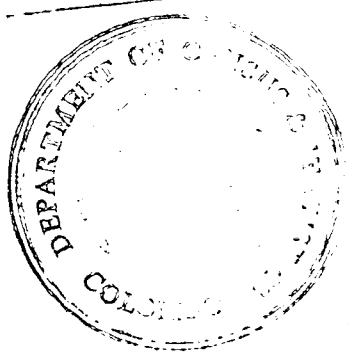
SRI LANKA
1987

DEMOGRAPHIC HEALTH SURVEY

SUMMARY REPORT



This report summarizes the major findings from the Sri Lanka Demographic and Health Survey (SLDHS) implemented by the Department of Census and Statistics, Ministry of Plan Implementation in 1987. The survey is part of the worldwide Demographic and Health Survey (DHS) Program supported by the U.S. Agency for International Development with technical assistance provided by the Institute for Resource Development/Westinghouse, USA. Further information on the SLDHS can be obtained from the Dept. of Census and Statistics, No. 6 Albert Crescent Road, Colombo - 7, Sri Lanka; or from the Institute for Resource Development, Box 866, Columbia, Md. 21044, USA (TELEX 87775).

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INTRODUCTION

The Sri Lanka Demographic and Health Survey (SLDHS) was designed to provide policymakers and administrators with current data on fertility, mortality, family planning, and selected aspects of maternal and child health. Field work for the survey was carried out between January and March 1987. The survey was implemented by the Department of Census and Statistics with financial support from the U.S. Agency for International Development and technical assistance from the Institute for Resource Development/ Westinghouse, USA. A total of 5,865 ever-married women aged 15-49 were interviewed in all areas of the country except the northern and eastern provinces.

The SLDHS is the third in a series of national demographic surveys which include the 1975 Sri Lanka World Fertility Survey (SLWFS) and the more recent 1982 Sri Lanka Contraceptive Survey (SLCPS). The data from these three surveys indicate that Sri Lanka is experiencing a rapid transition to low levels of fertility and mortality. The 1987 SLDHS data suggests that the decline in fertility has undoubtedly been influenced by a relatively high age of marriage, long periods of postpartum breastfeeding, amenorrhea, and abstinence, and a high prevalence of contraceptive use. Infant and child mortality, on the other hand, has been affected by the widespread coverage of primary health care services particularly immunization, prenatal care and assistance at delivery, tetanus toxoid injections, and the use of oral rehydration solution during episodes of diarrhea. The data from the SLDHS on nutritional status, however, is a cause for concern. The survey found relatively high levels of undernutrition, particularly among children on the estates.

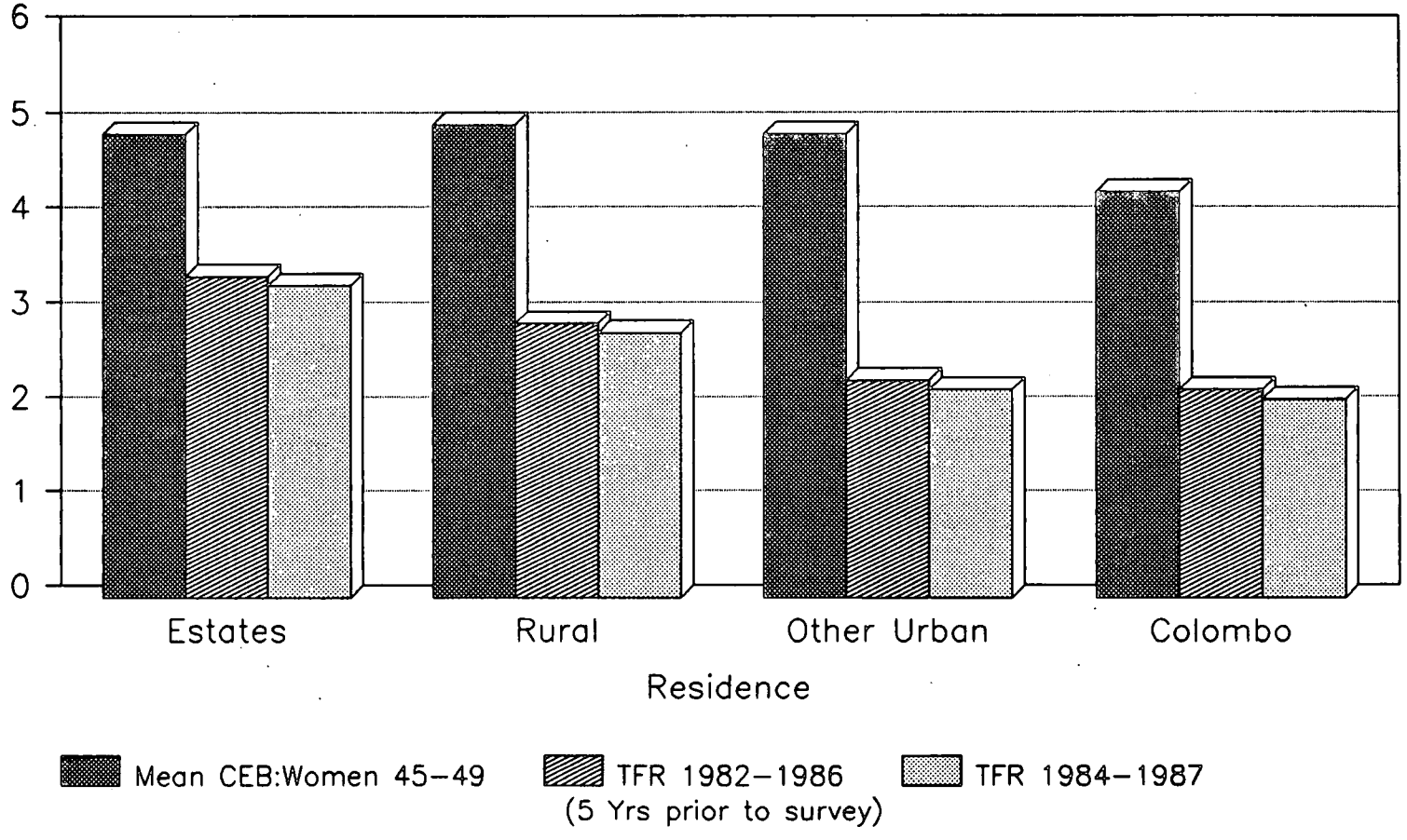
FERTILITY

Over the past two decades, there has been a substantial decline in the total fertility rate (TFR) in Sri Lanka from 5.0 children in 1963 to 2.8 for the period 1982-87. The TFR is a measure of current fertility and can be interpreted as the average number of births a woman would have if she survived throughout the reproductive period and she experienced the same age-specific fertility rates that all other women are currently experiencing. Current fertility as measured by the TFR is compared in Figure 1 against past fertility as measured by the average number of children ever born (CEB) to women who are currently aged 45-49. The comparison indicates that there has been a substantial decline in the number of children women are conceiving.

