Thailand

Monitoring the situation of children and women

Multiple Indicator Cluster Survey 2012

NSO
National Statistical Office

UNICEF
United Nations Children's Fund

MOPH
Ministry of Public Health

NHSO
National Health Security Office

THPF
Thai Health Promotion Foundation

IHPP
International Health Policy Program

MICS

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November 2013

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Preface

The National Statistical Office (NSO) conducted the Thailand 2012 Multiple Indicator Cluster Survey (MICS), which was part of MICS4 programme, between September and November 2012. This was the second such survey, following the earlier survey being part of MICS3 programme, which was carried out between December 2005 and February 2006 in collaboration with the Ministry of Public Health, the Ministry of Education, the Ministry of Social Development and Human Security and the United Nations Children's Fund (UNICEF). For Thailand 2012 MICS, the National Statistical Office's aims were to obtain updated information on the situation of children and women, including various key indicators that allow countries to monitor progress towards the Millennium Development Goals (MDGs), A World Fit for Children (WFFC) and other internationally agreed upon commitments. The data/information obtained from Thailand 2012 MICS can be used by government organizations in their evidence-based plans and policies regarding children and women. Additional information on the global MICS project may be obtained from www.childinfo.org.

The National Statistical Office would like to take this opportunity to express its gratitude to the United Nations Children's Fund (UNICEF), the Ministry of Public Health, the Ministry of Education, the Ministry of Social Development and Human Security, the Thai Health Promotion Foundation, the National Health Security Office, the International Health Policy Program, Thailand (IHPP) and Academic Institutes (Institute for Population and Social Research: Mahidol University, College of Population Studies: Chulalongkorn University) for their financial and technical support.

National Statistical Office

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List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ASFR	Age-specific fertility rate
BCG	Bacillis-Cereus-Geuerin (Tuberculosis)
CBR	Crude birth rate
CSPro	Census and Survey Processing System
DPT	Diphtheria Pertussis Tetanus
EPI	Expanded Programme on Immunization
GFR	General fertility rate
GPI	Gender Parity Index
HepB	Hepatitis B
HIV	Human Immunodeficiency Virus
IDD	Iodine Deficiency Disorders
IHPP	International Health Policy Program
IUD	Intrauterine Device
JMP	Joint Monitoring Programme
LAM	Lactational Amenorrhea Method
MDG	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
MICS4	Fourth global round of Multiple Indicator Clusters Surveys programme
MoPH	Ministry of Public Health
NAR	Net Attendance Rate
NHSO	National Health Security Office
NSO	National Statistical Office
ORT	Oral rehydration treatment
ppm	Parts Per Million
SPSS	Statistical Package for Social Sciences
STIs	Sexually transmitted infections
TFR	Total fertility rate
UNAIDS	United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNGASS	United Nations General Assembly Special Session on HIV/AIDS
UNICEF	United Nations Children's Fund
WFFC	World Fit for Children
WHO	World Health Organization

Summary Table of Findings

Multiple Indicator Cluster Survey and Millennium Development Goal Indicators, Thailand, 2012

Multiple Indicator Cluster Survey and Millennium Development Goal Indicators, Thailand, 2012											
Topic	**Indicator Number**		**Indicator**	Whole Kingdom	Bangkok	Central	North	North-east	South	Value
	MICS4	**MDG**								
NUTRITION										
			Underweight prevalence							
Nutritional status	2.1a		Moderate and Severe (- 2 SD)	9.2	7.9	7.3	7.8	10.7	10.0	%
	2.1b	*1.8*	Severe (- 3 SD)	2.1	2.4	1.7	1.4	2.5	2.3	%
			Stunting prevalence							
	2.2a		Moderate and Severe (- 2 SD)	16.3	16.2	13.6	13.8	18.9	16.7	%
	2.2b		Severe (- 3 SD)	5.9	6.4	5.3	3.5	7.1	6.1	%
			Wasting prevalence							
	2.3a		Moderate and Severe (- 2 SD)	6.7	6.7	6.5	6.1	6.5	8.2	%
	2.3b		Severe (- 3 SD)	2.2	1.9	2.3	1.8	2.3	2.6	%
Breastfeeding and infant feeding	2.4		Children ever breastfed	96.8	93.7	95.8	97.6	97.7	97.6	%
	2.5		Early initiation of breastfeeding	46.3	29.2	40.9	49.6	47.0	60.9	%
	2.6		Exclusive breastfeeding under 6 months	12.3	8.2	7.9	19.6	13.8	12.2	%
	2.7		Continued breastfeeding at 1 year	32.4	23.0	27.6	21.6	38.1	40.5	%
	2.8		Continued breastfeeding at 2 years	17.8	12.5	17.3	13.4	18.0	24.2	%
	2.9		Predominant breastfeeding under 6 months	40.8	38.8	31.3	53.8	39.0	48.8	%
	2.10		Duration of breastfeeding	6.5	4.6	5.5	7.7	7.6	9.4	months
	2.11		Bottle feeding	72.7	83.2	79.3	67.5	73.0	61.0	%
	2.12		Introduction of solid, semi-solid or soft foods	74.8	(*)	87.4	71.7	75.4	72.5	%
	2.13		Minimum meal frequency	77.5	86.7	84.6	76.8	74.8	70.8	%
	2.14		Age-appropriate breastfeeding	20.9	10.9	17.9	21.3	23.2	24.6	%
	2.15		Milk feeding frequency for non-breastfed children	98.4	97.9	99.2	95.2	99.2	98.9	%
Salt iodization	2.16		Iodized salt consumption	70.9	82.1	79.9	77.3	54.0	80.1	%
Low birth weight	2.18		Low-birthweight infants	7.6	6.3	6.0	8.9	9.3	6.7	%
	2.19		Infants weighed at birth	99.0	98.8	98.7	99.3	99.3	98.7	%
CHILD HEALTH										
Vaccinations	3.1		Tuberculosis immunization coverage	97.5	-	-	-	-	-	%
	3.2		Polio immunization coverage	89.0	-	-	-	-	-	%
	3.3		Immunization coverage for diphtheria, pertussis and tetanus (DPT)	87.9	-	-	-	-	-	%
	3.4	*4.3*	Measles immunization coverage	91.9	-	-	-	-	-	%
	3.5		Hepatitis B immunization coverage	80.7	-	-	-	-	-	%
Tetanus toxoid	3.7		Neonatal tetanus protection	75.9	84.9	76.9	75.0	71.9	77.4	%
Care of illness	3.8		Oral rehydration therapy with continued feeding	52.7	60.3	56.7	42.5	55.8	50.4	%

Multiple Indicator Cluster Survey and Millennium Development Goal Indicators, Thailand, 2012											
Topic	**Indicator Number**		**Indicator**	Whole Kingdom	Bangkok	Central	North	North-east	South	Value	
	MICS4	**MDG**									
	3.9		Care seeking for suspected pneumonia	83.3	(*)	(62.0)	(76.0)	95.5	(*)	%	
	3.10		Antibiotic treatment of suspected pneumonia	45.4	(*)	(57.3)	(48.5)	41.8	(*)	%	
Solid fuel use	3.11		Solid fuels	26.1	0.5	5.2	35.7	53.7	2.2	%	
WATER AND SANITATION											
Water and sanitation	4.1	*7.8*	Use of improved drinking water sources	97.0	100.0	98.6	94.6	98.8	89.6	%	
	4.2		Water treatment	13.5	-*	3.3	11.8	7.4	19.1	%	
	4.3	*7.9*	Use of improved sanitation	97.2	94.9	98.5	97.5	96.9	97.0	%	
	4.4		Safe disposal of child's faeces	56.9	44.7	53.1	67.1	63.0	44.5	%	
REPRODUCTIVE HEALTH											
Contraception and unmet need	5.1	*5.4*	Adolescent birth rate	60	45	60	47	73	53	per 1,000	
	5.2		Early childbearing	13.0	12.2	14.3	15.0	14.6	7.9	%	
	5.3	*5.3*	Contraceptive prevalence rate	79.3	75.7	81.3	81.4	81.7	69.7	%	
	5.4	*5.6*	Unmet need	6.9	8.2	5.7	5.7	5.5	12.7	%	
Maternal and newborn health			**Antenatal care coverage**								
	5.5a	*5.5*	At least once by skilled personnel	98.1	97.8	97.3	97.7	98.9	98.5	%	
	5.5b		At least four times by any provider	93.4	93.2	94.9	91.6	92.7	94.0	%	
	5.6		Content of antenatal care	98.0	96.6	97.1	98.5	98.6	98.9	%	
	5.7	*5.2*	Skilled attendant at delivery	99.6	99.7	99.9	99.0	99.8	99.2	%	
	5.8		Institutional deliveries	99.6	99.8	99.9	99.7	99.6	98.6	%	
	5.9		Caesarean section	32.0	42.6	38.6	32.8	23.9	29.8	%	

*100 per cent of the household population are using improved drinking water sources.

CHILD DEVELOPMENT											
Child development	6.1		Support for learning	92.7	93.5	92.7	90.7	93.4	92.9	%	
	6.2		Father's support for learning	35.3	48.1	41.9	35.8	24.8	43.2	%	
	6.3		Learning materials: children's books	42.7	62.4	47.7	43.4	33.8	45.2	%	
	6.4		Learning materials: playthings	70.8	66.3	69.5	68.8	70.3	78.4	%	
	6.5		Inadequate care	4.6	5.5	2.6	3.6	5.8	5.3	%	
	6.6		Early child development index	91.5	91.8	96.1	87.9	90.4	91.0	%	
	6.7		Attendance to early childhood education	84.4	66.3	77.8	90.9	91.0	81.4	%	
EDUCATION											
Literacy and education	7.1	*2.3*	Literacy rate among young women age 15-24 years	98.0	97.0	97.5	97.7	99.1	97.5	%	
	7.2		School readiness	100.0	100.0	100.0	99.9	100.0	100.0	%	
	7.3		Net intake rate in primary education	75.3	83.2	77.9	76.6	69.5	79.7	%	
	7.4	*2.1*	Primary school net attendance ratio (adjusted)	95.7	96.4	95.9	95.5	95.3	96.1	%	
	7.5		Secondary school net attendance ratio (adjusted)	78.8	82.0	77.4	80.7	80.8	71.3	%	
	7.6	*2.2*	Children reaching last grade of primary	99.5	99.4	98.4	99.8	100.0	99.4	%	
	7.7		Primary completion rate	106.8	108.6	122.4	122.6	94.3	100.4	%	
	7.8		Transition rate to secondary school	98.5	98.9	98.3	98.8	98.5	97.7	%	

Multiple Indicator Cluster Survey and Millennium Development Goal Indicators, Thailand, 2012										
Topic	**Indicator Number**		**Indicator**	Whole Kingdom	Bangkok	Central	North	North-east	South	Value
	MICS4	**MDG**								
	7.9	*3.1*	Gender parity index (primary school)	1.0	1.0	1.0	1.0	1.0	1.0	ratio
	7.10	*3.1*	Gender parity index (secondary school)	1.2	1.0	1.2	1.2	1.1	1.2	ratio
CHILD PROTECTION										
Birth registration	8.1		Birth registration	99.4	99.9	99.3	99.0	99.9	99.0	%
Early marriage	8.6		Marriage before age 15 among women age 15-49 years	2.7	2.5	2.8	2.8	2.7	2.4	%
	8.7		Marriage before age 18 among women age 20-49 years	14.7	11.6	12.1	14.6	19.1	12.8	%
	8.8		Young women age 15-19 years currently married or in union	16.3	12.3	16.4	15.1	18.4	15.4	%
			Spousal age difference							
	8.10a		women age 15-19 years	11.3	17.1	7.7	4.5	13.7	14.0	%
	8.10b		women age 20-24 years	13.1	12.5	15.0	16.9	11.8	9.2	%
Domestic violence	8.14		Attitudes toward domestic violence: women age 15-49 years	13.1	7.0	6.6	14.8	19.8	13.9	%
HIV/AIDS AND ORPHANED CHILDREN										
HIV/AIDS knowledge and attitudes	9.1		Comprehensive knowledge about HIV prevention among women age 15-49 years	52.4	51.9	60.0	55.6	48.3	43.9	%
	9.2	*6.3*	Comprehensive knowledge about HIV prevention among women age 15-24 years	55.7	51.1	61.5	59.8	56.0	45.1	%
	9.3		Knowledge of mother-to-child transmission of HIV among women age 15-49 years	74.0	63.8	80.7	72.9	74.9	69.9	%
	9.4		Accepting attitudes towards people living with HIV among women age 15-49 years	30.5	16.0	23.8	48.1	36.9	24.0	%
	9.5		Women who know where to be tested for HIV	81.4	85.1	86.4	83.3	75.3	80.4	%
	9.6		Women who have been tested for HIV and know the results	8.5	8.3	8.9	10.0	8.1	7.3	%
	9.8		HIV counselling during antenatal care	77.1	79.1	75.9	87.8	79.8	64.2	%
	9.9		HIV testing during antenatal care	72.8	82.9	78.7	83.6	69.1	55.1	%
Orphaned children	9.17		Children's living arrangements	22.8	13.0	18.5	23.2	31.2	12.5	%
	9.18		Prevalence of children with one or both parents dead	4.1	2.8	4.4	5.2	3.6	4.4	%
	9.19	*6.4*	School attendance of orphans	91.7	(*)	(*)	(*)	(*)	(*)	%
	9.20	*6.4*	School attendance of non-orphans	97.7	99.1	97.6	98.6	97.5	96.5	%

Notes

1) Figures denoted by an asterisk (*) are based on denominators of 24 un-weighted cases and less.
2) Figures shown in parenthesis (.) are based on denominators of 25-49 un-weighted cases.

Executive Summary

Nutrition

Nutritional Status

- About 16 per cent of children under 5 in Thailand suffer from stunting or are too short for their age, while almost 1 out of 10 (9 per cent) is moderately underweight. About 7 per cent of children are moderately wasted or too thin for their height.
- Children living in the Northeastern and Southern regions of Thailand are more likely to be underweight and stunted than other children. The prevalence of underweight (14 per cent) and stunting (34 per cent) are significant among children of mothers with no education. The age pattern shows that a higher percentage of children aged 0-5 months are undernourished according to three indices (18 per cent with underweight, 19 per cent with stunting and 16 per cent with wasting) in comparison to children who are older.
- Children from the poorest households have higher rates of stunting and underweight than those from the richest households.
- One in ten children (11 per cent) under 5 years of age is overweight. Children in the richest households and those who have mothers with higher education are more likely to be overweight. The largest populations of overweight children are concentrated in the Central region and Bangkok, with the smallest in the Northeastern region.

Breastfeeding

- Fewer than half of newborns (46 per cent) in Thailand are put to the breast within one hour of birth. Regional averages range from a high of 61 per cent in the South to a low of 29 per cent in Bangkok. Children born in the poorest households (51 per cent) are more likely to be breastfed within one hour of birth than those in the richest households (34 per cent).
- Only 12 per cent of infants under the age of 6 months receive the benefits of exclusive breastfeeding.
- The prevalence of exclusive breastfeeding for six months is particularly low in the Central region and Bangkok, at 8 per cent. The practice of exclusive breastfeeding is higher in Northern (20 per cent), Northeastern (14 per cent), and Southern (12 per cent) regions.
- Children born in the richest households are less likely to be exclusively breastfed (9 per cent) than those born in the poorest households (16 per cent).
- Girls (16 per cent) are more likely to be breastfed than boys (10 per cent).
- Only 24 per cent of children aged 6-23 months are being appropriately fed.

Salt Iodization

- Some 71 per cent of households consume adequately iodized salt. Around 87 per cent of the richest households consume adequately iodized salt compared to 54 per cent of the poorest households. Use of iodized salt was lowest in the Northeastern region at 54 per cent and highest in Bangkok at 82 per cent. More than two thirds (73 per cent) of municipal households were found to be using adequately iodized salt compared to only 69 per cent in non-municipal areas.

Low Birth Weight

- Some 8 per cent of all births are low birth weight. Children living in the Northern and Northeastern regions (9 per cent) are more likely to be born with low birth weight compared to the national average. There was no significant variation of low birth weight in municipal and non-municipal areas or by mother's education.

Child Health

Immunization Coverage

- Nearly all children (98 per cent) aged 12-23 months in Thailand received a BCG vaccination in the first year of life.
- All three doses of OPV (oral polio) and DPT were given to 89 per cent and 88 per cent of children, respectively. Some 92 per cent of children aged 12-23 months received a measles vaccine in the form of the measles-mumps-rubella (MMR) vaccine.
- Around 75 per cent of children had all eight recommended vaccinations on schedule.
- There are significant regional differences in immunization coverage. The lowest percentage of fully immunized children is in Bangkok at 63 per cent, and the highest is in the Northern region at 88 per cent. Children living in non-municipal areas (85 per cent) are more likely to be fully immunized than those in non-municipal areas (75 per cent).
- The findings also show that the percentage of fully immunized children in the poorest households (89 per cent) is much higher than for those living in the richest households (70 per cent).

Tetanus Immunization

- Overall, 76 per cent of women in Thailand received vaccines against tetanus during pregnancy, with 71 per cent receiving at least two doses during their last pregnancy.
- The highest proportion of women who are protected against tetanus is in Bangkok (85 per cent) and the lowest is in the Northeastern region (72 per cent).
- Significant differences are also observed by education level of mother and economic status of household.

Oral Rehydration Treatment

- Overall, 5 per cent of children under the age of 5 had diarrhoea in the two weeks preceding the survey, which is a relatively low rate. The prevalence of diarrhoea is higher among children living in non-municipal areas than in municipal areas, at 6 per cent versus 4 per cent.
- The use of oral rehydration salts or other recommended homemade fluids is low at 64 per cent, with significantly lower coverage in the Northern and Southern regions at 49 per cent.
- Only half of children (53 per cent) who had diarrhoea in the two weeks prior to the survey received ORT (or increased fluids) and continued feeding, with far fewer among those aged 0-11 months (37 per cent).

Care Seeking and Antibiotic Treatment of Pneumonia

- Only 2 per cent of children aged 0-59 months had suspected pneumonia during the two weeks preceding the survey and 83 per cent of those children were taken to an appropriate health care provider.

Solid Fuel Use

- Approximately one quarter of households (26 per cent) are using solid fuels for cooking with the proportion much higher among the poorest households (82 per cent). Use of solid fuels is quite common in the Northeastern region (54 per cent). The findings show that use of solid fuels in non-municipal areas is higher than in municipal areas. Overall, 11 per cent of households use wood and around 71 per cent use liquid petroleum gas (LPG) for cooking.
- Three quarters of households (75 per cent) cook either in a separate room used as a kitchen, outdoors, or in a separate building. One quarter of households (25 per cent) cook inside the dwelling.

Environment

Drinking Water

- Overall 97 per cent of households have access to improved drinking water and 99 per cent to improved sanitation facilities. There was no significant variation for either by region or residential areas.
- The main sources of drinking water are bottled and rain water. Municipal people prefer to use bottled water whereas non-municipal people use rain water.

Disposal of Children's Faeces

- Over half (57 per cent) of children's faeces are disposed of safely. The percentages are lowest in Bangkok and the Southern region (45 per cent). The richest households are more likely to throw their children's faeces into the garbage (50 per cent) compared to the poorest households (14 per cent).

