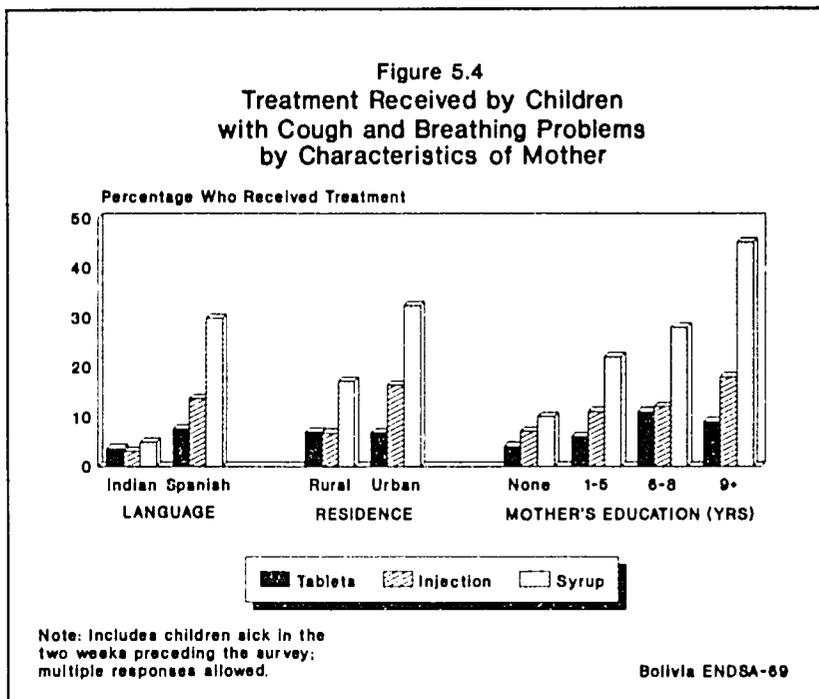
Bolivia ENDSA-89

Differences according to demographic characteristics are less marked (Table 5.4). A smaller proportion of children of mothers age 35 years or older and of birth order 6 and higher were taken for treatment.

A positive correlation was found between the level of the mother's education and the percentage of children with a cough and breathing problems who received treatment (Figure 5.4). Higher treatment rates were observed for urban compared with rural children and for children from families in which Spanish was the primary language.

Ideally, children with signs and symptoms of ALRI, or pneumonia, should be treated with antibiotics, since bacteria are the most common cause of fatal pneumonia. However, mother's recall may not be adequate to determine the proportion of children who were given antibiotics.

While injections are likely to represent treatment with antibiotics, other types of medication are often given as syrups or tablets. The type of treatment differed depending on the type of cough (Figure 5.5). Among children with both cough and breathing difficulties, 12 percent received an injection; this figure was just 5 percent for children with cough only. Tablets were also given more frequently to children with breathing problems (7 percent) than to those with cough only (3 percent).



There was little difference among the various health facilities in the types of treatment given to children with a cough accompanied by breathing problems (Table 5.5 and Figure 5.6). However, among children with cough only, those who were taken to a public hospital or health center were much more likely to have received an injection (41 percent) than were children taken to a private hospital or doctor (17 percent).

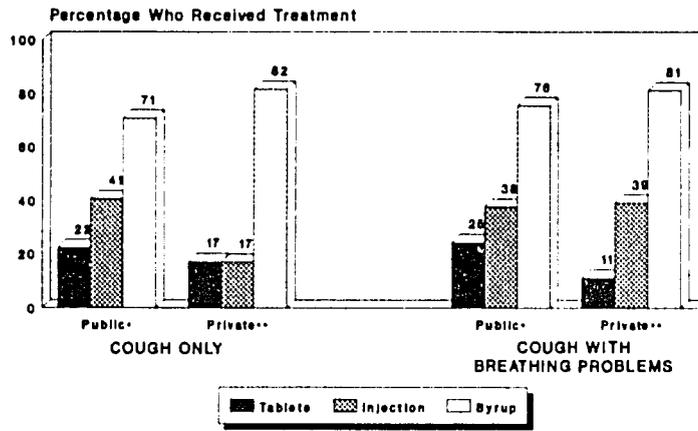
Table 5.5 Type of treatment received for respiratory illness in children according to the place where treatment was sought: Among children under five with cough, the percentage who received specific treatment by place of treatment, and severity of the cough, Bolivia ENDSA, 1989

Place of treatment	Injection	Tablets	Syrup	Home remedy	Other	No treatment	Number of children
COUGH ONLY							
Public hospital	52.4	17.7	75.0	5.5	3.5	0.0	66
Health center	18.7	31.0	62.8	0.0	8.7	0.0	35
Physician	20.7	17.1	74.7	3.0	13.3	2.4	47
Private Hospital	8.6	18.1	98.9	0.0	2.5	0.0	19
Pharmacy	b	b	b	b	b	b	b
Traditional practitioner	b	b	b	b	b	b	2
Other	b	b	b	b	b	b	12
COUGH WITH BREATHING PROBLEMS^a							
Public hospital	38.7	25.1	77.9	1.7	6.3	0.0	113
Health center	36.5	23.5	72.1	4.3	17.7	0.0	80
Physician	40.4	11.4	80.3	2.2	18.6	0.0	85
Private hospital	35.6	10.8	84.5	0.0	20.6	2.5	25
Pharmacy	b	b	b	b	b	b	17
Traditional practitioner	b	b	b	b	b	b	7
Other	b	b	b	b	b	b	17

^aCough accompanied by rapid and/or difficult breathing

^bLess than 20 cases

Figure 5.6
 Specific Treatment Received by Children
 with Cough by Type of Cough and
 Type of Facility



* Public hospital or doctor
 ** Private hospital or health center

Bolivia ENDSA-89

CHAPTER 6

NUTRITIONAL STATUS

Undernutrition is common among children in Bolivia. Thirty-eight percent of children age 3-36 months were classified as stunted (very short for their age), while 13 percent were considered underweight (low weight-for-age). Wasting (low weight-for-height), was not found to be a problem among children in any subgroup.

Substantial deterioration in nutritional status occurred during the first two years of life. The prevalence of stunting increased markedly both during the first and second years of life. While less than 10 percent of the youngest children were stunted, about one-fifth of those age 6-12 months and half of the children two years of age were stunted.

There were large differences in the prevalence of undernutrition according to socioeconomic and demographic characteristics. Forty-five percent of rural children were stunted, compared with 32 percent of urban children. The differences were even greater for mother's education and increased with age: only a small percentage of the youngest children (3-5 months) were stunted (regardless of mother's education); however, among children 33-36 months, 27 percent of those whose mothers had nine or more years of education were stunted and 79 percent of those whose mothers had no education.

6.1 Methodology

All children age 3 through 36 months were weighed and measured by specially trained personnel who accompanied the interviewer teams during the survey. They were taught to obtain the child's weight to within 100 grams using a spring balance scale and to measure the child's height to within 5 mm using a measuring board. Although this report uses the term "height," the children were actually measured lying down on an adjustable wooden board as recommended by the United Nations (1986). Emphasis was also placed on obtaining the correct year and month of birth for the children. Since age misreporting can result in the misclassification of a child as either malnourished or well-nourished (depending on the direction of the error), the interviewers were trained to obtain the correct birth date. Children without a reported month of birth were excluded from this analysis.

For purposes of comparison, the anthropometric data are expressed in terms of the reference population recommended by the World Health Organization (WHO).¹ Use of the reference population allows a comparison between children of different ages from different subgroups within the population and facilitates comparison with other survey data. Work by Martorell and Habicht (1986) has shown the applicability of this international reference population to infants and young children from many different populations.

As recommended by WHO, the following three indices are used to describe the child's anthropometric status: height-for-age, weight-for-age, and weight-for-height. In the case of the first two indices, the child's measurement is compared with the reference population for the appropriate age and, if it is more than two standard deviations below the median for the reference population, the child is classified as undernourished. The term "stunted" is applied to children whose height-for-age falls in this range (i.e., children who are very short), while "underweight" is the term used to describe children whose weight-for-age falls below this cut-off point. For the third indicator, the child's weight is related to his or her height (weight-for-height), and if the ratio is more than two standard deviations below the median for

¹ Developed by the U.S. Centers for Disease Control based on data from the U.S. National Center for Health Statistics (Dibley et al., 1987a; Dibley et al., 1987b).

the reference population, the child is classified as "wasted" (i.e., very thin). In a well-nourished population such as the reference population only 2.3 percent of the infants and young children are more than two standard deviations below the median. Hence, the percentage of children who are below the cut-off point gives an indication of the degree of undernutrition in a population or in a subgroup of children.

Stunting reflects *chronic* undernutrition, while wasting is often used as an indicator of *acute* undernutrition. Weight-for-age is a composite measure which captures both types of undernutrition. Undernutrition is often caused by inadequate nutritional intake and by recurrent bouts of infectious disease.

6.2 Findings

Levels of Undernutrition

The anthropometric status of 2,536 children age 3 through 36 months is included in this analysis; this is 83 percent of the children in this age group. The remaining 17 percent were not included for the following reasons: the child was not available when the measurer visited the house, only weight or only height was recorded, or the height or weight recorded was grossly improbable, due either to a measurement or recording error.

The survey showed no evidence indicating misreporting of birth dates or age heaping (on commonly preferred months such as 6, 12, or 24). The children were evenly distributed throughout the age group with the exception of the first and the last months, which had somewhat smaller numbers of children.

When the height-for-age and weight-for-age of young children in Bolivia are related to the reference population, it is clear that a large percentage of the children are more than two standard deviations below the median (Table 6.1 and Figure 6.1). Fully 38 percent of the children were stunted, and 13 percent were classified as underweight. However, they were not thinner than the children in the reference population, since less than 2 percent were below the cut-off point for weight-for-height.

Figure 6.2 shows how nutritional status deteriorates with increasing age in the first two years of life. The percentage of children classified as stunted increased steadily from less than 10 percent of children 3-6 months of age to half of all children as they approached their second birthday; thereafter, it plateaued. The percentage of children classified as underweight increased from less than 2 percent for the youngest children to one-fifth of children in the beginning of their second year of life. During the remainder of that year, the proportion of underweight children remained fairly constant, and at the end of the second year a decline commenced which continued into the third year. The deterioration in nutritional status appears to halt earlier in terms of weight (weight-for-age) than in terms of linear growth (height-for-age). Wasting was uncommon for children of any age.

Anthropometric data were collected in six DHS surveys in Latin American and the Caribbean during the period 1986-89. The proportion of children 3-35 months classified as stunted was higher in Bolivia than in northeast Brazil (29 percent), Colombia (25 percent), the Dominican Republic (21 percent) and Trinidad and Tobago (5 percent). However, Guatemala had the highest level of stunting overall (58 percent).

Table 6.1 Prevalence of undernutrition by socioeconomic characteristics: Percentage of children age 3-36 months who were classified as stunted, underweight, or wasted by socioeconomic characteristics, Bolivia ENDSA, 1989

Characteristic	Percentage of children classified as:			Number of children
	Stunted	Underweight	Wasted	
RESIDENCE				
Urban	31.5	10.7	1.2	1273
Rural	45.0	15.9	2.0	1264
REGION				
Altiplano	44.0	13.4	1.6	1257
Valle	40.7	16.1	1.5	736
Llanos	21.4	9.5	1.7	544
MOTHER'S EDUCATION				
None	56.0	23.1	2.8	456
1-5 years	41.9	13.1	1.1	1197
6-8 years	29.7	11.3	1.0	373
9+ years	19.9	6.6	2.2	511
FATHER'S OCCUPATION				
White collar	26.2	8.8	1.0	698
Blue collar	39.5	12.6	1.6	774
Agriculture	48.7	18.1	2.0	862
Other	30.3	11.4	1.8	202
MEDIA EXPOSURE				
TV daily	28.1	8.3	1.1	1136
Radio daily	44.2	14.9	1.3	826
Neither	49.7	21.0	3.1	574
LANGUAGE				
Spanish	32.6	10.0	1.5	1874
Indian	54.1	22.8	2.0	662
DRINKING WATER				
Piped	34.8	10.6	1.2	1551
Non-piped	43.5	17.6	2.2	986
SANITATION				
Flush toilet	19.5	6.7	1.7	650
Latrine	30.8	12.1	1.4	459
Other, none	49.1	16.7	1.6	1427
TOTAL	38.2	13.3	1.6	2536

Note: Children were classified as stunted, underweight, or wasted when their z-score was 2 or more standard deviations below the median for the WHO/CDC/NCHS International Reference Population (for height-for-age, weight-for-age, or weight-for-height).

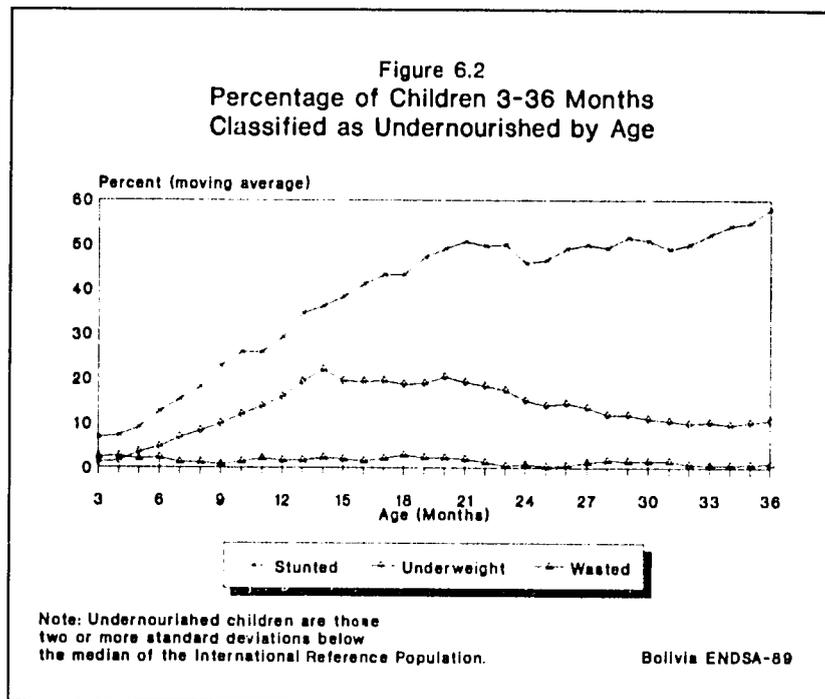
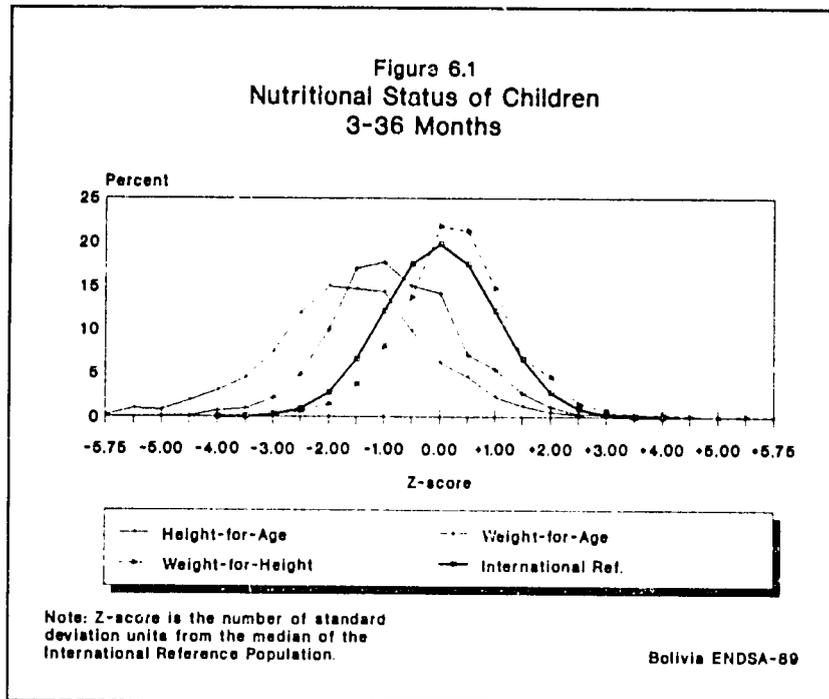


Table 6.2 compares the results of the ENDSA with a national survey carried out in 1981. The age groups considered are largely comparable. The results of the two surveys are very similar, indicating that the nutritional status of children under three years of age has remained the same in Bolivia during the 1980s, in both urban and rural areas. The only change is a decrease in the proportion who were underweight in rural areas from 21 to 16 percent.

Table 6.2 Prevalence of undernutrition in 1981 and 1989 by residence: Percentage of children who were stunted, underweight, or wasted in 1981 (children age 6-36 months) and 1989 (children age 3-36 months) by residence, Bolivia

Place of residence	Year	Stunted	Underweight	Wasted	Number of children
UPBAN	1981	29.7	11.5	1.1	1597
	1989	31.5	10.7	1.2	1273
RURAL	1981	44.5	20.7	1.0	1886
	1989	45.0	15.9	2.0	1989

Note: Children were classified as stunted, underweight, or wasted when their z-score was 2 or more standard deviations below the median for the WHO/CDC/NCHS International Reference Population (for height-for-age, weight-for-age, or weight-for-height).

Source of data for 1981: National Institute of Food and Nutrition, Government of Bolivia; and USAID *Bolivia National Nutritional Status Data Survey, 1981: Summary Report*, Washington, D.C. 1982.

Socioeconomic and Demographic Differentials

For most of the socioeconomic and demographic variables, there were marked differences in the prevalence of undernutrition (Tables 6.1 and 6.3). In most instances, the same pattern was found for both stunted and underweight children. The two exceptions were the variables for age of child (discussed above), and the region in which the respondent lived. There was little evidence of wasting in any of the subgroups.

All the demographic variables demonstrated the expected pattern. Higher maternal age was associated with increasing undernutrition: 30 percent of children whose mothers were 15 to 19 years were stunted compared with 43 percent of children whose mothers were 35 years or older. A similar pattern was seen for the percentage of children classified as underweight.

As for the length of the preceding birth interval, it was found that children born 48 months or more after the previous child had the lowest rates of undernutrition, with 29 percent classified as stunted and 9 percent as underweight. Over 40 percent of children born 24 to 47 months after the previous child were stunted, and almost 15 percent were underweight.

Birth order shows similar results: nutritional status was generally worse among children of higher birth order. Thirty-one percent of firstborn children were categorized as stunted and 12 percent as underweight; among children with a birth order of six and higher, 45 percent were stunted and 18 percent were underweight. Both types of undernutrition were slightly less common among girls than among boys.

There were also differences in the prevalence of undernutrition according to the place of residence. Urban children fared better than their rural counterparts, with 31 percent stunted and 11 percent underweight, compared with 45 and 16 percent, respectively, in rural areas. Regional differences were even greater, with children from the Llanos having the lowest rates of undernutrition. The other two regions had similar overall rates of undernutrition, but the components differed slightly, with the highest

Table 6.3 Prevalence of undernutrition by demographic characteristics: Percentage of children age 3-36 months who were classified as stunted, underweight, or wasted, by demographic characteristics, Bolivia ENDSA, 1989

Characteristic	Percentage of children classified as:			Number of children
	Stunted	Underweight	Wasted	
SEX				
Male	40.2	15.0	1.7	1257
Female	36.3	11.7	1.5	1280
CHILD'S AGE				
3-5 months	7.6	1.5	2.8	194
6-11 months	20.3	8.6	1.2	498
12-23 months	42.4	19.1	2.1	985
24-36 months	50.7	12.1	1.0	859
MOTHER'S AGE				
15-19 years	30.5	13.7	1.6	182
20-34 years	37.5	12.1	1.7	1809
35+ years	43.1	17.2	1.2	546
BIRTH ORDER				
First	31.4	11.9	1.8	533
2-3	35.1	10.5	1.7	819
4-5	42.3	13.6	1.3	598
6+	44.6	18.3	1.7	586
BIRTH INTERVAL				
<24 months	43.8	16.9	1.2	523
24-35 months	42.2	14.0	2.0	709
36-47 months	44.0	13.9	0.9	343
48+ months	28.7	9.3	1.7	426
TOTAL	38.2	13.3	1.6	2536

Note: Children were classified as stunted, underweight, or wasted when their z-score was 2 or more standard deviations below the median for the WHO/CDC/NCHS International Reference Population (for height-for-age, weight-for-age, or weight-for-height).

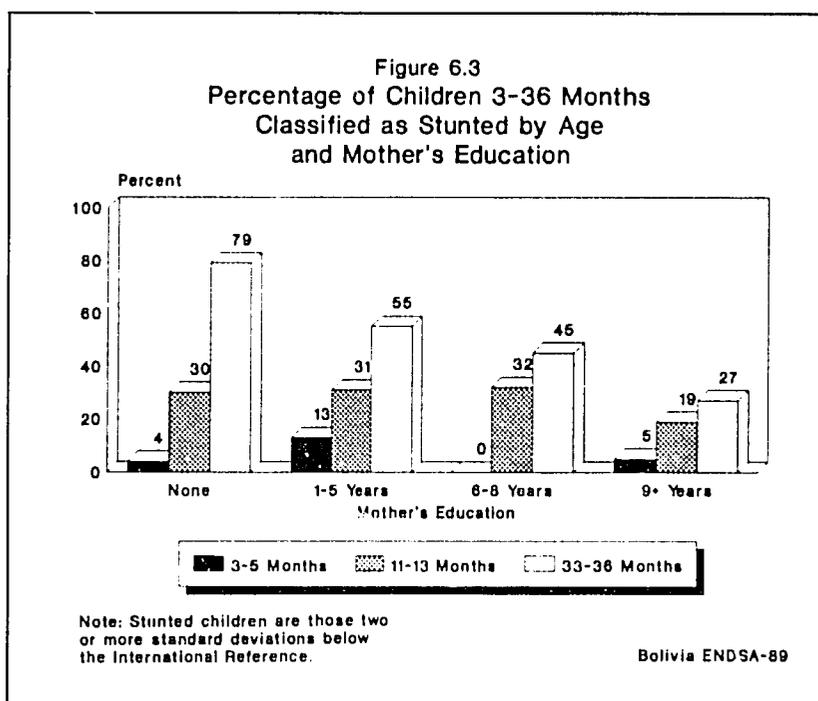
proportion of stunting (44 percent) found among children in the Altiplano and the highest proportion of underweight children (16 percent) in the Valle. There was a much higher rate of undernutrition among children whose mothers spoke an Indian language as their primary tongue than among those whose mothers spoke Spanish.

For the variables reflecting socioeconomic level, higher rates of undernutrition were found for children at lower socioeconomic levels. Over half (56 percent) of the children whose mothers had received no education were stunted, compared with just 20 percent of children whose mothers had attended nine or more years of school. The corresponding percentages for children classified as underweight were 23 and 7 percent, respectively. Not surprisingly, the percentage of children who were undernourished was lowest among the group who watched television daily and highest among those who were exposed to neither radio nor television. With regard to the father's occupation, the lowest

percentage of undernutrition was found among children of white collar workers and the highest among those listing agriculture. There were lower rates of undernutrition when the drinking water was piped and a flush toilet was available.

In a further analysis, the extent of stunting was examined both by the child's age and by the mother's level of education (Figure 6.3). The percent of children classified as very short for their age was relatively low for the youngest age group at all levels of education. However, there were marked differences as the children grew older, with almost four of five children in the oldest age group classified as stunted when the mother had received no education, compared with only about a quarter of the children whose mothers had gone to school for nine or more years.

Several of the demographic and socioeconomic variables discussed above are associated, and a more extensive analysis is needed to elucidate the causative relationships (Bicego and Boerma, 1990).



CHAPTER 7

INFANT FEEDING

Almost all children (96 percent) are breastfed in Bolivia. Overall, the median duration of breastfeeding was 17 months although there was substantial variation between population subgroups. For example, the median duration was 12 months for infants whose mothers had 9 or more years of schooling, compared with 21 months among infants of mothers lacking education.

Over half of the infants were breastfed exclusively for the first 3 months of life. By the end of the first year, about 60 percent of infants were receiving both breast milk and solid or mushy foods. At the time of the survey, 43 percent of children age 18-23 months were still breastfed. Powdered milk, a common breast milk supplement, was given to 20-25 percent of breastfed children. One-third of all breastfed children were also bottle fed.

7.1 Methodology

The respondents were asked whether their child(ren) had ever been breastfed and, if so, for how long. The reasons for never breastfeeding and for stopping breastfeeding were also determined. These questions were asked with regard to each of the respondent's children born during the five years preceding the survey, regardless of whether the child was alive at the time of the interview.

For last-born children the current status regarding breastfeeding was recorded, and the following information was collected about breastfeeding practices during the 24-hour period before the interview: 1) the number of times the child was fed at the breast, 2) the types of supplemental foods and liquids given, and 3) the number of times each of these foods and liquids were given. The interviewer inquired about the following specific items: plain water, water with herbs, juice or sugar water, powdered milk, cow's or goat's milk, other liquids, and solid food. The mothers were also asked if any of these were given in a bottle with a nipple.

The median duration of breastfeeding was calculated based on the current breastfeeding status of children alive at the time of the survey and was defined as the age when 50 percent of children did not receive any breast milk.

7.2 Findings

Prevalence and Duration of Breastfeeding

Fully 96 percent of all babies in Bolivia were breastfed for a period of time (ever breastfed). There were negligible differences in the percentage of children ever breastfed according to socioeconomic and demographic characteristics (Tables 7.1 and 7.2).

Based on current status data, the median duration of breastfeeding was estimated at 17 months, but it differed considerably between various subgroups. For example, the median duration was only 12 months for children whose mothers had nine or more years of education, compared with 21 months among those whose mothers lacked education. Similar, or slightly smaller differentials were found for the other socioeconomic characteristics that were examined (Table 7.1). Longer median durations of breastfeeding, of 18 to 20 months, were found in rural areas, in the Altiplano, among families not exposed to television and radio, and among respondents whose primary tongue was an Indian language. Shorter median durations, of about 16 months, were found among urban dwellers, families with television, white collar workers, and respondents who spoke Spanish.

Table 7.1 Initiation and duration of breastfeeding by socioeconomic characteristics: Percentage of children under five ever breastfed and median duration of breastfeeding by socioeconomic characteristics, Bolivia ENDSA, 1989

Characteristic	Percentage ever breastfed	Median duration of breastfeeding (months)	Percentage <4 months breastfed exclusively
RESIDENCE			
Urban	95.1	15.4	46.5
Rural	97.5	18.1	65.4
REGION			
Altiplano	97.0	19.7	73.2
Valle	96.8	16.4	51.8
Llanos	94.2	13.2	30.8
MOTHER'S EDUCATION			
None	97.7	20.6	68.9
1-5 years	96.8	18.3	60.5
6-8	95.1	16.0	51.3
9 or more	94.4	11.7	40.7
FATHER'S OCCUPATION			
White collar	95.6	15.9	41.5
Blue collar	95.7	18.8	64.6
Agriculture	97.3	17.1	65.1
Other	96.7	17.0	49.6
MEDIA EXPOSURE			
TV daily	95.7	15.6	49.5
Radio daily	96.7	17.5	61.6
Neither	96.9	20.0	63.2
LANGUAGE			
Spanish	95.7	15.8	47.8
Indian	97.6	19.9	76.3
DRINKING WATER			
Piped	96.1	16.1	57.2
Non-piped	96.7	18.0	55.4
SANITATION			
Flush toilet	95.1	14.3	45.5
Latrine	94.9	15.0	40.7
Other, none	97.4	19.3	66.9
TOTAL	96.4	16.9	56.4
NUMBER OF CHILDREN	5731	5161	308

Note: Ever-breastfed status refers to all children born in five years preceding the survey (including deceased children). Median duration is based on the current breastfeeding status of living children born 1-59 months before the survey.

Table 7.2 Initiation and duration of breastfeeding by demographic characteristics: Percentage of children under five ever breastfed and median duration of breastfeeding by demographic characteristics, Bolivia ENDSA, 1989

Characteristic	Percentage ever breastfed	Median duration of breastfeeding (months)	Percentage <4 months breastfed exclusively
SEX			
Male	95.6	17.2	54.9
Female	97.0	16.6	58.2
MOTHER'S AGE			
15-19 years	94.6	16.9	56.4
20-34 years	96.6	16.4	57.7
35+ years	95.8	21.1	50.5
BIRTH ORDER			
First	95.7	14.4	54.2
2-3	96.0	17.0	57.5
4-5	97.2	19.1	55.8
6+	96.4	18.0	57.2
BIRTH INTERVAL			
<24 months	94.7	17.3	72.2
24-35 months	97.3	18.6	60.3
36-47 months	98.1	17.0	49.8
48+ months	96.2	15.9	37.4
TOTAL	96.4	16.9	56.4
NUMBER OF CHILDREN	5731	5161	308

Note: Ever-breastfed status refers to all children born in the five years preceding the survey (including deceased children). Median duration is based on the current breastfeeding status of living children born 1-59 months before the survey.

Similar differentials exist for the demographic characteristics examined (Table 7.2). Children of birth order 4 and higher, children born after a birth interval of 24-47 months, and children of mothers 35 years and older were breastfed for a median duration of 18 to 21 months. In comparison, firstborn children, children born after a birth interval of less than 24 months, and children of mothers under 35 years of age had a shorter median duration of breastfeeding (14 to 17 months).

Reasons for Never Breastfeeding and for Stopping Breastfeeding

Over one-third of children who were never breastfed died during the first week of life (Figure 7.1). These children were probably too ill to breastfeed. For an additional 3 percent who died at an older age, the child's death was listed as the reason for never breastfeeding. Other reasons for never breastfeeding fall into three main categories: the infant's illness or refusal to suckle (11 percent), the mother's illness and reported inability to nurse the infant (42 percent), and other factors, including the mother working (8 percent).

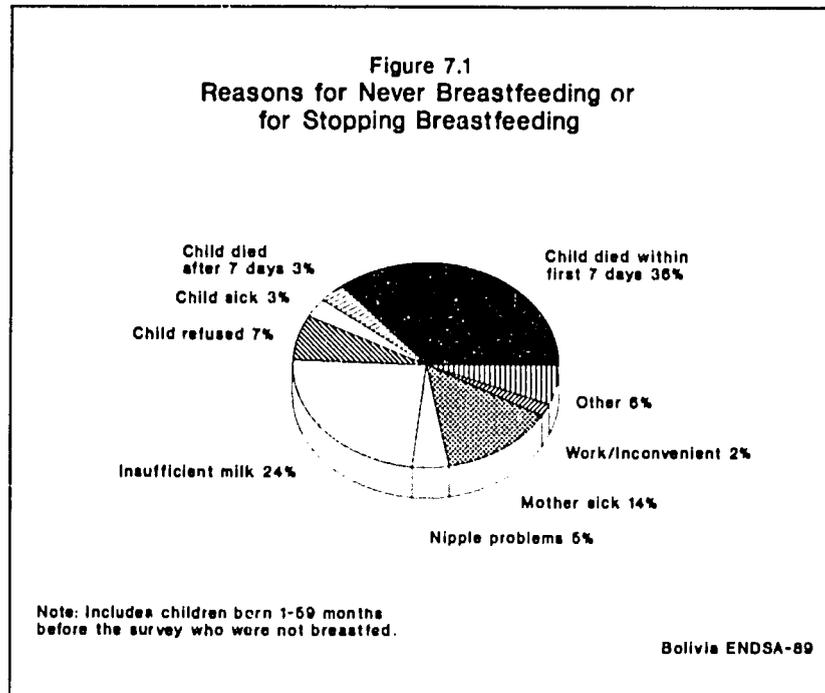


Table 7.3 and Figure 7.2 show the reasons for stopping breastfeeding among children who were still alive at the time of the interview. Most mothers stopped breastfeeding because they felt that the child had reached weaning age (60 percent). The remaining reasons for stopping can again be divided into three main categories related to: illness in the child or refusal to continue breastfeeding (7 percent), illness in the mother, reported inability to breastfeed and new pregnancy (25 percent), and other factors, including the mother's job (7 percent).

