

Iraq

Monitoring the situation of children and women



Multiple Indicator Cluster Survey 2011

Volume 1: Final Report



Central
Statistics
Organization



Kurdistan
Regional
Statistics Office



Ministry of
Health



United Nations
Children's Fund



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The Iraq Multiple Indicator Cluster Survey (MICS) was carried out in 2011 by the Central Statistics Organization and the Kurdistan Regional Statistics Office in collaboration with the Ministry of Health. Financial and technical support was provided by the United Nations Children's Fund (UNICEF) and the Iraq Trust Fund.

MICS is an international household survey programme developed by UNICEF. The Iraq MICS was conducted as part of the fourth global round of MICS surveys (MICS4). MICS provides up-to-date information on the situation of children and women and measures key indicators that allow countries to monitor progress towards the Millennium Development Goals (MDGs) and other internationally agreed upon commitments. Additional information on the global MICS project may be obtained from www.childinfo.org.

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2011

Volume 1: Final Report

CSO
Central Statistics Organization

KRSO
Kurdistan Regional Statistics Office

UNICEF
United Nations Children's Fund

Partner: Ministry of Health

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SUMMARY TABLE OF FINDINGS

Multiple Indicator Cluster Surveys (MICS) and Millennium Development Goals (MDG) Indicators, Iraq, 2011

Topic	MICS4 Indicator Number	MDG Indicator Number	Indicator	National	Kurdistan Region	Unit
FERTILITY						
Fertility			Total Fertility Rate	4.5	3.3	per woman
CHILD MORTALITY						
Child mortality	1.1	4.1	Under-five mortality rate	37	32	per 1,000
			Child mortality	5	4	per 1,000
	1.2	4.2	Infant mortality rate	32	28	per 1,000
			Post neonatal mortality	12	7	per 1,000
			Neonatal mortality	20	21	per 1,000
NUTRITION						
Nutritional status	2.1a	1.8	Underweight prevalence			
			Moderate and Severe (- 2 SD)	8.5	6.7	percent
	2.1b		Severe (- 3 SD)	3.7	3.9	percent
			Stunting prevalence			
	2.2a		Moderate and Severe (- 2 SD)	22.6	15.4	percent
	2.2b		Severe (- 3 SD)	9.9	6.1	percent
			Wasting prevalence			
	2.3a		Moderate and Severe (- 2 SD)	7.4	5.0	percent
	2.3b		Severe (- 3 SD)	3.6	2.6	percent
Breastfeeding and infant feeding	2.4		Children ever breastfed	92.2	92.6	percent
	2.5		Early initiation of breastfeeding	42.8	37.8	percent
	2.6		Exclusive breastfeeding under 6 months	19.6	19.8	percent
	2.7		Continued breastfeeding at 1 year	51.5	44.2	percent
	2.8		Continued breastfeeding at 2 years	22.7	29.0	percent
	2.9		Predominant breastfeeding under 6 months	45.8	33.1	percent
	2.10		Duration of breastfeeding	13.8	9.3	percent
	2.11		Bottle feeding	37.2	53.5	percent
	2.12		Introduction of solid, semi-solid or soft foods	35.5	29.4	percent
	2.13		Minimum meal frequency	54.8	58.6	percent
	2.14		Age-appropriate breastfeeding	25.7	23.7	percent
	2.15		Milk feeding frequency for non-breastfed children	81.1	91.2	percent
Salt iodization	2.16		Iodized salt consumption	29.0	37.5	percent
Vitamin A	2.17		Vitamin A supplementation (children under age 5)	27.5	38.4	percent
Low birth weight	2.18		Low-birthweight infants	13.4	11.4	percent
	2.19		Infants weighed at birth	52.6	65.9	percent
CHILD HEALTH						
Vaccinations	3.1		Tuberculosis immunization coverage	89.7	97.1	percent
	3.2		Polio immunization coverage	70.6	78.7	percent
	3.3		Immunization coverage for diphtheria, pertussis and tetanus (DPT)	64.8	75.2	percent
	3.4	4.3	Measles immunization coverage	65.8	75.2	percent
	3.5		Hepatitis B immunization coverage	61.0	73.2	percent
Tetanus toxoid	3.7		Neonatal tetanus protection	56.6	56.5	percent

Topic	MICS4 Indicator Number	MDG Indicator Number	Indicator	National	Kurdistan Region	Unit
Care of illness	3.8		Oral rehydration therapy with continued feeding	25.7	29.9	percent
	3.9		Care seeking for suspected pneumonia	74.4	76.5	percent
	3.10		Antibiotic treatment of suspected pneumonia	67.1	60.5	percent
Solid fuel use	3.11		Solid fuels	1.2	0.2	percent
WATER AND SANITATION						
Water and sanitation	4.1	7.8	Use of improved drinking water sources	91.4	96.7	percent
	4.2		Water treatment	15.8	2.9	percent
	4.3	7.9	Use of improved sanitation facilities	93.8	97.7	percent
	4.4		Safe disposal of child's faeces	19.3	13.8	percent
	4.5		Place for handwashing	94.8	95.7	Percent
	4.6		Availability of soap	99.1	99.4	Percent
REPRODUCTIVE HEALTH						
Contraception and unmet need	5.1	5.4	Adolescent birth rate	82.4	38.8	per 1,000
	5.2		Early childbearing	11.8	6.2	percent
	5.3	5.3	Contraceptive prevalence rate	52.5	64.5	Percent
	5.4	5.6	Unmet need	8.0	8.2	Percent
Maternal and newborn health	5.5a	5.5	Antenatal care coverage At least once by skilled personnel	77.7	81.0	percent
	5.5b		At least four times by any provider	49.6	57.1	percent
	5.6		Content of antenatal care	64.9	72.0	percent
	5.7	5.2	Skilled attendant at delivery	90.9	92.4	percent
	5.8		Institutional deliveries	76.6	84.9	percent
	5.9		Caesarean section	22.2	28.4	percent
CHILD DEVELOPMENT						
Child development	6.1		Support for learning	58.2	62.0	percent
	6.2		Father's support for learning	55.0	69.4	percent
	6.3		Learning materials: children's books	5.4	4.7	percent
	6.4		Learning materials: playthings	34.0	38.3	percent
	6.5		Inadequate care	7.5	8.0	percent
	6.6		Early child development index	71.6	82.3	percent
	6.7		Attendance to early childhood education	3.8	5.6	percent
EDUCATION						
Literacy and education	7.1	2.3	Literacy rate among young women	69.2	77.7	percent
	7.2		School readiness	5.4	22.9	percent
	7.3		Net intake rate in primary education	84.4	92.2	percent
	7.4	2.1	Primary school net attendance ratio (adjusted)	90.4	95.9	percent
	7.5		Secondary school net attendance ratio (adjusted)	48.6	71.9	percent
	7.6	2.2	Children reaching last grade of primary	95.5	95.7	percent
	7.7		Primary completion rate (gross)	83.9	104.6	percent
	7.8		Transition rate to secondary school	88.7	91.2	percent
	7.9		Gender parity index (primary school)	0.94	0.99	ratio
	7.10		Gender parity index (secondary school)	0.85	0.98	ratio

Topic	MICS4 Indicator Number	MDG Indicator Number	Indicator	National	Kurdistan Region	Unit
CHILD PROTECTION						
Birth registration	8.1		Birth registration	99.2	99.6	percent
Child labour	8.2		Child labour	6.4	2.2	percent
	8.3		School attendance among child labourers	64.6	76.2	percent
	8.4		Child labour among students	5.5	2.0	percent
Child discipline	8.5		Violent discipline	79.0	69.5	percent
Early marriage and polygamy	8.6		Marriage before age 15	5.5	4.9	percent
	8.7		Marriage before age 18	23.4	22.4	percent
	8.8		Young women age 15-19 currently married or in union	20.7	9.9	percent
	8.9		Polygamy	6.1	5.7	percent
			Spousal age difference			
	8.10a		Women age 15-19	16.5	13.8	percent
	8.10b		Women age 20-24	14.1	9.7	percent
Female genital mutilation/cutting	8.11		Approval for female genital mutilation/cutting (FGM/C)	4.9	11.3	percent
	8.12		Prevalence of female genital mutilation/cutting (FGM/C) among women	8.1	42.8	percent
Domestic violence	8.14		Attitudes towards domestic violence	51.2	25.2	percent
HIV/AIDS, AND ORPHANED AND VULNERABLE CHILDREN						
HIV/AIDS knowledge and attitudes	9.1	6.3	Comprehensive knowledge about HIV prevention	3.5	3.2	percent
	9.2		Comprehensive knowledge about HIV prevention among young people	3.5	3.7	percent
	9.3		Knowledge of mother-to-child transmission of HIV	26.1	34.3	percent
	9.4		Accepting attitude towards people living with HIV	2.1	2.2	percent
	9.5		Women who know where to be tested for HIV	4.2	3.9	percent
	9.6		Women who have been tested for HIV and know the results	0.2	0.3	percent
	9.8		HIV counselling during antenatal care	0.6	1.1	percent
	9.9		HIV testing during antenatal care	0.2	0.2	percent
Orphaned children	9.17		Children's living arrangements	1.8	0.9	percent
	9.18		Prevalence of children with at least one parent dead	5.2	4.6	percent
	9.19	6.4	School attendance of orphans	78.8	93.6	percent
	9.20	6.4	School attendance of non-orphans	83.3	92.5	percent

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List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
BCG	Bacillus-Cereus-Geuerin (Tuberculosis)
CDC	Center for Disease Control
CSO	Central Statistics Organization
CRC	Convention on the Rights of the Child
CSPRO	Census and Survey Processing System
DPT	Diphtheria, Pertussis, and Tetanus
GPI	Gender Parity Index
HepB	Hepatitis B
HIV	Human Immunodeficiency Virus
IUD	Intrauterine Device
KRSO	Kurdistan Regional Statistics Office
LAM	Lactational Amenorrhea Method
MDG	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
MICS2	The second round of the Multiple Indicator Cluster Survey
MICS3	The third round of the Multiple Indicator Cluster Survey
MMR	Measles, Mumps, and Rubella
MOH	Ministry of Health
NAR	Net Attendance Rate
NCHS	National Center for Health Statistics (USA)
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PPS	Probability Proportional to Size
PSU	Primary Sampling Unit
RHF	Recommended Home Fluid
SD	Standard Deviation
SPSS	Statistical Package for Social Sciences
TFR	Total Fertility Rate
TOT	Training of Trainers
UNICEF	United Nations Children's Fund
WFFC	World Fit For Children
WHO	World Health Organization

Preface

We are pleased to present the final findings of the 2011 Multiple Indicator Cluster Survey (MICS4) on key indicators to understand the status of children and women regarding health, nutrition, education, and protection. This survey contributes also to measure the progress attained in Iraq through efforts aiming at achieving the Millennium Development Goals (MDG) and the objectives of a World Fit for Children (WFFC), and to measure and refine other national goals.

In order to better understand the situation of children and women, UNICEF developed the Multiple Indicator Cluster Survey (MICS) in 1995. MICS produces a wide range of scientifically built and tested indicators to provide a realistic and detailed picture of the fulfillment of critical children and women rights across the world. Acknowledging the relevance of this tool, the Central Statistics Organization (CSO) conducted the first round of the survey in 1996 covering 6,000 households (MICS1); the second round was conducted in 2000 (MICS2) with 13,430 households. In 2006, 18,144 households were covered to conduct the third round (MICS3).

In 2011, the fourth round was conducted (MICS4) by CSO and the Kurdistan Region Statistics Office (KRSO), in close cooperation and coordination with the Ministry of Health, and with the financial and technical support from UNICEF. 36,580 households were sampled in MICS4, doubling the number of households interviewed in the last round, and providing information for all districts in all governorates of the country.

Children are half of the population of Iraq, hence investing efforts in their full development guarantees an excellent future for the country. We are cognizant that MICS guided the prioritization of the efforts to promote children and women's wellbeing in Iraq. MICS4 will provide valuable and reliable information to further supporting those national efforts and in reducing inequities of survival and development opportunities of children.

Professor Dr. Ali Yousif AL-Shukri
Minister of Planning and Development Cooperation

Acknowledgements

MICS is a primary source of information on women and children as it provides statistical indicators that are critical for the measurement of human development. MICS is an indispensable, reputable and high quality scientific mean for assessing the situation of women and children, and for monitoring and evaluating efforts and progress towards the fulfillment of the Millennium Development Goals and the World Fit for Children framework.

The implementation of MICS4 has been a success in all its phases. The excellence achieved is confirmed by the robustness of the results and the high quality data, which was confirmed in an international validation workshop held in November 2011 under the guidance and expertise of the UNICEF MICS Global Team from New York.

In presenting the Final Report of MICS4, 2011, we wish to express our gratitude and appreciation to all those who contributed directly or indirectly in designing, conducting the survey, preparing this report and releasing its results; from the workers in CSO and KRSO to MoH to the members of the National Higher Supervisory Committee of the survey. The contributions made by UNICEF Iraq Country Office, UNICEF Middle East and North Africa Regional Office, and UNICEF Headquarters cannot be overstated. We are also thankful to the Iraq offices of the World Health Organization (WHO) and other United Nations and international organizations which also contributed in various stages of this project.

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Executive Summary

This is the final report of the fourth round of the Multiple Cluster Indicator Survey (MICS4) carried out in Iraq. MICS4 surveys have been conducted in around fifty countries throughout the world. The sample of the survey was designed to cover all districts (118) and governorates (18), urban and rural areas, with a total sample size of 36,580 households. The objective of the survey is to provide up-to-date information for assessing the situation of children and women in Iraq, which will be used for monitoring progress towards the Millennium Development Goals, the goals of A World Fit for Children (WFFC), and the national goals.

In each of the interviewed households, information was collected on the sex and age of all household members, a total of 230,000 persons. Their access to water and sanitation, education levels, child labour, methods used to discipline children, salt iodization, and other living conditions were registered. More than 55,000 women 15-49 years living in those households were interviewed to obtain information on marriage, child mortality, contraception, FGM/C, maternal and newborn health, attitudes towards domestic violence, practices and knowledge related to HIV/AIDS. The mothers or caretakers of more than 36,000 children under five years were interviewed to collect information on birth registration, child development, immunization, breastfeeding, vitamin A supplementation, care of illness, and anthropometry.

Despite the remarkable differences in the levels of security and access throughout Iraq's territory, MICS4 has been conducted under the leadership of the two organizations: the Central Statistics Organization and the Kurdistan Regional Statistics Office. The location of interviewed households was registered using GPS devices, which will help identifying children living in the most disadvantaged communities.

Child Mortality

The results of MICS4 in Iraq indicate that in the five-years before the survey, neonatal mortality was estimated at 20 per 1,000 live births, while the post-neonatal mortality rate was at 12 per 1,000 live births. With an under-five mortality of 37 deaths per 1,000 live births, most of under-five deaths (87 percent) occur before they reach their first birthday. Generally all mortality rates (except infant mortality) are higher in the centre/south governorates as a whole compared to Kurdistan Region. The highest mortality rates for under five children are observed in Kirkuk governorate (51 per 1,000 live birth), while the lowest rates are observed in Suleimaniya (25 per 1,000 live birth). Nevertheless neonatal mortality rates do not differ from one region to the other: around 20 neonatal deaths per 1,000 live births.

There has been relatively little improvement during the last 15 years, with under-five mortality at 45 per 1,000 during the 10-14 year period preceding the survey, and 37 per 1,000 live births during the most recent five-year period. The rate of improvement is even slower for neonatal and especially post-neonatal mortality.

Nutrition

Over eight percent of children under five years old in Iraq are moderately or severely underweight and four percent are severely underweight. Nearly one-fourth of children are severely or moderately stunted (or too short for their age) and 10 percent are severely stunted. Seven percent of children are severely or moderately wasted (or too thin for their height) and four percent are severely wasted. The highest percentages of malnourished children are found in Al-Anbar, Baghdad and Najaf governorates, with a range of moderate and severe underweight of 10-13 percent. Suleimaniya, Kirkuk and Babil governorates had the lowest percentage ranging between 4-5 percent. The highest percentages of moderate and severe stunting were observed in Al-Anbar, Baghdad, Diyala and Najaf governorates ranging 28-35 percent. The situation in these governorates differs markedly with Suleimaniya and Kirkuk where around 10 percent of children are stunted. In general the percentage of malnourished children in Kurdistan Region governorates is lower than in the rest of the country.

Only 20 percent of children aged less than six months are exclusively breastfed, a level considerably lower than recommended. It is worth noting that adequate feeding was more common among uneducated women and poor ones. Women in governorates of Kirkuk and Al-Anbar (10 percent), Al-Najaf (20 percent) and Karbala (21 percent), were the least likely to start breastfeeding within one hour while the contrary was in Thi-Qar (73 percent) and Basrah (68 percent).

The levels of iodine found in the salt consumed in the households are sufficient in 29 percent of the households. Sixteen percent of the households in rural consume salt with adequate iodine levels and 34 percent in urban areas. While only 15 percent of the poorest households do consume adequately iodized salt, a three times percentage (47 percent) of households to in the richest.

In the six months prior the interviews, 39 percent of the children 9-14 months and 18-23 received the prescriptive vitamin A supplementation. Children in the Kurdish Region have better coverage (58 percent) than children in the centre/south (37 percent). Slightly above one quarter of those living in rural areas received the vitamin A supplementation, while 45 percent did in urban areas.

In Iraq, 53 percent of children under five were weighed at birth; with approximately 13 percent them estimated to weigh less than 2,500 grams at birth. In Suleimaniya governorate 77 percent of live births are weighted at birth, while in Al-Anbar and Al-Qadisiya less than one third are. Nevertheless the governorates with the highest percentages of low birth weight children are Missan and Basrah (20 percent); in contrast Erbil, Al-Anbar, Baghdad and Suleimaniya have 10 percent of low birth weight children.

Child Health

The percentage of children 12-23 months old who received all recommended vaccinations by age 12 months is 47 percent. Approximately 90 percent of children aged 12-23 months received a BCG vaccination by the age of 12 months, 65 percent received the three doses of DPT, 71 percent were immunized against Polio with 3 doses, and 61 percent were protected against Hepatitis B. The vaccination against measles reached 66 percent of the children. In

Dokuk, Karbala and Missan, children are more likely to be vaccinated than in any other governorate for all types of vaccines. On the contrary, the lowest vaccination coverage is found in Al-Anbar, Salahaddin, Wasit and Thi-Qar. The immunization coverage of children 18-29 months old is similar to that of children 12-23 months; with the exception of measles or MMR vaccine; it reaches 77 percent of children 18-29 months before they reach the age of 18 month.

The protection from tetanus among women who gave birth is 57 percent. Only one third of the women in Wasit received tetanus vaccines while about 78 percent in Karbala did. The coverage decreases according to the area where women live, from urban to rural, and the household wealth, from richest to poorest.

There were 15 percent of children under-five years of age who had diarrhoea in the two weeks preceding the survey. The diarrhoea prevalence is almost twice in centre/south Iraq (16 percent) than in Kurdistan region (9 percent). The highest percentages of diarrhoea cases were found in Kerbela (27 percent) and Thi-Qar (26 percent) governorates and the lowest percentages in Suleimaniya (8 percent) and Erbil (9 percent) governorates. Among the children who had diarrhoea, 26 percent received appropriate treatment with Oral Rehydration Solutions or increased fluids together with continued feeding.

About 10 percent of children aged 0-59 months were reported to have had symptoms of pneumonia during the two weeks preceding the survey; 75 percent of them were taken to an appropriate care provider: 30 percent to private physicians and about 36 percent to public facilities like hospitals or health centres. Two thirds of the children with suspected pneumonia received antibiotics: 61 percent in Kurdistan Region and 69 percent in centre/south.

The use of solid fuels for cooking is restricted among people living in the poorest households. Overall, it amount to 2 percent of the household members in Iraq using solid fuels.

Water and Sanitation

In Iraq, 91 percent of the population has access to improved drinking water sources. The situation in rural areas, with 77 percent having access to improved water sources, differs markedly from urban areas where 98 percent have. The population using unimproved drinking water sources is mostly not using any method for water treatment (only 16 percent do). Diyala and Salahaddin governorates, with 80 percent of the population accessing improved drinking water sources, present a worse situation than all other governorates, especially compared to Kirkuk, Baghdad, Al-Najaf, Basrah, and Kurdish Region (95 percent and above). Overall, Kurdistan Region governorates (97 percent) have better access to improved drinking water sources than centre/south Iraq governorates (91 percent).

Fetching water in those households where the water source is outside the premises is mostly done by adult males (51 percent). Nevertheless in some governorates it is mostly women who do this task regularly: in Suleimaniya It is done by women in 64 percent of the cases; 70 percent in Al-Muthanna and Thi-Qar, and 85 in A-Qadisiya.

Chlorine concentration levels were tested in 81 percent of the households. Results showed that there is a complete lack of chlorine in a quarter of the households of the country: 46 percent in the households of Kurdistan region and 24 percent in the central and southern governorates. Very similar proportions are observed in rural and urban areas (44 percent compared to 24 percent), and even more pronounced differences are found among governorates: while 3 percent of the households in Baghdad have no traces of chlorine in the water, 63 and 74 percent do respectively in Al-Anbar and Basrah.

Of the household population, 94 percent is using an improved unshared sanitation facility. In rural areas the percentage is 88 percent compared to 96 percent in urban ones. Residents of Babil and Al-Qadisiya governorates are less likely than others to use improved facilities. The percentage of an improved unshared sanitation facility increases from 84 percent in the poorest households to 98 percent in the richest.

The proportion of children whose stools are disposed safely is 18 percent, with notable variation by governorate. Al-Muthanna governorate has the lowest percentage of children having their stools safely disposed (7 percent) while Ninewa has the highest (30 percent). A specific place for hand washing was observed in 95 percent of the households, and in 97 percent of them there was water and soap available for appropriate hand washing.

Reproductive Health

The fertility rate among women 15-49 years in Iraq for the three years before the survey is estimated at 4.5 children per woman. Specific fertility arrives at its peak among women 25 to 29 years old. Among adolescents 15-19 years old, the total fertility rate is 4.4; ranging from the lowest 2.3 in Suleimaniya to the highest of 5.7 in Missan. Fertility levels in Dohuk, Suleimaniya, Erbil, Diyala and Baghdad governorates are below the national average. Regarding early childbearing, 11 percent of women aged 15-19 years already had one birth; four percent are pregnant with their first child, and 15 percent begun childbearing.

Half of the women 15-49 years who are currently married use any contraception method (51 percent), mostly using specifically the pill. The most extended use is found among women in the governorates of Kurdistan Region: Suleimaniya (67 percent), Erbil (62 percent) and Dohuk (52 percent).

The overall unmet need for contraception, or the proportion of married women 15-49 years willing to stop having children though not using contraceptives, is 8 percent. Babil governorate has the lowest percentage (5 percent) of unmet need and Dohuk governorate has the highest one (11 percent).

Coverage of antenatal care by skilled personnel: a doctor, nurse or midwife, is at 78 percent of women receiving antenatal care at least once during the pregnancy. Such antenatal care coverage is more common in urban areas (83 percent) than in rural ones (66 percent). In Salahaddin governorate it reaches only 64 percent of the women while it tops 89 percent in Suleimaniya. In the whole country, half of the pregnant women had visited at least four times any care provider; similar patterns across governorates are found, with 39 and 41

percent of women in Wasit and Salahaddin respectively having had those number of visits to a care provider, and 67 percent in Dohuk and 68 percent in Suleimaniya.

Most of the births (91 percent) occurring in the two years preceding the survey, were delivered by skilled personnel: 54 by a public doctor, 10 percent by a private doctor, and 27 percent by a nurse or midwife. While 100 percent of the women in Karbala delivered assisted by skilled personnel, 83 percent of women did in Ninewa and Al-Anbar. Irrespective of the birth attendant, 77 percent of births in Iraq were delivered in a health facility: 68 percent in public sector facilities and 9 percent in private sector facilities; the remaining 26 percent are home deliveries.

Child Development

Pre-school attendance is very low in Iraq: only 4 percent among children 36-59 months, although in some governorates like Thiqr and Dohuk governorates it is even lower at about 1 percent. Ten percent of children living in rich households attend pre-school, while the figure drops to one percent in the poorest households.

Development of children 36-59 months is very weak regarding literacy and numeracy skills, although children are mostly on track regarding their learning, socio-emotional, and physical skills. Most of the children (58 percent) could have a household adults engaging in more than four childhood development activities in the three days preceding the survey. Larger proportions of adults engaged in learning and school readiness activities with children in urban areas (65 percent) than in rural areas (46 percent); larger also in Baghdad and Kirkuk governorates (70 percent) than in Thiqr governorate (32 percent).

Literacy and Education

Sixty-nine percent of young women, 15 to 24 years, in Iraq are literate. The literacy status varies greatly by place of residence: from 78 percent in urban areas to 49 percent in rural areas. Variation is also notable by governorate: Al-Muthana and Misan respectively with 48 and 49 percent young women literate, and the Suleimaniya with 89 percent, or Baghdad, 78 percent.

Ninety percent of children of primary school age (6-11 years) are attending school, but only about half (49 percent) of the children of secondary school age (12-17 years) are attending secondary school. The secondary school net attendance ratio for females (45 percent) is lower than that for males (52 percent). Although primary school attendance is relatively high, in Missan governorate it is only 76 percent and in the opposite site, in Suleimaniya it is 98 percent.

The primary school completion (gross) rate is 84 percent for all Iraq: in Wasit (62 percent) and Missan (62 percent) it is well below the average, and Erbil and Suleimaniya have a rate of 110 percent. The estimation of the primary school completion net rate, at 44 percent for the whole Iraq, indicates that there are children over 11 years old attending primary school, or children who initiated primary school later than required.

Child Protection

The Iraq MICS 4 survey estimates that 99 percent of the children under five years old have been birth registered. Variations among areas are minor.

About six percent of children aged 5-14 years are involved in child labour. Variations across governorates are relevant, with the highest number of children involved in child labour residing in Missan governorate (15 percent), dropping to two percent in Suleimaniya, Erbil, and Diyala. The prevalence of child labour in Kurdistan region (2 percent) is three times lower than in the rest of the country (7 percent); or in rural areas (10 percent) is double than in urban areas (5 percent).

Seventy nine percent of children aged 2-14 years suffered from at least one form of psychological or physical punishment by their mothers/caretakers or other household members. More importantly, 28 percent of children were subjected to severe physical punishment. The use of at least one form of psychological or physical punishment was more prevalent in the centre/south governorates (81 percent) compared to Kurdistan Region (70 percent). The variations among governorates are remarkable as it is shown by the lowest percentage in Erbil, 59 percent, compared to the highest in both Al-Najaf and Karbala, 91 percent.

One in five young women aged 15-19 years is currently married. This proportion drops down to 9 percent in Suleimaniya, and Dohuk governorates and rises to the maximum 32 percent in Al-Basrah and 30 percent in Al-Najaf.

Eight percent of women aged 15-49 years experienced any form of female genital mutilation or cutting. The vast majority of cases are located in the Kurdistan Region (43 percent); in the governorates of Erbil and Suleimaniya (58 percent and 54 percent respectively), and 20 percent in Kirkuk, compared to very small percentages below 1 percent in the rest of Iraq's governorates.

Overall, 51 percent of women in Iraq feel that a husband has the right beat his wife for at least one of five reasons: if she goes out without telling him, if she neglects the children, if she argues with him, if she refuses sex with him, if she burns the food. The acceptance of domestic violence is very high in the southern governorates: topping 90 percent of women in Missan governorate, and it is at its lowest in Erbil (12 percent) and Suleimaniya (22 percent).

HIV/AIDS

In Iraq, more than half of the women 15 to 24 years have heard of AIDS but knowledge of the main ways to prevent transmission is limited: only 50 percent know that having one faithful uninfected sex partner is a preventive way, and only 22 percent know of using a condom is also a preventive mean. Only 3 percent of women have comprehensive knowledge on HIV/AIDS.

Orphans

In Iraq, about five percent of children aged 0-17 years are orphans who have lost one or both parents, and about two percent are not living with a biological parent. The older age group of 15-17 years has a higher percentage of orphans (12 percent) than younger age

groups: 8 percent among children 10-14 years, 4 percent among 5-9 years, and 1 percent among 0-4 years.

The school attendance ratio between orphans and non-orphans is 0.94. The ratio is lower in governorates like Al-Qadisiya (0.71) or Kirkuk (0.82), and higher in Dohuk (1.04).

Further Analysis: Child-Centred Equity Analysis

The Child-Centred Equity Analysis presented in the Section 13 is an additional utilization of MICS4 data to explore the situation of children. This analysis measures the status of children in three different life-cycles using several indicators. Results indicate that one third of the children 0-17 years in Iraq (5.4 million) are facing three or more deprivations of their rights; about 31 percent (5.1 million) suffer two deprivations; and 27 percent suffer one. There are only 10 percent children who are not deprived.

1. Introduction

1.1. Background

This report is based on the Iraq Multiple Indicator Cluster Survey, conducted in 2011 by the Central Statistics Organization (CSO) and Kurdistan Regional Statistics Office (KRSO), in coordination with the MoH. The survey provides valuable information on the situation of children and women in Iraq, and was based, in large part, on the needs to monitor progress towards goals and targets emanating from recent international agreements: the Millennium Declaration, adopted by all 191 United Nations Member States in September 2000, and the Plan of Action of A World Fit For Children, adopted by 189 Member States at the United Nations Special Session on Children in May 2002. Both of these commitments build upon promises made by the international community at the 1990 World Summit for Children.

In signing these international agreements, governments committed themselves to improving conditions for their children and to monitoring progress towards that end. UNICEF was assigned a supporting role in this task (see table below).

Commitment for Action: National and International Monitoring

The Governments of the signing States to the Millennium Declaration, the Convention on the Rights of the Child and the Plan of Action, have committed themselves to monitor progress towards attainment of the goals and objectives contained in those documents.

"We will regularly monitor at the national and regional levels, wherever possible, and evaluate our progress towards the goals and targets of the plan of operations at the national, regional and international levels. We will support, consequently, our national statistical capacities to collect, analyse and disaggregate data providing indicators by gender, age and other relevant factors that may lead to disparities, as well as to support a wide range of child-focused research. We will strengthen international cooperation to support statistical capacity-building efforts and build community capacity in monitoring, evaluation and planning" (**A World Fit for Children**, paragraph 60)

"...We will conduct periodic reviews at the national and subnational levels of progress in order to more effectively identify constraints and accelerate actions...." (**A World Fit for Children**, paragraph 61)

The Plan of Action (paragraph 61) also calls for the specific involvement of UNICEF in the preparation of periodic progress reports:

"... As the world's lead agency for children, the United Nations Children's Fund (UNICEF) is requested to continue to prepare and disseminate, in close collaboration with Governments, relevant funds, programmes and the specialized agencies of the United Nations system, and all other relevant actors, as appropriate, information on the progress made in the implementation of the Declaration and the Plan of Action."

Similarly, the **Millennium Declaration** (paragraph 31) calls for periodic reporting on progress:

"...We request the General Assembly to review on a regular basis the progress made in implementing the provisions of this Declaration, and ask the Secretary-General to issue periodic reports for consideration by the General Assembly and as a basis for further action."

Iraq has conducted MICS since it was first launched: the first round, MICS1, in 1996; the second round, MICS2, in 2000; and MICS3 in 2006. The 2011 MICS4 results will provide

valuable information to assess the current National Development Plan, 2010-2014, and its on-going reformulation into the National Development Plan 2013-2017; for the National Poverty Reduction Strategy Plan (PRSP) for Iraq, the National Education Strategy (NED). MICS4 results will significantly contribute to on-going government efforts at the central and Kurdistan regional levels, as well as other national actors, to design effective programmes, plans of action and policies for children and women directed for increased inclusion and for the reduction of inequities and poverty.

1.2. Survey Objectives

The 2011 Iraq Multiple Indicator Cluster Survey has as its primary objectives:

- To provide up-to-date information for assessing the situation of children and women in Iraq;
- To furnish data needed for monitoring progress toward goals established in the Millennium Declaration and other internationally agreed upon goals, as a basis for future action;
- To contribute to the improvement of data and monitoring systems in Iraq and to strengthen technical expertise in the design, implementation, and analysis of such systems.
- To generate data on the situation of children and women, including the identification of vulnerable groups and of disparities, to inform policies and interventions.

2. Sample and Survey Methodology

2.1. Sample Design

The sample for the Iraq Multiple Indicator Cluster Survey (MICS) was designed to provide estimates for a large number of indicators on the situation of children and women at the national level, for urban and rural areas, for the 18 governorates and 118 districts (Qadaa). The urban and rural areas within each district were identified as the main sampling domains. Thus, in total, the sample consists of 236 different sampling domains.

The sample was selected in two stages. Within each district, 31 Primary Sampling Units (PSUs, called blocks) were selected with linear systematic probability proportional to size (PPS). Blocks are groups of buildings comprising of, or part of, a mahala/village in which the borders are clearly outlined on the ground, mapped, coded/numbered, with easily identifiable landmarks. Each block covers at least 70-100 buildings/infrastructure and it is sequentially numbered within the borders of the mahala/village. Within each district, PSUs (blocks) were distributed between urban and rural areas proportionately. The total number of PSUs (blocks) was 3,658 PSU.

After a household listing was carried out within the selected enumeration areas (blocks), a systematic sample of 10 households was drawn in each sample enumeration area (block). The total number of clusters (blocks) selected in urban areas is 2,199, or 60.1 per cent of the total, and 1,459 clusters in rural areas, or 39.9 per cent of all clusters. Sample sizes differ between governorates depending on the number of districts in each governorate; Iraq has 118 districts, 85 in Central and Southern Iraq and 33 in the Kurdistan Region.

The total sample size for the survey is 36,580 households. The sample is not self-weighting. For reporting national level results, sample weights are used. A more detailed description of the sample design can be found in Appendix A.

2.2. Questionnaires

Three sets of questionnaires were used in the survey: 1) a household questionnaire which was used to collect information on all *de jure* household members (usual residents), the household, and the dwelling; 2) a women's questionnaire administered in each household to all women aged 15-49 years; and 3) an under-5 questionnaire, administered to mothers or caretakers for all children under-5 years living in the household. The questionnaires included the following modules:

The Household Questionnaire included the following modules:

- Household Listing Form
- Education
- Water and Sanitation
- Household Characteristics
- Child Labour
- Child Discipline
- Handwashing
- Salt Iodization
- Water Testing

The Questionnaire for Individual Women was administered to all women aged 15-49 years living in the households, and included the following modules:

- Women's Background
- Marriage
- Child Mortality (with Birth History)
- HIV/AIDS
- Desire for Last Birth
- Maternal and Newborn Health
- Illness Symptoms
- Contraception
- Unmet Need
- Female Genital Mutilation/Cutting
- Attitudes Towards Domestic Violence

The Questionnaire for Children Under-Five was administered to mothers or caretakers of children under-5 years of age living in the households. Normally, the questionnaire was administered to mothers of under-5 children; in cases when the mother was not listed in the household roster, a primary caretaker for the child was identified and interviewed. The questionnaire included the following modules:

- Age
- Birth Registration
- Early Childhood Development
- Breastfeeding
- Care of Illness
- Immunization
- Anthropometry

The questionnaires are based on the MICS4 model questionnaire¹. From the MICS4 model English version, the questionnaires were translated into Arabic and Kurdish (both dialects), and translated back into English. The questionnaires were pre-tested in January 2011, and based on the results of the pre-test, modifications were made to the wording and translation of the questionnaires. A copy of the Iraq MICS questionnaires is provided in Appendix F.

In addition to the administration of questionnaires, fieldwork teams tested the salt used for cooking in the households for iodine content (two tests were conducted, one for potassium iodide and one for potassium iodate due to the different origins of available salt in the Iraqi market), observed the place for handwashing and measured the weights and heights of children age under-5 years. Moreover the fieldwork teams also tested tap water for chlorine content; this is not a standard MICS4 test but a specific test conducted only with MICS4 in Iraq. Details and findings of these measurements are provided in the respective sections of the report.

¹ The model MICS4 questionnaires can be found at www.childinfo.org

2.3. Training and fieldwork

Twenty-two central supervisors were trained for 10 days in a training of trainers (TOT) workshop in Amman in June 2010 by experts from the UNICEF Middle East and North Africa Office in Amman. Implementation of the survey was postponed due to the preparation for the implementation of the Census, and the TOT was refreshed in January of 2011. The central supervisors trained field workers during the month of January and beginning of February 2011 in the Kurdistan region and during March 2011 in Centre/South Iraq. The training was conducted for 13 days in three training centres (Dohuk, Erbil, Suleimaniya) in Kurdistan region, and in eight training centres in Centre/South Iraq as follows:

- Training center in Baghdad - covering the governorates of Baghdad and Diyala.
- Training center in Karbala - covering the governorates of Karbala, Babil, Al-Najaf.
- Training center in Al-Qadisiya - covering the governorates of Al-Qadisiya, Al-Muthanna, and Wasit.
- Training center in Basrah – covering the governorates of Basrah, Missan, Thi-Qar.
- Training center in Al-Anbar - covering Al-Anbar governorate.
- Training Center in Kirkuk - covering Kirkuk governorate.
- Training center in Ninewa - covering Ninewa governorate.
- Training center in Salahaddin – covering Salahaddin governorate.

A total number of 207 trainees from Kurdistan region and 610 trainees from Centre/South Iraq participated in these trainings in the capacity of interviewers, local supervisors, local editors, and reserves.

The data were collected by 118 teams, each comprised of six members. The teams were composed by a field supervisor, directing the field team activities, and ultimately responsible of the achievement and maintenance of the standard of data quality; a field editor, who monitored the interviews and edited the completed questionnaires to assure accuracy and consistency; and four interviewers. Among those four interviewers, each team had a statistician who established the contact with the household and identified all the household members (filling the roster); a measurer, in charge of measuring and weighting the children, and conducting the salt and water tests; and eventually two female physicians who were in charge of administering the women and children questionnaires. The number of teams for each governorate varied according to the number of districts (Qadaa) in each governorate. Each team was responsible for the coverage of one district.

Field work was carried out in the Kurdistan region from February 13 until March 18 2011 by 33 teams. In the Center/South Iraq it was conducted by 85 teams and lasted from March 31 until May 9 2011 by 85 teams. The fieldwork lasted 34 days, with subsequent visits to complete interviews in some households. At each governorate statistical office, the head of the office was assigned the role of a local supervisor for his/her governorate. One central supervisor from CSO was also responsible for each governorate with the exception of governorates of Al-Anbar, Salahaddin, Kirkuk, Baghdad, Suleimaniya, Erbil that had two central supervisors for each. Overall supervision of the whole survey was overseen by the Higher National Committee whose members conducted field visits to all governorates as part of their direct supervision during the course of fieldwork.

2.4. Data Processing

Questionnaires were edited in the field by the local editors. A second round of editing was performed centrally at CSO office in Baghdad and KRSO office in Erbil. The data entry process began using 95 microcomputers (70 in Baghdad and 25 in Kurdistan Region) using the Census and Survey Processing System (CSPRO). In order to ensure quality control, all questionnaires were double entered and internal consistency checks were performed. Procedures and standard programs developed under the global MICS4 programme and adapted to the Iraq questionnaires were used throughout. Data entry took place in Baghdad from May until August 2011. In the Kurdistan Region, the entry process began in April and ended in June 2011. Data processing ended in October 2011, and overall data quality was assessed in November 2011. Data were analysed using the Statistical Package for Social Sciences (SPSS) software program, Version 18, and the model syntax and tabulation plans developed by UNICEF were used for this purpose.

3. Sample Coverage and the Characteristics of Households and Respondents

3.1. Sample Coverage

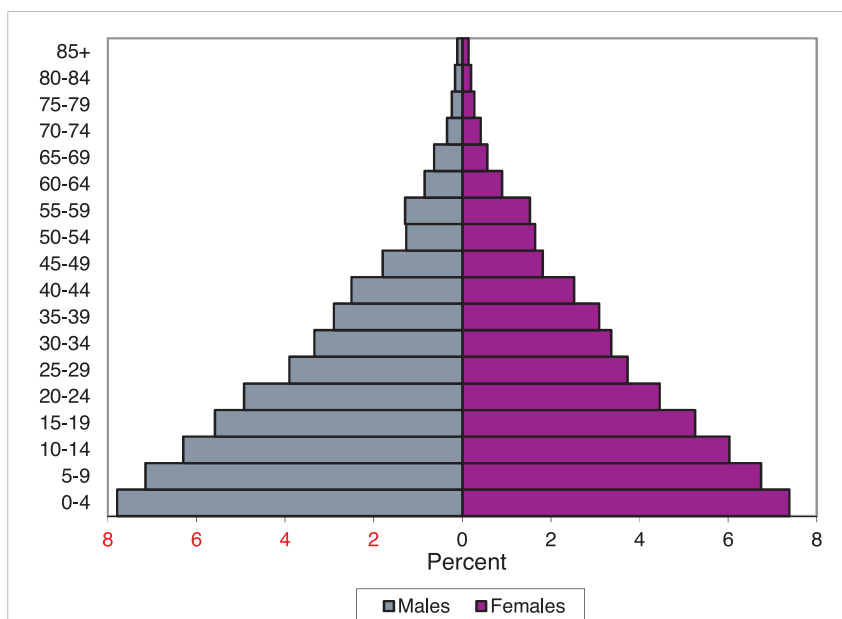
The original selected sample of 36,580 was increased up to 36,592 households because 12 housing units included 2 households each. Out of those, 35,828 were found to be occupied. Of these, 35,701 were successfully interviewed for a household response rate of 99.6 percent. In the interviewed households, 56,445 women (age 15-49 years) were identified. Of these, 55,194 were successfully interviewed, yielding a response rate of 97.8 percent within interviewed households. In addition, 36,599 children under age five were listed in the household questionnaire. Questionnaires were completed for 36,307 of these children, which corresponds to a response rate of 99.2 percent within interviewed households. Overall response rates of 97.4 and 98.9 are calculated for the women's and under-5's interviews respectively (Table HH.1). Generally, response rates were high and similar within urban and rural areas and within the governorates.

3.2. Characteristics of Households

The age and sex distribution of survey population is provided in Table HH.2. The distribution is also used to produce the population pyramid in Figure HH.1. In the 35,701 households successfully interviewed in the survey, 230,755 household members were listed. Of these, 116,549 were males, and 114,205 were females.

The age structure of Iraq shows a larger proportion of its population in the younger age groups than in the older age groups. About 41 percent of the population is under the age of

Figure HH.1: Age and sex distribution of household population, Iraq, 2011



15 years. The broad age structure of the Iraq MICS4 compares well with the population estimates from the 2011 CSO Statistics Yearbook of Iraq, which has 43, 54.2 and 2.8 percent for the age groups <15, 15-64, and 65+ respectively. Children 0-17 years constitute almost half of the population (48 percent). The percentage of missing ages is negligible.

Tables HH.3 - HH.5 provide basic information on the households, female respondents age 15-49, and children under-5 by presenting the unweighted, as well as the weighted numbers. Information on the basic characteristics of households, women and children under-5 interviewed in the survey is essential for the interpretation of findings presented later in the report and also can provide an indication of the representativeness of the survey. The remaining tables in this report are presented only with weighted numbers. See Appendix A for more details about the weighting.

Table HH.3 provides basic background information on the households. Within households, the sex of the household head, governorate, region, area of residence, number of household members and education of household head are shown in the table. These background characteristics are used in subsequent tables in this report; the figures in the table are also intended to show the numbers of observations by major categories of analysis in the report

Residence		Governorate																			
Urban	Rural	Dohuk	Ninewa	Sulaimaniya	Kirkuk	Erbil	Diyala	Al-Anbar	Baghdad	Babil	Karbala	Wasit	Salahaddin	Al-Najaf	Al-Qadisiya	Al-Muthanna	Thi-Qar	Missan	Basrah	Total	
Households Sampled	22001	14591	2170	2171	4960	1240	3101	1860	2480	3100	1240	930	1860	2480	930	1240	1240	1550	1860	2180	36592
Households Occupied	21509	14319	2102	2140	4732	1229	2927	1829	2437	3042	1231	924	1832	2457	922	1230	1235	1546	1846	2167	35828
Households Interviewed	21406	14295	2090	2139	4717	1227	2910	1825	2430	3019	1228	924	1822	2450	919	1224	1234	1545	1843	2155	35701
Household response rate	99.5	99.8	99.4	100.0	99.7	99.8	99.4	99.8	99.7	99.2	99.8	100.0	99.5	99.7	99.7	99.5	99.9	99.9	99.8	99.4	99.6
Women Eligible	33057	23388	3749	3526	6374	1880	3983	2783	4101	4218	2066	1425	2986	4156	1461	2171	2297	2730	3031	3508	56445
Women Interviewed	32293	22901	3649	3502	5984	1844	3789	2752	4024	4182	2040	1409	2936	4098	1446	2150	2294	2701	2988	3406	55194
Women's response rate	97.7	97.9	97.3	99.3	93.9	98.1	95.1	98.9	98.1	99.1	98.7	98.9	98.3	98.6	99.0	99.0	99.9	98.9	98.6	97.1	97.8
Women's overall response rate	97.2	97.8	96.8	99.3	93.6	97.9	94.6	98.7	97.8	98.4	98.5	98.9	97.8	98.3	98.7	98.5	99.8	98.9	98.4	96.6	97.4
Children under 5 Eligible	19797	16802	2222	2666	2614	1362	2084	1638	2870	2514	1393	954	2027	2928	981	1599	1754	1938	2462	2593	36599
Children under 5 Mother/Caretaker Interviewed	19653	16654	2191	2646	2578	1358	2060	1627	2825	2507	1388	950	1982	2909	981	1594	1754	1932	2453	2572	36307
Under-5's response rate	99.3	99.1	98.6	99.2	98.6	99.7	98.8	99.3	98.4	99.7	99.6	99.6	97.8	99.4	100.0	99.7	100.0	99.7	99.6	99.2	99.2
Under-5's overall response rate	98.8	99.0	98.0	99.2	98.3	99.5	98.3	99.1	98.1	99.0	99.4	99.6	97.2	99.1	99.7	99.2	99.9	99.6	99.5	98.6	98.9

Table HH.2: Household age distribution by sex

Percent and frequency distribution of the household population by five-year age groups, dependency age groups, and by child (age 0-17 years) and adult populations (age 18 or more), by sex, Iraq, 2011

Age	Males		Females		Total	
	Number	Percent	Number	Percent	Number	Percent
0-4	17760	15.2	16847	14.8	34607	15.0
5-9	16313	14.0	15384	13.5	31697	13.7
10-14	14372	12.3	13745	12.0	28118	12.2
15-19	12740	10.9	11984	10.5	24724	10.7
20-24	11239	9.6	10166	8.9	21405	9.3
25-29	8898	7.6	8509	7.5	17407	7.5
30-34	7617	6.5	7671	6.7	15288	6.6
35-39	6605	5.7	7046	6.2	13651	5.9
40-44	5703	4.9	5758	5.0	11461	5.0
45-49	4098	3.5	4154	3.6	8252	3.6
50-54	2884	2.5	3763	3.3	6647	2.9
55-59	2952	2.5	3481	3.0	6432	2.8
60-64	1940	1.7	2052	1.8	3992	1.7
65-69	1456	1.2	1285	1.1	2742	1.2
70-74	795	0.7	954	0.8	1749	0.8
75-79	544	0.5	618	0.5	1162	0.5
80-84	364	0.3	450	0.4	815	0.4
85+	255	0.2	331	0.3	586	0.3
Missing/DK	13	0.0	7	0.0	20	0.0
Dependency age group						
0-14	48446	41.6	45976	40.3	94422	40.9
15-64	64675	55.5	64584	56.6	129259	56.0
65+	3415	2.9	3639	3.2	7054	3.1
Missing/DK	13	0.0	7	0.0	20	0.0
Children and adult populations						
Children age 0-17 years	56260	48.3	53402	46.8	109663	47.5
Adults age 18+ years	60276	51.7	60796	53.2	121072	52.5
Missing/DK	13	0.0	7	0.0	20	0.0
Total	116549	100.0	114205	100.0	230755	100.0

Table HH.3: Household composition

Percent and frequency distribution of households by selected characteristics, Iraq, 2011

	Weighted percent	Number of households	
		Weighted	Unweighted
Sex of the household head			
Male	89.8	32060	32489
Female	10.2	3641	3212
Governorates			
Dohuk	3.5	1245	2090
Ninewa	8.1	2909	2139
Suleimaniya	7.6	2718	4717
Kirkuk	4.9	1762	1227
Erbil	6.7	2392	2910
Diyala	4.2	1515	1825
Al-Anbar	3.8	1354	2430
Baghdad	22.0	7863	3019
Babil	5.3	1884	1228
Karbala	3.2	1152	924
Wasit	3.2	1154	1822
Salahaddin	3.9	1378	2450
Al-Najaf	3.8	1357	919
Al-Qadisiya	3.0	1086	1224
Al-Muthanna	1.8	651	1234
Thi-Qar	4.8	1715	1545
Missan	2.7	957	1843
Basrah	7.3	2609	2155
Region			
Kurdistan Region	17.8	6355	9717
South/Centre Iraq	82.2	29346	25984
Area			
Urban	73.7	26325	21406
Rural	26.3	9376	14295
Number of household members			
1	1.2	419	464
2	5.7	2029	1984
3	7.9	2803	2697
4	12.8	4585	4206
5	15.7	5598	5033
6	14.6	5196	5053
7	12.3	4393	4448
8	9.3	3322	3466
9	6.6	2339	2579
10+	14.1	5018	5771
Education of household head			
None	19.0	6783	8399
Primary	32.0	11410	12132
Secondary +	48.3	17234	14827
Non-standard curriculum	0.7	260	327
Missing/DK	0.0	14	16

Table HH.3: Household composition

Percent and frequency distribution of households by selected characteristics, Iraq, 2011

	Weighted percent	Number of households	
		Weighted	Unweighted
Households with at least: one child age 0-4 years	55.9	35701	35701
Households with at least: one child age 0-17 years	84.2	33339	26848
Households with at least: one woman age 15-49 years	93.3	35701	35701
Mean household size	6.5	35701	35701
Total	100.0	35701	35701

The total weighted and unweighted numbers of households are equal, since sample weights were normalized (See Appendix A). The table HH.3 also shows the proportions of households with at least one child under 18, at least one child under-5 years, and at least one eligible woman age 15-49. The table also shows the weighted average household size estimated by the survey.

About 10 percent of households are headed by women and about 74 percent of the households live in urban areas, while the remaining one-fourth lives in rural areas. One fifth of the households live in the capital city Baghdad (22 percent). The least populated governorates are Missan (3 percent) and Al-Muthanna (2 percent). 82 percent of the households constitute the Centre/South governorates while the remaining 18 percent reside in the Kurdistan Region governorates. Most of the households consisted of 5 members (16 percent) or 6 members (15 percent), followed by households with 10 or more members (14 percent) reflecting the large family sizes in Iraq; the average household size is 6.5. Sixty percent of the households contained at least one child under-five years of age, in 84 percent there at least one child 0-17 years, and 93 percent contained at least one woman aged 15-49 years.

3.3. Characteristics of Respondents

Tables HH.4 and HH.5 provide information on the background characteristics of female respondents 15-49 years of age and of children under age 5. In both tables, the total numbers of weighted and unweighted observations are equal, since sample weights have been normalized (standardized). In addition to providing useful information on the background characteristics of women and children, the tables are also intended to show the numbers of observations in each background category. These categories are used in the subsequent tabulations of this report.

Table HH.4 provides background characteristics of female respondents 15-49 years of age. The table includes information on the distribution of women according to governorates, metropolitan/other urban/rural areas, age, marital status, motherhood status, education² and wealth index quintiles³.

Table HH.4: Women's background characteristics

Percent and frequency distribution of women age 15-49 years by selected background characteristics, Iraq, 2011

	Weighted percent	Number of women	
		Weighted	Unweighted
Governorates			
Dohuk	4.0	2195	3649
Ninewa	8.6	4774	3502
Suleimaniya	6.8	3729	5984
Kirkuk	4.3	2361	1844
Erbil	5.8	3209	3789
Diyala	4.2	2296	2752
Al-Anbar	4.3	2380	4024
Baghdad	20.2	11144	4182
Babil	5.6	3096	2040
Karbala	3.2	1769	1409
Wasit	3.3	1845	2936
Salahaddin	4.2	2331	4098
Al-Najaf	3.9	2178	1446
Al-Qadisiya	3.5	1912	2150
Al-Muthanna	2.1	1140	2294
Thi-Qar	5.6	3104	2701
Missan	2.8	1552	2988
Basrah	7.6	4179	3406

² Unless otherwise stated, "education" refers to educational level attended by the respondent throughout this report when it is used as a background variable.

³ Principal components analysis was performed by using information on the ownership of consumer goods, dwelling characteristics, water and sanitation, number of persons per room, floor materials, roof materials, walls materials, cooking fuel; characteristics that are related to the household's wealth to assign weights (factor scores) to each of the household assets. Each household was then assigned a wealth score based on these weights and the assets owned by that household. The survey household population was then ranked according to the wealth score of the household they are living in, and was finally divided into 5 equal parts (quintiles) from lowest (poorest) to highest (richest). The assets used in these calculations were as follows: electricity, radio, television set, telephone, fridge, satellite, internet, shared grid, power generator, deep freezer, split unit air conditioner, air cooler, cold box, earthen water container, watch, mobile, bicycle, motorcycle or scooter, animal drawn cart, car or truck, boat, computer. The wealth index is assumed to capture the underlying long-term wealth through information on the household assets, and is intended to produce a ranking of households by wealth, from poorest to richest. The wealth index does not provide information on absolute poverty, current income or expenditure levels. The wealth scores calculated are applicable for only the particular data set they are based on. Further information on the construction of the wealth index can be found in *Filmer, D. and Pritchett, L., 2001. "Estimating wealth effects without expenditure data – or tears: An application to educational enrolments in states of India". Demography 38(1): 115-132.* *Gwatkin, D.R., Rutstein, S., Johnson, K., Pande, R. and Wagstaff. A., 2000. Socio-Economic Differences in Health, Nutrition, and Population. HNP/Poverty Thematic Group, Washington, DC: World Bank.* *Rutstein, S.O. and Johnson, K., 2004. The DHS Wealth Index. DHS Comparative Reports No. 6. Calverton, Maryland: ORC Macro.*

Table HH.4: Women's background characteristics

Percent and frequency distribution of women age 15-49 years by selected background characteristics, Iraq, 2011

		Number of women	
	Weighted percent	Weighted	Unweighted
Region			
Kurdistan Region	16.5	9134	13422
South/Centre Iraq	83.5	46060	41772
Area			
Urban	71.8	39650	32293
Rural	28.2	15544	22901
Age			
15-19	21.5	11875	12373
20-24	18.3	10096	10047
25-29	15.4	8522	8826
30-34	14.0	7709	7636
35-39	12.8	7078	6990
40-44	10.5	5777	5441
45-49	7.5	4136	3881
Marital status			
Currently married	62.8	34637	34222
Widowed	2.5	1386	1277
Divorced	1.5	808	670
Separated	0.3	190	164
Never married	32.9	18172	18861
Motherhood status			
Ever gave birth	88.1	32624	32254
Never gave birth	11.9	4398	4079
Birth in last two years			
Had a birth in last two years	24.6	13572	13994
Had no birth in last two years	42.5	23449	22339
Missing	32.9	18172	18861
Education			
None	16.3	8970	12671
Primary	40.4	22317	23234
Secondary +	42.8	23606	18883
Non-standard curriculum	0.5	298	402
Missing/DK	0.0	2	4
Wealth index quintiles			
Poorest	18.3	10078	15740
Second	19.2	10592	12095
Middle	20.2	11152	10664
Fourth	20.6	11363	9042
Richest	21.8	12009	7653
Total	100.0	55194	55194

The Iraq MICS4 sampled all women of reproductive age. About 72 percent of female respondents 15-49 years of age live in urban areas while the remaining live in rural areas (28 percent). The majority (55 percent) of all women are aged 15-29 years compared to only 18 percent in the oldest age groups, 40-49 years.

Of the 55,194 successfully interviewed women, 34,222 women (63 percent) were currently married, 2,111 women (4 percent) were formerly married, and 18,661 women (33 percent) were never married. Eighty-eight percent of those women who were ever married gave birth while 12 percent never did.

To assess their education, women were asked about highest level of school they reached. About 16 percent of all women never attended any form of education. About 40 percent of all women reached primary education and 43 percent reached secondary education or higher. Less than one percent of women have non-standard curriculum education which includes religious schools, such as Quranic schools, which do not teach a full standard school curriculum. In Iraq Malali (Al-Mulla) schools were known to teach non-standard curriculum (reading and writing, and some notions of Quran), and were common especially until the 1970s. The inclusion of the category of non-standard curriculum education is a deviation from MICS standard; this implies that education indicators estimated from MICS4 Iraq cannot be compared with those from other countries, although they can be compared with those from MICS3 Iraq.

Some background characteristics of children under-five are presented in Table HH.5. These include distribution of children by several attributes: sex, governorate, region, area of residence, age in months, mother's or caretaker's education and wealth index.

The percentage of male children under-five is similar to the female (51 percent vs 49 percent respectively). About one-fifth of children were under one year of age (21 percent), 21 percent were 12-23 months, 21 percent were 24-35 months, 20 percent were 36-47 months and 18 percent were 48-59 months. The majority (34 percent) of these children reside in rural areas whereas 66 percent reside urban areas. Eighteen percent of children's mothers or care takers were uneducated, 50 percent reached primary education while 32 percent reached secondary education or higher.

Table HH.5: Under-5's background characteristics

Percent and frequency distribution of children under five years of age by selected characteristics, Iraq, 2011

	Weighted percent	Number of under-5 children	
		Weighted	Unweighted
Sex			
Male	51.3	18638	18554
Female	48.7	17669	17753
Governorates			
Dohuk	3.7	1338	2191
Ninewa	9.7	3521	2646
Suleimaniya	4.1	1503	2578
Kirkuk	4.2	1539	1358
Erbil	4.6	1682	2060
Diyala	3.9	1417	1627
Al-Anbar	4.5	1638	2825
Baghdad	18.1	6588	2507
Babil	6.1	2219	1388
Karbala	3.4	1234	950
Wasit	3.6	1295	1982
Salahaddin	4.7	1722	2909
Al-Najaf	4.2	1529	981
Al-Qadisiya	3.8	1392	1594
Al-Muthanna	2.5	914	1754
Thi-Qar	6.3	2270	1932
Missan	3.6	1310	2453
Basrah	8.8	3196	2572
Region			
Kurdistan Region	12.5	4524	6829
South/Centre Iraq	87.5	31783	29478
Area			
Urban	66.5	24149	19653
Rural	33.5	12158	16654
Age			
0-5	10.3	3751	3882
6-11	10.8	3924	3757
12-23	20.6	7487	7411
24-35	20.6	7476	7354
36-47	19.5	7067	7254
48-59	18.2	6602	6649
Mother's education			
None	17.8	6473	8990
Primary	49.9	18106	18175
Secondary +	32.1	11667	9050
Non-standard curriculum	0.2	58	90
Missing/DK	0.0	2	2
Wealth index quintiles			
Poorest	24.3	8828	12415
Second	22.3	8095	8693
Middle	20.5	7444	6690
Fourth	18.0	6548	4938
Richest	14.9	5392	3571
Total	100.0	36307	36307

* Mother's education refers to educational level reached by mothers and caretakers of children under 5.

4. Child Mortality

One of the overarching goals of the Millennium Development Goals (MDGs) and the World Fit for Children (WFFC) is to reduce infant and under-five mortality. Specifically, the MDGs call for the reduction of under-five mortality by two-thirds between 1990 and 2015. Monitoring progress towards this goal is an important but difficult objective.

Mortality rates presented in this chapter are calculated from information collected in the birth histories of the Women's Questionnaire. Women in the age-group 15-49 were asked whether they had ever given birth, and if they had, they were asked to report the number of sons and daughters who live with them, the number who live elsewhere, and the number who have died. In addition, they were asked to provide a detailed birth history of their children in chronological order starting with the first child. Women were asked whether a birth was single or multiple; the sex of the child; the date of birth (month and year); survival status; age of the child on the date of the interview if alive; and if not alive; the age at death of each live birth. Since the primary causes of childhood mortality change as children age, mostly as a result of biological and environmental factors, childhood mortality rates are expressed by age categories and are customarily defined as follows:

- Neonatal mortality (NN): the probability of dying within the first month of life
- Postneonatal mortality (PNN): the difference between infant and neonatal mortality
- Infant mortality (${}_1q_0$): the probability of dying between birth and the first birthday
- Child mortality (${}_4q_0$): the probability of dying between one and five years of age
- Under-five mortality (${}_5q_0$): the probability of dying between birth and the fifth birthday

The rates of childhood mortality are expressed as deaths per 1,000 live births, except in the case of child mortality, which is expressed as deaths per 1,000 children surviving to age one.

Table CM.1 presents neonatal, post neonatal, infant, child and under-five mortality rates for the three recent five year periods before the survey. Neonatal mortality in the most recent five year period is estimated at 20 per 1,000 live births, while the postneonatal mortality rate is estimated as 12 per 1,000 live births.

The infant mortality rate in the five years preceding the survey is 32 per 1,000 live births and under-five mortality is 37 deaths per 1,000 live births for the same period, indicating that the majority of under-five deaths (87 percent) die before they reach their first birthday.

Table CM.1 also provides estimates of mortality rates during the last three five-year periods preceding the survey, thus providing information on recent trends. The table shows that at the national level, relatively little improvement has taken place during the last 15 years, with under-five mortality at 45 per 1,000 during the 10-14 year period preceding the survey, and 37 per 1,000 live births during the most recent five-year period, roughly referring to the years 2006-2011. The rate of improvement is even slower for neonatal and especially post-neonatal mortality.

Table CM.1: Early childhood mortality rates

Neonatal, post-neonatal, infant, child and under-five mortality rates for five year periods preceding the survey, Iraq, 2011

	Neonatal mortality rate ¹	Post-neonatal mortality rate ²	Infant mortality rate ³	Child mortality rate ⁴	Under-five mortality rate ⁵
Years preceding the survey					
0-4	20	12	32	5	37
5-9	22	10	33	5	38
10-14	24	13	37	8	45

¹ MICS indicator 1.3² MICS indicator 1.4³ MICS indicator 1.2; MDG indicator 4.2⁴ MICS indicator 1.5⁵ MICS indicator 1.1; MDG indicator 4.1

Post-neonatal mortality rates are computed as the difference between the infant and neonatal mortality rates

Table CM.2 provides estimates of child mortality by sex, governorates, region, area of residence and mother's education for the five years preceding the survey. Mortality rates are somewhat higher among males than females, especially during the first 28 days of life (neonatal mortality); 24 vs. 16 neonatal deaths per 1,000 live births among males and females respectively. Mortality risk among children under five in rural areas is slightly higher than in urban areas. With respect to mother's education and household wealth, differentials of mortality rates for children under five are moderate, while no differences exist in neonatal mortality rates (around 20 deaths per 1,000 live births).

Mortality rates have also been calculated for the 18 governorates. Generally all mortality rates (except infant mortality) are somewhat higher in the Centre/south governorates as a whole compared to Kurdistan Region. But neonatal mortality rates do not differ from one region to the other: around 20 neonatal deaths per 1,000 live births.

Table CM.2 and figure CM.1 shows wide differences between governorates in regard to levels of child mortality. The highest mortality rates for under five children are observed in Kirkuk governorate (51 per 1,000 live birth), while the lowest rates are observed in Suleimaniya (25 per 1,000 live birth). This means that children in Kirkuk governorate experience about 50 percent higher under-five mortality than the national average, whereas children in Suleimaniya governorate appear to be experiencing 30 percent lower mortality during the first five years of life compared to the rest of the country. Under-five mortality is also relatively higher than the national average in Salahaddin, Al-Qadisiya, Diyala, Ninewa, and Babil governorates.

Table CM.2: Early childhood mortality rates by socioeconomic characteristics

Neonatal, post-neonatal, infant, child and under-five mortality rates for the five year period preceding the survey, by socioeconomic characteristics, Iraq, 2011

	Neonatal mortality rate ¹	Post-neonatal mortality rate ²	Infant mortality rate ³	Child mortality rate ⁴	Under-five mortality rate ⁵
Sex					
Males	24	11	35	6	41
Females	16	12	29	5	34
Governorates					
Dohuk	25	9	33	3	37
Ninewa	22	17	40	6	46
Suleimaniya	18	6	24	1	25
Kirkuk	32	12	44	7	51
Erbil	20	7	27	7	34
Diyala	23	19	42	3	46
Al-Anbar	18	14	32	6	38
Baghdad	15	10	25	6	31
Babil	25	15	40	8	48
Karbala	24	5	28	7	35
Wasit	19	7	26	3	29
Salahaddin	21	15	35	7	42
Al-Najaf	24	9	33	4	37
Al-Qadisiya	24	13	36	8	44
Al-Muthanna	18	8	26	4	30
Thi-Qar	20	10	30	10	39
Missan	13	13	26	3	29
Basrah	19	13	32	2	34
Region					
Kurdistan Region	21	7	28	4	32
South/Centre Iraq	20	12	33	6	38
Area					
Urban	21	10	31	5	36
Rural	19	14	33	7	40
Mother's education					
None	21	13	35	5	40
Primary	20	12	32	6	38
Secondary+	21	9	30	5	35
Wealth index quintile					
Poorest	20	15	35	5	40
Second	22	11	32	5	37
Middle	18	11	29	8	37
Fourth	21	9	31	6	37
Richest	21	12	33	2	34
Total	20	12	32	5	37

¹ MICS indicator 1.3

² MICS indicator 1.4

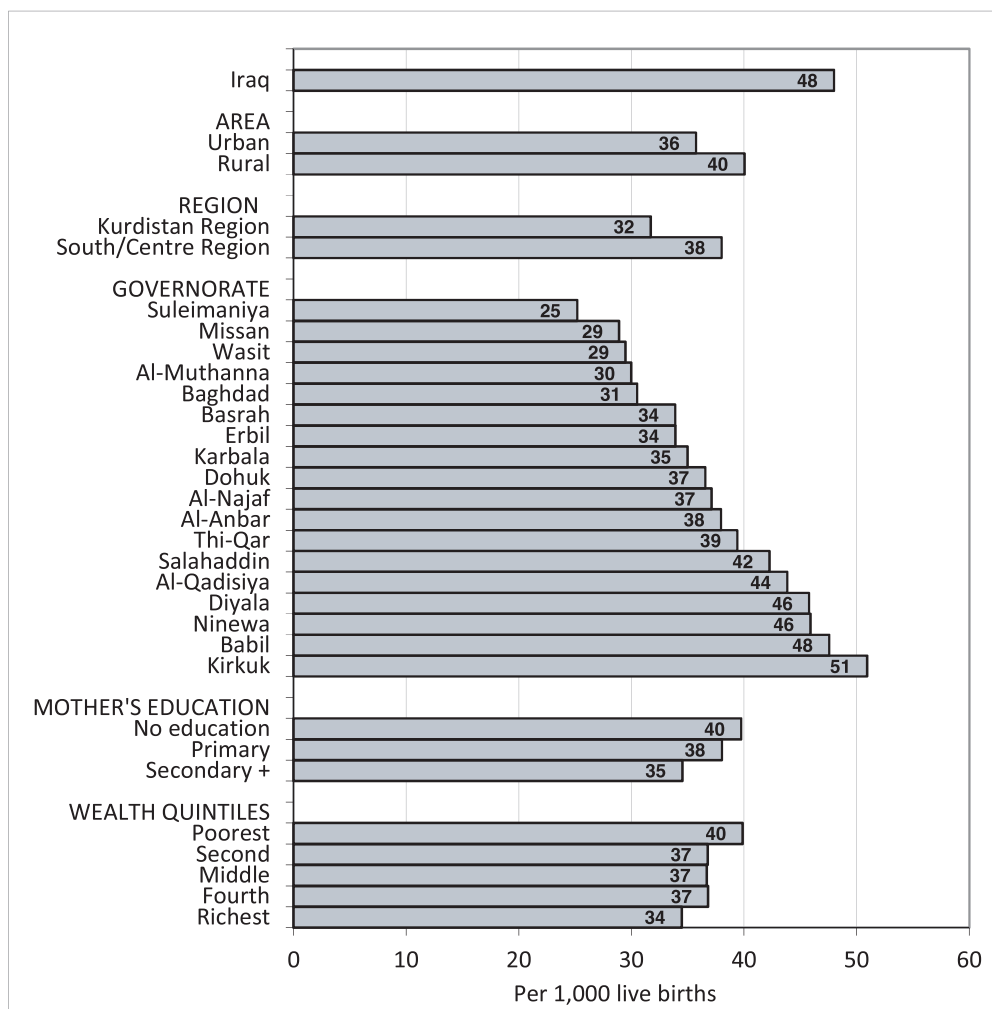
³ MICS indicator 1.2; MDG indicator 4.2

⁴ MICS indicator 1.5

⁵ MICS indicator 1.1; MDG indicator 4.1

Post-neonatal mortality rates are computed as the difference between the infant and neonatal mortality rates

Figure CM.1: Under-5 mortality rates by background characteristics, Iraq, 2011



Mortality rates were also estimated by biodemographic characteristics of the mother and the child that are known to play an important role in the mortality risks children are exposed to: mother's age at birth, birth order and birth intervals. Table CM.3 shows that children from mothers from 40 to 49 years have higher neonatal, post-neonatal and under-five mortality rates. Mortality rates of children whose birth order is seventh or higher have higher risk of mortality during the post-neonatal period (21 deaths per 1,000 live births). Regarding the inter birth intervals, the Table CM.3 shows that when the intervals are less than 2 years, the mortality rates are about twice as high as when the intervals are bigger, hence small birth intervals are associated with higher risks of mortality at any age of the children under-five.

Table CM.3: Child mortality by biodemographic characteristics, Iraq, 2011

Neonatal, post-neonatal, infant, child and under-five mortality rates for five year periods preceding the survey, Iraq, 2011

	Neonatal mortality rate	Post-neonatal mortality rate	Infant mortality rate	Child mortality rate	Under-five mortality rate
Mother's age at birth					
Less than 20	19	11	30	7	37
20-29	18	11	29	6	35
30-39	22	12	35	3	38
40-49	42	22	64	10	73
Birth order					
First birth	22	9	31	6	37
2-3	17	11	27	6	33
4-6	24	12	36	5	40
7+	24	21	45	5	49
Birth intervals					
Less than 2 years	35	23	59	8	66
2 years	15	11	26	4	30
3 years	15	10	25	6	30
4+ years	19	8	27	4	31

5. Nutrition

5.1. Nutritional Status

Children's nutritional status is a reflection of their overall health. When children have access to an adequate food supply, are not exposed to repeated illness, and are well cared for, they reach their growth potential and are considered well nourished.

Malnutrition is associated with more than half of all child deaths worldwide. Undernourished children are more likely to die from common childhood ailments, and for those who survive, have recurring sicknesses and faltering growth. Three-quarters of the children who die from causes related to malnutrition were only mildly or moderately malnourished – showing no outward sign of their vulnerability. The Millennium Development target is to reduce by half the proportion of people who suffer from hunger between 1990 and 2015. A reduction in the prevalence of malnutrition will also assist in the goal to reduce child mortality.

In a well-nourished population, there is a reference distribution of height and weight for children under age five. Under-nourishment in a population can be gauged by comparing children to a reference population. The reference population used in this report is based on new WHO growth standards. Each of the three nutritional status indicators can be expressed in standard deviation units (z-scores) from the median of the reference population.

Weight-for-age is a measure of both acute and chronic malnutrition. Children whose weight-for-age is more than two standard deviations below the median of the reference population are considered moderately or severely underweight while those whose weight-for-age is more than three standard deviations below the median are classified as severely underweight.

Height-for-age is a measure of linear growth. Children whose height-for-age is more than two standard deviations below the median of the reference population are considered short for their age and are classified as moderately or severely stunted. Those whose height-for-age is more than three standard deviations below the median are classified as severely stunted. Stunting is a reflection of chronic malnutrition as a result of failure to receive adequate nutrition over a long period and resulting from recurrent or chronic illness.

Finally, children whose weight-for-height is more than two standard deviations below the median of the reference population are classified as moderately or severely wasted, while those who fall more than three standard deviations below the median are classified as severely wasted. Wasting is usually the result of a recent nutritional deficiency. The indicator may exhibit significant seasonal shifts associated with changes in the availability of food or disease prevalence.

In MICS, weights and heights of all children under-five years of age were measured using anthropometric equipment recommended by UNICEF (www.childinfo.org). Findings in this section are based on the results of these measurements.