For all major geographical areas, the current level of fertility is considerably lower than it was in past periods. If current age specific fertility rates continue into the future, a

Figure 1

Children Ever Born (CEB) and Total Fertility Rates



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women entering the childbearing years can expect to have approximately 2.8 children by the time she reaches the age of 45-49. This is two children less than the 4.9 children born to women who are now in this age group. As Figure 2 indicates, the decline in fertility since 1975 has occurred among older women. That is to say, women who are currently between the ages of 15 and 24 have the same fertility now as women in this age group had in 1975. However, women aged 25 or over have much lower fertility than women who were in this age group in 1975.

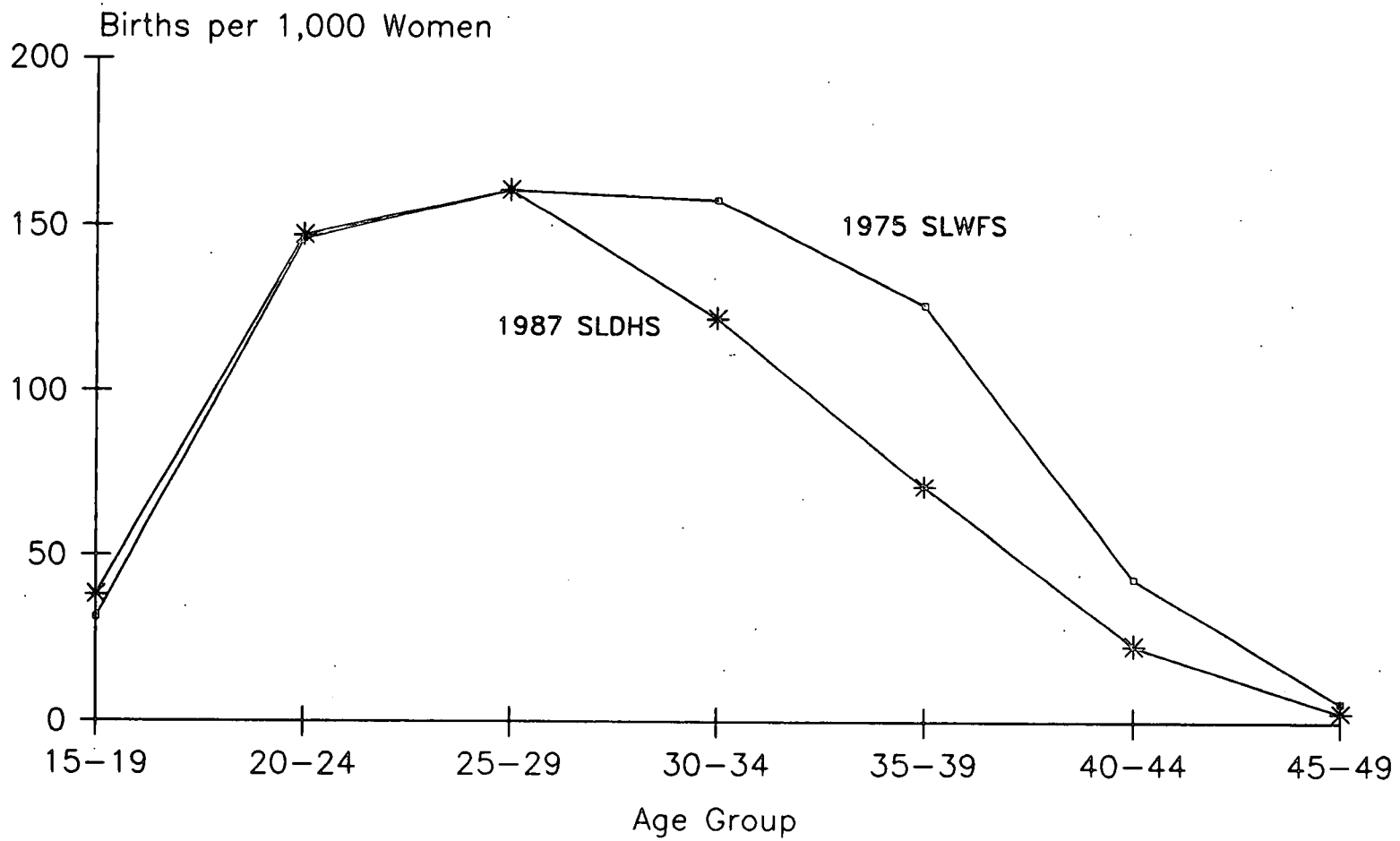
Demographic Factors

Age at Marriage. One of the most important demographic factors contributing to fertility decline is the age at which a woman marries. The reasons for this are fairly straightforward. Women who marry at an older age have fewer years of exposure to pregnancy than women who marry at an earlier age. Thus a rising age at marriage is usually associated with a decline in fertility. In Sri Lanka, the median age at marriage has been rising. Among women currently aged 25-29, only half were married by age 23. Among women who are currently aged 45-49, half were married by age 20. This difference indicates that younger women are now delaying marriage for about three years longer than women did in the past.

