

**STATE PLANNING COMMITTEE**  
NATIONAL STATISTICAL CENTER

PRELIMINARY REPORT  
FOR  
**MULTIPLE INDICATOR CLUSTER SURVEY,  
2000**

Funded by : United Nations Children's Fund  
(UNICEF)

Vientiane, September, 2000

## **Preface**

The National Health Survey for 2000 was a sample survey, which covered the whole country and can be analysis by regional. The survey is carried out by the National Institute of Public Health (NIOPH), Ministry of Health and the National Statistical Center (NSC) under the State Planning Committee. The survey was mainly financial and technical supported by UNICEF-Laos Office. In addition, it was also supported by the MOH, WHO, WFP, Lao-EU Malaria Program, GTZ, and JICA.

This report presents some result of this survey and called "Multiple Indicator Cluster Survey (MICS), display some situation of mother and children.

The National Statistical Center would like to thanks all of donors and International agency, especially to UNICEF support all finance and the technical in this study for great success.

The National Statistical Center appreciate all suggestions and comments from users, so that we can improve in the future.

We hope to receive kind cooperation from all users,

Vientiane, September, 2000

Director of National Statistical Center

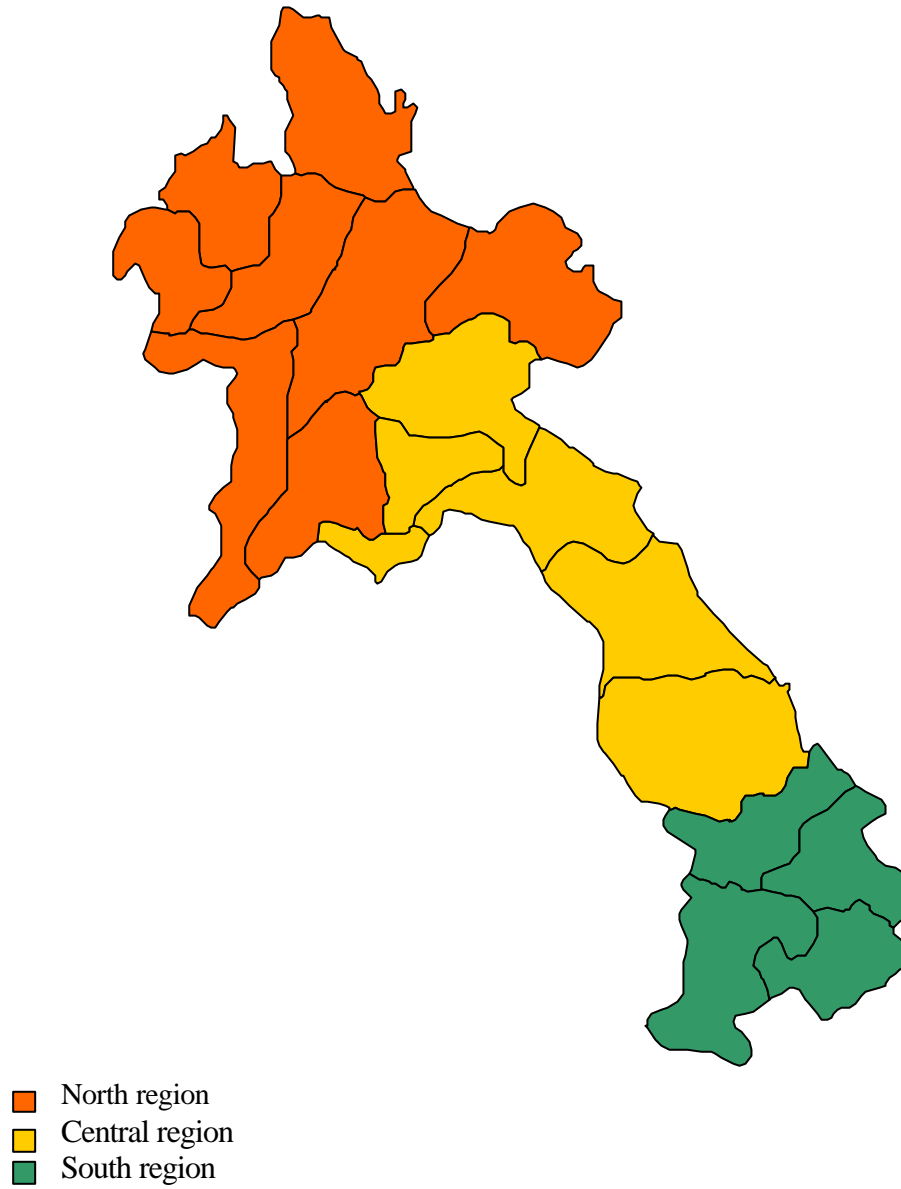
**Bounthavy SISOUPHANTHONG**

## Contents

•	Preface	1
•	Content	2
•	Summary Indicators for MICS II	3
•	Lao map by region	4
I.	Background	5
II.	Survey objective	6
III.	Survey organization	6
IV.	Sample and survey methodology	6
	4.1. Sample design	6
	4.2. Questionnaire	6
	4.3. Training and field work	7
	4.4. Data processing	7
	4.5. Sample coverage	8
V.	Result	
	Primary School Attendance	8
	Water and Sanitation	8
	Breast-feeding	10
	Vitamin A supplementation	10
	Salt iodination	11
	Immunization coverage	11
	Assistance at delivery	12
	Birth registration	12
VI.	Appendix (result tables)	

<b>Summary Indicators for MICS II, 2000</b>			
	<b>Indicators</b>		<b>MICS II (2000)</b>
1	Under-five mortality rate	Children under 5	97 per 1000 (1)
2	Infant mortality rate	Infant under 1	75 per 1000 (1)
3	Maternal mortality ratio	Mother 15-49	500 per 100,000 (1)
4	Use of safe drinking water	Household	51.8
5	Use of sanitary means of excreta disposal	Household	37.2
6	Attending primary school	Children 5-12	92.3
7	Literacy rate	Population 15 more	69.8
8	Antenatal care	Mother 15-49	28.7
9	Iodized salt consumption	Household	71.1
10	Children receiving Vitamin A supplementation	Children under 5	40.5
11	Mothers receiving Vitamin A supplementation	Mother 15-49	4.4
12	Exclusive breastfeeding rate	Children under 5	27.6
13	DPT immunization coverage (3)	Child age 12-23 months	54.0
14	Measles immunization coverage	Child age 12-23 months	53.7
15	Polio immunization coverage (3)	Child age 12-23 months	56.9
16	BCG	Child age 12-23 months	85.1
17	ORT use	Children under 5	33.9
18	Birth registration	Children under 5	60.1
19	Knowledge of preventing HIV/AIDS		52.8 (1)