Table NU.1 shows percentages of children classified into each of these categories, based on the anthropometric measurements that were taken during fieldwork. Additionally, the table includes the percentage of children who are overweight, which takes into account those

children whose weight for height is above 2 standard deviations from the median of the reference population, and mean z-scores for all three anthropometric indicators.

Children whose full birth date (month and year) were not obtained, and children whose measurements are outside a plausible range are excluded from Table NU.1. Children are excluded from one or more of the anthropometric indicators when their weights and heights have not been measured, whichever applicable. For example if a child has been weighed but his/her height has not been measured, the child is included in underweight calculations, but not in the calculations for stunting and wasting. Percentages of children by age and reasons for exclusion are shown in the data quality tables DQ.6 and DQ.7. Overall, 98 percent of children had both their weights and heights measured (Table DQ.6). Table DQ.7 shows that due to incomplete dates of birth, implausible measurements, and missing weight and/or height, 0.2 percent of children have been excluded from calculations of the weight-for-age indicator, while the figures are 0.6 for the height-for-age indicator, and 1 for the weight-for-height indicator.

The anthropometric measurements indicate that over eight percent of children under age five in Iraq are moderately or severely underweight and close to four percent are severely underweight (Table NU.1). Nearly one-fourth (23 percent) of children are severely or moderately stunted (or too short for their age) and 10 percent are severely stunted. Seven percent of children are severely or moderately wasted (or too thin for their height) and four percent are severely wasted. Results also show that 1 in 9 children in Iraq suffer from overweight (12 percent).

Results in Table NU.1 show variation in the nutrition indicators according to some background characteristics. In general, children from the centre/south governorates fare worse than children in the Kurdistan region, though differences are not always large. Figure NU.1 shows that the highest percentages of malnourished children are found in Al-Anbar, Baghdad and Najaf governorates, with a range of moderate and severe underweight of 10-13 percent. In the opposite situation, Suleimaniya, Kirkuk and Babil governorates had the lowest percentage in this indicator ranging between 4-5 percent. The highest percentages of moderate and severe stunting were observed in Al-Anbar, Baghdad, Diyala and Najaf governorates ranging 28-35 percent. The situation in these governorates differs markedly with Suleimaniya and Kirkuk where around 10 percent of children are stunted.

Table NU.1: Nutritional status of children

Percentage of children under age 5 by nutritional status according to three anthropometric indices: weight for age, height for age, and weight for height, Iraq, 2011

	Weight for age					Height for age					Weight for height				
	Underweight			Stunted		Wasted			Overweight		Mean Z-Score (SD)			Number of children under age 5	
	percent below -2 SD [1]	-3 SD [2]	Mean Z-Score (SD)	percent below -2 SD [3]	-3 SD [4]	percent below -2 SD [5]	-3 SD [6]	Mean Z-Score (SD)	percent below -2 SD [7]	+2 SD [8]	Mean Z-Score (SD)	percent above	Number of children under age 5		
Sex															
Male	9.4	4.4	-0.3	23.5	10.7	7.9	4.1	-0.9	18162	12.5	0.3	12.5	18160		
Female	7.4	3.1	-0.3	21.7	9.0	6.8	3.0	-0.8	17267	11.1	0.3	11.1	17237		
Area															
Urban	8.4	3.9	-0.3	21.8	9.6	7.5	3.7	-0.8	23501	12.3	0.3	12.3	23487		
Rural	8.5	3.3	-0.4	24.1	10.5	7.0	3.3	-1.0	11928	10.9	0.3	10.9	11910		
Governorates															
Dohuk	5.9	3.3	-0.1	19.0	7.1	4.0	2.0	-0.8	1314	12.5	0.5	12.5	1303		
Ninewa	6.3	2.6	-0.2	23.5	7.4	4.4	2.1	-1.0	3503	10.9	0.5	10.9	3504		
Suleimaniya	4.1	1.8	0.0	10.0	3.6	3.4	1.6	-0.4	1458	10.9	0.3	10.9	1455		
Kirkuk	3.7	1.5	0.0	11.1	2.1	1.8	0.7	-0.6	1538	7.5	0.4	7.5	1535		
Erbil	9.7	6.4	-0.3	17.5	7.7	7.2	4.2	-0.7	1548	10.2	0.2	10.2	1544		
Diwala	7.3	2.6	-0.1	30.1	12.9	6.4	3.3	-1.0	1389	18.0	0.7	18.0	1385		
Al-Anbar	13.4	7.6	-0.4	35.2	19.3	9.6	5.3	-1.4	1601	22.8	0.6	22.8	1592		
Baghdad	11.2	5.3	-0.3	32.0	17.7	12.2	5.8	-1.0	6330	19.0	0.4	19.0	6381		
Babil	5.1	1.6	-0.3	12.6	4.5	4.1	1.8	-0.7	2165	6.4	0.2	6.4	2159		
Karbala	7.2	2.3	-0.3	16.6	5.6	5.4	2.3	-0.9	1234	7.1	0.2	7.1	1230		
Wasit	9.4	4.0	-0.4	23.6	9.2	7.8	4.1	-1.0	1241	10.2	0.2	10.2	1236		
Salahaddin	9.2	4.6	-0.2	24.6	11.9	7.2	3.5	-0.9	1666	14.2	0.4	14.2	1662		
Al-Najaf	10.4	4.9	-0.4	28.5	14.2	7.1	4.4	-1.1	1508	15.5	0.3	15.5	1515		
Al-Qadisiya	7.1	2.7	-0.4	19.0	6.7	6.6	2.7	-0.8	1380	6.7	0.1	6.7	1373		
Al-Muthanna	8.7	2.6	-0.6	18.9	8.8	15.0	5.9	-0.5	911	5.9	-0.4	5.9	912		
Thi-Qar	8.7	2.7	-0.6	18.1	6.1	7.8	2.8	-0.8	2256	3.9	-0.2	3.9	2260		
Missan	7.6	2.6	-0.5	16.9	5.6	6.2	2.5	-0.8	1292	4.2	0.0	4.2	1291		
Basrah	9.9	4.2	-0.5	21.6	8.3	7.3	4.2	-0.9	3095	9.2	0.1	9.2	3058		
Region															
Kurdistan Region	6.7	3.9	-0.1	15.4	6.1	5.0	2.6	-0.7	4320	11.1	0.4	11.1	4301		
South/Centre Iraq	8.7	3.7	-0.3	23.6	10.4	7.7	3.7	-0.9	31108	11.9	0.3	11.9	31095		

Table NU.1: Nutritional status of children

Percentage of children under age 5 by nutritional status according to three anthropometric indices: weight for age, height for age, and weight for height, Iraq, 2011

Age	Weight for age				Height for age				Weight for height			
	Underweight		Stunted		Wasted		Overweight		Mean Z-Score (SD)		Number of children under age 5	
	percent below	Mean Z-Score (SD)	percent below	Mean Z-Score (SD)	percent below	Mean Z-Score (SD)	percent below	Mean Z-Score (SD)	percent below	Mean Z-Score (SD)	percent below	Mean Z-Score (SD)
	- 2 SD [1]	- 3 SD [2]	- 2 SD [3]	- 3 SD [4]	- 2 SD [5]	- 3 SD [6]	- 2 SD [7]	- 3 SD [8]	- 2 SD [9]	- 3 SD [10]	- 2 SD [11]	- 3 SD [12]
0-5	13.6	6.5	22.9	10.9	15.2	8.1	16.4	8.1	0.1	0.1	3670	3624
6-11	11.0	5.0	20.4	10.6	10.8	4.7	12.7	4.7	0.1	0.1	3809	3838
12-23	7.7	3.7	26.3	12.0	6.5	3.2	13.2	3.2	0.4	0.4	7301	7351
24-35	8.2	4.4	24.7	11.4	7.6	3.9	11.8	3.9	0.3	0.3	7296	7286
36-47	6.7	2.3	22.0	8.3	5.2	2.3	10.5	2.3	0.3	0.3	6914	6896
48-59	7.0	2.2	17.7	6.4	3.9	1.7	8.7	1.7	0.2	0.2	6439	6401
Mother's education												
None	9.8	4.1	24.7	11.1	7.3	3.7	9.1	3.7	0.2	0.2	6316	6304
Primary	7.8	3.3	23.1	9.7	6.7	3.0	11.6	3.0	0.3	0.3	17735	17693
Secondary +	8.7	4.3	20.6	9.5	8.4	4.3	13.7	4.3	0.3	0.3	11320	11341
Non-standard curriculum	6.1	0.6	17.8	6.6	1.9	1.9	8.3	1.9	0.3	0.3	56	56
Wealth index quintiles												
Poorest	9.1	3.8	24.9	10.2	7.3	3.5	9.0	3.5	0.2	0.2	8653	8629
Second	8.8	3.6	23.3	9.5	7.4	3.5	11.6	3.5	0.3	0.3	7913	7912
Middle	7.7	3.4	20.5	9.1	6.9	3.2	11.6	3.2	0.3	0.3	7269	7257
Fourth	8.2	4.2	21.7	10.3	7.5	4.0	13.4	4.0	0.3	0.3	6349	6356
Richest	8.2	3.7	21.7	10.4	7.8	3.8	15.3	3.8	0.4	0.4	5245	5242
Total	8.5	3.7	22.6	9.9	7.4	3.6	11.8	3.6	0.3	0.3	35429	35396

¹ MICS indicator 2.1a and MDG indicator 1.8

² MICS indicator 2.1b

³ MICS indicator 2.2a, ⁴ MICS indicator 2.2b

⁵ MICS indicator 2.3a, ⁶ MICS indicator 2.3b

Table NU.1b: Nutritional status of children based on NCHS/CDC/WHO International Reference Population

Percentage of children under age 5 by nutritional status according to three anthropometric indices: weight for age, height for age, and weight for height, based on NCHS/CDC/WHO International Reference Population, Iraq, 2011

	Weight for age				Height for age				Weight for height			
	Underweight		Stunted		Wasted		Overweight		Mean Z-score		Number of children	
	percent below	Mean Z-score (SD)	percent below	Mean Z-score (SD)	percent below	Mean Z-score (SD)	percent below	Mean Z-score (SD)	percent below	Mean Z-score (SD)	percent below	Number of children under age 5
Sex	- 2 SD [1]	- 3 SD [2]	- 2 SD [3]	- 3 SD [4]	- 2 SD [5]	- 3 SD [6]	- 2 SD [7]	- 3 SD [8]	- 2 SD [9]	- 3 SD [10]	- 2 SD [11]	- 3 SD [12]
Male	8.9	2.2	18.7	7.8	5.7	1.5	8.6	.1	18297	18279	18279	18279
Female	8.2	1.8	18.1	6.9	5.6	1.4	9.2	.2	17281	17271	17271	17271
Area												
Urban	8.3	2.0	17.7	7.2	5.6	1.4	9.4	.1	23608	23595	23595	23595
Rural	9.1	1.9	19.8	7.8	5.8	1.5	7.9	.1	11970	11955	11955	11955
Governorates												
Dohuk	4.5	.5	13.7	3.5	2.7	.9	9.0	.3	1305	1295	1295	1295
Ninewa	6.1	1.6	18.7	4.3	3.4	.9	8.1	.3	3518	3517	3517	3517
Suleimaniya	3.6	.4	14.73	2.4	1.9	.3	7.8	.1	1452	1447	1447	1447
Kirkuk	4.1	.9	15.39	1.5	1.8	.2	5.9	.2	1539	1539	1539	1539
Erbil	8.7	1.7	12.4	4.0	4.7	1.2	7.0	.1	1531	1535	1535	1535
Diyala	7.5	.9	13.95	9.8	5.5	1.4	14.0	.5	1395	1395	1395	1395
Al-Anbar	11.6	4.6	16.14	14.7	7.0	2.5	18.4	.5	1614	1614	1614	1614
Baghdad	11.9	3.0	28.7	15.1	9.0	2.5	14.5	.3	6408	6408	6408	6408
Babil	4.9	.9	10.2	3.1	3.2	.6	4.7	.0	2168	2165	2165	2165
Karbala	7.9	1.8	12.4	3.5	3.6	.8	4.6	.0	1234	1234	1234	1234
Wasit	9.7	2.2	19.2	6.2	5.9	1.9	7.7	.1	1249	1246	1246	1246
Salahaddin	8.6	2.5	19.8	9.0	5.9	1.5	10.2	.2	1677	1676	1676	1676
Al-Najaf	10.5	3.0	24.0	10.7	5.9	1.7	10.6	.1	1525	1525	1525	1525
Al-Qadisiya	7.6	1.4	14.7	4.4	4.8	1.0	4.8	.0	1385	1384	1384	1384
Al-Muthanna	10.0	1.5	15.7	7.0	13.8	4.0	3.7	-5	913	913	913	913
Thi-Qar	11.2	2.1	14.3	4.8	7.2	.9	2.6	-4	2265	2265	2265	2265
Missan	9.2	2.3	12.4	4.4	4.8	1.0	2.2	-2	1294	1293	1293	1293
Basrah	8.8	1.7	16.0	5.6	5.6	1.3	8.3	.0	3107	3099	3099	3099

Table NU.1b: Nutritional status of children based on NCHS/CDC/WHO International Reference Population

Percentage of children under age 5 by nutritional status according to three anthropometric indices: weight for age, height for age, and weight for height, based on NCHS/CDC/WHO International Reference Population, Iraq, 2011

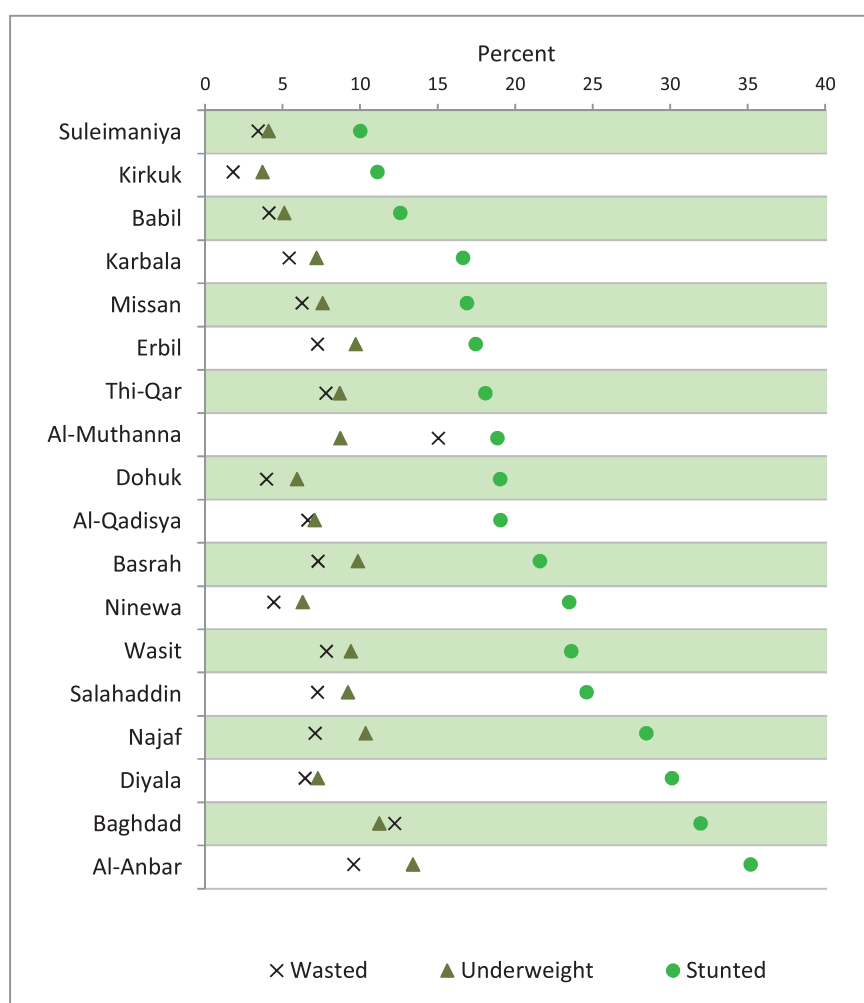
Region	Weight for age				Height for age				Weight for height			
	Underweight		Stunted		Wasted		Overweight		Mean Z-score		Number of children under age 5	
	percent below	Mean Z-score (SD)	percent below	Mean Z-score (SD)	percent below	Mean Z-score (SD)	percent below	Mean Z-score (SD)	percent below	Mean Z-score (SD)	Number of children under age 5	Number of children under age 5
Age	- 2 SD [1]	- 3 SD [2]	- 2 SD [3]	- 3 SD [4]	- 2 SD [5]	- 3 SD [6]	- 2 SD [7]	- 3 SD [8]	- 2 SD [9]	- 3 SD [10]	- 2 SD [11]	- 3 SD [12]
Kurdistan Region	5.7	.9	11.0	3.3	3.2	.8	7.9	.1	4288	.1	4277	
South/Centre Iraq	9.0	2.2	19.4	7.9	6.0	1.5	9.1	.1	31290	.1	31274	
0-5	3.1	.4	14.2	2.8	7.4	1.5	15.8	.4	3673	.4	3668	
6-11	11.2	3.2	18.0	8.2	8.5	1.8	11.4	.1	3848	.1	3844	
12-23	11.7	2.9	24.3	10.4	6.8	1.7	10.3	.1	7356	.1	7349	
24-35	8.8	2.6	18.2	8.6	5.6	1.6	6.5	.0	7343	.0	7338	
36-47	7.3	1.4	17.2	6.4	4.3	1.2	6.6	.1	6920	.1	6920	
48-59	7.6	1.2	15.8	5.6	3.2	.9	7.1	.1	6438	.1	6431	
Mother's education												
None	10.4	2.4	20.3	8.3	5.8	1.5	6.8	.0	6344	.0	6334	
Primary	7.9	1.8	18.6	7.0	5.4	1.3	8.8	.1	17780	.1	17766	
Secondary +	8.6	2.1	17.0	7.5	6.1	1.7	10.3	.2	11397	.2	11392	
Non-standard curriculum	6.7	.6	13.2	6.6	2.5	.6	3.9	.1	56	.1	56	
Wealth index quintiles												
Poorest	10.4	2.2	20.2	7.9	5.9	1.5	6.1	.0	8680	.0	8665	
Second	8.3	1.9	18.7	6.9	5.6	1.4	9.1	.1	7939	.1	7936	
Middle	7.3	1.8	16.6	6.0	5.2	1.1	8.9	.1	7294	.1	7294	
Fourth	8.0	2.1	18.3	8.3	5.6	1.6	10.4	.2	6388	.2	6382	
Richest	8.3	2.0	17.6	8.0	6.0	1.7	11.5	.3	5277	.3	5273	
Total	8.6	2.0	18.4	7.4	5.7	1.4	8.9	.1	35578	.1	35551	

Nevertheless, as it can be seen in the Map NU.1, stunted children are not homogenously distributed within governorates. For example, northern districts in Baghdad governorate are among those with the lowest levels; or conversely, although Dohuk and Suleimaniya are among the governorates with the lowest proportions of stunted children under five, in two of their districts stunting affects to more than one third of the under five children.

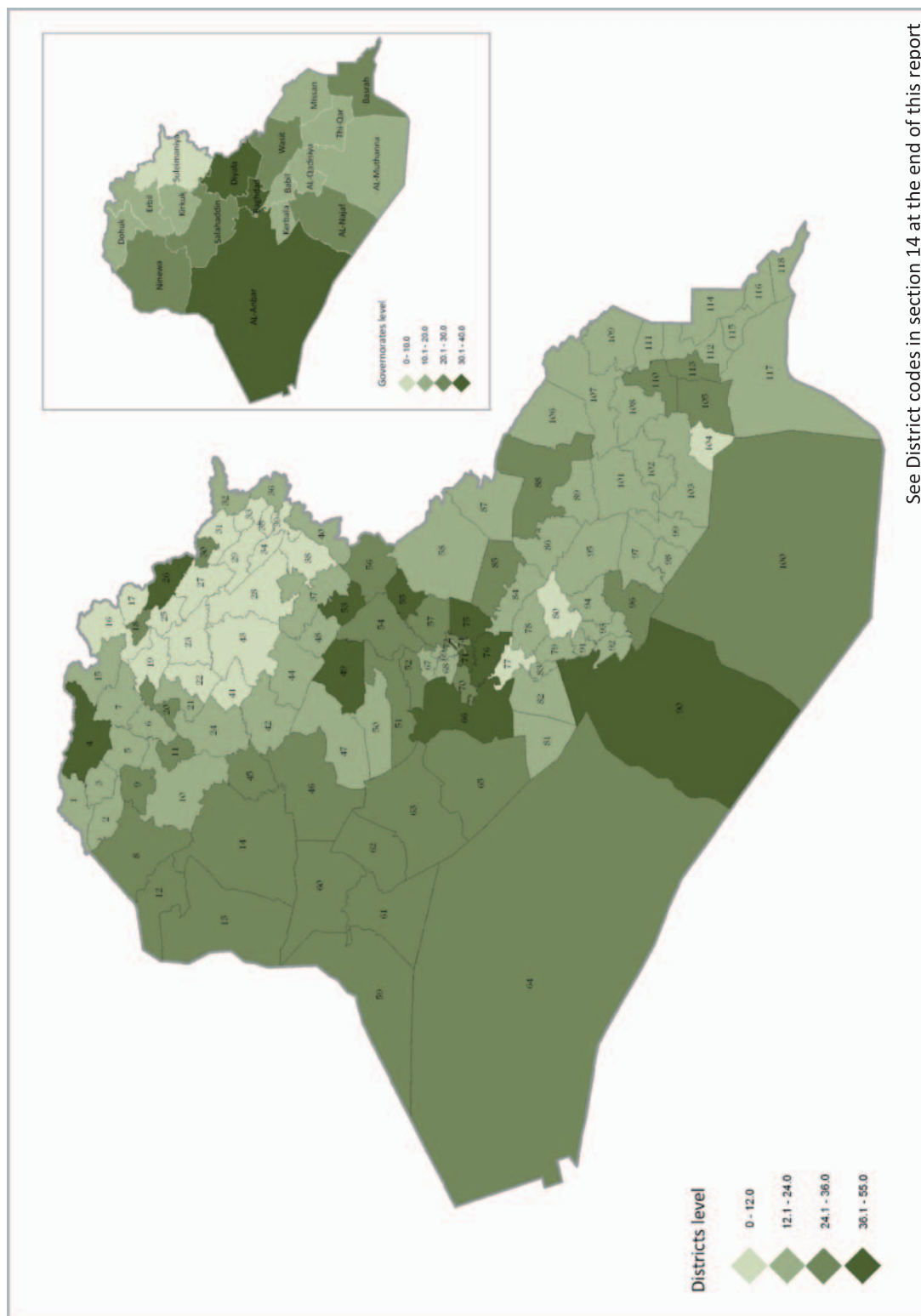
The age distribution shows highest percentages of all three malnutrition indicators among children 0-5 months. Moreover, children 12-23 months are more likely to be stunted compared to other children who are younger or older. Malnourishment is strongly related to mother's education. There is a weak association between household wealth levels and nutritional levels.

Table NU.1b presents the anthropometric calculations based upon the out-dated reference growth standards (NCHS/CDC/WHO). This information is provided only for the sake of comparative or trend analysis with anthropometric calculations elaborated before the release of the new reference growth standards by WHO in 2006, as is the case of MICS-3.

Figure NU.1: Nutritional status of children, Iraq, 2011



Map NU.1: Percentage of children under-five years who are stunted, Iraq, 2011



See District codes in section 14 at the end of this report

5.2. Breastfeeding

Breastfeeding for the first few years of life protects children from infection, provides an ideal source of nutrients, and is economical and safe. However, many mothers stop breastfeeding too soon and there are often pressures to switch to infant formula, which can contribute to growth faltering and micronutrient malnutrition and is unsafe if clean water is not readily available.

WHO/UNICEF have the following feeding recommendations:

- Exclusive breastfeeding for first six months
- Continued breastfeeding for two years or more
- Safe and age-appropriate complementary foods beginning at six months
- Frequency of complementary feeding: two times per day for 6-8 month olds; three times per day for 9-11 month olds

It is also recommended that breastfeeding be initiated within one hour of birth.

The indicators related to recommended child feeding practices are as follows:

- Early initiation of breastfeeding (within 1 hour of birth)
- Exclusive breastfeeding rate (< 6 months)
- Predominant breastfeeding (< 6 months)
- Continued breastfeeding rate (at 1 year and at 2 years)
- Duration of breastfeeding
- Age-appropriate breastfeeding (0-23 months)
- Introduction of solid, semi-solid and soft foods (6-8 months)
- Minimum meal frequency (6-23 months)
- Milk feeding frequency for non-breastfeeding children (6-23 months)
- Bottle feeding (0-23 months)

Table NU.2 provides the proportion of children born in the last two years who were breastfed at some stage, those who were first breastfed within one hour and one day of birth, and those who received a prelacteal feed. Although a very important step in management of lactation and establishment of a physical and emotional relationship between the baby and the mother, only 43 percent of babies were breastfed for the first time within one hour of birth, while 83 percent of newborns in Iraq start breastfeeding within one day of birth. Moreover, among children born in the last two years preceeding the survey, 92 percent had ever-breastfed and less than half of them received a prelacteal feed (46 percent).

Women differed in the timing of initial breastfeeding according to governorates, particularly when considering initiation of breastfeeding within one hour. Women in governorates of Kirkuk and Al-Anbar (10 percent), Al-Najaf (20 percent) and Karbala (21 percent), were the least likely to start breastfeeding within one hour while the contrary was in Thi-Qar (73 percent) and Basrah (68 percent) (Figure NU.2). Although initiation of breastfeeding within one hour of birth is generally at low levels, breastfeeding increases sharply during the first day of birth. It is worth noting that initial breastfeeding was negatively associated with wealth and mother's education (Table NU.2), with children born in the wealthiest

households and from highly educated mothers being less likely to be breastfed for the first time within one hour of birth. Children born in private hospitals were also less likely to be initially breastfed (27 percent) compared to those born in public sector hospitals (42 percent) or at home (51 percent).

In Table NU.3, breastfeeding status is based on the reports of mothers/caretakers of children's consumption of food and fluids during the previous day or night prior to the interview. Exclusively breastfed refers to infants who received only breast milk (and vitamins, mineral supplements, or medicine). The table shows exclusive breastfeeding of infants during the first six months of life, as well as continued breastfeeding of children at 12-15 and 20-23 months of age.

Only 20 percent of children aged less than six months are exclusively breastfed, a level considerably lower than recommended. At age 12-15 months, half of the children are breastfed (52 percent), while this percentage is 23 percent for children aged 20-23 months.

Figure NU.2: Percentage of mothers who started breastfeeding within one hour and within one day of birth, Iraq, 2011

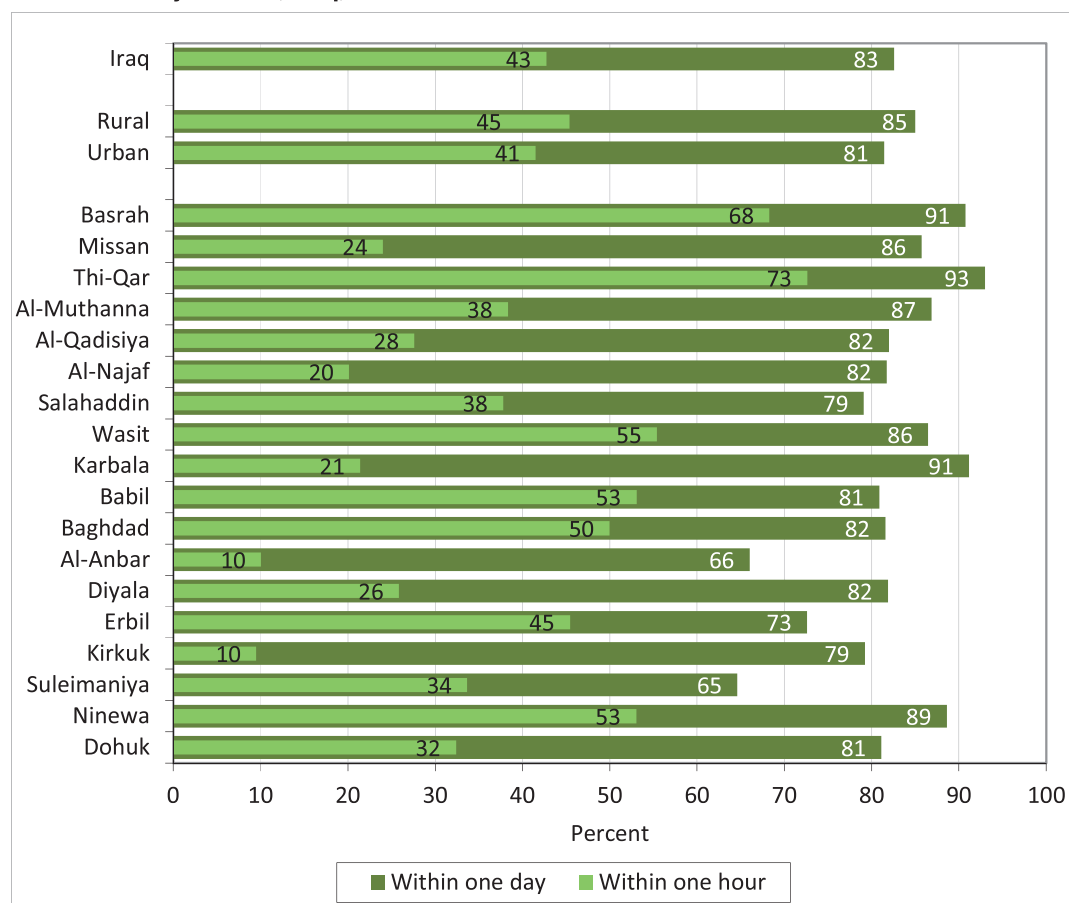


Table NU.2: Initial breastfeeding

Percentage of last-born children in the 2 years preceding the survey who were ever breastfed, percentage who were breastfed within one hour of birth and within one day of birth, and percentage who received a prelacteal feed, Iraq , 2011

	Percentage who were ever breastfed [1]	Percentage who were first breastfed:		Percentage who received a prelacteal feed	Number of last-born children in the two years preceding the survey
		Within one hour of birth [2]	Within one day of birth		
Governorates					
Dohuk	95.3	32.4	81.1	50.0	488
Ninewa	92.6	53.0	88.6	40.6	1307
Suleimaniya	91.5	33.7	64.6	62.6	517
Kirkuk	96.1	9.5	79.2	78.2	579
Erbil	91.4	45.4	72.6	57.2	625
Diyala	89.8	25.8	81.9	27.9	555
Al-Anbar	91.2	10.1	66.0	56.4	606
Baghdad	86.9	50.0	81.6	35.1	2503
Babil	90.3	53.1	80.9	25.9	828
Karbala	98.9	21.4	91.2	36.8	497
Wasit	92.9	55.4	86.5	41.5	461
Salahaddin	89.7	37.8	79.1	74.7	657
Al-Najaf	93.4	20.1	81.7	54.4	575
Al-Qadisiya	92.4	27.6	82.0	59.5	520
Al-Muthanna	94.2	38.3	86.8	49.2	333
Thi-Qar	96.7	72.6	93.0	46.9	853
Missan	94.5	24.0	85.7	45.8	479
Basrah	96.2	68.3	90.7	34.3	1189
Area					
Urban	91.3	41.5	81.4	43.4	9195
Rural	94.0	45.4	85.0	49.9	4377
Region					
Kurdistan Region	92.6	37.8	72.6	56.8	1630
South/Centre Iraq	92.1	43.4	83.9	44.0	11942
Months since last birth					
0-11 months	91.9	42.8	82.0	44.8	7230
12-23 months	92.5	42.7	83.1	46.4	6342
Assistance at delivery					
Skilled attendant	92.2	41.7	82.4	45.1	12333
Traditional birth attendant	92.6	53.6	84.7	49.3	1211
Other/Missing	(85.9)	(54.3)	(77.3)	(60.3)	28
Place of delivery					
Public sector health facility	93.1	42.0	83.6	44.8	9219
Private sector health facility	87.3	27.0	70.6	47.0	1171
Home	91.3	50.8	84.2	47.1	3171
Other/Missing	(*)	(*)	(*)	(*)	11

Table NU.2: Initial breastfeeding

Percentage of last-born children in the 2 years preceding the survey who were ever breastfed, percentage who were breastfed within one hour of birth and within one day of birth, and percentage who received a prelacteal feed, Iraq , 2011

	Percentage who were ever breastfed [1]	Percentage who were first breastfed:		Percentage who received a prelacteal feed	Number of last-born children in the two years preceding the survey
		Within one hour of birth [2]	Within one day of birth		
Mother's education					
None	94.1	48.0	83.9	53.2	2303
Primary	92.6	42.4	83.0	47.1	6728
Secondary +	90.7	40.7	81.2	39.3	4536
Non-standard curriculum	(*)	(*)	(*)	(*)	6
Wealth index quintiles					
Poorest	93.3	48.8	85.1	50.9	3109
Second	92.6	41.5	82.3	50.9	2902
Middle	92.7	43.3	83.4	42.7	2861
Fourth	91.7	40.5	82.8	41.4	2564
Richest	89.9	37.6	77.7	39.0	2136
Total	92.2	42.8	82.6	45.5	13572

¹ MICS indicator 2.4

² MICS indicator 2.5

() Figures that are based on 25-49 unweighted cases

(*) Figures that are based on less than 25 unweighted cases

It is observed that the level of exclusive breastfeeding is similar between the centre/south governorates and the Kurdistan Region. Nonetheless, differences exist between governorates with Diyala and Al-Muthanna ranking least (6 percent) and Karbala ranking first among all governorates in the exclusive breastfeeding indicator (40 percent). It is also observed that the percentage of exclusive breastfeeding increases with mothers education and decreases with wealth.

Figure NU.3 shows the detailed pattern of breastfeeding by the child's age in months, according to data shown in Table NU.4. Even at the earliest ages, the majority of children are receiving liquids or foods other than breast milk. By the end of the fifth month, the percentage of children exclusively breastfed is six percent. Only one out of every five children are receiving breast milk at two years of age. Complementary feeding is introduced at early ages with the percentage of children who are breastfed and given complementary food reaching 43 percent by nine months of age.

Table NU.3: Breastfeeding

Percentage of living children according to breastfeeding status at selected age groups, Iraq, 2011

	Children age 0-5 months			Children age 12-15 months		Children age 20-23 months	
	Percent exclusively breastfed [1]	Percent predominantly breastfed [2]	Number of children	Percent breastfed (Continued breastfeeding at 1 year) [3]	Number of children	Percent breastfed (Continued breastfeeding at 2 years) [4]	Number of children
Sex							
Male	20.7	47.0	1889	53.6	1416	23.2	1253
Female	18.4	44.6	1862	49.3	1340	22.2	1115
Governorates							
Dohuk	17.2	35.7	149	34.9	88	29.4	98
Ninewa	28.4	53.6	342	60.9	277	21.0	220
Suleimaniya	22.9	31.9	137	49.3	111	32.7	65
Kirkuk	17.6	50.4	182	38.5	148	16.7	122
Erbil	19.7	32.0	181	46.6	106	26.8	123
Diyala	5.5	29.6	155	46.3	118	12.0	94
Al-Anbar	8.8	29.5	165	61.9	149	19.9	98
Baghdad	19.1	40.2	679	39.7	532	27.4	395
Babil	30.8	53.4	244	58.7	156	26.8	151
Karbala	39.8	68.5	137	57.7	78	19.6	92
Wasit	19.7	51.4	129	54.4	104	20.5	91
Salahaddin	12.3	35.9	224	44.1	141	8.7	115
Al-Najaf	10.3	57.1	142	54.7	90	19.0	111
Al-Qadisiya	20.0	63.0	146	62.7	90	21.9	83
Al-Muthanna	6.3	39.6	85	73.6	69	22.9	57
Thi-Qar	19.7	55.5	226	71.5	153	36.1	150
Missan	28.9	52.8	118	64.1	104	26.8	84
Basrah	15.6	49.8	312	46.6	241	15.5	220
Area							
Urban	18.3	41.9	2532	47.9	1831	22.3	1626
Rural	22.3	53.9	1218	58.7	924	23.7	742
Region							
Kurdistan Region	19.8	33.1	466	44.2	305	29.0	286
South/Centre Iraq	19.5	47.6	3284	52.4	2451	21.9	2083
Mother's education							
None	22.9	51.3	655	62.8	501	27.1	396
Primary	20.6	48.4	1839	51.3	1377	23.1	1216
Secondary +	16.4	39.1	1254	45.4	876	19.9	756
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	0
Wealth index quintiles							
Poorest	22.6	55.4	891	61.3	703	23.2	553
Second	23.7	47.7	794	52.5	595	20.2	490
Middle	16.6	45.1	722	52.0	568	22.4	542
Fourth	16.8	42.2	735	43.3	498	22.2	381
Richest	16.6	34.3	609	42.0	393	26.3	403
Total	19.6	45.8	3751	51.5	2756	22.7	2368

¹ MICS indicator 2.6² MICS indicator 2.9³ MICS indicator 2.7⁴ MICS indicator 2.8

(*) Figures that are based on less than 25 unweighted cases

Figure NU.3: Pattern of breastfeeding by child age in months, Iraq, 2011

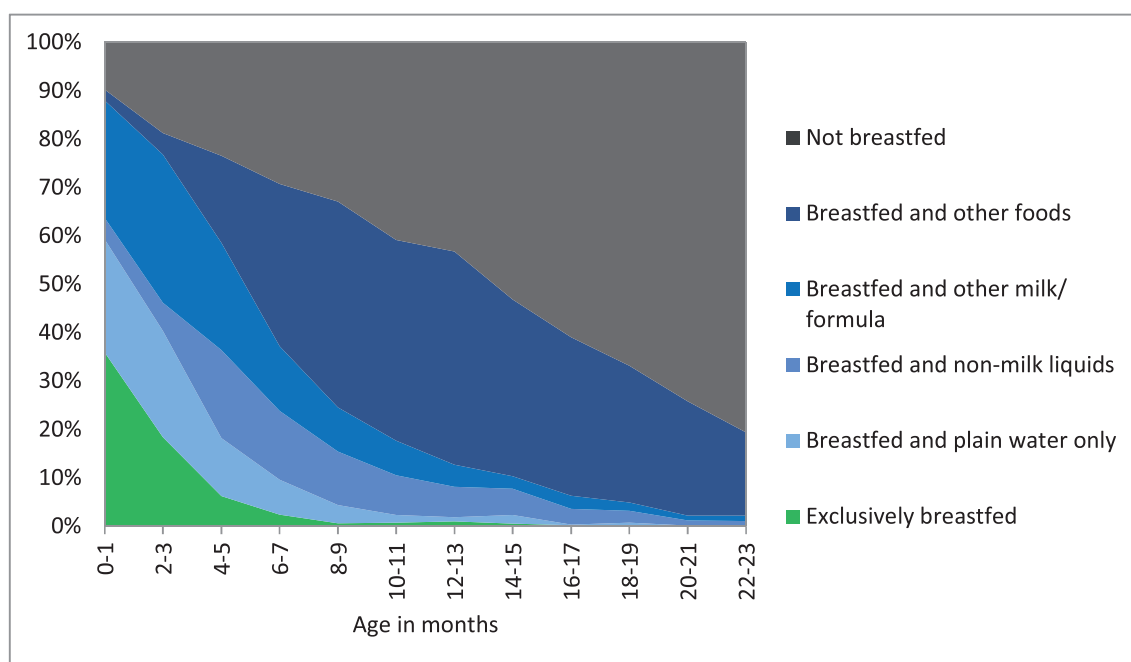


Table NU.4. Feeding patterns by age

Percent distribution of children age 0-23 months by feeding pattern, Iraq, 2011

Age	Infant feeding pattern						Total	Number of children
	Exclusively breastfed	Breastfed and plain water only	Breastfed and non-milk liquids	Breastfed and other milk / formula	Breastfed and other foods	Weaned (not breastfed)		
0-1	35.9	23.4	4.4	24.3	2.3	9.7	100.0	1125
2-3	18.4	22.0	5.8	30.6	4.5	18.7	100.0	1372
4-5	6.2	12.0	18.2	22.1	18.0	23.4	100.0	1254
6-7	2.3	7.3	14.2	13.3	33.6	29.3	100.0	1401
8-9	.6	3.8	11.1	9.1	42.5	32.9	100.0	1279
10-11	.7	1.6	8.2	7.1	41.5	40.9	100.0	1245
12-13	1.0	.8	6.3	4.6	44.1	43.2	100.0	1300
14-15	.5	1.8	5.4	2.6	36.5	53.2	100.0	1456
16-17	.2	.1	3.3	2.7	32.8	60.9	100.0	1132
18-19	.0	.7	2.4	1.8	28.2	66.9	100.0	1231
20-21	.0	.1	1.1	1.0	23.6	74.2	100.0	1237
22-23	.0	.2	.9	1.1	17.2	80.6	100.0	1131

Table NU.5 shows the median duration of breastfeeding by selected background characteristics. Among children under age three, the median duration is 13.8 months for any breastfeeding, less than one month for exclusive breastfeeding (0.6 months), and slightly more than two months for predominant breastfeeding (2.1 months).

Table NU.5: Duration of breastfeeding

Median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children age 0-35 months, Iraq, 2011

months, Iraq, 2011

	Median duration (in months) of			Number of children age 0-35 months
	Any breastfeeding [1]	Exclusive breastfeeding	Predominant breastfeeding	
Sex				
Male	14.5	0.6	2.2	11651
Female	13.2	0.6	2.0	10987
Governorates				
Dohuk	9.7	0.5	0.7	832
Ninewa	15.3	1.2	2.9	2219
Suleimaniya	12.3	0.5	0.5	854
Kirkuk	9.9	0.6	2.5	999
Erbil	11.1	0.7	1.5	1037
Diyala	9.0	0.4	0.6	914
Al-Anbar	15.4	0.5	0.6	1039
Baghdad	11.8	0.6	1.2	4188
Babil	16.1	1.4	2.8	1382
Karbala	17.2	0.9	3.9	801
Wasit	14.7	0.6	2.7	791
Salahaddin	11.5	0.5	1.0	1113
Al-Najaf	14.0	0.4	3.1	929
Al-Qadisiya	14.5	0.5	4.1	847
Al-Muthanna	17.5	0.4	1.9	552
Thi-Qar	17.7	0.6	3.2	1357
Missan	15.3	0.7	2.8	786
Basrah	12.8	0.6	2.5	1998
Region				
Kurdistan Region	9.3	0.6	0.7	2723
South/Centre Iraq	14.0	0.6	2.3	19915
Area				
Urban	12.4	0.6	1.7	15201
Rural	15.9	0.6	2.9	7437
Mother's education				
None	15.8	0.6	2.7	3949
Primary	13.8	0.6	2.3	11290
Secondary+	11.7	0.6	1.6	7377
Wealth index quintiles				
Poorest	15.3	0.6	3.2	5368
Second	14.4	0.6	2.2	4952
Middle	13.6	0.6	2.1	4742
Fourth	11.4	0.5	1.8	4114
Richest	12.1	0.6	1.3	3462
Median	13.8	0.6	2.1	22638
Mean for all children (0-35 months)	13.6	1.2	3.5	22638

¹ MICS indicator 2.10

Results show that the median duration of breastfeeding is lower in Kurdistan region (9.3 months) than at the centre/south governorates (14 months). Duration of breastfeeding is shorter in Diyala, Kirkuk, Dohuk and Erbil (with medians from 9 to 11 months) and longer in Karbala, Al-Muthanna and Thi-Qar (17 percent). Less educated mothers, mothers from poor households, and those living in rural areas, tend to exhibit higher median exclusive breastfeeding levels.

The adequacy of infant feeding in children under 24 months is provided in Table NU.6. Different criteria of feeding are used depending on the age of the child. For infants aged 0-5 months, exclusive breastfeeding is considered as age-appropriate feeding, while infants aged 6-23 months are considered to be appropriately fed if they are receiving breastmilk and solid, semi-solid or soft food. As a result of these feeding patterns, only 28 percent of children aged 6-23 months are being appropriately fed. The level of appropriate feeding drops in the governorates of Al-Anbar, Baghdad and Salahuddin (15, 17 and 20 percent respectively). It is worth noting that appropriate feeding was more common among uneducated and poor women.

Appropriate complementary feeding of children from 6 months to two years of age is particularly important for growth and development and the prevention of undernutrition. Continued breastfeeding beyond six months should be accompanied by consumption of nutritionally adequate, safe and appropriate complementary foods that help meet nutritional requirements when breastmilk is no longer sufficient. This requires that for breastfed children, two or more meals of solid, semi-solid or soft foods are needed if they are six to eight months old, and three or more meals if they are 9-23 months of age. For children 6-23 months and older who are not breastfed, four or more meals of solid, semi-solid or soft foods or milk feeds are needed.

Table NU.6: Age-appropriate breastfeeding

Percentage of children age 0-23 months who were appropriately breastfed during the previous day, Iraq, 2011

	Children age 0-5 months		Children age 6-23 months		Children age 0-23 months	
	Percent exclusively breastfed [1]	Number of children	Percent currently breastfeeding and receiving solid, semi-solid or soft foods	Number of children	Percent appropriately breastfed [2]	Number of children
Sex						
Male	20.7	1889	28.8	5865	26.8	7754
Female	18.4	1862	26.5	5546	24.5	7408
Governorates						
Dohuk	17.2	149	26.8	404	24.2	553
Ninewa	28.4	342	30.5	1110	30.0	1452
Suleimaniya	22.9	137	28.3	404	26.9	541
Kirkuk	17.6	182	27.7	497	25.0	678
Erbil	19.7	181	21.0	484	20.7	665
Diyala	5.5	155	22.0	460	17.9	615
Al-Anbar	8.8	165	15.4	523	13.8	688
Baghdad	19.1	679	17.4	2152	17.8	2831
Babil	30.8	244	38.3	668	36.3	911
Karbala	39.8	137	40.0	419	40.0	556
Wasit	19.7	129	28.7	411	26.6	540
Salahaddin	12.3	224	20.4	551	18.1	775
Al-Najaf	10.3	142	32.4	478	27.3	620
Al-Qadisiya	20.0	146	28.4	435	26.3	581
Al-Muthanna	6.3	85	48.7	278	38.8	363
Thi-Qar	19.7	226	41.6	725	36.4	950
Missan	28.9	118	31.0	412	30.5	530
Basrah	15.6	312	30.5	1000	27.0	1311
Region						
Kurdistan Region	19.8	466	25.1	1292	23.7	1758
South/Centre Iraq	19.5	3284	28.0	10119	25.9	13403
Area						
Urban	18.3	2532	25.5	7727	23.7	10259
Rural	22.3	1218	32.2	3684	29.8	4903
Mother's education						
None	22.9	655	31.2	1948	29.1	2603
Primary	20.6	1839	28.8	5685	26.8	7524
Secondary +	16.4	1254	24.2	3774	22.2	5028
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	7
Wealth index quintiles						
Poorest	22.6	891	30.9	2662	28.8	3552
Second	23.7	794	29.6	2417	28.2	3211
Middle	16.6	722	26.1	2460	23.9	3182
Fourth	16.8	735	25.7	2088	23.3	2823
Richest	16.6	609	24.8	1785	22.7	2394
Total	19.6	3751	27.7	11411	25.7	15162

¹ MICS indicator 2.6² MICS indicator 2.14

(*) Figures that are based on less than 25 unweighted cases

Overall, 36 percent of infants age 6-8 months received solid, semi-solid, or soft foods (Table NU.7). Among currently breastfeeding infants this percentage is 34 while it is 40 among infants currently not breastfeeding.

Table NU.8 presents the proportion of children age 6-23 months who received semi-solid or soft foods at least the minimum number of times during the previous day according to their breastfeeding status (see the note in Table NU.7 for a definition of minimum number of times for different age groups). Overall, more than half of the children age 6-23 months (55 percent) were receiving solid, semi-solid and soft foods the minimum number of times. A higher proportion of children in urban areas (57 percent) were enjoying the minimum meal frequency compared to children in rural areas (51 percent). Compliance with the minimum meal frequency recommendation is more common among older children. Among children 6-23 months who are currently breastfed, one-fourth of them (26 percent) were receiving solid, semi-solid and soft foods at least the minimum number of times. Among non-breastfeeding children, 81 percent of the children were fed as recommended.

The continued practice of bottle-feeding is a concern because of the possible contamination due to unsafe water and lack of hygiene in preparation. Table NU.9 shows that bottle-feeding is still prevalent in Iraq. Thirty-seven percent of children younger than two years are fed using a bottle with a nipple, with a much higher percentage in Kurdistan region (54 percent) than at the centre/south governorates (35 percent). Bottle use is higher among children 6-11 months (43 percent) and, apart from Kurdish governorates it is also common in Baghdad governorate (49 percent). It was also observed that the percentage of bottle use is lower among mothers with no education (27 percent) compared to mothers with primary (35 percent) and those with secondary or higher education (46 percent), and it is bottle feeding is also more common in richest households than in poorest ones. This is in consonance with the pattern of breastfeeding practices mentioned above.

Table NU.7: Introduction of solid, semi-solid or soft foods

Percentage of infants age 6-8 months who received solid, semi-solid or soft foods during the previous day, Iraq, 2011

	Currently breastfeeding		Currently not breastfeeding		All	
	Percent receiving solid, semi-solid or soft foods	Number of children age 6-8 months	Percent receiving solid, semi-solid or soft foods	Number of children age 6-8 months	Percent receiving solid, semi-solid or soft foods [1]	Number of children age 6-8 months
Sex						
Male	32.8	718	38.4	316	34.5	1034
Female	34.1	679	42.2	308	36.6	987
Area						
Urban	31.5	919	37.9	446	33.6	1366
Rural	37.0	477	46.2	177	39.5	655
Total	33.4	1397	40.2	624	35.5	2021

¹ MICS indicator 2.12

Table NU.8: Minimum meal frequency

Percentage of children age 6-23 months who received solid, semi-solid, or soft foods (and milk feeds for non-breastfeeding children) the minimum number of times or more during the previous day, according to breastfeeding status, Iraq, 2011

	Currently breastfeeding		Currently not breastfeeding		All		
	Percent receiving solid, semi-solid and soft foods the minimum number of times	Number of children age 6-23 months	Percent receiving at least 2 milk feeds [1]	Percent receiving solid, semi-solid and soft foods or milk feeds 4 times or more	Number of children age 6-23 months	Percent with minimum meal frequency [2]	Number of children age 6-23 months
Sex							
Male	26.8	2826	81.1	80.2	3039	54.5	5865
Female	25.2	2566	81.1	81.0	2980	55.2	5546
Age							
6-8 months	23.2	1397	97.4	89.9	624	43.8	2021
9-11 months	18.9	1187	95.3	87.0	716	44.5	1904
12-17 months	27.4	1862	84.9	82.3	2026	56.0	3888
18-23 months	36.7	946	70.6	75.4	2653	65.2	3599
Governorates							
Dohuk	27.6	159	89.4	85.9	245	62.9	404
Ninewa	31.0	556	80.4	81.0	554	55.9	1110
Suleimaniya	27.4	187	93.3	86.1	217	59.0	404
Kirkuk	43.5	172	78.7	89.8	325	73.7	497
Erbil	15.6	192	91.1	80.4	292	54.7	484
Diyala	4.6	172	80.4	75.4	288	48.9	460
Al-Anbar	5.7	252	71.4	58.7	271	33.2	523
Baghdad	20.2	1003	88.3	86.6	1149	55.7	2152
Babil	29.3	344	85.0	90.4	324	58.9	668
Karbala	58.3	215	72.4	88.2	204	72.8	419
Wasit	17.0	199	67.2	67.6	212	43.1	411
Salahaddin	22.0	209	78.0	72.7	342	53.5	551
Al-Najaf	37.6	221	63.5	68.7	258	54.4	478
Al-Qadisiya	26.2	226	76.3	79.5	209	51.8	435
Al-Muthanna	38.6	165	65.2	86.5	113	58.1	278
Thi-Qar	41.1	440	72.4	80.0	284	56.4	725
Missan	16.9	216	83.6	79.4	196	46.7	412
Basrah	16.8	464	84.8	78.2	536	49.7	1000
Region							
Kurdistan Region	23.2	538	91.2	83.8	754	58.6	1292
South/Centre Iraq	26.4	4854	79.7	80.1	5265	54.3	10119
Area							
Urban	25.4	3449	82.9	81.9	4277	56.6	7727
Rural	27.2	1943	76.7	77.5	1742	51.0	3684
Mother's education							
None	22.2	1027	73.3	74.6	920	47.0	1948
Primary	27.1	2735	80.1	80.5	2950	54.8	5685
Secondary +	26.6	1628	85.8	83.4	2146	58.9	3774
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	5
Wealth index quintiles							
Poorest	25.9	1377	74.6	76.4	1285	50.2	2662
Second	26.5	1161	77.2	76.3	1256	52.4	2417
Middle	22.1	1136	83.2	80.8	1324	53.7	2460
Fourth	28.2	922	85.3	84.6	1166	59.7	2088
Richest	28.8	796	86.6	86.6	989	60.9	1785
Total	26.0	5392	81.1	80.6	6019	54.8	11411

¹ MICS indicator 2.15

² MICS indicator 2.13

(*) Figures that are based on less than 25 unweighted cases

Among currently breastfeeding children age 6-8 months, minimum meal frequency is defined as children who also received solid, semi-solid or soft foods 2 times or more. Among currently breastfeeding children age 9-23 months, receipt of solid, semi-solid or soft foods at least 3 times constitutes minimum meal frequency. For non-breastfeeding children age 6-23 months, minimum meal frequency is defined as children receiving solid, semi-solid or soft foods, and milk feeds, at least 4 times during the previous day.

Table NU.9: Bottle feeding

Percentage of children age 0-23 months who were fed with a bottle with a nipple during the previous day, Iraq, 2011

	Percentage of children age 0-23 months fed with a bottle with a nipple [1]	Number of children age 0-23 months
Sex		
Male	36.9	7754
Female	37.6	7408
Age		
0-5 months	32.1	3751
6-11 months	42.9	3924
12-23 months	36.8	7487
Governorates		
Dohuk	50.1	553
Ninewa	27.5	1452
Suleimaniya	52.5	541
Kirkuk	48.4	678
Erbil	57.2	665
Diyala	35.7	615
Al-Anbar	38.7	688
Baghdad	48.8	2831
Babil	18.5	911
Karbala	30.8	556
Wasit	28.7	540
Salahaddin	38.6	775
Al-Najaf	33.0	620
Al-Qadisiya	31.2	581
Al-Muthanna	16.7	363
Thi-Qar	27.0	950
Missan	26.2	530
Basrah	35.9	1311
Region		
Kurdistan Region	53.5	1758
South/Centre Iraq	35.1	13403
Area		
Urban	42.3	10259
Rural	26.6	4903
Mother's education		
None	26.6	2603
Primary	35.3	7524
Secondary +	45.6	5028
Non-standard curriculum	(*)	7
Wealth index quintiles		
Poorest	26.9	3552
Second	35.3	3211
Middle	36.9	3182
Fourth	42.8	2823
Richest	49.0	2394
Total	37.2	15162

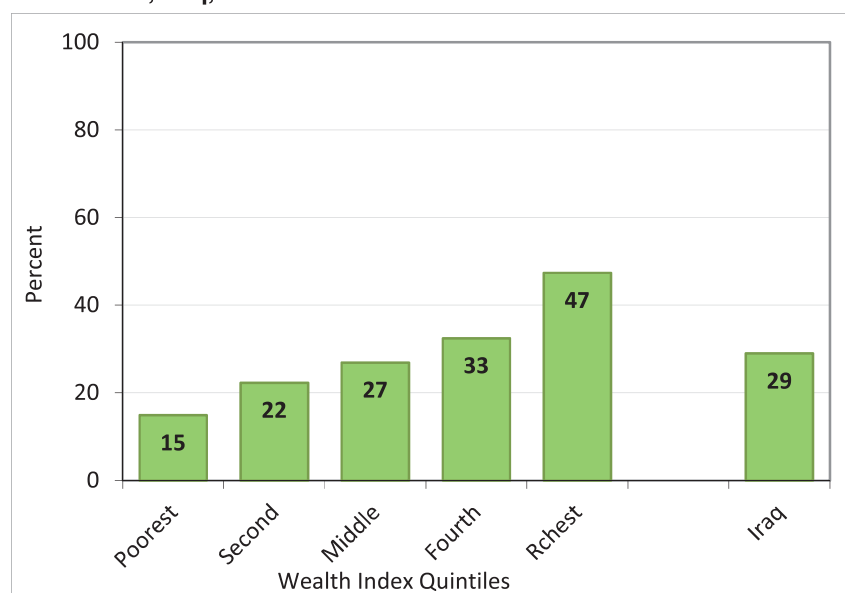
¹ MICS indicator 2.11

(*) Figures that are based on less than 25 unweighted cases

5.3. Salt Iodization

Iodine Deficiency Disorders (IDD) is the world's leading cause of preventable mental retardation and impaired psychomotor development in young children. In its most extreme form, iodine deficiency causes cretinism. It also increases the risks of stillbirth and miscarriage in pregnant women. Iodine deficiency is most commonly and visibly associated with goitre. IDD takes its greatest toll in impaired mental growth and development, contributing in turn to poor school performance, reduced intellectual ability, and impaired work performance. The international goal is to achieve sustainable elimination of iodine deficiency by 2005. The indicator is the percentage of households consuming adequately iodized salt (>15 parts per million).

Figure NU. 4: Percentage of households consuming adequately iodized salt, Iraq, 2011



In almost all households, salt used for cooking was tested for iodine content by using salt test kits. Iodine tests in each household tested for the presence of potassium iodide or potassium iodate because salt with either one or the other type can be found in Iraqi markets. Table NU.10 shows that in a very small proportion of households, there was no salt available. In 29 percent of households, salt was found to contain 15 parts per million (ppm) or more of iodine. Use of iodized salt was less extended in the centre/south governorates (27 percent) than in the Kurdistan Region (38 percent). Across governorates, use of iodized salt consumption was lower in Babil, Al-Qadisiya and Al-Muthanna (from 10 to 12 percent) and higher in Dohuk households (77 percent). One third (34 percent) of urban households were found to be using adequately iodized salt while only half of the rural households do. The use of iodized salt in the richest households is 47 percent, which is three times higher than in the poorest ones: 15 percent (Figure NU.4).

Table NU.10: Iodized salt consumption

Percent distribution of households by consumption of iodized salt, Iraq, 2011

	Percentage of households in which salt was tested	Number of households	Percent of households with Salt test result					Total	Number of households in which salt was tested or with no salt
			No salt	Salt test result					
				Not iodized 0 PPM	>0 and <15 PPM	15+ PPM [1]			
Governorates									
Dohuk	99.9	1245	0.0	8.6	14.6	76.7	100.0	1244	
Ninewa	100.0	2909	0.0	63.3	14.1	22.6	100.0	2909	
Suleimaniya	99.6	2718	0.3	16.8	43.8	39.1	100.0	2716	
Kirkuk	99.5	1762	0.3	9.8	27.1	62.8	100.0	1757	
Erbil	99.6	2392	0.2	19.9	64.7	15.3	100.0	2387	
Diyala	99.2	1515	0.2	50.9	20.6	28.3	100.0	1505	
Al-Anbar	99.7	1354	0.1	68.4	9.0	22.5	100.0	1352	
Baghdad	99.9	7863	0.0	44.2	23.4	32.3	100.0	7857	
Babil	99.7	1884	0.1	70.5	19.4	10.0	100.0	1881	
Karbala	100.0	1152	0.0	52.8	14.0	33.2	100.0	1152	
Wasit	99.4	1154	0.0	52.9	31.4	15.6	100.0	1148	
Salahaddin	99.1	1378	0.3	43.5	30.3	25.9	100.0	1371	
Al-Najaf	99.7	1357	0.3	47.7	27.4	24.6	100.0	1357	
Al-Qadisiya	99.7	1086	0.3	74.0	14.1	11.6	100.0	1086	
Al-Muthanna	100.0	651	0.0	73.1	15.0	11.9	100.0	651	
Thi-Qar	99.8	1715	0.2	62.8	24.0	13.0	100.0	1715	
Missan	98.1	957	1.8	80.2	2.3	15.7	100.0	957	
Basrah	99.7	2609	0.1	39.4	25.4	35.2	100.0	2603	
Region									
Kurdistan Region	99.7	6355	0.2	16.3	45.9	37.5	100.0	6346	
South/Centre Iraq	99.7	29346	0.2	51.6	21.1	27.2	100.0	29302	
Area									
Urban	99.7	26325	0.2	39.2	26.9	33.7	100.0	26289	
Rural	99.7	9376	0.1	62.6	21.5	15.8	100.0	9359	
Wealth index quintiles									
Poorest	99.4	6941	0.3	60.2	24.6	14.9	100.0	6920	
Second	99.7	7206	0.2	50.5	27.0	22.3	100.0	7195	
Middle	99.7	7057	0.2	47.6	25.3	26.9	100.0	7052	
Fourth	99.7	7060	0.1	41.4	26.0	32.5	100.0	7051	
Richest	99.8	7436	0.1	27.9	24.6	47.4	100.0	7431	
Total	99.7	35701	0.2	45.3	25.5	29.0	100.0	35648	
¹ MICS indicator 2.16									

¹ MICS indicator 2.16

5.4. Vitamin A Supplements

Vitamin A is essential for eye health and proper functioning of the immune system. It is found in foods such as milk, liver, eggs, red and orange fruits, red palm oil and green leafy vegetables, although the amount of vitamin A readily available to the body from these sources varies widely. In developing areas of the world, where vitamin A is largely consumed in the form of fruits and vegetables, daily per capita intake is often insufficient to meet dietary requirements. Inadequate intakes are further compromised by increased requirements for the vitamin as children grow or during periods of illness, as well as increased losses during common childhood infections. As a result, vitamin A deficiency is quite prevalent in the developing world and particularly in countries with the highest burden of under-five deaths.

The 1990 World Summit for Children set the goal of virtual elimination of vitamin A deficiency and its consequences, including blindness, by the year 2000. This goal was also endorsed at the Policy Conference on Ending Hidden Hunger in 1991, the 1992 International Conference on Nutrition, and the UN General Assembly's Special Session on Children in 2002. The critical role of vitamin A for child health and immune function also makes control of deficiency a primary component of child survival efforts, and therefore critical to the achievement of the fourth Millennium Development Goal: a two-thirds reduction in under-five mortality by the year 2015.

For countries with vitamin A deficiency problems, current international recommendations call for high-dose vitamin A supplementation every four to six months, targeted to all children between the ages of 6 to 59 months living in affected areas. Providing young children with two high-dose vitamin A capsules a year is a safe, cost-effective, efficient strategy for eliminating vitamin A deficiency and improving child survival. Giving vitamin A to new mothers who are breastfeeding helps protect their children during the first months of life and helps to replenish the mother's stores of vitamin A, which are depleted during pregnancy and lactation. For countries with vitamin A supplementation programs, the definition of the indicator is the percent of children 6-59 months of age receiving at least one high dose vitamin A supplement in the last six months.

Based on UNICEF/WHO guidelines, the Iraqi Ministry of Health recommends that by 9 months age children should have been given one dose of vitamin A of 100,000 IU, and by 18 month age a dose of vitamin A capsule of 200,000 IU. In some parts of the country, vitamin A capsules are linked to immunization services and are given when the child has contact with these services after six months of age. It is also recommended that mothers take a vitamin A supplement within eight weeks of giving birth due to increased vitamin A requirements during pregnancy and lactation.

Within the six months prior to the Iraq MICS4, 30 percent of children aged 9-14 months received a 100,000 IU vitamin A supplement, while only 19 percent children 18-23 months received a 200,000 IU dose (Table NU.11). When we look at the two age groups simultaneously, and include also the information provided by mother's reports, it turns out that 39 percent of the children 9-14 months and 18-23 months received a vitamin A dose in the six months prior to the interview. Ninewa is the governorate with the lowest vitamin A supplementation coverage (10 percent) and Missan has the highest coverage (65 percent).

Table NU.11: Children's vitamin A supplementation

Percent distribution of children age 9-14 and 18-23 months by receipt of a high dose vitamin A supplement in the last 6 months, Iraq, 2011

	According to vaccination card:				According to mother's report:	Percentage of children 9-14 and 18-23 months who received Vitamin A during the last 6 months	Number of children age 9-14 and 18-23 months
	Percentage who received a Dose of 100,000 International Units	Number of children 9-14 months	Percentage who received a Dose of 200,000 International Units	Number of children 18-23 months	Percentage of children 9-14 and 18-23 months who received any preventive dose		
Sex							
Male	32.1	1970	19.0	1865	29.3	40.1	3835
Female	28.7	1923	18.3	1734	29.8	38.1	3657
Governorates							
Dohuk	55.7	131	48.9	145	34.9	61.2	276
Ninewa	4.9	381	3.1	326	8.9	10.1	707
Suleimaniya	62.3	153	29.1	99	39.0	58.4	252
Kirkuk	29.5	172	18.7	166	29.8	35.1	338
Erbil	46.0	186	22.5	164	41.7	56.1	350
Diyala	18.6	164	9.9	143	15.0	22.1	307
Al-Anbar	11.5	194	3.2	151	16.7	20.3	345
Baghdad	33.6	739	17.6	649	37.0	44.5	1388
Babil	34.5	195	28.1	233	37.7	49.2	428
Karbala	30.7	120	15.9	139	26.2	34.1	258
Wasit	26.1	138	10.8	141	26.3	33.0	280
Salahaddin	16.2	186	12.4	182	18.3	25.5	368
Al-Najaf	23.7	158	8.3	157	24.8	30.9	315
Al-Qadisiya	28.5	135	19.9	131	25.1	40.1	266
Al-Muthanna	23.9	99	17.0	83	51.7	53.4	182
Thi-Qar	20.0	247	13.3	234	30.5	34.2	482
Missan	55.0	148	41.5	134	40.9	64.8	282
Basrah	46.1	345	29.9	323	33.2	50.6	669
Region							
Kurdistan Region	54.0	471	33.5	408	38.8	58.4	878
South/Centre Iraq	27.2	3422	16.8	3192	28.3	36.5	6614
Area							
Urban	34.4	2627	21.8	2432	34.5	44.5	5058
Rural	22.2	1266	12.1	1168	19.3	27.9	2434
Mother's education							
None	23.6	714	15.9	591	21.9	30.2	1305
Primary	28.3	1951	17.5	1823	25.2	34.6	3774
Secondary +	37.8	1227	21.8	1184	40.5	51.0	2411
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	2
Wealth index quintiles							
Poorest	22.1	976	11.2	831	19.3	26.3	1807
Second	30.5	848	17.9	743	27.1	37.3	1591
Middle	30.3	834	23.4	788	28.8	39.5	1621
Fourth	34.5	688	23.3	631	34.9	47.0	1319
Richest	40.3	548	18.9	607	44.0	52.1	1155
Total	30.4	3893	18.7	3599	29.6	39.1	7492

(*) Figures that are based on less than 25 unweighted cases

Vitamin A supplementation coverage is higher in Kurdistan than in the rest of the country, and it is also more common in urban than rural areas. The mother's level of education increases the likelihood of children receiving vitamin A supplementation. The percentage of children 9-14 and 18-23 months receiving a supplement in the last six months increases from 30 percent among children whose mothers have no education to 35 percent of those whose mothers have primary education and 51 percent among children of mothers with secondary or higher education. The coverage of this supplementation also increases with household wealth.

5.5. Low Birth Weight

Weight at birth is a good indicator not only of a mother's health and nutritional status but also the newborn's chances for survival, growth, long-term health and psychosocial development. Low birth weight (less than 2,500 grams) carries a range of grave health risks for children. Babies who were undernourished in the womb face a greatly increased risk of dying during their early months and years. Those who survive have impaired immune function and increased risk of disease; they are likely to remain undernourished, with reduced muscle strength, throughout their lives, and suffer a higher incidence of diabetes and heart disease in later life. Children born underweight also tend to have a lower IQ and cognitive disabilities, affecting their performance in school and their job opportunities as adults.

In the developing world, low birth weight stems primarily from the mother's poor health and nutrition. Three factors have most impact: the mother's poor nutritional status before conception, short stature (due mostly to under nutrition and infections during her childhood), and poor nutrition during the pregnancy. Inadequate weight gain during pregnancy is particularly important since it accounts for a large proportion of foetal growth retardation. Moreover, diseases such as diarrhoea and malaria, which are common in many developing countries, can significantly impair foetal growth if the mother becomes infected while pregnant.

In the industrialized world, cigarette smoking during pregnancy is the leading cause of low birth weight. In developed and developing countries alike, teenagers who give birth when their own bodies have yet to finish growing run the risk of bearing underweight babies.

One of the major challenges in measuring the incidence of low birth weight is the fact that more than half of infants in the developing world are not weighed. In the past, most estimates of low birth weight for developing countries were based on data compiled from health facilities. However, these estimates are biased for most developing countries because the majority of newborns are not delivered in facilities, and those who are represent only a selected sample of all births.

Because many infants are not weighed at birth and those who are weighed may be a biased sample of all births, the reported birth weights usually cannot be used to estimate the prevalence of low birth weight among all children. Therefore, the percentage of births weighing below 2,500 grams is estimated from two items in the questionnaire: the mother's assessment of the child's size at birth (i.e. very small, smaller than average, average, larger

than average, very large) and the mother's recollection of the child's weight or the weight as recorded on a health card if the child was weighed at birth.⁴

In Iraq, 53 percent of babies were weighed at birth with approximately 13 percent of infants estimated to weigh less than 2,500 grams at birth (Table NU.12). There are some variations by governorates. Firstly, while in Suleimaniya 77 percent of live births are weighted, in Al-Anbar and Al-Qadisiya about one third are weighed at birth. Nevertheless the governorates with the highest percentages of low birth weight children are Missan and Basrah (20 percent); in contrast Erbil, Al-Anbar, Baghdad and Suleimaniya have 10 percent of low birth weight children. The estimated percentage of low birth weight does not vary much by urban and rural areas or by mother's education, but the variation is slightly more conspicuous by wealth, with 16 percent of children in poorest households and 10 percent in the richest households weighting less than 2,500 grams at birth.

Table NU.12: Low birth weight infants

Percentage of last-born children in the 2 years preceding the survey that are estimated to have weighed below 2500 grams at birth and percentage of live births weighed at birth, Iraq, 2011

	Percent of live births:		Number of live births in the last 2 years
	Below 2500 grams [1]	Weighed at birth [2]	
Governorates			
Dohuk	14.9	58.0	488
Ninewa	11.9	49.7	1307
Suleimaniya	10.1	76.7	517
Kirkuk	11.6	56.7	579
Erbil	9.7	63.1	625
Diyala	10.5	61.7	555
Al-Anbar	9.6	36.4	606
Baghdad	9.7	52.5	2503
Babil	17.1	66.7	828
Karbala	16.9	60.9	497
Wasit	14.6	43.6	461
Salahaddin	13.2	57.7	657
Al-Najaf	11.4	45.9	575
Al-Qadisiya	13.6	37.3	520
Al-Muthanna	15.2	45.8	333
Thi-Qar	17.9	44.5	853
Missan	20.1	58.0	479
Basrah	19.5	42.9	1189
Region			
Kurdistan Region	11.4	65.9	1630
South/Centre Iraq	13.6	50.8	11942
Area			
Urban	12.9	57.5	9195
Rural	14.4	42.3	4377

⁴ For a detailed description of the methodology, see Boerma, J. T., Weinstein, K. I., Rutstein, S.O., and Sommerfelt, A. E. , 1996. *Data on Birth Weight in Developing Countries: Can Surveys Help?* Bulletin of the World Health Organization, 74(2), 209-16.

Table NU.12: Low birth weight infants

Percentage of last-born children in the 2 years preceding the survey that are estimated to have weighed below 2500 grams at birth and percentage of live births weighed at birth, Iraq, 2011

Below 2500 grams at birth and percentage of live births weighed at birth, Iraq, 2011			
	Percent of live births:		Number of live births in the last 2 years
	Below 2500 grams [1]	Weighed at birth [2]	
Mother's education			
None	14.5	35.2	2303
Primary	14.1	50.3	6728
Secondary +	11.7	64.9	4536
Non-standard curriculum	(*)	(*)	6
Wealth index quintiles			
Poorest	15.6	38.3	3109
Second	13.1	45.3	2902
Middle	14.2	55.0	2861
Fourth	12.7	62.3	2564
Richest	10.2	68.5	2136
Total	13.4	52.6	13572

¹ **MICS indicator 2.18**

² **MICS indicator 2.19**

(*) Figures that are based on less than 25 unweighted cases

6. Child Health

6.1. Immunization

The Millennium Development Goal (MDG) 4 is to reduce child mortality by two thirds between 1990 and 2015. Immunization plays a key part in this goal. Immunizations have saved the lives of millions of children in the three decades since the launch of the Expanded Programme on Immunization (EPI) in 1974. Worldwide there are still 27 million children overlooked by routine immunization and as a result, vaccine-preventable diseases cause more than two million deaths every year.

