MONGOLIA

CHILD and DEVELOPMENT SURVEY -2000
(MICS)

NATIONAL REPORT

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Acknowledgements

This Child and Development Survey - 2000 is a multiple indicator clutster survey (MICS) that was conducted among women and children, with the financial and technical support of UNICEF. The purpose of this survey is to establish comprehensive statistical data to monitor the implementation of Mongolia's National Program of Action for the Development of Children in the 1990s, and to aid future planning and organisation. Overall, the findings of the Child and Development Survey -2000 will be a valuable source of information in determining the current level of infant, child and women's health and education in Mongolia and the factors which influence those levels, and it will be extremely helpful in assessing government efforts towards improving the status of women and children in the country in the past 10 years.

Both National and International staff have dedicated a great deal of time and effort towards the successful completion of this project, in the conducting of the survey and the publication of this volume.

First of all, I would like to express my deep appreciation to UNICEF, Mongolia, for its financial support for this second multiple indicator cluster survey on the situation of Mongolian women and children, and for the technical assistance provided by UNICEF consultants and staff from the Area Office for China and Mongolia and the Regional Office for East Asia and the Pacific, as well as the Country Office in Mongolia. Also, I wish to give my thanks to the Ministry of Education, Science and Technology and Culture, the Ministry of Health, the State Police Department and the National Children's Center as well as the Mongolian Child Rights Center (a non-governmental organization) for their invaluable contribution towards the organization and review of the questionnaire for this second Multiple Indicator Cluster Survey.

I would also like to express my special gratitude to the staff of the National Statistical Office of Mongolia for their tremendous work, their dedication and commitment as the

leading agency in the conduct of the survey and the writing of the report during the entire period of the project. It is hoped that the NSO staff, especially the statistitians and programmers have improved their professional knowledge and skills using the combined special software employed pm the multiple indicator cluster survey.

Special thanks are due to the leadership of both government and non-government agencies of Mongolia and UNICEF in Mongolia, and, above all, to the late Mr. Matthew Girvin, the Programmer of the project. His tragic death has meant the loss of a strong voice for Mongolia's children and we all continue to feel his absence deeply.

B. Batmunkh
Project manager of MICS-2.

Foreword

The Child and Development Survey - 2000 of Mongolia has been a truly collaborative effort among national and international agencies, having been conducted by the National Statistical Office of Mongolia with the technical and financial support of UNICEF.

In the organisation of this multiple indicator cluster survey, and in the processing and analysis of the data collected, we have collabrated with the Ministry of Education, Science and Technology and Culture, the Ministry of Health, the State Police Department and the National Children's Center as well as the Mongolian Child Rights Center (a non-governmental organization).

The project also benefited from 3 regional MICS workshops and one in Ulaanbaatar, workshops especially designed for the key oganisations involved in the survey and their staff, organized by UNICEF as part of the global MICS effort associated with the end-decade assessment of the goals of the World Summit for Children.

The sample size of the survey was large. However it has been very well executed, in a short period of time, due to a strong team of interviewers hired on a temporary basis, an effective consultantive process, good technical and financial support and the special focus that was given to the data processing, report writing and analysis. In order to increase the effectiveness of the survey a short term consultant was invited from the UNICEF regional office for East Asia and the Pacific. This data processing and analysis was prepared within seven months of the completion of the fieldwork, and the resulting report, in both the Mongolian and English versions, is being distributed to the public. The report was prepared based on the current health and education situation of children and women in Mongolia, by region, by mother's education level and by mother and child's age group. It is hoped that this report will provide justification and systematic information useful in the monitoring and assessment of the National Programme of Action -2000

A rich information bank, as a result of this survey, has become available about the health situation of Mongolian infants, children, women, and children living in difficult circumstances, their access to services and the factors that effect the above.

The results of this report and the attached tables will be useful for researchers in this field while at the same time leaving the door open for further in-depth research of some topics. Further in-depth research should be a joint effort of teams of researchers from the NSO, MOH, MOLSP, the National Committee for Children and other research organisations and professionals. We hope that this survey will be useful for policy makers, planners and implementers who work in the areas of improving the situation of women and children. monitoring and evaluating the implementation of the National program of Action for the Development of Children in the 1990's.

We hope you find this report useful.

Ch. Davaasuren
Chair person
NSO Mongolia

Gabriella De. Vita
Representive UNICEF
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Executive Summary

The Child and Development Survey - 2000 Mongolia, is a nationally representative multiple indicator cluster survey (MICS) of households, women, and children. The main objectives of the survey were to assess the implemenation of the National Programme for Action for Child Development and the seven main goals established at the World Summit for Children and to develop a basis for future action.

Infant and Under Five Mortality

- Mortality estimates were obtained using the United Nations QFIVE computer program. For Mongolia, the West model life table was considered to be the most appropriate choice. According to the current survey's indirect estimates, using WHO and international statistical methods, the infant mortality rate was 64 (per 1,000) and the under-five mortality rate 87 (per 1,000) for the period 1994-1998.

Education

- Only 21 per cent of the children between the ages of 36 and 59 months are presently attending an organized learning or early childhood education program.
- Almost 76 per cent of children aged 7-12 years group are attending school. The attendance rate for children in the 8-11 age group increases to 84 per cent. The attendance rate at primary school is about 10 percent higher in urban areas than in rural areas.
- About 95 per cent of children who enter grade 1 reach grade 5. In urban areas, 97 per cent of children eventually reach the fifth grade, whereas in rural areas the figure is 4 percent lower.
- The survey found that, overall, 98 per cent of the population over 15 years old, are literate. The differential between men and women, and urban and rural areas is very small.

- The MICS findings correspond closely with figures from the 2000 population census, which found 97.8 per cent literacy in the total population aged 15 years and above, 98 per cent for men and 97.5 per cent for women.

Water and Sanitation

- According to the survey results, 60 per cent of the Mongolian population is supplied with clean and safe drinking water. However, there are big differences between city water supplies and those in the countryside. Clean drinking water reaches 91 per cent of the population in urban centers but only 34 per cent in rural areas. There are also major variations from region to region.

- Survey data indicate that 74 per cent of the population has access to improved sanitary facilities (flush toilets connected to sewage systems or septic tanks, other flush toilets, improved pit latrines, traditional pit latrines). More specifically, 97 per cent of the urban population uses improved sanitary facilities, compared to only 54 per cent in the countryside.

- The supply and sources of drinking water and type of sanitary facilities used in Mongolia is closely associated with the type of housing and the location.

Child Nutritional Status

- One out of ten surveyed children under the age of 5 were found to be moderately or severely underweight, one in four of the same age group were stunted and one in 20 children were found to be wasting.
- The cases of underweight, stunting and wasting in children under five in rural areas are twice as numerous as those in urban areas.
- There is a clear correlation between malnutrition in young children and mother's education. Children whose mothers had only primary schooling or less, are 3 times as likely to be stunted than those whose mothers had university education.

Breastfeeding

- About 64 per cent of babies under 4 months were breastfed exclusively, lower than the recommended 100 per cent but significantly higher than the average in many regions of the world. Approximately 54 per cent of children aged 6-9 months were breastfed along with complementary feeding, 75 per cent aged 12-15 months and 57 per cent of children aged 20-23 months were also still being breastfed.

Salt Iodization

- Overall, 45 per cent of the surveyed households had adequately iodized salt, but there was found to be a very wide variability from region to region.
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Vitamin A Supplementation

- Within six months prior to the Child and Development Survey - 2000 , about 32 per cent of children aged 6-59 months had been given the high dose vitamin A supplement. An additional 11 per cent had received the supplement more than 6 months ago.
- Nationwide, 13 percent of children had recieved high dose vitamin "A" supplementation within 8 weeks after birth.

Low Birth weight

- The survey found 5 per cent of newborns had low birth weight.

Immunization Coverage

- About 96 per cent of surveyed children in the 12-23 month age group had been vaccinated for all six major antigens within the first 12 months after birth.

- Measles still has the lowest coverage of all the vaccines, at 86 per cent.

Diarrhea

- More than 60 per cent of children with diarrhea were fed breast milk and 56 per cent were given packaged ORS. (N.B. Multiple answers were accepted so percentages do not add up to 100)
- About 98 per cent of the diarrhea cases received one or more recommended forms of treatment.
- The most appropriate treatmemt - increased fluids and continued eating - was reported in only 32 per cent of the cases.

Acute Respiratory Infection

- During the period of the survey, from May to August 2000, about 2 per cent of the children under five were found to have ARI.
- About 78 per cent of these cases taken for treatment to a health provider, in most instances a hospital or health center.
- One out of ten children, aged 6-23 months, have ARI and the numbers decrease as the age of the child increases.

IMCI Initiative

- About 15 per cent of children under five years in the sample were reported to have diarrhea or some other illness in the two weeks prior to the survey.and 44 per cent of these were aged between 6-23 months, indicating that this age group is more vulnerable to sickness.
- 39 per cent of children were given more than usual to drink and 57 per cent were given the same or less.
- 78 per cent of children were fed the same as usual and less than 20 per cent of children under 6 months old were given more than usual to drink, whereas the percentage among older children ranges from 35-50 per cent.

- The number of women with knowledge of when it is appropriate to seek medical care is increasing. One out of 3 mothers or caretakers in the survey were able to properly identify two appropriate symptoms that indicate a sick child should be taken for professional treatment.
- The most common response, given by 58 per cent of mothers and caretakers, was that a fever would be sufficient cause to take a child for professional treatment. Forty seven per cent of mothers said they would take a child for professional treatment if it seemed unwell.

HIV/AIDS

- Three out of four women were able to identify two effective ways of preventing HIV infection.
- One out of 3 women of reproductive age were able to correctly identify 3 misconceptions about AIDS transmission.
- In Mongolia, more than half of the women surveyed (54 per cent) know where they can be tested for AIDS, and 14 per cent have actually been tested. Of those tested, a large majority have collected the results.

Contraception

- Current use of some kind of contraception was reported by 7 per cent of the surveyed women who are married or living with a partner.
- By far the most popular method is IUD, used by 33 per cent of these women.
- About 54 per cent of women used a modern contraceptive method.

Prenatal Care

- About 97 per cent of the women of reproductive age who gave birth in the year prior to the survey received prenatal care from professional medical practitioners and 60 per cent of these had deliveries assisted by a doctor.

Birth Registration

- About 98 per cent of children aged 0-59 months have been registered. Only 85 per cent of children under 6 months of age had been registered.

Living Arrangements of Children, including Orphans

- About 80 per cent of children are living with both biological parents, and less than 2 per cent do not live with a biological parent.
- In the case of nearly17 per cent of children, who live with only one parent, it is much more likely that this parent will be the mother.
- Twelve per cent of children are living with their mother only, even though their father is still alive, and 0.3 per cent of children are living with their father only, even though their mother is still alive.
- The survey found that 0.3 per cent of children under five, are orphans, with both of the parents deceased.

Child Labor

- About 70 per cent of children aged 5-14 are not likely to be working for more than 4 hours per day. Of those who work for 4 or more hours a day, 20 per cent are working at home
- According to the survey findings, about 1.4 per cent of children are engaged in paid work for someone other than a household member.

Summary Indicators

World Summit for Children Indicators		
Under-five mortality rate	Probability of dying before reaching age five	87 per 1000
Infant mortality rate	Probability of dying before reaching age one	64 per 1000
Underweight prevalence	Proportion of under-fives who are too thin for their age	13 percent
Stunting prevalence	Proportion of under-fives who are too short for their age	25 percent
Wasting prevalence	Proportion of under fives who are too thin for their height	5 percent
Use of safe drinking water	Proportion of population who use a safe drinking water source	60 percent
Use of sanitary means of excreta disposal	Proportion of population who use a sanitary means of excreta disposal	74 percent
Children reaching grade five	Proportion of children entering first grade of primary school who eventually reach grade five	95 percent
Net primary school attendance rate	Proportion of children of primary school age attending primary school	76 percent
Literacy rate	Proportion of population aged 15+ years who are able to read a letter or newspaper	98 percent
Antenatal care	Proportion of women aged 15-49 attended at least once during pregnancy by skilled personnel	97 percent
Contraceptive prevalence	Proportion of married women aged 15-49 who are using a contraceptive method	67 percent

Childbirth care	Proportion of births attended by skilled health personnel	97 percent
Birth weight below 2.5 kg.	Proportion of live births that weigh below 2500 grams	5 percent
Iodized salt consumption	Proportion of households consuming adequately iodized salt	45 percent
Children receiving Vitamin A supplementation	Proportion of children aged 6-59 months who have received a Vitamin A supplement in the last 6 months	32 percent
Mothers receiving Vitamin A supplementation	Proportion of mothers who received a Vitamin A supplement before infant was 8 weeks old	13 percent
Exclusive breastfeeding rate	Proportion of infants aged less than 4 months who are exclusively breastfed	64 percent
Timely complementary feeding rate	Proportion of infants aged 6-9 months who are receiving breast milk and complementary food	54 percent
Continued breastfeeding rate	Proportion of children aged 12-15 months and 20-23 months who are breastfeeding	75 percent (12-15) 57 percent (20-23)
DPT immunization coverage	Proportion of children immunized against diphtheria, pertussis and tetanus by age one	99 percent
Measles immunization coverage	Proportion of children immunized against measles by age one	98 percent
Polio immunization coverage	Proportion of children immunized against polio by age one	99 percent
Tuberculosis immunization coverage	Proportion of children immunized against tuberculosis by age one	99 percent
ORT use	Proportion of under-five children who had diarrhea in the last 2 weeks who were	56 percent

	treated with oral rehydration salts or an appropriate household solution	
Home management of diarrhea	Proportion of under-five children who had diarrhea in the last 2 weeks and received increased fluids and continued feeding during the episode	32 percent

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	78 percent
Preschool development	Proportion of children aged 36-59 months who are attending some form of organized early childhood education program	21 percent
Indicators for Monitoring Children's Rights		
Birth registration	Proportion of under-five children whose births are reported registered	98 percent
Children's living arrangements	Proportion of children aged 0-14 years in households not living with a biological parent	20 percent
Orphans in household	Proportion of children aged 0-14 years who are orphans living in households	0.3 percent (both parents) 5.6 percent (one parent)
Child labor	Proportion of children aged 5-14 years who are currently working	1.4 percent
Indicators for Monitoring IMCI		
Home management of illness	Proportion of under-five children reported ill during the last 2 weeks who received increased fluids and continued feeding	30 percent
Care seeking	Proportion of caretakers of under-five	38 percent

knowledge	children who know at least 2 signs for seeking care immediately	
Indicators for Monitoring HIV/AIDS		
Knowledge of preventing HIV/AIDS	Proportion of women who correctly state the 3 main ways of avoiding HIV infection	38 percent
Knowledge of misconceptions of HIV/AIDS	Proportion of women who correctly identify 3 misconceptions about HIV/AIDS	36 percent
Knowledge of mother to child transmission	Proportion of women who correctly identify means of transmission of HIV from mother to child	27 percent
Attitude to people with HIV//AIDS	Proportion of women expressing a discriminatory attitude towards people with HIV/AIDS	57 percent
Women who know where to be tested for HIV	Proportion of women who know where to get a HIV test	54 percent
Women who have been tested for HIV	Proportion of women who have been tested for HIV	14 percent

I. INTRODUCTION

Background of the survey

At the World Summit for Children, held in New York in late 1990, the Government of Mongolia committed itself to the Summit Declaration and Plan of Action for Children. In addition to the establishment of goals and objectives for the decade of the 1990s, the Plan of Action also called for the establishment of mechanisms for monitoring progress toward these goals. One of the concrete steps taken by the Mongolian Government was a Child Development Survey /Multiple Indicator Cluster Survey (MICS)/, carried out in 1996 to measure progress at mid-decade.

To facilitate a broader and more thorough assessment at the end of the decade, UNICEF, in collaboration with WHO, UNESCO and others developed a core set of 75 indicators on specific aspects of the situation of children. The 2000 Mongolia MICS survey, formally designated the "Child and Development Survey -2000" Mongolia, was carried out to provide end-decade information on many of these indicators and to expand and improve the stock of relevant and reliable data on children's and women's issues. More specifically, the Child and Development Survey - 2000 (MICS) has as its main objectives:

- To monitor and evaluate the implementation of Mongolia's National Program of Action for the Development of Children in the 1990s (NPA).

- To furnish data for monitoring progress toward goals established at the World Summit for Children, and as a basis for further action in the first decade of the 21st century.

- To contribute to the improvement of data and monitoring systems in Mongolia, to enhance technical expertise in the design and implementation of these systems, and to strengthen the capacity for analysis and use of their findings.