Age at first birth. Another important indicator of fertility is the age at which a women gives birth to her first child. A relatively high age at first birth often is associated with an increase in the age at marriage and a subsequent decline in fertility. Conversely, an early age at first birth is often associated with high fertility as well as high infant and maternal mortality. The SLDHS shows that the median age at first birth is about 25 years among women who are currently aged 25-29. This is three years later than the median age at first marriage of women who are currently aged 45-49. In short, women are delaying the birth of their first child and this has undoubtedly contributed to the decline in fertility noted earlier. It is also important to note that 37 percent of women aged 25-29 have had no births and approximately 20 percent of women aged 30-34 have had no births.

Breastfeeding and Abstinence. A third crucial factor influencing fertility is the length of postpartum breastfeeding (which affects the return of menses), and the length of postpartum sexual abstinence. In Sri Lanka, the mean duration of breastfeeding among ever-married women is approximately 23 months and the average length of amenorrhea is 7 months. The mean duration of sexual abstinence is almost 7 months. When the period of postpartum amenorrhea is combined with the period of sexual abstinence, on the average, currently married women in Sri Lanka experience a period of 10 months when they are not

Figure 2
Age Specific Fertility Rates
1975 SLWFS and 1987 SLDHS



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susceptible to pregnancy. The period of insusceptibility is defined as the time between the birth of a child and the resumption of both menstruation and sexual intercourse.

Fertility Desires

In the SLDHS, women were asked about their desires for more children. Figure 3 summarizes the findings. A remarkably high 35 percent of currently married women want no more child while another 30 percent are already sterilized. Together, these two groups constitute 65 percent of all currently married women. The 35 percent who want no more children are potential clients for sterilization. Similarly, the 18 percent of women who want another child after two or more years are potential clients for spacing methods. Only 12 percent of currently married women want a child soon, within the next two years.

FAMILY PLANNING

Contraceptive Knowledge and Use

Besides the demographic factors discussed above, one of the most important contributors to low fertility in Sri Lanka is the wide spread use of contraception among all segments of the population. Virtually all currently married women (99 percent) know at least one or more methods of contraception and 72 percent used a method at one time or another. Moreover, Figure 4 indicates that 62 percent are currently using a method of contraception. This is almost double the 34 percent contraceptive prevalence rate measured by the SLWFS in 1975.

Table 1 shows that the major change in the method mix has been a three fold increase in sterilization use from about 11 percent in 1975, to 22 percent in 1982, and then to about 30 percent in 1987. The use of all other modern temporary methods (pills, IUD, Injectibles, and condom) has remained virtually constant at about 10 percent. Traditional method use, which has always been relatively high in Sri Lanka compared with other countries, went from 14 percent in 1975 to 26 percent in 1982. By 1987, however, traditional method use dropped slightly to 21 percent.

While the overall contraceptive prevalence rate in Sri Lanka is relatively high at 62 percent, the prevalence rate of the most effective methods (sterilization and modern temporary methods) is only 40 percent of currently married women. Since sterilization is already the most popular method for most women over the age of 30, it is unlikely that major additional increases in the prevalence of this method can be expected. This suggests that in order to increase the overall level of effective method use in

Figure 3
Fertility Preferences
Among All Currently Married Women
Age 15–49

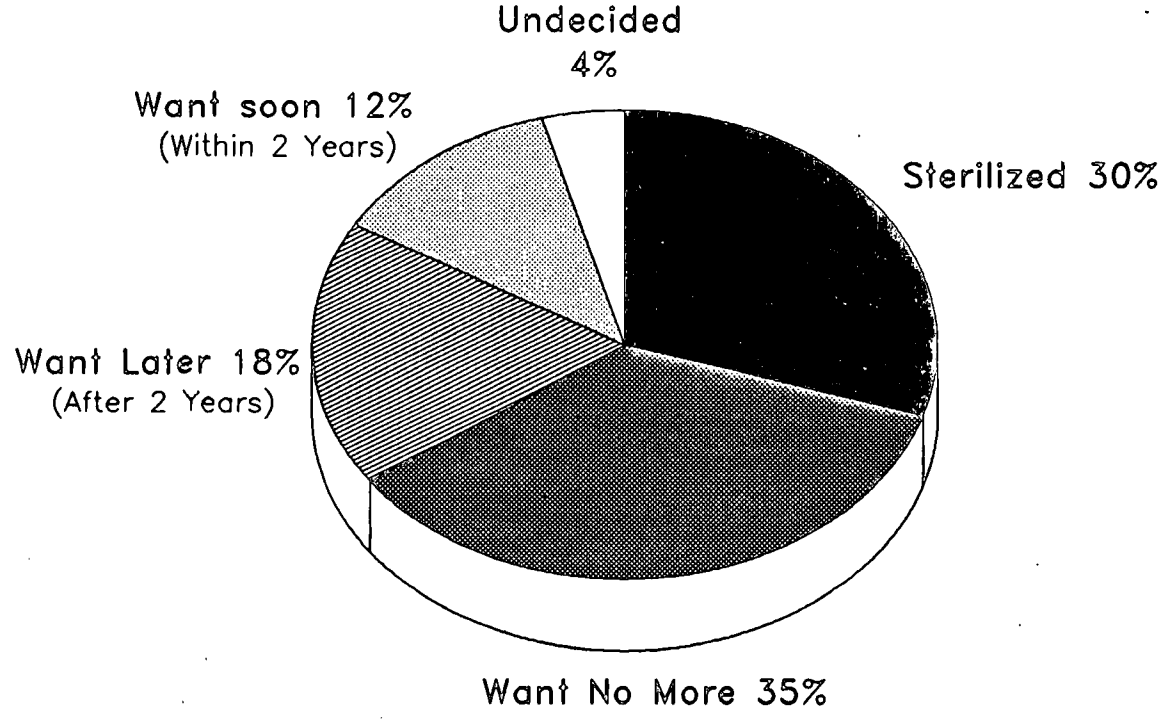

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Figure 4

Contraceptive Prevalence by Method among currently married women age 15–49

(excluding northern and eastern provinces)

