The Hashemite Kingdom of Jordan

Jordan Population and Family Health Survey 2012

Preliminary Report

Department of Statistics
Amman, JORDAN

MEASURE DHS
ICF International
Calverton, Maryland, USA

This report summarizes the findings of the 2012 Jordan Population and Family Health Survey (JPFHS) carried out by the Department of Statistics (DoS). The survey was funded by the Government of Jordan. Additional funding was provided by the U.S. Agency for International Development (USAID), the United Nations Population Fund (UNFPA), and the United Nations Children's Fund (UNICEF). ICF International provided technical assistance through its MEASURE DHS program, which is designed to collect data on fertility, family planning, and maternal and child health. The views expressed in this report do not necessarily reflect the views of the donor organizations.

Additional information about the Jordan survey may be obtained from the Department of Statistics: P.O. Box 2015, Amman, Jordan; Telephone (962) 6-5-300-700; Fax (962) 6-5-300-710; e-mail stat@DoS.gov.jo.

Additional information about the MEASURE DHS program may be obtained from ICF International: 11785 Beltsville Drive, Suite 300, Calverton, MD 20705; Telephone 301-572-0200; Fax 301-572-0999; e-mail reports@measuredhs.com; Internet: http://www.measuredhs.com.

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Preface

The 2012 Jordan Population and Family Health Survey (JPFHS) is the sixth Demographic and Health Survey conducted in Jordan. Like the first five JPFHS, conducted respectively in 1990, 1997, 2002, 2007, and 2009, the 2012 JPFHS was carried out by the Department of Statistics (DoS). The main objective of the survey is to provide comprehensive data on fertility and mortality, family planning, as well as maternal and child health and nutrition as a tool to evaluate existing population and health policies and programs.

The sample is nationally representative and has been designed to produce estimates of major survey variables at the national level, urban and rural areas, three regions (Central, North and South), twelve governorates, Badia areas and refugee camp areas. Over 15,000 households and more than 11,000 ever-married women age 15-49 years were interviewed between September and December 2012.

The 2012 JPFHS was funded by the Government of Jordan. Additional funding was provided by the U.S. Agency for International Development (USAID), the United Nations Population Fund (UNFPA), and the United Nations Children's Fund (UNICEF). ICF International provided technical assistance through the worldwide MEASURE Demographic and Health Surveys (DHS) program.

It is hoped that the 2012 JPFHS data will meet its objective of facilitating important government policies and programs promoting maternal and child health. Furthermore, the survey will also be useful to those interested in the fields of population, family planning and health.

This report provides some preliminary findings of the 2012 JPFHS. Detailed findings will be presented in the main survey report to be released in late 2013.

The DoS would like to express its thanks and appreciation to the individuals and organizations that contributed to the success of the survey. The timely and high quality data are the result of hard work from all the survey staff. Thanks go to all of the households interviewed during the survey for their time and willingness to provide the required information. Acknowledgment also goes to the Ministry of Health for its technical and logistic assistance. Thanks are also due to the USAID mission in Amman for its financial support and to the DHS team. Thanks also go to the UNFPA and UNICEF missions in Amman for their financial and technical support.

Fathi Nsour

Director General

CONTENTS

Main Indicators: JPFHS 1990, 1997, 2002, 2007, 2009 and 2012

	JPFHS					
Indicator	**1990**	**1997**	**2002**	**2007**	**2009**	**2012**
Sample						
Number of households interviewed	16,296	7,335	7,825	14,564	13,577	15,190
Household response rate (%)	96.9	96.6	99.0	98.8	97.3	96.6
Number of ever-married women interviewed	6,461	5,548	6,006	10,876	10,109	11,352
Woman response rate (%)	89.2	96.2	97.6	97.9	97.2	97.3
Background Characteristics of Ever-Married Women						
Urban (%)	74	84	80	85	84	83
Ever-married women age 15-29 years (%)	43	39	34	32	32	31
Educational level attended (%)						
No education	24	9	6	4	3	2
Elementary	23	15	12	8	7	8
Preparatory			21	16	16	15
Secondary	44	53	37	44	43	45
Higher	11	22	25	29	32	31
Fertility						
Total fertility rate (expressed per woman)	**5.6**	**4.4**	**3.7**	**3.6**	**3.8**	**3.5**
Place of Residence						
Urban	5.2	4.2	3.5	3.6	3.8	3.4
Rural	6.9	5.0	4.2	3.7	4.0	3.9
Region						
Central	-	4.1	3.5	3.5	3.8	3.4
North	-	4.9	3.9	3.8	4.0	3.8
South	-	4.8	4.0	3.6	4.1	3.7
Governorate						
Amman	-	-	-	3.4	3.7	3.2
Balqa	-	-	-	3.7	3.9	3.8
Zarqa	-	-	-	3.8	3.9	3.6
Madaba	-	-	-	3.6	3.6	3.5
Irbid	-	-	-	3.8	3.8	3.6
Mafraq	-	-	-	4.0	4.2	4.1
Jarash	-	-	-	3.8	4.5	4.3
Ajloun	-	-	-	3.7	4.0	3.8
Karak	-	-	-	3.2	3.8	3.5
Tafiela	-	-	-	3.7	4.3	3.9
Ma'an	-	-	-	4.0	4.3	4.1
Aqaba	-	-	-	4.1	4.2	3.7
Badia Areas						
Badia	-	-	-	4.2	4.5	4.4
Non-Badia	-	-	-	3.5	3.8	3.4
Camp Areas						
Camps	-	-	-	-	-	3.7
Non camps	-	-	-	-	-	3.5
Contraception (current use %)						
Any method	**40**	**53**	**56**	**57**	**59**	**61**
Place of Residence						
Urban	44	54	57	58	60	61
Rural	29	45	51	52	53	62
Region						
Central	-	55	58	58	61	61
North	-	50	54	55	58	61
South	-	43	48	53	54	61
Governorate						
Amman	-	-	-	59	62	61
Balqa	-	-	-	55	58	60
Zarqa	-	-	-	59	58	63
Madaba	-	-	-	53	62	62
Irbid	-	-	-	56	60	62
Mafraq	-	-	-	50	54	60

- Data not available

	JPFHS					
Indicator	**1990**	**1997**	**2002**	**2007**	**2009**	**2012**
Jarash	-	-	-	56	59	62
Ajloun	-	-	-	58	56	62
Karak	-	-	-	51	50	59
Tafiela	-	-	-	60	58	64
Ma'an	-	-	-	50	54	58
Aqaba	-	-	-	54	58	64
Badia Areas						
Badia	-	-	-	46	51	58
Non-Badia	-	-	-	58	60	61
Camp Areas						
Camps	-	-	-	-	-	61
Non camps	-	-	-	-	-	61
Any modern method	27	38	41	42	42	42
Any traditional method	13	15	15	15	17	19
Maternal and Child Health %						
Antenatal care from health provider (%)	**80**	**96**	**99**	**99**	**-**	**99**
Skilled delivery assistance (%)	**87**	**97**	**99**	**99**	**-**	**100**
Vaccination (% of children 12-23 months)						
All (excluding BCG)	88	86	94	94	-	-
All (including BCG)	-	21	28	87	-	93
Region						
Central	-	24	37	89	-	93
North	-	16	17	90	-	95
South	-	3	3	64	-	89
Badia Areas						
Badia	-	-	-	81	-	86
Non-Badia	-	-	-	88	-	94
Camp Areas						
Camps	-	-	-	-	-	98
Non camps	-	-	-	-	-	94
Nutrition						
Breastfeeding (%)						
Children 0-5 months exclusively breastfed	-	-	27	22	-	23
Children 6-9 months breastfed and receiving complementary food	-	-	70	66	-	66
Malnutrition (%)						
Stunting (height-for-age) WHO standard	-	-	12	-	8	8
Region						
Central	-	-	-	-	7	8
North	-	-	-	-	9	7
South	-	-	-	-	13	12
Wasting (weight-for-height) WHO stand.	-	-	2	-	2	2
Region						
Central	-	-	-	-	2	3
North	-	-	-	-	1	2
South	-	-	-	-	1	2
Underweight (weight-for-age) WHO stand.	-	-	4	-	2	3
Region						
Central	-	-	-	-	2	3
North	-	-	-	-	2	3
South	-	-	-	-	2	3
Overweight (weight-for-age) WHO stand.	-	-	-	-	3	2
Child Mortality						
Infant mortality	34	29	22	19	23	17
Child mortality	5	6	5	2	5	4
Under-five mortality	39	34	27	21	28	21

- Data not available

I. INTRODUCTION

A. Background

The 2012 Jordan Population and Family Health Survey (JPFHS) is the sixth survey conducted in Jordan under the auspices of the worldwide Demographic and Health Surveys (DHS) program. The JPFHS was funded by the Government of Jordan. Additional funding was provided by USAID, UNFPA and UNICEF. The first JPFHS was carried out in 1990, the second in 1997, the third in 2002, the fourth in 2007 and the fifth in 2009. The DHS program, currently at ICF International in Calverton, Maryland, USA, provided technical assistance for all surveys.

This preliminary publication presents the first findings of the 2012 JPFHS. These preliminary results were produced two months after completion of data collection in order to facilitate their use in family planning and health intervention programs. The final report on the JPFHS 2012 is expected to be published in late 2013 and will include a more comprehensive analysis of the survey results. The results presented here are provisional and may be subject to slight modifications. However, the final figures however are not expected to differ significantly from the findings presented in this report.

B. Objectives of the Survey

As in the previous DHS surveys in Jordan, the primary objective of the JPFHS is to provide reliable estimates of demographic parameters, such as fertility, mortality, family planning, and fertility preferences, as well as maternal and child health and nutrition that can be used by program managers and policy makers to evaluate and improve existing programs. In addition, the JPFHS data will be useful to researchers and scholars interested in analyzing trends in demographic parameters in Jordan as well as those conducting comparative, regional or cross-national studies.

II. METHODOLOGY

A. Survey Instruments

The 2012 JPFHS used two questionnaires, namely, the Household Questionnaire and the Woman's Questionnaire. The household questionnaire was used to list all usual members of the sampled households and to obtain information on each household member's age, sex, educational attainment, relationship to the head of the household and marital status. In addition, questions were included on the socio-economic characteristics of the household, such as source of water, sanitation facilities and the availability of durable goods. Moreover, the questionnaire included questions about child discipline. The household questionnaire was also used to identify women who are eligible for the individual interview (ever-married women age 15-49 years). In addition, all women 15-49 years and children under five years living in the household were eligible for height and weight measurement and anemia testing.

The Woman's Questionnaire was administered to ever-married woman age 15 to 49 years and collected information on the following topics:

- Respondent's background characteristics
- Birth history
- Knowledge, attitudes and practice of family planning, exposure to family planning messages
- Maternal health (antenatal, delivery and postnatal care)
- Immunization and health of children under 5 years of age
- Breastfeeding and infant feeding practices
- Marriage and husband's background characteristics
- Fertility preferences
- Respondent's employment
- Knowledge of AIDS and sexually transmitted infections (STI)
- Other women's health issues
- Early childhood development
- Domestic violence

In addition, information on births, pregnancies, contraceptive use and discontinuation during the five years prior to the survey was collected using a monthly calendar.

The Household and Woman's Questionnaires were based on the model questionnaires developed by the MEASURE DHS program. Additions and modifications to the model questionnaires were made in order to provide detailed information specific to Jordan.

B. Sample Design and Implementation

The 2012 JPFHS sample was designed to produce reliable estimates of major survey variables for the country as a whole, urban and rural areas, each of the twelve governorates, and for the two special domains: the Badia areas and people living in refugee camps. To facilitate comparisons with previous surveys, the sample was also designed to produce estimates for the three regions (North, Central and South). The grouping of the governorates into regions is as follows: the North consists of Irbid, Jarash, Ajlun and Mafraq governorates; the Central region consists of Amman, Madaba, Balqa and Zarqa governorates; and the South region consists of Karak, Tafiela, Ma'an and Aqaba governorates.

The 2012 JPFHS sample was selected using data from the 2004 Jordan Population and Housing Census as a sampling frame. The frame excludes the population living in remote areas (most of whom are nomads), as well as those living in collective housing units, such as hotels, hospitals, work camps, prisons and the like. For the 2004 census, the country was subdivided into convenient area units called census blocks. For the purposes

of the household surveys, the census blocks were regrouped to form a general statistical unit of moderate size (30 households or more), called a 'cluster', which is widely used in surveys as a primary sampling unit (PSU).

Stratification was achieved by first separating each governorate into urban and rural areas, and then within each urban and rural area, by Badia areas, refugee camps and other.

A two-stage sampling procedure was employed. In the first stage, 806 clusters were selected with probability proportional to the cluster size, i.e., the number of residential households counted in the 2004 census. A household listing operation was then carried out in all of the selected clusters, and the resulting lists of households served as the sampling frame for the selection of households in the second stage. In the second stage of selection, a fixed number of 20 households were selected in each cluster with an equal probability systematic selection. A sub-sample of two-thirds of the selected households was identified for anthropometry measurements.

Results of the sample implementation are presented in Table 1. In all, 16,120 households were selected for the survey and of these, 15,722 were found to be occupied households. Of these households, 15,190 or 97 percent were successfully interviewed.

In the households interviewed, 11,673 ever-married women age 15-49 years were identified and interviews were completed with 11,352 women, or 97 percent of all eligible women. Overall, the response rate combining the household and individual response rates is 94 percent.