Breastfeeding is known to be an important determinant of child survival. Therefore, it is of interest to examine the reasons for stopping breastfeeding among children who died (Table 7.3). Three-quarters of these mothers said that they stopped breastfeeding because the child died, or that the child was breastfed until death. Among the remaining 25 percent, the distribution of the reasons given was similar to that for living children (Figure 7.2). The only difference was as expected, a higher proportion of mothers who said they stopped because the child was sick and a smaller proportion who said they stopped because the child had reached weaning age.

Table 7.3 Reasons for stopping breastfeeding by survival status of child: Percent distribution of reasons for stopping breastfeeding by survival status among children born in the five years preceding the survey, Bolivia ENDSA, 1989

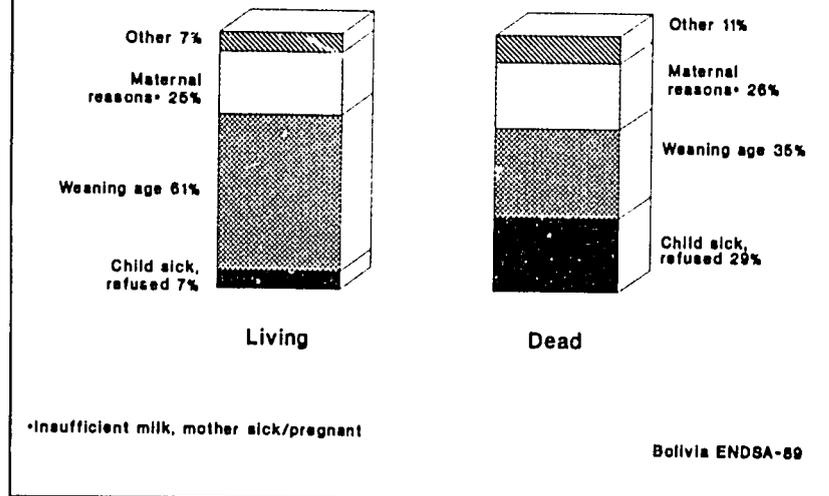
Reasons for stopping breastfeeding	Living children	Dead children
Child died/breastfed until death	--	75.3
Child sick	2.9	6.1
Child refused	4.0	1.0
Reached weaning age	61.1	8.6
Milk insufficient	7.6	1.7
New pregnancy	13.8	3.4
Mother sick	3.2	1.3
Mother works/inconvenient	3.4	1.1
Other	4.0	2.5
TOTAL	100.0	100.0
NUMBER OF CHILDREN	3473	444

Note: Figures are for children born 1-59 months before survey.

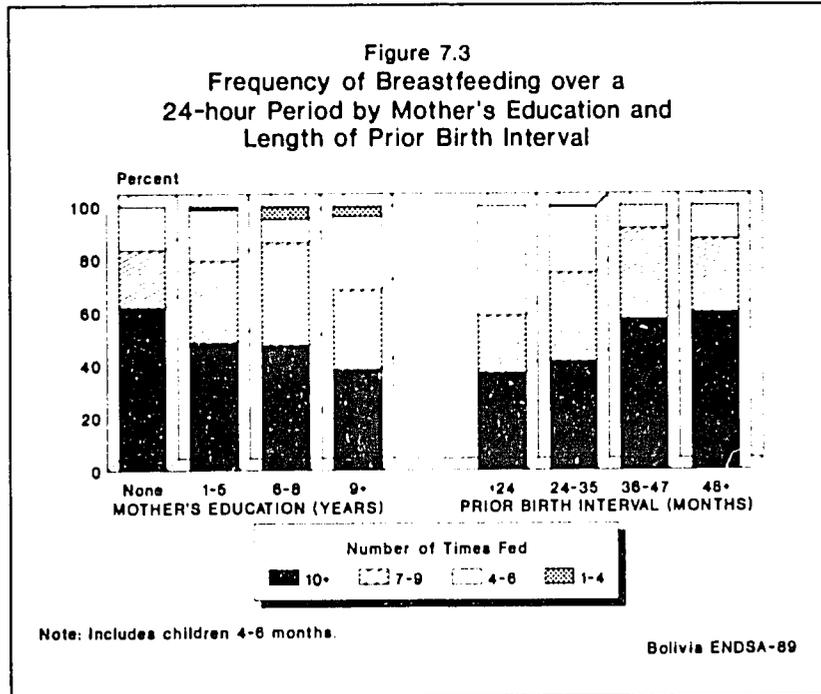
Frequency of Breastfeeding

Infants age 4-6 months were selected for the analysis of the frequency of breastfeeding, because breastfeeding should be well established and the processes of weaning has not yet begun in most cases. The frequency of breastfeeding in the 24 hours before the interview differed between subgroups. It tended to decrease with increases in the level of maternal education; over 60 percent of mothers without education nursed their infant ten times or more per day compared with 38 percent of mothers with nine or more years of schooling. However, when seven or more feedings was chosen as the cut-off point, there was no consistent trend.

Figure 7.2
Reasons for Stopping Breastfeeding by Survival Status of Children



The relationship between the frequency of breastfeeding and the length of the preceding birth interval is of interest because breastfeeding promotes longer periods of postpartum amenorrhea. Under the assumption that the frequency of breastfeeding observed for the index child reflects the mother's feeding practices for the preceding child, Figure 7.3 suggests a correlation between more frequent nursing and longer birth intervals. Almost 90 percent of infants born after a birth interval of at least 36 months were fed at least seven times per day, and 60 percent received ten or more feedings. The corresponding figures for infants born after a birth interval of less than 24 months were only 59 and 37 percent, respectively.

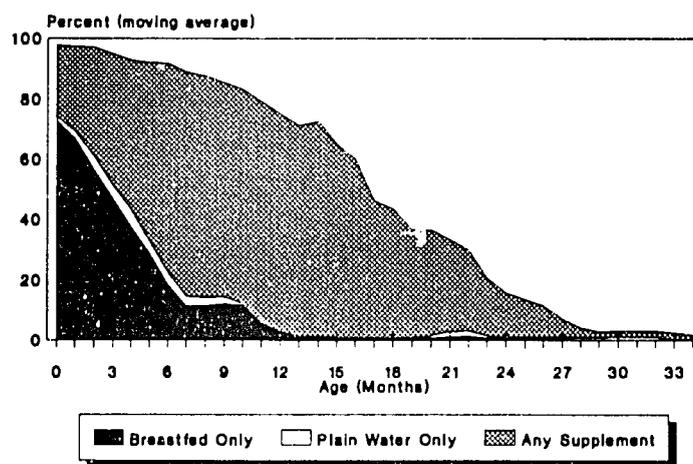


Supplementation and Bottle Feeding

About half the infants were breastfed exclusively for the first three months (Tables 7.1 and 7.2 and Figure 7.4). Exclusive breastfeeding was less common in urban areas and among more educated women. Particularly striking were the differences by region: exclusive breastfeeding for three months was more than twice as common in the Altiplano as in the Llanos, with the Valle intermediate.

The feeding practices by age for all children are summarized in Table 7.4 and Figure 7.5. Giving only water in addition to breast milk was relatively rare and was practiced by less than 5 percent of the mothers with children under 6 months of age. The percentage of infants who received both breast milk and solids increased from about 10 percent or less for infants under 5 months to 60 percent of infants age 9-17 months. The proportion of infants receiving both breast milk and other supplements (such as milk, sugar water or juice, herbal tea, and/or other liquids) but no solids ranged from one-third among babies under 5 months of age to 9 percent or less of children older than 9 months. At the time of the survey, 33 percent of children age 18-23 months were still breastfed.

Figure 7.4
Percentage of Children Still Breastfed
by Age of Child and Type of Supplement



Bolivia ENDSA-89

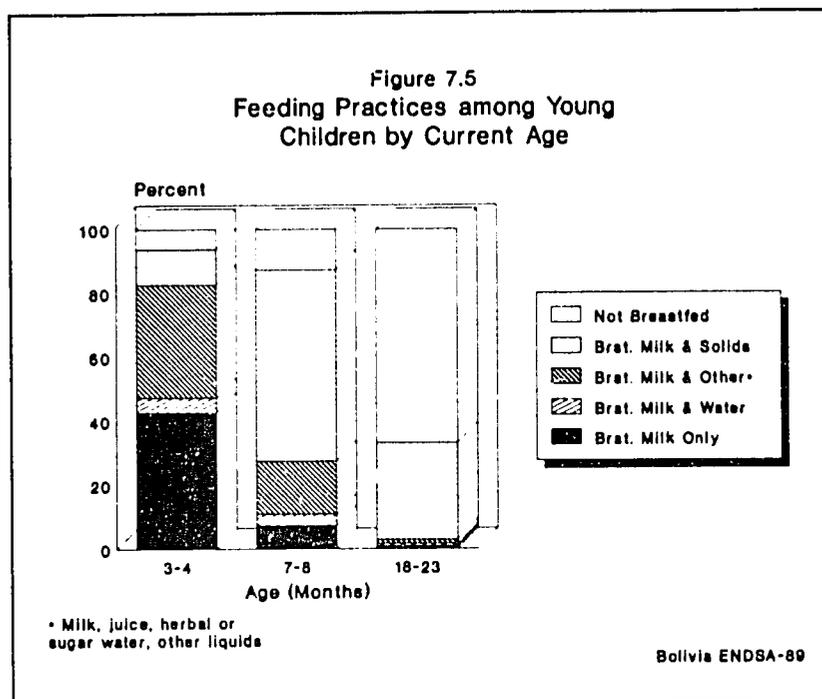
Table 7.4 Feeding practices for children under three years: Among children born less than three years preceding the survey, the percentage in each feeding category by current age, Bolivia ENDSA, 1989

Age of child	Not breastfed	Breast milk exclusively	Breast milk and water	Breast milk and solid food	Breast milk and other supplements ^a	Number of children
1-2 months	1.6	61.5	3.4	0.3	33.2	206
3-4 months	6.1	42.7	4.6	11.2	35.4	190
5-6 months	8.6	23.5	5.0	42.6	20.3	191
7-8 months	12.7	7.4	3.5	59.8	16.6	176
9-11 months	16.7	12.1	0.5	61.7	9.0	294
12-17 months	35.1	0.7	0.0	60.0	4.2	573
18-23 months	66.7	1.0	0.8	30.1	1.3	536
24-35 months	94.6	0.2	0.5	4.2	0.5	1017

Note: Figures are for children born 1-35 months before the survey. Categories are exclusive.

^aHerbal water, sugar water, juice, and/or other liquids

Among children still breastfed at the time of the survey the percentage who had received specific foods and liquids during the 24 hours before the interview is summarized in Table 7.5. Powdered milk, a common breast milk supplement, was given to one-fifth to one-quarter of the breastfed babies under 18 months of age. Cow's milk or goat's milk was given to less than 10 percent of infants under 7 months of age, and to 12-18 percent of children 7-18 months of age. The percentage of breastfed children who were given solids increased from 12 percent of those age 3-4 months, to 47 percent of those 5-6 months of age, to over 70 percent of (breastfed) children over 9 months of age. By the end of the first year, 85 percent of breastfed infants had received either solid food or a liquid.



One-quarter to one-third of breastfed babies of all ages were given a bottle. This proportion did not vary substantially by the age of the child (Table 7.5). If the assumption is made that all infants under six months received the bottle if they were not breastfed, the prevalence of bottle feeding in Bolivia can be estimated to be 32 percent for this age group.¹

Table 7.6 shows the number of times each food was given during the 24 hours before the interview for breastfed children who received each of the respective items. Three-quarters of the breastfed children who were given solids, received the foods once or twice a day. Half of the children were given cow's milk or goat's milk only once a day, while powdered milk was given more frequently, with 38 percent receiving more than three feedings per day.

¹ This is much lower than observed in six other DHS surveys in Latin America where bottle use—estimated using the same method—was 60 to 85 percent (Boerma et al., 1991a).

Table 7.5 Feeding practices for children under three years who were still breastfeeding at the time of the survey: Among children born less than three years preceding the survey who were breastfed, the percentage in each feeding category and the percentage who received various supplements, by age of the child, Bolivia ENDSA, 1989

Age of child	Feeding category ^a		Percentage of breastfed children who received supplements ^b						Number of children
	Breast-fed only	Breast milk and water only	Juice or sugar water	Powdered milk	Cow's or goat's milk	Other liquids	Solid food	Bottle	
1-2 months	62.5	3.4	1.7	18.7	1.7	16.3	0.3	27.2	202
3-4 months	45.5	4.9	8.4	24.7	4.9	25.8	11.9	31.7	179
5-6 months	25.7	5.4	20.3	20.2	8.3	34.3	46.6	25.5	174
7-8 months	8.5	4.0	27.1	24.5	11.9	43.3	68.4	40.7	153
9-11 months	14.6	0.6	23.5	22.2	10.8	54.1	74.1	35.1	244
12-17 months	1.1	0.1	26.0	25.2	18.1	57.3	92.4	34.1	372
18-23 months	3.0	2.5	29.7	17.5	12.6	54.9	90.5	21.2	178
24-36 months	3.4	9.0	30.0	17.7	29.8	64.0	78.5	20.9	55

Note: Figures are for children born 1-35 months before the survey.

^aCategories are exclusive

^bMore than one response allowed

Table 7.6 Frequency of breast milk supplements for children under five: Among children born less than five years preceding the survey, who were still breastfeeding at the time of the survey, the percentage who received specific food supplements during the 24 hours before the interview by frequency given, Bolivia, ENDSA, 1989

Frequency given	Plain water	Herbal water	Juice or sugar water	Powdered milk	Cow's or goat's milk	Other liquids	Solid foods
Once	46.6	57.7	54.9	26.0	49.5	25.6	22.1
Twice	35.6	31.4	30.7	35.4	33.7	24.3	52.4
Three times	12.6	8.4	10.6	25.0	10.8	6.1	20.8
Four times or more	4.5	1.9	2.9	12.9	6.1	2.7	4.0
Don't know/missing	0.6	0.6	0.9	0.7	0.0	41.3	0.7
NUMBER OF CHILDREN	525	368	322	345	178	692	951

Note: Figures are for children born 1-59 months before the survey.

CHAPTER 8

CHILDHOOD IMMUNIZATIONS

Only 19 percent of children age 12-23 months were fully immunized, and just 7 percent had completed the vaccination schedule during the first year of life. Coverage for measles vaccine, which requires only a single dose, was 58 percent. Extremely high dropout rates, however, limited coverage for those vaccines requiring multiple doses—the vaccines against diphtheria, whooping cough or pertussis, and tetanus (DPT) and poliomyelitis (polio). Thus, three-quarters of the children who received the first dose of DPT did not receive the third dose in the series before their first birthday. The survey results suggest that the figures for immunization coverage based on health facility reports may have overestimated coverage in Bolivia.

Mothers could present a child health card for only about one child in five. This is one of the lowest card levels found in the DHS surveys carried out between 1986 and 1989.

Immunization coverage levels showed an increase in 1987, which continued throughout 1988. The increase was substantial for all vaccines and doses, except for third doses of DPT and polio. Thus, dropout rates did not decrease.

None of the subgroups identified had high coverage levels. In all groups, for example, less than half of the children 12-23 months of age were vaccinated with three doses of DPT. Socioeconomic and demographic variables identified some groups, however, with extremely low coverage; these included children of mothers with no education and children living in rural areas.

Campaigns were the best-known source for immunizations, followed by health centers, public hospitals, and health posts. Less than 2 percent of the women with children under five years did not know of any source of immunization, although this figure was somewhat higher among women with no education, women speaking Indian languages, and women living in rural areas.

8.1 Methodology

Data on immunization coverage were collected for all of the respondents' living children under the age of five years. If the mother could present a child health card, the interviewer copied the dates of all immunizations from the card. If the mother could not present a card, she was asked to recall the specific vaccines given to her child(ren), including the number of doses of DPT and polio vaccines. Respondents were not asked to recall the ages at which each vaccine was given. Although the written record provides the most reliable vaccination information, additional information based on the mothers' recall is helpful in estimating the overall vaccination coverage level.

8.2 Findings

Coverage

A child health card was presented for only 19 percent of all children under five. The percentage of children with cards in Bolivia is one of the lowest for any DHS country surveyed. Only Mali and the Dominican Republic have lower figures (Boerma et al., 1990).

Among children age 12-23 months, only 23 percent had a child health card, so information reported by mothers represents the largest part of the coverage estimates. Over 50 percent of the children had received the single-dose vaccines, BCG (against tuberculosis) and measles (Table 8.1). More than half of the children had also been given two doses of DPT and polio vaccines. Coverage rates for the

third doses of DPT and polio were, however, just 28 percent and 38 percent respectively.¹ The dropout rate between the first and third doses of DPT was high, 60 percent; for children with a health card, the dropout rate was lower, 40 percent. Only 19 percent of children 12-23 months old were fully vaccinated.

According to the recommended schedule, all immunizations should be given during the first year of life, and children should be fully vaccinated by their first birthday. Table 8.1 estimates the extent of immunization coverage for children who were 12-23 months at the time of the survey, and the percentage vaccinated by 12 months of age in the same age group.² The coverage estimates drop considerably for all immunizations, especially for measles and the third doses of DPT and polio vaccines. Only one-third of children had received measles vaccine by age 12 months. While about half the children had been given the first doses of the DPT and polio vaccines, only 13 and 20 percent, respectively, had received three doses before their first birthday. Only 7 percent of the children were fully vaccinated by their first birthday.

Table 8.1 Immunization coverage by source of information: Percentage of children 12-23 months who had received specific vaccines and doses by source of information, and percentage vaccinated by 12 months of age, Bolivia ENDSA, 1989

Type of vaccine	Source of information			Vaccinated by 12 months	Reported data ^b
	Health card	Maternal recall	Both		
VACCINES					
BCG	14.4	40.6	55.0	37.0	27.0
DPT 1	20.4	50.0	70.4	52.8	
DPT 2	17.2	34.2	51.3	33.1	
DPT 3	12.1	16.2	28.4	12.7	39.0
DROPOUT RATE (DPT1/DPT3)	40.7	67.6	59.7	76.0	
Polio 1	21.6	57.7	79.3	57.6	
Polio 2	18.2	42.6	60.8	40.1	
Polio 3	13.4	24.4	37.8	19.7	40.0
Polio 4	5.4	4.1	9.5	2.8	
MEASLES	16.6	40.8	57.5	32.9	44.0
FULLY VACCINATED^a	7.6	11.1	18.8	6.9	

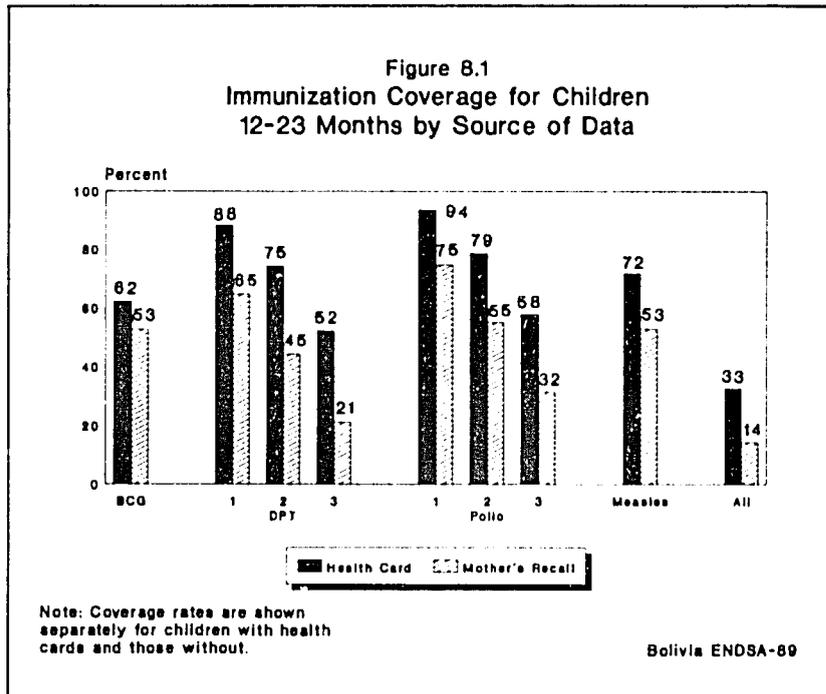
^aChildren who have received BCG, 3 doses of DPT, at least 3 doses of polio, and measles vaccines are classified as fully vaccinated.
^bData reported by health facilities in 1987 and 1988 (WHO, 1990b)

¹ The immunization schedule recommended by the World Health Organization includes four doses of polio vaccine: in addition to the three doses given simultaneously with DPT at 6, 10, and 14 weeks of age, one dose at birth is recommended.

² To obtain coverage estimates for all children, it was assumed that immunizations reported by mothers were given at the same ages as immunizations copied from the health cards of other children.

The immunization coverage estimates from the ENDSA differ considerably from the coverage figures derived from Bolivian health facility reports (Table 8.1). The data reported by health facilities refer to vaccinations given to children under one year of age during 1987 and 1988 (WHO, 1990b). The differences are particularly large for the third doses of DPT and polio. For the third dose of DPT, for example, health facilities report three times the coverage (by age 12 months) that was found in the ENDSA national sample. This suggests that the coverage figures based on health facility reports overestimate vaccination levels in Bolivia.

Figure 8.1 illustrates how much higher immunization coverage levels are when the mother has a written record, i.e., the child health card. Vaccination with BCG showed the smallest difference, 9 percentage points, followed by measles and the first dose of polio vaccine, for which the difference was 19 percentage points. The third dose of DPT showed the greatest disparity, 31 percentage points. Although the lower coverage levels among children without a vaccination card are expected, the inability of mothers to remember which vaccines her child(ren) had received may have contributed to the observed differences.



Trends in Coverage

Table 8.2 and Figure 8.2 show the trends in immunization coverage during the period 1985-1988. Using the information from the child health cards, which includes dates of immunization, the proportion of children vaccinated by 12 months of age was estimated for four age groups: 12-23, 24-35, 36-47 and 48-59 months.³ Coverage started to increase in 1987 and continued to increase during 1988. The increase was most pronounced for the first doses of DPT and polio vaccines and, to a lesser extent, measles immunization. Increases in the third dose of DPT and, to a lesser extent, the third dose of polio lagged behind. Thus, the dropout rates between the first and third doses of these vaccines did not decrease at all. The percentage of children fully vaccinated during the first year of life remained very low throughout the four-year period.

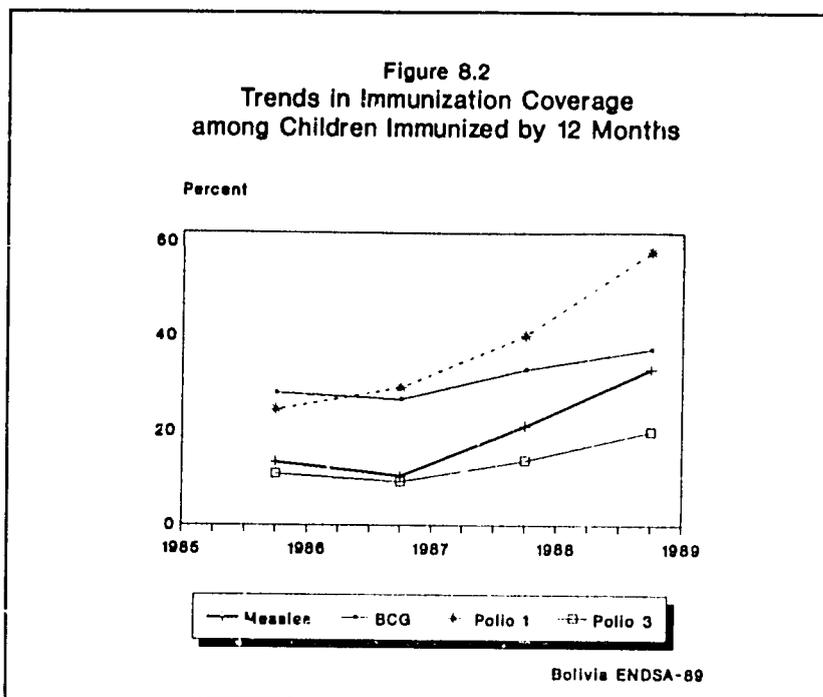
³ Again, it was assumed that children with immunizations reported by the mother were immunized at the same ages as children with a health card.

Table 8.2 Immunization coverage by age 12 months for children 12-59 months of age: Percentage of children 12-59 months immunized for specific vaccines by age 12 months (health card information and maternal recall), Bolivia ENDSA, 1989

Type of vaccine	Age of child (months)			
	12-23	24-35	36-47	48-59
PERCENTAGE WITH CARDS	23.1	23.1	16.3	15.1
VACCINES				
BCG	37.0	32.7	26.4	27.8
DPT 1	52.8	40.7	26.0	23.2
DPT 2	33.1	25.4	16.5	17.4
DPT 3	12.7	11.7	7.8	10.0
Polio 1	57.6	39.8	29.0	24.3
Polio 2	40.1	27.7	20.5	21.6
Polio 3	19.7	13.6	9.2	10.8
Polio 4	2.8	0.0	0.0	0.0
Measles	32.9	20.9	10.5	13.3
FULLY VACCINATED ^a	6.9	2.5	4.0	7.1
DROPOUT RATE (DPT1/DPT3)	76.0	71.3	70.0	56.8
NUMBER OF CHILDREN	1110	1017	993	986

Note: Figures are based on information from health cards and maternal recall.

^aChildren who received BCG, 3 doses of DPT, at least 3 doses of polio, and measles vaccines are classified as fully vaccinated.



Socioeconomic and Demographic Differentials

Tables 8.3 and 8.4 show the socioeconomic and demographic differentials in immunization coverage for the first and third doses of DPT and for measles. (The pattern for polio vaccine was similar to that shown for DPT.) Regarding the first dose of DPT, no subgroup had a coverage of less than 50 percent, and differentials were generally small, except by mother's level of education, language, and media exposure. In contrast, coverage was less than 50 percent for the third dose of DPT in every subgroup, and differentials were large. Selected variables have been summarized in Figure 8.3. Measles immunization coverage follows the same pattern as DPT3, but coverage levels were higher, ranging from 41 to 73 percent.

Overall, 15 percent of children age 12-23 months had not received any vaccinations. This figure dropped to less than 10 percent among children of mothers with more than five years of education, children of fathers with white collar jobs, children in the Valle region, and children of mothers who watch television daily. The proportion rose, however, to more than 25 percent among children of mothers without education, children of fathers working in agriculture, children of mothers who speak Indian language, and children of mothers who neither watch television nor listen to the radio.

A number of low-coverage groups can be identified:

- The largest differentials exist for mother's level of education (Figure 8.3). Children of mothers who have no education have the lowest level of immunization coverage overall (see Table 8.3).
- The second most important factor is media exposure, which is related to various socioeconomic factors. Children of women who are not regularly exposed to radio or television have very low coverage.
- Children of mothers who speak an Indian language are less likely to have been immunized than children of mothers who speak Spanish.

Table 8.3 Differentials in immunization coverage by socioeconomic characteristics: Percentage of children 12-23 months who were immunized for specific vaccines and the percentage who had a health card, by socioeconomic characteristics, Bolivia ENDSA, 1989

Characteristic	Type of immunization received				Percentage with a health card	Number of children
	DPT1	DPT3	Measles	None		
RESIDENCE						
Urban	73.7	35.9	61.4	10.4	27.6	542
Rural	67.2	21.2	53.7	19.8	18.7	568
REGION						
Altiplano	67.2	22.8	52.2	19.3	15.2	556
Valle	75.0	39.0	62.9	9.5	26.5	318
Llanos	71.8	27.3	62.4	13.3	36.9	236
MOTHER'S EDUCATION						
None	52.2	16.8	41.6	34.0	15.1	207
1-5 years	69.9	24.0	53.7	14.0	20.9	514
6-8 years	75.9	32.4	66.8	8.2	25.7	146
9+ years	83.5	45.1	73.4	6.0	32.8	242
FATHER'S OCCUPATION						
White collar	75.2	34.1	64.8	7.3	28.3	310
Blue collar	73.1	34.6	59.5	10.3	25.6	328
Agriculture	64.1	20.1	49.2	25.6	17.1	379
Other	70.8	21.3	59.5	16.2	20.8	93
MOTHER WORKING						
Yes	72.6	33.8	57.5	13.2	19.9	206
No	69.9	27.1	57.4	15.6	23.8	904
MEDIA EXPOSURE						
TV daily	80.5	40.7	66.6	8.0	29.8	486
Radio daily	65.8	20.6	57.1	16.7	18.0	358
Neither	58.1	16.3	41.3	26.4	17.6	265
LANGUAGE						
Spanish	76.8	34.1	63.1	10.3	25.6	783
Indian	55.0	14.8	44.0	27.0	17.1	327
TOTAL	70.4	28.4	57.5	15.2	23.1	1110

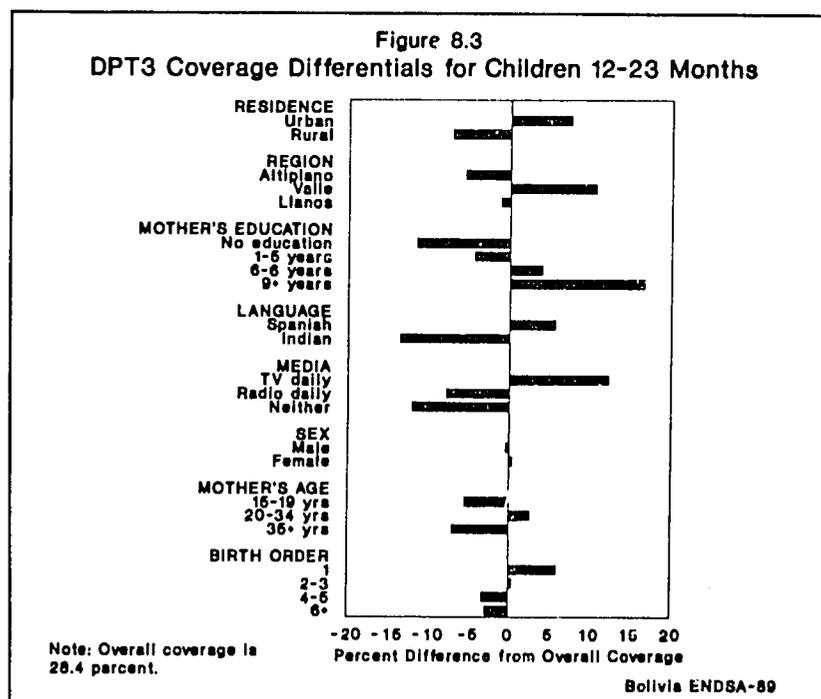
Note: Figures are based on information from health cards and maternal recall.

- Coverage is lower in rural than urban areas. Likewise, children of fathers who work in the agricultural sector are less likely to receive immunizations than children of fathers who have non-agricultural occupations.
- There are also regional differences. Immunization coverage is lower in the Altiplano region than in either the Valle or Llanos regions.
- Children of mothers age 35 years and over and children of birth order 4 or higher are less likely than other children to receive immunizations (Table 8.4). The preceding birth interval and sex of the child did not, however, have any substantial effect on coverage.