Reproductive Health

Contraception

- The total fertility rate for the one year preceding the survey is 1.8 births per woman. Fertility is slightly higher in non-municipal areas (2.1 births per woman) than in municipal areas (1.5 births per woman). The findings show that the fertility rate among women with only primary education is significantly higher at 2.9 births per woman compared to the national average.
- The adolescent birth rate of women aged 15-19 is 60 births per 1,000 women. A very high rate of 224 births per 1,000 women is presented in women with primary education only and among the poorest households at 85 births per 1,000 women.
- Overall, 9 per cent of women aged 15-19 have already had a birth, 2 per cent are pregnant with their first child and 11 per cent have begun childbearing. Less than 1 per cent have had a live birth before age 15.
- Some 79 per cent of women aged 15-49 years currently married or in union are using (or their partner is using) a contraceptive method. Contraceptive usage is lowest among women in the Southern region at 70 per cent. Modern methods are more popular (77 per cent) than traditional ones (2 per cent). Women who have not given birth are less likely to use contraception than those who have already had a birth.

Unmet Need for Contraception

- About 80 per cent of women aged 15-49 who are currently married or in union have their need for contraception met; 17 per cent have their need met for spacing and 63 per cent for limiting births.
- Only 7 per cent of women married or in union have an unmet need for contraception in Thailand, with the highest percentages in the Southern region (13 per cent) and among adolescents aged 15-19 (12 per cent). The need for contraception is less satisfied among women in the Southern region (85 per cent) compared to other regions (above 90 per cent).

Antenatal Care

- Some 98 per cent of women aged 15-49 who gave birth in the two years preceding the survey received antenatal care, almost all of which was provided by skilled personnel.
- Coverage of antenatal care – at least four visits during pregnancy – is quite high at 93 per cent. Lower coverage is found among women with no education (87 per cent) and women living in the poorest households (86 per cent).

Assistant at Birth

- Nearly 100 per cent of births in the two years preceding the survey were delivered by professional health personnel. This includes 78 per cent assisted by a nurse or a mid-wife, 14 per cent by a medical doctor and 7 per cent by a health care centre staff. Only 0.1 per cent of women were assisted by a traditional birth attendant.

Child Development

- Some 93 per cent of children under 5 with an adult household member over 15 years of age engaged in at least four activities that promote learning and school readiness in the three days prior to the survey. The average number of activities was 5.4. The father's involvement in such activities was very low, at 1.1 activities. Children from the poorest households and mothers and fathers who are less educated are less likely to be involved in activities that promote learning.
- Around 43 per cent of children are living in households that have at least three children's books, with the lowest percentage in the Northeastern region at 34 per cent. Children living in the poorest households (24 per cent) are less likely to have children's books compared to those living in the richest households (71 per cent).
- More than two thirds (71 per cent) of children aged 0-59 months had two or more playthings at home.
- About 5 per cent of children were left with inadequate care during the week preceding the survey. This practice is particularly common among the poorest households (7 per cent).
- Some 92 per cent of children aged 36-59 months are developmentally on track in literacy-numeracy, physical, social-emotional, and learning domains. The percentage of children on track in literacy and numeracy is the lowest at 63 per cent, compared to children on track in the physical (97 per cent), social-emotional (87 per cent) and learning (97 per cent) domains. The findings show that children attending an early childhood development programme have higher rankings in the Early Childhood Development Index compared to those who are not attending, at 94 per cent versus 77 per cent.

Education

Pre-school Attendance and School Readiness

- Some 84 per cent of children aged 36-59 months are attending some form of organized early childhood education programme. Differentials by education of mother are noticeable. The percentage of children enrolled in early childhood education increases from 75 per cent to 87 per cent as the mother's education rises from no education to higher. Mothers in non-municipal areas (87 per cent) are more likely to enroll their children in early childhood education programmes compared to mothers in municipal areas (80 per cent). Fewer children aged 36-47 months attend early childhood education programmes than those aged 48-59 months (75 per cent versus 93 per cent).

Primary and Secondary School Participation

- Three quarters (75 per cent) of children who are of primary school entry age are attending Grade 1. Children in the Northeastern region (70 per cent), children with mothers who have no education (59 per cent) and those in the poorest households (65 per cent) are less likely to attend primary school at the age-appropriate time.
- Almost all (96 per cent) children of primary school age attend primary school.

- Some 79 per cent of children of secondary school age are attending secondary school or higher. Differentials by economic status are significant, with 74 per cent of those in the poorest households attending secondary school versus 91 per cent in the richest households. Children living in the Southern (71 per cent) and Central regions (77 per cent) are less likely to attend secondary school.
- Almost 100 per cent of children who enter the first grade of primary school eventually reached Grade 6.
- Some 99 per cent of children who complete primary school continue on to secondary education.
- Gender parity at the primary level is 1.0, indicating no difference in attendance between girls and boys. At the secondary level, gender parity is 1.2, indicating that more girls are attending secondary schools than boys.

Adult Literacy

- Nationally, 98 per cent of women aged 15-24 are literate. Only 48 per cent of women living in households with non-Thai speakers are literate. There are no significant differences by region, age and socioeconomic status of women.

Child Protection

Birth Registration

- Almost 100 per cent of the births of children under 5 years of age have been registered. There are no significant variations in birth registration across sex, age or education. Children living in households with non-Thai speakers are somewhat less likely to have their births registered (79 per cent). This appears to be mainly because a relatively large proportion (72 per cent) of mothers/caretakers do not know that they need to obtain a birth certificate from District or Provincial Offices after receiving a birth document from a hospital.

Early Marriage

- Some 3 per cent of women aged 15-49 were married before the age of 15. Nationally 16 per cent of women aged 15-19 are currently married or in union, with the percentage highest in the poorest households (23 per cent), in non-municipal areas (19 per cent), in the Northeastern region (18 per cent), and in particular among women with only primary education (59 per cent).
- Around 11 per cent of young married women aged 15-19 are married to a partner 10 or more years older. The percentage is higher (23 per cent) among married women with only primary school education.

Domestic Violence

- Some 13 per cent of women feel that their husband/partner has a right to hit or beat them for at least one of a variety of reasons, with 11 per cent of women agreeing with and justifying violence in instances where they neglect their children.
- Domestic violence is more accepted by women in the Northeastern region (20 per cent) than in other regions. Acceptance is more common among women in poor and the poorest households (20 per cent and 18 per cent, respectively). It is also strongly correlated to the education levels of women (18 per cent among women who have no and only primary education) and among older women aged 40-49 years (17 per cent).

HIV/AIDS Infection and Orphaned Children

Knowledge of HIV Transmission

- Almost all (97 per cent) of the women interviewed had heard of AIDS. However, just 82 per cent knew of the two key ways to prevent HIV transmission: having one faithful uninfected sex partner (89 per cent), and using a condom (87 per cent). Knowledge of HIV transmission is lowest among women with no education (52 per cent). Women in the Northeastern region (79 per cent) are less likely to know of both key ways of preventing HIV transmission).
- More than half (59 per cent) of women can correctly identify the two most common misconceptions about HIV transmission (that HIV cannot be transmitted by sharing food and through mosquito bites) and know that a healthy looking person can be infected. The percentage is higher among women living in households speaking Thai and among more educated women.
- Overall, 93 per cent of women know that HIV can be transmitted from mother to child. Three quarters (74 per cent) know all three modes of mother-to-child transmission (during pregnancy, during delivery and through breastfeeding), while 4 per cent did not know any. Women in Bangkok (63 per cent) and those with no education (47 per cent) are less likely to know all three ways.
- Fewer women know about mother-to-child transmission during delivery (80 per cent) than during pregnancy (89 per cent) and breastfeeding (85 per cent).
- Almost all (97 per cent) women who have heard of AIDS agree with at least one accepting statement. The most common accepting attitude is willing to care for a family member with the AIDS virus in own home (92 per cent), while the least common accepting attitude is would not want to keep secret that a family member got infected with the AIDS virus (54 per cent). More educated women, women living in municipal areas and those in the richest households have less accepting attitudes on all four indicators than women with lower education, living in non-municipal areas and with a poorer wealth status. Only 16 per cent of women living in Bangkok have accepting attitudes towards people living with HIV/AIDS.

Testing for HIV

- Around 81 per cent of women knew where to be tested, while 50 per cent have actually been tested. Of these, a small proportion (9 per cent) had been tested within the last 12 months and told the result.
- Some 78 per cent of young women aged 15-24 knew where to test, while 29 per cent have been tested. Of these, 10 per cent had been tested within the last 12 months and told the result.

Orphan Children

- More than half (58 per cent) of children aged 0-17 years in Thailand live with both parents. Some 15 per cent live with their mothers only, with 14 per cent of their biological fathers alive. About 3 per cent live with fathers only. Almost one quarter (23 per cent) of children live with neither of their biological parents, 21 per cent of whom are both alive.
- In the Northern and Northeastern regions, the proportion of children living with both parents is lower than other regions, at 56 per cent and 50 per cent, respectively. Two thirds of children living in poor and the poorest households live with neither parent.

Orphan Children School Attendance

- Less than 1 per cent (0.5) of children aged 10-14 have lost both parents and 92 per cent of those children are currently attending school. Among children whose parents are both alive and who are living with at least one parent, 98 per cent are attending school

I.
Introduction


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Background

The National Statistical Office (NSO) conducted its first Multiple Indicator Cluster Survey (2005-06 MICS), which was part of MICS3 programme, between December 2005 and February 2006. The data were compiled and presented at national and provincial level (26 provinces). UNICEF Thailand provided key support in the collaboration between the various agencies involved in child development, namely the Ministry of Public Health, the Ministry of Education, the Ministry of Social Development and Human Security, and other agencies responsible for policy and planning. The previous MICS provided the data to create indicators for use in evaluating the well-being of children in Thailand in order to inform policy-making. The survey also provides valuable information on the situation of children and women in Thailand, and was based, in large part, on the need to monitor progress towards goals and targets emanating from recent international agreements: The Millennium Declaration, adopted by all 191 United Nations Member States in September 2000, and the Plan of Action of A World Fit For Children, adopted by 189 Member States at the United Nations Special Session on Children in May 2002. Both of these commitments build upon promises made by the international community at the 1990 World Summit for Children.

The second round of the Multiple Indicator Cluster Survey (Thailand 2012 MICS), which was part of MICS4 programme, was conducted in 2012 by NSO, collecting data from 27,000 households. The field work was carried out from September to November. The main purpose is to present the situation of women and children in Thailand and to continually monitor its change. UNICEF is the main agency providing technical and financial support, as in the previous MICS. It is also important to note that this project is the first time that NSO integrated budgets and work with various agencies, namely, Ministry of Public Health, Ministry of Education and Ministry of Social Development and Human Security, National Health Security Office, Thai Health Promotion Foundation, International Health Policy Program, Thailand and Educational Institutes (Institute for Population and Social Research: Mahidol University, College of Population Studies: Chulalongkorn University).

This round of the MICS is distinctive since the NSO introduced an electronic survey (E-Survey methodology). Instead of using paper-based questionnaires, enumerators used Tablet PCs as a tool for data collection. Data entry software with built-in basic consistency checks was installed on each Tablet PC. Hence, the quality control can be initiated early during the field work.

In signing these international agreements, governments committed themselves to improving conditions for children and to monitoring progress towards that end. UNICEF was assigned a supporting role in this task (see below).

A Commitment to Action: National and International Reporting Responsibilities

The governments that signed the Millennium Declaration, the World Fit for Children Declaration and the Plan of Action also committed themselves to monitoring progress towards the goals and objectives they contained:

"We will monitor regularly at the national level and, where appropriate, at the regional level and assess progress towards the goals and targets of the present Plan of Action at the national, regional and global levels. Accordingly, we will strengthen our national statistical capacity to collect, analyse and disaggregate data, including by sex, age and other relevant factors that may lead to disparities, and support a wide range of child-focused research. We will enhance international cooperation to support statistical capacity-building efforts and build community capacity for monitoring, assessment and planning." (**A World Fit for Children**, paragraph 60)

"…We will conduct periodic reviews at the national and subnational levels of progress in order to address obstacles more effectively and accelerate actions…." (**A World Fit for Children**, paragraph 61)

The Plan of Action (paragraph 61) also calls for the specific involvement of UNICEF in the preparation of periodic progress reports:

"… As the world's lead agency for children, the United Nations Children's Fund is requested to continue to prepare and disseminate, in close collaboration with Governments, relevant funds, programmes and the specialized agencies of the United Nations system, and all other relevant actors, as appropriate, information on the progress made in the implementation of the Declaration and the Plan of Action."

Similarly, the Millennium Declaration (paragraph 31) calls for periodic reporting on progress:

"…We request the General Assembly to review on a regular basis the progress made in implementing the provisions of this Declaration, and ask the Secretary-General to issue periodic reports for consideration by the General Assembly and as a basis for further action."

This final report presents the results of the indicators and topics covered in the survey.

Survey Objectives

The 2012 Thailand Multiple Indicator Cluster Survey has as its primary objectives:

- To provide up-to-date information for assessing the situation of children and women in Thailand;
- To furnish data needed for monitoring progress toward goals established in the Millennium Declaration and other internationally agreed upon goals, as a basis for future action;
- To contribute to the improvement of data and monitoring systems in Thailand and to strengthen technical expertise in the design, implementation and analysis of such systems.
- To generate data on the situation of children and women, including the identification of vulnerable groups and disparities, to inform policies and interventions.

II.
Sample and Survey Methodology

Sample Design

The sample for the Thailand Multiple Indicator Cluster Survey (MICS) was designed to provide estimates for a large number of indicators on the situation of children and women at the national level, for municipal (urban) and non-municipal (rural) areas, and for Bangkok and four regions: Central, North, Northeast and South. The urban and rural areas within each region were identified as the main sampling strata and the sample was selected in two stages. Within each stratum, a specified number of census enumeration areas were selected systematically with probability proportional to size. After a household listing was carried out within the selected enumeration areas, a systematic sample of 20 households was drawn in each sample enumeration area. An equal sample was allocated to each stratum (region, municipal and non-municipal areas), and the sample is not self-weighting.

For reporting national level results, sample weights are used. A more detailed description of the sample design can be found in Appendix A.

Questionnaires

Three sets of questionnaires were used in the survey: 1) a household questionnaire which was used to collect information on all *de jure* household members (usual residents), the household, and the dwelling; 2) a women's questionnaire administered in each household to all women aged 15-49 years; and 3) an under-5 questionnaire, administered to mothers or caretakers for all children under 5 living in the household.

The Household Questionnaire included the following modules:

- Household Listing Form
- Education
- Water and Sanitation
- Household Characteristics
- Child Labour
- Salt Iodization

The Questionnaire for Individual Women was administered to all women aged 15-49 years living in the households, and included the following modules:

- Women's Background
- Child Mortality[1]
- Desire for Last Birth
- Maternal and Newborn Health
- Contraception
- Unmet Need
- Marriage/Union
- HIV/AIDS
- Attitudes Towards Domestic Violence

The Questionnaire for Children Under Five was administered to mothers or caretakers of children under 5 years of age[2] living in the households. Normally, the questionnaire was administered to mothers of under-5 children; in cases where the mother was not listed in the household roster, a primary caretaker for the child was identified and interviewed.

The questionnaire included the following modules:

- Age
- Birth Registration
- Early Childhood Development
- Breastfeeding
- Care of Illness
- Immunization
- Anthropometry

The questionnaires are based on the MICS4 model questionnaire[3]. From the MICS4 model English version, the questionnaires were translated into Thai[4]. In addition to the administration of questionnaires, fieldwork teams tested the salt used in household cooking for iodine content and measured the weights and heights of children under 5. Details and findings of these measurements are provided in the respective sections of the report.

1 The results of this module are not included in this report because the summary birth history (indirect method) used to collect data on child deaths does not perform so well in countries with low child mortality.
2 The terms 'children under 5', 'children aged 0-4 years', and 'children aged 0-59 months' are used interchangeably in this report.
3 The model MICS4 questionnaires can be found at www.childinfo.org/mics4_questionnaire.html
4 In addition to the standard questions, a set of country specific questions is also included as follows: items HL8A, HL8B, HL12A, HL14A, HC15A in household questionnaire; items CM13A, CM13B, MN4D, MN27A, MN27B, MN27C, MN27D, CP3A, CP3B, UN2A, UN2B, MA2A, MA2B, MA2C, MA2D, MA2E, MA2F in questionnaire for women and BR2A, BR2B, BF2A, BF7A, BF7B, BF11A, CA6A, IM16A, IM16B in questionnaire for children under five. These additions are supposed to be analyzed by responsible agencies.

Pre-test

The first pre-test was carried out in Samut Songkhram province during 15-17 September 2011. The interviews were carried out by provincial field staff under the observation of NSO MICS co-ordinators, representatives from UNICEF Thailand, and specialists from Mahidol University. Before starting the test survey, field staff were provided with training on definitions and the survey's objectives. The test revealed that it took about an hour per household to finish all three questionnaires (excluding iodization and anthropometry modules). Based on the results of the pre-test, modifications were made to the wording and translation of the questionnaires.
A big turning point occurred after the first pre-test when the NSO decided to implement a data collection system with CAPI (Computer Assisted Personal Interviewing) for MICS. A company was outsourced to develop data entry software for the Tablet PCs using the Android operating system. Several months later, a MICS headquarters team visited the NSO during 12-16 March 2012.

The main purpose of the team's visit was to discuss and make recommendations for improvements to the CAPI. The mission also sought to provide feedback on the proposed fieldwork team structure, review and make recommendations on further development of survey instruments, and discuss a revised survey timetable.

The second pre-test was held in Kanchanaburi province during 15-17 July 2012. The main focus was on the data entry system. The interviews were jointly conducted by the NSO MICS co-ordinators, the outsourced company, representatives from UNICEF Thailand, and specialists from Mahidol University. Results from the second pre-test were discussed among the related parties, and the data entry software was revised accordingly. The questionnaires were also slightly changed. A copy of the final MICS questionnaires is provided in Appendix G.

Training

The anthropometry training of trainers for NSO MICS co-ordinators was held on 31 July 2012. An expert from UNICEF headquarters provided information on anthropometry issues. As well as learning theory, NSO staff had a chance to practice using scales and measuring boards.

Two 10-day fieldwork trainings were conducted in August 2012. The first round took place in Chiang Mai province from 6-15 August for staff from Northern and Northeastern regions.

The second round was for staff from Bangkok, Central and Southern regions, and was held in Phetchaburi province from August 22-31. Training focused on interviewing techniques, the contents of the questionnaires, and mock interviews between trainees to gain practice in asking questions. The NSO MICS co-ordinators, NSO officials and representatives from UNICEF Thailand participated in both training sessions. Representatives from UNICEF headquarters participated as observers in the second round. Moreover, in both rounds instructors from the Ministry of Public Health were invited to provide information on antenatal care, attendance at birth, child vaccination, maternal tetanus vaccination and oral rehydration treatment for children with diarrhoea. The knowledge and information acquired through the training were useful for the interview process and the accuracy of the survey results.

Fieldwork and Data Processing

Administratively, Thailand is divided into 77 provinces, including Bangkok (Metropolis). In Bangkok, the fieldwork was carried out under the responsibility of the Field Administration Bureau, while Provincial Statistical Officers were responsible for the fieldwork undertaken in the other 76 provinces.

