REPORT OF THE SECOND MULTIPLE INDICATOR CLUSTER SURVEY 2000, DPRK

Central Bureau of Statistics, DPRK

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FORWARD AND ACKNOWLEDGEMENT

20 October 2000

The Democratic People's Republic of Korea (DPR of Korea) implemented the Second Multiple Indicator Cluster Survey (MICS) from 8 to 12 May 2000.

The Central Bureau of Statistics (CBS) led this survey in close collaboration with State Planning Committee, Ministry of Health, Ministry of Education and Ministry of City Management.

The Department of Population and Health Statistics of CBS was directly responsible for preparation of questionnaire, identification of survey target households, recruitment and training of surveyors, organization and monitoring field survey activities, review of questionnaire and data collection, data analysis and report write-up.

This report presents the course and result of the second survey and, in comparison with the result of the 1998 First MICS, analyses the status of achievement of the target set at World Summit for Children held in New York in 1990.

CBS extends its sincere gratitude to UNICEF National Co-ordination Committee of DPR of Korea, State Planning Committee, Ministry of Public Health, Ministry of Education, Ministry of City Management and all the statistics and medical staff concerned for the valueless assistance to the survey.

Heartfelt gratitude is also extended to UNICEF for its logistic and technical support to the survey.

Department of Population and Health Statistics

Executive Summary

The 2000 Multiple Indicator Cluster Survey (MICS) in DPRK is a nationally representative survey of households, women, and children. The main objectives of the survey are to provide up-to-date information for assessing the situation of children and women in the DPRK at the end of the decade and to furnish data needed for monitoring progress toward goals established at the World Summit for Children and as a basis for future action.

Infant and Under Five Mortality

The infant mortality rate was 22.5 per 1000 and the under five mortality rate was 48.2 per 1000 in 1999. It was obtained using direct calculaton method based on the information collected through population registration system in stead of indirected estimates method based on the result of MICS.

Education

99.6 % of children of primary school age(aged 7-10) are attending primary school at present. All of the population aged above 15 have graduated or are attending senior middle school.

However, provision of food and school things including textbooks and teaching tools does not meet the demand due to the economical constraints derived from the breakdown of socialist market, pressure of external power, and a continuous natural disaster such as typhoon, tidal wave, hail, drought and flood since 1994. Therefore, percentage of attending school is considerably far below than ever before.

Water and Sanitation

Although all households have access to safe drinking water, safe drinking water is improperly provided and water quality is not satisfactory derived from the worse technical condition of facilities and imperpect disinfection of water due to the economical constraints.

All of the population is living in households with sanitory means of excreta disposal, but it is not perpect in quality in the view of design as well as sanitory science. It is rather dangerous for spreading infection.

Child Malnutrition

27.9 % of children under age five are underweight or too thin for their age. 45.2 % children are stunted or too short for their age and 10.4% are wasted or too thin for their height.

It is observed that the rate of mulnutrition is higher among children under 5 in mountainous areas than those in inland, coast and plain areas.

Breastfeeding

90.7 % of children aged under four months are exclusively breastfed. At age 6-9 months, 18.4 % of children are receiving breast milk and solid or semi-solid foods. By age 12-15 and 20-23 months, respectively 86.3 % and 36.5 % are continuing to breastfeed.

Salt Iodization

1.7 % of households have adequately iodized salt, a level considerably lower than recommended.

Vitamin A Supplementation

Within the six months prior to the MICS, 80.2 % of children aged 6-59 months received a high dose Vitamin A supplement. 14.8 % received one prior to that time, but 3 percent did not receive a supplement at all.
Only 20.2 % of mothers with a birth in the year before the MICS received a Vitamin A supplement within eight weeks of the birth.

Low Birth Weight

6.4 % of infants are estimated to weigh less than 2500 grams at birth.
The situation in urban area(7.0 %) is considerably worse than rural area(5.4 %).

Immunization Coverage

81.5 % of children aged 12-23 months received a BCG vaccination. The first dose of DPT was given to 91.0 %. The percentage ascends for subsequent doses of DPT to 92.3 % for the second dose, and 95.5 % for the third dose.
Meanwhile, the percentage for subsequent Polio vaccine are much alike; 98.3%, 97.2 % and 98.3 %. .
The coverage for measles vaccine is lightly lower than for the other vaccines at 91.5 %.
70.2 % of children had all eight recommended vaccinations.
Male and female, urban and rural children are vaccinated at roughly the same rate, but a little difference by region.

Diarrhea

Approximatel nine in ten children(90.9 %) with diarrhea received one or more of the recommended home treatments (i.e., were treated with ORS or RHF).
Only 17.7 % of children with diarrhea received increased fluids and continued eating as recommended.

Acute Respiratory Infection

12.2 % of under five children had an acute respiratory infection in the two weeks prior to the survey. Approximately 82.7 % of these children were taken to an appropriate health provider.

IMCI Initiative

Among under five children who were reported to have had diarrhea or some other illness in the two weeks preceding the MICS only 17.9 % received increased fluids and continued eating as recommended under the IMCI programmed.
78.4 % of mothers know at least two of the signs that a child should be taken immediately to a health facility.

Malaria

(data not collected)

HIV/AIDS

(data not collected)

Contraception

(data not collected)

Prenatal Care

73.5 % of women with births last year received two or more doses of tetanus toxoid within the last three years.

97.1 % of women received antenatal care from skilled personnel (doctor, nurse, midwife).

Assistance at Delivery

A doctor, nurse, or midwife delivered 96.7 % of births occurring in the year prior to the MICS.

Birth Registration

The births of 98.9 % of children under five years have been registered.

Orphanhood and Living Arrangements of Children

(data not collected)

Child Labor

(data not collected)

In view of the above mentioned result of the survey, the following recommendations are made.

In the course of the survey, basic data on the status of health of the children and women are collected thus contributing to evaluation of the status of achievement of target set at 1999 World Summit for Children and, to preparation of basic data for making National Program of Action for the New Millenium.

- It is observed that, though the children are comprehensively enjoying educational and medical services, improvement of deteriorated quality of such services are required.

- Though inoculation rate was raised up to 70% which is higher than the record of the 1998 first MICS, various measures are still to be taken to raise the rate to 80% and to ensure further

sustainable success of this work by providing preventive medicines, strengthening of cold storage linkages.

- While the activities for the treatment of diarrhea and acute respiratory diseases are on the way, the Strategy for the Integrated Management of Children's Illnesses (IMCI) which is recently developed by UNICEF and WHO should be immediately pursued.

- In spite of comprehensive exercise of prenatal care, capacity building of medical staff and provision of equipment to Provincial Maternity Hospitals and County Hospitals are required.

- In line with high level of breastfeeding achieved, the activities like extension of medical knowledge to mothers, increasing the number of baby-care-hospitals and breastfeeding by breast feed-sufficient-mothers are to be followed.

- Improvement of quality of water is also required.

I. Introduction

Background of the Survey

At the World Summit for Children held in 1990, the Government of DPR of Korea pledged itself to a Declaration and Plan of Action for Children. After approving the Convention on Right of Child in 1990, the Government signed the Declaration and Plan of Action for Children. And in accordance with the Government policy for the welfare of the children and women, it set up the National Plan of Action based on the 7 major and 20 subsidiary targets of Declaration and Plan of Action for Children and strove for the implementation of targets.