A World Fit for Children goal is to ensure full immunization of children less than one year of age at 90 percent nationally, with at least 80 percent coverage in every district or equivalent administrative unit.

According to the national immunization schedule, by a first birthday each child in Iraq should receive through routine immunization - a BCG vaccination to protect against tuberculosis, three doses of DPT to protect against Diphtheria, Pertussis, and Tetanus, four doses of polio vaccine, three doses of Hepatitis B vaccine and a measles vaccination at the age of nine months. In addition, an MMR vaccination is given to children at 15 months of age as part of the second opportunity for measles vaccination to protect against measles, as well as against mumps and rubella. Children are considered fully immunized if they receive BCG, DPT (1-3 doses), polio (1-3 doses), HepB (1-3 doses), and measles vaccines, by 12 months of age.

Mothers were asked to provide vaccination cards for children under the age of five. Interviewers copied vaccination information from the cards onto the MICS questionnaire. Overall, 70 percent of children aged 12-23 months had health cards that were seen by interviewers (Table CH.2a). If the child did not have a card, the mother was asked to recall whether or not the child had received each of the vaccinations and, for DPT and Polio, how many times. Table CH.1a shows the percentages of children aged 12 to 23 months who received a BCG and each of three DPT, polio vaccinations, HepB vaccination, measles, and were fully immunized.

The denominator for the percentages in the table CH.1a consists of children aged 12-23 months so that only children who were old enough to be fully vaccinated were counted. In the first three columns, the numerator includes all children who were vaccinated at any time before the survey according to the vaccination card or the mother's report. In the right hand side column, only those who were vaccinated before their first birthday were included. For children without vaccination cards, the proportion of vaccinations was assumed to be the same as for children with vaccination cards.

Table CH.1a: Vaccinations in first year of life, children 12-23 months old

Percentage of children age 12-23 months immunized against childhood diseases at any time before the survey and before the first birthday, Iraq, 2011

	Vaccinated at any time before the survey according to			
	Vaccination card	Mother's report	Either	Vaccinated by 12 months of age
BCG ¹	68.3	22.1	90.4	89.7
Polio				
At birth	69.1	14.0	83.0	82.4
1	66.6	24.2	90.8	89.6
2	62.3	22.8	85.1	82.4
32	57.2	19.2	76.4	70.6
DPT				
1	66.5	19.6	86.1	84.9
2	62.0	16.6	78.6	76.1
3 ³	57.0	13.1	70.1	64.8
Measles ⁴	54.0	21.3	75.4	65.8
HepB				
1	69.7	19.1	88.9	88.2
2	66.5	14.9	81.4	80.3
35	56.9	9.2	66.1	61.0
All vaccinations	53.0	5.4	58.4	46.5
No vaccinations	0.0	4.6	4.6	4.6

Number of children age 12-23 months 7487 7487 7487 7487

¹ MICS indicator 3.1;

² MICS indicator 3.2;

³ MICS indicator 3.3

⁴ MICS indicator 3.4; MDG indicator 4.3

⁵ MICS indicator 3.5;

Approximately 90 percent of children aged 12-23 months received a BCG vaccination by the age of 12 months and the first dose of DPT was given to 85 percent. The percentage declines for subsequent doses of DPT to 76 percent for the second dose, and 65 percent for the third dose (Figure CH.1). Similarly, although 90 percent of children received Polio 1 before their first birthday, this percentage declines to 71 percent by the third dose; and while 88 percent of children received the first dose of HepB, only 61 percent received the third one by 12 months age. The coverage for measles vaccine by 12 months age is at 66 percent. The percentage of children who had all recommended vaccinations (full vaccination) by age 12 months is 47 percent.

Table CH.2a: Vaccinations by background characteristics, children 12-23 months old

Percentage of children age 12-23 months currently vaccinated against childhood diseases, Iraq , 2011

Sex	Percentage of children who received:														
	Polio					DPT					Hepatitis				Number of children age 12-23 months
	BCG	At birth	1	2	3	1	2	3	Measles	1	2	3	None	All	
Male	90.7	83.9	90.9	85.6	76.9	86.7	79.7	70.9	75.7	89.5	81.8	66.7	4.0	58.9	3863
Female	90.1	82.2	90.7	84.7	75.8	85.3	77.5	69.3	75.0	88.2	80.9	65.4	5.4	57.9	3624
Governorates															
Dohuk	98.7	94.3	98.0	96.1	92.9	96.0	92.0	86.8	91.3	97.3	94.0	85.2	0.6	81.1	278
Ninewa	81.9	78.7	90.6	85.6	78.1	83.0	73.9	64.4	72.1	83.3	77.1	61.1	6.5	53.0	706
Sulaimaniya	95.8	94.2	93.3	87.3	82.2	91.2	83.1	79.1	83.2	95.0	90.1	77.6	3.5	73.5	269
Kirkuk	95.6	88.5	97.7	95.3	91.9	91.5	85.4	81.9	92.9	95.1	91.2	81.8	0.2	76.0	354
Erbil	96.7	89.7	91.9	84.0	76.5	88.4	81.2	74.4	81.1	90.7	84.4	70.9	2.4	64.5	319
Diyala	92.0	88.5	89.8	79.7	72.5	85.5	74.3	67.3	71.5	91.8	84.1	65.7	3.6	61.5	313
Al-Anbar	85.2	75.8	86.1	75.5	61.5	78.5	73.0	62.8	66.2	80.8	74.4	51.5	10.5	42.5	341
Baghdad	84.9	79.1	87.3	83.5	71.8	84.3	81.0	69.8	75.8	85.1	79.8	62.8	9.4	54.0	1377
Babil	95.9	81.7	93.3	88.7	83.0	88.5	85.7	79.5	79.9	93.5	85.7	70.7	1.5	65.3	464
Karbala	95.7	89.1	98.1	95.9	88.5	92.3	86.9	82.5	84.8	93.0	89.1	81.2	0.0	73.6	265
Wasit	92.7	72.7	83.2	75.7	62.0	80.5	67.3	52.1	60.8	86.2	71.8	51.4	5.7	43.6	277
Salahaddin	85.1	71.6	85.6	76.0	62.7	73.1	61.4	49.2	57.8	78.3	62.4	45.1	8.7	39.0	370
Al-Najaf	82.3	71.2	97.7	95.4	88.6	78.5	69.5	63.4	77.2	86.9	77.8	57.8	0.8	49.0	291
Al-Qadisiya	92.4	81.7	94.9	89.6	78.5	87.8	76.6	66.9	77.0	89.0	79.9	63.7	2.0	55.7	280
Al-Muthanna	97.0	83.3	98.9	97.1	93.8	88.5	81.6	70.4	84.7	93.1	84.3	66.5	0.0	60.6	191
Thi-Qar	88.7	84.1	83.5	71.5	59.8	82.1	66.6	56.0	53.4	86.9	72.9	52.7	5.6	40.7	459
Missan	96.6	89.2	96.7	94.7	88.3	95.5	94.2	88.9	91.9	93.4	88.2	82.2	1.1	78.8	264
Basrah	96.7	93.2	90.2	83.8	76.3	92.6	83.5	77.1	75.8	96.1	88.5	77.5	2.3	67.4	667
Region															
Kurdistan Region	97.1	92.6	94.3	88.9	83.5	91.7	85.3	79.8	85.0	94.2	89.3	77.6	2.2	72.6	866
South/Centre Iraq	89.5	81.8	90.3	84.7	75.4	85.3	77.7	68.8	74.1	88.2	80.3	64.5	5.0	56.5	6621
Area															
Urban	92.3	87.0	92.5	88.0	80.4	90.0	83.6	76.4	80.2	91.6	86.1	72.1	3.9	64.3	5044
Rural	86.5	75.0	87.2	79.3	68.1	77.9	68.3	57.1	65.4	83.3	71.5	53.6	6.2	46.3	2443

Table CH.2a: Vaccinations by background characteristics, children 12-23 months old

Percentage of children age 12-23 months currently vaccinated against childhood diseases, Iraq, 2011

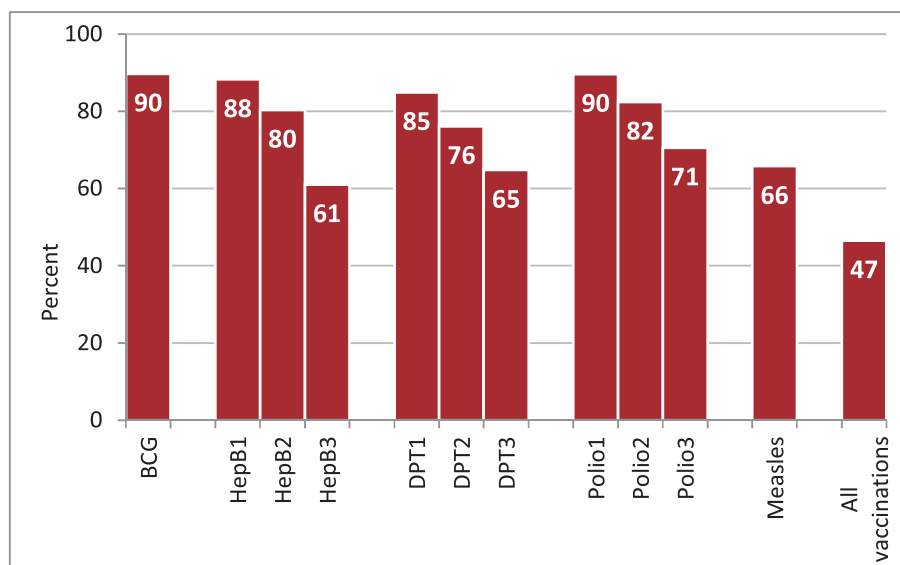
	Percentage of children who received:													Percentage with vaccination card seen	Number of children age 12-23 months	
	Polio			DPT			Hepatitis			All	None	3	2			1
	At birth	1	2	3	1	2	3	Measles								
Mother's education	BCG															
None	84.0	74.8	84.7	76.5	66.4	75.8	65.0	55.9	64.7	80.7	69.3	52.9	9.0	45.6	62.9	1270
Primary	89.7	81.4	90.8	84.9	75.4	84.5	77.0	67.3	73.5	88.3	79.9	63.9	4.6	56.0	68.6	3782
Secondary+	94.9	89.9	93.9	90.1	83.2	93.8	88.3	82.0	83.9	94.0	90.0	76.3	2.5	69.0	76.1	2431
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	4
Wealth index quintile																
Poorest	84.0	74.1	84.6	77.4	66.3	76.0	65.9	55.2	62.8	82.0	70.7	53.4	8.3	44.0	61.9	1805
Second	90.6	81.7	91.0	84.8	76.4	85.3	76.3	67.8	75.4	88.5	80.0	64.9	4.8	57.4	69.0	1603
Middle	89.9	84.1	91.3	85.6	77.4	86.4	80.3	72.6	76.4	90.3	81.8	69.6	3.8	61.4	72.2	1581
Fourth	95.0	88.8	94.6	90.4	83.4	92.7	87.2	79.6	83.4	93.2	88.4	73.6	2.7	68.4	75.1	1361
Richest	95.4	90.9	95.0	90.9	82.5	94.5	89.5	82.3	84.1	93.2	90.9	73.8	2.1	66.7	75.4	1137
Total	90.4	83.0	90.8	85.1	76.4	86.1	78.6	70.1	75.4	88.9	81.4	66.1	4.6	58.4	70.1	7487

(*) Figures that are based on less than 25 unweighted cases

(*) Figures that are based on less than 25 unweighted cases

Tables CH.2a shows vaccination coverage rates among children 12-23 months by background characteristics. The figures indicate children receiving the vaccinations at any time up to the date of the survey, and are based on information from both the vaccination cards and mothers'/caretakers' reports. There are differences in vaccination coverage: 64 percent children 12-23 months in urban areas received all recommended vaccinations while 46 percent did in rural ones; immunization coverage is also higher in the Kurdish Region (73 percent received all recommended vaccines) than in the rest of the country (57 percent). The mother's education level and household wealth are positively associated with vaccination coverage. Eventually, the higher differences are observed in the immunization of children across governorates: for all types of vaccines, in Dook, Suleimaniya, Kirkuk, Karbala and Missan, children are more likely to be vaccinated than anywhere else; from 70 to 81 percent of the children received all recommended vaccines in those governorates. On the contrary, the lowest vaccination coverages are found in Al-Anbar, Salahaddin, Wasit and Thi-Qar, where 39 to 44 percent of the children received all recommended vaccines.

Figure CH.1: Children aged 12-23 months vaccinated by first birthday, Iraq, 2011



In the estimation of immunized children shown in Tables CH.1a and CH.2a MMR vaccine was not considered because it is scheduled for age 15 months. In order to assess the coverage of immunization also for this vaccine the Tables CH.1b and CH.2b show the estimated percentage of children age 18-29 months immunized. Table CH.1b shows that the vaccination rate of children against measles or MMR by the 18 month of age is 77 percent, indicating that protection against measles is higher than among younger children (as shown in Table CH.1a). Immunization coverage by background characteristics (Table CH.2b) show the same patterns observed among younger children.

Table CH.1b: Vaccinations in first year of life, children 18-29 months old

Percentage of children age 18-29 months immunized against childhood diseases at any time before the survey and before the first birthday (18 months for Measles/MMR), Iraq, 2011

	Vaccinated at any time before the survey according to			Vaccinated by 12 months of age (18 months for Measles and MMR)
	Vaccination card	Mother's report	Either	
BCG	65.0	27.4	92.4	91.2
Polio				
At birth	64.9	17.4	82.4	81.5
1	63.2	29.2	92.4	90.2
2	59.7	27.5	87.2	83.2
3	55.7	23.4	79.1	70.4
DPT				
1	63.3	24.7	88.0	85.8
2	59.4	21.7	81.1	77.4
3	55.5	17.8	73.2	65.1
Measles	53.7	26.5	80.2	76.4
MMR	43.8	25.4	69.2	59.2
Measles or MMR	55.3	26.0	81.3	76.7
HepB				
1	65.9	24.3	90.1	89.1
2	63.0	19.6	82.6	80.7
3	55.1	12.6	67.7	60.2
All vaccinations	52.9	8.6	61.5	50.7
No vaccinations	0.0	3.6	3.7	3.7
Number of children age 18-29 months	7524	7524	7524	7524

Table CH.2b: Vaccinations by background characteristics, children 18-29 months old

Percentage of children age 18-29 vaccinated currently vaccinated against childhood diseases, Iraq , 2011

Sex	Percentage of children who received:															
	Polio				DPT				Measles				Hepatitis			
	At birth	1	2	3	1	2	3	1	2	3	MMR	MMR	1	2	3	All
Male	92.1	81.7	92.4	87.3	79.3	88.0	81.5	73.8	80.3	70.0	81.6	90.1	82.6	68.6	3.5	62.2
Female	92.7	83.1	92.4	87.0	78.8	88.0	80.6	72.7	80.2	68.4	81.0	90.1	82.7	66.7	3.9	60.8
Governorates																
Dohuk	99.3	94.6	98.0	96.2	94.1	96.8	93.0	90.4	94.1	79.5	94.1	97.8	93.6	89.0	0.6	85.6
Ninewa	87.9	79.5	92.8	88.4	81.4	87.0	78.9	69.7	81.2	66.6	82.5	87.2	79.7	66.0	4.3	60.0
Sulaimaniya	95.6	94.1	93.8	88.8	81.9	91.6	85.0	76.2	82.1	66.2	82.4	92.1	87.1	74.9	3.7	71.2
Kirkuk	97.1	91.8	96.5	90.5	86.1	91.7	83.3	78.3	87.0	77.3	89.5	97.8	89.2	76.6	0.1	70.8
Erbil	97.2	90.1	91.7	86.3	79.9	91.8	84.9	78.4	85.4	73.8	85.5	92.1	86.2	69.3	2.3	64.9
Diyala	93.4	85.2	91.5	80.7	75.7	87.6	75.8	68.7	76.6	65.1	76.6	90.8	84.4	67.0	4.0	64.4
Al-Anbar	88.9	74.7	91.3	79.9	67.9	81.4	77.2	66.5	75.8	69.1	76.5	82.9	79.7	55.1	6.5	48.0
Baghdad	89.5	80.5	92.0	88.8	78.7	88.4	86.0	77.9	81.3	72.1	83.1	88.6	83.3	69.2	5.7	61.0
Babil	95.4	80.1	93.1	88.2	81.6	90.2	85.1	80.1	82.4	73.3	83.2	94.1	86.5	65.8	2.2	60.9
Karbala	94.0	84.0	96.1	94.8	87.0	89.6	86.2	78.3	85.7	71.5	87.1	91.2	87.6	78.8	1.1	72.5
Wasit	91.9	69.9	83.2	76.7	65.1	80.6	68.4	56.2	64.2	58.5	67.1	85.1	71.4	53.6	6.7	46.1
Salahaddin	85.3	67.8	87.4	78.1	67.2	75.3	63.9	50.0	63.8	58.2	64.1	80.4	63.4	45.4	6.9	39.8
Al-Najaf	87.2	74.0	97.9	95.9	90.7	83.3	71.8	67.1	83.2	62.1	84.7	89.7	81.3	60.5	1.2	57.1
Al-Qadisiya	91.7	79.7	93.7	87.5	79.4	87.6	76.4	67.7	83.6	69.3	84.2	88.1	79.3	63.7	3.7	58.4
Al-Muthanna	94.8	78.0	98.5	94.3	91.5	88.5	81.0	68.0	86.7	66.0	87.2	91.6	82.7	61.3	0.1	56.7
Thi-Qar	89.9	81.2	86.5	75.6	64.4	84.5	70.9	61.3	63.5	53.7	64.5	86.4	74.5	56.2	5.9	49.1
Missan	98.4	89.2	96.9	94.8	87.6	96.4	94.3	89.9	95.1	89.7	95.1	93.9	88.7	78.3	0.5	76.4
Basrah	97.3	90.5	90.8	86.8	77.5	91.0	85.0	79.1	79.6	70.8	80.5	95.4	88.0	79.0	2.2	69.3
Region																
Kurdistan Region	97.4	92.7	94.3	90.2	85.0	93.3	87.5	81.6	87.3	73.4	87.4	93.9	88.8	77.2	2.2	73.3
South/Centre Iraq	91.7	80.9	92.1	86.7	78.3	87.2	80.2	72.1	79.2	68.7	80.4	89.6	81.8	66.3	3.9	59.8
Area																
Urban	94.6	87.0	94.2	90.0	82.9	91.9	86.1	79.9	84.5	74.2	85.7	93.0	87.4	74.1	2.7	67.6
Rural	87.9	73.0	88.7	81.4	71.3	80.1	70.9	59.6	71.4	59.0	72.3	84.3	72.9	54.6	5.5	49.2

Table CH.2b: Vaccinations by background characteristics, children 18-29 months old

Percentage of children age 18-29 vaccinated currently vaccinated against childhood diseases, Iraq , 2011

	Percentage of children who received:															
	Polio				Measles				MMR				Hepatitis			
	BCG	At birth	1	2	3	1	2	3	Measles	MMR	MMR	Measles	1	2	3	None
Mother's education																
None	85.9	73.7	87.4	80.1	70.5	78.6	68.1	59.3	70.8	57.4	71.6	81.3	70.6	53.5	6.6	47.6
Primary	91.8	80.6	91.7	86.3	77.4	86.6	79.9	70.8	78.4	67.4	79.6	89.7	81.4	66.5	4.0	59.8
Secondary+	96.9	90.0	96.2	92.5	86.6	95.3	90.0	84.8	88.4	78.7	89.4	95.5	91.2	77.2	1.5	71.9
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Wealth index quintile																
Poorest	85.7	71.9	86.9	79.8	68.8	78.0	67.3	56.8	69.2	58.8	70.2	82.7	69.8	52.7	6.2	45.8
Second	91.9	81.3	92.7	87.1	80.0	87.7	80.1	72.7	79.7	67.7	80.4	89.2	82.3	68.3	4.0	60.9
Middle	94.1	84.7	91.9	87.7	80.3	89.3	84.5	77.5	82.1	70.8	83.4	92.5	85.8	72.7	3.3	66.0
Fourth	96.6	89.4	96.3	90.9	84.6	94.2	88.4	81.7	87.1	77.8	88.0	94.6	89.3	74.8	1.7	70.8
Richest	96.3	88.9	96.8	93.6	85.7	95.0	90.7	83.9	87.8	75.6	89.1	94.3	90.9	74.7	2.0	69.7
Total	92.4	82.4	92.4	87.2	79.1	88.0	81.1	73.2	80.2	69.2	81.3	90.1	82.6	67.7	3.7	61.5

(*) Figures that are based on less than 25 unweighted cases

Percentage of children vaccinated during Polio and Measles vaccination campaigns in 2010, among children exposed to the vaccination campaigns

Iraq Multiple Indicator Cluster Survey Final Report, 2011

Table CH.2c: Vaccination during Polio and Measles campaigns

Percentage of children vaccinated during Polio and Measles vaccination campaigns in 2010, among children exposed to the vaccination campaigns

	Polio						Measles	
	May 2010 Campaign			June 2010 Campaign			November 2010 Campaign	
	Percentage of children Under 5 vaccinated during May 2010 campaign	Number of children born before May 2010	Percentage of children Under 5 vaccinated during June 2010 campaign	Number of children born before June 2010	Percentage of children Under 5 vaccinated during October 2010 campaign	Number of children born before October 2010	Percentage of children Under 5 vaccinated during November 2010 campaign	Number of children born before November 2010
Area								
Urban	86.2	19175	85.4	19606	85.5	21418	84.4	22029
Rural	83.0	9777	81.1	9975	82.5	10793	81.2	11015
Region								
Kurdistan Region	85.2	3794	86.3	3861	87.7	4135	87.2	4225
South/Centre Iraq	85.1	25157	83.6	25719	84.0	28077	82.8	28819
Mother's education								
None	82.3	5218	81.6	5317	82.6	5768	80.6	5893
Primary	85.1	14509	83.6	14800	84.7	16076	84.0	16448
Secondary +	86.7	9166	85.8	9406	85.0	10309	83.8	10645
Non-standard curriculum	94.3	56	94.3	56	96.0	56	96.9	56
Age								
0-5					63.7	78	48.5	497
6-11	73.0	337	65.5	949	65.8	3501	67.7	3915
12-23	78.8	7470	79.6	7487	84.9	7487	84.4	7487
24-35	86.1	7476	84.8	7476	86.4	7476	85.8	7476
36-47	87.9	7067	86.4	7067	87.7	7067	86.7	7067
48-59	88.7	6602	87.9	6602	88.4	6602	87.7	6602
Total	85.1	28951	83.9	29581	84.5	32211	83.4	33044

() Figures that are based on 25-49 unweighted cases

Across Iraq, the Ministry of Health conducted four campaigns of polio vaccination in May, June, October, and November 2010, targeting all children under-five years. Vaccination against polio during those campaigns reached around 84 percent of children (Table CH.2c). Coverage was slightly higher in urban areas than in rural ones, and among governorates immunization was the lowest in Al-Anbar, Baghdad, and Salahaddin (between 68 and 81 percent) and at the highest levels in Babil and Al-Muthanna (96 percent).

In December 2010 a vaccination campaign against measles was launched across the country targeting children from 6 to 36 months. Sixty seven percent of the children at the national level were vaccinated during this campaign, which was more successful in urban areas (70 percent) than in rural ones (61 percent); in Kurdistan Region than in the rest of the country (71 and 66 percent respectively), and among children from mothers with higher education levels (see Table CH.2c). There is a notable variation in the immunization coverage among governorates ranging from 85 percent children vaccinated in Babil or 81 percent in Basrah to 48 percent in Ninewa, or 56 and 59 percent in Al-Anbar and Baghdad respectively.

6.2. Tetanus Toxoid

One of the MDGs is to reduce by three quarters the maternal mortality ratio, with one strategy to eliminate maternal tetanus. In addition, another goal is to reduce the incidence of neonatal tetanus to less than 1 case of neonatal tetanus per 1000 live births in every district. A World Fit for Children goal is to eliminate maternal and neonatal tetanus by 2015.

The strategy for preventing maternal and neonatal tetanus is to assure all pregnant women receive at least two doses of tetanus toxoid vaccine. If a woman has not received at least two doses of tetanus toxoid during a particular pregnancy, she (and her newborn) are also considered to be protected against tetanus if the woman:

- Received at least two doses of tetanus toxoid vaccine, the last within the previous 3 years;
- Received at least 3 doses, the last within the previous 5 years;
- Received at least 4 doses, the previous 10 years;
- Received at least 5 doses during her life.

To assess the status of tetanus vaccination coverage, women who gave birth during the two years before the survey were asked if they had received tetanus toxoid injections during the pregnancy for their most recent birth, and if so, how many. Women who did not receive two or more tetanus toxoid vaccinations during this pregnancy were then asked about tetanus toxoid vaccinations they may have received prior to this pregnancy. Table CH.3 shows the protection status from tetanus of women who have had a live birth within the last 2 years. Figure CH.2 shows the protection of women against neonatal tetanus by major background characteristics. The results of the survey indicate that protection against tetanus toxoid is relatively low in Iraq: at 57 percent. It is worth noting that Tetanus toxoid protection is much lower in women from the poorest households (36 percent) compared to the richest ones (72 percent).

Similarly women without formal education (37 percent protected) are less likely to be protected than women with at least secondary education (73 percent); and while 65 percent of women from urban areas received the prescribed doses, only 38 percent in rural areas did. Disparities among governorates are even wider, ranging from 35 percent coverage in Wasit governorate or 37 percent in Salahaddin, to the highest coverage in Karbala governorate (78 percent) and in Suleimaniya (75 percent).

Figure CH.2: Percentage of women age 15-49 years with a live birth in the last 2 years who are protected against neonatal tetanus, Iraq, 2011

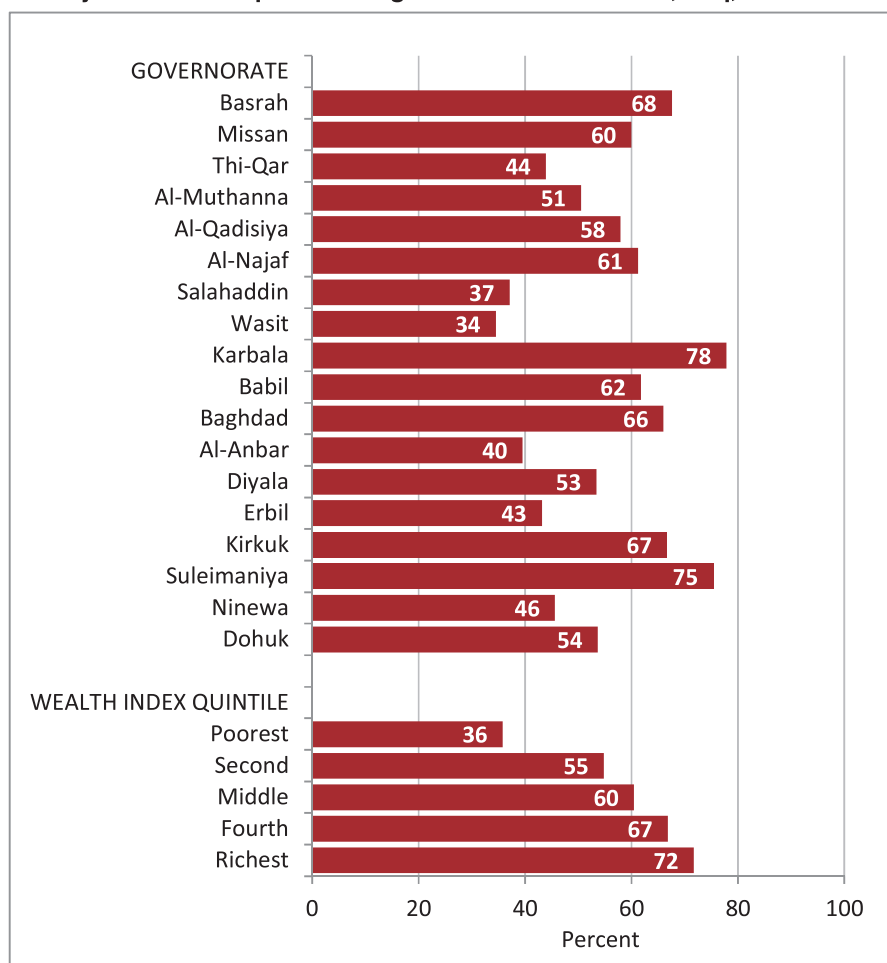


Table CH.3: Neonatal tetanus protection

Percentage of women age 15-49 years with a live birth in the last 2 years protected against neonatal tetanus, Iraq , 2011

Area	Percentage of women who received at least 2 doses during last pregnancy	Percentage of women who did not receive two or more doses during last pregnancy but received:				Protected against tetanus ¹	Number of women with a live birth in the last 2 years
		2 doses, the last within prior 3 years	3 doses, the last within prior 5 years	4 doses, the last within prior 10 years	5 or more doses during lifetime		
Urban	32.7	26.2	3.7	0.0	2.7	65.2	9195
Rural	19.8	14.9	2.2	0.0	1.6	38.4	4377
Governorates							
Dohuk	25.2	13.1	5.4	0.0	9.9	53.6	488
Ninewa	19.1	20.8	2.9	0.0	2.9	45.6	1307
Suleimaniya	50.6	18.1	2.9	0.0	3.6	75.3	517
Kirkuk	23.8	37.1	3.9	0.0	1.9	66.7	579
Erbil	29.5	9.2	1.4	0.0	3.1	43.1	625
Diyala	19.9	26.2	5.3	0.0	2.0	53.4	555
Al-Anbar	23.9	13.1	1.6	0.0	1.0	39.5	606
Baghdad	35.0	26.6	2.6	0.0	1.8	66.0	2503
Babil	30.5	25.4	3.3	0.0	2.5	61.7	828
Karbala	27.9	42.8	5.0	0.0	2.1	77.8	497
Wasit	20.7	11.9	1.7	0.0	0.2	34.5	461
Salahaddin	20.0	14.4	1.6	0.0	1.1	37.1	657
Al-Najaf	28.1	28.3	4.2	0.0	0.6	61.2	575
Al-Qadisiya	32.2	22.1	2.3	0.0	1.3	57.9	520
Al-Muthanna	33.9	12.2	2.9	0.0	1.6	50.5	333
Thi-Qar	26.1	12.9	2.7	0.0	2.1	43.9	853
Missan	33.5	19.2	4.4	0.0	2.9	60.0	479
Basrah	29.0	31.6	4.7	0.0	2.2	67.6	1189
Region							
Kurdistan Region	34.9	13.2	3.1	0.0	5.3	56.5	1630
South/Centre Iraq	27.7	23.8	3.2	0.0	1.9	56.6	11942
Education							
None	19.3	13.4	2.3	0.0	1.6	36.6	2303
Primary	26.7	21.1	2.7	0.0	2.2	52.7	6728
Secondary+	36.0	29.4	4.3	0.0	2.9	72.5	4536
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	6
Wealth index quintile							
Poorest	18.2	14.2	2.1	0.0	1.3	35.8	3109
Second	25.4	23.5	3.5	0.0	2.5	54.8	2902
Middle	29.5	24.9	3.3	0.0	2.7	60.5	2861
Fourth	34.1	26.3	4.1	0.0	2.4	66.8	2564
Richest	40.0	25.8	3.1	0.0	2.8	71.7	2136
Total	28.5	22.6	3.2	0.0	2.3	56.6	13572

¹ MICS indicator 3.7

(*) Figures that are based on less than 25 unweighted cases

6.3. Oral Rehydration Therapy

Diarrhoea is the second leading cause of death among children under-five worldwide. Most diarrhoea-related deaths in children are due to dehydration from loss of large quantities of water and electrolytes from the body in liquid stools. Management of diarrhoea – either through oral rehydration salts (ORS) or a recommended home fluid (RHF) - can prevent many of these deaths. Preventing dehydration and malnutrition by increasing fluid intake and continuing to feed the child are also important strategies for managing diarrhoea.

The goals are to: 1) reduce by one half deaths due to diarrhoea among children under-five by 2010 compared to 2000 (A World Fit for Children); and 2) reduce by two thirds the mortality rate among children under-five by 2015 compared to 1990 (Millennium Development Goals). In addition, the World Fit for Children calls for a reduction in the incidence of diarrhoea by 25 percent.

The indicators are:

- Prevalence of diarrhoea
- Oral rehydration therapy (ORT)
- Home management of diarrhoea
- ORT with continued feeding

In the MICS questionnaire, mothers (or caretakers) were asked to report whether their child had had diarrhoea in the two weeks prior to the survey. If so, the mother was asked a series of questions about what the child had to drink and eat during the episode and whether this was more or less than the child usually ate and drank.

Overall, 15 percent of children under-five years of age had diarrhoea in the two weeks preceding the survey with higher prevalence in South/Centre governorates (16 percent) than in Kurdistan region (9 percent) (Table CH.4). Diarrhoea prevalence differed among governorates, the highest being in Karbala and Thi-Qar (27 percent) governorates and the least in Suleimaniya (8 percent) and Erbil (9 percent) governorates. The peak diarrhoea prevalence occurred among children aged 0-11 and 12-23 months (21 percent). The results show differences between children of poor and rich households where 16 percent of children who live in the poorest households had diarrhoea in the two weeks preceding the survey compared to 11 percent among those living in the richest households.

Table CH.4 also shows the percentage of children receiving ORS (fluid from ORS packet or pre-packaged ORS fluid) during the episode of diarrhoea. About 23 percent of children received ORS: more of them received it in Kurdistan Region (38 percent) than in the rest of the country (22 percent); slightly more also received it in urban areas than in rural ones; and among younger than older children. The results indicate that ORS use is considerably low in the governorates of Ninewa and Kirkuk reaching 10 percent and 14 percent respectively.

About 16 percent of under-five children with diarrhoea drank more than usual while 41 percent drank the same; somewhat less (to drink) was given to 29 percent and much less to 11 percent of the children (Table CH.5). Regarding the feeding practices in cases of diarrhoea, seventy six percent ate somewhat less, same or more (continued feeding): 35 percent ate about the same, but 14 percent ate much less and close to 10 percent stopped food or had never been given food.

Table CH.6 provides the proportion of children aged 0-59 months with diarrhoea in the last two weeks who received oral rehydration therapy with continued feeding, and percentage of children with diarrhoea who received other treatments. Overall, 34 percent of children with diarrhoea received ORS or increased fluids. Combining the information in Table CH.5 with those in Table CH.4 on oral rehydration therapy, it is observed that 26 percent of children received ORS and, at the same time, feeding was continued as recommended.

The home management of diarrhoea varied according to the background characteristics; governorates, mothers education, sex and wealth index. Compared to other governorates, Kirkuk and Wasit had the lowest percentage of children who either received ORS or increased fluid intake (15 and 18 percent respectively), and the lowest percentage of children who received ORT and continued feeding at the same time: 12 percent in both Kirkuk and Wasit. Differences were also observed by region and area. There are also variations depending on the mother's educational level, with 42 percent of children whose mothers have secondary or higher education receiving ORS or increased fluids, and 32 percent ORT with continued feeding, compared to 30 percent children from uneducated mothers receiving ORS or increased fluids, and 23 percent receiving ORT with continued feeding. Seventeen percent of the oldest children (from 48-59 months) who had diarrhoea, received appropriate treatment, while among the younger 25 percent or slightly above did. Results also show that one in four children with diarrhoea were not given any treatment or drug (26 percent). Compared to other governorates, children with diarrhoea in Kirkuk and in Al-Najaf were the least likely to receive treatment or drugs for diarrhoea (Figure CH.3).

Figure CH.3: Percentage of children under age 5 years with diarrhoea who did not receive any treatment or drug, Iraq, 2011

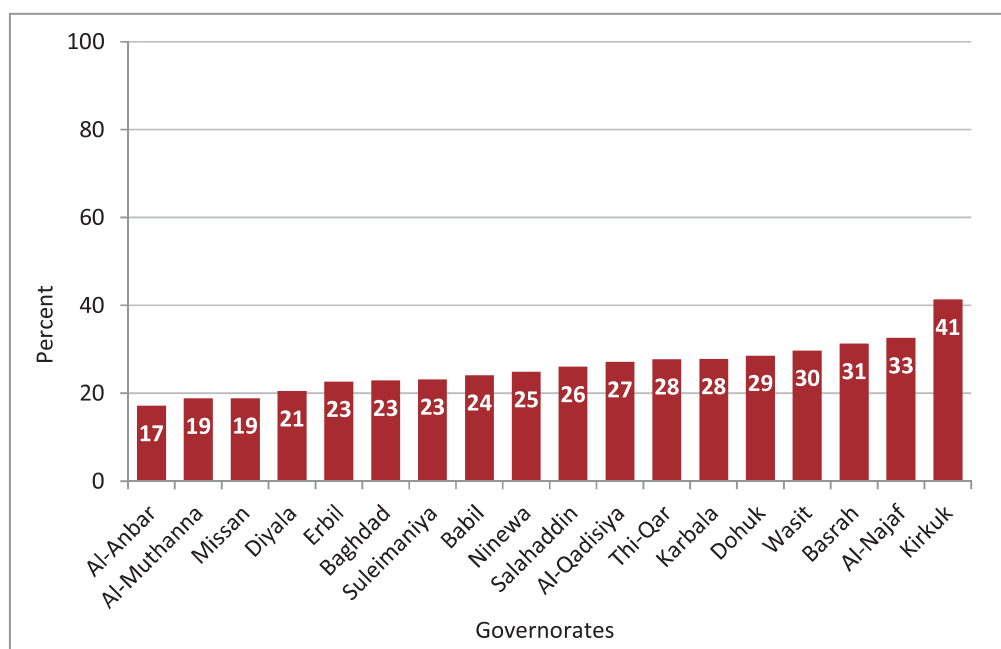


Table CH.4: Oral rehydration solutions and recommended homemade fluids

Percentage of children age 0-59 months with diarrhoea in the last two weeks, and treatment with oral rehydration solutions and recommended homemade fluids, Iraq, 2011

	Had diarrhoea in last two weeks	Number of children age 0-59 months	Children with diarrhoea who received: ORS (Fluid from ORS packet or pre-packaged ORS fluid)	Number of children age 0-59 months with diarrhoea in last two weeks
Sex				
Male	15.4	18638	22.8	2870
Female	14.1	17669	22.7	2493
Governorates				
Dohuk	10.8	1338	38.6	144
Ninewa	16.9	3521	9.5	596
Sulaimaniya	8.4	1503	44.4	126
Kirkuk	11.6	1539	13.6	178
Erbil	8.6	1682	31.3	145
Diyala	14.0	1417	18.0	198
Al-Anbar	11.5	1638	29.7	188
Baghdad	10.1	6588	32.4	667
Babil	10.4	2219	31.1	230
Karbala	27.4	1234	18.0	338
Wasit	15.5	1295	16.3	201
Salahaddin	12.4	1722	18.5	213
Al-Najaf	14.4	1529	16.5	221
Al-Qadisiya	18.7	1392	19.4	260
Al-Muthanna	12.8	914	20.6	117
Thi-Qar	26.5	2270	18.8	601
Missan	20.9	1310	20.5	273
Basrah	20.9	3196	28.7	669
Region				
Kurdistan Region	9.2	4524	37.8	414
South/Centre Iraq	15.6	31783	21.5	4949
Area				
Urban	14.5	24149	24.7	3499
Rural	15.3	12158	19.2	1864
Age				
0-11 months	20.6	7675	23.2	1577
12-23 months	21.2	7487	25.4	1586
24-35 months	13.5	7476	22.9	1007
36-47 months	9.9	7067	20.7	701
48-59 months	7.5	6602	15.8	492
Mother's education				
None	14.7	6473	20.0	950
Primary	16.1	18106	22.2	2910
Secondary+	12.8	11667	25.8	1488
Non-standard curriculum	24.7	58	(*)	14
Wealth index quintile				
Poorest	15.9	8828	19.0	1408
Second	15.2	8095	24.1	1232
Middle	16.4	7444	23.5	1222
Fourth	13.9	6548	26.7	911
Richest	11.0	5392	21.5	591
Total	14.8	36307	22.8	5363

(*) Figures that are based on less than 25 unweighted cases

Table CH.5: Feeding practices during diarrhoea

Percent distribution of children age 0-59 months with diarrhoea in the last two weeks by amount of liquids and food given during episode of diarrhoea, Iraq, 2011

	Drinking practices during diarrhoea:							Missing/DK	Total
	Had diarrhoea in last two weeks	Number of children age 0-59 months	Given much less to drink	Given some what less to drink	Given about the same to drink	Given more to drink	Given nothing to drink		
Sex									
Male	15.4	18638	12.2	27.6	42.2	15.1	2.2	0.8	100.0
Female	14.1	17669	9.8	30.9	40.3	16.0	2.4	0.5	100.0
Governorates									
Dohuk	10.8	1338	21.1	34.9	31.7	8.5	3.1	0.8	100.0
Ninewa	16.9	3521	9.6	22.7	41.2	26.0	0.5	0.0	100.0
Suleimaniya	8.4	1503	17.0	25.6	33.1	23.8	0.5	0.0	100.0
Kirkuk	11.6	1539	2.9	30.5	59.8	5.3	1.4	0.0	100.0
Erbil	8.6	1682	17.8	34.8	33.7	12.7	1.0	0.0	100.0
Diyala	14.0	1417	13.3	32.9	45.8	6.2	1.4	0.4	100.0
Al-Anbar	11.5	1638	9.8	44.1	38.4	7.4	0.0	0.3	100.0
Baghdad	10.1	6588	12.5	27.6	47.6	6.7	4.4	1.2	100.0
Babil	10.4	2219	8.2	34.0	44.1	9.0	4.7	0.0	100.0
Karbala	27.4	1234	4.9	12.6	37.0	41.3	3.2	0.9	100.0
Wasit	15.5	1295	11.4	36.2	49.7	1.6	1.1	0.0	100.0
Salahaddin	12.4	1722	13.0	34.4	37.7	12.1	2.5	0.3	100.0
Al-Najaf	14.4	1529	6.2	29.8	35.8	27.7	0.5	0.0	100.0
Al-Qadisiya	18.7	1392	23.0	27.9	29.7	18.4	0.6	0.4	100.0
Al-Muthanna	12.8	914	15.4	59.1	18.9	5.6	0.3	0.8	100.0
Thi-Qar	26.5	2270	5.0	26.1	43.4	20.5	4.4	0.6	100.0
Missan	20.9	1310	29.3	31.8	30.4	2.7	2.4	3.4	100.0
Basrah	20.9	3196	6.0	28.3	47.8	15.2	2.0	0.7	100.0
Region									
Kurdistan Region	9.2	4524	18.7	32.0	32.8	14.6	1.6	0.3	100.0
South/Centre Iraq	15.6	31783	10.5	28.9	42.0	15.6	2.4	0.7	100.0
Area									
Urban	14.5	24149	12.0	27.3	41.8	16.0	2.4	0.5	100.0
Rural	15.3	12158	9.4	32.5	40.5	14.6	2.2	0.8	100.0
Age									
0-11 months	20.6	7675	8.6	28.3	44.3	14.4	4.1	0.3	100.0
12-23 months	21.2	7487	11.6	29.6	38.9	18.1	1.4	0.4	100.0
24-35 months	13.5	7476	12.9	29.4	39.9	14.8	1.4	1.6	100.0
36-47 months	9.9	7067	11.5	28.6	42.0	16.0	1.4	0.5	100.0
48-59 months	7.5	6602	13.4	30.1	41.3	11.8	2.7	0.7	100.0
Mother's education									
None	14.7	6473	12.7	32.7	37.4	12.1	4.1	1.0	100.0
Primary	16.1	18106	11.5	30.1	41.8	13.9	2.2	0.4	100.0
Secondary+	12.8	11667	9.2	25.0	42.6	21.0	1.4	0.8	100.0
Non-standard curriculum	24.7	58	(*)	(*)	(*)	(*)	(*)	(*)	100.0
Wealth index quintile									
Poorest	15.9	8828	9.6	32.3	41.2	12.7	3.2	1.0	100.0
Second	15.2	8095	12.6	29.3	40.4	15.0	2.3	0.4	100.0
Middle	16.4	7444	12.1	29.4	40.8	15.6	1.8	0.2	100.0
Fourth	13.9	6548	12.6	26.0	40.5	18.6	1.6	0.8	100.0
Richest	11.0	5392	7.2	25.2	45.8	18.7	2.2	0.9	100.0
Total	14.8	36307	11.1	29.1	41.3	15.5	2.3	0.6	100.0

Table CH.5: Feeding practices during diarrhea (continue)

Percent distribution of children age 0-59 months with diarrhoea in the last two weeks by amount of liquids and food given during episode of diarrhoea, Iraq, 2011

	Had diarrhoea in last two weeks	Number of children age 0-59 months	Eating practices during diarrhoea:								Number of children age 0-59 months with diarrhoea in last two weeks
			Given much less to eat	Given somewhat less to eat	Given about the same to eat	Given more to eat	Stopped food	Had never been given food	Missing/DK	Total	
Sex											
Male	15.4	18638	15.0	36.3	34.4	4.1	3.6	6.2	0.5	100.0	2870
Female	14.1	17669	12.1	39.4	35.3	3.6	3.9	5.4	0.2	100.0	2493
Governorates											
Dohuk	10.8	1338	26.3	39.7	25.5	1.4	3.1	3.4	0.6	100.0	144
Ninewa	16.9	3521	15.3	36.6	32.3	6.2	6.2	3.4	0.0	100.0	596
Suleimaniya	8.4	1503	25.5	30.4	29.8	5.5	3.4	5.5	0.0	100.0	126
Kirkuk	11.6	1539	0.4	38.8	43.3	0.0	3.2	14.2	0.1	100.0	178
Erbil	8.6	1682	20.7	36.9	28.2	13.5	0.0	0.6	0.0	100.0	145
Diyala	14.0	1417	11.6	47.8	28.8	1.2	1.6	9.0	0.0	100.0	198
Al-Anbar	11.5	1638	12.3	53.2	26.9	2.8	0.2	4.6	0.0	100.0	188
Baghdad	10.1	6588	21.8	35.3	32.6	2.4	2.3	4.9	0.8	100.0	667
Babil	10.4	2219	8.5	44.1	30.8	2.3	11.7	2.5	0.0	100.0	230
Karbala	27.4	1234	3.5	38.9	34.0	9.1	6.5	8.0	0.0	100.0	338
Wasit	15.5	1295	14.1	39.1	42.8	0.3	1.1	2.5	0.0	100.0	201
Salahaddin	12.4	1722	13.6	38.8	33.0	3.8	2.8	7.8	0.3	100.0	213
Al-Najaf	14.4	1529	9.5	46.3	25.5	6.5	3.0	9.2	0.0	100.0	221
Al-Qadisiya	18.7	1392	23.3	33.9	30.9	4.1	0.8	6.8	0.3	100.0	260
Al-Muthanna	12.8	914	18.1	55.6	16.7	3.8	0.9	4.2	0.8	100.0	117
Thi-Qar	26.5	2270	5.0	31.5	42.5	3.1	7.1	10.6	0.2	100.0	601
Missan	20.9	1310	30.0	33.4	27.3	0.3	2.7	3.7	2.7	100.0	273
Basrah	20.9	3196	7.1	34.0	49.5	3.5	2.3	3.5	0.0	100.0	669
Region											
Kurdistan Region	9.2	4524	24.1	35.9	27.7	6.9	2.1	3.1	0.2	100.0	414
South/Centre Iraq	15.6	31783	12.8	37.9	35.4	3.6	3.9	6.0	0.3	100.0	4949
Area											
Urban	14.5	24149	15.3	36.2	36.2	3.7	3.4	5.1	0.1	100.0	3499
Rural	15.3	12158	10.7	40.7	32.2	4.1	4.4	7.2	0.6	100.0	1864
Age											
0-11 months	20.6	7675	9.1	31.1	34.3	3.3	3.1	18.7	0.4	100.0	1577
12-23 months	21.2	7487	14.2	39.0	35.2	4.9	5.6	1.1	0.0	100.0	1586
24-35 months	13.5	7476	16.6	41.1	36.5	2.6	2.9	0.0	0.4	100.0	1007
36-47 months	9.9	7067	16.4	40.5	35.5	4.2	2.8	0.0	0.6	100.0	701
48-59 months	7.5	6602	16.9	44.0	31.1	4.2	3.5	0.0	0.3	100.0	492
Mother's education											
None	14.7	6473	13.7	37.6	34.1	3.7	4.5	5.7	0.7	100.0	950
Primary	16.1	18106	13.7	38.6	33.8	4.0	3.9	5.8	0.3	100.0	2910
Secondary+	12.8	11667	13.8	36.3	37.1	3.7	3.0	5.9	0.1	100.0	1488
Non-standard curriculum	24.7	58	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	14
Wealth index quintile											
Poorest	15.9	8828	11.3	38.2	34.6	4.3	4.6	6.4	0.7	100.0	1408
Second	15.2	8095	15.0	36.9	35.8	3.4	3.1	5.4	0.3	100.0	1232
Middle	16.4	7444	13.6	38.9	34.7	4.0	3.4	5.3	0.1	100.0	1222
Fourth	13.9	6548	15.6	38.2	34.0	3.0	3.7	5.1	0.3	100.0	911
Richest	11.0	5392	13.7	35.4	35.0	4.5	4.0	7.3	0.0	100.0	591
Total	14.8	36307	13.7	37.7	34.8	3.8	3.8	5.8	0.3	100.0	5363

(*) Figures that are based on less than 25 unweighted cases

Table CH.6: Oral rehydration therapy with continued feeding and other treatments

Percentage of children age 0-59 months with diarrhoea in the last two weeks who received oral rehydration therapy with continued feeding, and percentage of children with diarrhoea who received other treatments, Iraq, 2011

	Children with diarrhoea who received:			Other treatments:												Number of children age 0-59 months with diarrhoea in last two weeks
	ORS or increased fluids	ORT with continued feeding ¹	Antibiotic	Pill or syrup			Injection						Not given any treatment or drug			
				Antimotility	Zinc	Other	Unknown	Anti-biotic	Non-antibiotic	Unknown	Intra-venous	Home remedy, herbal medicine	Other			
Sex																
Male	34.2	25.4	36.1	27.0	2.2	2.1	5.2	12.2	0.2	4.1	1.9	0.7	2.9	25.2	2870	
Female	34.6	26.1	30.7	27.8	1.5	1.9	5.4	10.4	0.4	3.5	1.6	0.6	2.9	27.5	2493	
Governorates																
Dohuk	44.2	28.1	36.6	27.9	3.8	1.5	3.6	6.4	0.3	2.3	2.0	0.0	4.9	28.6	144	
Ninewa	30.7	23.1	39.7	7.5	0.1	1.5	10.5	12.0	0.0	6.0	3.4	0.2	0.1	24.9	596	
Suleimaniya	55.2	35.0	56.5	14.7	1.8	3.2	7.6	1.2	0.0	6.6	4.3	0.0	2.7	23.2	126	
Kirkuk	15.3	12.1	34.0	6.4	1.6	5.0	1.2	8.8	0.0	0.2	1.3	0.1	5.4	41.4	178	
Erbil	41.7	27.3	53.5	17.4	0.4	0.5	7.2	6.8	0.0	5.5	0.0	0.1	1.7	22.7	145	
Diyala	23.2	17.1	37.9	47.2	1.4	0.0	2.2	7.7	1.4	10.7	1.8	1.2	0.6	20.5	198	
Al-Anbar	32.3	26.0	55.8	26.1	3.3	0.8	6.2	15.1	0.2	3.3	2.7	0.7	1.0	17.2	188	
Baghdad	37.3	27.9	32.6	28.0	6.1	1.1	4.0	12.6	0.0	5.2	1.5	0.1	3.1	22.9	667	
Babil	37.8	26.7	23.3	53.1	2.7	0.4	8.3	15.7	1.0	14.5	5.0	3.3	0.4	24.1	230	
Karbala	50.9	41.4	33.0	8.3	0.0	2.6	7.0	12.0	0.5	0.0	1.4	0.0	17.3	27.8	338	
Wasit	17.5	11.6	27.9	38.1	0.0	1.2	3.9	21.7	0.0	2.2	4.0	0.0	1.6	29.7	201	
Salahaddin	26.5	17.3	44.5	38.1	4.8	0.9	2.6	20.8	1.0	1.6	1.2	0.0	1.6	26.0	213	
Al-Najaf	40.6	30.1	41.5	26.3	1.2	6.2	0.0	9.4	1.1	0.0	0.4	1.1	4.3	32.6	221	
Al-Qadisiya	36.3	26.3	34.5	27.4	1.2	4.9	4.4	13.5	0.9	3.6	2.1	0.0	1.4	27.1	260	
Al-Muthanna	23.4	17.9	23.3	51.4	1.1	4.3	5.0	10.6	1.1	14.0	1.1	2.0	0.2	18.8	117	
Thi-Qar	34.8	27.6	37.6	28.9	1.1	2.1	3.5	9.7	0.0	1.6	0.3	0.4	1.6	27.8	601	
Missan	22.9	14.3	5.4	61.5	0.5	3.1	12.2	13.6	0.1	1.9	1.5	0.7	0.7	18.9	273	
Basrah	37.7	30.9	21.2	24.1	1.3	1.1	3.3	7.0	0.0	0.9	0.7	1.8	2.5	31.3	669	
Region																
Kurdistan Region	46.7	29.9	48.6	20.2	2.0	1.7	6.1	5.0	0.1	4.7	2.0	0.0	3.1	24.9	414	
South/Centre Iraq	33.4	25.4	32.4	28.0	1.9	2.0	5.2	11.9	0.3	3.8	1.7	0.7	2.9	26.4	4949	
Area																
Urban	35.8	26.8	33.5	25.1	1.9	2.4	4.8	10.4	0.2	3.1	1.8	0.5	2.9	25.8	3499	
Rural	31.7	23.8	33.8	31.7	1.9	1.2	6.2	13.2	0.4	5.2	1.6	0.9	2.9	27.0	1864	
Age																
0-11 months	34.6	25.0	33.7	26.0	0.6	3.3	3.5	12.0	0.2	3.2	1.7	0.4	3.3	29.3	1577	
12-23 months	38.0	29.3	34.7	28.8	1.7	1.5	5.6	12.9	0.3	4.4	2.2	0.8	2.9	23.2	1586	
24-35 months	33.8	26.2	34.4	29.3	2.3	1.6	6.0	11.0	0.4	2.3	1.3	0.6	1.9	24.6	1007	
36-47 months	32.4	24.7	34.1	22.5	3.0	1.1	6.8	10.6	0.3	4.2	2.1	0.5	3.6	26.1	701	
48-59 months	26.0	17.1	27.6	30.2	4.3	1.2	6.1	6.4	0.5	6.7	0.9	1.0	2.3	29.9	492	
Mother's education																
None	30.2	22.9	30.5	32.3	1.2	1.3	5.6	10.7	0.2	4.4	1.4	1.0	2.7	27.7	950	
Primary	32.1	23.5	33.3	27.0	2.2	1.9	5.6	12.3	0.4	4.4	1.9	0.4	3.0	27.0	2910	
Secondary+	41.8	32.1	36.4	25.2	1.8	2.8	4.4	10.1	0.1	2.4	1.7	0.9	2.8	23.2	1488	
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	14	
Wealth index quintile																
Poorest	28.9	21.8	28.2	32.2	1.6	0.8	5.6	12.2	0.1	4.5	2.1	0.6	2.6	29.6	1408	
Second	35.6	26.0	34.7	27.4	2.2	3.3	5.1	11.6	0.4	2.8	1.6	0.9	2.0	25.6	1232	
Middle	34.4	26.6	38.2	23.8	1.7	1.9	5.6	9.4	0.5	4.2	1.3	0.9	3.1	25.0	1222	
Fourth	41.2	31.2	33.8	26.9	1.9	1.7	5.4	12.0	0.3	2.9	2.0	0.2	4.1	22.8	911	
Richest	34.6	24.5	34.4	24.0	2.3	2.8	4.1	12.0	0.2	5.2	1.9	0.2	3.4	27.5	591	
Total	34.4	25.7	33.6	27.4	1.9	2.0	5.3	11.4	0.3	3.8	1.8	0.6	2.9	26.3	5363	

¹ MICS indicator 3.8

(*) Figures that are based on less than 25 unweighted cases

6.4. Care seeking and Antibiotic Therapy of Children with Suspected Pneumonia

Pneumonia is the leading cause of death in children and the use of antibiotics in under-5s with suspected pneumonia is a key intervention. A World Fit for Children goal is to reduce by one-third the deaths due to acute respiratory infections.

Children with suspected pneumonia are those who had an illness with a cough accompanied by rapid or difficult breathing and whose symptoms were NOT due to a problem in the chest and a blocked nose.

The indicators are:

- Prevalence of suspected pneumonia
- Care seeking for suspected pneumonia
- Antibiotic treatment for suspected pneumonia
- Knowledge of the danger signs of pneumonia

Table CH.7 presents the prevalence of suspected pneumonia and, if care was sought outside the home, where was it sought. About 10 percent of children aged 0-59 months were reported to have had symptoms of pneumonia during the two weeks preceding the survey. Of these children, 74 percent were taken to an appropriate care provider (77 percent of the boys; and 72 percent of the girls). Most children were taken to private physicians (30 percent), secondly to government hospitals (19 percent) and thirdly to government health centres (17 percent). Younger children were taken to appropriate providers more frequently than older ones. Children from educated mothers and those living in the richest households were also more frequently taken to an appropriate care provider than those from uneducated mothers or from the poorest households.

Overall, 67 percent of under-five children with suspected pneumonia had received an antibiotic during the two weeks prior to the survey; less in Kurdistan Region (61 percent) than in the centre/south governorates (69 percent). All governorates had somewhat high percentages (over 64 percent) for the use of antibiotics for treatment of suspected pneumonia, with the exception of Baghdad that had a percentage of 43 and Suleimaniya that had a percentage of 52. These figures show a fact that is worth further analysing because they might reflect an area of improvement in the management of pneumonia in those two governorates, or on the contrary, for the remaining governorates where an over administration of antibiotics might be occurring.

The knowledge of danger signs of pneumonia among mothers and caretakers is reflected in Table CH.8. Obviously, mothers' knowledge of the danger signs is an important determinant of care-seeking behaviour. Overall, only 15 percent of women know of the two danger signs of pneumonia – fast and difficult breathing. The most commonly identified symptom for taking a child to a health facility is developing a fever (71 percent). About 25 percent of mothers identified fast breathing and 38 percent identified difficult breathing as symptoms for taking children immediately to a health care provider. As it would be expected, knowledge increases with mother's education and wealth. The percentage of mothers in centre/south governorates (16 percent) recognizing the two danger signs is double that of mothers in the Kurdistan Region (8 percent). Knowledge is more common among mothers in Wasit governorate (49 percent), followed by mothers from Baghdad and Diyala (29 percent), while five percent or less of the mothers have that knowledge in Dohuk, Ninewa, Kirkuk, Karbala, Al-Najaf and Missan governorates.

Table CH.7: Care seeking for suspected pneumonia and antibiotic use during suspected pneumonia

Percentage of children age 0-59 months with suspected pneumonia in the last two weeks who were taken to a health provider and percentage of children who were given antibiotics, Iraq, 2011

Sex	Had suspected pneumonia in the last two weeks	Number of children age 0-59 months	Children with suspected pneumonia who were taken to:												Any appropriate provider	Percentage of children with suspected pneumonia who received antibiotics in the last two weeks ²	Number of children age 0-59 months with suspected pneumonia in the last two weeks	
			Public sources						Private sources									Other source
			Govt. hospital	Govt. health centre	Govt. health post	Village health worker	Mobile/outreach clinic	Other public	Private hospital/clinic	Private physician	Private pharmacy	Other private medical	Relative or friend	Shop	Trad. Practitioner			
Male	10.5	18638	19.6	16.3	4.9	6.2	0.0	0.1	3.6	32.8	8.3	2.0	0.2	0.3	1.4	76.5	68.4	1950
Female	8.5	17669	17.2	17.9	6.6	5.8	0.0	0.1	2.4	25.2	10.3	1.7	0.5	0.1	2.3	71.8	65.4	1502
Governorates																		
Dohuk	21.8	1338	20.3	23.7	3.8	6.1	0.2	0.0	7.1	20.0	1.8	5.7	0.0	0.0	0.3	80.4	64.3	291
Ninewa	9.9	3521	15.4	22.9	2.4	6.4	0.0	0.0	0.0	43.2	1.3	5.1	0.2	0.0	4.9	84.2	76.7	349
Suleimaniya	23.8	1503	27.5	8.8	6.4	5.4	0.0	0.0	2.1	24.2	27.3	0.0	1.2	1.2	0.0	70.4	52.0	357
Kirkuk	8.9	1539	20.8	8.1	12.8	29.8	0.2	0.1	0.0	18.2	3.9	0.0	0.4	0.0	0.0	88.5	64.8	137
Erbil	10.5	1682	32.0	6.6	8.2	8.1	0.0	2.2	0.7	27.0	5.1	2.0	0.0	0.0	0.0	82.4	71.6	176
Diyala	13.5	1417	6.7	18.8	7.9	22.7	0.0	0.0	0.9	25.9	7.3	0.0	1.1	0.6	4.5	78.6	68.4	192
Al-Anbar	5.8	1638	18.2	12.2	5.4	12.1	0.0	0.0	3.5	43.8	3.4	1.7	0.0	0.6	6.6	82.9	81.6	94
Baghdad	4.2	6588	18.6	18.9	3.8	1.5	0.0	0.0	6.0	23.2	10.4	4.4	0.0	0.2	2.8	69.5	42.9	277
Babil	5.8	2219	14.2	14.3	7.0	7.3	0.0	0.0	7.3	34.4	10.1	0.0	0.0	1.0	0.0	75.7	73.5	129
Karbala	13.6	1234	11.6	22.3	3.7	4.3	0.0	0.0	1.9	24.8	15.2	0.0	0.0	0.0	0.1	62.5	66.1	168
Wasit	6.7	1295	24.7	7.7	0.4	2.6	0.0	0.0	7.6	43.9	4.3	0.0	0.0	0.0	3.7	78.9	77.0	87
Salahaddin	11.1	1722	17.5	14.5	7.6	1.9	0.0	0.4	2.9	39.1	12.8	0.0	0.4	0.0	1.2	73.0	71.2	191
Al-Najaf	5.5	1529	10.8	17.4	0.0	1.0	0.0	0.0	1.0	27.5	16.7	0.0	0.0	0.0	4.1	56.3	74.4	85
Al-Qadisiya	9.9	1392	16.9	13.7	5.4	1.6	0.0	0.0	2.6	37.4	3.8	0.4	0.0	0.0	1.3	71.9	76.0	138
Al-Muthanna	5.2	914	45.8	10.4	5.1	0.0	0.0	0.0	2.3	25.4	6.5	0.0	0.1	0.0	0.0	76.0	80.1	48
Thi-Qar	11.8	2270	16.2	19.2	5.6	0.8	0.0	0.0	0.8	26.9	9.0	0.9	0.0	0.0	3.5	67.7	76.4	267
Missan	11.0	1310	26.1	25.9	18.0	1.4	0.0	0.0	2.7	19.1	7.7	0.0	2.1	0.0	0.0	70.1	65.6	144
Basrah	10.1	3196	10.7	20.9	2.8	1.3	0.0	0.0	5.3	34.3	7.7	3.0	0.0	0.0	0.0	70.4	68.4	322
Region																		
Kurdistan Region	18.2	4524	25.9	13.6	5.9	6.2	0.1	0.5	3.6	23.3	13.6	2.4	0.5	0.5	0.1	76.5	60.5	825
South/Centre Iraq	8.3	31783	16.2	18.1	5.6	6.0	0.0	0.0	2.9	31.5	7.8	1.7	0.3	0.1	2.3	73.8	69.1	2628

Table CH.7: Care seeking for suspected pneumonia and antibiotic use during suspected pneumonia

Percentage of children age 0-59 months with suspected pneumonia in the last two weeks who were taken to a health provider and percentage of children who were given antibiotics, Iraq, 2011

Children with suspected pneumonia who were taken to:																			
	Had suspected pneumonia in the last two weeks	Number of children age 0-59 months	Public sources								Private sources				Other source			Percentage of children with suspected pneumonia who received antibiotics in the last two weeks ²	Number of children age 0-59 months with suspected pneumonia in the last two weeks
			Govt. hospital	Govt. health centre	Govt. health post	Village health worker	Mobile/outreach clinic	Other public	Private hospital/clinic	Private physician	Private pharmacy	Other private medical	Relative or friend	Shop	Trad. Practitioner	Any appropriate provider			
Area																			
Urban	9.4	24149	20.2	17.6	3.2	5.3	0.0	0.1	3.2	32.7	9.6	2.0	0.4	0.2	1.8	76.5	66.9	2272	
Rural	9.7	12158	15.4	15.9	10.3	7.3	0.1	0.3	2.7	23.5	8.4	1.5	0.3	0.3	1.8	70.5	67.5	1181	
Age																			
0-11 months	10.9	7675	18.3	16.3	4.5	6.5	0.0	0.1	3.6	36.7	6.5	1.6	0.1	0.1	1.3	79.0	66.5	835	
12-23 months	11.2	7487	17.3	16.2	7.5	7.6	0.0	0.1	3.4	30.3	8.9	2.3	0.1	0.0	0.8	77.3	68.3	836	
24-35 months	8.8	7476	21.2	16.8	3.7	6.0	0.1	0.2	3.3	26.8	11.6	2.3	0.6	0.2	2.8	74.2	65.8	661	
36-47 months	9.2	7067	19.1	18.3	6.5	4.0	0.0	0.1	2.1	27.0	11.0	1.4	0.8	0.3	1.7	68.7	68.6	653	
48-59 months	7.1	6602	16.7	18.3	5.9	5.2	0.0	0.2	2.4	22.7	8.6	1.5	0.1	0.9	3.1	69.4	65.6	467	
Mother's education																			
None	11.0	6473	23.1	16.8	7.2	7.6	0.0	0.3	2.4	21.5	9.8	1.1	0.1	0.1	1.3	72.3	65.3	714	
Primary	9.7	18106	16.2	18.5	6.2	6.2	0.1	0.1	2.2	28.8	8.8	2.1	0.5	0.4	1.7	73.3	67.1	1753	
Secondary+	8.4	11667	19.5	14.6	3.6	4.3	0.0	0.0	5.0	36.6	9.5	1.9	0.2	0.0	2.2	77.9	68.3	979	
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	6	
Wealth index quintile																			
Poorest	10.3	8828	17.1	18.3	10.0	6.4	0.0	0.2	3.0	20.1	9.6	3.0	0.3	0.1	0.6	70.0	60.7	908	
Second	10.0	8095	19.1	17.2	6.3	7.2	0.1	0.4	2.2	25.1	9.3	2.0	0.6	0.1	2.9	74.4	70.3	808	
Middle	10.8	7444	21.9	19.3	4.0	6.1	0.0	0.0	3.2	28.3	9.4	2.0	0.3	0.0	1.9	74.9	70.5	807	
Fourth	8.5	6548	17.1	16.6	1.9	5.2	0.0	0.0	3.1	39.8	7.3	0.8	0.1	1.0	1.9	79.0	66.6	557	
Richest	6.9	5392	15.8	9.3	2.8	3.6	0.0	0.0	4.5	49.5	10.3	0.1	0.4	0.0	1.6	77.7	69.1	373	
Total	9.5	36307	18.5	17.0	5.6	6.0	0.0	0.1	3.0	29.5	9.2	1.9	0.3	0.2	1.8	74.4	67.1	3453	

¹ MICS indicator 3.9

² MICS indicator 3.10

(*) Figures that are based on less than 25 unweighted cases

Table CH.8: Knowledge of the two danger signs of pneumonia

Percentage of mothers and caretakers of children age 0-59 months by symptoms that would cause them to take the child immediately to a health facility, and percentage of mothers who recognize fast and difficult breathing as signs for seeking care immediately, Iraq, 2011

Percentage of mothers/caretakers of children age 0-59 months who think that a child should be taken immediately to a health facility if the child:										
	Is not able to drink or breastfeed	Becomes sicker	Develops a fever	Has fast breathing	Has difficulty breathing	Has blood in stool	Is drinking poorly	Has other symptoms	Mothers/caretakers who recognize the two danger signs of pneumonia	Number of mothers/caretakers of children age 0-59 months
Governorates										
Dohuk	5.3	15.2	77.6	20.9	16.2	1.1	3.2	27.6	3.6	798
Ninewa	4.5	21.8	77.1	10.6	26.2	4.3	1.2	16.6	5.4	2027
Suleimaniya	6.5	43.0	70.1	17.7	23.3	1.4	6.7	15.3	7.5	1138
Kirkuk	3.6	35.2	74.3	8.4	56.9	6.9	8.3	14.8	3.8	935
Erbil	4.5	27.0	76.5	30.2	26.8	14.2	4.1	12.6	12.3	1146
Diyala	17.9	41.8	62.4	44.9	46.7	30.0	23.0	18.4	28.6	866
Al-Anbar	10.3	30.0	53.5	33.8	31.3	16.1	13.7	3.6	15.0	966
Baghdad	29.9	45.7	75.2	37.2	48.9	38.6	20.8	3.5	29.3	4202
Babil	40.2	37.2	56.3	38.7	39.7	17.8	17.5	11.0	7.9	1354
Karbala	2.7	5.1	71.8	9.4	37.4	0.4	0.0	44.5	3.7	790
Wasit	36.2	45.9	81.0	56.8	58.0	38.6	20.1	1.4	48.7	761
Salahaddin	13.5	22.0	81.2	29.6	35.7	11.4	7.5	11.0	15.4	964
Al-Najaf	0.9	6.9	58.8	10.9	34.9	1.8	0.9	16.6	4.3	966
Al-Qadisiya	4.2	20.7	56.1	17.3	33.8	13.8	7.9	13.3	8.2	824
Al-Muthanna	15.5	30.0	72.7	30.4	46.4	18.1	7.4	0.2	16.7	538
Thi-Qar	5.9	23.1	65.8	14.1	34.6	11.6	2.2	23.4	8.6	1356
Missan	0.9	19.3	84.4	6.5	23.5	1.8	0.7	5.1	2.4	726
Basrah	5.8	23.8	69.3	19.0	38.9	5.3	1.7	12.0	14.2	1921
Region										
Kurdistan Region	5.4	29.8	74.4	23.2	22.8	6.1	4.8	17.5	8.3	3081
South/Centre Iraq	15.3	30.0	70.1	25.5	40.1	17.4	10.2	11.9	15.8	19196
Area										
Urban	14.7	30.5	71.9	25.2	40.3	17.3	10.1	12.3	15.6	15330
Rural	12.3	28.9	68.1	25.4	32.0	12.5	7.9	13.5	12.9	6947
Mother's education										
None	11.3	28.5	72.9	22.0	29.0	11.5	7.0	11.4	10.6	3670
Primary	12.6	28.9	70.3	24.7	37.5	14.5	9.0	12.7	13.8	10795
Secondary+	17.0	32.1	70.3	27.5	42.1	19.7	11.2	13.2	18.1	7768
Non-standard curriculum	(4.1)	(31.3)	(74.3)	(11.3)	(29.3)	(9.6)	(4.1)	(26.9)	(3.8)	41

Table CH.8: Knowledge of the two danger signs of pneumonia

Percentage of mothers and caretakers of children age 0-59 months by symptoms that would cause them to take the child immediately to a health facility, and percentage of mothers who recognize fast and difficult breathing as signs for seeking care immediately, Iraq, 2011

Wealth index quintile	Percentage of mothers/caretakers of children age 0-59 months who think that a child should be taken immediately to a health facility if the child:										Number of mothers/caretakers of children age 0-59 months
	Is not able to drink or breastfeed	Becomes sicker	Develops a fever	Has fast breathing	Has difficulty breathing	Has blood in stool	Is drinking poorly	Has other symptoms	Mothers/caretakers who recognize the two danger signs of pneumonia		
Poorest	9.8	27.5	71.9	22.1	33.4	12.9	6.3	12.1	12.1		4911
Second	11.2	29.4	69.5	23.5	35.2	12.3	8.2	12.8	11.6		4800
Middle	12.4	27.1	69.6	24.7	36.3	11.8	8.6	13.4	13.3		4641
Fourth	15.7	30.6	70.0	25.6	42.1	17.4	11.2	11.3	16.9		4257
Richest	22.9	37.0	72.9	32.0	43.3	27.5	14.0	14.0	21.8		3668
Total	13.9	30.0	70.7	25.2	37.7	15.8	9.4	12.7	14.7		22277

() Figures that are based on 25-49 unweighted cases

6.5. Solid Fuel Use

More than three billion people around the world rely on solid fuels for their basic energy needs, including cooking and heating. Solid fuels include biomass fuels, such as wood, charcoal, crops or other agricultural waste, dung, shrubs and straw, and coal. Cooking and heating with solid fuels leads to high levels of indoor smoke which contains a complex mix of health-damaging pollutants. The main problem with the use of solid fuels is their incomplete combustion, which produces toxic elements such as carbon monoxide, polyaromatic hydrocarbons, and sulphur dioxide (SO₂), among others. Use of solid fuels increases the risks of incurring acute respiratory illness, pneumonia, chronic obstructive lung disease, cancer, and possibly tuberculosis, asthma, or cataracts, and may contribute to low birth weight of babies born to pregnant women exposed to smoke. The primary indicator for monitoring use of solid fuels is the proportion of the population using solid fuels as the primary source of domestic energy for cooking, shown in Table CH.9.