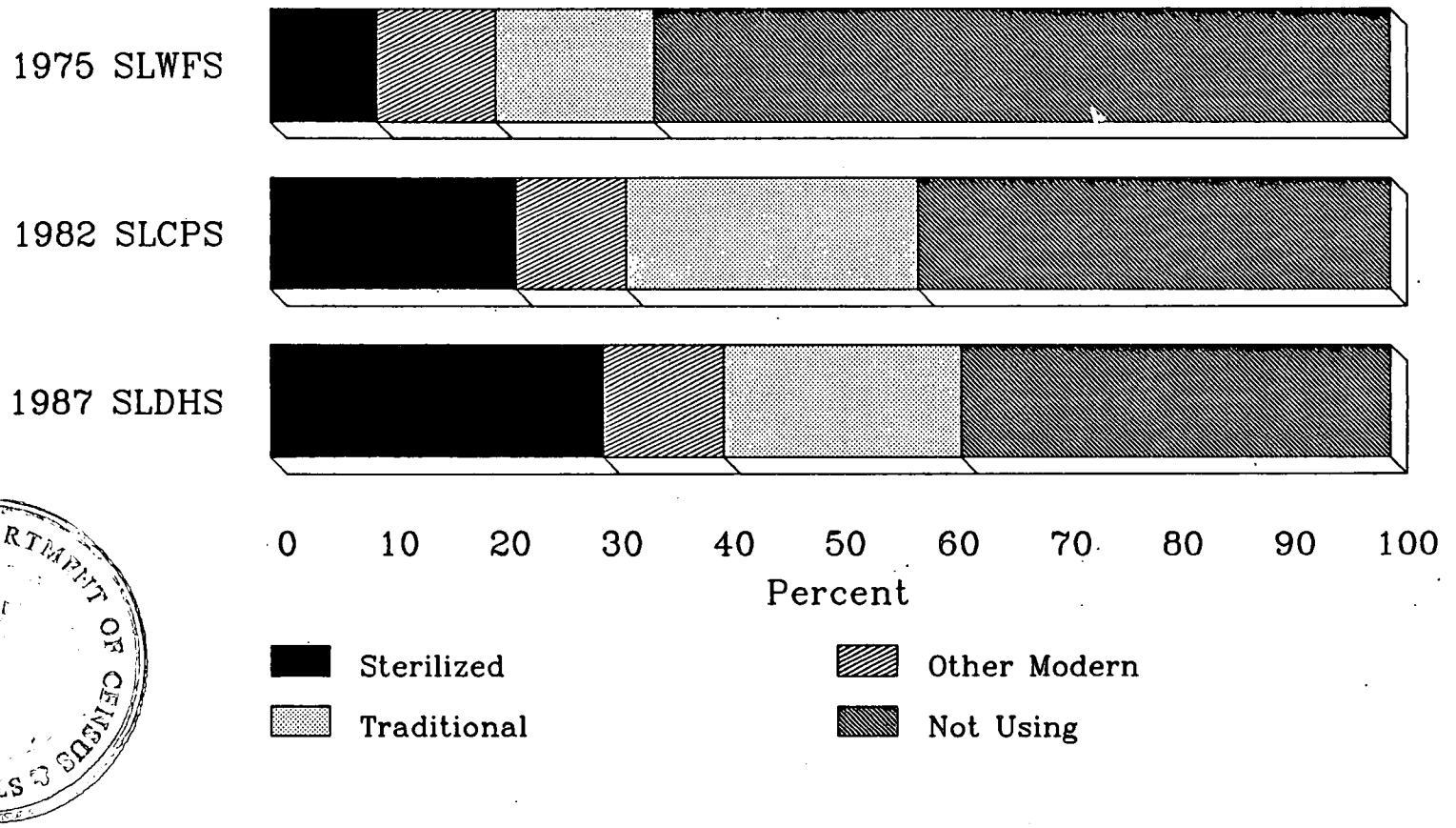

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TABLE 1: Trends in current contraceptive use by method among currently married women aged 15-49 from the 1975 SLWFS, 1982 SLCPS, and 1987 SLDHS. *

CONTRACEPTIVE METHODS	PERCENT CURRENTLY USING		
	SLWFS 1975	SLCPS 1982	SLDHS 1987
Pill	1.7	2.7	4.1
IUD	5.2	2.9	2.1
Injectable	0.4	1.0	2.7
Condoms	2.3	3.3	1.9
Sterilization	10.6	22.0	29.8
Rhythm (periodic abstin.)	8.9	14.2	14.9
Withdrawal	1.6	5.1	3.4
Other	3.7	6.7	2.8
All modern temporary	9.6	9.9	10.8
All sterilization	10.6	22.0	29.8
All traditional	14.2	26.0	21.1
ALL METHODS	34.4	57.8	61.7

* Data from the northern and eastern provinces have been excluded from the SLWFS and SLCPS in order to make these two surveys comparable with the geographic areas covered by the SLDHS.

the future, renewed efforts will have to be placed on promoting modern temporary (spacing) methods such as the pill, injectible, IUD, and condom among women who are under the age of 30.

Contraceptive Sources of Supply

The data from the SLDHS on the most recent source of supply for contraceptive methods shows that 27 percent of current users obtain their pills, injectibles, and condoms from government hospitals and MCH centers, and another 23 percent obtained these supplies from government midwives or nurses. The government's public health field staff were used as a source of supply by almost half of all pill users. For clinic methods (IUD and sterilization), 92 percent of current users relied on a government hospital or MCH center.

Besides government sources, private doctors are used as a source of supply by 29 percent of injectible users, and pharmacies or other shops are used as a source of supply by 14 percent of pill users and 37 percent of condom users. The relatively high percent of users who obtain their pills and condoms from pharmacies and shops is an indication of the activity of the contraceptive social marketing programme.

Reasons for Method Discontinuation

Women who discontinued any contraceptive method during the five year period preceding the survey were asked about their reasons for discontinuation. Nearly a third of the women (32 percent) discontinued in order to become pregnant. Another 28 percent discontinued because they believed the method failed. It should be noted, however, that the SLDHS had no way of verifying method failure.

Among former users of periodic abstinence and withdrawal, two of the major traditional methods, fully 37 percent said they discontinued because the method failed. This percent is not entirely surprising when one considers that 36 percent of women who have used periodic abstinence as a contraceptive method did not know that the most fertile period is in the middle of the ovulatory cycle. Clearly, these women are an important target group for educational programmes directed at helping them become more effective contraceptive method users.