Planning and preparation for the Child and Development Survey - 2000 (MICS) began in the last quarter of 1999. One of the first concrete steps was a workshop organized by UNICEF and held outside Ulaanbaatar in October 1999, where issues related to sampling, questionnaire content and design, logistics and other key survey issues were considered. Participants included UNICEF staff from country, area and regional offices, and representatives of key government ministries and the National Statistical Office (NSO). Subsequently a Steering Committee and Working group, with members from NSO, MOSTEC, MOH, NCC, MCRC and the Police Department, was set up to provide coordination and overall guidance for the survey design, questionnaire development and field implementation. A Working Group, consisting of representatives from relevant sectional ministries and agencies, was also established to provide technical backup and support. The National Statistical Office was given the responsibility for the survey implementation. UNICEF Mongolia provided funding and additional technical assistance.

The project also benefited from 3 regional MICS workshops, organized by UNICEF as part of the global MICS effort associated with the end-decade assessment of World Summit for Children goals. International experts in sampling and survey design, questionnaire construction, interview techniques, data processing and management, analysis and report preparation were used as resource persons. Participants were government and UNICEF staff expected to play key roles in MICS exercises to be carried out in their respective countries. The workshops were scheduled to correspond as closely as possible to the phases of country-level preparation and implementation.

A 10-day training program for interviewers and other field personnel was carried out in early May 2000. The program included training on the survey objectives and the guidance on the interviewing process from UNICEF. Trainers were those who participated in the regional MICS-2 workshop. At the local training there were around 100 participants, including those who would work as interviewers, editors and supervisors. During the training the participators gained knowledge of the survey objectives and the questionnaire, and the manual for the filling out the questionnaire. All participants studied how to interview, how to fill out the questionnaire and how to make contact with the interviewees. Participants practiced having interviews and learnt how to measure the weight and height of child under 5 years old, and the iodization of table salt used by the surveyed households.

Background of Mongolia

Mongolia is situated in the center of Asia, between the Russian Federation to the north and the People's Republic of China to the east, south and west. Mongolia has an extreme continental dry climate and four seasons. The winter is extremely cold, with with temperatures falling to minus 50-55 degrees centrigrade and in summer, especially June, increasing to +30 degrees centigrade. Mongolia is a landlocked country of 1565 million square kilometres and is located 1580 metres above sea level with a variety of terrain that includes mountains, forests, steppe and gobi desert zones. According to the findings of the Population and Housing Census for the year 2000, the population of Mongolia is 2.4 million with a population density of 1.5 person per square kilometre. About 32 percent of the total population live in the capital city of Ulaanbaatar. In the last few years there has been increacing urbanizaion and 51 per cent of the population are now living in urban areas, with 49 per cent in rural areas.

The average life expectancy of Mongolians is 64 years. Mongolia is still included among those countries where there is a high fertility rate and it is a youthful country with a higher percentage of young people than any other sector of the population. About 44.7 percent of the population are children and adolescents under 18 and 12.1 percent are *((junior*. Almost 35.2 per cent of women are less than 15 years old and 54.1 per cent are under the age of fertility.

Around 96 per cent of the population are Mongolian. There are Kazakhs and a Turkish- speaking population who live in the western part of the country. There are also a small number of ethnic Chinese and Russian, most of whom live in Ulaanbaatar. The official language is Mongolian, which has its own unique alphabet, but the Cyrillic alphabet is used in official documents, books, newspapers and magazines.

Buddhism is the predominant religion. In the last few years, other religions have been coming to Mongolia and the Kazakh populations who live in the west of the country practice Islam.

Mongolia is currently in transition from a centrally planned economy to a market economy. According to the statistical bulletin of the World Bank, in which Mongolia is still included as a developing country, the GDP per person was US$ 380 in 1998. Mongolia's GDP decreased by 3.9 and its industrial output by 30.9 per cent in 1999, at constant prices, from the equivalent in 1989. During this last decade the average income per person decreased by 16 percent due to the increasing population of Mongolia. Mongolia has implemented a program of modern economic and structural changes with the support of international financial and development agencies.

Long-established social and economic systems and patterns have broken down and social protection systems have been completely transformed during this transition period, giving rise to many new problems that significantly affect the situation of women and children. Poverty has increased. According to the 1998 Living Standards Measurement Survey[1], the incidence of poverty was 35.6 per cent in Mongolia. There are number of alarming adverse phenomenon which are emerging. For example, a number of school aged children from poor households are leaving schools to do hard work to earn money from a very young age, in order to struggle to survive, including a number of young girls who are engaging in prostitution. This is a violation of children's rights.

Due to the economic difficulties, the share of government budget devoted to the social sector has been diminishing significantly and investment in health and education sectors has been decreasing over time. As a result these sectors have been facing enormous difficulties and the prevalence and the quality of services have been deteriorating. In the past ten years, there has been almost no investment in the building of schools and hospitals. For example, almost no kindergartens were built and only one or two schools were newly built. In rural areas, due to the small number of schools and the relatively few places available, children aged 7 are not able to attend school and children who have graduated from 8th grade, are not able to continue their education.

One of the most urgent issues of today's society is the fact that the number of children who live on the street has been increasing in Mongolia. In most cases, these children are

living in the ducts of heating systems or in tunnels underneath buildings and are living by stealing coal, polishing shoes, and portering products or begging and cadging. The majority of these children end up living on the street because of poverty in the family or because of oppression and cruelty from a stepfather or stepmother.

While the Government's commitment to children remains firm, it faces many obstacles and constraints as it attempts to cope with this wide array of social, economic and environmental problems despite seriously limited budgetary, technical and other resources. In certain areas, such as those related to exploitative child labor, street children, HIV/AIDS, disabled and homeless children, a serious challenge is the lack of reliable data for assessing and monitoring the magnitude, distribution and severity of the problem as a basis for formulating corrective policies and programs. The MICS survey provides limited information on the current situation in some of these areas, such as knowledge and attitudes about HIV/AIDS, child labor and the living situation of orphans. Though much remains to be done, the findings of this survey may provide a baseline for monitoring trends over time and identifying certain aspects requiring more specific follow-up investigation.

The government of Mongolia has committed itself to a Declaration and Plan of Action for Children. Subsequently, a National Program of Action for Children was developed and approved in 1993, and the National Program for Advancement of Women was formulated and approved by the Parliament in 1995. In order to improve the coordination of the activities for children and to implement the National Program of Action, the government of Mongolia, in 1996, established a Working Committee that represent all the Ministries and government and non-governmental organisations working in child related matters.

To promote the implementation of the NPA and raise the awareness of the government and the public, the President of Mongolia took the initiative to declare the year of 1995 as the "Year of the Child". The First National Assembly on "Child Development and Protection" was convened, by the decision of Parliament, in 1995. This was an important

[1] Living Standards Measurement Survey 1998 (NSO/UNDP) Ulaanbaatar 1999

event to define government policy and create a favorable environment for children's survival, growth and development.

The Law on the Protection of Child Rights was adopted by the Mongolian Parliament in May 1996. The present Law defines the legal norms for the protection of the rights of the child in line with the new socio-economic system in Mongolia.

II. SURVEY METHODOLOGY

The questionnaire design, manual and methodologies of the first Child and Development Survey conducted in 1996 were improved and used for the development of related materials for the current survey. The methodology used in this survey was developed using the manual for conducting multi indicator cluster surveys and the methodological guidelines developed by South East Asian Regional Organizations of UNICEF. However the methodology also reflects the unique features of the country. The survey was conducted in close collaboration with the regional organization of UNICEF, which provided support in determining the sample size, selecting possible methods of sampling, developing the general design of the questionnaire and provided the survey team with common data processing methods, software and guidelines. All classifications, concepts and definitions of indicators and methods of estimation used in
this survey are based on internationally accepted standard indicators and methods.

2.1. Survey population and survey reference period

Survey population: According to the survey objectives, the current survey subjects were women aged 15-49, children under 5 or of pre-school and general education school age, and disabled children under 18 years in the households of the interviewees.

Survey coverage: The survey covered all Mongolian households/population and foreigners residing in Mongolia. However, it excluded Mongolian citizens residing outside the country or who had been residing, for more than 6 months, in institutions such as military camps, orphanages, care centers for the aged, hospitals, prisons and other correctional institutions.

Reference period: This survey is not an annual survey. It covers only the year proceeding the survey - the one-year period from June 1999 to June 2000. Some indicators applied statistics

only from the end of 1999 and the maternal births were surveyed only from the last time birth was given.

2.2. Sampling

2.2.1. ***Sample design:*** The sample for the survey was designed to provide national estimates for the main indicators covered by the survey, with a margin of error of ±5 percentage points at a 95 per cent level of confidence.

As Mongolia is a large country encompassing a wide variety of social, economic and geographic conditions, the survey was also designed to produce separate estimates for 6 regions as well as for urban and rural areas. These sub-national estimates are of course subject to somewhat wider margins of error than applies at national level.

The sample size necessary to achieve the desired level of precision was calculated according to the formula described in the MICS manual.[2] Since the MICS survey was intended to provide information on a variety of indicators and several specific target groups, the required sample size is based on the number of households needed to yield valid results with the desired level of precision for the "rarest" indicator-target group combination. This ensures that findings on the less "rare" combinations will also be valid at the chosen level of precision or better. For the Mongolian survey the key indicator for calculating the required sample size was the measles immunization rate in the target group of children aged 12-23 months. Using the formula from the MICS manual it was determined that a sample of 6000 households would be needed to obtain data on all survey indicators with a margin of error not greater than +/-5 percentage points at national level with a 95 per cent confidence level.

The MICS planners estimated that, on average, each interview team could cover about 20 households per day. Thus it was determined that in order to reach the required total of 6000 households, 300 clusters averaging 20 households each would be needed. Sample

[2] The technical manual, *Monitoring Progress toward the Goals of the World Summit for Children*, and other documentation related to the Multiple Indicator Cluster Survey can be found at www.childinfo.org. A detailed discussion of MICS sampling procedures, including the formula for determining the required sample size, is presented in Appendix 7 of the manual.

selection was done in two stages. First, using the sampling frame developed for the Population and Housing Census-2000[3], enumeration areas (EA) were listed according to urban, rural and regional categories and within these categories by aimag, soum and bag. From this listing 300 EA's were selected on the principle of probability proportional to size (pps)[4]. In stage 2, selected EAs were divided into segments of approximately 20 households each; one of which was selected randomly as a survey cluster. During the fieldwork phase of the survey, every household in each of the selected clusters was interviewed.

2.2.2 Sampling stratification: *In the survey, sampling used 2 different stratification's:*

1. By region: Most tabulations in this report are disagregated by 6 regions: Western, Northern, Eastern, Southern, Central 1 and Central 2. This is an official government classification based on petrol prices. Specifically, this regional delineation is as follows:

1. Western (Uvs, Zavkhan, Gobi-Altai, Bayan-Ulgii, and Khovd aimags)
2. Northern (Arhangai, Hovsgol, Bayankhongor, Uverhkangai and Bulgan aimags)
3. Eastern (Dornod, Hentii and Suhkbaatar aimags)
4. Southern (Omnogobi, Dundgovi, Dornogovi and Govisumber aimags)
5. "Central-1" (Tuv, Selenge, Darhkan-Uul and Orhkon aimags)
6. "Central-2" (Ulaanbaatar- capital city)

2. By urban and rural: The attached tabulations in this report are classified into urban and rural.

- **"Urban"** population and households are defined as those located in the capital city of Ulaanbaatar and any aimag centers.
- **"Rural "** - The rest of the population and all other households are classified as rural.

[3] Population and Housing Census – 2000 (National Statistical Office) Ulaanbaatar, Mongolia 2000
[4] See Chapter 4 and Appendix 7 of the MICS manual for a detailed explanation of *pps* and its application in MICS sampling.

2.2.3 Sample unit: The sample unit is a household. A household is a single person or group of people residing in one dwelling, accumulating their income together, having a common food and clothing source.

2.3. Questionnaires

The questionnaire used in the Mongolian "Child and Development Survey-2000" closely followed the content and format of the model MICS questionnaire recommended by UNICEF[5], with some revisions and adjustments to suit specific local circumstances. The MICS model actually consists of 3 types of questionnaires; each designed to collect information on specific topics and distinct target groups.

2.3.1. The household questionnaire collected information such as the construction of the housing, the sex, age, literacy, and marital and orphaned status of the household members. Also included in this questionnaire were questions on education, child labor, supply of water and sanitation, and the use of iodized salt.

2.3.2. The questionnaire for women aged 15-49 included modules on:

2.3.2.1. Information about women
2.3.2.2. Child mortality
2.3.2.3. Maternal and infant health
2.3.2.4. Contraceptive use
2.3.2.5. HIV/AIDS.
2.3.2.6. Vitamin "D" deficiency

2.3.3. The questionnaire on children under age 5 covered:

2.3.3.1. Birth registration
2.3.3.2. Early childhood learning
2.3.3.3. Vitamin A supplementation
2.3.3.4. Breastfeeding
2.3.3.5. Care for childhood illness

2.3.3.6. Hepatitis

2.3.3.7. Child immunization

2.3.3.8. Anthropometry (measurement of height and weight)

Modifications of the model questionnaire were carried out with the guidance of and coordination by the Steering Committee. The original English version was translated into Mongolian, and circulated among relevant government and non-governmental agencies for comments and suggestions, which were incorporated in subsequent drafts. The MICS Working Group ensured that the substantial inputs from the sectional ministries and other organizations were appropriately worded and consistent with the overall structure and format of the questionnaire. Before finalization, the questionnaires were pre-tested in two separate locations. This field-testing helped to identify and correct problems with physical and logical sequencing and to detect specific questions where changes in wording were needed to make the meaning clear to respondents. In addition, it yielded an estimated average duration of each household interview (about 90 minutes) and provided a basis for planning the number of interviewers required, the approximate workload of each and the probable duration of the entire survey exercise. Following the correction of problems identified by the pre-testing exercise, the questionnaires, along with the revised instruction manual for interviewers and supervisors, were given a final review and approval by the Steering Committee and the NSO.

2.4. Fieldwork and Data processing

2.4.1 Data collection: The official agreement on the process of conducting the Child and Development Survey - 2000 was officially signed in May 2000 between National Statistics Office of Mongolia and the Resident Representative of UNICEF.

The Steering Committee and Working Group selected the interviewers for the survey with the guidance of UNICEF. All the selected interviewers and editors participated at the MICS training, after which eight data collection teams were established, each team consisting of a team leader, 2 editors, 4 interviewers and 2 drivers. As agreed by the Steering Committee and under the direct supervision of the Working Group, supervisors provided team members

[5] The model questionnaire is included in the MICS manual at the end of Chapter 3.

with daily work and editors received and checked materials and information daily. Any errors, lack of clarity or omissions in the materials were immediately detected and edited in the field.

One of the supervisors of each team was a staff member from the local statistical office. By agreement with the local authority, these staff was allowed to take one month's unpaid work leave in order to serve on the MICS team. The participation of these local staff was very positive and made a significant contribution towards facilitating fieldwork, helping to reduce non-sampling error and improving data quality.

It should be noted that the Parliamentary Election Compain was going on at the same time as the survey and may have had an adverse effect on the process of conducting the survey.

Household interviews began at the end of May and concluded in early August 2000. Four monitoring units composed of Steering Committee and Working Group members were set up to provide overall supervision of field work progress and interviewers' and supervisors' performance in 10 aimags and Ulaanbaatar, reporting on shortcomings and successes and taking timely action as necessary to ensure continued smooth implementation. The data collection procedures were divided into 3 stages. After each team completed its work in one site and submitted the data to the working group in Ulaanbaatar, which was responsible for receiving and entering data, it was given permission to move to the next site. Each team worked in two aimags and the third stage of fieldwork was in Ulaanbaatar.

***Data Processing*:** ISSA computer software was used for data entry preparation and data collected was keyed into 5 microcomputers. Computer operators for data entry were hired and trained for 4 days. The data processing team had the responsibility of checking the completeness of all received raw data, pre-entry data quality control and preparation for entry, data entry process, testing and running controlling software, producing data error report, re-entry data corrected, converting software provided by the UNICEF Resident Representative's Office in Ulaanbaatar and processing data according to the instructions. In order to ensure the quality of received data, a double entry method, comparing results was used for each questionnaire. The Team Leader and the computer programmer attended a Data Processing training course held in Bangkok in April 2000, during which the trainees

received the necessary knowledge and skills to apply in the case of this particular survey. These skills included questionnaire computer design, data entry, quality control, correction and process, as well as the utilization of the commonly used software package, SPSS, for data integration and analysis for this survey. Some additional software work was carried out and applied to ensure consistency of the software to be used and country-specific questionnaires were designed for the Child and Development Survey-2000.

Data pre-entry preparation, quality control and data entry was carried out in July-August 2000 at a highly professional level and in a shorter time than expected. At this stage of the survey, the working group stayed in close contact with the survey regional office and some questions raised concerning software and mathematical methodology were solved very efficiently.

