Republic of Iraq
Council of Ministers
Planning Commission
The Central Statistical Organisation

United Nations Children's Fund
(UNICEF)

Multiple Indicator Cluster Survey for the Year 2000

Preliminary Report

Baghdad, February

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Appreciation

The Steering Committee of the Multiple Indicator Cluster Survey for the year 2000 presents its thanks and appreciation to His Excellency the Minister/President of the Planning Commission, Dr. Hassan Abdul Mon'em Al-Khattab, for his invaluable efforts and relevant instructions all through the stages of work. Wishing him the best of success.

Acknowledgement

The Steering Committee of the Multiple Indicator Cluster Survey 2000 presents its appreciation to all parties who contributed in the preparation and the implementation of the survey from the staff of the Ministry of Health, the Ministry of Education and the Ministry of Interior. Special thanks go to the participants in the implementation and editing of the fieldwork in all governorates; doctors at the Health Directorates, specialists of the General Directorates of Education and the Water and Sewerage Directorates and all other supporting authorities. The Committee also presents its appreciation to the staff of the Central Statistical Organization at the Organization's headquarters of all departments, and staff of the Statistics Directorates whether those who participated in the fieldwork or in all activities of the desk work.

The collaboration and co-ordination of efforts starting from the preparatory phase and field work phase and ending with the computerised processing phase and preparation of survey results, have all had a big role in the success of the survey and consistency of its results within an outstanding period of time, despite the huge size of work involved.

The Steering Committee of the Survey also takes this opportunity to pay special tribute to the efforts of the Office of the United Nations Children's Fund (UNICEF) in Iraq, for its essential support to facilitate the implementation of the survey and provision of its requirements and technical expertise.

Staff Involved in MICS

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Mr. Behnam Elias Butrus	Director General of Technical Affairs Department	Member
Mr. Abdulla Hasan Mathi	Acting Director General of Administrative & Financial Affairs	Member
Dr. Mahdi Mohsen Ismail	Director of Training and Statistical Research Centre	Member
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I. Background

Introduction

At the World Summit for Children held in New York in 1990, a set of goals related to children's conditions in the world were endorsed/documented/set for the end of the last decade of the 20th century to act as a guideline for all countries. Accordingly, the various organisations and departments of the ministries and independent bodies that are concerned with children's conditions set themselves the task of implementing annual plans of action directed towards the realisation /achieving of the goals National Plan for Childhood for that decade. These measures were taken to ensure that their actions are consistent with the development/progress in children's conditions that the Iraqi society aspires to achieve/realise.

The Plan of Action also called for the establishment of mechanisms for monitoring progress toward the goals and objectives set for the year 2000. Toward this end, UNICEF, in collaboration with WHO, UNESCO and others, has developed a core set of 75 indicators of specific aspects of the situation of children. The 2000 Iraq's MICS survey has been conducted to provide end-decade information on many of these indicators.

The Iraqi MICS was carried out by the Central Statistical Organisation/ Planning Commission, in co-ordination with the concerned ministries and bodies, in particular Ministry of Health, Ministry of Education, and Ministry of Interior (General Commission for water and Sewerage). Ministries of Health and Education were represented in the National Steering Committee that supervised the implementation of the survey. A large number of doctors from the health directorates of the governorates participated in the survey's field and desk/clerical work. Staff from the education, and water and sewerage directorates in the governorates was also involved in the implementation of the different clerical and field activities entailed by the conduct. Most of CSO staff took part in the implementation of the various clerical and field activities of the survey over and above their heavy involvement in the various preparatory tasks. To ensure proper implementation of the survey CSO professionals devoted lot of time to prepare for the survey.

This survey was implemented in co-ordination with the United Nation Children's Fund in Iraq. Iraq UNICEF office provided financial as well as technical support for all stages of the survey. UNICEF commissioned and international consultant to evaluate and assess the work performed at all stages of the survey.

This preliminary report provides a review of the methodology adopted for the preparation and implementation of the survey and of the basic indicators that it covered. A comprehensive full report for the survey's indicators will be prepared at a later date.

Survey Objectives

The 2000 Multiple Indicator Cluster Survey of Iraq has as its primary objectives:

- To provide up-to-date information for assessing the situation of children and women in Iraq at the end of the decade and for looking forward to the next decade;
- To furnish data needed for monitoring progress toward goals established in 1990 at the World Summit for Children and 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.

II. Sample and Survey Methodology

Sample Design

The sample of the Iraqi MICS was designed to be representative of the whole country and for rural and urban areas[1], and covered all the 18 governorates of Iraq. CSO professionals did the national sample size calculations. These calculations set the sample size at 13,430 households. The sample size was initially distributed equally among the 18 governorates with the exception of Baghdad where the rural percentage was increased from 10 percent to 25 percent. Thus, each governorate was allocated an equal sample size of 740 households except Baghdad with a sample size of 850 households. The sample was to be distributed to clusters of equal size. It was decided to work on a cluster size of 10 households.

Before selecting the sample of each one of the 18 governorates -through three stages stratified random sampling method- the sample of each governorate was distributed among its Qada'as[2], and among the rural and urban areas of each Qada'a, proportionately to size. Accordingly, the number of household (and clusters) of the urban and of the rural areas of each governorate was determined. Then for each urban/rural Qada'a a three stage stratified sampling design was employed as follows:

First stage: *Mahalas/Villages* in each Qada'a were listed with a measure of population. The required number of Mahallas and Villages were selected according to probability proportionate to size (PPS) sampling.

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[1] All sampling frames used defined urban areas as any administrative set-up lying within the municipality boarder. Areas other than that are considered rural

[2] All sampling frames made use of the administrative set-up present in Iraq population census. Each governorate is divided into districts (Qada'a) Each Qada'a is divided into sub-districts (Nahiya). These are further divided into Quarters (Mahala) in urban areas and (Village) in rural areas. The Primary Sampling Unit is Mahala in urban area and Village in rural area.