20	Knowledge of mother to child transmission on AIDS		14.8 (1)
21	Attitude to people with HIV/AIDS		24.7 (1)
	Remark : (1) Data from Reproductive Health Survey, 2000		

# LAO PEOPLE'S DEMOCRATIC REPUBLIC



## I. Background

The Government of Lao PDR gives highest priority to upgrading conditions and providing opportunities for the full development of the country's children. In 1979, the Action Committee for the International Year of Child was established and played an active role in promoting the well being of children. The Lao PDR participated in the World Summit for Children in 1990. The Summit Declaration and Plan of Action were signed by Lao representatives on 4 July 1991 and the Lao PDR acceded to the Convention of the Rights of child and in 1995 submitted its first report to the UN Committee of Child Rights. The National Commission for Mothers and Children was established in March 1992 to prepare and oversee the implementation of the Lao PDR Programme of Action for children.

The National Programme of Action some target goals to reach from 1990 to 2000 such as high immunization coverage, the elimination of neonatal tetanus, measles reduction, polio elimination, universal salt iodization, the usage of ORT, the strengthening of basic education, and increased access to safe drinking water. The Mid-Decade Goals (MDGs) were as follows:

- Elevation of immunization coverage of six antigens of the EPI (diphtheria, pertussis, tetanus, measles, poliomyelitis, and tuberculosis) to 80% or more in all countries.
- Elimination of neonatal tetanus.
- Reduction by 90 in measles deaths and reduction by 90% of measles cases eradication of measles in the longer run
- Elimination of poliomyelitis in selected countries and regions, as a contribution towards global eradication.
- Ensuring that at least 80% of all children under 24 months of age living in area with inadequate vitamin A intake receive adequate vitamin A through a combination of breast-feeding, dietary improvement, fortification, and supplementation.
- Achieving universal iodization of salt in all countries in which IDD is a public health problem.
- Achievement of 80% usage of ORT (increased fluids) and continued feeding as part of the programme to control diarrhea diseases.
- Ending and preventing free and low-cost supplies of breast-milk substitutes in all hospitals and maternity facilities. Having target hospitals and maternity facilities achieve "baby-friendly" status in accordance with BFHI global criteria.
- Universal ratification of the Convention on the Right of Child.
- Reduction of 1990 levels of severe and moderate malnutrition by one fifth or more.
- Strengthening basic education so as to achieve reduction by one-third of the gap between
  - (a) primary school enrolment and retention rates in 1990 and universal enrolment and retention in primary education of at least 80% of school-age children, and
  - (b) primary school enrolment and retention rates of boys and girls in 1990.