Survey data were processed using software based on the given designed questionnaire. The data processing was carried out in two stages. The goal of the first stage was to obtain a complete file of raw data according to the processing technology order and to ensure the quality of the data. This included following:

1.1 Data entry
1.2 Structure checks
1.3 Verification
1.4 Secondary editing
1.5 Production of verified and confirmed data set

The second stage aimed to produce cross tables enabling further analysis to be carried out. This included the following:

2.1 Entry of a variety of options and simulations
2.2 Production of output tables

After the completion of the data processing of the survey materials, statisticians analyzed particular indicators, checked consistency with other data sources, reviewed results, edited errors, and reviewed concepts and definitions of unclear indicators. Finally based on these, they developed a working document, which would be useful for the next survey, and

wrote the survey report. The other data sources used for analysis and consistency checks were other official statistics compiled by the National Statistical Office, the Statistical Year Book (NSO)[6], and the Mongolian government's Population and Housing Census - 2000.

Within the context of the Child and Development Survey-2000, another survey concerning "Children Surviving in Difficult Circumstances" was conducted, by attaching a further questionnaire (CDS-2) to the main survey, and collecting the data at the same time. This required each local government authority to provide information through questionnaire CDS-2, which was completed in August-September, 2000. Data from this second questionnaire was collected and processed, using similar pre-data preparation, quality control and software processing, and in addition sets of handbooks and instruction were designed for this specific survey and approved by the working group. Children surviving in difficult circumstances were desegregated by aimag and a database was established.

All related original raw inputs were delivered to the archive after the data process was completed. A working report on the survey organization will be submitted separately.

[6] National Statistical Year Book 1999. National Statistical Office of Mongolia. Ulaanbaatar, Mongolia

III. SAMPLE CHARACTERISTICS AND QUALITY OF INFORMATION

3.1. Response Rate

The selected 6000 households for the "Child and Development Survey -2000" completed the interview (Table 1). About 8606 women aged between 15-49, identified as the select group, were eligible for the women's questionnaire. Out of these, 8257 were interviewed successfully, with a response rate of 95.9 per cent. In addition, 6199 children under the age of 5 were found to be living in the selected households. Children's questionnaires were completed for 6184 of these, yielding a response rate of 99.8 per cent.

3.2. Missing data and age distribution:

3.2.1. Quality of information

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. 8.3 percent of household members (1764 persons) have missing information on their level of education but 0.1 percent (12 persons) have missing data on the year of education.

Among female respondents, 0.1 percent did not report a complete birth date (i.e., month and year). 0f women, who gave birth in the 12 months prior to the survey, 0.1 per cent did not report the data of AIDS testing.

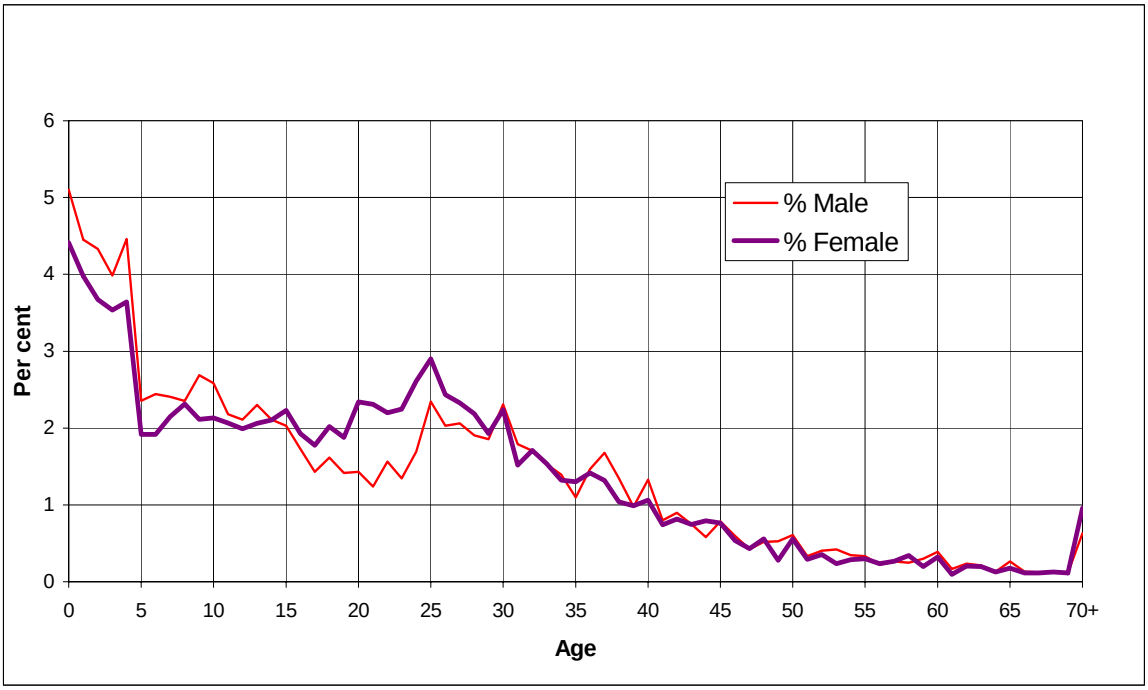
A small number of children under 5 years old and between 6 and 8 years old, gave incomplete answers for the question on children with diarrhea in the last two weeks.

The data on weight and height is missing in the case of approximately four percent of surveyed children under 5 years old, which may be the result of the child not being present, refusal, or other reasons. Date on weight and height is the most likely information to be missing, but, by international standards, the above percentage is relatively low in comparison to other surveys in which anthropometric measurements have been taken (Sommerfelt and Boerma, 1994).

3.2.2. Age distribution of survey population

Gender and age distribution among the survey population (the sample households) is more or less equal to the gender and age distribution in the total population, except in the under 5 age group and the 16-25 age group where there are slightly more males than in the general population of these age groups.

Figure 1. Single year age distribution of the household population by sex. Mongolia. 2000.



3.2.3. Demographic characteristics of the survey household

Information on the demographic 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.

By region: The number of households involved in a sampling is shown in Table 4 by region; 49 per cent (2925) of the respondent households are urban, 51 per cent (3075) rural.

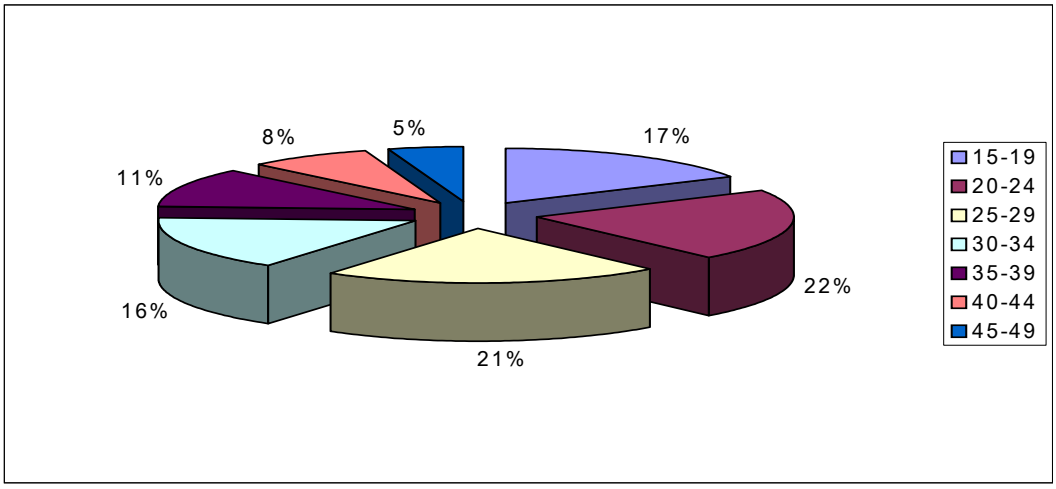
The Central-2 region (Ulaanbaatar) accounts for the largest share of sample households among the 6 regions, while the South, which is comprised of the sparsely populated aimags of Omnogobi, Dundgovi and Dornogovi, contributed only 7 per cent.

By family size: In terms of family size, most of the households (48 per cent) have 4-5 members, and 22 per cent have 6-7 members, only 0.1 per cent have a single member and about 10 per cent have 8 or more members. The survey results show that nearly 79 per cent of households have at least one child under age 5, and nearly all (99 per cent) have one or more women aged 15-49.

By women's age composition: About 22 per cent of the surveyed women were aged between 20-24 and 21 per cent between 25-29, and these constitute the largest proportion of the sample (Table 5).

The proportion of older women in the sample is much smaller than in any of the other age groups, women between 45-49 representing only 5 per cent of the sample.

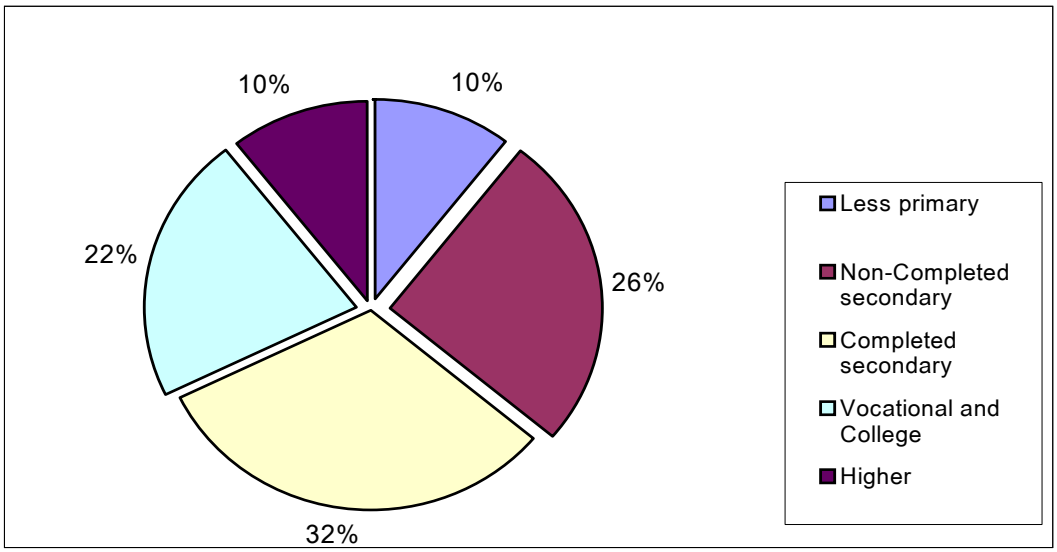
Figure 2. Age distribution: Women aged 15-49, Mongolia. 2000



By women's marital status and education level: About 60 per cent of the sampled women were married or live with partners, and 76 per cent had given birth at least once.

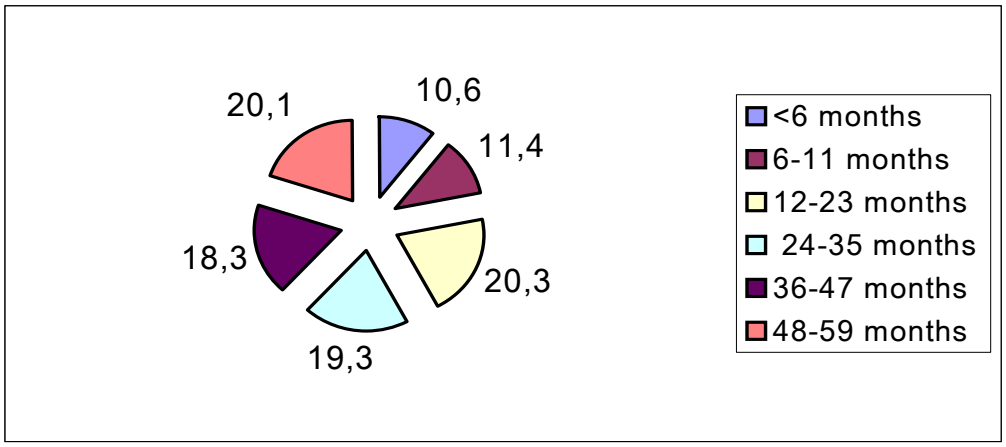
About 10 per cent of women in the sample have completed primary education, 25 per cent have completed or have partially completed (incomplete) secondary education, and over 50 per cent had graduated from specialist college or university. More than 80 per cent of women with a university education live in urban areas.

Figure 3.Women aged 15-49 years by education level, Mongolia.2000



Children under 5: Table 6 shows the distribution of children under the age of 5 in terms of gender, place of residence, age group and mother's education. Of the children included in the study, about 11 per cent were less than 6 months or between 6-11 months old, and between 18 and 20 per cent of children are 2,3,4 and 5 years old respectively.

Figure 4. Age distribution, children under five ages. Mongolia.2000



Slightly over half (51 per cent) are boys and 41 per cent are girls. Less than 1 per cent of the mothers with children under 5 years have no formal education, and a mere 5 per cent have completed only primary school, 27 per cent have not completed secondary education, 33 per cent have completed secondary education, and over 30 per cent have graduated from specialized college or university. Between 53 and87 per cent of mothers with only primary, incomplete and completed secondary education live in rural areas, but 80 per cent women with university education live in urban areas

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IV. THE RESULTS OF THE SURVEY

A. Infant and U5 Mortality

Goals. ***Global: Reduction of IMR and U5MR by one third, or to a level of 70 per 1 000 live births. National: Reduction of IMR to 49 and U5 MR to 61.***

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. These rates are often expressed in terms of the number of deaths per thousand live births. In MICS, infant and under-five mortality have been calculated using an indirect estimation technique (the Brass method). The data used in the estimation are: the mean number of children born for each five-year age group of women aged 15-49 and the proportion of these children who are dead, also for five-year age groups of women. The technique converts these data into probabilities of dying by taking account of both the mortality risks to which children are exposed and the length of their exposure to the risk of dying.

The data used for mortality estimation are shown in the Table 7. The mean number of children born rises from .128 for women of 15-19 years old to 5.325 for women aged 45-49, as would be expected. The steady increase in the proportion of children dead, from .022 among 15-19 year old mothers to .130 among mothers in the 40-44 age group, is also plausible, though it is not immediately clear why the proportion of children dead among women aged 45-49 should be smaller than the proportion among the younger mothers in the 40-44 age group. The highest rate of fertility is among women aged between 25-34.

Mortality estimates were obtained using the United Nations QFIVE computer program. For Mongolia, the West model life table was considered to be the most appropriate choice. By indirect estimates the infant mortality rate was 64 per 1,000 and the under-five mortality rate 87 per 1,000 according to MICS, for the period 1994-1998. According to MICS, the infant and under-five mortality rate increased in both indicators between 1985

and1988, and there was a sharp decline from 1988 to 1991 (estimates for 1985 and 1988 are based on reports from women aged 45-49 and 40-44, respectively). There was a leveling off between 1994 and 1996 and after 1996 the mortality rate appears to decline sharply once again. Compared to other sources, the MICS infant and under 5 mortality estimates are somewhat higher than official statistics based on administrative reports, but remarkably similar to the findings of the 1998 Reproductive Health Survey data.

Infant and under five mortality has been declining as a result of the improved legal environment for the protection of the rights of children and mothers, and as a result of measures undertaken by government and government agencies, and by international organizations and by other countries. However, the level remains high in comparison to the level in other countries. According to the results of a survey "Causes of Under five mortality and the Factors which contribute to it" conducted in 2000, by the Ministry of Health and Social Welfare with the support UNICEF, acute respiratory infection, diarrhea diseases, early infant illnesses and brain and neurological disorders were found to be the most common causes of mortality in the early years of live. About 95 percent of infants who died because of navel infection in 1999 (30 infants), died in care center's in Ulaanbaatar, in Maternal and Child Research Center and other maternity homes. This indicates how important it is to pay attention to the issue of the improvement of medical assistance and services for mothers and children. Of all the children covered by the survey who died at home, about 30 percent died because of poor standard of parental care, 27 percent died because the household was a great distance from medical assistance and 4 percent died because of inappropriate treatment by doctors. Of the children covered by this survey who died at home, 22 percent died before receiving medical assistance.