Among former pill users, health concerns were listed by 38 percent as the major reason for discontinuation. Similarly, health concerns were the major reason for discontinuation among 29 percent of former injection users and 27 percent among former IUD users. If the use of these temporary spacing methods is to be increased in coming years, educational programmes must be

designed to address the health concerns of these women. While the health risks of contraceptive use are very low, the health benefits in terms of reduced infant and maternal mortality are very large.

INFANT MORTALITY

Over the past ten years, Sri Lanka has experienced a substantial reduction in infant (under age one) mortality. Figure 5 shows the estimates of infant mortality derived from the SLDHS for various time periods and for populations in four sectors -- Metropolitan Colombo, other urban areas, rural areas, and the estates. Overall, for the most recent five year time period 1982-1987, the infant mortality rate is 25 deaths for every 1,000 live births. This is a remarkably low level particularly when compared with other developing countries.

However, when the infant mortality rate is estimated over a ten year period from 1977-1987 and examined in terms of sectors, there are some major differences that become apparent. For example, while the ten year infant mortality rate in Colombo, other urban areas, and rural areas varies between 30 and 36, the infant mortality rate for the estate population for this same ten year period is 57 deaths for every 1,000 live births. Clearly, the estate population has not participated as much as other sectors in the general infant mortality decline.

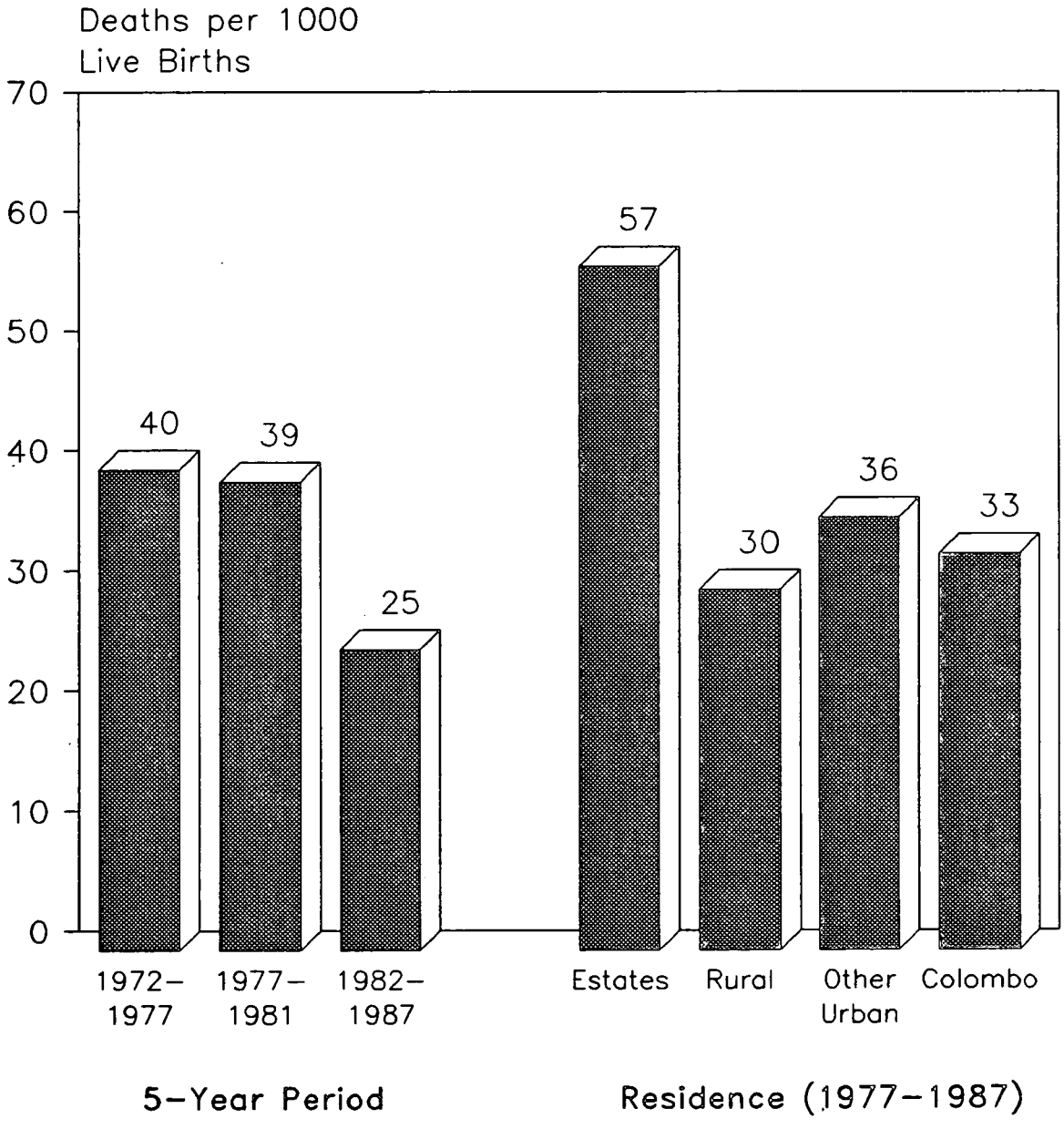
MATERNAL AND CHILD HEALTH

Effective prenatal care, assistance at delivery by a trained medical practitioner, protection against childhood diseases through immunization, and the use of oral rehydration solution (ORS) during episodes of childhood diarrhea can have a powerful effect on reducing infant mortality. In all of these areas, Sri Lanka has achieved an enviable record. The public health system in the country is widespread and reaches most all women and children with primary health care services.

Prenatal Care and Tetanus Protection

The SLDHS reveals that for approximately 97 percent of all births in the five year period prior to the survey, prenatal care was received from either a doctor (33 percent), a doctor and a midwife (62 percent), or a midwife alone (2 percent). This high level of prenatal care is probably the reason there is an equally high level of coverage against neonatal tetanus. For 66 percent of all births in the twelve months preceding the survey, the mother received two doses of tetanus toxoid and another 17 percent received one dose. The high proportion of women who

Figure 5
Infant Mortality Rates Over Time and by Residence



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have received tetanus toxoid injections is an indicator of widespread and effective coverage by the public health system in Sri Lanka. Moreover, there are very few differences in coverage between urban and rural areas.