Table 1 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence (unweighted), Jordan 2012

Result	Residence		Total
	Urban	Rural	
Household interviews			
Households selected	11,480	4,640	16,120
Households found	11,161	4,561	15,722
Households interviewed	10,727	4,463	15,190
Household response rate[1]	96.1	97.9	96.6
Interviews with women age 15-49			
Number of eligible women	8,296	3,377	11,673
Number of eligible women interviewed	8,034	3,318	11,352
Eligible women response rate[2]	96.8	98.3	97.3
Overall response rate[3]	93.0	96.2	94.0

[1] Households interviewed/households occupied
[2] Respondents interviewed/eligible respondents
[3] (Household response rate) * (Eligible woman response rate)

C. Training and Pretest

Training of the interviewers took place in Amman for six weeks in July-September 2012. The training course consisted of instructions regarding interviewing techniques and field procedures, a detailed review of items on the questionnaires, instruction and practice in weighing and measuring children and women, anemia testing, mock interviews between participants in the classroom, and practice interviews. After the training, pretest fieldwork was conducted over a one-week period in three urban clusters and one rural cluster. Field practice in anemia testing was also carried out during the pretest for persons who were assigned as team health technicians. In addition, team members practiced their ability to weigh and measure women and children in health centers related to the Ministry of Health (Amman Comprehensive Health Center, Abu Nsair Comprehensive Health Center and Sahab Comprehensive Health Center). Also during this period, field editors and team supervisors were provided with additional training in methods of field editing, data quality control procedures and fieldwork coordination. Debriefing sessions were held with the pretest field staff and modifications to the questionnaires and instructions were made based on lessons drawn from the exercise.

D. Data Collection and Processing

As in previous surveys, the household and women's data were collected by interview teams. A total of 26 field teams were formed, each consisting of one supervisor, one field editor, one biomarker technician, and 3-4 interviewers. During fieldwork, teams were grouped or split up depending on the need. Each team was provided with a vehicle. The fieldwork began on 9th September 2012 and was completed on 20th December 2012. Although the JPFHS teams were divided into regions in which they worked, all of the teams began data

collection in the central region to allow for closer supervision during the first days and weeks of data collection.

The field editors and supervisors first checked the completed questionnaires for completeness and consistency in the field. The questionnaires were then sent to the DoS central office in Amman where they were edited again and open-ended questions were coded. The data were processed using microcomputers and CSPro (Census and Survey Processing computer package). Data entry and editing were initiated almost immediately after the beginning of fieldwork. Processing activities (central office editing, data entry, 100 percent double entry, final editing and verification) were completed by early January 2013.

III. RESULTS

A. Characteristics of Respondents

The percent distribution of ever-married women interviewed in the 2012 JPFHS is presented in Table 2 by selected background characteristics. Less than one-third of ever-married women (31 percent) are under age 30. This represents a decline from 34 percent in 2002 and 32 percent in 2007 and 2009. This decline in the proportion of young women in the ever-married population is mainly the consequence of increasing age at marriage. In contrast, the proportion of ever-married women age 30-49 has increased from 66 percent in 2002 to 68 percent in 2007 and 2009 and to 69 percent in 2012.

In 2012, 83 percent of ever-married women live in urban areas. Almost two in three women live in the Central region, about 28 percent in the North region, and only 9 percent live in the South region.

The distribution of ever-married women by governorate is comparable to the distribution of the total population in the 2004 census. About two in five women live in Amman, 15 percent in Zarqa, and 18 percent in Irbid governorate. Table 2 also presents the weighted and unweighted numbers of women in the sample. The unweighted numbers of women in the largest governorates are smaller than the weighted numbers. The opposite is true for all other governorates because of oversampling. For example, in Ma'an governorate, although the weighted number of women is 178, in reality data were collected from 781 women: Ma'an governorate was oversampled to obtain a sufficient sample of women to yield statistically reliable estimates. Six percent of ever-married women live in Badia areas and 4 percent live in refugee camp areas.

Table 2 Background characteristics of respondents

Percent distribution of ever-married women age 15-49 by selected background characteristics, Jordan 2012

Background characteristic	Weighted percent	Weighted number	Unweighted number
Age			
15-19	2.4	278	239
20-24	10.6	1,207	1,190
25-29	17.7	2,006	2,110
30-34	18.8	2,136	2,169
35-39	18.5	2,098	2,164
40-44	18.1	2,055	1,999
45-49	13.8	1,571	1,481
Marital status			
Married	95.1	10,801	10,746
Divorced/separated	3.1	350	346
Widowed	1.8	201	260
Residence			
Urban	83.3	9,458	8,034
Rural	16.7	1,894	3,318
Governorate			
Amman	39.2	4,454	1,106
Balqa	6.7	765	945
Zarqa	14.6	1,659	1,139
Madaba	2.7	303	861
Irbid	17.5	1,986	1,137
Mafraq	5.0	562	1,000
Jarash	2.8	320	945
Ajlun	2.2	251	898
Karak	3.9	441	873
Tafiela	1.5	167	819
Ma'an	1.6	178	781
Aqaba	2.3	265	848
Region			
Central	63.3	7,181	4,051
North	27.5	3,120	3,980
South	9.3	1,051	3,321
Badia			
Badia	6.2	705	1,265
Non Badia	93.8	10,647	10,087
Camps			
Camp	3.6	413	904
Non camp	96.4	10,939	10,448
Education			
No education	2.3	267	408
Elementary	7.6	860	981
Preparatory	14.8	1,677	1,610
Secondary	44.7	5,073	4,799
Higher	30.6	3,475	3,554
Total	100.0	11,352	11,352

Note: Education categories refer to the highest level of education attended, whether or not that level was completed.

The overall level of education among women continues to improve. The percentage of ever-married women age 15-49 years who had no schooling declined from 6 percent in 2002 to 4 percent in 2007 and to 2 percent in 2012. The percentage who have attended school beyond secondary increased from 25 percent in 2002 to 29 percent in 2007 and to 31 percent in 2012.

B. Fertility

Ever-married women who were interviewed in the 2012 JPFHS were asked to report the total number of sons and daughters they had given birth to during their lifetime. To ensure complete reporting, women were asked separately about children living at home, those living elsewhere, and children who had died. A complete birth history was obtained from each respondent including information on the sex, date of birth, and survival status of each child. Age-specific and total fertility rates (TFR) were calculated directly from the birth history data.[1]

Table 3 Current fertility

Age-specific and total fertility rates, the general fertility rate, and the crude birth rate for the three years preceding the survey, by residence, Jordan 2012

	Residence		
Age group	Urban	Rural	Total
15-19	27	18	26
20-24	138	142	139
25-29	202	237	209
30-34	176	200	180
35-39	108	125	111
40-44	31	49	34
45-49	3	5	3
TFR (15-49)	3.4	3.9	3.5
GFR (15-44)	109	125	112
CBR	26.7	29.8	27.2

Notes: Age-specific fertility rates are per 1,000 women. Rates for age group 45-49 may be slightly biased due to truncation. Rates are for the period 1-36 months prior to interview.
TFR: Total fertility rate expressed per woman
GFR: General fertility rate expressed per 1,000 women age 15-44
CBR: Crude birth rate expressed per 1,000 population

The age-specific fertility rates and TFR shown in Table 3 are for the three-year period before the survey, a period covering approximately the years 2010-2012. The TFR is the sum of the age-specific rates and is a useful measure of the level of recent fertility. It represents the average number of children a woman would have by the end of her reproductive life if she were to bear children at the currently observed age-specific fertility rates. The TFR indicates that, if fertility rates were to remain constant at the level prevailing during the three years before the survey, a woman in Jordan would bear on average 3.5 children during her lifetime. Fertility is half a child higher in rural areas than urban areas (3.9 versus 3.4 births per woman).

According to the age-specific fertility rates shown in Table 3, on average, a woman in Jordan will give birth to less than one child (0.8) by age 25[2] and, similarly, about two children (1.9) between the ages of 25 and 34 years. In the age group 15-19 years, fertility rates are quite low (26 births per 1,000 women). Rates then increase dramatically to reach a maximum of 209 births per 1,000 women in the age group 25-29 years. Above age 29, rates decline slowly but regularly. Fertility is higher in rural areas for every age group except 15-19 years (Figure 1).

The general fertility rate (GFR), and the crude birth rate (CBR) are also presented in Table 3. The GFR is defined as the annual number of births per 1,000 women age 15-44, and the CBR refers to the total number of births occurring in a given year per 1,000 population. The CBR is 27 births per 1,000 population and the GFR is 112 births per 1,000 women age 15-44 years.

Figure 2 shows trends in fertility since 1990. The total fertility rate for Jordan declined rapidly in the 1990s, from 5.6 in 1990 to 3.7 in 2002. However, fertility has hardly changed at all between 2002 and 2012, fluctuating between a low of 3.5 and a high of 3.8.

[1] Numerators for age-specific fertility rates are calculated by summing the number of live births that occurred in the period 1-36 months preceding the survey (determined by the date of interview and the date of birth of the child) and classifying them by the age of the mother (in five-year groups) at the time of birth (determined by the mother's date of birth). The denominators for the rates are the number of woman-years lived in each of the specified five-year age groups during the period 1-36 months preceding the survey. Because only women who had ever married were interviewed in the JPFHS, the number of women in the denominator of the rates was inflated by factors calculated from information in the Household Questionnaire on the proportions ever married to produce a count of all women. Never-married women are presumed not to have given birth.

[2] Calculated as the sum of age specific rates in the age groups 15-19 years and 20-24 years, times 5 (to take into account the five-year age group), divided by 1,000.

Figure 1 **Age-specific fertility rates by urban-rural residence, 2012**

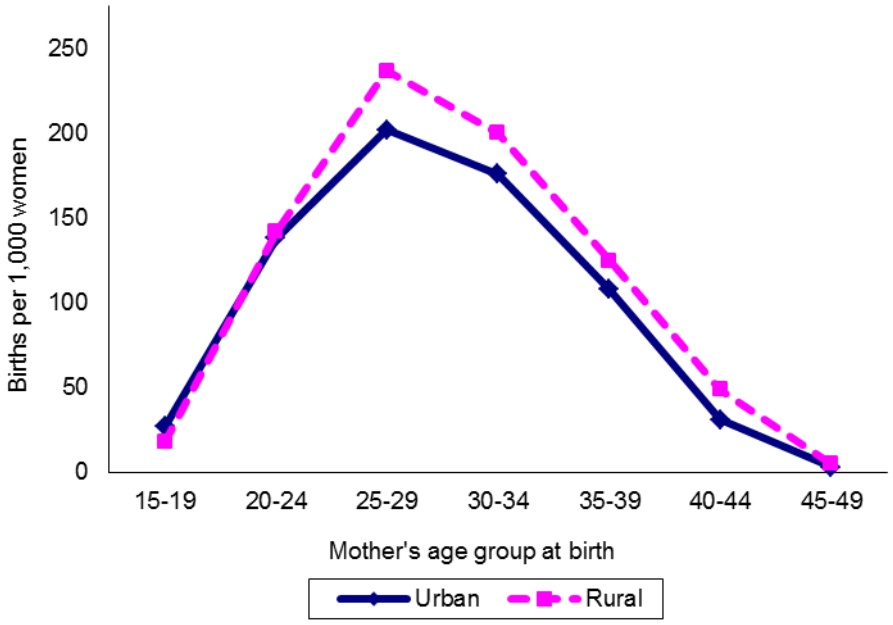
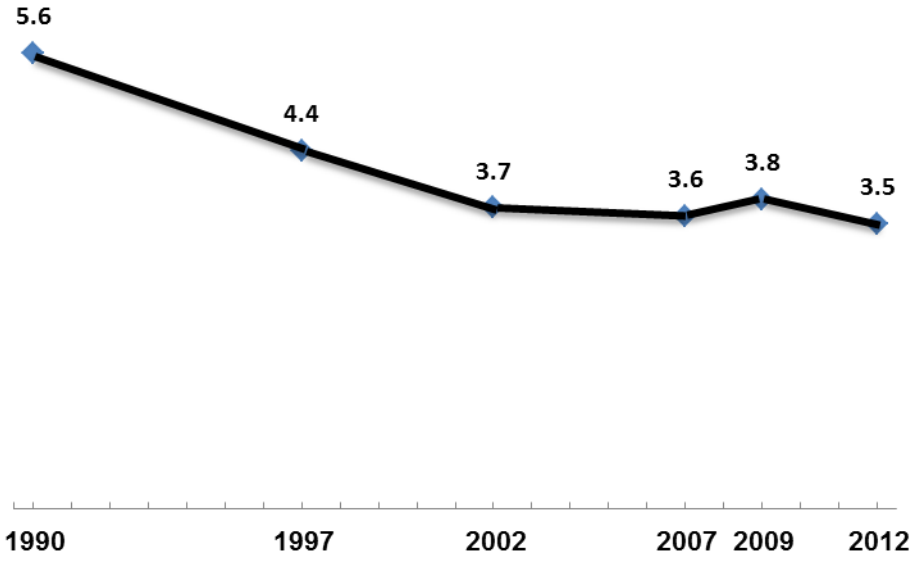
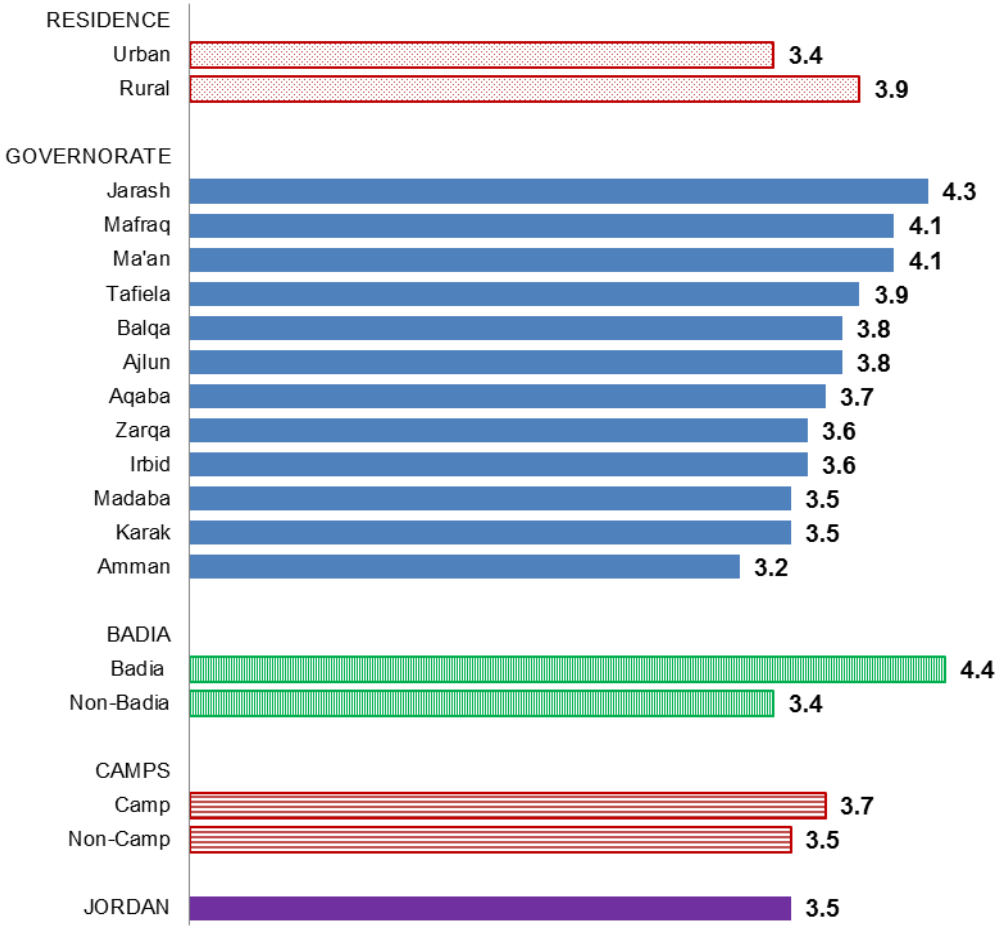