B.. Education

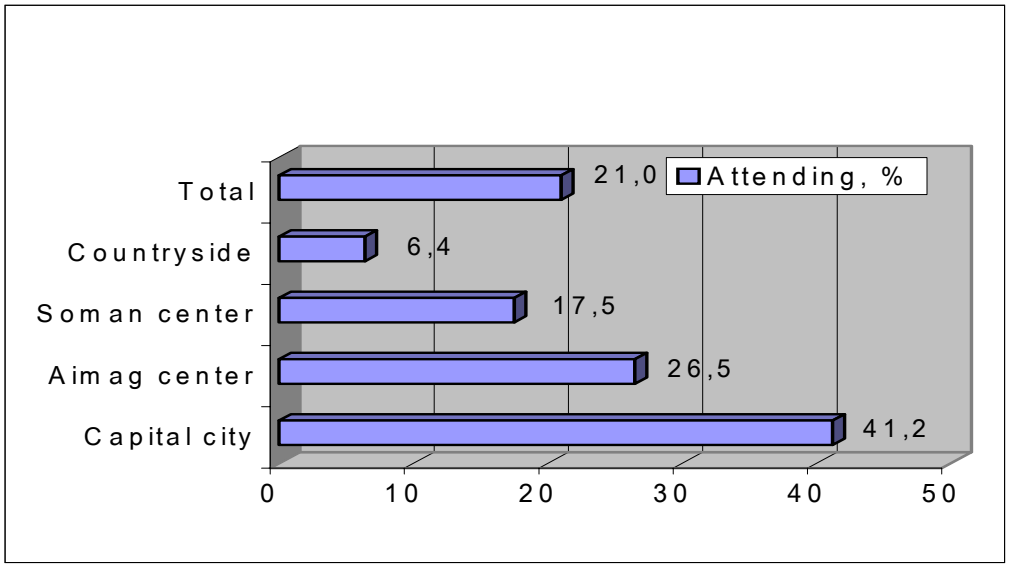
Goals. W:Universal access to basic education. Reduction of adult illiteracy rate 50 % of 1990 levels.N:98 % of population aged between 8-15, will access completed

Universal access to basic education and the completion of primary school education by all the world's children is one of the most important goals of the World Summit for children. Education is a fundamental condition for democracy, human rights, environmental protection, gender equity and the protection of children from hard and harmful labor.

B..1. Early Childhood Education

Findings from the current MICS survey show that only 21 per cent of children between the ages of 36 and 59 months (or 3-5 years) are presently attending an organized learning or early childhood education program (Table 9). There is almost no differentiation by gender, but there are wide gaps between urban and rural children and among different regions. Thirty-five per cent of urban children are participating in some form of education program, compared with only 10 per cent in the countryside. In Central-2 region (Ulaanbaatar) 41 per cent of this age group are participating in pre-school education programs, while in the North the participation rate is only 7 per cent. Analysis by household location shows a similar pattern. Whereas 41 per cent of children in the capital city are attending some kind of pre-school education program, this percentage declines steadily in smaller settlements; 26 per cent in aimag centers, about 18 per cent in soum centers and a mere 6 per cent in other rural areas. Clearly, children living in the larger cities and towns have a great advantage over those who live in the countryside.

Figure 5. Percentage of children aged 36-59 months who are attending at Early childhood program. Mongolia. 2000



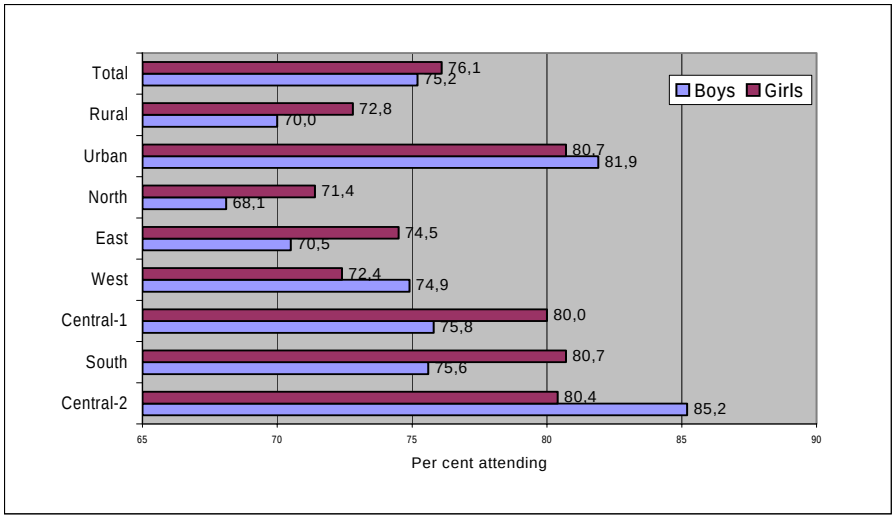
A strong relationship between pre-school attendance and the mother's education is evident. Children whose mothers have a university education are much more likely to be enrolled in a pre-school education program than those whose mothers have only primary schooling or less. Every increase in the mother's educational level is associated with an increase in the proportion of their children attending some kind of organized pre-school program.

B..2. Basic Education.

In Mongolia the official primary school age is from 8-11 years. However, to allow international comparability, data from the MICS survey were collected for children aged 7-12 years (Table 10). As the table shows, almost 76 per cent of children in this age group are attending school. If desegregated for children in the 8-11 age group, the attendance rate increases to 84 per cent. (The MICS was conducted at the end of the academic year 1999-2000, in May/June. The children who were in the 8-11 age group were then in the 9-12 age group, for which the attendance rate at primary school was 92 per cent). The survey shows, however, that a significant number (26 per cent) of children are attending school at age 7. At

the official starting school age of 8, only 63 per cent of children are in school, and the maximum attendance rate is 95 per cent at the age of 10. This seems to indicate that many parents prefer to start their children's schooling at a relatively late age.

Picture 6. Percentage of children of primary school age attending primary school, Mongolia.2000



The attendance rate at primary school is about 10 per cent higher in urban areas than in rural areas. There is also a wide differentiation between regions, varying from 70 per cent in the northern region to 83 per cent in Ulaanbaatar. Overall, girls' attendance is slightly higher than that for boys, but this pattern is not uniform throughout the country. In urban areas and in the Western and Central-2 regions, enrolment of boys is higher than enrolment among girls.

The data show a drop in school attendance after the age of 10, especially for boys. The decline in attendance for male children is 5.0 per cent between the ages 10 to 12, while the attendance rate of girls only drops by 2.5. Per cent, or only half as much.

Figure 7. Percentage of children entering first grade of primary school whom eventually reach grade5. Mongolia, 2000

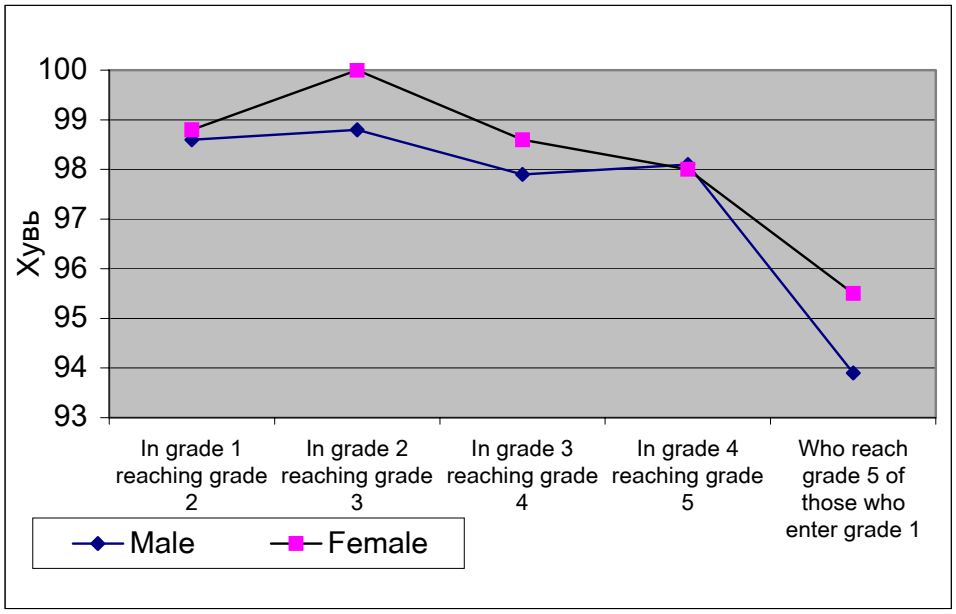


Table 11, shows the survey findings on the proportion of children who enter the first grade of primary school and eventually reach grade 5. This information was obtained by the interviewer asking whether each child in the appropriate age group was attending school that year, and if so in what level and grade. A second set of questions was asked about the child's attendance and grade the previous year. This information allowed the construction of a flow diagram showing the progress of children from one grade to the next and made possible a calculation of the survival rate at grade 5.

The overall figure from the Child and Development survey -2000, is about 95 per cent, and there is relatively little variation by sex or urban-rural residence. In urban areas, for example, 97 per cent of children eventually reach the fifth grade, whereas the rural percentage is less than 4 per cent lower. Girls have a slightly higher survival rate than boys, but the difference is probably not significant.

There is one major exception to this fairly uniform picture, however, in the Eastern region, where just under 70 per cent of children ultimately reach grade 5, as compared with

more than 90 per cent in all the other regions. The survey data show that at every step from grade 1 to grade 5 the transition rates in the Eastern are lower than in any other region. The difference is particularly marked at the earliest stage, where it appears that 15 per cent of the children who enroll in the first grade do not reach grade 2. With further attrition in succeeding years, the end result is that about 3 out of every 10 children who enroll in primary school do not complete four full years of education, the amount generally considered to be the necessary minimum to achieve a sustainable level of literacy.

According to the Population and Housing Census - 2000[7] statistics, the attendance rate at primary school at age 7 is 29.4 per cent, 84.8 per cent at age 8 and 93.3 per cent at the age of 9. Between the ages of 10-19, 69.4 per cent of the age group are attending school.

B..3. Literacy

The literacy rate is very high in Mongolia. The survey found that, overall, 98 per cent of the population above 15 years of age are literate. The difference between men and women is very small, and there is only about 1 per cent difference between urban and rural areas. The only significant differences to emerge were between the population under age 55 and people aged 55 and over, especially those aged 65 and above (Table 12).

The current survey findings correspond closely with those of the Population and Housing Census -2000[8], which found 97.8 per cent literacy among the total population aged 15 years and over, 98 per cent for men and 97.5 per cent for women.

In 1995 the Mongolian Government approved a national program of Pre-school education which aimed to maintain the level of progress and development that had aready been achieved in the field and to further develop pre-school education during the period of transition. The Government's policies and strategies for the future are reflected in this document.

[7] Population and Housing Census – 2000 (National Statistical Office) Ulaanbaatar, Mongolia 2000
[8] Op cit

According to the results of the Mongolian National Report on Education for All Assessment 2000,[9] conducted by MOSTEC with the support of UNDP,UNICEF, UNFPA, and the World Bank, about 30.6 per cent of pre school age (3-7 ages) children (256924) were, at the time of the survey, attending a pre-school or early childhood education program. Since 1990, the population aged between 3-7 years old declined by 4.3 per cent by 1997 and by 14.6 per cent by 1999. This decline clearly influences the attendance rate in pre-school education programs. About 51.3 per cent of children in this age group in Ulaanbaatar, 56.8 per cent in other urban areas and 84.1 per cent in rural areas are not attending an early childhood education program (By 2000, only 4.6 per cent of 7 year olds (or 12,059) were attending primary school). From 1990 to 2000, the number of kindergartens fell by 28.4 per cent, now totalling 650, and the attendance rate fell by 23.9 per cent.

Children who live either in herding families or poor households and disabled children have limited or no chance to attend an early childhood education program. Almost 99 per cent of rural administrative units do not have any early childhood education programs.

According to the survey by MOSTEC, from the beginning of the transition period, the school dropout rate has increased considerably and this phenomenon is more prevalent in rural areas. One of the main causes of children dropping out of school is the structural changes that have taken place in the socio-economic system and the subsequent lowering of the overall living standard of the population. Of children aged 8-15, about 19.6 per cent in 1992, 17.9 per cent in 1994, 14.1 per cent in 1996, and 12.8 per cent in 1998, were not enrolled in school. The survey highlighted several main reasons for dropping out of school. These were:

1. *Structure of school:* The structure of school has changed several times since 1990. For example, initially the school system had six years of primary education, 2 years of incomplete secondary and a further 2 years for complete secondary

[9] Mongolian Natinal Report on Education for All Assessment 2000 (MOSTEC, UNDP,UNESCO, UNICEF, WORLD BANK) January 2000

education (6+2+2). Then the primary education was reduced to four years. Now the school system has four years of primary education, four years of incomplete secondary and two years of complete secondary (4+4+2). These attempts to change the educational structure have had a negative impact on the normal activities of schools and the quality of training

2. *2. Privatization:* One of the negative consequences of the privatization that has taken place during transition has been utilization of child labor. Due to privatization of livestock, the number of livestock has been growing and has had a positive affect on the living standards of households and, consequently, on the economic growth of the country. However, the number of cases of drop out of children from school of livestock breeder's households in order to help to household is increased in rural areas.

3. Boarding school: One of the important facilities for children of Mongolian nomadic cattle breeders to attend school was maintaining boarding school. Since 1990, due to the financial difficulties and economic environment, the maintenance of boarding school started to deteriorate and consequently, children of some cattle breeders were not able to go to boarding school and the number of boarding school decreased significantly.

4. Deterioration of household living standard: During the transition period, price of consumer goods and services has been increasing, consequently, cost of living is increased. Thus gap between poor and rich has been increasing. Similarly, as a result of social-economic structural change, unemployment has increased enormously. On the other hand, everybody was not being able to take advantage from social security and it has resulted in the wide spread school drop out of children from vulnerable households.

5. Migration: As a result of imprecise regional development policies, a big stream of population migration towards to urban settlement, particularly to Ulaanbaatar city, was taken place. Thus, newly arrived children are more likely to experience school dropout.

6. Capability of school teachers and their discipline: Because of a failure to predict problems and difficulties which were likely to occur during the implementation of a new educational system and to undertake appropriate measures that would ensure protection from unexpected difficulties, a number of knowledgeable and capable teachers left school, resulting in a deterioration in the overall knowledge, capability and discipline of teachers. In turn, this has had a bad affect on the children.

C.. Water and Sanitation

C..1. Use of safe drinking water

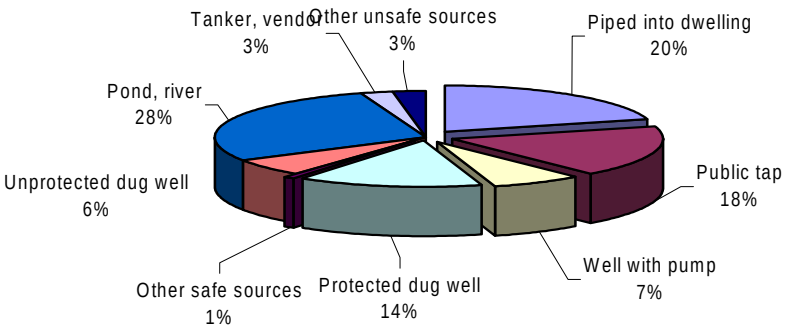
Goals. ***Global: Universal access to safe drinking water. National: 85 % of population with access to safe drinking water.***

Clean drinking water is fundamental for human health. Polluted water is a carrier of many infectious diseases, including cholera and typhoid. Pollution may also be caused by chemical, physical and radioactive contaminants, which can be harmful to human health. In addition to health considerations, access to safe drinking water may be particularly important for children and women, especially in rural areas, because they often bear primary responsibility for carrying water from the source to the home.

There are many well-known problems associated with assessments of "clean" or "safe" drinking water. Obviously, water quality varies from place to place, and even modern piped systems do not always provide water that is completely clean and safe. Nevertheless, it is known that water quality from some types of sources is generally better than that from other types. Therefore, reasonably accurate estimates of safe water coverage based on the type of source can be obtained through household surveys. In line with UNICEF recommendations and in order to maintain international comparability the following sources of drinking water were classified in the MICS-2 survey as safe:

(1) piped water to the household or yard, (2) public standpipe or tap, (3) tubewell or borehole with pump, (4) protected dug well, (5) protected spring and (6) rainwater. Figure 8, shows the results from the MICS about the sources of drinking water used by the survey households.

Figure 8. Percentage of distribution of the population by source of drinking water



According to the current survey results, 60 per cent of the Mongolian population is supplied with clean and safe drinking water (Table 13). However, there are big differences between city water supplies and those in the countryside. Clean drinking water reaches 91 per cent of the population in urban but only 34 per cent in rural areas. There is also major variation among regions. About 22-32 per cent of the population in Northern and Western regions have access to safe drinking water, while in Central-1 and Central-2 regions the proportions are 84 and 97 per cent, respectively.

Nationally, the survey finds that 20 per cent of the population uses water piped directly into the dwelling, and a further 18 per cent are supplied from public taps. The situation is more diverse in the Southern and Eastern regions, where people obtain drinking water from a wider variety of sources.

There is some concern that the water quality classification used in the Child and Development Survey - 2000, is not wholly appropriate for the Mongolian situation. In particular, it is widely believed that the lakes, streams and rivers that supply much of the drinking water in the Western and Northern regions are in fact a safe source and should be classified accordingly. It is argued that these areas are sparsely settled, with very little industry or modern agriculture of the sort that becomes a major source of water pollution elsewhere. The protected well is one major source of clean drinking water. In the last few years the number of protected wells has reduced slightly. On the other hand, there is some debate as to whether the protected wells that supply 14 per cent of the drinking water nation-wide and are especially important in the Southern region, should actually be classified as safe sources, considering that many of these facilities were installed before 1990 and have not been well maintained since.