As stated in the National Plan of Action, the National Co-ordination Committee of UNICEF, whose role is to co-ordinate the activities of the Ministries concerned, is responsible for the evaluation of success achieved regarding the children. In the past 15 years, UNICEF assisted the Government efforts to improve the welfare of children and women and to achieve the targets.

DPR of Korea kept close relationship with UNICEF in order to achieve the national target set for the year 2000.

National Plan of Action sets forth the National targets to be achieved by 2000 and strategy for its implementation.

The Plan of Action of World Summit also called for the establishment of mechanisms for monitoring progress towards the goals and objectives. Towards this end, UNICEF has developed a core set of 75 indicators of specific aspects of the situation of children in co-ordination with other international organizations. In many countries, the First MICS was implemented in 1995 in order to evaluate the status of achievement of target by 1995.

The Government of DPR of Korea, with the assistance from UNICEF, WFP and EU, carried out the First MICS in 1998. The main purpose of the First MICS was to evaluate the progress made in the course of its activities exercised to accelerate the achievement of the target.

The Second MICS of 2000 was done to evaluate the status of achievement of target at the end of 2000 and to collect required data for the preparation of National Plan of Action.

Data unavailable from the survey were collected in CBS by the help of population registration system.

When the First MICS was implemented, field enummeration were conducted by Ministry of Public Health while preparation of questionnaire, identification of survey target, review and collection of data and data analysis were done by the CBS. This survey was sponsored by the Government, UNICEF, WFP and EU.

The Government provided the fund for the Second MICS and UNICEF gave financial assistance for the print of questionnaire and training of relevant staff.

CBS implemented the second survey in collaboration with Ministry of Public Health.

This report presents the result of the principal topics covered in the survey.

At the World Summit for Children held in New York in 1990, the government of DPRK pledged itself to a Declaration and Plan of Action for Children. Subsequently, a National Programmed of Action for Children was developed and implemented.

The Plan of Action also called for the establishment of mechanisms for monitoring progress toward the goals and objectives set for the year 2000. Toward this end, UNICEF has developed a core set of 75 indicators of specific aspects of the situation of children in coordination with other international organizations. A MICS survey was conducted in 1985 to measure progress at mid-decade. The 2000 MICS survey has been implemented to provide end-decade information on many of the indicators. Information on other indicators will be derived from the vital registration system and various disease monitoring systems.

The Second MICS in DPRK was conducted by the Central Bureau of Statistics with cooperation of the Ministry of Health.

This report presents results on the principal topics covered in the survey.

Country Background

The DPRK has achieved much progress in the field of demographic and health situation of children and women for 30 years. Therefore, infant mortality rate declined from 37 per 1,000 in 1960 to 14 per 1,000 in 1993.

Total number of population of DPRK in 1999 were 22.75 millon. About nine percent of the population were chillren under five years. Recently the rate of increase of the country is below 1.5. It shows that DPRK is one of the country where the rate of increase is rather low in the world. About 60 percent of population are living in urban area.

DPRK has a regular health care system providing all residents with medical treatment service as well as preventive service.

DPRK has a lot of high-level skilled health staffs and a huge base of health. There are 433 hospitals in city and county level and 7,008 clinics in Ri(same size as village) level in the country. The numer of doctors, nurseries and midwifes per 10,000 are respectively , 30, 24 and 2.

Although great successes have been achieved in improving health and welfare of children, intake of low-nutrition food and bad life condition are still threatening the life and future of children of the country on account of the economic difficulties coming from breakdown of socialist market and pressure of external power, and a natural disaster in the latter half of 1990s.

As following some indicators present, total fertility rate and expectation of life at birth have declined by 0.2(number) and 6.4(year) respectively, whereas infant and under five motality rate have increased by 1.6 and 1.8 times for 6 years.

In addition, GNP per capita has showed a decrease of less than 1/2. The fact that GNP per capita is in the level of below US$500 presents the difficult situation of economy of DPRK, today.

Background Data Between 1993-1999 in DPRK

Index	Unit	1993	1999	Defference
Total Population	Thousand	21,213	22,754	1,541
Total Fertality Rate	Person	2.2	2.0	- 0.2
Life Expectancy at Birth	Age	73.2	66.8	- 6.4
Infant Mortality Rate	-	14.1	22.5	8.4
Under 5 Mortality Rate	-	26.6	48.2	21.6
GNP per capita	US$	991	457(1998)	- 534

It has been reflected in the result of this MICS 2, too. Not a little figures have been retreated in achieving targets compared to early part of 1990.

However, the Korean people are launching vigorous struggle for achieving high development of socio-economy and jumping to the powerful country in the near future in spit of any challenge, uniting as one around the great leader Comrade **Kim Jong Il**.

Aid and cooperation of several international organisations including UNICEF and WFP and governments lends assistance to improve the situation of the children and women of the country.

Besides, international relationship of DPRK has much developed by independent, peaceful and friendly external policy and activities of the Government of Republic.

This development of situation makes available environment in efforts of the Government for the welfare of childern and women.

Survey Objectives

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

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

- Children and improvement of the situation of children and women after the first MICS and a basis for future action;

- To contribute to the improvement of data and monitoring systems in DPRK and to strengthen technical expertise in the design, implementation, and analysis of such systems.

II. Survey Methodology

Sample Design

The DPRK consists of nine provinces and three municipal cities. There are 212 counties in the country. County consists of rather small administrative units called Ri in rural area and Tong in urban area. Total population of the DPRK are about 22.75 million.

The Central Bureau of Statistics in the DPRK takes the responsibility of providing population data including population size.

The sample for the MICS was designed to provide estimates of health indicators at the national level, for urban and rural areas, and for four regions: inland city, coast city, plain county and mountainous county.

3,600 households were selected at just same size as the first MICS for mutual comparison.

The sample was selected in three stages. At the first stage, 30 cities and counties out of 212 were selected with probability proportional to size(PPS). At the second stage, 4 Ri(Up, Ku, Tong) each city and county selected, totally 120 were selected with same method. After a household listing was carried out within the selected enumeration areas, a systematic sample of 3,600 households(30 every Ri) was drawn at the third stage. Full technical details of the sample are included in Appendix A.

Questionnaires

The questionnaires for the second MICS in DPRK were based on the MICS Model Questionnaire of UNICEF with some modifications and additions. A household questionnaire was administered in each household, which collected various information on children age 0-15 and married women age 15-49 only, not all household members. ,. The household questionnaire does not include literacy, marital status, orphanhood status and child labor. In addition to a household questionnaire, the questionnaire for women and for children under 5 years does not include contraception and AIDS, and Malaria.

The Central Bureau of Statistics designed queationnaire with consultation of the National Co-ordinative Committee of UNICEF and the Representative Office of UNICEF by March 2000. The questionnaires were pretested in early April 2000. Based on the results of the pretest, the second questionnaire was finally completed.

For the full questionnaires, see Appendix D.

Fieldwork and Processing

(a) Enummeration

Training of field staff was carried in two stages. At the first stage, 30 staffs selected from statistical offices of cities and counties attended training for 2 days from 24 April 2000 at CBS. At the second stage, 30 trained staffs trained 90 statistical staffs and 120 health staffs(3 statistical staffs and 4 health staffs from each city and county) in the field.

