Multiple Indicator Cluster Survey II

The Report for The Federal Republic of Yugoslavia

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Executive Summary

The 2000 Federal Republic of Yugoslavia Multiple Indicator Cluster Survey (MICS) is a representative survey of households, women and children covering the FRY (excluding the province of Kosovo and Metohija). The results pertain to June-July 2000, when the fieldwork was conducted.

Education

- Thirty one percent of children aged 36-69 months were attending some form of organised early childhood education programme. The attendance was four times higher in urban areas than rural areas. Children aged 36-47 months were less likely to attend than children aged 48-59 months.
- Ninety seven percent of children of primary school age attended primary school (at the end of the 1999/2000 school year). There was virtually no difference between the male/female and urban/rural rates.
- Ninety four percent of children who entered the first grade of primary school eventually reached grade five.

Water and Sanitation

- Ninety eight percent of the population had access to an improved drinking water source, if one uses a broad definition of access. Eighty six percent of the population had water that was piped either into the dwelling or the yard/plot. Such access was much higher in urban areas (98%) than in rural areas (68%). In rural areas, nine percent of the population had a tubewell/borehole with a pump, and 16 percent had a well.
- Virtually the entire population used sanitary means of excreta disposal. Eighty eight percent had a flush toilet connected either to a sewage system or septic tank. Septic tanks were much more common in rural areas; fifty six percent of the rural population used a septic tank, whereas in urban areas 10 percent of the population fell into this category. Septic tanks were particularly common in Vojvodina, where 47 percent of the population used a septic tank.

Child Malnutrition

- 14% of children aged under five were overweight.
- Two percent of children aged under five were underweight, five percent were too short for their age (stunted), and four percent were too thin for their age (wasted). In 1996, there was no stunting or wasting, so this appearance of malnutrition since then will have to be closely monitored.

Breastfeeding

- Approximately 11 percent of children aged under four months were exclusively breastfed, whereas all infants should still be breastfeeding exclusively at this age. However, this rate has increased threefold since 1996, particularly in areas where the Baby Friendly Hospital Initiative has been implemented in the maternities.
- At age 6-9 months, one third of children were receiving breast milk and solid or semi-solid foods. By age 20-23 months, only 11 percent were continuing to breastfeed.

Salt Iodisation

- Seventy three percent of households had adequately (15+ PPM) iodised salt. The percentage of households with adequately iodised salt was 63% in Vojvodina, 71% in Montenegro, 73% in Belgrade and 77% in Central Serbia.

Vaccination Coverage

- All children aged 12-23 months received a BCG vaccination by the age of 12 months, while all three doses of DPT and oral polio were given to 95% and 98%, respectively.
- Eighty nine percent of children received a measles vaccine (in the form of the measles-mumps-rubella (MMR) vaccine) by the age of 24 months. This relatively low coverage was due to a lack of availability of the MMR vaccine.
- Eighty nine percent of children had all eight recommended vaccinations according to the national immunisation schedule.
- Roughly three quarters of children had their own personal health card recording their vaccines. This proportion has doubled since 1996, as a result of a widespread distribution of health cards.

Diarrhoea

- Nine percent of under-five children had diarrhoea in the two weeks prior to the survey. Virtually all of these children received one or more of the recommended home treatments (i.e. received ORS or a recommended home fluid).
- However, less than two thirds of children with diarrhoea received increased fluids and continued eating as recommended.
- Roughly half of mothers knew what an Oral Rehydration Solution was.

Acute Respiratory Infections

- Three percent of under-five children had an acute respiratory infection in the two weeks prior to the survey. Virtually all of these children were taken to an appropriate health provider.

IMCI Initiative

- Twenty eight percent of under-five children were reported to have had some illness in the two weeks prior to the survey. Less than two thirds of these children received increased fluids and continued eating as recommended under the IMCI programme.
- Fifty eight percent of mothers knew at least two of the signs indicating that a child should be taken immediately to a health facility.
- Twelve percent of mothers reported administering an antibiotic to their sick child prior to taking the child to a doctor. Forty five percent reported giving a cough syrup, 51 percent tea and six percent a traditional medicine.

HIV/AIDS

- Just under half of women aged 15-49 knew two ways to prevent the sexual transmission of HIV – having only one faithful uninfected partner and using a condom during each act of sexual intercourse. This proportion was higher among women with more education.
- Sixteen percent of women aged 15-19 knew all three ways to prevent the sexual transmission of HIV – having only one faithful uninfected partner, using a condom during each act of sexual intercourse, and abstaining from sex.
- Just under one third of women aged 15-49 correctly identified two misconceptions about HIV transmission and infection – that HIV can be transmitted through mosquito bites, and that a healthy-looking person cannot be infected. This proportion was higher among women with more education.
- Just under one third of women of reproductive age knew the three ways in which HIV can be transmitted from mother to child.
- Forty five percent of women knew a place to get tested for AIDS. Six percent had been

tested, of whom 85% had been given the result.

- Twenty nine percent of women expressed a discriminatory attitude towards people with HIV/AIDS.
- Roughly one fifth of women had sufficient knowledge of HIV/AIDS transmission, a proportion that is strongly positively associated with the woman's level of education.

Contraception

- Current use of contraception was reported by 58% of married or in union women. The most popular method was the condom, followed by periodic abstinence and withdrawal. Abortion is a commonly used means of family planning.

Iron Deficiency Anaemia

- Twenty seven percent of women of child-bearing age suffered from iron-deficiency anaemia (IDA).
- Thirty percent of children aged 6-59 months suffered from IDA. The percentage ranged from 19.8% in Montenegro to 41.3% in Vojvodina. Infants aged 6-11 months suffered more from IDA (46%) than children aged 36-59 months (16-18%).

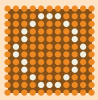
Summary Indicators

Indicator	Definition	Results for the FRY
World Summit for Children Indicator		
Underweight prevalence	Proportion of under-fives who are too thin for their age	**1.9% underweight**
Stunting prevalence	Proportion of under-fives who are too short for their age	**5.1% stunting**
Wasting prevalence	Proportion of under-fives who are too thin for their height	**3.7% wasting**
Use of safe drinking water	Proportion of population who use an improved drinking water source	**98.4% of population**
Use of sanitary means of excreta disposal	Proportion of population who use a sanitary means of excreta disposal	**99.6% of population**
Contraceptive prevalence	Proportion of married women aged 15-49 who use a contraceptive method	**58.3%**
Iodised salt consumption	Proportion of population consuming adequately iodised salt	**73.2% of households**
Exclusive breastfeeding rate	Proportion of infants aged less than 4 months who are exclusively breastfed	**10.6%**
Timely complementary feeding rate	Proportion of infants aged 6-9 months who are receiving breast milk and complementary food	**33.2%**
Continued breastfeeding rate	Proportion of children aged 12-15 months and 20-23 months who are breastfed	**20.8%; 10.8%**
DPT immunisation coverage	Proportion of children immunized against diphtheria, pertussis and tetanus by age one	**94.9%**
Measles immunisation coverage	Proportion of children immunized against measles by the age of one year	**90.1%**
Polio immunisation coverage	Proportion of children immunized against polio by the age of one year	**98.9%**
Tuberculosis immunisation coverage	Proportion of children immunized against tuberculosis by the age of one year	**98.0%**
ORT use	Proportion of under-five children who had diarrhoea in the last 2 weeks and were treated with oral rehydration salts or an appropriate household solution	**97.9%**
Care seeking for acute respiratory infections	Proportion of under-five children who had ARI in the last 2 weeks and were taken to an appropriate health provider	**96.7%**
Preschool development	Proportion of children aged 36-59 months who attend some form of organized early childhood education program	**31.4%**
Indicators for Monitoring IMCI		
Care seeking knowledge	Proportion of caretakers of under-five children who know at least 2 signs for seeking care immediately	**57.8%**
Indicators for Monitoring HIV/AIDS		
Knowledge of preventing HIV/AIDS	Proportion of women aged 15-49 who correctly state the 2 main ways of avoiding HIV infection and proportion of women aged 15-19 who correctly state the 3 main ways of avoiding HIV infection	**48.8%; 15.8%**
Knowledge of misconceptions of HIV/AIDS	Proportion of women who correctly identify 2 misconceptions about HIV/AIDS	**32.3%**
Knowledge of mother to child transmission	Proportion of women who correctly identify means of transmission of HIV from mother to child	**31.4%**
Attitude to people with HIV/AIDS	Proportion of women expressing a discriminatory attitude towards people with HIV/AIDS	**29.1%**
Women who know where to be tested for HIV	Proportion of women who know where to get a HIV test	**44.9%**
Women who have been tested for HIV	Proportion of women who have been tested for HIV	**5.9%**

Abbreviations and Acronyms

AFP	Acute Flaccid Paralysis
AIDS	Acquired Immunodeficiency Syndrome
ARI	Acute Respiratory Infections
BCG	Bacillus Calmette-Guerin, vaccine for tuberculosis
BFHI	Baby-Friendly Hospital Initiative
CRC	Convention on the Rights of the Child
DPT	Diphtheria, Pertussis, Tetanus vaccine
ECD	Early Childhood Development
EPI	Expanded Program on Immunization
EOC	Essential Obstetric Care
FRY	Federal Republic of Yugoslavia
FRY excl. K&M	Federal Republic of Yugoslavia excluding Kosovo and Metohija
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
ICCIDD	International Council for Control of Iodine Deficiency Disorders
ICD – X	International Classification of Diseases – Tenth Revision
ICRC	International Committee of the Red Cross
IDD	Iodine Deficiency Disorders
IDP	Internally Displaced Persons
IEC	Information – Education – Communication campaign
IMCI	Integrated Management of Childhood Illnesses
IMR	Infant Mortality Rate
IUD	Intrauterine Device
K&M	Kosovo and Metohija, province in the FRY
KAP	Knowledge, Attitude, Practice study
LBW	Low Birth Weight
MCHC	Maternal and Child Health Care
MICS	Multiple Indicator Cluster Survey
MMR	Maternal Mortality Rate
MMR	Measles, Mumps, Rubella vaccine
NA	Not Available data
NCHS/WHO	US National Centre for Health Statistics/World Health Organization standard or reference population for nutritional status of children
NGOs	Nongovernmental Organizations
NNT	Neonatal Tetanus

NPA	National Plan of Action for Children
OPV	Oral Polio Vaccine
ORT	Oral Rehydration Treatment
R + IDP	Refugees and Internally Displaced Persons
SD	Standard Deviation
SFRY	Socialistic Federal Republic of Yugoslavia (former Yugoslavia)
SWC	Social Welfare Centre
U5MR	Under-five Mortality Rate
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNMIK	United Nations Mission in Kosovo
UNISCAL	UNICEF scale – weight measuring instrument
WHO	World Health Organization
WSC	World Summit for Children
YRC	Yugoslav Red Cross



I. Introduction

Background of the survey

The Socialist Federal Republic of Yugoslavia (SFRY) signed the 1990 World Summit for Children Declaration, and committed itself to setting child welfare goals for the year 2000, to mobilize the necessary resources to achieve these goals, and to monitor progress towards these goals throughout the decade. Towards this end, UNICEF, in coordination with other organizations, developed a core set of 75 indicators.

Immediately after the Summit, the SFRY broke apart, ushering in a decade of wars, poverty and hardship. The Federal Republic of Yugoslavia was created, and undertook to fulfil the obligations of the SFRY. Progress toward the WSC goals was reviewed in 1996, including a nation-wide household Multiple Indicator Cluster Survey (MICS). The MICS was conducted in October 1996 on the whole territory of the FRY; it covered 10,604 households, 2,437 mothers of children aged under five and 3,228 children aged under five. It was conducted with the Republican Ministries of Health and the Institutes of Public Health of Serbia and Montenegro. The results also helped in proper program design and in developing and adjusting the plan of action for children.

The MICS 2000 has been conducted to provide information on many of the 75 indicators mentioned above, to determine how well the country met its end-decade objectives. In order to make an efficient use of resources, the MICS modules were incorporated into a more comprehensive survey, called "The Health Status and Needs of the Population in the FR Yugoslavia". A task force designed the survey, selected the sample, and organised data collection and data processing. The task force was comprised of UNICEF, WHO, the Institute of Public Health of Serbia and the Institute of Public Health of Podgorica. The WHO contracted the Finnish National Institute for Health to assist in the survey preparation. UNICEF FRY provided technical assistance, funding, growth monitoring tools, Hemocues and computer equipment. The Republican Institutes of Public Health selected instructors, supervisors and interviewers, organized and conducted the training, the fieldwork and data processing. The regional Institutes for Public Health, hygiene-epidemiology services and community health centres conducted the fieldwork.

The comprehensive survey was composed of several subprojects, addressing the following issues and covering the whole population: hygiene habits, nutrition, free time, physical activity and sport, smoking, alcohol and drug usage, sexual behaviour, traffic behaviour, injuries and poisoning, health knowledge and risky behaviour, general assessment and satisfaction with life, relationships with other people, violence, mental health, disabilities, utilisation and attitude towards the health care system, usage and availability of medicines, personal and family health status, and physiological status based on laboratory findings. Special attention was paid to the situation and needs for humanitarian assistance of refugees and internally displaced persons (IDPs) in collective accommodation.

The complete report of the comprehensive survey will be published in early 2001. This report provides the results of the MICS modules.

The National Context

The Federal Republic of Yugoslavia (FRY) is situated in the south of Central Europe, in the central-north part of the Balkan Peninsula, covering an area of 102,173 square km. It is a federal

state composed of the Republic of Serbia and the Republic of Montenegro. The Republic of Serbia also incorporates two provinces, Kosovo and Metohija in the south and Vojvodina in the north. Belgrade is the nation's capital. The population is estimated at about 10.5 million, of which 5% live in the Republic of Montenegro and 95% in the Republic of Serbia. The FRY has an average of 102 inhabitants per square km of territory.

Under UN Security Council resolution 1244, the province of Kosovo and Metohija was placed under temporary UN administration in June 1999.

Ten years of economic decline, regional wars, civil strife, international sanctions and the 1999 NATO military intervention have left serious marks on the lives of the nation's people, and children and women in particular. The overall quality and availability of social services has deteriorated. Public health facilities and medical care have been undermined by reduced contributions to the national health insurance fund. Investments in education have been curtailed, with a consequent impact on learning conditions and the quality of teaching. There have been numerous interruptions in schooling in recent years, due to teacher strikes and bombing. Social welfare services have been cut back, including allowances for children living in poverty. Unemployment, insecurity and stress have weakened parental care capacities. The sharp drop in the standard of living in Yugoslavia has resulted in a deterioration of nutritional practices, especially among the country's four million poor. Infants, pre-school and school children, pregnant women and lactating mothers are particularly at risk in this respect. The quality of food has deteriorated.

Over half a million refugees from Croatia and Bosnia and Herzegovina, and more than 200,000 mostly Serb, Montenegrin and Roma internally displaced persons (IDPs) from Kosovo, have created special social and economic difficulties. Overall, these two categories of persons constitute approximately 10% of the population (excluding Kosovo and Metohija).

Of the country's 10.5 million inhabitants, 50.4% are women. The Constitution of the FRY guarantees full equality of citizens regardless of gender and provides for the special protection of women, during pregnancy and in the post-pregnancy period, regardless of their marital status. Special regulations have been adopted to protect women from prostitution and other forms of exploitation. Labour legislation also guarantees equal rights to women and men with the same qualifications, in respect to employment and wages. However, the concentration of women in underpaid branches of the economy and lower-paid jobs has resulted in women's average wage being lower than men's. There are also indications that women are much more likely to lose their jobs than men whenever workers are laid off.

Here are some basic child and maternal welfare indicators for 1999 (FRY excluding Kosovo and Metohija):

- Infant mortality rate: 11.2
- Under five mortality rate: 12.9
- Maternal mortality rate: 8.6
- Literacy rate: 92.4 (1991)
- Total fertility rate: 1.52 (1998, FRY)
- Net primary school attendance rate: 97.4

Survey objectives

The Federal Republic of Yugoslavia Multiple Indicator Cluster Survey had as its primary objectives:

- To assess the situation of children and women in the FR Yugoslavia;
- To evaluate progress towards achieving the goals of the World Summit for Children;
- To strengthen technical expertise in the Country;
- To provide a basis for future action.

II. Survey methodology

Sample design

The sample was designed to provide estimates of the indicators at the national level, both in urban and rural areas. It was also designed to provide, following the administrative structure of the country, estimates at the level of the two Republics that constitute the State (Serbia and Montenegro), as well as at the level of Serbia's province Vojvodina, of Central Serbia (excluding Belgrade) and of Belgrade. Belgrade has a large population (almost one-fourth of the total) and its predominantly urban characteristics make it useful to separate out from the rest of Central Serbia, to which it administratively belongs.

The province of Kosovo and Metohija, which is currently under the UN administration, had to be excluded from the sample. In order to compare the 1996 and 2000 MICS, all data from the MICS 1996 consequently had to be recalculated.

The sample was selected in two stages. At the first stage, 390 census enumeration areas were selected with probability proportional to size. Based on the last census (1991), those units were divided into clusters of 15 households.

After a household listing was carried out within the selected enumeration areas, a systematic sample of 5,850 households was drawn. Because the sample was stratified by region, it is not self-weighting. For reporting the national level results, sample weights were used.

Standard errors

To estimate the standard errors for MICS indicators we used the estimation of variance for the proportion given in the formula below:

$Vp' = Def*p\ (1-p)/(n-1)$,

where:

p – proportion for the variance estimate,
n – sample size, and
Def – effect of sample planning for the observed group of indicators.

The standard error is the square root of Var x_d'.

To calculate the variance for the whole population, the estimations of variance for the separate domains were summed.

The approximate design effect was derived from the estimation of the variance of the simple random sample, and from the estimation of the variance proposed in the ultimate cluster method[1]. The design effect was calculated for all groups of variance and separately for all observed domains.

All differences denoted as significant in the text are significant at the 95 percent confidence level, unless otherwise indicated.

Methodology

The methodological basis of the survey was determined in accordance with the recommendations made in the *End-decade Multiple Indicator Survey Manual*, United Nations Children's Fund, February 2000. In accordance with the features specific to the situation in the FR Yugoslavia, certain changes were made. Some of the original modules (tetanus, Vitamin A modules…) are not covered by this survey because they were not applicable to the country situation. On the other hand, the content of some of the existing modules was expanded in order to obtain data that are missing in routine statistics but are important for finding out more about existing practices and for activity planning in the future. For example, the Water and Sanitation module was expanded to comprise methods used by households for solid waste disposal; the Care of Illness module was expanded to include care methods applied by mothers in case of diarrhoea and ARI in their children. Also, in addition to the questionnaires, blood testing was introduced in order to determine haemoglobin levels of women and children.

Questionnaires

In addition to a household questionnaire, questionnaires were administered in each household for women aged 15-49 and children under the age of five.

The MICS itself consisted of ten parts – modules:

1. *The Household Module*
2. *The Education Module*
3. *Water and Sanitation Module*
4. *Salt Iodisation Module*
5. *Contraceptive Use Module*
6. *HIV/AIDS Module*
7. *Breastfeeding Module*
8. *Care of Illness Module*
9. *Immunisation Module*
10. *Anthropometry Module*

Some of the modules like contraceptive use, HIV/AIDS, and salt iodisation were of particular importance since they provided the first information ever at the national level. Others, like breastfeeding, care of illnesses and anthropometry were also very important, since routine

[1] Hansen, M., Hurwitz, W. and Madow, W., *Sample Survey Methods and Theory, Volume I, Methods and Applications*, John Wiley and Sons, New York, 1953, p. 257-258.

statistics do not include information on those subjects and the only prior source of information was the MICS 1996.

The following types of questionnaires[2] were used:

Household Questionnaire

The Household Questionnaire included all members of the household and it was used to determine the age, sex, education, income, living arrangements and humanitarian assistance received or needed. The Questionnaire covered the Education module, the Water and Sanitation module and the Salt Iodisation module, as well.

Women Questionnaire

The Women questionnaire included information on contraceptive use and HIV/AIDS. These questionnaires were confidential, and were filled out by the respondents themselves.

Children questionnaire (<6)

The Children questionnaire included information on breastfeeding, care of illnesses, immunisation and anthropometry.

Laboratory findings

Haemoglobin levels in the blood of women aged 15-49 years and children aged 6 to 59 months were measured. The standard UNICEF equipment (Hemocue) for blood samples was used and samples were taken by trained health professionals, according to standard procedure.

Pre-testing

A month before the survey began, in May 2000, 200 households were pre-tested in the Belgrade area in order to test the survey materials and pinpoint any errors. The pre-test was done without any major difficulties. Based on the results of the pre-test, modifications were made to the wording of the questionnaires.

The training process

A training package was prepared by the task force team, including written instructions for interviewers and supervisors. At the beginning of June 2000, the training of trainers was organized, when trainers were selected and training material improved. After that, just before the field survey, a two-day training of interviewers and supervisors was organized in several places (Belgrade, Podgorica, Novi Sad, Nis, Kragujevac, Zrenjanin and Kraljevo). Standard equipment for measurements was distributed to the interviewers during the training.

[2] The questionnaires for children aged 7-19 and adults, which were part of the comprehensive survey (mentioned in the introductory part) will not be described here. Briefly, these questionnaires included demographic characteristics, nutritional habits, anthropometry, anaemia, HIV/AIDS, risk factors (e.g. smoking, alcohol consumption, drug abuse, physical activity), sexual behaviour, drug abuse, violence, traffic behaviour, and so forth. Besides the questionnaire, the assessment of biological risk factors (measuring of blood pressure, anthropometry, and laboratory analysis of serum cholesterol, HDL, LDL, tryglycerides, sugar and haemoglobin level) was performed. Results of a physical examination and biochemical tests were linked with the Questionnaires through the same code.

Fieldwork

The Institute of Public Health of Serbia and the Institute of Public Health of Montenegro, together with the regional Institutes for Public Health, hygiene-epidemiology services and community health centres were responsible for conducting the fieldwork. The whole territory of FRY (excluding Kosovo and Metohija) was divided into 23 districts (22 in Serbia and 1 in Montenegro, which again was divided into 15 areas). The districts were identified according to the regional Institutes of Public Health network. In each district a team of people was selected – one supervisor for the district, controllers (one controller per 5-6 interviewers) and interviewers (whose number depended on the number of clusters in the region). For conducting the fieldwork, 155 teams (120 in Serbia and 35 in Montenegro) were established - each was composed of three to four people, two interviewers (health workers), one laboratory technician and one driver.

The MICS Coordinator provided overall supervision.

The fieldwork was conducted from 20 June to 20 July 2000.

Several levels of control system were imposed:
1. During the field work, the controllers from the regional IPHs conducted the first level of control immediately after receiving questionnaires from the interviewers.
2. Controllers and supervisors from the Institutes of Public Health conducted a second level of control between 3 and 13 July on a sample of 10% of households.
3. The third level of control was carried out by supervisors from the WHO, UNICEF and IPH of Serbia on a sample of 5% of households.

Data Processing

The data were entered in 70 microcomputers using the specially prepared software in database MS Access. The data were entered in the regional Institutes of Public Health, with the 70 staff trained prior to data processing. In order to ensure quality control, the software was programmed to check the internal consistency of data entered. Procedures and standard programs developed under MICS and adapted to the FRY questionnaire were used throughout. The data processing was completed in August 2000. The SPSS-10 statistical package, being very suitable for this kind of analysis, was used for data tabulation and analysis.