The MICS fieldwork began in September 2012 and concluded in November 2012. Data were collected by about 80 teams; each was comprised of two to four interviewers, one measurer and a supervisor. In some areas in which non-Thai households were prevalent, the team also had a translator. The data were entered during fieldwork on 225 Tablet PCs using data entry software and the data from each Tablet PC were sent directly to the server computer in the central office via Internet. The supervisor provided advice, helped solve problems arising during the course of the fieldwork, and checked the completeness of the data through a web-based application. The NSO MICS co-ordinators provided overall supervision, with continuous visits to the field.

Data in CSPro format were exported by NSO MICS co-ordinators also through a web-based application. Procedures and standard programs developed under the global MICS4 programme and adapted to the Thailand questionnaires were used throughout. Data were analysed using the Statistical Package for Social Sciences (SPSS) software programme, Version 18, and the model syntax and tabulation plans developed by UNICEF were used for this purpose.

III.
Sample Coverage and the Characteristics of Households and Respondents


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Sample Coverage

Of the 26,850 households selected for the sample, 24,482 were found to be occupied. Of these, 24,119 were successfully interviewed for a household response rate of 98.5 per cent.

In the interviewed households, 22,256 women (aged 15-49 years) were identified. Of these, 21,981 were successfully interviewed, yielding a response rate of 98.8 per cent within interviewed households. There were 9,757 children under age 5 listed in the household questionnaire. Questionnaires were completed for 9,716 of these children, which corresponds to a response rate of 99.6 per cent within interviewed households. Overall response rates of 97.3 and 98.1 are calculated for the women's and under-5's interviews respectively (Table HH.1).

Table HH.1 Results of household, women's, and under-5's interviews

Number of households, women, and children under 5 by results of the household, women's, and under-5's interviews, and household, women's, and under-5's response rates, Thailand, 2012

	Area		Region					Total
	Municipal	Non-municipal	Bangkok	Central	North	North-east	South	
Households								
Sampled	14,851	11,999	2,959	5,970	5,945	5,999	5,977	26,850*
Occupied	13,262	11,220	2,589	5,262	5,562	5,656	5,413	24,482
Interviewed	12,987	11,132	2,480	5,190	5,532	5,631	5,286	24,119
Response rate	97.9	99.2	95.8	98.6	99.5	99.6	97.7	98.5
Women								
Eligible	12,349	9,907	2,707	5,107	4,432	4,924	5,086	22,256
Interviewed	12,168	9,813	2,649	5,066	4,399	4,848	5,019	21,981
Response rate	98.5	99.1	97.9	99.2	99.3	98.5	98.7	98.8
Overall response rate	96.5	98.3	93.7	97.8	98.7	98.0	96.4	97.3
Children under 5								
Eligible	5,032	4,725	848	2,043	2,157	2,494	2,215	9,757
Mothers/caretakers interviewed	5,004	4,712	841	2,036	2,150	2,490	2,199	9,716
Response rate	99.4	99.7	99.2	99.7	99.7	99.8	99.3	99.6
Overall response rate	97.4	98.9	95.0	98.3	99.1	99.4	96.9	98.1

*The actual number of households in Group 1 (households with children under 5) for some enumeration areas is less than 10. As a result, the actual number of sample households is slightly less than that of the design.

Response rates of municipal areas are somewhat lower than those of non-municipal areas. The rates across regions are almost similar, with the remark that all rates in Bangkok are lower than other regions. It is also interesting to note that all rates are above 90 per cent.

Characteristics of Households

The weighted age and sex distribution of the survey population is provided in Table HH.2. The distribution is also used to produce the population pyramid in Figure HH.1. In the 24,119 households successfully interviewed in the survey, 79,033 household members were listed. Of these, 37,596 were males and 41,437 were females. The child population (aged 0-14 years) was 17,065 children, accounting for 21.6 per cent of the total. The labour age population (aged 15-64 years) was 53,766 members, or 68 per cent of the total. The elderly population (65 years and older) was 8,202 members, or 10.4 per cent of the total. The corresponding proportions in the 2010 Population Census are 19.3 per cent, 72.1 per cent and 8.6 per cent, respectively. In addition, of the surveyed population, 26.3 per cent were children aged 0-17 years, and 73.7 per cent adults aged 18 and over.

Table HH.2 Household age distribution by sex

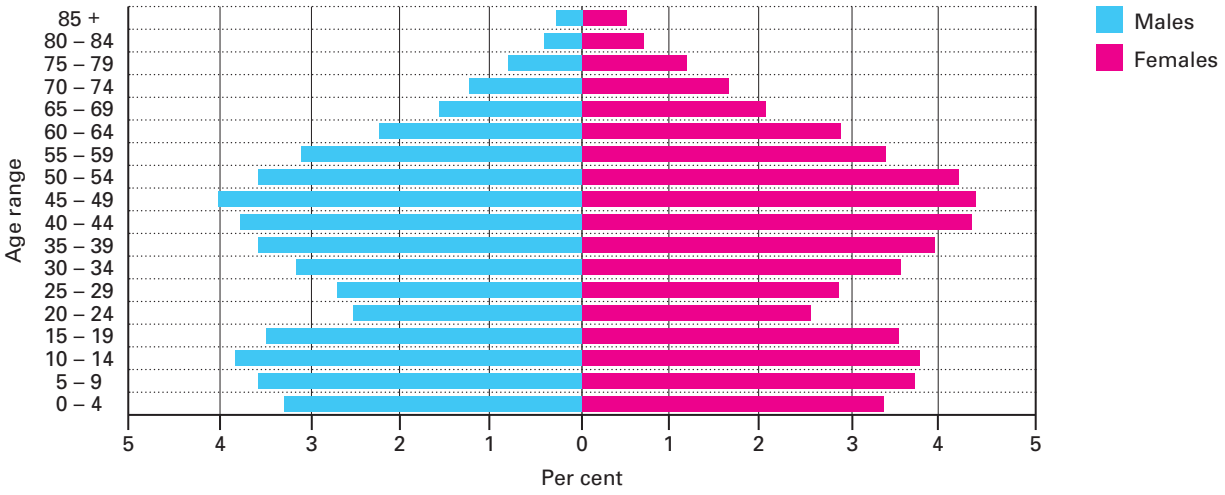
Per cent and frequency distribution of the household population by five-year age groups, dependency age groups, and by child (aged 0-17 years) and adult populations (aged 18 or more) by sex, Thailand, 2012

	Males		Females		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
Age						
0-4	2,620	7.0	2,652	6.4	5,272	6.7
5-9	2,847	7.6	2,923	7.1	5,769	7.3
10-14	3,050	8.1	2,974	7.2	6,024	7.6
15-19	2,782	7.4	2,788	6.7	5,570	7.0
20-24	1,991	5.3	2,014	4.9	4,005	5.1
25-29	2,150	5.7	2,263	5.5	4,413	5.6
30-34	2,515	6.7	2,804	6.8	5,319	6.7
35-39	2,854	7.6	3,104	7.5	5,958	7.5
40-44	3,033	8.1	3,427	8.3	6,460	8.2
45-49	3,197	8.5	3,464	8.4	6,661	8.4
50-54	2,854	7.6	3,319	8.0	6,173	7.8
55-59	2,474	6.6	2,671	6.4	5,144	6.5
60-64	1,786	4.7	2,276	5.5	4,062	5.1
65-69	1,254	3.3	1,610	3.9	2,864	3.6
70-74	986	2.6	1,289	3.1	2,275	2.9
75-79	645	1.7	920	2.2	1,565	2.0
80-84	335	0.9	546	1.3	880	1.1
85+	226	0.6	391	0.9	617	0.8
Dependency age groups						
0-14	8,516	22.7	8,549	20.6	17,065	21.6
15-64	25,635	68.2	28,131	67.9	53,766	68.0
65+	3,445	9.2	4,757	11.5	8,202	10.4
Child and adult populations						
Children aged 0-17 years	10,331	27.5	10,420	25.1	20,751	26.3
Adults aged 18+ years	27,265	72.5	31,017	74.9	58,282	73.7
Total	**37,596**	**100.0**	**41,437**	**100.0**	**79,033**	**100.0**

The age cohorts 20-24 and 25-29 for both male and female are smaller than would be expected. This may be due to the impact of migration and will require further analysis.

Census data indicate that the number of the male population in the five-year age groups from 0–4 to 20–24 years is higher than that of the female population, but a reverse pattern is observed in the age group 25–29 years and above, where the number of the male population is lower. MICS 2012 data indicate a somewhat different age-sex pattern, with males accounting for a higher number of the population only in the age group 10-14.

Figure HH.1 Age and sex distribution of household population, Thailand, 2012



Tables HH.3 – HH.5 provide basic information on the households, female respondents aged 15-49 and children under the age of 5 by presenting the unweighted, as well as the weighted numbers. Information on the basic characteristics of households, women and children under-5 interviewed in the survey is essential for the interpretation of findings presented later in the report and can also provide an indication of the representativeness of the survey. The remaining tables in this report are presented only with weighted numbers. See Appendix A for more details about the weighting.

Table HH.3 provides basic background information on the households. Within households, the sex of the household head, region, area, number of household members, education of household head and ethnicity[1] of the household head are shown in the table. These background characteristics are used in subsequent tables in this report; the figures in the table are also intended to show the numbers of observations by major categories of analysis in the report.

1 This was determined by asking "To what ethnic group does the head of this household belong?" Households were divided into two groups: 1) Thai; and 2) Non-Thai. Please refer to the questionnaire in Appendix F for detailed questions.

Table HH.3 Household composition

Per cent and frequency distribution of households by selected characteristics, Thailand, 2012

	Weighted	Number of households	
	Per cent	Weighted	Unweighted
Sex of household head			
Male	64.5	15,568	15,794
Female	35.5	8,550	8,324
Region			
Bangkok	11.1	2,683	2,480
Central	25.0	6,034	5,190
North	17.5	4,217	5,532
Northeast	33.9	8,184	5,631
South	12.4	3,000	5,286
Area			
Municipal	43.7	10,542	12,987
Non-municipal	56.3	13,577	11,132
Number of household members			
1	12.9	3,103	2,260
2	23.5	5,670	4,239
3	23.6	5,700	5,427
4	19.8	4,784	5,347
5	10.7	2,583	3,363
6	5.5	1,328	1,918
7	2.2	536	858
8	1.0	230	378
9	0.4	93	173
10+	0.4	92	156
Education of household head			
None	5.6	1,360	1,439
Primary	60.8	14,663	14,143
Secondary	19.9	4,809	5,164
Higher	13.5	3,251	3,327
Missing/DK	0.1	36	46
Ethnicity of household head			
Thai	98.5	23,750	23,662
Non-Thai	1.4	341	434
Missing/DK	0.1	29	23
Total	100.0	24,119	**24,119**
Households with at least			
One child aged 0-4 years	19.0	24,119	24,119
One child aged 0-17 years	53.9	24,119	24,119
One woman aged 15-49 years	64.3	24,119	24,119
Mean household size	**3.3**	**24,119**	**24,119**

The weighted and unweighted numbers of households are equal, since sample weights were normalized (See Appendix A). The table also shows the proportions of households with at least one child under 18 years of age, at least one child under 5 and at least one eligible woman aged 15-49. The table also shows the weighted average household size estimated by the survey.

According to Table HH.3, most households are headed by a male (64.5 per cent), more than 55 per cent of the population is living in non-municipal areas, and about 1.4 per cent of the population belongs to ethnic groups other than Thai. The weighted number of households in the Northern and Southern regions are lower than the unweighted number due to over-sampling. In contrast, the weighted number of households in other regions are higher than the unweighted number because of under-sampling. Some 12.9 per cent of the household population is living in single households and about 77.6 per cent is living in households containing two to five persons. Three in five household heads (60.8 per cent) completed primary level. The average household size is 3.3 members, which is close to the results of the 2010 Population Census (3.1 persons). The table further shows that half of interviewed households (53.9 per cent) have at least one child aged 0-17 years and three in five (64.3 per cent) households have women of productive age.

Characteristics of Female Respondents 15-49 Years of Age and Children Under-5

Tables HH.4 and HH.5 provide information on the background characteristics of female respondents 15-49 years of age and of children under age 5. In both tables, the total numbers of weighted and unweighted observations are equal, since sample weights have been normalized (standardized). In addition to providing useful information on the background characteristics of women and children, the tables are also intended to show the numbers of observations in each background category. These categories are used in the subsequent tabulations of this report.

Table HH.4 provides background characteristics of female respondents 15-49 years of age. The table includes information on the distribution of women according to region, area, age, marital status, motherhood status, births in last two years, education[2], wealth index quintiles[3], and ethnicity of the household head.

The regions with the largest share of women in the sample were the Northeast (31.9 per cent) and the Central region (26.6 per cent). Bangkok accounted for only 13.1 per cent of all females in the survey. In the sample, 45.8 per cent of women were residing in municipal areas and 54.2 per cent in non-municipal areas. With regard to marital status, 68.1 per cent of the women were married/in union and 66.2 per cent had given birth(s). The education level of more than half of the women (62.3 per cent) was secondary and beyond, with only 2.9 per cent never attending school.

2 Unless otherwise stated, 'education' refers to educational level attended by the respondent throughout this report when it is used as a background variable.

3 Principal components analysis was performed by using information on the ownership of consumer goods, dwelling characteristics, water and sanitation, and other characteristics that are related to the household's wealth to assign weights (factor scores) to each of the household assets. Each household was then assigned a wealth score based on these weights and the assets owned by that household. The survey household population was then ranked according to the wealth score of the household they are living in, and was finally divided into five equal parts (quintiles) from lowest (poorest) to highest (richest). The assets used in these calculations were as follows: water sources, toilet facility, housing, fuel types for cooking, electricity, durable goods (such as radio, TV, refrigerator, washing machine, microwave oven, watch, mobile phone, motorcycle, boat with motor, car), bank account, credit card account. The wealth index is assumed to capture the underlying long-term wealth through information on the household assets, and is intended to produce a ranking of households by wealth, from poorest to richest. The wealth index does not provide information on absolute poverty, current income or expenditure levels. The wealth scores calculated are applicable for only the particular data set they are based on. Further information on the construction of the wealth index can be found in *Filmer, D., and Pritchett, L., 2001. 'Estimating wealth effects without expenditure data – or tears: An application to educational enrolments in states of India'. Demography 38(1): 115-132. Gwatkin, D.R., Rutstein, S., Johnson, K., Pande, R. and Wagstaff. A., 2000. Socio-Economic Differences in Health, Nutrition, and Population. HNP/Poverty Thematic Group, Washington, DC: World Bank. Rutstein, S.O. and Johnson, K., 2004. The DHS Wealth Index. DHS Comparative Reports No. 6. Calverton, Maryland: ORC Macro.*

Table HH.4 Women's background characteristics

Per cent and frequency distribution of women aged 15-49 years by selected background characteristics, Thailand, 2012

	Weighted	Number of women	
	Per cent	Weighted	Unweighted
Region			
Bangkok	13.1	2,881	2,649
Central	26.6	5,851	5,066
North	14.8	3,258	4,399
Northeast	31.9	7,022	4,848
South	13.5	2,968	5,019
Area			
Municipal	45.8	10,072	12,168
Non-municipal	54.2	11,909	9,813
Age			
15-19	14.0	3,080	2,662
20-24	10.2	2,234	2,452
25-29	11.3	2,490	3,031
30-34	14.2	3,113	3,594
35-39	15.6	3,437	3,568
40-44	17.3	3,814	3,391
45-49	17.3	3,813	3,283
Marital/Union status			
Currently married/in union	68.1	14,977	15,841
Widowed	1.7	375	388
Divorced	2.3	516	478
Separated	2.9	633	742
Never married/in union	24.9	5,480	4,532
Motherhood status			
Ever gave birth	66.2	14,554	16,006
Never gave birth	33.8	7,427	5,975
Births in last two years			
Had a birth in last two years	8.7	1,914	2,762
Had no birth in last two years	91.3	20,067	19,217
Missing	0.0	0	2
Education			
None	2.8	610	647
Primary	34.9	7,675	7,044
Secondary	38.9	8,544	8,993
Higher	23.4	5,152	5,297
Wealth index quintile			
Poorest	15.2	3,340	2,502
Second	18.2	4,007	3,533
Middle	20.4	4,476	4,746
Fourth	22.9	5,033	5,660
Richest	23.3	5,125	5,540
Ethnicity of household head			
Thai	98.3	21,609	21,525
Non-Thai	1.6	341	434
Missing/DK	0.1	31	22
Total	**100.0**	**21,981**	**21,981**

Some background characteristics of children under 5 are presented in Table HH.5. These include the distribution of children by several attributes: sex, region, area, age, mother's or caretaker's education, wealth, and ethnicity.

Table HH.5 shows some background characteristics of children under the age of five, 49.8 per cent of whom were male and 50.2 per cent female. The Northeast comprised up to 37.8 per cent of the children under 5 years of age. Of the children under 5, one in five (19.6 per cent) was less than 12 months old. Most of the children under 5 in the survey had mothers or caretakers with secondary or higher education (57.3 per cent), with only 3.9 per cent having mothers or caregivers with no education. In addition, 98 per cent of the children were born to Thai-headed households, and only 1.9 per cent to non-Thai households.

Table HH.5 Under-5's background characteristics

Per cent and frequency distribution of children under five years of age by selected characteristics, Thailand, 2012

	Weighted	Number of under-5 children	
	Per cent	Weighted	Unweighted
Sex			
Male	49.8	4,836	4,953
Female	50.2	4,880	4,763
Region			
Bangkok	8.6	833	841
Central	23.3	2,268	2,036
North	15.4	1,493	2,150
Northeast	37.8	3,672	2,490
South	14.9	1,450	2,199
Area			
Municipal	38.3	3,723	5,004
Non-municipal	61.7	5,993	4,712
Age			
0-5 months	9.3	906	591
6-11 months	10.3	1,005	655
12-23 months	18.8	1,827	1,963
24-35 months	20.5	1,995	2,148
36-47 months	19.4	1,887	2,134
48-59 months	21.6	2,095	2,225
Mother's education*			
None	3.9	375	348
Primary	38.9	3,775	3,409
Secondary	39.2	3,812	3,874
Higher	18.1	1,754	2,085
Wealth index quintile			
Poorest	19.1	1,858	1,418
Second	21.9	2,127	1,812
Middle	22.5	2,183	2,166
Fourth	19.5	1,897	2,288
Richest	17.0	1,651	2,032

Table HH.5 Under-5's background characteristics (continued)

Per cent and frequency distribution of children under five years of age by selected characteristics, Thailand, 2012

	Weighted	Number of under-5 children	
	Per cent	Weighted	Unweighted
Ethnicity of household head			
Thai	98.0	9,522	9,522
Non-Thai	1.9	184	181
Missing/DK	0.1	10	13
Total	**100.0**	**9,716**	**9,716**

*Mother's education refers to educational attainment of mothers or caretakers of children under 5.

IV.
Nutrition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Nutritional Status

Children's nutritional status is a reflection of their overall health. When children have access to an adequate food supply, are not exposed to repeated illness, and are well cared for, they reach their growth potential and are considered well nourished.