Based on the training, 120 teams collected the data at 120 enumeration areas(Ri, Up, Gu, Tong) simulteneously; each was comprised of one statistical staff and one health staff. The field work was conducted for 5 days from 8 May 2000 to 12 May 2000.

After the enummeration was finished in the field, trained staff in charge of demographic and health statistics of the statistical offices in selected 30 cities and counties checked questionnaires finally and sent them to the CBS.

(b) Data Processing

First of all, queationnaires were checked and corrected at the Department of Population and Health Statistics of CBS from 20 May to 30 May 2000.

Data were entered on four microcomputers using the EpiInfo software from 1 June to 20 June 2000.
In order to ensure quality control, all questionnaires were double entered and internal consistency checks were performed from 20 June to 10 July 2000.

The CBS could'nt participate at the data processing workshop held in Thailand in April due to the delay of invitation doccument. Therefore, analysis of the results was processed using software(EpiInfo) which was used last MICS from 10 to 30 July 2000. After that, it was recalculated using SPSS provided by UNICEF from 20 August to 20 Sepember 2000.

III. Sample Characteristics and Data Quality

Response Rates

Of the 3,600 households selected for the MICS sample, 3,600 households were found to be occupied (Table 1).

Table 1: Number of households and women, and response rates, DPRK, 2000

	Area		Total
	Urban	Rural	
Sampled households	2,160	1,440	3,600
Occupied households	2,160	1,440	3,600
Completed households	2,160	1,440	3,600
Household response rate	100.0	100.0	100.0
Eligible women	2,171	1,442	3,613
Interviewed women	2,171	1,442	3,613
Women response rate	100.0	100.0	100.0
Children under 5	2,497	1,678	4,175
Interviewed children under 5	2,497	1,678	4,175
Child response rate	100.0	100.0	100.0

Of these, 3,600 were successfully interviewed for a household response rate of 100 percent.

In the interviewed households, 3,613 eligible women aged 15-49 were identified. Of course, were successfully interviewed, yielding a response rate of 100 percent.

A response rate for children under age five was 100 percent.

Age Distribution and Missing Data

Table 2 shows single year age distribution of the household members(children ages 0-16, married women ages 15-49) by sex. As all members of the household were not enumerated, age distribution of the household members was not studied with figure.

Table 2: Single year age distribution of household population by sex, DPRK, 2000

Age	Sex			
	Male		Female	
	Number	Percent	Number	Percent
0	622	21.0	616	9.3
1	565	19.1	510	7.7
2	398	13.5	369	5.6
3	341	11.5	349	5.2
4	198	6.7	207	3.1
5	223	7.5	238	3.6
6	177	6.0	191	2.9
7	123	4.2	176	2.6
8	92	3.1	101	1.5
9	58	2.0	82	1.2
10	47	1.6	63	0.9
11	48	1.6	44	0.7
12	29	1.0	35	0.5
13	19	0.6	23	0.3
14	9	0.3	13	0.2
15	10	0.3	9	0.1
16	0	0	9	0.1
18	0	0	0	0
19	0	0	0	0
20	0	0	2	0.1
21	0	0	5	0.1
22	0	0	17	0.3
23	0	0	28	0.4
24	0	0	54	0.8
25	0	0	67	1.0
26	0	0	257	3.9
27	0	0	417	6.3
28	0	0	425	6.4
29	0	0	435	6.6
30	0	0	486	7.3
31	0	0	349	5.2
32	0	0	290	4.4
33	0	0	235	3.5
34	0	0	137	2.1
35	0	0	125	1.9
36	0	0	104	1.6
37	0	0	59	0.9
38	0	0	41	0.6
39	0	0	29	0.4
40	0	0	12	0.2
41	0	0	11	0.2
42	0	0	7	0.1
43	0	0	6	0.1
44	0	0	2	0
45	0	0	5	0.1
46	0	0	2	0
47	0	0	1	0
48	0	0	2	0
49	0	0	3	0
Total	2,959	100.0	6,648	100.0

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.

Table 3: Percentage of cases missing information for selected questions, DPRK, 2000

Indicators	Percent missing	Number
Level of education of women	0	3,613
Year of education of women	0	3,613
Complete birth date of women	0	3,613
Date of tetanus toxoid injection last year	0	1,238
Complete birth date of children	0	4,175
Diarrhoea in last 2weeks	0	843
Weight	0	4,175
Height	0	4,175

Characteristics of the Household Population

Table 4 presents the percent distribution of households in the sample by background characteristics.

Table 4: Percent distribution of households by characteristics, DPRK, 2000

		Percent	Number
Region	Inland City	30.0	1,080
	Coast City	20.0	720
	Plain County	23.3	840
	Mountainous County	26.7	960
Area	Urban	60.0	2,160
	Rural	40.0	1,440
Total		100.0	3,600

About 60 percent of the households (2,160 households) are urban and 40 percent (1,440 households) are rural. It is the very same rate as population in urban and rural area. Percent distribution by region is also similar to this.

Table 5 shows the characteristics of female respondents aged 15-49. Women age 15-19 As the number of married women is zero, this shows that early marrige doesn't prevail in our country.

100 percent of women have had at least secondary education(80.2 percent for secondary education, 19.8 percent for higher level education) thanks to the benefits of universal 11-year compulsary free education.

Table 5: Percent distribution of women 15-49 by backgrond characteristics, DPRK, 2000

		Percent	Number
Region	Inland City	30.1	1088
	Coast City	20.0	722
	Plain County	23.2	840
	Mountainaus County	26.7	963
Area	Urban	60.1	2171
	Rural	39.9	1442
Age	15-19	.0	0
	20-24	2.9	106
	25-29	44.3	1601
	30-34	41.4	1497
	35-39	9.9	358
	40-44	1.1	38
	45-49	.4	13
Ever given birth	Yes	99.9	3610
	No	.1	3
Woman's education	Secondary	80.2	2898
level	College and University	19.8	715
Total		100.0	3613

Table 6 shows the characteristics of children under age five.

Table 6: Percent distribution of children under 5 by backgrond characteristics, DPRK, 2000

		Percent	Number
Sex	Male	50.9	2124
	Female	49.1	2051
Region	Inland City	32.3	1351
	Coast City	18.2	759
	Plain County	24.6	1025
	Mountainaus County	24.9	1040
Area	Urban	59.8	2497
	Rural	40.2	1678
Age	< 6 months	14.1	586
	6-11 months	15.6	652
	12-23 months	25.7	1075
	24-35 months	18.4	767
	36-47 months	16.5	690
	48-59months	9.7	405
Mother's education level	Secondary+	100.0	4175
Total		100.0	4175

50.9 percent of the children are male and 49.1 percent are female.

IV. Results

A. Infant and Under-Five Mortality

The *infant mortality rate* is the probability of dying before the first birthday. The *under five mortality rate* is the probability of dying before the fifth birthday. In MICS, infant and under five mortality rates are calculated using direct calculation technique based on data on population collected through unified system of the CBS instead of an indirect estimation technique (the Brass method).

Infant and under five mortality from 1993 when the first population census undertaken to 1999 is as Figure 1.