III. Sample Characteristics and Data Quality

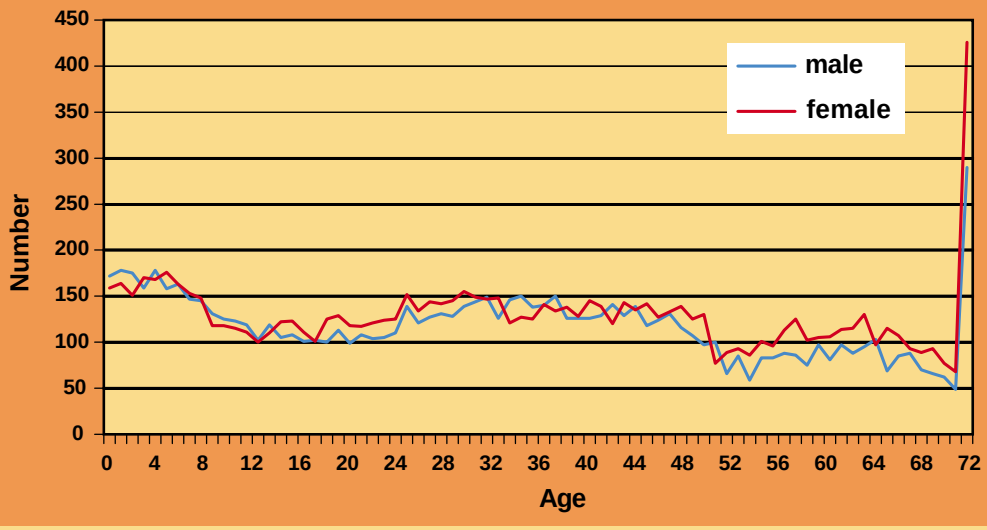
Response Rates

Out of the 5,850 households selected for the MICS sample, 5,822 were found to be occupied (Table 1). Of these, 5,731 were successfully interviewed for a household response rate of 98.4 percent. In the interviewed households, 4,630 eligible women aged 15-49 were identified. Of these, 4,514 were successfully interviewed, yielding an overall response rate for women of 95.9 percent. In addition, 1,674 children under the age of five were listed in the household questionnaire. Of these, the questionnaires were completed for 1654 children for an overall response rate of 97.2 percent.

Age distribution and Missing Data

As shown in Table 2 and Figure 1, the largest numbers of persons in any given single year are found in the first five years of life. The number in each year then steadily declines up to the age of 18 years, and then increases, with a maximum between 30-40 years of life. This pattern is not confirmed by routine statistics, which show a constant decrease in the birth rate for the past decade. After 40 years of age, the population starts to fall. The male/female ratio shows some variation over the first 50 years of life and then the number of women definitely exceeds that of men. The artificially large population at the end of the curve results from the fact that all people over the age of 75 were considered a single group.

Figure 1: Single year age distribution of the household population by sex, FRY excluding Kosovo & Metohija, 2000



As a basic check on the quality of the survey data, the percentage of cases missing information on selected questions is shown in Table 3. Fewer than three percent of household members have missing information on their level of education and the year of education. Among female respondents, 6.3 percent did not report a complete birth date (i.e., month and year). However, interviewers were instructed to report at least the year of birth, so this information was nonetheless provided for these 6.3 percent. The data on women being tested for HIV were the most likely among the selected information to be missing. This may result from the sensitivity of the question.

For all children, the complete birth date was registered, because controllers were instructed to repeat the interview if that information was missing. The information on diarrhoea was missing for less than one percent of children while the information on weight and height was missing for 2.3%. This may be the result of the absence of the child at the time of interview, a refusal to be weighed/measured, or some other reason. Nevertheless, the percentage is relatively low in comparison to other surveys in which anthropometric measurements are taken.

All in all, these low percentages of cases with missing information suggest that there were not significant problems with either the questions or the fieldwork.

Characteristics of the Household Population

Information on the characteristics of the household population and the survey respondents is provided to assist in the interpretation of the survey findings and to serve as a basic check on the sample implementation.

Table 4 presents the percent distribution of households in the sample by background characteristics. About 56 percent of the households are urban and 44 percent are rural. The Republic of Serbia comprises the largest number of households with 94 percent of households. Most households have between two and five members. Twenty-three percent of the households have at least one child under age five and 65 percent have at least one women age 15-49.

Table 5 shows the characteristics of female respondents aged 15-49. Approximately half of the women live in Central Serbia (excluding Belgrade), one fourth live in Vojvodina, one-fifth in Belgrade and about 7 percent in Republic of Montenegro. This pattern is expected and follows the Census data.

Women aged 25-29 comprise the greatest percentage of the sample at 17.1 percent. The lower percentage in age groups 15-19 (11.2) and 20-24 (13.3) could be the result of a steady birth rate decline in past years. Approximately 64 percent of women in the sample are married, while 28 percent have never married. The majority of women have secondary education (53 percent), 28 percent have no or primary education, while 18 percent have a higher education. Urban/rural disparities are significant. While roughly one fifth of urban women have no or primary education, the proportion in rural areas is two fifths. Conversely, approximately one quarter of urban women have higher education, but this is true for less than 10% of rural women. Note that the levels of education were grouped in three categories, according to the country's educational achievements: none/primary; secondary; and higher/high.

Table 6 shows the characteristics of children under five years of age. Out of these, 51.6 percent of the children are male and 48.4 are female. The age distribution of children under five is well balanced. Approximately 60 percent of mothers had secondary education, a percentage that is greater than the overall percentage of women with secondary education in the sample. The percentage of mothers with higher/high education is the same as for all women in the sample. Note that for children whose mothers did not live in the household, the education of the child's caretaker is used.

IV. Results

A. Education

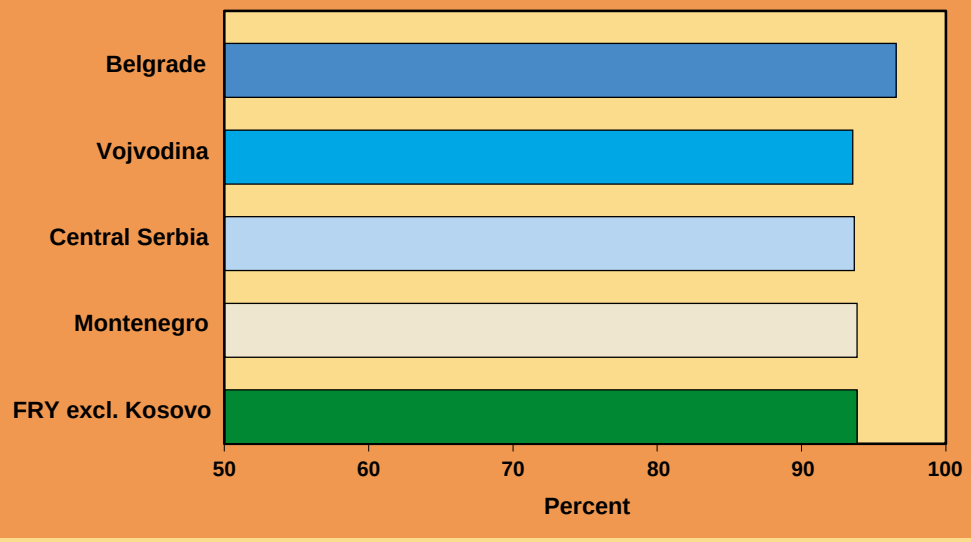
A.1 Early childhood education

Three in ten (31%) children aged 36-59 months attended an organised early childhood education programme, such as kindergarten (Table 7). Slightly more boys (34.4%) than girls (28.5%) attended these programmes. There were regional variations, ranging from 25.8 percent in Central Serbia to 51.7 percent in the Belgrade area. In addition, children in urban areas were almost four times as likely to attend early learning activities. The attendance rate of children whose mother had a tertiary education was higher (49.9%) than the rate of children whose mothers had no, primary or secondary (29.5-30%). There was a significant rise in attendance rates as the child got older, from 24.2% at 36-47 months to 38.1% at 48-59 months.

A.2 Basic education

Basic education is widely available to children in the FRY; it is both compulsory and free. 97.4% of children aged 7-14 (i.e. of primary school age) attended school (Table 9). There were no significant differences between boys and girls, children of different ages, urban and rural areas, and regions. This high net rate suggests that system retention is high, and indeed 93.8% of children who entered the first grade of primary school eventually reached grade five (Table 8). Again, there were no significant gender differences or regional or urban/rural disparities (Figure 2). More insight into the quality and availability of basic and primary education in the FRY will be given by the comprehensive evaluation study recently launched by UNICEF, UNESCO and the Ministries of Education of Serbia and Montenegro.

Figure 2: Percentage of children reaching grade 5, FRY (excl. K&M), 2000



Conclusion

There is relatively low enrolment in pre-primary education, particularly for younger children[3] and children living in rural areas. This has to do with a limited availability of facilities. Attendance at the primary level is nearly universal.There will be however pockets of low enrolment, particularly affecting the higher grades. The attendance rates found in this module are broadly compatible with routine statistics.

Recommendations

More pre-primary opportunities for development need to be made available at affordable costs; these might include in-home activities to promote psychosocial and cognitive stimulation and development. There is a growing network of private kindergartens; the quality of services provided in this sector should be monitored. At the primary level, there is a need for a finer understanding of where and at what grades attendance rates drop off, and who is affected. The routine statistics of the Ministry of Education should be adapted to enable such an analysis.

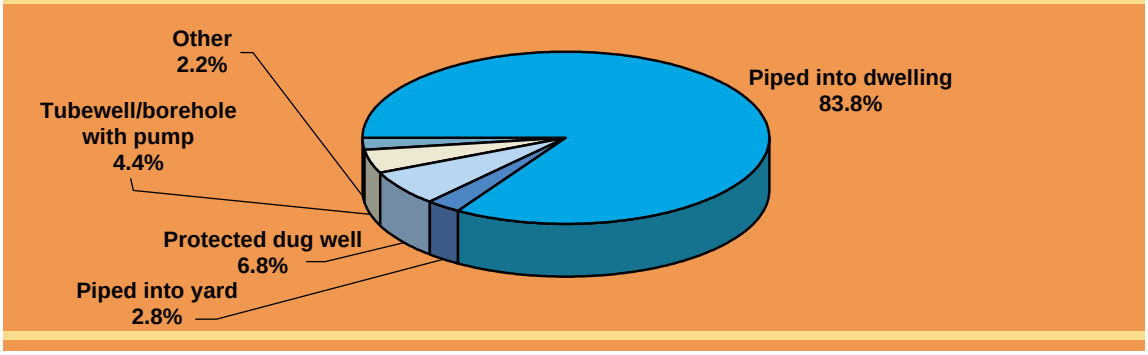
B. Water and Sanitation

B.1 Use of drinking water

Safe drinking water is a basic necessity for good health. Unsafe drinking water can be a significant carrier of diseases such as cholera, typhoid, and hepatitis A. Drinking water can also be tainted with chemical, physical and radiological contaminants with harmful effects on human health.

Overall, 98.4 percent of the surveyed population had access to “improved water sources” – 99.4 percent in urban areas and 97.4 percent in rural areas (Table 10).This is according to the commonly used definition of "safe drinking water" (piped water, public tap, borehole/tubewell, protected well, protected spring or rainwater).

Figure 3: Percentage of population using improved sources of drinking water, FRY (excl. K&M), 2000



A more restrictive definition is useful given the country’s level of development, *viz*. the proportion of the population with a water source that is piped into the dwelling or yard from a water supply system. By this definition, 86.6% of the population had access to safe drinking

[3] The enrolment rate for children aged 6, the age at which children have a pre-primary preparatory year for primary school, is 70-75%.

water in 2000. One can note that the national coverage rate has improved since 1996, when the proportion was 76.7%.

There was a huge difference in terms of water supply between urban and rural settlements. 98.5 percent of people in towns in the FRY (excl. K&M) used drinking water from public water-supply installations in their dwellings or yards. In rural settlements only 72.8 percent of people got their drinking water in the dwelling/yard from a public water-supply system; most the remainder accessed their water from dug wells (15.7%), tubewells or boreholes with pump (9.1%), or public taps (1.3%). There were few regional differences in terms of access to a water supply piped into the dwelling or yard. There were however important sub-regional differences in the Republic of Serbia; whereas 92.9% of the population in the Belgrade area had water piped into the dwelling or yard, the proportion in Central Serbia excluding Belgrade was 77%.

The MICS also found that 30% of urban households experienced sporadic interruptions in their water supply, with 5-7% experiencing daily interruptions.

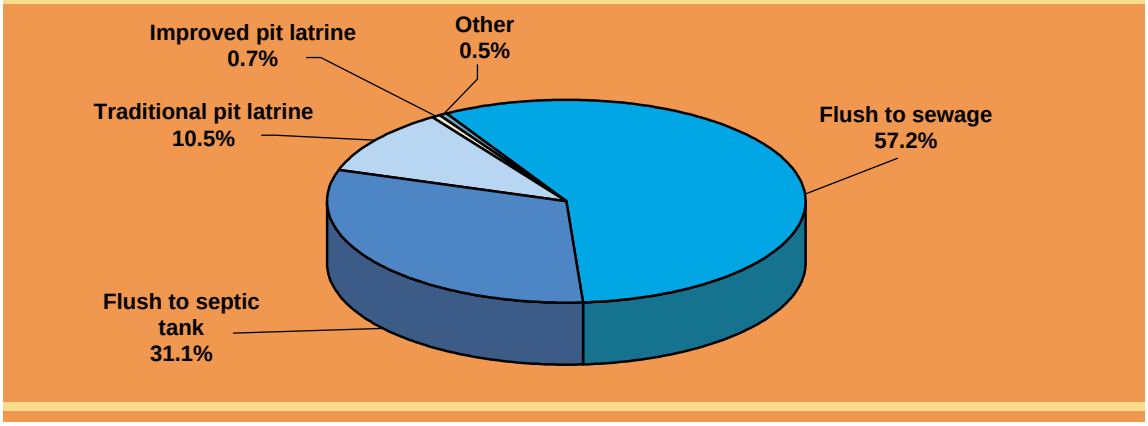
B.2 Use of sanitation

Inadequate disposal of human excreta and personal hygiene is associated with a range of diseases including diarrhoeal 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.

99.6 percent of the population of the FRY (excl. K&M) was living in households with sanitary means of excreta disposal (Table 11) with no difference between the population living in urban or rural areas.

A more sensitive analysis is possible by breaking down the sanitary means by type: toilets linked to sewage systems, toilets linked to septic tanks, and latrines. The safest way of disposing of human excreta and liquid waste is by means of a sewage system; 57.2% of the population lived in a household with such means. 31.1% used a toilet that flushed to a septic tank. Together, 88.3% of the population had flush toilets either linked to a sewage system or a septic tank. In 1996, the

Figure 4: Percentage of population using a sanitary means of excreta disposal, FRY (excl. K&M), 2000



proportion was 73.4%. However, one should note that septic tanks are often not built properly and

release waste matter into the environment. This poses a danger to the local population, particularly when they source their water from shallow and/or unprotected wells.

The coverage of the population with a flush toilet linked to a sewage system was lowest in Vojvodina (44.1%), which also had the highest proportion of toilets linked to a septic tank (47%). Many of these septic tanks leak, are poorly positioned and contaminate the water table. This is particularly problematic in Vojvodina because wells are relatively common in this province; they are usually not dug deep, and are consequently subject to contamination from septic tank leakage. The Institute of Public Health of Serbia has found a high proportion of bacteriological contamination in Vojvodina wells.

There were important urban/rural differences in terms of sanitation facilities. 87.5% of the urban population had a flush toilet linked to a sewage system, while in rural areas the proportion was 22.2%. In urban areas, 10.1% of the population was linked to a septic tank; in rural areas, the proportion was 55.5%. In urban areas, 1.9% of the population used a traditional pit latrine, while the proportion in rural areas was 20.4%.

Conclusion

When using the new global definition of "improved water sources", one can conclude that nearly the entire population of the FRY (excluding Kosovo and Metohija) has access to water. However, when using a more restrictive definition, there are still many households, particularly in rural areas, that do not have ready access to a water supply.

Many of the water supply networks have difficulty assuring a regular supply, and there are widespread water quality problems.

Households frequently experience interruptions in supply. The main problems facing the networks are insufficient capacity (in terms of water reservoirs and pumping power) and a poorly maintained infrastructure; underlying these has been unregulated development in many cities. Roughly 30-50% of network water is lost from the system due to leaks, and much of the network is made of asbestos-concrete piping that needs replacing.

As for quality, the Institute of Public Health of Serbia found that in 1998/99 62% of systems tested did not meet FRY microbiological standards, while 44% did not meet chemical-physical standards. Levels of chemical-physical impurities have tended to increase since at least 1981. The municipalities recording the poorest water quality often correspond to those hosting refugees and IDPs, though it is not known whether this is due to prior problems with water infrastructure or to increased demands on the system. Further, NATO bombing damaged chemical factories, causing water and soil pollution (vinyl chloride monomers, naphtha, ammonia, hydrochloric acid, mercury, liquid chlorine and dioxins).[4] There was also direct damage to water networks in several cities, and to chlorine storage and repacking facilities.

This sector has not received adequate investment and maintenance for many years. Prices for water are currently below costs, revenue collection is low, and current regulations are not adequately implemented; these practices must all be reviewed.

Access to adequate sanitation facilities is high, though there is room to increase access to sewage systems. The use of septic tanks is high in rural areas, but many of these leak and are poorly

[4] WHO (August 1999), WHO Health Sector Assessment in FRY.

positioned. There is a consequent risk of contamination of underground water, and hence of wellwater.

Recommendations

This sector needs reforms and fresh funds. Investments should made first in poorer and fast-growing urban settlements (particularly those with large numbers of refugees and IDPs). A priority must be placed on quality monitoring and maintenance, and future surveys should focus on water quality. In sanitation, there is a particular need to invest where access to sewage systems is low. The regulations governing septic tanks must be properly implemented, and the state of septic tanks monitored.

C. Child Malnutrition

C.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.

In order to improve feeding practices, UNICEF and the MCH Institute of Serbia have prepared and distributed an instructional leaflet for mothers and health workers on breastfeeding and complementary feeding that includes instructions on growth monitoring and a growth monitoring chart. In parallel with a distribution of scales and height measurements tools, UNICEF has intensified training of health workers on growth monitoring and promotion of proper feeding practices of children, as well as of women during pregnancy and lactation.

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. The standard or reference population used here is the NCHS standard, which UNICEF and the World Health Organisation recommend for use. Each of the three nutritional status indicators is expressed in standard deviation units (z-scores) from the median of this reference population.

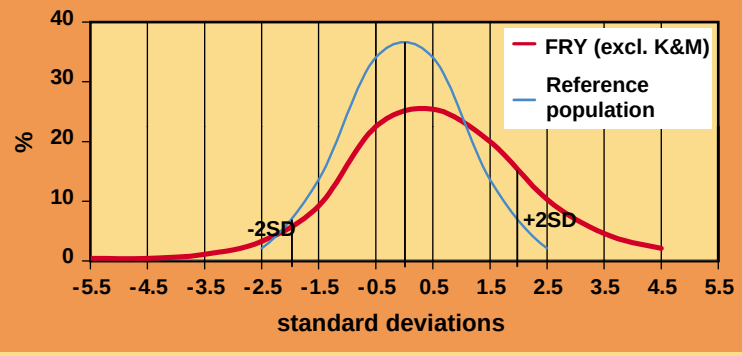
Weight for age is a measure of both acute and chronic malnutrition. Children whose weight for age is more than two standard deviations below the median of the reference population are considered *moderately or severely underweight* while those whose weight for age is more than three standard deviations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

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

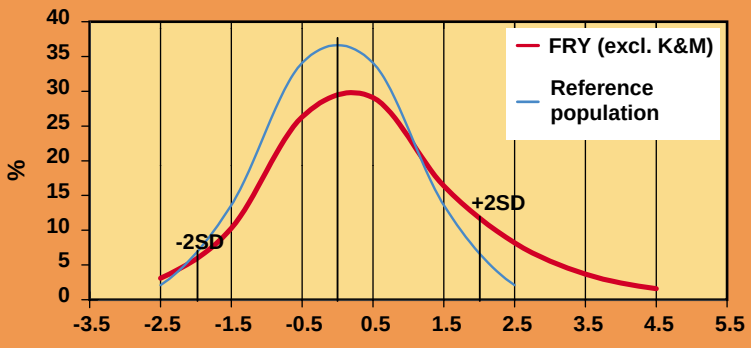
result of a recent nutritional deficiency. The indicator may exhibit significant seasonal shifts associated with changes in the availability of food or disease prevalence.

Figure 5: Distribution of height-for-age among children under five, 2000



The results of the MICS 2000 are presented in Tables 12 and 13, and Figures 5 and 6. They exclude children who were not weighed and measured (2.3% of children) and whose measurements were outside a plausible range (Table 12). In addition, a small number of children whose birth dates were not known were excluded.

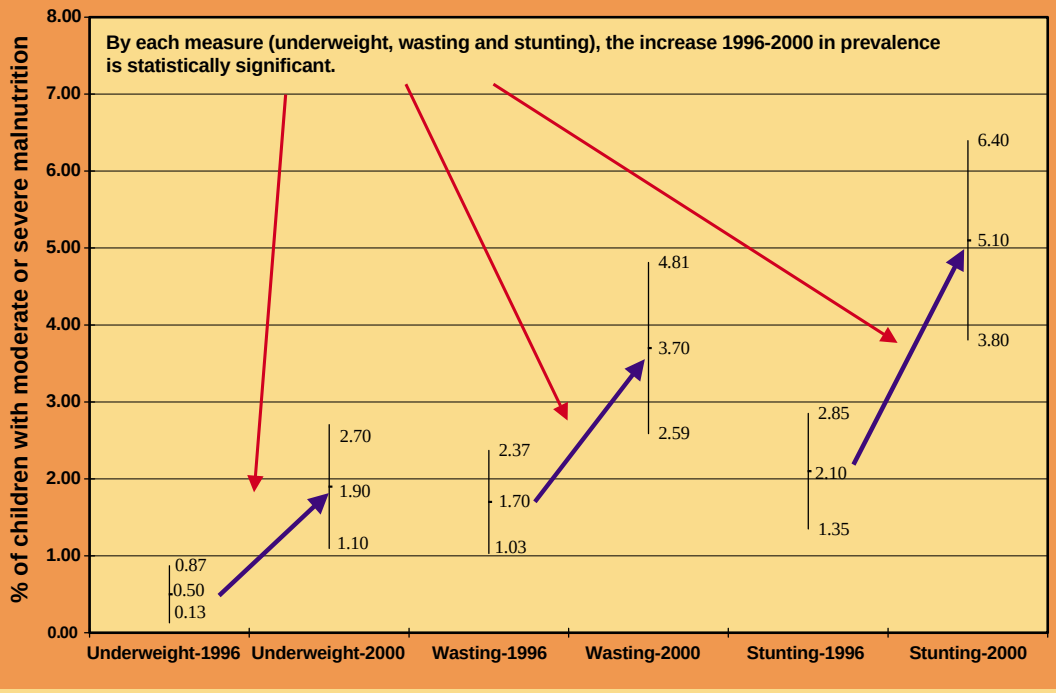
Figure 6: Distribution of weight-for-height among children under five, 2000



The major nutritional problem of children under five is overweight (Figure 5). 14.3% of children were moderately or severely overweight. There is a need to improve children's diets, which contain too little protein, too many saturated fats and complex carbohydrates, and too few fruits and vegetables. Part of the problem is poor feeding practice, while at the same time sources of protein and unsaturated fats, and fruit and vegetables are expensive. The latter consideration has become increasingly relevant over the past decade, which has seen a large decline in incomes.