Second stage: Each selected Mahala in the urban area, and selected village in the rural area, was divided into segments with a population of approximately 500 each. One segment or more was selected at random. Then each segment was divided into blocks or *Majals* with 25-30 households in urban areas and 20-25 households in rural areas. One *Majal* was then selected by simple random sampling.

Third stage: Within each selected *Majal* an update of existing household listing, or complete household listing, was carried out; and a cluster of 10 households was selected by systematic random sampling.

Questionnaires

The questionnaire is based on the MICS model questionnaire provided by UNICEF, which contains modules on households, women aged (15-49), and children under 5. The questionnaire used is based on the Arabic translation of the English core questionnaire, provided by the MENARO, with some revisions and adaptations. The child Mortality module was excluded, the HIV module was revised to suit local conditions, the optional modules on child disability and night blindness were included, and additional questions on breast feeding, water and sanitation, and maternal and new-born health were incorporated in the relevant modules.

The Arabic version was reviewed closely and repeatedly to ensure its consistency with the original version on the one hand and its suitability with the local terminology/vocabulary on the other. To detect problem areas and minimise misinterpretations, the endorsed questionnaire was pre-tested in August2000. Based on the results of the pre-test, modifications were made as deemed necessary.

Training

Training was given special prominence in the conduct of the survey. It was believed that the preparation and implementation of a detailed and comprehensive training plan was a necessary prerequisite for the proper understanding and comprehension of the technical details of sample design and selection, as well as the instructions for filling the questionnaire. The overall training activity undertaken in preparation for the conduct of the survey can be summarised as follows:

- Number of implemented training workshops : 15
- Number of training days: 50
- Number of trainees:
    - 10 Central Supervisors
    - 39 Local Supervisors
    - 54 Local Editors
    - 162 Fieldworkers
    - 44 Central Desk Editor
    - 6 Central Desk Reviewer
    - 13 Data Entry (Computer) Reviewer
    - 53 Data Entry Clerks
    - Total Number of Trainees 381

The workshops were conducted at the centre. The training workshops that were concerned with the conduct of interviews or with the editing and review of questionnaires involved the conduct of pilot survey.

In addition to the above workshops, the central supervisors carried out one refresher workshop in each governorate for all staff involved in the survey in the governorate concerned. These refresher workshops were implemented two days before the start of the fieldwork.

Fieldwork

The fieldwork lasted 26 days. To ensure timely and efficient conduct, detailed workplan was drawn for carrying it out. The basic framework of this plan was the following:

- Each member of the National Steering Committee was designated/appointed as a central supervisor for 2-3 governorates.
- The director of the statistical office of each governorate was appointed as local supervisor of the fieldwork in the governorate concerned with the head of care unit of the directorate of health of the governorate as an aid in supervision.
- In each governorate 4 teams carried out the fieldwork. Each team had one female doctor or health personnel from the directorate of health of the governorate and a statistician from the statistical office of the governorate.
- In each governorate a committee of 3 was formed to do the local editing. The committee's members belonged to the following bodies of the governorate;
  - The General Directorate for Education
  - General Commission for Water and Sewerage
  - Statistical Office

The table below gives the number of staff, by type of work performed, that was involved in the fieldwork

Type of Work	Total Number
Central Supervisor	10
Local Supervisor	39
Fieldworker	162
Local Editor	54

One vehicle was provided for each central supervisor, and for each single fieldteam. Thus a total of 86 vehicles was provided for the fieldwork. The provided transport ensured the arrival of the field teams to the selected clusters on time and contributed to the timely execution of work.

Office Work and Data Processing

As a complement to fieldwork, a plan for desk/office work was also prepared. This plan can be summarised as follows:

- The conduct of local editing by the local office editing teams in the governorates.
- Editing of work at the local/governorate level by the central supervisors.
- Editing of the work by the central office editing teams at the centre at CSO premises.
- Return of the questionnaire with mistakes or data gaps to the field so that it can be filled again correctly.
- Reviewing the edited questionnaires once again by central office reviewing teams as a prelude to computer entry.
- Entry of data by the data entry clerks trained for that purpose.
- Editing of entry operations by data entry (Computer) reviewers, making the corrections whenever possible.
- Cleaning and verification of data entry operations in accordance with the stages set in the data entry programme (EpiInfo)
- Final editing and cleaning of files by the central supervisors of the data processing work. And the cleaning of files after completion of data entry.
- Merging of files and the preparation of the required tables and reports.

These activities were continuously followed up and evaluated by the consultant commissioned by UNICEF for the survey.

Weighing of Data

The sampling design is not self-weighing, due to the disproportionate allocation of the sample among governorates urban/rural strata. For reporting national (or urban/rural) level results, design stratum weights were used. These weights were calculated as the ration of proportionate sample to the selected disproportionate sample. Accordingly all indicators cited in this report are weighted indicators that have taken into account the relative significance of population size of each governorate.

Sample Coverage

Of the 13430 households selected for the sample, 13114 were reached. Of these, 13011 were successfully interviewed yielding a household response rate of 99.2% for the whole country, 99.3% response rate for the urban areas, and 99.2% for the rural areas. In the interviewed households of the sample, 23079 eligible women (age 15-49) were identified. Of these, 22994 were successfully interviewed, giving a rate of 1.77 eligible woman per interviewed household. In addition, the sample contained 14744 children, of whom 14676 were interviewed. The response rate of children was 99.5% for the whole country, 99.6% and 99.5% for the urban areas and rural areas respectively.