Malnutrition is associated with more than half of all child deaths worldwide. Undernourished children are more likely to die from common childhood ailments, and for those who survive, have recurring sicknesses and faltering growth. Three-quarters of the children who die from causes related to malnutrition were only mildly or moderately malnourished – showing no outward sign of their vulnerability. The Millennium Development target is to reduce by half the proportion of people who suffer from hunger between 1990 and 2015. A reduction in the prevalence of malnutrition will also assist in the goal to reduce child mortality.

In a well-nourished population, there is a reference distribution of height and weight for children under age 5. Under-nourishment in a population can be gauged by comparing children to a reference population. The reference population used in this report is based on the WHO growth standards[1]. Each of the three nutritional status indicators can be expressed in standard deviation units (z-scores) from the median of the reference population.

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

Height-for-age is a measure of linear growth. Children whose height-for-age is more than two but less than three standard deviations below the median of the reference population are considered short for their age and are classified as *moderately stunted*. Those whose height-for-age is more than three standard deviations below the median are classified as *severely stunted*. Stunting is a reflection of chronic malnutrition as a result of failure to receive adequate nutrition over a long period and recurrent or chronic illness.

1 http://www.who.int/childgrowth/standards/second_set/technical_report_2.pdf

Finally, children whose **weight-for-height** is more than two but less than three standard deviations below the median of the reference population are classified as *moderately wasted,* while those who fall more than three standard deviations below the median are classified as *severely wasted*. Wasting is usually the result of a recent nutritional deficiency. The indicator may exhibit significant seasonal shifts associated with changes in the availability of food or disease prevalence.
In the Multiple Indicator Cluster Survey, the weights and heights of all children under 5 years of age were measured using anthropometric equipment recommended by UNICEF (www.childinfo.org). Findings in this section are based on the results of these measurements.

Children whose full birth date (month and year) were not obtained, and children whose measurements are outside a possible range are excluded from Table NU.1. Children are excluded from one or more of the anthropometric indicators when their weights and heights have not been measured, whichever applicable. For example if a child has been weighed but his/her height has not been measured, the child is included in underweight calculations, but not in the calculations for stunting and wasting.

Percentages of children by age and reasons for exclusion are shown in the data quality table DQ.7. Overall 91.4 per cent of children had both their weights and heights measured. Table DQ.7 also shows that due to incomplete dates of birth, implausible measurements, and missing weight and/or height, 5.2 per cent of children were excluded from calculations of the weight-for-age indicator, while the percentages are 7.2 for the height-for-age indicator, and 8.6 for the weight-for-height indicator.

Table NU.1 shows percentages of children classified into each of the above described categories, based on the anthropometric measurements that were taken during fieldwork. Additionally, the table includes the percentage of children who are overweight, which takes into account those children whose weight for height is above two standard deviations from the median of the reference population, and mean z-scores for all three anthropometric indicators.

Almost 1 in 10 children under age 5 (Table NU.1) in Thailand (9.2 per cent) are underweight (7.1 per cent are classified as moderately and 2.1 per cent as severely underweight). About 16.3 per cent of children are stunted or too short for their age (10.4 per cent are moderately and 5.9 per cent are severely stunted), 6.7 per cent are wasted or too thin for their height (4.5 per cent are moderately and 2.2 per cent are severely wasted).

Children in the Northeastern and the Southern regions are more likely to be underweight and stunted than other children. In contrast, the percentage wasted is highest in the Southern region (8.2 per cent). Children of mothers with no education are the most likely to be underweight, stunted, and wasted compared to children of educated mothers. There is no large difference in underweight, stunting and wasting rates between boys and girls. In addition, children of the poorest households are more undernourished according to all three indices in comparison to their counterparts in the richest households. The age pattern shows that a higher percentage of children aged less than 6 months are undernourished according to underweight and wasted in comparison to children who are older (Figure NU.1). To understand the relationship between underweight, stunting and wasting found in this survey will require further in-depth analysis of the data.

Table NU.1 Nutritional status of children

Percentage of children under age 5 by nutritional status according to three anthropometric indices: weight for age, height for age, and weight for height, Thailand, 2012

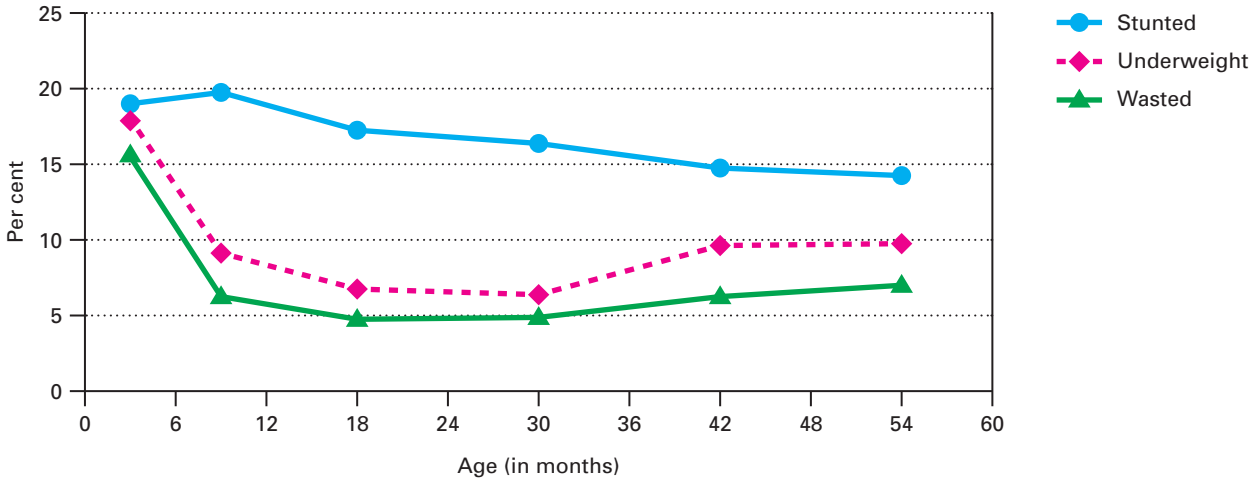
	Weight for age				Height for age				Weight for height				
	Underweight Per cent below		Mean Z-Score (SD)	Number of children under age 5	Stunted Per cent below		Mean Z-Score (SD)	Number of children under age 5	Wasted Per cent below		Over-weight Per cent above + 2 SD	Mean Z-Score (SD)	Number of children under age 5
	- 2 SD[1]	- 3 SD[2]			- 2 SD[3]	- 3 SD[4]			- 2 SD[5]	- 3 SD[6]			
Sex													
Male	9.9	2.6	-0.4	4,564	16.4	5.5	-0.7	4,463	7.4	2.8	10.1	0.0	4,397
Female	8.4	1.6	-0.3	4,639	16.3	6.3	-0.6	4,548	6.1	1.7	11.6	0.1	4,477
Region													
Bangkok	7.9	2.4	-0.1	676	16.2	6.4	-0.4	659	6.7	1.9	13.6	0.2	639
Central	7.3	1.7	-0.1	2,137	13.6	5.3	-0.5	2,119	6.5	2.3	15.4	0.3	2,077
North	7.8	1.4	-0.3	1,457	13.8	3.5	-0.6	1,434	6.1	1.8	9.2	0.1	1,418
Northeast	10.7	2.5	-0.5	3,543	18.9	7.1	-0.8	3,433	6.5	2.3	8.4	-0.1	3,407
South	10.0	2.3	-0.4	1,391	16.7	6.1	-0.7	1,364	8.2	2.6	10.7	0.0	1,334
Area													
Municipal	7.1	1.9	-0.2	3,423	13.3	4.7	-0.5	3,358	6.4	1.8	11.3	0.1	3,294
Non-municipal	10.4	2.2	-0.4	5,780	18.1	6.6	-0.7	5,653	6.9	2.5	10.6	0.0	5,580
Age													
0-5 months	17.9	6.5	-0.7	834	19.0	8.8	-0.4	782	15.7	6.6	7.7	-0.3	770
6-11 months	9.2	2.5	-0.4	981	19.7	10.6	-0.7	947	6.3	1.8	10.4	0.1	952
12-23 months	6.7	2.1	-0.2	1,764	17.2	6.6	-0.7	1,713	4.8	1.4	12.0	0.3	1,699
24-35 months	6.4	1.1	-0.1	1,892	16.3	5.3	-0.6	1,864	4.9	1.8	13.3	0.2	1,831
36-47 months	9.7	1.6	-0.3	1,771	14.7	4.6	-0.6	1,753	6.3	2.1	10.8	0.0	1,715
48-59 months	9.8	1.4	-0.5	1,961	14.2	3.6	-0.7	1,952	7.1	2.1	9.2	-0.1	1,908
Mother's education													
None	14.0	5.0	-0.8	371	34.1	10.7	-1.2	364	9.2	3.2	11.1	0.0	363
Primary	9.9	1.8	-0.4	3,606	16.5	6.0	-0.7	3,528	6.3	1.9	9.7	0.0	3,491
Secondary	9.0	2.2	-0.3	3,627	15.9	5.8	-0.6	3,542	6.9	2.5	10.9	0.0	3,490
Higher	6.7	1.9	-0.1	1,600	12.6	4.8	-0.4	1,576	6.8	2.1	13.7	0.2	1,530
Wealth index quintile													
Poorest	13.5	2.6	-0.7	1,814	23.1	8.1	-1.0	1,752	7.7	3.1	8.5	-0.1	1,744
Second	10.0	2.5	-0.5	2,045	19.9	7.6	-0.9	2,008	6.8	2.2	7.7	-0.1	1,979
Middle	10.2	2.4	-0.3	2,111	15.5	5.9	-0.7	2,070	6.5	1.7	11.3	0.1	2,038
Fourth	7.0	1.5	-0.1	1,768	10.9	3.4	-0.4	1,737	5.9	1.6	13.2	0.2	1,718
Richest	3.7	1.3	0.1	1,465	10.6	4.0	-0.3	1,442	6.7	2.9	14.9	0.4	1,396
Ethnicity of household head*													
Thai	9.1	2.1	-0.3	9,019	16.2	5.8	-0.6	8,830	6.7	2.2	10.9	0.1	8,699
Non-Thai	14.1	4.1	-0.6	174	24.0	8.6	-0.9	171	9.0	2.6	8.2	0.0	169
Missing/DK	(*)	(*)	(*)	10	(*)	(*)	(*)	10	(*)	(*)	(*)	(*)	7
Total	**9.2**	**2.1**	**-0.3**	**9,203**	**16.3**	**5.9**	**-0.6**	**9,010**	**6.7**	**2.2**	**10.9**	**0.1**	**8,874**

[1] MICS indicator 2.1a and MDG indicator 1.8
[2] MICS indicator 2.1b
[3] MICS indicator 2.2a
[4] MICS indicator 2.2b
[5] MICS indicator 2.3a
[6] MICS indicator 2.3b

(*) Figures that are based on less than 25 unweighted cases

Overweight is one of the concerns of Thailand's Strategy against Malnutrition. The overweight prevalence is 10.9 per cent. The largest population of overweight children is found in the Central region (15.4 per cent), followed by Bangkok (13.6 per cent), with the least in the Northeast (8.4 per cent). Overweight children are found more in municipal (11.3 per cent) than in non-municipal households (10.6 per cent), and more among children 24–35 months (13.3 per cent) than other age groups. The overweight prevalence is highest among children whose mothers have higher education (13.7 per cent) in comparison with other educational levels. Similarly, the prevalence rate in very rich households (14.9 per cent) is greater than in the other groups.

Figure NU.1 Percentage of children under age 5 who are underweight, stunted and wasted, Thailand, 2012



Breastfeeding and Infant and Young Child Feeding

Breastfeeding for the first few years of life protects children from infection, provides an ideal source of nutrients, and is economical and safe. However, many mothers stop breastfeeding too soon and there are often pressures to switch to infant formula, which can contribute to growth faltering and micronutrient malnutrition and is unsafe if clean water is not readily available.

WHO/UNICEF have the following feeding recommendations:

- Exclusive breastfeeding for first six months
- Continued breastfeeding for two years or more
- Safe and age-appropriate complementary foods beginning at 6 months
- Frequency of complementary feeding: two times per day for 6-8 month olds; three times per day for 9-11 month olds (4 times for non-breastfed children)

It is also recommended that breastfeeding be initiated within one hour of birth.

The indicators related to recommended child feeding practices are as follows:

- Early initiation of breastfeeding (within one hour of birth)
- Exclusive breastfeeding rate (< 6 months)
- Predominant breastfeeding (< 6 months)

- Continued breastfeeding rate (at 1 year and at 2 years)
- Duration of breastfeeding
- Age-appropriate breastfeeding (0-23 months)
- Introduction of solid, semi-solid and soft foods (6-8 months)
- Minimum meal frequency (6-23 months)
- Milk feeding frequency for non-breastfeeding children (6-23 months)
- Bottle feeding (0-23 months)

Table NU.2 shows the proportion of children born in the two years preceding the survey who were ever breastfed, those who were first breastfed within one hour and one day of birth, and those who received a prelacteal feed. Although a very important step in management of lactation and establishment of a physical and emotional relationship between the baby and the mother, only 46.3 per cent of babies are breastfed for the first time within one hour of birth, while 85.2 per cent of newborns in Thailand start breastfeeding within one day of birth. The highest proportion is found among newborns in the Southern region and the lowest proportion is found among newborns in Bangkok. Differentials are clearly seen with respect to mother's residential area, mother's education, household socioeconomic status and the ethnicity of household head.

The percentage breakdowns for starting breastfeeding within one hour of birth were: newborns in the South at 60.9 per cent compared to newborns in Bangkok at 29.2 per cent; non-municipal newborns at 52.2 per cent compared to municipal newborns at 38 per cent; and children with uneducated mothers at 66.9 per cent compared to children whose mothers have beyond secondary education at 34 per cent. Children living in very poor households are more likely to be breastfed compared to those living in very rich households (50.7 per cent versus 33.7 per cent) as are children living in non-Thai-headed households compared to those living in Thai headed households (73.1 per cent versus 45.6 per cent).

Table NU.2 Initial breastfeeding

Percentage of last-born children in the two years preceding the survey who were ever breastfed, percentage who were first breastfed within one hour of birth and within one day of birth, and percentage who received a prelacteal feed, Thailand, 2012

	Percentage who were ever breastfed[1]	Percentage who were first breastfed:		Percentage who received a prelacteal feed	Number of last-born children in the two years preceding the survey
		Within one hour of birth[2]	Within one day of birth		
Region					
Bangkok	93.7	29.2	65.8	20.5	194
Central	95.8	40.9	85.7	29.2	520
North	97.6	49.6	86.5	31.5	266
Northeast	97.7	47.0	87.6	20.4	611
South	97.6	60.9	90.7	33.3	323
Area					
Municipal	96.0	38.0	80.4	24.3	803
Non-municipal	97.3	52.2	88.8	28.1	1,110

Table NU.2 Initial breastfeeding (continued)

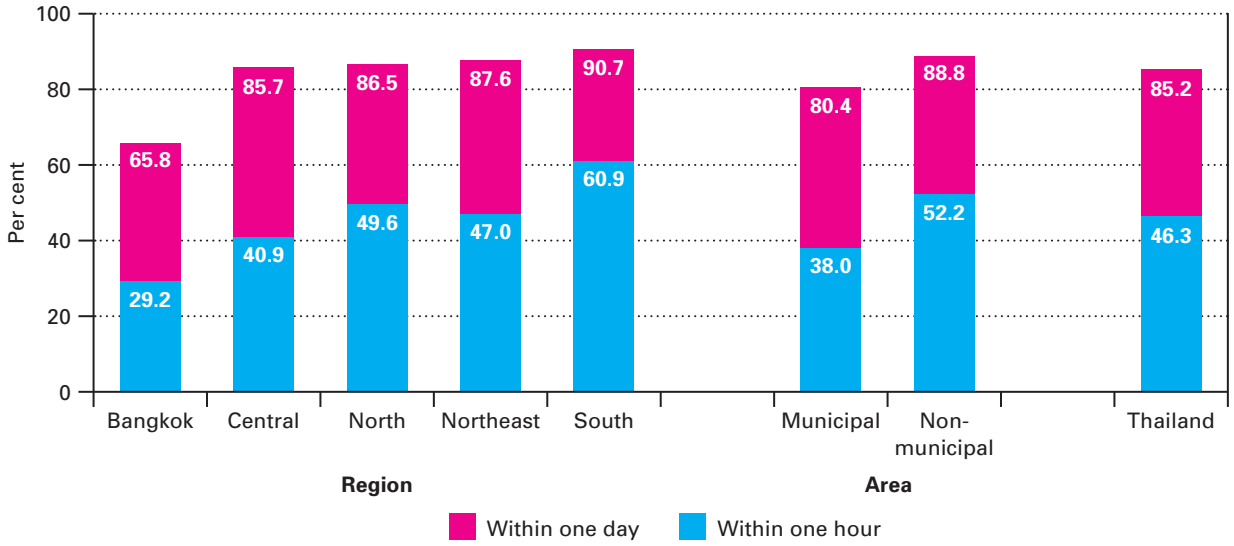
Percentage of last-born children in the two years preceding the survey who were ever breastfed, percentage who were first breastfed within one hour of birth and within one day of birth, and percentage who received a prelacteal feed, Thailand, 2012

	Percentage who were ever breastfed[1]	Percentage who were first breastfed:		Percentage who received a prelacteal feed	Number of last-born children in the two years preceding the survey
		Within one hour of birth[2]	Within one day of birth		
Months since last birth					
0-11 months	97.4	45.8	86.9	25.6	978
12-23 months	96.5	47.4	83.7	28.6	806
Assistance at delivery					
Skilled attendant	96.8	46.3	85.3	26.4	1,906
Other	(*)	(*)	(*)	(*)	7
No one/Missing	(*)	(*)	(*)	(*)	1
Place of delivery					
Public sector health facility	96.8	48.6	87.0	25.6	1,740
Private sector health facility	96.3	21.2	66.8	36.0	165
Home	(*)	(*)	(*)	(*)	4
Other/Missing	(*)	(*)	(*)	(*)	5
Mother's education					
None	98.8	66.9	96.2	23.9	51
Primary	96.9	48.2	86.7	32.4	412
Secondary	97.1	50.0	86.7	24.0	997
Higher	95.8	34.0	79.5	26.9	454
Wealth index quintile					
Poorest	98.1	50.7	88.5	26.3	277
Second	97.9	48.2	89.4	31.2	397
Middle	98.2	52.6	86.7	27.3	454
Fourth	96.8	45.2	84.8	23.4	428
Richest	92.6	33.7	76.8	24.2	358
Ethnicity of household head*					
Thai	96.7	45.6	85.0	26.5	1,869
Non-Thai	99.7	73.1	96.4	25.8	43
Total	**96.8**	**46.3**	**85.2**	**26.5**	**1,914**

[1] MICS indicator 2.4
(*) Figures that are based on less than 25 unweighted cases

[2] MICS indicator 2.5
*1 case with missing ethnicity of household head not shown

Figure NU.2 Percentage of mothers who started breastfeeding within one hour and within one day of birth, Thailand, 2012



In Table NU.3, breastfeeding status is based on the reports of mothers/caretakers of children's consumption of food and fluids during the previous day or night prior to the interview. Exclusively breastfed refers to infants who received only breast milk (and vitamins, mineral supplements or medicine). The table shows exclusive breastfeeding of infants during the first six months of life, as well as continued breastfeeding of children at 12-15 and 20-23 months of age. Approximately 12.3 per cent of children aged less than 6 months are exclusively breastfed. By age 12-15 months, 32.4 per cent of children are still being breastfed and by age 20-23 months, 17.8 per cent are still breastfed.