- Increasing water supply and sanitation so as to narrow the gap between the 1990 levels and universal access by the year 2000 of water supply by one-fourth and sanitation by one tenth.

## **II. Survey Objectives**

The 2000 Lao PDR National Health Survey especially MICS II has as its primary objectives:

- To provide up-to-date information for assessing the situation of children and women in the Lao PDR at the end of the decade and for looking forward to the next decade;
- To furnish data needed for monitoring progress toward goals established at the World Summit for Children and as a basis for future action;
- To contribute to the improvement of data and monitoring systems in the Lao PDR and to strengthen technical expertise in the design, implementation, and analysis of such systems.

## **III. Survey Organization**

The National Health Survey for 2000 including MICS II was a sample survey, which covered the whole country and can be analysis by regional. The survey was undertaken under the overall control of the Survey Steering Committee which comprised representatives of the National Institute of Public Health (NIOPH), Ministry of Health and the National Statistical Center (NSC) under the State Planning Committee. The Inter-ministerial working group was created to facilitate the whole work during the survey. This working group prepared the methodology and the procedure of the survey, chose the number of supervisors and enumerators at the central and local level, and also the composition of those colleagues from the statistical and health organization. The working group also prepared the logistic and training activities at two levels: the training of supervisors and trainer in Vientiane Municipality, and the training of enumerators in 3 regions. At least the two trainers were from the NSC and the Ministry of Health.

## **IV. Sample and Survey Methodology**

### ***4.1. Sample Design***

The sample for the National Health Survey, 2000 including MICS II was designed to provide estimates of health indicators at the national level, for urban and rural areas, and for three regions: North, Central, and South. The sample was selected in two stages.

The design was a two stage sampling. A 1999 population listing of villages for the Agricultural Census 1998/99 and the current list of households kept by village heads were used as the sample frame. The sample covered all 16 provinces, 1 municipality and 1 special zone.

- *First stage Sampling*

At the first stage, the samples were selected with probability proportional to estimation size (PPES). This entailed compiling a list of the area units with the latest estimates of their household sizes (based on the Agricultural Census 1998/99), which were assumed to be directly proportionate to the current number of children in the target group. Within each province, administrative districts were arranged geographically. 128 districts and 264 villages were included in the sample. The cluster identified from the PPES selection procedure were then visited by interviewers who carried out the second stage of selection.

- *Second stage Sampling*

Within each sample village, the fixed number of 25 households was selected. All the households in the village were on the household listing form, and the first household was chosen by random selection. Then the other 24 households were chosen by using the Standard Systematic Sampling (SSS) technique by intervals.

## **4.2. Questionnaires**

In addition to a household questionnaire, questionnaires were administered in each household for women aged 15-49 who have the children under five and children under age five. The questionnaires are based on the MICS model questionnaire with the inclusion of the sources of food, food habit, food frequency, sources of household income, acute illness, and care of illness modules. Moreover, it also includes examinations i.e. eye and goiter examinations, blood tests for malaria and hemoglobin, for serum retinol, and urine test for iodine level. From the MICS model English version, the questionnaires were translated into Lao version. The questionnaires were pre-tested during the third week of January 2000. Based on the results of the pre-test, modifications were made to the wording and translation of the questionnaires.

## **4.3. Training and field work**

The field supervisors were trained for five days during the second week of February 2000, and the field interviewers in each region were trained for five days during the subsequent week. The data were collected by twenty-six teams; each was comprised of one supervisor, two interviewers, one measurement staff, and one laboratory technician. Overall supervision was provided by the Project team at Central level, which consisted of the principal investigators and members from the NIOPH and the NSC. The field work began in the beginning of March 2000 and concluded in the end of April 2000.

## **4.4. Data processing**

In order to ensure quality control, all questionnaires were double checked (first checked by provincial supervisors, and second checked by central supervisors). Data were entered on ten computers using the EPIINFO software and SPSS software for analysis. Internal consistency checks were performed prior to file linkage.