In 1996, there was little or no malnutrition (Figure 7). The national prevalences of malnutrition (using the three anthropometric indicators) were at levels at or below what one finds in a reference population. The only exception was stunting in Kosovo and Metohija (8.6%).

Figure 7: Prevalence of malnutrition in children under five

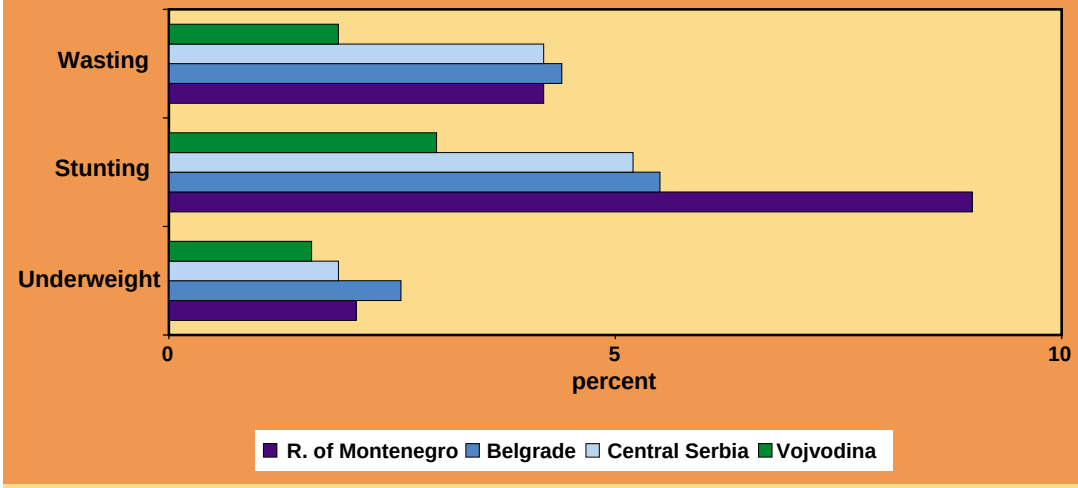


In 2000, the MICS found that prevalences of malnutrition had all increased (though no data could be gathered in Kosovo and Metohija). The prevalence of moderate and severe underweight had risen from 0.5 to 1.9%. Moderate and severe wasting had risen from 1.7 to 3.7%, stunting from 2.1 to 5.1%. The wasting and stunting are only 1.6-3 percentage points higher than what one finds in the reference population, and on a national level are of concern particularly if the survey is registering a trend.

The increase in malnutrition may be due to the deteriorated economic and security situation in 2000, as compared to 1996. Poorer households in particular had greater difficulty in ensuring adequate food intake. Further, the health care capacities of households and public services declined in this period. There has also been an influx of children from Kosovo-Metohija, where higher prevalences of malnutrition are common. Malnutrition, and stunting in particular, is of course associated with a host of ills, including higher levels of child morbidity and mortality, poor school performance later in life, and reduced energy levels. Further, stunting is difficult to reverse, particularly once the child reaches the age of two. This situation will need to be monitored closely.

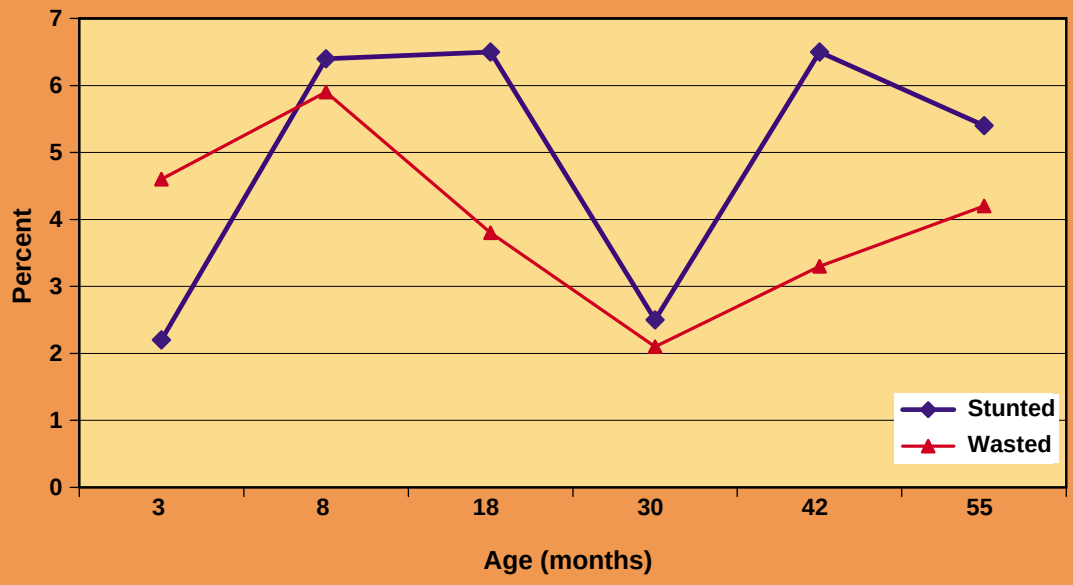
Regional differences in the indicators are presented in Figure 8.

Figure 8: Malnutrition by Region



The age structure is displayed in Figure 9, and shows some evidence that the child is more vulnerable to wasting in the first year of life, when complementary foods are introduced precociously and breastfeeding rates fall off rapidly; and that it is in this year that stunting begins, not to recover. However, given the number of children in each sample age group, it is not possible to draw any firm conclusions from the data. The prevalences of stunting and wasting decrease the more educated is the child's mother. This is as one would expect (and finds in other countries), and may reflect increased income in the household and greater knowledge about child care on the mother's part; but again, the differences are not statistically significant. There are no significant differences between the urban/rural and male/female prevalences.

Figure 9: Percentage of under-five children who are malnourished, by age



Conclusion

The major nutritional problem facing children under five is obesity. It can be traced to poor nutritional practices. In particular, these children eat too little protein, too many saturated fats and complex carbohydrates, and too few fruits and vegetables. This is partly the result of dietary custom, but it also reflects the fact that high-quality protein, fruits and vegetables are relatively expensive. There are also problems surrounding the introduction of complementary foods, which occurs too early; breastfeeding is not continued long enough.

There has been a small increase in malnutrition since 1996. This may be due to deteriorated nutritional practices and the reduced care capacities of both households and health services. These are both the consequence of the economic crisis, by which household incomes and state budgets have fallen.

Recommendations

Activities already undertaken – promotion of breastfeeding and timely complementary feeding, training of health workers in growth monitoring and proper feeding practice - should continue. In addition, growth monitoring tools should be provided for all primary health centre units, and training provided in their use. The use of IEC campaigns promoting good feeding practices through other media should also be investigated. The nutritional status of children has proven sensitive to external shocks in the past five years. Given current economic circumstances, this makes it all the more important closely to monitor each child's nutritional status, to ensure a prompt and timely reaction on the part of parents and health professionals to restore any child with faltering growth to health. There is moreover a need from a public health perspective to

monitor the nutritional status of the child population as a whole, to ensure that stunting and wasting return to the low levels of the past.

C.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 breast milk-substitutes and 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 was for children to 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. It has been adopted by the National Committee for Breastfeeding in the FRY.

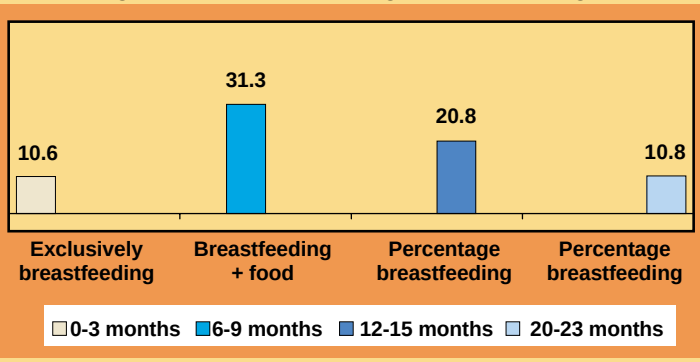
In the 1995-2000 period, over 2,500 health workers from 96% of maternities and maternity units, as well as some non-health professionals were trained in promoting breastfeeding and the BFHI as part of the UNICEF-supported National Breastfeeding Promotion Programme. Twenty-four out of 69 maternities in the FRY have been certified as a Baby-Friendly Hospital (BFH), and 40 others have taken steps to become baby-friendly. At the moment, 33.2% of all deliveries take place in BFHs with significant regional variations from 55.7% in Vojvodina to 19% in the Belgrade area. UNICEF made special efforts to accelerate breastfeeding promotion in 2000, by launching a wide promotional campaign on the basis of a recent public opinion poll on breastfeeding.

The goal of this module was to assess breastfeeding indicators and progress made since 1996. The MICS survey remains the only reliable source of information on breastfeeding since 1996.

In Table 14, breastfeeding status was based on the mother's report of her child's consumption in the 24 hours prior to the interview. ***Exclusive breastfeeding*** refers to children who received only breast milk and vitamins, mineral supplements, or medicine; in the table, this indicator is measured for children less than four months of age. ***Complementary feeding*** refers to children who received breast milk and solid or semi-solid food; in the table this indicator is measured for children aged 6-9 months, and is called timely complementary feeding. ***Continued breastfeeding*** refers to children who continue breastfeeding with an intake of other foods and liquids into the second and third year of life respectively.

In addition to the basic breastfeeding indicators, the MICS surveyed the ***Predominant breastfeeding rate*** (infants less than four months of age who were predominantly breastfed, receiving some additional liquids); ***Ever breastfeeding rate*** (infants less than 12 months of age who were ever breastfed); ***Timely first-suckling rate*** (percentage of infants who first suckled within 2 hours of birth); ***Bottle-feeding rate*** (percentage of infants receiving any food or drink from a bottle) (Table 15). Percentages by region and mother's education should be interpreted with caution, due to relatively small sample numbers in each category.

Figure 10: Breastfeeding as the child ages



Only 10.6 percent of children aged less than four months were exclusively breastfed, a low and unsatisfactory level. At age 6-9 months, 31.3 percent of children were receiving breast milk and solid or semi-solid foods; this low rate is the result of a high proportion of women ceasing breastfeeding before the age of six months. By age 12-15 months, only 20.8 percent of children were still being breastfed and by age 20-23 months, just 10.8 percent were still breastfed (Figure 10).

Continued breastfeeding at age 20-23 months was more prevalent in rural areas (19.2%) than in urban areas (4.1%).

Figure 11: Distibution of breastfeeding patterns by age

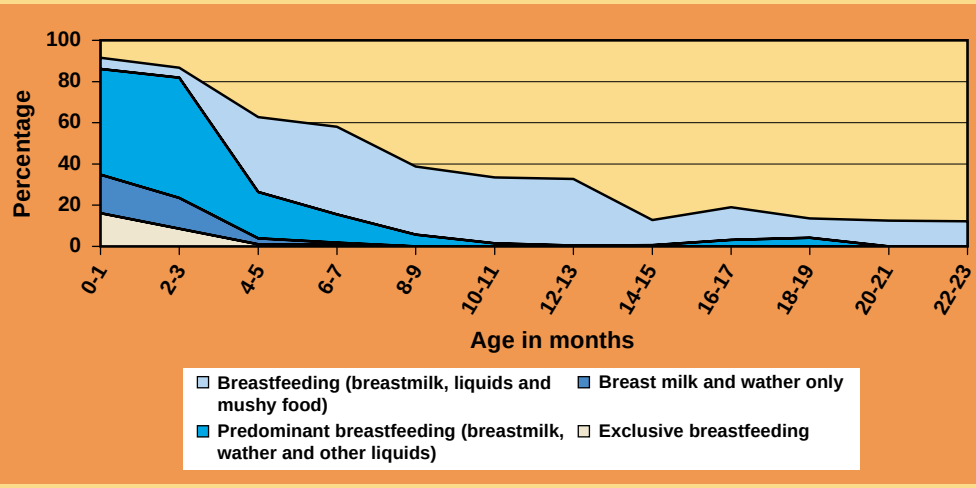
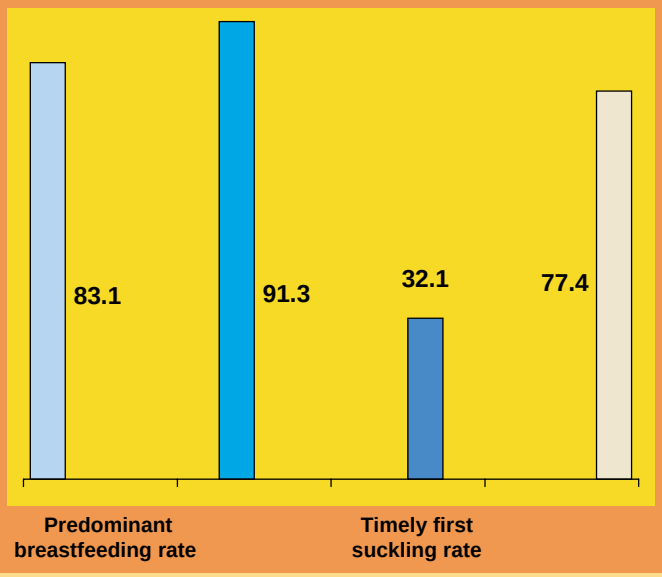


Figure 11 and Table 16 show the detailed pattern of breastfeeding status by the child's age in months. Even at the earliest ages, the majority of children were receiving liquids or foods other than breast milk. Only 16% of infants aged 0-1 months were exclusively BF, and this proportion drops off rapidly until it is close to zero by four months. This practice has to be understood in light of previously common paediatric recommendations on the early introduction of water, tea, juices and complementary foods. 4% of mothers introduced mashy foods in the first month.

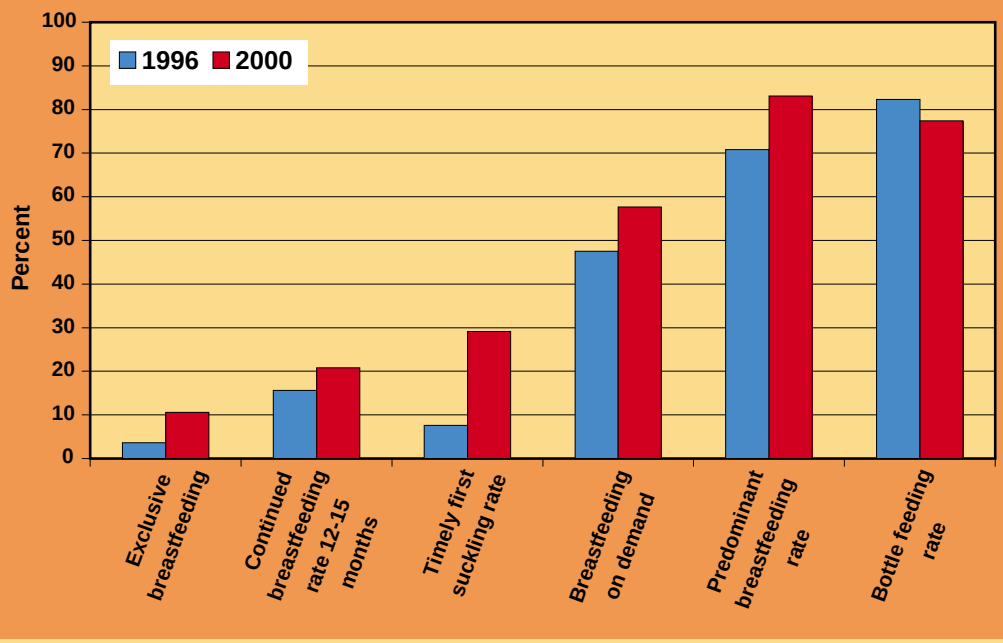
There are two additional indicators of well-established breastfeeding: the ever breastfeeding rate (91.3%) and the timely first suckling rate (32.1%) (Figure 12). The latter coincided with the percentage of deliveries in Baby-Friendly Hospitals (33.2%).

Figure 12: Additional indicators of breastfeeding, FRY 2000



Water and other liquids are quickly introduced into the infant's diet, and this was reflected in the high bottle-feeding rate (77.4%). As a result, the prevalence of breastfeeding, still high at four months, drops off rapidly in the subsequent months. By the end of the first year, only roughly one third of children are breastfed.

Figure 13: Progress in major breastfeeding indicators since MICS 1996



As a result of the UNICEF-supported programme for the promotion of breastfeeding, progress can be reported in the few years since 1996.

The core of the Breastfeeding Programme is exclusive breastfeeding for a period of about six months. The strategy used to increase the level of exclusive breastfeeding is to recommend that mothers begin breastfeeding within an hour after birth, breastfed the child on demand and not use bottles while feeding children. The indicators suggest good progress has been made – exclusive breastfeeding during the first four months rose from 3.6% to 10.6%, timely first suckling rate rose from 7.9% to 29.1%, breastfeeding on demand from 47.5% to 57.7%, while the bottle feeding rate has decreased from 82.3% to 77.4%.[5] The continued and predominant breastfeeding rates have also improved. (Figure 13). The gains break down regionally in a manner that matches the regional distribution of baby-friendly hospitals, all of which have gained this status since 1996.

While the percentage of children who are breastfed at 12-15 months is not significantly different according to the mother's education, there are significant differences when the child is aged 20-23 months. In this latter age group, children of mothers with no or primary education have a significantly higher breastfeeding rate (30.5%) than for children whose mothers have a secondary (5.7%) or higher education (2.2%).[6] This will have something to do with maternity leave and employment rates. All mothers are entitled to extended maternity leave (or benefits, if they were unemployed at the time of delivery), but most working mothers will have returned to work by the time the child is 20-23 months. Mothers with more education are more likely to be employed.

[5] The increases are all statistically significant using a 90% confidence interval.
[6] Significant at the 90% level.

Conclusion

Exclusive breastfeeding and continued breastfeeding rates in the first and second year of life are low and unsatisfactory compared to other countries which have provided data on exclusive breastfeeding. Semi-solid and solid foods, as well as other liquids, are introduced far too early into the child's diet; while mothers cease breastfeeding too soon. There is room to change these practices, particularly in light of the extended maternity leave available and current workforce participation rates. (One must recognise of course that the value of the leave/benefit has been seriously eroded during the 1990s). The breastfeeding promotion programme and the BFHI have already given positive results, particularly in the early introduction of breastfeeding, the extension of exclusive breastfeeding, and the reduction in bottle use. However, the early introduction of water, liquids and other foods in infant diets is a deeply ingrained practice among mothers that all too often continues to be recommended by health professionals.

Recommendations

UNICEF should continue support to the National Breastfeeding. The results of an August 2000 opinion poll on breastfeeding should also be considered in planning future activities. The MICS indicates the problems to be addressed, such as the early introduction of tea or water, the early introduction of complementary foods, the use of bottles and the lack of exclusive breastfeeding. The opinion poll can provide guidelines on groups to be targeted for further interventions, such as the child's father and female grandparents. Given the clear and positive impact of the BFHI, its further expansion is strongly recommended.

C.3 Salt iodisation

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 by as much as thirteen points. The main strategy in the elimination of Iodine Deficiency Disorders (IDD) is iodisation of edible salt, as an effective, low-cost way of preventing IDD. *Adequately iodised salt* contains 15 ppm (parts per million) of iodine or more. The end-decade objective was to have at least 90% of household using adequately iodised salt. In MICS, interviewers tested household salt for iodine levels by means of a testing kit.

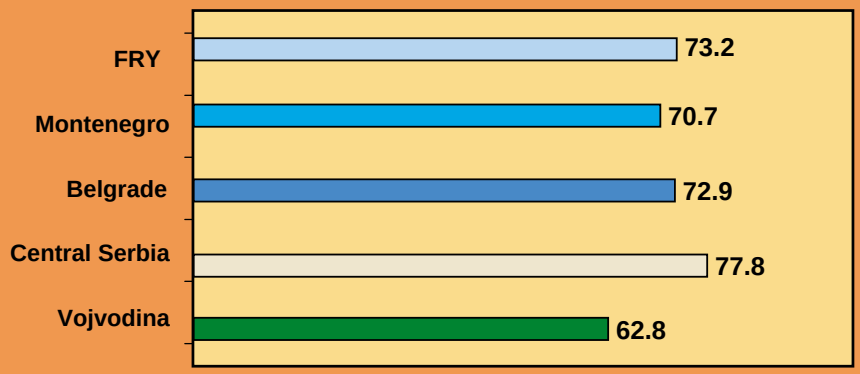
In the early 1950s in the FRY, more than 650,000 persons suffered from endemic goitre and up to 3% of the total population from cretinism. IDD was recognised as a public health problem and universal salt iodisation was introduced in 1953. Standards of iodisation were raised in 1992, when legal regulations were endorsed requiring iodisation amounting to 20 +/-4 mg of potassium iodide per kg of salt for all salt destined for human and animal consumption. In order to determine the status of iodine nutrition and goitre prevalence, UNICEF also supported a 1999 survey on goitre prevalence and urinary iodine level among school children in the Republic of Serbia. The survey covered 4,598 primary school-age children (7–14 years) living in villages and towns of 44 municipalities of central Serbia and Vojvodina. The results showed that only 2.35% of surveyed school children had increased thyroid volumes and that the median iodine concentration in children's urine was 158 mcg/l.

The goal of this module was to assess the proportion of households consuming adequately iodised salt.

99.2% of households surveyed had salt that was tested. 73.2 percent of the test samples had adequately iodised salt (Table 17). There were significant regional differences. Over 70% of

households had adequately iodised salt in Montenegro (70.7%) and Central Serbia (77%), while the coverage was lower in Vojvodina (62.8%) (Figure 14). The disparities are no doubt due to the different suppliers in the different regions.

Figure 14: Percentage of households consuming iodised salt, by region



Conclusion

There are three criteria that determine the elimination of IDD: that at least 90% of households consume adequate iodised salt, that the median level of urinary iodine (among a representative sample of children) be between 100-300 mcg/l, with the proportion of children below 50 mcg/l not to exceed 20%; and that the prevalence of goiter in school children be below 5%.

The MICS result shows that both the Republic of Serbia (excl. K&M) and the Republic of Montenegro are roughly 20 percentage points away from respecting the first criterion. However, using the physiological criteria, the Republic of Serbia (excl. K&M) has eliminated IDD. This illustrates the success of the national program based on universal salt iodisation (USI). This success was reached due to an early recognition of IDD as an important public health problem, the implementation of legislation on USI, and the constant monitoring of salt iodisation and of its biological impact. The achievement is striking in light of the crises the county faced during this decade, and particularly the loss of the country's main supplier of iodised salt in the early 1990s (in Bosnia). Special efforts were required to educate importers and producers who filled the gap about the importance of iodisation, and in some cases to provide them with technical assistance and equipment.

Recommendations

In light of the negative experience of some east European countries, which almost reached the goal, but are now faced with an increase of IDD, future efforts in this area will need to shift to sustaining achievements. There will be a need for adequate regulation of imports and domestic production, some further support to importers and producers in their iodisation activities, and a continued monitoring of the iodine content in salt. A survey on goitre among school children in the Republic of Montenegro should be conducted, taking into account the experience and methodology of the survey conducted in the Republic of Serbia, to determine whether IDD have also been eliminated there.

UNICEF should continue to support the recently established National IDD Committee. The responsibilities of the Committee will be to provide adequate legislation and regulation, ensure reliable quality assurance and quality control of edible salt at production level, and establish a reliable monitoring system, including biological monitoring.