Exclusive breastfeeding of infants during the first six month of life is associated with background characteristics. For example, infants aged 0-5 months living in the Northern region are twice as likely to be exclusively breastfed (19.6 per cent) than infants living in the Central region (7.9 per cent). Similarly, 15.8 per cent of infants in the poorest households are exclusively breastfed, compared to 8.6 per cent in the richest households. Among the five regions, children in the South are breastfed most until the age of 1 and 2 years (40.5 per cent versus 24.2 per cent).

Table NU.3 Breastfeeding

Percentage of living children according to breastfeeding status at selected age groups, Thailand, 2012

	Children age 0-5 months			Children age 12-15 months		Children age 20-23 months	
	Per cent exclusively breastfed[1]	Per cent predominantly breastfed[2]	Number of children	Per cent breastfed (Continued breastfeeding at 1 year)[3]	Number of children	Per cent breastfed (Continued breastfeeding at 2 years)[4]	Number of children
Sex							
Male	9.6	38.6	533	30.0	310	14.3	295
Female	16.1	44.0	374	34.5	355	21.7	254
Region							
Bangkok	8.2	38.8	121	23.0	36	12.5	47
Central	7.9	31.3	215	27.6	189	17.3	114
North	19.6	53.8	138	21.6	93	13.4	90
Northeast	13.8	39.0	299	38.1	240	18.0	196
South	12.2	48.8	133	40.5	107	24.2	101

Table NU.3 Breastfeeding (continued)

Percentage of living children according to breastfeeding status at selected age groups, Thailand, 2012

	Children age 0-5 months			Children age 12-15 months		Children age 20-23 months	
	Per cent exclusively breastfed[1]	Per cent predominantly breastfed[2]	Number of children	Per cent breastfed (Continued breastfeeding at 1 year)[3]	Number of children	Per cent breastfed (Continued breastfeeding at 2 years)[4]	Number of children
Area							
Municipal	12.2	41.1	375	27.0	261	15.2	188
Non-municipal	12.3	40.7	531	35.9	404	19.1	360
Mother's education							
None	(*)	(*)	23	(*)	23	(*)	20
Primary	9.4	29.6	248	29.6	226	20.3	215
Secondary	15.6	46.2	466	36.3	286	19.6	212
Higher	5.4	37.4	169	22.2	129	9.7	102
Wealth index quintile							
Poorest	15.8	43.3	149	37.3	94	21.1	117
Second	13.5	48.8	191	42.2	143	14.7	112
Middle	12.2	46.0	238	30.8	167	22.3	117
Fourth	11.3	32.1	180	29.0	142	12.6	122
Richest	8.6	30.3	148	23.0	117	18.2	80
Ethnicity of household head*							
Thai	12.1	40.0	881	30.7	646	18.0	534
Non-Thai	(*)	(*)	25	(*)	17	(*)	14
Total	**12.3**	**40.8**	**906**	**32.4**	**665**	**17.8**	**549**

[1] MICS indicator 2.6 [2] MICS indicator 2.9 [3] MICS indicator 2.7 [4] MICS indicator 2.8

(*) Figures that are based on less than 25 unweighted cases *1 case with missing ethnicity of household head not shown

Figure NU.3 Infant feeding patterns by age, Thailand, 2012

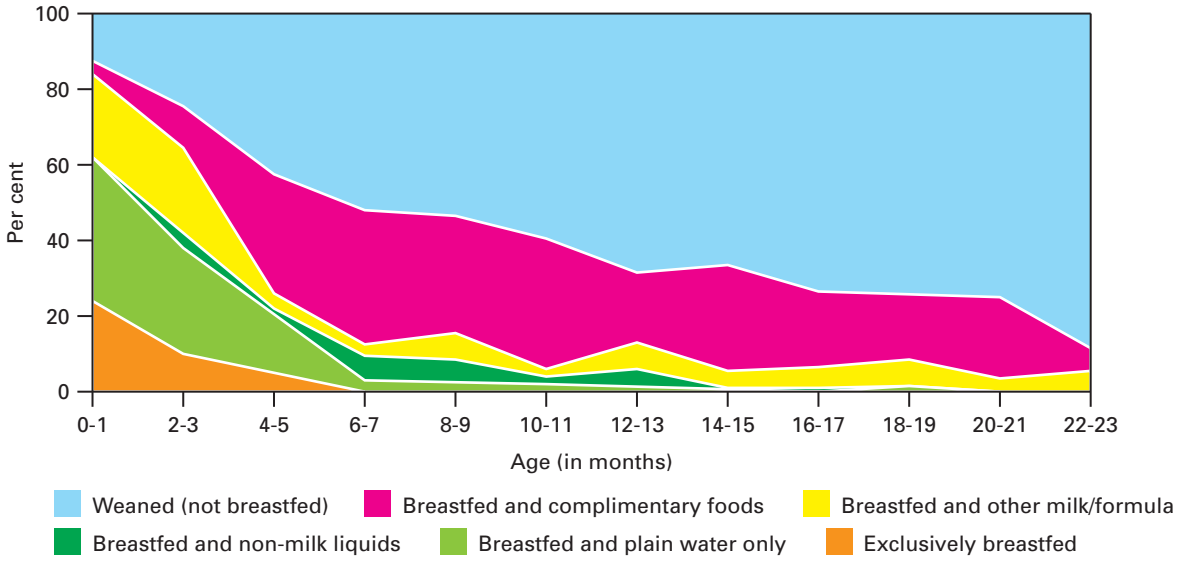


Figure NU.3 shows the detailed pattern of breastfeeding by the child's age in months. Even at the earliest ages, the majority of children are receiving liquids or foods other than breast milk. By

the end of the sixth month, the percentage of children exclusively breastfed is below 1 per cent. In addition, less than 20 per cent of children receive breast milk through the end of the second year of life.

Table NU.4 shows the median duration of breastfeeding by selected background characteristics. Among children under age 3, the median duration is 6.5 months for any breastfeeding, 0.5 months for exclusive breastfeeding, and 1.8 months for predominant breastfeeding. The highest median duration of any breastfeeding is found in the Southern region (9.4 months), and the lowest is in Bangkok (4.6 months). The longest period is found in non-municipal areas (7.8 months) compared to municipal areas (5.1 months). In addition, children with non-educated mothers are more likely to continue breastfeeding than other groups. Non-Thai mothers have longer median duration of any breastfeeding than Thai mothers.

Table NU.4 Duration of breastfeeding

Median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children aged 0-35 months, Thailand, 2012

	Median duration (in months) of			Number of children age 0-35 months
	Any breastfeeding[1]	Exclusive breastfeeding	Predominant breastfeeding	
Sex				
Male	5.8	0.5	1.7	2,895
Female	9.3	0.6	1.8	2,839
Region				
Bangkok	4.6	0.4	1.8	490
Central	5.5	0.5	0.8	1,361
North	7.7	0.6	2.9	850
Northeast	7.6	0.5	1.8	2,186
South	9.4	0.5	1.3	848
Area				
Municipal	5.1	0.5	1.9	2,207
Non-municipal	7.8	0.5	1.6	3,527
Mother's education				
None	11.2	0.4	4.0	192
Primary	4.4	0.5	1.2	2,120
Secondary	7.3	0.5	2.2	2,359
Higher	7.3	0.4	0.7	1,064
Wealth index quintile				
Poorest	7.5	0.6	2.1	1,095
Second	6.9	0.5	2.4	1,284
Middle	9.5	0.4	2.2	1,292
Fourth	5.3	0.6	1.7	1,133
Richest	5.6	0.4	0.6	931
Ethnicity of household head				
Thai	6.4	0.5	1.7	5,620
Non-Thai	16.9	0.7	4.9	109
Median	**6.5**	**0.5**	**1.8**	**5,734**
Mean for all children (0-35 months)	**10.8**	**0.8**	**2.8**	**5,734**

[1] MICS indicator 2.10

The adequacy of infant feeding in children under 24 months is provided in Table NU.5. Different criteria of feeding are used depending on the age of the child. For infants aged 0-5 months, exclusive breastfeeding is considered as age-appropriate feeding, while infants aged 6-23 months are considered to be appropriately fed if they are receiving breast milk and solid, semi-solid or soft food.

Table NU.5 Age-appropriate breastfeeding

Percentage of children age 0-23 months who were appropriately breastfed during the previous day, Thailand, 2012

	Children age 0-5 months		Children age 6-23 months		Children age 0-23 months	
	Per cent exclusively breastfed[1]	Number of children	Per cent currently breastfeeding and receiving solid, semi-solid or soft foods	Number of children	Per cent appropriately breastfed[2]	Number of children
Sex						
Male	9.6	533	18.7	1,351	16.1	1,883
Female	16.1	374	28.1	1,482	25.7	1,856
Region						
Bangkok	8.2	121	12.5	200	10.9	321
Central	7.9	215	21.3	643	17.9	858
North	19.6	138	21.9	409	21.3	548
Northeast	13.8	299	25.7	1,140	23.2	1,439
South	12.2	133	28.3	441	24.6	574
Area						
Municipal	12.2	375	19.5	1,060	17.6	1,435
Non-municipal	12.3	531	26.1	1,773	22.9	2,304
Mother's education						
None	(*)	23	32.3	98	31.2	120
Primary	9.4	248	23.7	1,015	20.9	1,263
Secondary	15.6	466	24.2	1,193	21.8	1,659
Higher	5.4	169	20.6	528	16.9	697
Wealth index quintile						
Poorest	15.8	149	29.8	501	26.6	650
Second	13.5	191	26.1	714	23.4	906
Middle	12.2	238	24.1	611	20.8	849
Fourth	11.3	180	19.8	559	17.7	739
Richest	8.6	148	17.0	448	14.9	596
Ethnicity of household head*						
Thai	12.1	881	23.4	2,783	20.6	3,664
Non-Thai	(*)	25	40.5	47	33.3	72
Total	**12.3**	**906**	**23.6**	**2,833**	**20.9**	**3,739**

[1] MICS indicator 2.6 [2] MICS indicator 2.14
(*) Figures that are based on less than 25 unweighted cases

*3 cases with missing ethnicity of household head not shown

The survey results show disparities by region in age-appropriate feeding for children aged 0–5 months and 6–23 months, with the Central region indicating a comparatively low percentage of adequate feeding for 0–5 month olds and Bangkok for 6–23 month olds, at 7.9 per cent and 12.5 per cent, respectively. There is no difference in the rate of exclusive breastfeeding in infants aged 0-5 months living in municipal and non-municipal areas. Whereas the proportion of children aged 6-23 months who are appropriately fed is higher in non-municipal areas than in municipal areas (26.1 per cent versus 19.5 per cent). As a result of these feeding patterns, overall only 23.6 per cent of children aged 6–23 months are being adequately fed. Age-appropriate feeding among all infants aged 0-5 months is 12.3 per cent. Taking the two age groups together, age-appropriate feeding of children below 24 months is 20.9 per cent in Thailand.

The differences in adequate feeding for children aged 0-23 months are also associated with children's background characteristics. Children in the South are adequately fed the most (24.6 per cent), while children in Bangkok are adequately fed the least (10.9 per cent). A lower proportion of municipal children (17.6 per cent) are adequately fed than non-municipal children (22.9 per cent). It is also noted that adequate feeding is negatively related to mother's education and household wealth. Babies with non-educated mothers (31.2 per cent) are adequately fed more than those with educated mothers. Similarly, children of poor households are more adequately fed than those of very rich households (26.6 per cent versus 14.9 per cent).

Table NU.6 Introduction of solid, semi-solid or soft foods

Percentage of infants aged 6-8 months who received solid, semi-solid or soft foods during the previous day, Thailand, 2012

	Currently breastfeeding		Currently not breastfeeding		All	
	Per cent receiving solid, semi-solid or softfoods	Number of children age 6-8 months	Per cent receiving solid, semi-solid or soft foods	Number of children age 6-8 months	Per cent receiving solid, semi-solid or soft foods[1]	Number of children age 6-8 months
Sex						
Male	76.9	69	76.6	122	76.7	191
Female	64.7	163	86.8	108	73.5	271
Region						
Bangkok	(*)	2	(*)	23	(*)	25
Central	(92.0)	34	(*)	42	87.4	76
North	(82.1)	34	(*)	29	71.7	62
Northeast	(58.2)	127	(95.1)	111	75.4	238
South	(66.5)	35	(80.7)	26	72.5	61
Area						
Municipal	73.7	56	77.8	93	76.2	149
Non-municipal	66.6	175	83.8	137	74.1	313
Total	**68.3**	**232**	**81.4**	**230**	**74.8**	**462**

[1] MICS indicator 2.12
( ) Figures that are based on 25-49 unweighted cases (*) Figures that are based on less than 25 unweighted cases

Appropriate complementary feeding of children from 6 months to 2 years of age is particularly important for growth and development and the prevention of under-nutrition. Continued breastfeeding beyond six months should be accompanied by consumption of nutritionally adequate, safe and appropriate complementary foods that help meet nutritional requirements when breast milk is no longer sufficient. This requires that for breastfed children, two or more meals of solid, semi-solid or soft foods are needed if they are 6-8 months old, and three or more meals if they are 9-23 months of age. For children 6-23 months and older who are not breastfed, four or more meals of solid, semi-solid or soft foods or milk feeds are needed.

Overall, 74.8 per cent of infants aged 6-8 months received solid, semi-solid, or soft foods (Table NU.6). Among currently breastfeeding infants this percentage is 68.3 while it is 81.4 for infants currently not breastfeeding. Regional differences are observed, with the Central region indicating the highest percentage of infants aged 6-8 months who received solid, semi-solid or soft foods (87.4 per cent), and the Northern region indicating the lowest (71.7 per cent).

Table NU.7 presents the proportion of children aged 6-23 months who received semi-solid or soft foods the minimum number of times or more during the day or night preceding the interview by breastfeeding status (see the note in Table NU.7 for a definition of minimum number of times for different age groups). Overall, more than three quarters of the children aged 6-23 months (77.5 per cent) were receiving solid, semi-solid and soft foods the minimum number of times. A higher proportion of males (81.2 per cent) were achieving the minimum meal frequency compared to females (74.2 per cent).

Among currently breastfeeding children aged 6-23 months, two in five (42.5 per cent) were receiving solid, semi-solid and soft foods the minimum number of times. Among non-breastfeeding children, 94.3 per cent were receiving solid, semi-solid and soft foods or milk feeds four times or more and 98.4 per cent were receiving at least two milk feeds.

The continued practice of bottle-feeding is a concern because of possible contamination due to unsafe water and lack of hygiene in preparation. Table NU.8 shows that bottle-feeding is still prevalent in Thailand. Some 64.4 per cent of children under 6 months are fed using a bottle with a nipple. The highest percentage of bottle-feeding is found in Bangkok, at 83.2 per cent, followed by the Central region (79.3 per cent) while the lowest is in the South (61 per cent). Bottle-feeding is more common among children living in municipal areas (77.8 per cent) and among children whose mothers have higher education (79.7 per cent). It is also higher among children in very rich households compared to very poor households (79.6 per cent versus 70.5 per cent).

Table NU.7 Minimum meal frequency

Percentage of children aged 6-23 months who received solid, semi-solid, or soft foods (and milk feeds for non-breastfeeding children) the minimum number of times or more during the previous day, according to breastfeeding status, Thailand, 2012

	Currently breastfeeding		Currently not breastfeeding			All	
	Per cent receiving solid, semi-solid and soft foods the minimum number of times	Number of children age 6-23 months	Per cent receiving at least 2 milk feeds[1]	Per cent solid, semi-solid and soft foods or milk feeds 4 times or more	Number of children age 6-23 months	Per cent with minimum meal frequency[2]	Number of children age 6-23 months
Sex							
Male	40.9	348	98.2	95.2	1,003	81.2	1,351
Female	43.6	571	98.6	93.4	911	74.2	1,482
Age							
6-8 months	48.0	232	99.6	96.2	230	72.0	462
9-11 months	35.4	214	100.0	92.6	330	70.1	543
12-17 months	42.5	305	98.6	94.6	696	78.7	1,002
18-23 months	44.3	168	96.9	94.2	658	84.1	826
Region							
Bangkok	(54.6)	35	97.9	93.6	165	86.7	200
Central	54.4	173	99.2	95.7	470	84.6	643
North	44.5	121	95.2	90.4	288	76.8	409
Northeast	39.1	419	99.2	95.6	721	74.8	1,140
South	35.1	171	98.4	93.4	270	70.8	441
Area							
Municipal	42.5	291	97.9	95.8	768	81.2	1,060
Non-municipal	42.5	628	98.7	93.4	1,145	75.4	1,773
Mother's education							
None	(54.6)	48	(96.3)	(89.0)	49	72.0	98
Primary	42.2	299	97.6	92.6	716	77.8	1,015
Secondary	40.6	436	98.9	95.1	757	75.2	1,193
Higher	45.4	136	99.1	96.8	392	83.5	528
Wealth index quintile							
Poorest	44.6	192	95.8	93.8	309	74.9	501
Second	38.0	253	99.4	95.7	461	75.3	714
Middle	40.2	226	98.8	93.2	384	73.5	611
Fourth	42.2	153	99.3	92.3	406	78.6	559
Richest	56.6	94	97.7	96.7	354	88.2	448
Ethnicity of household head*							
Thai	42.6	892	98.5	94.6	1,891	77.9	2,783
Non-Thai	(40.9)	27	(88.9)	(72.5)	20	(54.6)	47
Total	**42.5**	**919**	**98.4**	**94.3**	**1,914**	**77.5**	**2,833**

[1] MICS indicator 2.15 [2] MICS indicator 2.13
( ) Figures that are based on 25-49 unweighted cases
*3 cases with missing ethnicity of household head not shown

Note: Among currently breastfeeding children aged 6-8 months, minimum meal frequency is defined as children who also received solid, semi-solid or soft foods 2 times or more. Among currently breastfeeding children aged 9-23 months, receipt of solid, semi-solid or soft foods at least 3 times constitutes minimum meal frequency. For non-breastfeeding children aged 6-23 months, minimum meal frequency is defined as children receiving solid, semi-solid or soft foods, and milk feeds, at least 4 times during the previous day.