Figure 2 **Trends in total fertility rates, 1990-2012**



Differentials in fertility by urban-rural residence, governorate, Badia/non-Badia and Camp/non-camp are shown in Figure 3. As mentioned above, women in rural areas give birth to an average of half a child more than urban women. There are still some sizeable differentials in fertility levels by governorate; the TFR ranges from 3.2 in Amman to 4.3 in Jarash. Fertility is also high in Ma'an and Mafraq governorates (4.1 children per woman). The largest differential in fertility exists between Badia and non-Badia areas. The TFR in Badia areas is 4.4, compared with 3.4 in non-Badia areas. Women who live in refugee camps have slightly higher fertility than those who do not (3.7 and 3.5 children per woman, respectively).

Figure 3 **Differentials in total fertility rates, 2012**



C. Fertility Preferences

In the 2012 JPFHS, currently married women were asked about their fertility preferences, including the desire for additional children and spacing preferences. The survey findings are presented in Table 4.

Overall, 53 percent of married women in Jordan do not want to have any more children at any time in the future, including 2 percent who have been sterilized. An additional 23 percent of married women want to delay having another child for at least two years. Summing these two figures implies that 76 percent of married women in Jordan may have a potential need for family planning services for either limiting or spacing births.

Table 4 Fertility preferences by number of living children

Percent distribution of currently married women age 15-49 by desire for children, according to number of living children, Jordan 2012

Desire for children	Number of living children[1]							
	0	1	2	3	4	5	6+	Total
Have another soon[2]	82.8	43.0	19.0	14.9	8.4	5.6	2.6	18.4
Have another later[3]	1.7	48.2	47.1	32.8	15.6	8.0	2.5	23.1
Have another, undecided when	0.9	0.4	0.5	0.3	0.1	0.5	0.0	0.3
Undecided	0.5	0.6	2.8	3.1	3.4	2.2	1.1	2.2
Want no more	0.8	5.7	29.3	45.6	69.6	79.1	80.5	50.6
Sterilized[4]	0.0	0.0	0.7	0.6	1.1	1.5	8.7	2.2
Declare infecund	13.3	2.1	0.6	2.7	1.8	3.1	4.6	3.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	678	1,239	1,703	1,949	1,789	1,458	1,986	10,801

[1] Number of living children includes current pregnancy
[2] Wants next birth within 2 years
[3] Wants to delay next birth for 2 or more years
[4] Includes both female and male sterilization

The desire for a child is strongly related to the number of living children the woman has. More than eight in ten women who had not yet begun childbearing at the time of the survey want a birth soon. Ninety-two percent of women who have one child also express a desire to have another, although most of them want to wait to have the next child. The desire to cease childbearing rises rapidly with the number of children, from less than one percent among women with no children to 89 percent among women with six or more children (including 9 percent who have been sterilized).

D. Family Planning

Current Use of Family Planning

Table 5 shows that 61 percent of currently married women in Jordan are using a method of family planning: 42 percent are using modern contraceptive methods and 19 percent use traditional methods. Contraceptive prevalence increased in the 1990s, from 40 percent in 1990 to 56 percent in 2002 (Figure 4). Prevalence has increased from 56 percent in 2002 to 61 percent in 2012; however, the increase has been almost entirely in use of traditional methods. Modern method use has remained almost constant since 2002 at about 42 percent of currently married women, as shown in Figure 4.

The most popular modern method is the IUD, used by 21 percent of married women. The next most popular modern methods are the pill (8 percent) and the condom (8 percent). Two percent of married women have been sterilized, while less than one percent is using injectables or implants. As for traditional methods, withdrawal is used by 14 percent of currently married women and rhythm or periodic abstinence is used by about 4 percent.

Differentials in contraceptive use according to background characteristics are shown in Table 5. In general, married women age 30-44 years, those with more than elementary education, and women who have three or more children are more likely to use family planning than other women. Interestingly, there is no difference by urban-rural residence in the proportion of married women who are using any method. However, urban women are more likely to use a modern method than rural women, while rural women are more likely to use a traditional method than urban women. The contraceptive prevalence rate ranges from 58 percent in Ma'an governorate to 64 percent in Tafiela and Aqaba governorates. In addition, women who live in Badia areas are slightly less likely to use contraception than other women (58 percent versus 61 percent). There is no difference in the contraceptive prevalence rate for women in refugee camps and those not in camps; however, those in camps are more likely to use modern contraceptives than those not in camps.

Except among women age 15-24 years, the IUD is the most popular method. This method is used by 27-29 percent of women age 35-44 years, and by almost one in five women age 25-34 years. The youngest married women age 15-19 years are most likely to use the pill, followed by withdrawal, LAM, and the IUD, while those age 20-24 years are most likely to use withdrawal, followed by the IUD. Use of female sterilization is positively associated with the woman's age; older women are more likely to use this method to terminate childbearing. Seven percent of married women in the oldest age group have been sterilized.

Urban women are more likely than rural women to use the IUD (22 percent and 17 percent, respectively) and condoms (9 percent and 5 percent, respectively). Rural women are more likely than urban women to use the pill (12 percent and 7 percent, respectively) and withdrawal (17 percent and 14 percent, respectively). The proportion of married women using contraception rises steadily with increasing education from 46 percent among women with no education up to 65 percent of those with at least some secondary education, after which it decreases to 59 percent among those with higher education.

More than half of women with one or two children are using family planning (52 percent), mainly withdrawal, IUD, and condoms. The contraceptive prevalence rate is highest among those with five or more children (75 percent), and is expectedly low (2 percent) among childless women.

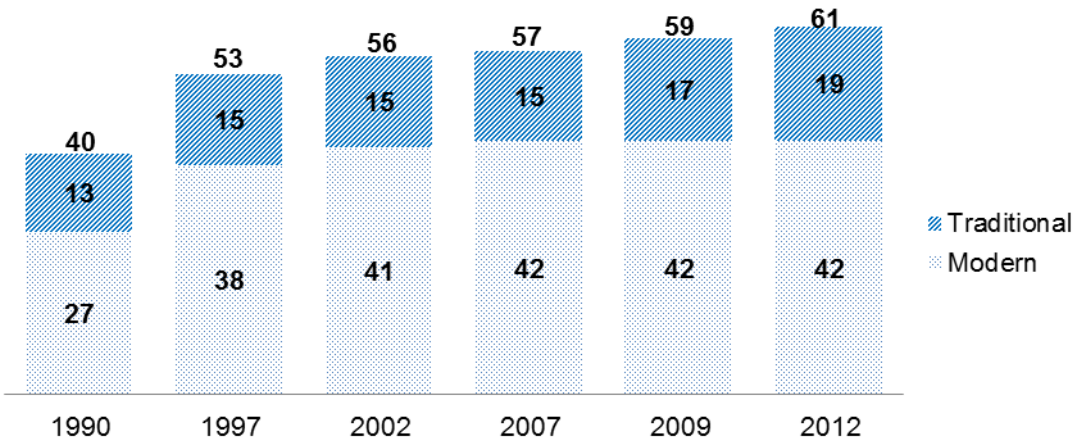
Table 5 Current use of contraception by background characteristics

Percent distribution of currently married women age 15-49 by contraceptive method currently used, according to background characteristics, Jordan 2012

Background characteristic	Any method	Any modern method	Modern method								Any traditional method	Traditional method			Not currently using	Total	Number of women
			Female sterilization	Pill	IUD	Injectables	Implants	Male condom	LAM	Other		Rhythm	Withdrawal	Other			
Age																	
15-19	27.5	21.8	0.0	11.4	4.0	1.1	0.0	1.2	4.1	0.0	5.7	0.0	4.4	1.3	72.5	100.0	264
20-24	46.8	30.0	0.0	7.6	10.6	1.5	0.5	6.4	3.3	0.0	16.8	1.2	14.4	1.2	53.2	100.0	1,171
25-29	57.7	37.7	0.0	8.6	18.2	1.2	0.5	7.8	1.4	0.0	20.0	2.4	16.4	1.3	42.3	100.0	1,935
30-34	65.2	46.0	0.2	10.2	22.6	1.0	0.2	9.3	2.1	0.3	19.2	2.9	15.1	1.2	34.8	100.0	2,055
35-39	71.2	51.0	1.5	10.4	26.6	1.1	0.4	9.5	1.0	0.6	20.2	3.5	15.4	1.3	28.8	100.0	2,012
40-44	70.8	51.0	5.1	7.0	28.9	0.6	0.4	8.6	0.2	0.1	19.8	5.6	13.6	0.7	29.2	100.0	1,944
45-49	50.7	33.1	7.4	2.5	17.8	0.1	0.0	5.2	0.0	0.1	17.6	5.8	11.7	0.1	49.3	100.0	1,419
Residence																	
Urban	61.1	42.7	2.2	7.3	22.1	0.8	0.3	8.5	1.3	0.2	18.3	3.6	13.9	0.9	38.9	100.0	8,983
Rural	61.7	40.2	2.4	12.1	17.4	1.8	0.3	4.9	1.2	0.1	21.6	3.3	16.6	1.7	38.3	100.0	1,818
Governorate																	
Amman	60.5	41.6	1.7	5.8	21.8	0.5	0.3	9.5	1.6	0.4	18.9	4.4	14.0	0.5	39.5	100.0	4,262
Balqa	60.0	41.6	2.2	10.2	20.8	1.9	0.1	5.5	0.9	0.0	18.4	4.7	12.3	1.3	40.0	100.0	724
Zarqa	63.1	46.5	1.7	10.4	23.5	0.8	1.0	8.0	1.0	0.0	16.7	2.6	12.6	1.4	36.9	100.0	1,564
Madaba	62.1	42.2	2.6	9.7	20.4	1.3	0.2	6.4	1.4	0.1	19.9	3.4	15.8	0.8	37.9	100.0	289
Irbid	61.7	43.9	3.1	9.4	22.0	0.6	0.0	7.3	1.3	0.1	17.8	2.5	14.1	1.1	38.3	100.0	1,892
Mafraq	59.5	36.7	1.9	10.2	15.8	2.7	0.0	4.5	1.3	0.4	22.8	2.0	18.8	2.0	40.5	100.0	528
Jarash	61.8	42.7	3.2	9.9	20.5	1.1	0.3	6.7	0.7	0.1	19.2	3.0	14.2	1.9	38.2	100.0	306
Ajlun	61.6	41.0	2.0	4.1	26.4	0.6	0.2	6.6	1.0	0.0	20.6	3.4	14.9	2.3	38.4	100.0	239
Karak	59.2	40.0	3.1	10.5	15.1	2.9	0.6	6.8	0.9	0.0	19.3	3.4	15.6	0.3	40.8	100.0	420
Tafiela	64.1	41.5	5.6	11.3	13.7	0.9	1.0	7.2	1.8	0.0	22.6	2.1	20.0	0.5	35.9	100.0	161
Ma'an	58.4	30.7	4.6	6.0	10.5	0.8	0.3	7.2	0.9	0.4	27.7	3.5	23.4	0.8	41.6	100.0	163
Aqaba	63.7	43.2	1.1	8.7	27.0	0.6	0.3	4.7	0.9	0.0	20.5	3.1	15.4	1.9	36.3	100.0	253
Region																	
Central	61.1	42.7	1.8	7.5	22.0	0.8	0.4	8.6	1.4	0.3	18.4	4.0	13.6	0.8	38.9	100.0	6,839
North	61.3	42.3	2.8	9.2	21.1	1.0	0.1	6.7	1.2	0.2	19.0	2.6	15.0	1.5	38.7	100.0	2,966
South	61.0	39.5	3.3	9.4	17.1	1.7	0.5	6.4	1.1	0.1	21.5	3.1	17.6	0.8	39.0	100.0	996
Badia																	
Badia	57.8	36.6	2.6	12.4	12.8	2.7	0.3	4.1	1.5	0.2	21.2	1.9	17.4	1.9	42.2	100.0	666
Non Badia	61.4	42.7	2.2	7.8	21.9	0.8	0.3	8.1	1.3	0.2	18.7	3.6	14.1	0.9	38.6	100.0	10,135
Camps																	
Camp	60.8	45.4	2.1	12.2	21.2	0.7	0.0	8.2	0.9	0.1	15.4	3.0	11.3	1.1	39.2	100.0	387
Non camp	61.2	42.2	2.2	8.0	21.3	0.9	0.3	7.9	1.3	0.2	19.0	3.6	14.4	1.0	38.8	100.0	10,414
Education																	
No education	45.6	31.8	3.8	7.9	14.3	2.0	0.0	3.0	0.7	0.1	13.8	0.5	10.2	3.0	54.4	100.0	226
Elementary	53.4	36.6	7.7	6.6	14.4	1.8	0.1	5.3	0.6	0.1	16.8	0.5	15.3	1.0	46.6	100.0	788
Preparatory	60.6	43.5	3.1	8.6	24.9	1.0	0.8	4.1	1.0	0.1	17.1	1.9	14.4	0.8	39.4	100.0	1,547
Secondary	64.7	46.0	1.6	8.3	24.1	1.1	0.3	8.7	1.7	0.2	18.7	3.7	13.8	1.1	35.3	100.0	4,863
Higher	59.3	38.5	1.3	8.0	17.8	0.4	0.1	9.4	1.1	0.4	20.8	4.9	15.1	0.7	40.7	100.0	3,376
Number of living children																	
0	1.5	0.2	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	1.3	0.2	1.1	0.0	98.5	100.0	930
1-2	52.4	32.0	0.4	8.4	10.8	0.8	0.1	9.7	1.7	0.0	20.5	2.8	16.7	1.0	47.6	100.0	2,880
3-4	70.5	49.4	0.9	9.7	27.5	0.8	0.5	8.1	1.5	0.4	21.1	4.4	15.8	0.9	29.5	100.0	3,673
5+	75.2	55.3	5.9	8.3	29.5	1.5	0.4	8.3	1.2	0.3	19.9	4.1	14.4	1.4	24.8	100.0	3,317
Total	61.2	42.3	2.2	8.1	21.3	0.9	0.3	7.9	1.3	0.2	18.9	3.5	14.3	1.0	38.8	100.0	10,801