Assistance at Delivery

Given the high proportions of women who receive prenatal care from a trained medical practitioner and tetanus toxoid injections, it is not entirely surprising that an equally high proportion of all births in the five years prior to the survey were assisted by either a doctor, nurse, or trained midwife. Overall, 94 percent of these births were assisted by a trained medical person. Nurses assisted with 74 percent of the births, doctors with 14 percent, and midwives with 6 percent.

Immunization

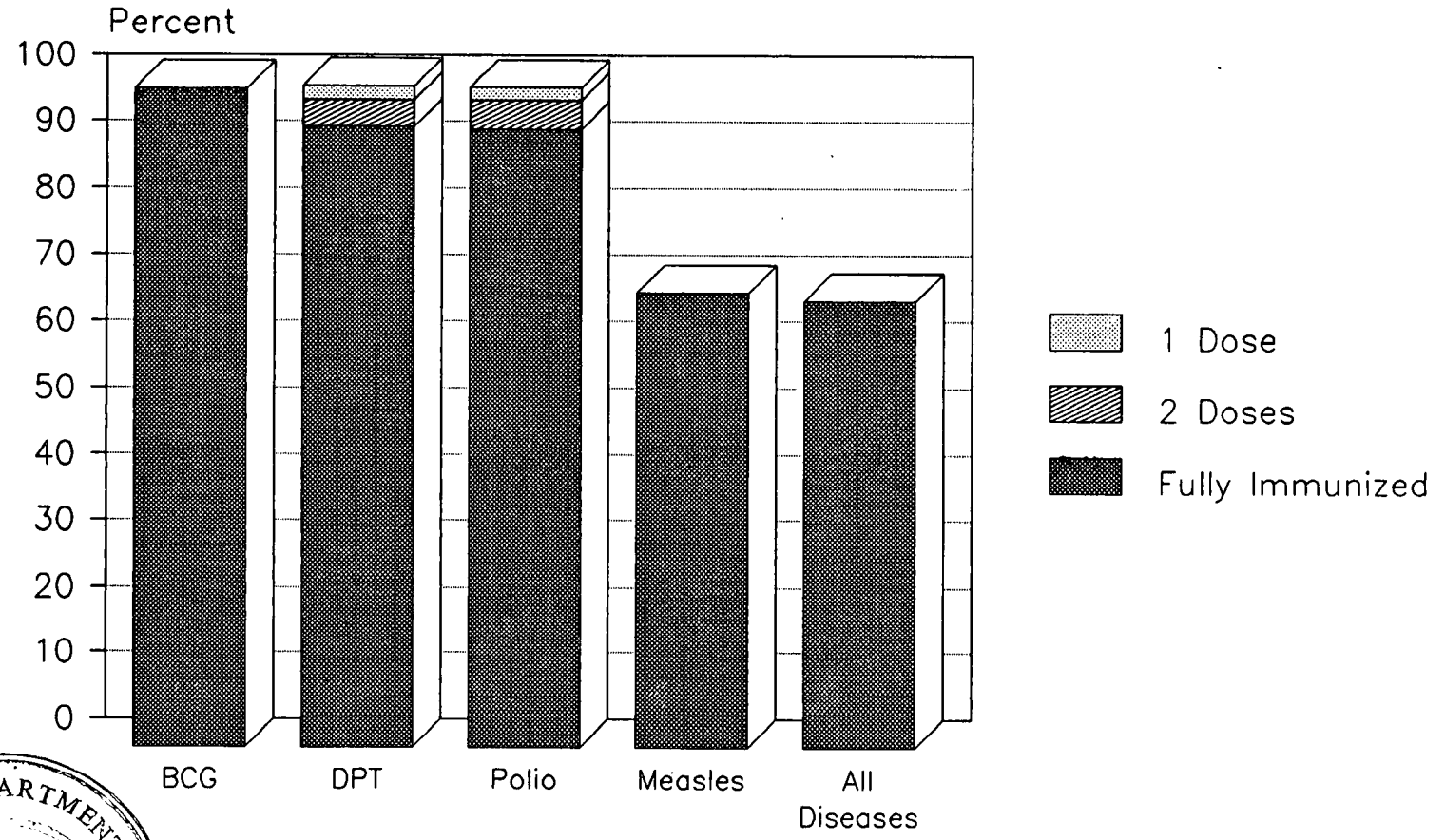
An important indicator of child health status in a country is the proportion of children protected against potentially life threatening disease by immunization. In Sri Lanka, a national programme to immunize children with BCG, polio vaccine, and DPT began in 1961 but was not expanded significantly to cover most areas of the island until 1978. Vaccination against measles was introduced in 1978 but did not achieve island wide coverage until 1985.

The SLDHS obtained information on immunization from the health cards of children. Among all children between the ages of 12 and 23 months, 82 percent have a health card. Figure 6 shows that immunization coverage among children in this critical age group is near universal. Fully 99 percent have been immunized with BCG, 93 percent with three doses of DPT, 93 percent with three doses of Polio, and 69 percent with measles. Full immunization coverage (BCG, DPT3, Polio3, and measles) has been received by 67 percent of all children aged 12-23 months who have a health card. This rate of full coverage will likely increase rapidly in the coming years as more children are protected against measles.

Treatment of Diarrhea

Diarrheal disease is a major cause of infant and child morbidity and mortality in Sri Lanka as it is in other developing countries. Most often, mortality from diarrheal disease is the result of rapid dehydration which could be prevented through the use of an oral rehydration solution consisting of the proper mixture of salt, water, and sugar. In Sri Lanka, a national Control of Diarrhoeal Disease (CDD) programme was implemented in

Figure 6
Immunization Coverage Among Children 12–23 Months with Health Cards



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1983 and achieved widespread coverage by 1987. The State Pharmaceutical Corporation produces "Jeevanee", an ORS preparation and UNICEF packets of ORS are also available.