Solid fuel use is uncommon in Iraq where 98 percent of all household members are using liquefied petroleum gas for cooking. Only two percent use solid fuels for cooking, all of which are from the poorest households, and mainly in centre/south governorates and in the rural areas. Among those using solid fuels, 63 percent are exposed to its harmful impact by using it inside the house (Table CH.10): 31 percent cooking in a separate room used as kitchen and 32 percent elsewhere in the house.

Table CH.9: Solid fuel use

Percent distribution of household members according to type of cooking fuel used by the household, and percentage of household members living in households using solid fuels for cooking, Iraq, 2011

Percentage of household members in households using:															
	Electricity	Liquefied Petroleum Gas (LPG)	Kerosene	Char-coal	Wood	Solid fuels				Other fuel	No food cooked in the household	Missing	Total	Solid fuels for cooking ¹	Number of household members
						Straw, shrubs, grass	Animal dung	Agricultural crop residue							
Governorates															
Dohuk	0.0	99.2	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.4	8931
Ninewa	0.1	98.9	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	100.0	0.1	20321
Sulaimaniya	0.1	99.4	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.2	13645
Kirkuk	0.2	99.1	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.2	0.0	100.0	0.5	9517
Erbil	0.1	99.8	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.1	12817
Diyala	0.3	99.1	0.0	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.6	9444
Al-Anbar	0.4	99.0	0.4	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	100.0	0.1	10088
Baghdad	0.5	99.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	46471
Babil	0.6	96.1	0.9	0.1	1.7	0.5	0.0	0.1	0.0	0.0	0.0	0.0	100.0	2.4	13048
Karbala	0.0	97.8	0.5	0.0	1.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1.7	7302
Wasit	0.2	97.2	0.1	0.1	1.7	0.4	0.2	0.0	0.0	0.0	0.0	0.0	100.0	2.5	8032
Salahaddin	0.3	97.8	0.6	0.0	0.6	0.6	0.0	0.0	0.1	0.0	0.0	0.0	100.0	1.3	9769
Al-Najaf	0.0	96.8	2.7	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.4	9180
Al-Qadisiya	0.1	87.4	1.9	0.0	4.8	3.3	1.3	0.2	1.0	0.0	0.0	0.0	100.0	9.6	8076
Al-Muthanna	0.0	94.2	1.1	0.0	1.8	2.3	0.4	0.3	0.0	0.0	0.0	0.0	100.0	4.7	5005
Thi-Qar	0.3	94.5	3.2	0.0	1.6	0.1	0.2	0.0	0.0	0.0	0.0	0.0	100.0	2.0	13527
Missan	0.0	92.9	1.4	0.0	0.4	4.2	0.4	0.0	0.6	0.0	0.0	0.0	100.0	5.0	7107
Basrah	0.3	99.0	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.2	18477
Region															
Kurdistan Region	0.0	99.5	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.2	35392
South/Centre Iraq	0.3	97.5	0.8	0.0	0.7	0.5	0.1	0.0	0.1	0.0	0.0	0.0	100.0	1.3	195363
Area															
Urban	0.2	99.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	161947
Rural	0.3	93.7	2.0	0.1	2.0	1.3	0.4	0.1	0.2	0.0	0.0	0.0	100.0	3.8	68808

Table CH.9: Solid fuel use

Percent distribution of household members according to type of cooking fuel used by the household, and percentage of household members living in households using solid fuels for cooking, Iraq, 2011

Percentage of household members in households using:															
		Electricity	Liquefied Petroleum Gas (LPG)	Kerosene	Char-coal	Wood	Straw, shrubs, grass	Animal dung	Agricultural crop residue	Other fuel	No food cooked in the household	Missing	Total	Solid fuels for cooking ¹	Number of household members
Education of household head															
	None	0.2	95.0	1.5	0.0	1.5	1.2	0.3	0.1	0.2	0.0	0.0	100.0	3.2	45575
	Primary	0.2	97.8	0.8	0.0	0.7	0.4	0.1	0.0	0.1	0.0	0.0	100.0	1.1	76477
	Secondary+	0.3	99.0	0.3	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	100.0	0.3	106448
	Non-standard curriculum	0.2	96.9	2.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.2	2160
	Missing/DK	0.0	95.9	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	95
Wealth index quintiles															
	Poorest	0.4	89.9	3.5	0.1	3.1	2.0	0.6	0.1	0.3	0.1	0.0	100.0	5.8	46152
	Second	0.4	99.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	100.0	0.0	46149
	Middle	0.0	99.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	46139
	Fourth	0.2	99.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	46163
	Richest	0.2	99.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	46151
Total		0.3	97.8	0.7	0.0	0.6	0.4	0.1	0.0	0.1	0.0	0.0	100.0	1.2	230755

¹ MICS indicator 3.11

Table CH.10: Solid fuel use by place of cooking

Percent distribution of household members in households using solid fuels by place of cooking, Iraq, 2011

	Place of cooking:						Number of household members in households using solid fuels for cooking
	In a separate room used as kitchen	Elsewhere in the house	In a separate building	Outdoors	At another place	Total	
Governorates							
Dohuk	(8.3)	(20.5)	(50.6)	(20.6)	(0.0)	(100.0)	37
Ninewa	(28.1)	(22.2)	(0.0)	(49.7)	(0.0)	(100.0)	25
Suleimaniya	(61.7)	(10.7)	(25.5)	(2.2)	(0.0)	(100.0)	27
Kirkuk	(25.0)	(75.0)	(0.0)	(0.0)	(0.0)	(100.0)	43
Erbil	(*)	(*)	(*)	(*)	(*)	(*)	9
Diyala	2.0	98.0	0.0	0.0	0.0	100.0	53
Al-Anbar	(*)	(*)	(*)	(*)	(*)	(*)	12
Babil	10.6	35.4	18.7	30.9	4.4	100.0	320
Karbala	68.1	0.0	0.0	31.9	0.0	100.0	124
Wasit	42.4	29.4	4.5	23.7	0.0	100.0	200
Salahaddin	55.3	4.9	2.2	37.6	0.0	100.0	123
Al-Najaf	(19.4)	(16.8)	(22.2)	(41.6)	(0.0)	(100.0)	39
Al-Qadisiya	27.3	40.3	12.1	20.3	0.0	100.0	776
Al-Muthanna	76.9	13.4	1.7	5.5	2.5	100.0	235
Thi-Qar	7.2	5.2	1.6	86.0	0.0	100.0	267
Missan	29.4	59.7	2.1	8.8	0.0	100.0	359
Basrah	(12.5)	(0.0)	(8.4)	(79.1)	(0.0)	(100.0)	31
Region							
Kurdistan Region	31.6	19.3	37.7	11.4	0.0	100.0	73
South/Centre Iraq	31.4	32.5	7.5	27.9	0.8	100.0	2607
Area							
Urban	(61.9)	(23.3)	(4.4)	(10.3)	(0.0)	100.0	43
Rural	30.9	32.3	8.4	27.7	0.8	100.0	2637
Education of household head							
None	32.7	29.4	6.5	30.4	1.0	100.0	1451
Primary	31.2	35.2	8.8	24.1	0.7	100.0	853
Secondary+	26.6	36.2	14.3	22.9	0.0	100.0	370
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	5
Wealth index quintiles							
Poorest	31.4	32.1	8.3	27.4	0.7	100.0	2680
Total	31.4	32.1	8.3	27.4	0.7	100.0	2680

() Figures that are based on 25-49 unweighted cases

(*) Figures that are based on less than 25 unweighted cases

7. Water and Sanitation

Safe drinking water is a basic necessity for good health. Unsafe drinking water can be a significant carrier of diseases such as trachoma, cholera, typhoid, and schistosomiasis. Drinking water can also be tainted with chemical, physical and radiological contaminants with harmful effects on human health. In addition to its association with disease, access to drinking water may be particularly important for women and children, especially in rural areas, who bear the primary responsibility for carrying water, often for long distances.

The MDG goal is to reduce by half, between 1990 and 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation. The World Fit for Children goal calls for a reduction in the proportion of households without access to hygienic sanitation facilities and affordable and safe drinking water by at least one-third.

The list of indicators used in MICS is as follows:

- Water
- Use of improved drinking water sources
- Use of adequate water treatment method
- Time to source of drinking water
- Person collecting drinking water Sanitation
- Use of improved sanitation facilities
- Sanitary disposal of child's faeces

For more details on water and sanitation and to access some reference documents, please visit the UNICEF childinfo website <http://www.childinfo.org/wes.html>.

7.1. Use of Improved Water Sources

The distribution of the population by source of drinking water is shown in Table WS.1 and Figure WS.1. The population using improved sources of drinking water are those using any of the following types of supply: piped water (into dwelling, compound, yard or plot, public tap/standpipe), tube well/borehole, protected well, protected spring, rainwater collection and water from reverse osmosis. Bottled water is considered as an improved water source only if the household is using an improved water source for other purposes, such as handwashing and cooking.

Overall, 91 percent of the population has access to improved drinking water sources – 98 percent in urban areas and only 77 percent in rural areas. About 58 percent of the population use water piped into their dwelling and 5 percent piped into the yard or plot (Figure WS.1). The situation varies markedly among governorates (Figure WS.2). Diyala governorate is considerably worse than all other governorates with 80 percent of the population having access to improved drinking water sources compared to 95 percent or above in Kirkuk, Baghdad, Al-Najaf, Basrah, and the Kurdish region. Overall, Kurdistan Region governorates (97 percent) have better access to improved drinking water sources than South/Centre Iraq governorates (91 percent). Southern governorates depend mostly on Reverse Osmosis, the second most common source of drinking water, like Basrah (99 percent), Missan (94 percent), Thi-Qar (48 percent) and Al-Muthanna (57 percent). Results show that about 10 percent of the population use bottled water to drink but improved sources for handwashing or cooking, particularly in the governorates of Al-Najaf (73 percent) and Karbala (52 percent).

Figure WS.1: Percent distribution of household members by source of drinking water, Iraq, 2011

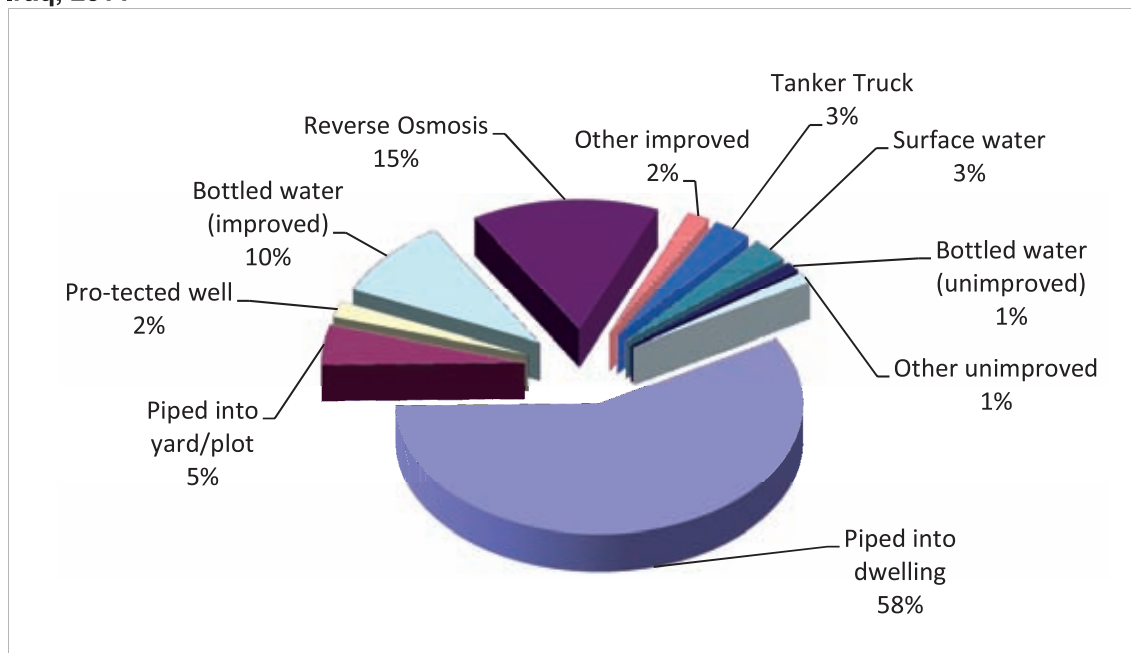


Figure WS. 2: Percentage of household members using an improved source of drinking water, Iraq, 2011

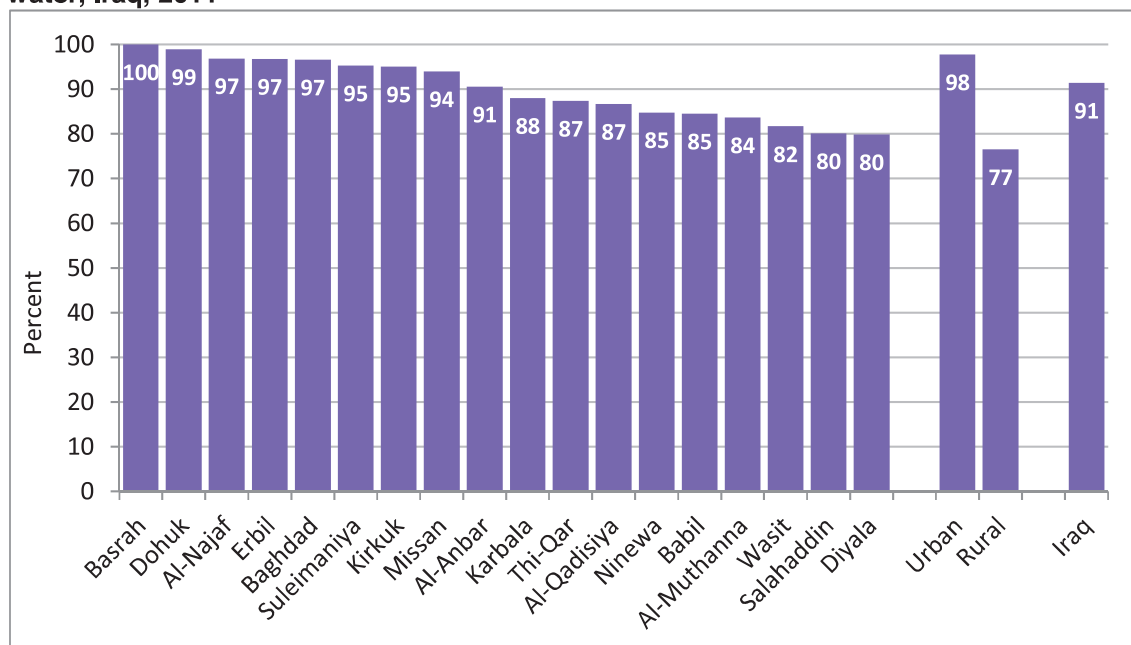


Table WS.1: Use of improved water sources

Percent distribution of household population according to main source of drinking water and percentage of household population using improved drinking water sources, Iraq, 2011

	Main source of drinking water																		Percentage using improved sources of drinking water [1]	Number of household members
	Piped water						Improved sources						Unimproved sources							
	Into dwelling	Into yard/plot	To neigh-bour	Public tap/stand-pipe	Tube-well/bore-hole	Pro-ected well	Pro-ected spring	Rain-water collection	Bottled water	Reverse osmosis (RO)	Unpro-ected well	Unpro-ected spring	Tanker truck	Cart with tank/drum	Surface water	Bottled water	Other	Total		
Governorate																				
Dohuk	92.4	2.2	0.1	0.7	0.1	1.0	0.0	0.0	2.4	0.0	0.1	0.0	0.4	0.1	0.3	0.1	0.1	100.0	98.9	8931
Ninewa	65.4	10.9	0.7	0.1	1.4	6.0	0.2	0.1	0.0	0.0	0.1	0.0	14.6	0.1	0.0	0.0	0.3	100.0	84.8	20321
Suleimaniya	74.4	5.4	0.1	0.5	2.0	10.1	1.6	0.0	0.3	0.9	0.0	0.5	3.4	0.2	0.4	0.1	0.0	100.0	95.3	13645
Kirkuk	70.4	15.6	0.6	0.0	4.8	3.6	0.0	0.0	0.0	0.0	1.0	0.0	0.8	0.8	2.3	0.0	0.0	100.0	95.1	9517
Erbil	74.6	17.1	0.1	0.9	1.0	1.8	1.2	0.0	0.0	0.0	0.1	0.2	2.6	0.3	0.0	0.0	0.0	100.0	96.8	12817
Diyala	70.4	2.0	0.3	0.0	0.1	4.9	0.2	0.0	1.9	0.0	0.5	0.1	1.2	3.8	9.2	5.3	0.0	100.0	79.9	9444
Al-Anbar	72.0	9.3	1.5	0.0	0.0	0.6	0.0	0.0	7.1	0.0	0.0	0.0	2.1	0.4	5.6	1.2	0.0	100.0	90.5	10088
Baghdad	83.6	2.0	0.0	1.7	0.0	0.1	0.0	0.0	9.2	0.0	0.0	0.0	0.7	0.6	1.7	0.3	0.1	100.0	96.6	46471
Babil	51.4	5.8	0.8	0.5	1.0	0.4	0.0	0.0	24.7	0.0	0.1	0.0	0.6	1.0	8.8	4.8	0.1	100.0	84.6	13048
Karbala	35.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	52.0	0.0	0.0	0.0	0.3	3.4	0.9	6.4	1.0	100.0	88.0	7302
Wasit	69.1	2.6	0.0	0.1	1.1	4.5	0.0	0.0	4.3	0.0	0.0	0.0	1.9	0.6	10.0	2.4	3.4	100.0	81.7	8032
Salahaddin	65.9	8.0	0.5	0.3	0.6	2.6	0.2	0.0	2.0	0.0	0.1	0.0	9.2	2.3	7.7	0.0	0.6	100.0	80.1	9769
Al-Najaf	23.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	73.0	0.0	0.0	0.0	0.4	0.8	0.4	1.5	0.0	100.0	96.9	9180
Al-Qadisiya	49.2	3.5	0.5	0.1	1.2	0.6	0.0	0.0	31.7	0.0	0.2	0.0	1.2	0.5	5.2	6.2	0.0	100.0	86.7	8076
Al-Muthanna	21.2	4.0	0.3	0.8	0.1	0.4	0.3	0.0	0.0	56.6	0.0	0.0	14.9	0.6	0.8	0.0	0.0	100.0	83.7	5005
Thi-Qar	34.4	0.4	0.1	0.0	2.2	0.1	0.0	0.0	2.2	48.1	0.0	0.0	1.1	3.2	8.0	0.3	0.0	100.0	87.4	13527
Missan	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	93.5	0.0	0.0	3.9	1.6	0.6	0.0	0.0	100.0	93.9	7107
Basrah	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	98.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	18477
Region																				
Kurdistan Region	79.0	8.8	0.1	0.7	1.2	4.8	1.1	0.0	0.7	0.4	0.1	0.3	2.3	0.2	0.2	0.1	0.0	100.0	96.7	35392
South/Centre Iraq	54.3	4.2	0.3	0.5	0.7	1.5	0.1	0.0	11.5	17.5	0.1	0.0	3.2	1.1	3.5	1.4	0.3	100.0	90.5	195363
Area																				
Urban	66.0	3.3	0.2	0.0	0.3	0.9	0.1	0.0	10.9	16.0	0.1	0.0	1.3	0.2	0.3	0.3	0.1	100.0	97.8	161947
Rural	39.5	8.6	0.5	1.7	1.9	4.4	0.6	0.0	7.1	12.2	0.1	0.1	7.1	2.8	9.4	3.3	0.6	100.0	76.5	68808

Table WS.1: Use of improved water sources

Percent distribution of household population according to main source of drinking water and percentage of household population using improved drinking water sources, Iraq, 2011

	Main source of drinking water																		Percentage using improved sources of drinking water [1]	Number of household members
	Piped water						Improved sources						Unimproved sources							
	Into dwelling	Into yard/plot	To neigh-bour	Public tap/stand-pipe	Tube-well/bore-hole	Pro-ected well	Pro-ected spring	Rain-water collection	Bottled water	Reverse osmosis (RO)	Unpro-ected well	Unpro-ected spring	Tanker truck	Cart with tank/drum	Surface water	Bottled water	Other	Total		
Education of household head																				
None	56.7	5.7	0.3	0.6	1.5	2.9	0.5	0.0	6.3	12.7	0.1	0.1	5.5	1.1	4.1	1.7	0.2	100.0	87.2	45575
Primary	55.7	5.5	0.3	0.5	1.0	2.8	0.2	0.0	8.1	15.7	0.1	0.1	3.9	1.1	3.2	1.3	0.4	100.0	89.9	76477
Secondary+	60.6	4.1	0.2	0.5	0.4	1.0	0.1	0.0	12.6	15.0	0.1	0.0	1.3	0.7	2.3	0.9	0.2	100.0	94.4	106448
Non-standard curriculum	42.7	3.7	0.2	0.0	1.0	3.1	0.2	0.0	8.2	27.9	0.0	0.0	2.2	1.0	6.5	3.1	0.4	100.0	86.8	2160
Missing/DK	87.4	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.3	8.5	0.0	0.0	0.0	0.0	2.3	0.0	0.0	100.0	97.7	95
Wealth index quintile																				
Poorest	27.2	9.9	1.0	1.4	2.5	5.6	0.8	0.0	4.2	16.4	0.2	0.1	12.1	3.2	11.8	3.1	0.5	100.0	68.9	46152
Second	55.5	7.7	0.4	0.9	0.9	2.2	0.1	0.0	8.9	16.5	0.2	0.1	2.1	0.9	2.1	1.2	0.2	100.0	93.1	46149
Middle	64.2	3.8	0.0	0.2	0.3	1.1	0.0	0.0	9.3	18.2	0.1	0.0	0.6	0.3	0.9	0.6	0.3	100.0	97.1	46139
Fourth	67.7	2.2	0.0	0.0	0.3	0.9	0.0	0.0	11.5	16.0	0.1	0.0	0.2	0.2	0.1	0.6	0.2	100.0	98.6	46163
Richest	75.7	0.8	0.0	0.0	0.0	0.2	0.0	0.0	15.2	7.4	0.0	0.0	0.1	0.1	0.0	0.4	0.0	100.0	99.4	46151
Total	58.1	4.9	0.3	0.5	0.8	2.0	0.2	0.0	9.8	14.9	0.1	0.1	3.0	1.0	3.0	1.2	0.2	100.0	91.4	230755

¹ **MICS indicator 4.1; MDG indicator 7.8**

Households using bottled water as the main source of drinking water are classified into improved or unimproved drinking water users according to the water source used for other purposes such as cooking and handwashing.

Table WS.2: Household water treatment

Percentage of household population by drinking water treatment method used in the household, and for household members living in households where an unimproved drinking water source is used, the percentage who are using an appropriate treatment method, Iraq, 2011

	Water treatment method used in the household										Percentage of household members in households using unimproved drinking water sources and using an appropriate water treatment method [1]	Number of household members in households using unimproved drinking water sources
	None	Boil	Add bleach/ chlorine	Strain through a cloth	Use water filter	Solar disinfection	Let it stand and settle	Other	Missing/DK	Number of household members		
Governorate												
Dohuk	89.5	1.7	0.5	1.6	6.4	0.0	0.0	0.5	0.1	8931	14.8	96
Ninewa	69.1	1.2	1.4	0.8	16.2	0.0	11.0	0.6	0.0	20321	0.8	3090
Suleimaniya	95.5	0.6	2.3	0.0	1.5	0.0	0.0	0.1	0.0	13645	2.7	644
Kirkuk	82.3	7.8	1.4	0.6	11.4	0.2	1.3	0.3	0.0	9517	0.0	469
Erbil	97.3	1.0	0.2	0.0	0.0	0.0	0.1	0.1	1.2	12817	0.4	415
Diyala	52.7	6.7	19.3	6.7	10.4	0.1	1.3	14.3	0.0	9444	29.7	1900
Al-Anbar	43.4	1.9	1.8	1.0	31.1	0.1	0.2	49.8	0.0	10088	44.2	954
Baghdad	82.4	2.9	6.7	1.9	3.5	0.0	0.8	3.2	0.1	46471	31.0	1580
Babil	88.3	0.4	3.7	1.0	1.6	0.0	0.1	5.8	0.0	13048	14.5	2015
Karbala	82.6	10.7	0.7	0.5	3.4	0.0	0.1	2.6	0.0	7302	0.1	875
Wasit	70.7	1.4	6.0	1.6	21.0	0.1	0.4	0.6	0.0	8032	26.2	1472
Salahaddin	69.1	5.0	10.3	4.0	14.1	0.6	4.3	1.3	0.0	9769	19.5	1944
Al-Najaf	79.7	0.4	1.0	0.0	0.0	0.0	0.1	18.8	0.0	9180	21.1	287
Al-Qadisiya	81.1	1.8	5.4	0.6	6.9	0.3	3.9	0.8	0.1	8076	18.5	1074
Al-Muthanna	97.2	1.3	1.0	0.0	0.0	0.0	0.4	0.4	0.0	5005	2.0	816
Thi-Qar	86.8	1.3	5.0	0.7	0.2	0.5	3.5	6.4	0.0	13527	14.6	1707
Missan	99.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	7107	0.8	430
Basrah	97.3	1.0	1.2	0.0	0.0	0.0	0.1	0.2	0.0	18477	(*)	4
Region												
Kurdistan Region	94.7	1.0	1.1	0.4	2.2	0.0	0.0	0.2	0.5	35392	2.9	1155
South/Centre Iraq	79.4	2.7	4.6	1.4	7.3	0.1	2.1	6.1	0.0	195363	16.6	18617
Area												
Urban	81.7	2.9	2.8	1.3	6.9	0.1	1.8	4.9	0.1	161947	5.0	3635
Rural	81.8	1.4	7.2	1.1	5.6	0.1	1.8	5.8	0.1	68808	18.2	16136
Education of household head												
None	88.5	1.9	2.7	0.6	3.7	0.1	1.5	2.9	0.1	45575	8.5	5841
Primary	85.1	2.0	3.8	1.1	4.9	0.1	1.7	3.6	0.1	76477	13.6	7703
Secondary+	76.3	3.0	4.9	1.6	8.9	0.1	2.1	7.2	0.1	106448	25.3	5941
Non-standard curriculum	86.0	1.1	5.6	0.0	2.8	0.0	0.3	5.2	0.0	2160	27.2	285
Wealth index quintile												
Poorest	89.6	1.7	5.7	0.5	1.3	0.1	1.6	1.7	0.1	46152	14.1	14354
Second	88.5	1.9	3.5	0.6	2.9	0.2	1.7	3.0	0.1	46149	21.0	3188
Middle	84.2	2.6	3.4	0.9	4.9	0.0	2.5	4.7	0.1	46139	22.8	1334
Fourth	77.7	2.5	3.6	1.4	9.3	0.0	1.8	7.2	0.2	46163	12.5	630
Richest	68.6	3.5	4.3	2.8	14.1	0.1	1.5	9.1	0.1	46151	16.0	266
Total	81.7	2.4	4.1	1.2	6.5	0.1	1.8	5.2	0.1	230755	15.8	19771

¹ MICS indicator 4.2

(*) Figures that are based on less than 25 unweighted cases

Use of in-house water treatment is presented in Table WS.2. Households were asked of ways they may be treating water at home to make it safer to drink – boiling, adding bleach or chlorine, using a water filter, and using solar disinfection were considered as proper treatment of drinking water. The table shows water treatment by all households and the percentage of household members living in households using unimproved water sources but using appropriate water treatment methods.

Only about 16 percent of households (among those using an unimproved source of drinking water) in Iraq use appropriate water treatment for unimproved drinking water sources and 82 percent do not use any method for water treatment. About 7 percent of households use water filter and one percent add chlorine. There exist large differentials in use of appropriate water treatment among governorates. Less than 3 percent of household members with unimproved water sources in the governorates of Kirkuk, Al-Basrah, Erbil, Karbela, Missan, Ninewa, Al-Muthanna and Suleimaniya use appropriate water treatment methods. It was also observed that appropriate water treatment use is greater in rural areas and where the household head is educated.

The amount of time it takes to obtain water is presented in Table WS.3 and the person who usually collected the water in Table WS.4. Note that these results refer to one roundtrip from home to drinking water source. Information on the number of trips made in one day was not collected.

Table WS.3 shows that for 89 percent of households, the drinking water source is on the premises. For one percent of households that use improved drinking water sources, it takes less than 30 minutes to get to the water source and bring water. In rural areas higher proportions of households (3 percent) spend time in collecting water compared to those in urban areas (1 percent). About 45 percent of the population in Al-Muthanna spend less than 30 minutes to fetch water, while in Karbala and Wasit 7 percent and 5 percent respectively spend more 30 minutes or more.

Table WS.4 shows that for about half of households (51 percent), an adult male is usually the person collecting the water, when the source of drinking water is not on the premises. Adult women collect water in 38 percent of the households, while for the about 5 percent, female or male children under age 15 collect water. It is worth noting that more women in Suleimaniya (64 percent) Wasit (51 percent), Al-Qadisiya (85 percent), Al-Muthanna and Thi-Qar (70 percent) governorates collect water compared to the remaining governorates where this is a task done mostly by men.

Table WS.3: Time to source of drinking water

Percent distribution of household population according to time to go to source of drinking water, get water and return, for users of improved and unimproved drinking water sources, Iraq, 2011

	Time to source of drinking water								Total	Number of household members
	Users of improved drinking water sources				Users of unimproved drinking water sources					
	Water on premises	Less than 30 minutes	30 minutes or more	Missing/DK	Water on premises	Less than 30 minutes	30 minutes or more	Missing/DK		
Governorates										
Dohuk	98.9	0.0	0.0	0.0	0.5	0.0	0.0	0.5	100.0	8931
Ninewa	84.5	0.2	0.0	0.0	9.7	0.2	3.9	1.3	100.0	20321
Suleimaniya	93.0	1.5	0.5	0.3	1.0	0.4	0.4	3.0	100.0	13645
Kirkuk	95.1	0.0	0.0	0.0	1.7	1.6	1.6	0.0	100.0	9517
Erbil	95.9	0.2	0.0	0.7	0.4	0.2	0.4	2.3	100.0	12817
Diyala	77.3	2.0	0.6	0.0	6.4	8.8	4.8	0.1	100.0	9444
Al-Anbar	90.5	0.0	0.0	0.0	6.8	1.4	1.1	0.2	100.0	10088
Baghdad	95.0	0.1	1.3	0.2	2.7	0.2	0.3	0.2	100.0	46471
Babil	83.4	0.8	0.3	0.1	14.0	0.5	0.9	0.0	100.0	13048
Karbala	88.0	0.0	0.0	0.0	2.4	2.5	6.8	0.2	100.0	7302
Wasit	80.2	1.2	0.2	0.1	3.0	10.3	4.7	0.3	100.0	8032
Salahaddin	79.7	0.1	0.3	0.0	12.4	4.4	3.0	0.1	100.0	9769
Al-Najaf	96.9	0.0	0.0	0.0	2.3	0.5	0.2	0.0	100.0	9180
Al-Qadisiya	85.4	0.8	0.5	0.0	5.8	5.5	1.9	0.1	100.0	8076
Al-Muthanna	62.1	19.0	1.4	1.2	0.0	14.7	1.0	0.6	100.0	5005
Thi-Qar	83.3	3.8	0.3	0.0	7.6	4.3	0.7	0.0	100.0	13527
Missan	78.0	7.0	8.9	0.0	1.0	5.0	0.0	0.0	100.0	7107
Basrah	97.1	2.8	0.0	0.0	0.0	0.0	0.0	0.0	100.0	18477
Region										
Kurdistan Region	95.5	0.6	0.2	0.4	0.7	0.2	0.3	2.1	100.0	35392
South/Centre Iraq	88.0	1.6	0.8	0.1	5.1	2.5	1.7	0.3	100.0	195363
Area										
Urban	96.9	0.7	0.1	0.0	1.3	0.4	0.3	0.2	100.0	161947
Rural	71.1	3.0	2.1	0.4	11.7	6.3	4.1	1.3	100.0	68808
Education of household head										
None	83.7	2.0	1.2	0.3	5.8	3.3	2.9	0.8	100.0	45575
Primary	87.1	1.9	0.7	0.1	5.4	2.5	1.3	0.8	100.0	76477
Secondary+	93.1	0.8	0.5	0.1	3.0	1.4	0.9	0.2	100.0	106448
Non-standard curriculum	84.2	2.2	0.1	0.3	5.8	4.8	2.5	0.0	100.0	2160
Wealth index quintile										
Poorest	62.3	4.0	2.2	0.4	15.6	8.3	5.6	1.7	100.0	46152
Second	90.7	1.3	0.9	0.2	3.8	1.5	1.1	0.6	100.0	46149
Middle	95.7	1.0	0.3	0.1	1.8	0.5	0.3	0.3	100.0	46139
Fourth	98.1	0.5	0.0	0.0	0.7	0.4	0.2	0.1	100.0	46163
Richest	99.2	0.2	0.0	0.0	0.1	0.2	0.1	0.1	100.0	46151
Total	89.2	1.4	0.7	0.1	4.4	2.2	1.5	0.5	100.0	230755

Table WS.4: Person collecting water

Percentage of households without drinking water on premises, and percent distribution of households without drinking water on premises according to the person usually collecting drinking water used in the household, Iraq, 2011

	Percentage of households without drinking water on premises	Number of households	Person usually collecting drinking water						Total	Number of households without drinking water on premises
			Adult woman	Adult man	Female child under age 15	Male child under age 15	Missing/DK			
Governorates										
Dohuk	0.6	1245	(*)	(*)	(*)	(*)	(*)	(*)	7	
Ninewa	5.4	2909	1.7	88.2	0.0	1.3	8.9	100.0	157	
Suleimaniya	5.9	2718	63.5	29.3	0.6	3.1	3.5	100.0	161	
Kirkuk	2.0	1762	(27.1)	(72.9)	(0.0)	(0.0)	(0.0)	100.0	35	
Erbil	3.1	2392	22.1	9.4	0.0	0.0	68.5	100.0	74	
Diyala	15.4	1515	14.9	75.3	0.5	1.7	7.5	100.0	233	
Al-Anbar	2.7	1354	(15.7)	(51.8)	(4.4)	(18.8)	(9.3)	100.0	37	
Baghdad	1.9	7863	4.4	81.4	0.9	0.6	12.7	100.0	149	
Babil	2.4	1884	(29.2)	(65.2)	(0.0)	(2.8)	(2.7)	100.0	46	
Karbala	6.9	1152	4.3	88.3	0.0	3.7	3.7	100.0	80	
Wasit	16.0	1154	51.0	43.0	3.7	0.9	1.5	100.0	185	
Salahaddin	6.7	1378	44.3	51.3	1.9	0.0	2.5	100.0	92	
Al-Najaf	1.4	1357	(*)	(*)	(*)	(*)	(*)	(*)	18	
Al-Qadisiya	7.2	1086	85.1	12.9	0.6	1.4	0.0	100.0	78	
Al-Muthanna	32.8	651	70.3	24.5	1.3	3.5	0.4	100.0	214	
Thi-Qar	9.4	1715	69.7	21.1	2.7	5.9	0.7	100.0	161	
Missan	19.4	957	45.0	54.0	0.0	0.9	0.2	100.0	186	
Basrah	2.8	2609	2.8	69.1	5.6	20.7	1.7	100.0	74	
Region										
Kurdistan Region	3.8	6355	49.2	22.9	0.4	2.0	25.5	100.0	242	
South/Centre Iraq	5.9	29346	36.1	55.3	1.4	3.4	3.8	100.0	1744	
Area										
Urban	1.6	26325	23.5	60.8	2.3	9.1	4.2	100.0	428	
Rural	16.6	9376	41.6	48.8	1.0	1.6	7.1	100.0	1558	
Education of household head										
None	9.0	6783	43.0	46.8	1.2	2.1	6.9	100.0	612	
Primary	6.7	11410	41.3	47.2	1.7	3.3	6.6	100.0	766	
Secondary+	3.4	17234	27.8	61.3	0.8	3.9	6.2	100.0	582	
Non-standard curriculum	10.0	260	(26.8)	(59.9)	(0.0)	(13.3)	(0.0)	100.0	26	
Wealth index quintile										
Poorest	19.5	6941	44.0	46.8	1.0	1.7	6.5	100.0	1354	
Second	4.6	7206	30.1	60.2	1.0	2.1	6.5	100.0	335	
Middle	2.4	7057	16.7	61.9	3.3	12.5	5.6	100.0	166	
Fourth	1.2	7060	21.0	61.7	3.8	9.4	4.1	100.0	82	
Richest	0.7	7436	12.0	64.6	0.0	11.9	11.5	100.0	50	
Total	5.6	35701	37.7	51.4	1.3	3.2	6.5	100.0	1986	

() Figures that are based on 25-49 unweighted cases

(*) Figures that are based on less than 25 unweighted cases

In every household the interviewers tried to test the chlorine concentration in a sample of water used for drinking, cooking or handwashing. It is considered that concentrations of chlorine of at least 0.5 parts per million (ppm) of water prevent from water borne diseases, although less than 0.5 might be enough in some cases. In 81 percent of the households this

test was conducted (Table WS.5), but the variation was considerable among governorates: while in Baghdad and Dohuk over 95 percent of the tests were conducted, only 52 percent of them were in Salahaddin. In 27 percent of the households there were no traces of chlorine found in the water tested, and in other 15 percent the concentration found was below 0.5 ppm. The lack of chlorine affects 46 percent of the households in Kurdistan region and 24 percent in the South/Centre one. Similar differences are observed among rural (44 percent without chlorine) and urban (24 percent) households, or the poorest and the richest households, with respectively 41 percent and 16 percent. There is a remarkable variation among governorates regarding the lack of chlorine, ranging from the minimum found in Baghdad (3 percent) or Karbala (4 percent) to Al-Anbar and Basrah where 63 percent and 74 percent of households have no traces of chlorine in their water.

Table WS.5: Water chlorination

Percent distribution of households by water chlorine. Iraq, 2011

	Percent of households where chlorine was tested	Number of households	Percent of households with chlorine test result				Total	Number of households in which chlorine was tested
			Percent of households with no chlorine	Less than 0.5	0.5 - 1	More than 1		
Governorates								
Duhuk	97.8	1245	40.9	29.3	25.8	4.0	100.0	1218
Nainwa	71.7	2909	27.4	14.0	15.9	42.7	100.0	2087
Sulimania	81.4	2718	50.4	19.6	21.5	8.5	100.0	2213
Kakuk	89.4	1762	10.4	6.5	3.4	79.7	100.0	1575
Arbil	71.7	2392	43.0	10.0	45.0	2.0	100.0	1715
Diala	63.8	1515	21.8	25.7	26.3	26.2	100.0	967
Anbar	89.7	1354	63.0	11.4	14.8	10.7	100.0	1214
Baghdad	95.6	7863	3.1	9.9	15.3	71.7	100.0	7518
Babil	81.3	1884	26.1	17.0	24.7	32.2	100.0	1531
Karbala	81.8	1152	3.5	18.1	19.0	59.4	100.0	943
Wasit	72.4	1154	8.9	26.2	12.0	52.9	100.0	835
Salahaladin	51.5	1378	39.7	27.9	8.7	23.7	100.0	710
Najaf	88.5	1357	22.4	26.8	28.6	22.2	100.0	1201
Qadisya	85.1	1086	7.1	14.0	10.1	68.7	100.0	925
Almuthana	65.8	651	19.5	4.1	0.8	75.7	100.0	428
Thiqar	69.4	1715	51.4	12.4	2.6	33.6	100.0	1190
Misan	73.6	957	50.0	25.3	10.0	14.8	100.0	705
Albasrah	76.9	2609	73.7	12.5	3.0	10.8	100.0	2006
Region								
Kurdistan Region	81.0	6355	45.7	18.7	30.3	5.3	100.0	5146
South/Centre Iraq	81.2	29346	23.5	14.3	13.8	48.4	100.0	23832
Area								
Urban	90.3	26325	23.7	14.1	17.4	44.7	100.0	23767
Rural	55.6	9376	44.4	19.7	13.5	22.4	100.0	5211
Wealth index quintiles								
Poorest	50.0	6941	40.8	18.1	15.6	25.6	100.0	3473
Second	81.4	7206	34.1	17.5	16.6	31.8	100.0	5869
Middle	87.8	7057	30.7	16.2	16.0	37.1	100.0	6194
Fourth	90.9	7060	23.0	14.3	17.5	45.2	100.0	6416
Richest	94.5	7436	16.4	11.5	17.4	54.7	100.0	7026
Total	81.2	35701	27.4	15.1	16.7	40.7	100.0	28978

7.2. Use of Improved Sanitation Facilities

Inadequate disposal of human excreta and personal hygiene is associated with a range of diseases including diarrhoeal diseases and polio. An improved sanitation facility is defined as one that hygienically separates human excreta from human contact. Improved sanitation can reduce diarrheal disease by more than a third, and can significantly lessen the adverse health impacts of other disorders responsible for death and disease among millions of children in developing countries. Improved sanitation facilities for excreta disposal include flush or pour flush to a piped sewer system, septic tank, or latrine; ventilated improved pit latrine, pit latrine with slab, and composting toilet.

Table WS.6: Types of sanitation facilities

Percent distribution of household population according to type of toilet facility used by the household, Iraq, 2011

Governorates	Type of toilet facility used by household														Number of household members
	Improved sanitation facility						Unimproved sanitation facility						Total	Percentage using improved sanitation facilities	
	Flush/pour flush to: Piped sewer system	Septic tank	Pit latrine	Ventilated improved pit latrine	Pit latrine with slab	Composting toilet	Flush/pour flush to somewhere else	Unknown place/not sure/DK where	Pit latrine without slab/ open pit	Bucket	Other/missing	Open defecation (no facility, bush, field)			
Dohuk	2.1	94.7	1.7	0.0	0.2	0.0	0.6	0.4	0.1	0.0	0.2	0.0	100.0	98.7	8931
Ninewa	5.7	78.1	13.9	0.1	1.6	0.0	0.1	0.0	0.1	0.1	0.0	0.2	0.0	100.0	20321
Suleimaniya	81.8	0.3	15.9	0.0	0.8	0.0	0.9	0.0	0.0	0.0	0.2	0.0	100.0	98.9	13645
Kirkuk	7.1	6.5	62.4	0.2	23.2	0.0	0.2	0.2	0.1	0.0	0.0	0.0	100.0	99.5	9517
Erbil	16.1	13.4	70.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.2	0.0	100.0	99.5	12817
Diyala	5.1	44.2	5.4	2.6	40.3	0.1	1.1	0.0	1.2	0.0	0.0	0.0	100.0	97.7	9444
Al-Anbar	7.7	35.7	5.4	0.3	50.1	0.0	0.3	0.0	0.4	0.0	0.0	0.0	100.0	99.2	10088
Baghdad	60.0	29.8	5.3	0.1	4.0	0.0	0.6	0.0	0.0	0.0	0.1	0.2	100.0	99.1	46471
Babil	3.4	72.1	3.7	0.0	10.1	0.1	1.0	0.0	5.5	0.0	0.6	3.6	100.0	89.3	13048
Karbala	29.7	40.0	21.1	0.4	6.6	0.1	0.2	0.0	0.6	0.0	1.0	0.3	100.0	97.9	7302
Wasit	0.7	61.2	28.9	0.1	2.3	0.0	0.9	0.0	4.8	0.0	0.0	1.1	100.0	93.1	8032
Salahaddin	8.1	62.4	19.1	0.6	7.6	0.0	0.2	0.0	0.7	0.0	0.0	1.1	100.0	97.9	9769
Al-Najaf	10.7	69.4	17.0	0.1	0.4	0.0	1.0	0.0	1.4	0.0	0.0	0.0	100.0	97.6	9180
Al-Qadisiya	16.9	5.6	26.3	0.3	38.7	0.0	5.0	0.2	1.0	0.0	0.1	5.9	100.0	87.8	8076

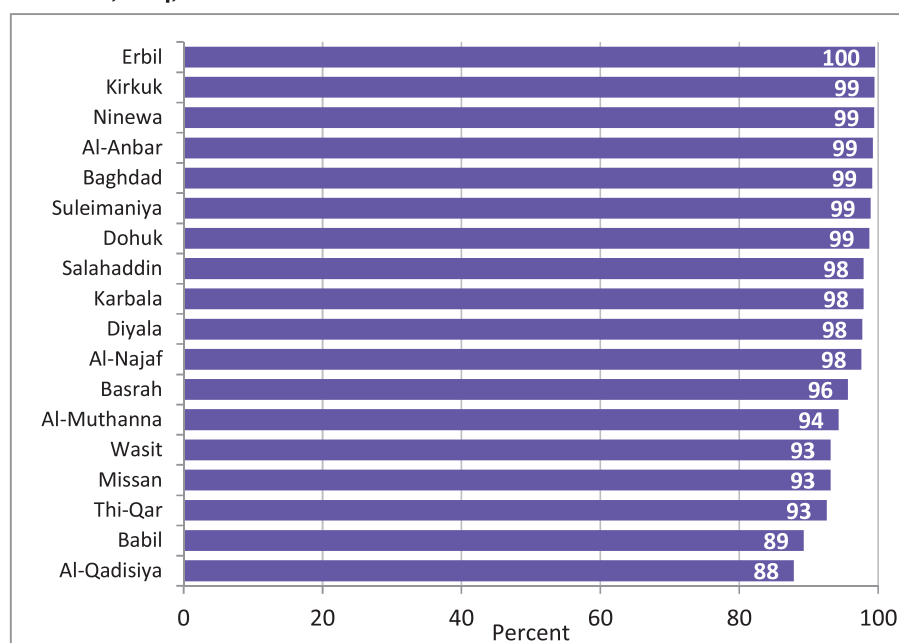
Table WS.6: Types of sanitation facilities

Percent distribution of household population according to type of toilet facility used by the household, Iraq, 2011

Type of toilet facility used by household															
	Improved sanitation facility					Unimproved sanitation facility						Total	Percentage using improved sanitation facilities	Number of household members	
	Flush/pour flush to: Piped sewer system	Septic tank	Pit latrine	Ventilated improved pit latrine	Pit latrine with slab	Compos-ting toilet	Flush/ pour flush to somewhere else	Unknown place/not sure/DK where	Pit latrine without slab/ open pit	Bucket	Other/missing				Open defecation (no facility, bush, field)
Al-Muthanna	0.0	17.2	28.7	5.0	43.4	0.0	0.0	0.4	0.0	2.4	0.0	0.0	2.9	100.0	5005
Thi-Qar	13.2	26.5	35.9	0.3	16.5	0.2	0.0	2.5	0.0	1.3	0.0	2.3	1.3	100.0	13527
Missan	61.0	16.0	14.6	0.0	1.5	0.0	0.0	0.2	0.0	3.9	0.0	0.0	2.8	100.0	7107
Basrah	47.4	34.2	3.5	0.3	10.2	0.0	0.0	1.1	0.0	2.3	0.0	0.6	0.3	100.0	18477
Region															
Kurdistan Region	37.9	28.9	31.9	0.0	0.4	0.0	0.0	0.6	0.1	0.0	0.0	0.2	0.0	100.0	35392
South/Centre Iraq	26.4	41.0	15.4	0.4	13.1	0.0	0.0	0.9	0.0	1.3	0.0	0.3	1.0	100.0	195363
Area															
Urban	38.8	37.2	12.8	0.2	10.2	0.0	0.0	0.4	0.0	0.2	0.0	0.2	0.1	100.0	161947
Rural	3.3	43.7	30.2	0.8	13.4	0.1	0.1	2.0	0.1	3.3	0.0	0.6	2.6	100.0	68808
Education of household head															
None	23.6	36.7	26.1	0.3	8.0	0.1	0.1	1.1	0.1	1.6	0.0	0.3	2.1	100.0	45575
Primary	25.7	38.9	20.1	0.4	11.4	0.0	0.0	0.9	0.0	1.3	0.0	0.4	0.7	100.0	76477
Secondary+	32.3	40.2	12.9	0.4	12.1	0.0	0.0	0.7	0.0	0.8	0.0	0.2	0.3	100.0	106448
Non-standard curriculum	12.2	47.6	17.1	0.7	17.2	0.0	0.0	0.9	0.0	2.5	0.0	0.9	0.9	100.0	2160
Wealth index quintile															
Poorest	4.4	29.9	43.3	0.6	9.1	0.1	0.1	2.6	0.1	4.7	0.1	0.9	4.1	100.0	46152
Second	17.1	44.3	22.4	0.6	13.3	0.0	0.0	1.1	0.0	0.8	0.0	0.3	0.0	100.0	46149
Middle	29.4	44.7	11.5	0.3	13.4	0.0	0.0	0.4	0.0	0.1	0.0	0.1	0.0	100.0	46139
Fourth	41.3	40.0	7.2	0.2	10.9	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	100.0	46163
Richest	48.8	36.8	5.4	0.1	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	46151
Total	28.2	39.2	18.0	0.4	11.1	0.0	0.0	0.9	0.0	1.1	0.0	0.3	0.8	100.0	230755

The majority of the population of Iraq (97 percent) is living in households using improved sanitation facilities (Table WS.6). Residents of Babil and Al-Qadisiya governorates are less likely than others to use improved facilities (Figure WS.3). The table indicates that use of improved sanitation facilities is strongly associated with wealth and differs also between urban (99 percent) and rural (92 percent) areas. In rural areas, the population mostly uses

Figure WS.3: Percentage of household members using improved sanitation facilities, Iraq, 2011



facilities that flush to septic tanks or flush to pit (latrine). The most common facilities in urban areas are toilets that flush to septic tank or flush to piped sewer system.

Access to safe drinking-water and to basic sanitation is measured by the proportion of population using an improved sanitation facility. MDGs and WHO / UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation classify households as using an unimproved sanitation facility if they are using otherwise acceptable sanitation facilities but sharing a facility between two or more households or using a public toilet facility.

As shown in Table WS.7, 94 percent of the household population is using an improved unshared sanitation facility. Rural households are less likely than urban households to use an unshared improved toilet facility (88 percent and 96 percent, respectively). Results show strong positive correlation for this indicator with wealth index, where the percentage of an improved unshared sanitation facility increases from 84 percent for households at the lowest wealth quintile to 98 percent at the highest quintile.

Table WS.7: Use and sharing of sanitation facilities

Percent distribution of household population by use of private and public sanitation facilities and use of shared facilities, by users of improved and unimproved sanitation facilities, Iraq, 2011

	Users of improved sanitation facilities					Users of unimproved sanitation facilities				Open defecation (no facility, bush, field)	Total	Number of household members
	Not shared [1]	Public facility	Shared by 5 households or less	More than 5 households	Missing/DK	Not shared	Public facility	Shared by 5 households or less	More than 5 households			
Governorates												
Dohuk	97.3	0.1	1.1	0.2	0.0	1.2	0.0	0.0	0.0	0.0	100.0	8931
Ninewa	95.1	0.0	4.3	0.0	0.0	0.4	0.0	0.0	0.0	0.2	100.0	20321
Suleimaniya	96.9	0.2	1.6	0.2	0.0	1.1	0.0	0.0	0.0	0.0	100.0	13645
Kirkuk	93.0	0.3	5.8	0.3	0.0	0.5	0.0	0.0	0.0	0.0	100.0	9517
Erbil	98.7	0.2	0.4	0.1	0.2	0.4	0.0	0.0	0.0	0.0	100.0	12817
Diyala	93.0	0.1	4.3	0.2	0.1	2.1	0.1	0.1	0.0	0.0	100.0	9444
Al-Anbar	98.0	0.4	0.8	0.0	0.0	0.6	0.0	0.0	0.0	0.2	100.0	10088
Baghdad	96.5	0.4	2.1	0.1	0.0	0.7	0.0	0.0	0.0	0.2	100.0	46471
Babil	87.8	0.2	1.3	0.0	0.0	7.0	0.0	0.0	0.0	3.6	100.0	13048
Karbala	90.9	0.6	6.2	0.2	0.0	1.6	0.0	0.1	0.0	0.3	100.0	7302
Wasit	91.9	0.1	0.8	0.2	0.1	5.7	0.0	0.1	0.0	1.1	100.0	8032
Salahaddin	96.0	0.6	1.0	0.2	0.1	0.9	0.0	0.0	0.0	1.1	100.0	9769
Al-Najaf	92.5	0.2	4.8	0.0	0.0	2.3	0.0	0.1	0.0	0.0	100.0	9180
Al-Qadisiya	84.3	0.0	3.3	0.2	0.0	5.9	0.0	0.4	0.0	5.9	100.0	8076
Al-Muthanna	91.8	0.2	2.3	0.0	0.0	2.7	0.0	0.1	0.0	2.9	100.0	5005
Thi-Qar	86.8	0.5	5.2	0.1	0.0	6.1	0.0	0.1	0.0	1.3	100.0	13527
Missan	91.3	0.1	1.7	0.0	0.0	4.1	0.0	0.0	0.0	2.8	100.0	7107
Basrah	93.6	0.0	1.9	0.1	0.0	3.9	0.0	0.2	0.0	0.3	100.0	18477
Region												
Kurdistan Region	97.7	0.2	1.0	0.2	0.1	0.9	0.0	0.0	0.0	0.0	100.0	35392
South/Centre Iraq	93.1	0.3	2.9	0.1	0.0	2.5	0.0	0.1	0.0	1.0	100.0	195363
Area												
Urban	96.1	0.2	2.6	0.1	0.0	0.8	0.0	0.0	0.0	0.1	100.0	161947
Rural	88.4	0.2	2.7	0.1	0.0	5.8	0.0	0.1	0.0	2.6	100.0	68808
Education of household head												
None	91.5	0.4	2.7	0.2	0.0	3.1	0.0	0.0	0.0	2.1	100.0	45575
Primary	93.1	0.2	3.0	0.1	0.1	2.7	0.0	0.1	0.0	0.7	100.0	76477
Secondary+	95.4	0.2	2.3	0.1	0.0	1.6	0.0	0.1	0.0	0.3	100.0	106448
Non-standard curriculum	92.3	0.0	2.5	0.0	0.0	4.0	0.0	0.3	0.0	0.9	100.0	2160
Wealth index quintile												
Poorest	83.5	0.4	3.4	0.1	0.1	8.2	0.0	0.2	0.0	4.1	100.0	46152
Second	94.1	0.1	3.3	0.3	0.1	2.2	0.0	0.1	0.0	0.0	100.0	46149
Middle	96.3	0.2	2.8	0.0	0.0	0.6	0.0	0.0	0.0	0.0	100.0	46139
Fourth	97.1	0.3	2.2	0.1	0.0	0.3	0.0	0.0	0.0	0.0	100.0	46163
Richest	98.1	0.2	1.5	0.1	0.0	0.1	0.0	0.0	0.0	0.0	100.0	46151
Total	93.8	0.2	2.6	0.1	0.0	2.3	0.0	0.1	0.0	0.8	100.0	230755

¹ MICS indicator 4.3; MDG indicator 7.9

Table WS.8: Disposal of child's faeces

Percent distribution of children age 0-2 years according to place of disposal of child's faeces, and the percentage of children age 0-2 years whose stools were disposed of safely the last time the child passed stools, Iraq, 2011

	Place of disposal of child's faeces								Total	Percentage of children whose last stools were disposed of safely [1]	Number of children age 0-2 years
	Child used toilet/latrine	Put/rinsed into toilet or latrine	Put/rinsed into drain or ditch	Thrown into garbage	Buried	Left in the open	Other	Missing/DK			
Type of sanitation facility in dwelling											
Improved	12.4	7.0	3.9	70.3	0.4	4.4	1.4	0.1	100.0	19.5	21755
Unimproved	10.7	6.5	10.2	56.4	4.3	10.9	0.9	0.1	100.0	17.2	590
Open defecation	2.3	1.8	13.6	19.0	1.2	61.1	1.0	0.0	100.0	4.1	209
Governorates											
Dohuk	8.6	1.8	0.5	87.8	0.2	0.7	0.3	0.1	100.0	10.4	829
Ninewa	13.3	16.4	3.0	58.6	0.1	5.5	3.1	0.0	100.0	29.7	2212
Suleimaniya	11.4	10.4	2.1	74.5	0.4	0.7	0.1	0.3	100.0	21.8	855
Kirkuk	15.3	2.0	1.6	79.2	0.0	1.8	0.1	0.0	100.0	17.3	999
Erbil	6.4	3.5	0.7	86.7	0.0	2.1	0.3	0.3	100.0	9.9	1035
Diyala	16.7	6.0	0.8	65.0	1.7	7.5	2.3	0.1	100.0	22.6	910
Al-Anbar	4.9	7.0	4.7	81.1	0.4	1.8	0.0	0.2	100.0	11.9	1033
Baghdad	8.9	5.2	8.3	75.4	0.0	1.9	0.2	0.1	100.0	14.0	4161
Babil	16.2	4.0	4.4	62.2	3.7	7.4	2.0	0.1	100.0	20.2	1376
Karbala	12.8	1.8	0.9	70.3	1.1	6.1	7.0	0.0	100.0	14.6	801
Wasit	9.1	9.3	3.7	67.4	0.8	9.0	0.8	0.0	100.0	18.3	786
Salahaddin	11.1	5.7	6.2	59.9	0.7	10.5	5.7	0.1	100.0	16.8	1110
Al-Najaf	11.6	0.8	3.7	78.5	0.3	2.4	2.7	0.0	100.0	12.4	926
Al-Qadisiya	9.7	10.3	7.2	54.7	0.8	15.7	1.7	0.0	100.0	20.0	847
Al-Muthanna	6.2	0.7	2.2	60.9	0.8	26.6	2.5	0.0	100.0	6.9	550
Thi-Qar	20.5	5.1	4.0	66.9	0.2	3.3	0.0	0.1	100.0	25.5	1356
Missan	17.9	9.4	8.8	53.5	0.0	10.3	0.1	0.1	100.0	27.3	782
Basrah	18.1	13.2	1.9	64.5	0.0	1.9	0.4	0.1	100.0	31.3	1987
Region											
Kurdistan Region	8.6	5.2	1.1	83.2	0.2	1.3	0.2	0.3	100.0	13.8	2719
South/Centre Iraq	12.8	7.2	4.6	67.6	0.6	5.6	1.6	0.1	100.0	20.0	19834
Area											
Urban	12.5	6.4	2.5	77.2	0.0	0.9	0.3	0.1	100.0	19.0	15141
Rural	11.8	8.1	7.8	53.6	1.5	13.6	3.6	0.1	100.0	19.9	7413
Mother's education											
None	11.9	7.0	7.1	58.5	0.8	13.5	1.1	0.1	100.0	18.9	3937
Primary	12.5	7.8	4.7	67.7	0.7	4.6	1.9	0.1	100.0	20.4	11241
Secondary+	12.1	5.7	1.9	78.1	0.1	1.2	0.8	0.1	100.0	17.7	7353
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	22
Wealth index quintile											
Poorest	12.3	6.9	9.1	51.5	1.5	16.2	2.4	0.1	100.0	19.2	5353
Second	13.7	7.7	4.7	68.6	0.5	3.3	1.5	0.2	100.0	21.4	4937
Middle	13.5	8.4	2.3	72.7	0.2	1.5	1.3	0.0	100.0	22.0	4722
Fourth	11.6	7.0	1.4	78.1	0.2	0.9	0.9	0.1	100.0	18.5	4093
Richest	9.4	4.1	1.8	83.7	0.0	0.2	0.6	0.1	100.0	13.5	3449
Total	12.3	7.0	4.2	69.4	0.5	5.1	1.4	0.1	100.0	19.3	22554

¹ MICS indicator 4.4

(*) Figures that are based on less than 25 unweighted cases

Table WS.9: Drinking water and sanitation ladders

Percentage of household population by drinking water and sanitation ladders, Iraq, 2011

	Percentage of household population using:										
	Improved drinking water [1]				Unimproved sanitation						
	Piped into dwelling, plot or yard	Other improved	Unimproved drinking water	Total	Improved sanitation [2]	Shared improved facilities	Unimproved facilities	Open defecation	Total	Improved drinking water sources and improved sanitation	Number of household members
Governorates											
Dohuk	97.0	1.9	1.1	100.0	97.3	1.5	1.3	0.0	100.0	96.2	8931
Ninewa	76.3	8.5	15.2	100.0	95.1	4.3	0.4	0.2	100.0	80.6	20321
Suleimaniya	80.0	15.3	4.7	100.0	96.9	1.9	1.1	0.0	100.0	92.3	13645
Kirkuk	86.1	9.0	4.9	100.0	93.0	6.5	0.5	0.0	100.0	88.1	9517
Erbil	91.7	5.0	3.2	100.0	98.7	0.8	0.4	0.0	100.0	95.5	12817
Diyala	73.7	6.2	20.1	100.0	93.0	4.7	2.3	0.0	100.0	74.8	9444
Al-Anbar	88.4	2.1	9.5	100.0	98.0	1.2	0.6	0.2	100.0	88.9	10088
Baghdad	94.7	1.9	3.4	100.0	96.5	2.7	0.7	0.2	100.0	93.2	46471
Babil	80.7	3.8	15.4	100.0	87.8	1.5	7.1	3.6	100.0	80.3	13048
Karbala	87.8	0.2	12.0	100.0	90.9	7.0	1.7	0.3	100.0	81.3	7302
Wasit	75.7	5.9	18.3	100.0	91.9	1.2	5.8	1.1	100.0	75.1	8032
Salahaddin	76.0	4.1	19.9	100.0	96.0	1.9	0.9	1.1	100.0	78.6	9769
Al-Najaf	96.9	0.0	3.1	100.0	92.5	5.1	2.4	0.0	100.0	90.3	9180
Al-Qadisiya	83.4	3.3	13.3	100.0	84.3	3.6	6.2	5.9	100.0	77.0	8076
Al-Muthanna	25.2	58.5	16.3	100.0	91.8	2.5	2.8	2.9	100.0	77.8	5005
Thi-Qar	37.0	50.4	12.6	100.0	86.8	5.8	6.2	1.3	100.0	78.9	13527
Missan	0.4	93.6	6.1	100.0	91.3	1.8	4.1	2.8	100.0	88.3	7107
Basrah	1.1	98.9	0.0	100.0	93.6	2.1	4.1	0.3	100.0	93.6	18477
Region											
Kurdistan Region	88.5	8.2	3.3	100.0	97.7	1.4	0.9	0.0	100.0	94.4	35392
South/Centre Iraq	69.7	20.8	9.5	100.0	93.1	3.3	2.6	1.0	100.0	85.4	195363
Area											
Urban	80.2	17.6	2.2	100.0	96.1	3.0	0.8	0.1	100.0	94.0	161947
Rural	54.7	21.8	23.5	100.0	88.4	3.0	6.0	2.6	100.0	69.8	68808

Table WS.9: Drinking water and sanitation ladders

Percentage of household population by drinking water and sanitation ladders, Iraq, 2011

Percentage of household population using:											
Improved drinking water [1]				Unimproved sanitation							
	Piped into dwelling, plot or yard	Other improved	Unimproved drinking water	Improved sanitation [2]		Shared improved facilities	Unimproved facilities	Open defecation	Total	Improved drinking water sources and improved sanitation	Number of household members
				Total	Improved sanitation [2]						
Education of household head											
None	68.5	18.7	12.8	100.0	91.5	3.3	3.1	2.1	100.0	81.7	45575
Primary	69.2	20.7	10.1	100.0	93.1	3.4	2.7	0.7	100.0	84.8	76477
Secondary+	77.1	17.3	5.6	100.0	95.4	2.6	1.7	0.3	100.0	90.5	106448
Non-standard curriculum	54.3	32.5	13.2	100.0	92.3	2.5	4.3	0.9	100.0	81.1	2160
Wealth index quintile											
Poorest	40.9	28.0	31.1	100.0	83.5	4.0	8.4	4.1	100.0	59.6	46152
Second	71.7	21.4	6.9	100.0	94.1	3.7	2.2	0.0	100.0	87.5	46149
Middle	77.2	19.9	2.9	100.0	96.3	3.1	0.6	0.0	100.0	93.5	46139
Fourth	81.3	17.3	1.4	100.0	97.1	2.5	0.3	0.0	100.0	95.8	46163
Richest	91.8	7.7	0.6	100.0	98.1	1.8	0.1	0.0	100.0	97.5	46151
Total	72.6	18.9	8.6	100.0	93.8	3.0	2.3	0.8	100.0	86.8	230755

¹ MICS indicator 4.1; MDG indicator 7.8

² MICS indicator 4.3; MDG indicator 7.9

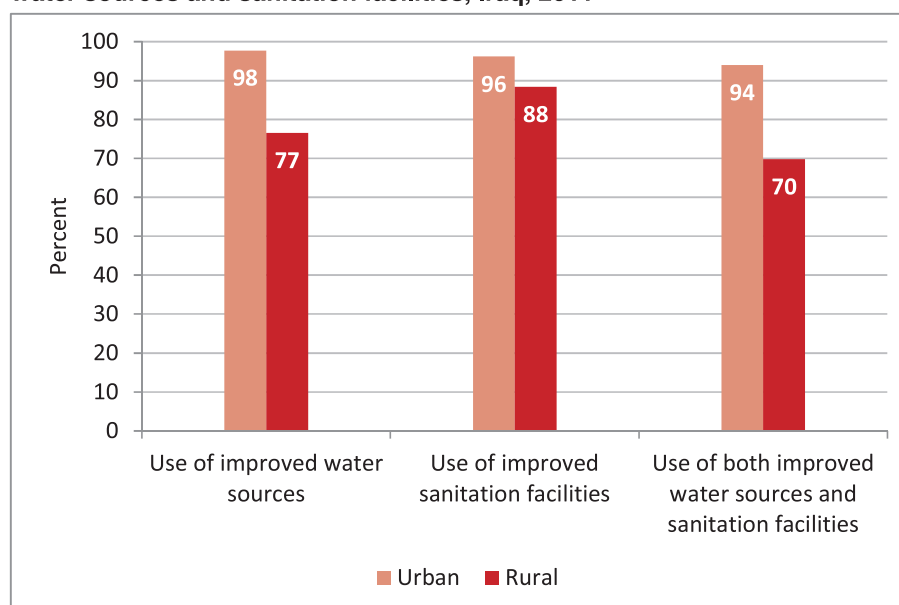
Safe disposal of a child's faeces is disposing of the stool, by the child using a toilet or by rinsing the stool into a toilet or latrine. Disposal of faeces of children 0-2 years of age is presented in Table WS.8.

Stools of only 19 percent of children are disposed of safely. More than two-third of households dispose children's faeces unsafely in the garbage (69 percent), seven percent put or rinse it into toilet or latrine, four percent put or rinsed into drain or ditch, five percent leave it in the open and 12 percent of children use the toilet/ latrine. The proportion of children whose stools are disposed safely varies by governorate. Al-Muthanna governorate has the lowest percentage of children having their stools safely disposed (7 percent) while the highest percentage occurs in Nineveh (30 percent).

In its 2008 report, the JMP developed a new way of presenting the access figures, by disaggregating and refining the data on drinking-water and sanitation and reflecting them in "ladder" format. This ladder allows a disaggregated analysis of trends in a three rung ladder for drinking-water and a four-rung ladder for sanitation. For sanitation, this gives an understanding of the proportion of population with no sanitation facilities at all, of those reliant on technologies defined by JMP as "unimproved," of those sharing sanitation facilities of otherwise acceptable technology, and those using "improved" sanitation facilities. Table WS.9 presents the percentages of household population by drinking water and sanitation ladders. The table also shows the percentage of household members using improved sources of drinking water and sanitary means of excreta disposal

About 87 percent of households use both improved drinking sources and sanitary means of excreta disposal, 94 percent in urban areas and 70 percent in rural areas (Figure WS.4). The governorates with percentages of households using both improved sources of drinking water and sanitary means of excreta disposal that are below the national average may be ranked in the following order – Diyala (75 percent), Wasit (75 percent), Al-Qadisiya (77 percent), Al-Muthanna (78 percent), Salahaddin and Thi-Qar (79 percent), Babil (80 percent), and Ninewa and Karbala (81 percent).

Figure WS.4: Percentage of household population using both improved water sources and sanitation facilities, Iraq, 2011



7.3. Handwashing

Handwashing with water and soap is the most cost effective health intervention to reduce both the incidence of diarrhoea and pneumonia in children under-five. It is most effective when done using water and soap after visiting a toilet or cleaning a child, before eating or handling food and, before feeding a child. Monitoring correct hand washing behaviour at these critical times is challenging. A reliable alternative to observations or self-reported behaviour is assessing the likelihood that correct hand washing behaviour takes place by observing if a household has a specific place where people most often wash their hands and observing if water and soap (or other local cleansing materials) are present at a specific place for hand washing.

A specific place for hand washing was observed in 95 percent of the households (98 percent in urban area and 87 percent in rural areas) while in five percent of households a specific place where household members usually wash their hands could not be indicated (Table WS.10).