Note: If more than one method is used, only the most effective method is considered in this tabulation.
LAM = Lactational amenorrhea method

Figure 4 **Trends in contraceptive use, 1990-2012**
(Percentage of currently married women age 15-49 years)



Sources of Family Planning

Women who were using a modern method of contraception at the time of the survey were asked where they obtained the method the last time. As shown in Table 6, more than four in ten modern contraceptive users obtain their method from a public source: 23 percent from a government health center, 12 percent from a maternal and child health center and 6 percent from a government hospital. More than half of women who use a modern method obtain the method from a private sector source, mainly pharmacies (15 percent), the Jordan Association of Family Planning and Protection (JAFPP) (11 percent), UNRWA clinics (10 percent), or private doctors (7 percent). The source of family planning methods varies according to the method being used. For example, two fifths (39 percent) of condom users and 35 percent of pill users obtain their methods from a pharmacy, while IUD users are likely to obtain services from a private hospital or clinic, a government health center, or the JAFPP. More than half of women who are sterilized had the procedure at a government hospital (54 percent), while one-quarter used the Royal Medical Services.

Table 6 Source of modern contraception methods

Percent distribution of users of modern contraceptive methods age 15-49 by most recent source of method, according to method, Jordan 2012

Source	Female sterilization	Pill	IUD	Injectables	Implants	Male condom	Total
Public sector	**79.8**	**47.7**	**37.8**	**82.2**	**(80.0)**	**41.5**	**44.1**
Government hospital	53.5	2.0	3.8	1.0	(49.4)	0.6	5.9
Government health center	0.0	30.3	18.9	63.2	(23.0)	27.1	22.7
Government MCH center	0.0	14.4	12.8	17.8	(6.1)	11.5	12.2
University hospital/clinic	2.0	0.1	0.5	0.0	(0.0)	0.8	0.5
Royal Medical Services	24.4	0.8	1.8	0.2	(1.4)	1.4	2.7
Private sector	**20.0**	**52.3**	**62.1**	**17.8**	**(20.0)**	**57.6**	**55.6**
Private hospital/clinic	20.0	0.7	21.7	0.7	(15.0)	0.2	12.7
Private doctor	0.0	1.1	13.4	2.6	(5.1)	0.3	7.4
Pharmacy	0.0	34.8	0.9	0.2	(0.0)	39.3	15.0
JAFPP	0.0	1.8	18.9	1.0	(0.0)	1.9	10.6
UNRWA clinic	0.0	14.0	6.9	12.6	(0.0)	16.0	9.7
Other NGO	0.0	0.0	0.3	0.8	(0.0)	0.0	0.1
Other	**0.2**	**0.0**	**0.2**	**0.0**	**(0.0)**	**0.9**	**0.3**
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	246	877	2,302	101	35	852	4,413

MCH = Maternal and child health
JAFPP = Jordanian Association of Family Planning and Protection
UNRWA = United Nations Refugee Welfare Association
Note: Total includes other modern methods but excludes lactational amenorrhea method (LAM). Figures in parentheses are based on 25-49 users.

Discontinuation Rates

An important concern for family planning programs is the rate at which users discontinue use of contraception and the reasons for such discontinuation. High rates of discontinuation indicate that a family planning program should focus greater attention on counseling and follow-up, which can reduce discontinuation rates by helping women deal with various obstacles to continued use. Table 7 shows 12-month contraceptive discontinuation rates, i.e., the proportion of users discontinuing within the first 12 months after beginning to use the method. The rates are calculated separately for four modern methods (pill, IUD, injectables, and condom) and two traditional methods (rhythm and withdrawal). Reasons for discontinuation are shown in the columns in the table. The percentage of women who switched to another method is also presented separately, since these women did not stop using contraception, but stopped using one method and started using another one.

Table 7 Twelve-month contraceptive discontinuation rates

Among women age 15-49 who started an episode of contraceptive use within the five years preceding the survey, the percentage of episodes discontinued within 12 months, by reason for discontinuation and specific method, Jordan 2012

Method	Method failure	Desire to become pregnant	Other fertility related reasons[2]	Side effects/ health concerns	Wanted more effective method	Other method related reasons[3]	Other reasons	Any reason[4]	Switched to another method[5]	Number of episodes of use[6]
Pill	6.1	11.9	2.9	16.2	2.9	2.6	3.7	46.3	20.4	2,488
IUD	1.5	4.5	0.2	5.6	0.1	1.4	0.1	13.5	5.2	2,768
Injectables	1.9	8.8	4.3	28.3	1.5	3.5	1.3	49.6	23.2	264
Male condom	11.9	9.8	0.7	2.5	7.4	1.5	4.7	38.4	13.8	1,504
Rhythm	20.5	13.2	1.3	1.3	6.5	0.3	0.1	43.2	7.8	696
Withdrawal	12.8	14.0	3.0	0.9	8.7	0.1	2.5	42.1	11.7	3,166
Other[1]	8.8	8.3	0.9	0.7	28.7	0.6	43.0	91.0	65.9	3,020
All methods	8.6	9.9	1.7	5.2	10.0	1.2	11.3	47.8	24.2	13,905

Note: Figures are based on life table calculations using information on episodes of use that began 3-62 months before the survey.
[1] Includes LAM, female sterilization, implants, female condom and other methods not shown separately
[2] Includes infrequent sex/husband away, difficult to get pregnant/menopausal, and marital dissolution/separation
[3] Includes lack of access/too far, costs too much, and inconvenient to use
[4] Reasons for discontinuation are mutually exclusive and add to the total given in this column
[5] The episodes of use included in this column are a subset of the discontinued episodes included in the discontinuation rate. A woman is considered to have switched to another method if she used a different method in the month following discontinuation or if she gave "wanted a more effective method" as the reason for discontinuation and started another method within two months of discontinuation.
[6] Number of episodes of use includes both episodes of use that were discontinued during the period of observation and episodes of use that were not discontinued during the period of observation

Overall, Table 7 shows that almost half of contraceptive users in Jordan (48 percent) stopped using a method within 12 months of starting use, but half of those who stop switch to using another method (24 percent of users). Ten percent of users stop using because they want a more effective method, while about 10 percent stop because they want to get pregnant. About nine percent stop using because they became pregnant while using the method (method failure), and five percent stop because of side effects or health concerns about the method.

Regarding individual methods, the discontinuation rate is highest for injectables (50 percent), followed by pill (46 percent), rhythm (43 percent), withdrawal (42 percent) and condom (38 percent). The IUD (the most popular method) has the lowest discontinuation rate, with only about 14 percent of users stopping use during the first 12 months of use.

E. Infant and Child Mortality

One important objective of the JPFHS 2012 was to measure the level and trend of mortality among children, since infant and child mortality rates are basic indicators of a country's socioeconomic situation and quality of life. Estimates of childhood mortality are based on information from the birth history section of the questionnaire administered to individual women. The section began with questions about the aggregate childbearing experience of respondents (i.e., the number of sons and daughters who live with the mother, the number who live elsewhere and the number who have died). For each of these births, information was then

collected on sex, month and year of birth, survivorship status and current age, or, if the child had died, age at death. This information is used to directly estimate the following five mortality rates:

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

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

Table 8 presents early childhood mortality rates for the 15 years preceding the survey. Under-five mortality for the period 0-4 years before the survey (which corresponds approximately to the calendar years 2008-2012) is 21 deaths per 1,000 births. Most of the mortality occurs during the first year of life since the infant mortality rate is 17 deaths per 1,000 births, while mortality between the first and the fifth birthday is 4 deaths per 1,000 children surviving at the first birthday. As expected, mortality during the first month (neonatal mortality), is higher than post-neonatal mortality (14 deaths per 1,000 versus 4 deaths per 1,000) and accounts for 82 percent of the overall infant mortality.

Table 8 Early childhood mortality rates

Neonatal, post-neonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey, Jordan 2012

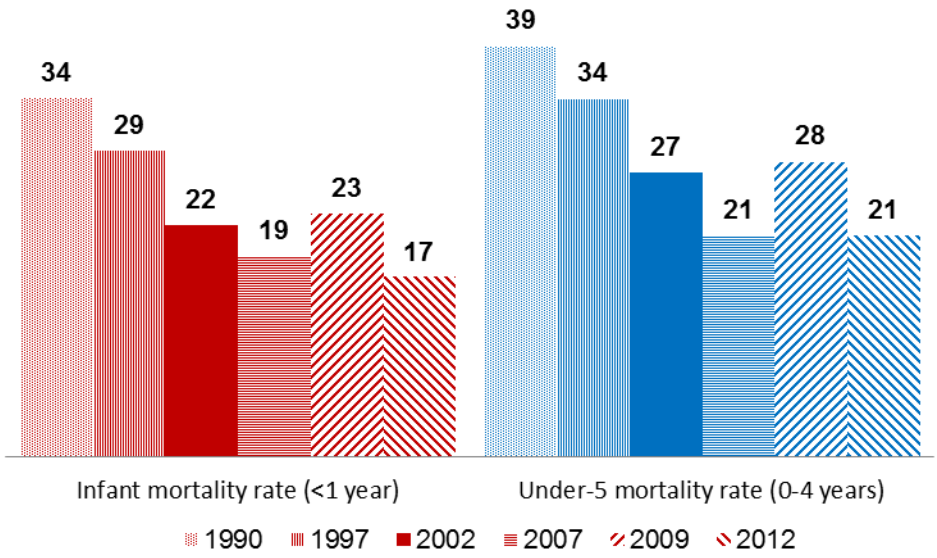
Years preceding the survey	Neonatal mortality (NN)	Post-neonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
0-4 (2008-2012)	14	4	17	4	21
5-9 (2003-2007)	11	7	18	2	20
10-14 (1998-2002)	20	10	30	4	34

[1] Computed as the difference between the infant and neonatal mortality rates

The results in Table 8 can be used to explore the trend in early childhood mortality in Jordan. It should be noted however that the rates in Table 8 are derived from retrospective data from the 2012 JPFHS. Thus, they are subject to errors of omission and misreporting of date of birth and age at death, which are usually more common for events further back in time. The data in Table 8 show almost no change in rates between the period 5-9 years before the survey (circa 2003-2007) and the period 0-4 years before the survey (circa 2008-2012), but a sizeable decline in the five years before that. For example, infant mortality declined from 30 deaths per 1,000 births in the period 10-14 years before the survey (circa 1998-2002), to 18 in the period 5-9 years before the survey (circa 2003-2007) and to 17 for the five-year period immediately before the survey (circa 2008-2012).