According to the results of the "Living Standards Measurement Survey 1998" [10], about 52 per cent of the total urban population and 72 per cent of the residents of Ulaanbaatar had access to a central supply system of safe drinking water. In the countryside, 27-30 per cent of the rural population have access to safe drinking water from unprotected wells. However, the percentage of the urban population who have access to a central supply system for safe drinking water has been decreasing in the last 3 years, 67.5 per cent in 1995 to 52.0 per cent in 1998.

C..2. Use of sanitation

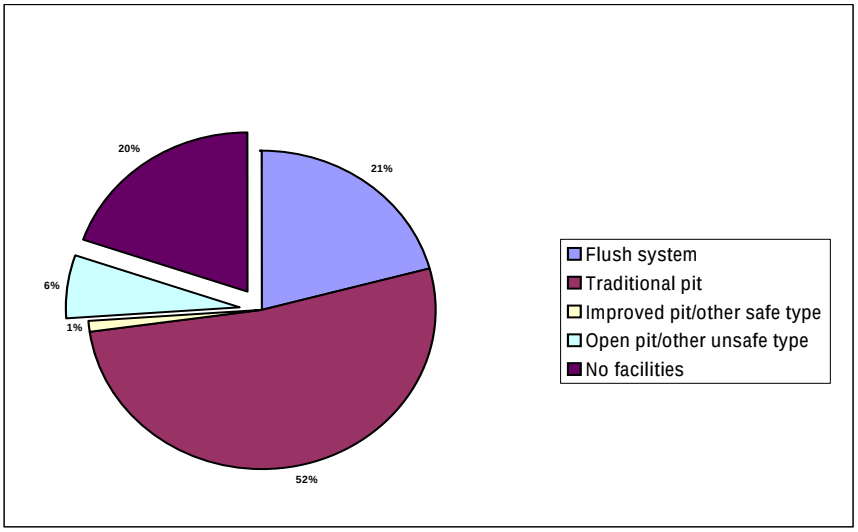
Goals. Global: Universal access to sanitary means of excreta disposal. National: 75 % with flush toilets or latrines that meet sanitary standards.

Inadequate or improper disposal of human excreta and poor personal hygienic are associated with a range of diseases, including diarrhea and polio. In the Child and

[10] Living Standards Measurement Survey 1998 (NSO/UNDP) Ulaanbaatar, Mongolia 1999

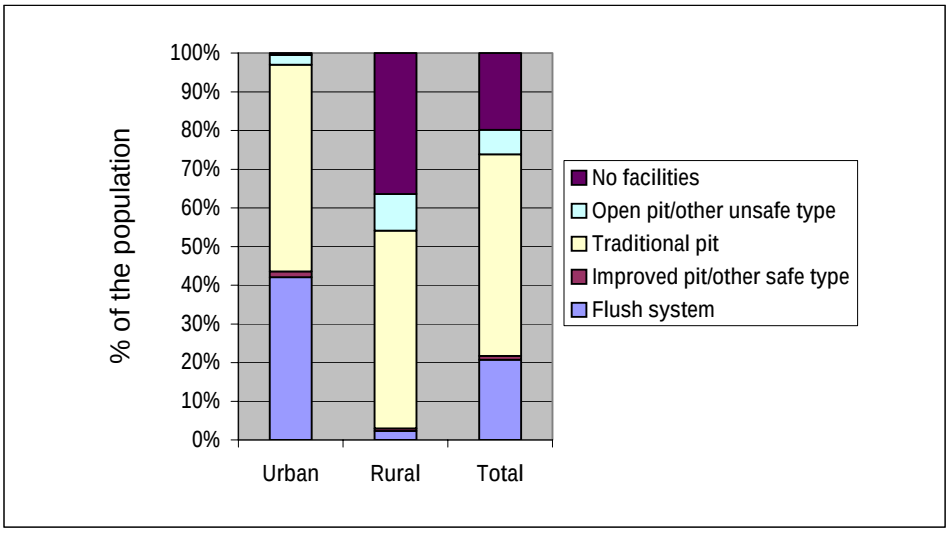
Development Survey - 2000 sanitary facilities include: (1) flush toilets connected to sewage systems or septic tanks, (2) other flush toilets, (3) improved pit latrines and (4) traditional pit latrines.

Figure 9. Percentage Distribution of the Population by type of sanitary facility used. Mongolia, 2000



The data in the survey indicate that 74 per cent of the population has access to improved sanitary facilities (Table 14). However, as with improved sanitary facilities supply, the situation is very different in urban centers and rural areas and there is considerable variation among regions. More specifically, 97 per cent of the urban population uses improved sanitary facilities, compared to only 54 per cent in the countryside. In the capital city (Central-2 region) less than 5 per cent of the population do not have access to adequate sanitary facilities, while in Northern and Southern regions nearly half of the population has no access.

Figure 10. Percentage Distribution of the Population by location and sanitary facility used, Mongolia.2000



Data from the MICS survey indicate that 21 per cent of the whole population use flush toilets. Among regions, this percentage ranges from nearly zero in the Northern region and less than 10 per cent in the Southern and Western, to almost half the population in Central-2. The urban-rural difference is very striking. Only about 2 per cent of the rural population use a flush toilet, whereas in urban areas the figure rises to 42 per cent.

The type of sanitary facilities used is closely associated with housing type and more general living conditions. For example, for urban dwellers who live in apartments or other permanent dwellings with centralized heating, flush toilets are a practical and convenient solution to sanitation needs. For those living in ordinary gers (yurts) or houses, and especially nomadic people who move with their herds two or three times a year, flush toilets are not a practical alternative. These population groups commonly use pit latrines. Overall, there is relatively little geographical variation in the use of pit latrines. This type of facility is used by just over half of the residents in the capital city, with little difference between urban and rural locations. It is most common in the Eastern region, where it accounts for about 63 per cent of the total, and least common in the South, where it is used by only 44 per cent.

The MICS data show that over one third of the rural population have no toilet facility.

According to the "Living Standard Measurement Survey" in 1998 (NSO/UNDP),[11] about 70 percent of households in the cities and urban areas live in apartment buildings and houses, while more than 20 per cent of the households live in gers. Also, about 50 percent of the households living in the apartment buildings and houses have a connection to a sewage system and have flush toilets inside their houses. The majority of such houses is located in Ulaanbaatar. Eighty percent of the total households have garbage disposal areas and about 50 per cent have sewage pits. About 60 percent of the households have pit latrines. The majority of poor households in the cities and urban areas use pit latrines outside the houses while households with better living standards have more improved sanitation facilities. The availability of adequate garbage disposal is an important necessity to maintain a healthy environment, which will contribute to the health of the population. Poor households, particularly those living in urban settlements, do not have adequate facilities that meet the sanitation requirements.

It is important for city municipalities, aimag and local administrations to plan and implement a set of policies aiming to provide the population with safe drinking water and facilities that meet the sanitation requirements.

D.. Child Food and Nutrition

D..1. Nutritional status

Goals. ***Global: Reduction of severe and moderate malnutrition by half of 1990 levels. National: Reduction in severe and moderate malnutrition among children under 5 by half of 1990 levels.***

Children's nutritional status is a reflection of their overall health. When children have access to an adequate food supply, are well cared for and are not exposed to repeated illnesses, they are able to achieve their growth potential and are considered to be well nourished. Nutritional status is conventionally assessed by comparison with a standard

[11] Living Standards Measurement Survey 1998 (NSO/ UNDP) Ulaanbaatar Mongolia 1999

distribution of height and weight for children under the age of 5. For the Child and Development Survey - 2000, measurements of height and weight were taken for children under 5 in the survey households. These measurements were used to compute 3 standard indicators of nutritional status for each child, from which the proportion of malnourished children in the sample was calculated. The 3 standard indicators of nutritional status are as follows:

- ***Underweight (weight for age)*** is the best indicator for describing the overall level of malnutrition in a population and for assessing changes over time. Underweight reflects aspects of both stunting and wasting. 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 standards deviation below the median are classified as *severely underweight.*
- ***Stunting (height for age)*** means that a child is relatively short as compared with the reference population. Stunting is an indicator of poor growth over time, and is usually associated with chronically insufficient dietary intake, frequent illness and poor feeding practices over a long period. 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 in whom height for age is more than three standard deviations below the median are classified as *severely stunted.*
- ***Wasting (weight for height)*** is usually caused by recent nutritional deficiency, and therefore may show significant periodic variation associate with seasonal availability of food or disease prevalence. 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 below the median are *severely wasted.* Wasting is usually the result of a recent nutritional deficiency.

The U.S. National Center for Health Statistics (NCHS) standard, recommended by UNICEF and WHO, was used as the reference for determining the nutritional status of children covered by the survey. Two standard deviations below the median value in the NCHS reference population for a given indicator (underweight, stunting or wasting) is

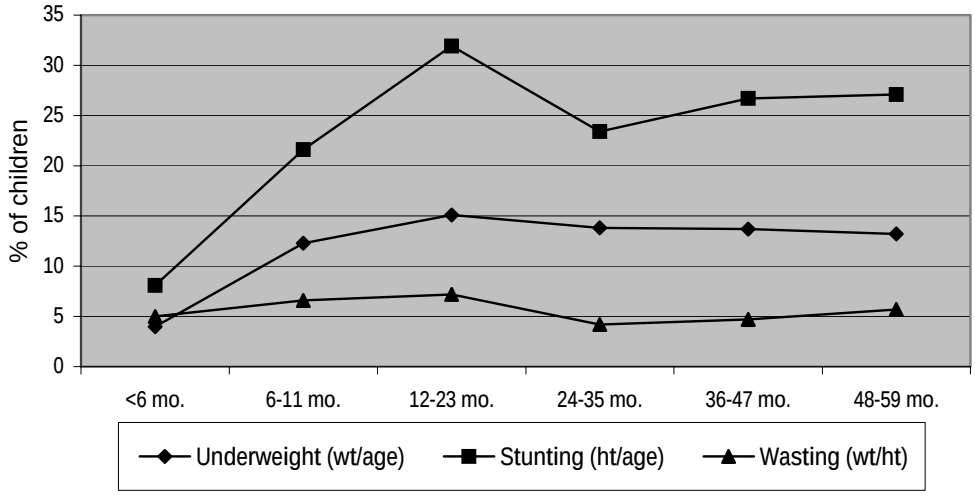
defined as moderate malnutrition as measured by that indicator. At 3 standard deviations below the reference median a child is classified as severely malnourished.

Children who were not weighed and measured for height (approximately 4.1 per cent) and whose measurements were outside the plausible range are not included in the calculations. In addition, a small number of children whose birth dates are unknown were excluded.

As shown in Table 15, nearly 13 per cent of the surveyed children under the age of 5 were found to be moderately or severely underweight. The underweight prevalence in rural areas, at 16 per cent, is considerably higher than in urban areas, where the rate is 9 per cent. Among the regions, the underweight prevalence in the Eastern region is close to twice the national rate (21 per cent), while the lowest levels are found in Central-2 and the Southern regions, with 7.0 per cent, and 9.0 per cent respectively. There is no difference in underweight prevalence between boys and girls. The regional pattern varies somewhat for the other 2 indicators, though all types of malnutrition tend to be relatively high in the Eastern, Northern and Western region and lowest in the Southern region and Central-2.

There is a clear correlation between malnutrition in young children and the mother's education. The relationship is especially pronounced with stunting, which is most closely associated with chronic dietary deficiencies and poor feeding practices over a long period. Children whose mothers had only primary schooling or less are 3 times as likely to be stunted than those whose mothers had university education. The same general pattern holds for underweight and wasting as well. The prevalence of malnutrition also varies with the specific age of the child. In general, malnutrition is at its lowest level in the early months of life, when most children are still being breastfed, and reaches a maximum during the 12-23 month period. Stunting drops sharply in the third year then rises again at the age of 4 and 5. Underweight declines only very gradually after the age of 2, while no particular trend is evident for wasting over the entire 5 years.

Figure 11. Percentage of Under 5 children who are undernourished. Mongolia, 2000



D..2. Breastfeeding

Goals. ***Global and National: Empowerment of women to exclusively breastfeed their children for 4-6 months after birth, and continue breastfeeding, with complementary foods, well into the child's second year.***

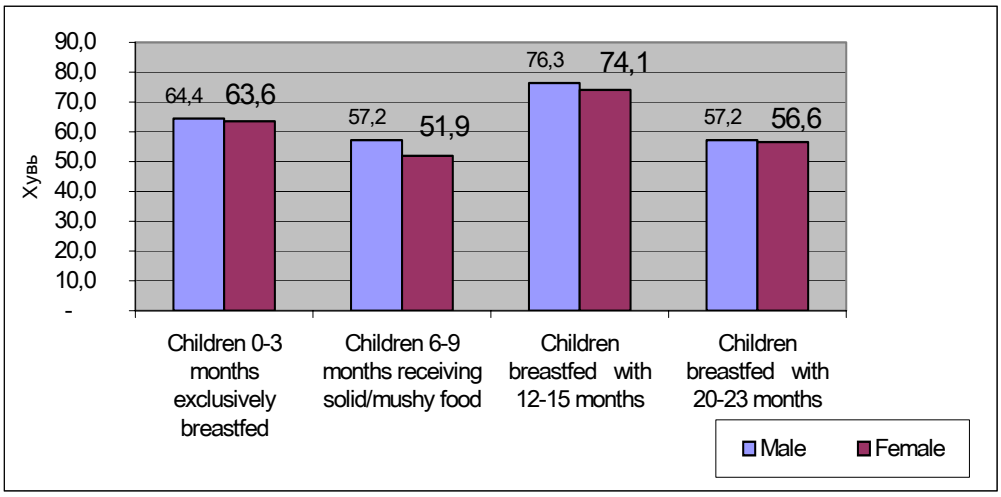
Breastfeeding in the first few years of life protects babies from infection, provides an ideal source of nutrition, and is economically optimal and safe. Nevertheless, many mothers stop breastfeeding too soon, and this often has a negative influence on the child's health and nutritional status. Bottle feeding with infant formula may be particularly risky if clean drinking water is not readily available. The goal of the World Summit for Children recommends that children should receive only breast milk in their first 4-6 months, and that breastfeeding should continue, along with appropriate complementary foods, well into the second year.

The data in Table 16 are based on information provided by mothers in the survey interview on children's consumption during the previous 24 hours. *Exclusive breastfeeding* means that the child has received only breast milk (and possibly vitamins or medicine). *Complementary feeding* refers to children who are given solid or semi-solid food in addition

to breast milk. The last 2 columns of the table show the proportion of children who are still being breastfed at the age of 1 and 2 years. Breakdowns by region and mother's educational background are not shown due to the small sample size. For the same reason, the figures on sex and urban-rural residence should be interpreted more cautiously.

Approximately 64 per cent of babies under 4 months were breastfed exclusively, lower than the recommended 100 per cent but significantly higher than the average in many regions of the world. There appears to be little difference between boys and girls, though the rate in rural areas is about 10 points higher than in urban areas. About 54 per cent of children aged 6-9 months were breastfed along with complementary feeding, 75 per cent aged 12-15 months and 57 per cent of children aged 20-23 months were also still being breastfed.

Figure 12: Percent distribution of living children by breastfeeding status, Mongolia, 2000

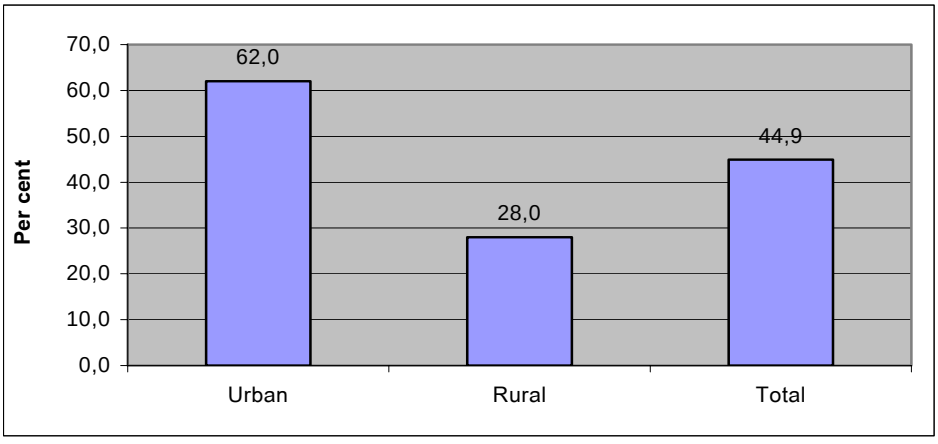


D..3. Salt iodization

Goals. ***Global: Virtual elimination of iodine deficiency disorders. National: By 1995, carry out prevalence survey of iodine deficiency disorders among the population and initiate corrective action.***

A deficiency of dietary iodine is the world's greatest single cause of preventable mental retardation and can cause a reduction in the average intelligence quotient (IQ) in a population of 13 points. Salt iodization is an effective and low-cost way of preventing iodine deficiency disorders (IDD). Adequately iodized salt contains 15 ppm (parts per million) of iodine or more. In the current MICS, interviewers tested household salt for iodine level by means of a testing kit. In more than 99 per cent of households salt was available for testing. The results are shown in Table 17. Overall, 45 per cent of the survey households had adequately iodized salt, but very wide variability was found among regions. In nearly 83 per cent of households in Ulaanbaatar (Central-2) the salt was found to be adequately iodized, but in the Western region this figure was only 16 per cent. Among the other regions the iodization rate ranged between 26 per cent in the Northern region to 63 per cent in the Southern region (Table 17a). For all urban areas the iodization level was about 62 per cent, in comparison to 28 per cent in rural areas.