Properties	Environment		Total
	Urban	Rural	
Number of Households in the sample	8141	5289	13430
Number of Households Reached/accessed	8024	5090	13114
Number of Households Interviewed	7964	5047	13011
Response rate of-Households	99.3%	99.2%	99.2%
Number of Eligible Women in the Sample	13998	9081	23079
Number of EligibleWomen Interviewed	13943	9051	22994
Response Rate of EligibleWomen	99.6%	99.7%	99.6%
Number of Children in the sample	7799	6945	14744
Number of Children Interviewed	7764	6914	14676
Response Rate of Children	99.6%	99.5%	99.5%

Characteristics of the Respondents

A. Household's characteristics

Table 1 presents the percentage distribution of households in the sample by a number of background characteristics for the urban and rural areas. Of the unweighted number of interviewed households (7964 households) 61 percent are urban and 39 percent (5047 households) are rural. 12.3 percent of the interviewed households have less than 4 members. 24.6% of the interviewed households have between two and five members. 81.5% percent of the interviewed households contain at least one child under age fifteen, while 56.7 percent of these households have at least one child under age five.

B. Characteristics of Eligible women (15-49) Years of Age

Table (2) shows that the weighted number of eligible women interviewed was 22980, 71.7% were in the urban areas and 28.3% were in the rural. Women aged 15-19 comprise the largest percentage of the sample at 21 percent. This percentage declines steadily across age groups until age 45-49 where it is 8.2 percent only. Approximately 51.4 percent of the female respondents in the sample are married, 43.8 percent never married and 4.9 percent widowed, divorced or separated. 26 percent of the interviewed females has never attended schools. Those who have completed primary/elementary education form 38 percent, while those who have completed secondary education 34.7 percent and those who had some form of non-formal education 1.3 percent

C. Characteristics of Eligible Children (Children Under 5)

Table 3 shows the characteristics of children under age five. There is slight difference between the proportions of female and male under 5 children covered by the survey; 50.4 percent of these children are males and 49.6 percent are females. Approximately 63.6 percent of interviewed children under age 5 live in the urban areas, compared to 36.4 percent in the rural. When comparing the prorpotional distribution of under 5 children and that of eligible women between rural and urban areas, one will observe that the proportion of under fives living in the rural areas is greater than that of eligible women living in the same areas by 8 percentage points. Given the fact that the response rates for rural and urban areas are very

close to each other, the afore-mentioned phenomenon can be attributed to the higher fertility

Review of the age structure of children under five years of age covered by the survey shows that 9.5 percent of these children are under 5 months of age, and 11.3 percent of them belong to the age group 6-11 months. The proportions of the age groups (12-23) months, (24-35) months, (36-47), (48-59) months show slight disparities from each other; all of them roam around 20 percent with slight positive or negative variations.

Distribution/classification of children by mother's education highlights the effect of educational level on fertility pattern. Women with no education form 26% of total eligible women interviewed (Table 2) while their children form 31.8 percent of the total children covered by the survey (table 3) reflecting the high fertility of this strata of women. Proportion of eligible women interviewed with elementary education certificate is slightly higher than the proportion of their children being 41.1 percent and 38 percent respectively. Women with at least secondary education form 34.7 percent of the total eligible women and their children 25.3 percent.

III. Results

Primary School Attendance

Universal access to basic education and the achievement of primary education is considered as one of the most important goals of the World Summit for Children. Education is a vital prerequisite for combating poverty, empowering women, protecting children from hazards of work at an early age and from discrimination between the sexes. It also enhances the capacities/capabilities, i.e. it empowers, the citizens of the country, and of both sexes, in strengthening the process of development and construction.

Overall, 76.3 percent of children of primary school age (7-12) in Iraq are attending primary school (Table 4). In urban areas, 83.3 percent of children attend school while in rural areas 61.0 percent attend. In the rural areas, female attendance rate (49.2 percent) is lower than that of the male attendance rate (72.1 percent). In the urban areas these two rates are closer to each other being 87.4 percent and 80.0 percent for males and females respectively.

Generally speaking there are slight differences between the primary school attendance rates of the different ages, except age 12 where there is a marked decline.

However, around 88.3 percent of children who enter the first grade of primary school eventually reach grade five (Table 5). There is slight difference between urban and rural areas in achievement rates with 89.8 percent of children who enter the first grade eventually reach grade 5 in the urban areas and 83.5 in the rural areas. On the other hand, there are noticeable disparities between the sexes in the achievement of grade five. 92.2 percent of male children who enter grade one reach grade five compared to 88.3 percent of female children.

Water and Sanitation

Safe drinking water [3] 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, who bear the primary responsibility for carrying water, often for long distances.

Overall, 83.3 percent of Iraq's population have access to sources of safe drinking water, 97.5 per cent in the urban areas and 51.5 percent only in the rural. The relatively low access in rural areas to safe drinking water is primarily due to the inability to construct new projects for potable water and or the establishment of water compounds because of the existing sanctions conditions. This is reflected in the fact that only 27.1 percent of rural population uses drinking water that is piped into their dwellings, compared to 89 percent in the urban areas, and 7.1 percent of the rural inhabitants use public taps compared to 2.1 percent only of the urban people.

As for excreta disposal[4], 92.5 percent of the population of Iraq use sanitary means of excreta disposal (Table 7). This percentage is 99.1 in urban areas and 77.8 percent in rural. Results of the survey indicate that most of the rural inhabitants (90.5 percent) use flush toilets connected to sewage systems or septic tanks, while only 37.9 percent of the rural population use similar toilets. 28.2 percent of the rural inhabitants still resort to the traditional pit latrines.

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.

To measures and compare nutritional status[5] of the child, UNICEF and the World Health Organisation recommend the use of simple numerical measures to compare nutrition status between countries and within the same country. The three major measures are the following:

- Malnutrition Indicator

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.*

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[3] The population using *safe drinking water* sources are those who use any of the following types of supply: piped water, public tap, borehole/tubewell, protected well, protected spring or rainwater.