D. Child Health

D.1 Vaccination coverage

According to UNICEF and WHO recommendations, a child should receive at least a BCG vaccination to protect against tuberculosis, three doses of DPT to protect against diphtheria, pertussis, and tetanus, three doses of oral polio vaccine, and a measles vaccination by the age of 12 months. The national immunisation calendar in Yugoslavia differs slightly, with a measles vaccine being administered at the age 12-18 months in the form of a MMR vaccine (Measles, Mumps, and Rubella).

UNICEF is supporting the national immunisation programme by providing cold chain equipment, disposables for immunisation, vaccines not produced locally, vehicles for out-reach immunisation teams; while also providing support to acute flaccid paralysis and polio virus surveillance. Particular attention has been given to improving the surveillance system of vaccine-preventable diseases and the rationalisation of immunisation practice, with a focus on safe-injections practices and immunisation reporting. Community promotion of immunisation and actions to reach minority groups have been integrated into UNICEF programmes.
The aim of the immunisation module was to determine vaccination coverage against all antigens envisaged by the national immunisation schedule, and to assess progress in coverage made since MICS I as well as programme achievements. Of particular importance was that the survey also provide a source of information on vaccination coverage other than routine statistics.

In MICS II, 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. Mothers were also probed to report any vaccinations the child had received that did not appear on the card. Overall, 75.8 percent of children had personal health cards. This proportion has doubled since 1996, when only 37.1% of children had person health cards; this is the result of UNICEF's distribution of over 1.5 million personal immunisation cards. If the child did not have a card, the mother was read a short description of each vaccine and asked to recall whether or not the child had received it and, for DPT and Polio, how many times (vaccination history).

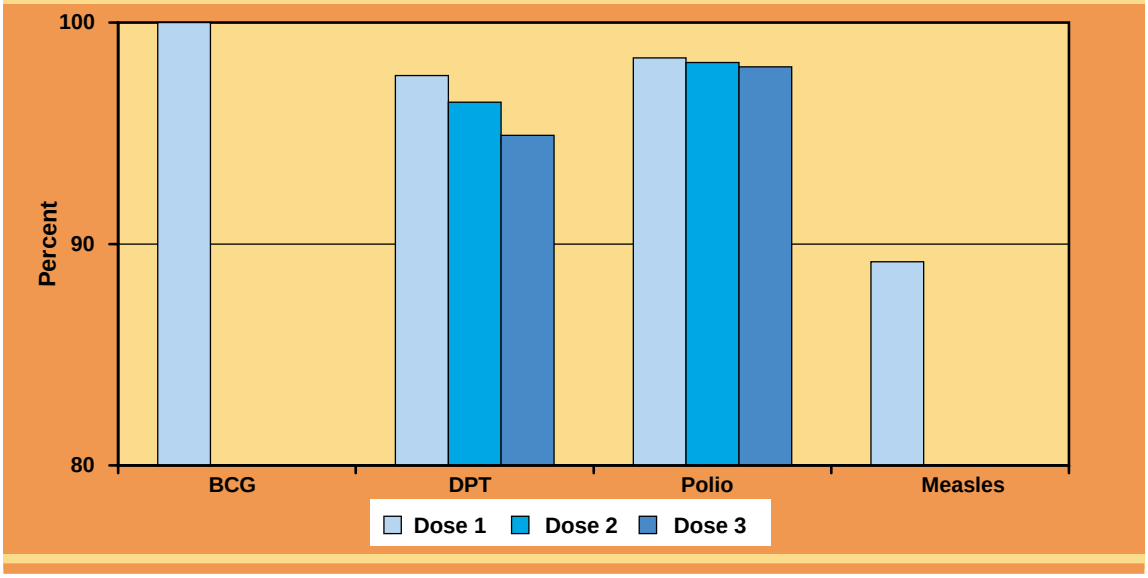
Table 18 shows the percentage of those who received each of the vaccinations according to schedule. The denominator for BCG, DPT and polio is comprised of children aged 12-23 months so only those children who are old enough to be fully vaccinated are counted. The denominator of measles is children aged 24-35, to take account of the national immunisation calendar's recommendation for measles. The numerator for BCG, DPT and polio includes only those children who were vaccinated before their first birthday, while the numerator for measles includes only those who were vaccinated before their second birthday.

All children aged 12-23 months received a BCG vaccination by the age of 12 months. This is due to the fact that nearly all children are born in maternities, and that the BCG at birth is mandatory. 97.6% received the first dose of DPT; the percentage declined for subsequent doses of DPT to 96.4 percent for the second dose, and 94.9 percent for the third dose (Figure 15). Similarly, 98.4 percent of children received Polio 1 by 12 months, and this declined to 98 percent by the third

dose. Polio and DPT are normally administered simultaneously. The slight difference in coverage rates can be explained by contraindications in DPT. The coverage for measles vaccine (MMR) for children was somewhat lower; 89.2% of children aged 24-35 months received the MMR by their second birthday.

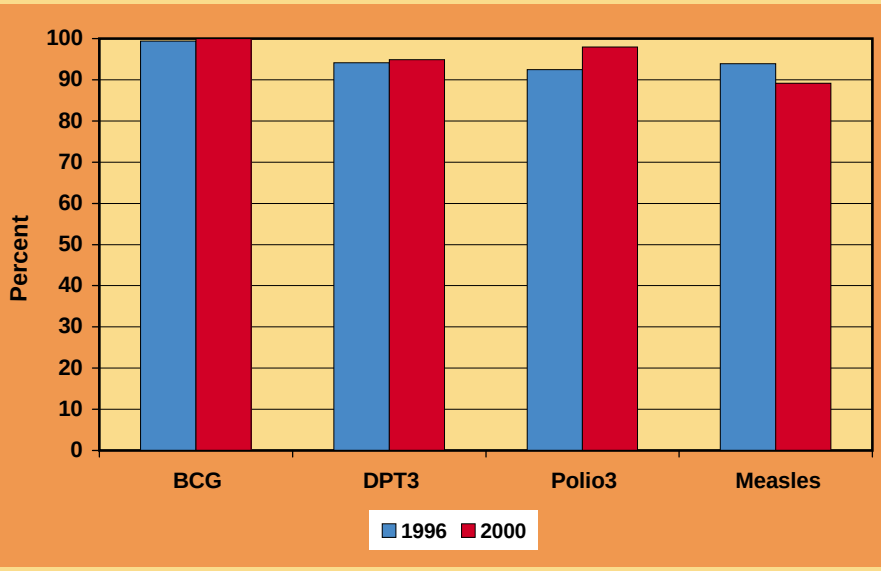
Figure 15: Percentage of children aged 12-23 months who received BCG, OPV3 and DPT3 vaccinations hy age 12 months and percentage of children aged 24-35 months who received Measles (MMR) by age of 24 months, FRY 2000

Figure 15: Percentage of children aged 12-23 months who received BCG, OPV3 and DPT3 vaccinations hy age 12 months and percentage of children aged 24-35 months who received Measles (MMR) by age of 24 months, FRY 2000



The relatively low measles coverage is a result of a shortage of MMR vaccine, which is not produced locally. As a result, the percentage of children aged 24-35 who had received all recommended vaccinations by their second birthday was 88.8 percent, with slight regional differences.

Figure 16: Vaccination coverage 1996 (MICS I) and 2000 (MICSII), FRY (excl. K&M)



Comparison of the data on vaccination coverage between 1996 and 2000 indicates that high coverage rates were generally maintained (Figure 16). There has been a small decrease in the measles coverage, which reflects the deterioration in the availability of MMR vaccines in 1999/2000. UNICEF has ordered a year's supply of MMR vaccine, which is expected to arrive in the first quarter of 2001.

Conclusion and recommendations

The end-decade vaccination goal for 2000 was achieved in the FRY (excluding Kosovo and Metohija). It is not yet possible to compare the MICS results with routine statistics, as the latter have still to be compiled and published for 2000. However, preliminary indications suggest that the MICS 2000 results are the same as those recorded by routine statistics, as was the case in 1996. Significant progress has been made in improving immunisation records, as evidenced by the doubling of the percentage of children with their own personal immunisation record. Further actions should be concentrated on the maintenance of the service, the achievement of universal availability of all vaccines and focussing efforts on those areas with relatively low coverage rates.

D.2 Diarrhoea, acute respiratory infections and the integrated management of childhood illnesses

D.2.1 Diarrhoea

Acute diarrhoea is an important cause of morbidity among children in the Federal Republic of Yugoslavia. Preventing dehydration and malnutrition by increasing fluid intake – either through oral rehydration salts (ORS) or a recommended home fluid (RHF) - and continuing to feed the child are important strategies for managing diarrhoea and can be implemented at home.

In the MICS questionnaire, mothers (or carers) 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/same/less than what the child usually ate and drank. Overall, 8.6 percent of under five children had had diarrhoea in the two weeks preceding the survey (Table 19), which would correspond to 2.3 episodes per child annually (assuming no seasonal variations and that the child only had had one diarrhoeal episode during the previous two weeks). Diarrhoea prevalence was highest in Vojvodina, at 12.2 percent.[7] This result is somewhat counterintuitive, given that Vojvodina is a relatively well developed region. The problem may be due to the water and sanitation conditions of that region: the water there is contaminated with chemicals and pesticides, and in rural areas in particular, wellwater is often contaminated by leaking septic tanks (see section on water and sanitation). The prevalence of diarrhoea among boys (11%) was significantly higher than among girls (6.1%). The peak of diarrhoea prevalence occurred among children aged 12-23 months, though this difference is not statistically significant.

Table 19 also shows the percentage of children receiving various types of recommended liquids during the episode of diarrhoea. Since mothers were able to name more than one type of liquid, the percentages do not necessarily add to 100. One in eight children received breast milk while they had diarrhoea. As expected, children under age 6 months were especially likely to have received breast milk – 56.8 percent. About 66 percent of children received gruel, 75 percent received local acceptable fluids and 22.7 percent received ORS. The children of mothers with no or primary education were significantly more likely to receive breastmilk during a diarrhoeal episode (24.1%) than children of mothers who have secondary (6.5%) or higher (0%) education.[8] This will have to do with the fact that less educated mothers breastfeed their children longer (see section on breastfeeding).

Almost all (97.9 percent) children with diarrhoea received one or more of the recommended home treatments (i.e. were treated with ORS or RHF). Half of the mothers knew what Oral Rehydration Solution was (Table 21); knowledge was highest in Vojvodina (62%) and lowest in Montenegro (41%), while it was 48.5% in Central Serbia.[9] Knowledge rates were significantly higher in rural areas (62.6%) than urban areas (42.7%), and among mothers with no or primary education.

With respect to the management of a diarrhoeal episode, it is recommended that children with diarrhoea receive increased fluids and continue to eat the same amount (or somewhat less) or more. It was not possible to determine the extent to which children with diarrhoea received increased fluids, for two reasons. First, the question on fluids was posed such that the 'more' and 'same' responses were grouped together, instead of being separated. Second, roughly half of the respondents answered 'don't know' in response to the question on the management of a diarrhoeal episode, suggesting that this question was not clearly understood. Of those that did not respond 'don't know', 92.8% reported giving more or the same amount of fluids during an episode of diarrhoea, while 60.9% reported giving the child somewhat less/the same/more to eat. The latter figure suggests that less than 60.9% of diarrhoeal cases will be properly managed at home.[10]

[7] The difference between Vojvodina (12.2%) and Central Serbia (7.6%) is significant at the 90% confidence level.
[8] Statistically significant at the 90% level.
[9] Statistically significant at the 90% level.
[10] Because it represents the upper limit for children who received both more fluids and ate somewhat less/the same/more.

D.2.2 Acute respiratory infections

Acute lower respiratory infections, particularly pneumonia, are the leading cause of child morbidity in the FRY, and are an important cause of death. In the MICS questionnaire, children with acute respiratory infection are defined as those who had an illness with a cough accompanied by rapid or difficult breathing and whose symptoms were due to a problem in the chest, or both a problem in the chest and a blocked nose, or whose mother did not know the source of the problem. Only 2.7 percent of under five children had an acute respiratory infection in the two weeks prior to the survey according to these criteria (Table 22). This low prevalence, much lower than diarrhoea,[11] can be explained by the restrictive criteria in the questionnaire identifying an ARI, which captured just children with a severe ARI (suspected pneumonia). 22.9 percent of these children were taken to a hospital, 64.7 to a health centre, 5.4% to a dispensary and 2.3% to a mobile or outreach clinic. Overall, 96.7 percent of children with ARI were taken to an appropriate health provider. The small number of children with an ARI (n=44) does not enable further, disaggregated, analysis.

D.2.3 IMCI initiative

This initiative is based on a WHO/UNICEF programme, and was first adapted in 1997 by the Mother and Child Health Care Institute of Serbia to cover mother and child health care as a whole; more recently, the Children's Hospital in Podgorica has adopted the IMCI initiative, and plans to implement its activities throughout the Republic of Montenegro. The initiative combines strategies for the control and treatment of childhood diseases and promotes practices to improve child health, in the following areas: ARI and diarrhoeal diseases (which together constitute the main causes of preventable child morbidity and mortality), immunisation, nutrition, neurological disorders, acute urinary infections, safe motherhood, family planning, sexually transmitted infections, hygiene, child abuse, stress management and psychosocial development. The programme was first implemented in Kosovo and Metohija in 1997, in light of its higher infant/child mortality rates and the higher proportion of preventable diseases in its infant/child mortality structure. It was thereafter extended throughout the Republic of Serbia. More than 500 doctors have been trained, as well as 450 home-visiting nurses and 500 paediatric nurses working in primary MCH care services. Trained staff were provided with the manual, drugs, equipment and consumables needed to carry out programme activities in the health centre.

The programme focuses on the improvement of case management skills by health workers, improvement of the health system, and improvement of family and community practices in the prevention and early management of childhood illnesses. Appropriate home management of illness is one component of IMCI. The approach teaches mothers that appropriate home management of diarrhoea or any other illness requires giving more fluids and continuing to feed sick children as they are normally fed.

Table 23 presents information on the drinking and eating behaviour of sick children. As the questionnaire did not adequately distinguish between drinking more and the same during illness, it is not possible to report what proportion of children received increased fluids and continued eating, as recommended under the IMCI initiative. In any case, 96.9% of children drank more or

[11] Nonetheless, diarrhoea is much less common a cause of morbidity than diseases of the respiratory system, as registered by routine health statistics.

the same during the illness while 63.1% of children ate somewhat less/the same/more. The latter result suggests that less than 63.1% of cases of illness will be properly managed at home.

Promoting knowledge among caretakers about when it is appropriate to seek care for ill children is another important component of the IMCI initiative. In the MICS, mothers or caretakers of children were asked to name all of the symptoms that would cause them to take a child to a health facility right away. The most common response, given by 69 percent of mothers, was that they would take their child to a health facility right away if he/she developed a fever (Table 24). Forty three percent said that blood in the stools would cause them to take the child to a health facility and 38 percent mentioned difficulty breathing. 33 percent of mothers cited child becoming sicker, 28 percent of mothers an inability to drink/breastfeed and 23 percent fast breathing as reasons for taking a child to a health facility right away. Only 8 percent of mothers considered drinking poorly a sufficiently serious symptom to warrant taking the sick child to a health provider.

Overall, 58 percent of mothers knew at least two signs for seeking care immediately. There were some differences in the responses according to area of residence and education, but only the latter was significant; 53.9% of mothers with no or primary education knew at least two signs, while the percentage for mothers with higher education was 62.5%.[12] This is a good example of how the level of maternal education is positively reflected in a good understanding of appropriate care practices.

The mothers were also asked whether they would give some medicine to a sick child before taking him/her to a doctor. The answers are revealing of home care habits in the country (Table 25). 45.2% of mothers answered they would give a cough syrup, 11.6% would administer an antibiotic, and 5.9% a traditional medicine. Giving tea can be innocuous, but administering antibiotics is not; it may be an irrational use, can endanger the child's health, and could affect medical tests needed to determine treatment. Giving cough syrup can be inappropriate and harmful, particularly if it contains codeine. The use of drugs, particularly antibiotics and cough syrup, was more common in Montenegro than in other parts of the country. The administration of cough syrup and/or antibiotics was much less common if the child was aged under 6 months. However, giving tea to sick children in this age group was very common (70.8%), another indication that the benefits of exclusive breastfeeding are not well understood.

Conclusion

Diarrhoea and acute respiratory infections are important causes of child morbidity and mortality. Their deleterious effects on health can be greatly diminished if they are well managed, particularly in the home. The IMCI initiative has been undertaken to address this issue. There is still room to improve symptom recognition and home practices. Less than 60% of mothers know at least two symptoms warranting taking the child to see a doctor. Less than two thirds properly manage a diarrhoeal episode or, more generally, an episode of illness. There is frequent recourse to medications that are not effective and in some instances can be harmful.

Recommendations

The IMCI Initiative should continue to be implemented and effects of the training should be evaluated. Efforts should focus on proper feeding and drinking practices during an illness, on better symptom recognition, on discouraging the use of inappropriate medications, and on promoting breastfeeding as an effective means of combating illness among small children. A new

[12] Significant at the 90% level.

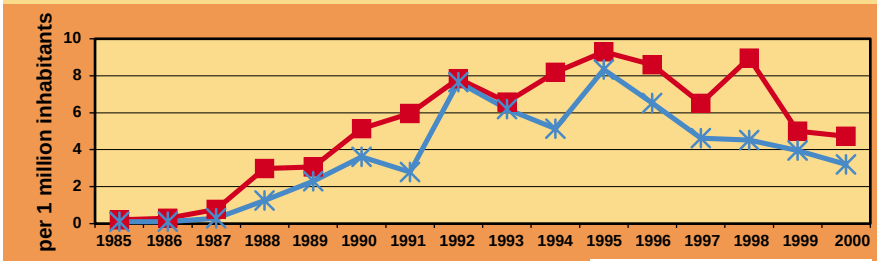
communication strategy using media and technology should be investigated. A baseline of home practices should be established and monitored after an appropriate lapse of time, to determine the Initiative's impact in this area.

E. HIV/AIDS

HIV and AIDS continue to take the lives of millions around the world. There is still no cure in sight for one of the most frightening and devastating diseases the world has known. In the meantime, we can fight with what we have at the moment – with knowledge on how to prevent infection.

In the past 3-4 years there have been between 5-9 new cases annually of AIDS per 1 million inhabitants, with 3-5 deaths per year per 1 million inhabitants (Figure 17). However, it is not certain that all cases of HIV/AIDS and AIDS deaths are being properly reported. Further, it must be noted that there is no estimate of HIV prevalence, indeed there is no systematic surveillance of HIV infection, and the incidence of AIDS cases is subject to a long time lag as an indicator of the HIV/AIDS situation. Of the 860 AIDS cases thus far reported in the country, the highest number has been among intravenous drug users (413), followed by heterosexuals (164) and homosexuals/bisexuals (122). There have been 7 cases reported thus far of mother-to-child transmission. Most AIDS cases have been declared in Belgrade, followed by Nis, Novi Sad and Pozarevac.

Figure 17: Incidence of AIDS cases and AIDS mortality rate



Source: Federal institute of Public Health, Belgrade, 2000. The 2000 figures have been estimated by doubling the number of new cases and deaths reported until June 30, 2000.

E.1 AIDS knowledge

The aim of this module was to assess knowledge among women of reproductive age about the main ways of preventing HIV, means of HIV transmission, misconceptions about HIV/AIDS, and to find out about the magnitude of discriminatory attitudes towards people with HIV/AIDS. For one of the most important strategies to reduce the rate of HIV/AIDS infection is the promotion of accurate knowledge of how AIDS is transmitted and how to prevent transmission. Further, for those who suffer from HIV/AIDS, it is important to ensure that discriminatory attitudes do not prevent them from enjoying their rights, receiving services and being integrated into society.

Heard of AIDS. Among women aged 15-49 in the FR Yugoslavia excluding Kosovo and Metohija, 91.7 percent had ever heard of AIDS (Table 26). There was a significant difference between women with no or primary education (88%) and women with either secondary (92.5%) or higher education (94.8%).

Knowledge of sexual means of transmission. Women in the MICS were read several statements about means of HIV/AIDS transmission and asked to state whether they believed the three statements on main ways of preventing HIV/AIDS were true. The three main ways are "having

only one faithful uninfected sex partner", "using a condom every time" and "abstinence". In data analysis for all women (15-49) questions on "abstinence" were excluded (Table 26). Although "abstinence" is an important way of prevention, it is rarely used as a primary HIV prevention method among adults who are already sexually active and negative responses on this item are more likely to result from people believing that abstinence is not feasible than from believing that abstinence does not provide effective protection. However, for adolescents (15-19) the question about "abstinence" continues to be important and therefore for this age group it is analysed with two other indicators as "correct knowledge of **three** main ways of preventing HIV/AIDS" (Table 26A).

Among women aged 15-49, 63% believed that having only one uninfected sex partner can prevent HIV transmission and sixty percent believed that using a condom every time one has sex can prevent HIV transmission. Overall, 49 percent knew both ways and 74 percent were aware of at least one of the means of preventing transmission. Regionally, women in Vojvodina (75.8% aware of at least one way) and Central Serbia (74.1%) were significantly better informed than in Montenegro (64.5%). Women in urban areas (77.7%) were better informed than women in rural areas (68.8%).

In general, adolescents were less informed than adults. While the percentage who believed that using the condom every time can prevent HIV transmission was roughly the same (60 percent), significantly fewer adolescents believed that having only one uninfected sex partner can prevent HIV transmission (55 percent). One quarter of adolescents agreed that abstaining from sex prevents HIV transmission. Overall, just 16 percent knew all three ways and 73 percent were aware of at least one of the means.

Knowledge of preventing AIDS transmission increased significantly with educational level. The percentage of women (15-49) who knew both means of preventing transmission was lowest among women with no or primary education (42%), while it was 49% among women with secondary education and 58.9% among women with higher education. Differences in knowledge across age groups were not particularly large.

Identification of misconceptions. More than six in ten women (62.7 percent) knew that a healthy looking person can be infected (Table 27), but only 38% knew AIDS cannot be transmitted by mosquito bites. As a result, just one third of women aged 15-49 correctly identified two misconceptions about HIV/AIDS. Women in rural areas were less likely to identify both misconceptions about AIDS transmission than urban women (26.2 versus 37.1 percent). Women with higher education were more likely to recognize both misconceptions (50.5%) than women with secondary (31.5%) and primary or no education (22.0%).

Sufficient knowledge of AIDS. Table 30 summarises information from two previous tables on AIDS knowledge (Tables 26 and 27). The second column shows the percentage of women who knew two ways of preventing HIV transmission – having one faithful uninfected partner and using a condom every time. Roughly half of women knew these two ways. The third column of the table shows the percentage of women who correctly identified two misconceptions about HIV transmission – that it can be transmitted through mosquito bites, and that a healthy looking person cannot be infected. Roughly one third of women correctly identified these as misconceptions. Finally, the fourth column of the table shows the percentage of women who have "sufficient knowledge" of HIV/AIDS transmission. These are women who knew both ways of preventing HIV transmission *and* correctly identified both misconceptions. Only 21.7% of women aged 15-49 fell into this category.