Figure 1. Mortality Dynamics of infants and under five chidren between 1993-1999

As shown in Figure 1, infant and under five mortality increased from 1993 to 1998. But, in 1999 the mortality dropped down.

In addition, it shows that infant and under five mortality was increased by 1.6 and 1.8 times respectively between 1993 to 1999. (Figure 2)

Figure 2. Comparision of Mortality of infants and under five chidren (1993/1999)

The primary objective set at the World Summit for Children was to decrease the mortality of infants and under five children to 50 and 70 respectively or to one third of the level of the year 1990.

As shown in Figure 2, infant and under 5 mortality is 23 and 48 respectively. This means that the mortality is higher than the record of 1993.

The primary objective set at the World Summit for Children was to decrease the infant and under five mortality to 50 and 70 respectively or to one third of the level of the year 1990.

As shown in Figure 2, infant and under 5 mortality is 23 and 48 respectively in 1999. This means that the mortality is higher than the record of 1993.

B. Education

Universal access to basic education and the achievement of primary education by the world's children is one of the most important goals of the World Summit for Children.

The result of the survey shows that, in DPR of Korea, most of the children of the school age are attending primary and senior middle school and, especially, the level of education of women is above senior middle school course.

It was identified by 1998 MICS that schools are located 2 Km away from childrens' houses.

Branch schools are established for the children living in remote mountainous areas and in islands. All the children are enjoying 11-year-compulsory-free-education system. Long ago, the DPR of Korea achieved the target of education-for-all and 100 percent literacy.

All population above 15 are either attending senior middle school or have graduated.

In spite of the vast educational infrastructure and the fact that everybody is under the educational system, the current unsatisfactory quality of education should be improved. Due to the current economical constraints derived from the consecutive natural calamities since 1994, food and school utilities and furnishings are improperly provided.

Besides, due to the lack of educational equipment and facilities and financial support, rehabilitation and proper maintenance of school buildings became another problem it faced.

1998 MICS reported that amount of production of text books were far below the demand due to the shortage of paper. Thus, text book possessing rate of the primary school children and senior middle school pupils were only 64.9 percent and 50.7 percent respectively.

And, the quality of text books is inferior as they are made of recycled paper and handed down for several years.

Provision of notebooks and school things does not meet the demand, too.

Therefore, the attendance rate of the children is far below than before.The attendance rate is lower in the natural disaster hit areas, demarcation line areas and in mountainous areas. In terms of season, attendance rate is lower in winter when supply of electricity and heat is less than summer.

It is also noted that the occurrence rate of acute respiratory disease of the children is higher in winter.

Early childhood education

3.2 percent of the children aged 36-59 months are attending an organized early childhood education programmed like kindergarten. (Table 7)

Children in urban areas (3.8%) are almost twice as likely to attend early learning activities as children in rural areas (2.4%). And the number of 4-year old children (4.8%) is twice than the 3-year old (2.3%).

In the country, talented children are getting early childhood education.

Table 7: Percentage of children aged 36-59 months who are attending some form of organized early childhood education programm, DPRK, 2000

		Percent	Number
Sex	Male	3.2	539

	Female	3.5	556
Region	Inland City	3.5	296
	Coast City	3.9	234
	Plain County	2.7	292
	Mountainaus County	2.9	273
Area	Urban	3.8	641
	Rural	2.4	454
Age	36-47 months	2.3	690
	48-9 months	4.8	405
Mother's education level	Secondary+	3.2	1095
Total		3.2	1095

World Summit for Children Goal => Number 26

Basic education

Overall, 99.6 percent of children of primary school age in DPR of Korea are attending primary school (Table 8).

The remaining children that represents 0.4 percent (in other words, 2.7 percent of the 10-year-old children) are attending senior middle school course. Therefore, 100 percent of the primary school age children is under education.

There is no difference in attendance rate between boys and girls, urban and rural areas and regions.

Table 8: Percentage of children of primary school age attending primary school, DPRK, 2000

		Sex				Total	
		Male		Female			
		Attending school		Attening school			
		Attending	Number	Attending	Number	Attending	Number
Region	Inland City	99.4	84	100.0	87	98.8	171
	Coast City	100.0	43	100.0	70	100.0	113
	Plain County	99.4	87	98.4	117	99.9	204
	Mountainaus County	100.0	106	99.9	148	99.7	254
Area	Urban	99.3	149	99.1	194	99.5	343
	Rural	100.0	171	99.9	228	99.7	399
Age	7	100.0	123	100.0	176	100.0	299
	8	100.0	92	100.0	101	100.0	193
	9	100.0	58	100.0	82	100.0	140
	10	97.9	47	96.9	63	97.3	110

Total	99.7	320	99.5	422	99.6	742

World Summit for Children Goal => Number 6

Literacy

Illiteracy rate is 0 percent in DPR of Korea and this means 100% literacy.

The Government of DPR of Korea had already 100% literacy in Mid-1940s after the liberation of the country.

C. Water and Sanitation

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 trachoma, cholera, typhoid, and schistosomiasis. Drinking water can also be tainted with chemical, physical and radiological contaminants with harmful effects on human health. In addition to its association with disease, access to drinking water may be particularly important for women and children, particularly in rural areas.

In 1998, when the First MICS was done, 99.8 percent of households were using piped water in the house or private/public tap, well and pump water installed within 100m from home.

Regardless of source of water, the quality of water is not satisfactory.

The Second MICS revealed that, though households have access to various sources of water, time-limit water supply due to the irregular power supply, malfunction of pumps and contamination of water due to erosion of water pipe is not avoided.

Many households get water under time-limit water supply system while the pipe leaking rate is reported to be about 30 percent.

In many regions, chemical disinfection of water is not done regularly, thus there is a worry about supply of safe drinking water.

Table 9: Percentage of the households using improved drinking water sources,

DPRK, 2000

	Main source of water			

		Piped Into dwelling	Piped into yard	Public Tab	Tube well/bore hole with pump	Protected dug well/ spring	Total	Total with safe drinking water	Number of house holds
Region	Inland City	87.0	.4	1.6	3.6	7.4	100.0	100.0	1080
	Coast City	84.3	.3	2.1	4.6	8.7	100.0	100.0	720
	Plain County	75.5	2.5	1.3	8.8	11.9	100.0	100.0	840
	Mountainaus County	71.7	2.2	1.4	9.7	15.0	100.0	100.0	960
Area	Urban	87.5	1.1	1.8	3.4	6.2	100.0	100.0	2160
	Rural	68.0	1.7	1.2	11.5	17.6	100.0	100.0	1440
Total		79.7	1.4	1.6	6.6	10.7	100.0	100.0	3600

World Summit for Children Goal => Number 4

Use of Sanitation

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

The result of the Second MICS indicates that 19.6% use flush toilets connected to sewage systems or septic while 33.2% and 47.2% use other flush toilets and pit latrines respectively.

There is a clear distinction in the use of sanitary system between urban and rural areas and regions.

Natural disasters since 1995 has hampered not only water supply system but also sewage system. Due to the improper supply of water, flush toilets turned into other types of toilets. Public toilets emerged in the areas where sewage system is damaged. The sanitary status of many toilets is not good and most of toilets are reported to be open-air pit latrines.

The unfavorable sanitary conditions bring diseases infected by water like diarrhear to women and children which is the cause of malnutrition and other diseases.