[4] Inadequate disposal of human excreta and personal hygiene is associated with a range of diseases including diarrheal diseases and polio. *Sanitary means of excreta disposal* include: flush toilets connected to sewage systems or septic tanks, other flush toilets, improved pit latrines, and traditional pit latrines.

[5] In a well-nourished population, there is a standard distribution of height and weight for children under age five. Undernourishment in a population can be gauged by comparing children to this standard distribution.

- Stunting Indicator

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 recurrent or chronic illness.

- Wasting Indicator

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 *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.

Table 8 displays the surveys results on the nutritional status of Iraqi children by type of malnutrition indicator. A review of the table shows that:

- 15.9 percent of Iraqi children suffer from moderate or severe underweight; and 2.0 percent of them, from severe underweight.
- 22.1 percent are moderately or severely stunted with ~~1.2~~ 6.4 percent severely stunted.
- 5.9 percent are moderately or severely wasted (1.2)
- All indicators of moderate and severe malnourishment (underweight, stunting and wasting) are higher in the rural areas than in the urban for both moderate and severe cases.
- Malnourishment indicators for males and females are generally close to each other.
- Underweight has decreased slightly since 1996 when it was 23.4 percent. But stunting indicator is still on the high side. Given the fact that stunting is influenced by long run undernourishment, the level of the stunting indicator highlights and reflects the harsh effects of the unjust sanctions that has lasted for quiet a long period.
- All three indicators of nutrition status vary inversely with the educational level of mother. Children of mother with at least secondary education have lower level of malnourishment by all three indicators than other children

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. The World Summit for Children goal states that children should be exclusively breastfed for four to six months, and that breastfeeding should continue with complementary food, well into the second year of life. Many countries have adopted the recommendation of exclusive breastfeeding for about six months.

Table 9 surveys relative distribution of children by breastfeeding status[6]. The small sample size, as indicated by the number of children involved, highlight the need to exercise extreme caution when making detailed comparisons between children at the various age groups. Nevertheless, a number of conclusions can be drawn. It is clear that 17.1 percent of children aged (0-3) months are exclusively breast fed, 51 percent of children aged (6-9) moths are receiving breastmilk with complimentary feeding, 58.6 and 27.0 percent of children aged (12-15) and (20-23) months respectively continue to be breastfed while taking other foods.
Data do not show any noticeable effect of level of mother's education on breastfeeding practice. This phenomenon can be partly be attributed to the positive long-standing tradition in Iraqi society of giving special care to infants. Breastfeeding is also affected by the presence of the mother at home near her child especially during infancy, whether the mother is a housewife, or a civil servant enjoying her one-year fully paid maternity leave.

Vitamin A Supplementation

Vitamin A deficiency (VAD) impairs children's immune systems, increasing their chances of dying of common childhood diseases and undermines the health of pregnant and lactating women. It can also cause eye damage and blindness in children. Yet it can be easily prevented by vitamin A supplementation or food fortification. UNICEF and WHO recommend that all countries with an under five mortality rate exceeding 70 per 1000 live births, or where vitamin A deficiency is a public health problem, should put in place a programme for control of vitamin A deficiency. Based on UNICEF/WHO guidelines, the [Country] Ministry of Health recommends that children aged 6-12 months be given one dose Vitamin A capsule of 100,000 IU every six months, and children older than one year be given one high dose of 200,000 IU every six months.

Within the six months prior to the conduct of MICS, 12.7 percent of children aged 6-59 months received the high dose of Vitamin A supplement (Table 10). Approximately 13.8 percent did not receive the supplement in the last 6 months but did receive one prior to that time. 6.7 percent of children received a Vitamin A supplement at some time in the past but their mothers/caretakers were unable to specify when.

It is observed that Vitamin A supplementation coverage in the urban areas is slightly higher than in the rural areas. This small difference in coverage reflects the serious efforts made by the concerned health institutions to ensure the availability of vitamin A supplement to the remotest rural areas of the country in spite of the resource limitations arising from the sanctions imposed on the country.

According to the survey's results, educational status/level of the mother does not seem to have a significant influence on children's intake of vitamin A supplement. This fact confirms the effectiveness of the social awareness campaigns during immunisation carried out by the ministry of health and the supporting bodies.

The age pattern of Vitamin A supplementation shows that supplementation in the last six months preceding the survey rises from 15.4 percent among children aged 6-11 months to

[6] *Exclusive breastfeeding* refers to children who receive only breast milk and vitamins, mineral supplements, or medicine. *Complementary feeding* refers to children who receive breast milk and solid or semi-solid food. The last two columns of the table include children who are continuing to be breastfed at one and at two years of age.

22.9 percent among children aged 12-23 months and then declines steadily with age to 10 percent among the children aged 24-35 months.

Salt Iodization.

Deficiency of iodine in the diet is the world's single greatest cause of preventable mental retardation and can lower the average intelligence quotient (IQ) of a population.

Salt iodization is an effective, low-cost way of preventing iodine deficiency disorders (IDD). *Adequately iodized salt* contains 15 ppm (parts per million) of iodine or more. In MICS, interviewers tested household salt for iodine levels by means of a testing kit. It was found out that, during the survey period, only (40.0%) of households use iodised salt with (15 PPM) or more, (42.6%) urban households and (33.4%) rural.

Salt distributed to households through the ration is iodised. Yet these rationed quantities do not full satisfy the monthly requirements of households for iodised salt. The 1988 household budget survey showed that average per capita consumption of salt was (331)gms, while what is provided through the ration is only (150)gms per capita. So If the average per capita consumption of iodised salt of 1998 is used as a to base to identify actual need of iodised salt, then the proportion of households using iodised salt shown by this survey is close to the quantity actually distributed through the food ration and the remaining (60%) represents the quantity of salt that is purchased from the local market to meet household's need, which is either deficient or totally lacking in iodine.