The SLDHS determined that 6 percent of children under the age of 5 years had diarrhea in the last two weeks. This figure is relatively low when compared with other countries but should be interpreted with care since diarrhea is a disease more prevalent during the monsoon season and less prevalent during the dry season when the SLDHS interviews were conducted. Among the children who had diarrhea, a very high 73 percent were taken to a medical facility for treatment. Equally important, 29 percent received ORS packets for treatment. Although ORS was not widely promoted until 1987, the SLDHS also indicates the 70 percent of mothers with children under age five have heard of either Jeevanee or UNICEF ORS packets. Knowledge levels are high among all sectors except among women on the estates where only 43 percent knew about ORS.

NUTRITIONAL STATUS OF CHILDREN

A unique feature of the SLDHS was obtaining anthropometric weight and height measurements from approximately 2,000 children aged 3 through 36 months. These measurements provide an indication of the nutritional status of children in this age group.

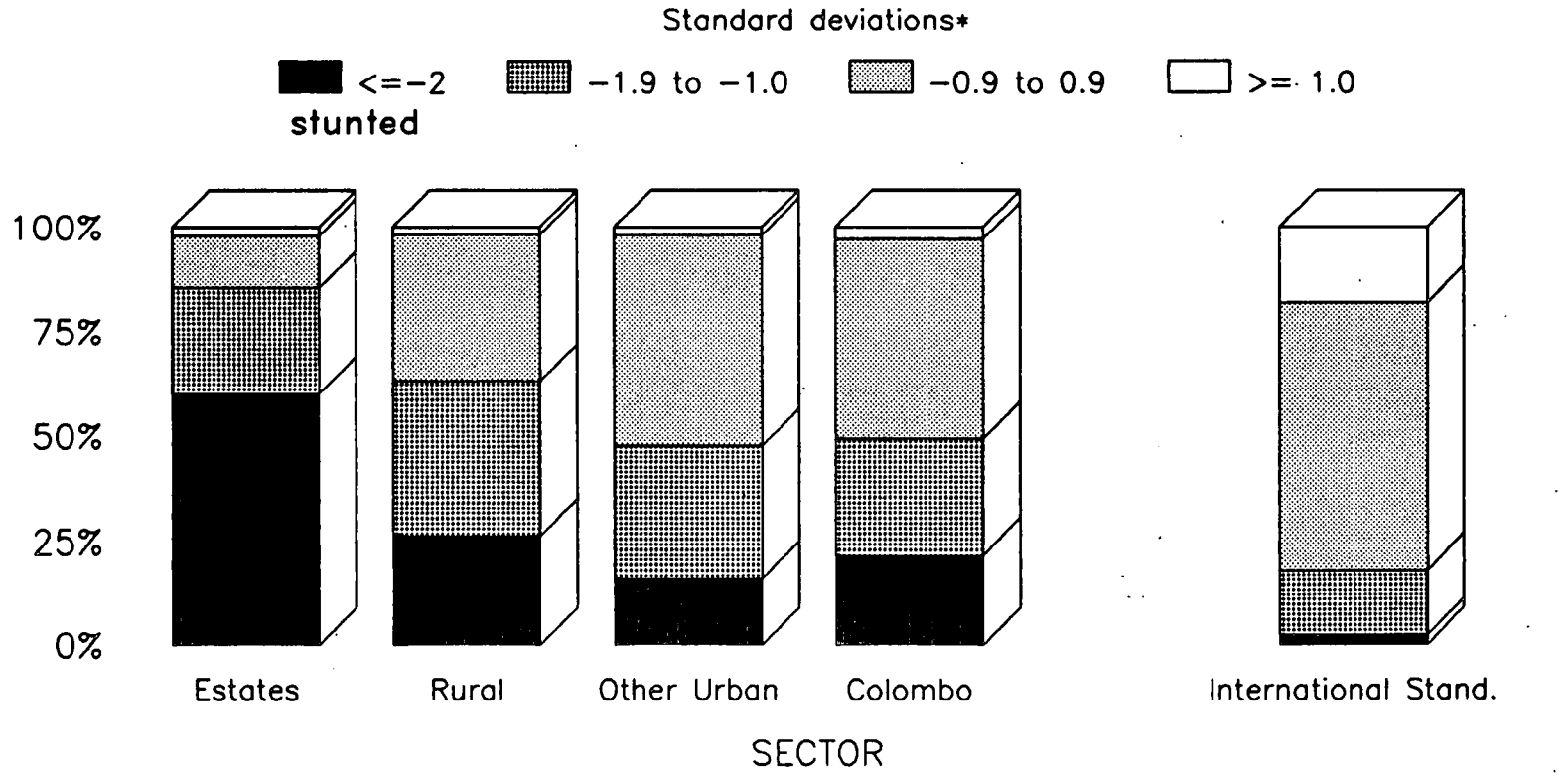
Height-for-Age

Height-for-age is a commonly used measure of nutritional status which indicates linear growth. A child who is 2 or more standard deviations below the mean of the reference population in terms of height-for-age is considered short for his/her age or "stunted". The SLDHS used the population of well fed, healthy children defined by the U.S. National Center for Health Statistics and accepted by the World Health Organization as the reference standard. Figure 7 indicates the degree of stunting or chronic undernutrition estimated by the SLDHS for various segments of the population. Overall, almost 28 percent of all children aged 3-36 months are chronically undernourished. Among children on the estates, an extremely high 60 percent are chronically undernourished. This level of undernutrition on the estates is probably a major contributing factor to the high level of infant mortality noted earlier. Clearly, the children on the estates constitute a major target group for nutritional programmes.

Weight-for-Height

Weight-for-height is a measure of recent or acute undernutrition. Children who are 2 or more standard deviations

FIGURE 7
STUNTING AMONG CHILDREN (3–36 MONTHS) BY SECTOR



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* Standard deviations from the international reference for Height/Age

from the mean of the reference population in terms of weight-for-height are often termed "wasted". Overall, the SLDHS found that 13 percent of the children aged 3-36 months were acutely undernourished. However, among children age 12-23 months, 19 percent were acutely undernourished. It is likely that this is because many of these children are no longer breastfeeding and the supplemental food they receive does not provide adequate levels of nutrition.