Table 10: Percentage of the households using sanitary means of excreta disposal, DPRK, 2000

		Type of toilet facility					
		Flush to sewage system/ septic tank	Pour flush Latrine	Improved pit latrine	Total	Total with sanitary means of extreta disposal	Number of households
Region	Inland City	42.7	37.8	19.5	100.0	100.0	1080
	Coast City	14.5	41.4	44.1	100.0	100.0	720
	Plain County	11.3	33.2	55.5	100.0	100.0	840
	Mountainaus County	4.7	21.8	73.5	100.0	100.0	960
Area	Urban	30.5	42.1	27.4	100.0	100.0	2160
	Rural	3.2	19.8	77.0	100.0	100.0	1440
Total		19.6	33.2	47.2	100.0	100.0	3600

World Summit for Children Goal => Number 5

D. Child Malnutrition

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 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 is recommended for use by UNICEF and the World Health Organization.

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

Height for age is a measure of linear growth. Children whose height for age is more than two standard deviations below the median of the reference population are considered short for their age and are classified as *moderately or severely stunted*. Those whose height for age is more than three standard deviations below the median are classified as *severely stunted*. Stunting is a reflection of chronic

malnutrition as a result of failure to receive adequate nutrition over a long period and 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.

The status of malnutrition of under five children reported by the Second MICS is as Table 11.

Table 11: Percentage of the under-five children who are severely or moderately undernourished, DPRK, 2000

		Weight for age		Height for age		Weight for height		
		Percent below -2SD	Percent below -3SD	Percent below -2SD	Percent below -3SD	Percent below -2SD	Percent below -3SD	Number of children
Sex	Male	28.2	10.8	45.8	24.2	10.7	4.6	2124
	Female	27.7	9.0	44.6	20.6	10.1	3.8	2051
Region	Inland City	24.5	7.6	36.9	16.8	10.5	3.8	1351
	Coast City	19.3	4.8	41.6	18.3	6.9	3.3	759
	Plain County	30.1	11.2	51.2	25.8	8.7	3.0	1025
	Mountainaus County	36.5	15.5	52.8	29.4	14.5	6.5	1040

Area	Urban	22.3	6.3	39.2	17.4	8.3	3.5	2497
	Rural	36.3	15.4	54.1	29.9	13.5	5.3	1678
Age	< 6 months	7.7	1.6	21.9	12.3	7.8	3.0	586
	6-11 months	21.5	6.8	31.9	14.6	10.4	3.1	652
	12-23 months	31.4	11.8	50.2	25.2	11.9	4.5	1075
	24-35 months	34.0	12.1	47.5	23.1	9.7	4.0	767
	36-47 months	32.4	11.7	58.6	27.7	10.2	4.5	690
	48-59months	39.0	15.1	60.3	32.1	11.9	6.8	405
Mothers education level	Secondary+	27.9	9.9	45.2	22.4	10.4	4.2	4175
Total		27.9	9.9	45.2	22.4	10.4	4.2	4175

World Summit for Children Goal => Number 3,9,26

In view of the 6 indicators for identifying malnutrition, it is observed that the rate of malnutrition is higher among boys than girls and in rural areas than urban areas. It could also be noticed that the older records higher rate of malnutrition.(Figure 3)

Figure 3. Comparision of Sex and Regional Mulnutrition Rates

Figure 4 shows that mulnutrition rate grow higher and higher by age.

Figure 4. Dinamic curve of Age specific Mulnutrition Rates

In Figure 5 the result of the First and Second survey regarding the status of malnutrition are compared with.

Figure 5. Comparision of Mulnutrition Rates between Mics1 and Mics2

Figure 6 shows that most of the indicators regarding the malnutrition were improved to a certain degree from 1998 to 2000 except WHZ indictor. In view of WHZ indicator, the portion of more than 3 standard deviations revealed in the Second MICS (4.2%) is almost doubled compared to the first survey (2.2%). This can be explained by the fact that those children, who could not attend the first survey as they were hospitalized due to severe malnutrition, participated the second survey.

Improvement of nutrition in the past two years is the result of Government effort and collaboration of Government and NGOs like UNICEF, WFP and EU.

Breastfeeding

Breastfeeding for the first few years of life protects children from infection, provides an ideal source of nutrients, and is economical and safe. However, many mothers stop breastfeeding too soon, and there are often pressures to switch to infant formula, which can contribute to growth faltering and micronutrient malnutrition and is unsafe if clean water is not readily available. The World Summit for Children goal states that children should be exclusively breastfed for four to six months, and that breastfeeding should continue with complementary food, well into the second year of life.

Many countries have adopted the recommendation of exclusive breastfeeding for about six months.

In Table 12, breastfeeding status is based on women's reports of children's consumption in the 24 hours prior to the interview

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Table 12: Percent of living children by breastfeeding status, DPRK, 2000

	Exclusive breastfeeding	Solid foods	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
Sex	Male	90.3	148	13.7	243	87.4	222	39.0	159
	Female	91.2	129	23.9	209	85.2	217	33.8	145
Region	Inland City	91.2	81	25.0	162	84.1	149	31.0	87
	Coast City	89.4	66	23.2	81	83.9	73	21.5	65
	Plain County	88.3	64	12.3	98	88.2	115	49.2	59
	Mountainaus County	93.9	66	10.7	111	89.2	102	44.1	93
Area	Urban	89.9	181	20.2	279	85.2	256	23.3	176
	Rural	92.4	96	15.6	173	87.9	183	54.7	128
Mother's education level	Secondary+	90.7	277	18.4	452	86.3	439	36.5	304
Total		90.7	277	18.4	452	86.3	439	36.5	304

World Summit for Children Goal => Number 16

Exclusive breastfeeding refers to children who receive only breast milk and vitamins, mineral supplements, or medicine. *Complementary feeding* refers to children who receive breast milk and solid or semi-solid food.

90.7 percent of children aged between 0 to 3 months are exclusively breastfed. At age 12 to 15 months, 86.3 percent of children are receiving breast milk and by age 20 to 23 months, 36.5 percent of children are still being breastfed. Percentage of children who are receiving breast milk is higher in rural area than in urban area.

Salt iodization

Deficiency of iodine in the diet is the world's single greatest cause of preventable mental retardation. Salt iodization is an effective, low-cost way of preventing iodine deficiency disorders (IDD). *Adequately iodized salt* contains 15 ppm (parts per million) of iodine or more.

As the production of iodized salt is small, the status of use of ordinary salt and iodized salt is reviewed in the second survey.(Table 13)

The use rate of ordinary salt is recorded to be 100% while only 1.7% of households use iodized salt.

Table 13: Percent of households consuming adequately iodized salt, DPRK, 2000

		Percent of households with no salt	Percent of households in which salt was tested	Results of test		Number of households interviewed
				Common salt at home	Salt iodized at home	Total
Region	Inland City	.0	100.0	98.8	1.2	1080
	Coast City	.0	100.0	97.9	2.1	720
	Plain County	.0	100.0	97.7	2.3	840
	Mountainaus County	.0	100.0	98.4	1.6	960
Area	Urban	.0	100.0	98.0	2.0	2160
	Rural	.0	100.0	98.6	1.4	1440
Total		.0	100.0	98.3	1.7	3600

World Summit for Children Goal => Number 14

Vitamin A supplementation

Vitamin A deficiency (VAD) impairs children's immune systems, increasing their chances of dying of common childhood diseases and undermines the health of pregnant and lactating women. It can also cause eye damage and blindness in children.