Table WS.10: Water and soap at place for handwashing

Percentage of households where place for handwashing was observed and percent distribution of households by availability of water and soap at place for handwashing, Iraq, 2011

Governorates	Percentage of households where place for handwashing was not observed				Percent distribution of households where place for handwashing was observed, where:								Number of households	Total	Number of households where place for handwashing was observed	
	Percentage of households where place for handwashing was observed ¹	Not in dwelling/place	No permission to see	Other reasons	Missing	Water and soap are available	Water is available, soap is not available	Water is not available, soap is available	Water and soap are not available	Total						
Dohuk	88.9	8.3	0.0	2.8	0.0	0.0	0.0	0.0	99.0	0.6	0.4	0.1	100.0	1244	0.0	1106
Ninewa	94.9	5.0	0.0	0.0	0.0	0.0	0.0	0.0	93.7	4.9	1.2	0.2	100.0	2909	0.0	2761
Suleimaniya	99.8	0.1	0.0	0.1	0.0	0.0	0.0	0.0	98.2	1.8	0.0	0.0	100.0	2718	0.0	2713
Kirkuk	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	99.4	0.6	0.0	0.0	100.0	1761	0.0	1762
Erbil	94.6	4.2	1.0	0.2	0.0	0.0	0.0	0.0	98.9	0.0	1.1	0.0	100.0	2391	0.0	2264
Diyala	88.3	5.2	2.7	3.8	0.0	0.0	0.0	0.0	94.4	0.3	5.0	0.2	100.0	1515	0.0	1337
Al-Anbar	95.4	0.5	3.5	0.6	0.0	0.0	0.0	0.0	94.8	0.6	4.5	0.1	100.0	1354	0.0	1291
Baghdad	99.6	0.1	0.1	0.3	0.0	0.0	0.0	0.0	97.0	1.9	0.9	0.2	100.0	7863	0.0	7829
Babil	89.9	10.0	0.1	0.0	0.0	0.0	0.0	0.0	99.4	0.4	0.2	0.1	100.0	1883	0.0	1694
Karbala	99.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	95.8	3.2	0.4	0.5	100.0	1152	0.0	1149
Wasit	89.9	9.4	0.0	0.6	0.0	0.0	0.0	0.0	97.1	2.6	0.3	0.0	100.0	1153	0.0	1037
Salahaddin	87.8	11.1	0.1	1.0	0.0	0.0	0.0	0.0	96.5	0.3	1.1	2.1	100.0	1377	0.0	1210

Table WS-10: Water and soap at place for handwashing

Percentage of households where place for handwashing was observed and percent distribution of households by availability of water and soap at place for handwashing, Iraq, 2011

	Percentage of households where place for handwashing was not observed					Percent distribution of households where place for handwashing was observed, where:										Total	Number of households	Water and soap are available	Water is available, soap is not available	Water is not available, soap is available	Water and soap are not available	Total	Number of households where place for handwashing was observed
	Percentage of households where place for handwashing was observed ¹	Not in dwelling/plot	No permission to see	Other reasons	Missing																		
Al-Najaf	98.2	1.2	0.6	0.0	0.0	90.4	7.1	1.2	1.4	100.0	1357	90.4	7.1	1.2	1.4	100.0	1333	100.0	1333				
Al-Qadisiya	94.1	4.8	0.4	0.6	0.0	88.4	9.2	1.4	0.9	100.0	1086	88.4	9.2	1.4	0.9	100.0	1022	100.0	1022				
Al-Muthanna	85.0	14.7	0.0	0.3	0.0	94.4	1.2	3.6	0.8	100.0	650	94.4	1.2	3.6	0.8	100.0	553	100.0	553				
Thi-Qar	85.7	12.0	1.0	1.3	0.0	94.2	2.7	1.9	1.1	100.0	1714	94.2	2.7	1.9	1.1	100.0	1470	100.0	1470				
Missan	92.4	7.5	0.1	0.0	0.0	96.8	3.1	0.1	0.0	100.0	957	96.8	3.1	0.1	0.0	100.0	884	100.0	884				
Basrah	93.2	0.4	0.5	5.9	0.0	99.5	0.3	0.2	0.0	100.0	2608	99.5	0.3	0.2	0.0	100.0	2431	100.0	2431				
Region																							
Kurdistan Region	95.7	3.2	0.4	0.6	0.0	98.6	0.9	0.5	0.0	100.0	6354	98.6	0.9	0.5	0.0	100.0	6083	100.0	6083				
South/Centre Iraq	94.6	3.9	0.5	1.0	0.0	96.1	2.3	1.2	0.4	100.0	29346	96.1	2.3	1.2	0.4	100.0	27765	100.0	27765				
Area																							
Urban	97.5	1.4	0.4	0.8	0.0	97.7	1.4	0.7	0.1	100.0	26324	97.7	1.4	0.7	0.1	100.0	25659	100.0	25659				
Rural	87.3	10.5	0.8	1.4	0.0	92.7	4.2	2.2	1.0	100.0	9376	92.7	4.2	2.2	1.0	100.0	8189	100.0	8189				
Education of household head																							
None	92.4	6.0	0.5	1.1	0.0	94.7	3.6	1.4	0.4	100.0	6783.2	94.7	3.6	1.4	0.4	100.0	6269	100.0	6269				
Primary	93.4	5.0	0.6	1.0	0.0	95.5	2.9	1.2	0.5	100.0	11409.9	95.5	2.9	1.2	0.5	100.0	10655	100.0	10655				
Secondary+	96.7	2.1	0.4	0.8	0.0	97.9	1.0	0.9	0.2	100.0	17233.8	97.9	1.0	0.9	0.2	100.0	16667	100.0	16667				
Non-standard curriculum	94.0	2.0	0.9	3.1	0.0	93.4	1.9	2.6	2.1	100.0	260.5	93.4	1.9	2.6	2.1	100.0	245	100.0	245				
Wealth index quintile																							
Poorest	84.1	12.8	0.9	2.2	0.0	90.1	6.3	2.4	1.1	100.0	6941.4	90.1	6.3	2.4	1.1	100.0	5839	100.0	5839				
Second	94.1	3.9	0.5	1.5	0.0	95.2	3.0	1.3	0.5	100.0	7206.3	95.2	3.0	1.3	0.5	100.0	6780	100.0	6780				
Middle	97.0	1.8	0.5	0.6	0.0	97.7	1.1	1.1	0.1	100.0	7057.4	97.7	1.1	1.1	0.1	100.0	6848	100.0	6848				
Fourth	98.7	0.7	0.2	0.3	0.0	98.9	0.6	0.5	0.0	100.0	7060.0	98.9	0.6	0.5	0.0	100.0	6972	100.0	6972				
Richest	99.7	0.1	0.2	0.1	0.0	99.4	0.2	0.4	0.0	100.0	7435.9	99.4	0.2	0.4	0.0	100.0	7410	100.0	7410				
Total	94.8	3.8	0.5	0.9	0.0	96.5	2.1	1.1	0.3	100.0	35701.0	96.5	2.1	1.1	0.3	100.0	33848	100.0	33848				
¹ MICS indicator 4.5																							

¹ MICS indicator 4.5

Of those households where place for handwashing was observed, the majority (97 percent) had both water and soap available at the designated place. In two percent of the households only water was available at the designated place for handwashing, while in one percent of the households the place only had soap but no water. The remaining 0.3 percent of households had neither water nor soap available at the designated place for handwashing. Less than one percent of the households were not able to show any soap present in the household, while in 93 percent the soap was observed by interviewer in the place for handwashing (Table WS.11).

Table WS.11: Availability of soap

Percent distribution of households by availability of soap in the dwelling, Iraq, 2011

	Place for handwashing observed				Place for handwashing not observed				Total	Percentage of households with soap anywhere in the dwelling [2]	Number of households
	Soap observed	Soap not observed at place for handwashing			Soap shown	No soap in household	Not able/Does not want to show soap				
		Soap shown	No soap in household	Not able/Does not want to show soap							
Governorates											
Dohuk	88.3	0.2	0.4	0.0	10.7	0.3	0.0	100.0	99.2	1245	
Ninewa	90.1	4.8	0.0	0.0	5.0	0.1	0.0	100.0	99.9	2909	
Suleimaniya	98.0	1.1	0.6	0.0	0.1	0.1	0.0	100.0	99.3	2718	
Kirkuk	99.4	0.6	0.0	0.0	0.0	0.0	0.0	100.0	100.0	1762	
Erbil	94.6	0.0	0.0	0.0	5.0	0.3	0.0	100.0	99.7	2392	
Diyala	87.8	0.5	0.0	0.0	11.3	0.4	0.0	100.0	99.5	1515	
Al-Anbar	94.7	0.4	0.1	0.2	4.1	0.1	0.5	100.0	99.1	1354	
Baghdad	97.4	0.4	1.7	0.0	0.3	0.1	0.0	100.0	98.2	7863	
Babil	89.5	0.4	0.1	0.0	7.9	2.2	0.0	100.0	97.8	1884	
Karbala	96.0	3.4	0.3	0.1	0.3	0.0	0.0	100.0	99.6	1152	
Wasit	87.5	1.8	0.6	0.0	10.0	0.1	0.0	100.0	99.3	1154	
Salahaddin	85.7	1.8	0.3	0.0	11.9	0.3	0.0	100.0	99.4	1378	
Al-Najaf	89.9	8.2	0.1	0.1	1.8	0.0	0.0	100.0	99.9	1357	
Al-Qadisiya	84.6	7.9	1.1	0.5	5.2	0.6	0.0	100.0	97.7	1086	
Al-Muthanna	83.3	1.5	0.2	0.0	14.0	1.0	0.0	100.0	98.8	651	
Thi-Qar	82.5	3.3	0.0	0.0	13.7	0.5	0.1	100.0	99.5	1715	
Missan	89.5	2.7	0.2	0.0	7.3	0.3	0.0	100.0	99.5	957	
Basrah	92.9	0.2	0.1	0.0	6.5	0.1	0.2	100.0	99.7	2609	
Region											
Kurdistan Region	94.8	0.5	0.4	0.0	4.0	0.2	0.0	100.0	99.4	6355	
South/Centre Iraq	92.0	2.0	0.6	0.0	5.0	0.3	0.0	100.0	99.0	29346	
Area											
Urban	96.0	0.9	0.6	0.0	2.4	0.1	0.0	100.0	99.2	26325	
Rural	82.8	4.1	0.3	0.1	11.8	0.8	0.1	100.0	98.7	9376	
Education of household head											
None	88.8	2.6	1.0	0.0	6.9	0.6	0.1	100.0	98.2	6783	
Primary	90.3	2.4	0.6	0.1	6.3	0.3	0.0	100.0	99.0	11410	
Secondary+	95.5	0.9	0.3	0.0	3.1	0.2	0.0	100.0	99.5	17234	
Non-standard curriculum	90.3	3.1	0.6	0.0	5.7	0.3	0.0	100.0	99.1	260	

Table WS.11: Availability of soap

Percent distribution of households by availability of soap in the dwelling, Iraq, 2011

	Place for handwashing observed				Place for handwashing not observed			Total	Percentage of households with soap anywhere in the dwelling [2]	Number of households
	Soap observed	Soap not observed at place for handwashing			Soap shown	No soap in household	Not able/Does not want to show soap			
		Soap shown	No soap in household	Not able/Does not want to show soap						
Wealth index quintile										
Poorest	77.9	5.2	1.0	0.1	14.6	1.2	0.1	100.0	97.6	6941
Second	90.8	2.2	1.0	0.1	5.7	0.1	0.1	100.0	98.6	7206
Middle	95.8	0.8	0.4	0.0	2.9	0.1	0.0	100.0	99.5	7057
Fourth	98.1	0.4	0.2	0.0	1.2	0.1	0.0	100.0	99.7	7060
Richest	99.5	0.1	0.1	0.0	0.3	0.0	0.0	100.0	99.9	7436
Total	92.5	1.7	0.5	0.0	4.9	0.3	0.0	100.0	99.1	35701

¹ MICS indicator 4.6

8. Reproductive Health

8.1. Fertility

Fertility refers to the number of live births women will have over her reproductive years. Information on fertility obtained from the Iraq MICS4 provides recent indicators of fertility rates, at the national level and also at sub-national levels. The fertility indicators in this report are based on information provided by ever-married women age 15-49 years regarding their reproductive histories. Each woman was asked to provide information on the total number of sons and daughters to whom she had given birth and were living with her, the number living elsewhere, and the number who had died. Information on all live births was collected using the birth history module of the questionnaire administered to individual women. For all live births of the respondent the module collected information on sex, month and year of birth, survivorship status and current age, or, if the child had died, age at death.

Table FR.1: Births, exposure, and age specific fertility rates (ASFR) for three-year periods preceding the survey, by mother's age at the time of the birth, and total fertility rate (TFR) (Total) Iraq, 2011

	Number of years preceding the survey				
	0-2	3-5	6-8	9-11	12-14
Births					
15-19	2857	2521	1882	1640	1718
20-24	6100	5690	4771	4649	4234
25-29	5769	5485	5254	5226	4658
30-34	4179	4096	4164	3897	3350
35-39	2654	2283	2406	1984	582
40-44	721	646	487	34	.
45-49	55	9	.	.	.
Exposure					
15-19	34780	30966	27380	25119	23564
20-24	28502	25842	23964	22744	21471
25-29	24450	23174	21805	20799	18860
30-34	22309	21101	19748	16875	14161
35-39	20314	17903	15059	10875	3105
40-44	15974	12855	5567	290	.
45-49	8284	1282	.	.	.
Age Specific Fertility Rate					
15-19	82	81	69	65	73
20-24	214	220	199	204	197
25-29	236	237	241	251	247
30-34	187	194	211	231	237
35-39	131	128	160	182	187
40-44	45	50	87	119	.
45-49	7	7	.	.	.
Total Fertility Rate	4.5	4.6	4.8	5.3	4.7

Fertility rates can be calculated for specific age groups to see differences in fertility behaviours at different ages or for comparison over time. The age-specific fertility rate gives the number of live births per 1,000 women at a specific age group. The total fertility rate (TFR) calculated as the sum of the age-specific fertility rates is a useful means to summarize what fertility is now, without waiting for the end of the childbearing years. The TFR is the average number of children that would be born to a woman by the time she ended childbearing if she were to pass through all her childbearing years (15-49) conforming to the age-specific fertility rates of a given year. Table RH.1 gives the reported age-specific fertility rates and total fertility rate for the three-year period preceding the survey per 1,000 women.

The total fertility rate in Iraq (Table FR.1) for the three years before the survey (approximately 2009 through 2011) is 4.5 children per woman. The age pattern of fertility indicates that Iraqi women give birth to most of the children they will ever have between 20 and 34 years of age. Young women in the age group 15-19 give birth to only a small percentage of the children they will ever have. Fertility is low among this age group i.e. 82 per 1000 and increases to a peak of 236 per 1,000 among women aged 25-29 and declines thereafter.

Table RH.1 also shows the variation in adolescent fertility by area of residence, governorate, and education. Considering the variation by area of residence, the fertility is higher in rural areas than in urban areas. The total fertility rate is estimated at 5.1 children per woman in rural areas compared to 4.2 in urban areas. There are differences in fertility among governorates, ranging from a low of 2.3 in Suleimaniya to a high of 5.7 in Missan. Fertility levels in Dohuk, Suleimaniya, Erbil, Diyala and Baghdad governorates are below the national average.

The level of fertility is inversely associated with women's education, decreasing rapidly from 122 children among women with no education or primary education to 45 children among women who have at least some secondary education.

Sexual activity and childbearing early in life carry significant risks for young people all around the world. Table RH.2 presents some early childbearing indicators for women aged 15-19 and 20-24 years while Table RH.3 presents the trends for early childbearing. As shown in Table RH.2, 11 percent of women aged 15-19 years already had one birth, four percent are pregnant with their first child, 15 percent have begun childbearing and less than one percent has had a live birth before age 15. Twelve percent of women aged 20-24 years gave birth before reaching 18 years of age. Compared to all governorates the highest percentage of giving birth before age 18 for this age group was in the governorates of Missan and Kerbala (20 and 19 percent respectively). Early childbearing is still common among younger generations of women (Table RH.3), with barely any differences with older generations: 12 percent of women 20-24 years old had a live birth before the age of 18, while 15 percent of the women 45-49 years old did.

Table RH.1: Adolescent birth rate and total fertility rate

Adolescent birth rates and total fertility rates, Iraq, 2011

	Adolescent birth rate [1] (Age-specific fertility rate for women age 15-19)	Total fertility rate
Governorate		
Dohuk	25.6	3.9
Ninewa	79.1	5.2
Suleimaniya	24.8	2.3
Kirkuk	76.9	4.5
Erbil	64.1	3.5
Diyala	77.2	4.3
Al-Anbar	85.5	4.8
Baghdad	88.1	4.2
Babil	74.2	4.5
Karbala	121.5	5.1
Wasit	65.2	4.5
Salahaddin	80.7	5.4
Al-Najaf	118.1	4.7
Al-Qadisiya	85.7	4.9
Al-Muthanna	108.7	4.8
Thi-Qar	90.4	5.2
Missan	90.5	5.7
Basrah	125.6	4.7
Region		
Kurdistan Region	38.8	3.1
South/Centre Iraq	90.3	4.7
Area		
Urban	82.3	4.2
Rural	82.6	5.1
Mother's education		
None	121.7	5.1
Primary	121.6	5.0
Secondary+	45.3	3.7
Wealth index quintile		
Poorest	90.2	5.5
Second	80.0	4.8
Middle	92.8	4.5
Fourth	83.2	4.2
Richest	67.1	3.3
Total	82.4	4.4

¹ MICS indicator 5.1; MDG indicator 5.4

Table RH.2: Early childbearing

Percentage of women age 15-19 years who have had a live birth or who are pregnant with the first child and percentage of women age 15-19 years who have begun childbearing, percentage of women who have had a live birth before age 15, and percentage of women age 20-24 who have had a live birth before age 18, Iraq, 2011

	Percentage of women age 15-19 who:					Percentage of women age 20-24 who have had a live birth before age 18 [1]	Number of women age 20-24
	Have had a live birth	Are pregnant with first child	Have begun childbearing	Have had a live birth before age 15	Number of women age 15-19		
Governorate							
Dohuk	4.2	2.0	6.2	0.2	482	5.2	460
Ninewa	8.4	6.9	15.4	0.4	1084	12.7	982
Suleimaniya	4.0	1.6	5.6	0.3	691	6.2	718
Kirkuk	9.6	5.1	14.7	2.0	443	13.3	402
Erbil	7.4	1.8	9.3	1.2	638	7.0	600
Diyala	10.3	4.7	15.0	0.9	493	10.8	353
Al-Anbar	11.1	2.7	13.7	0.7	552	10.9	408
Baghdad	11.0	4.0	15.0	0.7	2279	11.6	1993
Babil	12.6	5.1	17.6	0.9	698	11.4	518
Karbala	14.6	6.0	20.6	0.6	374	19.2	295
Wasit	8.9	3.0	11.9	0.2	414	10.1	323
Salahaddin	11.3	2.9	14.3	0.8	573	10.2	447
Al-Najaf	18.5	3.7	22.1	2.9	484	20.0	418
Al-Qadisiya	11.9	3.5	15.4	2.3	442	12.5	356
Al-Muthanna	13.7	3.7	17.4	1.4	287	12.6	208
Thi-Qar	12.2	3.8	16.0	0.8	763	12.3	534
Missan	12.2	4.1	16.3	1.6	352	19.3	264
Basrah	18.2	6.0	24.2	1.1	826	15.6	818
Region							
Kurdistan Region	5.3	1.8	7.0	0.5	1810	6.2	1778
South/Centre Iraq	12.0	4.5	16.5	1.0	10065	13.0	8318
Area							
Urban	10.9	3.7	14.6	0.9	8234	10.9	7316
Rural	11.1	5.0	16.1	1.1	3641	14.2	2780
Mother's education							
None	16.9	4.3	21.2	2.0	1521	18.0	1567
Primary	16.5	6.8	23.3	1.4	4165	16.7	3980
Secondary+	5.8	2.2	8.0	0.4	6187	5.5	4542
Non-standard curriculum	(*)	(*)	(*)	(*)	2	(*)	6
Wealth index quintile							
Poorest	11.5	3.6	15.1	1.3	2250	15.1	1710
Second	11.3	4.1	15.4	0.9	2259	16.2	1788
Middle	12.8	4.6	17.4	1.5	2392	11.8	2087
Fourth	11.5	3.7	15.2	0.7	2437	12.1	2034
Richest	8.0	4.3	12.2	0.3	2537	6.3	2479
Total	11.0	4.1	15.0	0.9	11875	11.8	10096

¹ MICS indicator 5.2

(*) Figures that are based on less than 25 unweighted cases

Table RH.3: Trends in early childbearing

Percentage of women who have had a live birth, by age 15 and 18, by residence and age group, Iraq, 2011

Age	Urban				Rural				All			
	Percentage of women with a live birth before age 15	Number of women 15-49	Percentage of women with a live birth before age 18	Number of women 20-49	Percentage of women with a live birth before age 15	Number of women 15-49	Percentage of women with a live birth before age 18	Number of women 20-49	Percentage of women with a live birth before age 15	Number of women 15-49	Percentage of women with a live birth before age 18	Number of women 20-49
15-19	0.9	8234	na	na	1.1	3641	na	na	0.9	11875	na	na
20-24	0.7	7316	10.9	7316	1.3	2780	14.2	2780	0.9	10096	11.8	10096
25-29	0.6	6015	8.3	6015	1.1	2507	11.4	2507	0.8	8522	9.2	8522
30-34	1.1	5593	10.4	5593	1.4	2116	13.4	2116	1.2	7709	11.2	7709
35-39	1.0	5098	10.3	5098	0.9	1980	14.2	1980	1.0	7078	11.4	7078
40-44	2.1	4270	12.8	4270	2.8	1508	13.8	1508	2.2	5777	13.0	5777
45-49	2.0	3124	14.6	3124	2.9	1011	16.1	1011	2.2	4136	15.0	4136
Total	1.1	39650	10.8	31416	1.4	15544	13.6	11902	1.2	55194	11.6	43319

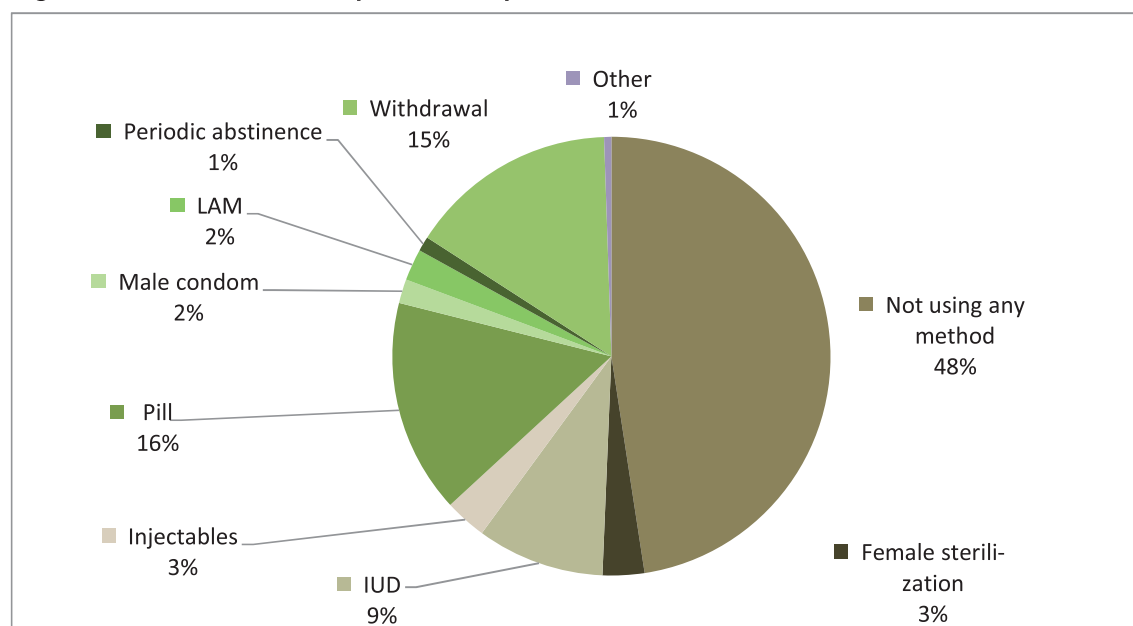
8.2. Contraception

Appropriate family planning is important to the health of women and children by: 1) preventing pregnancies that are too early or too late; 2) extending the period between births; and 3) limiting the number of children. Access by all couples to information and services to prevent pregnancies that are too early, too closely spaced, too late or too many is critical.

Current use of contraception is defined as the proportion of women who reported they were using a family planning method at the time of the interview. In the Iraq MICS4 survey, only women who were married at the time of the survey were asked questions about current use of contraception.

Current use of contraception was reported by 53 percent of currently married women (Table RH.4). The most popular method is the pill which is used by one in seven married women in Iraq. The next most popular method is withdrawal, which is practiced by 15 percent of married women. This is followed by IUD which is used by nine percent of married women. Between one and three percent of women reported use of periodic abstinence, condom, lactational amenorrhea method (LAM), female sterilization and injectables as a method of contraception. Less than one percent use female condom, vaginal methods or implants.

Figure RH.1: Use of contraceptives in Iraq, 2011



Current use of contraception is highest in all governorates of Kurdistan Region, Suleimaniya, Erbil and Dohuk with percentages amounting to 67, 62 and 52 percent respectively. The lowest levels of contraceptive use were seen in Missan and Al-Muthanna governorates. Younger women are less likely to use contraception than older women. Only about 21 percent of married women aged 15-19 currently use a method of contraception compared to 41 percent of 20-24 years old and 65 percent of 40-44 years old women.

Figure RH.2 shows modern and traditional use of contraceptives by women's age. Use of modern contraceptive methods is more common than traditional methods across all age groups. The proportion of women using traditional methods is nearly constant for women older than 25 years.

Women's education levels are strongly associated with contraceptive prevalence. The percentage of women using any method of contraception rises from 45 percent among those with no education to 51 percent among women with primary education, and to 57 percent among women with secondary or higher education.

The use of any contraceptive method is negligible when the woman has no living children (2 percent). The greater the number of living children a woman has the more likely she is to use contraceptives - the contraceptive use rate rises from 33 percent for women with one living child to 66 percent for women with four or more living children. In addition to differences in prevalence, the method mix varies by the number of living children. About 20 percent of contraceptive users with four or more living children use the pill and 17 percent use withdrawal. In contrast, 0 percent of contraceptive users with no living children use the pill while 1 percent uses withdrawal. The use of both methods increases sharply among women with one living child: 10 percent use the pill and 15 percent withdrawal.

Figure RH.2: Use of modern and traditional contraceptive methods by age of women, Iraq 2011

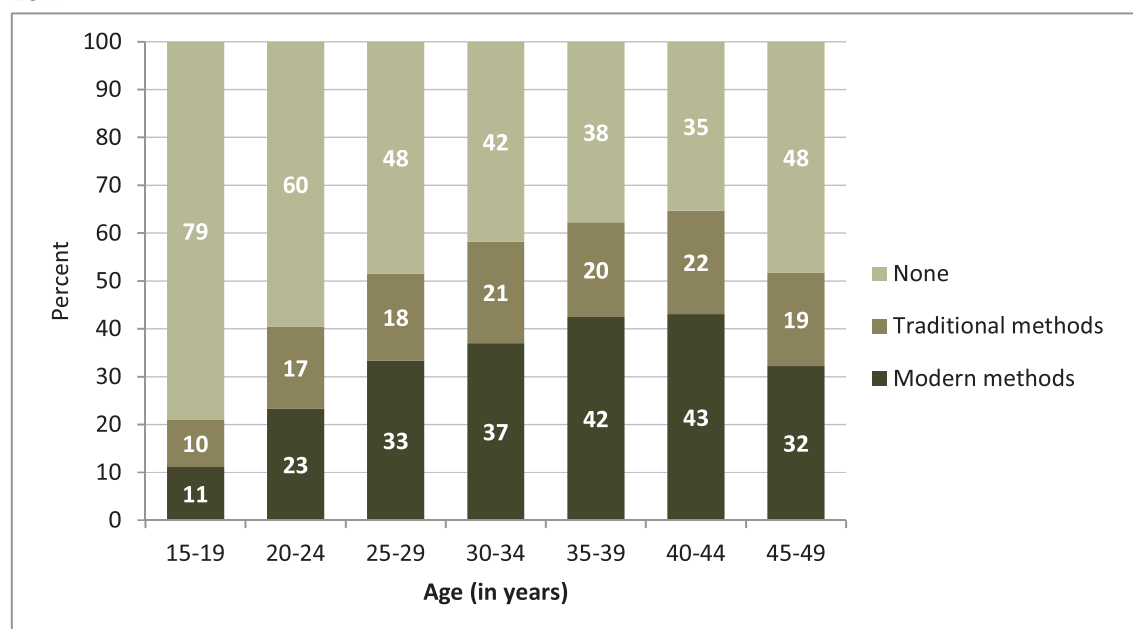


Table RH.4: Use of contraception

Percentage of women age 15-49 years currently married who are using (or whose partner is using) a contraceptive method, Iraq, 2011

Percent of women (currently married) who are using:																	
	Not using any method	Female sterilization	IUD	Injectables	Implants	Pill	Male condom	Female condom	Diaphragm/ Foam/Jelly	LAM	Periodic abstinence	Withdrawal	Other	Any modern method	Any tradi- tional method	Any method [1]	Number of women currently married
Governorate																	
Dohuk	45.2	2.3	9.8	1.2	0.2	5.2	2.3	0.2	0.5	1.5	1.5	30.1	0.0	21.7	33.1	54.8	1181
Ninewa	57.0	0.5	9.9	4.7	0.0	6.8	2.5	0.0	0.6	3.0	0.9	14.0	0.0	25.1	17.9	43.0	3048
Sulaimaniya	31.9	3.0	17.2	0.5	0.0	11.2	4.3	0.0	0.5	0.6	0.1	30.6	0.2	36.6	31.5	68.1	2034
Kirkuk	53.6	0.9	10.4	1.7	0.4	7.8	1.5	0.0	0.0	0.3	0.1	23.4	0.0	22.7	23.7	46.4	1488
Erbil	33.3	1.5	11.2	1.8	0.0	12.0	1.7	0.0	1.5	1.0	0.0	35.9	0.0	29.7	37.0	66.7	1895
Diyala	50.1	3.6	10.4	3.1	0.0	13.9	1.0	0.2	0.3	0.9	4.4	12.1	0.0	32.5	17.3	49.9	1367
Al-Anbar	48.5	2.1	20.2	3.9	0.1	13.6	0.9	0.0	0.3	3.0	1.7	5.6	0.1	41.2	10.3	51.5	1461
Baghdad	48.1	3.7	10.3	2.5	0.1	18.0	1.5	0.0	0.2	1.5	0.7	13.2	0.1	36.4	15.5	51.9	7056
Babil	45.6	3.9	9.4	4.2	0.0	14.2	1.9	0.0	0.4	1.8	1.0	17.6	0.0	34.0	20.4	54.4	2006
Karbala	49.1	2.3	9.6	4.8	0.1	15.9	4.3	0.0	0.7	3.7	1.2	8.4	0.0	37.6	13.3	50.9	1183
Wasit	50.5	4.0	7.9	4.8	0.0	16.8	0.6	0.1	0.4	2.0	1.1	11.5	0.1	34.7	14.8	49.5	1176
Salahaddin	52.5	2.5	13.4	2.1	0.0	12.4	0.6	0.1	0.6	3.6	3.2	8.7	0.1	31.8	15.6	47.5	1471
Al-Najaf	41.4	3.9	7.7	3.2	0.0	20.8	1.8	0.1	0.2	6.5	2.5	11.7	0.2	37.6	21.0	58.6	1479
Al-Qadisiya	50.4	6.6	5.6	5.0	0.0	14.9	2.0	0.0	0.4	3.0	1.2	10.8	0.0	34.6	14.9	49.6	1237
Al-Muthanna	55.9	4.2	2.5	5.5	0.0	23.2	1.7	0.0	0.1	0.3	0.3	6.1	0.2	37.2	6.9	44.1	760
Thi-Qar	50.2	3.9	4.0	1.7	0.1	26.0	1.7	0.1	0.1	1.4	0.5	10.4	0.1	37.5	12.3	49.8	1969
Missan	53.0	3.8	2.7	8.4	0.0	19.8	0.8	0.0	0.1	5.5	0.6	5.3	0.1	35.4	11.5	47.0	980
Basrah	45.6	3.5	2.3	2.2	0.2	25.6	1.0	0.3	0.2	4.5	0.9	13.7	0.1	35.3	19.1	54.4	2847
Region																	
Kurdistan Region	35.5	2.3	13.3	1.1	0.1	10.1	2.9	0.1	0.9	0.9	0.4	32.5	0.1	30.6	33.9	64.5	5110
South/Centre Iraq	49.6	3.2	8.8	3.4	0.1	16.7	1.6	0.1	0.3	2.6	1.2	12.4	0.1	34.1	16.2	50.4	29527
Area																	
Urban	45.3	3.1	9.6	2.7	0.1	16.2	2.2	0.1	0.5	1.9	0.9	17.4	0.1	34.4	20.2	54.7	24580
Rural	53.0	2.9	9.0	3.8	0.1	14.8	0.7	0.0	0.2	3.4	1.4	10.5	0.1	31.6	15.4	47.0	10057

Table RH.4: Use of contraception

Percentage of women age 15-49 years currently married who are using (or whose partner is using) a contraceptive method, Iraq, 2011

Percent of women (currently married) who are using:													
Age	Not using any method	Female sterilization	IUD	Injectables	Implants	Pill	Male condom	Female condom	Daphragm/Foam/jelly	LAM	Periodic abstinence	Withdrawal	Other
15-19	79.0	0.1	2.2	0.7	0.0	7.0	0.8	0.0	0.3	3.1	0.1	6.7	0.0
20-24	59.5	0.2	5.7	2.3	0.0	13.1	1.7	0.0	0.2	3.5	0.7	13.0	0.0
25-29	48.4	0.1	9.7	4.2	0.0	17.0	1.9	0.0	0.4	2.8	0.9	14.5	0.0
30-34	41.8	1.1	11.9	3.5	0.2	18.0	1.8	0.0	0.5	3.2	0.9	17.1	0.0
35-39	37.7	4.9	12.7	3.9	0.1	18.0	2.4	0.1	0.3	2.0	1.4	16.4	0.1
40-44	35.4	8.0	11.1	2.9	0.0	18.6	1.9	0.1	0.6	0.8	1.7	18.9	0.1
45-49	48.3	9.3	7.6	1.8	0.1	11.9	1.1	0.1	0.3	0.0	1.6	17.3	0.5
Number of living children													
0	98.7	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	1.0	0.0
1	65.3	0.2	2.3	1.0	0.0	9.8	2.1	0.0	0.5	3.3	0.6	14.8	0.0
2	46.4	0.2	10.1	2.4	0.1	16.2	2.2	0.1	0.5	2.5	1.3	18.1	0.0
3	37.6	1.1	11.9	3.6	0.1	19.5	2.4	0.0	0.4	2.8	0.9	19.8	0.0
4+	32.3	6.7	13.0	4.6	0.1	20.2	1.7	0.1	0.4	2.4	1.5	16.7	0.2
Education													
None	53.9	3.4	7.2	4.3	0.0	14.3	0.8	0.0	0.2	2.9	0.8	12.1	0.1
Primary	48.7	3.1	9.6	3.6	0.1	15.3	1.4	0.0	0.3	2.5	1.0	14.3	0.0
Secondary+	42.8	2.8	10.3	1.7	0.1	17.1	2.7	0.1	0.6	1.9	1.3	18.4	0.1
Non-standard curriculum	53.3	12.5	6.1	5.3	0.0	10.1	0.4	0.0	0.5	0.0	0.7	10.3	0.7
Wealth index quintile													
Poorest	55.6	2.2	6.3	4.9	0.1	14.4	0.8	0.0	0.2	3.6	1.0	10.8	0.1
Second	47.9	2.3	9.2	3.7	0.0	16.9	1.2	0.1	0.4	2.5	1.1	14.7	0.1
Middle	47.5	2.6	10.1	2.9	0.0	15.8	1.5	0.1	0.3	2.6	1.1	15.5	0.0
Fourth	44.8	4.5	9.8	2.5	0.1	16.5	2.4	0.0	0.3	1.9	1.2	15.8	0.0
Richest	42.1	3.7	11.6	1.4	0.1	15.1	2.8	0.1	0.8	1.0	1.0	19.9	0.2
Total	47.5	3.1	9.4	3.1	0.1	15.8	1.8	0.1	0.4	2.3	1.1	15.4	0.1

¹ MICS indicator 5.3; MDG indicator 5.3

8.3. Unmet Need

Unmet need for contraception refers to fecund women who are not using any method of contraception, but who wish to postpone the next birth (spacing) or who wish to stop childbearing altogether (limiting). Unmet need is identified in MICS by using a set of questions eliciting current behaviours and preferences pertaining to contraceptive use, fecundity, and fertility preferences.

Table RH.5 shows the results of the survey on contraception, unmet need, and the demand for contraception satisfied.

Unmet need for spacing is defined as percentage of women who are not using a method of contraception AND

- are not pregnant and not postpartum amenorrheic and are fecund and say they want to wait two or more years for their next birth OR
- are not pregnant and not postpartum amenorrheic and are fecund and unsure whether they want another child OR
- are pregnant and say that pregnancy was mistimed: would have wanted to wait OR
- are postpartum amenorrheic and say that the birth was mistimed: would have wanted to wait
- Unmet need for limiting is defined as percentage of women who are not using a method of contraception AND
- are not pregnant and not postpartum amenorrheic and are fecund and say they do not want any more children OR
- are pregnant and say they didn't want to have a child OR
- are postpartum amenorrheic and say that they didn't want the birth

Total unmet need for contraception is the sum of unmet need for spacing and unmet need for limiting.

Total unmet need for contraception in Iraq is eight percent, i.e. eight percent of married Iraqi women are not using contraceptives but want to stop having children (limit) or postpone the next pregnancy for at least two years (space). Unmet need for spacing and limiting is 5 and 4 percent respectively. Married women in the 18 governorates differ with respect to the total unmet need for contraception – Babil has the lowest percentage (5 percent) and Dohuk governorate has the highest rates (11 percent). The total unmet need for contraception reached its the peak at the age group 20-24 and 30- 34 years and also among poor women.

Met need for limiting includes women who are using a contraceptive method and who want no more children, are using male or female sterilization or declare themselves as infecund. Met need for spacing includes women who are using a contraceptive method and who want to have another child or are undecided whether to have another child. The total of met need for spacing and limiting add up to the total met need for contraception (53 percent). Results show that met need for limiting is 36 percent and for spacing is 17 percent.

Table RH.5: Unmet need for contraception

Percentage of women age 15-49 years currently married with an unmet need for family planning and percentage of demand for contraception satisfied, Iraq, 2011

	Met need for contraception			Unmet need for contraception			Number of women currently married	Percentage of demand for contraception satisfied	Number of women currently married with need for contraception
	For spacing	For limiting	Total [1]	For spacing	For limiting	Total [2]			
Governorates									
Dohuk	20.0	36.3	54.9	6.1	4.7	10.7	1181	83.6	775
Ninewa	16.8	27.1	43.0	5.2	2.7	8.0	3048	84.3	1555
Suleimaniya	22.4	48.2	68.1	7.0	1.5	8.5	2034	88.9	1559
Kirkuk	16.5	29.9	46.4	6.7	1.5	8.2	1488	85.0	812
Erbil	16.2	51.8	66.7	4.1	2.3	6.3	1895	91.3	1384
Diyala	17.6	33.6	49.9	4.0	2.0	6.0	1367	89.3	763
Al-Anbar	14.6	38.8	51.5	3.2	3.4	6.5	1461	88.7	848
Baghdad	15.6	37.5	51.9	3.8	4.3	8.2	7056	86.4	4236
Babil	8.3	46.6	54.4	2.5	2.4	4.9	2006	91.8	1189
Karbala	17.2	34.7	50.9	2.9	6.2	9.1	1183	84.9	710
Wasit	13.9	36.1	49.5	2.5	4.0	6.6	1176	88.3	659
Salahaddin	13.4	34.7	47.5	5.9	3.9	9.8	1471	82.8	843
Al-Najaf	24.7	34.6	58.6	3.3	2.5	5.8	1479	91.0	953
Al-Qadisiya	15.7	34.2	49.6	4.9	3.0	7.8	1237	86.3	710
Al-Muthanna	16.6	27.7	44.1	5.6	4.8	10.4	760	80.9	414
Thi-Qar	15.0	34.9	49.8	3.9	5.6	9.6	1969	83.9	1169
Missan	19.7	27.3	47.0	4.7	4.5	9.2	980	83.6	551
Basrah	23.1	31.6	54.4	5.9	3.7	9.5	2847	85.1	1819
Region									
Kurdistan Region	19.5	46.8	64.5	5.7	2.5	8.2	5110	88.7	3718
South/Centre Iraq	16.5	34.6	50.4	4.3	3.7	8.0	29527	86.3	17230
Area									
Urban	17.5	38.1	54.7	4.4	3.4	7.8	24580	87.5	15358
Rural	15.5	32.4	47.0	4.7	3.9	8.5	10057	84.6	5589
Age									
15-19	15.9	5.4	21.0	5.9	1.7	7.6	2462	73.4	704
20-24	25.4	16.0	40.5	7.7	1.5	9.1	5492	81.6	2724
25-29	27.3	25.6	51.6	6.0	2.9	8.9	6531	85.3	3949
30-34	20.5	39.0	58.2	4.9	4.3	9.3	6269	86.3	4231
35-39	11.7	51.4	62.3	3.0	5.9	8.9	5852	87.5	4167
40-44	6.1	59.3	64.6	2.0	4.9	6.8	4772	90.5	3410
45-49	1.5	50.4	51.7	0.7	1.7	2.4	3258	95.6	1761
Education									
None	13.6	33.2	46.1	5.0	4.4	9.5	6081	83.0	3376
Primary	16.8	35.4	51.3	4.9	3.5	8.4	15752	86.0	9393
Secondary+	19.1	39.1	57.2	3.9	3.0	6.9	12575	89.2	8061
Non-standard curriculum	1.7	45.0	46.7	1.2	3.0	4.1	226	91.9	115
Wealth index quintiles									
Poorest	15.8	29.3	44.4	6.0	5.1	11.1	6634	79.9	3681
Second	17.2	35.7	52.1	5.0	3.2	8.2	7115	86.4	4291
Middle	17.1	36.3	52.5	5.4	2.9	8.3	7104	86.3	4319
Fourth	17.8	38.6	55.2	3.2	4.0	7.1	6937	88.6	4324
Richest	16.9	41.9	57.9	3.0	2.4	5.4	6847	91.4	4332
Total	17.0	36.4	52.5	4.5	3.5	8.0	34637	86.7	20947

¹ MICS indicator 5.3; MDG indicator 5.3

² MICS indicator 5.4; MDG indicator 5.6

Using information on contraception and unmet need, the percentage of demand for contraception satisfied is also estimated from the MICS data. Percentage of demand satisfied is defined as the proportion of women currently married or in a marital union who are currently using contraception, of the total demand for contraception. The total demand for contraception includes women who currently have an unmet need (for spacing or limiting), plus those who are currently using contraception.

Results show that a high percentage of currently married women (87 percent) of the total number of women demanding contraception are currently using contraception. This percentage of demand for contraception satisfied increases with education, wealth, age, and among women living in Erbil, Babil and Al-Najaf governorates.

8.4. Antenatal Care

The antenatal period presents important opportunities for reaching pregnant women with a number of interventions that may be vital to their health and well-being and that of their infants. Better understanding of foetal growth and development and its relationship to the mother's health has resulted in increased attention to the potential of antenatal care as an intervention to improve both maternal and newborn health. For example, if the antenatal period is used to inform women and families about the danger signs and symptoms and about the risks of labour and delivery, it may provide the route for ensuring that pregnant women do, in practice, deliver with the assistance of a skilled health care provider. The antenatal period also provides an opportunity to supply information on birth spacing, which is recognized as an important factor in improving infant survival. Tetanus immunization during pregnancy can be life-saving for both the mother and infant. The prevention and treatment of malaria among pregnant women, management of anaemia during pregnancy and treatment of STIs can significantly improve foetal outcomes and improve maternal health. Adverse outcomes such as low birth weight can be reduced through a combination of interventions to improve women's nutritional status and prevent infections (e.g. malaria and STIs) during pregnancy. More recently, the potential of the antenatal period as an entry point for HIV prevention and care, in particular for the prevention of HIV transmission from mother to child, has led to renewed interest in access to and use of antenatal services.

WHO recommends a minimum of four antenatal visits based on a review of the effectiveness of different models of antenatal care. WHO guidelines are specific on the content on antenatal care visits, which include:

- Blood pressure measurement
- Urine testing for bacteriuria and proteinuria
- Blood testing to detect syphilis and severe anemia
- Weight/height measurement (optional)

The type of personnel providing antenatal care to women aged 15-49 years who gave birth in the two years preceding is presented in Table RH.6. Coverage of antenatal care (by a doctor, nurse, or midwife) is relatively high in Iraq with 78 percent of women receiving antenatal care at least once during the pregnancy (Public doctor, 53 percent; private doctor, 25 percent). Almost all women who received antenatal care received it from a doctor. Antenatal care coverage is higher in urban areas (83 percent) than in rural (66 percent).

Table RH.6: Antenatal care coverage

Percent distribution of women age 15-49 who gave birth in the two years preceding the survey by type of personnel providing antenatal care, Iraq, 2011

Region	Person providing antenatal care						No antenatal care received	Total	Any skilled personnel [1]	Number of women who gave birth in the preceding two years
	Doctor Public	Doctor Private	Nurse/Midwife	Traditional birth attendant	Relative/friend	Other/Missing				
Dohuk	38.9	45.6	0.1	0.0	0.0	0.1	15.3	100.0	84.6	488
Ninewa	40.1	31.0	0.1	0.0	0.0	0.0	28.9	100.0	71.1	1307
Suleimaniya	68.1	17.6	2.9	0.0	0.0	0.2	11.1	100.0	88.7	517
Kirkuk	56.9	18.0	0.0	0.0	0.0	0.0	25.2	100.0	74.8	579
Erbil	50.5	21.5	0.0	0.0	0.0	0.0	28.0	100.0	72.0	625
Diyala	48.9	30.7	0.0	0.0	0.0	0.0	20.4	100.0	79.6	555
Al-Anbar	22.2	48.0	0.1	0.0	0.0	0.0	29.7	100.0	70.3	606
Baghdad	65.2	13.3	0.1	0.0	0.0	0.0	21.5	100.0	78.5	2503
Babil	54.7	22.2	0.0	0.0	0.0	0.0	23.1	100.0	76.9	828
Karbala	74.3	12.0	0.0	0.0	0.0	0.0	13.7	100.0	86.3	497
Wasit	27.2	47.4	0.0	0.0	0.0	0.0	25.4	100.0	74.6	461
Salahaddin	34.8	28.4	0.5	0.1	0.0	0.0	36.1	100.0	63.8	657
Al-Najaf	62.1	24.4	0.0	0.0	0.0	0.0	13.6	100.0	86.4	575
Al-Qadisiya	48.8	32.1	0.0	0.0	0.0	0.0	19.1	100.0	80.9	520
Al-Muthanna	46.3	38.1	0.0	0.0	0.3	0.0	15.3	100.0	84.4	333
Thi-Qar	55.5	25.0	0.1	0.0	0.0	0.0	19.4	100.0	80.6	853
Missan	51.6	15.0	4.1	0.0	0.0	0.1	29.2	100.0	70.7	479
Basrah	64.8	17.4	0.0	0.0	0.0	0.1	17.7	100.0	82.2	1189
Region										
Kurdistan Region	52.6	27.5	0.9	0.0	0.0	0.1	18.8	100.0	81.0	1630
South/Centre Iraq	53.0	24.1	0.2	0.0	0.0	0.0	22.7	100.0	77.3	11942
Area										
Urban	60.9	22.0	0.4	0.0	0.0	0.0	16.7	100.0	83.3	9195
Rural	36.2	29.7	0.2	0.0	0.0	0.0	33.9	100.0	66.1	4377
Mother's age at birth										
Less than 20	60.4	22.6	0.3	0.0	0.0	0.0	16.7	100.0	83.3	1715
20-34	53.0	24.7	0.3	0.0	0.0	0.0	22.0	100.0	78.0	9709
35-49	46.8	25.0	0.3	0.0	0.0	0.0	27.9	100.0	72.1	2148

Table RH.6: Antenatal care coverage

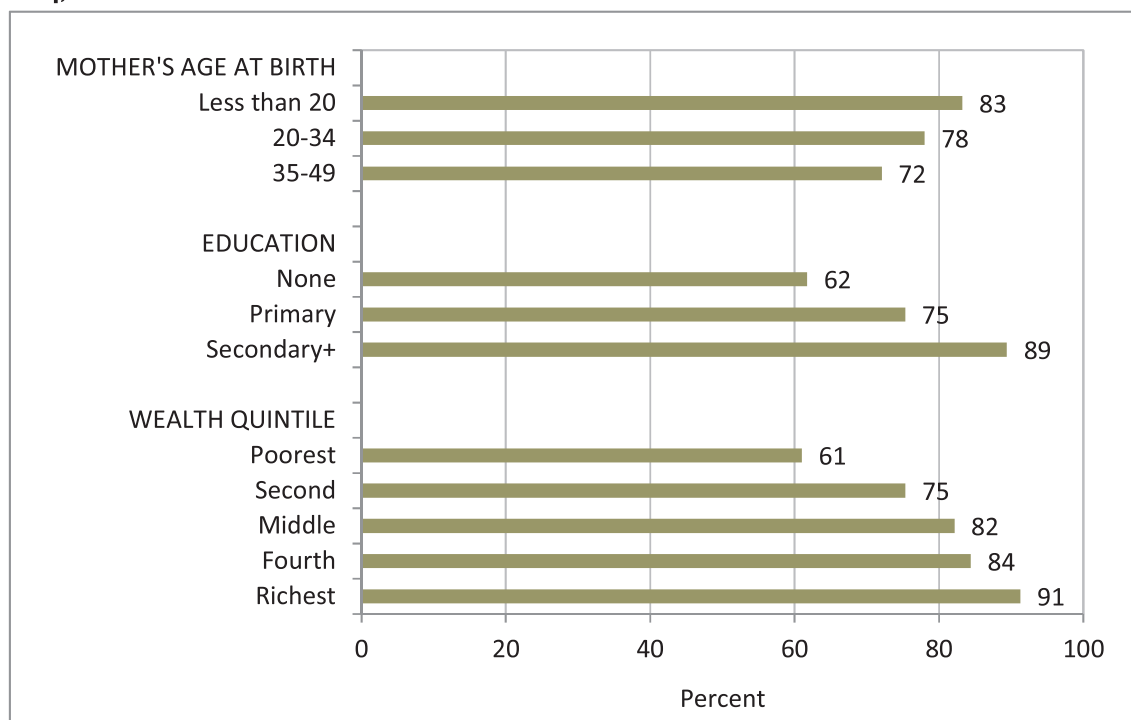
Percent distribution of women age 15-49 who gave birth in the two years preceding the survey by type of personnel providing antenatal care, Iraq, 2011

Education	Person providing antenatal care						No antenatal care received	Total	Any skilled personnel [1]	Number of women who gave birth in the preceding two years
	Doctor Public	Doctor Private	Nurse/Midwife	Traditional birth attendant	Relative/friend	Other/Missing				
None	36.9	24.3	0.5	0.0	0.0	0.1	38.2	100.0	61.7	2303
Primary	49.6	25.4	0.3	0.0	0.0	0.0	24.7	100.0	75.3	6728
Secondary+	66.0	23.2	0.2	0.0	0.0	0.0	10.6	100.0	89.4	4536
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	6
Wealth index quintiles										
Poorest	36.5	24.2	0.3	0.0	0.0	0.1	38.9	100.0	61.0	3109
Second	50.8	24.0	0.5	0.0	0.0	0.0	24.6	100.0	75.3	2902
Middle	56.5	25.2	0.4	0.0	0.0	0.0	17.9	100.0	82.1	2861
Fourth	61.6	22.5	0.4	0.0	0.0	0.0	15.6	100.0	84.4	2564
Richest	64.4	26.9	0.0	0.0	0.0	0.0	8.7	100.0	91.3	2136
Total	52.9	24.5	0.3	0.0	0.0	0.0	22.2	100.0	77.7	13572

¹ MICS indicator 5.5a; MDG indicator 5.5

(*) Figures that are based on less than 25 unweighted cases

Figure RH.3: Women who received care during pregnancy from skilled medical staff, Iraq, 2011



Use of antenatal service was highest among women who were below 20 years of age, had secondary or higher education and lived in households among the richest fifth wealth quintile.

UNICEF and WHO recommend a minimum of at least four antenatal care visits during pregnancy. Table RH.7 shows the number of antenatal care visits during the last pregnancy in the two years preceding the survey, regardless of provider and by selected characteristics. Almost 22 percent of mothers did not receive any antenatal care while half of mothers received antenatal care at least four times (50 percent). Mothers from the poorest households and those with primary education are less advantaged than educated mothers in the richest households who receive ANC four or more times. For example, 35 percent of the women living in the poorest households reported four or more antenatal care visits compared with 65 percent among those living in the richest households.

The types of services pregnant women received are shown in Table RH.8. Among those women who have given birth to a child during the two years preceding the survey, 72 percent reported that their blood pressure was checked during antenatal care visits, and 69 percent reported that a blood sample or a urine specimen was taken and in 65 percent of cases all three tests were conducted. It was observed that women living in Salahaddin (49 percent), Missan (53 percent), Al-Anbar (51 percent) and Ninewa (54 percent) were less likely to have all three tests conducted. Similarly, the poorest women and those in the age group 35-49 years are also less likely to receive all tests.

Table RH.7: Number of antenatal care visits

Percent distribution of women who had a live birth during the two years preceding the survey by number of antenatal care visits by any provider, Iraq, 2011

	Percent distribution of women who had:						Number of women who had a live birth in the preceding two years
	No antenatal care visits	One visit	Two visits	Three visits	4 or more visits [1]	Total	
Governorates							
Dohuk	15.3	2.3	6.4	7.7	66.8	100.0	488
Ninewa	28.9	3.9	7.5	9.2	49.8	100.0	1307
Suleimaniya	11.1	2.8	3.7	9.6	67.9	100.0	517
Kirkuk	25.2	10.8	9.2	16.5	36.5	100.0	579
Erbil	28.0	2.7	10.7	10.7	40.5	100.0	625
Diyala	20.4	2.3	9.0	13.7	52.9	100.0	555
Al-Anbar	29.8	1.3	10.1	16.2	41.7	100.0	606
Baghdad	21.5	2.2	14.0	15.4	43.9	100.0	2503
Babil	23.3	2.7	8.3	18.1	47.0	100.0	828
Karbala	13.7	1.9	5.0	8.4	70.5	100.0	497
Wasit	25.6	3.8	12.3	16.5	38.7	100.0	461
Salahaddin	36.2	4.5	8.5	9.2	40.7	100.0	657
Al-Najaf	13.6	1.5	8.6	10.6	65.0	100.0	575
Al-Qadisiya	19.2	3.5	6.4	11.7	54.2	100.0	520
Al-Muthanna	15.4	3.5	10.6	13.2	54.1	100.0	333
Thi-Qar	19.7	3.8	6.7	13.4	56.0	100.0	853
Missan	29.5	5.5	10.9	11.2	42.4	100.0	479
Basrah	17.7	3.7	12.1	11.1	50.3	100.0	1189
Region							
Kurdistan Region	18.8	2.6	7.2	9.4	57.1	100.0	1630
South/Centre Iraq	22.8	3.4	10.0	13.1	48.6	100.0	11942
Area							
Urban	16.8	3.3	10.4	12.6	54.0	100.0	9195
Rural	33.9	3.3	8.0	12.9	40.5	100.0	4377
Mother's age at birth							
Less than 20	16.7	3.0	11.8	12.6	53.4	100.0	1715
20-34	22.1	3.5	9.6	12.7	49.7	100.0	9709
35-49	27.9	2.7	8.0	12.9	46.3	100.0	2148
Education							
None	38.3	4.6	9.3	10.3	35.5	100.0	2303
Primary	24.7	3.2	9.3	12.8	48.0	100.0	6728
Secondary+	10.6	2.9	10.3	13.7	59.2	100.0	4536
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	6
Wealth index quintile							
Poorest	38.9	4.1	8.7	11.4	35.4	100.0	3109
Second	24.7	4.3	9.3	13.9	45.1	100.0	2902
Middle	17.9	3.0	10.2	12.2	53.4	100.0	2861
Fourth	15.6	2.3	10.1	14.6	55.0	100.0	2564
Richest	8.8	2.4	10.2	11.4	64.9	100.0	2136
Total	22.3	3.3	9.6	12.7	49.6	100.0	13572

¹ MICS indicator 5.5b; MDG indicator 5.5

(*) Figures that are based on less than 25 unweighted cases

Table RH.8: Content of antenatal care

Percentage of women age 15-49 years who had their blood pressure measured, urine sample taken, and blood sample taken as part of antenatal care, Iraq, 2011

Percentage of pregnant women who had:					
	Blood pressure measured	Urine sample taken	Blood sample taken	Blood pressure measured, urine and blood sample taken [1]	Number of women who had a live birth in the preceding two years
Governorates					
Dohuk	80.6	73.7	72.9	69.3	488
Ninewa	66.7	58.9	57.0	53.6	1307
Suleimaniya	87.7	85.5	87.4	85.2	517
Kirkuk	70.0	64.3	62.3	59.6	579
Erbil	67.0	63.9	64.9	63.2	625
Diyala	75.0	73.9	74.1	72.1	555
Al-Anbar	66.7	58.5	59.1	51.3	606
Baghdad	70.0	68.5	67.7	64.5	2503
Babil	61.5	69.8	68.9	57.6	828
Karbala	83.1	80.1	83.5	77.9	497
Wasit	73.1	71.4	71.2	70.9	461
Salahaddin	55.0	51.3	51.4	48.7	657
Al-Najaf	85.9	85.3	84.2	84.0	575
Al-Qadisiya	74.3	68.3	68.3	63.8	520
Al-Muthanna	80.1	80.3	78.5	75.3	333
Thi-Qar	78.2	71.4	76.5	70.8	853
Missan	63.6	56.1	60.3	53.2	479
Basrah	75.1	70.8	74.6	69.7	1189
Region					
Kurdistan Region	77.7	73.7	74.4	72.0	1630
South/Centre Iraq	71.0	67.8	68.3	63.9	11942
Area					
Urban	77.4	74.1	74.7	70.8	9195
Rural	60.1	56.8	57.1	52.6	4377
Mother's age at birth					
Less than 20	75.1	72.6	73.7	68.5	1715
20-34	72.1	68.7	69.1	65.0	9709
35-49	68.0	64.4	64.8	61.7	2148
Education					
None	57.0	52.4	52.7	49.0	2303
Primary	69.0	65.6	66.1	62.1	6728
Secondary+	83.6	80.9	81.6	77.1	4536
Non-standard curriculum	(*)	(*)	(*)	(*)	6
Wealth index quintile					
Poorest	55.0	51.9	52.1	48.3	3109
Second	69.1	64.0	65.5	60.8	2902
Middle	76.2	72.5	73.0	68.3	2861
Fourth	79.3	76.3	76.8	73.6	2564
Richest	85.2	84.1	83.5	79.8	2136
Total	71.8	68.5	69.0	64.9	13572

¹ MICS indicator 5.6

(*) Figures that are based on less than 25 unweighted cases

8.5. Assistance at Delivery

Three quarters of all maternal deaths occur during delivery and the immediate post-partum period. The single most critical intervention for safe motherhood is to ensure a competent health worker with midwifery skills is present at every birth, and transport is available to a referral facility for obstetric care in case of emergency. A World Fit for Children goal is to ensure that women have ready and affordable access to skilled attendance at delivery. The indicators are the proportion of births with a skilled attendant and proportion of institutional deliveries. The skilled attendant at delivery indicator is also used to track progress toward the Millennium Development target of reducing the maternal mortality ratio by three quarters between 1990 and 2015.

The MICS included a number of questions to assess the proportion of births attended by a skilled attendant. A skilled attendant includes a doctor, nurse, midwife or auxiliary midwife.

Overall the vast majority (91 percent) of births occurring in the two years preceding the Iraq MICS4 survey were delivered by skilled personnel: public doctor, 54 percent; private doctor, 10 percent; nurse or midwife, 27 percent (Table RH.9). Almost all women living in Kerbela (100 percent), and 94 percent each in Al-Najaf, Thi-Qar and Basrah governorates were assisted during delivery by skilled personnel. Women living in Ninewa and Al-Anbar (83 percent each) are less likely to seek assistance at delivery by skilled personnel. Deliveries by traditional birth attendants referred to as “Gida” were more common in Al-Anbar (17 percent) and Ninewa (16 percent) and in rural areas.

Table RH.9: Assistance during delivery

Percent distribution of women age 15-49 who had a live birth in the two years preceding the survey by person assisting at delivery and percentage of births delivered by C-section, Iraq, 2011

	Person assisting at delivery										
	Doctor Public	Doctor Private	Nurse/ Midwife	Traditional birth attendant	Relative/Friend	Other/Missing	No attendant	Total	Any skilled attendant [1]	Percent delivered by C-section [2]	Number of women who had a live birth in preceding two years
Governorates											
Dohuk	57.6	6.4	26.2	5.3	3.9	0.6	0.0	100.0	90.2	20.5	488
Ninewa	55.0	5.7	21.9	15.8	1.3	0.2	0.1	100.0	82.6	13.2	1307
Suleimaniya	58.4	20.4	16.3	2.0	1.7	1.0	0.2	100.0	95.1	36.5	517
Kirkuk	58.6	2.3	25.9	12.4	0.8	0.0	0.0	100.0	86.8	15.4	579
Erbil	68.0	7.2	16.6	3.7	3.9	0.4	0.2	100.0	91.8	28.0	625
Diyala	43.0	11.4	36.6	8.2	0.8	0.0	0.0	100.0	91.0	23.6	555
Al-Anbar	35.7	7.3	40.3	16.7	0.0	0.0	0.0	100.0	83.3	14.0	606
Baghdad	46.0	19.8	26.4	7.7	0.1	0.0	0.0	100.0	92.2	26.2	2503
Babil	62.5	8.1	22.8	5.7	0.2	0.2	0.5	100.0	93.4	22.6	828
Karbala	35.0	16.3	48.5	0.1	0.0	0.0	0.0	100.0	99.9	28.5	497
Wasit	54.1	3.5	27.9	13.6	0.5	0.1	0.2	100.0	85.5	22.5	461
Salahaddin	54.7	11.4	18.8	14.4	0.7	0.0	0.1	100.0	84.9	21.6	657
Al-Najaf	51.7	6.1	38.4	3.8	0.0	0.0	0.0	100.0	96.2	28.9	575
Al-Qadisiya	54.7	20.4	18.6	5.2	0.8	0.1	0.2	100.0	93.7	33.9	520
Al-Muthanna	57.9	2.2	28.9	9.5	0.8	0.6	0.0	100.0	89.1	20.7	333
Thi-Qar	61.9	3.4	28.5	5.8	0.4	0.0	0.0	100.0	93.8	20.6	853
Missan	65.5	2.7	26.0	5.8	0.1	0.0	0.0	100.0	94.2	14.5	479
Basrah	64.4	6.2	23.4	5.9	0.1	0.0	0.0	100.0	94.0	15.3	1189
Region											
Kurdistan Region	61.8	11.2	19.4	3.6	3.2	0.6	0.1	100.0	92.4	28.4	1630
South/Centre Iraq	53.1	10.0	27.5	8.8	0.4	0.1	0.1	100.0	90.7	21.3	11942
Area											
Urban	56.5	12.2	25.2	5.5	0.5	0.1	0.0	100.0	93.9	25.1	9195
Rural	49.3	5.8	29.4	13.8	1.3	0.2	0.2	100.0	84.5	16.0	4377
Mother's age at birth											
Less than 20	58.2	9.0	25.2	6.9	0.6	0.1	0.0	100.0	92.4	17.6	1715
20-34	53.6	10.0	27.5	8.0	0.7	0.1	0.1	100.0	91.1	21.4	9709
35-49	53.6	11.7	23.4	10.0	1.1	0.2	0.1	100.0	88.6	29.5	2148
Place of delivery											
Public sector health facility	78.7	3.3	17.7	0.0	0.2	0.1	0.0	100.0	99.7	23.7	9219
Private sector health facility	5.2	90.6	4.0	0.1	0.1	0.1	0.0	100.0	99.8	70.4	1171
Home	1.2	0.4	60.6	35.0	2.4	0.3	0.2	100.0	62.2	0.0	3171
Other	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	8
Missing/DK	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	3
Education											
None	51.6	4.1	26.7	15.2	1.8	0.4	0.3	100.0	82.4	15.4	2303
Primary	54.6	7.5	28.0	9.0	0.7	0.1	0.0	100.0	90.1	20.0	6728
Secondary+	55.0	17.1	24.2	3.3	0.2	0.1	0.0	100.0	96.3	28.8	4536
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	6
Wealth index quintiles											
Poorest	49.3	4.2	28.6	15.7	1.7	0.2	0.3	100.0	82.2	14.5	3109
Second	56.2	5.8	27.7	9.5	0.6	0.3	0.0	100.0	89.6	20.5	2902
Middle	56.9	8.8	28.0	5.5	0.7	0.1	0.0	100.0	93.7	21.7	2861
Fourth	57.4	13.9	24.2	4.3	0.3	0.0	0.0	100.0	95.5	27.3	2564
Richest	51.2	22.1	22.7	3.8	0.2	0.1	0.0	100.0	96.0	30.0	2136
Total	54.2	10.1	26.5	8.2	0.7	0.1	0.1	100.0	90.9	22.2	13572

¹ MICS indicator 5.7; MDG indicator 5.2 / ² MICS indicator 5.9

(*) Figures that are based on less than 25 unweighted cases

8.6. Place of Delivery

Increasing the proportion of births that are delivered in health facilities is an important factor in reducing the health risks to both the mother and the baby. Proper medical attention and hygienic conditions during delivery can reduce the risks of complications and infection that can cause morbidity and mortality for the mother or the baby. Table RH.10 presents the percent distribution of women aged 15-49 years who had a live birth in the two years preceding the survey by place of delivery and the percentage of births delivered in a health facility, according to background characteristics.

About 77 percent of births in Iraq are delivered in a health facility; 68 percent of deliveries occur in public sector facilities and nine percent occur in private sector facilities. One in four births (23 percent) occurs at home. Women less than 20 years of age are most likely to deliver in a health facility (81 percent). Women in urban areas are more likely to deliver in a health facility than their rural counterparts (80 percent compared with 70 percent).

The governorate of Dohuk has the highest proportion of institutional deliveries (92 percent), followed by Suleimaniya (89 percent), while Al-Anbar has the lowest proportion (63 percent). The variation within governorates is even more salient as it is shown in the Map RH.1: in Ninewa governorate, for example, while in the districts of Sinjar, Al Bahaaj and Al Hadhar (labelled 12, 13 and 14 in the map) between 33 and 50 percent of the women delivered in health facilities, while the district of Ninewa itself (label 10), with mostly an urban population, has above 80 percent institutional deliveries.

In the southern governorates of Al Muthanna 83 percent of deliveries occurred in health facilities, albeit there are remarkable variations: in Al Ramitha district (label 97 in the map) there were about 90 percent of institutional deliveries, but in Al Salman district (label 100) it was only 41 percent. Women with higher levels of educational attainment are more likely to deliver in a health facility than women with less education or no education. The proportion of births occurring in a health facility increases steadily with increasing wealth quintile, from 67 percent of births in the lowest wealth quintile to 84 percent among those in the highest quintile.

Table RH.10: Place of delivery

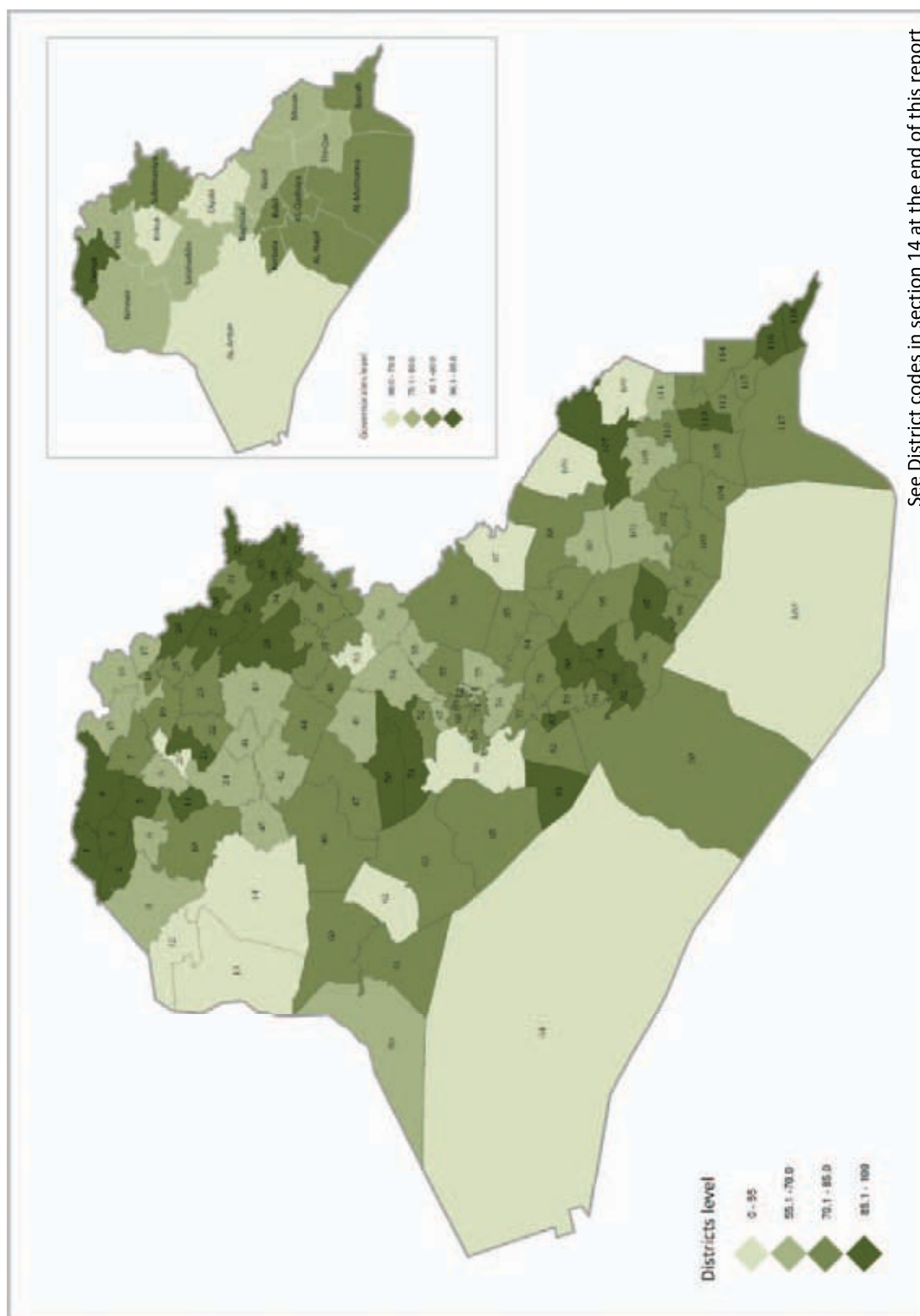
Percent distribution of women age 15-49 who had a live birth in two years preceding the survey by place of delivery, Iraq, 2011

	Public sector health facility	Place of delivery				Delivered in health facility [1]	Number of women who had a live birth in preceding two years
		Private sector health facility	Home	Other	Total		
Governorates							
Dohuk	89.8	2.2	7.8	0.1	100.0	92.0	488
Ninewa	70.6	1.4	27.8	0.2	100.0	72.0	1307
Suleimaniya	71.3	18.0	10.5	0.1	100.0	89.3	517
Kirkuk	63.9	2.3	33.9	0.0	100.0	66.1	579
Erbil	68.7	6.8	23.9	0.2	100.0	75.5	625
Diyala	61.9	7.2	30.9	0.0	100.0	69.1	555
Al-Anbar	58.6	4.5	36.9	0.0	100.0	63.1	606
Baghdad	51.3	20.4	28.3	0.0	100.0	71.7	2503
Babil	78.8	3.8	17.1	0.3	100.0	82.6	828
Karbala	68.8	12.4	18.8	0.0	100.0	81.2	497
Wasit	72.6	2.4	24.9	0.1	100.0	75.0	461
Salahaddin	66.0	9.4	24.5	0.0	100.0	75.5	657
Al-Najaf	76.8	6.1	17.1	0.0	100.0	82.9	575
Al-Qadisiya	67.5	19.3	13.1	0.1	100.0	86.8	520
Al-Muthanna	81.8	1.4	16.8	0.0	100.0	83.2	333
Thi-Qar	70.0	3.3	26.7	0.0	100.0	73.3	853
Missan	75.2	1.0	23.7	0.0	100.0	76.3	479
Basrah	77.5	6.4	16.1	0.0	100.0	83.9	1189
Region							
Kurdistan Region	75.8	9.0	14.9	0.1	100.0	84.9	1630
South/Centre Iraq	66.8	8.6	24.5	0.0	100.0	75.4	11942
Area							
Urban	69.3	10.6	20.1	0.0	100.0	79.9	9195
Rural	65.1	4.6	30.2	0.1	100.0	69.6	4377
Mother's age at birth							
Less than 20	73.0	7.8	19.1	0.0	100.0	80.9	1715
20-34	67.6	8.5	23.8	0.1	100.0	76.1	9709
35-49	65.1	10.0	24.9	0.0	100.0	75.1	2148
Number of antenatal care visits							
None	56.0	4.3	39.6	0.1	100.0	60.2	3027
1-3 visits	66.6	9.1	24.4	0.0	100.0	75.6	3482
4+ visits	73.9	10.2	15.8	0.1	100.0	84.2	6736
Education							
None	64.8	2.8	32.1	0.2	100.0	67.6	2303
Primary	69.6	6.1	24.3	0.0	100.0	75.7	6728
Secondary+	67.1	15.3	17.5	0.0	100.0	82.4	4536
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	6
Wealth index quintiles							
Poorest	64.2	3.1	32.4	0.2	100.0	67.4	3109
Second	69.7	4.2	26.1	0.0	100.0	73.8	2902
Middle	72.4	7.2	20.5	0.0	100.0	79.5	2861
Fourth	69.4	12.3	18.2	0.1	100.0	81.7	2564
Richest	63.3	20.2	16.5	0.0	100.0	83.5	2136
Total	67.9	8.6	23.4	0.1	100.0	76.6	13572

¹ MICS indicator 5.8

(*) Figures that are based on less than 25 unweighted cases

Map RH.1: Percentage of women 15-49 years who gave birth in the previous 2 years and delivered in a health facility, Iraq, 2011



See District codes in section 14 at the end of this report

9. Child Development

9.1. Early Childhood Education and Learning

It is well recognized that a period of rapid brain development occurs in the first 3-4 years of life, and the quality of home care is the major determinant of the child's development during this period. In this context, engagement of adults in activities with children, presence of books in the home, for the child, and the conditions of care are important indicators of quality of home care. Children should be physically healthy, mentally alert, emotionally secure, socially competent and ready to learn.