Another approach to looking at trends in mortality levels involves the comparison of estimates from surveys conducted at different points in time. A comparison of results from the 2012 JPFHS and the previous five JPFHS surveys is presented in Figure 5. Except for rates from the 2009 survey, trends from the other surveys indicate a decline in infant and under-five mortality that has slowed in recent years.

Figure 5 **Trends in childhood mortality rates, 1990-2012**



F. Maternal Care

The 2012 JPFHS contained a number of questions on maternal health care for women who had given birth to at least one child in the five years before the survey. For the most recent birth in that period, women were asked from whom they had obtained antenatal care during pregnancy and whether they had received a tetanus toxoid injection. For all births in the five years before the survey, mothers were asked who assisted at the delivery of the child and where they delivered. Finally, questions were asked about postnatal care for the most recent birth. Results are shown in Table 9.

In Jordan, antenatal care is almost universal; 99 percent of women received antenatal care from a health professional (doctor, nurse, or midwife) during the pregnancy for their most recent birth in the five years preceding the survey. Antenatal coverage varies little by mother's characteristics.

Tetanus toxoid injections are given to women during pregnancy to protect infants from neonatal tetanus, a cause of infant death that is due primarily to unsanitary conditions at childbirth. Full protection is considered to be provided to an infant if the mother received two injections during the pregnancy of her last birth, or two or more injections (the last within 3 years of the last live birth), or three or more injections (the last within 5 years of the last birth), or four or more injections (the last within ten years of the last live birth), or five or more injections prior to the last birth. Only 31 percent of women received the number of tetanus toxoid injections required to provide full protection to their most recent birth in the five years preceding the survey. Women in urban areas are more likely to receive full protection against tetanus than those in rural areas. Similarly, women in Ajlun and Madaba governorates are more likely than other women to have received the required number of tetanus injections to protect their most recent birth. Women in the North region, those in non-Badia areas, and those in refugee camps have higher levels of tetanus toxoid protection than women in other areas.

Table 9 indicates that health professionals assisted at the delivery of almost all births in the five-year period preceding the survey, probably due to the fact that 99 percent of all births occur in a health facility. Assistance at delivery and place of delivery vary little by mother's background characteristics. However, mothers with no education are slightly less likely than those with some education to have delivered in a health facility and with the assistance of health professionals.

More than eight in ten women receive postnatal care within two days after delivery. As shown in Table 9, the proportion of women who receive timely postnatal care is higher among rural women than urban women. More than 95 percent of women in Aqaba and Karak governorates and 91 percent of women in Tafiela governorate receive postnatal care within two days of delivery, as do 93 percent of women in the South region. The proportion of women who receive postnatal care within two days after delivering increases with increasing education, from only 67 percent for women with no education to 90 percent of those with higher than secondary education.

Table 9 Maternal care indicators

Among women age 15-49 who had a live birth in the five years preceding the survey, percentage who received antenatal care from a skilled provider for the last live birth and percentage whose last live birth was protected against neonatal tetanus, and among all live births in the five years before the survey, percentage delivered by a skilled provider and percentage delivered in a health facility, and among women who had a birth in the two years preceding the survey, percentage who received a postnatal checkup within two days after delivery of the last live birth, by background characteristics, Jordan 2012

Background characteristic	Percentage with antenatal care from a skilled provider[1]	Percentage whose last live birth was protected against neonatal tetanus[2]	Number of women	Percentage delivered by a skilled provider	Percentage delivered in a health facility	Number of births	Percentage with postnatal care within 2 days of delivery of last live birth	Number of women with birth in two years before survey
Mother's age at birth								
<20	98.3	31.9	277	98.9	97.4	559	67.0	195
20-34	99.4	30.0	4,849	99.7	98.9	7,535	83.0	2,629
35+	98.3	33.7	1,451	99.6	98.8	1,739	82.5	664
Residence								
Urban	99.1	32.3	5,395	99.6	98.6	8,010	80.6	2,796
Rural	99.2	24.4	1,182	99.7	99.3	1,823	87.7	692
Governorate								
Amman	98.8	25.8	2,469	99.4	98.3	3,622	74.1	1,318
Balqa	99.6	35.7	452	99.8	99.9	703	85.1	257
Zarqa	99.5	32.0	947	100.0	99.0	1,412	82.2	470
Madaba	99.2	43.7	184	99.5	99.5	276	89.2	99
Irbid	99.1	39.2	1,174	99.8	98.4	1,729	87.5	601
Mafraq	99.3	16.1	366	99.3	98.5	574	86.0	203
Jarash	99.2	33.2	207	99.9	99.6	333	86.4	123
Ajlun	99.6	51.4	156	100.0	99.9	232	89.7	86
Karak	99.3	31.7	269	99.5	99.2	410	94.3	143
Tafiela	99.3	29.1	103	99.3	99.3	157	90.7	54
Ma'an	97.5	30.5	104	98.9	98.0	170	87.4	62
Aqaba	99.9	23.8	146	100.0	99.5	215	95.3	71
Region								
Central	99.1	29.1	4,052	99.6	98.7	6,014	77.9	2,144
North	99.2	35.1	1,903	99.7	98.7	2,867	87.2	1,013
South	99.1	29.2	622	99.5	99.1	952	92.6	331
Badia								
Badia	99.0	21.8	469	99.3	98.6	769	83.9	293
Non Badia	99.1	31.6	6,108	99.7	98.8	9,064	81.8	3,196
Camps								
Camp	99.6	51.1	253	99.7	99.6	388	76.8	130
Non camp	99.1	30.1	6,324	99.6	98.7	9,446	82.2	3,358
Mother's education								
No education	98.0	24.0	130	98.1	95.1	207	66.9	57
Elementary	96.0	36.4	400	99.6	95.8	628	75.6	202
Preparatory	98.9	32.6	872	99.7	99.1	1,308	74.6	464
Secondary	99.2	33.8	3,069	99.5	98.6	4,599	79.5	1,603
Higher	99.7	25.4	2,106	99.9	99.7	3,091	90.3	1,162
Total	99.1	30.9	6,577	99.6	98.8	9,833	82.0	3,488

[1] Skilled provider includes doctor, nurse, or midwife

[2] Includes mothers with two injections during the pregnancy of her last live birth, or two or more injections (the last within 3 years of the last live birth), or three or more injections (the last within 5 years of the last live birth), or four or more injections (the last within ten years of the last live birth), or five or more injections at any time prior to the last live birth

G. Immunization and Child Health

Immunization of Children

In the 2012 JPFHS, information on vaccinations was collected for all children born in the five years before the survey. For each of these children, mothers were asked whether they had a health card for the child, and if so, whether the interviewer could see it. When a mother was able to show the health card to the interviewer, the dates of vaccinations received were copied from the card to the questionnaire. If a child never received a health card or if the mother was unable to show the card to the interviewer, the mother was asked specific questions about whether the child had received each vaccine. The information presented below on vaccination coverage is based on both the information taken from the health cards and the information obtained from the mothers' reports.

Table 10 presents vaccination information for children age 12-23 months, the age by which they should have received all vaccinations. The table shows that mothers were able to show the interviewer a health card for 80 percent of children; coverage does not vary considerably by background characteristics.

Table 10 Vaccinations by background characteristics

Percentage of children age 12-23 months who received specific vaccines at any time before the survey by source of information (vaccination card or the mother's report), and percentage with a vaccination card, by background characteristics, Jordan 2012

Background characteristic	BCG	DPT 1	DPT 2	DPT 3	Polio 1	Polio 2	Polio 3	Measles	All basic vaccinations[1]	No vaccinations	Percentage with a vaccination card	Number of children
Sex												
Male	97.6	99.3	99.1	98.5	99.3	99.1	98.5	94.9	92.7	0.4	80.0	1,030
Female	99.1	99.7	99.2	98.3	99.7	99.2	98.3	93.9	93.3	0.2	80.8	910
Residence												
Urban	98.5	99.5	99.3	98.6	99.5	99.3	98.7	94.3	93.0	0.3	80.0	1,538
Rural	97.4	99.6	98.4	97.4	99.6	98.4	97.4	95.1	92.8	0.2	81.8	403
Governorate												
Amman	97.8	100.0	99.6	99.6	100.0	99.6	99.6	93.8	91.5	0.0	79.5	730
Balqa	98.5	99.6	99.0	97.9	99.6	99.0	97.9	96.6	94.8	0.4	85.0	145
Zarqa	100.0	99.4	99.4	99.2	99.4	99.4	99.2	96.3	96.3	0.0	76.0	258
Madaba	99.4	99.4	97.5	96.6	99.4	97.5	96.6	93.2	91.6	0.6	87.2	57
Irbid	100.0	100.0	100.0	99.2	100.0	100.0	99.2	95.6	95.6	0.0	86.7	332
Mafraq	96.9	99.6	97.8	94.3	99.6	97.8	94.8	93.2	90.0	0.4	80.2	116
Jarash	98.5	100.0	100.0	99.4	100.0	100.0	99.4	96.6	96.3	0.0	69.9	69
Ajlun	100.0	100.0	100.0	98.0	100.0	100.0	98.0	94.6	94.6	0.0	87.0	45
Karak	97.4	99.5	99.0	97.8	99.5	99.0	97.8	93.2	90.4	0.0	80.8	80
Tafiela	90.7	93.8	93.8	93.8	93.8	93.8	93.8	92.2	88.0	4.2	71.1	29
Ma'an	88.8	90.4	88.9	83.5	90.4	88.9	83.5	80.0	78.8	9.0	76.2	36
Aqaba	97.1	97.9	97.4	95.8	97.9	97.4	95.8	95.3	93.7	1.1	67.4	44
Region												
Central	98.4	99.8	99.4	99.2	99.8	99.4	99.2	94.6	93.0	0.1	79.8	1,190
North	99.2	99.9	99.5	98.1	99.9	99.5	98.2	95.2	94.5	0.1	83.4	562
South	94.6	96.6	95.9	94.0	96.6	95.9	94.0	91.0	88.6	2.6	75.3	189
Badia												
Badia	94.8	97.0	94.8	91.3	97.0	94.8	91.3	88.1	85.7	2.6	80.4	169
Non Badia	98.6	99.8	99.5	99.1	99.8	99.5	99.1	95.0	93.7	0.1	80.4	1,772
Camps												
Camp	99.2	99.2	99.2	99.2	99.2	99.2	99.2	97.6	97.6	0.8	85.7	68
Non camp	98.2	99.5	99.1	98.3	99.5	99.1	98.4	94.3	92.8	0.3	80.2	1,873
Education												
No education	91.4	90.4	87.9	77.1	90.4	87.9	77.1	74.8	69.5	5.6	76.3	37
Elementary	95.6	97.9	96.6	94.3	97.9	96.6	94.8	85.4	82.8	2.1	64.0	114
Preparatory	99.7	99.8	99.0	97.9	99.8	99.0	97.9	95.1	94.7	0.2	80.3	288
Secondary	99.5	99.9	99.6	99.2	99.9	99.6	99.2	94.8	94.4	0.0	81.5	855
Higher	96.9	99.7	99.6	99.4	99.7	99.6	99.4	96.4	93.5	0.1	82.1	647
Total	98.3	99.5	99.1	98.4	99.5	99.1	98.4	94.4	93.0	0.3	80.4	1,941

[1] BCG, measles and three doses each of DPT and polio vaccine

According to the health cards and mothers' reports, almost all children age 12-23 months (93 percent) have received all of the recommended vaccinations in Jordan, i.e., BCG, measles, and three doses each of DPT and polio. The proportion of children fully immunized has increased since 2007 (87 percent); however, almost all of this increase is due to an increase in coverage of BCG vaccination, due to the fact that Jordan only introduced the BCG vaccine at birth shortly before the 2007 survey. Ninety-eight percent of children age 12-23 months have received BCG (compared with 91 percent in 2007). Consequently, the percentage of children fully immunized (including BCG) has increased considerably, from 87 percent in 2007 to 93 percent in 2012. Coverage of DPT3 (98 percent), polio3 (98 percent), and measles (94 percent) is also very high and almost unchanged since 2007. The dropout rate for DPT and polio between the first and third doses is low (1 percent).

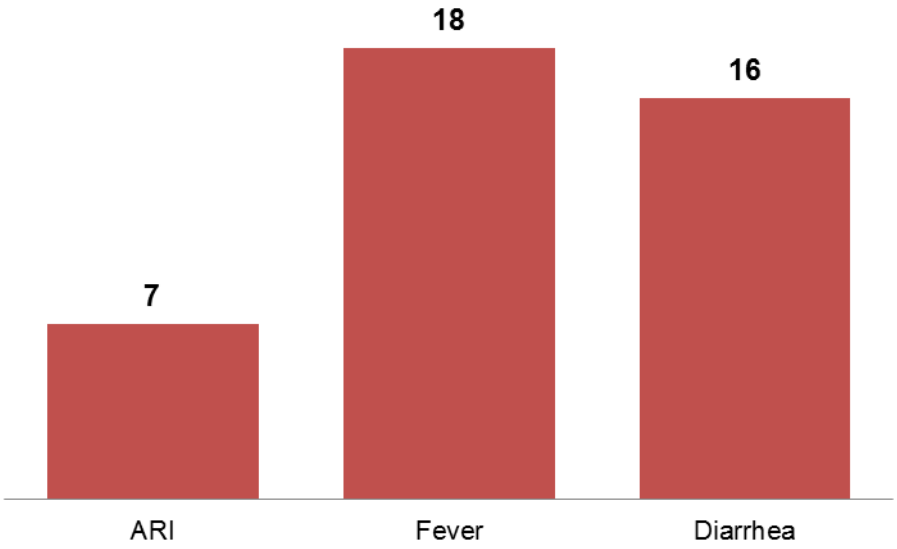
There are no substantial differences in vaccination coverage by background characteristics. However, children of mothers in Ma'an governorate and in Badia areas and those whose mothers have no education or only elementary education are less likely to be fully vaccinated than other children.