Figure 13. The consumption level of adequately iodized salt, Mongolia. 2000



D..4. Vitamin A supplementation

Goals. ***Global: Virtual elimination of vitamin A deficiency and consequences, including blindness. National: By 1995, define prevalence of vitamin A among children under 5, and initiate corrective action as necessary.***

Vitamin A deficiency (VAD) impairs a child's immune system, increasing its chance of dying of common childhood diseases, and can cause eye damage and even blindness in children. It also impairs the health of pregnant and lactating women. Yet VAD can be easily prevented by vitamin "A" supplementation or food fortification. UNICEF and WHO recommend that all countries with an under-five mortality rate greater than 70 per 1000 live births, or where vitamin "A" deficiency is widespread in the population, should establish programs to bring the problem under control. In accordance with recommendations by UNICEF and WHO, the Mongolian Ministry of Health suggests that children aged 6-12 months be given one vitamin A capsule of 100,000 IU every 6 months, and children older than 1 year should get one high dose capsule of 200,000 IU every 6 months.

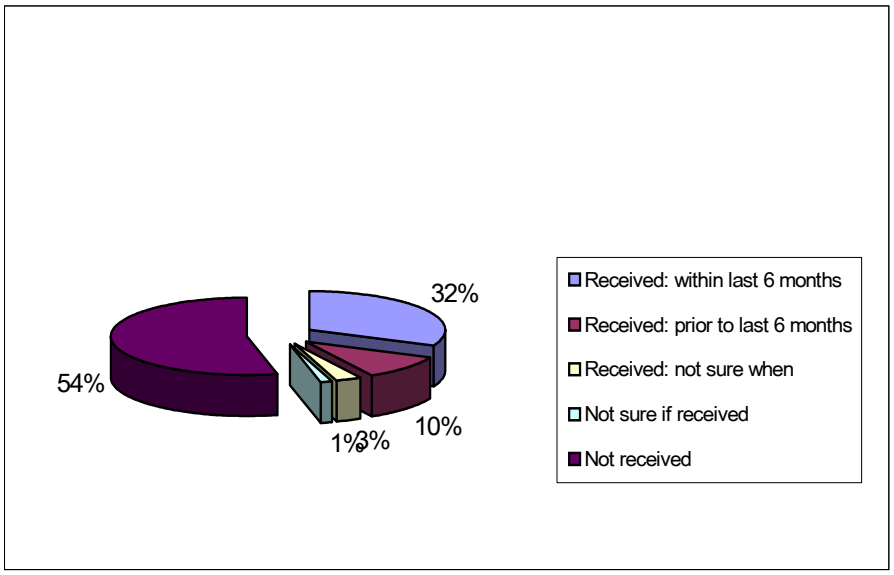
Within the six months prior to the Child and Development Survey - 2000, about 32 per cent of children aged 6-59 months had been given the high dose vitamin "A" supplementation (Table18). Approximately 10 per cent of others in the age group had received the supplement, but more than 6 months previously, and 54 per cent of children of this age were reported never to have received the supplement. For 3 per cent of the surveyed children, mothers or caretakers reported that the child had received a vitamin "A" supplement at some time in the past, but were not able to give a specific date.

The survey found very little variation among regions in the percentage of children receiving the high dose supplement in the last 6 months, through the rate is significantly higher in the city (37 per cent) than in the countryside (27 per cent). Similarly, 45 per cent of urban children were reported to have received no supplement, while in rural areas this figure was much higher, at about 60 per cent. Regional differences in the proportion of children who had never received a vitamin "A" supplement were also small relatively small. The only exception is the Southern region, where only 46 per cent of children had never received the supplement, compared to between 52 and 56 per cent in other regions.

Survey findings show that about 30 per cent of children aged 6-11 months had received vitamin "A" supplementation in the previous 6 months. This percentage increases to 36 per cent in the second year, then begins to decline, reaching 28 per cent in the fourth and fifth year. There is no clear trend in supplementation associated with the mother or caretaker's education. While the lowest rate (22 per cent) is for women with only a primary education, the supplementation level for all other educational categories shows little variation, from 31 to 34 per cent.

It is interesting to note that in aimag centers every second child received vitamin "A" supplementation, which is more than in Ulaanbaatar. In Ulaanbaatar and soum centers the vitamin supplementation coverage is 25-28 percent.

Figure 14. Children aged 6-59 months,receiving a high dose Vitamin "A" supplementation, Mongolia. 2000



The percentage of children receiving a high dose of vitamin "A" supplementation within 8 weeks after birth is 13 per cent nation-wide and highest among aimag centre mothers. The percentage of children aged less than 56 days in the twelve months preceeding the survey receiving a high dose of vitamin "A" supplementation was 22 per cent in the

Central-1 region and in the aimag centers which was the highest rate among the regions. The lowest rate was in the Western region. at 5.6 per cent (Table 19).

D..5. Low Birth Weight

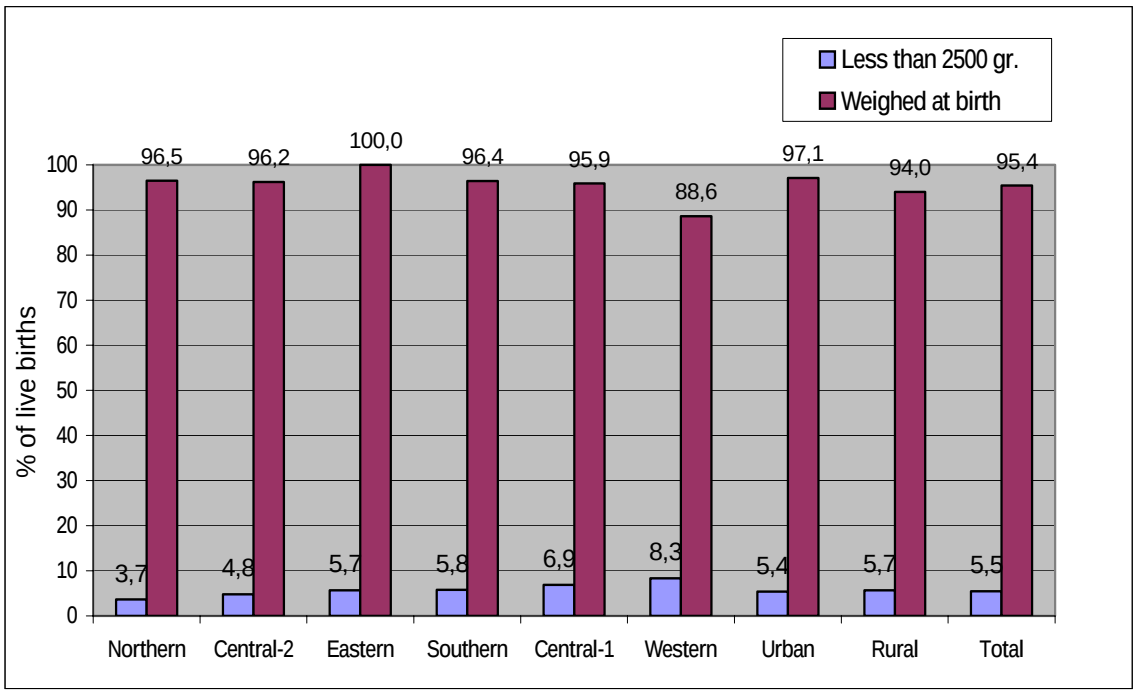
Goals. ***Global: Reduction of the rate of low birth weights (less than 2.5kg) to less than 10 %. National: Reduce the rate of low birth weight from 2% in 2000. And Reduce prevalence of vitamin D deficiency (rickets) 50 % by the year 2000.***

Infants who weigh less than 2500 grams (2.5 kg) at birth are classified as low birth weight babies. In order to identify the proportion of low birth weights in the survey sample, two types of information were requested and obtained in interviews with mothers or caretakers. If a health card showing the child's weight at birth was available, or if the mother or caretaker could recall the child's birth weight, this information was recorded. In addition, mothers or caretakers were asked to assess whether the child had been very small, smaller than average, average, larger than average or very large. For children who were weighed at birth, these weights were cross-tabulated with the mother's/caretaker's size assessment to obtain the proportion of births in each size category that were actually recorded as less than 2500 grams. Applying these proportions to the number of unweight children in each size category yielded an estimate of the number of low birth weights among those babies who had not been weighed at birth. This estimate was then added to the number of babies whose recorded weight was less than 2500 grams to obtain the total number of low birth weight children in the sample, and from this total the percentage of children with low birth weight was calculated.

In fact, according to the findings of the survey, more than 95 per cent of the 1,515 children born within the 12 months preceding this survey had been weighed at birth, so the estimation procedure described above was actually needed for only a small fraction of the total. In all, the survey found 5 per cent of newborns with low birth weight (Table 20). There was less than 1 per cemt difference between urban and rural, though variations among regions were quite substantial. The Western region shows the highest incidence of low birth

weight, at over 8 per cent. The lowest incidence of low birth weight, at 4 per cent, was found in the Northern region. There is no clear linear pattern according to mother's education level, though mothers with complete secondary school or less are more likely to have a low birth weight baby than better educated women. The number of births on which these statistics are based is relatively small, so caution should be used when interpreting these findings.

Figure 15. Incidence of Low weight and proportion of Infants weighed at birth by location, Mongolia. 2000



In the last few years the living standard of the population has gone down and access to the good food stuffs, that meet health requirements, has been reduced. Poor quality of food and nutrition affects negatively the health of mothers and children. Micronutrient deficiency, particularly a deficiency of vitamin "A" and "D", or iron and iodine deficiency, still remains a most acute health problem in Mongolia. It is important to improve the system of procurement of essential vitamins for mothers and children in the country and to strengthen the control over the implementation.

E.. Child Health

E..1. Immunization coverage

Goals. ***Global: Maintenance of high level of immunization coverage (at least 90 % children under one year of age by the year 2000) against diphtheria, pertussis, tetanus, measles, polio-militias, tuberculosis and against tetanus for women of childbearing age. National: Achieve 95 % coverage of infants for all antigens.***

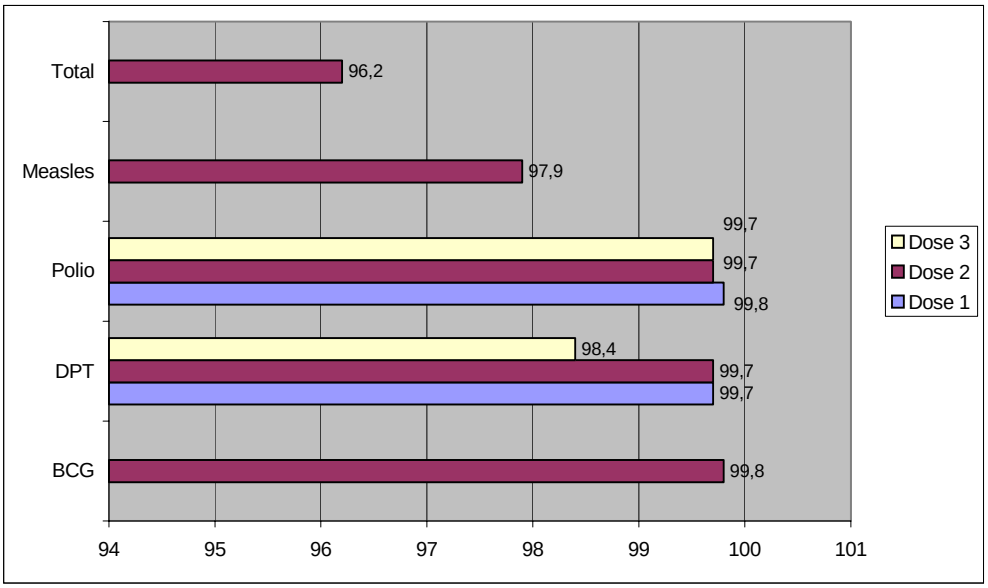
According to recommendations by UNICEF and WHO, every child should receive one BCG vaccination, within the first 12 months of life, as protection against tuberculosis, 3 doses of DPT vaccine as protection against diphtheria, pertussis (whooping cough) and tetanus, 3 doses of polio vaccine and a measles vaccination. In the current MICS survey, vaccination cards for children under 5 years of age were checked, and information on the type and date of immunizations received was recorded on the questionnaire form. If no vaccination card was available, mothers were asked to provide this information from memory, if possible. Cards were available for about 81 per cent of the children surveyed.

The figures in Table 21 are computed for children aged 12-23 months so only those children who are old enough to be fully vaccinated are counted. The table shows 2 coverage figures for each type of immunization, one based only on information obtained from vaccination cards and the other based on information from cards plus mother's reports in those instances when no card was available.

According to information recorded on vaccination cards, coverage among surveyed children in the 12-23 month age group was high and very uniform for all vaccines. The figure is 87 per cent for all doses of DPT and all doses of polio. BCG coverage was slightly higher, at 90 per cent, and measles was significantly lower than the average, at 82 per cent. Using information provided by mothers or caretakers in addition to that from vaccination cards, coverage figures rise by 3-5 points for most vaccines. By this calculation the percentages are less uniform across different vaccines, probably indicating that mother's recall is a less reliable source of information than vaccination cards. Measles still has the lowest coverage, at 86 per cent, Polio 3 and DPT 3 are both a little below 90 per cent, and BCG is highest with

96 per cent. Dropout rates, as indicated by declining rates between the first and third doses of DPT and Polio, are very low, considerably less than 1 point according to data from the vaccination cards (Table 22).

Figure 16: Percentage of children aged 12-23 months who received immunizations by age 12 months, Mongolia. 2000



About 96 per cent of children aged 12-23 months had been vaccinated by the first 12 months.

In order to cover all children fully by vaccination the Ministry of Health has been organizing a "National Vaccination Day" and, as a result, the coverage of all types of vaccination has been increasing year by year. Moreover, special attention has been given on storage, protection, transportation and provision and appropriate measures were taken in these areas. As a result Mongolia has became one of the countries where child illness has been declining and no cases of polio have been reported. There are no significant differences in the level of coverage of any vaccination from region to region or according to residence. Similarly, there is no significant difference by mother's educational level.

E..2. Diarrhea

Goals. ***Global: Reduction by 50% in deaths due to diarrhea, and 25 % reduction of the diarrhea incidence rate, in children under 5 years. National: Reduce incidence by 50%.***

Dehydration caused by diarrhea is still a major cause of mortality among children in Mongolia. Home management of diarrhea - either through oral rehydration salts (ORS) or a recommended home fluid (RHF) - could prevent many of these deaths. Preventing dehydration and malnutrition by increasing fluid intake and continuing to feed the child are also important strategies for managing diarrhea. In the MICS questionnaire, mothers were asked to report whether their child had had diarrhea in the two weeks prior to the survey. If so, a series of additional questions were asked about what the child had to eat and drink during the episode and whether this was more or less than usual.

Overall, 8 per cent of the under-5 children covered by the survey had diarrhea in the 2 weeks prior to the survey (Table 23). The highest incidence, about 14 per cent, occurred among children aged 6-23 months. This is a common pattern, as this is normally the age at which children are weaned. Among regions, the Northern region had a much lower incidence of childhood diarrhea, at just under 4 per cent, than any other, while the highest incidence was found in Western (nearly 12 per cent) and Southern region (10 per cent). Urban areas had a somewhat higher rate than rural areas, at 9 per cent and 7 per cent, respectively.