Attendance to pre-school education in an organized learning or child education program is important for the readiness of children to attend school. Only four percent of children aged 36-59 months are attending pre-school (Table CD.1). Urban-rural and regional differentials are significant – the figure is five percent in urban areas, compared to one percent in rural areas. This percentage is also lower among children aged 36-47 months (2 percent), compared to those aged 48-59 months (6 percent). Among children aged 36-59 months, attendance to pre-school is more prevalent in Sulaymania (8 percent), Erbil (7 percent) and Karabala (6 percent) governorates and lowest in the Thiqr and Dohuk governorates (1 percent each). Notable differentials exist by mother's education and socioeconomic status: ten percent of children living in rich households attend pre-school, while the figure drops to one percent in poor households. It is interesting to note that there is no gender differential for pre-school attendance for children aged 36-59 months.

Information on a number of activities that support early learning was collected in the survey. These included the involvement of adults with children in the following activities: reading books or looking at picture books, telling stories, singing songs, taking children outside the home, compound or yard, playing with children, and spending time with children naming, counting, or drawing things.

For more than half (58 percent) of children 36-59 months, an adult household member engaged in four or more activities that promote learning and school readiness during the three days preceding the survey (Table CD.2). The average number of activities that adults engaged with children was four. Engagement of an adult with more than four activities was higher among rich households, those living in urban areas and in Baghdad governorate. It is worth noting that adults were least engaged with children's activities in the governorate of Thiqr. The table also indicates that the father's involvement in such activities was similar to other adults' involvement (55 percent) but he was only engaged with generally one such activity as it is indicated by the mean number of activities the father engaged in.

There are no gender differentials in terms of engagement of adults in activities with children; however, a larger proportion of fathers engaged in activities with male children (59 percent) than with female children (51 percent). Larger proportions of adults engaged in learning and school readiness activities with children in urban areas (65 percent) than in rural areas (46 percent). Differentials by region and socio-economic status are also observed: adult engagement in activities with children was greatest in the Baghdad and Kirkuk governorates (70 percent) and lowest in the Thiqr governorate (32 percent), while the proportion was 78 percent for children living in the richest households, as opposed to those living in the poorest households (40 percent).

Table CD.1: Early childhood education

Percentage of children age 36-59 months who are attending an organized early childhood education programme, Iraq, 2011

	Percentage of children age 36-59 months currently attending early childhood education [1]	Number of children age 36-59 months
Sex		
Male	4.0	6987
Female	3.6	6682
Governorates		
Dohuk	1.1	506
Ninewa	3.3	1303
Suleimaniya	7.7	649
Kirkuk	3.2	540
Erbil	6.8	646
Diyala	5.8	503
Al-Anbar	3.8	599
Baghdad	5.5	2400
Babil	3.3	837
Karbala	6.0	433
Wasit	2.0	504
Salahaddin	2.5	609
Al-Najaf	3.1	600
Al-Qadisiya	2.8	545
Al-Muthanna	1.0	362
Thi-Qar	0.8	913
Missan	2.1	524
Basrah	3.6	1198
Region		
Kurdistan Region	5.6	1801
South/Centre Iraq	3.6	11868
Area		
Urban	5.3	8948
Rural	1.1	4721
Age of child		
36-47 months	1.9	7067
48-59 months	5.9	6602
Mother's education		
None	0.9	2524
Primary	2.2	6816
Secondary+	8.1	4290
Non-standard	(0.0)	36
Wealth index quintile		
Poorest	1.1	3459
Second	1.1	3143
Middle	2.8	2702
Fourth	7.5	2434
Richest	9.8	1930
Total	3.8	13669

¹ MICS indicator 6.7

() Figures that are based on 25-49 unweighted cases

Table CD.2: Support for learning

Percentage of children age 36-59 months with whom an adult household member engaged in activities that promote learning and school readiness during the last three days, Iraq, 2011

	Percentage of children age 36-59 months		Mean number of activities			
	With whom adult household members engaged in four or more activities [1]	With whom the father engaged in one or more activities [2]	Any adult household member engaged with the child	The father engaged with the child	Percentage of children not living with their natural father	Number of children age 36-59 months
Sex						
Male	57.5	59.0	4.0	1.2	2.7	6987
Female	59.0	50.8	4.0	1.0	2.6	6682
Governorates						
Dohuk	62.6	63.1	4.3	1.6	1.1	506
Ninewa	65.8	61.9	4.2	1.2	1.9	1303
Suleimaniya	61.0	71.3	4.1	1.7	2.4	649
Kirkuk	69.5	42.9	4.2	0.8	4.9	540
Erbil	62.5	72.6	4.3	2.1	1.5	646
Diyala	62.1	35.9	4.2	0.6	7.4	503
Al-Anbar	62.0	67.3	4.3	1.4	2.3	599
Baghdad	70.0	55.7	4.7	1.2	2.7	2400
Babil	46.2	32.7	3.4	0.6	1.7	837
Karbala	56.6	54.2	3.9	1.1	0.8	433
Wasit	49.3	42.7	3.5	1.0	3.1	504
Salahaddin	64.3	62.9	4.4	1.3	2.7	609
Al-Najaf	59.9	62.2	4.0	1.0	2.6	600
Al-Qadisiya	55.9	57.0	3.9	1.4	3.7	545
Al-Muthanna	49.2	58.8	3.8	1.3	2.7	362
Thi-Qar	31.6	44.5	2.3	0.8	4.1	913
Missan	44.0	48.8	3.4	0.9	2.1	524
Basrah	51.0	53.7	3.7	0.8	1.7	1198
Region						
Kurdistan Region	62.0	69.4	4.2	1.8	1.7	1801
South/Centre Iraq	57.6	52.8	4.0	1.0	2.8	11868
Area						
Urban	64.9	57.6	4.3	1.2	2.8	8948
Rural	45.6	50.0	3.4	0.9	2.3	4721
Age						
36-47 months	57.0	55.3	3.9	1.1	2.3	7067
48-59 months	59.5	54.6	4.1	1.1	3.0	6602
Mother's education						
None	38.7	48.4	3.0	0.9	3.0	2524
Primary	55.9	54.1	3.9	1.1	2.0	6816
Secondary+	73.5	60.5	4.8	1.3	3.4	4290
Non-standard	(40.4)	(31.3)	(2.8)	(0.5)	(11.6)	36
Father's education						
None	35.3	43.2	2.9	0.8	0.5	1166
Primary	50.9	52.3	3.6	1.0	0.3	5252
Secondary+	67.6	60.8	4.4	1.3	0.3	6913
Non-standard	(*)	(*)	(*)	(*)	(*)	13
Father not in household	59.7	16.7	4.1	0.3	100.0	322

Table CD.2: Support for learning

Percentage of children age 36-59 months with whom an adult household member engaged in activities that promote learning and school readiness during the last three days, Iraq, 2011

	Percentage of children age 36-59 months		Mean number of activities			
	With whom adult household members engaged in four or more activities [1]	With whom the father engaged in one or more activities [2]	Any adult household member engaged with the child	The father engaged with the child	Percentage of children not living with their natural father	Number of children age 36-59 months
Wealth index quintiles						
Poorest	40.3	45.4	3.1	0.9	2.6	3459
Second	52.6	55.1	3.7	1.1	2.6	3143
Middle	61.3	57.8	4.1	1.2	2.4	2702
Fourth	71.4	62.0	4.6	1.3	1.9	2434
Richest	78.3	59.3	5.0	1.5	4.0	1930

Total	58.2	55.0	4.0	1.1	2.6	13669
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¹ MICS indicator 6.1

² MICS Indicator 6.2

() Figures that are based on 25-49 unweighted cases

(*) Figures that are based on less than 25 unweighted cases

Exposure to books in early years not only provides the child with greater understanding of the nature of print and visual materials, but may also give the child opportunities to see others reading, such as older siblings doing school work. Presence of books is important for later school performance and IQ scores. The mother/caretaker of all children under-five years were asked about the number of children's books or picture books they have for the child, household objects or outside objects, and homemade toys or toys that came from a shop that are available at home.

In Iraq, only five percent of children age 0-59 months are living in households where at least three children's books are available (Table CD.3). The percentage of children with 10 or more books declines to less than one percent. While no gender differentials are observed, children from wealthier households appear to have more access to children's books than poor. The proportion of children under-five years who have three or more children's books is 16 percent among children living in the richest quintile, compared to less than one percent among children who live in the poorest quintile. Older children are much likelier to have books compared to younger children.

Table CD.3 also shows that 34 percent of children aged 0-59 months had two or more playthings to play with in their homes. The playthings in MICS included homemade toys (such as dolls and cars, or other toys made at home), toys that came from a store, and household objects (such as pots and bowls) or objects and materials found outside the home (such as sticks, rocks, animal shells, or leaves). It is interesting to note that 77 percent of children play with toys that come from a store; however, the percentages for other types of toys is below 35 percent. The proportion of children who have two or more playthings to play with is similar among male children and female children. Differentials are observed among regions where the lowest percentage was observed in Babil (17 percent) compared

Table CD.3: Learning materials

Percentage of children under age 5 by numbers of children's books present in the household, and by playthings that child plays with, Iraq, 2011

	Household has for the child:			Child plays with:		Two or more types of playthings [2]	Percent of children under age 5	Number of children under age 5
	3 or more children's books [1]	10 or more children's books	Homemade toys	Toys from a shop / manufactured toys	Household objects/objects found outside			
Sex								
Male	4.9	1.0	10.9	76.7	34.8	34.2	100.0	18638
Female	5.8	1.2	11.5	77.2	33.9	33.7	100.0	17669
Governorates								
Dohuk	4.5	1.0	7.3	76.6	26.6	26.9	100.0	1338
Ninewa	4.0	1.2	11.7	81.5	43.5	43.3	100.0	3521
Suleimaniya	7.5	2.7	14.6	84.5	43.6	49.0	100.0	1503
Kirkuk	3.1	0.3	4.9	79.4	54.3	50.4	100.0	1539
Erbil	2.5	0.6	12.1	85.3	32.5	37.8	100.0	1682
Diyala	3.4	1.0	6.7	72.0	35.4	34.9	100.0	1417
Al-Anbar	2.7	0.1	26.6	67.9	39.1	45.5	100.0	1638
Baghdad	12.1	1.7	17.4	78.7	27.0	27.7	100.0	6588
Babil	2.8	1.2	2.7	64.7	18.7	16.7	100.0	2219
Karbala	8.4	1.9	5.1	77.2	48.5	43.6	100.0	1234
Wasit	3.8	1.9	7.6	72.5	22.6	20.2	100.0	1295
Salahaddin	3.5	0.5	12.9	73.1	37.7	34.5	100.0	1722
Al-Najaf	10.1	3.5	3.2	86.1	34.5	31.2	100.0	1529
Al-Qadisiya	3.2	0.4	14.8	62.7	44.5	38.4	100.0	1392
Al-Muthanna	1.0	0.0	7.3	76.1	24.9	25.2	100.0	914
Thi-Qar	0.3	0.0	6.0	67.2	37.3	36.1	100.0	2270
Missan	2.9	0.1	18.5	73.5	38.6	37.5	100.0	1310
Basrah	4.0	0.5	7.2	88.9	29.7	29.0	100.0	3196
Region								
Kurdistan Region	4.7	1.4	11.5	82.5	34.4	38.3	100.0	4524
South/Centre Iraq	5.5	1.1	11.1	76.2	34.4	33.4	100.0	31783
Area								
Urban	7.4	1.5	10.8	82.5	32.2	33.5	100.0	24149
Rural	1.2	0.2	11.8	65.8	38.7	35.0	100.0	12158
Age								
0-23 months	1.0	0.3	7.5	64.3	22.3	21.8	100.0	15162
24-59 months	8.5	1.7	13.8	86.0	43.1	42.8	100.0	21145
Mother's education								
None	0.6	0.1	12.6	65.5	38.1	34.1	100.0	6473
Primary	2.7	0.6	11.5	75.4	35.1	34.8	100.0	18106
Secondary+	12.1	2.5	9.9	85.7	31.1	32.6	100.0	11667
Non-standard	0.0	0.0	10.1	71.9	51.8	50.0	100.0	58
Wealth index quintiles								
Poorest	0.5	0.1	12.6	61.8	39.4	34.4	100.0	8828
Second	1.9	0.2	10.7	75.3	36.7	35.9	100.0	8095
Middle	4.0	0.7	10.1	83.3	34.3	35.5	100.0	7444
Fourth	8.7	1.4	10.0	84.7	28.1	30.6	100.0	6548
Richest	16.4	4.3	12.5	86.1	30.4	32.4	100.0	5392
Total	5.4	1.1	11.2	76.9	34.4	34.0	100.0	36307

¹ MICS indicator 6.3

² MICS indicator 6.4

Table CD.4: Inadequate care

Percentage of children under age 5 left alone or left in the care of another child younger than 10 years of age for more than one hour at least once during the past week, Iraq, 2011

	Percentage of children under age 5			Number of children under age 5
	Left alone in the past week	Left in the care of another child younger than 10 years of age in the past week	Left with inadequate care in the past week [1]	
Sex				
Male	4.2	6.0	7.6	18638
Female	4.2	5.5	7.4	17669
Governorates				
Dohuk	5.0	7.0	10.0	1338
Ninewa	2.8	4.7	5.9	3521
Suleimaniya	2.8	8.9	10.8	1503
Kirkuk	0.7	1.5	1.5	1539
Erbil	1.0	3.3	3.9	1682
Diyala	1.0	1.1	1.8	1417
Al-Anbar	4.3	4.4	6.8	1638
Baghdad	4.6	3.9	6.1	6588
Babil	8.6	18.8	21.4	2219
Karbala	1.9	2.5	3.5	1234
Wasit	1.3	2.2	3.0	1295
Salahaddin	6.9	9.4	10.7	1722
Al-Najaf	6.7	8.5	10.0	1529
Al-Qadisiya	3.8	3.8	5.6	1392
Al-Muthanna	2.5	4.4	5.5	914
Thi-Qar	14.0	10.1	16.4	2270
Missan	0.2	6.9	7.0	1310
Basrah	1.4	2.9	3.1	3196
Region				
Kurdistan Region	2.8	6.3	8.0	4524
South/Centre Iraq	4.4	5.7	7.4	31783
Area				
Urban	3.5	4.7	6.5	24149
Rural	5.6	7.9	9.5	12158
Age				
0-23 months	2.6	3.9	5.1	15162
24-59 months	5.3	7.1	9.2	21145
Mother's education				
None	4.5	7.2	8.8	6473
Primary	4.1	5.7	7.1	18106
Secondary+	4.1	5.1	7.3	11667
Non-standard	9.3	10.1	15.4	58
Wealth index quintiles				
Poorest	5.2	7.4	8.8	8828
Second	3.1	5.4	6.7	8095
Middle	3.9	6.1	7.6	7444
Fourth	3.7	3.9	6.1	6548
Richest	5.2	5.5	8.2	5392
Total	4.2	5.8	7.5	36307

* MICS indicator 6.5

to nearly 50 percent in Kirkuk and Sulaimania governorates. There are neither differences among urban and rural areas (around 34 percent) nor by socioeconomic status of the households.

Leaving children alone or in the presence of other young children is known to increase the risk of accidents. In MICS, two questions were asked to find out whether children aged 0-59 months were left alone during the week preceding the interview, and whether children were left in the care of other children under 10 years of age.

Table CD.4 shows that four percent of children aged 0-59 months were left in the care of other children, while six percent were left alone during the week preceding the interview. Combining the two care indicators, it is calculated that eight percent of children were left with inadequate care during the week preceding the survey, either by being left alone or in the care of another child. Large differentials were observed amongst governorates, with inadequate care more prevalent among children living in Babil (21 percent) and Thiqr (16 percent) and least prevalent in Kirkuk and Diala governorates (2 percent each). Children aged 24-59 months were left with inadequate care more (9 percent) than those who were aged 0-23 months (5 percent). Small differences were observed between urban and rural areas with percentage of inadequate care seven and 10 percent respectively. No differences were observed in regard to the level of mother's education or to the socioeconomic status of the household.

9.2. Early Childhood Development

Early child development is defined as an orderly, predictable process along a continuous path, in which a child learns to handle more complicated levels of moving, thinking, speaking, feeling and relating to others. Physical growth, literacy and numeracy skills, socio-emotional development and readiness to learn are vital domains of a child's overall development, which is a basis for overall human development.

A 10-item module that has been developed for the MICS programme was used to calculate the Early Child Development Index (ECDI). The indicator is based on some benchmarks that children would be expected to have if they are developing as the majority of children in that age group. The primary purpose of the ECDI is to inform public policy regarding the developmental status of children in Iraq.

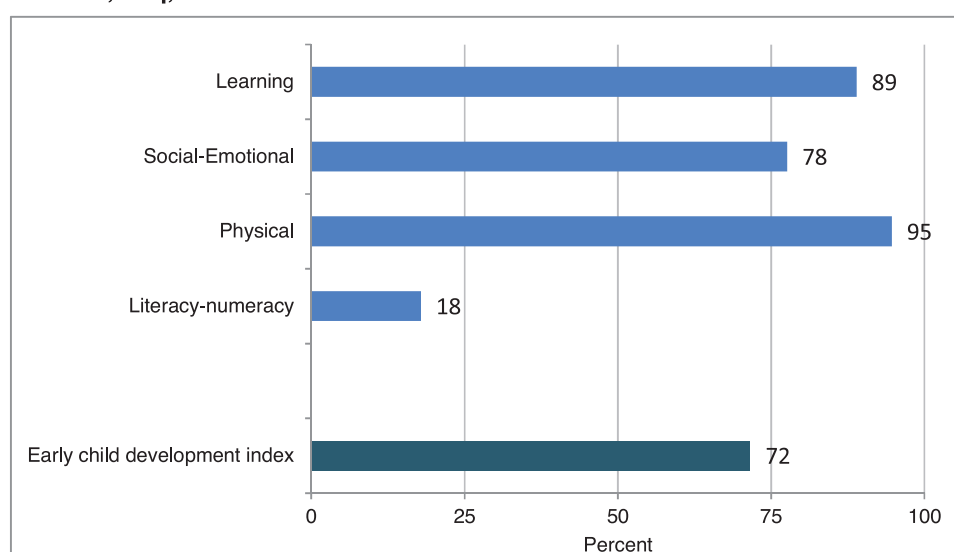
Each of the 10 items is used in one of the four domains, to determine if children are developmentally on track in that domain. The domains in question are:

- Literacy-numeracy: Children are identified as being developmentally on track based on whether they can identify/name at least ten letters of the alphabet, whether they can read at least four simple, popular words, and whether they know the name and recognize the symbols of all numbers from 1 to 10. If at least two of these are correct, then the child is considered developmentally on track.
- Physical: If the child can pick up a small object with two fingers, like a stick or a rock from the ground and/or the mother/caretaker does not indicate that the child is sometimes too sick to play, then the child is regarded as being developmentally on track in the physical domain.

- In the social-emotional domain, children are considered to be developmentally on track if two of the following is true: If the child gets along well with other children, if the child does not kick, bite, or hit other children and if the child does not get distracted easily.
- Learning: If the child follows simple directions on how to do something correctly and/or when given something to do, is able to do it independently, then the child is considered to be developmentally on track in the learning domain.

ECDI is then calculated as the percentage of children who are developmentally on track in at least three of these four domains.

Figure CD.1: Percentage of children age 36-59 months who are developmentally on track, Iraq, 2011



The results are presented in Table CD.5. In Iraq, 72 percent of children aged 36-59 months are developmentally on track. ECDI is higher among girls (76 percent) than boys (68 percent). As expected, ECDI is much higher in the older age group, i.e. 76 percent among 48-59 months old compared to 68 percent among 36-47 months old, since children mature and develop more skills with increasing age. Higher ECDI is also seen in children attending an early childhood education programme (88 percent compared to 71 percent for those who are not attending it). Children living in the poorest households have lower ECDI (66 percent) compared to children living in richest households (81 percent of children developmentally on track).

The analysis of four domains of child development (Figure CD.1) shows that 95 percent of children are on track in the physical learning domain, but less on track in learning (89 percent), social-emotional (78 percent) domains and strikingly less in literacy-numeracy (18 percent) domain. In the domains of literacy-numeracy and learning the higher score is associated with children living in richest households and with older children; social-emotional skills are higher among girls. It is worth noting the ECDI in Qadisiya governorate is 35 percent only while in Erbil and Babil is 87 and 83 percent respectively.

Table CD.5: Early child development index

Percentage of children age 36-59 months who are developmentally on track in literacy-numeracy, physical, social-emotional, and learning domains, and the early child development index score, Iraq, 2011

	Percentage of children age 36-59 months who are developmentally on track for indicated domains				Early child development index score [1]	Number of children age 36-59 months
	Literacy-numeracy	Physical	Social-Emotional	Learning		
Sex						
Male	17.0	94.5	73.0	87.9	67.8	6987
Female	18.7	94.8	82.4	90.0	75.6	6682
Governorates						
Dohuk	46.0	93.6	79.1	94.8	81.7	506
Ninewa	11.4	98.7	82.9	91.1	76.9	1303
Suleimaniya	12.4	95.9	84.5	92.9	78.6	649
Kirkuk	4.8	95.6	67.2	95.5	66.6	540
Erbil	5.4	95.7	92.4	95.6	86.6	646
Diyala	7.9	96.7	82.8	84.2	69.4	503
Al-Anbar	27.2	98.1	79.2	82.3	72.2	599
Baghdad	35.8	94.4	83.3	90.6	79.3	2400
Babil	16.3	97.6	85.5	93.2	83.2	837
Karbala	11.7	95.0	77.6	94.8	74.3	433
Wasit	10.6	98.4	70.0	91.6	67.3	504
Salahaddin	23.7	95.6	74.7	89.1	72.6	609
Al-Najaf	22.8	92.9	81.2	89.1	72.8	600
Al-Qadisiya	11.3	75.1	53.6	71.5	34.8	545
Al-Muthanna	14.9	96.8	83.8	90.8	80.0	362
Thi-Qar	11.1	87.4	68.7	81.7	56.0	913
Missan	7.2	98.6	61.5	80.0	54.1	524
Basrah	6.9	95.7	69.9	87.9	62.5	1198
Region						
Kurdistan Region	19.3	95.2	85.8	94.4	82.3	1801
South/Centre Iraq	17.6	94.6	76.3	88.1	70.0	11868
Area						
Urban	21.8	94.5	77.6	89.9	72.8	8948
Rural	10.4	95.1	77.6	87.1	69.3	4721
Age						
36-47 months	13.0	93.5	76.8	86.4	67.9	7067
48-59 months	23.1	95.9	78.5	91.7	75.6	6602
Preschool attendance						
Attending preschool	58.8	96.4	82.1	93.4	88.3	522
Not attending preschool	16.2	94.6	77.4	88.8	70.9	13147
Mother's education						
None	10.4	94.2	76.0	86.1	67.7	2524
Primary	15.3	94.6	77.6	88.3	70.5	6816
Secondary+	26.5	95.0	78.7	91.5	75.7	4290
Non-standard	(11.7)	(96.1)	(71.7)	(95.5)	(63.6)	36
Wealth index quintiles						
Poorest	8.4	94.3	76.5	85.1	66.1	3459
Second	12.3	94.3	76.1	88.8	69.0	3143
Middle	17.5	95.3	76.9	89.7	71.8	2702
Fourth	25.2	94.5	80.0	89.6	75.5	2434
Richest	35.2	95.2	79.9	94.1	80.5	1930
Total	17.9	94.7	77.6	89.0	71.6	13669

¹ MICS indicator 6.6

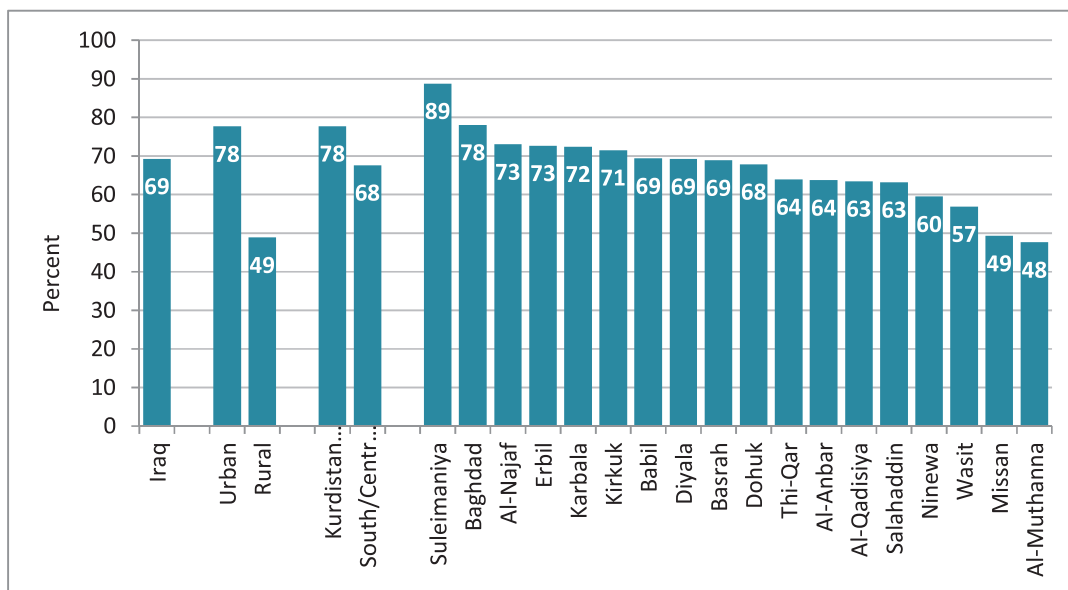
() Figures that are based on 25-49 unweighted cases

10. Literacy and Education

10.1. Literacy among Young Women

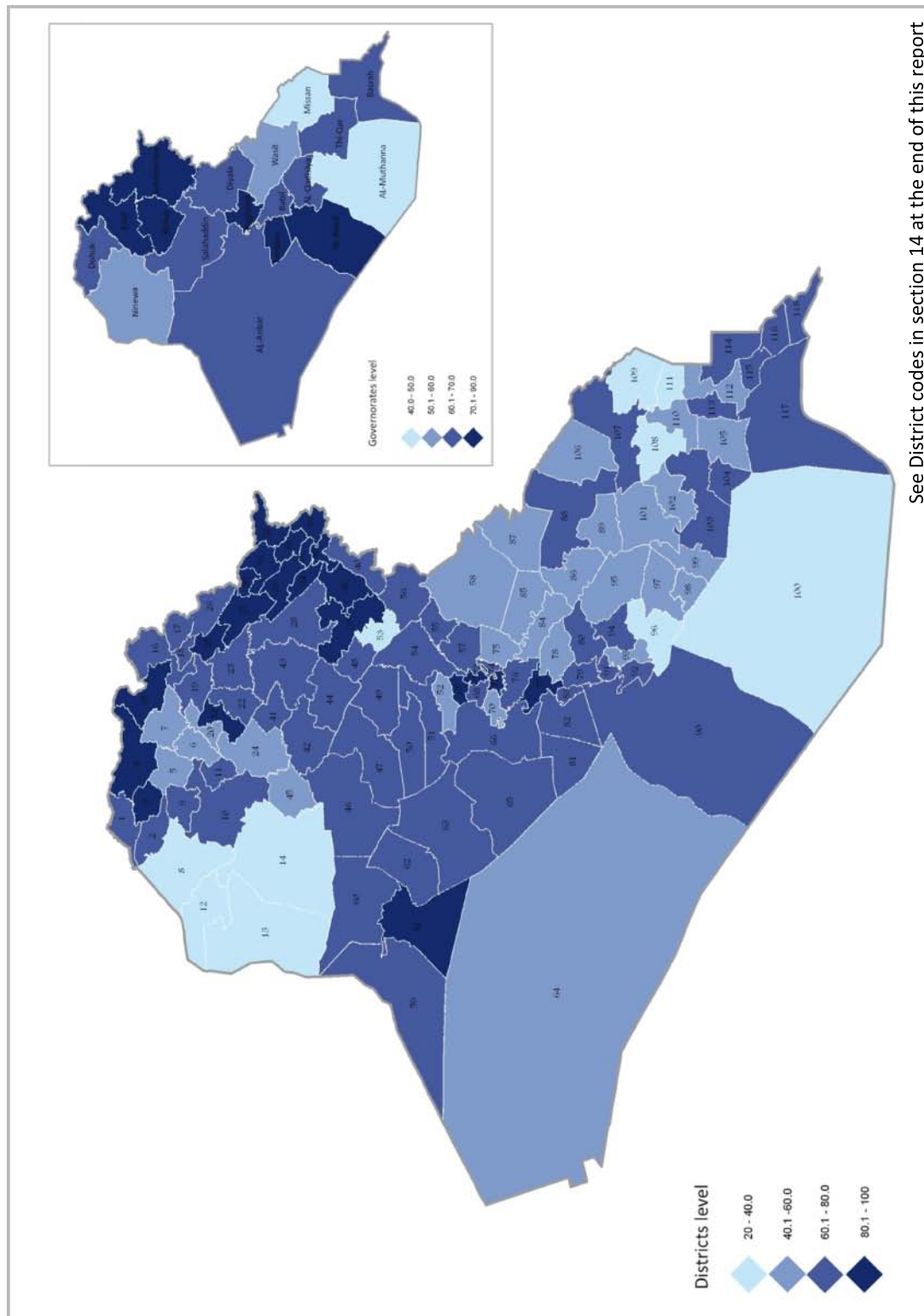
One of the World Fit for Children goals is to assure adult literacy. Adult literacy is also an MDG indicator, relating to both men and women. In MICS, since only a women's questionnaire was administered, the results are based on females aged 15-24 years (Table ED.1) and on females 15-49 years (Table ED.1b). Literacy was assessed on the ability of women to read a short simple statement or based on school attendance. Table ED.1 indicates that 69 percent of young women in Iraq are literate and that literacy status varies greatly by place of residence (Urban, 78 percent; Rural, 49 percent). Of women who stated that primary school was their highest level of education, just 54 percent were actually able to read the statement shown to them. Results show clear differentials amongst governorates (Figure ED.1) with the least percentages in Al-Muthana and Misan (48 and 49 percent respectively) and highest percentages in Suleimaniya, Baghdad (89, 78 percent respectively) and 73 percent in Karbala and Al-Najaf governorates. The southern governorates and Ninewa, with the lowest literacy rates, as well as Baghdad, are also the ones that show the greatest variations among their districts (Map ED.1). Literacy among young women is positively associated with the wealth index with literacy rates only 36 percent for women living in the poorest households compared to 92 percent for those living in the richest ones.

Figure ED.1: Literacy among young women 15-24 years, Iraq, 2011



The literacy rate and patterns of literacy among women 15-49 years (Table ED.1b) are very similar to those for young women 15-24 years, with the exception of Kurdistan region, where the literacy rate for older women (59 percent) is below the literacy in south/centre Iraq (67 percent), while in Table ED.1 it is observed that Kurdish young women have a literacy rate of 78 percent.

Map ED.1: Percentage of literacy among young women 15-24 years, Iraq, 2011



See District codes in section 14 at the end of this report

Table ED.1: Literacy among young women

Percentage of women age 15-24 years who are literate, Iraq, 2011

	Percentage literate [1]	Percentage not known	Number of women age 15-24 years
Governorates			
Dohuk	67.8	0.9	941
Ninewa	59.5	0.1	2066
Suleimaniya	88.8	0.5	1409
Kirkuk	71.5	4.2	845
Erbil	72.6	2.3	1238
Diyala	69.2	0.1	846
Al-Anbar	63.7	0.0	959
Baghdad	78.1	0.0	4273
Babil	69.4	0.0	1216
Karbala	72.5	0.0	668
Wasit	56.9	0.0	737
Salahaddin	63.2	0.0	1020
Al-Najaf	73.0	0.1	903
Al-Qadisiya	63.5	0.0	798
Al-Muthanna	47.6	0.0	495
Thi-Qar	63.9	0.0	1297
Missan	49.3	0.0	616
Basrah	68.9	0.0	1644
Region			
Kurdistan Region	77.7	1.2	3588
South/Centre Iraq	67.6	0.2	18383
Area			
Urban	77.7	0.4	15551
Rural	48.9	0.4	6421
Education			
None	2.5	0.1	3089
Primary	54.1	1.0	8145
Secondary +	100.0	0.0	10729
Non-standard curriculum	(*)	(*)	8
Age			
15-19	70.5	0.4	11875
20-24	67.7	0.3	10096
Wealth index quintiles			
Poorest	35.8	0.8	3960
Second	58.9	0.8	4046
Middle	69.8	0.3	4478
Fourth	81.9	0.1	4471
Richest	92.1	0.0	5016
Total	69.2	0.4	21971

¹ MICS indicator 7.1; MDG indicator 2.3

(*) Figures that are based on less than 25 unweighted cases

Table ED.1b: Literacy among women

Percentage of women age 15-49 years who are literate, Iraq, 2011

	Percentage literate	Percentage not known	Number of women age 15-49 years
Governorates			
Dohuk	50.5	2.3	2195
Ninewa	61.0	0.1	4774
Suleimaniya	66.2	0.8	3729
Kirkuk	68.1	2.1	2361
Erbil	55.8	2.5	3209
Diyala	71.2	0.0	2296
Al-Anbar	61.5	0.0	2380
Baghdad	76.2	0.0	11144
Babil	71.3	0.0	3096
Karbala	73.9	0.0	1769
Wasit	57.1	0.0	1845
Salahaddin	60.5	0.1	2331
Al-Najaf	69.9	0.1	2178
Al-Qadisiya	64.1	0.0	1912
Al-Muthanna	47.7	0.0	1140
Thi-Qar	61.2	0.0	3104
Missan	52.2	0.0	1552
Basrah	67.9	0.0	4179
Region			
Kurdistan Region	58.8	1.8	9134
South/Centre Iraq	67.1	0.1	46060
Area			
Urban	72.8	0.4	39650
Rural	47.8	0.4	15544
Education			
None	2.5	0.2	8970
Primary	55.8	0.9	22317
Secondary +	100.0	0.0	23606
Non-standard curriculum	0.0	0.0	298
Age			
15-19	70.5	0.4	11875
20-24	67.7	0.3	10096
25-29	62.2	0.5	8522
30-34	67.6	0.3	7709
35-39	67.1	0.5	7078
40-44	64.0	0.4	5777
45-49	51.2	0.3	4136
Wealth index quintiles			
Poorest	35.5	0.7	10078
Second	54.6	0.7	10592
Middle	66.0	0.3	11152
Fourth	77.8	0.3	11363
Richest	89.5	0.1	12009
Total	65.8	0.4	55194

10.2. School Readiness

Attendance to pre-school education in an organised learning or child education programme is important for the readiness of children to attend school. Table ED.2 shows the proportion of children in the first grade of primary school who attended pre-school the previous year.

Table ED.2: School readiness

Percentage of children attending first grade of primary school who attended pre-school the previous year, Iraq, 2011

	Percentage of children attending first grade who attended preschool in previous year [1]	Number of children attending first grade of primary school
Sex		
Male	4.9	3778
Female	6.1	3267
Governorates		
Dohuk	11.6	234
Ninewa	2.4	731
Suleimaniya	18.9	367
Kirkuk	0.5	215
Erbil	34.2	364
Diyala	8.3	300
Al-Anbar	3.4	320
Baghdad	3.6	1320
Babil	1.6	445
Karbala	0.9	195
Wasit	3.2	303
Salahaddin	2.5	318
Al-Najaf	4.9	275
Al-Qadisiya	3.0	252
Al-Muthanna	0.0	144
Thi-Qar	1.1	458
Missan	0.1	229
Basrah	1.5	577
Region		
Kurdistan Region	22.9	965
South/Centre Iraq	2.7	6081
Area		
Urban	7.6	4601
Rural	1.3	2445
Education		
None	5.1	1320
Primary	3.8	3558
Secondary +	8.5	2110
Non-standard curriculum	0.0	52
Wealth index quintiles		
Poorest	2.7	1782
Second	4.6	1660
Middle	5.1	1420
Fourth	6.4	1246
Richest	11.3	937
Total	5.4	7046

¹ MICS indicator 7.2

Overall, five percent of children who are currently attending the first grade of primary school were attending pre-school the previous year. No notable gender differentials exist; females (6percent) and males (5 percent). There are large differences at the governorate level; first graders in Erbil, Sulaimania and Duhuk governorates had the highest percentages of pre-school attendance in the country (34, 19 and 12 percent respectively), while those in Al-Muthanna, Kirkuk, Karbala and Misan had less than one percent attendance. Socioeconomic status appears to have a positive correlation with school readiness – while the indicator is only three percent among the poorest households, it increases to 11 percent among those children living in the richest households. There was no clear trend in pre-school attendance with mothers' education (no education, 5 percent; primary, 4 percent; secondary or higher, 98 percent) though; urban children were much likelier to be ready for school.

10.3. Primary and Secondary School Participation

Universal access to basic education and the achievement of primary education by the world's children is one of the most important goals of the Millennium Development Goals and A World Fit for Children. Education is a vital prerequisite for combating poverty, empowering women, protecting children from hazardous and exploitative labour and sexual exploitation, promoting human rights and democracy, protecting the environment, and influencing population growth.

The indicators for primary and secondary school attendance include:

- Net intake rate in primary education
- Primary school net attendance ratio (adjusted)
- Secondary school net attendance ratio (adjusted)
- Female to male education ratio (or gender parity index - GPI) in primary and secondary school

The indicators of school progression include:

- Children reaching last grade of primary
- Primary completion rate
- Transition rate to secondary school

Of children who are of primary school entry age 6 in Iraq, 84 percent are attending the first grade of primary school (Table ED.3). Differences are noted at the governorate level and by area of residence. Attendance is highest in Suleimaniya (97 percent), Kirkuk (92 percent), and Dohuk (90 percent) compared with the lowest percentage in Missan (65 percent). Children's participation in primary school is higher in urban areas than in rural areas. A positive correlation with mother's education and socioeconomic status is observed; for children age 6 whose mothers have at least secondary school education, 89 percent were attending the first grade, compared to 72 percent for children whose mothers have no education. In rich households, the proportion is around 91 percent, while it is 73 percent among children living in the poorest households.

Table ED.3: Primary school entry

Percentage of children of primary school entry age entering grade 1 (net intake rate), Iraq, 2011

	Percentage of children of primary school entry age entering grade 1 [1]	Number of children of primary school entry age
Sex		
Male	85.6	3194
Female	83.1	2960
Governorates		
Dohuk	90.4	241
Ninewa	88.5	535
Suleimaniya	97.3	333
Kirkuk	91.9	195
Erbil	88.6	362
Diyala	89.4	254
Al-Anbar	78.9	273
Baghdad	83.9	1166
Babil	85.3	359
Karbala	78.7	189
Wasit	79.9	255
Salahaddin	79.1	276
Al-Najaf	83.9	261
Al-Qadisiya	82.7	258
Al-Muthanna	79.0	155
Thi-Qar	80.4	377
Missan	65.4	226
Basrah	85.8	441
Region		
Kurdistan Region	92.2	936
South/Centre Iraq	83.0	5219
Area		
Urban	87.6	4009
Rural	78.5	2146
Education		
None	71.8	1217
Primary	86.5	3003
Secondary +	89.4	1894
Non-standard curriculum	(80.8)	41
Wealth index quintiles		
Poorest	72.6	1547
Second	85.4	1442
Middle	87.3	1179
Fourth	91.7	1094
Richest	90.7	892
Total	84.4	6154
¹ MICS indicator 7.3		

Table ED.4 provides the percentage of children of primary school ages 6 to 11 years who are attending primary or secondary school. The majority of children of primary school age are attending school (90 percent). However, 10 percent of the children are out of school when they are expected to be participating in school. Mothers' education is positively associated

with primary or secondary school attendance of children of primary school age, increasing from 81 percent for mothers with no education to 97 for mothers with primary education and to 97 for those who have secondary or higher education. In urban areas 94 percent of children attend school while in rural areas attendance is only 84 percent. Differentials exist in primary net attendance ratio among governorates ranging from 98 percent in Suleimaniya governorate to 76 percent in Missan. The primary net attendance ratio is also higher for boys (93 percent) than for girls (87 percent).

The secondary school net attendance ratio is presented in Table ED.5. Only about half of the children of secondary school age are attending secondary school (49 percent). Of the remaining half some of them are either out of school or attending primary school (see Figure ED.2); one in seven (14 percent) of the children of secondary school age are attending primary school when they should be attending secondary school while the remaining 38 percent are not attending school at all. It is worth noting that the secondary net attendance ratio for females (45 percent) is lower than for males (52 percent). The results show clear association between mothers' education and household wealth on secondary school net attendance ratio. This ratio is 38 percent for children with uneducated mothers and increases to 73 percent for children whose mother's education is secondary or higher. Moreover, secondary school net attendance ratio increased from 25 percent at the poorest households to 75 percent at the richest household.

The percentage of children entering first grade who eventually reach the last grade of primary school is presented in Table ED.6. Of all children starting grade one, the majority of them (96 percent) will eventually reach the last grade. Notice that this number includes children that repeat grades and that eventually move up to reach the final grade. There are no large differences in this indicator by wealth index, mother's education and governorates.

Figure ED.2: Secondary school age children attending secondary (NAR), primary, and out of school, Iraq, 2011

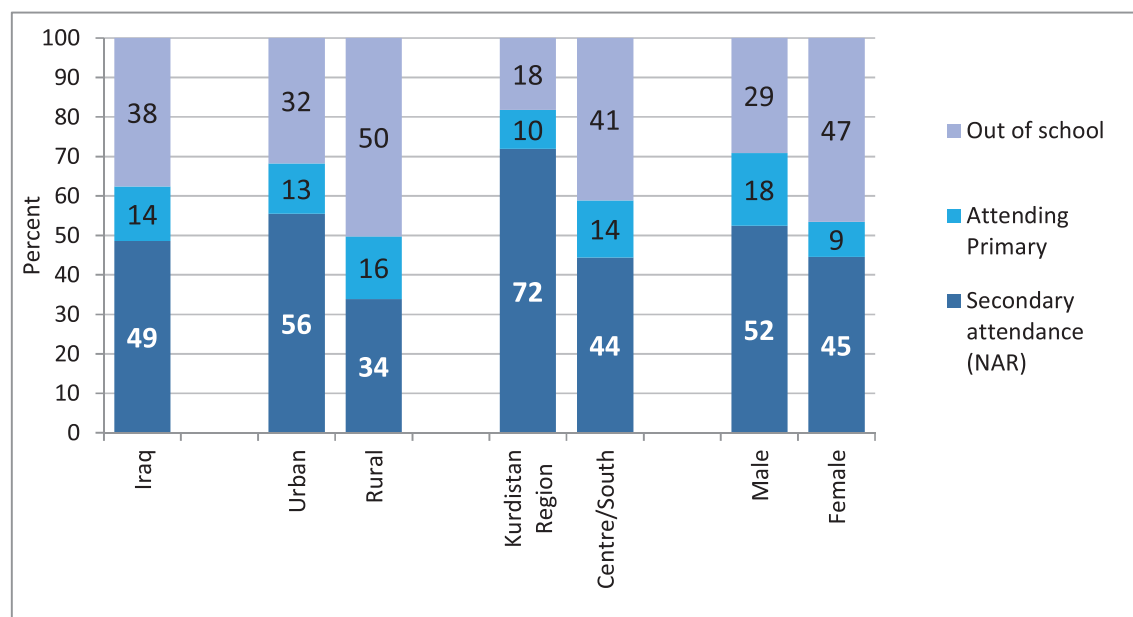


Table ED.4: Primary school attendance

Percentage of children of primary school age attending primary or secondary school (adjusted net attendance ratio), Iraq, 2011

	Male		Female		Total	
	Net attendance ratio (adjusted)	Number of children	Net attendance ratio (adjusted)	Number of children	Net attendance ratio (adjusted) [1]	Number of children
Governorates						
Dohuk	95.8	757	93.5	707	94.7	1463
Ninewa	95.9	1687	86.7	1506	91.5	3193
Suleimaniya	98.5	970	97.9	897	98.2	1867
Kirkuk	96.4	638	93.1	550	94.8	1188
Erbil	95.4	1056	93.9	994	94.7	2051
Diyala	94.2	745	90.3	709	92.3	1454
Al-Anbar	90.8	874	85.1	779	88.1	1653
Baghdad	93.0	3521	91.1	3218	92.1	6739
Babil	90.8	1076	86.3	1040	88.6	2116
Karbala	91.5	578	85.9	563	88.7	1141
Wasit	90.2	744	76.2	638	83.7	1382
Salahaddin	90.0	813	82.0	754	86.2	1567
Al-Najaf	92.5	727	88.2	753	90.3	1480
Al-Qadisiya	90.3	642	82.9	655	86.6	1298
Al-Muthanna	93.0	406	78.8	409	85.9	815
Thi-Qar	93.6	1197	83.2	1140	88.6	2336
Missan	85.6	610	66.4	633	75.8	1244
Basrah	93.9	1413	89.0	1450	91.4	2863
Region						
Kurdistan Region	96.6	2783	95.2	2597	95.9	5381
South/Centre Iraq	92.6	15672	86.0	14797	89.4	30469
Area						
Urban	95.1	12135	92.4	11499	93.8	23634
Rural	89.6	6320	77.6	5896	83.8	12216
Age at beginning of school year						
6	86.8	3194	84.5	2960	85.7	6154
7	94.0	3199	91.8	3033	92.9	6232
8	96.5	3105	91.0	2832	93.9	5937
9	95.5	3052	89.7	2895	92.7	5947
10	94.3	3143	86.1	3016	90.3	6158
11	92.2	2763	80.5	2659	86.5	5421
Mother's education						
None	86.6	4089	74.2	3919	80.5	8007
Primary	93.5	8525	88.3	7881	91.0	16406
Secondary +	97.5	5631	96.0	5394	96.8	11025
Non-standard curriculum	93.6	211	76.1	199	85.1	409
Wealth index quintiles						
Poorest	86.6	4351	70.7	4193	78.8	8544
Second	91.7	4070	88.3	3835	90.1	7905
Middle	95.5	3740	91.5	3448	93.6	7188
Fourth	96.7	3358	95.5	3213	96.1	6571
Richest	98.3	2936	97.0	2706	97.6	5642
Total	93.2	18455	87.4	17394	90.4	35849

¹ MICS indicator 7.4; MDG indicator 2.1

Table ED.5: Secondary school attendance

Percentage of children of secondary school age attending secondary school or higher (adjusted net attendance ratio) and percentage of children attending primary school, Iraq, 2011

	Male			Female			Total		
	Net attendance ratio (adjusted) [1]	Percent attending primary school	Number of children	Net attendance ratio (adjusted) [1]	Percent attending primary school	Number of children	Net attendance ratio (adjusted) [1]	Percent attending primary school	Number of children
Governorates									
Dohuk	68.9	12.8	647	62.2	6.2	577	65.7	9.7	1224
Ninewa	48.2	19.0	1422	34.0	7.1	1366	41.2	13.2	2787
Suleimaniya	77.7	11.6	954	80.5	7.0	827	79.0	9.5	1781
Kirkuk	61.4	15.5	543	50.8	3.1	522	56.2	9.4	1066
Erbil	70.2	14.0	910	67.7	6.8	852	69.0	10.5	1762
Diyala	46.9	21.0	648	44.7	9.0	620	45.8	15.1	1268
Al-Anbar	54.3	20.7	792	35.5	12.9	723	45.3	17.0	1515
Baghdad	52.6	14.7	3216	48.7	8.8	2939	50.7	11.9	6155
Babil	50.1	21.3	859	39.4	8.2	869	44.7	14.7	1728
Karbala	45.2	20.2	486	41.4	8.6	456	43.3	14.6	943
Wasit	41.1	23.7	605	32.7	9.8	558	37.1	17.1	1163
Salahaddin	50.0	19.5	700	36.9	7.8	717	43.4	13.6	1417
Al-Najaf	41.8	22.9	624	36.6	11.6	594	39.3	17.4	1218
Al-Qadisiya	50.4	17.9	571	36.6	12.0	574	43.5	15.0	1145
Al-Muthanna	41.3	29.1	334	26.5	8.8	376	33.5	18.3	710
Thi-Qar	46.8	23.7	950	37.9	12.3	1028	42.2	17.7	1978
Missan	39.4	26.0	486	23.5	9.6	497	31.4	17.7	983
Basrah	44.4	18.7	1271	42.7	9.7	1148	43.6	14.5	2419
Region									
Kurdistan Region	72.7	12.8	2510	71.0	6.7	2256	71.9	9.9	4766
South/Centre Iraq	48.7	19.4	13506	40.0	9.2	12988	44.4	14.4	26495
Area									
Urban	56.6	16.4	10895	54.4	8.9	10402	55.5	12.7	21297
Rural	43.7	22.7	5121	23.6	8.8	4842	33.9	15.9	9964
Age at beginning of school year									
12	41.3	48.8	2720	39.6	30.7	2629	40.4	39.9	5350
13	52.3	31.3	2856	50.2	13.7	2648	51.3	22.8	5503
14	58.1	17.1	2631	50.8	5.2	2459	54.6	11.3	5090
15	60.4	6.9	2677	46.5	1.2	2502	53.7	4.1	5179
16	54.3	2.4	2593	40.5	0.7	2503	47.5	1.6	5096
17	48.6	1.1	2540	40.1	0.2	2503	44.3	0.7	5043
Mother's education									
None	42.7	22.3	4243	33.1	10.5	3839	38.2	16.7	8082
Primary	46.6	24.9	5720	41.6	11.4	5154	44.2	18.5	10875
Secondary +	74.3	11.6	4007	72.4	8.6	3695	73.4	10.2	7702
Non-standard curriculum	34.4	22.9	348	31.3	13.0	280	33.0	18.5	628
Mother not in household	49.8	5.9	253	12.8	0.3	926	20.7	1.5	1179
Wealth index quintiles									
Poorest	33.1	25.6	3216	16.9	9.4	3086	25.1	17.7	6303
Second	44.2	20.4	3190	33.7	11.0	2892	39.2	15.9	6082
Middle	49.8	20.5	3303	45.5	10.1	3102	47.7	15.4	6405
Fourth	58.2	16.2	3229	55.5	8.3	3105	56.8	12.3	6335
Richest	78.2	8.7	3077	70.8	5.7	3059	74.5	7.2	6136
Total	52.5	18.4	16016	44.6	8.9	15244	48.6	13.7	31261

¹ MICS indicator 7.5

The primary school completion rate and transition rate to secondary education are presented in Table ED.7. The (gross) primary completion rate is the ratio of the total number of students, regardless of age, entering the last grade of primary school for the first time, to the number of children of the primary graduation age at the beginning of the current (or most recent) school year. At the time of the survey, the primary school completion rate was 84 percent. Large differences were observed on the primary completion rate by governorates with the lowest rates found in Wasit (62 percent) and Missan (63 percent) and the highest rates in Erbil and Suleimaniya (110 percent), and Al-Najaf and Dohuk (91 percent). The distribution of net primary completion rate at the district level (Map ED.2) shows that besides Wasit, Missan and Thi-Qar, there are also several other areas with very low performance, especially districts in Ninewa, Al-Anbar and Karbala.

The primary completion rate was lower in households of the first quintiles of the wealth index (58 percent) compared to the fifth quintile (107 percent). The primary completion rate was 68 percent for children of uneducated mothers compared to 98 percent for those whose mothers have secondary or higher education.

The net primary completion rate is calculated as the number of children of primary school completion age (11) who are completing the final grade of primary education, 6th grade, as a percentage of the number of children primary school age. In other words, the net primary completion rate indicates the percentage of children who are on track to complete primary school in time, i.e. when they are 11 years old. The net completion rate is 44 percent, with a minor difference between boys and girls (43 and 46 percent respectively). There is a higher net completion rate among children in urban areas (50 percent) than in rural ones (33 percent), and also in Kurdistan Region Governorates compared to the South/Centre ones: 65 percent versus 41 percent. As mother's education and wealth increase, the net completion also increases markedly. The variation among governorates is also remarkable: from 26 to 30 percent in Missan, Thi-qar, and Wasit, to 62 percent in Duhok or 70 percent in Suleimaniya.

Table ED.6: Children reaching last grade of primary school

Percentage of children entering first grade of primary school who eventually reach the last grade of primary school (Survival rate to last grade of primary school), Iraq, 2011

	Percent attending grade 1 last school year who are in grade 2 this school year	Percent attending grade 2 last school year who are attending grade 3 this school year	Percent attending grade 3 last school year who are attending grade 4 this school year	Percent attending grade 4 last school year who are attending grade 5 this school year	Percent attending grade 5 last school year who are attending grade 6 this school year	Percent who reach grade 6 of those who enter grade 1 [1]
Sex						
Male	99.6	99.8	99.7	99.0	98.9	96.9
Female	98.7	99.6	99.3	98.2	97.8	93.7
Governorates						
Dohuk	99.3	99.4	99.9	98.4	98.0	95.1
Ninewa	100.0	99.8	100.0	97.8	96.8	94.4
Suleimaniya	99.8	99.7	99.8	99.4	98.0	96.8
Kirkuk	99.1	99.8	98.3	96.2	98.5	92.0
Erbil	98.7	99.7	99.3	99.0	98.2	95.0
Diyala	100.0	99.3	98.5	98.9	96.7	93.4
Al-Anbar	99.2	99.5	99.4	99.5	99.8	97.4
Baghdad	99.0	100.0	100.0	99.4	98.3	96.8
Babil	98.1	99.7	99.0	98.7	99.2	94.8
Karbala	99.4	100.0	99.6	97.2	100.0	96.2
Wasit	98.4	100.0	99.7	98.4	99.6	96.2
Salahaddin	99.5	99.7	99.1	98.1	98.8	95.3
Al-Najaf	96.9	99.7	98.4	99.0	98.9	93.1
Al-Qadisiya	100.0	99.1	100.0	98.9	100.0	98.0
Al-Muthanna	99.8	100.0	99.6	98.4	99.4	97.4
Thi-Qar	99.0	99.9	99.2	98.5	97.3	94.0
Missan	99.3	99.5	99.8	99.9	99.8	98.4
Basrah	99.5	99.2	99.7	97.3	98.7	94.5
Region						
Kurdistan Region	99.2	99.6	99.6	99.0	98.1	95.7
South/Centre Iraq	99.1	99.7	99.5	98.5	98.5	95.4
Area						
Urban	99.2	99.8	99.6	98.6	98.9	96.2
Rural	99.0	99.5	99.4	98.6	97.3	93.8
Mother's education						
None	98.7	99.3	99.6	98.9	96.6	93.2
Primary	99.0	99.8	99.4	99.0	98.5	95.7
Secondary +	99.7	99.9	99.8	98.2	99.5	97.2
Non-standard curriculum	96.4	99.1	95.8	97.5	97.1	86.6
Mother not in household	100.0	.	100.0	61.6	83.8	.
Wealth index quintiles						
Poorest	98.9	99.4	99.1	98.1	97.1	92.8
Second	98.8	99.6	99.5	98.2	98.6	94.8
Middle	99.1	100.0	99.2	99.0	98.0	95.3
Fourth	99.3	99.7	99.9	98.6	98.4	95.9
Richest	99.9	100.0	100.0	99.1	99.8	98.9
Total	99.1	99.7	99.5	98.6	98.4	95.5

¹ MICS indicator 7.6; MDG indicator 2.2

Table ED.7: Primary school completion and transition to secondary school

Primary school completion rates and transition rate to secondary school, Iraq, 2011

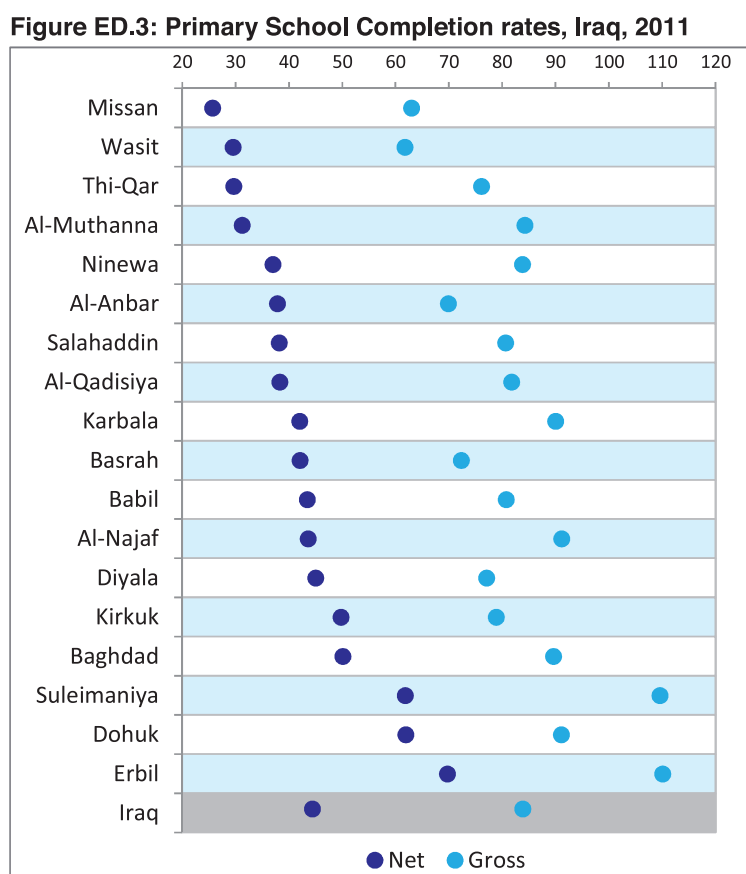
	Net Primary school completion rate	Gross Primary school completion rate [1]	Number of children of primary school completion age	Transition rate to secondar y school [2]	Number of children who were in the last grade of primary school the previous year	Transition rate Intermediate (grade 3) to Secondary (grade 4)	Number of children who were in the last grade of intermediate school the previous year
Sex							
Male	43.0	92.6	2763	87.2	2536	76.1	1638
Female	45.9	74.8	2659	90.8	1788	86.1	1268
Governorates							
Dohuk	61.9	91.1	226	88.0	267	81.5	160
Ninewa	37.0	83.8	457	90.2	358	72.5	208
Suleimaniya	61.8	109.6	269	90.5	344	77.2	327
Kirkuk	49.8	78.9	189	84.7	170	86.3	137
Erbil	69.7	110.1	308	94.2	369	89.8	233
Diyala	45.0	77.1	228	77.3	181	67.9	112
Al-Anbar	37.8	69.9	268	90.9	188	79.8	119
Baghdad	50.1	89.6	1040	90.0	802	83.9	621
Babil	43.4	80.7	337	90.2	212	82.4	143
Karbala	42.0	90.0	140	89.3	130	79.3	64
Wasit	29.5	61.8	227	87.2	116	78.9	60
Salahaddin	38.2	80.6	243	85.9	162	73.6	113
Al-Najaf	43.6	91.1	216	92.3	159	74.7	90
Al-Qadisiya	38.3	81.7	180	92.6	145	76.8	86
Al-Muthanna	31.2	84.2	117	95.5	69	(87.3)	41
Thi-Qar	29.7	76.1	372	76.5	232	82.2	153
Missan	25.7	63.0	192	89.3	110	75.0	53
Basrah	42.1	72.3	412	87.5	311	80.9	184
Region							
Kurdistan Region	64.9	104.6	803	91.2	979	82.2	720
South/Centre Iraq	40.8	80.3	4618	87.9	3345	79.9	2185
Area							
Urban	50.2	91.1	3556	90.0	3167	81.4	2311
Rural	33.4	70.1	1865	85.1	1157	76.8	595
Mother's education							
None	29.7	67.7	1411	87.1	1015	81.5	440
Primary	37.6	81.8	2287	87.7	1710	83.3	575
Secondary +	67.8	98.1	1631	92.4	1423	83.7	1022
Non-standard curriculum	24.5	77.6	93	81.5	66	(89.5)	29
Cannot be determined	-	-	-	(68.8)	31	70.4	63
Wealth index quintiles							
Poorest	23.8	58.3	1296	83.2	641	75.6	214
Second	35.6	75.4	1145	85.8	829	82.0	418
Middle	43.8	88.9	1099	90.4	961	78.8	602
Fourth	60.1	101.1	1022	88.6	1002	79.0	726
Richest	69.3	106.7	859	93.6	892	83.0	947
Total	44.4	83.9	5421	88.7	4325	80.4	2905

¹ MICS indicator 7.7² MICS indicator 7.8

() Figures that are based on 25-49 unweighted cases

(*) Figures that are based on less than 25 unweighted cases

The comparison between the gross and the net primary completion rate, 84 percent and 44 percent respectively, (Figure ED.3) indicates the presence of children who are over 11 years old at the time of the survey at the 6th grade, or of children who initiated primary school later than required.



About 89 percent of the children that completed successfully the last grade of primary school were found at the time the survey to be attending the first grade of secondary school. The transition rate for females (91 percent) was slightly higher than for males (87 percent). The transition rate increased from 88 percent for children whose mothers have primary education to 92 percent for children whose mothers have secondary or higher education.

The ratio of girls to boys attending primary and secondary education is provided in Table ED.8. These ratios are better known as the Gender Parity Index (GPI). Notice that the ratios included here are obtained from net attendance ratios rather than gross attendance ratios. The last ratios provide an erroneous description of the GPI mainly because in most of the cases the majority of over-aged children attending primary education are boys. The table shows that gender parity for primary school is 0.94, indicating that less girls attend primary school than boys. The indicator is even lower for secondary education which is 0.85. The disadvantage of girls is clearly pronounced for background characteristics, like governorates, mothers' education or wealth index.

Table ED.8: Education gender parity

Ratio of adjusted net attendance ratios of girls to boys, in primary and secondary school, Iraq, 2011

	Primary school adjusted net attendance ratio (NAR), girls	Primary school adjusted net attendance ratio (NAR), boys	Gender parity index (GPI) for primary school adjusted NAR [1]	Secondary school adjusted net attendance ratio (NAR), girls	Secondary school adjusted net attendance ratio (NAR), boys	Gender parity index (GPI) for secondary school adjusted NAR [2]
Governorates						
Dohuk	93.5	95.8	0.98	62.2	68.9	0.90
Ninewa	86.7	95.9	0.90	34.0	48.2	0.70
Suleimaniya	97.9	98.5	0.99	80.5	77.7	1.04
Kirkuk	93.1	96.4	0.97	50.8	61.4	0.83
Erbil	93.9	95.4	0.98	67.7	70.2	0.96
Diyala	90.3	94.2	0.96	44.7	46.9	0.95
Al-Anbar	85.1	90.8	0.94	35.5	54.3	0.65
Baghdad	91.1	93.0	0.98	48.7	52.6	0.93
Babil	86.3	90.8	0.95	39.4	50.1	0.79
Karbala	85.9	91.5	0.94	41.4	45.2	0.92
Wasit	76.2	90.2	0.84	32.7	41.1	0.80
Salahaddin	82.0	90.0	0.91	36.9	50.0	0.74
Al-Najaf	88.2	92.5	0.95	36.6	41.8	0.88
Al-Qadisiya	82.9	90.3	0.92	36.6	50.4	0.73
Al-Muthanna	78.8	93.0	0.85	26.5	41.3	0.64
Thi-Qar	83.2	93.6	0.89	37.9	46.8	0.81
Missan	66.4	85.6	0.78	23.5	39.4	0.60
Basrah	89.0	93.9	0.95	42.7	44.4	0.96
Region						
Kurdistan Region	95.2	96.6	0.99	71.0	72.7	0.98
South/Centre Iraq	86.0	92.6	0.93	40.0	48.7	0.82
Area						
Urban	92.4	95.1	0.97	54.4	56.6	0.96
Rural	77.6	89.6	0.87	23.6	43.7	0.54
Mother's education						
None	74.2	86.6	0.86	33.1	42.7	0.78
Primary	88.3	93.5	0.94	41.6	46.6	0.89
Secondary +	96.0	97.5	0.98	72.4	74.3	0.97
Non-standard curriculum	76.1	93.6	0.81	31.3	34.4	0.91
Wealth index quintiles						
Poorest	70.7	86.6	0.82	16.9	33.1	0.51
Second	88.3	91.7	0.96	33.7	44.2	0.76
Middle	91.5	95.5	0.96	45.5	49.8	0.91
Fourth	95.5	96.7	0.99	55.5	58.2	0.95
Richest	97.0	98.3	0.99	70.8	78.2	0.91
Total	87.4	93.2	0.94	44.6	52.5	0.85

¹ MICS indicator 7.9; MDG indicator 3.1² MICS indicator 7.10; MDG indicator 3.1

The Table ED.9 shows that the highest differences in school attendance between boys and girls occur in rural areas; there is a surge of those differences at the age of 12 years old, when children are expected to initiate secondary school.

Table ED.9: School attendance

Percentage of household members' age 5-24 years attending school, by residence and sex. Iraq, 2011

		Urban				Rural			
		Male		Female		Male		Female	
		Percentage attending	Number of household members	Percentage attending	Number of household members	Percentage attending	Number of household members	Percentage attending	Number of household members
Age at beginning of school year	5	35.9	2394	37.0	2202	25.8	1154	23.0	1174
	6	90.2	2051	88.8	1957	81.2	1143	76.4	1003
	7	95.2	2118	95.4	1987	91.7	1080	84.9	1046
	8	97.8	2090	95.3	1856	93.7	1014	82.9	977
	9	96.2	2026	94.9	1921	94.0	1026	79.5	975
	10	97.2	2063	92.0	2008	88.8	1080	74.4	1008
	11	93.6	1786	87.1	1771	88.6	977	64.4	888
	12	91.0	1841	80.6	1727	88.2	880	50.5	903
	13	84.9	1940	76.3	1773	80.5	916	38.8	874
	14	76.6	1771	68.0	1673	72.4	859	30.6	787
	15	70.9	1828	56.9	1685	59.4	849	28.8	817
	16	59.0	1804	50.2	1759	51.5	788	19.7	744
	17	52.3	1710	47.5	1786	42.2	830	20.3	717
	18	50.8	1600	44.7	1497	41.6	730	14.8	647
	19	40.9	1836	36.4	1663	33.4	780	11.5	655
	20	35.9	1788	32.2	1674	25.0	748	12.0	670
	21	31.4	1648	28.4	1505	22.2	576	7.4	554
	22	21.3	1583	17.8	1415	16.3	552	3.1	530
	23	16.0	1359	14.1	1290	12.8	517	4.7	455
	24	5.0	1424	2.7	1369	3.8	582	0.3	555

11. Child Protection

11.1. Birth Registration

The International Convention on the Rights of the Child states that every child has the right to a name and a nationality and the right to protection from being deprived of his or her identity. Birth registration is a fundamental means of securing these rights for children. The World Fit for Children states the goal to develop systems to ensure the registration of every child at or shortly after birth, and fulfil his or her right to acquire a name and a nationality, in accordance with national laws and relevant international instruments. The indicator is the percentage of children under-5 years of age whose birth is registered.

The births of almost all children under-five years in Iraq have been registered (99 percent) (Table CP.1). There are no significant variations in birth registration across sex, age, governorates, region, area, mother's education, or wealth status of households. However among children who were not registered, one third of their mothers/caretakers did not know how to register a birth.

11.2. Child Labour

Article 32 of the Convention on the Rights of the Child states: "States Parties recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development..." The World Fit for Children mentions nine strategies to combat child labour and the MDGs call for the protection of children against exploitation. In the MICS questionnaire, a number of questions addressed the issue of child labour, that is, children 5-14 years of age involved in labour activities. A child is considered to be involved in child labour activities at the moment of the survey if during the week preceding the survey:

- Ages 5-11: at least one hour of economic work or 28 hours of domestic work per week.
- Ages 12-14: at least 14 hours of economic work or 28 hours of domestic work per week.

This definition allows differentiation between child labour and child work to identify the type of work that should be eliminated. As such, the estimate provided here is a minimum of the prevalence of child labour since some children may be involved in hazardous labour activities for a number of hours that could be less than the numbers specified in the criteria explained above. Table CP.2 presents the results of child labour by the type of work. Percentages do not add up to the total child labour as children may be involved in more than one type of work.

Table CP.1: Birth registration

Percentage of children under age 5 by whether birth is registered and percentage of children not registered whose mothers/caretakers know how to register birth, Iraq, 2011

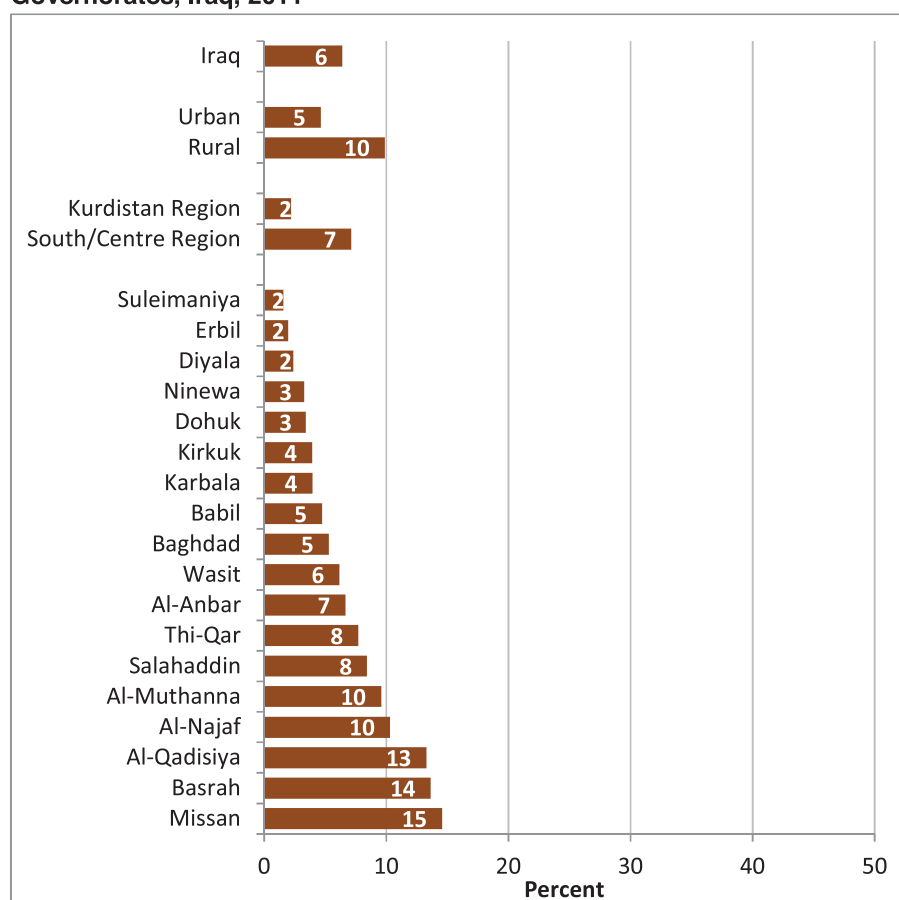
	Children under age 5 whose birth is registered with civil authorities				Children under age 5 whose birth is not registered		
	Has birth certificate			Total registered [1]	Number of children	Percent of children whose mother/caretaker knows how to register birth	Number of children without birth registration
	Seen	Not seen	No birth certificate				
Sex							
Male	86.3	11.0	2.1	99.4	18638	59.5	109
Female	86.2	10.7	2.2	99.0	17669	67.4	171
Governorates							
Dohuk	96.1	2.8	0.8	99.8	1338	(*)	3
Ninewa	85.1	11.3	2.1	98.5	3521	76.6	52
Suleimaniya	81.5	15.4	2.7	99.6	1503	(*)	6
Kirkuk	91.8	4.1	2.9	98.9	1539	(*)	17
Erbil	74.5	24.6	0.4	99.5	1682	(*)	9
Diyala	87.7	9.8	1.8	99.3	1417	(*)	10
Al-Anbar	90.8	7.7	1.3	99.8	1638	(*)	4
Baghdad	75.4	20.2	4.2	99.8	6588	(*)	15
Babil	94.1	3.7	1.4	99.1	2219	(*)	19
Karbala	88.6	7.7	1.8	98.1	1234	(*)	23
Wasit	90.0	6.2	2.0	98.1	1295	(*)	24
Salahaddin	76.4	19.9	2.1	98.3	1722	(74.4)	28
Al-Najaf	86.2	11.3	2.0	99.6	1529	(*)	6
Al-Qadisiya	94.1	4.1	1.3	99.6	1392	(*)	6
Al-Muthanna	90.9	5.9	1.8	98.7	914	(*)	12
Thi-Qar	92.3	6.4	0.9	99.6	2270	(*)	9
Missan	94.9	2.5	1.4	98.8	1310	(*)	15
Basrah	93.3	4.0	2.1	99.3	3196	(*)	21
Region							
Kurdistan Region	83.2	15.1	1.3	99.6	4524	(*)	18
South/Centre Iraq	86.7	10.2	2.3	99.2	31783	64.3	261
Area							
Urban	86.3	10.8	2.3	99.4	24149	68.2	146
Rural	86.1	10.9	1.9	98.9	12158	60.1	134
Age							
0-11 months	80.0	12.1	5.9	97.9	7675	68.9	159
12-23 months	86.9	10.8	1.7	99.3	7487	63.5	51
24-35 months	88.5	10.0	1.2	99.6	7476	(*)	28
36-47 months	87.4	11.2	1.1	99.7	7067	(*)	23
48-59 months	89.1	10.1	0.6	99.7	6602	(*)	18
Mother's education							
None	85.5	11.0	1.8	98.2	6473	59.5	116
Primary	87.1	10.0	2.2	99.3	18106	67.4	127
Secondary+	85.3	12.1	2.2	99.7	11667	68.4	36
Non-standard curriculum	96.1	3.1	0.0	99.1	58	(*)	1
Wealth index quintile							
Poorest	85.4	10.8	2.1	98.3	8828	57.2	152
Second	86.4	10.6	2.2	99.1	8095	67.6	72
Middle	88.5	9.7	1.6	99.7	7444	(*)	20
Fourth	84.9	11.9	2.8	99.6	6548	(*)	29
Richest	86.0	11.5	2.3	99.9	5392	(*)	7
Total	86.2	10.8	2.2	99.2	36307	64.3	279

¹ MICS indicator 8.1

() Figures that are based on 25-49 unweighted cases / (*) Figures that are based on less than 25 unweighted cases

Table CP.2 presents the results of child labour by the type of work. The Iraq MICS4 survey estimates that about six percent of children aged 5-14 years are involved in child labour. There exist variations in child labour by background characteristics. Variations are more relevant across governorates with the highest number of children involved in child labour residing in Missan governorate (15 percent), dropping to two percent in Nineveh governorate (Figure CP.1). Results show that child labour among children born to uneducated mothers is 9 percent, decreasing to five percent for children whose mothers have completed secondary education.