Table 8.4 Differentials in immunization coverage by demographic characteristics: Percentage of children 12-23 months who were immunized for specific vaccines and the percentage who had a health card, by demographic characteristics, Bolivia ENDSA, 1989

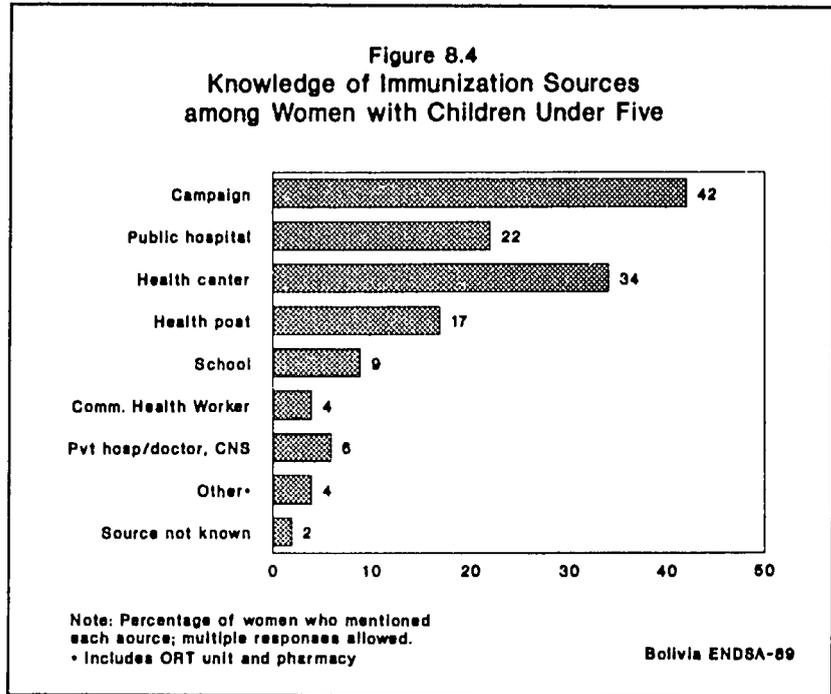
Characteristic	Type of immunization received:				Percentage with a health card	Number of children
	DPT1	DPT3	Measles	None		
SEX						
Male	68.2	28.0	54.1	16.6	23.3	574
Female	72.7	28.8	61.0	13.7	22.8	535
MOTHER'S AGE						
15-19	67.2	22.9	62.1	18.0	17.4	81
20-34	73.3	31.0	60.4	13.0	25.0	796
35+ years	61.6	21.4	45.8	21.9	18.3	232
BIRTH ORDER						
First	73.3	34.3	61.9	12.6	31.5	231
2-3	71.3	28.8	61.1	13.1	23.4	380
4-5	71.9	25.1	52.6	16.0	18.9	250
6+	64.8	25.5	52.6	20.2	18.8	248
BIRTH INTERVAL						
<24 months	73.0	31.6	61.1	14.5	20.1	227
24-35 months	65.7	25.3	53.1	17.7	18.5	303
36-47 months	68.8	21.7	57.8	13.9	21.1	142
48+ months	72.2	27.2	54.5	16.3	24.9	206
TOTAL	70.4	28.4	57.5	15.2	23.1	1110

Note: Figures are based on information from health cards and maternal recall.



Sources of Immunization

All women with children under five years were asked what sources they knew of for immunizations. Campaigns were the source most frequently mentioned, 47 percent of the women; 34 percent mentioned health centers, 22 percent mentioned public hospitals, and 17 percent mentioned health posts (Figure 8.4). There were distinct regional differences in knowledge: campaigns were mentioned by 56 percent of the women in the Valle, 43 percent in the Altiplano, and just 20 percent in the Llanos. Private sources were not common, 10 percent of the women with at least nine years of education mentioned private doctors; 10 percent of this group also mentioned private hospitals.



Only 2 percent of the women said they did not know of any source for immunizations. This figure was somewhat higher in the rural areas (3 percent), among women without education (6 percent), and among women speaking an Indian language (6 percent).

CHAPTER 9

PRENATAL CARE AND DELIVERY ASSISTANCE

More than half of all pregnant women did not receive any prenatal care during the period 1984-88, and only 1 in 5 women received an injection to prevent tetanus in the newborn. This low level of tetanus toxoid (TT) vaccination is due in part to the general lack of prenatal care, but also in part to missed opportunities. Many pregnant women who had a prenatal visit still did not receive a TT injection. There were substantial socioeconomic differentials in prenatal care, with rural women and less educated women the least likely to have a prenatal check-up.

Sixty percent of the babies born in the last five years were born at home. Home deliveries were much more common in the rural areas and among women with specific socioeconomic characteristics. Almost half of all babies were delivered at home and without prenatal care. Half of these mothers did not know of any modern method of family planning.

One in 13 babies was delivered by cesarean section, but this rate varied markedly according to socioeconomic variables. In urban areas, 1 in 8 babies was born by cesarean section, and among women with at least nine years of education, 1 in 5.

9.1 Methodology

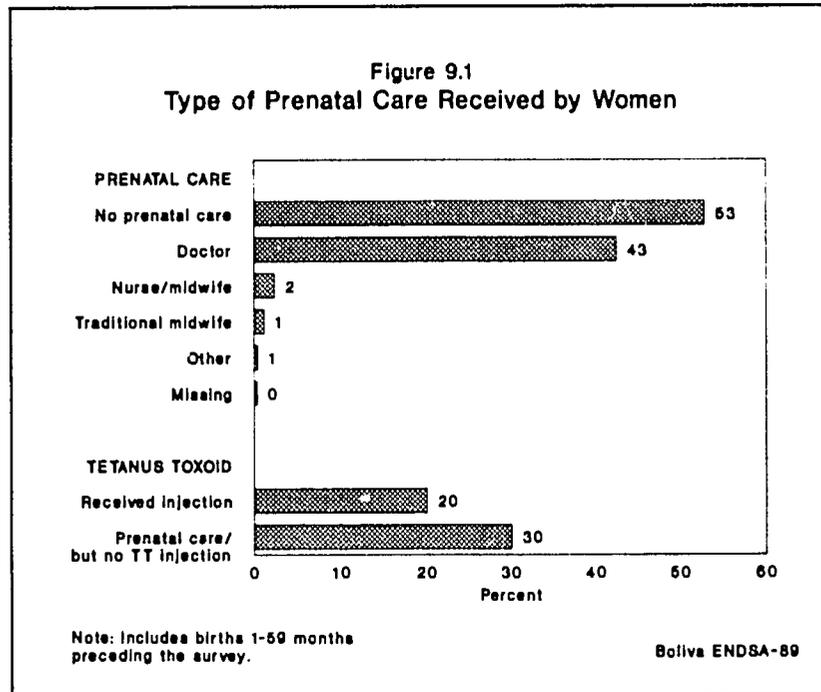
Women who had given birth in the five years preceding the survey were asked a series of questions concerning the type of health care they received during pregnancy and the subsequent delivery. Respondents were asked whether or not they had seen anyone for a check-up during the pregnancy and whether they had received a tetanus toxoid injection. Women were also asked where each baby was delivered and who assisted during the delivery. If more than one type of care-giver provided prenatal care or attended the delivery, interviewers were instructed to record the most qualified person. In addition, women were asked whether their last baby was born by cesarean section. Women who were currently pregnant also reported on whether they had received prenatal care and/or a tetanus toxoid vaccination.

9.2 Findings

Prenatal Care and Tetanus Toxoid Coverage

Figure 9.1 shows the percent distribution of births in the five years preceding the survey according to (1) the type of prenatal care received by the mother and (2) whether the mother received at least one tetanus toxoid injection during pregnancy. The overall level of prenatal care was low: over half (53 percent) of the women did not receive any prenatal care. Doctors were by far the most common providers of prenatal care; one percent of the women were visited by traditional midwives.

Only 20 percent of the women said they received an injection during pregnancy to prevent tetanus in the newborn. Generally, a tetanus toxoid (TT) injection is given during a prenatal visit. However, for 6 percent of all pregnancies, women responded that they had received a TT injection but had not seen a medical person during the pregnancy (data not shown). These women may have received the TT injections during immunization campaigns. In addition, 30 percent of the women received prenatal care, but still did not get a TT injection. This may have been due to shortages of the vaccine, but it might also reflect missed opportunities for vaccination. Missed opportunities appeared to be more common in urban areas, where 41 percent of the women did not receive a TT injection although they visited a doctor, nurse, or trained midwife during their pregnancy (data not shown).



Based on information from women pregnant at the time of the interview, the first prenatal care visit was when they were a median of 5.0 months pregnant. Among women who were in their last two months of pregnancy at the time of the interview, 43 percent had a prenatal visit, 15 percent had received one dose of TT, and 15 percent had received at least 2 doses of TT (Table 9.1). Health facilities were the main source for TT immunization for these women, providing the injection for 49 percent of those who received TT; 38 percent received the TT injections during campaigns, 7 percent in schools, and 7 percent from other sources.

Table 9.1 Prenatal care and tetanus toxoid immunization among currently pregnant women: Percentage of currently pregnant women who had at least one prenatal visit and the percentage who were immunized with tetanus toxoid by duration of the pregnancy, Bolivia ENDSA, 1989

Duration of pregnancy (months)	Prenatal visit	Tetanus toxoid vaccine		Number of women
		One dose	Two or more doses	
<5 months	23.4	14.9	6.5	193
5-7 months	27.3	14.2	8.0	285
8+ months	42.9	15.1	15.1	123

There are substantial socioeconomic differentials in the utilization of prenatal care (Table 9.2). The proportion of pregnant women who did not receive prenatal care was twice as high in the rural areas as in the urban areas. Women living in the Llanos region were more likely than women living elsewhere to receive prenatal care. Prenatal care was least frequently received in the Altiplano. As might be expected, the most educated women were far more likely to receive prenatal care: only 12 percent of their pregnancies went without any care compared with 81 percent among women with no education. The

other socioeconomic variables showed similar patterns. Women who did not speak Spanish, women who did not watch television or listen to the radio, and women whose husbands worked in agriculture were all less likely to receive prenatal care.

Table 9.2 Prenatal care and tetanus toxoid immunization by socioeconomic characteristics: Percent distribution of births in the five years preceding the survey by prenatal care, and the percentage of births for which women received at least one tetanus toxoid (TT) injection, by socioeconomic characteristics, Bolivia ENDSA, 1989

Characteristic	Prenatal care			Total	Received TT injection	Number of births
	None	Medical ^a	Other			
RESIDENCE						
Urban	35.7	62.3	2.0	100.0	25.6	2767
Rural	69.0	28.8	2.2	100.0	15.0	2965
REGION						
Altiplano	59.5	38.7	1.8	100.0	15.4	2865
Valle	50.8	46.7	2.5	100.0	19.4	1601
Llanos	40.7	57.1	2.2	100.0	31.7	1265
MOTHER'S EDUCATION						
None	81.4	15.5	3.1	100.0	9.5	1204
1-5 years	61.7	35.7	2.6	100.0	18.5	2667
6-8 years	35.5	63.6	1.1	100.0	29.5	767
9+ years	12.4	86.8	0.8	100.0	29.3	1093
FATHER'S OCCUPATION						
White collar	30.8	67.8	1.4	100.0	26.4	1564
Blue collar	48.7	48.9	2.4	100.0	21.4	1673
Agriculture	73.2	24.3	2.5	100.0	15.0	2101
Other	50.6	47.0	2.4	100.0	17.4	394
MEDIA EXPOSURE						
TV daily	30.3	67.1	2.6	100.0	26.6	2443
Radio daily	63.7	34.5	1.8	100.0	18.1	1903
Neither	78.0	20.2	1.8	100.0	11.5	1385
LANGUAGE						
Spanish	41.9	56.2	1.9	100.0	24.6	4029
Indian	78.9	18.5	2.6	100.0	9.5	1702
TOTAL	52.9	44.9	2.2	100.0	20.1	5731

Note: Figures are for births 1-59 months before the survey.
^aPrenatal care provided by doctor, nurse or trained midwife.

Variation by demographic variables is smaller (Table 9.3). The most important differences were observed for mother's age and birth order. Women age 35 years and over were less likely to have received prenatal care, as were high parity women (6 or more live births).

Table 9.3 Prenatal care and tetanus toxoid immunization by demographic characteristics: Percent distribution of births in the five years preceding the survey by prenatal care, and the percentage of births for which women received at least one tetanus toxoid (TT) injection, by demographic characteristics, Bolivia ENDSA, 1989

Characteristic	Prenatal care			Total	Received TT injection	Number of births
	None	Medical ^a	Other			
SEX						
Male	52.2	46.1	1.7	100.0	20.1	2879
Female	53.6	43.9	2.5	100.0	20.1	2853
MOTHER'S AGE						
15-19 years	50.1	49.6	0.3	100.0	22.2	292
20-34 years	50.1	48.0	1.9	100.0	21.6	4015
35+ years	61.5	35.5	3.0	100.0	15.6	1424
BIRTH ORDER						
First	40.1	59.0	0.9	100.0	21.5	1149
2-3	48.4	49.5	2.1	100.0	20.7	1944
4-5	57.2	41.1	1.7	100.0	20.3	1307
6+	66.3	30.1	3.6	100.0	17.9	1332
BIRTH INTERVAL						
<24 months	57.4	38.9	3.7	100.0	19.5	1315
24-35 months	60.8	37.1	2.1	100.0	20.7	1576
36-47 months	57.6	40.1	2.3	100.0	18.4	765
48+ months	45.3	53.4	1.3	100.0	20.0	921
TOTAL	52.9	44.9	2.2	100.0	20.1	5731

Note: Figures are for births 1-59 months before the survey.

^aPrenatal care provided by doctor, nurse or trained midwife

Assistance at Delivery

Over a third of all deliveries took place in health facilities, including 10 percent which occurred in private hospitals (Table 9.4 and Figure 9.2). Sixty percent of the babies born from 1984 to 1988 were born at home. In a number of cases, home deliveries were assisted by medically qualified personnel. Two percent of all births were home deliveries assisted by a doctor, and three percent were home deliveries assisted by a nurse or auxiliary nurse.

Not all mothers understood the ranking of health personnel or the status of trained vs. untrained traditional midwives and birth attendants. Thus, the information collected on who assisted at the delivery may be inaccurate in a number of cases. However, Figure 9.2 shows that relatives were the most common attendants at delivery (39 percent), followed by doctors (38 percent). Traditional birth attendants (mostly untrained or with minimal training) assisted at 12 percent of all deliveries, while 5 percent of the women said they delivered without an attendant.

The place where delivery occurred varied considerably, depending on the women's socio-economic characteristics (Table 9.4). In urban areas, for example, 58 percent of babies were delivered at health facilities compared with 18 percent in rural areas. In the Llanos, 53 percent were delivered at health facilities, and in the Altiplano, 30 percent. Substantial differentials also existed for mother's level

of education, language, media exposure, and father's occupation. Deliveries at private health facilities were more common among women with at least nine years of education, women who watch television regularly, and women with husbands employed in white collar jobs.

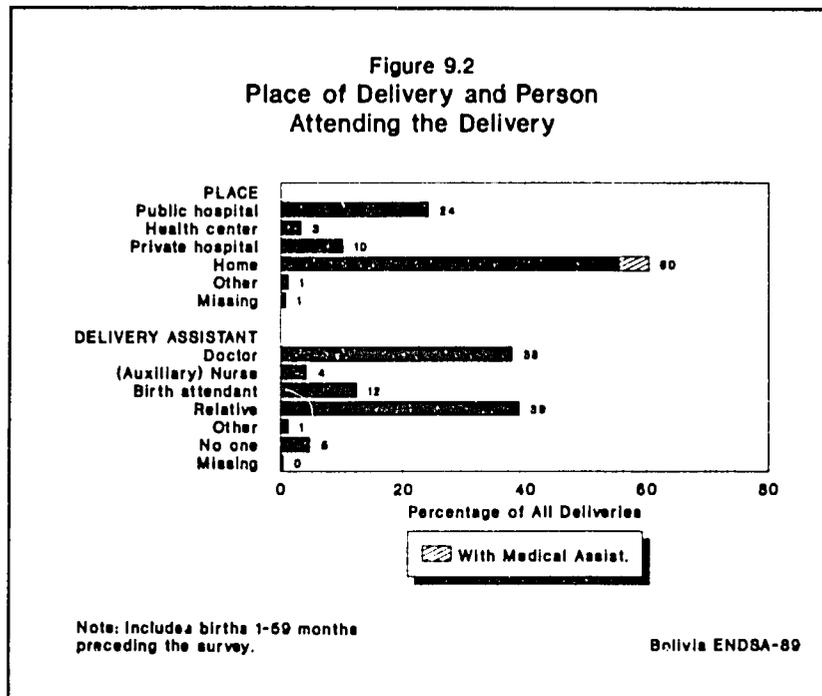
Five percent of all deliveries took place at home but were attended by health personnel. This proportion varies little according to socioeconomic variables; however, when home deliveries attended by trained health personnel are examined as a percentage of total home deliveries, the expected socioeconomic differences emerge. For example, 28 percent of home deliveries among women with at least nine years of schooling were attended by health personnel, compared with only 4 percent among women without education.

Table 9.4 Place of delivery for births by socioeconomic characteristics: Percentage of births in the five years preceding the survey that were delivered in a health facility and the percentage delivered at home (with and without a health attendant), by socioeconomic characteristics, Bolivia ENDSA, 1989

Characteristic	Delivery in health facility			Delivery at home			Other	No information	Number of births
	Public	Private	Total	Health attendant ^a	No health attendant	Total			
RESIDENCE									
Urban	42.3	15.9	58.2	4.6	34.9	39.5	1.9	0.4	2767
Rural	13.6	4.6	18.3	5.3	74.6	79.9	0.8	1.0	2965
REGION									
Altiplano	21.4	8.7	30.0	5.0	63.1	68.1	1.2	0.7	2865
Valle	28.9	10.0	39.0	4.7	54.1	58.9	1.3	0.9	1601
Llanos	39.5	13.3	52.8	5.2	39.6	44.8	1.6	0.8	1265
MOTHER'S EDUCATION									
None	7.2	0.4	7.6	3.6	87.0	90.6	0.8	1.0	1204
1-5 years	21.7	4.7	26.5	5.8	65.5	71.3	1.2	1.0	2667
6-8 years	46.7	11.8	58.5	5.5	34.2	39.7	1.7	0.1	767
9 or more	50.4	32.5	82.9	4.1	10.7	14.8	1.8	0.5	1093
FATHER'S OCCUPATION									
White collar	42.5	20.6	63.0	4.9	29.8	34.7	1.8	0.5	1564
Blue collar	33.1	10.7	43.7	6.2	48.2	54.4	1.5	0.4	1673
Agriculture	10.4	2.3	12.7	4.3	81.2	85.5	0.6	1.2	2101
Other	35.4	7.3	42.7	3.1	50.1	53.2	2.7	1.4	394
LANGUAGE									
Spanish	36.3	13.8	50.1	5.4	42.0	47.4	1.6	0.9	4029
Indian	6.6	1.3	7.9	3.9	87.1	91.0	0.5	0.6	1702
MEDIA EXPOSURE									
TV daily	42.8	19.4	62.2	5.5	30.0	35.5	1.4	0.9	2443
Radio daily	19.7	4.1	23.9	5.8	67.8	73.6	1.8	0.7	1903
Neither	11.1	1.8	12.9	2.9	83.1	86.0	0.4	0.7	1385
TOTAL	27.5	10.1	37.6	5.0	55.4	60.4	1.3	0.7	5731

Note: Figures are for births 1-59 months before the survey.

^aDoctor, nurse or trained midwife



Older women (35 or over) were less likely to give birth in health facilities than younger mothers (Table 9.5). Differences by birth order were more pronounced: firstborn babies were more than twice as likely to be delivered at a health facility as babies of birth order 6 or higher.

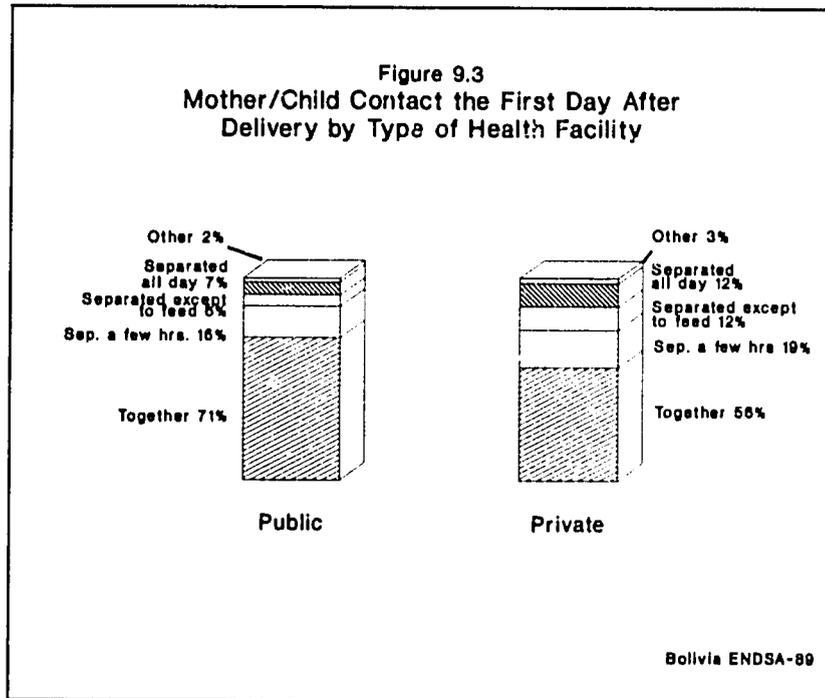
Figure 9.3 shows the practices of health facilities concerning the separation of mother and child during the first day after delivery. In public hospitals, 71 percent of the mothers kept their babies in their own room or bed, 16 percent were separated for a few hours, 6 percent were only together with the baby during feeding, and 7 percent did not see the baby at all during the first day. Mothers and babies were more frequently separated in private hospitals: 56 percent of the mothers kept their babies with them throughout the day, 19 percent were separated for only a few hours, 12 percent were with the baby only during feedings, and 12 percent did not see the baby at all during the first day after delivery.

Table 9.5 Place of delivery for births by demographic characteristics: Percentage of births in the five years preceding the survey that were delivered in a health facility and the percentage delivered at home (with and without a health attendant), by demographic characteristics, Bolivia ENDSA, 1989

Characteristic	Delivery in health facility			Delivery at home			Other	No information	Number of births
	Public	Private	Total	Health attendant ^a	No health attendant	Total			
SEX									
Male	28.4	10.1	38.4	5.5	53.5	59.0	1.5	1.1	2879
Female	26.5	10.1	36.7	4.5	57.3	61.8	1.1	0.4	2853
MOTHER'S AGE									
15-19 years	36.4	7.0	43.4	5.8	48.7	54.5	2.1	0.0	292
20-34 years	28.0	11.5	39.5	5.3	53.2	58.5	1.4	0.6	4015
35+ years	24.0	6.8	30.8	3.8	62.9	66.7	1.0	1.5	1424
BIRTH ORDER									
First	37.3	15.0	52.4	5.0	40.8	45.8	1.7	0.2	1149
2-3	28.2	13.6	41.8	5.1	50.7	55.8	1.6	0.8	1944
4-5	25.5	7.9	33.3	5.1	60.3	65.4	0.8	0.5	1307
6+	19.9	2.8	22.8	4.5	70.0	74.5	1.1	1.6	1332
BIRTH INTERVAL									
<24 months	22.9	8.4	31.4	5.5	59.9	65.4	1.3	1.9	1315
24-35 months	22.5	6.9	29.5	4.2	64.2	68.4	1.6	0.5	1576
36-47 months	23.7	7.3	31.0	5.6	61.4	67.0	1.0	1.0	765
48+ months	33.3	13.8	47.1	5.0	47.1	52.1	0.6	0.3	921
TOTAL	27.5	10.1	37.6	5.0	55.4	60.4	1.3	0.7	5731

Note: Figures are for births 1-59 months before the survey.

^aDoctor, nurse or trained midwife



Maternity Care and Family Planning

Many of the maternal and child health variables and family planning indicators are closely related. For example, women who received prenatal care were more likely to deliver in health facilities, and women who used prenatal care and delivery services were more likely to use family planning. Table 9.6 examines the use of a modern method of contraception with respect to maternity care and several key socioeconomic variables. Maternity care is defined as prenatal and/or delivery care provided in a health facility or by trained health personnel for at least one birth in the five years preceding the survey. The family planning indicator chosen was ever use of a modern method of contraception.

Overall, 16 percent of the women had received maternity care and also had ever used a modern method of contraception. Another 44 percent had received maternity care, but had never used a modern family planning method. Two percent reported ever use of a modern method of contraception but no maternity care, while 39 percent had neither received maternity care nor ever used a modern contraceptive method.

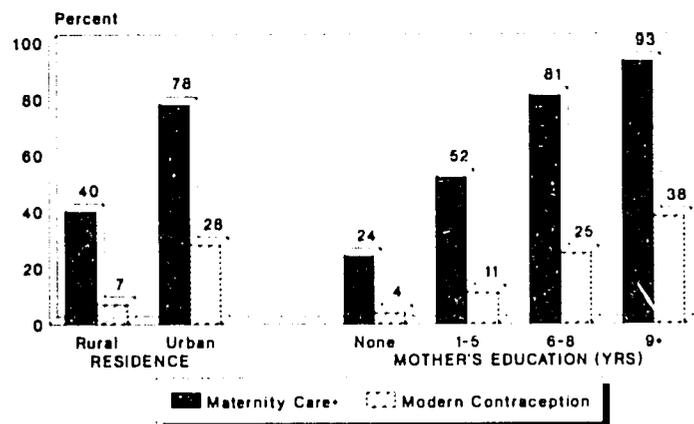
There were marked differentials according to mother's education, place of residence, and region (Table 9.6 and Figure 9.4). Over one-third of women with at least nine years of schooling reported receiving maternity care and using a modern method of contraception; 56 percent had used maternity services but had never used modern contraceptives, and only 6 percent had done neither. In contrast, only 3 percent of women without any education had both received maternity care and used modern methods of family planning; another 21 percent received maternity care only; and 75 percent reported neither. The very low rate of contraceptive use for some subgroups may reflect the lack of contact with the health care system.

Table 9.6 Maternity care and use of contraception by socioeconomic characteristics: Percent distribution of women 15-49 who had at least one live birth in the five years preceding the survey by whether or not they received maternity care and if they had ever used a modern method of contraception, according to selected socioeconomic characteristics, Bolivia ENDSA, 1990

Characteristic	Received maternity care		Did not receive maternity care		Total	Number of women
	Ever used	Never used	Ever used	Never used		
RESIDENCE						
Urban	25.7	52.3	1.6	20.4	100.0	1882
Rural	5.6	34.4	1.5	58.5	100.0	1810
REGION						
Altiplano	7.8	43.4	1.6	47.3	100.0	1879
Valle	14.1	45.1	0.9	39.9	100.0	1008
Llanos	36.9	41.9	2.3	18.9	100.0	805
MOTHER'S EDUCATION						
None	2.8	21.2	1.2	74.8	100.0	764
1-5 years	9.2	43.2	2.1	45.6	100.0	1601
6-8 years	23.0	57.6	1.5	17.9	100.0	510
9+ years	36.6	56.4	0.8	6.2	100.0	818
TOTAL	15.9	43.5	1.5	39.1	100.0	3692

Note: Maternity care is defined as prenatal care provided by health personnel and/or delivery in a health facility, or delivery at home attended by health personnel (doctor, nurse or midwife).

Figure 9.4
Maternity Care and Ever Use of a Modern Family Planning Method



Note: Includes women who had a birth in the five years preceding the survey.
 • Prenatal and/or delivery care provided by health personnel
 Bolivia ENDSA-89

About 1 in 13 last-born babies was delivered by cesarean section (Table 9.7). In the urban areas, this ratio rose to 1 in 8 births. The practice was twice as common in the Llanos as in the other two regions. Among women with at least nine years of education, 1 in 5 babies was delivered by cesarean section. There were substantial socioeconomic differentials. Most of the women who had had a cesarean section had seen a doctor during pregnancy: only 2 percent of those women who had not seen anyone for a prenatal checkup went on to have cesarean sections.

Table 9.7 Prevalence of caesarean section by socioeconomic characteristics: Percentage of births in the five years preceding the survey that were delivered by caesarean section, by socioeconomic characteristics, Bolivia ENDSA, 1989

Characteristic	Births delivered by caesarean section	Number of births
RESIDENCE		
Urban	12.3	1882
Rural	3.4	1811
REGION		
Altiplano	5.7	1879
Valle	6.9	1009
Llanos	14.4	805
MOTHER'S EDUCATION		
None	2.5	764
1-5 years	5.0	1601
6-8 years	6.9	510
9+ years	19.3	818
FATHER'S OCCUPATION		
White collar	13.2	1057
Blue collar	9.3	1056
Agriculture	2.2	1250
Other	8.1	329
MOTHER WORKING		
Yes	11.3	784
No	7.0	2908
MEDIA EXPOSURE		
TV daily	13.9	1649
Radio daily	4.4	1147
Neither	1.3	866
LANGUAGE		
Spanish	10.5	2622
Indian	1.5	1070
PRENATAL CARE		
No one	2.0	1804
Doctor	14.7	1734
Trained nurse	1.3	58
Trained midwife	0.0	34
Birth attendant	0.5	39
Other	0.0	18
TOTAL	7.9	3692

CHAPTER 10

MATERNAL MORTALITY

Maternal mortality is difficult to measure since it is a relatively rare phenomenon. Two methods of calculation based on data on the survival status of the respondent's female siblings were used to estimate maternal mortality. The direct method yielded an estimate of 332 maternal deaths per 100,000 live births for 1975-88, while the indirect method resulted in an estimate of 373 deaths per 100,000 live births in 1977. These maternal mortality estimates do not include single women, who may account for as much as 30 percent of maternal deaths, according to another Bolivian study. Therefore, they may underestimate the true extent of maternal mortality.

Women giving birth in their forties, irrespective of the number of children they already had, were at greater risk of dying.

There are two important obstacles to reducing maternal mortality in Bolivia: the limited extent of prenatal care (less than half of the pregnant women) and, to a lesser extent, the low proportion of deliveries taking place in health facilities (about 40 percent).

10.1 Other Sources of Data on Maternal Mortality

The only national data on maternal mortality that are available for Bolivia refer to the period from 1973 to 1977. At that time, maternal mortality was estimated to be 480 per 100,000 live births.¹

In 1988 a survey was carried out in the province of Avarao, Oruro Department, to estimate the level of maternal mortality. The maternal mortality estimate, using the sisterhood method, was extremely high: 1,379 maternal deaths per 100,000 live births. At this rate, women had a 1 in 10 lifetime risk of dying of maternal causes (Simons et al., 1989).

Another study, which included eight of the twelve health units in Bolivia, examined 118 maternal deaths that took place in hospitals or were recorded in civil registers. It found that 30 percent of the maternal deaths were among single women (De la Galvez Murillo and Castillo, 1982). Of the deaths, 27 percent were due to abortion (induced or spontaneous), while hemorrhage before and after delivery was the leading cause of death (38 percent). Eleven percent of the maternal deaths were associated with infections, and 13 percent with toxemia.

In a study of 70 obstetric deaths which took place in medical institutions in Cochabamba between 1979 and 1986, 20 percent were due to induced abortion, 21 percent to hemorrhage, 26 percent to infection, and 10 percent to toxemia (Salinas, 1987). This study reported a maternal mortality ratio of 250 per 100,000 live births.

10.2 Methodology

Maternal mortality is defined as deaths among women while pregnant or within 42 days of termination of pregnancy from any cause related to or aggravated by the pregnancy or its management (WHO 1979). Maternal death is much less common than childhood death and therefore more difficult to measure.

¹ These data were reported by WHO (1986) and were drawn from WHO (1980). They are based on health facility statistics.