Procedures and standard programs developed under MICS and adapted to the questionnaire were used throughout. Data processing began in mid July 2000 and finished in end of September, 2000.

#### **4.5. Sample Coverage**

Of the 6,600 households selected for the sample, 6,498 were found to be occupied. Of these, 6,498 were successfully interviewed for a household response rate of 98.5 percent. In the interviewed households, 3,720 eligible women (age 15-49) were identified. Of these, 3,657 were successfully interviewed, yielding a response rate of 98.3 percent. In addition, 5,212 children under age five were listed in the household questionnaire. Of these, questionnaires were completed for 5,158 for a response rate of 99 percent.

## **V. Results**

### ***Primary School Attendance***

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

Overall, 62.4 percent of children of primary school age in Lao People's Democratic Republic are attending primary school (Table 4). In urban areas, 81.2 percent of children attend school while in rural areas 52.8 percent. School attendance in the South is significantly lower than in the rest of the country at 57.4 percent.

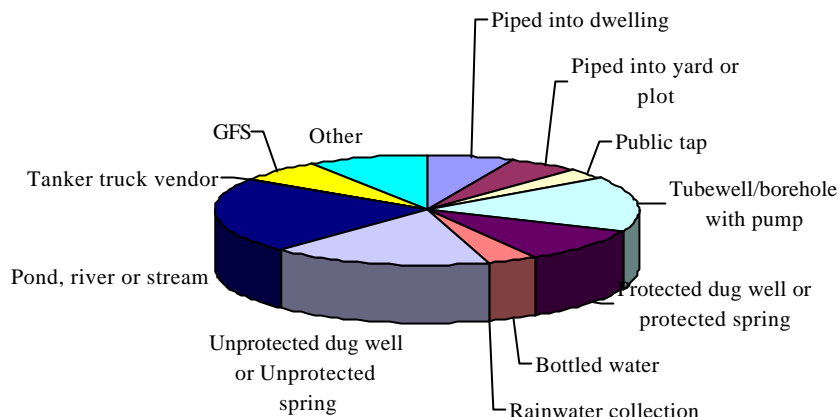
The percentage is not high about 2-3 percent for disparities in the achievement of grade to grade. The highest about 3.1 percent of children who enter grade four reach grade five. And about 3.3 percent of the female who enter grade four reach grade five while male only 2.3 percent. The central region is the best about 1.5 percent of those entering grade four reach grade five (table 5).

### ***Water and Sanitation***

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

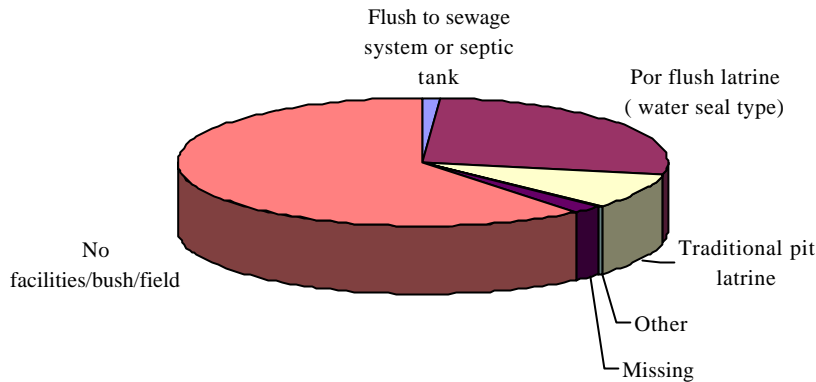
The distribution of the overall population by source of drinking water is shown in Figure 1. about 6.8 percent of the population uses drinking water from that is piped into their dwelling and 5.3 percent used water piped into their yard or plot. Rainwater collection and rivers and streams are also important sources of drinking water.

The source of drinking water for the population varies strongly by region (Table 6). In the Central region, 9.3 percent of the population uses drinking water that is piped into their dwelling or into their yard or plot. In the South regions, 16.6 percent use piped water.



The population using *safe drinking water* sources are those who use any of the following types of supply: piped water, public tap, bore-hole/tubewell, protected well, protected spring or rainwater. Overall, 51.8 percent of the population has access to safe drinking water – 76.4 percent in urban areas and 42.3 percent in rural areas.