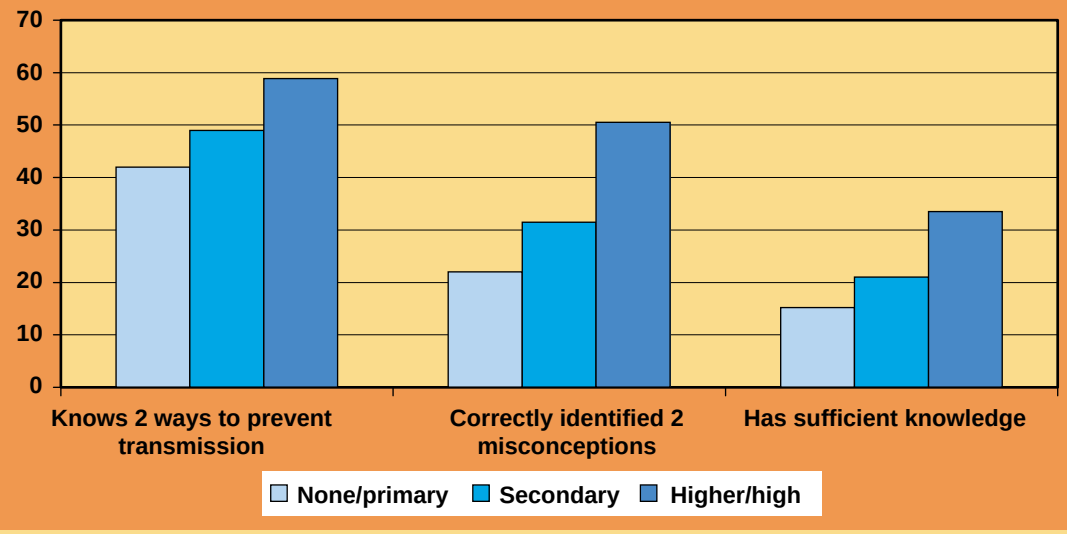
Knowledge of HIV/AIDS transmission varied by level of education (Figure 18). Women with a higher education were roughly 50% more likely than women with no or primary education to know both ways of preventing HIV transmission; and were more than twice as likely to correctly identify two misconceptions about HIV transmission. As a result, women with higher education were almost twice as likely to have sufficient knowledge of HIV/AIDS transmission.

The level of knowledge was lower for women aged 15-49, as can be seen in Table 30A. Here, "sufficient knowledge" was considered to be those who knew three ways to prevent HIV transmission (the above two, plus abstinence) and correctly identified two misconceptions. Less than 10% of women aged 15-19 fell into this category.

Knowledge of mother-child transmission. Sixty one percent of women knew that HIV/AIDS can be transmitted from mother to child, but slightly less than one in three women knew all three modes of transmission (Table 28). When asked specifically about the mechanisms through which mother to child transmission can take place, about 65 percent said that transmission during pregnancy was possible, 51 percent said that transmission at delivery was possible and only 37 percent agreed that AIDS can be transmitted through breast milk (see UNICEF position paper on HIV and breastfeeding). Knowledge that AIDS can be transmitted from mother to child was higher in urban (65.7%) than rural areas (55.2%); it was also higher among the more educated women (76.4% among women with higher education, for example, as against 50.1% among women with no or primary education).

Discriminatory attitudes. 29.1% of women aged 15-49 agreed with at least one discriminatory statement towards people with HIV/AIDS (Table 29). Every fourth respondent believed that a teacher with HIV/AIDS should not be allowed to work. Urban women and those with secondary or higher education were more likely to express this discriminatory attitude than rural women and those with no or primary education. Seventeen percent of women would not buy food from a person with HIV/AIDS. Again, urban women and those with secondary or higher education were more likely to express this discriminatory attitude than rural women and those with no or primary education. This may be due to urban women and those more educated being more aware of the dangers of HIV/AIDS, but without knowing enough about how HIV is transmitted.

Figure 18: Percentage of woman aged 15-49 who have sufficient knowledge of HIV/AIDS transmission by level of education, FR Yugoslavia excluding Kosovo and Metohija, 2000



E.2 AIDS testing

Voluntary testing for AIDS, accompanied by counseling, allows those infected to seek health care and to prevent the infection of others. Testing is particularly important for women of childbearing age and pregnant women who can then make informed decisions about pregnancy and take steps to prevent infecting their babies.

There are several places where it is possible to be tested for HIV, mainly at the Institutes of Public Health and Institutes for blood transfusion. There is as yet no regular testing for pregnant women in Yugoslavia.

The indicators shown in Table 31 are designed to monitor whether women are aware of places to get tested for HIV/AIDS, the extent to which they have been tested, and the extent to which those tested have been told the result of the test. In some places, a relatively large proportion of people who are tested do not return to get their results due to fear of having the disease, fear that their privacy will be violated, or other reasons.

Forty five percent of women of reproductive age knew a place to get tested for AIDS. Women living in Belgrade were most likely to know a place (60.5%), followed by Central Serbia (excluding Belgrade) (42.3%), Vojvodina (41.4%) and the Republic of Montenegro (33.7%). Only 27.4 percent of women with primary or no education knew of a place to get tested compared to 46.8 percent of women with secondary and 66.5 percent with a higher education.

About six percent of women have been tested for AIDS. Again, this percentage was highest in Belgrade (10 percent) and lowest in Montenegro (2.4 percent); this is explained by the different availability of blood testing facilities in these areas. The vast majority of women who have been tested were told the results (85.4 percent). Adolescent women (15-19) were the least likely of any age group to have been tested and the least likely to know the result. Finally, women with no or

primary education were less likely than women with more education to be tested and least likely to have been told the result of the test.

Conclusion

The epidemiological situation surrounding HIV/AIDS is unclear. Reporting and surveillance are not rigorous and systematic enough to draw conclusions about trends in HIV/AIDS prevalence. Of those AIDS cases reported thus far, the major means of HIV transmission has been via the use of intravenous drugs.

Nine out of ten women knew of AIDS at the time of the survey. However, only one fifth had sufficient knowledge of HIV/AIDS, that is, knew of two ways of preventing the sexual transmission of HIV *and* could identify two misconceptions. Women with more education had better levels of sufficient knowledge. Less than 10% of teenage girls (15-19 years) had sufficient knowledge. Approximately two thirds of women knew that HIV/AIDS could be transmitted from other to child, but less than one third could identify all three modes of transmission. One fifth of women agreed with at least one discriminatory statement. Less than one half of women knew of a place where they could be tested for AIDS; of the 6% who had been tested, 85% had been informed of the result.

Recommendations

These results suggest there is still ample room to improve knowledge and attitudes. Health information campaigns will need to be intensified and their geographical scope broadened. School syllabi are obvious candidates to transmit information, but information campaigns will need to use many media. More needs to be understood about the drug culture and intravenous drug users, and other high-risk populations, such as commercial sex workers. The lack of good epidemiological data on HIV/AIDS must be addressed. Evidence found in the section on reproductive health of this survey and elsewhere suggests that the availability and affordability of condoms will need to be reviewed. AIDS victims should receive special support, not only in terms of medical treatment, but to ensure that their rights are respected and they do not suffer social exclusion.

The evolution of knowledge and attitudes will need to be continuously monitored. Future survey exercises should also incorporate questions about practices, particularly about risky behaviours.

There is a Federal Commission responsible for combating HIV/AIDS, and it should receive all the funds and authority necessary to carry out the above recommendations.

F. Reproductive Health - Contraception

There are a wide range of pregnancy prevention methods available – abstinence, hormonal contraceptive methods, intrauterine devices, barrier methods, lactational amenorrhoea, withdrawal, sterilization. Each of these methods has different characteristics in terms of efficacy, prevention of STI, side effects, availability, and affordability. Each year, it is estimated that women world-wide experience 75 million unwanted pregnancies.

No systematic data on contraception use has been gathered in the FRY in the past. The total fertility rate in the FRY excluding Kosovo and Metohija has steadily declined throughout the decade, from 2.1 in 1990 to 1.7 in 1998. The abortion rate is high (66.1 per 100 live births in

1996). Information gathered from MICS 2000 will help to elaborate public policy on family planning. Serbian Government adopted in 1998 National Programme on Family Planning.

Current use of contraception was reported by 58 percent of married or in union women (Table 32). The most popular method was the condom (17.4%). The next most popular methods were periodic abstinence and withdrawal (14 and 11 percent, respectively). Eight percent used intrauterine devices, 5 percent the pill and between one and two percent of women reported use of vaginal methods or the lactational amenorrhoea method (LAM).

Contraceptive prevalence ranged from 52.7% in Montenegro to 61.1% in Vojvodina, but these differences were not statistically significant. Similarly, contraceptive prevalence seemed to increase with age, but the relatively small number of cases of young married or in union women does not permit statistically robust conclusions. The most popular method among women aged 15-24 did seem to be the condom. Older women tended to use the pill more, as well as periodic abstinence, withdrawal and an IUD.

Women's education level was significantly associated with contraceptive prevalence. The percentage of women using any method of contraception rose from 43 percent among those with primary education to 61 percent among women with secondary education, and up to 71 percent among women with higher education. In addition to differences in prevalence, the method mix varied by education. While the proportion of those using the pill, an IUD and periodic abstinence was roughly constant across educational groups, the proportion using the condom increased while the proportion practicing withdrawal decreased, as educational level increased. For example, 22% of those using any method who had no or primary education used a condom; for women with a higher education, 35% of those using any method used a condom. This may well be partly the result of costs and incomes; those with more education are generally better off, are better able to afford condoms, and need not resort to withdrawal.

Conclusion and Recommendations

The relatively low use of modern contraceptive method is due to non-selective and unrestricted abortion and certain constraints on family planning services and products. Family planning services are in place, but they do not give rise to the use of modern contraceptive methods, for several reasons. There are misconceptions concerning the negative effects of modern contraceptive methods among both the general population and health professionals, and thus adequate family planning counseling is not provided. Some modern methods are considered inconvenient, or have been unaffordable or unavailable; some methods have high perceived health risks. Gynaecologists are not preventive oriented. There are no cultural or traditional barriers to abortion, which is easily available and inexpensive. FP counseling and sex education for youth has not been given priority.

Greater priority should be given to improving health information and education on family planning for women of reproductive age. This is particularly true for adolescents, for whom there are special considerations such as confidentiality. It is also important to improve the availability and affordability of modern contraceptive methods.

G. Iron Deficiency Anaemia

Anaemia is defined as an abnormally low haemoglobin level due to pathological conditions. Anaemia can have a variety of causes (infections, hereditary conditions...), but it is believed that

the most common reason is iron deficiency. Iron Deficiency Anaemia (IDA) steals vitality from over 3.5 billion women around the world, making iron deficiency the most prevalent micronutrient deficiency globally.

The contribution of IDA to miscarriages, perinatal and infant mortality and low birth weight is well recognised. IDA increases fatigue and decreases work capacity in adults, and reduces resistance to infection and impairs intellectual performance and cognitive development in children. Its most severe forms can be a direct cause of death. IDA has higher overall costs than any other disease, except tuberculosis.

The causes of a high prevalence of IDA are complex and relate to poor eating habits, current living conditions and chronic illnesses. Throughout the country, the disease is addressed mainly from a clinical perspective. There has been inadequate information to address it from a public health perspective. The main objective of this module was to identify the scale of the problem, since national data were not available.

Women and children are the groups most vulnerable to iron deficiency. Blood samples were taken from women and children in the MICS population sample, to determine the haemoglobin level in blood. The cut-off points used to determine IDA were a haemoglobin level below 12g/100 ml in women aged 15-49 and below 11g/100 ml for children aged 6 to 59 months. Standard equipment for measurements was used. The blood samples were taken at every third household.

Of the 4,630 women included in the survey sample, 1,296 were blood tested. Among those women, approximately 27 percent had haemoglobin levels below 12 g/100 ml blood (table 33). There were some small differences according to area, age and so forth, but they are not statistically significant.

Of the children who were blood tested, 30% had haemoglobin levels below 11g/100 ml blood (Table 34). The prevalence of anaemia was significantly higher in some regions. For example, the prevalence in Vojvodina (41.3%) was roughly double that in Montenegro (19.8%).[13] Also, children aged 6-11 (46%) were significantly more likely to be anaemic than children aged over 36 months (16-18%).

Conclusion

Roughly one quarter of women of reproductive age, and one third of children aged 6-59 months, suffer from iron deficiency anaemia. Unfortunately, it is not possible to determine the prevalence of anaemia among pregnant women, as data on this are not systematically compiled. Nor is it possible to ascertain trends in anaemia, as nation-wide data have not been compiled before. In any case, it is clear that the health status of both these population groups is unsatisfactory.

Dietary practices are important contributing causes of this problem. The worsening of economic conditions in past years may well have led to a decrease in consumption of iron-rich foods. For infants in particular, anaemia reflects poor conditions in utero (resulting from maternal anaemia), poor practices in the introduction of complementary foods (early introduction and large intake large intake of foods/drink that inhibit iron absorption, such as tea and cow's milk); as well perhaps as illnesses that compromise nutrient absorption.

[13] The difference is significant at the 90% confidence level.

There is no public health programme to address IDA, yet it is clear that special attention needs to be paid to this issue in pregnant and lactating women, in women in general, and in children.

Recommendations

The problem calls for an urgent introduction of a new, integrated programme. The economic costs of anaemia and the cost of interventions necessary to prevent IDA suggest that an IDA programme will have a high benefit/cost ratio. IDA interventions are among the most cost effective in the realm of public health. The programme should include interventions to improve feeding practices in infants and promoting positive dietary changes in women. Also, the possibility of widespread fortification of cereals and weaning foods with iron and the broadened use of oral iron supplementation should be investigated. The main targets groups are pregnant women, women of childbearing age, infants and young children and adolescent girls.

All stakeholders need to be persuaded as to the magnitude of this problem. Action should concentrate on educating and motivating adolescents and mothers on how to improve their diets, on improving medical curricula and educating health professionals. Specific rapid assessments to determine current practices in feeding might be necessary. These interventions should be linked with other public health programmes, such as family planning, breastfeeding promotion, improved maternal health and the Integrated Management of Childhood Illnesses. Extensive promotional campaigns should follow the implementation of the programme.

H. Child refugees and internally displaced children who are living in collective accommodation centres

A preliminary analysis of data on child refugees and internally displaced children (R+IDP children) living in collective accommodation centres suggests that they were significantly worse off than children in the rest of the population. A comparison of different welfare indicators for the

Figure 19 Various Child Welfare Indicators - National Average (excl. K&M) vs. R+IDP Children Living in Collective Centres, 2000

	All	R+IDP
Stunted (moderate and severe) (%)	5.1	17.2
Wasted (moderate and severe) (%)	3.7	8.0
Prevalence of an ARI during the two weeks prior to survey (%)	2.7	6.1
Attending some form of organised early childhood education programme (%)	31.4	20.1
Net primary attendance (%)	97.4	92.3

R+IDP children (under-five) living in collective centres with the general (excl. K&M) child population is provided in Figure 19. R+IDP children living in collective centres had a higher prevalence of malnutrition.

Whereas 3.7% of children aged under five among the general population were wasted, 8% of R+IDP children were wasted; similarly, while 5.1% of children among the general population were stunted, 17.2% of R+IDP children fell into this category. [14] R+IDP children aged under five also tended to be sick more often, as evidenced by a higher prevalence of an acute respiratory infection during the two weeks prior to the survey (6.1% vs. 2.7% among the general population). Finally, these children living in collective centres received less schooling. Twenty percent of R+IDP children living in collective centres aged 36-59 months attended some form of organised early childhood education programme, as against 31% among children in the general population. The net primary primary school attendance rate was also lower: 92.3% vs. 97.4%.

Conclusion and recommendations

Child refugees and internally displaced children who are living in collective accommodation centres have poorer health and nutritional status than children among the general population, and receive less schooling. It is not clear whether this R+IDP profile is characteristic solely of this group of society, or whether it is also characteristic of the poor in general. Nor is it clear whether this profile is due to a recent deterioration in the economy, or whether and to what extent it reflects the arrival of internally displaced persons from Kosovo and Metohija, where child welfare indicators are known to be poor in relation to the rest of the country.

Refugees and IDPs enjoy for the most part the same social services as those among the general population, though they are one of the poorest and most vulnerable groups of society. To the extent that the state has not been able to deliver social services in general, those living in collective centres will also suffer, but they will not have the resources to seek out private alternatives.

The causes of the relatively poor status of this group of children require more investigation. In the meantime, all child welfare programmes – such as the IMCI and the Breastfeeding Programme – should specifically include the targeting of families living in collective centres. The provision of food aid should be reviewed, to ensure that children and mothers are receiving adequate amounts of good quality food. The government should enquire into the causes of the relatively low attendance rates, particularly at the primary level, which is compulsory.

[14] A 1998 survey found no indication of protein-energy deficiency among child refugees living in collective centres, though roughly 10% of children were overweight. (WHO/UNHCR/Institute of Public Health of Montenegro/Institute of Public Health of Serbia, 1998. The Health and Nutrition of the Refugee Population in the FRY.) There can be several reasons for the apparent increase in malnutrition among children living in collective centres since 1998. The two sample populations of the two surveys are not the same, in many senses. For example, the 2000 sample included IDPs, whereas the 1998 sample did not. This different provenance may be important (i.e. from Kosovo and Metohija, rather than abroad), because it is known that children in Kosovo and Metohija have worse child welfare indicators generally. So it may be that the increase simply reflects a change in the constitution of the population, with the new arrivals bringing with them a status and practices that have changed the apparent welfare status of the group as a whole. Also, the economy has deteriorated since 1998, and the worsened nutritional status and relatively poorer health status may reflect a real deterioration in food intake and household care capacities.

Tables

Table 1: Number of households and women, and response rates, FRY excl. K & M, 2000

	Urban	Rural	Total
Sampled households	3585	2265	5850
Occupied households	3579	2243	5822
Interviewed households	3538	2193	5731
Household response rate	**98.9**	**97.8**	**98.4**
Eligible women	2835	1795	4630
Interviewed women	2769	1745	4514
Women response rate	97.7	97.2	97.5
Overall response rate for women	***96.6***	***95.1***	***95.9***
Children under 5	957	717	1674
Interviewed children under 5	950	704	1654
Child response rate	99.3	98.2	98.8
Overall response rate for children	***98.2***	***96.0***	***97.2***

Table 2: Single year age distribution of household population by sex, FRY excl. K & M, 2000

	Male		Female			Male		Female	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
0	172	1.92	159	1.63	39	150	1.68	134	1.37
1	178	1.99	164	1.68	40	126	1.41	138	1.41
2	175	1.96	151	1.55	41	126	1.41	128	1.31
3	159	1.78	170	1.74	42	126	1.41	145	1.48
4	178	1.99	168	1.72	43	129	1.44	139	1.42
5	158	1.77	176	1.80	44	141	1.58	120	1.23
6	163	1.82	163	1.67	45	129	1.44	143	1.46
7	147	1.64	153	1.57	46	139	1.55	135	1.38
8	145	1.62	148	1.52	47	118	1.32	142	1.45
9	131	1.46	118	1.21	48	124	1.39	127	1.30
10	125	1.40	118	1.21	49	131	1.46	133	1.36
11	123	1.37	115	1.18	50	116	1.30	139	1.42
12	119	1.33	111	1.14	51	107	1.20	125	1.28
13	102	1.14	100	1.02	52	97	1.08	130	1.33
14	119	1.33	110	1.13	53	100	1.12	77	0.79
15	105	1.17	122	1.25	54	66	0.74	89	0.91
16	108	1.21	123	1.26	55	85	0.95	93	0.95
17	101	1.13	111	1.14	56	59	0.66	86	0.88
18	102	1.14	101	1.03	57	83	0.93	101	1.03
19	100	1.12	125	1.28	58	83	0.93	96	0.98
20	113	1.26	129	1.32	59	88	0.98	113	1.16
21	99	1.11	118	1.21	60	86	0.96	125	1.28
22	108	1.21	117	1.20	61	75	0.84	102	1.04
23	104	1.16	121	1.24	62	97	1.08	105	1.08
24	105	1.17	124	1.27	63	81	0.90	106	1.09

25	110	1.23	125	1.28		64	97	1.08	114	1.17
26	139	1.55	152	1.56		65	88	0.98	115	1.18
27	121	1.35	134	1.37		66	95	1.06	130	1.33
28	127	1.42	144	1.47		67	103	1.15	97	0.99
29	131	1.46	142	1.45		68	69	0.77	115	1.18
30	128	1.43	145	1.48		69	85	0.95	107	1.10
31	139	1.55	155	1.59		70	88	0.98	93	0.95
32	144	1.61	149	1.53		71	70	0.78	89	0.91
33	149	1.66	147	1.51		72	66	0.74	93	0.95
34	126	1.41	148	1.52		73	62	0.69	77	0.79
35	146	1.63	121	1.24		74	49	0.55	68	0.69
36	150	1.68	127	1.30		75+	290	3.23	426	4.30
37	138	1.54	125	1.28		Missing/DK				
38	140	1.56	141	1.44	Total		8,951	100.0	9,765	100.0

Table 3: Percentage of cases with missing information, FRY excluding K & M, 2000

	Reference population	Percent missing	Number
Level of education	Household members	2.8	12711
Year of education	Household members	2.9	12711
Complete birth date	Women 15-49	6.3	4514
Ever been tested for HIV	Women 15-49	3.0	4514
Complete birth date	Children under five	0.0	1654
Diarrhoea in last two weeks	Children under five	0.7	1654
Weight	Children under five	2.3	1654
Height	Children under five	2.3	1654

Table 4: Percent distribution of households by background characteristics, FRY excl. K & M, 2000

	Area		
Territory	*Urban*	*Rural*	**Total**
Republic of Montenegro	7.1	4.9	**6.1**
Republic of Serbia excl. K & M	92.9	95.1	**93.9**
Central Serbia total	65.8	69.0	**67.2**
C. Serbia excl. Belgrade	37.4	60.7	**47.4**
Belgrade	28.4	8.3	**19.8**
Vojvodina	27.2	26.1	**26.7**
Number of HH members			
1	14.3	11.6	**13.1**
2-3	46.5	39.0	**43.3**
4-5	34.5	35.2	**34.8**
6-7	4.4	12.7	**8.0**
8-9	0.2	1.4	**0.7**
10+	0.0	0.1	**0.1**
Total	100.0	100.0	**100.0**
At least one child age < 15	40.6	46.4	**43.1**
At least one child age < 5	21.2	24.6	**22.6**
At least one woman age 15-49	64.7	65.6	**65.0**
Number	3270	2461	**5731**
Unweighted	3538	2193	**5731**

Table 5: Percent distribution of women 15-49 by background characteristics, FRY excl. K & M, 2000

	Area		Total
Territory	***Urban***	***Rural***	
Republic of Montenegro	8.1	5.3	**6.9**
Republic of Serbia excl. K & M	91.9	94.7	**93.1**
Central Serbia total	65.2	72.2	**68.3**
C. Serbia excl. Belgrade	38.3	63.2	**49.2**
Belgrade	26.9	9.0	**19.0**
Vojvodina	26.6	22.5	**24.8**
Age			
15-19	11.5	10.8	**11.2**
20-24	12.4	14.4	**13.3**
25-29	16.3	18.1	**17.1**
30-34	15.6	15.4	**15.5**
35-39	13.5	12.6	**13.1**
40-44	15.2	13.8	**14.6**
45-49	15.5	14.8	**15.2**
Marital status			
Currently married	63.5	74.3	**68.2**
Formerly married	8.8	5.6	**7.4**
Never married	27.7	20.2	**24.4**
Education level			
None/primary	19.1	40.1	**28.3**
Secondary	55.4	50.4	**53.2**
Higher/high	25.5	9.5	**18.5**
Total	100	100	**100**
Number	2537	1980	**4517**
Unweighted	2769	1745	**4514**

Table 6: Percent distribution of children under 5 by background characteristics, FRY excl. K & M, 2000