Data on the survivorship of sisters of ENDSA respondents was used to estimate maternal mortality. The level of maternal mortality can be estimated indirectly, using the so-called sisterhood method (Graham et al., 1989). In addition, a new approach, which entailed collecting more information about the sisters of the respondents than is required by the sisterhood method, was used for direct estimation of the maternal mortality. The main difference between these two methods is that the indirect method provides only overall estimates of maternal mortality, while the direct method allows the calculation of rates for different time periods.²

The survey respondents were asked to list all their siblings and to give the sex, survival status, age and, if applicable, the age at death and the time period when death took place. In addition, marital status and parity were ascertained for female siblings who died after the age of 12 years. Deaths among married female siblings were categorized according to whether they occurred during pregnancy or delivery, or within two months following delivery or termination of a pregnancy. This definition of a death as being due to maternal causes differs from the definition of maternal mortality cited above in two respects: 1) all deaths within a specific time period are defined as maternal deaths even if they were not due to pregnancy-related causes, and 2) the time period has been extended from 42 days to two months. This simplified definition was chosen in order to minimize underreporting. Extending the time period is supported by other data which suggest that a significant number of maternal deaths take place in the period 42 to 90 days following the termination of a pregnancy (Rochat, 1985).

10.3 Findings

Indirect Estimates

The sisterhood method uses the proportion of the respondent's adult sisters who have died during pregnancy, childbirth or within two months after childbirth, as reported by the ENDSA respondents, to estimate the level of maternal mortality. Table 10.1 presents the results of the indirect estimation procedure. A total of 7,454 female respondents age 15-49 years reported 11,934 ever-married sisters and 116 maternal deaths. Seventy-nine percent of the maternal deaths occurred during pregnancy or childbirth, and 21 percent occurred in the two months after delivery. The estimated lifetime risk of maternal death was 0.023 (i.e., 116 maternal deaths taken as a proportion of 5103 sister units of risk) (Graham et al., 1989). In other words, the lifetime risk of dying of pregnancy-related causes was 1 in 44. From these data and knowledge of the total fertility rate (TFR) it is possible to estimate the maternal mortality ratio, that is, maternal deaths per 100,000 live births³. The resulting estimate of the maternal mortality ratio is 373 deaths per 100,000 live births and refers to a point in time about 12 years before the survey, 1977.

The last column of Table 10.1 shows the proportion of dead sisters who died from maternal causes. Almost a quarter of all deaths to sisters of reproductive age were ascribed to maternal causes, which is relatively high. There was no decline in the proportion due to maternal causes with increasing age of the respondent.

² For details see Rutenberg et al., 1990.

³ The maternal mortality ratio (MMR) can be approximated as follows: $MMR = 1 - ((\text{Probability of survival})^{1/TFR})$. Since the MMR estimate refers to 12 years before the survey, the TFR for the period 10-14 years before the survey was used. That rate was 6.177.

Table 10.1 Indirect estimates of maternal mortality: Estimates of maternal mortality, Bolivia ENDSA, 1989

Age group	Number of respondents	Number of sisters 15 years and older	Number of ever-married sisters ^a	Number of maternal deaths	Adjustment factor	Sister units of risk exposure	Life-time risk of maternal death	Proportion of sisters who died of maternal causes
15-19	1524	1774	2440 ^b	2	0.107	261	0.009	0.08
20-24	1282	2074	2053 ^b	6	0.206	423	0.014	0.19
25-29	1289	2346	2064 ^b	16	0.343	708	0.023	0.21
30-34	1039	2046	1584	19	0.503	797	0.024	0.26
35-39	1011	1973	1642	20	0.664	1090	0.019	0.22
40-44	680	1295	1140	25	0.802	914	0.028	0.30
45-49	628	1128	1011	27	0.900	910	0.029	0.22
TOTAL	7454	12635	11934	116		5103	0.023	0.23

Maternal mortality ratio (MMR)^c 373

^aThe number of ever-married sisters was calculated by applying the proportion ever-married by five-year age groups in the ENDSA to the age distribution of living sisters and summing to obtain the number of ever-married living sisters. The number of sisters who reached age 15 and married but subsequently died were then added to the sum

^bDerived by multiplying the number of respondents by the average number of ever-married sisters per respondent for respondents age 30-49, that is 1.60

^cMMR = $1 - (1 - \text{Life-time risk})^{1/\text{TFR}}$ assumes TFR 10-14 years before survey equal to 6.177

Direct Estimates

In addition to the questions required for the sisterhood method, four other questions were asked to obtain a direct estimate of maternal mortality. These questions concerned the age of all surviving siblings, the age at death of those sisters who died, the period in which the death occurred, and the parity of the sisters who died.

The sex of the sibling was missing for only two cases, and survival status was unknown for only 106 cases (0.33 percent). These cases were excluded from the analysis. There was no age given for 3.3 percent of all living female siblings. The year of death was missing for 18 percent, and the age at death for 10 percent. The missing data were imputed according to standard DHS procedures (Rutenberg et al., 1990).

From data on the ages of the female siblings and the period in which death occurred, maternal mortality rates can be estimated. The rates are presented in Table 10.2. Since there was considerable heaping on 5 and 10 years before the survey, the periods 0-6 years and 7-13 years before the survey were used as reference periods. It appears that the maternal mortality rate increased from 0.60 per 1,000 women age 15-49 in the period 1975-81 to 0.65 per 1,000 in the period 1982-88. The general fertility rate, which was based on data from all women in the ENDSA, declined from 216 live births per 1,000 women 15-49 years for the period 1975-81 to 173 for 1982-88. The maternal mortality ratio is equal to the maternal mortality rate divided by the general fertility rate; thus it increased from 278 to 373 deaths per 100,000 live births. A possible explanation for the increase in maternal mortality rates is that deaths, including maternal deaths, are more likely to be omitted the longer ago that they occurred. The maternal mortality ratio for the ten-year period preceding the survey is 332 deaths per 100,000 live births.

Studies have shown that maternal mortality risks are high for very young women and for older women, as well as for first births and births of higher orders. In this study, the maternal mortality rates cannot be computed directly by age and parity since parity was not determined for surviving sisters. However, it is

Table 10.2 Direct estimates of maternal mortality: Maternal mortality rates based on the survivorship of sisters of survey respondents, by time period, Bolivia ENDSA, 1989

Age group	1975-1981			1982-1988			1975-1988		
	Maternal deaths	Years of exposure	Rate ^a	Maternal deaths	Years of exposure	Rate ^a	Maternal deaths	Years of exposure	Rate ^a
15-19	6.3	15342	.42	3.8	14959	.25	10.1	30301	.33
20-24	5.7	13008	.44	5.4	15480	.35	11.1	28488	.39
25-29	5.1	11072	.46	11.3	13789	.82	16.4	24861	.66
30-34	4.8	7530	.63	12.5	11691	1.07	17.3	19221	.90
35-39	4.5	4531	.99	3.6	8888	.40	8.1	13419	.60
40-44	3.7	2131	1.73	6.5	5453	1.20	10.2	7584	1.35
45-49	2.5	1047	2.48	4.1	2869	1.43	6.6	3914	1.71
TOTAL 15-49	32.8	54664	.60	47.2	73130	.65	80.0	127794	.63
Maternal mortality ratio (MMR) ^b			278			373			332

^aRate per 1000 women for age-specific mortality and overall mortality rate for women 15-49. MMR is per 100,000 births.

^bCalculated as the maternal mortality rate for women 15-49 divided by the general fertility rate (GFR). The GFR, per 1,000 women, was 216, 173 and 190 for the time periods 1975-81, 1982-88 and 1975-88, respectively.

possible to indirectly assess differential mortality risks by parity and age, as shown in Table 10.3. The distribution of maternal deaths by age and parity is known for the sisters of the ENDSA respondents, while the distribution of births by parity and age for Bolivia as a whole can be obtained from the respondents. From these distributions, the relative risk of maternal death by age and parity can be estimated. Table 10.3 shows that there is only minor variation by parity. Differentials by age of the women are large, however, and increase dramatically for pregnancies at age 40 and over. In addition, women having their first birth in their thirties appear to be at higher risk of maternal mortality, but the numbers are small.

Table 10.3 Relative risk of maternal death by age and parity: Maternal deaths and births by age and parity and the relative risk of maternal death by age and parity, Bolivia ENDSA, 1989

Parity	Age of woman				Total
	<20	20-29	30-39	40+	
MATERNAL DEATHS					
Parity 1	5.9	7.9	2.8	0.0	16.5
Parity 2-5	4.4	17.6	19.8	4.2	46.0
Parity 6+	0.0	2.3	2.6	12.8	17.7
Total	10.3	27.7	25.2	17.0	80.3
BIRTHS					
Parity 1	985	1233	107	6	2330
Parity 2-5	535	4503	1576	74	6688
Parity 6+	--	453	1722	376	2551
Total	1520	6189	3405	455	11569
RELATIVE RISK OF MATERNAL DEATH					
Parity 1	0.86	0.92	3.78	0.00	1.03
Parity 2-5	1.19	0.56	1.81	8.21	0.99
Parity 6+	--	0.73	0.22	4.91	1.00
TOTAL	0.98	0.65	1.07	5.38	1.00

Note: *Maternal deaths* are based on the sisterhood method; *births* are the number of births to survey respondents; *relative risk of maternal death* (per live birth) is calculated with total risk (1.00) as the reference category.

Discussion

The indirect estimate of the maternal mortality ratio was 373 deaths per 100,000 live births for a point in time about 12 years before the survey. The direct estimate for the 10-year period preceding the survey was very close: 332 per 100,000 live births. The direct method of estimation requires that a few extra questions are asked of the respondents and results in some added complexity in data processing and analysis compared with the indirect method. A major advantage of the direct method, however, is that the data on years since death allow the calculation of maternal mortality rates for more than one retrospective time period. Future direct estimates can be compared with estimates for earlier time periods for the purposes of program evaluation.

Both the indirect and direct methods excluded women who had never been married. Another study in Bolivia found, however, that 30 percent of all maternal deaths involved single women and that abortion was a leading cause of maternal death. Since the ENDSA excluded unmarried women, the estimates presented here must be considered an underestimate of the true rate of maternal mortality.

Maternal mortality in Bolivia appears to be among the highest in Latin America. The utilization of prenatal care in Bolivia is low: 53 percent of women do not receive any prenatal care. In addition, only about 40 percent of women delivered in health facilities. Increasing the utilization of prenatal care is the first step necessary to improve the detection and referral of women at high risk and thus reduce maternal mortality.

REFERENCES

- Alam, N., F.J. Henry, and M.M. Rahaman. 1989. Reporting Errors in One-week Diarrhoea Recall Surveys: Experience from a Prospective Study in Rural Bangladesh. *International Journal of Epidemiology* 18(3):697-700.
- Bicego, G.T. and J.T. Boerma. 1990. *Maternal Education, Use of Health Services and Child Survival: An Analysis of Data from the Bolivia DHS Survey*. DHS Working Papers, No. 1. Columbia, Maryland: Institute for Resource Development.
- Boerma, J.T., S.O. Rutstein, A.E. Sommerfelt, and G. Bicego. 1991. Bottle Use for Infant Feeding in Developing Countries: Data from the Demographic and Health Surveys: Has the Bottle Battle been Lost? *Journal of Tropical Pediatrics* 37(1):. (Text reference is Boerma et al., 1991a).
- Boerma, J.T., R.E. Black, A.E. Sommerfelt, S.O. Rutstein, and G.T. Bicego. [1991]. Accuracy and Completeness of Mother's Recall of Diarrhea Occurrence in Preschool Children in the Demographic and Health Surveys. *International Journal of Epidemiology* Vol 20. Forthcoming. (Text reference is Boerma et al., 1991b).
- Boerma J.T., A.E. Sommerfelt, S.O. Rutstein, and G. Rojas. 1990. *Immunization: Levels, Trends and Differentials*. DHS Comparative Studies, No. 1. Columbia, Maryland: Institute for Resource Development.
- Campbell, H., P. Byass, and B.M. Greenwood. 1988. Simple Clinical Signs for Diagnosis of Acute Lower Respiratory Infections. *Lancet* 2(8613):742-743.
- Cherian, T., T.J. John, M.C. Steinhoff, and M. John. 1988. Evaluation of Simple Clinical Signs for the Diagnosis of Acute Respiratory Tract Infection. *Lancet* 2(8603):125-128.
- Coloma, R. Belmonte and B.P. de Ormachea. 1985. *Encuesta de Prevalencia de Medicamentos, Bolivia 1983: Resultados Generales*. La Paz, Bolivia: Consultora Boliviana de Reproducción Humana.
- Consejo Nacional de Población. 1988. Posición de Consejo Nacional de Población (CONAPO) sobre el Control de la Natalidad y la Planificación Familiar (PF). *Boletín Informativo* 3(September).
- De la Galvez Murillo, A. and J. Castillo. 1982. *Mortalidad Materna en Hospitales y Registros Civiles Año 1980*. La Paz, Bolivia: Ministerio de Previsión Social y Salud Pública.
- Dibley, M.J., J.B. Goldsby, N.W. Stachling, and F.L. Trowbridge. 1987. Development of Normalized Curves for the International Growth Reference: Historical and Technical Considerations. *American Journal of Clinical Nutrition* 46(5):736-748. (Text reference is Dibley et al., 1987a).
- Dibley, M.J., N.W. Stachling, P. Nieburg, and F.L. Trowbridge. 1987. Interpretation of Z-score Anthropometric Indicators Derived from the International Growth Reference. *American Journal of Clinical Nutrition* 46(5):749-762. (Text reference is Dibley et al., 1987b).
- Feachem, R.G. and M.A. Koblinsky. 1984. Interventions for the Control of Diarrhoeal Diseases among Young Children: Promotion of Breastfeeding. *Bulletin of the World Health Organization* 62(2):271-291.
- Freeman, J. and G.B. Hutchison. 1980. Prevalence, Incidence and Duration. *American Journal of Epidemiology* 112(5):707-723.

Freij, L. 1977. Exploring Child Health and its Ecology: The Kirkos Study in Addis Ababa, An Evaluation of Procedures in the Measurement of Acute Morbidity and a Search for Causal Structure. *Acta Paediatrica Scandinavica*, Supplement 267:1-180.

Garenne, M. and O. Fontaine. 1986. Assessing Probable Causes of Death Using a Standardized Questionnaire: A Study in Rural Senegal. Paper presented at the IUSSP Seminar on Comparative Studies of Mortality and Morbidity, Siena, Italy, July 7-12.

Goldman, N., L. Moreno, and C.F. Westoff. 1989. *Peru Experimental Study: An Evaluation of Fertility and Child Health Information*. Columbia, Maryland: Office of Population Research (Princeton University) and Institute for Resource Development/Macro Systems, Inc.

Graham, W., W. Brass, and R.W. Snow. 1989. Estimating Maternal Mortality: The Sisterhood Method. *Studies In Family Planning* 20(3):125-135.

Instituto Nacional de Estadística (INE). 1989. Bolivia: *Encuesta Nacional de Población y Vivienda 1988: Resultados Finales*. La Paz, Bolivia.

Instituto Nacional de Estadística (INE) and Institute for Resource Development/Macro Systems, Inc. (IRD). 1990. *Encuesta Nacional de Demografía y Salud 1989*. Columbia, Maryland: INE and IRD.

Kalter, H., R.H. Gray, R.E. Black, and S.A. Gultiano. 1990. Validation of Postmortem Interviews to Ascertain Selected Causes of Death in Children. *International Journal of Epidemiology* 19(2):380-386.

Koenig, M.A., M.A. Khan, B. Wojtyniak, J.D. Clemens, J. Chakraborty, V. Fauveau, J.F. Phillips, J. Akbar, and U.S. Barua. 1990. Impact of Measles Vaccination on Childhood Mortality in Rural Bangladesh. *Bulletin of the World Health Organization* 68(4):441-447.

Martorell, R. and J.P. Habicht. 1986. Growth in Early Childhood in Developing Countries. In *Human Growth: A Comprehensive Treatise* Vol. 3, ed. F. Falkner and J.M. Tanner, 241-262. New York: Plenum Press.

Martorell, R., J.P. Habicht, C. Yarbrough, and R.E. Klein. 1976. Underreporting in Fortnightly Recall Morbidity Surveys. *Journal of Tropical Pediatrics and Environmental Child Health* 22(3):129-134.

Ministerio de Previsión Social y Salud Pública. 1983. *Lista Básica de Causas y Estructura de Edad para Tabulación de Morbilidad y Mortalidad*. La Paz, Bolivia.

Ministerio de Previsión Social y Salud Pública. 1989. *Plan Nacional de Supervivencia - Desarrollo Infantil y Salud Materna*. La Paz, Bolivia.

Moreno, L. and N. Goldman. 1990. An Assessment of Survey Data on Birth Weight. *Social Science and Medicine* 31(4):491-500.

Murillo, A. and R. Belmonte Coloma. 1984. [Diarrheal Disease in Urban Areas of Bolivia: Report of a Study of Children Aged 0-5 Undertaken with the Aid of PAHO]. La Paz, Bolivia: Ministerio de Previsión Social y Salud Pública, División Nacional Materno Infantil.

National Institute of Food and Nutrition, Government of Bolivia and U.S. Agency for International Development (USAID). 1982. *Bolivia National Nutritional Status Survey, 1981: Summary Report*. Washington, D.C.

- Pedersen, D., C. Betts, J. Mariscal, and J. Torres Goitia. 1987. *Supervivencia Infantil en Bolivia: Situación Actual y Prioridades para la Acción*. Resources for Child Health (REACH) Project Report. La Paz, Bolivia: REACH.
- Rance, S., O. Wolowyna, and G. Pinto Aguirre. 1989. *Salud y Población: Supervivencia Infantil*. La Paz, Bolivia: Consejo Nacional de Población and Research Triangle Institute.
- Rochat, R. 1985. The Magnitude of Maternal Mortality: Definitions and Methods of Measurement. Paper presented at the WHO Interregional Meeting on Prevention of Maternal Mortality, Geneva, Switzerland, November 11-15.
- Rutenberg, N., T. Boerma, J. Sullivan, and T. Croft. 1990. Direct and Indirect Estimates of Maternal Mortality with Data on the Survivorship of Sisters: Results from the Bolivia DHS. Paper presented at the 1990 annual meeting of the Population Association of America, Toronto, Ontario, May 3-5.
- Rutstein, S.O. 1984. *Infant and Child Mortality: Levels, Trends, and Demographic Differentials*. WFS Comparative Studies, No. 43. Voorburg, Netherlands: International Statistical Institute.
- Salinas, W. 1987. Mortalidad Materna-Institucional: Cochabamba 1979-86. Cochabamba, Bolivia.
- Simons, H., L. Wong, W. Graham, and S. Schkolnik. 1989. The Sisterhood Method to Estimate Maternal Mortality: Applications with Special Reference to Latin America. Paper presented at the General Conference of the International Union for the Scientific Study of Population (IUSSP), New Delhi, India, September 20-27.
- Sullivan, J.M. and S.E. Wilson. 1982. *A Methodology for Detecting Bias in Indirect Mortality Estimates: The Case of Indonesia*. Carolina Population Center, Paper No. 25. Chapel Hill, North Carolina: Carolina Population Center (Univ. of North Carolina).
- United Nations. 1983. *Manual X: Indirect Techniques for Demographic Estimation*. Population Studies, No. 81. New York: Department of International Economic and Social Affairs.
- United Nations. 1986. *How to Weigh and Measure Children: Assessing the Nutritional Status of Young Children in Household Surveys*. New York: United Nations, Department of Technical Cooperation for Development and Statistical Office (National Household Survey Capability Programme).
- World Health Organization (WHO). 1979. *International Classification of Diseases, Injuries and Death*, 9th ed. (ICD9). Geneva.
- World Health Organization (WHO). 1980. *The Sixth Report on the World Health Situation 1973-77, Part 2: Review by Country and Area*. Geneva.
- World Health Organization (WHO). 1986. *Maternal Mortality Rates: A Tabulation of Available Information*, 2nd ed., Geneva. (Document FHE 86.3).
- World Health Organization (WHO). 1989. *Household Survey Manual: Diarrhea Case Management, Morbidity and Mortality*. Geneva.
- World Health Organization (WHO). 1990a. *Acute Respiratory Infections in Children: Case Management in Small Hospitals in Developing Countries*. Geneva. (WHO/ARI/90.5)
- World Health Organization (WHO). 1990b. *EPI--Health Information System*. Geneva: EPI.

APPENDIX A

ACCURACY OF DIARRHEA RECALL

APPENDIX A

ACCURACY OF DIARRHEA RECALL

A.1 Heaping of Responses

Mothers were allowed to respond in days, weeks, or months to the question on when their child's last episode of diarrhea had occurred. The results of the responses reported in days and weeks (if less than 3 weeks), are shown in Table A.1 (unweighted data). More than half of the children with diarrhea in the two weeks preceding the survey had diarrhea at the time of the survey.

Table A-1 Length of time since the last episode of diarrhea:
Distribution of mother's responses in days and weeks
to a question about child's last episode of diarrhea,
Bolivia ENDSA, 1989

Time elapsed since last episode	Percent	Number
DAYS		
0	53.9	839
1	0.5	8
2	2.3	36
3	3.7	57
4	1.9	30
5	1.7	27
6	0.8	12
7	2.4	38
8	0.5	8
9	0.2	3
10	0.6	9
11	0.0	0
12	0.0	0
13	0.0	0
14	0.2	3
15	1.1	17
16	0.0	0
17	0.0	0
WEEKS		
1	15.5	241
2	14.8	230
Current	53.9	839
Days	15.9	248
Weeks	30.2	471
TOTAL	100.0	1558

Note: Includes only responses of less than 18 days or less than 3 weeks.

For children who did not have diarrhea in the 24 hours prior to the interview, but had diarrhea in the two weeks preceding the survey (or slightly longer ago), about one-third of the women responded to the question in days. There was heaping on 2-4 days, and on 7, and 15 days. The latter appears to be common in Latin America, where respondents consider a two-week period as 15 rather than 14 days (Goldman et al., 1989). More important is the large proportion of cases that were recalled as one or two weeks ago. In Bolivia 15 per cent of the answers were "two weeks ago." These will presumably be translated into 14-15 days ago, unless the interviewer makes a special effort to find out exactly which was the last day of the diarrheal episode. What respondents mean by two weeks ago may vary between cultures, however. Assuming that the responses of "two weeks ago" really refer to the period 11-17 days before the survey, if all the "two weeks" responses are included in the recall period, diarrhea prevalence will be overestimated by about 6 percent. Studies with a one-week recall period would have similar problems.

A.2 Underreporting of Diarrhea

The data from Bolivia can be used to study diarrhea reporting in recent and more distant periods preceding the survey. An estimate of the daily prevalence and incidence of diarrhea can be made, since questions were asked both about the length of time which had elapsed since the last diarrheal episode and about its duration.

The daily incidence and prevalence of diarrhea were calculated from the responses to these questions and are presented in Table A.2, and Figures A.1 and A.2. The mother's responses were assumed to refer to the end of the last episode. Responses of "one week ago" were distributed over the period 5-10 days before the survey. Responses of "two weeks ago" were distributed over the period 11-17 days before the survey. Daily prevalence in Bolivia drops from over 150 cases per 1000 children on the first and second days preceding the survey to well under 100 cases by the fourth day preceding the survey (Figure A.1). Incidence also peaks during the three days preceding the survey, with a second, lower peak on the seventh day preceding the survey (Figure A.2). On most days, however, the incidence of diarrhea is less than a third as great as on the three days immediately preceding the survey.

Thus, the results show a dramatic decline in both the incidence and prevalence of diarrhea with increasing number of days preceding the survey. The decline in prevalence is larger than observed in studies in Bangladesh, Ethiopia, and Guatemala (Alam et al, 1989; Freij, 1977; Martorell et al., 1976). In the ENDSA, this may be associated in part with overreporting of children currently having an episode of diarrhea.¹

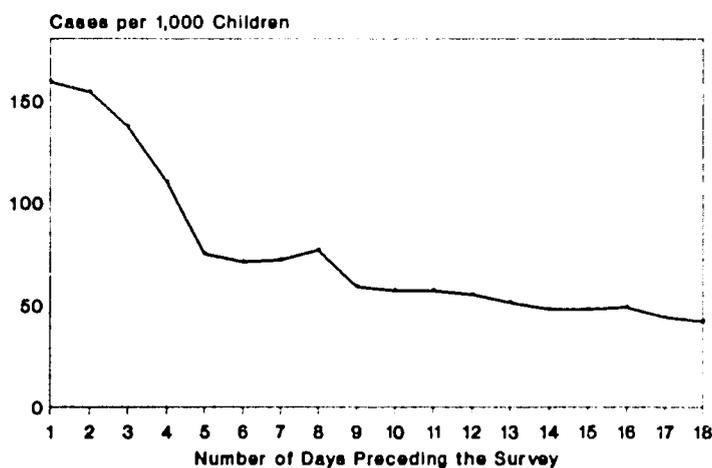
The duration of the illness plays a role in the treatment pattern. The percentage of children for whom some kind of medical intervention has been sought is higher if the diarrheal episode has terminated. This may, however, also be due to selective recall: only the more severe episodes are recalled. For current episodes of diarrhea, two days duration appeared to be a cut-off point. If diarrhea had started at least two days before the interview, treatment patterns differed little from treatment patterns for all children with diarrhea in the preceding two weeks. The information on treatment patterns may be more accurate for children who were having an episode of diarrhea at the time of the survey.

¹ A more extensive analysis of this problem which includes data from other DHS countries, can be found in Boerma et al. (1991b).

Table A-2 Incidence and prevalence of diarrhea in the two weeks preceding the survey: Among children under five, the incidence and prevalence of diarrhea in the two weeks preceding the survey (from mothers' report), Bolivia, ENDSA, 1989

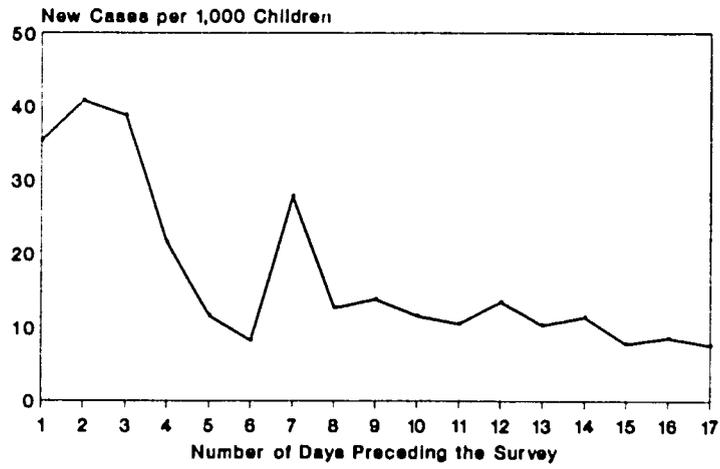
Days preceding the survey	Incidence of diarrhea		Prevalence of diarrhea		Number of children exposed (N-starters)
	Number	Per 1,000	Number	Per 1,000	
0	39	7.4	839	160	5247
1	146	28.0	808	155	5208
2	217	42.9	698	138	5062
3	213	44.0	538	111	4845
4	97	20.9	388	84	4632
5	57	12.6	353	78	4535
6	61	13.6	342	76	4478
7	138	31.2	353	80	4417
8	55	12.9	257	60	4279
9	50	11.8	239	57	4224
10	44	10.5	232	56	4174
11	42	10.2	221	54	4130
12	44	10.8	206	50	4088
13	36	8.9	194	48	4044
14	50	12.5	190	47	4008
15	45	11.4	178	45	3958
16	33	8.4	183	47	3913
17	31	8.0	181	47	3880
18	NA	0.0	143	37	3849

Figure A.1
Daily Prevalence of Diarrhea among Children Under Five by Number of Days Preceding the Survey



Bolivia ENDSA-89

Figure A.2
Daily Incidence of Diarrhea among
Children Under Five by Number of Days
Preceding the Survey



Bolivia ENDSA-89

APPENDIX B
SURVEY STAFF

APPENDIX B
SURVEY STAFF

DIRECTOR

Antonio Gómez V.

FIELDWORK

Coordinator

Erika Palenque

Supervision

Rosendo Aquino, Angel Pinto

Sampling

Anibal Angulo

Consultants

Alberto de la Galvez Murillo

Mario Gutierrez

Jorge Mariscal

Gladys Moreira

Bertha Pooley

Julietta Rivera

INE State Directors

Jesús Castedo (Beni)

José Palma (Chuquisaca)

Mario Cazón (Tarija)

Ernesto Parada (Santa Cruz)

Oscar Condarco (Oruro)

Jaime Valda (Potosí)

Cynthia Moreno (Cochabamba)

Field Supervisors

Mayga Irala, Rosario Martínez, Verónica Camacho, Janeth Bustamante, Magdalena Algañarás
Dora Gómez, Liliana Villamil, Roxana Camacho, Beatriz Galvez, Zulema Burgoa

Field Editors

Kotska Galván, Ana Roca, Marianela Antezana, Evelyn Claire, Elena Montañó, Elizabeth Rivero
Betina Baldivieso, Mirtha Morató, Hortencia Antúnez, Virginia López

State Supervisors

Raúl Rodríguez, Nelson Villarroel, Germán Valdivia, Freddy Zelada

Interviewers

María Hidalgo, Beatriz Pozo, María S. Mallo, Rosario Sejas, María E. Pacheco, María L. Tames
Martha Serrudo, Carmen Escalante, Alicia Condori, Lourdes Lobo, Margarita Vargas, Rosalba Rojas
Ligia de la Borda, María J. Salbatierra, María Mendoza, Fanny Vargas, Celia Vargas, Nancy Barrios
Lidia Zenteno, Graciela Barrios, Justina Coro, Elsa Escobar, Rosario Martínez, Lidia Soto
Sonia Baldivieso, Silvia Villacres, Lourdes Valencia, Amalia Ramos, Sonia Díaz, María de J. Ticona
Alicia Ponce, Vilma Gutiérrez, Roxana de Murakani, Magaly Morales, Rosmery Quiroga
Nancy Saavedra, Elizabeth San Martín, Justina Victor, Tatiana Guzmán, Beberlyn Melgar
María E. Moro, Nelly Robiedo, Jaqueline Díaz, Antonia Oliveira

DATA PROCESSING

General Supervision

Mónica Sanjinés

Data Entry Supervisor

Charo Gutierrez

Data Entry

Martina Ibáñez, Jaime Chuqimia, José A. Villegas
Marcelo Bejarano, Daniel Mancilla, Henry Arandia

Coders

Sofía Juanes, María E. Amusquibar

INSTITUTE FOR RESOURCE DEVELOPMENT, DHS PROGRAM

Martin Vaessen, Director, DHS Program
Luis Hernando Ochoa, Coordinator of Technical Assistance
Juan Schoemaker, Country Monitor
Enrique Carrasco, Consultant
Alfredo Aliaga, Sampling
Elisabeth Sommerfelt, Health Consultant
Victor Carales, Data Processing
Guillermo Rojas, Data Processing
Brian Taaffe, Data Processing
Carlos Thomas, Data Processing
Sidney Moore, Editing
Kaye Mitchell, Word Processing
Robert Wolf, Graphics

APPENDIX C
QUESTIONNAIRES

ENCUESTA NACIONAL DE DEMOGRAFIA Y SALUD - 1989
CUESTIONARIO DEL HOGAR

IDENTIFICACION

<input type="text"/>					
PAQUETE			VIVIENDA		HOGAR

A: UBICACION GEOGRAFICA

1. DEPARTAMENTO.....	<input type="text"/>	7. ZONA Nº	<input type="text"/>
2. AREA URBANA=1; RURAL=2.....	<input type="text"/>	8. SECTOR Nº	<input type="text"/>
3. CIUDAD O LOCALIDAD.....	<input type="text"/>	9. SECTOR Nº	<input type="text"/>
4. PROVINCIA.....	<input type="text"/>	10. VIVIENDA Nº	<input type="text"/>
5. CANTON.....	<input type="text"/>	11. HOGAR Nº	<input type="text"/>
(SOLAMENTE PARA CIUDADES DE 10.000 +)			
6. MANZANO/Z. ESTADISTICA	<input type="text"/>		
12.- DIRECCION DE LA VIVIENDA			
CALLE.....		Nº	
DEPARTAMENTO Nº		CAMINO O CARRETERA.....	