Table NU.8 Bottle feeding

Percentage of children aged 0-23 months who were fed with a bottle with a nipple during the previous day, Thailand, 2012

	Percentage of children aged 0-23 months fed with a bottle with a nipple[1]	Number of children aged 0-23 months
Sex		
Male	73.1	1,883
Female	72.3	1,856
Age		
0-5 months	64.4	906
6-11 months	78.9	1,005
12-23 months	73.4	1,827
Region		
Bangkok	83.2	321
Central	79.3	858
North	67.5	548
Northeast	73.0	1,439
South	61.0	574
Area		
Municipal	77.8	1,435
Non-municipal	69.5	2,304
Mother's education		
None	49.6	120
Primary	75.3	1,263
Secondary	69.4	1,659
Higher	79.7	697
Wealth index quintile		
Poorest	70.5	650
Second	71.6	906
Middle	67.1	849
Fourth	76.9	739
Richest	79.6	596
Ethnicity of household head*		
Thai	73.2	3,664
Non-Thai	44.0	72
Total	**72.7**	**3,739**

[1] MICS indicator 2.11
*3 cases with missing ethnicity of household head not shown

Salt Iodization

Iodine deficiency disorder (IDD) is the world's leading cause of preventable mental retardation and impaired psychomotor development in young children. In its most extreme form, iodine deficiency causes cretinism. It also increases the risks of stillbirth and miscarriage in pregnant women. Iodine deficiency is most commonly and visibly associated with goitre. The greatest impact of IDD is impaired mental growth and development, which contributes in turn to poor school performance, reduced intellectual ability, and impaired work performance. The indicator is the percentage of households consuming adequately iodized salt (≥15 parts per million).

In Thailand, there are food and nutrition programmes for the reduction and control of micronutrient deficiencies, including iodine deficiency. The IDD national programme includes the universal iodized salt triferdine (Fe, folate and iodine), supplementation in pregnancy, vitamin supplementation in children under 3, triple fortification of instant noodles, enrichment of iodine egg, and fish sauce fortification.

Table NU.9 Iodized salt consumption

Per cent distribution of households by consumption of iodized salt, Thailand, 2012

	Percentage of households in which salt was tested	Number of households	Per cent of households with:				Total	Number of households in which salt was tested or with no salt
				Salt test result				
			No salt	Not iodized 0 PPM	>0 and <15 PPM	15+ PPM[1]		
Region								
Bangkok	88.5	2,683	8.6	2.5	6.9	82.1	100.0	2,598
Central	92.6	6,034	6.8	3.9	9.4	79.9	100.0	5,993
North	95.2	4,217	4.4	8.9	9.4	77.3	100.0	4,196
Northeast	97.2	8,184	2.4	22.5	21.1	54.0	100.0	8,144
South	95.8	3,000	3.4	5.7	10.8	80.1	100.0	2,976
Area								
Municipal	91.6	10,542	7.1	8.2	11.3	73.3	100.0	10,395
Non-municipal	96.8	13,577	2.7	13.5	14.8	69.0	100.0	13,513
Wealth index quintile								
Poorest	96.1	5,195	3.4	23.8	19.0	53.7	100.0	5,172
Second	95.1	4,861	4.5	14.8	17.6	63.0	100.0	4,838
Middle	92.1	4,831	7.1	7.6	12.2	73.2	100.0	4,789
Fourth	94.5	4,730	4.6	5.8	9.5	80.0	100.0	4,686
Richest	94.7	4,501	3.6	2.0	7.1	87.3	100.0	4,422
Total	**94.5**	**24,119**	**4.6**	**11.2**	**13.3**	**70.9**	**100.0**	**23,908**

[1] MICS indicator 2.16

In about 94.5 per cent of households, salt used for cooking was tested for iodine content by using salt test kits (both potassium iodide and potassium iodate content). Table NU.9 shows that in a very small proportion of households (4.6 per cent), there was no salt available. These households may use iodized fish sauce for cooking, which is commonly used in Thailand. In 70.9 per cent of households, salt was found to contain 15 parts per million (ppm) or more of iodine. Use of iodized salt was lowest in the Northeast (only 54 per cent) and highest in Bangkok (82.1 per cent). Interestingly, the difference between the richest and poorest households in terms of iodized salt consumption is much more than expected, at 87.3 per cent and 53.7 per cent, respectively (Figure NU.4).

Figure NU.4 Percentage of households consuming adequately iodized salt, Thailand, 2012

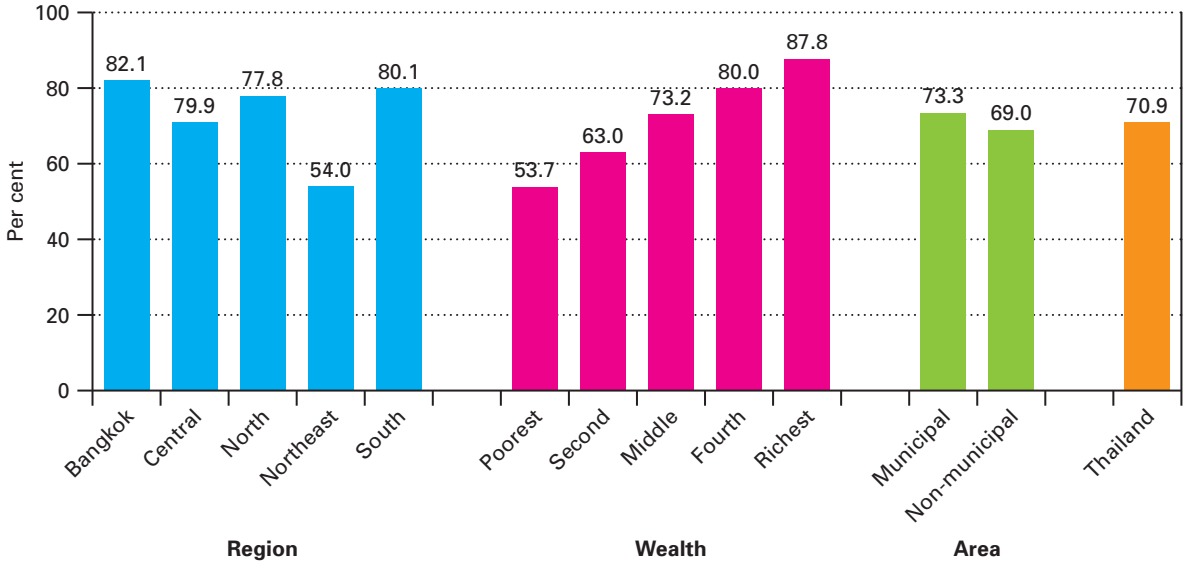


Figure NU.5 and NU.6 depict a comparison between households consuming iodized salt (> 0 ppm iodine) and quality iodized salt (> 15 ppm iodine). Figure NU.5 shows that use of iodized salt was lowest among poorest (72.7 per cent) and highest among richest (94.4 per cent). The findings also reveal that relative declines between coverage and quality coverage are largest among poorest (19 percentage point) and lowest among richest (7.1 percentage point).

Figure NU.5 Percentage of households consuming iodized salt by wealth index quintile, Thailand, 2012

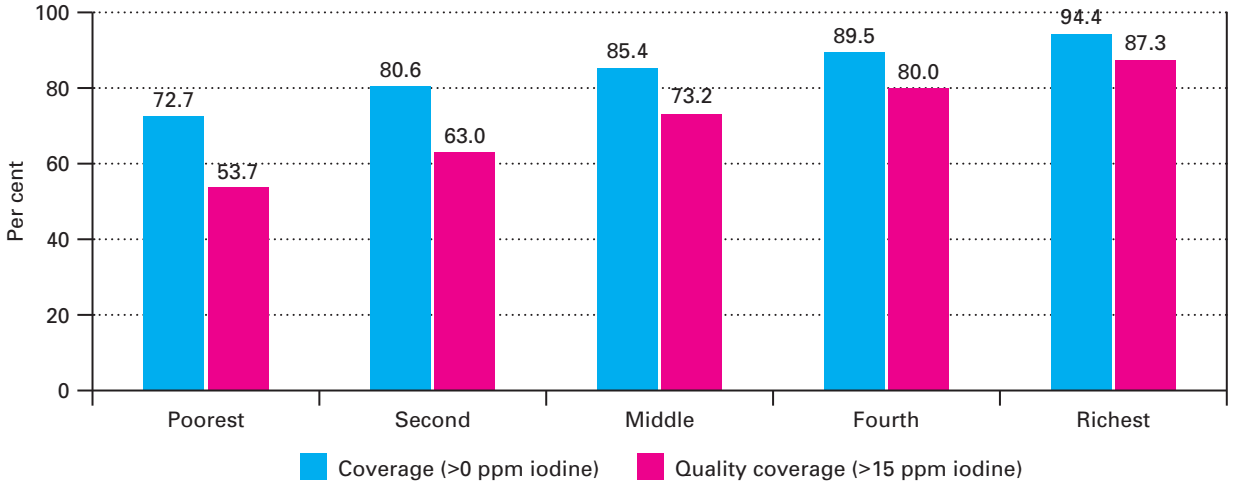
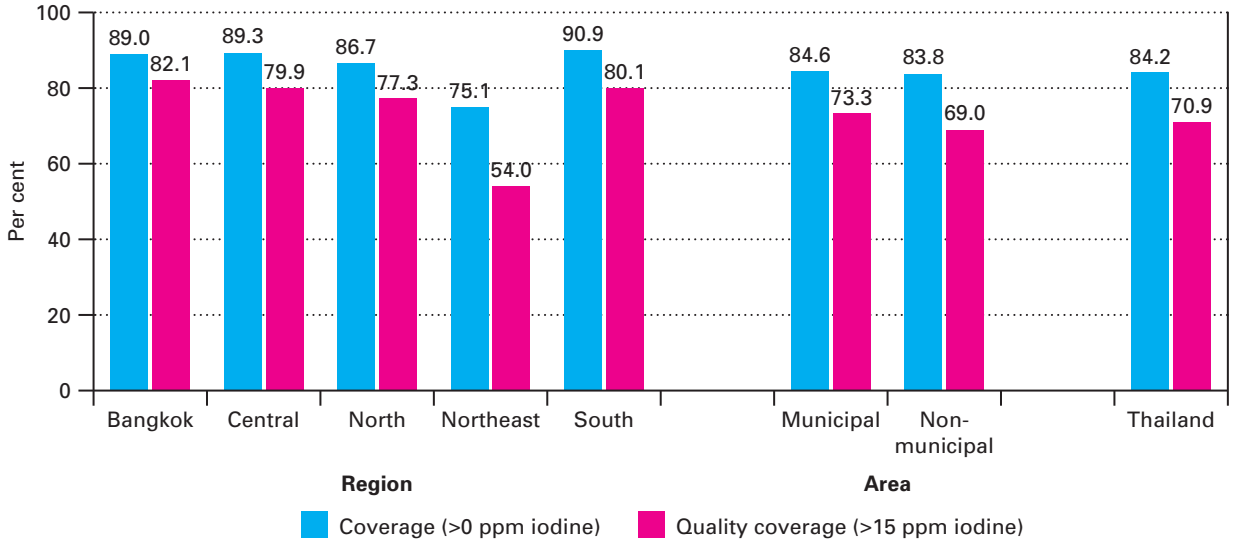


Figure NU.6 indicates that 84.2 percent of households in Thailand consume iodized salt; while 70.9 percent of households consume quality iodized salt. The findings also show that both areas (municipal and non-municipal) have the same coverage but the decline from coverage to quality coverage is greater for non-municipal. It is also interesting to note that relative declines between coverage and quality coverage are largest among households in the Northeast (21.1 percentage point) and lowest among households in Bangkok (6.9 percentage point).

Figure NU.6 Percentage of households consuming iodized salt by region and area, Thailand, 2012



Low Birth Weight

Weight at birth is a good indicator not only of a mother's health and nutritional status but also of the newborn's chances for survival, growth, long-term health and psychosocial development. Low birth weight (less than 2,500 grams) carries a range of grave health risks for children. Babies who were undernourished in the womb face a greatly increased risk of dying during early childhood. Those who survive are at increased risk of impaired immune function and disease; they are likely to remain undernourished, with reduced muscle strength, throughout their lives, and suffer a higher incidence of diabetes and heart disease in later life. Children born underweight also tend to have a lower IQ and cognitive disabilities, affecting their performance in school and their job opportunities as adults.

In the developing world, low birth weight stems primarily from the mother's poor health and nutrition. Three factors have the most impact: the mother's poor nutritional status before conception, short stature (due mostly to under nutrition and infections during her childhood), and poor nutrition during the pregnancy. Inadequate weight gain during pregnancy is particularly important since it accounts for a large proportion of foetal growth retardation. Moreover, diseases such as diarrhoea and malaria, which are common in many developing countries, can significantly impair foetal growth if the mother becomes infected while pregnant.

In the industrialized world, cigarette smoking during pregnancy is the leading cause of low birth weight. In developed and developing countries alike, teenagers who give birth when their own bodies have yet to finish growing run the risk of bearing underweight babies.

Overall, 99 per cent of births were weighed at birth and approximately 7.6 per cent of infants are estimated to weigh less than 2,500 grams at birth (Table NU.10). There was obvious variation by region (Figure NU.5). The percentage of low birth weight does not vary much by municipal and non-municipal areas or by mother's education. A small disparity can be observed by living standards (8.5 and 6.1 per cent for the poorest and the richest, respectively).

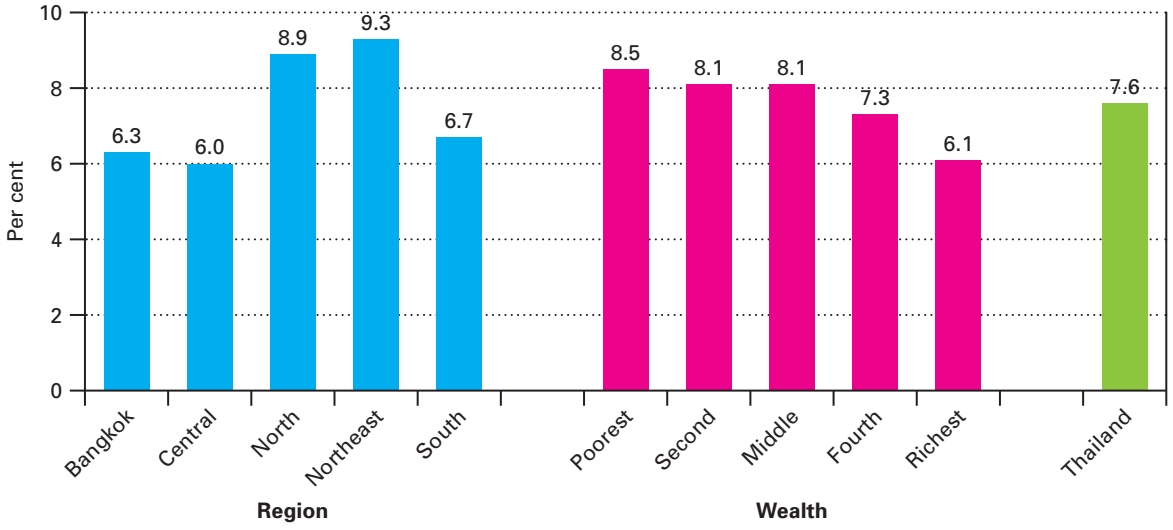
Table NU.10 Low birth weight infants

Percentage of last-born children in the two years preceding the survey that are estimated to have weighed below 2,500 grams at birth and percentage of live births weighed at birth, Thailand, 2012

	Per cent of live births:		Number of last-born children two years preceding the survey
	Below 2,500 grams[1]	Weighed at birth[2]	
Region			
Bangkok	6.3	98.8	194
Central	6.0	98.7	520
North	8.9	99.3	266
Northeast	9.3	99.3	611
South	6.7	98.7	323
Area			
Municipal	6.9	98.5	803
Non-municipal	8.1	99.3	1,110
Mother's education			
None	7.7	97.0	51
Primary	7.3	99.6	412
Secondary	7.6	98.8	997
Higher	7.7	99.1	454
Wealth index quintile			
Poorest	8.5	99.0	277
Second	8.1	99.0	397
Middle	8.1	99.9	454
Fourth	7.3	99.0	428
Richest	6.1	97.9	358
Ethnicity of household head*			
Thai	7.5	99.1	1,869
Non-Thai	10.0	96.8	43
Total	**7.6**	**99.0**	**1,914**

[1] MICS indicator 2.18 [2] MICS indicator 2.19
*1 case with missing ethnicity of household head not shown

Figure NU.7 Percentage of infants weighing less than 2,500 grams at birth, Thailand, 2012



V.
Child Health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Vaccinations

The Millennium Development Goal (MDG) 4 aims to reduce child mortality by two thirds between 1990 and 2015. Immunization plays a key part in achieving this goal. Immunizations have saved the lives of millions of children in the three decades since the launch of the Expanded Programme on Immunization (EPI) in 1974.

One of the World Fit for Children goals is to ensure 90 per cent full immunization coverage of children under age 1 nationally, with at least 80 per cent coverage in every district or equivalent administrative unit.

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 12 months of age.

The vaccination schedule followed by the Thailand National Immunization Programme provides all the above-mentioned vaccinations as well as three doses of vaccine against Hepatitis B.
All vaccinations should be received during the first year of life. Taking into consideration this vaccination schedule, the estimates for full immunization coverage from the Thailand MICS are based on children aged 12-23 months.

Information on vaccination coverage was collected for all children under five years of age.
All mothers or caretakers were asked to provide vaccination cards. If the vaccination card for a child was available, interviewers copied vaccination information from the cards onto the MICS questionnaire in the Tablet PC. If no vaccination card was available for the child, the interviewer proceeded to ask the mother to recall whether or not the child had received each of the vaccinations, and for Polio, DPT and Hepatitis B, how many doses were received. The final vaccination coverage estimates are based on both information obtained from the vaccination card and the mother's report of vaccinations received by the child.

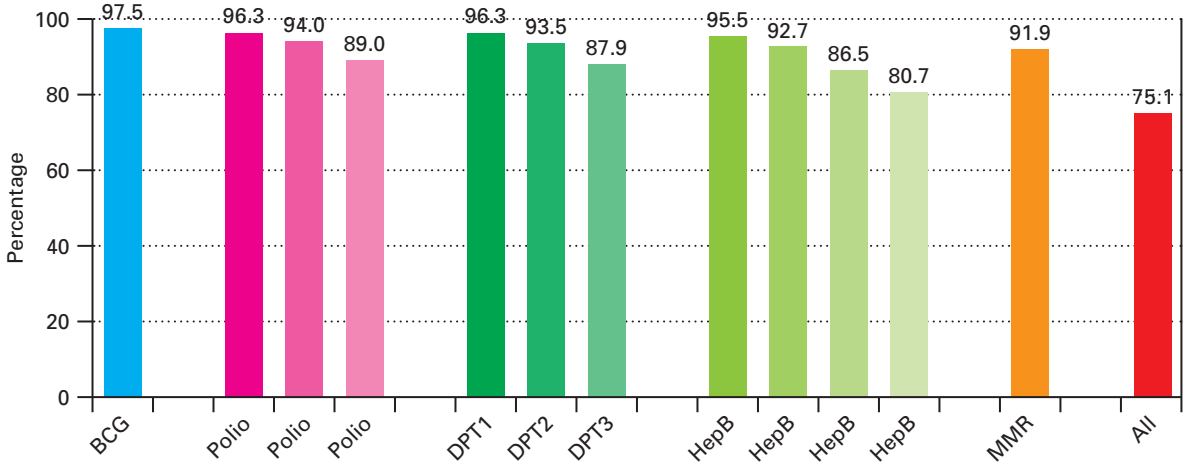
Table CH.1 Vaccinations in first year of life

Percentage of children aged 12-23 months immunized against childhood diseases at any time before the survey and percentage vaccinated before the first birthday, Thailand, 2012

	Vaccinated at any time before the survey according to:			Vaccinated by 12 months of age
	Vaccination card	Mother's/ Caretaker's report	Either	
BCG[1]	82.0	15.5	97.5	97.5
Polio				
1	80.8	15.6	96.4	96.3
2	79.7	14.6	94.3	94.0
3[2]	79.7	11.2	90.9	89.0
DPT				
1	81.7	15.0	96.7	96.3
2	80.5	13.3	93.8	93.5
3[3]	80.5	9.5	89.9	87.9
MMR[4]	80.8	14.5	95.3	91.9
HepB				
At birth	82.8	12.6	95.5	95.5
1	81.8	11.0	92.8	92.7
2	80.7	6.1	86.8	86.5
3[5]	80.8	2.8	83.6	80.7
All vaccinations	79.4	1.8	81.2	75.1
No vaccinations	0.0	1.9	1.9	1.9
Number of children age 12-23 months	**1,827**	**1,827**	**1,827**	**1,827**

[1] MICS indicator 3.1 [2] MICS indicator 3.2 [3] MICS indicator 3.3
[4] MICS indicator 3.4 MDG indicator 4.3 [5] MICS indicator 3.5

Figure CH.1 Percentage of children aged 12-23 months who received the recommended vaccinations by 12 months of age, Thailand, 2012



The percentage of children aged 12 to 23 months who have received each of the specific vaccinations by source of information (vaccination card and mother's recall) is shown in Table CH.1. 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 first three columns of the table, the numerator includes all children who were vaccinated at any time before the survey according to the vaccination card or the mother's report. In the last column, only those children who were vaccinated before their first birthday, as recommended, are included. For children without vaccination cards, the proportion of vaccinations given before the first birthday is assumed to be the same as for children with vaccination cards.