According to UNICEF and WHO recommendation, children aged 6-12 months sbould be given one dose Vitamin A capsule of 100,000 IU every six months, and children older than one year should be given one high dose of 200,000 IU every six months.

Within the six months prior to the MICS, 80.2 percent of children aged 6-59 months received the high dose Vitamin A supplement, while 3.0 percent of children aged 6-59 months did not receive the supplement at all in the last 6 months. (Table 14)

Table 14: Percent distribution of children aged 6-59 months by whether they received a high dose of Vitamin A supplement in the last 6 months, DPRK, 2000

	Vitamin A	Total

		Received: within last 6months	Received: prior to last 6months	Received :not sure when	Not sure if received	Not receiv ed	Total	Number of children
Sex	Male	80.5	14.5	.1	1.2	3.7	100.0	1876
	Female	79.9	15.2	.3	2.4	2.2	100.0	1713
Region	Inland City	78.8	16.6	.4	2.3	1.9	100.0	1065
	Coast City	79.4	15.2	.3	2.0	3.1	100.0	647
	Plain County	82.6	12.5	.1	1.5	3.3	100.0	901
	Mountainaus County	80.1	14.8	.0	1.1	4.0	100.0	910
Area	Urban	79.4	14.2	.3	1.9	4.2	100.0	2099
	Rural	81.3	15.7	.1	1.6	1.3	100.0	1490
Age	6-11 months	80.7	11.0	.2	2.3	5.8	100.0	652
	12-23 months	82.3	14.5	.3	1.3	1.6	100.0	1075
	24-35 months	80.9	14.6	.1	1.7	2.7	100.0	767
	36-47 months	79.4	16.2	.3	1.8	2.3	100.0	690
	48-59months	73.8	20.1	.0	2.1	4.0	100.0	405
Mother's education level	Secondary+	80.2	14.8	.2	1.8	3.0	100.0	3589
Total		80.2	14.8	.2	1.8	3.0	100.0	3589

World Summit for Children Goal => Number 15

20.2 percent of mothers with birth in the year before the MICS received Vitamin A supplement within 8 weeks of the birth.

Table 15: Percentage of women with a birth in the last 12 months by whether they received a high dose of Vitamin A supplement before the infant was 8 weeks old, DPRK, 2000

		Received Vitamin A supplement	Not sure if received	Number of women
Region	Inland City	20.8	.2	354
	Coast City	19.1	.3	243
	Plain County	18.0	.0	314
	Mountainaus County	22.4	.2	327
Area	Urban	21.3	.2	707
	Rural	18.7	.1	531
Mother's education level	Secondary+	20.2	.2	1238
Total		20.2	.2	1238

World Summit for Children Goal => Number 15

Low birth weight

Infants who weigh less than 2500 grams (2.5 kg.) at birth are categorized as low birth weight babies. As 6.4 percent of infants are estimated to weight less than 2500 grams, it is low

Table 16: Percentage of live births in the last 12 monthsthat weighed below 2500 grams at birth, DPRK, 1999

		Percent of live births below 2500 grams	Percent of live births weighed at birth	Number of live births
Region	Inland City	7.4	61.2	354
	Coast City	7.9	41.2	243
	Plain County	4.6	28.3	314
	Mountainaus County	6.0	37.9	327
Area	Urban	7.0	52.3	707
	Rural	5.6	29.9	531
Mother's education level	Secondary+	6.4	42.7	1238
Total		6.4	42.7	1238

World Summit for Children Goal => Number 12

The percentage(7.0%) is higher in urban area than one(5.6%) in rural area.

The percentage of low birth weight babies was nearly similar to the percentage of mother's assessment reported as very small for baby's size at birth.(mother's assessment: very small, smaller than average, average, larger than average, very large)

This percentage is 2.6% lower than one(9.0%) of MICS1.

E. Child Health

Immunization coverage

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

Table 17 and Table 18 show the percentage of children aged 12 to 23 months who received BCG vaccination , DPT vaccination, polio vaccine and measles vaccination according to the viccination cards and the mother's report.

Table 17: Percentage of children 12-23 months immunized against childhood diseases at any time before the survey, DPRK, 2000

BCG	Vaccination Card	57.4
	Mother's Report	24.1
	Not vaccinated	18.5
DPT1	Vaccination Card	59.6
	Mother's Report	31.4
	Not vaccinated	9.0
DPT2	Vaccination Card	72.2
	Mother's Report	20.1
	Not vaccinated	7.7
DPT3	Vaccination Card	62.1
	Mother's Report	33.4
	Not vaccinated	4.5
Polio 0	Vaccination Card	78.2
	Mother's Report	12.2
	Not vaccinated	9.6
Polio 1	Vaccination Card	79.9
	Mother's Report	18.4
	Not vaccinated	1.7
Polio 2	Vaccination Card	77.1
	Mother's Report	20.1
	Not vaccinated	2.8
Polio 3	Vaccination Card	80.5
	Mother's Report	17.8
	Not vaccinated	1.7
Measles	Vaccination Card	81.6
	Mother's Report	9.9
	Not vaccinated	8.5
All vaccinations	Vaccination Card	55.9
	Mother's Report	14.3
	Doesnt have all vaccinations	29.8
No vaccinations	Vaccination Card	.1
	Mother's Report	.3
	Has some vaccinations	99.6
Number of children		1075

World Summit for Children Goal => Number 22

Table 18: Percentage of children 12-23 months immunized against childhood Diseases before the first birthday for children who had a complete date on their vaccination card, DPRK, 2000

BCG	96.3
DPT1	93.2
DPT2	90.5
DPT3	87.0
Polio 0	95.8
Polio 1	93.7
Polio 2	92.3
Polio 3	86.5
Measles	71.2
All vaccinations	33.2
No vaccinations	.0

World Summit for Children Goal => Number 22

Table 19 presents the percentage of children aged 12 to 23 months who received each of the vaccinations by sex and by aera

Vaccination rates by type and time are: 81.5% for BCG, 91.0 % for the first DPT, 92.3% for the second DPT, 95.5% for the third DPT, 90.4% for the Polio, 98.3% for the first Polio, 98.3 % for the third Polio, 91.5 % for mealse. It shows that various vaccination rates are generally high.

The percentage of children who had all recommened vaccinations is silghtly high in urban areas.

The percentage of children with health cards is 98.8 percent, almost of children have got the health cards, while approximately one per one hundred of children hasn't got the health card.

Figure 7 show the percentage of vaccination and it's tendency by type of immunization and by time of vaccination .

The percentage of children who received DPT vaccination grew higher by the time of vaccination.
The percentage of children aged 12 to 23 months who received polio vaccine were simmilar.

Diarrhea

Dehydration caused by diarrhea is a major cause of mortality among children. Home management of diarrhea – either through oral rehydration salts (ORS) or a recommended home fluid (RHF) can prevent many of these deaths caused by dehydration. Preventing dehydration and malnutrition by increasing fluid intake and continuing to feed the child are also important ways for managing diarrhea.