B: RESULTADOS DE LAS VISITAS

VISITA	1a.	2a.	3a.	4a.
FECHA				
RESULTADO				
CODIGO DE LA ENTREVISTADORA				
HORA				

Códigos de Resultados:

- 1 Entrevista completa
- 2 No hay adultos presentes
- 3 Hogar ausente
- 4 Entrevista postergada
- 5 Vivienda vacante o la dirección no es vivienda
- 6 Vivienda destruida
- 7 Vivienda no encontrada
- 8 Rechazo
- 9 Otro

C: DATOS DE LA VIVIENDA Y DEL HOGAR

<p>1 ¿Cuál es la fuente de abastecimiento principal de agua para beber que utilizan los miembros de este hogar?</p> <p>RED PUBLICA (ACUEDUCTO).....01 ACUEDUCTO VEREDAL O PRIVADO.....02 PILA PUBLICA.....04 POZO O ALJIBE.....05 RIO, ACEQUIA O MANANTIAL.....06 CAMION O TANQUE AGUATERO.....07 AGUA DE LLUVIA.....08 OTRA (ESPECIFIQUE).....09</p>	<p>2 ¿Cuál es la fuente de abastecimiento principal de agua para otros usos que utilizan los miembros de este hogar?</p> <p>RED PUBLICA (ACUEDUCTO).....01 ACUEDUCTO VEREDAL O PRIVADO.....02 PILA PUBLICA.....04 POZO O ALJIBE.....05 RIO, ACEQUIA O MANANTIAL.....06 CAMION O TANQUE AGUATERO.....07 AGUA DE LLUVIA.....08 OTRA (ESPECIFIQUE).....09</p>																		
<p>3 ¿Con que clase de servicio sanitario cuenta esta vivienda?</p> <p>INODORO CONECTADO AL ALCANTARILLADO...1 INODORO CONECTADO A POZO SEPTICO.....2 LETRINA, POZO NEGRO, HOYO.....3 OTRO (ESPECIFIQUE).....4</p>	<p>4 ¿Algún miembro de su familia tiene:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>SI</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>BICICLETA.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>MOTOCICLETA.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>CARRO.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>CASA O DEPARTAMENTO.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>TRACTOR*.....</td> <td>1</td> <td>2</td> </tr> </tbody> </table> <p>* Esta pregunta se formula solamente a las que residen en el sector rural.</p>		SI	NO	BICICLETA.....	1	2	MOTOCICLETA.....	1	2	CARRO.....	1	2	CASA O DEPARTAMENTO.....	1	2	TRACTOR*.....	1	2
	SI	NO																	
BICICLETA.....	1	2																	
MOTOCICLETA.....	1	2																	
CARRO.....	1	2																	
CASA O DEPARTAMENTO.....	1	2																	
TRACTOR*.....	1	2																	

ABIO DE HOGAR

Ahora quisiera alguna información sobre las personas que normalmente viven en su casa o que durmieron anoche aquí.

	NOMBRE DE RESIDENTES HABITUALES Y VISITANTES	RESIDENCIA		SEXO		EDAD	ELEGIBLE
		¿Vive (NOMBRE) normalmente aquí?	¿Durmió (NOMBRE) aquí anoche?	¿Es (NOMBRE) hombre o mujer?	¿Qué edad tiene ei/ella?		
(1)	(2)	SI NO (3)	SI NO (4)	VARON O MUJER (5)		(6)	(7)
01		1 2	1 2	1 2			01
02		1 2	1 2	1 2			02
03		1 2	1 2	1 2			03
04		1 2	1 2	1 2			04
05		1 2	1 2	1			05
06		1 2	1 2	1 2			06
07		1 2	1 2	1 2			07
08		1 2	1 2	1 2			08
09		1 2	1 2	1 2			09
10		1 2	1 2	1 2			10
11		1 2	1 2	1 2			11
12		1 2	1 2	1 2			12
13		1 2	1 2	1 2			13
14		1 2	1 2	1 2			14
15		1 2	1 2	1 2			15
16		1 2	1 2	1 2			16
17		1 2	1 2	1 2			17
18		1 2	1 2	1 2			18
19		1 2	1 2	1 2			19
20		1 2	1 2	1 2			20
21		1 2	1 2	1 2			21
22		1 2	1 2	1 2			22
23		1 2	1 2	1 2			23

1. Hay algunas personas como niños pequeños o recién nacidos que no hayan sido mencionados?

SI (¿NOTÉLAS EN EL CUADRO) NO

TOTAL DE PERSONAS

TOTAL ELEGIBLES

2. Hay otras personas que no sean miembros de su familia como trabajadoras domésticas, personas alojadas o amigos que normalmente viven aquí?

SI (¿NOTÉLAS EN EL CUADRO) NO

NUMERO DE NIÑOS DE 5 AÑOS Y MENOS QUE RESIDEN EN EL HOGAR.

TOTAL ENTREVISTADAS.

3. Tiene huéspedes o visitantes que estén alojados aquí?

SI (¿NOTÉLAS EN EL CUADRO) NO

SI SE USO HOJA ADICIONAL MARQUE CON UNA X.

ENCUESTA NACIONAL DE DEMOGRAFIA Y SALUD - 1989
CUESTIONARIO INDIVIDUAL

IDENTIFICACION

<input type="text"/>					
PAQUETE	VIVIENDA	HOGAR	MUJER		

A: UBICACION GEOGRAFICA

1. DEPARTAMENTO..... <input type="text"/>	7. ZONA N° <input type="text"/>
2. AREA URBANA=1; RURAL=2..... <input type="text"/>	8. SECTOR N° <input type="text"/>
3. CIUDAD O LOCALIDAD..... <input type="text"/>	9. SEGMENTO N° <input type="text"/>
4. PROVINCIA..... <input type="text"/>	10. VIVIENDA N° <input type="text"/>
5. CANTON..... <input type="text"/>	11. HOGAR N° <input type="text"/>
(SOLAMENTE PARA CIUDADES DE 10.000 +)	
6. MANZANO/Z. ESTADISTICA <input type="text"/>	
12.- DIRECCION DE LA VIVIENDA	
CALLE..... N° PISO N°	
DEPARTAMENTO N°CAMINO O CARRETERA.....	
13.- NOMBRE DE LA MUJER.....	
14.- NUMERO DE LINEA DE LA MUJER EN EL CUESTIONARIO DE HOGAR <input type="text"/>	

B: RESULTADOS DE LAS VISITAS

VISITA FINAL

VISITA	1a.	2a.	3a.	4a.	VISITA FINAL	
FECHA					NUMERO DE VISITA	<input type="text"/>
CODIGO DE ENTREVIST.					DIA	<input type="text"/>
RESULTADO					MES	<input type="text"/>
PROXIMA VISITA	FECHA: _____				CODIGO DE LA ENTREVISTADORA	<input type="text"/>
	HORA: _____				RESULTADO	<input type="text"/>
					IDIOMA DE LA ENTREVISTA	<input type="text" value="1"/>

CODIGOS DE IDIOMA: ESPAÑOL=1; QUECHUA=2; AYMARA=3; OTRO=4

CODIGO DE RESULTADOS:

- | | |
|-----------------|-------------------------|
| 1 COMPLETA | 4 RECHAZO |
| 2 MUJER AUSENTE | 5 PARCIALMENTE COMPLETA |
| 3 POSTERGADA | 6 OTRO |

C: CONTROL DE OFICINA

	SUPERVISADO POR	CRITICADO POR	DIGITADO POR
CODIGO			
FECHA			

SECCION 1: ANTECEDENTES DE LA ENTREVISTADA

Para empezar me gustaria hacerle unas preguntas generales acerca de Ud. misma

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.
101	REGISTRE LA HORA EXACTA DE INICIO DE LA ENTREVISTA	HORA..... <input type="text"/> <input type="text"/> MINUTOS..... <input type="text"/> <input type="text"/>	
102	¿Qué idioma (lengua) hablan habitualmente los miembros de esta familia o la mayoría de ellos? INDAGUE: ¿Qué idioma hablan sobre todo a las horas de comida?	ESPAÑOL..... 1 AYMARA..... 2 QUECHUA..... 3 GUARANI..... 4 OTRO _____ 5 (ESPECIFIQUE)	→ 104
103	¿Puede hablar y entender español?	SI..... 1 NO..... 2	
104	Antes de que Ud. cumpliera 12 años, ¿dónde vivió la mayor parte del tiempo? ¿En el campo, en un pueblo o en una ciudad?	CAMPO 1 PUEBLO..... 2 CIUDAD..... 3	
105	¿Cuánto tiempo esta viviendo aquí en (NOMBRE DEL LUGAR DE LA ENTREVISTA)? PARA EL NOMBRE DEL LUGAR VER PUNTO 3 DE UBICACION GEOGRAFICA.	SIEMPRE..... 96 NO SIEMPRE..... 94 AÑOS..... <input type="text"/> <input type="text"/> VISITANTE..... 95	→ 107 → 106A
106	Antes de llegar a vivir aquí, a (NOMBRE DEL LUGAR) ¿dónde vivió Ud.? ¿en el campo, en un pueblo o en una ciudad?	CAMPO..... 1 PUEBLO 2 CIUDAD..... 3	→ 107
106A	¿Habitualmente dónde vive Ud.? SI VIVE EN EL EXTRANJERO, ANOTE EL NOMBRE DEL PAIS EN LA LINEA DEL DEPARTAMENTO.	_____ <input type="text"/> <input type="text"/> LOCALIDAD _____ <input type="text"/> <input type="text"/> PROVINCIA _____ <input type="text"/> <input type="text"/> DEPARTAMENTO	
107	¿En qué mes y año nació Ud.?	MES..... <input type="text"/> <input type="text"/> NO SABE MES.....98 AÑO..... <input type="text"/> <input type="text"/> NO SABE AÑO.....98	

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.
108	<p>¿Cuántos años cumplidos tiene? COMPARE 107 CON 108, SI HAY IN- CONSISTENCIA INDAGUE Y CORRIJA.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>SI LA ENTREVISTADA NO SABE LA FECHA DE NACIMIENTO NI SU EDAD INDAGUE Y AYUDELA A ESTIMAR SU EDAD, LUEGO ANOTE LA EN EL SE- GUNDO RECUADRO.</p> </div>	<p>AÑOS CUMPLIDOS..... <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/></p> <p>AÑOS CUMPLIDOS..... <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> (ESTIMADOS)</p>	
109	¿Alguna vez Ud. fué a la escuela o colegio?	<p>SI..... 1</p> <p>NO..... 2 → 113</p>	
110	¿Cuál es el último año de estudios que Ud. aprobó?	<p>PRIMARIA..... <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/></p> <p>SECUNDARIA..... <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/></p> <p>SUPERIOR..... <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/></p> <p style="text-align: right;">→ 114</p>	
113	¿Puede, Ud. leer una carta o un periódico con facilidad, con dificultad o no puede leerlo?	<p>CON FACILIDAD.....1</p> <p>CON DIFICULTAD.....2</p> <p>NO PUEDE HACERLO.....3 → 115</p>	
114	¿Lee Ud. un periódico por lo menos una vez a la semana?	<p>SI.....1</p> <p>NO.....2</p>	
115	¿Generalmente ve Ud. televisión todos los días?	<p>SI.....1</p> <p>NO.....2</p>	
116	¿Generalmente escucha Ud. radio todos los días?	<p>SI.....1</p> <p>NO.....2</p>	

SECCION 2: REPRODUCCION

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.								
201	Ahora quisiera preguntarle acerca de todas las hijas e hijos nacidos vivos que Ud. ha dado a luz. Fijese que no me refiero a hijos criados o adoptados por Ud. ¿Ha tenido alguna hija o hijo que ha nacido vivo?	SI..... 1 NO..... 2 → 206									
202	¿Tiene algún hijo o hija que esté viviendo con Ud.?	SI..... 1 NO..... 2 → 204									
203	¿Cuántos hijos varones viven con Ud.? ¿Cuántas hijas mujeres viven con Ud.?	HIJOS EN CASA..... <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> HIJAS EN CASA..... <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>									
204	¿Tiene Ud. alguna hija o hijo vivo que no esté viviendo con Ud.?	SI..... 1 NO..... 2 → 206									
205	¿Cuántos hijos varones no viven con Ud.? ¿Cuántas hijas mujeres no viven con Ud.?	HIJOS FUERA..... <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> HIJAS FUERA..... <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>									
206	¿Alguna vez dió a luz a una niña o a un niño que nació vivo pero que falleció después? INDAGUE: ¿Algún (otro) hijo o hija que nació vivo pero que sólo vivió algunos minutos, horas o días?	SI..... 1 NO..... 2 → 208									
207	¿Cuántos hijos varones han muerto? ¿Cuántas hijas mujeres han muerto?	HIJOS MUERTOS..... <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> HIJAS MUERTAS..... <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>									
208	SUME LAS RESPUESTAS DE 203, 205 Y 207 Y ANOTE EL TOTAL.	TOTAL..... <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table> (SI "00" PASE A 209A)									
209	SI DECLARA QUE TUVO ALGUN HIJO NACIDO VIVO Quisiera asegurarme que tengo la información correcta: Ud. ha tenido en total _____ hijos nacidos vivos durante toda su vida. ¿Es correcto? SI 1 <input type="checkbox"/> → (PASE A 210) NO 2 <input type="checkbox"/> (INDAGUE Y CORRIJA DEL 201 AL 208)										
209A	SI NO DECLARA NINGUN HIJO NACIDO VIVO Ud. no ha tenido ningún hijo que haya nacido vivo. ¿Es correcto? SI 1 <input type="checkbox"/> v NO 2 <input type="checkbox"/> (INDAGUE Y CORRIJA DEL 201 AL 208)										
210	MARQUE LA CASILLA APROPIADA: UNO O MAS NACIDOS VIVOS 1 <input type="checkbox"/> v NINGUN NACIDO VIVO 2 <input type="checkbox"/> → (PASE A 221)										
210A	Ahora quisiera hacer una lista completa de todos los hijos nacidos vivos que Ud. ha tenido, estén vivos o muertos. Empecemos por el primero que tuvo. (ANOTE EN 211 LOS NOMBRES DE TODOS LOS NACIDOS VIVOS Y LUEGO PREGUNTE 212 A 217 SEGUN CORRESPONDA)										

211 ¿Cuál es el nombre de su (primer, segundo, etc.) hijo? ANOTE MELLIZOS EN LINEAS SEPARADAS Y UNALOS CON UNA LLAVE.	212 (NOMBRE) ¿Es hombre o mujer?	213 ¿En qué mes y año nació (NOMBRE)? INDAGUE: ¿Cuál es su fecha de nacimiento?	214 ¿(NOMBRE) está vivo?	215 SI FALLECIO ¿Qué edad tenía (NOMBRE) cuando murió? ANOTE: DIAS, SI < DE 1 MES; MESES, SI DE 1 MES A < DE 2 AÑOS; Y AÑOS SI DE 2 AÑOS O MAS.	216 SI ESTA VIVO ¿Qué edad tiene (NOMBRE) en años cumplidos?	217 SI ESTA VIVO ¿(NOMBRE) está viviendo con Ud.?
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0 1	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 <input type="text"/> MESES..... 2 <input type="text"/> AÑOS..... 3 <input type="text"/> (PASE A LA SGTE. FILA)	<input type="text"/> EDAD	SI.....1 NO.....2
0 2	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 <input type="text"/> MESES..... 2 <input type="text"/> AÑOS..... 3 <input type="text"/> (PASE A LA SGTE. FILA)	<input type="text"/> EDAD	SI.....1 NO.....2
0 3	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 <input type="text"/> MESES..... 2 <input type="text"/> AÑOS..... 3 <input type="text"/> (PASE A LA SGTE. FILA)	<input type="text"/> EDAD	SI.....1 NO.....2
0 4	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 <input type="text"/> MESES..... 2 <input type="text"/> AÑOS..... 3 <input type="text"/> (PASE A LA SGTE. FILA)	<input type="text"/> EDAD	SI.....1 NO.....2
0 5	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 <input type="text"/> MESES..... 2 <input type="text"/> AÑOS..... 3 <input type="text"/> (PASE A LA SGTE. FILA)	<input type="text"/> EDAD	SI.....1 NO.....2
0 6	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 <input type="text"/> MESES..... 2 <input type="text"/> AÑOS..... 3 <input type="text"/> (PASE A LA SGTE. FILA)	<input type="text"/> EDAD	SI.....1 NO.....2
0 7	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 <input type="text"/> MESES..... 2 <input type="text"/> AÑOS..... 3 <input type="text"/> (PASE A LA SGTE. FILA)	<input type="text"/> EDAD	SI.....1 NO.....2
0 8	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 <input type="text"/> MESES..... 2 <input type="text"/> AÑOS..... 3 <input type="text"/> (PASE A LA SGTE. FILA)	<input type="text"/> EDAD	SI.....1 NO.....2
0 9	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 <input type="text"/> MESES..... 2 <input type="text"/> AÑOS..... 3 <input type="text"/> (PASE A LA SGTE. FILA)	<input type="text"/> EDAD	SI.....1 NO.....2
1 0	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 <input type="text"/> MESES..... 2 <input type="text"/> AÑOS..... 3 <input type="text"/> (PASE A LA SGTE. FILA)	<input type="text"/> EDAD	SI.....1 NO.....2

211 ¿Cuál es el nombre de su (primer, segundo, etc.) hijo? ANOTE MELLIZOS EN LINEAS SEPARADAS Y UNALOS CON UNA LLAVE.	212 (HOMBRE) ¿Es hombre o mujer?	213 ¿En que mes y año nació (NOMBRE)? INDAGUE: ¿Cuál es su fecha de nacimiento?	214 ¿(NOMBRE) está vivo?	215 SI FALLECIO ¿Qué edad tenía (NOMBRE) cuando murió? ANOTE: DIAS, SI < DE 1 MES; MESES, SI DE 1 MES A < DE 2 AÑOS; Y AÑOS SI DE 2 AÑOS O MAS.	216 SI ESTA VIVO ¿Qué edad tiene (NOMBRE) en años cumplidos?	217 SI ESTA VIVO ¿(NOMBRE) está viviendo con Ud.?
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1 1	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 MESES..... 2 AÑOS..... 3 (PASE A LA SGTE. FILA)	EDAD	SI.....1 NO.....2
1 2	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 MESES..... 2 AÑOS..... 3 (PASE A LA SGTE. FILA)	EDAD	SI.....1 NO.....2
1 3	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 MESES..... 2 AÑOS..... 3 (PASE A LA SGTE. FILA)	EDAD	SI.....1 NO.....2
1 4	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 MESES..... 2 AÑOS..... 3 (PASE A LA SGTE. FILA)	EDAD	SI.....1 NO.....2
1 5	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 MESES..... 2 AÑOS..... 3 (PASE A LA SGTE. FILA)	EDAD	SI.....1 NO.....2
1 6	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 MESES..... 2 AÑOS..... 3 (PASE A LA SGTE. FILA)	EDAD	SI.....1 NO.....2
1 7	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 MESES..... 2 AÑOS..... 3 (PASE A LA SGTE. FILA)	EDAD	SI.....1 NO.....2
1 8	HOMBRE.....1 MUJER.....2	MES... <input type="text"/> AÑO... <input type="text"/>	SI..... 1 (PASE A 216) NO..... 2	DIAS..... 1 MESES..... 2 AÑOS..... 3 (PASE A LA SGTE. FILA)	EDAD	SI.....1 NO.....2
218 COMPARE 208 CON EL NUMERO DE NACIDOS VIVOS EN LA HISTORIA DE ARRIBA Y MARQUE: NUMERO ES EL MISMO <input type="checkbox"/> (1) <input type="checkbox"/> (2) → (INDAGUE Y CORRIJA LAS INCONSISTENCIAS; LUEGO PROSIGA CON LA 219)						
219 A FIN DE VERIFICAR SI TODA LA INFORMACION NECESARIA HA SIDO REGISTRADA, REVISE SI:						
A) PARA CADA HIJO HACIDO VIVO LOS DATOS DE LAS COLUMNAS 1 A 4 HAN SIDO REGISTRADOS						<input type="checkbox"/>
B) PARA CADA HIJO FALLECIDO LOS DATOS DE LA COLUMNA 5 HAN SIDO REGISTRADOS, Y LAS COLUMNAS 6 Y 7 HAN QUEDADO EN BLANCO.						<input type="checkbox"/>
C) PARA CADA HIJO SOBREVIVIENTE LOS DATOS DE LA COLUMNA 6 Y 7 HAN SIDO REGISTRADOS, Y LA COLUMNA 5 HA QUEDADO EN BLANCO.						<input type="checkbox"/>

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.
220	¿A su (último) hijo lo tuvo por parto natural?	SI..... 1 NO..... 2	→ 221
220A	¿El parto de ese (último) hijo fué por cesárea? INDAGUE: ¿El parto de ese (último) hijo fué por una operación del vientre?	SI..... 1 NO..... 2	
221	¿Está Ud. embarazada actualmente?	SI..... 1 NO..... 2 NO SABE..... 8	→ 226
222	¿Cuántos meses de embarazo tiene?	MESES..... <input type="text"/> NO SABE..... 98	
223	¿Durante este embarazo le han puesto a Ud. alguna inyección para evitar que el niño tenga tétanos?	SI..... 1 NO..... 2 NO SABE..... 8	→ 224
223A	¿Cuántas inyecciones contra el tétanos le pusieron?	NUMERO DE INYECCIONES..... <input type="text"/> NO SABE..... 98	
223B	¿A dónde fué a que le pusieran la última inyección contra el tétanos?	HOSPITAL PUBLICO..... 01 CENTRO DE SALUD..... 02 PUESTO DE SALUD/ POSTA SANITARIA..... 03 CONSULTORIO MEDICO/ MEDICO PARTICULAR..... 04 CLINICA/ HOSPITAL PRIVADO..... 05 CAJA NACIONAL DE SALUD/OTRAS CAJAS.... 06 FARMACIA..... 07 ESCUELA..... 12 CAMPAÑA DE VACUNACION..... 13 OTRO LUGAR _____ 17 (ESPECIFIQUE) NO SABE/NO RECUERDA.... 98	
224	¿Fué a consultar a alguien para controlar su embarazo?	SI..... 1 NO..... 2	→ 227

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.						
225	¿A quién consultó? SI CONSULTO A MAS DE UNA PERSONA ANOTE A LA MAS CALIFICADA.	DOCTOR..... 1 ENFERMERA..... 2 AUXILIAR DE ENFERMERIA O SANITARIO..... 3 REPRESENTANTE POPULAR DE SALUD (RPS)..... 4 COMADRONA /MATRONA/ PARTERA..... 6 FAMILIAR..... 7 OTRO _____ 8 (ESPECIFIQUE)	> 227						
226	¿Hace cuánto tiempo tuvo su última menstruación (regla, mes, sangrado)?	HACE: DIAS..... 1 <table border="1" data-bbox="1144 661 1263 709"><tr><td></td><td></td></tr></table> SEMANAS..... 2 <table border="1" data-bbox="1144 716 1263 764"><tr><td></td><td></td></tr></table> MESES..... 3 <table border="1" data-bbox="1144 770 1263 819"><tr><td></td><td></td></tr></table> YA NO MENSTRUA..... 994 ANTES DEL ULTIMO NACIDO VIVO..... 995 NUNCA MENSTRUO..... 996 NO RECUERDA..... 998							
227	¿En cuales dias entre una menstruación y otra cree usted que la mujer debe cuidarse para no quedar embarazada?	DURANTE LA REGLA..... 1 INMEDIATAMENTE DESPUES DE LA REGLA..... 2 EN LA MITAD DEL TIEMPO ENTRE UNA REGLA Y OTRA.. 3 INMEDIATAMENTE ANTES DEL COMIENZO DE LA REGLA.... 4 INMEDIATAMENTE ANTES E INMEDIATAMENTE DESPUES ..5 EN CUALQUIER MOMENTO..... 6 OTRO _____ 7 (ESPECIFIQUE) NO SABE..... 8							
228	REGISTRE LA PRESENCIA DE OTRAS PERSONAS EN ESTE MOMENTO	NIÑOS MENORES DE 10 AÑOS.... 1 MARIDO/COMPAÑERO..... 1 HOMBRES ADULTOS..... 1 OTRAS MUJERES ADULTAS..... 1 OTROS..... 1	SI NO 2 2 2 2 2 2 2 2						

SECCION 3: ANTICONCEPTIVOS

301. Ahora quisiera que conversáramos acerca de un tema diferente. Hay varios métodos que una pareja puede usar para demorar o evitar un embarazo. ¿Qué métodos conoce Ud. o de cuáles ha escuchado hablar?
INDAGUE: ¿Algún otro?

CIRCULE EL CODIGO 1 EN 302 PARA CADA METODO MENCIONADO ESPONTANEAMENTE.
PARA CADA METODO NO MENCIONADO LEA SU NOMBRE Y DESCRIPCION Y PREGUNTE 302. CIRCULE EL CODIGO 2 SI EL METODO ES RECONOCIDO, EN CASO CONTRARIO CIRCULE EL CODIGO 3 Y CONTINUE CON EL SIGUIENTE METODO QUE CORRESPONDA.
LUEGO PREGUNTE DE 303 A 304 PARA CADA METODO MENCIONADO ESPONTANEAMENTE (CODIGO 1) O RECONOCIDO (CODIGO 2).

M E T O D O	302			303	304
	¿Conoce o ha escuchado Ud. hablar de este método? SI ESPONTA- NEO	SI RECONO- CIDO	NO		
PASTILLAS, PILDORAS Las mujeres pueden tomar todos los días una pastilla para no quedar embarazadas.	1	2	3 v	SI..... 1 NO..... 2	<input type="checkbox"/>
DIU Las mujeres pueden hacerse colocar dentro de la matriz un espiral, anillo, o una I de cobre con un médico o una enfermera.	1	2	3 v	SI..... 1 NO..... 2	<input type="checkbox"/>
INYECCION (DEPO-PROVERA) Las mujeres pueden hacerse poner una inyección anticonceptiva cada 1 ó 3 meses para evitar quedar embarazada.	1	2	3 v	SI..... 1 NO..... 2	<input type="checkbox"/>
DIAFRAGMA, ESPUMA, TABLETAS Las mujeres pueden colocarse dentro de la vagina una crema, un diafragma o tabletas antes de tener relaciones sexuales.	1	2	3 v	SI..... 1 NO..... 2	<input type="checkbox"/>
PRESERVATIVO (CONDON) Los hombres pueden usar un preservativo (condón) durante las relaciones sexuales.	1	2	3 v	SI..... 1 NO..... 2	<input type="checkbox"/>
ESTERILIZACION FEMENINA (LIGADURA) Las mujeres pueden hacerse operar para evitar tener hijos.	1	2	3 v	SI..... 1 → ¿Adónde fué Ud. para hacerse operar? NO..... 2 → ¿Adónde iría...?	<input type="checkbox"/>
ESTERILIZACION MASCULINA (VASECTOMIA) Los hombres pueden hacerse operar para no tener hijos.	1	2	3 v	SI..... 1 → ¿Adónde fué su esposo (compañero) para hacerse operar? NO..... 2 → ¿Adónde iría...?	<input type="checkbox"/>
RITMO, CALENDARIO, BILLINGS Las parejas pueden evitar tener relaciones sexuales los días del mes en que la mujer tiene mayor posibilidad (riesgo) de quedar embarazada.	1	2	3 v	SI..... 1 → ¿Adónde fué Ud. para recibir información acerca del ritmo? NO..... 2 → ¿Adónde iría...?	<input type="checkbox"/>
RETIRO (COITO INTERRUPTO) Los hombres pueden ser cuidadosos durante el acto sexual y retirarse antes de terminar.	1	2	3 v	SI..... 1 NO..... 2	
OTROS METODOS Además de los métodos que ya le mencióné, la pareja puede utilizar otros métodos para evitar un embarazo. ¿Conoce o ha escuchado hablar de algún otro método? SI RESPONDE "SI" ESPECIFICAR METODO.	1		3	SI..... 1 NO..... 2	

CODIGOS PARA 304

HOSPITAL PUBLICO..... 01	CLINICA/HOSPITAL PRIVADO 05	OTRO LUGAR..... 17
CENTRO DE SALUD..... 02	CNS/OTRAS CAJAS 06	NO QUIERE USAR/NO RESPONDE 88
PUESTO DE SALUD/POSTA SANITARIA . 03	FARMACIA 07	NO SABE 98
CONSULTORIO/MEDICO PARTICULAR ... 04	REPRESENTANTE POPULAR DE SALUD... 10	

306 VEA 303 Y MARQUE SEGUN CORRESPONDA:
NI UN SOLO "SI" EN 303
(NUNCA HA USADO)

1 2 3
|
v
(PROSIGA CON LA 307)

AL MENOS UN "SI" EN 303
(HA USADO ALGUN METODO) 2 → 309

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.		
307	¿Ha usado alguna vez algo o ha tratado de cualquier manera evitar quedar embarazada?	SI..... 1 NO..... 2 →	339		
308	¿Qué ha hecho? (CORRIJA 302 Y 303. COMPLETE LA INFORMACION DE 304 A 306 CUANDO SEA NECESARIO)	_____ _____			
309	<p style="text-align: center;">VEA 303:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <p style="text-align: center;">HA USADO RITMO O CALENDARIO (ABSTINENCIA PERIODICA)</p> <p style="text-align: center;">1 <input type="checkbox"/> v</p> </td> <td style="width: 50%; border: none;"> <p style="text-align: center;">NUNCA HA USADO RITMO ABSTINENCIA PERIODICA)</p> <p style="text-align: center;">2 <input type="checkbox"/> (PASE A 311)</p> </td> </tr> </table>			<p style="text-align: center;">HA USADO RITMO O CALENDARIO (ABSTINENCIA PERIODICA)</p> <p style="text-align: center;">1 <input type="checkbox"/> v</p>	<p style="text-align: center;">NUNCA HA USADO RITMO ABSTINENCIA PERIODICA)</p> <p style="text-align: center;">2 <input type="checkbox"/> (PASE A 311)</p>
<p style="text-align: center;">HA USADO RITMO O CALENDARIO (ABSTINENCIA PERIODICA)</p> <p style="text-align: center;">1 <input type="checkbox"/> v</p>	<p style="text-align: center;">NUNCA HA USADO RITMO ABSTINENCIA PERIODICA)</p> <p style="text-align: center;">2 <input type="checkbox"/> (PASE A 311)</p>				
310	La última vez que usó el ritmo ¿Cómo determinó en que días no podía tener relaciones sexuales? (que no podía estar con su esposo)	EN BASE: AL CALENDARIO.....1 A LA TEMPERATURA DEL CUERPO.2 A LA MUCOSIDAD CERVICAL (BILLINGS).....3 A LA TEMPERATURA DEL CUERPO Y LA MUCOSIDAD.....4 AL CALENDARIO Y TEMPERATURA.5 AL CALENDARIO Y MUCOSIDAD 6 OTRO.....7 (ESPECIFICAR)			
311	<p style="text-align: center;">VEA 208:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <p style="text-align: center;">HA TENIDO HIJOS</p> <p style="text-align: center;">1 <input type="checkbox"/> v</p> </td> <td style="width: 50%; border: none;"> <p style="text-align: center;">NO HA TENIDO HIJOS</p> <p style="text-align: center;">2 <input type="checkbox"/> (PASE A 312)</p> </td> </tr> </table>			<p style="text-align: center;">HA TENIDO HIJOS</p> <p style="text-align: center;">1 <input type="checkbox"/> v</p>	<p style="text-align: center;">NO HA TENIDO HIJOS</p> <p style="text-align: center;">2 <input type="checkbox"/> (PASE A 312)</p>
<p style="text-align: center;">HA TENIDO HIJOS</p> <p style="text-align: center;">1 <input type="checkbox"/> v</p>	<p style="text-align: center;">NO HA TENIDO HIJOS</p> <p style="text-align: center;">2 <input type="checkbox"/> (PASE A 312)</p>				
311A	¿Cuántos hijos tenía Ud. cuando comenzó a usar por primera vez un método para no quedar embarazada? SI "NINGUNO" ANOTE 00	NUMERO DE HIJOS.... <input type="text"/> <input type="text"/>			
312	<p style="text-align: center;">VEA 221</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <p style="text-align: center;">NO ESTA EMBARAZADA O NO SABE</p> <p style="text-align: center;">1 <input type="checkbox"/> v</p> </td> <td style="width: 50%; border: none;"> <p style="text-align: center;">ACTUALMENTE EMBARAZADA</p> <p style="text-align: center;">2 <input type="checkbox"/> (PASE A 339)</p> </td> </tr> </table>			<p style="text-align: center;">NO ESTA EMBARAZADA O NO SABE</p> <p style="text-align: center;">1 <input type="checkbox"/> v</p>	<p style="text-align: center;">ACTUALMENTE EMBARAZADA</p> <p style="text-align: center;">2 <input type="checkbox"/> (PASE A 339)</p>
<p style="text-align: center;">NO ESTA EMBARAZADA O NO SABE</p> <p style="text-align: center;">1 <input type="checkbox"/> v</p>	<p style="text-align: center;">ACTUALMENTE EMBARAZADA</p> <p style="text-align: center;">2 <input type="checkbox"/> (PASE A 339)</p>				
312A	<p style="text-align: center;">VEA 303</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <p style="text-align: center;">MUJER NO ESTERILIZADA</p> <p style="text-align: center;">1 <input type="checkbox"/> v</p> </td> <td style="width: 50%; border: none;"> <p style="text-align: center;">MUJER ESTERILIZADA</p> <p style="text-align: center;">2 <input type="checkbox"/> (PASE A 314A)</p> </td> </tr> </table>			<p style="text-align: center;">MUJER NO ESTERILIZADA</p> <p style="text-align: center;">1 <input type="checkbox"/> v</p>	<p style="text-align: center;">MUJER ESTERILIZADA</p> <p style="text-align: center;">2 <input type="checkbox"/> (PASE A 314A)</p>
<p style="text-align: center;">MUJER NO ESTERILIZADA</p> <p style="text-align: center;">1 <input type="checkbox"/> v</p>	<p style="text-align: center;">MUJER ESTERILIZADA</p> <p style="text-align: center;">2 <input type="checkbox"/> (PASE A 314A)</p>				
313	¿Actualmente están Ud. o su marido (compañero) usando algún método para no quedar embarazada?	SI.....1 NO.....2 →	322		