A total of 97.5 per cent 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 96.3 per cent. The percentage declines for subsequent doses of DPT to 93.5 per cent for the second dose, and 87.9 per cent for the third dose (Table CH.1 & Figure CH.1). Similarly, 96.3 per cent of children received Polio 1 by age 12 months and this declines to 89 per cent by the third dose. The coverage for the measles/mumps/rubella vaccine (MMR) by 12 months of age is 91.9 per cent. There is also a slight decline in the Hepatitis B vaccination doses received from 92.7 per cent for the first dose to 86.5 per cent for the second dose, and 80.7 per cent for the third dose. The percentage of children who had all the recommended vaccinations by their first birthday is low at only 75.1 per cent.

For vaccination of children any time before the survey, 81.2 per cent of children aged 12-23 months had received all recommended and only 1.9 per cent had received none. For individual vaccines, 97.5 per cent of children aged 12-23 months had received BCG, 89.9 per cent received three doses of DPT, 90.9 per cent received three doses of Polio, 83.6 per cent received three doses of Hepatitis B, and 95.3 per cent received measles vaccines.

Table CH.2 presents vaccination coverage estimates among children 12-23 months by background characteristics. The figures indicate children receiving the vaccinations at any time up to the date of the survey, and are based on information from both the vaccination cards and mothers'/caretakers' reports. Vaccination cards were seen by the interviewer for only 81.9 per cent of children. With respect to the background characteristics of vaccinated children, children in the North have the highest coverage of all the recommended vaccinations at 87.5 per cent; the lowest proportion (63.3 per cent) is found among children in Bangkok. It is interesting to note that children whose mothers have tertiary education are less likely to be vaccinated than those whose mothers have lower or no education (71.9 per cent compared to above 80 per cent). Household living standards also seem to be a factor. Some 70.1 per cent of children living in the richest households received all recommended vaccinations, compared to 88.6 per cent among their peers in the poorest households. There is not much variation by sex.

Table CH.2 Vaccinations by background characteristics

Percentage of children aged 12-23 months currently vaccinated against childhood diseases, Thailand, 2012

	Percentage of children who received:														Percentage with vaccination card seen	Number of children age 12-23 months
	BCG	Polio			DPT			Measles	HepB				None	All		
		Polio1	Polio2	Polio3	DPT1	DPT2	DPT3		At birth	HepB1	HepB2	HepB3				
Sex																
Male	98.1	96.9	94.8	92.2	96.9	94.4	91.0	95.2	95.5	93.3	86.9	83.5	1.6	81.7	82.9	885
Female	97.0	95.8	93.7	89.7	96.6	93.2	88.9	95.4	95.5	92.4	86.7	83.6	2.1	80.7	81.0	943
Region																
Bangkok	97.7	93.5	88.4	78.8	94.6	88.9	79.2	91.3	92.7	90.1	69.4	66.4	2.3	63.3	66.8	145
Central	97.7	97.2	93.9	90.1	97.3	92.4	87.8	95.6	95.2	92.9	83.6	80.3	1.6	77.9	79.9	444
North	99.1	98.6	98.5	96.8	99.0	98.5	96.5	97.9	95.0	96.2	93.6	90.9	0.6	87.5	87.3	282
Northeast	96.6	95.7	94.1	91.8	96.4	94.2	91.1	95.8	96.3	92.6	90.2	86.6	2.7	85.0	83.4	661
South	97.6	95.9	94.1	90.5	95.4	92.6	89.4	93.2	95.6	91.3	85.9	83.1	1.5	80.2	83.9	295
Area																
Municipal	97.0	95.9	93.1	87.9	96.3	92.8	87.5	95.1	93.8	91.1	81.1	77.9	2.3	74.8	76.3	687
Non-municipal	97.8	96.6	95.0	92.7	96.9	94.4	91.4	95.4	96.5	93.9	90.2	87.0	1.6	85.0	85.3	1,140
Mother's education																
None	96.5	92.5	91.3	88.2	93.4	91.2	88.2	88.9	94.6	90.6	87.2	85.9	3.5	83.5	90.3	69
Primary	97.1	97.4	96.4	94.1	97.3	96.2	93.8	96.2	96.1	95.3	90.0	88.5	1.7	85.3	86.8	674
Secondary	98.5	97.3	95.1	91.1	97.9	94.7	89.6	96.8	96.1	93.2	87.4	83.2	1.3	81.7	81.4	716
Higher	96.6	93.3	89.3	85.2	94.0	87.8	83.7	92.1	93.2	88.0	79.5	75.0	3.0	71.9	72.4	368
Wealth index quintile																
Poorest	98.9	97.8	96.0	93.9	98.4	96.3	93.1	95.8	98.9	95.4	91.1	89.9	0.7	88.6	90.7	308
Second	98.5	98.6	95.2	92.7	98.6	95.0	92.3	97.5	96.7	94.7	89.9	86.6	0.8	84.8	88.7	416
Middle	96.1	94.6	93.2	90.5	95.4	92.2	88.5	95.4	94.1	92.2	86.3	82.4	2.6	79.6	78.0	414
Fourth	97.6	96.3	96.4	92.2	96.3	95.0	90.5	94.9	94.5	93.6	88.8	84.9	2.3	81.9	80.1	377
Richest	96.5	94.3	90.1	84.6	94.7	89.9	84.8	92.2	93.2	87.5	76.5	73.3	3.0	70.1	71.7	312
Ethnicity of household head*																
Thai	97.6	96.4	94.3	90.9	96.8	93.8	89.9	95.4	95.6	92.9	86.7	83.4	1.8	81.1	81.9	1,786
Non-Thai	(94.1)	(92.3)	(92.8)	(91.6)	(92.9)	(92.9)	(91.8)	(91.7)	(89.0)	(92.9)	(91.8)	(91.8)	(5.9)	(85.0)	(86.0)	39
Total	**97.5**	**96.4**	**94.3**	**90.9**	**96.7**	**93.8**	**89.9**	**95.3**	**95.5**	**92.8**	**86.8**	**83.6**	**1.9**	**81.2**	**81.9**	**1,827**

( ) Figures that are based on 25-49 unweighted cases
*3 cases with missing ethnicity of household head not shown

Neonatal Tetanus Protection

Eliminating maternal tetanus is a key strategy to achieve MDG 5: reducing the maternal mortality ratio by three quarters between 1990 and 2015. Another global health objective is to reduce the incidence of neonatal tetanus to less than 1 case per every 1,000 live births in every district.

The strategy for preventing maternal and neonatal tetanus is to ensure that all pregnant women receive at least two doses of tetanus toxoid vaccine. If a woman has not received at least two

doses of tetanus toxoid during a particular pregnancy, she (and her newborn) is considered to be protected against tetanus if she has:

- Received at least two doses of tetanus toxoid vaccine, the last within the previous three years;
- Received at least three doses, the last within the previous five years;
- Received at least four doses, the last within the previous 10 years;
- Received five or more doses anytime during her life.

To assess the status of tetanus vaccination coverage, women who gave birth in the two years prior to the survey were asked if they had received tetanus toxoid injections during the pregnancy for their most recent birth, and if so, how many. Women who did not receive two or more tetanus toxoid vaccinations during this pregnancy were then asked about any tetanus toxoid vaccinations they may have received prior to this pregnancy. Interviewers also asked women to present their vaccination card, on which dates of tetanus toxoid injections are recorded and referred to information from the cards when available.

Table CH.3 Neonatal tetanus protection

Percentage of women aged 15-49 years with a live birth in the last 2 years protected against neonatal tetanus, Thailand, 2012

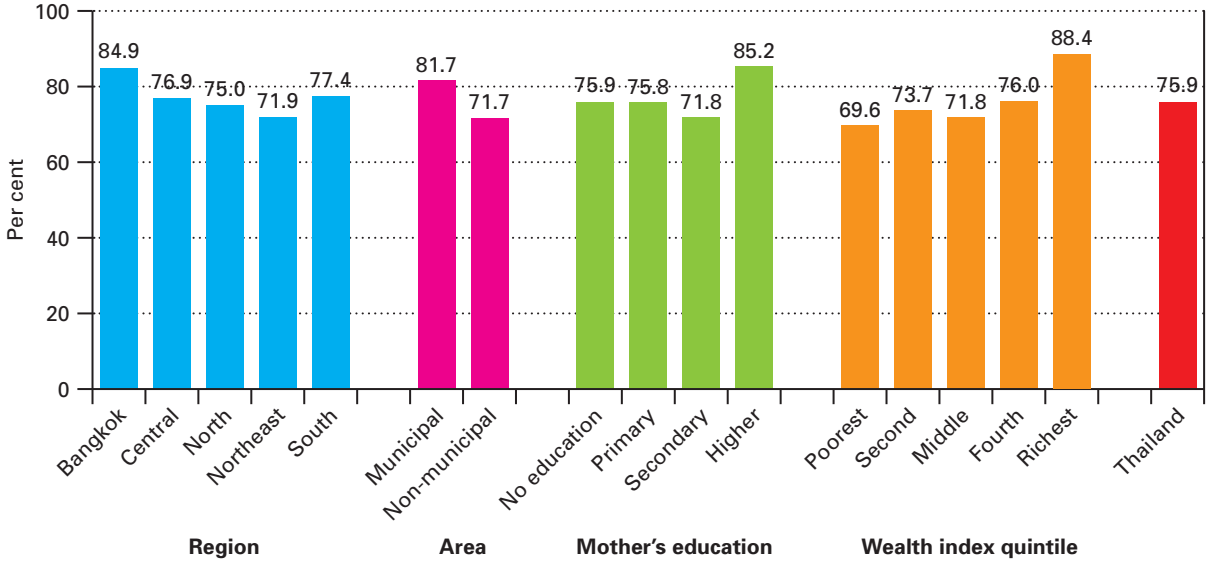
	Percentage of women who received at least 2 doses during last pregnancy	Percentage of women who did not receive two or more doses during last pregnancy but received:			Protected against tetanus[1]	Number of women with a live birth in the last 2 years
		2 doses, the last within prior 3 years	3 doses, the last within prior 5 years	4 doses, the last within prior 10 years		
Region						
Bangkok	83.8	0.6	0.5	0.0	84.9	194
Central	72.7	3.5	0.6	0.0	76.9	520
North	66.8	4.7	3.1	0.3	75.0	266
Northeast	65.7	4.8	1.4	0.0	71.9	611
South	73.2	2.0	2.2	0.1	77.4	323
Area						
Municipal	77.1	3.4	1.2	0.0	81.7	803
Non-municipal	66.3	3.6	1.7	0.1	71.7	1,110
Education						
None	73.9	1.8	0.2	0.0	75.9	51
Primary	71.2	2.7	1.8	0.0	75.8	412
Secondary	66.6	3.8	1.2	0.1	71.8	997
Higher	79.5	3.8	2.0	0.0	85.2	454
Wealth index quintile						
Poorest	62.2	5.6	1.8	0.0	69.6	277
Second	68.6	3.1	2.0	0.0	73.7	397
Middle	67.1	3.7	0.9	0.2	71.8	454
Fourth	71.9	3.1	1.0	0.0	76.0	428
Richest	83.6	2.8	2.0	0.0	88.4	358
Ethnicity of household head*						
Thai	71.0	3.5	1.5	0.0	76.0	1,869
Non-Thai	64.5	6.5	0.0	1.0	72.1	43
Total	**70.8**	**3.5**	**1.5**	**0.0**	**75.9**	**1,914**

[1] MICS indicator 3.7
*1 case with missing ethnicity of household head not shown

Table CH.3 shows the protection from tetanus of women who have had a live birth within the last two years. In Thailand, 75.9 per cent of women aged 15-49 with a live birth in the last two years are protected against tetanus, and 70.8 per cent received at least two doses during the last pregnancy. The proportion of women receiving two doses of tetanus toxoid vaccine (the last within the prior three years) and three doses of tetanus toxoid vaccine (the last within the prior five years) were 3.5 per cent and 1.5 per cent, respectively.

Figure CH.2 shows the protection of women against neonatal tetanus by major background characteristics. There is a considerable differential in tetanus protection by region, area, mother's education and household wealth. About 84.9 per cent of women living in Bangkok are protected against tetanus, compared to only 71.9 per cent of women living in the Northeast. The percentage was higher in municipal areas than in non-municipal areas (81.7 per cent and 71.7 per cent). Women who have secondary education are less likely to protect against tetanus than those with other educational levels. Living standards also influence the prevalence of tetanus protection. About 88.4 per cent of women from the richest households are protected against tetanus, compared to 69.6 per cent of very poor women.

Figure CH.2 Percentage of women with a live birth in the last 2 years who are protected against neonatal tetanus, Thailand, 2012



Oral Rehydration Treatment

Diarrhoea is a leading cause of death globally among children under five. Most diarrhoea-related deaths in children are due to dehydration from loss of large quantities of water and electrolytes from the body in liquid stools. Management of diarrhoea – either through oral rehydration salts (ORS) or a recommended homemade fluid (RHF) – can 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 diarrhoea.

The goals are to:

1) reduce by one half deaths due to diarrhoea among children under 5 between 2000 and 2010 (A World Fit for Children); and
2) reduce by two thirds the mortality rate among children under 5 between 1990 and 2015 (Millennium Development Goals). In addition, A World Fit for Children calls for a reduction in the incidence of diarrhoea by 25 per cent.

In the MICS, the prevalence of diarrhoea was estimated by asking mothers or caretakers whether their child under 5 years of age had had an episode of diarrhoea in the two weeks prior to the survey. In cases where mothers reported that the child had diarrhoea, a series of questions were asked about the treatment of the illness, including what was given to the child to drink and eat during the episode and whether this was more or less than what was usually given to the child.

Overall, 5.1 per cent of children under 5 had diarrhoea in the two weeks preceding the survey (Table CH.4). Diarrhoea prevalence was highest in the North (6.4 per cent). The peak of diarrhoea prevalence occurs in the weaning period, among children aged 12-23 months (9.2 per cent compared to less than 7 per cent).

Table CH.4 also shows the percentage of children who were given various types of recommended liquids during the episode of diarrhoea. Since children may have been given more than one type of liquid, the percentages do not necessarily add to 100. Overall, 57.8 per cent were given fluids from ORS packets and 33.9 per cent were given recommended homemade fluids. Children of mothers with higher education were least likely to be given oral rehydration solution. Some 63.9 per cent of children with diarrhoea were given one or more of the recommended home treatments (i.e., were treated with ORS or any recommended homemade fluid).

Table CH.4 Oral rehydration solutions and recommended homemade fluids

Percentage of children aged 0-59 months with diarrhoea in the last two weeks, and treatment with oral rehydration solutions and recommended homemade fluids, Thailand, 2012

	Had diarrhoea in last two weeks	Number of children age 0-59 months	Children with diarrhoea who were given:			Number of children age 0-59 months with diarrhoea in last two weeks
			Fluid from ORS packet	Any recommended homemade fluid	ORS or any recommended homemade fluid	
Sex						
Male	5.4	4,836	57.2	28.2	58.8	263
Female	4.7	4,880	58.5	40.4	69.8	230
Region						
Bangkok	(3.5)	(833)	(70.2)	(23.6)	(73.1)	29
Central	4.4	2,268	52.1	34.9	71.8	100
North	6.4	1,493	48.6	30.7	48.9	96
Northeast	4.9	3,672	69.3	43.2	73.4	179
South	6.1	1,450	46.9	20.7	49.0	89
Area						
Municipal	4.4	3,723	58.8	35.1	69.2	165
Non-municipal	5.5	5,993	57.3	33.2	61.3	329
Age						
0-11 months	6.2	1,912	45.1	37.4	53.9	119
12-23 months	9.2	1,827	63.9	36.5	69.3	168
24-35 months	4.9	1,995	54.6	40.9	65.8	97
36-47 months	3.5	1,887	57.1	17.2	57.1	66
48-59 months	(2.1)	(2,095)	(77.3)	(23.7)	(77.3)	43
Mother's education						
None	(9.7)	(375)	(59.2)	(62.0)	(72.7)	36
Primary	4.2	3,775	50.1	38.2	60.2	160
Secondary	5.6	3,812	63.8	30.8	68.1	213
Higher	4.8	1,754	56.7	21.4	56.8	84

Table CH.4 Oral rehydration solutions and recommended homemade fluids (continued)

Percentage of children aged 0-59 months with diarrhoea in the last two weeks, and treatment with oral rehydration solutions and recommended homemade fluids, Thailand, 2012

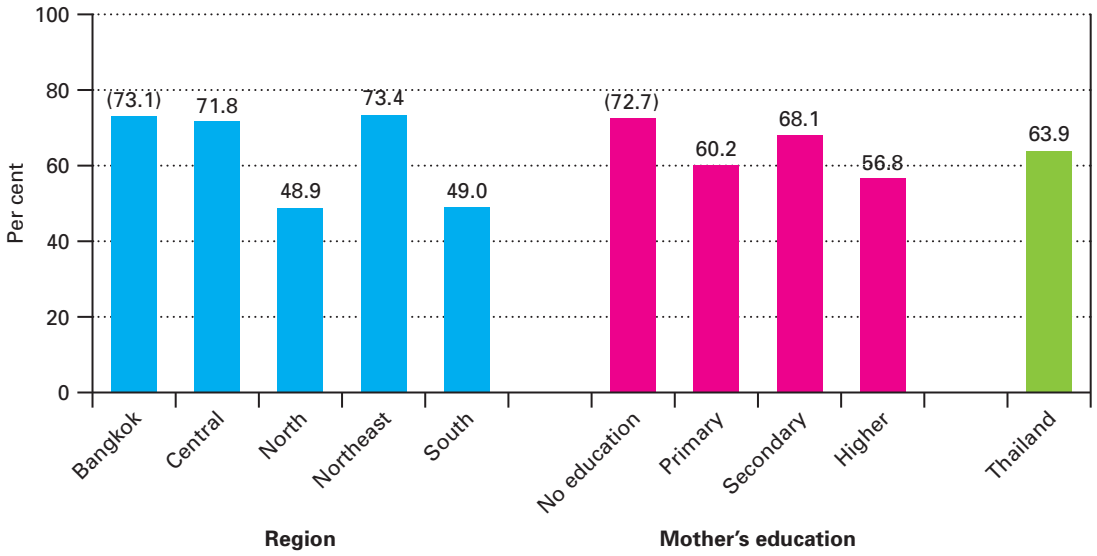
	Had diarrhoea in last two weeks	Number of children age 0-59 months	Children with diarrhoea who were given:			Number of children age 0-59 months with diarrhoea in last two weeks
			Fluid from ORS packet	Any recommended homemade fluid	ORS or any recommended homemade fluid	
Wealth index quintile						
Poorest	4.5	1,858	70.9	49.3	74.3	83
Second	5.8	2,127	52.3	25.2	60.5	124
Middle	4.4	2,183	63.3	38.1	66.8	97
Fourth	6.7	1,897	52.9	36.3	63.1	127
Richest	3.8	1,651	52.7	18.8	54.1	62
Ethnicity of household head*						
Thai	5.0	9,522	58.3	33.5	64.1	474
Non-Thai	(*)	(*)	(*)	(*)	(*)	19
Total	**5.1**	**9,716**	**57.8**	**33.9**	**63.9**	**494**

( ) Figures that are based on 25-49 unweighted cases (*) Figures that are based on less than 25 unweighted cases
*1 case with missing ethnicity of household head not shown

The use of ORS or other fluids is associated with children's gender and the socioeconomic status of households. The percentage for boys with diarrhoea that were given this solution was slightly lower than that of girls (58.8 per cent versus 69.8 per cent). Only 54.1 per cent of children from richest households received ORS or other fluids compared with 74.3 per cent of children from the poorest households.