	Area		Total
Sex	***Urban***	***Rural***	
Male	51.6	51.6	**51.6**
Female	48.4	48.4	**48.4**
Territory			
Republic of Montenegro	10.4	8.3	**9.6**
Republic of Serbia excl. K & M	89.6	91.7	**90.4**
Central Serbia total	67.7	67.3	**67.6**
C. Serbia excl. Belgrade	49.9	62.8	**55.2**
Belgrade	17.9	4.5	**12.3**
Vojvodina	21.8	24.4	**22.9**
Age			
< 6 months	9.1	7.9	**8.6**
6-11 months	11.2	9.7	**10.6**
12-23 months	20.0	21.5	**20.6**
24-35 months	18.5	20.9	**19.5**
36-47 months	20.5	18.5	**19.7**
48-59 months	20.8	21.3	**21.0**
Mother's education			
None/primary	13.4	34.5	**22.1**
Secondary	62.2	57.3	**60.2**
Higher/high	24.4	8.2	**17.7**
Total	100	100	**100**
Number	971	683	**1654**
Unweighted	950	704	**1654**

Table 7: Percentage of children aged 36-59 months who are attending some form of organised early childhood education programme, FRY excl. K & M, 2000

	Attending programme	Number of children
Territory		
FRY excl. K & M	**31.4**	**674**
Republic of Montenegro	32.3	68
Republic of Serbia excl K & M	31.3	605
Central Serbia total	30.6	460
C. Serbia excl. Belgrade	25.8	375
Belgrade	51.7	84
Vojvodina	33.6	145
Area		
Urban	44.7	401
Rural	11.9	272
Sex		
Male	34.4	334
Female	28.5	340
Age		
36-47 months	24.2	325
48-59 months	38.1	348
Mother's education		
None/primary	29.5	212
Secondary	30.0	407
Higher/high	49.9	55

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Table 8: Percentage of children entering first grade of primary school, who eventually reach grade 5, FRY excl. K & M, 2000

	Percent in grade 1 reaching grade 2	Percent in grade 2 reaching grade 3	Percent in grade 3 reaching grade 4	Percent in grade 4 reaching grade 5	Percent who reach grade 5 of those who enter grade 1
Territory					
FRY (excl. Kosovo)	**97.2**	**99.6**	**98.9**	**97.9**	**93.8**
Republic of Montenegro	97.2	99.0	100	97.5	93.8
Republic of Serbia excl K & M	97.3	99.6	98.8	97.9	93.8
Central Serbia total	96.6	100	99.1	98.4	94.2
C. Serbia excl. Belgrade	96.6	100	98.9	97.9	93.6
Belgrade	96.5	100	100	100	96.5
Vojvodina	100	98.6	98.0	96.8	93.5
Area	97.6	99.4	99.0	97.7	93.8
Urban	96.9	100	98.7	99.7	95.4
Rural	97.6	99.1	99.1	96.0	92.0
Sex					
Male	98.2	100	98.8	96.4	93.6
Female	96.5	99.0	99.0	99.1	93.9

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Table 9: Percentage of children of primary school age attending primary school, FRY excl. K & M, 2000

	SEX				Total	
	Male		Female			
	Attending	Number	Attending	Number	Attending	Number
FRY excl. K & M	**98.2**	**748**	**96.6**	**759**	**97.4**	**1508**
Republic of Montenegro	96.9	69	97.6	68	97.2	137
Republic of Serbia excl. K & M	98.3	679	96.5	692	97.4	1371
Central Serbia total	98.1	488	97.4	485	97.8	973
Central Serbia excl. Belgrade	100.0	140	100.0	135	100.0	275
Belgrade	97.4	348	96.4	349	96.9	697
Vojvodina	98.7	191	94.4	207	96.5	398
Urban	98.0	401	98.4	408	98.2	809
Rural	98.4	347	94.6	352	96.5	699
8	99.5	111	93.1	99	96.5	210
9	98.4	113	94.7	109	96.6	223
10	96.3	92	97.2	104	96.8	196
11	97.6	94	98.2	106	97.9	200
12	99.6	88	97.9	91	98.7	180
13	100.0	110	97.4	92	98.8	202
14	97.0	85	97.8	115	97.5	200
15	95.0	55	96.8	43	95.8	98

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Table 10: Percentage of the population using improved drinking water sources, FRY excl. K & M, 2000

	Main source of water										Total	Total with safe drinking water	Number of persons
	Piped into dwelling	Piped into yard or plot	Public tap	Tubewell/ borehole with pump	Protected dug well	Unprotected dug well	Unprotected spring	Tanker truck vendor	Other	Missing/ DK			
Territory													
FRY excl. K & M	**83.8**	**2.8**	**0.6**	**4.4**	**6.8**	**0.7**	**0.0**	**0.1**	**0.4**	**0.3**	**100**	**98.4**	**18791**
Republic of Montenegro	85.1	6.0	1.0	1.1	3.0	0.4	0.1	0.9	1.2	1.2	100	96.1	1227
Republic of Serbia excl. K & M	83.7	2.6	0.6	4.6	7.0	0.8	0.0	0.1	0.3	0.3	100	98.6	17564
Central Serbia	81.3	2.6	0.6	4.4	9.6	1.0	0.0	0.0	0.3	0.2	100	98.5	12892
Central Serbia excl. Belgrade	77.0	3.1	0.8	4.8	12.4	1.3	0.0	0.0	0.4	0.2	100	98.1	9442
Belgrade area	92.9	1.2	0.0	3.5	1.9	0.3	0.0	0.0	0.1	0.0	100	99.6	3451
Vojvodina	90.4	2.5	0.7	5.2	0.1	0.0	0.0	0.3	0.4	0.5	100	98.8	4671
Area													
Urban	97.5	1.0	0.1	0.4	0.4	0.0	0.0	0.0	0.3	0.3	100	99.4	10077
Rural	68.0	4.8	1.3	9.1	14.1	1.6	0.0	0.3	0.5	0.3	100	97.2	8714

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Table 11: Percentage of the population using sanitary means of excreta disposal, FRY excl. K & M, 2000

	Type of toilet facility						Total	Total with sanitary means of excreta disposal	Number of persons
	Flush to sewage system	Flush to septic tank	Improved pit latrine	Traditional pit latrine	No facilities	Missing			
Territory									
FRY excl. K & M	**57.2**	**31.1**	**0.7**	**10.5**	**0.1**	**0.3**	**100.0**	**99.6**	**18791**
Republic of Montenegro	60.6	28.2	0.6	8.4	0.7	1.5	100.0	97.8	1227
Republic of Serbia excl K & M	57.0	31.3	0.7	10.7	0.1	0.3	100.0	99.7	17564
Central Serbia total	61.7	25.6	0.8	11.6	0.1	0.2	100.0	99.8	12892
C. Serbia excl. Belgrade	53.3	30.4	1.0	14.9	0.1	0.2	100.0	99.7	9442
Belgrade	84.5	12.4	0.2	2.8	0.0	0.0	100.0	100.0	3451
Vojvodina	44.1	47.2	0.3	7.9	0.0	0.5	100.0	99.5	4671
Area									
Urban	87.5	10.1	0.1	1.9	0.0	0.4	100.0	99.6	10077
Rural	22.2	55.5	1.3	20.4	0.2	0.3	100.0	99.5	8714

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Table 12: Percentage of under-five children with missing height or weight, FRY excl. K & M, 2000

	Missing height or weight	Number of children
Territory		
FRY excl. K & M	**2.3**	**1654**
Republic of Montenegro	5.0	158
Republic of Serbia excl K & M	2.0	1496
Central Serbia total	1.6	1117
C. Serbia excl. Belgrade	1.9	913
Belgrade	0.4	204
Vojvodina	3.2	378
Area		
Urban	2.5	971
Rural	2.0	683
Sex		
Male	1.8	853
Female	2.8	800
Age		
< 6 months	1.2	142
6-11 months	1.6	175
12-23 months	2.3	341
24-35 months	1.5	322
36-47 months	3.1	325
48-59 months	3.1	348
Mother's education		
None/primary	1.6	365
Secondary	2.4	995
Higher/high	2.9	293

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Table 13: Percentage of under-five children, who are severely or moderately undernourished, FRY excl. K & M, 2000

	Weight for age: -2 SD	Weight for age: -3 SD	Height for age: -2 SD	Height for age: -3 SD	Weight for height: -2 SD	Weight for height: -3 SD	Number of children
FRY excl. K & M	**1.9**	**0.4**	**5.1**	**1.9**	**3.7**	**0.7**	**1519**
Republic of Montenegro	2.1	0.8	9.0	4.2	4.6	0.3	134
Republic of Serbia excl K & M	1.9	0.3	4.7	1.6	3.7	0.7	1386
Central Serbia total	2.0	0.4	5.3	2.0	4.3	0.8	1030
C. Serbia excl. Belgrade	1.9	0.4	5.2	1.9	4.2	0.7	842
Belgrade	2.6	0.4	5.5	2.7	4.4	1.3	188
Vojvodina	1.6	0.0	3.0	0.5	1.9	0.3	356
Urban	1.1	0.2	4.2	1.2	3.6	0.7	893
Rural	3.1	0.6	6.3	2.7	3.9	0.6	626
Male	1.9	0.4	5.4	1.8	3.3	0.4	788
Female	2.0	0.3	4.7	1.9	4.2	0.9	731
< 6 months	.7	0.0	2.2	1.3	4.6	0.0	139
6-11 months	1.2	1.2	6.4	2.1	5.9	1.5	155
12-23 months	2.8	1.0	6.5	2.7	3.8	0.1	304
24-35 months	1.1	0.0	2.5	0.6	2.1	0.2	295
36-47 months	1.0	0.0	6.5	2.6	3.3	0.5	304
48-59 months	3.6	0.3	5.4	1.7	4.2	1.6	323
None/primary	4.8	1.3	7.4	3.4	5.2	0.8	341
Secondary	1.3	0.1	4.4	1.4	3.5	0.6	912
Higher/high	0.3	0.2	4.2	1.6	2.6	0.5	266

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Table 14: Percent of living children by breastfeeding status, FRY excl. K & M, 2000

	Exclusive breastfeeding		Timely complementary feeding		Breastfed		Breastfed	
	Children 0-3 months	Number of children	Children 6-9 months	Number of children	Children 12-15 months	Number of children	Children 20-23 months	Number of children
Territory								
FRY excl. K & M	**10.6**	**109**	**33.2**	**125**	**20.8**	**121**	**10.8**	**118**
Republic of Montenegro	18.1	11	40.5	10	32.9	12	11.9	10
Republic of Serbia excl K & M	9.7	98	32.6	115	19.5	109	10.7	108
Central Serbia total	6.3	75	34.8	90	20.3	86	14.9	77
C. Serbia excl. Belgrade	7.4	64	34.4	79	19.2	69	17.5	61
Belgrade	.0	11	37.4	11	24.5	17	5.4	16
Vojvodina	21.0	23	24.5	25	16.7	23	.0	31
Area								
Urban	9.9	70	33.2	72	19.6	73	4.1	66
Rural	11.9	40	33.2	53	22.8	47	19.2	52
Sex								
Male	10.5	64	31.2	75	16.4	58	7.2	59
Female	10.7	45	36.3	50	24.9	63	14.3	59
Mother's education								
None/elementary	11.3	27	23.1	22	23.3	33	30.5	26
Secondary	8.5	62	33.6	79	18.4	65	5.7	75
Higher/high	15.7	21	55.7	24	24.4	23	2.2	16

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Table 15: Percent of living children by breastfeeding status, additional indicators, FRY excl. K & M, 2000

	Predominant breastfeeding		Ever breastfed rate		Timely first suckling rate		Bottle feeding rate	
	Children 0-3 months	Number of children	Children 6-9 months	Number of children	Children 12-15 months	Number of children	Children 20-23 months	Number of children
Territory								
FRY excl. K & M	**83.1**	**91**	**91.3**	**289**	**32.1**	**93**	**77.4**	**244**
Republic of Montenegro	80.2	9	84.9	26	34.8	9	54.8	16
Republic of Serbia excl K & M	83.4	82	91.9	264	31.8	84	79.7	229
Central Serbia total	79.6	60	90.7	196	32.0	63	80.3	173
C. Serbia excl. Belgrade	80.1	51	91.5	169	35.6	60	79.3	146
Belgrade	77.1	9	86.3	27	9.4	3	86.5	27
Vojvodina	95.9	22	95.6	68	31.4	21	77.8	55
Area								
Urban	86.1	60	91.9	181	32.6	59	78.7	154
Rural	77.8	31	90.2	109	31.4	34	75.4	91
Sex								
Male	82.8	53	88.8	153	28.5	44	77.1	133
Female	83.6	38	94.2	136	36.1	49	77.7	112
Mother's education								
None/elementary	80.9	22	90.1	57	33.7	19	75.0	48
Secondary	85.5	53	90.7	175	34.8	61	76.9	148
Higher/high	78.8	16	94.4	57	22.2	13	81.6	49

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Table 16: Percent distribution of children by breastfeeding status, FRY excl. K & M, 2000

	Breastfeeding status				Total
Age	*Not breastfeeding*	*Exclusively breastfed*	*Breast milk and water only*	*Breast milk and supplementary food*	
0-1	8.5	16.1	18.7	56.7	100
2-3	13.3	8.6	15.0	63.1	100
4-5	47.3	1.1	2.8	48.8	100
6-7	39.9	.8	.9	58.3	100
8-9	61.3	.0	.0	38.7	100
10-11	66.5	.0	.0	33.5	100
12-13	67.3	.0	.0	32.7	100
14-15	87.2	.0	.0	12.8	100
16-17	81.1	.0	.0	18.9	100
18-19	86.5	.0	.0	13.5	100
20-21	87.5	.0	.0	12.5	100
22-23	87.7	.0	.0	12.3	100
24-25	94.7	.0	.0	5.3	100
26-27	93.3	.0	.0	6.7	100
28-29	96.5	.0	.0	3.5	100
30-31	99.1	.0	.0	.9	100
32-33	97.1	.0	.0	2.9	100
34-35	96.3	.0	.0	3.7	100

Table 17: Percentage of households consuming adequately iodised salt, FRY excl. K & M, 2000

	Percent of households with no salt	Percent of households in which salt was tested	Result of test		Number of households interviewed
Territory			*< 15 PPM*	*15+ PPM*	*Total*
FRY excl. K & M	**0.3**	**99.2**	**26.8**	**73.2**	**5731**
Republic of Montenegro	0.3	99.3	29.3	70.7	350
Republic of Serbia excl K & M	0.2	99.1	26.7	73.3	5381
Central Serbia total	0.2	99.2	23.0	77.0	3849
C. Serbia excl. Belgrade	0.2	99.4	22.2	77.8	2717
Belgrade	0.2	99.1	27.1	72.9	1132
Vojvodina	0.5	98.9	37.2	62.8	1531
Area					
Urban	0.3	99.1	29.0	71.0	3270
Rural	0.2	99.3	24.2	75.8	2461

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Table 18: Percentage of children ages 12-23 months currently vaccinated against childhood diseases, FRY excl. K & M, 2000

	BCG	DPT 1	DPT 2	DPT 3	Polio 1	Polio 2	Polio 3	Measles*	All	None	% with health card	Number of children
Territory												
FRY excl. K & M	**100.0**	**97.6**	**96.4**	**94.9**	**98.4**	**98.2**	**98.0**	**89.2**	**88.8**	**0.0**	**75.8**	**341**
Republic of Montenegro	100.0	99.0	97.6	96.3	99.2	97.9	96.6	89.1	89.1	0.0	73.0	29
Republic of Serbia excl. K & M	100.0	97.5	96.2	94.7	98.3	98.2	98.1	89.2	88.7	0.0	76.0	312
Central Serbia total	100.0	98.2	96.6	95.4	99.2	99.1	99.0	89.9	89.9	0.0	74.2	233
C. Serbia excl. Belgrade	100.0	98.0	96.1	94.9	99.2	99.1	99.0	91.1	91.1	0.0	74.7	188
Belgrade	100.0	99.0	98.8	97.5	99.2	99.1	99.0	85.3	85.3	0.0	71.8	45
Vojvodina	100.0	95.4	95.2	92.8	95.6	95.5	95.4	87.5	85.8	0.0	81.6	79
Area												
Urban	100.0	97.5	96.4	95.2	97.7	97.5	97.2	88.4	87.6	0.0	74.7	194
Rural	100.0	97.8	96.3	94.5	99.2	99.1	99.0	90.2	90.2	0.0	77.2	147
Sex												
Male	100.0	97.4	95.1	93.9	97.6	97.3	97.0	91.9	91.1	0.0	78.4	177
Female	100.0	97.9	97.7	95.8	99.2	99.1	99.0	86.2	86.2	0.0	72.9	164
Mother's education												
None/elementary	100.0	95.7	95.5	93.2	95.9	95.8	95.7	85.5	83.7	0.0	78.0	85
Secondary	100.0	98.1	96.1	94.9	99.2	98.9	98.8	89.4	89.4	0.0	74.1	203
Higher/high	100.0	99.0	98.8	97.5	99.2	99.1	98.3	93.7	93.7	0.0	78.7	53

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* Percentage of children ages 24-35 months, due to the different national immunization schedule (vaccination against measles is at the age of 12-18 months)

Table 19: Percentage of under-five children with diarrhoea in the last two weeks and treatment with ORS or ORT, FRY excl. K & M, 2000

	Had diarrhoea in last two weeks	Number of children under 5	Breast milk	Gruel	Local acceptable	ORS packet	Other milk or infant formula	Water with feeding	Any recommended treatment	No treatment	Number of children with diarrhoea
FRY excl. K & M	**8.6**	**1654**	**13.1**	**66.4**	**75.6**	**22.7**	**43.7**	**74.8**	**97.9**	**2.1**	**143**
Republic of Montenegro	7.2	158	10.7	59.5	90.6	36.4	45.7	74.0	100	0.0	11
R. of Serbia excl K & M	8.8	1496	13.3	67.0	74.3	21.5	43.5	74.9	97.7	2.3	132
Central Serbia total	7.6	1117	16.5	68.2	74.8	25.2	46.1	80.7	98.3	1.7	85
C. Serbia excl. Belgrade	7.4	913	16.2	67.5	74.1	22.1	49.7	83.2	97.8	2.2	67
Belgrade	8.7	204	17.8	70.7	77.2	37.0	32.7	71.3	100	0.0	18
Vojvodina	12.2	378	7.4	64.9	73.5	14.5	38.5	64.1	96.8	3.2	47
Urban	8.1	971	4.4	69.9	83.7	24.7	31.9	69.8	96.2	3.8	78
Rural	9.5	683	23.6	62.2	65.8	20.1	57.9	80.9	100	0.0	65
Male	11.0	853	14.0	65.4	75.8	20.1	38.6	74.7	98.4	1.6	94
Female	6.1	800	11.4	68.4	75.2	27.5	53.4	75.0	96.9	3.1	48
< 6 months	5.9	142	56.8	30.8	16.2	43.1	40.7	0.0	100	0.0	8
6-11 months	5.3	175	15.1	86.4	100	0.0	61.6	86.4	100	0.0	9
12-23 months	11.1	341	20.8	79.4	77.5	18.0	44.0	87.1	96.1	3.9	38
24-35 months	7.7	322	6.8	66.2	68.7	30.8	54.3	78.6	100	0.0	25
36-47 months	9.5	325	8.7	63.5	79.5	23.5	36.2	68.0	95.2	4.8	31
48-59 months	9.0	348	0.7	57.5	83.6	22.3	37.7	80.5	100	0.0	31
None/primary	10.1	540	24.1	62.4	66.8	29.7	46.5	76.7	100	0.0	55
Secondary	8.5	995	6.5	67.7	82.5	19.0	41.4	73.5	96.5	3.5	85
Higher/high	2.9	119	0.0	100	47.4	0.0	52.6	76.3	100	0.0	3

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Table 20: Percentage of under-five children with diarrhea in the last two weeks who took increased fluids and continued to feed during the episode, FRY excl. K & M, 2000

	Drinking during illness		Total	Eating during illness		Total
	More/same	Less		More/same	Less	
FRY excl. K & M	**92.8**	**7.2**	**100**	**60.9**	**39.1**	**100**
Republic of Montenegro	96.9	3.1	100	61.2	38.8	100
Republic of Serbia excl. K & M	96.0	4.0	100	58.9	41.1	100
Central Serbia Total	100.0	0.0	100	73.3	26.7	100
Central Serbia excl. Belgrade	85.9	14.1	100	57.0	43.0	100
Belgrade area	90.9	9.1	100	47.7	52.3	100
Vojvodina	95.6	4.4	100	74.6	25.4	100
Male	94.9	5.1	100	53.5	46.5	100
Female	87.3	12.7	100	74.9	25.1	100
Urban	90.3	9.7	100	69.8	30.2	100
Rural	93.1	6.9	100	59.9	40.1	100
< 6 months	100.0	0.0	100	100.0	0.0	100
6-11 months	83.1	16.9	100	67.0	33.9	100
12-23 months	92.8	7.2	100	36.3	63.7	100
24-35 months	91.4	8.6	100	79.3	20.7	100
36-47 months	93.1	6.9	100	57.5	42.5	100
48-59 months	97.6	2.4	100	66.2	33.8	100
None/primary	93.4	6.6	100	77.0	23.0	100
Secondary	92.2	7.8	100	54.4	45.6	100
Higher/high	100.0	0.0	100	0.0	100.0	100

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Table 21: Percentage of mothers who knows what Oral Rehydration Solution is, FRY excl. K & M, 2000

	Mothers who knows	Number of children
Territory		
FRY excl. K & M	**50.9**	**841**
Republic of Montenegro	40.8	64
Republic of Serbia excl K & M	52.0	777
Central Serbia total	48.5	542
C. Serbia excl. Belgrade	41.3	84
Belgrade	50.2	458
Vojvodina	62.1	235
Area		
Urban	42.7	414
Rural	62.6	427
Sex		
Male	51.0	434
Female	50.8	406
Age		
< 6 months	58.9	142
6-11 months	62.8	175
12-23 months	54.4	341
24-35 months	48.5	321
36-47 months	47.9	325
48-59 months	43.2	348
Mother's education		
None/primary	65.1	237
Secondary	51.6	513
Higher/high	31.0	91

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Table 22: Percentage of under-five children with acute respiratory infection in the last two weeks and treatment by health providers, FRY excl. K & M, 2000