Childhood Diseases and Treatment

Acute respiratory infection (ARI), fever, and dehydration from severe diarrhea are major causes of childhood morbidity and mortality. Early diagnosis and treatment for children experiencing symptoms of these illnesses is crucial in reducing early child deaths. To obtain information on how childhood illnesses are treated, mothers were asked for each child under age five years, whether, in the two weeks before the survey, the child had experienced a cough accompanied by short, rapid breathing due to a problem in the chest, fever, or diarrhea. It should be noted that the morbidity data collected are subjective, i.e., they are based on the mother's perception of illness with no validation from medical personnel. Also, the prevalence of these illnesses may fluctuate due to seasonality. Figure 6 shows that 7 percent of children under five showed symptoms of ARI at some time in the two weeks preceding the survey, while 18 percent were reported to have fever, and 16 percent had diarrhea.

Figure 6 **Prevalence of childhood illnesses, 2012**

(Percentage of children under five with illness in the 2 weeks before the survey)



For over three-quarters (77 percent) of children under five with symptoms of ARI, treatment or advice was sought from a health facility or provider (Table 11). Children in rural areas are more likely than those in urban areas to be taken to a health facility or provider when they have signs of ARI. Male children are slightly more likely than female children to be taken to a health provider (79 and 74 percent, respectively).

For 69 percent of children under five with fever, treatment or advice was sought from a medical health facility or provider (Table 11). As for ARI, children in rural areas are more likely than those in urban areas to be taken for treatment when they are ill with fever (82 percent versus 66 percent).

Table 11 Treatment for acute respiratory infection, fever, and diarrhea

Among children under five years who had symptoms of acute respiratory infection (ARI) or were sick with fever in the two weeks preceding the survey, percentage for whom treatment was sought from a health facility or provider, and among children under five years who were sick with diarrhea during the two weeks preceding the survey, percentage for whom treatment was sought from a health facility or provider, percentage given a solution made from oral rehydration salt (ORS) packets, and percentage given any oral rehydration therapy (ORT) by background characteristics, Jordan 2012

Background characteristic	Children with symptoms of ARI[1]		Children with fever		Children with diarrhea			
	Percentage for whom treatment was sought from a health facility/ provider[2]	Number with ARI	Percentage for whom treatment was sought from a health facility/ provider[2]	Number with fever	Percentage for whom treatment was sought from a health facility/ provider[2]	Percentage given solution from ORS packet[3]	Percentage given any ORT[4]	Number with diarrhea
Age in months								
<6	(91.0)	34	64.1	98	47.4	11.1	24.2	138
6-11	81.2	86	79.0	241	66.9	22.3	27.0	292
12-23	79.7	164	64.2	515	56.8	27.3	32.8	539
24-35	74.1	156	70.7	321	52.7	13.3	19.0	237
36-47	78.9	113	65.0	304	44.0	12.8	27.8	188
48-59	68.6	104	72.1	281	57.8	21.6	30.0	107
Sex								
Male	79.1	420	69.0	908	55.0	17.7	24.9	823
Female	74.0	236	68.6	852	56.6	23.7	31.4	678
Residence								
Urban	75.8	541	66.4	1,486	55.5	20.0	27.7	1,261
Rural	84.2	114	81.7	274	57.0	22.7	28.9	241
Governorate								
Amman	79.0	233	67.2	680	53.6	15.8	24.0	567
Balqa	73.1	37	75.4	68	57.9	35.0	38.6	89
Zarqa	79.8	102	68.3	242	61.4	29.9	34.7	217
Madaba	(86.2)	14	75.6	32	49.8	13.3	19.1	44
Irbid	74.0	113	66.8	440	50.7	18.0	26.2	308
Mafraq	71.3	39	74.1	68	59.2	21.9	29.6	71
Jarash	78.6	31	74.2	75	57.2	24.3	29.4	62
Ajlun	74.6	14	72.1	44	54.9	13.7	20.7	38
Karak	83.2	27	73.9	34	70.4	27.9	37.8	44
Tafiela	77.4	13	79.9	29	63.6	10.2	18.5	23
Ma'an	63.5	13	67.6	28	69.5	23.4	31.5	21
Aqaba	(75.2)	18	72.1	21	63.4	25.2	47.7	18
Region								
Central	78.9	387	68.3	1,022	55.7	20.9	27.7	917
North	74.2	197	68.8	626	53.1	19.0	26.7	478
South	76.4	71	73.5	112	67.5	22.6	33.9	106
Badia								
Badia	70.4	50	76.4	113	62.5	25.4	31.4	105
Non Badia	77.8	606	68.3	1,646	55.2	20.0	27.6	1,396
Camps								
Camp	77.5	35	70.1	87	52.1	17.0	21.0	68
Non camp	77.2	621	68.7	1,673	55.9	20.6	28.2	1,433
Mother's education								
No education	*	16	*	16	(50.3)	(31.4)	(37.3)	15
Elementary	(85.1)	35	67.7	135	58.3	16.1	18.2	131
Preparatory	85.7	87	61.2	281	42.4	23.7	32.4	264
Secondary	77.0	300	70.4	807	57.0	23.0	29.6	686
Higher	73.3	218	70.3	521	61.5	14.9	24.7	405
Total	77.2	656	68.8	1,760	55.7	20.4	27.8	1,501

Note: Numbers in parentheses are based on 25-49 unweighted children; an asterisk denotes a figure based on fewer than 25 unweighted children that has been suppressed.
[1] Symptoms of ARI (cough accompanied by short, rapid breathing which was chest-related and/or by difficult breathing which was chest-related) is considered a proxy for pneumonia
[2] Excludes pharmacy, shop, and traditional practitioner
[3] Includes ORS from packets and prepackaged ORS liquids
[4] Includes ORS from packets, prepackaged ORS liquids, and recommended home fluid

With regard to treatment of diarrhea, the table also shows that more than half (56 percent) of children under five with diarrhea were taken to a health facility or provider. Oral rehydration therapy (ORT), either using a solution prepared with commercially produced packets or a homemade solution, is recommended to prevent dehydration in children with diarrhea. One-fifth (20 percent) of children with diarrhea in the two weeks before the survey were treated with oral rehydration salts (ORS packets) and 28 percent were given any ORT, which includes ORS packets and recommended home fluids.

Differentials by some background characteristics in treatment of childhood illnesses is hampered by the small numbers of children under five who were ill in the two-week period preceding the survey.

H. Infant Feeding Practices

Breast milk is the primary source of nutrients for young infants. Children who are exclusively breastfed receive only breast milk. The Ministry of Health recommends exclusive breastfeeding during the first six months of life. Supplementing breast milk with liquids or other foods before this time is discouraged because it increases the likelihood of contamination and hence, the risk of diarrhea. It is important to introduce complementary foods by age six months since, at that stage, the mother's breast milk no longer provides adequate nutrition for the child.

The JPFHS 2012 collected data on infant feeding for all children born in the five years preceding the survey. As shown in Table 12, only 23 percent of mothers exclusively breastfeed their children during the first six months of life. Among infants 0-5 months old, 13 percent are not breastfeeding, 9 percent are given water along with breast milk, 5 percent are breastfeeding and consuming non-milk liquids, 37 percent are breastfeeding and consuming other milk as well, and 14 percent are breastfeeding and consuming solid or mushy food prematurely. At the age of 6-9 months, 66 percent of children are being fed solid or mushy food along with breast milk, as recommended. Only about four in ten of children 12-15 months of age continue to breastfeed while consuming complementary foods (42 percent).

Table 12 Breastfeeding status by age

Percent distribution of youngest children under two years who are living with their mother, by breastfeeding status and the percentage currently breastfeeding; and percentage of all children under two years using a bottle with a nipple, according to age in months, Jordan 2012

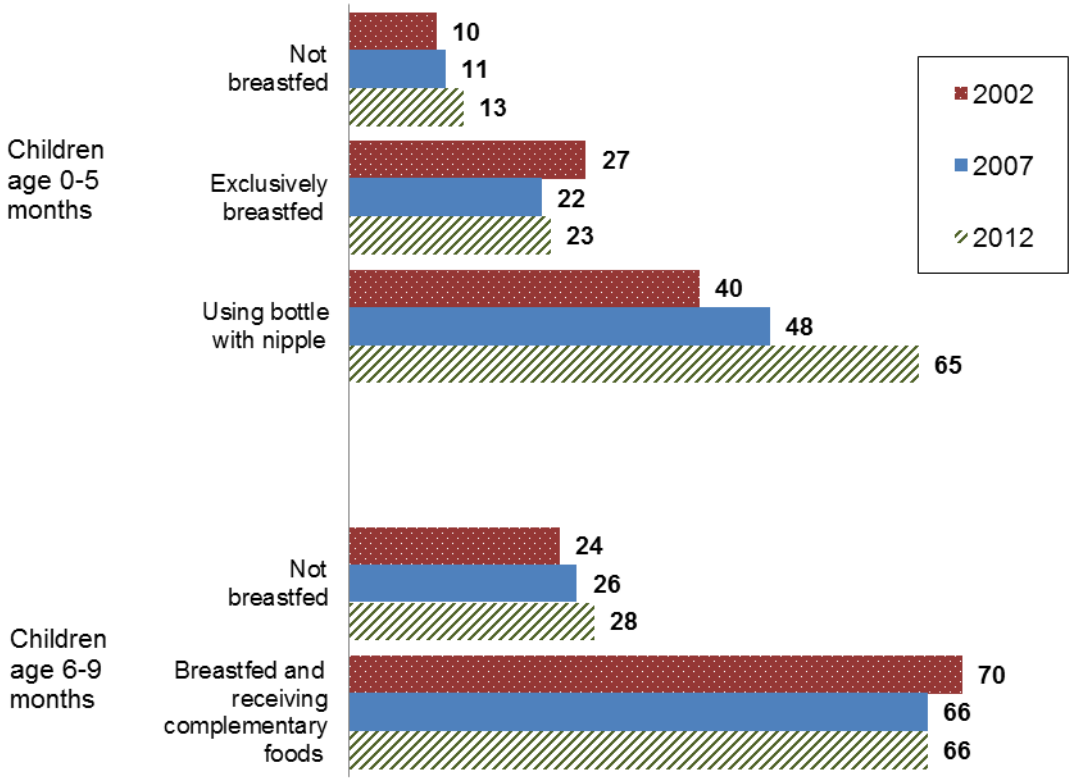
	Percent distribution of youngest children under two living with their mother by breastfeeding status										
Age in months	Not breast-feeding	Exclu-sively breastfed	Breast-feeding and consuming plain water only	Breast-feeding and consuming non-milk liquids/ juice	Breast-feeding and consuming other milk	Breast-feeding and comple-mentary foods	Total	Percent-age currently breast-feeding	Number of youngest children under two years	Percentage using a bottle with a nipple	Number of all children under two years
0-1	0.8	38.1	5.1	10.8	45.2	0.0	100.0	99.2	206	59.8	218
2-3	10.4	25.4	9.7	3.3	44.3	6.8	100.0	89.6	320	62.1	322
4-5	23.9	9.3	9.7	3.6	22.6	30.9	100.0	76.1	304	71.1	311
6-8	26.4	2.3	2.3	0.2	2.0	66.8	100.0	73.6	424	59.0	436
9-11	36.4	1.9	0.0	0.0	2.3	59.5	100.0	63.6	466	60.8	477
12-17	61.0	0.1	0.0	0.3	0.5	38.1	100.0	39.0	856	64.5	942
18-23	83.6	0.0	0.0	0.0	0.0	16.4	100.0	16.4	857	50.6	999
0-3	6.7	30.4	7.9	6.3	44.7	4.1	100.0	93.3	527	61.2	540
0-5	13.0	22.7	8.5	5.3	36.6	13.9	100.0	87.0	831	64.8	851
6-9	27.7	3.0	1.7	0.2	1.6	65.7	100.0	72.3	564	57.3	581
12-15	56.5	0.2	0.0	0.4	0.7	42.2	100.0	43.5	608	64.0	657
12-23	72.3	0.1	0.0	0.1	0.2	27.2	100.0	27.7	1,712	57.4	1,941
20-23	87.1	0.0	0.0	0.0	0.0	12.9	100.0	12.9	590	48.7	685

Note: Breastfeeding status refers to a "24-hour" period (yesterday and last night). Children who are classified as breastfeeding and consuming plain water only consumed no liquid or solid supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, non-milk liquids/juice, other milk, and complementary foods (solids and semi-solids) are hierarchical and mutually exclusive, and their percentages add to 100 percent. Thus children who receive breast milk and non-milk liquids and who do not receive other milk and who do not receive complementary foods are classified in the non-milk liquid category even though they may also get plain water. Any children who get complementary food are classified in that category as long as they are breastfeeding as well.

The extent to which Jordanian children are bottle-fed is also examined in Table 12. Bottle-feeding is discouraged for the potential negative effects that it may have on the child's health. Six in ten children less than two months old are being fed with a bottle with a nipple.

Since 2002, infant feeding practices have worsened (Figure 7). The proportion of children 0-5 months of age not breastfed has slightly increased (from 10 percent in 2002 to 13 percent in 2012); exclusive breastfeeding (as recommended) has decreased (from 27 to 23 percent); and use of a bottle with a nipple has increased (from 40 to 65 percent). Similarly, the proportion of children 6-9 months of age not breastfed has slightly increased (from 24 to 28 percent), and the percentage of breastfed children receiving complementary food (as recommended) has decreased (from 70 to 66 percent).