Immunization Coverage

According to UNICEF and WHO guidelines, a child should receive a BCG vaccination to protect against tuberculosis, three doses of DPT to protect against diptheria, pertussis, and tetanus, three doses of polio vaccine, and a measles vaccination by the age of 12 months. In MICS, 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.

Table 12 shows that 91.7 percent of children aged (12-23) months received a BCG vaccination at any time prior to the survey according to the vaccination cards or mother's report/memory. The results show that the first dose of DPT was given to 85.5 percent of these children. This percentage declines for subsequent doses of DPT with 87.1 percent for the second dose, and 68.9 percent for the third. Similarly, 73 percent of children received the zero dose of Polio which then increases to 93.5 percent for dose one, and then declines to 89.5 percent for the second dose and 81.8 percent for the third dose. The coverage for measles vaccination turned out to be 78.1 percent. The survey also showed that 60.7 percent of children received all the above-mentioned vaccines.

The annex to table 12 is concerned with children (12-23) months of age that have received vaccinations before their first birthday and who have properly dated vaccination cards. This table indicates that 98.7 percent of these children received a BCG vaccination and the coverage with the first, second and third dose of DPT was 97 percent, 96.3 percent and 92.7 percent respectively. The consecutive four doses of Polio vaccine were received by 99.2

percent, 97.6 percent, 96.1 percent and 92.5 percent of children (12-23) months of age, while only 78.1 percent of these children were vaccinated against measles. As a result the percentage of children with vaccination cards who had all the recommended vaccinations by their first birthday was at 70.3 percent.

Knowledge of HIV/AIDS Transmission

Iraq is considered as an AIDS free country. Nonetheless, it was considered appropriate and relevant to incorporate in Iraq's questionnaire a limited number of questions on this subject to measure the level and degree of knowledge of this disease and of the means of its transmission.

One of the most important strategies for reducing the rate of HIV/AIDS infection is the promotion of accurate knowledge of how AIDS is transmitted and how to prevent transmission. Among women aged 15-49 in Iraq, 49.9% percent have ever heard of AIDS (Table 13). This percentage is higher in urban areas (59.5%percent) than in rural areas in rural areas (25.5% percent). 36.6 percent of total interviewed women believe that AIDS can be prevented compared to 45.5 percent of the urban women and only 13.0 percent of rural women. There is only slight variation between the different age groups in knowledge about the disease except for the youngest and oldest age groups where knowledge is markedly less.

The survey's results show a marked influence of educational level on awareness of AIDS. 81 percent of those who have heard of the disease have at least secondary education, and 70 percent of those who believe that infection with AIDS can be avoided have at least secondary education as well. These two percentages are significantly higher than the similar percentages for the lower educational levels.

Table 14 expresses knowledge about means of transmission of the disease. 50.6 percent believe that AIDS is transmitted through sexual relations, 26.6 percent through the intake of infected blood; and 11.8 percent cited infected medical equipment as the cause.

Educational level is the only classification criterion that yields marked variations between different groups. Women with at least secondary education have cited that sexual relations, intake of infected blood and medical equipment are the primary means for the transmission of the virus.

Assistance at Delivery

The provision of delivery assistance by skilled attendants can greatly improve outcomes for mothers and children through the use of technically appropriate procedures, and accurate and speedy diagnosis and treatment of complications. *Skilled assistance at delivery* is defined as assistance provided by a doctor, nurse, or midwife.

About 72 percent of births occurring in the year prior to the MICS survey were delivered by skilled personnel (Table 15), 79 percent for the urban births and 60.2 percent for the rural births. The more educated a woman is, the more likely she is to have delivery with the

assistance of a skilled person, the percentage being 84.8 percent for mothers with at least secondary education.

In the year prior to this survey, the highest percentage of births were delivered with assistance of a nurse or trained midwife (37 percent), followed by deliveries assisted by doctors (28.2 percent). It is also observed that traditional midwifes assisted 24.2 percent of the deliveries. The latter type of assistance is still widely resorted to in the rural areas where the percentage jumps to 34.5 percent.

Birth Registration

Birth registration is a fundamental means of supporting the respect of child's rights and the interest in his care and future. The survey results show that birth registration of children aged (0-59) months at the official beuaros is very high. MICS results indicate that 98.1 percent of children less than five years in Iraq have been registered with 98.7 percent in the urban areas and 97.2 percent on the rural. (Table 16).

The high birth registration reflects the respect that Iraqi people have for the laws, rules and regulations of their country. The fact that birth registration is higher in the rural areas than in the urban highlights the keenness of the rural inhabitants to overcome the difficulties and problems associated with going to the registration offices given the fact that these offices are normally far from their residence as they are usually located in the urban areas.

The survey shows no significant variations in birth registration across sex, age, or education categories.

Table 1: Percent distribution of households by background characteristics
Iraq 2000

Characteristics	Area		Total
	Urban	Rural	
Number of HH members			
1	1.1	1.3	1.2
2-3	11.6	9.7	11.1
4-5	23.6	16.7	21.7
6-7	25.7	22.0	24.6
8-9	19.0	20.4	19.4
10+	19.0	29.9	22.1
Total	100.0	100.0	100.0
Number of HH			
Weighted	9,338	3,673	13,011
Unweighted	7,964	5,047	13,011
% of HH that include at least:			
At least one child age < 15 year	80.0	85.3	81.5
At least one child age < 5 year	52.7	66.9	56.7
At least one woman age between 15-49 year	94.2	94.5	94.3
Number of HH			
Weighted	9,338	3,667	13,005
Unweighted	7,964	5,037	13,001
	(61%)	(39%)	(100%)

Table 2: Percent distribution of women (15-49) year by background characteristics Iraq 2000