	Had acute respiratory infection	Number of children under 5	Hospital	Health centre	Dispensary	Village health worker	MCH clinic	Mobile/ outreach clinic	Private physician	Traditional healer	Other	Any appropriate provider	Number of children with ARI
FRY excl. K & M	**2.7**	**1654**	**22.9**	**64.7**	**5.4**	**0.0**	**1.4**	**2.3**	**0.0**	**0.0**	**0.0**	**96.7**	**44**
R. of Montenegro	2.1	158	10.5	70.9	0.0	0.0	18.6	0.0	0.0	0.0	0.0	100	3
R. of Serbia excl. K & M	2.7	1496	23.9	64.2	5.9	0.0	0.0	2.4	0.0	0.0	0.0	96.4	41
Central Serbia total	2.6	1117	15.0	71.7	5.0	0.0	0.0	3.4	0.0	0.0	0.0	95.0	29
C. Serbia excl. Belgrade	2.7	913	17.6	70.7	5.8	0.0	0.0	0.0	0.0	0.0	0.0	94.2	25
Belgrade	2.1	204	0.0	77.2	0.0	0.0	0.0	22.8	0.0	0.0	0.0	100	4
Vojvodina	3.1	378	46.4	45.5	8.1	0.0	0.0	0.0	0.0	0.0	0.0	100	12
Urban	3.2	971	28.9	60.6	4.6	0.0	1.3	0.0	0.0	0.0	0.0	95.4	31
Rural	1.9	683	8.2	75.0	7.4	0.0	1.7	7.8	0.0	0.0	0.0	100	13
Male	3.0	853	22.2	74.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	100	26
Female	2.3	800	23.9	51.8	13.0	0.0	3.4	0.0	0.0	0.0	0.0	92.1	18
< 6 months	1.7	142	0.0	61.0	39.0	0.0	0.0	0.0	0.0	0.0	0.0	100	2
6-11 months	3.0	175	61.9	34.2	0.0	0.0	4.0	0.0	0.0	0.0	0.0	100	5
12-23 months	2.4	341	17.8	52.6	0.0	0.0	0.0	12.0	0.0	0.0	0.0	82.4	8
24-35 months	2.4	322	13.4	68.1	18.5	0.0	0.0	0.0	0.0	0.0	0.0	100	8
36-47 months	4.3	325	10.3	89.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100	14
48-59 months	1.8	348	45.8	47.5	0.0	0.0	6.7	0.0	0.0	0.0	0.0	100	6
None/primary	1.7	540	35.9	61.8	0.0	0.0	2.3	0.0	0.0	0.0	0.0	100	9
Secondary	3.4	995	16.2	68.2	7.1	0.0	1.2	3.0	0.0	0.0	0.0	95.7	34
Higher/high	1.2	119	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100	1

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Table 23: Percentage of children 0-59 months of age reported ill during the last two weeks who received increased fluids and continued feeding, FRY excl. K & M, 2000

	Reported illness in last two weeks	Number of children under 5	Drinking during illness		Total	Eating during illness		Total	Number of sick children
			More/ same	*Less*		*More/ same*	*Less*		
FRY excl. K & M	**27.9**	**1654**	**96.9**	**3.1**	**100**	**63.1**	**36.9**	**100**	**461**
R. of Montenegro	18.6	158	95.0	5.0	100	63.5	36.5	100	29
R. Serbia excl. K & M	28.9	1496	97.1	2.9	100	63.1	36.9	100	432
Central Serbia total	28.2	1117	97.9	2.1	100	69.3	30.7	100	315
C. Serbia excl. Belgrade	27.8	913	97.4	2.6	100	69.5	30.5	100	254
Belgrade	29.8	204	100.0	0.0	100	69.3	30.7	100	61
Vojvodina	30.9	378	94.8	5.2	100	39.8	60.2	100	117
Urban	28.6	971	96.0	4.0	100	61.0	39.0	100	278
Rural	26.9	683	98.4	1.6	100	66.5	33.5	100	183
Male	28.1	853	98.0	2.0	100	56.0	44.0	100	240
Female	27.7	800	95.7	4.3	100	69.9	30.1	100	222
< 6 months	17.6	142	100.0	0.0	100	72.2	27.8	100	25
6-11 months	18.4	175	89.7	10.3	100	55.7	44.3	100	32
12-23 months	32.8	341	95.2	4.8	100	70.5	29.5	100	112
24-35 months	29.0	322	97.8	2.2	100	58.2	41.8	100	93
36-47 months	33.1	325	98.2	1.8	100	67.3	32.7	100	108
48-59 months	26.2	348	99.3	0.7	100	52.8	47.2	100	91
None/primary	29.9	540	96.8	3.2	100	65.1	34.9	100	161
Secondary	26.7	995	96.6	3.4	100	65.5	34.5	100	266
Higher/high	28.9	119	100.0	0.0	100	27.7	72.3	100	34

Table 24: Percentage of caretakers of children 0-59 months who know at least 2 signs for seeking care immediately, FRY excl. K & M, 2000

	Not able to drink/breastfed	Becomes sicker	Develops a fever	Has fast breathing	Has difficult breathing	Has blood in stool	Is drinking poorly	Knows at least two signs	Number of caretakers
Territory									
FRY excl. K & M	**27.9**	**33.4**	**68.7**	**23.4**	**38.3**	**43.5**	**8.1**	**57.8**	**1654**
R. of Montenegro	43.0	30.5	73.2	25.4	36.5	45.3	10.8	59.6	158
R. Serbia excl. K & M	26.3	33.7	68.2	23.2	38.4	43.3	7.8	57.7	1496
Central Serbia total	26.5	32.1	68.5	23.6	38.6	44.6	7.0	58.9	1117
C. Serbia excl. Belgrade	24.8	30.5	69.1	20.8	35.9	42.4	5.4	57.7	913
Belgrade	33.7	39.3	65.8	36.4	50.4	54.1	14.3	64.4	204
Vojvodina	25.9	38.4	67.3	21.9	38.1	39.7	10.3	53.9	378
Area									
Urban	28.4	33.1	70.7	22.7	39.7	46.3	7.6	59.5	971
Rural	27.2	33.8	65.8	24.4	36.2	39.6	8.9	55.5	683
Sex									
Male	30.4	34.9	69.2	25.8	39.6	42.6	8.5	58.1	853
Female	25.3	31.7	68.1	20.9	36.9	44.5	7.7	57.6	800
Mother's education									
None/primary	27.7	31.6	65.5	21.1	36.7	40.3	7.3	53.9	540
Secondary	27.1	34.6	70.9	24.2	39.0	45.1	8.3	59.4	995
Higher/high	35.6	31.1	64.6	27.1	38.8	45.0	10.4	62.5	119

Table 25: Percentage of mothers, who use medicines before taking children to a doctor, FRY excl. K & M, 2000

	Cough syrup	Antibiotics	Traditional medicine	Tea	Other
FRY excl. K & M	**45.2**	**11.6**	**5.9**	**51.4**	**5.4**
Republic of Montenegro	51.3	24.8	5.9	57.2	4.0
R. of Serbia excl K & M	44.8	10.8	5.9	51.0	5.5
Central Serbia total	43.7	11.0	5.0	52.1	5.1
C. Serbia excl. Belgrade	52.4	5.1	3.4	59.3	6.5
Belgrade	41.5	12.5	5.3	50.2	4.8
Vojvodina	48.0	10.0	8.6	48.0	6.6
Urban	41.3	12.5	6.5	54.5	5.6
Rural	51.7	10.2	4.9	46.2	5.1
Male	50.9	10.0	4.1	54.2	3.7
Female	39.9	13.2	7.5	48.9	7.0
< 6 months	10.7	9.4	10.3	70.8	8.2
6-11 months	41.7	3.5	5.0	77.2	0.8
12-23 months	48.7	7.0	2.9	50.0	4.8
24-35 months	47.1	15.7	6.8	47.5	9.2
36-47 months	48.4	8.8	7.7	48.6	6.3
48-59 months	45.5	20.3	5.3	44.5	1.7
None/primary	54.0	7.4	4.4	43.7	6.6
Secondary	44.6	13.9	5.8	51.6	5.6
Higher/high	38.1	9.5	7.4	58.4	3.8

Table 26: Percentage of women aged 15-49, who knows the main ways of preventing HIV transmission, FRY excl. K & M, 2000

	Heard of AIDS	Have only one faithful uninfected sex partner	Using a condom every time	Knows all two ways	Knows at least one way	Doesn't know any way	Number of women
FRY excl. K & M	**91.7**	**62.6**	**60.1**	**48.8**	**73.8**	**26.2**	**4517**
Republic of Montenegro	86.5	57.0	47.9	40.4	64.5	35.5	312
R. of Serbia excl K & M	92.0	63.0	61.0	49.5	74.5	25.5	4205
Central Serbia total	91.9	62.8	59.7	48.4	74.1	25.9	3084
C. Serbia excl. Belgrade	92.9	62.7	56.9	47.0	72.6	27.4	2223
Belgrade	89.5	62.9	66.9	52.0	77.7	22.3	860
Vojvodina	92.4	63.7	64.6	52.5	75.8	24.2	1121
Urban	92.4	65.3	64.3	51.9	77.7	22.3	2537
Rural	90.7	59.1	54.6	44.9	68.8	31.2	1980
15-19	90.9	54.6	60.2	43.5	71.4	28.6	506
20-24	92.3	61.6	64.9	48.7	77.8	22.2	600
25-29	93.1	66.6	62.9	52.1	77.4	22.6	771
30-34	91.0	66.3	60.0	49.0	77.3	22.7	702
35-39	91.9	66.8	60.6	52.4	75.0	25.0	592
40-44	92.3	62.8	59.9	50.1	72.6	27.4	658
45-49	89.9	57.4	52.3	44.9	64.8	35.2	687
None/primary	88.0	54.6	50.6	42.0	63.2	36.8	1278
Secondary	92.5	64.1	60.4	49.0	75.5	24.5	2404
Higher/high	94.8	70.6	73.6	58.9	85.3	14.7	836

Table 26A: Percentage of women aged 15-19, who knows the main ways of preventing HIV transmission, FRY excl. K & M, 2000

	Heard of AIDS	Have only one faithful uninfected sex partner	Using a condom every time	Abstaining from sex	Knows all three ways	Knows at least one way	Doesn't know any way	Number of women
FRY excl. K & M	**90.9**	**54.6**	**60.2**	**25.0**	**15.8**	**73.0**	**27.0**	**506**
Republic of Montenegro	85.3	42.1	44.6	28.7	20.0	56.7	43.3	36
Republic of Serbia excl K & M	91.3	55.6	61.4	24.8	15.4	74.3	25.7	470
Central Serbia total	91.2	57.6	62.8	26.5	16.4	76.6	23.4	327
Central Serbia excl. Belgrade	91.9	54.8	57.9	27.9	15.2	73.1	26.9	213
Belgrade	89.8	62.7	72.1	23.7	18.7	83.0	17.0	114
Vojvodina	91.6	51.1	58.2	20.9	13.2	69.1	30.9	143
Urban	93.5	59.1	64.6	26.6	18.0	77.1	22.9	293
Rural	87.3	48.6	54.2	22.9	12.7	67.5	32.5	213
15	88.0	44.5	56.9	17.4	9.8	66.5	33.5	101
16	92.3	60.0	64.1	32.4	25.3	74.8	25.2	117
17	91.2	54.0	60.9	24.0	17.3	77.2	22.8	100
18	90.3	47.4	62.2	29.0	14.2	70.9	29.1	80
19	92.2	64.4	57.0	22.3	10.8	74.9	25.1	108
None/primary	89.9	54.1	59.1	24.5	16.9	71.3	28.7	281
Secondary	92.1	55.6	61.4	25.7	14.4	75.1	24.9	224
Higher/high	100.0	30.7	84.6	15.4	15.4	84.6	15.4	2

Table 27: Percentage of women aged 15-49, who correctly identifies misconceptions about HIV/AIDS, FRY excl. K & M, 2000

	Heard of AIDS	AIDS can't be transmitted by mosquito bites	A healthy looking person can be infected	Knows all 2 misconceptions	Knows at least one misconception	Doesn't correctly identify any misconception	Number of women
FRY excl. K & M	**91.7**	**38.0**	**62.7**	**32.3**	**68.3**	**31.7**	**4517**
Republic of Montenegro	86.5	28.2	53.9	22.2	59.8	40.2	312
Republic of Serbia excl K & M	92.0	38.7	63.4	33.1	69.0	31.0	4205
Central Serbia total	91.9	37.7	62.2	32.2	67.7	32.3	3084
C. Serbia excl. Belgrade	92.9	32.7	59.5	28.4	63.9	36.1	2223
Belgrade	89.5	50.6	69.2	42.1	77.7	22.3	860
Vojvodina	92.4	41.4	66.5	35.5	72.4	27.6	1121
Urban	92.4	43.3	68.1	37.1	74.3	25.7	2537
Rural	90.7	31.2	55.8	26.2	60.7	39.3	1980
15-19	90.9	42.2	63.6	34.1	71.7	28.3	506
20-24	92.3	42.8	66.9	38.1	71.6	28.4	600
25-29	93.1	37.6	65.5	32.4	70.7	29.3	771
30-34	91.0	38.2	67.9	34.6	71.5	28.5	702
35-39	91.9	39.1	63.2	32.6	69.6	30.4	592
40-44	92.3	36.9	60.2	30.6	66.6	33.4	658
45-49	89.9	30.7	51.9	24.9	57.7	42.3	687
None/primary	88.0	28.2	49.1	22.0	55.4	44.6	1278
Secondary	92.5	36.9	63.2	31.5	68.7	31.3	2404
Higher/high	94.8	55.7	81.9	50.5	87.1	12.9	836

Table 28: Percentage of women aged 15-49 who correctly identify means of HIV transmission from mother to child, FRY excl. K & M, 2000

	Know AIDS can be transmitted from mother to child	Transmission during pregnancy possible	Transmission at delivery possible	Transmission through breastmilk possible	Knows all three	Did not know any specific way	Number of women
FRY excl. K & M	**61.1**	**64.5**	**50.6**	**37.3**	**31.4**	**31.1**	**4517**
Republic of Montenegro	56.7	57.2	44.3	34.3	29.6	39.7	312
Republic of Serbia excl. K & M	61.5	65.1	51.1	37.6	31.5	30.4	4205
Central Serbia total	60.9	63.7	51.4	40.4	34.0	31.7	3084
C. Serbia excl. Belgrade	59.4	60.9	49.9	39.6	34.0	34.5	2223
Belgrade	64.9	70.8	55.2	42.7	34.1	24.7	860
Vojvodina	63.0	69.0	50.1	29.6	24.6	26.8	1121
Urban	65.7	70.4	53.8	37.7	31.3	25.2	2537
Rural	55.2	57.0	46.4	36.9	31.5	38.6	1980
15-19	54.7	60.5	43.0	36.6	25.7	32.1	506
20-24	62.4	67.4	50.4	40.7	33.9	28.9	600
25-29	65.7	67.4	52.8	37.8	32.2	27.9	771
30-34	63.2	67.8	54.7	37.9	32.4	27.5	702
35-39	62.9	68.2	54.9	39.1	34.2	28.0	592
40-44	61.4	65.1	50.5	38.0	32.4	31.9	658
45-49	55.6	54.8	46.0	31.8	28.0	41.3	687
None/primary	50.1	52.1	41.4	35.7	30.7	44.3	1278
Secondary	61.7	65.8	51.2	37.5	31.3	29.6	2404
Higher/high	76.4	79.9	62.9	39.2	32.6	15.0	836

Table 29: Percentage of women aged 15-49 who expresses a discriminatory attitude towards people with HIV/AIDS, FRY excl. K & M, 2000

	Believe that a teacher with HIV should not be allowed to work	Would not buy food from a person with HIV/AIDS	Agree with at least one discriminatory statement	Agree with neither discriminatory statement	Number of women
FRY excl. K & M	**25.2**	**17.2**	**29.1**	**70.9**	**4517**
Republic of Montenegro	17.6	13.3	21.3	78.7	312
Republic of Serbia excl K & M	92.0	22.0	33.1	10.3	4205
Central Serbia total	25.3	17.4	29.3	70.7	3084
C. Serbia excl. Belgrade	21.7	15.5	25.9	74.1	2223
Belgrade	34.7	22.3	38.2	61.8	860
Vojvodina	27.1	17.7	30.6	69.4	1121
Urban	29.4	19.3	33.3	66.7	2537
Rural	19.8	14.5	23.7	76.3	1980
15-19	26.0	15.1	29.5	70.5	506
20-24	32.2	22.4	36.1	63.9	600
25-29	24.8	19.1	30.4	69.6	771
30-34	26.8	18.9	30.2	69.8	702
35-39	24.0	14.8	26.5	73.5	592
40-44	23.7	16.6	28.5	71.5	658
45-49	20.1	12.9	22.9	77.1	687
None/primary	16.2	11.3	19.2	80.8	1278
Secondary	25.6	17.5	29.7	70.3	2404
Higher/high	37.8	25.4	42.6	57.4	836

Monitoring HIV/AIDS Indicator

Table 30: Percentage of women aged 15-49, who has sufficient knowledge of HIV/AIDS transmission, FRY excl. K & M, 2000

	Heard of AIDS	Know 2 ways to prevent HIV transmission	Correctly identify 2 misconceptions about HIV transmission	Have sufficient knowledge	Number of women
FRY excl. K & M	**91.7**	**48.8**	**32.3**	**21.7**	**4517**
Republic of Montenegro	86.5	40.4	22.2	13.6	312
Republic of Serbia excl K & M	92.0	49.5	33.1	22.3	4205
Central Serbia total	91.9	48.4	32.2	21.5	3084
C. Serbia excl. Belgrade	92.9		28.4		2223
Belgrade	89.5	52.0	42.1	27.0	860
Vojvodina	92.4	52.5	35.5	24.3	1121
Urban	92.4	51.9	37.1	25.0	2537
Rural	90.7	44.9	26.2	17.4	1980
15-19	90.9	43.5	34.1	20.4	506
20-24	92.3	48.7	38.1	24.2	600
25-29	93.1	52.1	32.4	21.2	771
30-34	91.0	49.0	34.6	23.3	702
35-39	91.9	52.4	32.6	24.5	592
40-44	92.3	50.1	30.6	22.0	658
45-49	89.9	44.9	24.9	16.5	687
None/primary	88.0	42.0	22.0	15.2	1278
Secondary	92.5	49.0	31.5	21.0	2404
Higher/high	94.8	58.9	50.5	33.5	836

Table 30A: Percentage of women aged 15-19 who have sufficient knowledge of HIV/AIDS transmission, FRY, 2000

	Heard of AIDS	Know 3 ways to prevent HIV transmission	Correctly identify 2 misconceptions about HIV transmission	Have sufficient knowledge	Number of women
FRY excl. K & M	**90.9**	**15.8**	**34.1**	**8.1**	**506**
Republic of Montenegro	85.3	20.0	16.6	5.4	36
Republic of Serbia excl K & M	91.3	15.4	35.5	8.3	470
Central Serbia total	91.2	16.4	37.2	9.2	327
Central Serbia excluding Belgrade	91.9	15.2	33.5	9.1	213
Belgrade	89.8	18.7	44.1	9.4	114
Vojvodina	91.6	13.2	31.5	6.1	143
Urban	93.5	18.0	36.8	9.6	293
Rural	87.3	12.7	30.4	6.0	213
15	88.0	9.8	31.8	4.6	101
16	92.3	25.3	33.1	13.9	117
17	91.2	17.3	35.5	7.6	100
18	90.3	14.2	36.2	7.8	80
19	92.2	10.8	34.5	5.8	108
None/primary	89.9	16.9	32.8	8.7	281
Secondary	92.1	14.4	35.4	7.2	224
Higher/high	100.0	15.4	69.3	15.4	2

Monitoring HIV/AIDS Indicator

Table 31: Percentage of women aged 15-49 who know where to get an AIDS test and who has been tested, FRY excl. K & M, 2000

	Know a place to get tested	Have been tested	If tested, have been told result	Number of women
FRY excl. K & M	**44.9**	**5.9**	**85.4**	**4517**
Republic of Montenegro	33.7	2.4	75.9	312
Republic of Serbia excl K & M	45.8	6.2	85.7	4205
Central Serbia total	47.4	6.9	86.3	3084
C. Serbia excl. Belgrade	42.3	5.7	83.1	2223
Belgrade	60.5	10.0	91.1	860
Vojvodina	41.4	4.0	82.5	1121
Urban	52.8	7.8	90.7	2537
Rural	34.9	3.5	70.0	1980
15-19	39.6	1.9	63.6	506
20-24	45.3	6.8	86.0	600
25-29	48.7	8.3	96.6	771
30-34	51.8	8.4	83.1	702
35-39	48.4	5.1	89.1	592
40-44	41.3	5.3	73.7	658
45-49	38.0	4.1	81.7	687
None/primary	27.4	3.6	56.4	1278
Secondary	46.8	6.2	90.6	2404
Higher/high	66.5	8.4	93.5	836

Monitoring HIV/AIDS Indicator

Table 32: Percentage of married or in union women aged 15-49 who are using (or whose partner is using) a contraceptive method, FRY excl. K & M, 2000

	Current method									Total	Any modern method	Any traditional method	Any method	Number of currently married women
	No method	Pill	IUD	LAM	Condom	Diaphragm/ foam/ jelly	Periodic abstinence	Withdrawal	Other					
FRY excl. K & M	**41.1**	**4.7**	**7.7**	**1.2**	**17.4**	**1.8**	**14.2**	**11.3**	**.6**	**100**	**32.8**	**25.5**	**58.3**	**3081**
Republic of Montenegro	47.1	6.8	7.6	.7	13.6	2.0	10.6	11.4	.2	100	30.7	22.0	52.7	212
Republic of Serbia excl K & M	40.6	4.5	7.8	1.2	17.7	2	15	11.3	0.6	100	33.0	25.8	58.7	2869
Central Serbia total	41.5	4.1	7.1	1.2	17.2	2.0	14.6	11.7	.5	100	31.6	26.3	57.9	2132
C. Serbia excl. Belgrade	41.8	3.9	7.3	1.0	15.8	1.7	15.0	12.9	.5	100	29.8	28.0	57.8	1619
Belgrade	40.5	4.7	6.4	1.7	21.7	3.0	13.5	7.7	.8	100	37.5	21.2	58.7	512
Vojvodina	38.1	5.6	9.6	1.4	19.1	1.2	14.1	10.1	.9	100	36.9	24.2	61.1	737
Urban	36.0	5.8	8.1	1.5	20.6	2.4	15.0	10.3	.4	100	38.2	25.3	63.5	1611
Rural	46.6	3.4	7.4	.9	14.0	1.2	13.4	12.3	.8	100	26.9	25.7	52.6	1470
15-19	59.1	.0	.0	8.7	22.6	.0	4.4	5.1	.0	100	31.3	9.5	40.9	25
20-24	45.4	1.5	3.8	.5	20.9	.4	13.5	13.7	.4	100	27.0	27.1	54.2	271
25-49	40.5	5.0	8.2	1.2	17.0	2.0	14.4	11.1	.6	100	33.4	25.5	58.9	2785
None/primary	56.2	3.9	6.0	1.2	9.5	.9	9.4	12.6	.3	100	21.5	22.0	43.5	846
Secondary	37.8	4.5	8.2	.8	18.9	1.8	16.0	11.3	.7	100	34.2	27.3	61.5	1681
Higher/high	28.0	6.2	9.1	2.3	24.9	3.2	16.4	9.0	.8	100	45.8	25.4	71.3	554

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Table 33: Percentage of women aged 15-49 with haemoglobin levels below 12-grams/100 ml blood, FRY excl. K & M, 2000

	Percentage of women aged 15-49 with haemoglobin levels below 12 g/100 ml	Number of women	Total number of women
FRY excl. K & M	**26.7**	**346**	**1296**
Republic of Montenegro	20.6	4	19
Republic of Serbia excl. K & M	26.8	342	1277
Central Serbia	27.3	262	959
Central Serbia excl. Belgrade	26.3	201	764
Belgrade	31.0	61	196
Vojvodina	25.4	81	317
Urban	26.6	161	607
Rural	26.8	185	689
15-19	20.7	30	146
20-24	28.8	51	177
25-29	27.6	57	208
30-34	23.6	49	209
35-39	25.1	43	172
40-44	27.3	49	180
45-49	32.5	66	203
None/primary	28.6	119	418
Secondary	24.7	165	667
Higher/high	29.4	62	211

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Table 34: Percentage of children aged 6-59 months with haemoglobin levels below 11-grams/100 ml blood, FRY excl. K & M, 2000

	Percentage of children aged 6-59 months with haemoglobin levels below 11 g/100 ml	Number of children	Total number of children
FRY excl. K & M	**29.5**	**111**	**369**
Republic of Montenegro	19.8	8	41
Republic of Serbia excl. K & M	30.8	103	327
Central Serbia	27.2	70	248
Central Serbia excl. Belgrade	26.3	61	226
Belgrade	36.6	8	22
Vojvodina	41.3	33	79
Urban	31.9	63	196
Rural	26.8	48	173
Male	31.5	59	178
Female	27.6	52	191
6-11 months	46.0	20	44
12-23 months	42.6	36	84
24-35 months	30.8	30	97
36-47 months	16.4	12	72
48-59 months	18.4	13	72
None/primary	24.5	23	91
Secondary	30.3	70	226
Higher/high	34.4	18	52

Appendix A: Sample Design

Planned Sample

The population, the units examined, the selection and size of the sample

The major set comprises the entire population of the Federal Republic of Yugoslavia (excluding Kosovo and Metohija) which is made up of two federal units, the Republic of Serbia and the Republic of Montenegro.