Figure CP.1: Children age 5 - 14 years involved in child labor by Governorates, Iraq, 2011



Two percent of these children age 12-14 participate in unpaid work for someone other than a household member, an equal percentage of children do household chores for 28 hours or more per week, while a higher percentage of children work for family business (12 percent). By type of area, a higher percentage of children age 5-14 work in the rural areas (10 percent) compared to the urban areas (5 percent).

Table CP.2: Child labour

Percentage of children by involvement in economic activity and household chores during the past week, according to age groups, and percentage of children age 5-14 involved in child labour, Iraq , 2011

	Percentage of children age 5-11 involved in							Number of children age 5-11
	Economic activity			Economic activity for at least one hour	Household chores less than 28 hours	Household chores for 28 hours or more	Child labour	
	Paid work	Unpaid work	Working for family business					
Sex								
Male	0.3	1.6	5.6	6.8	21.2	0.1	6.8	22425
Female	0.2	1.0	3.8	4.8	31.6	0.3	5.1	21128
Governorates								
Dohuk	0.0	0.2	2.2	2.5	22.9	0.1	2.5	1736
Ninewa	0.1	0.2	1.5	1.8	24.6	0.3	2.1	3910
Suleimaniya	0.1	0.2	1.1	1.3	13.4	0.0	1.3	2203
Kirkuk	0.7	0.3	2.2	2.7	54.7	0.0	2.7	1505
Erbil	0.3	0.1	1.4	1.9	10.0	0.0	1.9	2435
Diyala	0.2	0.3	1.0	1.4	21.3	0.1	1.6	1801
Al-Anbar	0.2	2.7	5.2	7.3	21.8	0.1	7.3	1988
Baghdad	0.2	2.3	2.6	4.8	29.3	0.0	4.8	8095
Babil	0.0	0.0	3.1	3.1	28.8	0.0	3.1	2532
Karbala	0.1	0.7	3.1	4.0	23.0	0.0	4.0	1420
Wasit	0.1	1.9	2.7	4.4	13.1	0.0	4.4	1645
Salahaddin	0.1	0.5	6.2	6.7	29.3	0.3	6.9	1932
Al-Najaf	1.5	0.5	7.4	8.7	51.8	0.1	8.7	1824
Al-Qadisiya	0.4	1.8	10.6	12.3	35.3	0.5	12.6	1594
Al-Muthanna	0.7	0.7	10.2	11.1	24.5	0.0	11.1	1002
Thi-Qar	0.1	1.1	6.8	7.7	20.6	0.2	7.8	2763
Missan	0.4	4.1	6.1	9.4	17.0	2.9	12.1	1484
Basrah	0.1	2.7	15.2	16.1	30.5	0.1	16.2	3682
Region								
Kurdistan Region	0.2	0.2	1.5	1.8	14.7	0.0	1.9	6374
South/Centre Iraq	0.3	1.5	5.3	6.5	28.3	0.2	6.7	37178
Area								
Urban	0.3	1.3	3.1	4.3	27.8	0.2	4.5	28712
Rural	0.3	1.3	7.8	8.7	23.3	0.2	8.9	14840
School attendance								
Yes	0.3	1.3	4.9	6.0	30.2	0.1	6.1	32330
No	0.3	1.3	4.1	5.3	15.0	0.3	5.6	11222
Mother's education								
None	0.3	1.9	6.6	8.0	22.9	0.4	8.3	9221
Primary	0.3	1.1	4.6	5.5	25.6	0.2	5.7	20404
Secondary+	0.2	1.2	3.5	4.6	29.6	0.1	4.7	13507
Non-standard curriculum	0.2	2.5	9.9	10.8	26.5	0.3	11.0	417
Wealth index quintile								
Poorest	0.4	1.3	8.4	9.4	22.7	0.4	9.7	10572
Second	0.3	1.4	4.9	5.9	25.5	0.2	6.1	9692
Middle	0.2	0.8	4.0	4.6	28.8	0.2	4.8	8702
Fourth	0.2	2.1	2.8	4.8	28.3	0.1	4.9	7940
Richest	0.2	0.8	1.9	2.7	27.3	0.1	2.8	6647
Total	0.3	1.3	4.7	5.8	26.3	0.2	6.0	43552

¹ MICS indicator 8.2

Table CP.2: Child labour

Percentage of children by involvement in economic activity and household chores during the past week, according to age groups, and percentage of children age 5-14 involved in child labour, Iraq , 2011

	Percentage of children age 12-14 involved in									Total child labour [1]	Number of children age 5-14 years	
	Economic activity			Economic activity less than 14 hours	Economic activity for 14 hours or more	Household chores less than 28 hours	Household chores for 28 hours or more	Child labour				
	Paid work	Unpaid work	Working for family business									
Sex												
Male	3.8	2.5	15.2	11.1	8.4	36.1	0.4	8.7	8261	7.3	30686	
Female	0.5	1.3	7.9	5.8	3.3	67.6	3.1	6.2	8002	5.4	29129	
Governorates												
Dohuk	2.7	0.3	7.6	5.1	4.4	51.8	1.3	5.7	641	3.4	2377	
Ninewa	2.4	0.5	5.5	4.4	4.0	49.1	2.5	6.5	1374	3.3	5284	
Suleimaniya	1.0	0.3	3.2	2.4	2.0	30.9	0.2	2.2	893	1.6	3097	
Kirkuk	1.4	0.9	6.4	2.5	5.5	73.6	1.8	7.3	554	3.9	2059	
Erbil	1.1	0.4	3.6	2.9	2.1	26.1	0.0	2.1	967	2.0	3402	
Diyala	1.9	0.6	4.6	3.8	3.3	49.1	1.2	4.5	666	2.4	2467	
Al-Anbar	2.0	2.7	14.6	12.1	4.7	55.3	0.5	5.0	790	6.6	2778	
Baghdad	2.9	2.6	7.3	5.6	6.2	53.4	0.2	6.4	3160	5.3	11255	
Babil	1.2	0.1	11.2	4.8	7.5	58.0	1.8	9.1	927	4.7	3459	
Karbala	2.3	1.4	10.6	9.2	3.9	50.6	0.0	3.9	446	3.9	1867	
Wasit	1.3	2.7	12.0	5.0	9.9	38.7	1.3	10.7	637	6.1	2282	
Salahaddin	0.9	1.0	17.6	8.6	10.4	58.1	2.5	12.3	744	8.4	2676	
Al-Najaf	6.6	2.0	20.4	14.3	10.5	72.2	4.5	15.0	629	10.3	2453	
Al-Qadisiya	2.4	3.5	18.8	10.2	11.8	58.9	3.8	15.0	604	13.3	2197	
Al-Muthanna	3.8	1.2	25.4	22.8	4.8	66.3	0.5	5.4	356	9.6	1358	
Thi-Qar	1.8	2.5	16.5	13.9	5.4	51.4	2.0	7.4	1054	7.7	3817	
Missan	1.5	6.2	14.1	11.4	7.8	38.1	13.4	21.0	565	14.6	2049	
Basrah	1.6	4.0	27.0	24.0	4.9	60.3	1.4	6.2	1255	13.6	4937	
Region												
Kurdistan Region	1.5	0.3	4.5	3.3	2.6	34.4	0.4	3.0	2502	2.2	8876	
South/Centre Iraq	2.3	2.2	12.9	9.4	6.4	54.7	2.0	8.3	13761	7.1	50939	
Area												
Urban	2.4	1.7	7.3	6.7	3.6	51.7	1.5	5.1	10910	4.6	39622	
Rural	1.7	2.4	20.4	12.2	10.3	51.5	2.3	12.5	5353	9.9	20193	
School attendance												
Yes	1.2	1.7	9.1	7.7	3.2	49.5	0.8	4.0	12536	5.5	44867	
No	5.5	2.6	20.0	10.9	14.7	58.8	5.0	19.3	3726	9.1	14948	
Mother's education												
None	2.7	2.5	15.1	10.4	8.1	47.0	2.0	10.0	4493	8.9	13713	
Primary	2.2	1.8	11.8	8.1	6.3	51.9	1.9	8.0	6736	6.3	27140	
Secondary+	1.6	1.4	7.4	7.0	2.7	55.5	1.3	4.0	4721	4.5	18228	
Non-standard curriculum	1.1	2.8	18.9	11.8	9.7	52.0	3.1	12.7	311	11.7	728	
Wealth index quintile												
Poorest	2.4	2.8	20.7	12.1	11.5	49.7	2.2	13.5	3557	10.7	14129	
Second	2.9	2.4	13.2	10.3	6.4	49.4	2.0	8.3	3284	6.6	12975	
Middle	2.4	1.2	10.1	7.9	4.9	55.0	2.0	6.8	3342	5.3	12043	
Fourth	1.9	2.0	7.6	6.8	3.7	52.2	1.5	5.2	3248	5.0	11188	
Richest	1.0	1.0	4.5	4.4	1.7	52.0	0.9	2.6	2832	2.7	9479	
Total	2.2	1.9	11.6	8.5	5.8	51.6	1.7	7.5	16263	6.4	59815	

¹ MICS indicator 8.2

Table CP.3: Child labour and school attendance

Percentage of children age 5-14 years involved in child labour who are attending school, and percentage of children age 5-14 years attending school who are involved in child labour, Iraq, 2011

	Percentage of children involved in child labour	Percentage of children attending school	Number of children age 5-14 years	Percentage of child labourers who are attending school [1]	Number of children age 5-14 years involved in child labour	Percentage of children attending school who are involved in child labour [2]	Number of children age 5-14 years attending school
Sex							
Male	7.3	79.0	30686	72.5	2251	6.7	24235
Female	5.4	70.8	29129	53.4	1578	4.1	20631
Governorates							
Dohuk	3.4	82.0	2377	67.8	81	2.8	1948
Ninewa	3.3	74.3	5284	53.8	172	2.4	3924
Suleimaniya	1.6	89.1	3097	(74.5)	48	1.3	2760
Kirkuk	3.9	76.7	2059	56.0	81	2.9	1580
Erbil	2.0	83.9	3402	87.5	66	2.0	2854
Diyala	2.4	75.2	2467	51.8	58	1.6	1855
Al-Anbar	6.6	73.4	2778	75.1	185	6.8	2038
Baghdad	5.3	77.0	11255	67.2	594	4.6	8668
Babil	4.7	72.9	3459	45.5	164	3.0	2522
Karbala	3.9	72.0	1867	70.9	74	3.9	1343
Wasit	6.1	68.8	2282	50.1	140	4.5	1571
Salahaddin	8.4	69.3	2676	57.4	225	7.0	1855
Al-Najaf	10.3	73.7	2453	67.5	252	9.4	1808
Al-Qadisiya	13.3	70.1	2197	58.7	292	11.1	1540
Al-Muthanna	9.6	68.2	1358	66.5	130	9.3	927
Thi-Qar	7.7	73.9	3817	74.8	294	7.8	2822
Missan	14.6	60.9	2049	44.1	299	10.5	1249
Basrah	13.6	73.0	4937	76.4	673	14.3	3602
Region							
Kurdistan Region	2.2	85.2	8876	76.2	196	2.0	7563
South/Centre Iraq	7.1	73.2	50939	64.0	3634	6.2	37304
Area							
Urban	4.6	79.1	39622	71.0	1835	4.2	31360
Rural	9.9	66.9	20193	58.8	1994	8.7	13507
Age							
5-11	6.0	74.2	43552	75.7	2610	6.1	32330
12-14	7.5	77.1	16263	40.9	1219	4.0	12536
Mother's education							
None	8.9	66.8	13713	50.4	1218	6.7	9165
Primary	6.3	73.6	27140	66.7	1700	5.7	19980
Secondary+	4.5	83.3	18228	80.9	823	4.4	15177
Non-standard curriculum	11.7	74.0	728	68.5	86	10.9	539
Wealth index quintile							
Poorest	10.7	61.9	14129	52.5	1505	9.0	8742
Second	6.6	72.8	12975	69.3	862	6.3	9448
Middle	5.3	78.3	12043	72.5	643	4.9	9425
Fourth	5.0	80.5	11188	74.7	559	4.6	9009
Richest	2.7	87.0	9479	78.7	260	2.5	8243
Total	6.4	75.0	59815	64.6	3829	5.5	44867

¹ MICS indicator 8.3

² MICS indicator 8.4

Table CP.3 presents the percentage of children age 5-14 years involved in child labour who are attending school and percentage of children age 5-14 years attending school who are involved in child labour. Among the 75 percent of the children 5-14 years of age attending school, 6 percent are also involved in child labour activities. On the other hand, out of the six percent of the children who are involved in child labour, the majority of them are also attending school (65 percent).

11.3. Child Discipline

As stated in A World Fit for Children, “children must be protected against any acts of violence ...” and the Millennium Declaration calls for the protection of children against abuse, exploitation and violence. In the Iraq MICS survey, mothers/caretakers of children age 2-14 years were asked a series of questions on the ways parents tend to use to discipline their children when they misbehave. Note that for the child discipline module, one child aged 2-14 per household was selected randomly during fieldwork. Out of these questions, the two indicators used to describe aspects of child discipline are: 1) the number of children 2-14 years that experience psychological aggression as punishment or minor physical punishment or severe physical punishment; and 2) the number of parents/caretakers of children 2-14 years of age that believe that in order to raise their children properly, they need to physically punish them.

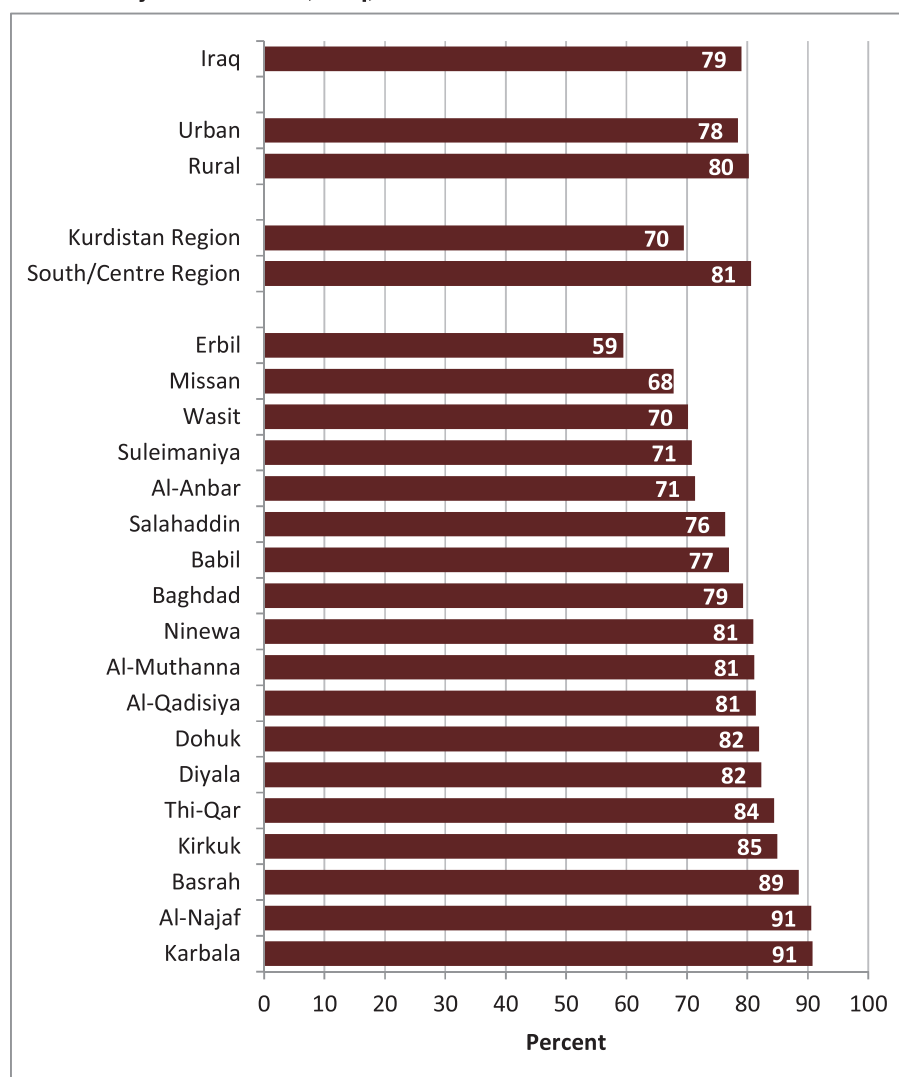
In Iraq, 79 percent of children age 2-14 years were subjected to at least one form of psychological or physical punishment by their mothers/caretakers or other household members. More importantly, 28 percent of children were subjected to severe physical punishment. Boys were subjected to either any form of physical punishment or to a severe physical form (66 and 31 percent) slightly more frequently than female children (60 and 25 percent). Generally, children aged 5-9 years, those living in rural areas and those living in the poorest households were more likely to be subjected to at least one psychological or physical punishment than their counterparts. Generally, education did not show a clear association with child discipline. The use of at least one form of psychological or physical punishment was more prevalent in the Center/South governorates (81 percent) compared to Kurdistan region (70 percent). Large variations exist among governorates: the lowest value is to be found in Erbil (59 percent) and the highest in Al-Najaf and Karbala (91 percent) (Figure CP.2). While 22 percent of parents/caretakers believe that in order to raise their children properly, he has to be physically punished, about 63 percent uses physical punishment.

Table CP.4: Child discipline

Percentage of children age 2-14 years according to method of disciplining the child, Iraq , 2011

	Percentage of children age 2-14 years who experienced:					Number of children age 2-14 years	Respondent believes that the child needs to be physically punished	Respondents to the child discipline module
	Only non-violent discipline	Psychological aggression	Physical punishment	Any	Severe			
Sex								
Male	14.1	77.0	66.3	30.6	81.1	40776	24.0	14183
Female	17.5	72.6	59.7	24.6	76.9	39232	20.3	13139
Governorates								
Dohuk	15.9	78.1	58.0	28.1	81.9	3126	21.8	958
Ninewa	11.9	76.5	62.1	29.5	81.0	7260	14.3	2355
Suleimaniya	26.4	62.1	52.6	28.4	70.8	4012	6.3	1762
Kirkuk	12.8	80.7	62.0	17.6	85.0	2880	21.3	1109
Erbil	32.2	51.3	40.0	14.9	59.5	4375	4.5	1606
Diyala	14.9	77.5	68.9	21.5	82.3	3234	30.9	1152
Al-Anbar	18.1	66.5	55.8	19.0	71.4	3685	21.9	1120
Baghdad	17.3	75.3	65.6	21.7	79.3	14853	23.4	5751
Babil	12.7	74.8	73.6	39.9	76.9	4702	23.8	1524
Karbala	7.5	85.4	79.1	41.8	90.7	2515	37.8	920
Wasit	25.4	68.2	55.7	32.6	70.2	3008	32.2	933
Salahaddin	16.0	70.5	56.3	21.6	76.3	3585	20.2	1129
Al-Najaf	7.6	89.4	69.1	48.8	90.6	3322	21.9	1114
Al-Qadisiya	14.8	76.2	70.2	35.1	81.4	2971	25.9	923
Al-Muthanna	17.1	78.2	62.9	10.2	81.1	1885	10.9	547
Thi-Qar	12.6	81.6	65.8	23.2	84.4	5077	31.6	1461
Missan	11.5	66.2	52.5	36.4	67.8	2789	31.2	792
Basrah	8.6	85.2	74.0	36.3	88.5	6729	30.9	2163
Region								
Kurdistan Region	25.7	62.3	49.3	23.2	69.5	11513	9.1	4327
South/Centre Iraq	14.1	76.9	65.4	28.4	80.6	68496	24.7	22995
Area								
Urban	16.4	74.0	61.8	26.3	78.4	52890	21.1	19526
Rural	14.5	76.4	65.5	30.3	80.2	27118	25.1	7796
Age								
2-4 years	16.4	71.2	63.3	26.5	76.4	20454	20.9	7950
5-9 years	13.4	78.1	67.4	31.2	82.1	31127	23.6	9855
10-14 years	17.8	73.9	58.1	24.6	77.6	28428	22.0	9517
Education of household head								
None	15.8	74.2	62.9	29.7	78.8	13052	24.3	4275
Primary	14.5	76.1	65.4	29.9	80.4	27885	23.6	9172
Secondary+	16.7	74.0	61.4	25.1	78.1	38437	20.5	13684
Non-standard curriculum	10.2	81.1	69.1	38.8	82.1	593	32.3	180
Respondent's education								
None	15.8	73.1	62.8	30.0	78.3	14629	23.9	4792
Primary	14.1	77.2	66.5	30.6	81.3	31201	24.0	10157
Secondary+	17.3	73.3	60.1	23.7	77.3	33426	20.0	12128
Non-standard curriculum	12.4	80.1	62.4	35.4	80.6	744	24.9	243
Wealth index quintile								
Poorest	14.6	77.1	65.0	32.9	80.6	19163	28.8	5550
Second	13.8	76.3	65.1	29.8	80.5	17644	22.8	5725
Middle	14.4	75.5	65.0	28.4	80.3	16107	22.1	5506
Fourth	15.4	74.2	63.1	24.0	79.3	14745	20.2	5390
Richest	22.4	69.1	54.7	19.8	72.8	12348	16.7	5150
Total	15.7	74.8	63.1	27.7	79.0	80008	22.2	27322
¹ MICS indicator 8.5								

Figure CP.2: Children age 2 - 14 years who experience violent disciplinning methods by Governorate, Iraq, 2011



11.4. Early Marriage and Polygamy

Marriage before the age of 18 is a reality for many young girls. According to UNICEF's worldwide estimates, over 64 million women age 20-24 were married/in union before the age of 18. Factors that influence child marriage rates include: the state of the country's civil registration system, which provides proof of age for children; the existence of an adequate legislative framework with an accompanying enforcement mechanism to address cases of child marriage; and the existence of customary or religious laws that condone the practice.

In many parts of the world parents encourage the marriage of their daughters while they are still children in hopes that the marriage will benefit them both financially and socially, while also relieving financial burdens on the family. In actual fact, child marriage is a violation of human rights, compromising the development of girls and often resulting in early pregnancy and social isolation, with little education and poor vocational training reinforcing the gendered nature of poverty. The right to 'free and full' consent to a marriage

is recognized in the Universal Declaration of Human Rights - with the recognition that consent cannot be 'free and full' when one of the parties involved is not sufficiently mature to make an informed decision about a life partner.

The Convention on the Elimination of all Forms of Discrimination against Women mentions the right to protection from child marriage in article 16, which states: "The betrothal and the marriage of a child shall have no legal effect, and all necessary action, including legislation, shall be taken to specify a minimum age for marriage..." While marriage is not considered directly in the Convention on the Rights of the Child, child marriage is linked to other rights - such as the right to express their views freely, the right to protection from all forms of abuse, and the right to be protected from harmful traditional practices - and is frequently addressed by the Committee on the Rights of the Child. Other international agreements related to child marriage are the Convention on Consent to Marriage, Minimum Age for Marriage and Registration of Marriages and the African Charter on the Rights and Welfare of the Child and the Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa. Child marriage was also identified by the Pan-African Forum against the Sexual Exploitation of Children as a type of commercial sexual exploitation of children.

Young married girls are a unique, though often invisible, group. Required to perform heavy amounts of domestic work, under pressure to demonstrate fertility, and responsible for raising children while still children themselves, married girls and child mothers face constrained decision-making and reduced life choices. Boys are also affected by child marriage but the issue impacts girls in far larger numbers and with more intensity. Cohabitation - when a couple lives together as if married - raises the same human rights concerns as marriage. Where a girl lives with a man and takes on the role of caregiver for him, the assumption is often that she has become an adult woman, even if she has not yet reached the age of 18. Additional concerns due to the informality of the relationship - for example, inheritance, citizenship and social recognition - might make girls in informal unions vulnerable in different ways than those who are in formally recognized marriages.

Research suggests that many factors interact to place a child at risk of marriage. Poverty, protection of girls, family honour and the provision of stability during unstable social periods are considered as significant factors in determining a girl's risk of becoming married while still a child. Women who married at younger ages were more likely to believe that it is sometimes acceptable for a husband to beat his wife and were more likely to experience domestic violence themselves. The age gap between partners is thought to contribute to these abusive power dynamics and to increase the risk of untimely widowhood.

Closely related to the issue of child marriage is the age at which girls become sexually active. Women who are married before the age of 18 tend to have more children than those who marry later in life. Pregnancy related deaths are known to be a leading cause of mortality for both married and unmarried girls between the ages of 15 and 19, particularly among the youngest of this cohort. There is evidence to suggest that girls who marry at young ages are more likely to marry older men which puts them at increased risk of HIV infection. Parents seek to marry off their girls to protect their honour, and men often seek younger women as wives as a means to avoid choosing a wife who might already be infected. The demand for this young wife to reproduce and the power imbalance resulting from the age differential lead to very low condom use among such couples.

Three of the indicators are to estimate the percentage of women currently married, percentage married before 15 years of age and percentage married before 18 years of age. About one in five young women age 15-19 years is currently married (21 percent). This is strongly negatively associated with the level of education where this percentage decreases from 32 percent among women with primary education to 12 percent among women with secondary or higher education. There are clear differences among young women who are currently married among the governorates where Suleimaniya, and Dohuk governorates recorded the lowest proportion (9 percent for each), whereas the highest proportions were observed in Al-Basrah (32 percent) and Al-Najaf (30 percent). Overall, it is observed that the percentage of currently married women is much less (10 percent) in Kurdistan region than in centre/south governorates (23 percent).

Six percent of women aged 15-49 years were married before age 15 while 23 percent of women aged 20-49 years were married before age 18. The percentage of women married before age 15 and age 18 were slightly higher for centre/south governorates compared to Kurdistan Region. These percentages decrease for women with more education and for those who are richer. The percentage of women in a polygamous marriage is also provided in Table CP5. Six percent of married women are currently in a polygamous marriage. The data suggests that older women are most likely to be in a polygamous marriage and that this is more prevalent in rural areas. Women's education is strongly correlated as the prevalence decreases with increasing levels of education.

Figure CP. 3: Women age 15-49 years who first married before their 15th birthday, and women age 20-49 years who first married before their 18th birthday, by age, Iraq 2011

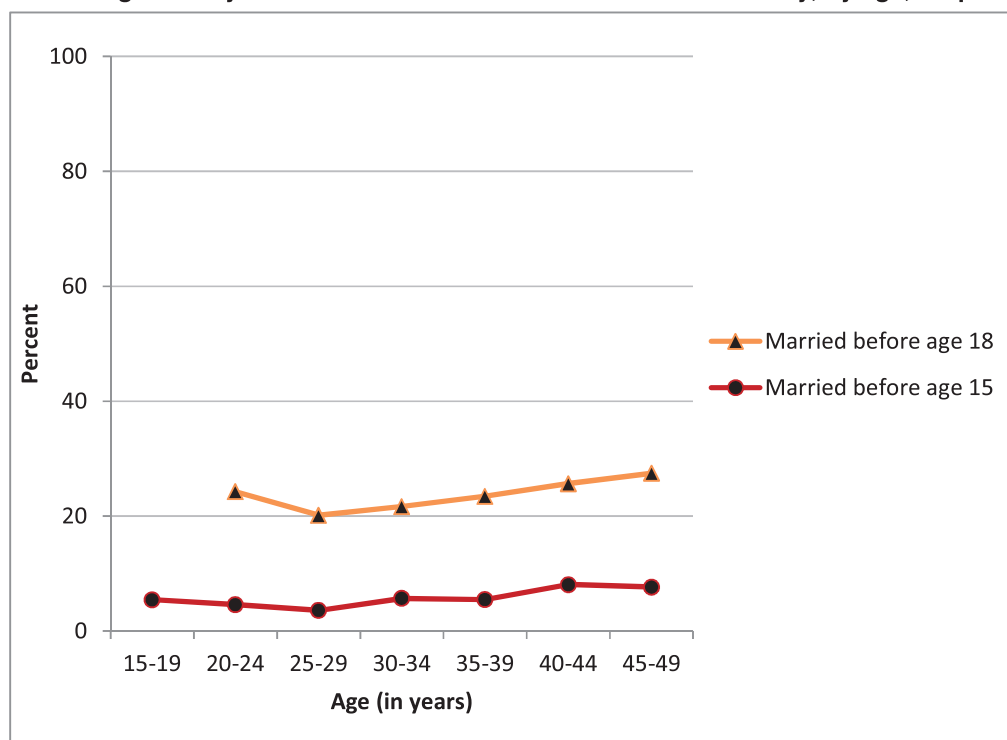


Table CP.5: Early marriage and polygamy

Percentage of women age 15-49 years who first married before their 15th birthday, percentages of women age 20-49 years who first married before their 15th and 18th birthdays, percentage of women age 15-19 years currently married, and the percentage of women currently married who are in a polygamous marriage, Iraq, 2011

	Percentage married before age 15 [1]	Number of women age 15-49 years	Percentage married before age 15	Percentage married before age 18 [2]	Number of women age 20-49 years	Percentage of women 15-19 years currently married [3]	Number of women age 15-19 years	Percentage of women age 15-49 years in polygamous marriage [4]	Number of women age 15-49 years currently married
Governorates									
Dohuk	5.2	2195	6.2	23.1	1714	9.1	482	6.5	1181
Ninewa	5.9	4774	5.4	26.2	3690	23.5	1084	4.2	3048
Suleimaniya	4.2	3729	5.0	22.4	3038	8.8	691	5.7	2034
Kirkuk	5.5	2361	4.8	20.6	1918	19.3	443	3.8	1488
Erbil	5.7	3209	6.4	22.1	2571	11.7	638	5.3	1895
Diyala	3.6	2296	3.4	20.2	1803	18.1	493	6.9	1367
Al-Anbar	4.4	2380	4.6	24.4	1828	16.8	552	9.8	1461
Baghdad	4.2	11144	4.1	19.6	8864	21.3	2279	4.9	7056
Babil	5.4	3096	5.2	21.5	2397	24.6	698	5.7	2006
Karbala	5.6	1769	5.7	26.3	1395	23.7	374	6.5	1183
Wasit	5.5	1845	5.9	22.5	1431	16.6	414	7.6	1176
Salahaddin	5.4	2331	5.4	23.7	1758	18.8	573	10.6	1471
Al-Najaf	8.5	2178	8.1	30.2	1693	30.3	484	6.3	1479
Al-Qadisiya	7.5	1912	7.6	25.7	1471	21.3	442	6.0	1237
Al-Muthanna	8.5	1140	8.7	28.8	853	25.9	287	11.0	760
Thi-Qar	7.5	3104	7.8	27.1	2341	23.9	763	7.4	1969
Missan	9.6	1552	10.7	30.0	1200	21.8	352	7.2	980
Basrah	5.1	4179	4.4	24.3	3353	31.8	826	5.4	2847
Region									
Kurdistan Region	4.9	9134	5.7	22.4	7323	9.9	1810	5.7	5110
South/Centre Iraq	5.6	46060	5.5	23.5	35995	22.7	10065	6.2	29527
Area									
Urban	5.1	39650	5.2	21.8	31416	20.3	8234	5.0	24580
Rural	6.4	15544	6.4	27.3	11902	21.7	3641	8.9	10057
Age									
15-19	5.5	11875	na	na	na	20.7	11875	1.4	2462
20-24	4.6	10096	4.6	24.3	10096	na	na	1.6	5492
25-29	3.6	8522	3.6	20.1	8522	.na	na	3.7	6531
30-34	5.7	7709	5.7	21.7	7709	.na	na	5.6	6269
35-39	5.5	7078	5.5	23.5	7078	.na	na	9.7	5852
40-44	8.1	5777	8.1	25.7	5777	.na	na	10.0	4772
45-49	7.7	4136	7.7	27.5	4136	.na	na	11.0	3258
Education									
None	10.4	8970	10.6	32.9	7448	28.0	1521	10.4	6081
Primary	7.2	22317	6.7	29.4	18152	31.6	4165	6.2	15752
Secondary+	1.9	23606	1.9	12.6	17419	11.7	6187	3.8	12575
Non-standard curriculum	15.5	298	15.6	44.3	296	(*)	2	16.4	226
Wealth index quintile									
Poorest	7.6	10078	7.7	27.8	7827	20.4	2250	9.7	6634
Second	6.3	10592	6.6	27.8	8333	22.2	2259	6.6	7115
Middle	5.9	11152	5.7	24.4	8760	23.4	2392	5.6	7104
Fourth	4.8	11363	4.7	22.1	8926	21.6	2437	4.7	6937
Richest	3.3	12009	3.3	15.9	9472	16.4	2537	4.2	6847
Total	5.5	55194	5.5	23.4	43319	20.7	11875	6.1	34637

¹ MICS indicator 8.6

² MICS indicator 8.7

³ MICS indicator 8.8

⁴ MICS indicator 8.9

(*) Figures that are based on less than 25 unweighted cases

Table CP.6: Trends in early marriage

Percentage of women who were first married before age 15 and 18, by residence and age groups, Iraq, 2011

Age	Urban				Rural				All			
	Percentage of women married before age 15	Number of women age 15-49	Percentage of women married before age 18	Number of women age 20-49	Percentage of women married before age 15	Number of women 15-49	Percentage of women married before age 18	Number of women 20-49	Percentage of women married before age 15	Number of women 15-49	Percentage of women married before age 18	Number of women 20-49
15-19	5.1	8234	na	na	6.2	3641	na	na	5.5	11875	na	na
20-24	4.2	7316	22.4	7316	5.6	2780	29.1	2780	4.6	10096	24.3	10096
25-29	3.2	6015	18.6	6015	4.6	2507	23.8	2507	3.6	8522	20.1	8522
30-34	5.1	5593	19.8	5593	7.4	2116	26.6	2116	5.7	7709	21.7	7709
35-39	5.0	5098	21.6	5098	6.7	1980	28.4	1980	5.5	7078	23.5	7078
40-44	7.9	4270	25.0	4270	8.5	1508	27.6	1508	8.1	5777	25.7	5777
45-49	7.6	3124	26.5	3124	7.9	1011	30.4	1011	7.7	4136	27.5	4136
Total	5.1	39650	21.8	31416	6.4	15544	27.3	11902	5.5	55194	23.4	43319

Table CP.6 presents the proportion of women who were first married before age 15 and 18 by residence and age groups. Examining the percentages married before age 15 and 18 by different age groups allows us to see trends in early marriage over time. For example, examining the age pattern for women aged 20-49 years (Figure CP.3), it can be seen that the prevalence of early marriage has not declined over time; 27 percent of women aged 45-49 years were married before their 18th birthday compared to 25 percent of women aged 20-24 years. The proportion of women who were first married before age 15 and 18 is higher in rural areas compared to urban and the decline in early marriage over time is somewhat steeper in urban areas than in rural, particularly for marriage before age 18.

Another component is the spousal age difference with an indicator being the percentage of married women with a difference of 10 or more years younger than their current spouse. Table CP.7 presents the results of the age difference between husbands and wives. Slightly more than one in seven women age 20-24 is currently married to a man who is older by ten years or more (14 percent), and slightly more than one in six women age 15-19 are currently married to men who are older by ten years or more (17 percent). These percentages increase with the wealth index, increasing from 10 percent among women living in the poorest households to 22 percent among women living in the richest ones for women 15-19.

Table CP.7: Spousal age difference

Percent distribution of women currently married age 15-19 and 20-24 years according to the age difference with their husband, Iraq, 2011

	Percentage of currently married women age 15-19 years whose husband is:						Number of women age 15-19 years currently married	Percentage of currently married women age 20-24 years whose husband is:						Number of women age 20-24 years currently married
	Younger	0-4 years older	5-9 years older	10+ years older [1]	Husband's age unknown	Total		Younger	0-4 years older	5-9 years older	10+ years older [2]	Husband's age unknown	Total	
Governorates														
Dohuk	(2.6)	(34.7)	(43.4)	(13.8)	(5.4)	100.0	44	10.9	46.4	32.4	10.1	0.2	100.0	166
Ninewa	1.8	35.4	45.0	12.9	4.9	100.0	255	8.5	36.9	38.9	9.6	6.1	100.0	620
Suleimaniya	6.6	38.8	34.4	20.2	0.0	100.0	60	4.5	43.0	40.0	12.2	0.3	100.0	254
Kirkuk	0.7	33.1	43.3	22.8	0.0	100.0	86	6.5	36.0	38.7	16.5	2.3	100.0	292
Erbil	0.0	40.2	50.3	8.5	1.0	100.0	75	10.7	54.0	27.9	6.9	0.4	100.0	247
Diyala	0.6	43.6	27.0	28.9	0.0	100.0	89	9.3	40.9	32.1	16.6	1.1	100.0	179
Al-Anbar	6.3	42.0	35.9	14.7	1.1	100.0	93	13.9	38.2	30.2	15.7	2.0	100.0	211
Baghdad	2.0	33.9	44.2	17.6	2.4	100.0	486	7.5	37.7	37.3	16.7	0.7	100.0	1019
Babil	2.6	40.0	42.3	13.8	1.3	100.0	172	13.6	34.7	36.6	14.2	0.9	100.0	295
Karbala	6.9	56.4	24.2	9.4	3.2	100.0	88	8.1	44.7	30.7	16.1	0.4	100.0	199
Wasit	6.1	31.1	36.9	18.9	6.9	100.0	69	16.7	32.2	29.4	14.4	7.4	100.0	180
Salahaddin	1.7	46.2	35.7	13.0	3.4	100.0	108	12.6	41.5	29.5	14.8	1.5	100.0	259
Al-Najaf	2.8	42.8	37.6	14.5	2.3	100.0	147	10.8	42.0	33.3	13.9	0.0	100.0	259
Al-Qadisiya	5.2	47.8	28.4	17.5	1.1	100.0	94	13.2	40.5	30.1	15.4	0.9	100.0	213
Al-Muthanna	4.1	34.2	37.1	12.5	12.1	100.0	75	16.9	39.1	30.4	11.7	1.9	100.0	139
Thi-Qar	4.2	31.5	44.7	16.9	2.7	100.0	182	13.0	44.0	31.3	11.6	0.1	100.0	280
Missan	3.0	28.4	48.9	18.7	1.1	100.0	77	8.0	40.3	28.3	20.2	3.2	100.0	161
Basrah	3.9	37.3	34.8	20.3	3.7	100.0	263	8.0	35.4	38.1	14.9	3.5	100.0	518
Region														
Kurdistan Region	2.9	38.4	43.3	13.8	1.7	100.0	179	8.4	47.9	33.6	9.7	0.3	100.0	668
South/Centre Iraq	3.1	37.7	39.5	16.7	3.0	100.0	2283	10.0	38.4	34.8	14.7	2.2	100.0	4824
Area														
Urban	2.8	36.2	40.2	18.3	2.4	100.0	1674	8.4	39.3	35.5	15.1	1.7	100.0	3848
Rural	3.5	41.0	39.0	12.6	3.8	100.0	788	13.1	40.1	32.5	11.6	2.6	100.0	1644
Age														
15-19	3.1	37.8	39.8	16.5	2.9	100.0	2462	(*)	(*)	(*)	(*)	(*)	(*)	0
20-24	(*)	(*)	(*)	(*)	(*)	(*)	0	9.8	39.5	34.6	14.1	2.0	100.0	5492
Education														
None	5.0	42.5	36.7	11.0	4.8	100.0	425	13.4	38.6	30.0	14.5	3.4	100.0	971
Primary	3.4	39.0	38.0	16.5	3.2	100.0	1315	10.0	38.9	35.0	14.3	1.8	100.0	2689
Secondary+	1.3	32.9	44.9	19.8	1.1	100.0	722	7.6	40.9	36.5	13.5	1.6	100.0	1832
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	0	(*)	(*)	(*)	(*)	(*)	(*)	0
Wealth index quintile														
Poorest	6.4	42.0	37.9	9.6	4.0	100.0	460	14.6	41.5	27.5	13.2	3.1	100.0	1015
Second	1.5	43.8	38.5	13.6	2.6	100.0	500	11.3	39.3	33.9	13.6	1.9	100.0	1122
Middle	3.5	34.3	40.6	18.6	3.0	100.0	560	9.9	40.2	34.8	12.9	2.2	100.0	1204
Fourth	1.9	37.9	40.2	18.6	1.4	100.0	526	7.0	37.0	39.7	15.0	1.3	100.0	1097
Richest	2.1	30.4	41.7	22.1	3.7	100.0	416	6.3	39.7	36.8	15.6	1.5	100.0	1054
Total	3.1	37.8	39.8	16.5	2.9	100.0	2462	9.8	39.5	34.6	14.1	2.0	100.0	5492

¹ MICS indicator 8.10a² MICS indicator 8.10b

(*) Figures that are based on less than 25 unweighted cases

11.5. Female Genital Mutilation/Cutting

Female genital mutilation/cutting (FGM/C) is the partial or total removal of the female external genitalia or other injury to the female genital organs. FGM/C is always traumatic with immediate complications including excruciating pain, shock, urine retention, ulceration of the genitals and injury to adjacent tissue. Other complications include septicaemia, infertility, obstructed labour, and even death.

FGM/C is a fundamental violation of human rights. In the absence of any perceived medical necessity, it subjects girls and women to health risks and has life-threatening consequences. Among those rights violated are the rights to the highest attainable standard of health and to bodily integrity. Furthermore, it could be argued that girls (under 18) cannot be said to give informed consent to such a potentially damaging practice as FGM/C.

Table CP.8 presents the prevalence of FGM/C among women and the type and extent of the procedure. The table shows that eight percent of women aged 15-49 had experienced some form of female genital mutilation. It is noted that the majority of this practice is observed in the Kurdistan Region (43 percent in Kurdistan compared to only one percent in centre/south Iraq). The practice of circumcision is common in the governorates of Erbil and Suleimaniya (58 percent and 54 percent respectively), compared to very small percentages in the rest of Iraq's governorates, where it reaches less than one percent. At district level the prevalence of FGM/C affects over 75 percent of the women in seven districts from Erbil and Suleimniya (Map CP.1), and it decreases gradually in neighbouring districts. The results show that this percentage declines from 16 percent for women who did not receive any education to six percent for women who received secondary education or higher. It seems that the practice is more common among the poor households.

Table CP.9 presents the prevalence and extent of FGM/C performed on daughters of the respondents. Overall, 21 percent of living daughters from interviewed women had undergone FGM/C. The relationship between mothers FGM and their daughters FGM is clear: among women who had undergone FGM/C, 35 percent of their daughters had also undergone this practice, compared to only one percent of daughters whose mothers had not undergone FGM/C. There is a positive correlation between mothers' education and reproduction of the practice of FGM/C from mothers to daughters, where the percentage of daughters who have undergone FGM/C increases sharply from six percent for those whose mothers have secondary or higher education to 36 percent for those of uneducated mothers. Daughters' FGM/C practice is more prevalent among older mothers, meaning that younger generations of women tend to refrain from reproducing the practice with their daughters. This practice is two times more common among daughters of women from the poorest (23 percent) households compared to the richest ones (12 percent).

Table CP.10 presents the woman's attitudes towards FGM/C. Regarding opinion as to whether the practice should be continued or discontinued, five percent of women thought it should be continued while 88 percent believed it should be discontinued. Women in the governorates of Erbil, Suleimaniya and Dohuk are more likely to approve of the continuation of the practice of FGM/C than women in other governorates. Approval of the continuation of the practice is highest among women with no education (17 percent) than those with secondary education and above (2 percent), and it is mainly common among women who suffered FGM/C (20 percent) than among those who did not (2 percent). Women from the richest households are less likely to approve the continuation of the practice than women from the poorest households.

Table CP.8: Female genital mutilation/cutting (FGM/C) among women

Percent distribution of women age 15-49 years by FGM/C status,Iraq, 2011

Percent distribution of women age 15-49 years:			
	Did not suffer any form of FGM/C	Suffered any form of FGM/C [1]	Number of women age 15-49 years
Governorates			
Dohuk	98.3	1.7	2195
Ninewa	100.0	0.0	4774
Suleimaniya	45.7	54.3	3729
Kirkuk	80.1	19.9	2361
Erbil	42.5	57.5	3209
Diyala	99.8	0.2	2296
Al-Anbar	100.0	0.0	2380
Baghdad	100.0	0.0	11144
Babil	99.7	0.3	3096
Karbala	99.8	0.2	1769
Wasit	99.7	0.3	1845
Salahaddin	98.4	1.6	2331
Al-Najaf	99.6	0.4	2178
Al-Qadisiya	99.2	0.8	1912
Al-Muthanna	99.7	0.3	1140
Thi-Qar	100.0	0.0	3104
Missan	100.0	0.0	1552
Basrah	100.0	0.0	4179
Region			
Kurdistan Region	57.2	42.8	9134
South/Centre Iraq	98.8	1.2	46060
Area			
Urban	91.0	9.0	39650
Rural	94.2	5.8	15544
Age			
15-19	95.1	4.9	11875
20-24	92.5	7.5	10096
25-29	90.9	9.1	8522
30-34	90.9	9.1	7709
35-39	90.3	9.7	7078
40-44	90.6	9.4	5777
45-49	89.7	10.3	4136
Education			
None	84.5	15.5	8970
Primary	92.6	7.4	22317
Secondary+	94.0	6.0	23606
Non-standard curriculum	98.3	1.7	298
Wealth index quintile			
Poorest	90.2	9.8	10078
Second	87.9	12.1	10592
Middle	90.4	9.6	11152
Fourth	94.5	5.5	11363
Richest	95.8	4.2	12009
Total	91.9	8.1	55194
¹ MICS indicator 8.12			

Table CP.9: Female genital mutilation/cutting (FGM/C) among daughters

Rate of FGM/C among the living daughters of women 15-49 years, Iraq, 2011

	Percent of daughters who suffered any form of FGM/C	Number of daughters
Mother's FGM/C		
No FGM/C	1.1	3714
Had FGM/C	35.0	5045
Governorate		
Suleimaniya	22.2	3252
Kirkuk	4.8	2106
Erbil	29.0	3402
Region		
Kurdistan Region	25.7	6653
South/Centre Iraq	4.8	2106
Area		
Urban	19.9	7045
Rural	23.7	1714
Age		
15-19	0.0	89
20-24	1.2	532
25-29	6.7	1049
30-34	15.3	1616
35-39	18.2	1823
40-44	30.8	1998
45-49	32.4	1654
Education		
None	36.0	3071
Primary	15.4	3875
Secondary+	6.0	1757
Non-standard curriculum	0.0	55
Wealth index quintile		
Poorest	22.9	1979
Second	20.5	2523
Middle	25.4	1781
Fourth	18.5	1366
Richest	11.9	1110
Total	20.6	8759

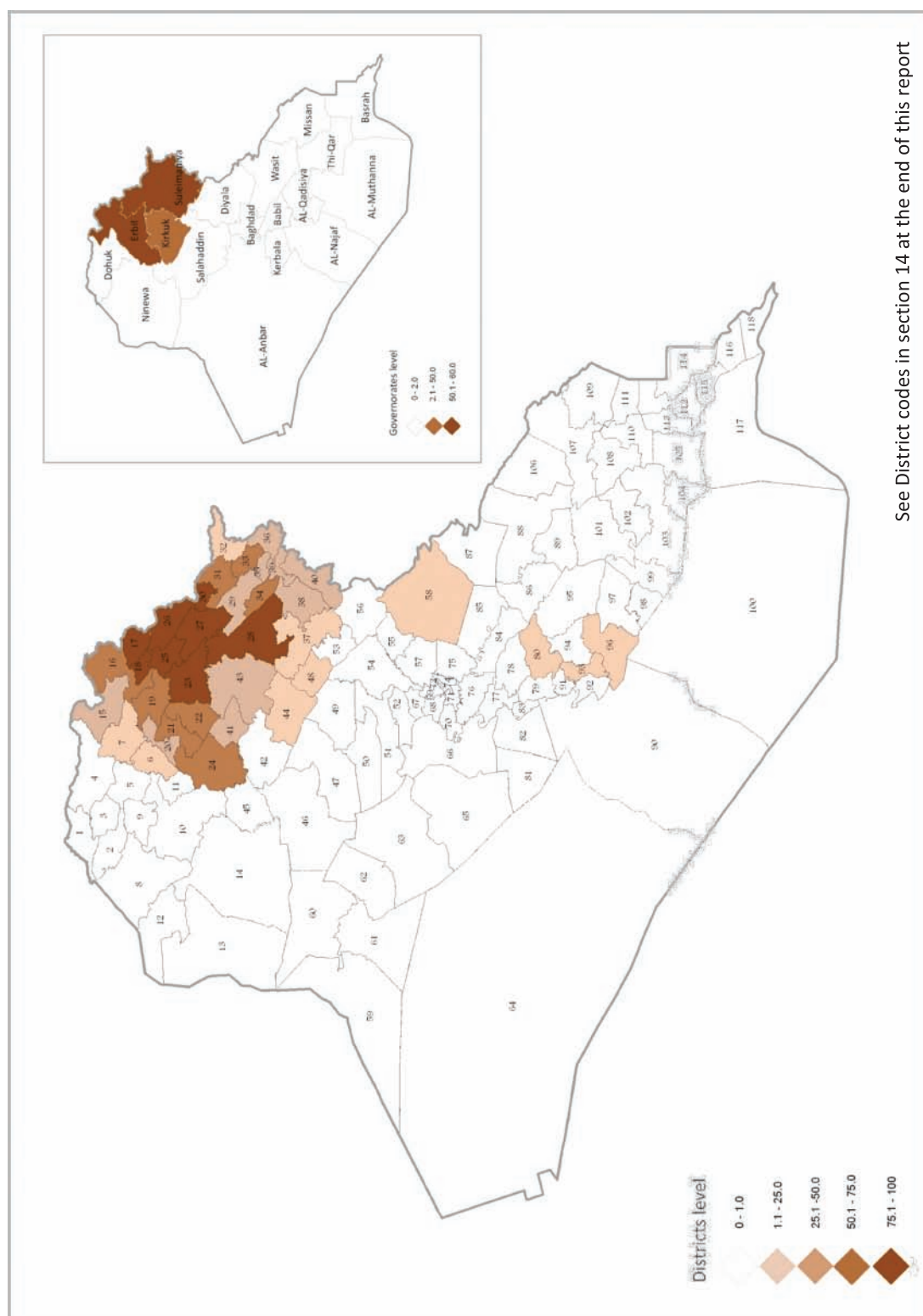
Table CP.10: Approval of female genital mutilation/cutting (FGM/C)

Percentage of women age 15-49 years who have heard of FGM/C, and percent distribution of women according to attitudes towards whether the practice of FGM/C should be continued , Iraq, 2011

	Percentage of women who have heard of FGM/C	Number of women age 15-49 years	Percent distribution of women who believe the practice of FGM/C should be:					Number of women age 15-49 years who have heard of FGM/C
			Continued ¹	Discontinued	Depends	Don't know	Total	
Governorates								
Dohuk	48.6	2195	6.9	77.4	1.6	14.2	100.0	1067
Ninewa	31.9	4774	0.3	91.8	1.2	6.7	100.0	1524
Suleimaniya	98.3	3729	10.0	87.9	0.0	2.1	100.0	3667
Kirkuk	76.5	2361	4.8	84.4	2.5	8.4	100.0	1806
Erbil	97.5	3209	14.5	80.6	0.5	4.5	100.0	3128
Diyala	34.8	2296	1.8	76.9	4.5	16.8	100.0	799
Al-Anbar	32.6	2380	0.2	94.8	0.6	4.4	100.0	775
Baghdad	40.6	11144	0.6	92.9	1.0	5.6	100.0	4526
Babil	26.9	3096	4.9	88.8	1.4	4.9	100.0	832
Karbala	53.1	1769	4.3	85.3	0.0	10.4	100.0	940
Wasit	26.1	1845	3.5	75.5	2.6	18.3	100.0	482
Salahaddin	43.2	2331	2.9	84.9	7.4	4.8	100.0	1006
Al-Najaf	44.1	2178	1.7	90.9	0.0	7.4	100.0	961
Al-Qadisiya	49.0	1912	9.4	77.4	2.2	11.0	100.0	937
Al-Muthanna	35.1	1140	1.6	91.4	4.8	2.2	100.0	400
Thi-Qar	31.8	3104	0.0	98.3	0.4	1.3	100.0	986
Missan	53.1	1552	0.3	90.6	0.1	9.0	100.0	824
Basrah	34.2	4179	0.3	96.7	0.3	2.7	100.0	1429
Region								
Kurdistan Region	86.1	9134	11.3	83.6	0.4	4.7	100.0	7862
South/Centre Iraq	39.6	46060	2.1	89.4	1.6	6.9	100.0	18229
Area								
Urban	52.6	39650	3.7	89.6	1.1	5.6	100.0	20844
Rural	33.8	15544	9.4	80.0	1.9	8.7	100.0	5247
Age								
15-19	34.3	11875	3.8	89.8	0.9	5.5	100.0	4070
20-24	45.4	10096	3.8	89.1	1.1	6.1	100.0	4585
25-29	47.8	8522	4.3	88.5	1.3	5.9	100.0	4077
30-34	51.0	7709	5.1	87.9	1.2	5.8	100.0	3935
35-39	54.4	7078	5.5	86.4	1.3	6.8	100.0	3850
40-44	56.1	5777	6.1	85.2	1.7	7.0	100.0	3241
45-49	56.4	4136	6.7	85.0	1.5	6.8	100.0	2333
Education								
None	39.1	8970	16.5	72.5	1.8	9.2	100.0	3507
Primary	38.0	22317	5.5	84.6	1.4	8.5	100.0	8491
Secondary+	59.2	23606	1.6	93.4	1.0	4.0	100.0	13966
Non-standard curriculum	42.6	298	5.4	79.2	1.7	13.8	100.0	127
FGM/C experience								
No FGM/C	42.6	50726	1.7	90.3	1.4	6.5	100.0	21623
Had FGM/C	100.0	4468	20.0	74.8	0.4	4.9	100.0	4468
Wealth index quintile								
Poorest	36.1	10078	13.0	74.9	1.9	10.2	100.0	3637
Second	44.1	10592	7.9	83.0	1.5	7.6	100.0	4668
Middle	44.7	11152	4.4	87.8	1.2	6.5	100.0	4987
Fourth	48.8	11363	2.5	91.0	1.0	5.6	100.0	5547
Richest	60.4	12009	1.0	94.4	0.9	3.6	100.0	7252
Total	47.3	55194	4.9	87.7	1.3	6.2	100.0	26091

¹ MICS indicator 8.11

Map CP.1: Percentage of women 15-49 years who suffered any form of FGM/C, Iraq, 2011



See District codes in section 14 at the end of this report

11.6. Attitudes toward Domestic Violence

A number of questions were asked of women age 15-49 years to assess their attitudes towards whether husbands are justified to hit or beat their wives in a variety of scenarios. These questions were asked to have an indication of cultural beliefs that tend to be associated with the prevalence of violence against women by their husbands. The main assumption here is that women that agree with the statements indicating that husbands are justified to beat their wives under the situations described tend to be abused by their own husbands. The responses to these questions can be found in Table CP.11. Overall, 51 percent of women in Iraq feel that a husband has the right to hit or beat his wife for at least one of five reasons: if she goes out without telling him, if she neglects the children, if she argues with him, if she refuses sex with him, if she burns the food. Women who approve of their husband's violence, in most cases agree and justify violence in instances when they neglect the children (35 percent), or if they demonstrate their autonomy, e.g. go out without telling their husbands (39 percent) or argue with them (35 percent). Around one-third of women believe that their partner has a right to hit or beat them if they refuse to have sex with him (32 percent), if they burn the food (18 percent). The MICS4 questionnaire included also two additional circumstances that might justify a husband's beating his wife: if they were careless spenders (16 percent) or if they disclose the husband or household secrets (46 percent).

There are notable variations of opinion among women living in different governorates: from 90 percent of women in Missan governorate accepting this type of violence to 12 percent in Erbil or 22 percent in Suleimaniya governorates. Although this pattern prevails within governorates, some differences can be observed (Map CP.2) yet; even to the extreme of Al-Anbar governorate where in Ana district (labeled 61 in the Map) 17 percent of the women justify such violence, and in Falluja (label 66) about 83 percent do. Association of domestic violence with education is strong: around two-thirds of women with no education (63 percent) justify this type of violence, while it is only above one third among women who have secondary or higher education (39 percent). Acceptance is also more common among those living in the poorest households (66 percent) compared with the richest ones (40 percent).

Table CP.11: Attitudes toward domestic violence

Percentage of women age 15-49 years who believe a husband is justified in beating his wife in various circumstances, Iraq, 2011

Percentage of women age 15-49 years who believe a husband is justified in beating his wife:										
Governorates	If goes out without telling him	If she neglects the children	If she argues with him	If she refuses sex with him	If she burns the food	For any of these reasons [1]	If she is a careless spender	If she discloses husband / household secrets	For any of the previous 7 reasons	Number of women age 15-49 years
Dohuk	29.1	32.9	32.7	33.3	11.6	49.5	22.7	45.4	55.7	2195
Ninewa	31.4	24.1	25.7	22.5	10.9	43.3	19.6	42.5	52.9	4774
Sulaimaniya	12.1	15.6	8.7	11.0	3.6	22.3	8.1	22.7	29.5	3729
Kirkuk	32.9	29.1	30.6	32.9	18.0	42.5	27.8	38.8	44.9	2361
Erbil	7.3	7.2	7.4	8.0	2.9	12.0	5.1	11.3	13.8	3209
Diyala	40.5	41.4	41.1	30.4	20.0	53.5	31.3	54.7	60.4	2296
Al-Anbar	46.0	40.4	38.8	39.1	20.1	66.4	28.9	54.2	71.0	2380
Baghdad	30.9	23.9	25.9	25.4	12.8	42.5	22.4	35.9	46.6	11144
Babil	57.5	60.2	59.3	39.4	22.8	73.1	44.8	64.0	76.0	3096
Karbala	41.9	44.1	44.1	41.0	19.8	60.6	30.5	51.4	65.0	1769
Wasit	37.9	36.6	37.5	29.1	19.4	45.1	32.3	41.8	46.8	1845
Salahaddin	53.3	42.2	52.0	37.9	18.5	68.0	32.5	63.6	74.1	2331
Al-Najaf	52.1	54.4	42.7	43.5	20.2	68.5	31.7	56.7	72.1	2178
Al-Qadisiya	46.0	40.0	42.4	38.5	26.1	61.0	36.8	51.0	65.3	1912
Al-Muthanna	64.6	48.8	64.1	59.1	26.8	78.8	41.6	60.2	81.3	1140
Thi-Qar	51.9	41.1	34.8	40.8	14.3	60.1	29.8	56.4	63.3	3104
Missan	84.3	76.7	71.8	65.5	52.6	89.6	67.1	87.0	91.5	1552
Basrah	52.0	46.5	45.9	42.1	18.2	66.2	36.3	60.9	71.5	4179
Region										
Kurdistan Region	14.5	16.8	14.0	15.3	5.3	25.2	10.6	24.1	30.3	9134
South/Centre Iraq	43.5	38.3	38.7	34.9	18.3	56.3	30.7	50.3	60.9	46060
Area										
Urban	33.9	30.0	29.8	27.3	12.9	46.0	23.3	41.3	50.8	39650
Rural	51.0	46.8	46.8	42.7	24.5	64.4	37.5	57.9	68.7	15544

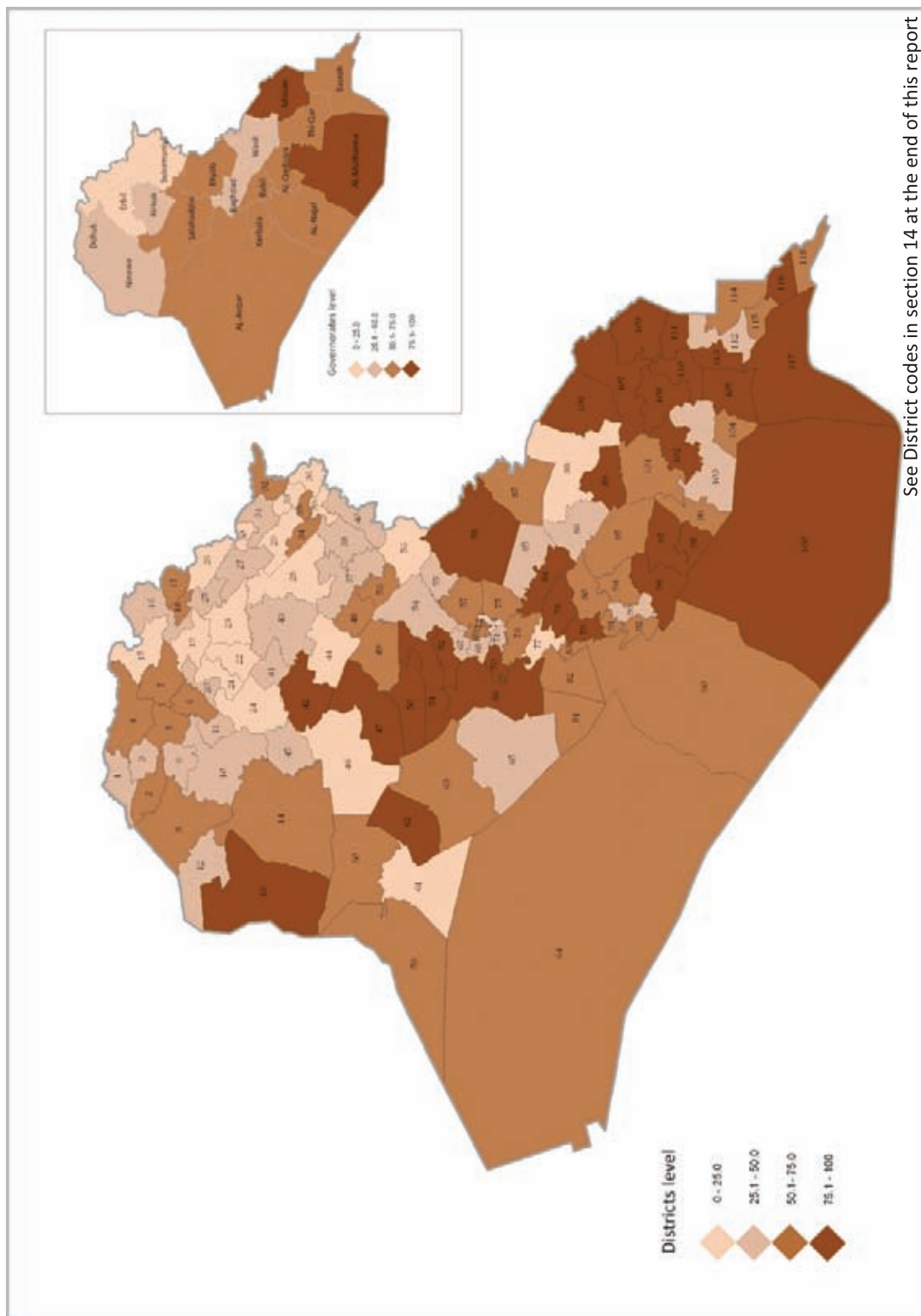
Table CP.11: Attitudes toward domestic violence

Percentage of women age 15-49 years who believe a husband is justified in beating his wife in various circumstances, Iraq, 2011

Percentage of women age 15-49 years who believe a husband is justified in beating his wife:										
Age	If goes out without telling him	If she neglects the children	If she argues with him	If she refuses sex with him	If she burns the food	For any of these reasons [1]	If she is a careless spender	If she discloses husband / household secrets	For any of the previous 7 reasons	Number of women age 15-49 years
15-19	37.3	33.1	32.6	26.9	15.4	50.1	26.1	46.4	55.7	11875
20-24	38.2	33.6	34.0	30.3	15.9	50.0	25.9	45.5	55.3	10096
25-29	39.8	35.8	36.2	33.8	16.6	52.3	27.9	47.2	56.9	8522
30-34	39.8	35.8	35.2	33.5	16.6	51.8	28.5	45.6	55.6	7709
35-39	38.8	35.7	35.2	33.2	16.5	52.1	28.2	45.5	56.0	7078
40-44	38.9	35.0	35.2	34.3	16.6	51.4	28.1	45.7	55.7	5777
45-49	39.5	35.7	35.6	34.3	15.7	52.1	28.5	45.8	56.2	4136
Marital/Union status										
Currently married	42.1	37.7	38.1	36.0	17.6	54.5	29.7	48.0	58.6	34637
Formerly married	41.9	38.6	38.4	36.7	17.8	54.7	29.7	47.6	58.0	2385
Never married	31.9	28.5	27.5	22.6	13.2	44.4	22.5	42.0	50.3	18172
Education										
None	53.0	47.1	47.4	44.9	27.0	63.4	39.3	57.0	66.7	8970
Primary	46.6	41.6	41.6	38.9	20.3	59.2	33.3	52.8	63.3	22317
Secondary+	25.6	23.3	22.9	19.5	8.0	38.7	17.0	35.2	44.5	23606
Non-standard curriculum	54.7	48.7	48.9	50.8	24.8	69.0	37.1	63.8	73.0	298
Wealth index quintile										
Poorest	55.0	49.3	50.5	45.3	28.4	65.8	41.8	59.7	69.2	10078
Second	43.2	38.8	38.2	36.0	18.3	55.3	30.1	48.3	59.3	10592
Middle	39.4	35.5	33.6	32.0	15.0	52.3	26.3	45.9	56.9	11152
Fourth	33.0	29.0	29.3	26.0	12.0	45.6	22.0	41.8	50.7	11363
Richest	25.8	23.6	23.9	21.4	8.8	39.5	18.8	36.5	45.6	12009
Total	38.7	34.7	34.6	31.7	16.1	51.2	27.3	46.0	55.9	55194
1 MICS indicator 8.14										

¹ MICS indicator 8.14

Map CP.2: Percentage of women 15-49 years who believe a husband is justified in beating his wife, Iraq, 2011



See District codes in section 14 at the end of this report

12. HIV/AIDS and Orphans

12.1. Knowledge about HIV Transmission and Misconceptions about HIV/AIDS

One of the most important prerequisites for reducing the rate of HIV infection is accurate knowledge of how HIV is transmitted and strategies for preventing transmission. Correct information is the first step towards raising awareness and giving young people the tools to protect themselves from infection. Misconceptions about HIV are common and can confuse young people and hinder prevention efforts. Different regions are likely to have variations in misconceptions although some appear to be universal (for example that sharing food can transmit HIV or mosquito bites can transmit HIV). The UN General Assembly Special Session on HIV/AIDS (UNGASS) called on governments to improve the knowledge and skills of young people to protect themselves from HIV. The indicators to measure this goal as well as the MDG of reducing HIV infections by half include improving the level of knowledge of HIV and its prevention, and changing behaviours to prevent further spread of the disease. HIV modules were administered to women 15-49 years of age.

One indicator which is both an MDG and UNGASS indicator is the percent of young women who have comprehensive and correct knowledge of HIV prevention and transmission. In Iraq MICS all women who have heard of AIDS were asked whether they knew of the three main ways of preventing HIV transmission – having only one faithful uninfected partner, using a condom every time, and abstaining from sex.

The results are presented in Table HA.1 for women age 15-49. In Iraq, more than half of the interviewed women (55 percent) have heard of AIDS, with clear variation among governorates: 34 percent of women in Wasit heard of it while more than seventy percent did in Suleimaniya and Erbil (Figure HA.1). However, the percentage of women who know of both main ways of preventing HIV transmission is only 20 percent (Table HA.1); 45 percent of women know of having one faithful uninfected sex partner and 22 percent know of using a condom every time as main ways of preventing HIV transmission. Differentials were observed in the percentage of women who know of both main ways of preventing HIV transmission by governorates, with Suleimaniya governorate ranking first for this indicator (36 percent) and Kirkuk and Al-Muthanna governorates ranking last (10 and 9 percent respectively). As expected, lower levels of knowledge were observed among women with no education where the percentage of women who know of both main ways was six percent, increasing to 14 percent for women with primary education and to 32 percent for women with secondary or higher education. Knowledge was also correlated with wealth index, decreasing from 34 percent among the richest women to eight percent among poorest women.

The results for women age 15-24 are separately presented in Table HA.2. The percentage of women who have heard of AIDS is 54 percent and the percentage of those who know of both main ways of preventing HIV transmission is slightly lower for this age group (17 percent). Differentials of these indicators across governorates, education and household wealth are generally similar to those for age group 15-49.