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.
314	¿Qué método está(n) usando?	PILDORA.....01 DISPOSITIVO INTRAUTERINO..02 INYECCIONES.....03 DIAFRAGMA/ESPUMA/TABLETAS .04 CONDON.....05	-> 319
314A	CIRCULE "06" Y PASE A 317	LIGADURA DE TROMPAS.....06 MET. IRREV. MASCULINO....07 RITMO, BILLINGS.....08 RETIRO.....09 OTROS METODOS.....10	
315	¿Por favor dígame el nombre o marca de las pastillas que está usando? MUESTRE LA PRESENTACION GRAFICA DE LAS MARCAS Y SEÑALE EL CODIGO APROPIADO.	PROGILUTON 21/28..... 01 EUGYNON..... 02 NEOGYNON 21/NEOGYNON 28.... 03 MICROGYNON 21/MICROGYNON 28.04 DENOVAL 21/DENOVAL 28..... 05 NORDETTE 21/NORDETTE 28.... 06 OVRAL 21..... 07 TRIQUILAR 21/28..... 08 DIANE 21/DIANE 28..... 09 OTRA MARCA _____ 10 (ESPECIFIQUE) NO RECUERDA..... 98	
316	¿Cuánto le cuesta un ciclo (paquete) de pastillas anticonceptivas?	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> GRATIS.....9996 NO SABE.....9998	-> 319
317	LA MUJER O EL ESPOSO (COMPAÑERO) ESTAN USANDO METODO IRREVERSIBLE EL ESPOSO O COMPAÑERO <input type="checkbox"/> 1 v	LA MUJER <input type="checkbox"/> 2 (PASE A 317D)	
317A	¿En qué mes y año operaron a su marido para no tener más hijos?	MES..... <input type="text"/> <input type="text"/> AÑO..... <input type="text"/> <input type="text"/> NO SABE..... 98	
317B	¿Hasta dónde Ud. sabe, su marido (compañero) está satisfecho de haberse hecho esta operación?	SI.....1 NO.....2 NO SABE.....8	-> 319A
317C	¿Porqué no está satisfecho su marido (compañero) con esta operación?	DESEA UN (OTRO)HIJO..... 1 TUVO COMPLICACIONES..... 2 LA OPERACION FALLO..... 3 LA MUJER NO ESTUVO DE ACUERDO..... 4 OTRO _____ 5 (ESPECIFIQUE)	-> 319A
317D	¿En qué mes y año la operaron a Ud. para no tener mas hijos?	MES..... <input type="text"/> <input type="text"/> AÑO... .. <input type="text"/> <input type="text"/>	-> 319A

No.	PREGUNTAS Y FILTROS	CODIGOS	FASE A PGTA.
326A	¿Además de (METODO ACTUAL) usa Ud. regularmente algún otro método?	SI..... 1 NO..... 2 →	328
327	¿Cuál es ese método?	PILDORA..... 01 DIU..... 02 INYECCIONES..... 03 DIAFRAGMA/ESPUMA/TABLETAS..04 CONDON..... 05 RITMO, BILLINGS..... 08 RETIRO..... 09 OTROS METODOS _____ 10 (ESPECIFIQUE)	
328	¿Han usado algún otro método o han hecho algo (desde el nacimiento de su último hijo) antes de usar (METODO ACTUAL) para evitar un embarazo?	SI..... 1 NO..... 2 →	342
329	¿Qué método usó antes de (METODO ACTUAL)?	PILDORA.....01 DISPOSITIVO INTRAUTERINO...02 INYECCIONES.....03 DIAFRAGMA/ESPUMA/TABLETAS..04 CONDON.....05 MET. IRREVERSIBLE MASCULINO.07 RITMO, BILLINGS.....08 RETIRO.....09 OTROS METODOS _____ 10 (ESPECIFIQUE)	
330	¿En que mes y año comenzó a usar (METODO ANTERIOR AL ACTUAL; METODO EN 329)?	MES..... <input type="text"/> <input type="text"/> AÑO..... <input type="text"/> <input type="text"/> NO SABE.....98	
331	¿Por cuánto tiempo usó (METODO ANTERIOR AL ACTUAL) antes de dejar de usarlo por última vez? ANOTE MESES Y AÑOS	MESES..... <input type="text"/> <input type="text"/> AÑOS..... <input type="text"/> <input type="text"/>	

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.
338	¿Cuál fué la razón principal por la que dejó de usar (ULTIMO METODO)?	PARA EMBARAZARSE..... 01 METODO FALLO..... 02 EL COMPAÑERO DESAPRUEBA.. 03 EFECTOS SECUNDARIOS..... 04 ACCESIBILIDAD/ DISPONIBILIDAD..... 05 COSTO MUY ALTO..... 06 DIFICIL DE USAR O SE OLVIDA..... 07 INTERFIERE CON SEXO..... 08 CAMBIO DE METODO..... 09 SEXUALMENTE INACTIVA..... 10 MENOPAUSIA/INFERTILIDAD.. 11 OTRO _____ 12 (ESPECIFICAR) NO SABE.....98	
339	¿Piensa usted usar en el futuro algún método para no quedar embarazada?	SI.....1 NO.....2 INDECISA.....8	-> 342
340	¿Qué método preferiría usar?	PILDORA.....01 DISPOSITIVO INTRAUTERINO..02 INYECCIONES.....03 DIAFRAGMA/ESPUMA/ TABLETAS..... 04 CONDON.....05 MET.IRREVERSIBLE FEMENINO..... 06 MET.IRREVERSIBLE MASCULINO..... 07 RITMO, BILLINGS..... 08 RETIRO..... 09 OTROS METODOS..... 10 NO SABE, INDECISA..... 98	
341	¿Piensa usted usar (METODO PREFERIDO O ALGUN METODO) en los próximos doce meses?	SI..... 1 NO..... 2 INDECISA..... 8	
342	¿Escuchó alguna vez, por radio o vió por televisión un mensaje sobre planificación familiar?	SI..... 1 NO..... 2	-> 344

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.		
343	¿Lo escuchó o vio una vez o más de una vez?	UNA VEZ..... 1 MAS DE UNA..... 2			
344	¿Está Ud. de acuerdo que se pase información sobre planificación familiar en la radio o la televisión?	SI..... 1 NO..... 2 INDECISA..... 8			
345	¿Ha visto usted un anuncio sobre el bienestar de la madre patrocinado por el nombre "DeVida"?	SI..... 1 NO..... 2 NO SABE/NO RECUERDA..... 8	} >346		
345A	¿Hizo usted algo o tomó usted alguna decisión como resultado de haber visto este anuncio?	SI..... 1 NO..... 2	->346		
345B	¿Qué fué lo que hizo o cuál fué la decisión que tomó? (MARQUE TODAS LAS ALTERNATIVAS QUE LA MUJER MENCIONA)	FUE A UN MEDICO/ PUESTO DE SALUD 1 FUE A UNA FARMACIA 1 DISCUTIO PF CON EL MARIDO 1 DISCUTIO PF CON AMIGO(A) O PARIENTE . 1 DECIDIO CUIDARSE CON ALGUN METODO DE PF .. 1 OTRO _____ 1 (ESPECIFIQUE) NO RESPONDE 1			
<p>346 VEA 213, 221 Y MARQUE SEGUN CORRESPONDA:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;"> <p>HA TENIDO UN HIJO O MAS DESDE ENERO DE 1984 O ESTA ACTUALMENTE EMBARAZADA</p> <p style="text-align: center;">1 <input type="checkbox"/> v</p> <p style="text-align: center;">(SIGA CON 347)</p> </td> <td style="width: 50%; border: none; vertical-align: top;"> <p>NO HA TENIDO HIJOS DESDE ENERO DE 1984 Y NO ESTA ACTUALMENTE EMBARAZADA O NO SABE</p> <p style="text-align: center;">2 <input type="checkbox"/> v</p> <p style="text-align: center;">(PASE A LA PREGUNTA 478)</p> </td> </tr> </table>				<p>HA TENIDO UN HIJO O MAS DESDE ENERO DE 1984 O ESTA ACTUALMENTE EMBARAZADA</p> <p style="text-align: center;">1 <input type="checkbox"/> v</p> <p style="text-align: center;">(SIGA CON 347)</p>	<p>NO HA TENIDO HIJOS DESDE ENERO DE 1984 Y NO ESTA ACTUALMENTE EMBARAZADA O NO SABE</p> <p style="text-align: center;">2 <input type="checkbox"/> v</p> <p style="text-align: center;">(PASE A LA PREGUNTA 478)</p>
<p>HA TENIDO UN HIJO O MAS DESDE ENERO DE 1984 O ESTA ACTUALMENTE EMBARAZADA</p> <p style="text-align: center;">1 <input type="checkbox"/> v</p> <p style="text-align: center;">(SIGA CON 347)</p>	<p>NO HA TENIDO HIJOS DESDE ENERO DE 1984 Y NO ESTA ACTUALMENTE EMBARAZADA O NO SABE</p> <p style="text-align: center;">2 <input type="checkbox"/> v</p> <p style="text-align: center;">(PASE A LA PREGUNTA 478)</p>				

347
Ahora quisiera obtener más información sobre (su embarazo y) los hijos nacidos vivos que tuvo en los últimos cinco años. MARQUE EN EL ENCABEZAMIENTO DEL CUADRO SI ESTA ACTUALMENTE EMBARAZADA Y ANOTE ADEMÁS LOS NOMBRES DE LOS HIJOS NACIDOS VIVOS DESDE ENERO DE 1984. DESPUÉS MARQUE SI USO O NO ALGUNA VEZ UN MÉTODO ANTICONCEPTIVO.

VEA 306 NUNCA USO UN MÉTODO 1 (PREGUNTE 355 PARA CADA COLUMNA) ALGUNA VEZ USO UN MÉTODO 2 (PREGUNTE 349 A 356 PARA CADA COLUMNA)

PREGUNTAS Y FILTROS	VER 221: EMBARAZADA ACTUALMENTE	ULTIMO NACIDO VIVO	PENULTIMO NACIDO VIVO	ANTEPENULTIMO NACIDO VIVO	ANTE ANTEPENULTIMO NACIDO VIVO
	SI <input type="checkbox"/> NO <input type="checkbox"/> 1 2	NOMBRE _____ NUMERO DE ORDEN <input type="text"/>			
349 Antes de que Ud. quedara embarazada de (NOMBRE), pero después del nacimiento de (NOMBRE DE ANTERIOR NACIDO VIVO) ¿usó algún método para no quedar embarazada, aunque sea por poco tiempo?	SI..... 1 NO..... 2 (PASE A 355)←				
350 ¿Cuál fué el último método que usó entonces?	PILDORA.....01 DIU.....02 INYECCIONES.....03 MET. VAGINALES..04 CONDON.....05 RITMO, BILLINGS.08 RETIRO.....09 OTROS.....10				
352 ¿Por cuánto tiempo estuvo usando (ULTIMO MÉTODO) en esa oportunidad? ANOTE MESES	MESES..... <input type="text"/>				
353 ¿Estaba usando (ULTIMO MÉTODO) cuando quedó embarazada?	SI.....1 NO.....2 (PASE A 356)←				
354 ¿Cuál fué la razón principal por la que dejó de usar (ULTIMO MÉTODO) en esa oportunidad?	EMBARAZARSE.....01 (PASE SGTE.COLUMNA) COMPAÑERO DESA- PRUEBA.....03 EFECTOS SECUNDA- RIOS.....04 ACCESIBILIDAD/ DISPONIBILIDAD.05 COSTO MUY ALTO...06 DIFICIL DE USAR..07 INTERFIERE CON SEXO.....08 SEXUALMENTE INACTIVA.....10 OTRO.....12 NO SABE.....9B	EMBARAZARSE.....01 (PASE SGTE.COLUMNA) COMPAÑERO DESA- PRUEBA.....03 EFECTOS SECUNDA- RIOS.....04 ACCESIBILIDAD/ DISPONIBILIDAD.05 COSTO MUY ALTO...06 DIFICIL DE USAR..07 INTERFIERE CON SEXO.....08 SEXUALMENTE INACTIVA.....10 OTRO.....12 NO SABE.....9B	EMBARAZARSE.....01 (PASE SGTE.COLUMNA) COMPAÑERO DESA- PRUEBA.....03 EFECTOS SECUNDA- RIOS.....04 ACCESIBILIDAD/ DISPONIBILIDAD.05 COSTO MUY ALTO...06 DIFICIL DE USAR..07 INTERFIERE CON SEXO.....08 SEXUALMENTE INACTIVA.....10 OTRO.....12 NO SABE.....9B	EMBARAZARSE.....01 (PASE SGTE.COLUMNA) COMPAÑERO DESA- PRUEBA.....03 EFECTOS SECUNDA- RIOS.....04 ACCESIBILIDAD/ DISPONIBILIDAD.05 COSTO MUY ALTO...06 DIFICIL DE USAR..07 INTERFIERE CON SEXO.....08 SEXUALMENTE INACTIVA.....10 OTRO.....12 NO SABE.....9B	EMBARAZARSE.....01 (PASE SGTE.COLUMNA) COMPAÑERO DESA- PRUEBA.....03 EFECTOS SECUNDA- RIOS.....04 ACCESIBILIDAD/ DISPONIBILIDAD.05 COSTO MUY ALTO...06 DIFICIL DE USAR..07 INTERFIERE CON SEXO.....08 SEXUALMENTE INACTIVA.....10 OTRO.....12 NO SABE.....9B
355 ¿Antes de quedar embarazada de (NOMBRE), pensaba tener otro (un) hijo entonces, pensaba tener otro (un) hijo pero más tarde o pensaba no tener (más) hijos?	ENTONCES.....1 MAS TARDE.....2 NO MAS.....3 (PASE A LA SGTE. COLUMNA)	ENTONCES.....1 MAS TARDE.....2 NO MAS.....3 (PASE A 401)			
356 ¿Quería Ud. tener ese hijo más tarde o ya no quería tener más hijos?	MAS TARDE.....1 NO QUERIA MAS....2 (PASE A LA SGTE. COLUMNA)	MAS TARDE.....1 NO QUERIA MAS....2 (PASE A 401)			

SECCION 4. SALUD Y LACTANCIA MATERNA

401 VEA 213 Y MARQUE SEGUN CORRESPONDA: UNO O MAS NACIDOS VIVOS DESDE ENERO DE 1984		NINGUN HIJO NACIDO VIVO DESDE ENERO DE 1984		
402 ANOTE EN EL ENCABEZAMIENTO DEL CUADRO EL NOMBRE Y ESTADO DE SOBREVIVENCIA DE CADA NACIDO VIVO DESDE ENERO DE 1984. COMIENZE CON EL ULTIMO NACIDO VIVO.		PASE A LA PREGUNTA 478		
PREGUNTAS Y FILTROS	ULTIMO NACIDO VIVO	PENULTIMO NACIDO VIVO	ANTE PENULTIMO N.V.	ANTE ANTEPENUL. N.V.
	NOMBRE..... NUMERO DE ORDEN <input type="text"/> <input type="text"/> VIVO <input type="checkbox"/> MUERTO <input type="checkbox"/>	NOMBRE..... NUMERO DE ORDEN <input type="text"/> <input type="text"/> VIVO <input type="checkbox"/> MUERTO <input type="checkbox"/>	NOMBRE..... NUMERO DE ORDEN <input type="text"/> <input type="text"/> VIVO <input type="checkbox"/> MUERTO <input type="checkbox"/>	NOMBRE..... NUMERO DE ORDEN <input type="text"/> <input type="text"/> VIVO <input type="checkbox"/> MUERTO <input type="checkbox"/>
403 ¿Cuándo estaba embarazada de (NOMBRE) le colocaron a Ud. alguna inyección para que el niño no tenga tétanos?	SI..... 1 NO..... 2 NO SABE..... 8			
404 ¿Durante el embarazo de (NOMBRE), se hizo controlar por ese embarazo? <div style="border: 1px solid black; padding: 2px; width: fit-content;">SI LA RESPUESTA ES "SI" INDAGUE Y ANOTE A LA PERSONA MAS CALIFICADA.</div> ¿Quién le controló por ese embarazo?	DOCTOR..... 1 ENFERMERA..... 2 AUXILIAR DE ENFERMERIA O SANITARIO.. 3 COMADRONA/ PARTERA/MATRONA.. 6 OTRO..... 8 NO SE CONTROLA.... 9	DOCTOR..... 1 ENFERMERA..... 2 AUXILIAR DE ENFERMERIA O SANITARIO.. 3 COMADRONA/ PARTERA/MATRONA.. 6 OTRO..... 8 NO SE CONTROLA.... 9	DOCTOR..... 1 ENFERMERA..... 2 AUXILIAR DE ENFERMERIA O SANITARIO.. 3 COMADRONA/ PARTERA/MATRONA.. 6 OTRO..... 8 NO SE CONTROLA.... 9	DOCTOR..... 1 ENFERMERA..... 2 AUXILIAR DE ENFERMERIA O SANITARIO.. 3 COMADRONA/ PARTERA/MATRONA.. 6 OTRO..... 8 NO SE CONTROLA.... 9
405 ¿Quién le atendió en el parto de (NOMBRE)? <div style="border: 1px solid black; padding: 2px; width: fit-content;">SI LE ATENDIO MAS DE UNA PERSONA, ANOTE A LA MAS CALIFICADA.</div>	DOCTOR..... 1 ENFERMERA..... 2 AUXILIAR DE ENFERMERIA O SANITARIO.. 3 COMADRONA/ PARTERA/MATRONA.. 6 FAMILIAR..... 7 OTRO..... 8 NADIE..... 9	DOCTOR..... 1 ENFERMERA..... 2 AUXILIAR DE ENFERMERIA O SANITARIO.. 3 COMADRONA/ PARTERA/MATRONA.. 6 FAMILIAR..... 7 OTRO..... 8 NADIE..... 9	DOCTOR..... 1 ENFERMERA..... 2 AUXILIAR DE ENFERMERIA O SANITARIO.. 3 COMADRONA/ PARTERA/MATRONA.. 6 FAMILIAR..... 7 OTRO..... 8 NADIE..... 9	DOCTOR..... 1 ENFERMERA..... 2 AUXILIAR DE ENFERMERIA O SANITARIO.. 3 COMADRONA/ PARTERA/MATRONA.. 6 FAMILIAR..... 7 OTRO..... 8 NADIE..... 9
405A ¿Dónde tuvo lugar el parto de (NOMBRE)?	HOSPITAL PUBLICO... 1 CENTRO DE SALUD... 2 CLINICA U HOSPITAL PRIVADO..... 5 EN LA CASA.....11 OTRO LUGAR.....17	HOSPITAL PUBLICO... 1 CENTRO DE SALUD... 2 CLINICA U HOSPITAL PRIVADO..... 5 EN LA CASA.....11 OTRO LUGAR.....17	HOSPITAL PUBLICO... 1 CENTRO DE SALUD... 2 CLINICA U HOSPITAL PRIVADO..... 5 EN LA CASA.....11 OTRO LUGAR.....17	HOSPITAL PUBLICO... 1 CENTRO DE SALUD... 2 CLINICA U HOSPITAL PRIVADO..... 5 EN LA CASA.....11 OTRO LUGAR.....17
405B ¿En las 24 horas después de su nacimiento (NOMBRE) estuvo... en la misma cama o en la misma habitación que Ud.? separado(a) de Ud. por algunas horas pero luego en la misma habitación? separado(a) todo el 1er.día pero alimentado(a) por Ud.? separado(a) todo el día?	MISMA CAMA O MISMA HABITACION.....1 SEPARADO POR ALGUNAS HORAS.....2 SEPARADO PERO ALIMENTADO POR LA MADRE.....3 SEPARADO TODO EL PRIMER DIA.....4 OTROS CASOS.....5	MISMA CAMA O MISMA HABITACION.....1 SEPARADO POR ALGUNAS HORAS.....2 SEPARADO PERO ALIMENTADO POR LA MADRE.....3 SEPARADO TODO EL PRIMER DIA.....4 OTROS CASOS.....5	MISMA CAMA O MISMA HABITACION.....1 SEPARADO POR ALGUNAS HORAS.....2 SEPARADO PERO ALIMENTADO POR LA MADRE.....3 SEPARADO TODO EL PRIMER DIA.....4 OTROS CASOS.....5	MISMA CAMA O MISMA HABITACION.....1 SEPARADO POR ALGUNAS HORAS.....2 SEPARADO PERO ALIMENTADO POR LA MADRE.....3 SEPARADO TODO EL PRIMER DIA.....4 OTROS CASOS.....5
405C ¿En su opinión (NOMBRE) al nacer era pequeño, normal o más grande de lo normal?	MUY PEQUEÑO.....1 MAS PEQUEÑO QUE LO NORMAL.....2 NORMAL.....3 MAS GRANDE QUE LO NORMAL.....4 MUCHO MAS GRANDE QUE LO NORMAL.....5 NO SABE.....8	MUY PEQUEÑO.....1 MAS PEQUEÑO QUE LO NORMAL.....2 NORMAL.....3 MAS GRANDE QUE LO NORMAL.....4 MUCHO MAS GRANDE QUE LO NORMAL.....5 NO SABE.....8	MUY PEQUEÑO.....1 MAS PEQUEÑO QUE LO NORMAL.....2 NORMAL.....3 MAS GRANDE QUE LO NORMAL.....4 MUCHO MAS GRANDE QUE LO NORMAL.....5 NO SABE.....8	MUY PEQUEÑO.....1 MAS PEQUEÑO QUE LO NORMAL.....2 NORMAL.....3 MAS GRANDE QUE LO NORMAL.....4 MUCHO MAS GRANDE QUE LO NORMAL.....5 NO SABE.....8

CONTINUE COMO EN LA PAGINA ANTERIOR	ULTIMO NACIDO VIVO	PENULTIMO NACIDO VIVO	ANTEPENULTIMO NACIDO VIVO	ANTE ANTEPENULTIMO NACIDO VIVO
	NOMBRE.....	NOMBRE.....	NOMBRE.....	NOMBRE.....
405D ¿A los cuántos meses después del nacimiento de (NOMBRE) le volvió su menstruación?	NO LE HA VUELTO...96 [][] MESES	NO LE VOLVIO96 [][] (PASE A 405F) MESES	NO LE VOLVIO96 [][] (PASE A 405F) MESES	NO LE VOLVIO96 [][] (PASE A 405F) MESES
405E ¿Ha vuelto a tener relaciones sexuales después del nacimiento de (NOMBRE)?	SI (O EMBARAZADA)... 1 NO..... 2 (PASE A 406) ←			
405F ¿Cuántos meses después del nacimiento de (NOMBRE) volvió a tener relaciones sexuales?	MESES..... [][]			
406 ¿Le dió pecho alguna vez a (NOMBRE)?	SI..... 1 (PASE A 407) ← NO..... 2	SI..... 1 (PASE A 407A) ← NO..... 2	SI..... 1 (PASE A 407A) ← NO..... 2	SI..... 1 (PASE A 407A) ← NO..... 2
406A ¿Porqué nunca le dió pecho a (NOMBRE)?	INCONVENIENTE..... 1 DEBIA TRABAJAR..... 2 LECHE INSUFICIENTE. 3 EL NIÑO NO QUERIA.. 4 EL NIÑO MURIO..... 5 EL NIÑO ENFERMO... 6 LA MADRE ENFERMO... 7 PEZON INVERTIDO O LESIONES..... 8 OTR: S RAZONES.....12 (PASE A 408A)	INCONVENIENTE..... 1 DEBIA TRABAJAR..... 2 LECHE INSUFICIENTE. 3 EL NIÑO NO QUERIA.. 4 EL NIÑO MURIO..... 5 EL NIÑO ENFERMO... 6 LA MADRE ENFERMO... 7 PEZON INVERTIDO O LESIONES..... 8 OTRAS RAZONES.....12 (PASE A 408A)	INCONVENIENTE..... 1 DEBIA TRABAJAR..... 2 LECHE INSUFICIENTE. 3 EL NIÑO NO QUERIA.. 4 EL NIÑO MURIO..... 5 EL NIÑO ENFERMO... 6 LA MADRE ENFERMO... 7 PEZON INVERTIDO O LESIONES..... 8 OTRAS RAZONES.....12 (PASE A 408A)	INCONVENIENTE..... 1 DEBIA TRABAJAR..... 2 LECHE INSUFICIENTE. 3 EL NIÑO NO QUERIA.. 4 EL NIÑO MURIO..... 5 EL NIÑO ENFERMO... 6 LA MADRE ENFERMO... 7 PEZON INVERTIDO O LESIONES..... 8 OTRAS RAZONES.....12 (PASE A 408A)
SI ESTA VIVO, PREGUNTE: 407 ¿Todavía le está dando pecho a (NOMBRE)? SI HA FALLECIDO MARQUE "2" Y PASE A LA 407A.	SI..... 1 (PASE A 413) ← NO..... 2			
407A ¿Por cuántos meses le dió pecho a (NOMBRE)?	MESES..... [][] HASTA QUE MURIO.....96			
408 ¿Porqué dejó de darle pecho a (NOMBRE)?	INCONVENIENTE.....1 DEBIA TRABAJAR.....2 LECHE INSUFICIENTE..3 EL NIÑO NO QUERIA..4 EL NIÑO MURIO.....5 EL NIÑO ENFERMO....6 LA MADRE ENFERMO...7 EL NIÑO C/DIARREA..8 EDAD DE DESTETE....9 SE EMBARAZO.....10 CONSEJO MEDICO....11 OTRAS RAZONES.....12	INCONVENIENTE.....1 DEBIA TRABAJAR.....2 LECHE INSUFICIENTE..3 EL NIÑO NO QUERIA..4 EL NIÑO MURIO.....5 EL NIÑO ENFERMO....6 LA MADRE ENFERMO...7 EL NIÑO C/DIARREA..8 EDAD DE DESTETE....9 SE EMBARAZO.....10 CONSEJO MEDICO....11 OTRAS RAZONES.....12	INCONVENIENTE.....1 DEBIA TRABAJAR.....2 LECHE INSUFICIENTE..3 EL NIÑO NO QUERIA..4 EL NIÑO MURIO.....5 EL NIÑO ENFERMO....6 LA MADRE ENFERMO...7 EL NIÑO C/DIARREA..8 EDAD DE DESTETE....9 SE EMBARAZO.....10 CONSEJO MEDICO....11 OTRAS RAZONES.....12	INCONVENIENTE.....1 DEBIA TRABAJAR.....2 LECHE INSUFICIENTE..3 EL NIÑO NO QUERIA..4 EL NIÑO MURIO.....5 EL NIÑO ENFERMO....6 LA MADRE ENFERMO...7 EL NIÑO C/DIARREA..8 EDAD DE DESTETE....9 SE EMBARAZO.....10 CONSEJO MEDICO....11 OTRAS RAZONES.....12
408A VEA CONDICION DE SUPERVIVENCIA	VIVO MUERTO 1 [] 2 [] (PASE A 403, SGTE. COLUMNA) ↓ (PROSIGA CON 412)	VIVO MUERTO 1 [] 2 [] (PASE A 403, SGTE. COLUMNA) ↓ (PASE A 419)	VIVO MUERTO 1 [] 2 [] (PASE A 403, SGTE. COLUMNA) ↓ (PASE A 419)	VIVO MUERTO 1 [] 2 [] (PASE A 427) ↓ (PASE A 419)

412 VEA 407
 ¿UN LE ESTA DANDO DE MAMAR AL ULTIMO HIJO

OTROS CASOS

(SIGA CON 413) 1 2 → PASE A 419

413 ¿Cuántas veces dió el pecho a (NOMBRE) desde ayer a las 7 de la noche hasta hoy a las 6 de la mañana?
 INDAGUE: ...desde ayer por la noche hasta hoy al amanecer?

NUMERO DE VECES.....

414 ¿Cuántas veces dió el pecho a (NOMBRE) durante las horas del día de ayer?

NUMERO DE VECES.....

415	¿En algún momento de ayer o de anoche le dió Ud. u otra persona a (NOMBRE) algo de lo siguiente? (LEA LAS SIGUIENTES ALTERNATIVAS)	SUPLEMENTOS	SI	NO	415A SI 415 = 1 ¿Cuántas veces dió ayer (SUPLEMENTO) a (NOMBRE)?	415B SI 415 = 1 ¿Qué edad tenía (NOMBRE) cuando comenzó a darle (SUPLEMENTO) regularmente todos los días? MESES (ANOTE LA EDAD EN MESES)
	Agua sola?	AGUA SOLA.....	1	2	<input type="text"/>	<input type="text"/>
	Agua de hierbas?	AGUA DE HIERBAS.....	1	2	<input type="text"/>	<input type="text"/>
	Jugo, agua con azúcar?	JUGO, AGUA CON AZUCAR....	1	2	<input type="text"/>	<input type="text"/>
	Leche en polvo?	LECHE EN POLVO.....	1	2	<input type="text"/>	<input type="text"/>
	Leche de vaca o cabra?	LECHE DE VACA O CABRA....	1	2	<input type="text"/>	<input type="text"/>
	Otros líquidos?	OTROS LIQUIDOS.....	1	2	<input type="text"/>	<input type="text"/>
	Alimentos sólidos, pure, papilla?	ALIMENTO SOLIDO, PURE....	1	2	<input type="text"/>	<input type="text"/>

NO RECUERDA=98
 MENOS DE 1 = 00

415C VEA 415

LE FUE DADO UN SUPLEMENTO LIQUIDO 1

NO SE LE DIO NINGUN SUPLEMENTO LIQUIDO 2 → 419

415D ¿Alguno de estos líquidos le fue dado en una botella con chupón o en un biberón?