Within this major set the following groups of the population were examined in particular:

1. Children aged up to 6 years (for the purposes of the MICS subset, up to 5 years)
2. Children and young people aged 7 to 19 years
3. Adults over 19 years (20 or more years)
4. Refugees from the former Yugoslav republics and the internally displaced population from Kosovo and Metohija.

Besides these four basic groups, the following were also examined:

- women of child bearing age (from the age of 15 to 49)
- the population able to work (from the age of 15 to 65)
- people in employment

The levels at which results are compiled. The planned sample is intended to produce reliable results at the following levels:

- The territory of the FRY, the Republic of Montenegro, central Serbia (in its entirety), central Serbia without Belgrade, Belgrade and Vojvodina.
- The urban and rural population at the level of the FRY

The size of the sample. When determining the size of the sample we drew on the experience of the MICS I, which indicated that, when dealing with markers relating to children, the sampling design was most often approximately 1.5 and that the percentage of non-response was below 5%. Using formula 1 from Annex VII of the MICS methodological handbook (Sampling Details) the necessary number of households in the sample was arrived at on the basis of the equation:

$n = 2*(1.96)* (r)* (1-r)* (f)* (c) / [(e^2) (p) (n_h)])$
$n = 2*(1.96)*(0.08)*(1-0.08)*(1.5)*(1.1) / [(0.02^2) (0.06) (3.4)] =$ **5,834**
where

- n (5,834) is the necessary number of households in the sample,
- 2*(1.96) is the factor necessary to reach a reliability level of 95%,
- r (0.08) is the indicator rate (assumed value for the incidence of diarrhoea in the two weeks prior to the study among children up to the age of 5),
- f (1.5) is the sampling design,
- c (1.1) is the constant for correction due to non-response in the survey,
- e (0.02) is the permitted level of error for the assumed incidence of diarrhoea,
- p (0.06) is the proportion of children up to five years old in the whole population,
- n_h (3.4) is the average number of household members.

The stratification of the major set. The first level of stratification was the following regions: the Republic of Montenegro, Vojvodina, Belgrade and central Serbia without Belgrade. Each of these areas was further stratified at the level of the district (okrug) and within the districts between urban and rural areas.

The kind and size of sample. A two-stage stratified sample of clusters of households was applied. The units of the first stage were municipal sub-units (mesna zajednica) and were chosen in proportion to size (the size of population) according to Lehiry's selection method. Within municipal sub-units a random cluster of households was chosen. Each cluster comprised 15 households. All members of households were questioned.

The distribution of clusters by strata. In order to comply with the demand for precision and reliability of results, the number of those questioned was chosen to provide the necessary size of sample in each strata and over the population as a whole. Since it was specified that clusters should include 15 households, a total number of 390 clusters was chosen. The total number of selected households (5850) was therefore somewhat higher than the calculated number of households deemed necessary for a reliable sample (5834).

The cluster distribution per major strata

	Number of clusters	*Number of households*	*Assessed number of people per house-hold*	*Expected number of people (overall)*
FRY excluding Kosovo & Metohija	**390**	**5850**	**3.4**	**19590**
Republic of Montenegro	90	1350	3.8	5130
Republic of Serbia (excl. K & M)	300	4500	3.2	14460
Central Serbia (excl. Belgrade)	130	1950	3.5	6825
Belgrade	80	1200	3.1	3720
Vojvodina	90	1350	2.9	3915

Appendix B: Questionnaires

HOUSEHOLD QUESTIONNAIRE

Cluster No. /__/__/__/

Household No. /__/__/

First ad last names of head of household _____

Interviewer code	Date of interview	If call-back is necessary, when
/__/__/__/	/__/__/ /__/__/ /__/__/ day month year	/__/__/ /__/__/ /__/__/ date /__/__/ hour
Supervisor code	**All forms completed**	**If not, why not?**
/__/__/__/	Yes ..... 1 No 2	Refused to respond ..... 1 Were not at home ..... 2 Other reasons 3

LIST OF MEMBERS LIVING IN THE HOUSEHOLD

Ordinal No.	First and last name	Sex		Date of birth			Completed years of life
		Female	Male	date	month	year	
1		1	2	|__|__|	|__|__|	|__|__|__|__|	|__|__|
2		1	2	|__|__|	|__|__|	|__|__|__|__|	|__|__|
3		1	2	|__|__|	|__|__|	|__|__|__|__|	|__|__|
4		1	2	|__|__|	|__|__|	|__|__|__|__|	|__|__|
5		1	2	|__|__|	|__|__|	|__|__|__|__|	|__|__|
6		1	2	|__|__|	|__|__|	|__|__|__|__|	|__|__|
7		1	2	|__|__|	|__|__|	|__|__|__|__|	|__|__|
8		1	2	|__|__|	|__|__|	|__|__|__|__|	|__|__|
9		1	2	|__|__|	|__|__|	|__|__|__|__|	|__|__|
10		1	2	|__|__|	|__|__|	|__|__|__|__|	|__|__|
11		1	2	|__|__|	|__|__|	|__|__|__|__|	|__|__|
12		1	2	|__|__|	|__|__|	|__|__|__|__|	|__|__|
13		1	2	|__|__|	|__|__|	|__|__|__|__|	|__|__|
14		1	2	|__|__|	|__|__|	|__|__|__|__|	|__|__|
15		1	2	|__|__|	|__|__|	|__|__|__|__|	|__|__|

IODINE PROPHYLAXIS

Household salt iodization test results:	0 ppm ..... 1 0-7 pm ..... 2 7 ppm ..... 3 7-15 ppm ..... 4 15 ppm ..... 5 15-30 ppm ..... 6 30 ppm ..... 7 > 30 ppm ..... 8 Not tested 9

I SOCIAL ECONOMIC STATE OF THE HOUSEHOLD

1.	**Who is the owner of the apartment / house?**	Private apartment / house Council apartment / house Parent Tenant/subtenant Other (state) _____ Do not know	1 2 3 4 5 6	⇒ 2
2.	**How big is your apartment / house?**	/_/_/_/ m2		⇒ 3
3.	**How many rooms are there in the apartment / house?**	/_/_/		⇒ 4
4.	**Type of dwelling floor material?**	Parquet / tiles Planks / concrete Ground Other	1 2 3 4	⇒ 5
5.	**Do you have electricity in your apartment / house?**	No Yes	1 2	⇒ 6
6.	**What is the main source of income in your family?**	Wages from civil service employment Wages from private employer Own business Agriculture Trade Pension Socijal benefit No income Other _____ Does not want to reply	1 2 3 4 5 6 7 8 9 10	⇒ 7
7.	**How do you provide food for your family?**		No / Yes	⇒ 8
		Buy it	1 / 2	
		Own production	1 / 2	
		Aid from relatives/friends/neighbors	1 / 2	
		Humanitarian packages	1 / 2	
		Meals at public kitchen	1 / 2	
		Other _____	1 / 2	
8.	**Evaluate expenses of your household for food in past month?**	Less than 30% 30 to 50% 50 to 70% More than 70% Do not know	1 2 3 4 5	⇒ 9
9.	**Were your incomes in the last month enough for:**		No / Yes	⇒ 10
		Food	1 / 2	
		Personal hygiene	1 / 2	
		Hygiene of the household	1 / 2	
		Clothes and footwear	1 / 2	
		Utilities	1 / 2	
		Health care (check-ups, drugs)	1 / 2	
		Recreation	1 / 2	
		Going out (theatre, restaurant...)	1 / 2	
10.	**Has any member of your household been somewhere for summer or winter holidays last year?**	No Yes	1 2	⇒ 11

11.	**Does your household own?**		No	Yes	⇒ 12
		Land	1	2	
		Car	1	2	
		Tractor	1	2	
		Refrigerator	1	2	
		Washing machine	1	2	
		Color TV set	1	2	
		Telephone	1	2	
		Personal computer	1	2	
		Bathroom	1	2	
		Central heating	1	2	
12.	**How do you judge the material state of your household?**	Very poor		1	⇒ 13
		Poor		2	
		Tolerable		3	
		Good		4	
		Very good		5	
		Do not know		6	
13.	**Are there any refugees, exiles or temporarily displaced persons living in your household?**	No		1	⇒ 15
		Yes		2	⇒ 14
14.	**How many of them, and state place and year when they come:**	Slovenia	____	year	____	⇒ 15
		Croatia	____	year	____	
		B&H	____	year	____	
		Macedonia	____	year	____	
		Kosovo	____	year	____	
15.	**Did any of your household members receive any of the following in the course of last month?**		No	Yes	⇒ 16
		Food package	1	2	
		Hygiene package	1	2	
		Free meal at school	1	2	
		Clothing/footwear	1	2	
		Linen/blankets	1	2	
		Heating/cooking fuel	1	2	
		Financial benefit	1	2	
		Psycho-social support (counseling)	1	2	
		Medication	1	2	
		Other_____	1	2	
16.	**Do you currently need some of humanitarian aid?**		No	Yes	⇒ 17
		Food package	1	2	
		Hygiene package	1	2	
		Free meal at school	1	2	
		Clothing/footwear	1	2	
		Linen/blankets	1	2	
		Heating/cooking fuel	1	2	
		Financial benefit	1	2	
		Psycho-social support (counseling))	1	2	
		Medication	1	2	
		Other_____	1	2	
17.	**How far away from your home (walking distance or the available transportation) is the closest**	Dispensary	___ min	___. __ Km	⇒ 18
		Health Center	___ min	___. __ Km	
		Hospital	___ min	___. __ Km	
		Pharmacy	___ min	___. __ Km	

II DRINKING WATER SUPPLY AND WASTE DISPOSAL

18.	**What is the source of drinking water for your household?**	City / town water-supply system Rural (local) water-supply system Public tap Tube well Protected dug well or protected spring Unprotected dug well or spring Lake, river or stream Tank Other _____	1 2 3 4 5 6 7 8 9	⇒ 19
19.	**Are there interruptions in water supplies?**	No Yes, occasionally Yes, daily Yes, during the summer	1 2 3 4	⇒ 20
20.	**How far is the source of drinking water from your dwelling?**	In the dwelling In the yard Less than 100m 100 - 500m From 500m to 1km More than 1km Do not know	1 2 3 4 5 6 7	⇒ 22 ⇒ 22 ⇒ 21 ⇒ 21 ⇒ 21 ⇒ 21 ⇒ 22
21.	**How long does it take you to get to the source of drinking water?**	/_/_/_/ minutes		⇒ 22
22.	**What type of toilet facility does your household use?**	Flush to sewage system Flush to septic tank No flush with a water-proof septic tank Latrine No toilet facility	1 2 3 4 5	⇒ 23
23.	**How far is the facility from your dwelling?**	In the dwelling Less than 50m More than 50m Do not know	1 2 3 4	⇒ 24
24.	**What do you do with your child's excrement and urine when he is not using the toilet facility?**	Children always use toilet facility You dispose of it in the toilet facility You dispose of it near your own dwelling You bury it in the yard You leave it on the ground You dispose of it at the garbage place Other _____ There are no children in the household Do not know	1 2 3 4 5 6 7 8 9	⇒ 25
25.	**What is done about the garbage from your household?**	Taken away by a communal utility service You dispose of it at an official dump You dispose of it at an illegal dump You burn it You bury it You collect it near your dwelling You throw it into a river You just throw it wherever Other _____	1 2 3 4 5 6 7 8 9	

Cluster No. /__/__/__/	Household No. /__/__/	Mother No. /__/__/	Child No. /__/__/

QUESTIONNAIRE FOR MOTHERS (CARETAKERS) WITH CHILDREN UP TO SIX YEARS OF AGE

I HYGIENIC PRACTICES

1.	**Does your child wash his / her hands (or do you wash them for him / her)?**	Always / Sometimes / Almost never	⇒ 2
	Before meals	1 2 3	
	Before using a toilet	1 2 3	
	After using a toilet	1 2 3	
	After entering the house	1 2 3	
2.	**Does your child brush his / her teeth?**	No, he/she does not 1 Yes, occasionally 2 Only in the morning 3 Only in the evening 4 In the morning and in the evening 5 Several times a day 6	⇒ 3
3.	**How many times did your child have a shower or a bath during the last week?**	Not once 1 Once 2 2 - 3 times 3 4 - 6 times 4 Every day 5	⇒ 4
4.	**How often does your child change his / her underwear?**	Once a week or less frequently 1 Every 3-4 days 2 Every other day 3 Every day 4	⇒ 5
5.	**Does your child have his own room?**	No 1 Yes 2	⇒ 6

II EDUCATION OF PRE-SCHOOL CHILDREN

6.	**Has your child attended any organized pre-school educational institution (private, public kindergarten)?**	No 1 Yes 2	⇒ 8 ⇒ 7
7.	**How many hours has your child spent in that institution last week?**	/_/_/ hours	⇒ 8

III TAKING CARE OF SICK CHILDREN (ACUTE RESPIRATORY INFECTIONS, DIARRHOEA)

8.	**Has your child had diarrhoea in the past two weeks?**	No			1	⇒ 10
		Yes			2	⇒ 9
		Do not know			3	⇒ 10
9.	**Did you give the child any of the following liquids during the last episode of diarrhoea?**		No	Yes	DK	⇒ 10
		Breast milk	1	2	3	
		Gruel based on cereals, leguminous plants or roots or soup	1	2	3	
		Other liquids (yoghurt, buttermilk, tea, a solution of sugar and salt, unsweetened fruit juice)	1	2	3	
		Oral rehydration salts ("Nelit" and "Orosal")	1	2	3	
		Animal milk or infant formula	1	2	3	
		Water with food	1	2	3	
		Water alone	1	2	3	
		Sweetened water, sweetened tea or sweetened fruit juice	1	2	3	
		Nothing	1	2	3	
10.	**Do you know what an oral rehydration solution is?**	No			1	⇒ 11
		Yes			2	
11.	**Has your child had diseases with cough in past two weeks?**	No			1	⇒ 17
		Yes			2	⇒ 12
		Do not know			3	⇒ 17
12.	**Has your child had fast or difficult breathing?**	No			1	⇒ 14
		Yes			2	⇒ 13
		Do not know			3	⇒ 14
13.	**Did these symptoms resulted from congested nose or lungs-related problems?**				1 2 3 4 5	⇒ 8
14.	**Did you ask an advise or care for the sick child outside your home?**	No			1	⇒ 16
		Yes			2	⇒ 15
		Do not know			3	⇒ 16
15.	**Who did you turn to for help?**	Dispensary			1	⇒ 16
		Health Center			2	
		Hospital			3	
		Emergency			4	
		Private doctor			5	
		Pharmacist / drug seller			6	
		Local healer			7	
		Cousin / friend			8	
		Other _____			9	

16.	**If you treat your child by yourself, what of the following do you use?**	Cough syrup An antibiotic "Folk remedy" (specify) _____ Tea Other _____	1 2 3 4 5	⇒ 17
17.	**Severity of some diseases necessitate immediate care of physicians. Which of the following symptoms will persuade you to take him / her to a doctor?**	Cannot breathe or swallow Deterioration fo condition Fever Fast breathing Difficult breathing Blood in the stool Drinks very little liquid Other _____ Other _____ Other _____	1 2 3 4 5 6 7 8 9 10	⇒ 18
18.	**When your child has acute respiratory infection or diarrhoea and when you take care of him/her at home, in your daily feeding routine you will:**	Breastfeed the child as often as before or more often Breastfeed the child less often Give the child the same amounts of food or more than usually Give the child less food than usually Give the child the same or extra amounts of fluid (any liquids) Give the child less fluid (any liquids) than usually Other _____	1 2 3 4 5 6 7	⇒ 19

IV BREASTFEEDING

19.	**Has the child ever been breastfed?**	No			1	⇒ 23
		Yes			2	⇒ 20
		Do not know			3	⇒ 23
20.	**Is the child still breastfed?**	No			1	⇒ 21
		Yes			2	
		Do not know			3	
21.	**When was the child first breastfed?**	Within 2 hours of birth			1	⇒ 22
		Within 24 hours of birth			2	
		After 24 hours			3	
		Do not know			4	
22.	**How often is the child breastfed or how often was the child breastfed?**	According to a regular daily schedule			1	⇒ 23
		On demand			2	
		Do not know			3	
23.	**Has the child received any of the following in the past 24 hours?**		No	Yes	DK	⇒ 24
		Vitamin supplements, mineral supplements or medicine	1	2	3	
		Plain water	1	2	3	
		Sweetened water, tea or fruit juice	1	2	3	
		Oral rehydration solution ("Nelit" and "Orosal")	1	2	3	
		Infant formula or milk of animal origin (fresh or powdered)	1	2	3	
		Any other liquids (specify) _____	1	2	3	
		Solid or semi-solid (mushy) food	1	2	3	
24.	**Has the child been given anything to drink from a feeding bottle in the past 24 hours?**	No			1	⇒ 25
		Yes			2	
		Do not know			3	

V IMMUNIZATION

25.	**Does your child have a vaccination chart?**	Yes, presented 1 Yes, not presented 2 No 3 Do not know 4			⇒ 25 ⇒ 27 ⇒ 27 ⇒ 27
26.	**If he / she has a vaccination chart, the following table should be filled in, to mach it:**	Copy dates of all vaccinations from the chart. In the column for dates, "44" should be written if the vaccine was given but there is no date in the chart			
		Date of vaccination			
		Day	Month	Year	
	BCG				
	OPV				
	OPV1				
	OPV2				
	OPV3				
	DPT				
	DPT1				
	DPT2				
	DPT3				
	MMR, Morbili, Morbili-Parotitis				
27.	**Has _____ (name of the child) ever been immunized?**	No 1 Yes 2 Do not know 3			⇒ M VI ⇒ 28 ⇒ M VI
28.	**Has the child ever been given a BCG vaccine?** *(This is an injection against tuberculosis, given immediately after birth in a single dose, creating a scar on the left upper arm).*	No 1 Yes 2 Do not know 3			⇒ 29
29.	**Has the child ever been given a POLIO vaccine?** *(These are "vaccination drops" against polio given in three doses directly into the mouth or with a spoon during the first year of life.)*	No 1 Yes 2 Do not know 3			⇒ 31 ⇒ 30 ⇒ 31
30.	**How many doses of POLIO vaccine has the child been given?**	/_/ doses			⇒ 31
31.	**Has the child ever been given a DTP vaccine?** *(This is a "vaccination injection" against tetanus, whooping cough and diphtheria, given in the first year of a child's life in the upper arm in three doses)*	No 1 Yes 2 Do not know 3			⇒ 33 ⇒ 32 ⇒ 33
32.	**How many doses of DTP vaccine has the child been given?**	/_/ doses			⇒ 33
33.	**Has the child ever been given a Morbilli or MoruPar vaccine?** *(These are "vaccination injections" against measles, mumps and rubella given in the upper arm in a single dose after the first year of birth)*	No 1 Yes 2 Do not know 3			⇒ M VI

VI ANTHROPOMETRY

1.	**Weight (kg, dg)**	/__/__/__/ ,/__/

2.	**Height / length (cm, mm)**	/__/__/__/ ,/__/

3.	**Measurement made**	Lying down Standing Not made at all	1 2 3

4.	**Number of interviewer that made measurement**	/__/__/__/

5.	**Was the child measured**	Yes No – not present No – refused to be measured Other	1 2 3 4

VII BIOCHEMICAL ANALYSIS

1.	**Haemoglobin (g/L)?**	/__/__/__/

2.	**Was the child measured**	Yes No – not present No – refused to be measured Other	1 2 3 4

3.	**Number of interviewer that made measurement**	/__/__/__/

Cluster No. /__/__/__/	Household No. /__/__/	Woman No. /__/__/

QUESTIONNAIRE FOR WOMEN AGED 15-49 YEARS

I CONTRACEPTION

1.	**Do you have sexual relations?**	No 1 Yes 2	1 ⇒ 2 2 ⇒ 3
2.	**State the reason:**	No partner 1 Medical reasons 2 Age 3 Other	⇒ 9
3.	**Do you enter into sexual relationship with a person you meet for the first time?**	No 1 Yes 2 Sometimes 3	⇒ 4
4.	**Do you insist on condom use at you first sexual contact with someone?**	No 1 Yes 2 Sometimes 3	⇒ 5
5.	**Do you have sexual relations with:**	One partner 1 Two or more partners 2 I do not want to reply 3	⇒ 6
6.	**Do you use a protective device (condom)?**	Never 1 Sometimes 2 Always 3	⇒ 7
7.	**Do you use any kind of contraception (means for preventing pregnancy)?**	No 1 Yes 2 No need 3	2 ⇒ 8
8.	**What kind of contraception or method do you use?**	Pill 1 2 3 Intrauterine devices 1 2 3 Local chemical methods 1 2 3 Condom 1 2 3 Diaphragm 1 2 3 Periodic abstinence 1 2 3 Withdrawal 1 2 3 Other _____ 1 2 3	⇒ 9

II HIV / AIDS MODULE

9	**Have you heard about the HIV virus or AIDS disease?**	No Yes			1 2	2 ⇒ 10
10	**What is your opinion about following statements?**		Yes	No	DK	⇒ 11
		There are ways to avoid HIV infection (AIDS inducing virus)	1	2	3	
		People can protect themselves from HIV infection if they stick to only one partner who is not infected	1	2	3	
		People can protect themselves from HIV infection by regular use of condom for every single intercourse	1	2	3	
		People can protect themselves from HIV infection if they abstain from sexual contacts completely	1	2	3	
		AIDS can be acquired by a mosquito bite	1	2	3	
		A healthy-looking person may be an HIV carrier	1	2	3	
		HIV can be transmitted from mother to child	1	2	3	
		HIV can be transmitted from mother to child during pregnancy	1	2	3	
		HIV can be transmitted from mother to child during delivery	1	2	3	
		HIV can be transmitted from mother to child during breastfeeding	1	2	3	
		An HIV infected teacher should be allowed to keep on working at school	1	2	3	
		One can go on buying food from a vendor that you heard had acquired HIV or AIDS	1	2	3	
11.	**Were you tested for HIV, the virus that causes AIDS?**	No Yes			1 2	1 ⇒ 13 2 ⇒ 12
12.	**I do not want you to tell me your results, but were they reported to you?**	No Yes			1 2	⇒ 13
13.	**Do you know a place where you can be tested and see if you have AIDS?**	No Yes			1 2	

III BIOCHEMICAL ANALYSIS

1.	**Haemoglobin (g/L)?**	/__/__/__/

2.	**Was the women measured**	Yes No – not present No – refused to be measured Other	1 2 3 4

3.	**Number of interviewer that made measurement**	/__/__/__/