Characteristics	Percent	Number	Number of Unweighted
Area			
Urban	71.7	16,471	13,944
Rural	28.3	6,509	9,026
Age			
15-19	23.6	5,429	5,592
20-24	20.7	4,756	4,719
25-29	16.2	3,715	3,693
30-34	13.1	3,015	3,029
35-39	10.8	2,475	2,410
40-44	7.4	1,702	1,677
45-49	8.2	1.887	1,847
Marital status			
Currently married	51.4	11,803	11.902
Not currently married	4.9	1,119	1.107
Not married	43.8	10.053	9,957
Ever given birth throughout married life			
Yes	50.1	11.522	11.665
No	49.9	11.453	11.301
Women education level			
None	26.0	5,971	7.028
Primary	38.0	8,729	9.077
Secondary+	34.7	7,971	6,530
Non formal education	1.3	303	329
Unknown or lost data	0.0	6	6
Total	100.0	22.980	22.970

Table 3: Percent distribution of children under 5 by background characteristics
Iraq 2000

Characteristics	Percent	Number	Number of Unweighted
Sex			
Male	50.4	7,339	7,382
Female	49.6	7,215	7,180
Area			
Urban	63.6	9,262	7,740
Rural	36.4	5,292	6,822
Age			
<5 months	9.5	1,378	1,325
6-11 months	11.3	1,646	1,665
12-23 months	20.4	2,962	3,006
24-35 months	18.8	2,735	2,759
36-47 months	21.7	3,152	3,129
48-59 months	18.4	2,677	2,673
Mother's education			
None	31.8	4,622	5,265
Primary	41.1	5,984	5,848
Secondary+	25.3	3,683	3,461
Non formal education	1.8	259	283
Unknown or lost data	0.0	5	5
Total	100.0	14,554	14,562

Table 4: Percentage of children of primary school age (7-12 year) attending school
Iraq 2000

Characteristics	Sex					Total	
	Male		Female		Lost data		
	Attending Primary school		Attending Primary school		Number		
	Attending %	Number	Attending %	Number		Attending %	Number
Area							
Urban	87.4	5,513	80.0	5,249	1	83.8	10,763
Rural	72.4	2,686	49.2	2,587	0	61.0	5,273
Age							
7	71.9	1,436	67.4	1,320	0	69.8	2,756
8	85.1	1,431	74.7	1,226	0	80.3	2,657
9	87.8	1,356	77.7	1,392	0	82.6	2,748
10	88.3	1,599	75.9	1,361	0	82.6	2,960
11	87.1	1,262	69.9	1,276	0	78.5	2,537
12	73.3	1,146	52.2	1,260	1	62.3	2,407
Total	82.5	8,230	69.8	7,836	1	76.3	16,066

Table 5: Percentage of children entering first grade of primary school who eventually reach grade 5 Iraq 2000

Characteristics	Percent of children completing grade1 & reaching 2nd grade	Percent of children completing grade 2 & reaching 3rd grade	Percent of children completing grade 3 & reaching 4th grade	Percent of children completing grade 4 & reaching 5th grade	Percent of children who completed four primary grades & reached the 5th grade
Sex					
Male	98.4	99.2	98.1	96.3	92.2
Female	97.2	96.6	95.3	93.4	83.6
Area					
Urban	97.7	98.6	97.2	95.9	89.8
Rural	98.3	96.7	95.7	91.7	83.5
Total	97.9	98.1	96.9	95.0	88.3

Table 6: Percentage of the population using improved drinking water sources
Iraq 2000

Area	HH directly linked to the water network	Piped into yard or plot	Public tap	Tube-well/Bore-hole with pump	Protected dug well	Protected spring	Bottled water	Unprotected dug well	Unprotected Spring
Urban	89.0	5.8	2.1	0.3	0.3	0.0	0.0	0.0	0.0
Rural	27.1	6.7	7.1	5.2	4.0	1.5	0.1	5.2	1.3
Total	69.8	6.1	3.6	1.8	1.5	0.5	0.0	1.6	0.4

Continued/Table 6

Area	River or stream	Tanker truck Vendor	Other resources	Total	Percent using drinking water*	No. of persons
Urban	0.9	1.2	0.3	100.0	97.5	64,844
Rural	29.6	9.2	3.2	100.0	51.5	29,037
Total	9.8	3.7	1.2	100.0	83.3	93,881

* This percentage includes first six sources of water mentioned in the table.

Table 7:Distribution of the population according to the means of used latrine
Iraq 2000

Area	Flush to sewage system/ Septic tank	Pour flush latrine	Improved pit latrine	Traditional pit latrine	Open pit	Bucket	Others	Missing	Total	Percent of using latrine	No. of persons
Urban	90.5	3.4	0.9	4.2	0.6	0.0	0.1	0.2	100.0	99.1	64,844
Rural	37.9	2.6	9.1	28.2	4.7	0.0	0.5	17.0	100.0	77.8	29,037
Total	74.2	3.2	3.5	11.6	1.9	0.0	0.2	5.4	100.0	92.5	93,881

*** This Percentage includes the first four means mentioned in the table.**

Table 8:Percentage of under-five children with severely or moderately malnourished*
Iraq 2000

Characteristic	Moderate or sever malnourish Weight for age -2 SD	Sever malnourish Weight for age -3 SD	Sever/moderate Stunting Height for age -2 SD	Sever Stunting Height for age -3 SD	Sever/moderate Wastage Weight for Height -2 SD	Sever Wastage Weight for Height -3 SD	Num ber of chi ldren
Sex							
Male	16.1	1.6	22.2	6.0	6.1	1.3	6 14
Female	15.6	2.5	22.1	6.7	5.7	1.0	6 08
Area							
Urban	14.9	1.8	19.8	5.3	5.7	1.0	8 05
Rural	17.5	2.5	26.3	8.3	6.2	1.5	4 17
Age							
<6 months	6.1	0.9	8.3	2.3	6.2	2.0	1 31
6-11 months	15.4	2.2	12.6	3.3	7.9	2.8	1 54
12-23 months	17.9	2.7	26.2	9.0	7.9	1.3	2 74
24-35 months	17.7	2.5	21.6	5.6	5.9	0.9	2 28
36-47 months	16.1	1.7	24.3	7.7	4.4	0.6	3 16
48-59 months	16.3	1.7	28.1	6.5	4.1	0.6	2 17
Women education level							
None	16.6	2.3	26.7	8.0	5.5	0.9	4 97
Primary	16.7	2.2	22.1	6.2	6.2	1.4	5 59
Secondary+	13.8	1.4	16.5	4.8	5.7	1.1	3 01
Non formal education	13.2	4.8	23.4	4.3	8.7	1.7	2
Unknown or lost data	0.0	0.0	17.0	17.0	0.0	0.0	
Total	15.9	2.0	22.1	6.4	5.9	1.2	12