SI.....1
 NO.....2

CONTINUE COMO EN LA PAGINA ANTERIOR	ULTIMO NACIDO VIVO NOMBRE.....	PENULTIMO NACIDO VIVO NOMBRE.....	ANTEPENULTIMO NACIDO VIVO NOMBRE.....	ANTE ANTEPENULTIMO NACIDO VIVO NOMBRE.....
419 ¿Tiene Ud. el carnet de vacunacion o el carnet infantil de (NOMBRE)? Si es: "SI" ¿Me permitiría verlo?	SI (LO VIO C.V.).. 1 SI (LO VIO C.S.).. 2 SI (NO LO VIO)... 3 NO LO TIENE..... B (PASE A 420A)←	SI (LO VIO C.V.).. 1 SI (LO VIO C.S.).. 2 SI (NO LO VIO)... 3 NO LO TIENE..... B (PASE A 420A)←	SI (LO VIO C.V.).. 1 SI (LO VIO C.S.).. 2 SI (NO LO VIO)... 3 NO LO TIENE..... B (PASE A 420A)←	SI (LO VIO C.V.).. 1 SI (LO VIO C.S.).. 2 SI (NO LO VIO)... 3 NO LO TIENE..... B (PASE A 420A)←

420 SI LA ENTREVISTADA LE PERMITE VER EL CARNET DE VACUNACIONES DEL HIJO, ANOTE EL DIA, EL MES Y EL AÑO CORRESPONDIENTE A CADA VACUNACION EN LAS CASILLAS QUE SIGUEN. ESCRIBA 95 EN LA COLUMNA "DIAS" SI EL CARNET ESTA TIQUEADO. SI NO ESTA TIQUEADO O SI NO TIENE LAS FECHAS EN EL CARNET DE VACUNACION, ENCIERRE EN UN CIRCULO EL "1" DE LA COLUMNA "C".

	C	DIA	MES	AÑO												
POLIO 1	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>
POLIO 2	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>
POLIO 3	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>
POLIO 4	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>
DPT 1	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>
DPT 2	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>
DPT 3	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>
SARAMPION	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>
BCG	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>

(PASE A 420H) (PASE A 420G) (PASE A 420G) (PASE A 420G)

CONTINUE COMO EN LA PAGINA ANTERIOR	ULTIMO NACIDO VIVO	PENULTIMO NACIDO VIVO	ANTEPENULTIMO NACIDO VIVO	ANTE ANTEPENULTIMO NACIDO VIVO
	NOMBRE.....	NOMBRE.....	NOMBRE.....	NOMBRE.....
420A ¿Fue (NOMBRE) vacunado(a) contra la polio, la vacuna que se da en gotas?	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 420C)←	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 420C)←	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 420C)←	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 420C)←
420B ¿Cuántas veces le dieron la vacuna en gotas?	UNA..... 1 DOS..... 2 TRES..... 3 CUATRO..... 4 NO SABE..... 8	UNA..... 1 DOS..... 2 TRES..... 3 CUATRO..... 4 NO SABE..... 8	UNA..... 1 DOS..... 2 TRES..... 3 CUATRO..... 4 NO SABE..... 8	UNA..... 1 DOS..... 2 TRES..... 3 CUATRO..... 4 NO SABE..... 8
420C ¿Fue (NOMBRE) vacunado(a) con la vacuna triple (DPT)?	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 420E)←	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 420E)←	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 420E)←	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 420E)←
420D ¿Cuántas veces recibió la vacuna?	UNA..... 1 DOS..... 2 TRES..... 3 NO SABE..... 8	UNA..... 1 DOS..... 2 TRES..... 3 NO SABE..... 8	UNA..... 1 DOS..... 2 TRES..... 3 NO SABE..... 8	UNA..... 1 DOS..... 2 TRES..... 3 NO SABE..... 8
420E ¿Fue (NOMBRE) vacunado(a) contra el sarampión?	SI..... 1 NO..... 2 NO SABE..... 8	SI..... 1 NO..... 2 NO SABE..... 8	SI..... 1 NO..... 2 NO SABE..... 8	SI..... 1 NO..... 2 NO SABE..... 8
420F ¿Fue vacunado(a) contra la tuberculosis (BCG)? (La vacuna que deja cicatriz en el brazo)	SI..... 1 NO..... 2 NO SABE..... 8	SI..... 1 NO..... 2 NO SABE..... 8	SI..... 1 NO..... 2 NO SABE..... 8	SI..... 1 NO..... 2 NO SABE..... 8
420G MARQUE LA CASILLA QUE CORRESPONDA: LA PREGUNTA 420H FUE FORMULADA PARA UN HIJO MENOR				
NO FUE FORMULADA <input type="checkbox"/>		YA FUE FORMULADA <input type="checkbox"/> → 421		
2				
No.	PREGUNTAS Y FILTROS	CODIGOS		PASE A PGTA.
420H	¿A que sitios podría ir si quisiera hacer vacunar a su hijo(s)?	HOSPITAL PUBLICO..... 1 CENTRO DE SALUD..... 1 PUESTO DE SALUD/ POSTA SANITARIA..... 1 CONSULTORIO MEDICO/ MEDICO PARTICULAR..... 1 CLINICA/ HOSPITAL PRIVADO..... 1 CHS/OTRAS CAJAS..... 1 UNIDAD DE REHIDRATAION ORAL (URO)..... 1 FARMACIA..... 1 CURANDERO..... 1 RESPONSABLE POPULAR DE SALUD (RPS)..... 1 ESCUELA..... 1 CAMPAÑA DE VACUNACION..... 1 OTRO LUGAR..... 1 (ESPECIFIQUE) NO SABE..... 1		

CONTINUE COMO EN LA PAGINA ANTERIOR	ULTIMO HIJO NACIDO VIVO	PENULTIMO HIJO NACIDO VIVO	ANTEPENULTIMO HIJO NACIDO VIVO	ANTE ANTEPENULTIMO HIJO NACIDO VIVO
421 ¿(NOMBRE) tuvo tos en las últimas 24 horas?	SI 1 NO 2 (PASE A 422A) <	SI 1 NO 2 (PASE A 422A) <	SI 1 NO 2 (PASE A 422A) <	SI 1 NO 2 (PASE A 422A) <
422 ¿Hace cuántos días le comenzó la tos a (NOMBRE)?	DIAS .. <input type="text"/> <input type="text"/> MENOS DE 1 DIA= 00 NO SABE 98 (PASE A 423) <	DIAS .. <input type="text"/> <input type="text"/> MENOS DE 1 DIA= 00 NO SABE 98 (PASE A 423) <	DIAS .. <input type="text"/> <input type="text"/> MENOS DE 1 DIA= 00 NO SABE 98 (PASE A 423) <	DIAS .. <input type="text"/> <input type="text"/> MENOS DE 1 DIA= 00 NO SABE 98 (PASE A 423) <
422A ¿Hace cuánto tiempo (NOMBRE) tuvo tos por última vez?	DIAS <input type="text"/> <input type="text"/> SEMANAS.. <input type="text"/> <input type="text"/> MESES ... <input type="text"/> <input type="text"/> NO RECUERDA ... 98 NUNCA TUVO ... 96 (PASE A 424) <	DIAS <input type="text"/> <input type="text"/> SEMANAS.. <input type="text"/> <input type="text"/> MESES ... <input type="text"/> <input type="text"/> NO RECUERDA ... 98 NUNCA TUVO ... 96 (PASE A 424) <	DIAS <input type="text"/> <input type="text"/> SEMANAS.. <input type="text"/> <input type="text"/> MESES ... <input type="text"/> <input type="text"/> NO RECUERDA ... 98 NUNCA TUVO ... 96 (PASE A 424) <	DIAS <input type="text"/> <input type="text"/> SEMANAS.. <input type="text"/> <input type="text"/> MESES ... <input type="text"/> <input type="text"/> NO RECUERDA ... 98 NUNCA TUVO ... 96 (PASE A 424) <
422B ¿Por cuánto tiempo (NOMBRE) tuvo tos esa vez que se enfermó?	DIAS ... <input type="text"/> <input type="text"/> MENOS DE 1 DIA = 00 NO SABE 98	DIAS ... <input type="text"/> <input type="text"/> MENOS DE 1 DIA = 00 NO SABE 98	DIAS ... <input type="text"/> <input type="text"/> MENOS DE 1 DIA = 00 NO SABE 98	DIAS ... <input type="text"/> <input type="text"/> MENOS DE 1 DIA = 00 NO SABE 98
423 ¿Tenía (NOMBRE) dificultad en respirar durante el tiempo en que estuvo con tos?	SI 1 NO 2 (PASE A 423B) <	SI 1 NO 2 (PASE A 423B) <	SI 1 NO 2 (PASE A 423B) <	SI 1 NO 2 (PASE A 423B) <
423A ¿Durante cuántos días tuvo (NOMBRE) dificultad de respirar?	DIAS ... <input type="text"/> <input type="text"/> MENOS DE 1 DIA = 00	DIAS ... <input type="text"/> <input type="text"/> MENOS DE 1 DIA = 00	DIAS ... <input type="text"/> <input type="text"/> MENOS DE 1 DIA = 00	DIAS ... <input type="text"/> <input type="text"/> MENOS DE 1 DIA = 00
423B ¿Respiraba (NOMBRE) con rapidez durante el tiempo que estaba con tos?	SI 1 NO 2	SI 1 NO 2	SI 1 NO 2	SI 1 NO 2
423C ¿Le llevaron a (NOMBRE) a un hospital, a un centro de salud, a una clínica, o a algún otro lugar para que lo trataran cuando tuvo esa tos?	SI 1 NO 2 (PASE A 423H) <	SI 1 NO 2 (PASE A 423H) <	SI 1 NO 2 (PASE A 423H) <	SI 1 NO 2 (PASE A 423H) <
423D ¿A dónde lo (la) llevaron?	HOSPITAL PUBLICO .. 1 CENTRO DE SALUD ... 1 ENCIERRE CON UN CIRCULO TODAS LAS RESPUESTAS QUE DE LA ENTREVISTADA MEDICO PARTICULAR . 1 HOSPITAL PRIVADO .. 1 FARMACIA 1 MEDICO TRADICIONAL 1 OTRO LUGAR 1	HOSPITAL PUBLICO .. 1 CENTRO DE SALUD ... 1 MEDICO PARTICULAR . 1 HOSPITAL PRIVADO .. 1 FARMACIA 1 MEDICO TRADICIONAL 1 OTRO LUGAR 1	HOSPITAL PUBLICO .. 1 CENTRO DE SALUD ... 1 MEDICO PARTICULAR . 1 HOSPITAL PRIVADO .. 1 FARMACIA 1 MEDICO TRADICIONAL 1 OTRO LUGAR 1	HOSPITAL PUBLICO .. 1 CENTRO DE SALUD ... 1 MEDICO PARTICULAR . 1 HOSPITAL PRIVADO .. 1 FARMACIA 1 MEDICO TRADICIONAL 1 OTRO LUGAR 1
423E ¿Qué tratamiento le dieron a (NOMBRE) en esa ocasión?	INYECCIONES1 TABLETAS/PASTILLAS .1 JARABE PARA TOS1 REMEDIOS CASEROS ...1 OTRO TRATAMIENTO ...1 NO LE DIERON TRATAMIENTO ... 1 (PASE A 424)	INYECCIONES1 TABLETAS/PASTILLAS .1 JARABE PARA TOS1 REMEDIOS CASEROS ...1 OTRO TRATAMIENTO ...1 NO LE DIERON TRATAMIENTO ... 1 (PASE A 424)	INYECCIONES1 TABLETAS/PASTILLAS .1 JARABE PARA TOS1 REMEDIOS CASEROS ...1 OTRO TRATAMIENTO ...1 NO LE DIERON TRATAMIENTO ... 1 (PASE A 424)	INYECCIONES1 TABLETAS/PASTILLAS .1 JARABE PARA TOS1 REMEDIOS CASEROS ...1 OTRO TRATAMIENTO ...1 NO LE DIERON TRATAMIENTO ... 1 (PASE A 424)
423H ¿Porqué no llevó a (NOMBRE) a que lo (la) trataran cuando tuvo esa tos?	LA ENFERMEDAD NO ERA GRAVE 1 LA MADRE NO TUVO TIEMPO .. 2 NO HAY SERVICIOS CERCANOS 3 OTROS MOTIVOS 4	LA ENFERMEDAD NO ERA GRAVE 1 LA MADRE NO TUVO TIEMPO .. 2 NO HAY SERVICIOS CERCANOS 3 OTROS MOTIVOS 4	LA ENFERMEDAD NO ERA GRAVE 1 LA MADRE NO TUVO TIEMPO .. 2 NO HAY SERVICIOS CERCANOS 3 OTROS MOTIVOS 4	LA ENFERMEDAD NO ERA GRAVE 1 LA MADRE NO TUVO TIEMPO .. 2 NO HAY SERVICIOS CERCANOS 3 OTROS MOTIVOS 4
424 ¿(NOMBRE) tuvo diarrea en las últimas 24 horas?	SI 1 NO 2 (PASE A 425A) <	SI 1 NO 2 (PASE A 425A) <	SI 1 NO 2 (PASE A 425A) <	SI 1 NO 2 (PASE A 425A) <
425 ¿Hace cuántos días le comenzó la diarrea a (NOMBRE)?	DIAS .. <input type="text"/> <input type="text"/> MENOS DE 1 DIA= 00 NO SABE 98 (PASE A 426) <	DIAS .. <input type="text"/> <input type="text"/> MENOS DE 1 DIA= 00 NO SABE 98 (PASE A 426) <	DIAS .. <input type="text"/> <input type="text"/> MENOS DE 1 DIA= 00 NO SABE 98 (PASE A 426) <	DIAS .. <input type="text"/> <input type="text"/> MENOS DE 1 DIA= 00 NO SABE 98 (PASE A 426) <

CONTINUE COMO EN LA PAGINA ANTERIOR	ULTIMO HIJO NACIDO VIVO	PENULTIMO HIJO NACIDO VIVO	ANTEPENULTIMO HIJO NACIDO VIVO	ANTE ANTEPENULTIMO HIJO NACIDO VIVO
425A ¿Hace cuánto tiempo (NOMBRE) tuvo diarrea por última vez?	DIAS ... SEMANAS... MESES ... NO RECUERDA ... 98 NUNCA TUVO ... 96	DIAS ... SEMANAS... MESES ... NO RECUERDA ... 98 NUNCA TUVO ... 96	DIAS ... SEMANAS... MESES ... NO RECUERDA ... 98 NUNCA TUVO ... 96	DIAS ... SEMANAS... MESES ... NO RECUERDA ... 98 NUNCA TUVO ... 96 (PASE A 427) ←
425B ¿Por cuánto tiempo (NOMBRE) tuvo diarrea, esa vez que se enfermó?	DIAS ... MENOS DE 1 DIA = 00 NO SABE 98	DIAS ... MENOS DE 1 DIA = 00 NO SABE 98	DIAS ... MENOS DE 1 DIA = 00 NO SABE 98	DIAS ... MENOS DE 1 DIA = 00 NO SABE 98
426 ¿La última vez que (NOMBRE) tuvo diarrea, tenía sangre en la materia fecal?	SI 1 NO 2 NO SABE 8	SI 1 NO 2 NO SABE 8	SI 1 NO 2 NO SABE 8	SI 1 NO 2 NO SABE 8
426A VEA 407 AUN ESTA DANDO DE MAMAR AL ULTIMO HIJO	SI <input type="checkbox"/> NO <input type="checkbox"/> → 426C			
426B ¿Dió de mamar a (NOMBRE) mientras tuvo diarrea?	SI 1 NO 2			
426C ¿Cuando (NOMBRE) tuvo diarrea, usted le dió de tomar más líquidos, menos líquidos o la misma cantidad de líquidos de lo que le da habitualmente?	MAS LIQUIDOS 1 MENOS LIQUIDOS ... 2 MISMA CANTIDAD ... 3 NO SABE 8	MAS LIQUIDOS 1 MENOS LIQUIDOS ... 2 MISMA CANTIDAD ... 3 NO SABE 8	MAS LIQUIDOS 1 MENOS LIQUIDOS ... 2 MISMA CANTIDAD ... 3 NO SABE 8	MAS LIQUIDOS 1 MENOS LIQUIDOS ... 2 MISMA CANTIDAD ... 3 NO SABE 8
426D ¿Cuando (NOMBRE) tuvo diarrea, usted le aumentó, le disminuyó o le mantuvo igual la cantidad de comida (alimentos sólidos) que normalmente le da?	AUMENTO 1 DISMINUYO 2 MANTUVO IGUAL ... 3 TODAVIA NO COME .. 4 NO SABE 8	AUMENTO 1 DISMINUYO 2 MANTUVO IGUAL ... 3 TODAVIA NO COME .. 4 NO SABE 8	AUMENTO 1 DISMINUYO 2 MANTUVO IGUAL ... 3 TODAVIA NO COME .. 4 NO SABE 8	AUMENTO 1 DISMINUYO 2 MANTUVO IGUAL ... 3 TODAVIA NO COME .. 4 NO SABE 8
426E ¿Le dieron a (NOMBRE) ya sea una solución casera de sal, azúcar y agua o una solución hecha con los paquetes especiales de rehidratación?	SOLUCION CASERA .. 1 PAQUETE ESPECIAL.. 2 AMBAS COSAS 3 NO LE DIERON NADA. 4 (PASE A 426K) ←	SOLUCION CASERA .. 1 PAQUETE ESPECIAL.. 2 AMBAS COSAS 3 NO LE DIERON NADA. 4 (PASE A 426K) ←	SOLUCION CASERA .. 1 PAQUETE ESPECIAL.. 2 AMBAS COSAS 3 NO LE DIERON NADA. 4 (PASE A 426K) ←	SOLUCION CASERA .. 1 PAQUETE ESPECIAL.. 2 AMBAS COSAS 3 NO LE DIERON NADA. 4 (PASE A 426K) ←
426G ¿Durante cuántos días estuvo dándole la solución?	DIAS ... MENOS DE 1 DIA 00 NO SABE 98	DIAS ... MENOS DE 1 DIA 00 NO SABE 98	DIAS ... MENOS DE 1 DIA 00 NO SABE 98	DIAS ... MENOS DE 1 DIA 00 NO SABE 98
426K ¿Cuando (NOMBRE) tuvo diarrea, consultó con alguien o lo llevó a alguna parte para que recibiera tratamiento? SI LA RESPUESTA ES "SI" ¿Adónde lo (la) llevó?	HOSPITAL PUBLICO ..01 CENTRO DE SALUD ...02 MEDICO PARTICULAR .04 HOSPITAL PRIVADO ..05 FARMACIA07 MEDICO TRADICIONAL 11 OTRO LUGAR13 NO LO LLEVO 88 (PASE A 426M) ←	HOSPITAL PUBLICO ..01 CENTRO DE SALUD ...02 MEDICO PARTICULAR .04 HOSPITAL PRIVADO ..05 FARMACIA07 MEDICO TRADICIONAL 11 OTRO LUGAR13 NO LO LLEVO 88 (PASE A 426M) ←	HOSPITAL PUBLICO ..01 CENTRO DE SALUD ...02 MEDICO PARTICULAR .04 HOSPITAL PRIVADO ..05 FARMACIA07 MEDICO TRADICIONAL 11 OTRO LUGAR13 NO LO LLEVO 88 (PASE A 426M) ←	HOSPITAL PUBLICO ..01 CENTRO DE SALUD ...02 MEDICO PARTICULAR .04 HOSPITAL PRIVADO ..05 FARMACIA07 MEDICO TRADICIONAL 11 OTRO LUGAR13 NO LO LLEVO 88 (PASE A 426M) ←
426L ¿Qué tratamiento recibió?	INYECCION..... 1 INTRAVENOSA..... 1 TABLETAS/PASTILLAS 1 JARABES 1 REHIDRATACION ORAL 1 OTRO 1 NO RECIBIO 1 REGRESE A 403 SGTE COL. PRG. COLOR	INYECCION..... 1 INTRAVENOSA..... 1 TABLETAS/PASTILLAS 1 JARABES 1 REHIDRATACION ORAL 1 OTRO 1 NO RECIBIO 1 REGRESE A 403 SGTE COL. PRG. COLOR	INYECCION..... 1 INTRAVENOSA..... 1 TABLETAS/PASTILLAS 1 JARABES 1 REHIDRATACION ORAL 1 OTRO 1 NO RECIBIO 1 REGRESE A 403 SGTE COL. PRG. COLOR	INYECCION..... 1 INTRAVENOSA..... 1 TABLETAS/PASTILLAS 1 JARABES 1 REHIDRATACION ORAL 1 OTRO 1 NO RECIBIO 1 REGRESE A 403 SGTE COL. PRG. COLOR (PASE A 427)

CONTINUE COMO EN LA PAGINA ANTERIOR	ULTIMO HIJO NACIDO VIVO	PENULTIMO HIJO NACIDO VIVO	ANTEPENULTIMO HIJO NACIDO VIVO	ANTE ANTEPENULTIMO HIJO NACIDO VIVO
426H ¿Porqué no llevaron a (NOMBRE) para que lo (la) trataran de la diarrea?	LA DIARREA NO ERA GRAVE 1 LA MADRE NO TUVO TIEMPO .. 2 NO HAY SERVICIOS CERCANOS 3 OTROS MOTIVOS 4 (REGRESE A LA PREGUNTA 403, SIGUIENTE COLUMNA, PAGINA DE COLOR)	LA DIARREA NO ERA GRAVE 1 LA MADRE NO TUVO TIEMPO .. 2 NO HAY SERVICIOS CERCANOS 3 OTROS MOTIVOS 4 (REGRESE A LA PREGUNTA 403, SIGUIENTE COLUMNA, PAGINA DE COLOR)	LA DIARREA NO ERA GRAVE 1 LA MADRE NO TUVO TIEMPO .. 2 NO HAY SERVICIOS CERCANOS 3 OTROS MOTIVOS 4 (REGRESE A LA PREGUNTA 403, SIGUIENTE COLUMNA, PAGINA DE COLOR)	LA DIARREA NO ERA GRAVE 1 LA MADRE NO TUVO TIEMPO .. 2 NO HAY SERVICIOS CERCANOS 3 OTROS MOTIVOS 4 (PASE A 427)

NO.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.
427	VEA 424 Y 426E NO MENCIONO SOBRES DE REHIDRATAACION O NADIE TUVO DIARREA 1 <input type="checkbox"/> v	MENCIONO SOBRES DE REHIDRATAACION 2 <input type="checkbox"/> -->PASE A 432	
428	¿Alguna vez escuchó que existen sobres de rehidratación o sobres URO?	SI..... 1 NO..... 2	
429	¿Alguna vez ha visto algún sobre como uno de éstos? (MUESTRE LOS SOBRES)	SI..... 1 NO..... 2	> 440
430	¿Me puede decir para que se utiliza este sobre?	DIARREA/DESHIDRATAACION..... 1 OTRA RESPUESTA..... 2 NO SABE..... 8	
431	¿Ud. ha utilizado uno de estos sobres, ya sea para su(s) hijos(s) o para alguna otra persona?	UTILIZO PARA SU(S) HIJO(S)..... 1 UTILIZO PARA OTRAS PERSONAS..... 2 UTILIZO PARA AMBOS..... 3 NUNCA LO HA UTILIZADO..... 4	> 440
432	¿Ud. cree que estos sobres sirven para curar la diarrea o para evitar que el niño se deshidrate?	PARA CURAR LA DIARREA..... 1 PARA EVITAR DESHIDRATAACION..... 2 PARA LAS DOS COSAS..... 3 NO SABE..... 8	
432A	¿La última vez que Ud. preparó uno de estos sobres, que cantidad de agua utilizó?	1/2 LITRO..... 1 1 LITRO..... 2 1 1/2 LITRO..... 3 2 LITROS..... 4 OTRO _____ 5 (ESPECIFIQUE) NUNCA HA PREPARADO..... 6 NO SABE..... 8	
432B	¿Utilizó Ud. agua hervida para preparar el contenido del sobre?	SI..... 1 NO..... 2	
434	¿Cuando Ud. prepara el suero, lo hace de nuevo cada día o usa el mismo suero para para dos o más días?	NUEVO CADA DIA..... 1 USA DOS DIAS O MAS..... 2 A VECES USA DOS DIAS O MAS..... 3 OTRA RESPUESTA _____ 4 (ESPECIFIQUE)	

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.
435	<p>¿De dónde puede usted obtener éstos sobres?</p> <p>MARQUE TODAS LAS ALTERNATIVAS QUE LA MUJER MENCIONA</p>	<p>HOSPITAL PUBLICO..... 1</p> <p>CENTRO DE SALUD..... 1</p> <p>PUESTO DE SALUD/ POSTA SANITARIA..... 1</p> <p>CONSULTORIO MEDICO/ MEDICO PARTICULAR..... 1</p> <p>CLINICA/ HOSPITAL PRIVADO..... 1</p> <p>CNS/OTRAS CAJAS..... 1</p> <p>UNIDAD DE REHIDRATAACION ORAL (URO)..... 1</p> <p>FARMACIA..... 1</p> <p>CURANDERO..... 1</p> <p>RESPONSABLE POPULAR DE SALUD (RPS)..... 1</p> <p>OTRO LUGAR _____ 1 (ESPECIFIQUE)</p> <p>NO SABE..... 1</p>	
436	<p>¿Cuánto cuesta un sobre de éstos?</p>	<p style="text-align: center;"> <input type="text"/> . <input type="text"/> <input type="text"/> </p> <p>GRATIS.....888</p> <p>NO SABE.....998</p>	
437	<p>¿Tiene alguno de éstos sobres en su casa en este momento?</p>	<p>SI..... 1</p> <p>NO..... 2</p>	->440
438	<p>¿Puedo ver el sobre?</p>	<p>MUESTRA EL SOBRE..... 1</p> <p>NO MUESTRA EL SOBRE..... 2</p>	

SECCION 4.1 AUTOPSIA VERBAL

<p>440 VEA 213 Y 214:</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>UNO O MAS HIJOS FALLECIDOS ENTRE LOS NACIDOS DESPUES DE ENERO DE 1984</p> <p>1 <input type="checkbox"/></p> <p>↓</p> <p>ANOTE LOS NOMBRES Y LA CONDICION DE SOBREVIVENCIA DE TODOS LOS NACIDOS VIVOS DESDE ENERO DE 1984. FORMULE LAS PREGUNTAS SOLAMENTE PARA LOS HIJOS FALLECIDOS.</p> </div> <div style="text-align: center;"> <p>NINGUN HIJO FALLECIDO ENTRE LOS NACIDOS DESPUES DE ENERO DE 1984</p> <p>2 <input type="checkbox"/></p> <p>(PASE A 478)</p> </div> </div>				
<p>441 PREGUNTAS Y FILTROS</p>	<p>ULTIMO NACIDO VIVO</p> <p>NOMBRE _____</p> <p>NUMERO DE ORDEN</p> <p><input type="text"/> <input type="text"/></p> <p>VIVO <input type="checkbox"/> MUERTO <input type="checkbox"/></p> <p>1 2</p> <p>→(SGTE. COLUMNA)</p>	<p>PENULTIMO NACIDO VIVO</p> <p>NOMBRE _____</p> <p>NUMERO DE ORDEN</p> <p><input type="text"/> <input type="text"/></p> <p>VIVO <input type="checkbox"/> MUERTO <input type="checkbox"/></p> <p>1 2</p> <p>→(SGTE. COLUMNA)</p>	<p>ANTEPENULTIMO NACIDO VIVO</p> <p>NOMBRE _____</p> <p>NUMERO DE ORDEN</p> <p><input type="text"/> <input type="text"/></p> <p>VIVO <input type="checkbox"/> MUERTO <input type="checkbox"/></p> <p>1 2</p> <p>→(SGTE. COLUMNA)</p>	<p>ANTE ANTEPENULTIMO NACIDO VIVO</p> <p>NOMBRE _____</p> <p>NUMERO DE ORDEN</p> <p><input type="text"/> <input type="text"/></p> <p>VIVO <input type="checkbox"/> MUERTO <input type="checkbox"/></p> <p>1 2</p> <p>(PASE A 478)</p>
<p>Si usted me permite, ahora me gustaria hacerle algunas preguntas acerca de su(s) hijo(s) fallecido(s)</p>				
<p>442 ¿(NOMBRE) falleció debido a un accidente o por una enfermedad?</p>	<p>ENFERMEDAD..... 1</p> <p>(PASE A 444) ←</p> <p>ACCIDENTE..... 2</p>	<p>ENFERMEDAD..... 1</p> <p>(PASE A 444) ←</p> <p>ACCIDENTE..... 2</p>	<p>ENFERMEDAD..... 1</p> <p>(PASE A 444) ←</p> <p>ACCIDENTE..... 2</p>	<p>ENFERMEDAD..... 1</p> <p>(PASE A 444) ←</p> <p>ACCIDENTE..... 2</p>
<p>443 ¿Cuál fué el accidente?</p>	<p>.....</p> <p>.....</p> <p>(PASE A 449)</p>	<p>.....</p> <p>.....</p> <p>(PASE A 449)</p>	<p>.....</p> <p>.....</p> <p>(PASE A 449)</p>	<p>.....</p> <p>.....</p> <p>(PASE A 449)</p>
<p>444 ¿Cuál fué la enfermedad que causó el fallecimiento de (NOMBRE)?</p>	<p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p>
<p>445 ¿(En las dos semanas) antes de morir, tuvo (NOMBRE) alguno de los siguientes síntomas:</p> <p>a) Diarrea?</p> <p>b) Diarrea con sangre?</p> <p>c) Resfrío?</p> <p>d) Dificultad en respirar?</p> <p>e) Ronchas o granos?</p> <p>f) Ataque?</p> <p>g) Fiebre?</p> <p>j) Otros síntomas?</p>	<p>DIARREA..... 1</p> <p>DIARREA CON SANGRE. 1</p> <p>TOS..... 1</p> <p>DIFICULTAD EN RESPIRAR..... 1</p> <p>RONCHAS/ GRANOS..... 1</p> <p>ATAQUE..... 1</p> <p>FIEBRE..... 1</p> <p>OTROS SINTOMAS..... 1</p>	<p>DIARREA..... 1</p> <p>DIARREA CON SANGRE. 1</p> <p>TOS..... 1</p> <p>DIFICULTAD EN RESPIRAR..... 1</p> <p>RONCHAS/ GRANOS..... 1</p> <p>ATAQUE..... 1</p> <p>FIEBRE..... 1</p> <p>OTROS SINTOMAS..... 1</p>	<p>DIARREA..... 1</p> <p>DIARREA CON SANGRE. 1</p> <p>TOS..... 1</p> <p>DIFICULTAD EN RESPIRAR..... 1</p> <p>RONCHAS/ GRANOS..... 1</p> <p>ATAQUE..... 1</p> <p>FIEBRE..... 1</p> <p>OTROS SINTOMAS..... 1</p>	<p>DIARREA..... 1</p> <p>DIARREA CON SANGRE. 1</p> <p>TOS..... 1</p> <p>DIFICULTAD EN RESPIRAR..... 1</p> <p>RONCHAS/ GRANOS..... 1</p> <p>ATAQUE..... 1</p> <p>FIEBRE..... 1</p> <p>OTROS SINTOMAS..... 1</p>
<p>PARA CADA UNO DE LOS SINTOMAS MENCIONADOS EN 445, FORMULE LA PREGUNTA 445A. ASEGURESE QUE LAS RESPUESTAS COINCIDEN CON LA RESPUESTA DE LA PREGUNTA 445.</p>				
<p>445A ¿Cuánto tiempo antes de morir (NOMBRE) comenzó a tener esos problemas?</p> <p>a) DIARREA</p> <p>b) DIARREA CON SANGRE</p> <p>c) RESFRIO</p> <p>d) DIFICULTAD EN RESPIRAR</p> <p>e) RONCHAS O GRANOS</p> <p>f) ATAQUE</p> <p>g) FIEBRE</p> <p>j) OTROS SINTOMAS</p>	<p>DIAS SEMANAS MESES</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>DIAS SEMANAS MESES</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>DIAS SEMANAS MESES</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>DIAS SEMANAS MESES</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

SECCION 4.2 MORTALIDAD MATERNA

478 VERIFIQUE:

LA INFORMACION SOBRE LOS HERMANOS Y HERMANAS YA HA SIDO OBTENIDA DE UNA HERMANA QUE VIVE HABITUALMENTE O QUE HA PASADO LA NOCHE ANTERIOR EN ESE HOGAR.