Figure 7 **Breastfeeding Status, 2002, 2007, and 2012**



I. Nutritional Status of Children

Anthropometric measurements (heights and weights) provide one of the most important indicators of children's nutritional status. Inadequate nutrition is a direct result of insufficient food intake or repeated infectious diseases or a combination of both. It can result in increased risk of illness and death.

In the JPFHS, children under age five who were listed in the household questionnaire were eligible for height and weight measurements. Height was measured using a special board manufactured by Shorr Boards in the U.S. Children under age 2 years were measured lying down and those age 2 years and older were measured standing up. Electronic Seca scales were used to measure the weight of children. Based on these measurements, three internationally accepted indices were constructed to reflect the nutritional status of children:

- Height-for-age (stunting)
- Weight-for-height (wasting)
- Weight-for-age (underweight)

In presenting anthropometric results, the nutritional status of children is compared with the recently developed WHO Child Growth standards (WHO, 2006). The use of the WHO Child Growth standard is based on the finding that well-nourished children for all population groups follow very similar growth patterns before puberty. The internationally-based standard population serves as a point of comparison, facilitating the examination of differences in the anthropometric status of subgroups in a population. In any large population, there are natural variation in height and weight. The variations approximate a normal distribution. Children who fall below minus two standard deviations (-2 SD) from the reference population median are considered malnourished, and children who fall below minus three standard deviations (-3 SD) from the reference median are considered severely malnourished. Each of the three indices provides and measures different aspects of children's nutritional status.

Height-for-age reflects long-term, cumulative effects of inadequate nutrition and/or health. Children who are below -2 SD from the median of the reference population are considered short for their age, or stunted. Children who are below -3 SD from the reference population median are severely stunted. Stunting of a child's growth may be the result of failure to receive adequate nutrition over a long period, or of sustained improper feeding practices, or of the effects of repeated episodes of illness. Height-for-age therefore represents a measure of the outcome of undernutrition in a population over a long period of time and does not vary appreciably with the season of data collection.

Weight-for-height measures body mass in relation to body length. It describes a recent and severe process that has produced a substantial weight loss usually as a consequence of acute shortage of food and/or severe disease. Children whose weight-for-height is below -2 SD from the median of the reference population are too thin for their height, or wasted, while those who measure below -3 SD from the reference population median are severely wasted. Wasting represents the failure to receive adequate nutrition during the period immediately before the survey and usually shows marked seasonal patterns associated with changes in food availability or disease prevalence. It may be the result of recent episodes of illness, particularly diarrhea, improper feeding practices, or acute food shortage.

Weight-for-age is a composite index of height-for-age and weight-for-height. It represents body mass relative to age. Children whose weight-for-age is below -2 SD from the median of the reference population are underweight for their age, while those whose measurements are below -3 SD from the reference population median are severely underweight. Being underweight for one's age therefore could mean that a child is stunted or wasted or both stunted and wasted.

Overweight and obesity are becoming problems for some children in developing countries. The percentage of children more than two standard deviations above the median for weight-for-height indicates the level of this potential problem. The percentage of children more than two standard deviations above the median for weight-for-age is included here in order to compare with other data sources that did not measure height.

Table 13 shows that 8 percent of children are chronically malnourished or stunted (height-for-age below –2 SD), with only 2 percent severely stunted; 2 percent are wasted or acutely malnourished (weight-for-height below –2 SD), with less than 1 percent severely wasted; and 3 percent are underweight (weight-for-age below –2 SD), with less than 1 percent severely underweight. On the other end, 4 percent of children are overweight for their height and 2 percent are overweight for their age.

In general, differentials in nutritional status of children by background characteristics are not large, especially for wasting and underweight. In terms of stunting, children age 18-23 months are more likely to be stunted than either younger or older children. Stunting is also slightly higher in the South region and especially in Ma'an governorate, where almost one in five children is stunted. It is also higher among children in Badia areas compared with those in non-Badia areas. The prevalence of stunting tends to decrease as mother's education increases.

Figure 8 presents trends in the prevalence of stunting and wasting among children under five in 2002, 2009, and 2012. The figure shows a decline in stunting between 2002 and 2009, but little change in nutritional status of children over the past three years.

Table 13 Nutritional status of children

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Jordan 2012

	Height-for-age[1]			Weight-for-height				Weight-for-age				
Background characteristic	Percentage below -3 SD	Percentage below -2 SD[2]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[2]	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[2]	Percentage above +2 SD	Mean Z-Score (SD)	Number of children
Age in months												
<6	1.6	8.6	-0.1	2.3	5.0	13.1	0.3	1.6	4.8	1.2	0.0	482
6-8	0.4	5.6	0.1	1.0	3.0	6.0	0.2	0.7	1.0	2.0	0.1	221
9-11	0.3	9.3	-0.1	0.1	0.7	2.6	0.2	0.2	0.3	5.2	0.1	274
12-17	0.6	7.8	-0.1	0.9	2.4	6.2	0.3	1.4	3.3	5.6	0.2	608
18-23	3.9	13.1	-0.6	0.1	1.0	4.2	0.3	0.2	5.0	2.1	-0.1	599
24-35	2.2	8.8	-0.5	0.6	1.5	3.1	0.2	0.3	3.0	0.7	-0.1	1,159
36-47	0.7	6.3	-0.5	0.1	2.8	2.4	0.1	0.1	3.0	0.8	-0.2	1,260
48-59	1.2	5.0	-0.5	0.4	2.8	3.6	0.0	0.3	2.2	1.1	-0.3	1,248
Sex												
Male	1.6	9.2	-0.4	0.4	2.4	5.1	0.2	0.4	3.3	2.3	-0.1	3,006
Female	1.3	6.1	-0.4	0.8	2.5	3.6	0.1	0.6	2.7	1.2	-0.1	2,846
Residence												
Urban	1.3	7.4	-0.4	0.6	2.5	4.1	0.1	0.5	3.2	1.7	-0.1	4,737
Rural	2.3	8.9	-0.5	0.5	2.0	5.7	0.3	0.6	2.1	1.7	-0.1	1,114
Governorate												
Amman	1.2	7.1	-0.3	0.7	2.9	4.4	0.2	0.6	3.3	1.4	-0.1	2,038
Balqa	0.9	5.6	-0.4	1.5	3.3	4.5	0.2	0.6	3.0	1.7	-0.1	395
Zarqa	2.1	9.8	-0.5	0.3	2.1	3.5	0.1	0.3	3.5	1.7	-0.3	879
Madaba	0.4	4.5	-0.2	0.4	2.0	6.2	0.3	0.0	1.6	2.7	0.1	160
Irbid	0.8	5.1	-0.2	0.5	2.2	2.9	0.1	0.3	2.3	1.6	-0.1	1,080
Mafraq	2.2	10.4	-0.7	0.0	0.9	4.3	0.3	0.5	2.3	0.9	-0.2	369
Jarash	2.5	9.2	-0.5	0.4	3.0	4.6	0.2	0.5	3.8	2.2	-0.1	217
Ajlun	0.8	4.6	-0.4	0.7	1.2	6.0	0.3	0.4	1.9	2.5	-0.0	146
Karak	3.2	11.1	-0.5	0.2	1.5	8.9	0.4	0.4	2.7	2.9	0.0	257
Tafiela	0.5	9.9	-0.4	1.6	2.7	6.0	0.2	1.0	3.1	3.7	-0.1	98
Ma'an	3.8	18.5	-0.9	0.7	3.2	4.5	0.2	0.4	6.2	1.4	-0.4	105
Aqaba	3.3	10.4	-0.5	0.3	1.0	9.8	0.4	0.4	2.6	5.0	0.0	107
Region												
Central	1.3	7.5	-0.4	0.7	2.7	4.2	0.1	0.5	3.2	1.6	-0.1	3,472
North	1.3	6.7	-0.4	0.4	2.0	3.7	0.2	0.4	2.5	1.6	-0.1	1,813
South	2.9	12.1	-0.6	0.6	2.0	7.7	0.4	0.5	3.4	3.1	-0.1	567
Badia												
Badia	3.2	11.8	-0.8	0.2	2.6	4.7	0.1	0.4	2.9	0.7	-0.3	468
Non Badia	1.3	7.3	-0.4	0.6	2.4	4.4	0.2	0.5	3.0	1.8	-0.1	5,383
Camps												
Camp	2.0	9.6	-0.6	0.7	3.2	2.5	0.0	0.7	4.2	0.9	-0.3	245
Non camp	1.4	7.6	-0.4	0.6	2.4	4.5	0.2	0.5	2.9	1.8	-0.1	5,606
Mother's education												
No education	2.2	11.7	-1.0	1.4	4.5	3.2	0.1	0.6	6.7	0.7	-0.5	103
Elementary	2.8	12.0	-0.7	0.3	0.6	4.8	0.3	0.4	2.7	0.7	-0.2	386
Preparatory	2.4	10.9	-0.6	0.3	1.8	3.1	0.1	0.2	4.0	1.1	-0.3	765
Secondary	1.2	8.0	-0.4	0.6	3.4	3.7	0.1	0.7	3.8	1.7	-0.1	2,774
Higher	1.1	4.7	-0.2	0.6	1.5	6.1	0.2	0.3	1.2	2.4	0.1	1,777
Mother's interview status												
Mother interviewed	1.5	7.7	-0.4	0.5	2.4	4.4	0.2	0.4	3.0	1.7	-0.1	5,754
Mother not interviewed, but in household	(0.5)	(6.2)	-0.6	(5.9)	(6.5)	(3.1)	-0.1	(4.2)	(6.5)	(3.1)	-0.4	50
Mother not interviewed, not in household[4]	1.4	6.6	-0.6	0.6	0.9	2.4	0.3	0.0	3.3	0.0	-0.1	47
Total	1.5	7.7	-0.4	0.6	2.4	4.4	0.2	0.5	3.0	1.7	-0.1	5,851

Note: Table is based on children who spent the night before the interview in the household. Each of the indices is expressed in standard deviation units (SD) from the median of the WHO Child Growth Standards adopted in 2006. The indices in this table are NOT comparable to those based on the previously used 1977 NCHS/CDC/WHO Reference. Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight. Numbers in parentheses are based on 25-49 unweighted children.

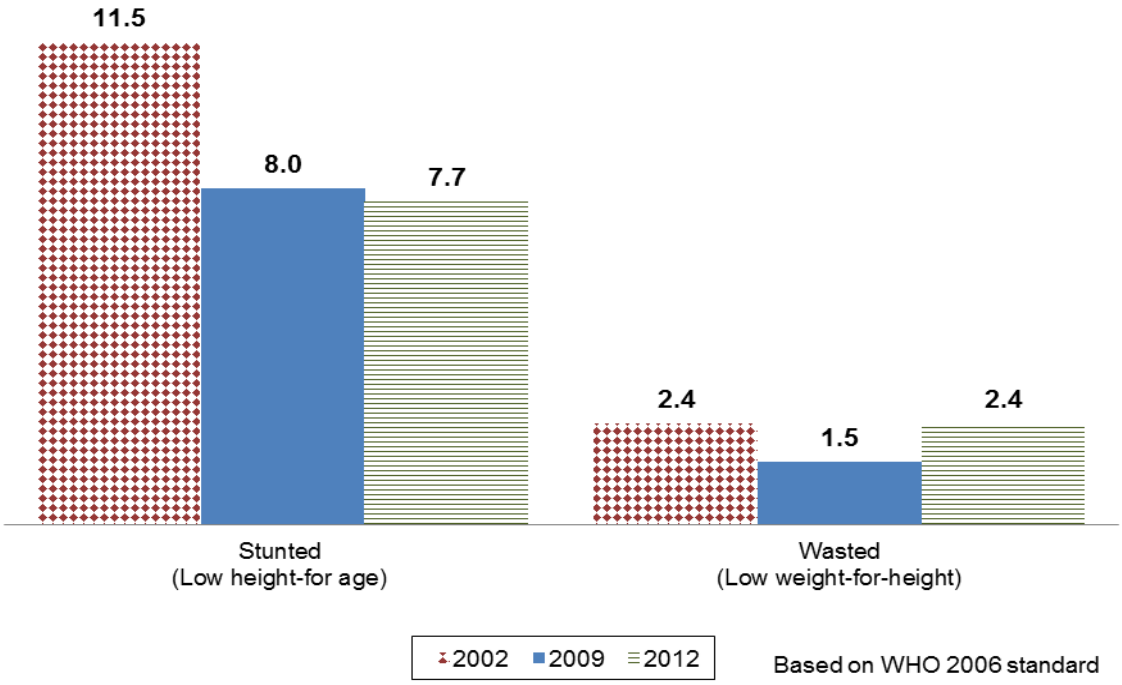
[1] Recumbent length is measured for children under age 2 and less than 85 cm; standing height is measured for all other children.

[2] Includes children who are below -3 standard deviations (SD) from the WHO Growth Standards population median

[3] For women not interviewed, information is from the household questionnaire; excludes children whose mothers are not listed in the household questionnaire.

[4] Includes children whose mothers are deceased

Figure 8 **Trends in Nutritional Status of Children, 2002, 2009 and 2012**
(Percentage of children under five years)



J. Anemia

Anemia is characterized by a low level of hemoglobin in the blood. Hemoglobin is necessary for transporting oxygen from the lungs to other tissues and organs in the body. Anemia can result from a nutritional deficiency of iron, folate, vitamin B_{12}, or some other nutrients. This type of anemia is commonly referred to as iron-deficiency anemia and is the most widespread form of malnutrition in the world. Anemia can also be the result of hemorrhage and chronic disease, malaria, parasitic infection or genetic disorders.