Height-for-Age by Weight-for-Height

The relationship between chronic undernutrition (height-for-age) and acute under nutrition (Weight-for-height) is shown in Table 2. This table reveals that 5 percent of all children aged 3 through 36 months are simultaneously stunted and wasted, that is to say, chronically and acutely undernourished. These are the most severely undernourished children

SUMMARY

The SLDHS provides a rich source of data on current fertility, contraceptive use, mortality, and health status levels in Sri Lanka. Overall, the country is experiencing a rapid transition to low levels of fertility and infant mortality. The relatively high age at marriage, age at first childbearing, and long period of postpartum amenorrhea and abstinence unquestionably have been a major factor influencing the lower levels of fertility. At the same time, the low level of infant mortality has unquestionably been influenced by the widespread availability of primary health care services, in particular prenatal care, assistance at delivery, immunization, and oral rehydration packets for diarrhea.

The one major area of concern is the nutritional status of young children. Overall, there are relatively high levels of undernutrition in among Sri Lankan children, both stunting (height-for-age_ and wasting (height-for-weight). The most severely affected segment of the population are children living on the estates. These children show very high levels of undernutrition. They also have a far higher level of infant mortality than children in other areas.

TABLE 2: Among children aged 3-36 months, the percent in each height-for-age standard deviation category by each weight-for-height standard deviation category (Waterlow classification) using the NCHS/WHO/CDC international reference population, SLDHS 1987.

HEIGHT FOR AGE STANDARD DEVIATIONS FROM NCHS/WHO/CDC REFERENCE POPULATION	WEIGHT FOR HEIGHT STANDARD DEVIATIONS FROM NCHS/CDC/WHO REFERENCE					
	-2.00 or more	-1.00 to -1.99	-0.99 to +0.99	+1.00 to +1.99	+2.00 or more	Percent total
-2.00 or more	4.7	12.7	9.6	0.6	0.0	27.5
-1.00 to -1.99	4.8	14.8	14.9	0.5	0.0	35.0
-0.99 to +0.99	3.3	12.8	18.3	1.1	0.1	35.5
+1.00 to +1.99	0.0	0.6	0.9	0.0	0.0	1.5
+2.00 or more	0.1	0.1	0.1	0.0	0.0	0.5
Percent total N = 1995	12.9	41.0	43.8	2.2	0.1	100.0

FACT SHEET
SRI LANKA DEMOGRAPHIC AND HEALTH SURVEY 1987

Survey Sample Size	
Ever-married women aged 15-49 years	5,865
Background characteristics	
Percent no education	11.2
Percent rural	77.6
Percent Estates	6.2
Percent urban	16.1
Marriage and other fertility determinants	
Percent currently married	91.4
Median age at first marriage for women 25-29	23.1
Mean length of breastfeeding (in months)[1]	22.7
Mean length of postpartum amenorrhea (in months)[1]	7.5
Mean length of postpartum abstinence (in months)[1]	6.6
Fertility	
Total fertility rate[2]	2.8
Mean number of children ever born to women 45-49[3]	5.1
Percent of currently married women pregnant	6.9
Median age at 1st birth among women aged 25-29	24.7
Desire for Children	
Percent of currently married women aged 15-49:	
Wanting no more children	35.3
Already sterilized	29.8
Wanting to delay next birth at least 2 years	18.4
Mean ideal number of children for ever married	3.1
Knowledge and Use of Family Planning	
Percent of currently married women aged 15-49:	
Knowing any method	98.8
Knowing any modern method[4]	98.7
Ever used any method	71.8
Ever used any modern method[4]	50.4
Ever used any traditional method[5]	44.3
Currently using any method	61.7
Pill	4.1
IUD	2.1
Injectable	2.7
Condoms	1.9
Female sterilization	24.9
Male sterilization	4.9
Periodic abstinence (Rhythm)	14.9
Withdrawal	3.4
Prolonged abstinence to avoid pregnancy	2.8
Other	0.1

Mortality and Health	
Infant mortality rate[6]	25.4
Under five mortality rate[6]	34.6
Percent of births in last 5 years whose mother received:	
Prenatal care from doctor	33.3
Prenatal care from doctor and midwife	61.6
Assistance at delivery from doctor	13.6
Assistance at delivery from nurse	74.1
Percent of births in last 12 months whose mother received:	
One dose tetanus toxoid	16.6
Two doses tetanus toxoid	66.0
Percent of children aged 12-23 months with health cards	82.1
Percent of children aged 12-23 months with health cards immunized against:	
BCG	99.1
DPT3 (3 doses)	93.4
Polio3 (3 doses)	93.1
Measles	68.5
Percent of children under 5 years with diarrhea:	
In last 24 hours	2.1
In last 2 weeks (includes 24 hour period)	6.0
Percent of mothers with children under 5 years who know about oral rehydration solution	69.9
Percent of children aged 3-36 months who fall two or more standard deviations below NCHS/CDC/WHO international reference population in:	
Weight-for-age	38.1
Colombo	27.6
Other urban	26.5
Rural	38.7
Estates	52.9
Height-for-age	27.5
Colombo	21.8
Other Urban	16.3
Rural	26.2
Estates	60.0
Weight-for-height	12.9
Colombo	13.4
Other Urban	10.2
Rural	13.6
Estates	7.1

NOTES

1. Current status estimate based on births within 36 months of interview date.

2. Based on all births to all women aged 15-49 years during the period five years prior to the survey.

3. Mean number of children ever born to ever married women aged 45-49.

4. Modern methods are pill, IUD, injectable, diaphragm, foam, jelly, condoms, male and female sterilization.

5. Traditional methods are withdrawal, periodic abstinence (rhythm), and prolonged abstinence for pregnancy avoidance purposes.

6. Infant and child mortality rate is for five year period 1982-1986 plus period during 1987 up to the calendar month preceding the interview.

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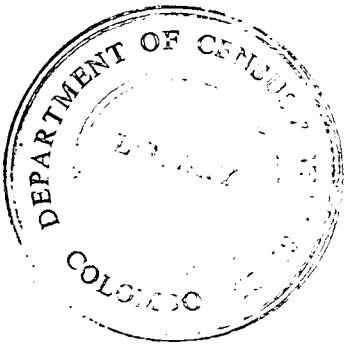

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