SI → (PROSIGA CON 479)

NO → (PROSIGA CON 479)

REGISTRE EL NOMBRE Y EL NUMERO DE LINEA DE LA MUJER DE LA CUAL SE OBTUVO LA INFORMACION.

NOMBRE _____

NUMERO DE LINEA → PASE A LA PREGUNTA 501

479 ¿Usted tiene o ha tenido hermanos y hermanas?

SI:..... 1

NO:..... 2 → 501

Ahora me gustaría hacerle algunas preguntas sobre sus hermanos y hermanas. Fijese que me refiero solamente a sus hermanos de padre y madre o a hermanos de madre. Por favor, dígame los nombres de todos sus hermanos y hermanas, incluyendo a los que ya fallecieron y a los que están viviendo en otra parte. Comencemos por el de más edad.

480	481	482	483	484	485	486	487	488	489
¿Cuál es el nombre de su hermano o hermana de más edad (el siguiente de más edad, etc)...?	(NOMBRE) es hombre o mujer?	(NOMBRE) está vivo(a) todavía	SI ESTA VIVO: ¿Que edad tiene (NOMBRE) en años cumplidos?	SI FALLECIO ¿Hace cuántos años falleció (NOMBRE)?	¿Cuántos años de edad tenía (NOMBRE) cuando falleció?	(NOMBRE) estuvo casada o unida alguna vez?	(NOMBRE) murió durante un embarazo o un parto?	(NOMBRE) murió antes de que se cumpliera dos meses después del parto o de la terminación de su embarazo?	¿Cuántos hijos o hijas tuvo (NOMBRE) en toda su vida?
ANOTE EL NOMBRE			NO SABE = 98 SOLO ACEPTE "NO SABE" EN CASOS EXTREMOS	NO SABE=98 SOLO ACEPTE NO SADE EN CASOS EXTREMOS	NO SABE = 98 SOLO ACEPTE "NO SABE" EN CASOS EXTREMOS				
0 1	H.....1 M.....2	SI.....1--> NO... 2 v 484 NO SABE 8 v FILA 02	EDAD <input type="text"/> <input type="text"/>	AÑOS <input type="text"/> <input type="text"/>	AÑOS <input type="text"/> <input type="text"/>	PREGUNTAS PARA MUJERES SOLAMENTE			
				Menos de 1 año= 00	NO SABE = 98	SI.....1-->SI... 1 NO... 2 v PASE A FILA 02	SI.....1 NO.....2 v PASE A 489 NO.....2-->	HIJOS <input type="text"/> <input type="text"/>	NO SABE = 98 PASE A FILA 02
0 2	H.....1 M.....2	SI.....1--> NO... 2 v 484 NO SABE 8 v FILA 03	EDAD <input type="text"/> <input type="text"/>	AÑOS <input type="text"/> <input type="text"/>	AÑOS <input type="text"/> <input type="text"/>	PREGUNTAS PARA MUJERES SOLAMENTE			
				Menos de 1 año= 00	HOMBRES PASAN A FILA 03	SI.....1-->SI... 1 NO... 2 v PASE A FILA 03	SI.....1 NO.....2 v PASE A 489 NO.....2-->	HIJOS <input type="text"/> <input type="text"/>	NO SABE = 98 PASE A FILA 03
0 3	H.....1 M.....2	SI.....1--> NO... 2 v 484 NO SABE 8 v FILA 04	EDAD <input type="text"/> <input type="text"/>	AÑOS <input type="text"/> <input type="text"/>	AÑOS <input type="text"/> <input type="text"/>	PREGUNTAS PARA MUJERES SOLAMENTE			
				Menos de 1 año= 00	HOMBRES PASAN A FILA 04	SI.....1-->SI... 1 NO... 2 v PASE A FILA 04	SI.....1 NO.....2 v PASE A 489 NO.....2-->	HIJOS <input type="text"/> <input type="text"/>	NO SABE = 98 PASE A FILA 04
0 4	H.....1 M.....2	SI.....1--> NO... 2 v 484 NO SABE 8 v FILA 05	EDAD <input type="text"/> <input type="text"/>	AÑOS <input type="text"/> <input type="text"/>	AÑOS <input type="text"/> <input type="text"/>	PREGUNTAS PARA MUJERES SOLAMENTE			
				Menos de 1 año= 00	HOMBRES PASAN A FILA 05	SI.....1-->SI... 1 NO... 2 v PASE A FILA 05	SI.....1 NO.....2 v PASE A 489 NO.....2-->	HIJOS <input type="text"/> <input type="text"/>	NO SABE = 98 PASE A FILA 05

480 ¿Cuál es el nombre de su hermano o hermana de más edad (el siguiente de más edad, etc)...? ANOTE EL NOMBRE	481 (NOMBRE) es hombre o mujer?	482 (NOMBRE) está vivo(a) todavía	483 SI ESTA VIVO: ¿Que edad tiene (NOMBRE) en años cumplidos? NO SABE = 98 SOLO ACEPTE "NO SABE" EN CASOS EXTREMOS	484 SI FALLECIO: ¿Hace cuántos años falleció (NOMBRE)? NO SABE=98 SOLO ACEPTE NO SABE EN CASOS EXTREMOS	485 ¿Cuántos años de edad tenía (NOMBRE) cuando falleció? HOMBRES PASAN A SIGUIENTE FILA NO SABE = 98 SOLO ACEPTE "NO SABE" EN CASOS EXTREMOS	486 (NOMBRE) estuvo casada o unida alguna vez?	487 (NOMBRE) murió durante un embarazo o un parto?	488 (NOMBRE) murió antes de que se cumpliera dos meses después del parto o de la terminación de su embarazo?	489 ¿Cuántos hijos o hijas tuvo (NOMBRE) en toda su vida?
0 5	H.....1 M.....2	SI.....1-> NO... 2 v 484 NO SABE 8 v FILA 06	EDAD v PASE A LA FILA 06	AROS	AROS	HOMBRES PASAN A FILA 06	SI.....1->SI... 1 NO... 2 v PASE A FILA 06	PASE A 489 NO.....2->	HIJOS NO SABE = 98 PASE A FILA 06
0 6	H.....1 M.....2	SI.....1-> NO... 2 v 484 NO SABE 8 v FILA 07	EDAD v PASE A LA FILA 07	AROS	AROS	HOMBRES PASAN A FILA 07	SI.....1->SI... 1 NO... 2 v PASE A FILA 07	PASE A 489 NO.....2->	HIJOS NO SABE = 98 PASE A FILA 07
0 7	H.....1 M.....2	SI.....1-> NO... 2 v 484 NO SABE 8 v FILA 08	EDAD v PASE A LA FILA 08	AROS	Menos de 1 año= 00	HOMBRES PASAN A FILA 08	SI.....1->SI... 1 NO... 2 v PASE A FILA 08	PASE A 489 NO.....2->	HIJOS NO SABE = 98 PASE A FILA 08
0 8	H.....1 M.....2	SI.....1-> NO... 2 v 484 NO SABE 8 v FILA 09	EDAD v PASE A LA FILA 09	AROS	Menos de 1 año= 00	HOMBRES PASAN A FILA 09	SI.....1->SI... 1 NO... 2 v PASE A FILA 09	PASE A 489 NO.....2->	HIJOS NO SABE = 98 PASE A FILA 09
0 9	H.....1 M.....2	SI.....1-> NO... 2 v 484 NO SABE 8 v FILA 10	EDAD v PASE A LA FILA 10	AROS	Menos de 1 año= 00	HOMBRES PASAN A FILA 10	SI.....1->SI... 1 NO... 2 v PASE A FILA 10	PASE A 489 NO.....2->	HIJOS NO SABE = 98 PASE A FILA 10
1 0	H.....1 M.....2	SI.....1-> NO... 2 v 484 NO SABE 8 v PASE A 490	EDAD v PASE A 490	AROS	Menos de 1 año= 00	HOMBRES PASAN A 490	SI.....1->SI... 1 NO... 2 v PASE A 490	PASE A 489 NO.....2->	HIJOS NO SABE = 98 PASE A 490
490 Permítame verificar si tengo ya información correcta, usted ha tenido en total _____ hermanos y hermanas de madre, incluyendo los que han fallecido y los que están viviendo en el extranjero ¿es esto correcto? SI 1 v (PASE A LA SECCION 5) NO 2 v → INDAGUE Y HAGA LAS CORRECCIONES CORRESPONDIENTES									

SECCION 5: NUPCIALIDAD

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.
501	¿Cuál es su estado civil actual?	CASADA..... 1 UNIDA..... 2 VIUDA..... 3 DIVORCIADA..... 4 SEPARADA..... 5 SOLTERA..... 6	->503
502	¿Ha estado Ud. casada o unida más de una vez?	UNA SOLA VEZ..... 1 MAS DE UNA VEZ..... 2	->504
503	¿Ha estado Ud. casada o unida alguna vez?	SI..... 1 NO..... 2	->516
504	¿En que mes y año comenzó a vivir con su (primer) esposo (compañero)?	MES..... <input type="text"/> <input type="text"/> NO SABE MES..... 98 AÑO..... <input type="text"/> <input type="text"/> NO SABE AÑO..... 98	
505	¿Qué edad tenía Ud. cuando comenzó a vivir con él?	EDAD..... <input type="text"/> <input type="text"/>	
506	¿Están vivos el padre y la madre de Ud.?	SI NO NO SABE PADRE.....1 2 8 MADRE.....1 2 8	
507	¿Están vivos el padre y la madre de su esposo (compañero)?	SI NO NO SABE PADRE.....1 2 8 MADRE.....1 2 8	
516	¿Qué edad tenía Ud. cuando tuvo relaciones sexuales por primera vez? INDAGUR: ¿Qué edad tenía Ud. cuando estuvo con alguien por primera vez?	EDAD..... <input type="text"/> <input type="text"/> NO RECUERDA..... 98 NO HA TENIDO RELACIONES. 88 NO DA INFORMACION..... 99	->524
517	¿Ha tenido relaciones sexuales en las últimas cuatro semanas?	SI 1 NO 2 NO RESPONDE 9	->519 ->520
518	¿Cuántas veces?	VECES <input type="text"/> <input type="text"/> NO RECUERDA 98 SE NIEGA A DAR INFORMACION 99	

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.								
519	<p>¿Hace cuánto tiempo tuvo relaciones sexuales la última vez?</p> <p>INDAGUE:</p> <p>¿Hace cuánto tiempo estuvo con alguien la última vez?</p>	<p>HACE: DIAS.....1</p> <table border="1" data-bbox="1079 207 1230 410"> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </table> <p>SEMANAS.....2</p> <p>MESES3</p> <p>AÑOS.....4</p> <p>ANTES ULTIMO PARTO... 996 NO RECUERDA..... 998</p>									<p>->524</p>
<p>520 VEA 221 NO EMBARAZADA O NO SABE EMBARAZADA</p> <p>1 <input type="checkbox"/> 2 <input type="checkbox"/> -> (PASE A 524)</p>											
<p>521 VEA 313 317 NO ESTA USANDO METODO ESTA USANDO METODO</p> <p>1 <input type="checkbox"/> 2 <input type="checkbox"/> -> (PASE A 524)</p>											
522	<p>Si Ud. quedara embarazada en las próximas semanas ¿Se sentiria contenta, triste o no le importaria?</p>	<p>CONTENTA.....1 TRISTE.....2 NO LE IMPORTARIA.....3 NO SABE.....8</p>	<p>-> 524</p>								
523	<p>¿Cuál es la razón principal por la cual usted no está usando un método para no quedar embarazada?</p>	<p>FALTA DE CONOCIMIENTO....01 SE OPONE A LA PLANIFICACION FAMILIAR..02 EL MARIDO O COMPAÑERO DESAPRUEBA.....03 OTROS FAMILIARES DESAPRUEBAN.....04 ACCESIBILIDAD/ DISPONIBILIDAD.....05 EL COSTO DEL METODO.....06 DIFICIL DE USAR O SE OLVIDA DE USAR.....07 RELACION SEXUAL POCO FRECUENTE.....08 PREOCUPACION DE SALUD.....09 FATALISTA.....10 MOTIVOS RELIGIOSOS.....11 LACTANDO O EN AMENORREA POST-PARTO.....12 MENOPAUSIA O INFERTIL.....13 OTRAS RAZONES _____ 14 (ESPECIFIQUE) NO SABE.....98</p>									
524	<p>REGISTRE LA PRESENCIA DE OTRAS PERSONAS EN ESTE MOMENTO</p>	<p>NIÑOS MENORES DE 10 AÑOS.....1 MARIDO/COMPAÑERO.....1 HOMBRES ADULTOS.....1 OTRAS MUJERES ADULTAS.....1 OTROS.....1</p>	<p>SI NO 2 2 2 2 2 2 2 2</p>								

SECCION 6: PREFERENCIAS DE FECUNDIDAD

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.
601	VEA 317 MARIDO ESTERILIZADO MUJER ESTERILIZADA OTROS CASOS 1 <input type="checkbox"/> (PASE A 609) 2 <input type="checkbox"/> 3 <input type="checkbox"/>		
602	VEA 502 ACTUALMENTE CASADA O UNIDA NO ESTA CASADA NI UNIDA 1 <input type="checkbox"/> 2 <input type="checkbox"/>		PASE A 611
603	Ahora quisiera hacerle algunas preguntas sobre el futuro... VEA 221 NO EMBARAZADA 1 <input type="checkbox"/> ¿Quisiera tener un (otro) hijo o preferiría no tener (más) hijos? EMBARAZADA 2 <input type="checkbox"/> ¿Después del hijo que está esperando, quisiera tener otro hijo o preferiría no tener más hijos?	QUIERE HIJO..... 1 NO QUIERE MAS HIJOS..... 2 MENOPAUSICA/ESTERIL..... 3 INDECISA O NO SABE..... 8	-> 611
607	¿Cuánto tiempo quisiera esperar, a partir de hoy antes del nacimiento de un (otro) hijo? 1 <input type="checkbox"/>	MESES.....1 <input type="checkbox"/> AÑOS.....2 <input type="checkbox"/> LO ANTES POSIBLE 996 NO SABE..... 998	-> 611
607A	VEA: 214 Y 221 ALGUN HIJO SOBREVIVIENTE Y NO EMBARAZADA ACTUALMENTE 1 <input type="checkbox"/>	NINGUN HIJO SOBREVIVIENTE O ACTUALMENTE EMBARAZADA 2 <input type="checkbox"/>	PASE A 611
608	¿Qué edad le gustaría que tuviera su hijo menor antes de tener otro hijo? 1 <input type="checkbox"/>	AÑOS DE EDAD..... <input type="checkbox"/> NO SABE.....98	-> 611
609	¿Lamenta que Ud. (su esposa) haya sido operada (operado) para no tener más hijos? 1 <input type="checkbox"/>	SI..... 1 NO..... 2	-> 611
610	¿Le gustaría tener otro hijo o prefiere no tener más hijos? 1 <input type="checkbox"/>	QUISIERA TENER OTRO HIJO.. 1 NO QUISIERA OTRO HIJO..... 2 INDECISA O NO SABE..... 8	
611	VEA 202 Y 204: SIN HIJOS VIVOS 1 <input type="checkbox"/> Si pudiera elegir exactamente el número de hijos que tendría en toda su vida, ¿cuántos serían? TIENE HIJOS VIVOS 2 <input type="checkbox"/> Si pudiera volver a la época en que todavía no tenía hijos y pudiera elegir exactamente el número de hijos que tendría en toda su vida ¿cuántos serían? ANOTE NUMERO, RANGO U OTRA RESPUESTA	NUMERO..... <input type="checkbox"/> RANGO: ENTRE _____ Y _____ OTRA RESPUESTA _____ (ESPECIFIQUE)	

SECCION 7: ANTECEDENTES DEL CONYUGE Y TRABAJO DE LA MUJER

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.						
701	VEA 501 Y MARQUE: ALGUNA VEZ CASADA O CONVIVIENTE 1 <input type="checkbox"/> v <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> PREGUNTE SOBRE EL ESPOSO O COMPAÑERO ACTUAL O ULTIMO. </div>	SOLTERA 2 <input type="checkbox"/> (PASE A 712)							
702	Ahora me gustaría hacerle unas preguntas sobre su actual (último) esposo (compañero). ¿Fue a la escuela su esposo (compañero)?	SI..... 1 NO..... 2 NO SABE..... 8	} -> 707						
703	¿Cuál fue el último año de estudios que él aprobó?	PRIMARIA..... <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>1</td><td><input type="checkbox"/></td></tr><tr><td>2</td><td><input type="checkbox"/></td></tr><tr><td>3</td><td><input type="checkbox"/></td></tr></table> SECUNDARIA..... SUPERIOR..... NO SABE..... 98	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	
1	<input type="checkbox"/>								
2	<input type="checkbox"/>								
3	<input type="checkbox"/>								
707	¿Cuál es (era) la principal ocupación que su esposo (compañero) tiene (tenía)? INDAGUE: ¿Que cosas hace (hacía), que tareas realiza (ba) él principalmente en su trabajo? <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr></table> NO TRABAJA (BA):..... 000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	} -> 712			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
708	MARQUE: NO TRABAJA (NO TRABAJO) EN AGRICULTURA O GANADERIA 1 <input type="checkbox"/> v	TRABAJA (TRABAJO) EN AGRICULTURA O GANADERIA 2 <input type="checkbox"/> (PASE A 710)							
709	¿Gana (ganaba) él un sueldo o salario regularmente?	SI..... 1 NO..... 2 NO SABE..... 8	} -> 712						
710	¿Trabaja (trabajaba) el principalmente en tierras propias o en tierras de sus familiares, o en tierras de otros?	TIERRA PROPIA O DE LA FAMILIA..... 1 TIERRA DE OTROS..... 2 TIERRA PROPIA Y TIERRAS DE OTROS..... 3 NO SABE..... 8	} -> 712						
711	¿Trabaja (trabajaba) el principalmente por dinero o trabaja (trabajaba) por una parte de las cosechas (al partir)?	DINERO..... 1 PARTE DE LAS COSECHAS O AL PARTIR..... 2 AMBOS..... 3 OTRO..... 4							

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.
712	Además de ocuparse de los quehaceres domésticos, muchas mujeres trabajan para ganar dinero. ¿Trabaja usted actualmente para ganar dinero, en algún lugar que no sea un negocio familiar o una finca familiar?	SI..... 1 NO..... 2	-> 719
713	¿Cuál es su ocupación principal, es decir, que clase de trabajo hace usted? <input type="text"/> <input type="text"/> <input type="text"/>	
714	¿Cuánto gana normalmente, ya sea por hora, por día, por semana o por mes?	CANTIDAD.... <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> POR HORA..... 1 POR DIA..... 2 POR SEMANA..... 3 POR MES..... 4	
715	¿En este trabajo, usted trabaja la mayor parte del tiempo, sólo parte del tiempo, irregularmente o sólo en ciertas épocas del año?	LA MAYOR PARTE..... 1 PARTE DEL TIEMPO..... 2 IRREGULARMENTE..... 3 EN CIERTAS EPOCAS..... 4 OTROS CASOS..... 5 (ESPECIFIQUE)	
716	En un día normal, ¿cuántas horas se pasa usted trabajando?	HORAS DE TRABAJO... <input type="text"/> <input type="text"/> NO SABE 98	
718	Cuando trabaja por dinero, ¿usted decide como usar todo ese dinero, como usar parte de ese dinero, o es alguna otra persona quien decide como usar ese dinero?	ELLA DECIDE SOBRE TODO.... 1 ELLA DECIDE SOBRE PARTE... 2 OTRA PERSONA DECIDE..... 3	

719	AREAS URBANAS 1 <input type="checkbox"/>	PROSIGA CON LA PREGUNTA 721
	AREAS RURALES 2 <input type="checkbox"/>	PASE A 740

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.
721	VEA 216, 217 Y 712 TIENE HIJOS DE MENOS DE 6 AÑOS QUE VIVEN CON ELLA Y TRABAJA ACTUALMENTE	OTROS CASOS	
	1 <input type="checkbox"/>	2 <input type="checkbox"/> →	724
722	Mientras usted trabaja sus hijos - menores de 6 años están con usted en su lugar de trabajo generalmente, están con ud. a veces, están con usted raras veces, o nunca están con usted?	GENERALMENTE..... 1 A VECES..... 2 RARAS VECES..... 3 NUNCA..... 4	-> 724
723	¿Generalmente, quien cuida a sus hijos menores de seis años cuando usted sale a trabajar?	EL MARIDO/COMPAÑERO..... 1 OTROS NIÑOS DE LA FAMILIA.. 2 PARIENTES EN LA CASA..... 3 PARIENTES FUERA DE LA CASA. 4 AMIGOS, VECINOS..... 5 SERVICIO DOMESTICO..... 6 SERVICIO DE GUARDERIA..... 7 OTRO _____ 8 (ESPECIFIQUE)	
724	VEA 501 Y 712 ALGUNA VEZ CASADA O UNIDA	SOLTERA TRABAJA ACTUALMENTE	SOLTERA NO TRABAJA ACTUALMENTE
	1 <input type="checkbox"/>	2 <input type="checkbox"/> (PASE A 730)	3 <input type="checkbox"/> (PASE A 740)
725	¿Qué edad tenía su primer esposo o compañero cuando ustedes se casaron o unieron por primera vez?	EDAD DEL ESPOSO..... <input type="text"/> <input type="text"/> NO SABE..... 98	
726	Antes de casarse o unirse (por primera vez)¿Alguna vez usted trabajó regularmente para ganar dinero, en una actividad que no sea un negocio familiar o una finca familiar?	SI..... 1 NO..... 2	-> 730
727	¿Cuál era su ocupacion principal, es decir, que clase de trabajo hacia usted? <input type="text"/> <input type="text"/> <input type="text"/>	
728	¿Trabajaba Ud. la mayor parte del tiempo, sólo parte del tiempo, irregularmente o sólo en ciertas épocas del año?	LA MAYOR PARTE..... 1 PARTE DEL TIEMPO..... 2 IRREGULARMENTE..... 3 EN CIERTAS EPOCAS..... 4 OTROS CASOS..... 5	
729	Cuando trabajaba por dinero, ¿usted decidía como usar todo ese dinero, como usar parte de ese dinero, o era alguna otra persona quien decidía como usar ese dinero?	ELLA DECIDIA SOBRE TODO... 1 ELLA DECIDIA SOBRE PARTE.. 2 OTRA PERSONA DECIDIA..... 3	

730 VEA 208 Y 712, MARQUE SEGUN CORRESPONDA:				
UNO O MAS HIJOS NACIDOS VIVOS Y TRABAJA ACTUALMENTE		UNO O MAS HIJOS NACIDOS VIVOS Y NO TRABAJA ACTUALMENTE		NINGUN HIJO NACIDO VIVO
1 <input type="checkbox"/> ↓		2 <input type="checkbox"/> → PASE A COLUMNA 2		3 <input type="checkbox"/> → PASE A 736
731	¿Ha estado usted trabajando continuamente en el mismo tipo de actividad desde que tuvo su último hijo?	SI..... 1 → COLUMNA 2 NO..... 2 → COLUMNA 1		
732 INDEPENDIEMENTE DE LA FECHA DE NACIMIENTO DE LOS HIJOS (YA SEA QUE HAYAN NACIDO ANTES O DESPUES DE 1984), ANOTE EL NOMBRE DEL ULTIMO HIJO EN LA COLUMNA (1), EL NOMBRE DEL PRIMERO EN LA COLUMNA (2) LOS NOMBRES DEL ULTIMO Y DEL PENULTIMO EN LA COLUMNA (3), LOS NOMBRES DEL PENULTIMO Y DEL ANTEPENULTIMO EN LA COLUMNA (4). SI LA MUJER HA TENIDO TRES HIJOS O MENOS, COMPLETE LAS COLUMNAS (3) Y (4) SOLAMENTE CUANDO CORRESPONDA.				
PREGUNTAS Y FILTROS	(1) Desde el nacimiento de (ULTIMO HIJO) (pero antes del trabajo que tiene actualmente)...	(2) Antes del nacimiento de (PRIMER HIJO) (pero despues de haberse casado o unido)...	(3) Antes del nacimiento de (ULTIMO HIJO) pero despues del nacimiento de (PENULTIMO HIJO)	(4) Antes del nacimiento de (PENULTIMO HIJO) pero despues del nacimiento de (ANTEPENULTIMO HIJO)
733 ¿...trabajó usted para ganar dinero en algún lugar que no haya sido un negocio familiar o una finca familiar?	SI..... 1 NO..... 2 (PASE SGTE.COL.)←	SI..... 1 NO..... 2 (PASE SGTE.COL.)←	SI..... 1 NO..... 2 (PASE SGTE.COL.)←	SI..... 1 NO..... 2 (PASE A 740)←
734 ¿...cuál era su ocupación principal, es decir, que tipo de trabajo hacia usted?	_____	_____	_____	_____
735 ¿... trabajaba la mayor parte del tiempo, sólo parte del tiempo, irregularmente o sólo en ciertas épocas del año?	LA MAYOR PARTE...1 PARTE DEL TIEMPO...2 IRREGULARMENTE...3 CIERTAS EPOCAS...4 OTROS CASOS.....5 (PASE A LA SIGUIENTE COLUMNA)	LA MAYOR PARTE...1 PARTE DEL TIEMPO...2 IRREGULARMENTE...3 CIERTAS EPOCAS...4 OTROS CASOS.....5 (PASE A LA SIGUIENTE COLUMNA)	LA MAYOR PARTE...1 PARTE DEL TIEMPO...2 IRREGULARMENTE...3 CIERTAS EPOCAS...4 OTROS CASOS.....5 (PASE A LA SIGUIENTE COLUMNA)	LA MAYOR PARTE...1 PARTE DEL TIEMPO...2 IRREGULARMENTE...3 CIERTAS EPOCAS...4 OTROS CASOS.....5 (PASE A LA PREGUNTA 740)
736 VEA 701 Y 712				
ALGUNA VEZ CASADA O UNIDA Y NO TRABAJA ACTUALMENTE			OTRAS MUJERES	
1 <input type="checkbox"/> ↓			2 <input type="checkbox"/> → (PASE A 740)	
737	Desde que se casó, ¿trabajó Ud. para ganar dinero en algún lugar que no haya sido un negocio familiar o una finca familiar?	SI..... 1 NO..... 2 → 740		
738	¿Cual era su ocupación principal, es decir, que tipo de trabajo hacia Ud.?	_____		
739	¿Trabajaba Ud. la mayor parte del tiempo, sólo parte del tiempo, irregularmente o sólo en ciertas épocas del año?	LA MAYOR PARTE..... 1 PARTE DEL TIEMPO..... 2 IRREGULARMENTE..... 3 CIERTAS EPOCAS..... 4 OTROS CASOS..... 5		

NOTA.- La actividad a la que se hace referencia en 731 es la misma que la declarada en 713.

No.	PREGUNTAS Y FILTROS	CODIGOS	PASE A PGTA.
740	Ahora me gustaría hacerle algunas preguntas sobre seguro social... ¿está Ud. asegurada por la caja nacional de salud u otra institución de seguro?	SI..... 1 NO..... 2 NO SABE..... 8	->743
741	¿En qué seguro está Ud. inscrita?	CAJA NACIONAL DE SALUD ... 1 OTRO _____ 2 (ESPECIFIQUE) NO SABE..... 8	
742	¿Quién es el trabajador que le da derecho a este seguro?	ENTREVISTADA..... 1 MARIDO/COMPAÑERO..... 2 PADRE O MADRE..... 3 OTRO _____ 4 (ESPECIFIQUE)	
743	REGISTRE LA HORA EXACTA DE TERMINACION DE LA ENTREVISTA	HORA <input type="text"/> <input type="text"/> MINUTOS..... <input type="text"/> <input type="text"/>	

PESO Y TALLA

No. CUESTIONARIO INDIVIDUAL _____

REGISTRE EL PESO Y LA TALLA DE CADA HIJO ENTRE 3 Y 36 MESES.
 REGISTRE EL NOMBRE Y EL NUMERO DE ORDEN DE CADA UNO, COMENZANDO POR EL
 ULTIMO O MAS PEQUEÑO.

<p>NOMBRE.....</p> <p>NUMERO DE ORDEN <input type="text"/> <input type="text"/></p> <p>SEXO (1) MASCULINO <input type="checkbox"/> (2) FEMENINO <input type="checkbox"/></p> <p>IMPOSIBLE DE REGISTRAR.. <input type="checkbox"/></p>	<p>MES DE NACIMIENTO <input type="text"/> <input type="text"/></p> <p>AÑO DE NACIMIENTO <input type="text"/> <input type="text"/></p> <p>PESO EN KILOS <input type="text"/> <input type="text"/> <input type="text"/></p> <p>ESTATURA EN CENTIMETROS <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>RAZON _____</p>
<p>NOMBRE.....</p> <p>NUMERO DE ORDEN <input type="text"/> <input type="text"/></p> <p>SEXO (1) MASCULINO <input type="checkbox"/> (2) FEMENINO <input type="checkbox"/></p> <p>IMPOSIBLE DE REGISTRAR.. <input type="checkbox"/></p>	<p>MES DE NACIMIENTO <input type="text"/> <input type="text"/></p> <p>AÑO DE NACIMIENTO <input type="text"/> <input type="text"/></p> <p>PESO EN KILOS <input type="text"/> <input type="text"/> <input type="text"/></p> <p>ESTATURA EN CENTIMETROS <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>RAZON _____</p>
<p>NOMBRE.....</p> <p>NUMERO DE ORDEN <input type="text"/> <input type="text"/></p> <p>SEXO (1) MASCULINO <input type="checkbox"/> (2) FEMENINO <input type="checkbox"/></p> <p>IMPOSIBLE DE REGISTRAR.. <input type="checkbox"/></p>	<p>MES DE NACIMIENTO <input type="text"/> <input type="text"/></p> <p>AÑO DE NACIMIENTO <input type="text"/> <input type="text"/></p> <p>PESO EN KILOS <input type="text"/> <input type="text"/> <input type="text"/></p> <p>ESTATURA EN CENTIMETROS <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>RAZON _____</p>
<p>NOMBRE.....</p> <p>NUMERO DE ORDEN <input type="text"/> <input type="text"/></p> <p>SEXO (1) MASCULINO <input type="checkbox"/> (2) FEMENINO <input type="checkbox"/></p> <p>IMPOSIBLE DE REGISTRAR.. <input type="checkbox"/></p>	<p>MES DE NACIMIENTO <input type="text"/> <input type="text"/></p> <p>AÑO DE NACIMIENTO <input type="text"/> <input type="text"/></p> <p>PESO EN KILOS <input type="text"/> <input type="text"/> <input type="text"/></p> <p>ESTATURA EN CENTIMETROS <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>RAZON _____</p>

OBSERVACIONES DE LA ENTREVISTADORA

RESPECTO A LA PERSONA ENTREVISTADA: -----

RESPECTO A LAS PREGUNTAS: -----

OTROS ASPECTOS: -----

=====

OBSERVACIONES DE LA SUPERVISORA

=====

OBSERVACIONES DE CRITICA Y ENTRADA DE DATOS