Figure 17: Percentage of children aged under 5,with diarrhea in the 2 weeks prior to the survey, by drinking and eating status, Mongolia. 2000

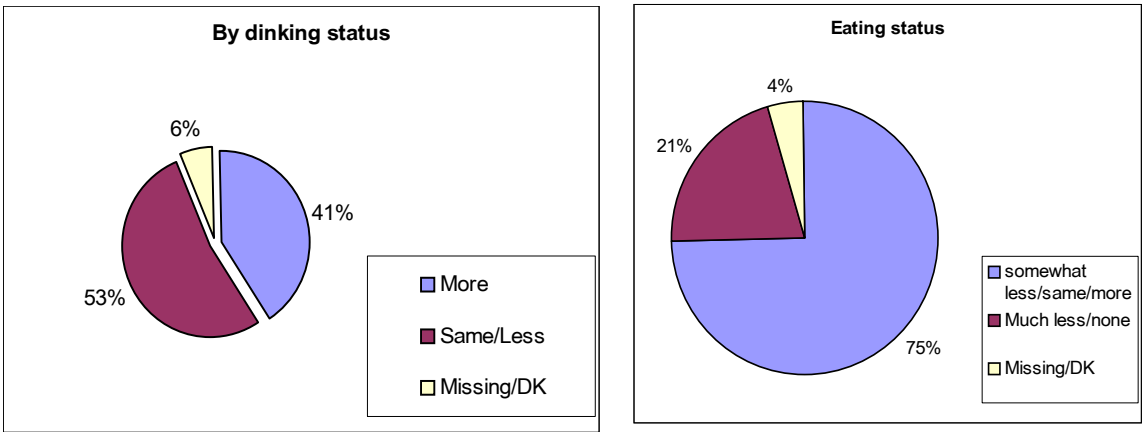


Table 23 also shows the percentage of children receiving various kinds of home treatment during the diarrhea episode. Note that multiple answers were accepted, so percentages do not add to 100. In addition, the number of diarrhea cases in many of these categories is quite small, and should be interpreted cautiously. Overall, 98 per cent of the diarrhea cases received one or more recommended forms of treatment. More than 60 per cent of children with diarrhea were fed breast milk and 56 per cent were given packaged ORS.

The recommendation to continue feeding during an episode of diarrhea seems to be generally accepted in Mongolia. Nearly three-quarters of children with diarrhea were fed about the same or more than usual (Table 24). Increasing the child's intake of fluids appears to be a less common practice. Only 41 per cent of mothers reported their child drank more during diarrhea episodes, and 53 per cent said they drank less. The most appropriate treatment, which is to drink increased fluids and to continue eating, was reported in only 32 per cent of the cases.

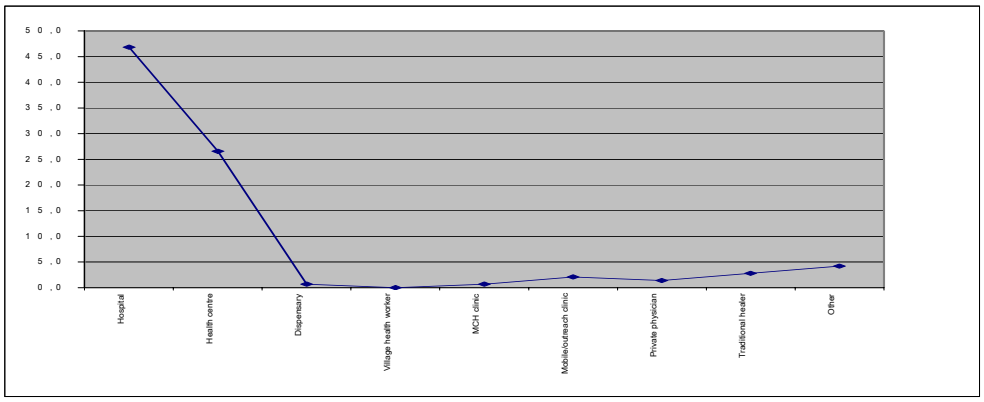
E..3. Acute Respiratory Infection

Goals. ***Global: Reduction by one third in the deaths due to acute respiratory infections in children under 5 years. National: Reduce by 38%.***

Acute lower respiratory infection (ARI), particularly pneumonia, is one of the leading causes of child deaths in Mongolia. In the MICS questionnaire children with acute respiratory

infection were defined as those who were ill with a cough accompanied by rapid or difficult breathing and whose symptoms were due to a problem in the chest, or both the chest and a blocked nose. Survey data show that only 143 cases of ARI were reported to have occurred in the 2 weeks preceding the interview, which represents about 2 per cent of children under five (Table 25). About 78 per cent of these cases were taken for treatment to an appropriate health provider, in most instances a hospital or health center. Given the very small number of cases, more detailed breakdowns by region, mother's education, etc., would not be meaningful.

Figure 18: Percentage of children aged under 5,with ARI and treatment by health providers. Mongolia. 2000



E..4. IMCI

The Integrated Management of Childhood Illnesses (IMCI) is a program developed by UNICEF and WHO that combines strategies for the control and treatment of the five major killers of children, acute lower respiratory tract infections, diarrhea, malaria, measles and malnutrition. The program focuses on the improvement of family and community practices in the prevention and early management of childhood illnesses. The IMCI approach teaches

that appropriate home management of any of these major illnesses includes giving more fluids and continuing to feed sick children as they are normally fed.

Table 26 presents information on the reported drinking and eating behavior of sick children under the age of 5. About 15 per cent of the under-5 year olds in the sample were reported to have had diarrhea or some other illness in the two weeks prior to the survey. As was noted in the earlier section on diarrhea, children with any kind of illness tend to be fed more or less as usual (about 78 per cent), but the recommended practice of giving additional fluids is much less common (40 per cent). Both eating and drinking during illness vary by age. Less than 20 per cent of children aged less than 6 months old are given more than usual to drink, whereas the percentage among older children ranges from 35 to 50 per cent. On the other hand, a larger percentage of younger children tend eat more during illness than older children. The IMCI recommendation that sick children should receive increased fluids and continue to eat as usual was followed in only 30 per cent of cases covered in the MICS survey. There is relatively little variation across regions, or between urban-rural locations, and mother's educational level. About 36 per cent of children aged between 12-23 months continue to eat and receive increased fluids while the children in other age groups have too little consumption.

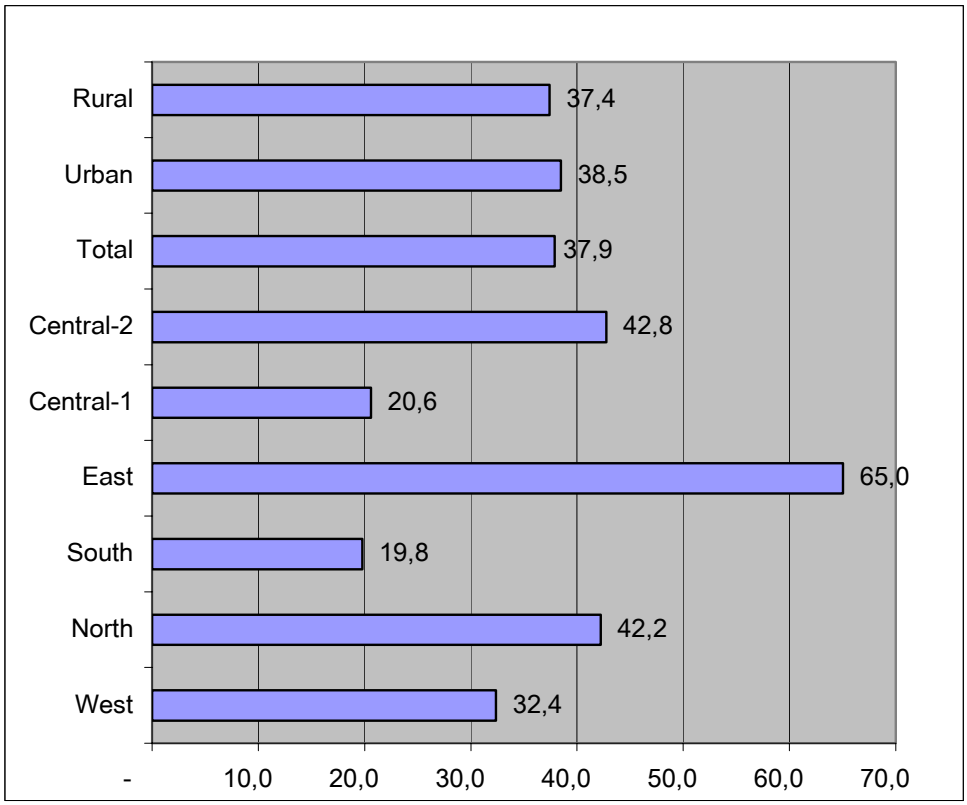
Promoting knowledge among caretakers about when it is appropriate to seek medical care for children who are ill is another important component of the IMCI program. In the Child and Development Survey - 2000, mothers and other caretakers were asked to name the symptoms that would cause them to take their children to a health facility immediately. The most common response, given by 58 per cent of mothers, was that a fever would be sufficient cause to take a child for professional treatment (Table 27). Another reason for seeking professional treatment, mentioned by 47 per cent of mothers, was if the child became increasingly ill. But while roughly half of the mothers or caretakers in the survey were able to properly identify one appropriate cause for taking a sick child for professional treatment, only 38 per cent were able to name two such causes. This varies somewhat by mother's education, though the association is not as clear or as strong as might be expected. There are very striking differences among regions on this indicator, with about 20 per cent in Southern and Central-1 regions knowing at least 2 signs, as compared with more than 40 per cent in

Northern and Central-1 regions and 65 per cent in the Eastern region. There is very little difference between urban and rural.

During the last 10 years, a health insurance system has been introduced and 90 percent of the total population is involved in health insurance. As a result of government support for the private sector, many private health facilities have been opened which have increased the access to health facilities. Several programs and projects are being implemented with financial and technical support from international organizations which are having positive results. Children of paricular age groups have been successfully covered by immunization, a monitoring system has been introduced and the cases of preventable diseases have been reduced. Since 1994 no cases of polio have been reported and no cases of death of measles have occurred. Tetanus, and meningitis, which broke out in 1994, have completely stopped. Vaccine storage, transportation and procurement have been improved and 70 percent of all the soums have been provided with special refrigerators, freezers and cold chain.

Parents and caretakers do not have sufficient knowledge to take care of sick children at home and their health seeking behavior is low. Not all soums have creches, and 48 per cent of aimags have no day care centers for children. These problems and difficulties have contributed to the increase of child mortality and child morbidity.

Figure 19: Percentage of caretakers of children under 5 years, who know at least 2 signs for seeking care immediately. Mongolia. 2000



F.. HIV/AIDS

F..1. AIDS knowledge

One of the most important strategies for reducing the rate of HIV/AIDS infection is to propagate accurate knowledge of how AIDS is transmitted and how to prevent the spread of HIV infection in the population. The Child and Development Survey - 2000 found that 94 per cent of Mongolian women aged 15-49 years have heard about AIDS (Table 30). This proportion represents about 98 per cent in urban centers and just under 91 per cent in rural areas. It varies somewhat among regions, with the lowest level, at 89 per cent, in Northern

and Southern regions, and the highest level (99 per cent) in Central-2. Among age categories, the lowest percentage that has ever heard of AIDS is in the group 15-19 years of age, at about 90 per cent.

During the survey all women aged 15-49 were presented with several statements about ways of preventing HIV/AIDS infection and were asked whether they believed them to be true or false. Eighty-two per cent of women believe that having only one uninfected sex partner can prevent HIV infection, while 80 per cent believe that always using a condom during sexual intercourse is an effective prevention measure. Three out of 4 women were able to identify both statements as effective ways of preventing HIV infection (Table 30a). Accurate knowledge about the means of preventing HIV/AIDS transmission is significantly higher among urban women. Women in the youngest age group were the least well informed, with only two-thirds in this group knowing both methods of prevention. There is a fairly consistent increase in knowledge as women's education increases. Only about 43-58 per cent of those with only primary education or less, and 70 per cent with incomplete secondary education, knew both of the main ways of preventing HIV transmission, while among better educated women the percentage ranges between 77 and 86 per cent.

There are many misconceptions about AIDS transmission, and in the survey women were asked to indicate whether or not they believed the following statements:

- AIDS can't be transmitted by supernatural means.
- AIDS can't be transmitted by mosquito bites.
- A healthy-looking person may be infected with AIDS.

Over three-quarters (76 per cent) of the women agreed with statement 1, 58 per cent agreed with statement 2 and 56 per cent agreed with statement 3 (Table 31). The responses show considerable variation across the different regions, between urban and rural residents, and most of all among different educational levels. The proportion able to identify all 3 misconceptions (that is, those who agreed with all of the statements) ranged from 24 per cent in the Southern region to 43 per cent in Central-2, a range of nearly 20 points. The figures for urban and rural women were 43 per cent and 31 per cent, respectively. Those with little or

no formal education were much more likely to accept the misconceptions about HIV/AIDS transmission than women with higher levels of education. At the lowest level, (no education or only primary schooling), only 27 per cent correctly identified all 3 misconceptions, as compared with 50 per cent for women with university education. There appears to be little association between age and knowledge about HIV/AIDS, as roughly 36 per cent of all age groups were able to respond correctly on all 3 misconceptions.

Table 32 presents data on women's knowledge about AIDS transmission from mother to child. When asked if AIDS can be transmitted from mother to child, 69 per cent of women in the 15-49 age group correctly responded "Yes". Women's education is closely associated with this knowledge, with increasing percentages knowing the correct answer as educational level increases. The percentage knowing that mother-to-child AIDS transmission is possible is about 5 points higher in urban areas than in rural places. The fact that a majority of urban women know about AIDS transmission and three means of preventing transmission, could be a result of the greater access that urban women have to radio, TV, mass media etc. which provide learning opportunities.

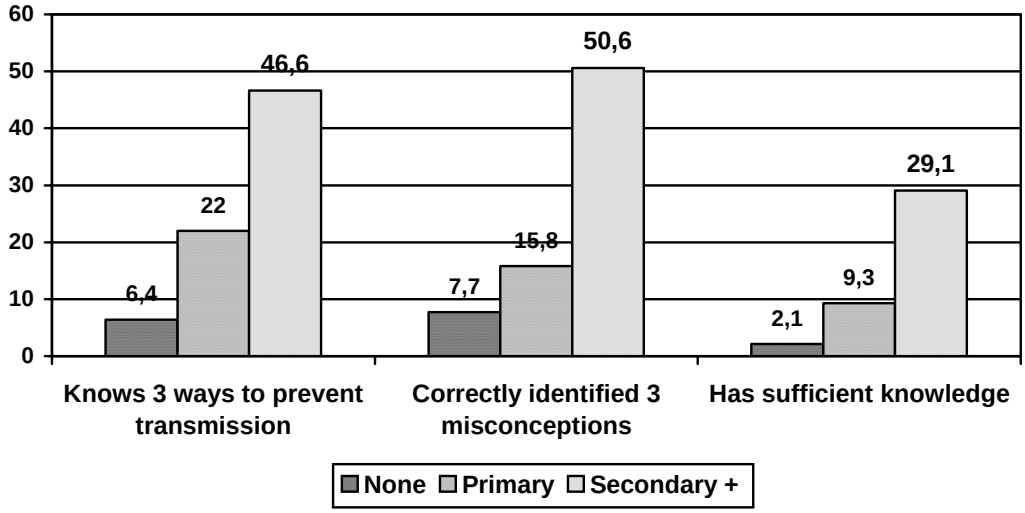
When asked specifically how this transmission can take place, 58 per cent said that transmission during pregnancy was possible, 55 per cent said that transmission at delivery was possible, but only one woman in 3 knew that AIDS could be transmitted from mother to child through breast milk. Only 27 per cent of these women knew all 3 modes of transmission. In general, women aged 30 and above were more likely to know about mother-to-child transmission than younger women, and more education is associated with a greater likelihood of knowing, but in neither case is the relationship very dramatic. At the other end of the spectrum, 34 per cent of the respondents did not know of any specific way in which AIDS could be transmitted from mother to child. On this indicator, the percentage of rural women was significantly higher than for urban women. Nearly half (47 per cent) of young women in the 15-19 age group did not know any mode of transmission, and more than 50 per cent of those with primary education or less did not know. Among regions, the percentage varies between 28.0 in the Western to 44.0 in the Northern region.

The MICS survey also attempted to measure discriminatory attitudes towards people living with HIV/AIDS. To this end, respondents were asked whether they agreed with two

questions. The first asked whether a teacher who has the HIV virus but is not sick should be allowed to continue teaching in school. The second question asked whether the respondent would buy food from a shopkeeper or food seller whom the respondent knew to be infected with HIV or AIDS. The results are presented in Table 33. Forty-one per cent of women aged between 15-49 years of age believe that a teacher with HIV/AIDS should not be allowed to work and 14 per cent would not buy food from a person infected with AIDS. Overall 43 per cent of women agree with one or both of the conditions, while 57 per cent agree with neither. The highest percentages of those who believe that a teacher with HIV should not be allowed to work are found in the Central-2 region (53 per cent) and among women with the highest level of education (62 per cent). The same two categories have the highest percentages that would not buy food from a person with AIDS, 22 per cent in Ulaanbaatar (Central-2 region) and 27 per cent for women with a university education. In general, rural dwellers appear to be less prone to discriminatory attitudes than those living in urban areas. Only 46 per cent in the urban category agreed with neither discriminatory statement, while 2 out of 3 in rural areas agreed with neither. Similarly, women with the least education were much more likely to disagree with both discriminatory statements than those who were better educated.