* The Figures in this table indicate the percentage of children with weight less than the threshold for malnutrition (which is weight median minus 2SD to indicate moderate malnutrition, and minus 3SD to indicate sever malnutrition).

Table 9:Percent of children by breastfeeding status*
Iraq 2000

Characteristic	Exclusive breastfeeding		Average of complementary feeding		Average of continuous breastfeeding		Average of breast	ontinuous eding	
	Children 0-3 months (%)	Number of children	Children 6-9 months (%)	Number of children	Children 12-15 months (%)	Number of children	Children 20-23 m (%)	ths	Number o children
Sex									
Male	17.8	426	53.6	593	61.5	457	26.8		537
Female	16.4	443	48.2	540	56.1	502	27.3		530
Area									
Urban	13.1	566	50.0	718	57.3	582	26.2		653
Rural	24.6	303	52.9	415	60.8	377	28.4		414
Mother's education level									
None	21.2	250	47.5	326	61.6	328	32.1		334
Primary	17.7	398	54.7	491	59.4	400	25.5		456
Secondary+	11.1	214	48.7	297	54.1	226	23.5		259
Non formal education	26.8	6	58.1	18	24.2	6	25.1		18
Unknown or lost data	0.0	1	0.0	1	0	0	0		0
Total	17.1	869	51.0	1,133	58.6	959	27.0		1,067

* **Exclusive breastfeeding; Breastfeeding without any supplementary feeding soild/semi-soild food, including water, milk or any other fluids since birth.**
Complementary feeding; Supplementary feeding beside breastfeeding.
Continuous breastfeeding; To continue with breastfeeding whether the child depend on other or not.

Table 10:Percent distribution of children aged 6-59 months by the status of receiving dose of Vitamin (A) supplement in the last 6 months before the survey

Iraq 2000

Characteristic	Children who received Vitamin (A) within last 6 months %	Children who received Vitamin (A) prior to last 6 months %	Children who received Vitamin (A) but not sure when %	Children who are not sure if received Vitamin A %	Children who never received Vitamin A %	Total %	Number of ildren
Area							
Urban	13.6	15.2	7.2	10.4	53.6	100.0	8,35
Rural	11.1	11.3	5.9	11.3	60.5	100.0	4,82
Age							
6-11 months	15.4	1.1	1.7	6.3	75.5	100.0	1,64
12-23 months	22.9	9.6	5.2	9.0	53.3	100.0	2,96
24-35 months	10.0	19.4	7.1	9.2	54.3	100.0	2,73
36-47 months	7.8	16.9	8.3	13.3	53.7	100.0	3,15
48-59 months	8.1	16.8	9.4	13.7	52.0	100.0	2,67
Mother's education level							
None	12.8	11.9	7.0	11.0	57.3	100.0	4,2
Primary	12.2	12.8	6.6	12.2	56.2	100.0	5,3
Secondary+	13.0	17.7	6.6	8.0	54.7	100.0	3,3
Non formal education	15.1	12.5	8.6	10.6	53.1	100.0	24
Unknown or lost data	0.0	14.7	0.0	0.0	85.3	100.0	5
Total	12.7	13.8	6.7	10.7	56.1	100.0	13,1

Table 11:Percentage of households consuming adequately iodized salt
Iraq 2000

Area	Percent of households with no salt during the survey	Percent of households in which salt was tested	Salt test result		Number of households interviewed
			Iodine <15 PPM	Iodine >15 PPM	
Urban	0.2	99.8	57.3	42.7	9,338
Rural	0.2	99.7	66.6	33.4	3,673
Total	0.2	99.7	60.0	40.0	13,011

Table 12:Percentage of children age (12-23) months immunized against childhood diseases at any time before the survey Iraq 2000

Vaccination type	Data Sources	Percentage of children vaccinated (%)	
BCG	Vaccination Card	58.0	91.7
	Mother's report	33.7	
	Not vaccinated	8.4	
DPT 1	Vaccination Card	57.2	85.5
	Mother's report	28.3	
	Not vaccinated	14.5	
DPT 2	Vaccination Card	52.8	78.1
	Mother's report	25.3	
	Not vaccinated	22.0	
DPT 3	Vaccination Card	47.8	68.9
	Mother's report	21.1	
	Not vaccinated	31.1	
Polio 0	Vaccination Card	54.7	73.0
	Mother's report	18.3	
	Not vaccinated	27.0	
Polio 1	Vaccination Card	56.8	93.5
	Mother's report	36.7	
	Not vaccinated	6.5	
Polio 2	Vaccination Card	52.1	89.5
	Mother's report	37.4	
	Not vaccinated	10.6	
Polio 3	Vaccination Card	46.7	81.8
	Mother's report	35.1	
	Not vaccinated	18.2	
Measles	Vaccination Card	50.4	78.1
	Mother's report	27.7	
	Not vaccinated	21.8	
All	Vaccination Card	40.7	60.7
	Mother's report	20.0	
	Not vaccinated	39.3	
None	Vaccination Card	0.0	2.6
	Mother's report	2.6	
	Not vaccinated	97.4	
	Number of children	2,962	