20.2 percent of under five children reported to have diarrhea in the two weeks prior to the survey.(Table 20)

Diarrhea prevalence was highest in the coast cities with 25 percent among 4 regions, while it was simmila in urban area and rural area.

The peak of diarrhea prevalence is the peak among children age 6-11 months and it grew down by older and older. This is because that resistibility and immunization for digestive organs of babies who have exclusively breast feeding are still weak after they give up breast feeding.

Difference between male and female is not large.

The percentage of children who received treatment during the episode of diarrhea is comparatively high as 90.9 percent.

The percentage of children received breast milk as 48.2 , percent of children received gruel as 50.4 and percent received ORS as 70.1 is comparatively high and 9.1percent of children never received any treatment.

According to UNICEF and WHO recommendation, only 17.7 percent of children had increased fluid intake and continued to eat food. (Table 21)

Acute respiratory infection

Acute respiratory infections, particularly pneumonia, are one of the leading causes of child deaths.

According to the result of MICS, 12.2 percent of under five children had an acute respiratory infection in the two weeks prior to the survey. (Table 22)

The percent of children received treatment was comparatively high level.

The percentage(86.5%) in urban area was higher than in rural area(74.4%) and percentage of children under six months was highest.

IMCI initiative

The Integrated Management of Childhood Illnesses (IMCI) is a programme developed by UNICEF and

WHO that combines strategies for control and treatment of five major killers of children – acute lower respiratory tract infections, diarrheal dehydration, measles, malaria, and malnutrition.

The programmed 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 diarrhea or any other illness requires giving more fluids and continuing to feed sick children as they are normally fed.

The percentage of children who had diarrhea or some other illness in the two weeks preceding the survey was 32.4 percent(Table 23).

Of these, 21.3 percent drank more liquids during the illness and 55.7 percent continued to eat. Overall, only 17.9 percent of ill children received increased fluids and continued eating as recommended under the IMCI programmed

Promoting medical knowledge among caretakers about when they would take their ill child to a health facility is another important component of the IMCI programmed.

Table 24 presents the percent of mothers that reported to take their ill child to a health facility right away according to the symptoms.

In all of symptoms, the percent of mothers that reported to take their child to a health facility right away if he/she developed a fever was highest in. The percentage was higher in urban area than in rural area.

G. Reproductive Health

Prenatal care

Quality prenatal care can contribute to the prevention of maternal mortality by detecting and managing potential complications and risk factors, including pre-eclampsia, anemia, and sexually transmitted diseases.

Antenatal care also provides opportunities for women to learn the danger signs of pregnancy and delivery, to be immunized against tetanus, to learn about infant care, and be treated for existing conditions, such as malaria and anemia.

Tetanus toxoid injections are given to women during pregnancy to protect infants from neonatal tetanus that is a major cause of infant death caused by unsanitary conditions .

. Two doses of tetanus toxoid during pregnancy offer full protection. However, if a woman was vaccinated during a previous pregnancy, she may only need a booster to give full protection. Five doses are thought to provide lifetime protection.

Among the women who gave birth in last year, the percentage of women received two or more doses of tetanus toxoid within the last three years at 73.5 percent was over half(Table 25)

Total of percents of women received tetanus toxoid at 199.2 percent was considerably high level. By area the percent of women in urban area was slightly high than one in rural area.

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Table 25: Percentage of mothers with a birth in the last 12 months protected against neonatal tetanus, DPRK, 2000

		Received at least 2 dose, last within 3 years	Received at least 3 dose, last within 10 years	Received at least 5 dose during lifetime	Protected against tetanus	Number of mothers
						1.00
Region	Inland City	72.9	65.7	62.7	201.3	354
	Coast City	71.4	62.7	60.4	194.5	243
	Plain County	73.7	63.9	61.8	199.4	314
	Mountainaus County	75.5	64.9	59.8	200.2	327
Area	Urban	71.8	63.6	60.3	195.7	707
	Rural	75.8	65.5	62.5	203.8	531
Mother's education level	Secondary+	73.5	64.4	61.3	199.2	1238
Total		73.5	64.4	61.3	199.2	1238

World Summit for Children Goal => Number 22

The percentage of women received prenatal care from skilled personnel was 97.1 percent and Almost all of women received prenatal care during pregnancy(Table 26).

Table 26: Percent distribution of women aged 15-49 with a birth in the last years by type of personnel delivering antenatal care, DPRK, 2000

		Person delivering antenatal care					Total	Any skilled personnel	Number of women
		No antenatal care received	Doctor	Nurse	Midwife	Other			1.00
Region	Inland City	2.8	48.4	.9	46.6	1.3	100.0	95.9	354
	Coast City	2.5	44.0	.0	53.5	.0	100.0	97.5	243
	Plain County	2.9	15.3	.6	81.2	.0	100.0	97.1	314
	Mountainaus County	1.8	46.8	5.2	46.2	.0	100.0	98.2	327
Area	Urban	2.6	44.6	1.3	50.9	.6	100.0	96.8	707
	Rural	2.4	30.9	2.4	64.2	.1	100.0	97.5	531
Mother's education level	Secondary+	2.5	38.7	1.8	56.6	.4	100.0	97.1	1238
Total		2.5	38.7	1.8	56.6	.4	100.0	97.1	1238

World Summit for Children Goal => Number 9,11

Assistance at delivery

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

96.7 percent of births occurring in the year prior to the MICS2 survey were delivered by skilled personnel , doctors assisted with the delivery of 36.3 percent of births, nurses assisted with 2.8 percent, midwife assisted with 57.6% and the other's assisted with 3.0 %(Table 27, Figure 8).

Table 27: Percent distribution of women aged 15-49 with a birth in the last years by type of personnel assisting at delivery DPRK, 2000

		Person assisting at delivery					Total	Any skilled personnel	Number of women
		No assistance received	Doctor	Nurse	Midwife	Other			1.00
Region	Inland City	.2	42.5	.9	54.5	1.9	100.0	97.9	354
	Coast City	.1	40.9	1.6	54.7	2.7	100.0	97.2	243
	Plain County	.3	20.1	.3	75.4	3.9	100.0	95.8	314
	Mountainaus County	.4	41.9	8.0	46.2	3.5	100.0	96.1	327
Area	Urban	.1	42.5	2.3	53.5	1.6	100.0	98.3	707
	Rural	.5	28.1	3.4	63.2	4.8	100.0	94.7	531
Mothers education level	Secondary+	.3	36.3	2.8	57.6	3.0	100.0	96.7	1238
Total		.3	36.3	2.8	57.6	3.0	100.0	96.7	1238

World Summit for Children Goal => Number 11

Figure 7. Percent distribution of women with a birth in the last year by type of personal assisting at delivery

By area the percent in urban area was slightly higher than one in rural area.

H. Child Rights

Birth registration

The International Convention on the Rights of the Child states that every child has the right to a name and a nationality and the right to protection from being deprived of his or her identity.
Birth registration is a fundamental means of securing these rights for children. The births of 98.9% of children under five years in this survey have been registered (Table 28).

There are no significant variations in birth registration across sex, region.
However children over six months registered their births with 100 percent and only 7.9 percent of the the children under five months have not registered. Among those whose births are not registered, percentage of children whose the reason was travel distance was 3.7 percent and the other was 4.2 percent.