The overall level of knowledge about HIV/AIDS among Mongolian women is reflected in Table 34, which summarizes information from Tables 30 and 31. Table 34 shows that 38 per cent of women of reproductive age know 3 main methods to prevent HIV transmission and 36 per cent can correctly identify 3 misconceptions about AIDS transmission. "Sufficient" knowledge of HIV/AIDS transmission is defined as giving the correct response to all 6 items about prevention and transmission. The proportion of women who responded correctly on all 6 items is only 20 per cent. On this indicator, urban women are twice as likely as rural women to have "sufficient" knowledge, and better educated women are generally more likely to be knowledgeable than those with less education. There are no striking differences among the various age groups but on a regional basis, Central-2 with 28 per cent and the Western region with 20 per cent are places where women are much more likely to be knowledgeable about HIV/AIDS than those living in the Southern region. The knowledge level in each of the other 3 regions is the same for all three, at between 16 and17 per cent.

Figure 20 Percentage women aged 15-49 who have sufficient knowledge of HIV/ AIDS transmission by level of education, Mongolia.2000



F..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 pregnant women who can then take steps to prevent infecting their babies. The indicators shown in Table 35 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 results 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. In Mongolia, more than half of the women surveyed (54 per cent) know where they can be tested for AIDS, and 14 per cent have actually been tested. Of those tested, a large majority has been given the result. Knowledge of where to be tested is much greater in cities (67 per cent) than in rural places (42 per cent), and much higher among well-educated women (nearly 80 per cent for university women) than among those with less education (roughly 1 in 3 for those with primary school or less). The percentage of women under the age of 20 who know where to be tested for HIV/AIDS, which is about 40 per cent, is substantially lower than the 55-60 per cent figures for older groups.

Women who have actually been tested are much more likely to have at least a completed secondary education and to live in urban areas. Among regions, women living in Central-2 are 5-6 times more likely to have been tested than those living in the Western or Northern region. There is substantial variation in the proportion of those tested who have been given the results, ranging from as high as 91 per cent in Ulaanbaatar to as low as 61 per cent among women with primary schooling.

G.. Reproductive Health

G..1. Contraception

Goals. ***Global: Access by all couples to information and services to prevent pregnancies that are too early, too closely spaced, too late or too many. National: Organize consulting services on sexual life, birth spacing, and family planning. Organize educational courses, intended to reach young girls and all couples in need of guidance, on preventing early and undesired pregnancies; to increase the percentage of women using effective contraception.***

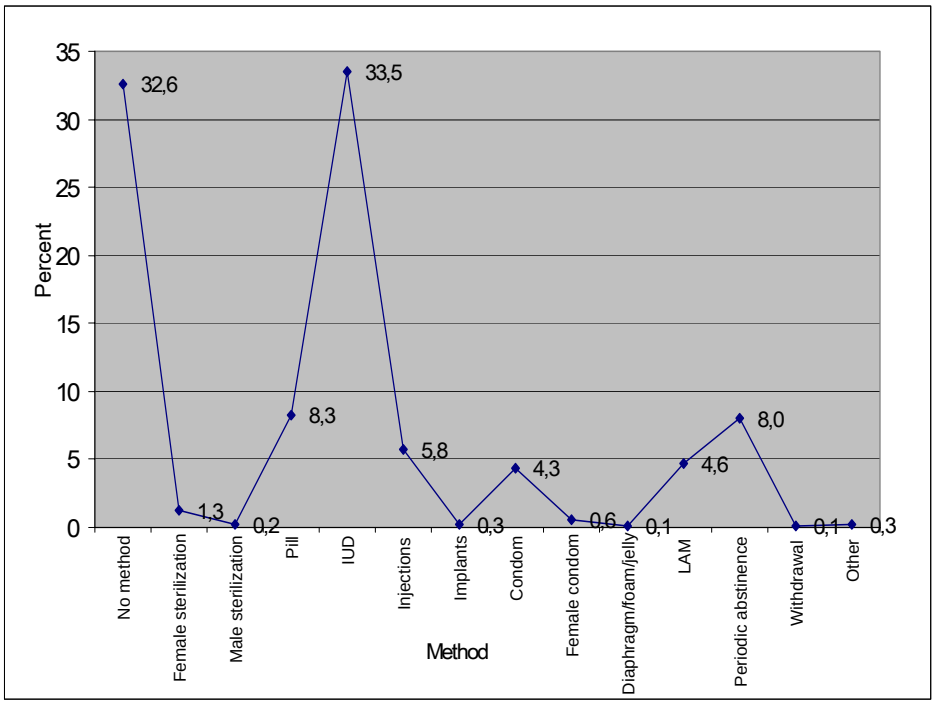
Current use of some kind of contraception was reported by 2 out of 3 of the surveyed women who are married living with a partner (Table 36). By far the most popular method is IUD used by 34 per cent of these women. The pill was the second most common choice among modern methods, but only at about 8 per cent while injections were reported used by about 6 per cent.

One of the key objectives of the Child and Development Survey (MICS) was to analyze the reproductive health situation. Questions related to the use of contraceptives, care during pregnancy, and prenatal care were asked from women of reproductive age who were married or living with a partner.

60.7 per cent of married women or women in union, aged between 15-49, reported using a contraceptive method of whom 54 per cent had used a modern contraceptive method and 13 per cent had used traditional methods. About 33 per cent of the surveyed women in

the above category did not use contraceptive method of any kind. In rural areas, especially, modern contraceptive methods were not commonly used.

Figure 21 Percentage of women aged 15-49 who use contraceptive methods, Mongolia.2000



The use of any modern contraceptive method varies relatively little across background categories, the main exceptions being the relatively low percentages in women with the least education. There are much wider differences among groups using traditional methods. Interestingly, the use of any traditional method is significantly more common in urban areas than in rural places, at 16 per cent, the percentage using traditional methods being highest of all among women with a university education.

According to the Reproductive Health Survey 1998[12] conducted by the National Statistical Office, covering 6000 households, contraceptive use was highest among married women of reproductive age. The current survey revealed that 84 of reproductive age women use some contraceptive method, and among these 74 percent reported that they use modern contraceptive methods. The most common method was IUD and more than half of women-respondents said that they (56 per cent) use IUD. The next popular method was condoms (29 per cent) and the pill (22 per cent). These two surveys both show that among the most popular methods are IUD and pills, although the figures with reference to condoms are different.

G..2. 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. Prenatal 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 to be treated for existing conditions, such as anemia.

The MICS survey found that 97 per cent of the 1,515 women of reproductive age who gave birth in the year prior to the survey received prenatal care from professional medical practitioners (Table 38). Of these practitioners, 91 per cent were doctors and 5 per cent were feldshers (community health workers), midwives or nurses. Over all geographic and educational categories, doctors provided prenatal care in 85-95 per cent of pregnancies, and some form of skilled professional assistance was provided in 90 per cent or more of the cases.

G..3. Assistance at delivery

[12] Reproductive Health Survey Report 1998 (NSO/MOH/UNFPA/UNICEF) Ulaanbaatar, 1998

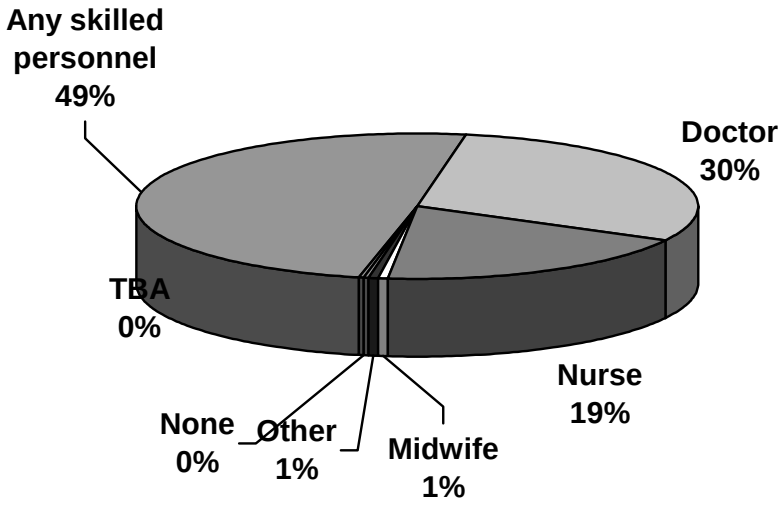
Goals. ***Global: Access by all pregnant women to pre-natal care, trained attendants during child birth and referral facilities for high-risk pregnancies and obstetric emergencies. National: 75 % of pregnant women with pre-natal care during the first trimester of pregnancy, 100% deliveries supervised by doctors and midwives.***

The provision of delivery assistance by skilled attendants can greatly improve outcomes for mothers and children through the use of technically appropriate procedures and by accurate and speedy diagnosis and treatment of complications. Table 39 presents the survey's findings on assistance during delivery. Again, the respondents were those women, aged 15-49, who gave birth in the previous 12 months, of whom 97 per cent had antenatal care.

As with antenatal care, the proportion of births assisted by skilled medical personnel is very high. Across virtually all-geographic and educational categories, the figure is 95 per cent or more. The only significant exception is the very small group of women with no formal schooling, with only 80 per cent of deliveries assisted by skilled personnel. However, this educational category includes only 10 births, so the finding may not be significant. Skilled assistance at delivery is assistance provided by a doctor, nurse or midwife. Skilled personnel delivered about 97 per cent of births occurring in the 12 months prior to the MICS survey. There are considerable differences among regions and between urban and rural locations. Two-thirds or more of obstetric cases in Central-1 and Central-2 regions, and roughly half in Western, Northern and Eastern regions, were attended by doctors, but, in the Southern region, doctors provided assistance in only 38 per cent of the cases. Doctors attend two out of 3 urban deliveries., as compared with 53 per cent (just over half) in the countryside.

Accessibility, availability and quality of the prenatal and postnatal care are not sufficient in the country, especially in terms of rural health services. Mongolia is still among the countries with high maternal mortality. Causes of maternal mortality are pre-eclampsia, post-pregnancy toxication, other diseases combined with pregnancy, bleeding, infection etc. The supply of essential drugs is not enough, and the drug management system, and the supply and service system do not meet modern requirements.

Figure 22: Percent distribution of women who gave birth in the year prior to the survey by type of personnel assisting at delivery, Mongolia, 2000



H.. Child Rights and Children in difficult circumstances

Goals. W: Improved protection of children in especially difficult circumstances, N: Formulate legislation to increase social service coverage for families & children.

H..1. Birth Registration

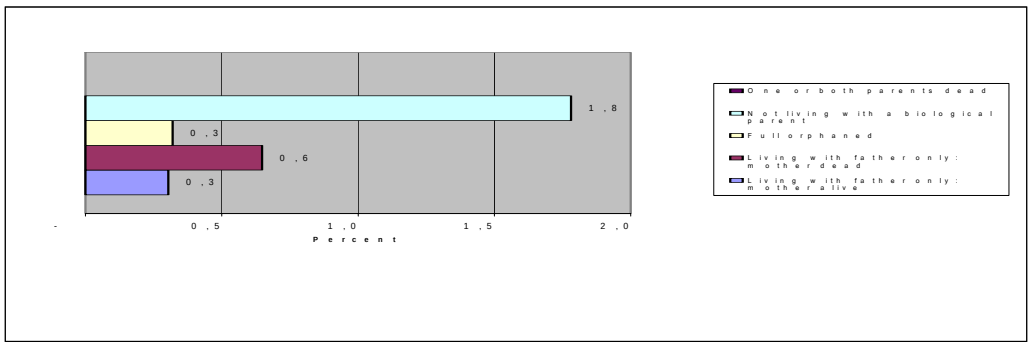
The Convention on the Rights of the Child emphasizes the right of every child to a name and a nationality and to the right of protection from being deprived of his or her identity. Birth registration is a fundamental basis for securing these rights. Data from the Child and Development Survey (MICS) revealed that about 98 per cent of children aged 0-59 months have been registered (Table 40). There is very little variation across sex, region, urban-rural residence or educational categories. The survey findings do indicate, however, that a significant proportion of children are not registered at or soon after birth. Only 85 per cent of children under 6 months of age were found to be registered. But this delay is not prolonged; for children aged 2 and above, essentially all (99+ per cent) have been registered.

H..2. Orphans and neglected children

Children who are orphaned or neglected by their parents may be at increased risk of impoverishment, discrimination, denial of property or inheritance rights, or may be subject to various forms of abuse, neglect, and exploitation.

Monitoring the level of orphanhood and the living arrangements of children assists in identifying those who may be at risk and in tracking changes over time. In Mongolia, of 12,806 children, aged 0-14, who are covered by the survey, 80 per cent are living with both biological parents, and less than 2 per cent do not live with a biological parent (Table 41). In the case of the 17 per cent of children living with only one parent, it is much more likely that this parent will be the mother. Sixteen per cent of children are living with their mother only. Among these, the fathers of 4 per cent of the children are dead, while the fathers of 12 per cent are still alive. By contrast, the mothers of only 0.3 per cent of the children who are living only with their father, are still alive. The incidence of orphaned children aged 5-9 is 0.1 per cent, rising to about 0.7 per cent for children aged 10-14. According to the findings of the survey, 0.3 per cent of children under 5 years are fully orphaned.

Figure 23: Children 0-14 years of age, not living with parents. Mongolia, 2000

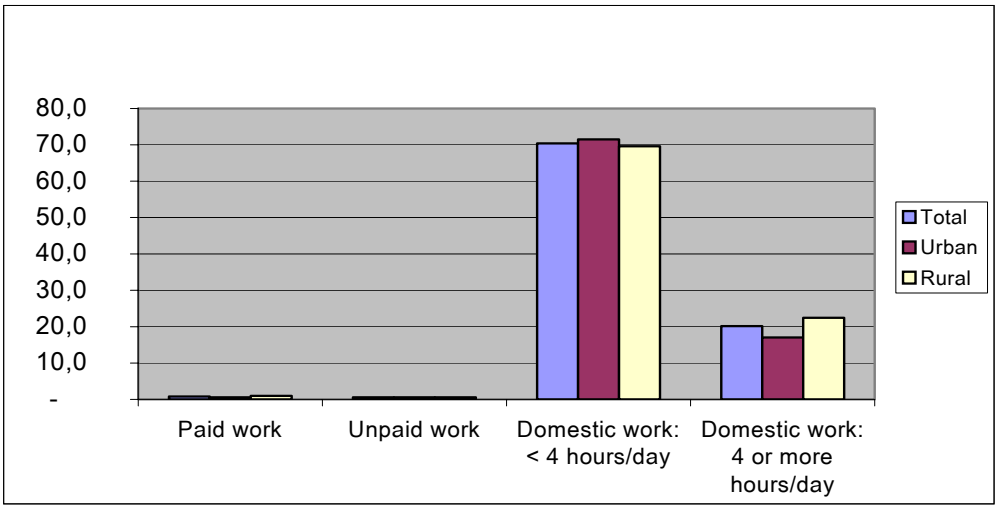


H..3. Child Labor

It is important to monitor the extent to which children work and the type of work they do, for several reasons. Children who are working are less likely to attend school and more likely to drop out. They can be trapped in a cycle of poverty and disadvantage from an early age. Conditions of labor for children are often unregulated, with few safeguards against potential abuse. In addition, many types of work are hazardous, including jobs involving exposure to chemicals and those requiring the lifting of heavy weights.

Data gathered in the current MICS survey on the number of children aged 5-14 who were working, and on some of the characteristics of that work, are presented in Table 42. The survey finds that nearly all children help out with domestic work. However, for 70 per cent of the children this type of work requires less than 4 hours per day, though for about 20 per cent, domestic work was reported to require 4 or more hours per day.

Figure 24: Percentage of children 5-14 years who are working . Mongolia, 2000



Overall, the survey estimates that 1.4 per cent of children between 5 and14 years of age are engaged in paid or unpaid work for someone other than a household member. There are some differences among regions, with paid work for children in the Eastern region and in soum centers nationwide at more than twice the level for the country as a whole. Older children, aged 10-14, are much more likely to be involved in paid work than those in the

younger age group. For domestic work requiring less than 4 hours per day there appear to be no major geographical differences, though a greater than average proportion of children in the Southern region are engaged in this category of work, and in the Western region the proportion is somewhat lower than average. There is more variability for domestic work of 4 or more hours per day, which involves relatively small percentages of children in the Southern and Central-2 regions and significantly larger than average percentages in the Western and Eastern regions. Children aged 10-14 are much more likely to be working for 4 or more hours per day than are the younger children.

Children working for someone other than a household member, whether paid or not, are 70 per cent in rural areas, out of which 35 per cent are working with livestock and 20 per cent work on the farms.

V. Appendix A: Tables

VI. Appendix B: Sample Design

VII. Appendix C: List of Personnel Involved in the Mongolian MICS-2.

VIII. Appendix D: Questionnaires