Table HA.1: Knowledge about HIV transmission, misconceptions about HIV/AIDS, and comprehensive knowledge about HIV transmission

Percentage of women age 15-49 years who know the main ways of preventing HIV transmission, percentage who know that a healthy looking person can have the AIDS virus, percentage who reject common misconceptions, and percentage who have comprehensive knowledge about HIV transmission Iraq, 2011

	Percentage who know transmission can be prevented by:				Percentage who know that a healthy looking person can have the AIDS virus	Percentage who know that HIV cannot be transmitted by:			Percentage who reject the two most common misconceptions and know that a healthy looking person can have the AIDS virus	Percentage with comprehensive knowledge [1]	Number of women
	Percentage who have heard of AIDS	Having only one faithful sex partner	Using a condom every time	Percentage of women who know both ways		Percentage who know a person can contract HIV using an unsterilized syringe / needle used by someone else	Mosquito bites	Supernatural means			
Governorate											
Dohuk	50.9	41.8	19.2	18.0	22.6	44.2	16.2	35.4	4.5	2.2	2195
Ninewa	52.0	42.3	14.3	13.2	32.5	47.8	20.3	39.8	11.4	3.9	4774
Suleimaniya	73.4	65.8	38.4	35.8	35.8	67.3	31.8	56.6	9.5	4.5	3729
Kirkuk	54.3	39.0	11.0	9.6	22.5	46.6	11.9	31.1	4.7	1.4	2361
Erbil	74.1	66.2	24.8	23.9	15.7	59.7	27.0	52.6	3.6	2.3	3209
Diyala	51.7	41.6	26.6	24.9	13.1	36.5	12.3	29.2	2.7	1.4	2296
Al-Anbar	56.6	43.0	12.3	10.8	27.6	46.3	23.9	41.5	5.7	1.6	2380
Baghdad	53.5	44.4	24.1	22.6	28.7	44.8	23.0	39.5	8.7	4.9	11144
Babil	43.6	40.8	33.6	32.6	30.7	41.9	23.8	32.7	5.7	4.6	3096
Karbala	62.9	55.5	23.0	21.8	38.1	57.9	17.9	48.4	7.5	2.8	1769
Wasit	33.8	26.2	14.7	13.9	17.6	28.2	18.1	25.7	10.1	7.1	1845
Salahaddin	49.4	44.1	23.7	22.9	23.9	38.7	19.2	39.9	4.8	3.2	2331
Al-Najaf	64.6	58.4	19.2	18.7	29.3	54.9	22.5	49.0	5.0	2.3	2178
Al-Qadisiya	50.3	39.4	18.9	17.4	22.1	44.4	16.8	32.8	4.7	2.2	1912
Al-Muthanna	36.3	27.7	10.1	8.6	20.7	31.5	14.8	30.8	4.6	0.6	1140
Thi-Qar	44.0	33.8	18.2	15.9	22.4	40.5	22.6	35.9	7.9	3.2	3104
Missan	40.8	35.5	22.9	21.3	19.0	33.5	17.8	33.0	8.2	6.0	1552
Basrah	62.0	41.0	15.0	13.7	28.7	49.0	21.8	40.9	6.3	2.3	4179
Region											
Kurdistan Region	68.2	60.2	29.0	27.3	25.6	59.1	26.3	50.1	6.2	3.2	9134
South/Centre Iraq	51.8	41.8	20.1	18.7	26.6	44.0	20.3	37.7	7.2	3.5	46060
Area											
Urban	62.1	51.4	24.8	23.2	30.7	53.5	25.0	46.5	8.6	4.3	39650
Rural	35.1	28.2	13.1	12.3	15.3	28.7	11.9	22.5	3.2	1.3	15544

Table HA.1: Knowledge about HIV transmission, misconceptions about HIV/AIDS, and comprehensive knowledge about HIV transmission

Percentage of women age 15-49 years who know the main ways of preventing HIV transmission, percentage who know that a healthy looking person can have the AIDS virus, percentage who reject common misconceptions, and percentage who have comprehensive knowledge about HIV transmission Iraq, 2011

	Percentage who know transmission can be prevented by:			Percentage who know that HIV cannot be transmitted by:							Number of women	
	Percentage who have heard of AIDS	Having only one faithful uninfected sex partner	Using a condom every time	Percentage of women who know both ways	Percentage who know that a healthy looking person can have the AIDS virus	Percentage who know a person can contract HIV using an unsterilized syringe / needle used by someone else	Mosquito bites	Supernatural means	Sharing food with someone with AIDS	Percentage who reject the two most common misconceptions and know that a healthy looking person can have the AIDS virus		
Age												
15-24	53.8	43.1	18.1	16.8	26.3	46.3	23.3	40.0	23.4	7.9	3.5	21971
25-29	53.6	44.4	22.5	21.2	25.4	44.6	19.8	39.1	22.1	6.7	3.7	8522
30-39	57.6	48.4	25.0	23.5	27.2	48.9	21.7	41.2	23.6	6.6	3.6	14787
40-49	52.2	43.9	23.1	21.7	26.2	45.1	17.7	37.3	20.7	6.1	3.0	9913
Marital status												
Ever married	52.7	43.9	22.7	21.3	24.5	44.0	18.8	36.8	20.4	5.9	3.3	37022
Never married	58.3	46.8	19.1	17.9	30.2	51.7	26.4	45.6	27.7	9.3	3.8	18172
Education												
None	19.1	14.6	6.1	5.5	6.1	14.1	5.2	10.1	4.7	1.0	0.5	8970
Primary	41.5	32.6	14.7	13.6	16.9	33.3	13.3	25.5	13.3	3.1	1.3	22317
Secondary +	80.7	68.3	34.0	32.1	43.2	71.6	35.2	64.8	38.9	13.2	6.7	23606
Non-standard curriculum	24.5	19.6	5.9	4.9	14.3	20.1	3.9	10.3	6.2	1.0	0.2	298
Wealth index quintiles												
Poorest	27.7	20.9	9.0	8.3	10.1	21.5	9.0	15.8	8.7	2.2	0.9	10078
Second	45.5	36.5	15.8	14.6	18.9	37.3	15.3	29.5	16.3	4.3	2.0	10592
Middle	53.5	43.1	19.6	18.2	23.4	44.9	19.5	37.2	20.2	4.8	2.2	11152
Fourth	63.7	51.7	25.0	23.0	31.5	54.4	24.9	47.5	27.1	8.2	3.8	11363
Richest	77.2	67.6	35.7	34.2	44.6	69.6	35.3	63.9	38.6	14.6	7.6	12009
Total	54.5	44.9	21.5	20.1	26.4	46.5	21.3	39.7	22.8	7.0	3.5	55194
1MICS indicator 9.1												

¹MICS indicator 9.1

Table HA.2: Knowledge about HIV transmission, misconceptions about HIV/AIDS, and comprehensive knowledge about HIV transmission among young women

Percentage of young women age 15-24 years who know the main ways of preventing HIV transmission, percentage who know that a healthy looking person can have the AIDS virus, percentage who reject common misconceptions, and percentage who have comprehensive knowledge about HIV transmission Iraq, 2011

Governorate	Percentage who know transmission can be prevented by:			Percentage who know that a healthy looking person can have the AIDS virus		Percentage who know that HIV cannot be transmitted by:			Percentage who reject the two most common misconceptions and know that a healthy looking person can have the AIDS virus		Number of women age 15-24
	Percentage who have heard of AIDS	Having only one faithful sex partner	Using a condom every time	Percentage of women who know both ways	Percentage who know that a healthy looking person can have the AIDS virus	Percentage who know a person can contract HIV using an unsterilized syringe / needle used by someone else	Mosquito bites	Supernatural means	Sharing food with someone with AIDS	Percentage with comprehensive knowledge [1]	
Dohuk	53.1	42.4	15.8	14.7	23.1	46.9	18.4	38.2	19.3	4.8	941
Ninewa	53.6	41.5	12.7	11.0	35.9	49.9	21.9	41.5	24.4	12.2	2066
Suleimaniya	81.3	69.9	36.7	33.6	39.6	75.4	40.4	66.4	44.7	13.1	1409
Kirkuk	54.3	41.0	7.2	6.4	23.6	48.2	14.0	33.8	18.4	4.0	845
Erbil	77.3	69.2	24.8	23.7	17.3	62.7	29.0	54.7	35.2	4.8	1238
Diyala	50.3	37.6	20.0	19.1	15.5	36.1	14.2	27.4	17.0	4.2	846
Al-Anbar	55.3	39.5	10.3	9.1	27.2	47.0	24.5	42.4	20.9	5.4	959
Baghdad	50.9	40.9	19.5	18.3	27.8	43.3	24.1	37.3	21.9	10.0	4273
Babil	39.1	35.1	24.8	23.6	22.9	37.0	21.8	28.2	14.0	4.7	1216
Karbala	55.8	47.3	16.1	15.5	36.4	50.9	22.7	45.7	29.0	10.1	668
Wasit	31.9	22.9	11.2	10.6	15.9	25.4	17.9	25.0	15.6	6.2	737
Salahaddin	51.0	45.1	23.6	23.0	25.3	40.2	20.4	41.0	19.7	5.5	1020
Al-Najaf	63.1	55.9	14.6	14.2	28.3	53.5	24.5	48.1	22.5	6.1	903
Al-Qadisiya	47.9	36.1	14.7	13.3	19.6	43.6	20.4	32.5	19.8	4.4	798
Al-Muthanna	36.4	24.8	11.4	10.0	20.7	31.1	16.0	30.5	14.8	3.8	495
Thi-Qar	45.3	34.1	14.9	12.7	23.0	42.5	25.2	37.7	21.8	9.2	1297
Missan	39.2	32.3	19.7	17.7	19.9	32.0	19.6	31.5	19.5	9.2	616
Basrah	58.5	40.4	13.6	12.8	27.1	44.2	23.9	40.8	26.9	6.5	1644
Region											
Kurdistan Region	72.5	62.4	27.1	25.2	27.6	63.6	30.7	55.0	34.8	8.0	3588
South/Centre Iraq	50.2	39.4	16.3	15.1	26.1	42.9	21.9	37.1	21.2	7.9	18383
Area											
Urban	61.8	49.8	21.2	19.6	30.9	53.6	27.6	46.9	28.0	9.7	15551
Rural	34.4	27.0	10.7	10.0	15.2	28.5	12.9	23.4	12.2	3.6	6421

Table HA.2: Knowledge about HIV transmission, misconceptions about HIV/AIDS, and comprehensive knowledge about HIV transmission among young women

Percentage of young women age 15-24 years who know the main ways of preventing HIV transmission, percentage who know that a healthy looking person can have the AIDS virus, percentage who reject common misconceptions, and percentage who have comprehensive knowledge about HIV transmission Iraq, 2011

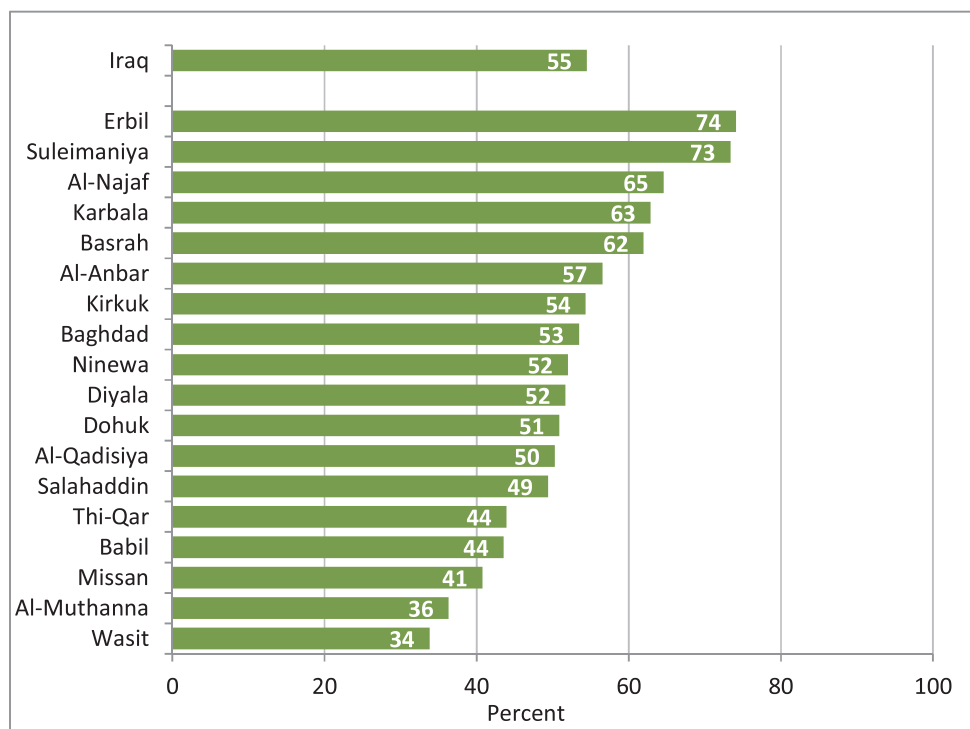
	Percentage who know transmission can be prevented by:			Percentage who know that HIV cannot be transmitted by:		Percentage who reject the two most common misconceptions and know that a healthy looking person can have the AIDS virus		Number of women age 15-24
	Having only one faithful sex partner	Using a condom every time	Percentage of women who know both ways	Percentage who know that a healthy looking person can have the AIDS virus	Percentage who know a person can contract HIV using an unsterilized syringe / needle used by someone else	Mosquito bites	Supernatural means	
Age								
15-24	51.1	39.4	15.0	24.9	44.1	22.4	37.1	11875
25-29	57.1	47.5	21.7	28.0	49.0	24.4	43.4	10096
Marital status								
Ever married	47.6	39.0	18.3	20.8	38.6	17.3	31.7	8302
Never married	57.6	45.7	18.0	29.7	51.0	26.9	45.1	13670
Education								
None	14.8	10.6	4.1	5.0	11.0	4.1	7.0	3089
Primary	36.3	27.5	10.8	14.5	28.6	12.9	22.2	8145
Secondary +	78.4	64.4	27.7	41.5	70.0	36.7	63.1	10729
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	(*)	(*)	8
Wealth index quintiles								
Poorest	26.0	19.6	7.6	9.9	20.3	10.3	15.7	3960
Second	44.8	35.2	12.7	18.7	37.4	16.7	30.2	4046
Middle	53.6	42.1	17.6	23.3	45.5	21.3	38.0	4478
Fourth	63.6	51.2	20.1	31.8	54.4	26.6	49.3	4471
Richest	74.7	61.9	29.3	43.3	67.4	37.7	60.7	5016
Total	53.8	43.1	18.1	26.3	46.3	23.3	40.0	21971

¹MICS indicator 9.2; MDG indicator 6.3

(*) Figures that are based on less than 25 unweighted cases

Table HA.1 and HA.2 also present the percent of women who can correctly identify misconceptions concerning HIV. The indicator is based on the two most common and relevant misconceptions in Iraq, that HIV can be transmitted by supernatural means and sharing food with someone with AIDS. The table also provides information on whether women know that HIV cannot be transmitted by mosquito bites. Of the interviewed women, seven percent reject the two most common misconceptions and know that a healthy-looking person can be infected. Forty percent of women know that HIV can be not be transmitted by supernatural means, and 23 percent of women know that HIV cannot be transmitted by sharing food with someone with AIDS, while 23 percent of women know that a healthy-looking person can be infected. Results for women aged 15-24 years were similar to those of women age 15-49. In general the percentage of women who know that a person can contract HIV through the use of unsterilized syringes or needles is higher than those who know that a healthy looking person can be infected. Nevertheless the association with education and wealth is much stronger in the former (use of unsterilized syringes or needles) than in the latter.

Figure HA.1: Percentage of women 15-49 years who heard of AIDS, Iraq, 2011

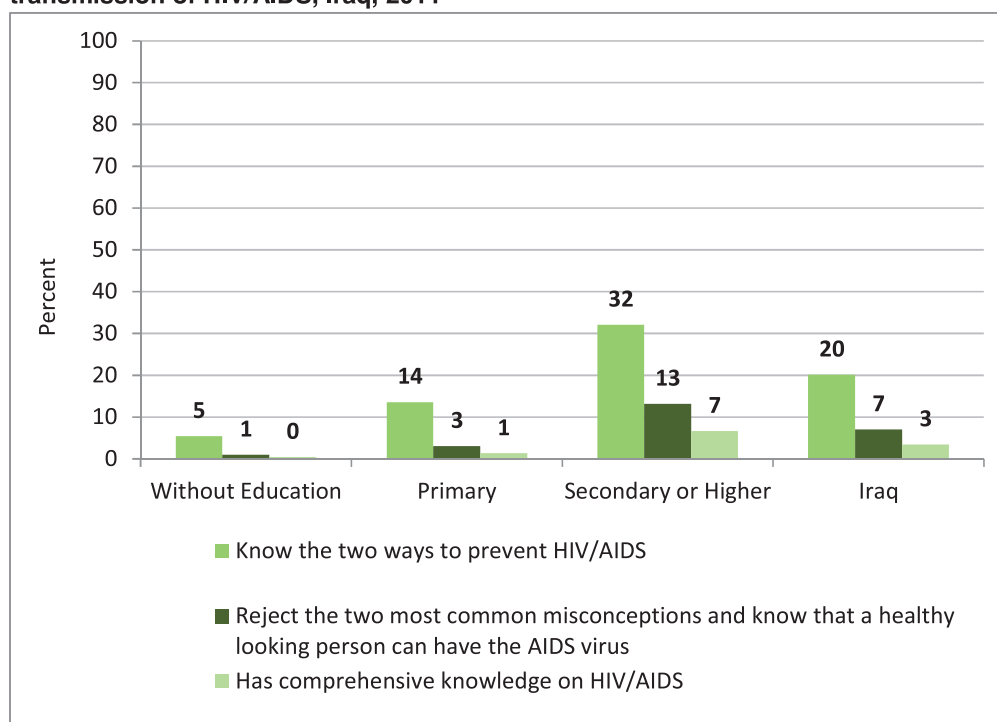


Women who have comprehensive knowledge about HIV prevention include women who know of the two main ways of HIV prevention (having only one faithful uninfected partner and using a condom every time), also know that a healthy looking person can have the AIDS virus, and who reject the two most common misconceptions. Tables HA.1 and HA.2 also present the percentage of women with comprehensive knowledge. Comprehensive knowledge of HIV prevention methods and transmission is fairly low (below 4 percent) although there are differences by area.

The proportion of women who have comprehensive knowledge is higher in urban areas (4 percent) compared to rural (1 percent). Not surprisingly, the percent of women with comprehensive knowledge increases with the woman's education level (Figure HA.2). Comprehensive knowledge was absent among women with no education (0 percent) and increased to seven percent among women with secondary or higher education. Differentials among governorates also exist for this indicator. The lowest percentage of comprehensive knowledge was found in Al-Muthanna, Kirkuk, and Diyala (about 1 percent) while the highest was in Wasit governorate (7 percent). Only one percent of women residing in the poorest households have comprehensive knowledge compared to eight percent of women from the richest households.

Knowledge of mother-to-child transmission of HIV is also an important first step for women to seek HIV testing when they are pregnant to avoid infecting the baby. Women should know that HIV can be transmitted during pregnancy, during delivery, and through breastfeeding. The level of knowledge among women age 15-49 years concerning mother-to-child transmission is presented in Table HA.3. About 44 percent of women know that HIV

Figure HA.2: Figure HA.2: Percentage of women 15-49 years with knowledge on the transmission of HIV/AIDS, Iraq, 2011



can be transmitted from mother to child, 40 percent during pregnancy, 34 percent during delivery and 32 percent by breastfeeding. The percentage of women who know all three ways of mother-to-child transmission is 26 percent, while 11 percent of women did not know of any specific way.

There are differences in the knowledge of mother-to-child HIV transmission depending on the governorate the women live in: the highest percentage for this indicator in the governorate of Erbil (47 percent) and the lowest in governorates of Wasit and Al-Muthanna

(15 percent each). The impact of education on the knowledge levels is also clear with the percentage of women with no education rising from nine percent to 19 percent among women who have primary education and increasing dramatically to reach the maximum of 40 percent among women who have secondary or higher education. Wealth index also is positively correlated with knowledge of the transmission from mother to child from 13 percent among women in the poorest households and rising gradually to reach 37 percent for women in the richest households.

12.2. Attitudes toward People Living with HIV/AIDS

The indicators on attitudes toward people living with HIV measure stigma and discrimination in the community. Stigma and discrimination are low if respondents report an accepting attitude on the following four questions: 1) Would care for family member sick with AIDS; 2) would buy fresh vegetables from a vendor who is HIV positive; 3) thinks that a female teacher who is HIV positive should be allowed to teach in school; and 4) would not want to keep HIV status of a family member a secret. Table HA.4 presents the attitudes of women towards people living with HIV/AIDS. In Iraq, 93 percent of women who have heard of AIDS agree with at least one accepting statement. The most common accepting attitude is willing to care for a family member with the AIDS virus in own home (87 percent), followed by not wanting to keep the HIV status of a family member a secret (29 percent), followed by the belief that a female teacher with the AIDS virus and is not sick should be allowed to continue teaching (22 percent), with the least accepted statement being buying fresh vegetables from a shopkeeper or vendor who has the AIDS virus (15 percent). The percentage of women expressing an accepting attitude to all four statements is only two percent. The highest percentage for this indicator was found in Dohuk (5 percent).

12.3. Knowledge of a Place for HIV Testing, Counselling and Testing during Antenatal Care

Another important indicator is the knowledge of where to be tested for HIV and use of such services. In order to protect themselves and to prevent infecting others, it is important for individuals to know their HIV status. Knowledge of their own status is also a critical factor in the decision to seek treatment. Questions related to knowledge of a facility for HIV testing among women, and whether they have ever been tested are presented in Table HA.5. Four percent of women knew where to be tested, while one percent had actually been tested. Nevertheless a negligible proportion had been tested within the last 12 months (0.3 percent), while fewer have been tested and were told the result within the last 12 months (0.2 percent).

Among women who had given birth within the two years preceding the survey, the percent who received counselling and HIV testing during antenatal care is presented in Table HA.6. This percentage was only 0.6 percent. The percentage of women who were offered the test for HIV and actually tested was 0.2 percent.

Table HA.3: Knowledge of mother-to-child HIV transmission

Percentage of women age 15-49 years who correctly identify means of HIV transmission from mother to child, Iraq, 2011

	Percentage who know HIV can be transmitted from mother to child	Percent who know HIV can be transmitted:				Does not know any of the specific means	Number of women
		During pregnancy	During delivery	By breastfeeding	All three means [1]		
Governorate							
Dohuk	41.4	38.9	31.7	34.0	27.2	9.5	2195
Ninewa	41.8	40.0	34.5	26.8	23.0	10.2	4774
Suleimaniya	64.4	57.1	38.1	44.2	27.7	9.0	3729
Kirkuk	38.8	36.1	34.7	33.5	31.2	15.5	2361
Erbil	57.2	52.5	52.1	51.7	46.9	16.9	3209
Diyala	35.5	33.4	30.4	29.7	26.3	16.2	2296
Al-Anbar	48.9	43.4	42.6	36.8	33.8	7.6	2380
Baghdad	41.2	35.1	28.1	23.8	19.2	12.2	11144
Babil	38.0	35.0	33.8	24.3	21.6	5.5	3096
Karbala	50.5	46.7	39.5	39.8	31.6	12.4	1769
Wasit	29.0	26.2	23.9	18.1	14.8	4.8	1845
Salahaddin	41.1	38.4	31.7	23.1	17.7	8.3	2331
Al-Najaf	49.5	46.3	36.2	39.0	28.9	15.0	2178
Al-Qadisiya	41.4	37.5	31.3	32.0	24.3	8.8	1912
Al-Muthanna	32.3	28.7	22.7	19.3	15.0	4.0	1140
Thi-Qar	39.4	37.0	31.8	33.9	27.8	4.6	3104
Missan	34.1	31.5	26.9	22.8	19.6	6.7	1552
Basrah	50.2	47.9	44.1	42.0	37.0	11.7	4179
Region							
Kurdistan Region	56.3	51.1	41.5	44.4	34.3	11.9	9134
South/Centre Iraq	41.6	37.9	32.9	29.2	24.5	10.2	46060
Area							
Urban	50.5	45.9	38.9	35.9	29.4	11.6	39650
Rural	27.3	25.1	22.4	21.0	17.9	7.8	15544
Age group							
15-24	44.2	40.0	34.2	32.8	26.3	9.6	21971
25+	43.8	40.2	34.4	31.0	26.0	11.1	33223
Age group							
15-19	42.2	38.0	32.5	31.8	25.4	8.9	11875
20-24	46.7	42.2	36.1	34.1	27.4	10.4	10096
25-29	42.6	38.7	32.8	30.3	24.7	11.0	8522
30-39	45.5	41.6	35.9	32.1	27.3	12.1	14787
40-49	42.5	39.3	33.4	29.9	25.2	9.8	9913
Marital status							
Ever married	41.6	38.2	32.5	29.7	24.8	11.0	37022
Never married	48.8	43.8	38.0	35.8	28.8	9.5	18172
Education							
None	13.8	12.5	10.4	10.9	8.7	5.3	8970
Primary	31.0	28.4	23.7	23.5	19.0	10.5	22317
Secondary +	68.0	61.9	53.6	47.6	39.6	12.6	23606
Non-standard curriculum	17.9	16.1	13.1	13.4	10.6	6.5	298
Wealth index quintiles							
Poorest	20.1	18.5	15.6	16.0	13.2	7.5	10078
Second	35.3	32.0	27.6	27.1	21.9	10.2	10592
Middle	42.7	39.2	33.4	32.2	26.5	10.8	11152
Fourth	51.4	47.0	39.3	36.4	30.0	12.3	11363
Richest	66.0	59.5	52.0	44.0	36.6	11.3	12009
Total	44.0	40.1	34.3	31.7	26.1	10.5	55194
¹ MICS indicator 9.3							

¹ MICS indicator 9.3

Table HA.4: Accepting attitudes toward people living with HIV/AIDS

Percentage of women age 15-49 years who have heard of AIDS who express an accepting attitude towards people living with HIV/AIDS, Iraq, 2011

Governorate	Percentage of women who:						Number of women who have heard of AIDS
	Are willing to care for a family member with the AIDS virus in own home	Would buy fresh vegetables from a shopkeeper or vendor who has the AIDS virus	Believe that a female teacher with the AIDS virus and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus	Agree with at least one accepting attitude	Express accepting attitudes on all four indicators [1]	
Dohuk	89.1	15.1	21.3	36.6	93.6	4.8	1117
Ninewa	92.0	13.5	20.6	33.4	94.7	2.4	2482
Suleimaniya	88.4	14.7	35.7	32.0	96.2	2.1	2736
Kirkuk	78.7	11.7	17.3	24.1	85.3	1.6	1283
Erbil	86.3	7.4	11.6	17.4	92.6	1.0	2378
Diyala	91.4	9.0	15.2	15.1	93.6	1.1	1187
Al-Anbar	62.0	11.6	11.7	29.8	77.7	0.7	1346
Baghdad	80.7	21.0	30.9	25.2	88.2	2.4	5957
Babil	93.4	17.6	22.0	26.9	97.8	0.7	1348
Karbala	94.1	15.0	20.7	26.2	96.3	3.0	1113
Wasit	93.4	15.3	18.6	43.7	95.3	2.2	624
Salahaddin	93.6	19.2	28.0	31.4	96.0	2.0	1151
Al-Najaf	92.1	14.8	15.7	28.1	95.7	3.7	1406
Al-Qadisiya	87.5	16.8	20.0	27.1	92.9	1.9	961
Al-Muthanna	64.8	13.4	17.5	22.1	75.0	1.6	414
Thi-Qar	97.3	10.9	17.1	36.1	98.6	1.2	1364
Missan	94.4	13.1	16.2	29.7	97.2	2.7	633
Basrah	95.0	13.3	17.4	40.2	98.3	2.1	2589
Region							
Kurdistan Region	87.7	12.0	23.9	27.3	94.4	2.2	6231
South/Centre Iraq	87.1	15.6	21.6	29.3	92.2	2.0	23859
Area							
Urban	87.5	15.5	23.3	27.8	93.0	2.1	24626
Rural	85.9	11.9	16.4	33.8	91.4	1.9	5463

Table HA.4: Accepting attitudes toward people living with HIV/AIDS

Percentage of women age 15-49 years who have heard of AIDS who express an accepting attitude towards people living with HIV/AIDS, Iraq, 2011

	Percentage of women who:					Number of women who have heard of AIDS
	Are willing to care for a family member with the AIDS virus in own home	Would buy fresh vegetables from a shopkeeper or vendor who has the AIDS virus	Believe that a female teacher with the AIDS virus and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus	Agree with at least one accepting attitude	Express accepting attitudes on all four indicators [1]
Age group						
15-24	87.5	17.0	24.7	29.0	93.3	2.5
25+	87.0	13.4	20.3	28.7	92.3	1.8
Age group						
15-19	86.9	17.0	24.0	29.5	92.7	2.5
20-24	88.2	17.1	25.5	28.5	93.8	2.5
25-29	86.0	15.5	22.3	28.6	91.3	1.9
30-39	86.8	12.7	19.3	28.4	92.2	1.9
40-49	88.1	12.9	20.3	29.4	93.2	1.6
Marital status						
Ever married	87.0	13.4	19.2	29.2	92.2	1.7
Never married	87.6	17.6	27.2	28.2	93.5	2.7
Education						
None	84.2	9.6	15.8	28.6	90.3	1.2
Primary	85.1	11.1	16.1	30.6	90.3	1.6
Secondary +	88.5	17.1	25.5	28.0	94.0	2.3
Non-standard curriculum	90.5	15.7	16.6	41.7	94.9	8.2
Wealth index quintiles						
Poorest	85.3	12.1	16.5	35.7	91.1	2.0
Second	85.9	11.0	17.5	30.8	92.0	1.7
Middle	86.6	12.7	19.6	30.4	92.1	2.0
Fourth	86.2	14.5	21.3	29.2	92.4	2.1
Richest	89.7	19.3	28.2	24.5	94.1	2.4
Total	87.2	14.8	22.0	28.8	92.7	2.1
¹ MICS indicator 9.4						30090

Table HA.5: Knowledge of a place for HIV testing

Percentage of women age 15-49 years who know where to get an HIV test, percentage of women who have ever been tested, percentage of women who have been tested in the last 12 months, and percentage of women who have been tested and have been told the result, Iraq, 2011

	Percentage of women who:				Number of women
	Know a place to get tested [1]	Have ever been tested	Have been tested in the last 12 months	Have been tested in the last 12 months and have been told result [2]	
Governorate					
Dohuk	6.2	1.5	0.4	0.4	2195
Ninewa	5.5	2.4	0.1	0.1	4774
Suleimaniya	3.8	1.6	0.3	0.3	3729
Kirkuk	3.5	0.4	0.0	0.0	2361
Erbil	2.5	1.1	0.4	0.2	3209
Diyala	1.3	0.8	0.1	0.1	2296
Al-Anbar	10.2	3.5	1.0	0.8	2380
Baghdad	4.0	0.7	0.2	0.2	11144
Babil	3.5	2.3	0.5	0.1	3096
Karbala	5.4	1.1	0.2	0.2	1769
Wasit	1.0	0.4	0.2	0.2	1845
Salahaddin	8.2	2.6	0.4	0.4	2331
Al-Najaf	2.4	1.2	0.4	0.3	2178
Al-Qadisiya	4.0	2.0	0.5	0.4	1912
Al-Muthanna	2.6	0.3	0.0	0.0	1140
Thi-Qar	1.4	0.3	0.1	0.1	3104
Missan	2.0	0.5	0.0	0.0	1552
Basrah	6.6	0.5	0.3	0.3	4179
Region					
Kurdistan Region	3.9	1.4	0.4	0.3	9134
South/Centre Iraq	4.3	1.2	0.3	0.2	46060
Area					
Urban	4.9	1.4	0.3	0.2	39650
Rural	2.7	0.8	0.3	0.2	15544
Age					
15-19	0.9	0.4	0.2	0.2	11875
20-24	3.7	1.8	0.4	0.3	10096
25-29	4.3	1.6	0.3	0.2	8522
30-34	5.5	1.4	0.3	0.2	7709
35-39	6.7	1.7	0.3	0.2	7078
40-44	6.4	1.3	0.4	0.2	5777
45-49	5.5	0.6	0.2	0.1	4136
Marital status					
Ever married	6.3	1.9	0.4	0.3	37022
Never married	0.0	0.0	0.0	0.0	18172
Wealth index quintiles					
Poorest	1.7	0.5	0.1	0.1	10078
Second	3.2	0.9	0.3	0.2	10592
Middle	4.0	1.1	0.2	0.2	11152
Fourth	4.6	1.1	0.2	0.2	11363
Richest	7.2	2.5	0.5	0.4	12009
Total	4.2	1.3	0.3	0.2	55194
¹ MICS indicator 9.5					
² MICS indicator 9.6					

Table HA.6: HIV counselling and testing during antenatal care

Among women age 15-49 who gave birth in the last 2 years, percentage of women who received antenatal care from a health professional during the last pregnancy, percentage who received HIV counselling, percentage who were offered and accepted an HIV test and received the results, Iraq, 2011

Governorate	Percentage of women who:					Number of women who gave birth in the 2 years preceding the survey
	Received antenatal care from a health professional for last pregnancy	Received HIV counselling during antenatal care [1]	Were offered an HIV test and were tested for HIV during antenatal care	Were offered an HIV test and were tested for HIV during antenatal care, and received the results [2]	Received HIV counselling, were offered an HIV test, accepted and received the results	
Dohuk	84.6	0.8	0.7	0.7	0.6	488
Ninewa	71.1	0.1	0.0	0.0	0.0	1307
Suleimaniya	88.7	0.2	0.2	0.1	0.1	517
Kirkuk	74.8	0.0	0.0	0.0	0.0	579
Erbil	72.0	2.0	0.0	0.0	0.0	625
Diyala	79.6	0.0	0.0	0.0	0.0	555
Al-Anbar	70.3	0.6	1.6	1.6	0.3	606
Baghdad	78.5	0.3	0.0	0.0	0.0	2503
Babil	76.9	0.0	0.0	0.0	0.0	828
Karbala	86.3	0.6	0.0	0.0	0.0	497
Wasit	74.6	1.1	0.1	0.1	0.0	461
Salahaddin	63.8	0.4	0.2	0.2	0.1	657
Al-Najaf	86.4	0.4	0.0	0.0	0.0	575
Al-Qadisiya	80.9	3.6	2.7	1.4	1.1	520
Al-Muthanna	84.4	0.3	0.0	0.0	0.0	333
Thi-Qar	80.6	0.0	0.0	0.0	0.0	853
Missan	70.7	2.1	0.0	0.0	0.0	479
Basrah	82.2	0.4	0.0	0.0	0.0	1189
Region						
Kurdistan Region	81.0	1.1	0.3	0.2	0.2	1630
South/Centre Iraq	77.3	0.5	0.2	0.2	0.1	11942
Area						
Urban	83.3	0.7	0.2	0.1	0.1	9195
Rural	66.1	0.3	0.3	0.2	0.1	4377
Young women						
15-24	81.9	0.4	0.2	0.1	0.1	4619

Table HA.6: HIV counselling and testing during antenatal care

Among women age 15-49 who gave birth in the last 2 years, percentage of women who received antenatal care from a health professional during the last pregnancy, percentage who received HIV counselling, percentage who were offered and accepted an HIV test and received the results, Iraq, 2011

	Percentage of women who:					
	Received antenatal care from a health professional for last pregnancy	Received HIV counselling during antenatal care [1]	Were offered an HIV test and were tested for HIV during antenatal care	Were offered an HIV test and were tested for HIV during antenatal care, and received the results [2]	Received HIV counselling, were offered an HIV test, accepted and received the results	Number of women who gave birth in the 2 years preceding the survey
Age						
15-19	83.5	0.2	0.3	0.2	0.2	1172
20-24	81.4	0.4	0.1	0.1	0.1	3447
25-29	77.9	0.7	0.3	0.2	0.1	3622
30-34	75.3	0.6	0.2	0.1	0.1	2799
35-49	72.5	0.7	0.3	0.2	0.1	2533
Education						
None	61.7	0.0	0.0	0.0	0.0	2303
Primary	75.3	0.3	0.1	0.1	0.1	6728
Secondary +	89.4	1.2	0.4	0.3	0.1	4536
Non-standard curriculum	(*)	(*)	(*)	(*)	(*)	6
Wealth index quintiles						
Poorest	61.0	0.4	0.3	0.2	0.1	3109
Second	75.3	0.3	0.1	0.1	0.1	2902
Middle	82.1	0.8	0.2	0.1	0.1	2861
Fourth	84.4	0.5	0.1	0.1	0.0	2564
Richest	91.3	1.1	0.4	0.4	0.1	2136
Total	77.7	0.6	0.2	0.2	0.1	13572

¹ MICS indicator 9.8

² MICS indicator 9.9

(*) Figures that are based on less than 25 unweighted cases

12.4. Orphans

Children are classified as orphaned if they have experienced the death of either parent. Due to the increase of violence and displacement in Iraq, more children are becoming orphaned. Children who are orphaned or living away from their parents may be at increased risk of neglect or exploitation if their parents are not available to assist and protect them. Monitoring the variations in different outcomes for orphans and comparing them to their peers gives us a measure of how well communities and governments are responding to their needs.

The frequency of children living with neither parent, mother only, or father only is presented in Table HA.7. In Iraq, about five percent of children aged 0-17 years are orphans who have lost one or both parents, and about two percent are not living with a biological parent and 92 percent of children live with both parents. Older age group 15-17 years has a higher percentage of orphans than younger age groups. By governorates, Diala, Baghdad, and Al-Anbar have the highest proportion of orphans (about 7 percent in each governorate).

One of the measures developed for the assessment of the status of orphaned children relative to their peers looks at the school attendance of children 10-14 for children who have lost one of their parents versus children whose parents are alive (and who live with at least one of these parents). If children whom at least one parent died do not have the same access to school as their peers, then families and schools are not ensuring that these children's rights are being met.

In Iraq, eight percent of children aged 10-14 have lost at least one parent (Table HA.8). Among those 79 percent are currently attending school. Among the children age 10-14 who have not lost a parent and who live with at least one parent, 83 percent are attending school. This would suggest that orphans are slightly disadvantaged compared to the non-orphaned children in terms of school attendance: orphans to non-orphans school attendance ratio is 0.94. The lowest ratio is found in Al-Qadisiya (0.71), followed by Kirkuk (0.82).

Table HA.7: Children's living arrangements and orphanhood

Percent distribution of children age 0-17 years according to living arrangements, percentage of children age 0-17 years in households not living with a biological parent and percentage of children who have one or both parents dead, Iraq, 2011

Sex	Living with both parents	Living with neither parent				Living with mother only		Living with father only		Impossible to determine	Total	Not living with a biological parent [1]	One or both parents dead [2]	Number of children age 0-17 years
		Only father alive	Only mother alive	Both are alive	Both are dead	Father alive	Father dead	Mother alive	Mother dead					
Male	92.9	0.1	0.2	0.2	0.2	1.2	4.0	0.5	0.7	0.0	100.0	0.7	5.2	56260
Female	91.1	0.1	0.2	2.0	0.6	1.2	3.7	0.5	0.6	0.1	100.0	2.9	5.2	53402
Governorate														
Dohuk	94.2	0.1	0.2	0.4	0.3	1.2	2.7	0.1	0.7	0.0	100.0	1.0	4.0	4241
Ninewa	92.1	0.3	0.1	1.8	0.2	0.6	4.1	0.7	0.2	0.1	100.0	2.4	4.8	10053
Suleimaniya	92.2	0.3	0.1	0.6	0.1	1.2	3.8	0.4	1.2	0.0	100.0	1.0	5.5	5417
Kirkuk	90.9	0.1	0.4	0.8	1.1	1.6	3.8	1.0	0.5	0.0	100.0	2.4	5.8	4066
Erbil	93.8	0.0	0.1	0.4	0.2	1.4	3.2	0.2	0.6	0.1	100.0	0.7	4.1	5816
Diyala	90.1	0.2	0.2	1.0	0.4	1.4	5.3	0.1	1.0	0.2	100.0	1.8	7.1	4423
Al-Anbar	92.1	0.0	0.0	0.6	0.5	0.4	4.9	0.3	1.0	0.1	100.0	1.2	6.5	5082
Baghdad	91.1	0.0	0.2	1.0	0.7	1.0	5.0	0.3	0.6	0.1	100.0	1.9	6.5	20564
Babil	92.7	0.1	0.2	1.2	0.2	1.0	3.1	0.3	1.1	0.1	100.0	1.8	4.7	6411
Karbala	92.3	0.1	0.1	1.2	0.1	1.4	3.8	0.3	0.7	0.0	100.0	1.5	4.8	3528
Wasit	92.7	0.0	0.3	0.6	0.3	1.2	3.2	0.9	0.8	0.1	100.0	1.2	4.5	4083
Salahaddin	91.9	0.0	0.2	1.0	0.3	1.8	3.6	0.4	0.7	0.2	100.0	1.4	4.7	5003
Al-Najaf	91.0	0.3	0.1	1.6	0.5	1.4	3.5	0.4	1.0	0.1	100.0	2.6	5.5	4508
Al-Qadisiya	91.8	0.3	0.6	1.4	0.3	1.9	2.4	0.8	0.4	0.0	100.0	2.6	4.0	4076
Al-Muthanna	90.5	0.0	0.2	1.2	0.3	3.0	3.4	0.5	0.8	0.0	100.0	1.7	4.7	2581
Thi-Qar	91.6	0.0	0.3	1.0	0.5	2.0	3.5	0.1	0.7	0.1	100.0	1.9	5.1	6943
Missan	92.6	0.0	0.2	1.1	0.2	1.4	3.5	0.5	0.3	0.0	100.0	1.6	4.3	3767
Basrah	93.0	0.0	0.2	1.3	0.3	1.0	2.6	0.9	0.5	0.1	100.0	1.8	3.6	9100
Region														
Kurdistan Region	93.4	0.1	0.1	0.4	0.2	1.3	3.3	0.3	0.8	0.1	100.0	0.9	4.6	15474
South/Centre Iraq	91.8	0.1	0.2	1.2	0.4	1.2	3.9	0.5	0.6	0.1	100.0	1.9	5.3	94189
Area														
Urban	91.7	0.1	0.2	1.1	0.4	1.2	4.0	0.6	0.5	0.1	100.0	1.9	5.3	73096
Rural	92.5	0.1	0.2	0.9	0.3	1.2	3.5	0.2	0.9	0.1	100.0	1.5	5.0	36567

Table HA.7: Children's living arrangements and orphanhood

Percent distribution of children age 0-17 years according to living arrangements, percentage of children age 0-17 years in households not living with a biological parent and percentage of children who have one or both parents dead, Iraq, 2011

Age	Living with neither parent				Living with mother only		Living with father only		Impossible to determine	Total	Not living with a biological parent [1]	One or both parents dead [2]	Number of children age 0-17 years
	Living with both parents	Only father alive	Only mother alive	Both are alive	Both are dead	Father alive	Father dead	Mother alive	Mother dead				
0-4 years	97.5	0.0	0.1	0.1	0.0	0.9	0.9	0.3	0.2	0.0	100.0	1.2	34607
5-9 years	93.8	0.1	0.2	0.2	0.2	1.3	3.2	0.5	0.6	0.0	100.0	4.2	31697
10-14 years	89.9	0.1	0.2	0.6	0.4	1.3	5.8	0.6	1.1	0.0	100.0	7.6	28118
15-17 years	79.5	0.2	0.6	5.9	1.6	1.7	8.1	0.7	1.2	0.5	100.0	11.8	15240
Wealth index quintiles													
Poorest	91.8	0.1	0.2	0.9	0.3	1.5	3.8	0.3	0.9	0.1	100.0	5.3	25514
Second	92.8	0.1	0.1	0.8	0.3	1.3	3.5	0.4	0.6	0.1	100.0	4.6	23606
Middle	91.2	0.0	0.3	1.1	0.4	1.2	4.5	0.5	0.8	0.1	100.0	6.0	22255
Fourth	92.2	0.1	0.1	1.2	0.5	1.0	3.8	0.5	0.5	0.1	100.0	5.0	20513
Richest	91.8	0.1	0.3	1.4	0.5	1.2	3.5	0.7	0.5	0.1	100.0	4.9	17775
Total	92.0	0.1	0.2	1.1	0.4	1.2	3.8	0.5	0.7	0.1	100.0	5.2	109663

¹ MICS indicator 9.17

² MICS indicator 9.18

Table HA.8: School attendance of orphans and non-orphans

School attendance of children age 10-14 years by orphanhood, Iraq, 2011

Sex	Percentage of children whose mother or father have died (orphans)	Percentage of children of whom both parents are alive and child is living with at least one parent (non-orphans)	Number of children age 10-14 years	Percentage of children who are orphans and are attending school [1]	Total number of orphan children age 10-14 years	Percentage of children who are non-orphans and are attending school [2]	Total number of non-orphan children age 10-14 years	Orphans to non-orphans school attendance ratio
Male	7.2	92.5	14372.4	86.3	1032	89.9	13297	0.96
Female	8.1	91.0	13745	71.8	1107	76.3	12511	0.94
Area								
Urban	7.7	91.7	18720	83.2	1442	88.5	17170	0.94
Rural	7.4	91.9	9398	69.6	698	73.1	8637	0.95
Governorates								
Dohuk	6.2	93.4	1130	93.8	70	90.0	1055	1.04
Ninewa	6.9	92.0	2428	77.4	167	81.6	2235	0.95
Suleimaniya	6.8	93.1	1556	95.9	105	95.9	1448	1.00
Kirkuk	9.9	90.1	907	72.2	90	88.2	817	0.82
Erbil	5.4	94.3	1674	90.8	91	91.1	1579	1.00
Diyala	9.5	89.7	1143	76.9	109	83.2	1025	0.92
Al-Anbar	11.0	88.9	1352	82.2	149	82.2	1203	1.00
Baghdad	9.0	90.4	5413	79.1	486	85.4	4895	0.93
Babil	7.0	91.9	1632	78.1	115	80.1	1501	0.98
Karbala	7.8	91.4	827	77.4	65	83.8	756	0.92
Wasit	6.1	93.5	1083	72.3	66	74.7	1012	0.97
Salahaddin	7.3	91.6	1250	64.7	92	77.2	1145	0.84
Al-Najaf	9.2	90.4	1092	75.6	100	84.1	987	0.90
Al-Qadisiya	5.4	93.4	1029	56.5	56	79.1	961	0.71
Al-Muthanna	6.8	92.9	631	(72.6)	43	75.8	586	0.96
Thi-Qar	7.0	92.6	1805	81.4	126	82.2	1672	0.99
Missan	7.2	92.2	959	67.6	70	65.6	884	1.03
Basrah	6.4	92.8	2207	82.5	141	83.0	2048	0.99
Region								
Kurdistan Region	6.1	93.6	4359	93.6	266	92.5	4082	1.01
South/Centre Iraq	7.9	91.4	23759	76.6	1874	81.6	21726	0.94
Total	7.6	91.8	28118	78.8	2140	83.3	25808	0.94

¹ MICS indicator 9.19; MDG indicator 6.4

² MICS indicator 9.20; MDG indicator 6.4

13. Child-Centred Equity Analysis

13.1. Introduction

The interview process for MICS4 was conducted in the first half of 2011. In parallel, the Government of Iraq (Central Statistics Organization and Kurdistan Regional Statistics Office) and UNICEF developed a methodology to produce further knowledge on the level of well-being and deprivation children experience across Iraq. The objective was to conduct a systematic analysis that ultimately would provide crucial information to increase the impact and efficiency of the interventions aimed at improving the wellbeing of Iraqi children. This methodology was discussed, refined, and eventually validated by a group of international experts in October 2011.

This methodology is briefly reviewed in this section. Herein is the introduction of the methodology, a summary of some of the results using MICS4 data, and comments on the potential of this methodology for the development of policies and interventions to improve the lives of 16.5 million children, which represents half of the population of Iraq.

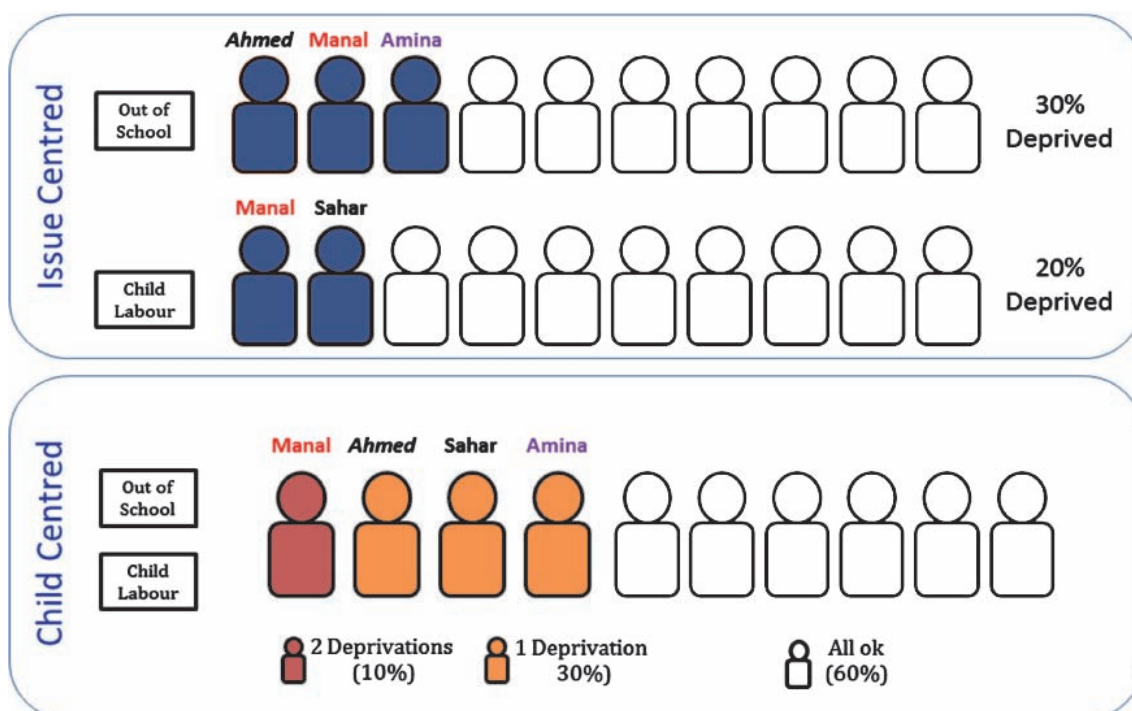
13.2. Conceptual Framework for a Child-Centred Equity Analysis

The Child-centred analysis enables a multidimensional analysis of deprivations in different life-cycles. It measures deprivations that children face regarding the fulfilment of their rights as reflected in the Convention on the Rights of the Child (CRC). A deprivation here is understood as the violation of at least one of the child rights. Deprivations are sometimes interconnected and often related to common –and interacting– factors; they are not evenly or randomly distributed among children. A child facing a single deprivation will tend to have more opportunities to develop his/her full potential than a child facing that deprivation plus a second one. Inequity is manifested here as compounded deprivations that reduce the opportunities of some children to survive or develop their full potential without discrimination, bias or favouritism.

The analysis of single indicators (hereby referred to as the issue-centred approach) only informs about individual issues children experience whereas the analysis of multiple indicators (hereby referred to as the child-centred approach) takes every child and measures him or her against every relevant indicator, counting the number of deprivations he/she faces at the same time (see Figure CC.1). This produces a more realistic picture of the situation of children and the fulfilment, or lack thereof, of their rights.

This methodology adopts a life-cycle approach in order to illuminate the different types of issues or deprivations children experience during the different stages of their lives; children have different needs during the different stages of their lives, and therefore the potential deprivations will be different. The rights in which fulfilment is at risk will be different for an under five years old child than for an adolescent.

Figure CC.1: Issue-Centred and Child-Centred approaches for the analysis of deprivations



13.3. Operationalization

The multidimensional analysis of deprivations in different life-cycles is conducted across seven dimensions in each of the three life-cycle stages (see Table CC.1 at the end of this Section). The selection of the dimensions follows the areas covered by the Bristol approach for child poverty analysis, while the life-cycles have been defined according to the needs of children at different stages in life and data availability. The first life-cycle stage, Birth and Early Childhood, comprises children from 0 to 4 years; the dimensions covered are maternal care, child care, nutrition, violent discipline, water, sanitation, and shelter. For the second life-cycle, Primary Childhood, children from 5 to 14 years, the dimensions include violent discipline, child labour, access to information, schooling, water, sanitation, and shelter. Children 15 to 17 years constitute the third life-cycle (adolescents), with the seven dimensions of schooling, access to information, early marriage, female genital mutilation, water, sanitation, and shelter. Every life-cycle has four dimensions plus the three that are common to children in any life-cycle: water, sanitation, and shelter. A more detailed description of the indicators can be seen in Table CC.2 (at the end of this section).

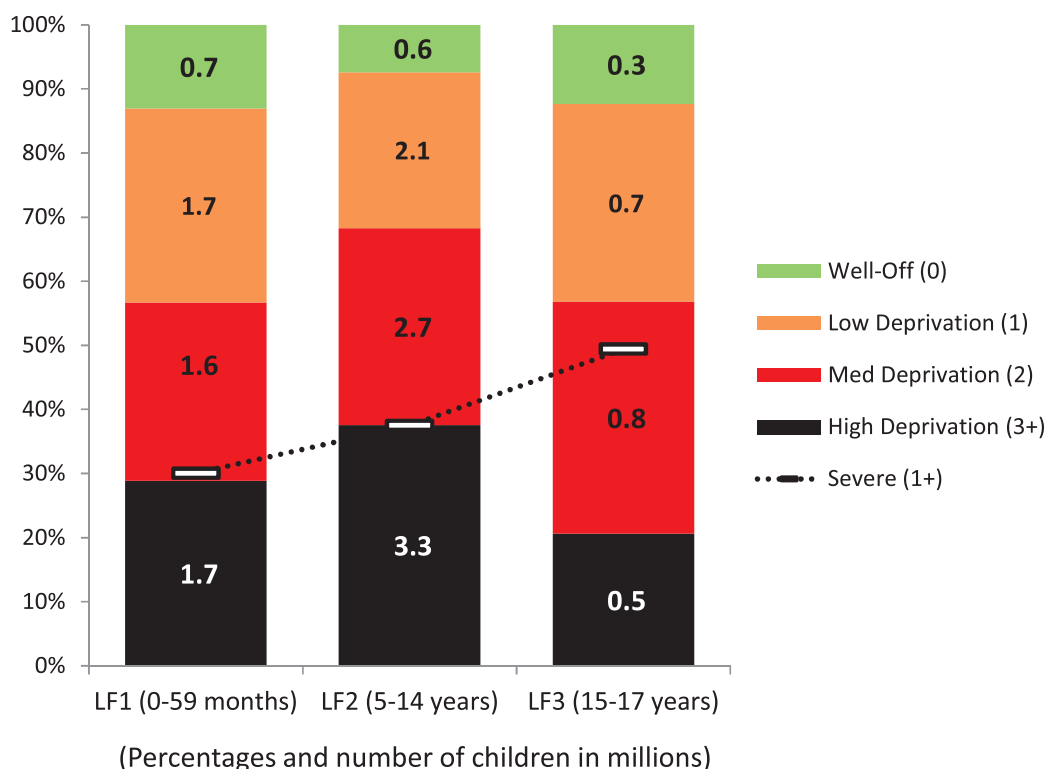
Every dimension is measured by the indicators listed in the Table CC.1. The indicators used in each dimension are defined in the same way or very close to MICS4 indicators (Table CC.2), which is based in international standards. This methodology allows differentiating not only the number and type of deprivations that children may face, but also its intensity; whether it is moderate or severe.

The results of the child-centred equity-focused methodology provides information that identifies the number and type of multiple deprivations faced by an individual child (for instance, child labour, lack of access to safe drinking water and lack of access to education), characteristics of the children (and their households) facing these deprivations, and geographic locations of these children.

13.4. Results

The application of this methodology using MICS4 data indicates that about 1.7 million (around 30 percent) of children under five years old face deprivations in at least three out of the seven dimensions; 1.6 million are deprived in two dimensions, another 1.7 million face one deprivation, and 700,000 are free from any deprivation. About 37 percent (3.3 million)

Figure CC.2: Deprivation Levels by Life-Cycle Stage, Iraq, 2011

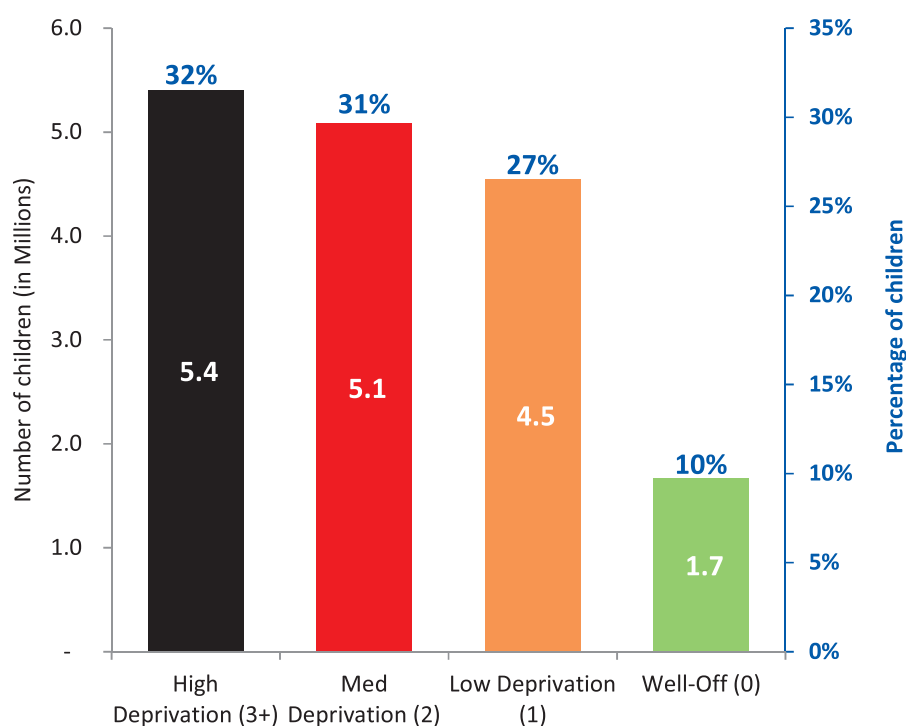


of the children in the Primary Childhood life-cycle, from 5 to 14 years old, are deprived in more than three dimensions, and another 30 percent (2.7 million) are deprived in two dimensions. A smaller number of adolescent (0.5 million; less than 20 percent), children from 15 to 17 years old, face three or more deprivations, although a higher percentage of about 40 percent (800,000) suffer from two deprivations. When we look at the intensity of the deprivations that children face, adolescents tend to suffer from severe deprivations in a higher degree than children in Primary Childhood or children in the Birth and Early Childhood life-cycle: 50 percent of the adolescents face severe deprivations compared to 37 percent of children in the second life-cycle, or 30 percent in the first one.

Figure CC.3 presents the results for all three life-cycles collapsed, showing the deprivations for all children from 0 to 17 years. About one third of all children face three or more deprivations, another third suffers from two deprivations, 27 percent face one deprivation, with only 10 percent free from any deprivation. This means that 1.7 million children out of 16.5 million living in Iraq are not deprived, while 5.4 million are deprived in at least three dimensions.

The geographical distribution of children 0 to 17 years who are highly deprived (facing three or more deprivations) shows considerable variation across governorates (Figure CC.4). While less than 25 percent of the children in Baghdad, Dohuk, Erbil, and Suleimaniya governorates are highly deprived, about half of the children in Wasit, Al-Qadisiya, and Al-Muthanna are.

Figure CC.3: Deprivation Level, all children 0-17 years, Iraq, 2011



Nevertheless, when we consider the number of children instead of percentages (Figure CC.5), the most populated and urbanized governorates are the ones where bigger numbers of highly deprived can be found. Baghdad and Ninewa are the governorates with the highest number of children facing three or more deprivations: more than 800,000 and 500,000 respectively. On the contrary, in the predominantly rural governorate of Al-Muthanna there are less than 200,000 highly deprived children.

Figure CC.4: Percentage of highly deprived children (3 or more deprivations), Iraq, 2011

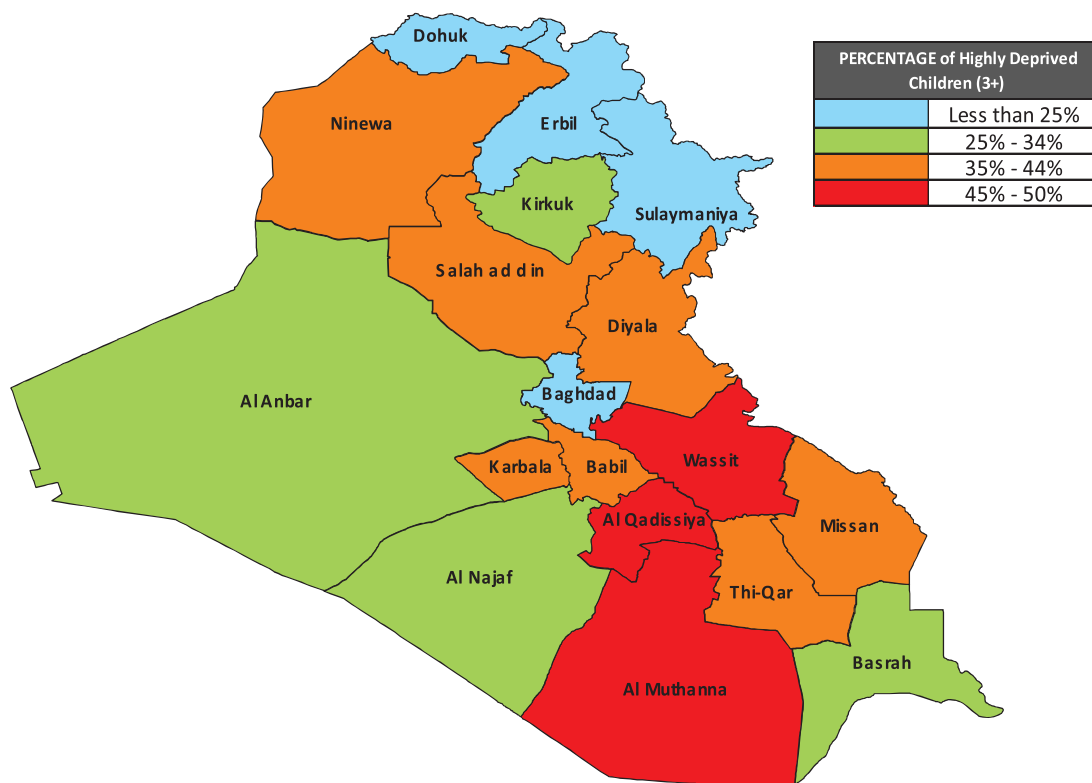
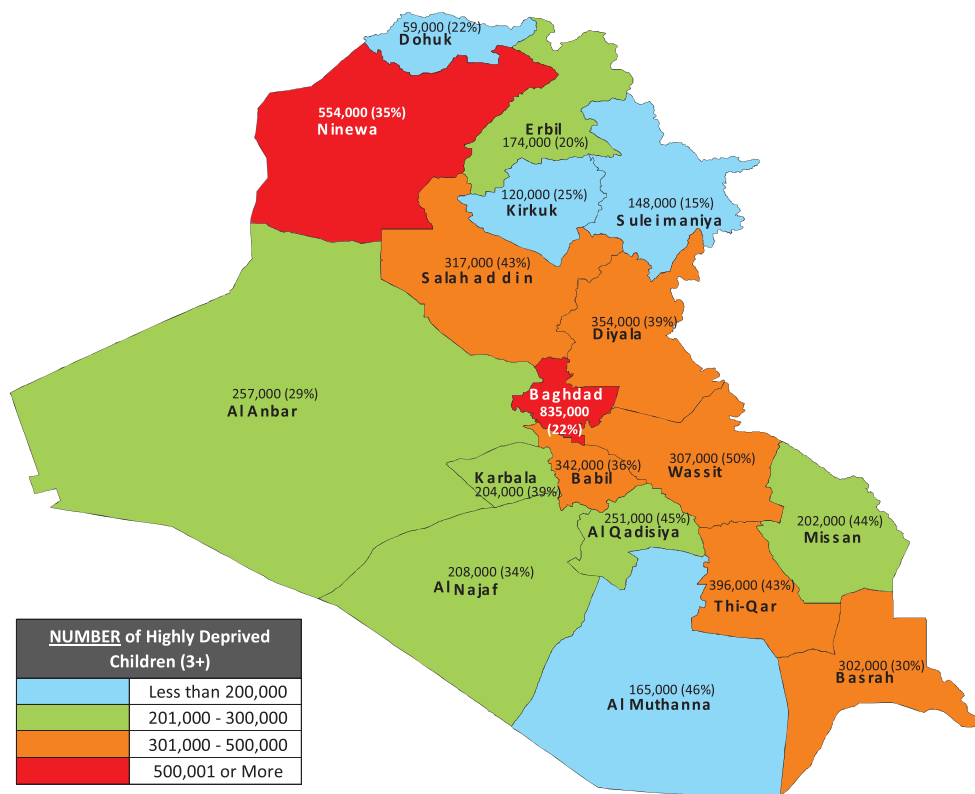


Figure CC.5: Number of highly deprived children (3 or more deprivations), Iraq, 2011



13.5. Further steps

The results produced with this methodology are varied and especially useful to design integrated programmes to address children's compounded deprivations. It is a first step towards a comprehensive and relevant evidence base on child inequities. Understanding the drivers or risk factors of compounded deprivations is the next stage in the analysis of results produced with this methodology.

While analysing the role of social, environmental, economic, institutional, and cultural conditions may be easier once the child-centred equity analysis has identified the most disadvantaged children and communities at district level and below, there is nonetheless an additional analysis that is required for this and can be conducted with this methodology. This is the analysis of the specific deprivations the most deprived children experience, the compounding of deprivations, and the pattern of deprivations for children of specific life-cycles or in specific regions. The answers to these questions will facilitate a holistic understanding of children's well-being, which will lead to better capturing the role of community level determinants, and hence of possible modalities for efficient and sustainable intervention.

Table CC.1: Life-cycles, dimensions, and indicators of the Child-Centred Equity analysis

Life-Cycle Stage	LF Dimension	CRC Thematic Area	MICS4 Section	Indicators
Birth & Early Childhood (0-59 months)	Maternal Care	Basic health and welfare	Reproductive Health	- Antenatal care coverage (at least four times by any provider); Skilled attendant at delivery
	Child Care	Basic health and welfare	Child Health	- Immunization coverage for diphtheria, pertussis and tetanus (DPT); Oral rehydration therapy with continued feeding; Care-seeking for suspected pneumonia
	Nutrition	Basic health and welfare	Nutrition	- Underweight; Stunting; Wasting
	Violent Discipline	Family environment and alternative care	Child Protection	- Psychological discipline; Physical discipline
Primary Childhood (5-14 years)	Violent Discipline	Family environment and alternative care	Child Protection	- Psychological discipline; Physical discipline
	Child Labour	Special protection measures	Child Protection	- Child Labour
	Access to Information	Civil rights and freedoms	Housing Conditions	- Household assets ownership
	Schooling	Education	Child Development Education	- Attendance to early childhood education; Appropriate grade for age; Primary school attendance; Intermediate school attendance
Adolescence (15-17 years)	Schooling	Education	Education	- Appropriate grade for age; Secondary school attendance
	Access to Information	Civil rights and freedoms	Housing Conditions	- Household assets ownership
	Child Marriage and Domestic Violence	Special protection measures	Child Protection	- Marriage before 18; Tolerance of domestic violence
	Female Genital Mutilation	Special protection measures	Child Protection	- Female genital mutilation/cutting
Shelter, Water & Sanitation (0-17 years)	Safe Water	Basic health and welfare	Water and Sanitation	- Use of improved drinking water sources; Appropriate treatment of water to make safe it for drinking
	Improved Sanitation	Basic health and welfare	Water and Sanitation	- Use of improved type of sanitation facility
	Shelter	Basic health and welfare	Housing Conditions	- Number of persons per bedroom/room; Floor material

Table CC.2: Operationalization of dimensions and indicators

Life-Cycle Stage	Dimension	Moderate Deprivation	Severe Deprivation	Imputation
Birth & Early Childhood (0-59 months)	Maternal Care	Not ANC 4+ or No Skilled attendant at delivery	Not ANC 4+ and No Skilled attendant at delivery	If any child in the household has the conditions for deprivation (moderate or severe), same deprivation level is assigned to all children 24-59 months old from the same mother. If a mother does not have a child 0-23 months but do have at least one child 24-59 months, the child is considered not deprived.
	Child Care	(no DPT immunization) or (no appropriate treatment of diarrhoea or pneumonia)	(no DPT immunization) and (no appropriate treatment of diarrhoea or pneumonia)	For immunization, deprivation is given according to child's age (2-4 months DPT1, 5-6 months DPT2, 7-59 months DPT3) For appropriate treatment of diarrhoea or pneumonia, deprivation is assigned to all children from the same mother if one of her children was deprived. If the mother has only one child 0-1 months, the child is considered not deprived.
	Nutrition	Stunting or Wasting or Underweight (all moderate <2SD)	Stunting or Wasting or Underweight (all severe <3SD)	None
	Violent Discipline	Child suffered psychological abuse as form of discipline or any physical form	Child suffered severe physical abuse (hit with a stick, burned or bitten) as form of discipline	For children not directly asked the question, if a child in the household suffered moderate/severe punishment, same level of deprivation is assigned
	Violent Discipline	Child suffered psychological abuse as form of discipline or any physical form	Child suffered severe physical abuse (hit with a stick, burned or bitten) as form of discipline	For children not directly asked the question, if a child in the household suffered moderate/severe punishment, same level of deprivation is assigned
Primary Childhood (5-14 years)	Child Labour	Child is involved in labour for: * Age 5-11 years: At least 1 hour of economic work or 28 hours of domestic work per week. * Age 12-14 years: At least 14 hours of economic work or 28 hours of domestic work per week	Child is involved in labour for: * Age 5-11 years: more than 7 hours of economic work or more than 28 hours of domestic work per week. * Age 12-14 years: more than 21 hours of economic work or more than 28 hours of domestic work per week	None
	Access to Information	Deprived if does not have electricity, telephone (landline or mobile) or radio/TV - At least 2 of these unavailable.	Deprived if does not have electricity and telephone (landline or mobile) and radio/TV - All simultaneously.	Household deprivation level is assigned to all children in the household (Note: definition is equal to Bristol methodology)
	Schooling	* Child is 4-5 years at beginning of school year and not attending (or attended)	* Child is 4-5 years at beginning of school year and has never been to school at all	None

Table CC.2: Operationalization of dimensions and indicators

Life-Cycle Stage	Dimension	Moderate Deprivation	Severe Deprivation	Imputation
		preschool or primary -the later is relevant in Iraq. Or not attending/never attended school at all * Child is 6-14 years old and in lower grade for age at beginning of school year. Or not attending/never attended school at all	* Child is 6-14 years at beginning of school year and not attending school (or never attended school)	
Adolescence (15-17 years)	Schooling	Child is 14-17 at beginning of school year and in lower grade for age at beginning of school year. Or never been to school	Child is 14-17 at beginning of school year and not attending school (or never attended)	None
	Access to Information	Household does not have either satellite or radio set	Household does not have dish/satellite and does not have radio and does not have internet	Household deprivation level is assigned to all children in the household
	Child Marriage and Domestic Violence	Girl is 15-17 years old and currently or ever married	Girl is 15-17 years old and currently or ever married and reports wife beating is justified by any one reason	None
	Female Genital Mutilation (FGM)	* 15-17 years old girl reports to have undergone any form of female genital mutilation/cutting (FGM/C)	* 15-17 years old girl reports to have undergone any form of FGM/C and thinks practice should be "continued" or "depends"	None
	Safe Water	Household using unimproved drinking water sources	Household using unimproved drinking water and does not use treat water to make safe for drinking	Household deprivation level is assigned to all children in the household
Shelter, Water & Sanitation (0-17 years)	Improved Sanitation	Household using unimproved sanitation facility	Household using No facility, Bush, Field (95) as sanitation facility	Household deprivation level is assigned to all children in the household
	Shelter	Five or more persons (Overcrowding) per bedroom/room or no floor materials (earth, sand, dung)	Five or more persons (Overcrowding) per bedroom/room and no floor materials (earth, sand, dung)	Household deprivation level is assigned to all children in the household

14. Mapping Districts Codes

Maps Code	District Name	Maps Code	District Name
1	ZAKHO	60	RAWA
2	SEMEL	61	ANA
3	DUHOK	62	HADITHA
4	AMEDI	63	HEET
5	SHEKHAN	64	ALRUTBA
6	BARDARASH	65	RAMMADY
7	AKRE	66	FALLUJA
8	TALLAHFAR	67	TARMEEA
9	TALKAEF	68	ALKADMIYA
10	NAINAWA	69	ALAHDHAMIYA
11	ALHAMDANYA	70	ABUGHAREEB
12	SINJAR	71	ALKARKH
13	ALBAHAAJ	72	ALSADR1
14	ALHADHAR	73	ALSADR2
15	MERGASOOR	74	ALRASSAFA
16	SORAN	75	ALMADAEEN
17	CHOMAN	76	ALMAHMOODIYA
18	RAWANDOOZ	77	ALMUSAEEB
19	SHAQLAWA	78	ALMAHAWHEEL
20	KHEBAT	79	ALHILLA
21	ERBIL	80	ALHASHMEEA
22	DASHTYHAWLER	81	AENALTTAMR
23	KOISINJAQ	82	KARBALAA
24	MAKHMOOR	83	ALHINDEEA
25	RANYA	84	ALSWERA
26	PSHDAR	85	ALAZIZIYA
27	DOKAN	86	ALNAHMANIYA
28	CHAMCHAMAL	87	BADRA
29	SULAYMANYIA	88	KOOT
30	MAWAT	89	ALHAY
31	SHARBAZHER	90	ALNAJAF
32	PENJWEEN	91	ALKOOFA
33	SAIDSADIQ	92	ALMANADHERA
34	QARADAGH	93	ALSAMIA
35	SHAHRAZOOZ	94	ALDIWANYIA
36	HALBJA	95	ALAFAK
37	KFREE	96	ALHAMZA
38	KALAR	97	ALRAMITHA
39	DARBANDIKHAN	98	ALSAMAOUA
40	KHANAQEEEN	99	ALKHADR
41	ALDBS	100	ALSALMAN
42	ALHAWEEJA	101	ALRAFEE
43	KERKUK	102	ALSHATRA
44	DAQOOQ	103	ALNASIRIA
45	ALSHARGAT	104	SOUKAL
46	BEJEE	105	ALGEBUAESH

Maps Code	District Name	Maps Code	District Name
47	TKREET	106	ALIALGABI
48	TOZKHORMATOO	107	ALAMARA
49	ALDDOR	108	ALMIMONA
50	SAMARAA	109	ALKAHLAA
51	BALAD	110	ALMAJAR
52	ALDUJAEL	111	KHLASALAH
53	KFREE	112	ALQRNA
54	ALKHALS	113	ALMUDINA
55	ALMIQDADYA	114	SHUTALARAB
56	KHANAQEEN	115	ALBASRA
57	BAKOOBA	116	ALQASEEB
58	BALADROOZ	117	ALZABEAR
59	ALQAEEM	118	ALFAW