Inadequate disposal of human excreta and personal hygiene is associated with a range of diseases including diarrhea diseases and polio. *Sanitary means of excreta disposal* include: flush toilets connected to sewage systems or septic tanks, other flush toilets, improved pit latrines, and traditional pit latrines. 37.2 percent of the population is living in households with sanitary means of excreta disposal (Table 7). This percentage is 77 in urban areas and 21.6 percent in rural areas. Residents of the South are much less likely than others to use sanitary means of excreta disposal. Most of this population uses rivers, bush, fields, or has no facilities.



**Breast-feeding**

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

In Table 9, breast-feeding status is based on women’s reports of children’s consumption in the 24 hours prior to the interview. *Exclusive breast-feeding* refers to children who receive only breast milk and vitamins, mineral supplements, or medicine. *Complementary feeding* refers to children who receive breast milk and solid or semi-solid food. The last two columns of the table include children who are continuing to be breastfed at one and at two years of age. Percentages according to region and mother’s education are not shown due to small sample sizes. For the same reason, the sex and urban-rural residence breakdowns should be interpreted with caution.

Approximately 28.1 percent of children aged less than four months are exclusively breastfed, a level considerably lower than recommended. At age 6-9 months, 9.9 percent of children are receiving breast milk and solid or semi-solid foods. By age 12-15 months, 82.5 percent of children are still being breastfed and by age 20-23 months, 46.5 percent are still breastfed. Boys were more likely to be exclusively breastfed than girls, while girls had higher levels than boys for timely complementary feeding.

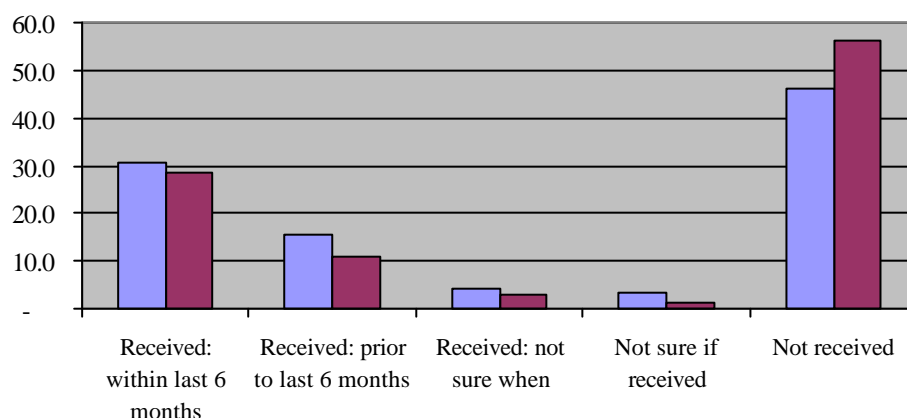
**Vitamin A Supplementation**

Vitamin A deficiency (VAD) impairs children's immune systems, increasing their chances of dying of common childhood diseases and undermines the health of

pregnant and lactating women. It can also cause eye damage and blindness in children. Yet it can be easily prevented by vitamin A supplementation or food fortification. UNICEF and WHO recommend that all countries with an under five mortality rate exceeding 70 per 1000 live births, or where vitamin A deficiency is a public health problem, should put in place a programme for control of vitamin A deficiency. Based on UNICEF/WHO guidelines, the Lao People’s Democratic Republic Ministry of Health recommends that children aged 6-12 months be given one dose Vitamin A capsule of 100,000 IU every six months, and children older than one year be given one high dose of 200,000 IU every six months.

Within the six months prior to the MICS, 40.5 percent of children aged 6-59 months received the high dose Vitamin A supplement (Table 10). Approximately 11.7 percent did not receive the supplement in the last 6 months but did receive one prior to that time. Vitamin A supplementation coverage is lower in the South than in other regions.

The age pattern of Vitamin A supplementation shows that supplementation in the last six months rises from 18.7 percent among children aged 6-11 months to 28.7 percent among children aged 12-23 months.



### **Salt Iodization**

Deficiency of iodine in the diet is the world’s single greatest cause of preventable mental retardation and can lower the average intelligence quotient (IQ) of a population by as much as thirteen points. Salt iodization is an effective, low-cost way of preventing iodine deficiency disorders (IDD). *Adequately iodized salt* contains 15 ppm (parts per million) of iodine or more. In MICS, interviewers tested household salt for iodine levels by means of a testing kit.