Continued Table 12:Percentage of children age (12-23) months immunized against childhood diseases before the first birthday and have completed vaccination cards
Iraq 2000

Vaccination type	Percentage of children vaccinated (%)
BCG	98.7
DPT 1	97.5
DPT 2	96.2
DPT 3	92.7
Polio 0	99.2
Polio 1	97.6
Polio 2	96.1
Polio 3	92.5
Measles	78.1
All	70.3
None	0.1

Table 13:Percentage of Women aged (15-49) who have knowledge about AIDS
Iraq 2000

Characteristic	Heard of AIDS	The extent of Women's conviction in the possibility of avoiding AIDS	Number of women
Area			
Urban	59.5	45.5	16,471
Rural	25.5	13.0	6,509
Age			
15-19 year	40.4	27.4	5,429
20-24 year	53.2	37.9	4,756
25-29 year	57.5	43.4	3,715
30-34 year	55.3	41.3	3,015
35-39 year	53.4	41.0	2,475
40-44 year	50.4	37.8	1,702
45-49 year	39.9	28.2	1,887
Women education level			
None	19.9	9.4	5,971
Primary	42.3	24.4	8,729
Secondary+	81.0	69.8	7,971
Non formal education	40.9	25.1	303
Unknown or lost data	10.6	10.6	6
Total	49.9	36.3	22,980

Table 14:Percentage of women aged (15-49) who know the means of infection with AIDS, according to the mode of infec on Iraq 2000

Characteristic	Modes of infection								Total	Number of women
	Sexual intercourse	Taking infected blood	From mother to child during pregnancy	From Mother to child during breastfeeding	Mosquito bites	Mother is infected by polluted tools	Do not know	lost		
Area										
Urban	49.8	27.3	2.4	0.6	0.4	12.3	7.1	0.1	100.0	7,487
Rural	58.1	20.5	0.6	0.4	0.9	7.0	12.4	0.2	100.0	849
Women education level										
None	62.9	11.8	0.7	0.0	1.3	4.0	18.9	0.4	100.0	560
Primary	59.6	16.7	0.8	0.2	0.7	7.0	14.7	0.2	100.0	2,134
Secondary+	45.7	32.0	2.9	0.7	0.2	14.5	3.8	0.1	100.0	5,566
Non formal education	65.6	16.6	0.0	0.0	0.0	5.0	12.7	0.0	100.0	76
Unknown or lost data	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1
Total	50.6	26.6	2.2	0.5	0.4	11.8	7.7	0.1	100.0	8,336

Table 15:Percent distribution of women aged (15-49) with a birth in the last year by type of personnel assisting at deliv ry Iraq 2000

Characteristic	Person assisting at delivery							Total	*Percent of skilled personnel	N aber of omen
	Doctor	Nurse/ Midwife	Assistant Midwife	Traditional birth attendant	Relative/ Friend	Other Missing	No one			
Area										
Urban	31.6	40.5	6.9	18.3	1.7	0.8	0.2	100.0	79.0	363
Rural	22.3	31.0	6.9	34.5	4.1	0.8	0.4	100.0	60.2	972
Mother's education level										
None	21.5	32.9	6.5	33.7	3.9	0.9	0.5	100.0	60.9	33
Primary	24.7	39.3	8.3	24.5	2.9	0.2	0.2	100.0	72.3	306
Secondary+	41.5	38.0	5.3	12.8	0.7	1.6	0.2	100.0	84.8	57
Non formal education	28.7	30.0	0.0	35.6	2.0	3.7	0.0	100.0	58.7	37
Unknown or lost data	34.0	66.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	2
Total	28.2	37.0	6.9	24.2	2.6	0.8	0.3	100.0	72.1	935

* Skilled personnel; includes Doctor, Nurse/Midwife & Assistant Midwife

Table 16:Percent distribution of children aged (0-59 months) by whether birth is registered and reasons for non-registration Iraq 2000

Characteristic	Registry status										
	Birth is registered	Not known if birth is registered	Birth is not registered						No answer	Total	Number of children
			Cost too much	Must travel too far	Did not know it should be registered	Family delayed the registry & do not want to pay fin	Family do not know where to register	Other			
Sex											
Male	98.1	0.1	0.1	0.3	0.0	0.0	0.0	0.5	0.8	100.0	7,9
Female	98.1	0.1	0.2	0.1	0.1	0.0	0.0	0.5	0.9	100.0	7,5
Area											
Urban	98.7	0.1	0.1	0.1	0.0	0.0	0.0	0.4	0.5	100.0	9,2
Rural	97.2	0.1	0.2	0.3	0.0	0.0	0.0	0.7	1.6	100.0	5,2
Age											
< 6 months	92.0	0.2	0.2	0.6	0.3	0.1	0.1	3.7	2.8	100.0	1,8
6-11 months	98.2	0.0	0.3	0.2	0.0	0.0	0.0	0.2	1.1	100.0	1,6
12-23 months	98.3	0.1	0.0	0.3	0.0	0.0	0.0	0.3	0.9	100.0	2,2
24-35 months	98.8	0.2	0.1	0.1	0.0	0.0	0.0	0.2	0.7	100.0	2,5
36-47 months	99.0	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.5	100.0	3,2
48-59 months	99.3	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.3	100.0	2,7
Mother's education level											
None	97.3	0.2	0.2	0.3	0.1	0.0	0.0	0.6	1.3	100.0	4,2
Primary	98.1	0.1	0.1	0.1	0.0	0.0	0.0	0.6	0.9	100.0	5,4
Secondary+	99.1	0.1	0.1	0.1	0.0	0.0	0.0	0.3	0.3	100.0	3,3
Non formal education	99.7	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	100.0	2
Unknown or lost data	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	
Total	98.1	0.1	0.1	0.2	0.0	0.0	0.0	0.5	0.9	100.0	14,54