Hemoglobin testing is the primary method of anemia diagnosis. The 2012 JPFHS included direct measurements of hemoglobin levels for children age 6-59 months and all women age 15-49 years. Hemoglobin measurements were taken in the field using the HemoCue system. This involved taking a drop of capillary blood from the finger which was drawn directly into a reagent-coated microcuvette (a blood collection device). The filled microcuvette was inserted into a portable, battery-operated photometer. In less than a minute, hemoglobin concentration was indicated on a digital read-out in grams per deciliter.

Table 14 presents the anemia levels for children age 6-59 months and for all women age 15-49 years. Levels of anemia were classified as severe, moderate, or mild according to criteria developed by the World Health Organization. Children with < 7.0 g/dl of hemoglobin are classified as having severe anemia, with 7.0 – 9.9 g/dl having moderate anemia, and with 10.0 – 10.9 g/dl having mild anemia. Women with < 7.0 g/dl are classified as having severe anemia, with 7.0 – 9.9 g/dl having moderate anemia, and non-pregnant women with 10.0 – 11.9 g/dl and pregnant women with 10.0 – 10.9 g/dl as having mild anemia.

Anemia is common among children in Jordan; almost one-third of children are anemic (32 percent). Most of the children with anemia have mild anemia (20 percent of all children). Twelve percent have moderate anemia and a tiny fraction of children have severe anemia.

The prevalence of anemia among children is higher in Badia areas than in non-Badia areas (39 percent versus 32 percent) and slightly higher in camps than in non-camp areas (37 percent versus 32 percent). The prevalence of anemia varies from 22 percent in Tafiela governorate to 38 percent in Ma'an and Balqa governorates.

Table 14 Anemia among children and women

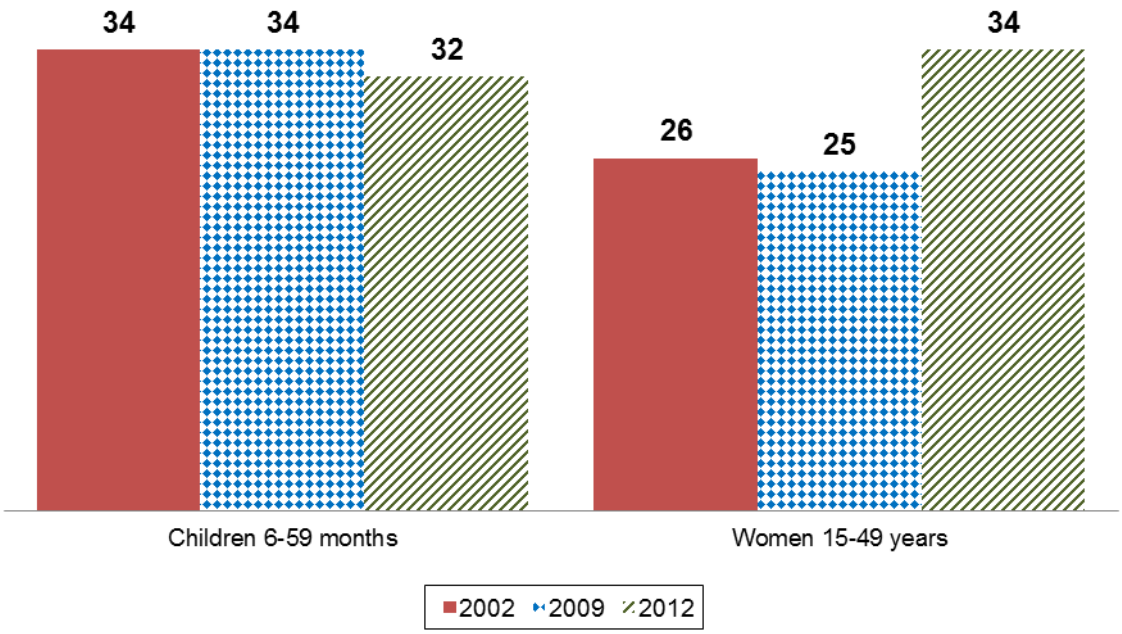
Percentage of children age 6-59 months and women age 15-49 years classified as having anemia, by background characteristics, Jordan 2012

Background characteristic	Any anemia	Percentage with anemia: Mild anemia	Moderate anemia	Severe anemia	Number
CHILDREN					
Residence					
Urban	32.2	19.5	12.5	0.2	4,142
Rural	33.0	20.7	12.1	0.2	977
Governorate					
Amman	34.2	22.2	12.0	0.0	1,738
Balqa	37.5	20.4	16.0	1.1	341
Zarqa	27.4	15.4	11.7	0.3	797
Madaba	24.6	16.9	7.5	0.2	138
Irbid	34.2	21.0	13.0	0.2	960
Mafraq	26.3	16.2	10.0	0.1	325
Jarash	31.3	17.7	13.2	0.4	187
Ajlun	37.2	21.4	15.6	0.2	131
Karak	34.7	19.0	15.1	0.6	224
Tafiela	21.9	15.9	5.7	0.3	87
Ma'an	38.1	19.8	18.0	0.3	88
Aqaba	28.6	17.8	10.5	0.2	104
Region					
Central	32.4	20.0	12.2	0.2	3,014
North	32.5	19.7	12.6	0.2	1,603
South	31.8	18.4	13.0	0.4	503
Badia					
Badia	39.3	23.5	15.8	0.0	420
Non Badia	31.7	19.4	12.1	0.2	4,700
Camps					
Camp	36.5	21.1	15.3	0.0	222
Non camp	32.2	19.7	12.3	0.2	4,897
Total	32.4	19.7	12.4	0.2	5,119
WOMEN					
Residence					
Urban	33.3	26.3	6.6	0.3	8,798
Rural	34.4	25.2	8.9	0.3	1,936
Governorate					
Amman	29.5	24.3	5.0	0.3	3,988
Balqa	39.7	30.3	8.6	0.7	731
Zarqa	38.4	28.8	9.1	0.4	1,494
Madaba	23.7	18.4	5.3	0.0	301
Irbid	36.2	27.1	8.8	0.2	2,019
Mafraq	30.4	22.8	7.5	0.1	557
Jarash	35.1	27.5	7.6	0.0	333
Ajlun	38.9	29.0	9.2	0.7	264
Karak	35.6	29.4	6.0	0.2	459
Tafiela	32.9	24.6	8.2	0.2	166
Ma'an	30.3	22.7	7.4	0.1	189
Aqaba	36.5	29.3	6.9	0.3	235
Region					
Central	32.4	25.7	6.4	0.3	6,513
North	35.3	26.6	8.5	0.2	3,173
South	34.4	27.4	6.8	0.2	1,048
Badia					
Badia	30.5	22.1	8.1	0.3	707
Non Badia	33.7	26.4	7.0	0.3	10,027
Camps					
Camp	33.8	26.3	7.1	0.5	403
Non camp	33.4	26.1	7.0	0.3	10,331
Total	33.5	26.1	7.0	0.3	10,734

Note: Table is based on children and women who stayed in the household the night before the interview. Prevalence of anemia, based on hemoglobin levels, is adjusted for altitude (for children and women) and smoking (for women) using CDC formulas (CDC, 1998). Women and children with <7.0 g/dl of hemoglobin have severe anemia, women and children with 7.0-9.9 g/dl have moderate anemia, and non-pregnant women with 10.0-11.9 g/dl and children and pregnant women with 10.0-10.9 g/dl have mild anemia.

Figure 9 shows that 34 percent of children were anemic in 2002 and 2009, compared with 32 percent in 2012.

***Figure 9* Trends in prevalence of anemia, 2002, 2009 and 2012**



Anemia is also common among women in Jordan; one-third of all women are anemic (34 percent). Most of those with anemia have mild anemia (26 percent of all women), while 7 percent of women are classified as having moderate anemia and only a tiny fraction have severe anemia. The prevalence of anemia ranges from a low of 24 percent of women in Madaba governorate to a high of 40 percent of women in Balqa governorate. Differentials in the prevalence of anemia among women by other background characteristics are minimal.

The prevalence of anemia has increased over the past decade, from 26 percent of all women in 2002 to 34 percent in 2012. The increase appears to have occurred among women in all three regions.

K. Knowledge of HIV/AIDS

The 2012 JPFHS included a series of questions that inquired about women's knowledge about AIDS and their awareness of modes of transmission of the human immunodeficiency virus (HIV) that causes AIDS. In addition, respondents were asked if they knew of behaviors that can prevent the spread of HIV. Results show that 99 percent of ever-married women age 15-49 years have heard of AIDS. Moreover, the level of knowledge is remarkably high (95 percent or higher) across all categories of background characteristics of women except those with no education, 89 percent of whom have heard of AIDS (data not shown).

Table 15 shows that almost 6 in 10 ever-married women (58 percent) know that consistent use of condoms is a means of preventing the spread of HIV. About eight in ten women (81 percent) know that limiting sexual intercourse to one faithful and uninfected partner can reduce the chances of contracting HIV. Overall, 52 percent of ever-married women know about these two ways of prevention. Knowledge of ways of prevention is the lowest among women with no education; only 34 percent of ever-married women with no education know that using condoms can prevent HIV and only 53 percent know that limiting sexual intercourse to one partner can reduce the chances of contracting HIV.

Table 15 Knowledge of HIV prevention methods

Percentage of ever-married women age 15-49 who, in response to prompted questions, say that people can reduce the risk of getting the AIDS virus by using condoms every time they have sexual intercourse and by having one partner who is not infected and has no other partners, by background characteristics, Jordan 2012

Background characteristic	Percentage of women who say HIV can be prevented by: Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Number of women
Age				
15-24	56.5	79.9	48.3	1,485
15-19	51.5	70.2	40.5	278
20-24	57.6	82.1	50.1	1,207
25-29	59.4	81.0	51.6	2,006
30-39	59.6	82.8	54.3	4,234
40-49	56.7	78.8	49.3	3,626
Marital status				
Married or living together	58.6	81.1	51.9	10,801
Divorced/separated/widowed	51.6	75.2	43.7	551
Residence				
Urban	58.5	80.8	51.3	9,458
Rural	57.1	81.2	52.5	1,894
Governorate				
Amman	55.6	77.2	47.0	4,454
Balqa	61.8	83.8	56.9	765
Zarqa	61.2	80.8	54.0	1,659
Madaba	61.8	80.5	54.1	303
Irbid	57.6	85.4	52.3	1,986
Mafraq	57.8	85.4	54.2	562
Jarash	61.5	88.2	58.2	320
Ajlun	59.6	91.0	56.2	251
Karak	60.4	75.6	54.4	441
Tafiela	65.0	78.6	59.1	167
Ma'an	55.4	73.0	48.8	178
Aqaba	63.0	86.6	59.2	265
Region				
Central	57.8	78.9	50.0	7,181
North	58.2	86.2	53.6	3,120
South	61.0	78.4	55.4	1,051
Badia				
Badia	49.2	74.3	44.6	705
Non Badia	58.8	81.3	51.9	10,647
Camps				
Camp	55.3	80.2	49.7	413
Non camp	58.3	80.9	51.5	10,939
Education				
No education	33.6	52.9	30.2	267
Elementary	45.5	65.0	37.8	860
Preparatory	52.6	75.8	44.7	1,677
Secondary	58.6	82.2	51.3	5,073
Higher	65.5	87.4	60.0	3,475
Total 15-49	58.2	80.8	51.5	11,352

[1] Using condoms every time they have sexual intercourse
[2] Partner who has no other partners

L. Birth Registration

The registration of births is the inscription of the facts of the birth into an official log kept at the registrar's office. A birth certificate is issued at the time of registration or later as proof of the registration of the birth. Birth registration is basic to ensuring a child's legal status and, thus, basic rights and services (UNICEF, 2006; United Nations General Assembly, 2002). For the first time in the series of JPFHS surveys, the 2012 JPFHS Household Questionnaire included a question for all children under five years as to whether the child had a birth certificate or not.

Table 16 shows the percentage of children under five years of age whose births were officially registered (i.e., they have a birth certificate). The data show that 99 percent of children in Jordan have birth certificates; only a tiny fraction of births are not registered.

The proportion of children with birth certificates is above 97 percent in all categories. In fact, Tafiela is the only governorate with less than 98 percent of children with birth certificates. Consequently, differentials in birth registration by background characteristics are very minor.

Table 16 Birth registration of children under age five

Percentage of de jure children under five years of age whose births are registered with the civil authorities, according to background characteristics, Jordan 2012

Background characteristic	Percentage registered	Number of children
Age		
<2	98.0	3,541
2-4	99.7	5,796
Sex		
Male	99.3	4,870
Female	98.8	4,468
Residence		
Urban	99.0	7,546
Rural	99.5	1,792
Governorate		
Amman	99.0	3,292
Balqa	99.7	691
Zarqa	99.7	1,407
Madaba	99.1	276
Irbid	98.6	1,648
Mafraq	98.6	558
Jarash	99.1	323
Ajlun	99.7	223
Karak	99.1	399
Tafiela	97.9	152
Ma'an	99.2	166
Aqaba	99.0	204
Region		
Central	99.3	5,665
North	98.7	2,751
South	98.9	921
Badia		
Badia	98.9	748
Non Badia	99.1	8,590
Camps		
Camp	99.6	382
Non camp	99.0	8,956
Total	99.1	9,338

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