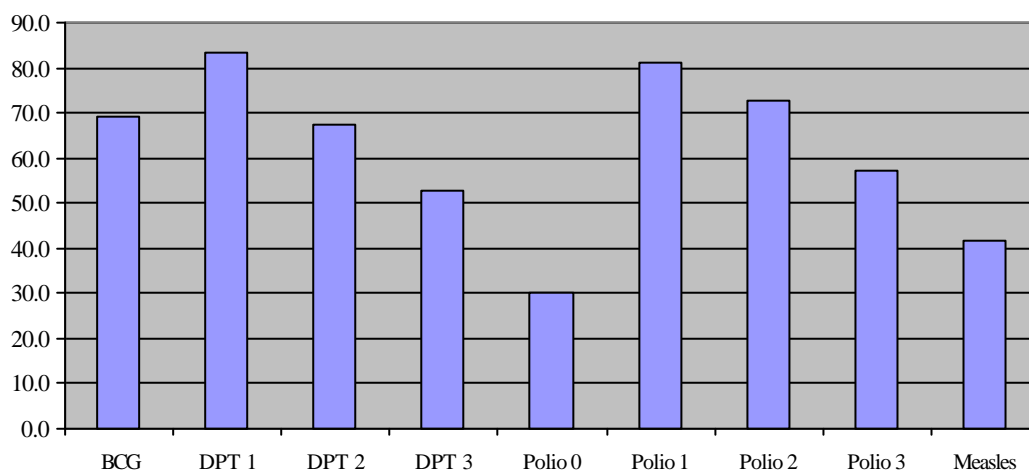
Approximately 94.3 percent of households had salt which was tested during the MICS (Table 11). Among households in which salt was tested, 71.1 percent had adequately used iodized salt. The percentage of households with adequately iodized salt ranges from 67.5 percent in the South to 75.7 percent in the North region. Eighty one percent of urban households had adequately used iodized salt compared to 68.3 percent of rural households.

### **Immunization Coverage**

According to UNICEF and WHO guidelines, a child should receive a BCG vaccination to protect against tuberculosis, three doses of DPT to protect against diphtheria, pertussis, and tetanus, three doses of polio vaccine, and a measles vaccination by the age of 12 months. In MICS II, mothers were asked to provide vaccination cards for children under the age of five. Interviewers copied vaccination information from the cards onto the MICS questionnaire.

Table 12 shows the percentage of children aged 12 to 23 months who received each of the vaccinations. The denominator for the table is comprised of children aged 12-23 months so that only children who are old enough to be fully vaccinated are counted. In the top panel, the numerator includes all children who were vaccinated at any time before the survey according to the vaccination card. In the bottom panel, only those who were vaccinated before their first birthday are included.

Approximately 69.3 percent of children aged 12-23 months received a BCG vaccination by the age of 12 months and the first dose of DPT was given to 83.2 percent. The percentage declines for subsequent doses of DPT to 67.5 percent for the second dose, and 52.8 percent for the third dose (Figure 3). Similarly, 81.2 percent of children received Polio 1 by age 12 months and this declines to 57.1 percent by the third dose. The coverage for measles vaccine by 12 months is lower than for the other vaccines at 41.8 percent.



### **Assistance at Delivery**

The provision of delivery assistance by skilled attendants can greatly improve outcomes for mothers and children by the use of technically appropriate procedures, and accurate and speedy diagnosis and treatment of complications. *Skilled assistance at delivery* is defined as assistance provided by a doctor, nurse, or midwife. About 21.4 percent of births occurring in the year prior to the MICS survey were delivered by skilled personnel (Table 15). This percentage is highest in the Central region at 28.8 percent and lowest in the North at 16.4 percent. The more educated a woman is, the more likely she is to have delivered with the assistance of a skilled person.

Only 2.9 percent of the births in the year prior to the MICS survey were delivered with assistance by a midwife. Doctors assisted with the delivery of 10.5 percent of births and nurses assisted with 7.9 percent. In the South, about 32.3 percent by traditional birth attendants.

### ***Birth Registration***

The International Convention on the Rights of the Child states that every child has the right to a name and a nationality and the right to protection from being deprived of his or her identity. Birth registration is a fundamental means of securing these rights for children. The births of 60.1 percent of children under five years in Lao People's Democratic Republic have been registered (Table 16). There are no significant variations in birth registration across sex, age, or education categories. Children in the South are somewhat less likely to have their births registered than other children but this appears to be due primarily to a relatively large proportion of mothers who do not know if their child's birth was registered. Among those whose births are not registered, cost, travel distance, and lack of knowledge do not appear to be the main reasons.

## Appendix

(Result tables)