Table 28: Percent distribution of children aged 0-59 months by whether birth is registered and reasons for non-registration, DPRK, 2000

		Registration status				Total	Number of children
		Birth registered	Must travel too far	Other	DK		1.00
Sex	Male	99.1	.1	.8	.0	100.0	2124
	Female	98.7	.7	.6	.0	100.0	2051
Region	Inland City	98.5	.1	1.4	.0	100.0	1351
	Coast City	100.0	.0	.0	.0	100.0	759
	Plain County	99.9	.0	.1	.0	100.0	1025
	Mountainaus County	97.6	.8	1.6	.0	100.0	1040
Area	Urban	99.2	.0	.8	.0	100.0	2497
	Rural	98.5	.3	1.2	.0	100.0	1678
Age	< 6 months	92.1	3.7	4.2	.0	100.0	586
	6-11 months	100.0	.0	.0	.0	100.0	652
	12-23 months	100.0	.0	.0	.0	100.0	1075
	24-35 months	100.0	.0	.0	.0	100.0	767
	36-47 months	100.0	.0	.0	.0	100.0	690
	48-59 months	100.0	.0	.0	.0	100.0	405
Mother's education level	Secondary+	98.9	.5	.6	.0	100.0	4175
Total		98.9	.5	.6	.0	100.0	4175

Monitoring children's Rights Indicator

Appendix A: Sample Design

CACULATING THE SAMLPE SIZE

When MICS1 was conducted in 1998 year, sample size of 3600 household was decided in collaboration with a consultant from UNICEF.

In MICS2 sample size of 3600 household was decided as same as MICS1.

SAMPLING

Sample for MICS2 was designed to estimate indicators to be representative each of regions, rural area and urabn area.

Selecting of sample consist of three stages.

First was selecting of 30 unites among 212 cities and counties by using one(probability proportional to size of sampling methods second was selecting of 4 Ri (Ub, Gu, Dong) in each of cities(counties) and totally 120 Ri(Ub, Gu, Dong) were selected.

Systematic sample in selecting of household in each Ri(Ub, Gu, Dong)Ri was used .

Appendix 2: List of Main Statistical Personnel Involved in the 2TH MICS in DPRK

No	Name	Title
1	Kondo,Kim	Director of Department of Population and Health Statistics , Central Bureau of Statistics
2	Myongson, Chang	Officer of Department of Population and Health Statistics , Central Bureau of Statistics

3	Yongmu, Ri	Officer of Department of Population and Health Statistics , Central Bureau of Statistics
4	Ilnam, So	Officer of Population and Health Statistics , Statistiacal Office, Kangdong county, Pyongyang City
5	Sangchol, Yu	Senior Officer of Population and Health Statistics , Statistiacal Office, Pyongchon District, Pyongyang City
6	Mihae, Kim	Officer of Population and Health Statistics , Statistiacal Office, Moranbong District, Pyongyang City
7	Wonil, Ryu	Officer of Population and Health Statistics , Statistiacal Office, Sadong District, Pyongyang City
8	Kwangon, Kim	Officer of Population and Health Statistics , Statistiacal Office, Rakrang District, Pyongyang City
9	Ungjin, Kim	Officer of Population and Health Statistics , Statistiacal Office, Kaechon City, South Pyongan Province
10	Kyunsong, Kim	Officer of Population and Health Statistics , Statistiacal Office, Sunchon City, South Pyongan Province
11	Hyeok, Ri	Officer of Population and Health Statistics , Statistiacal Office, Pyongwan county, South Pyongan Province
12	Yongok, Paek	Officer of Population and Health Statistics , Statistiacal Office, Sukchon county, South Pyongan Province
13	Songil, Kim	Officer of Population and Health Statistics , Statistiacal Office, Chongju City, North Pyongan Province
14	Chongae, An	Officer of Population and Health Statistics , Statistiacal Office, Yomju County, North Pyongan Province
15	Songsuk, Pak	Officer of Population and Health Statistics , Statistiacal Office, Kujang County, North Pyongan Province
16	Taesong, O	Officer of Population and Health Statistics , Statistiacal Office, Huichon City, Chakang Province
17	Kwangbok, Chong	Officer of Population and Health Statistics , Statistiacal Office, Pyoksong County, South Hwanghae Province
18	Chonghui, Om	Officer of Population and Health Statistics , Statistiacal Office, Sinchon County, South Hwanghae Province
19	Pyongguk, Cho	Officer of Population and Health Statistics , Statistiacal Office, Chongdan County, South Hwanghae Province
20	Hwachun, Chang	Head of Statistiacal Office, Songrim City, North Hwanghae Province
21	Yonghui, O	Officer of Population and Health Statistics , Statistiacal Office, Sohung County, North Hwanghae Province
22	Kumchol, Chong	Officer of Population and Health Statistics , Statistiacal Office, Wansan City, Kangwon Province
23	Unbok, Han	Officer of Population and Health Statistics , Statistiacal Office of Kosan county, Kangwon Province
24	Tongil, Ri	Officer of Population and Health Statistics , Statistiacal Office, Hoisang District, Hamhung City, South Hamgyong Province
25	Myongchol, Kim	Officer of Population and Health Statistics , Statistiacal Office, Tanchon City, South Hamgyong Province
26	Sangpil, So	Officer of Population and Health Statistics , Statistiacal Office, Hongwon County, South Hamgyong Province
27	Cholmin, Chang	Officer of Population and Health Statistics , Statistiacal Office,

		Yonggwang County, South Hamgyong Province
28	Unhui, Chong	Officer of Population and Health Statistics , Statistiacal Office, Sunam District, Chongjin City, North Hamgyong Province
29	Hakjun, Kim	Officer of Population and Health Statistics , Statistiacal Office, Hoiryong City, North Hamgyong Province
30	Hui, Mun	Officer of Population and Health Statistics , Statistiacal Office, Orang County, North Hamgyong Province
31	Unhak, Sin	Officer of Population and Health Statistics , Statistiacal Office, Uunhung County, Ryanggang Province
32	Toksong, Ri	Officer of Population and Health Statistics , Statistiacal Office, Hanggu District, Nampo City
33	Hyangsuk, Chong	Officer of Population and Health Statistics , Statistiacal Office, Daean District, Nampo City

Appendix 3: List of 30 Cities, Counties Selected in the 2TH MICS in DPRK

No	Name of region	Name of City,County
1	**Inland City**	Pyongyang City-Pyonchon Dist, Moranbong Dist,Sadong Dist,Rakrang Dist Kaechon City, Sunchon City, Huichon City, Songrim City, Hoiryong City
2	**Coast City**	Jongzu City,Wonsan City, Hamhung City- Hoisang Dist,Danchon City, Chongjin City- Sunam Dist, Nampo City-Hanggu Dist, Daean Dist
3	**Plain County**	Kangdong, Pyongwon,Sukchon, Ryongchon,Sinchon,Chongdan,Sohung
4	**Mountainouse County**	Kujang, Pyoksong, Kosan, Yongkwang, Hongwon, Orang, Unhung

Here Jongzu City, Wonsan City, Hamhung City,Danchon City, Chongjin City, Nampo City were also selected in 1TH MICS

Appendix 4: Questionnaires