The use rate of ORS or other fluids is also associated with region and mother's education (Figure CH.3). The percentage in the North and the South (49 per cent) are considerably less than for other regions (between 71 and 73 per cent).

Figure CH.3 Percentage of children under age 5 with diarrhoea who received ORS or recommended home fluids, Thailand, 2012



( ) Figures that are based on 25-49 unweighted cases

Less than 9 per cent of under-5 children with diarrhoea were given more than usual to drink while 86.7 per cent were given the same or less (Table CH.5). Giving the child more to drink during diarrhoea is most prevalent among children aged 48-59 months (32.2 per cent) and children in the second quintile (20 per cent) as well as children in the Northeast (17.4 per cent).

Table CH.5 Feeding practices during diarrhoea

Per cent distribution of children aged 0-59 months with diarrhoea in the last two weeks by amount of liquids and food given during episode of diarrhoea, Thailand, 2012

	Had diarrhoea in last two weeks	Number of children age 0-59 months	Drinking practices during diarrhoea:						Total	Eating practices during diarrhoea:						Total	Number of children age 0-59 months with diarrhoea in last two weeks
			Given much less	Given some what less	Given about the same	Given more	Given nothing	Missing/DK		Given much less	Given some what less	Given about the same	Given more	Stopped food	Had never been given		
Sex																	
Male	5.4	4,836	7.9	28.5	47.4	10.0	6.0	0.2	100.0	8.8	35.3	44.3	6.6	2.7	2.4	100.0	263
Female	4.7	4,880	8.3	27.1	54.7	7.0	3.0	0.0	100.0	9.8	30.5	48.4	0.9	6.0	4.4	100.0	230
Region																	
Bangkok	3.5	833	(28.4)	(25.4)	(41.4)	(0.0)	(4.8)	(0.0)	100.0	(25.5)	(48.9)	(25.7)	(0.0)	(0.0)	(0.0)	100.0	29
Central	4.4	2,268	13.7	32.3	49.0	1.3	3.7	0.0	100.0	16.8	26.6	55.9	0.0	0.0	0.7	100.0	100
North	6.4	1,493	4.6	16.2	70.3	5.3	3.1	0.5	100.0	5.8	21.6	65.6	2.8	0.8	3.3	100.0	96
Northeast	4.9	3,672	5.5	25.6	46.4	17.4	5.0	0.0	100.0	7.3	35.0	32.7	8.8	11.2	5.0	100.0	179
South	6.1	1,450	3.8	40.5	43.6	5.8	6.3	0.0	100.0	2.9	43.6	48.3	1.2	(0.0)	3.9	100.0	89
Area																	
Municipal	4.4	3,723	16.2	21.8	52.9	5.0	4.1	0.0	100.0	16.5	26.7	53.0	1.7	1.0	1.1	100.0	165
Non-municipal	5.5	5,993	4.0	30.8	49.7	10.5	4.8	0.1	100.0	5.6	36.2	42.8	5.1	5.9	4.5	100.0	329
Age																	
0-11 months	6.2	1,912	11.2	12.0	73.2	3.6	0.0	0.0	100.0	11.0	9.4	61.6	2.4	10.5	5.0	100.0	119
12-23 months	9.2	1,827	6.8	36.5	41.7	11.1	3.9	0.0	100.0	10.3	40.0	41.5	0.4	2.4	5.4	100.0	168
24-35 months	4.9	1,995	9.2	34.8	49.9	2.5	3.4	0.0	100.0	9.6	53.0	36.4	0.0	0.3	0.7	100.0	97
36-47 months	3.5	1,887	5.6	25.2	58.0	4.9	5.6	0.7	100.0	5.5	24.7	61.0	1.5	6.2	1.1	100.0	66
48-59 months	2.1	2,095	(5.3)	(25.5)	(15.8)	(32.2)	(21.1)	(0.0)	100.0	(5.5)	(39.0)	(21.4)	(34.2)	(0.0)	(0.0)	100.0	43
Mother's education																	
None	9.7	375	(20.7)	(36.1)	(36.8)	(3.3)	(1.7)	(1.3)	100.0	(26.8)	(26.0)	(34.3)	(4.2)	(8.7)	(0.0)	100.0	36
Primary	4.2	3,775	11.6	24.8	56.2	2.7	4.7	0.0	100.0	12.3	39.0	42.1	0.4	3.4	2.7	100.0	160
Secondary	5.6	3,812	5.5	26.2	47.4	15.1	5.8	0.0	100.0	5.2	31.9	43.8	7.7	5.7	5.7	100.0	213
Higher	4.8	1,754	2.5	34.0	55.1	5.7	2.6	0.0	100.0	6.0	27.8	65.2	1.0	0.0	0.0	100.0	84
Wealth index quintile																	
Poorest	4.5	1,858	8.2	31.7	50.9	3.0	5.7	0.6	100.0	9.2	44.0	39.5	0.0	5.0	2.3	100.0	83
Second	5.8	2,127	3.1	28.8	45.3	20.0	2.7	0.0	100.0	7.1	29.1	48.2	12.8	1.8	1.1	100.0	124
Middle	4.4	2,183	3.4	27.3	53.6	8.8	6.9	0.0	100.0	4.1	34.2	44.5	2.4	3.2	11.7	100.0	97
Fourth	6.7	1,897	15.5	22.0	54.3	3.8	4.4	0.0	100.0	15.1	23.2	51.0	0.3	9.0	1.5	100.0	127
Richest	3.8	1,651	9.8	33.3	50.1	3.2	3.6	0.0	100.0	9.5	45.0	44.1	1.3	0.0	0.0	100.0	62
Ethnicity of household head*																	
Thai	5.0	9,522	8.0	27.7	50.5	9.0	4.7	0.1	100.0	8.6	33.6	46.1	3.8	4.4	3.5	100.0	474
Non-Thai	10.4	184	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	(*)	(*)	(*)	(*)	(*)	100.0	19
Total	5.1	9,716	8.1	27.8	50.8	8.6	4.6	0.1	100.0	9.2	33.1	46.2	3.9	4.2	3.3	100.0	494

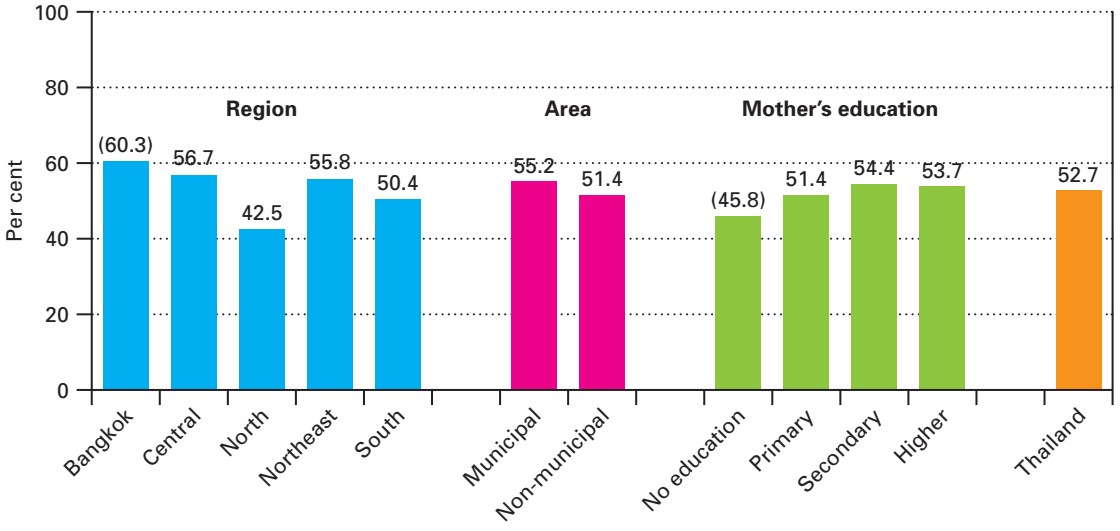
( ) Figures that are based on 25-49 unweighted cases (*) Figures that are based on less than 25 unweighted cases
*1 case with missing ethnicity of household head not shown

Around four in five children (83.2 per cent) were given somewhat less to eat, the same or more (continued feeding), but 9.2 per cent were given much less to eat. There are considerable differences in continued eating practices by region, with 93.1 per cent of children aged 0–59 months in the South who continued feeding, compared with only 74.6 per cent of children in Bangkok. Age differentials indicate that 94.6 per cent of children aged 48-59 months continued feeding compared with 73.4 per cent of children aged 0-11 months. Indeed, the practice of continued feeding increases substantially as the mother's education increases, from 64.5 per cent among children with uneducated mothers to 94 per cent for children whose mothers have higher education.

Table CH.6 shows the percentage of children aged 0-59 months with diarrhoea in the last two weeks who were given ORS or increased fluid with continued feeding, and the percentage of children with diarrhoea who were given other treatments. Overall, 59.3 per cent of children with diarrhoea received ORS or increased fluids, 65.4 per cent received ORT (ORS or recommended homemade fluids or increased fluids). Combining the information in Table CH.5 with that in Table CH.4 on oral rehydration therapy, it is observed that 52.7 per cent of children received ORT and continued feeding, as is the recommendation. There are differences in the home management of diarrhoea by background characteristics (Figure CH.4). In the North, only 42.5 per cent of children were given ORT and continued feeding, while the figure is 50 per cent and above in other regions. Children with educated mothers are more likely to receive ORT and continued feeding than children whose mothers have no education.

About one child in five (18.4 per cent) with diarrhoea in the last two weeks prior to the survey was given antimotility medicine, which is the highest percentage for all other treatments given. Even so, 23.6 per cent of children with diarrhoea did not receive any treatment or medicine. Gender disparities are observed in the use of antibiotics for diarrhoea treatment, with 0.5 per cent of girls aged 0-59 months with diarrhoea receiving antibiotics, compared to 2 per cent of boys.

Figure CH.4 Percentage of children under age 5 with diarrhoea who received ORT or increased fluids, AND continued feeding, Thailand, 2012



( ) Figures that are based on 25-49 unweighted cases

Table CH.6 Oral rehydration therapy with continued feeding and other treatments

Percentage of children aged 0-59 months with diarrhoea in the last two weeks who received oral rehydration therapy with continued feeding, and percentage of children with diarrhoea who received other treatments, Thailand, 2012

	Children with diarrhoea who received:			Other treatments:					Not given any treatment or drug	Number of children age 0-59 months with diarrhoea in last two weeks
				Pill or syrup						
	ORS or increased fluids	ORT (ORS or recommended homemade fluids or increased fluids)	ORT with continued feeding[1]	Anti-biotic	Anti-motility	Other	Un-known	Other*		
Sex										
Male	58.7	60.4	53.0	2.0	16.9	2.3	25.3	0.0	28.9	263
Female	60.0	71.2	52.3	0.5	20.0	0.3	32.9	0.0	17.5	230
Region										
Bangkok	(70.2)	(73.1)	(60.3)	(0.0)	(5.2)	(10.7)	(26.2)	(0.0)	(22.0)	29
Central	53.0	72.7	56.7	5.1	26.3	2.7	24.7	0.0	23.4	100
North	50.2	50.5	42.5	0.0	0.0	0.0	30.7	0.0	37.8	96
Northeast	70.7	74.8	55.8	0.0	29.3	0.0	26.1	0.0	16.3	179
South	49.8	51.9	50.4	1.5	11.4	1.2	38.1	0.0	23.8	89
Area										
Municipal	60.2	70.6	55.2	1.2	20.8	2.2	30.1	0.0	22.3	165
Non-municipal	58.9	62.9	51.4	1.4	17.2	1.0	28.2	0.0	24.2	329
Age										
0-11 months	46.7	55.5	37.1	2.9	20.4	2.6	20.9	0.0	38.1	119
12-23 months	65.9	71.3	55.5	1.2	12.3	0.1	39.9	0.0	16.3	168
24-35 months	56.9	68.0	59.1	0.3	20.5	0.0	24.8	0.0	19.9	97
36-47 months	57.1	57.1	50.0	0.7	10.5	5.6	32.7	0.0	26.8	66
48-59 months	(77.3)	(77.3)	(74.2)	(0.7)	(43.6)	(0.0)	(11.5)	(0.0)	(15.4)	43
Mother's education										
None	(59.2)	(72.7)	(45.8)	(0.0)	(27.9)	(0.0)	(30.6)	(0.0)	(25.4)	36
Primary	52.0	62.0	51.4	1.7	19.8	1.9	21.5	0.0	25.1	160
Secondary	64.9	69.3	54.4	1.2	19.4	1.9	28.6	0.0	20.3	213
Higher	59.0	59.2	53.7	1.3	9.0	0.0	42.9	0.0	28.3	84
Wealth index quintile										
Poorest	70.9	74.3	62.4	0.0	16.8	0.0	14.7	0.0	20.8	83
Second	55.6	63.8	55.5	2.2	24.8	2.2	23.2	0.0	25.2	124
Middle	63.6	67.2	55.6	1.6	7.7	0.9	52.5	0.0	13.3	97
Fourth	54.9	65.1	42.0	1.1	28.4	2.7	23.4	0.0	28.2	127
Richest	53.6	55.0	51.4	1.2	3.9	0.0	33.2	0.0	30.8	62
Ethnicity of household head**										
Thai	59.9	65.7	53.4	1.4	18.3	1.5	29.2	0.0	23.0	474
Non-Thai	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	19
Total	**59.3**	**65.4**	**52.7**	**1.3**	**18.4**	**1.4**	**28.9**	**0.0**	**23.6**	**494**

[1] MICS indicator 3.8
( ) Figures that are based on 25-49 unweighted cases
(*) Figures that are based on less than 25 unweighted cases
*such as zinc, injection, intravenous, home remedy, herbal medicine
**1 case with missing ethnicity of household head not shown

Care Seeking and Antibiotic Treatment of Pneumonia

Pneumonia is one of the leading causes of death of children under 5 and the use of antibiotics by children with suspected pneumonia is a key life-saving intervention. One of the World Fit for Children goals is to reduce by one-third the deaths due to acute respiratory infections.

In the Thailand MICS, the prevalence of suspected pneumonia was estimated by asking mothers or caretakers whether their child under age 5 had had an illness with a cough accompanied by rapid or difficult breathing, and whose symptoms were due either to a problem in the chest or a problem in the chest and a blocked nose.

Table CH.7 presents the prevalence of suspected pneumonia and, if care was sought outside the home, the site of care. Only 1.9 per cent of children aged 0-59 months were reported to have had symptoms of pneumonia during the two weeks preceding the survey. Just over one third of children with suspected pneumonia were taken to a government hospital (37.5 per cent) and one third to a private hospital (33.9 per cent). Some 83.3 per cent of children with suspected pneumonia were taken to an appropriate health-care provider, with the highest percentage in the Northeast (95.5 per cent) and the lowest in the Central region (62 per cent). The proportion of non-municipal children taken to an appropriate health-care provider is higher than that of municipal children (85.7 per cent versus 78.5 per cent). As many as 90.2 per cent of children with suspected pneumonia whose mothers have higher education went to an appropriate health care providers.

Table CH.7 also presents the use of antibiotics for the treatment of suspected pneumonia in children under 5 by sex, age, region, area, and socioeconomic factors. Some 45.4 per cent of children under 5 with suspected pneumonia had received antibiotics during the two weeks prior to the survey. The percentage was higher in municipal areas compared to non-municipal areas (53.1 per cent versus 41.6). A cautious interpretation is required since the number of observations is small and makes it difficult to reach conclusions about the differences by background characteristics.

Table CH.7 Care seeking for suspected pneumonia and antibiotic use during suspected pneumonia

Percentage of children aged 0-59 months with suspected pneumonia in the last two weeks who were taken to a health provider and percentage of children who were given antibiotics, Thailand, 2012

	Had suspected pneumonia in the last two weeks	Number of children aged 0-59 months	Children with suspected pneumonia who were taken to:							Any appropriate provider[1]	Percentage of children with suspected pneumonia who received antibiotics in the last two weeks[2]	Number of children aged 0-59 months with suspected pneumonia in the last two weeks
			Public sources		Private sources			Other source				
			Govt. hospital	Govt. health post	Private hospital/ clinic	Private physician	Private pharmacy	Shop	Other*			
Sex												
Male	1.8	4,836	30.6	8.6	37.0	2.0	2.2	0.0	0.0	78.2	55.3	86
Female	2.1	4,880	43.3	7.2	31.3	5.8	0.0	0.9	0.0	87.6	37.1	102
Region												
Bangkok	0.7	833	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	6
Central	2.2	2,268	(32.6)	(4.4)	(25.0)	(0.0)	(0.9)	(1.3)	(0.0)	(62.0)	(57.3)	49
North	1.5	1,493	(10.6)	(4.8)	(27.1)	(33.5)	(0.0)	(1.3)	(0.0)	(76.0)	(48.5)	23
Northeast	2.6	3,672	48.3	12.3	34.8	0.0	1.5	0.0	0.0	95.5	41.8	94
South	1.2	1,450	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	17
Area												
Municipal	1.7	3,723	39.2	5.2	32.3	1.7	0.7	0.5	0.0	78.5	53.1	63
Non-municipal	2.1	5,993	36.6	9.2	34.7	5.2	1.2	0.5	0.0	85.7	41.6	125

Table CH.7 Care seeking for suspected pneumonia and antibiotic use during suspected pneumonia (continued)

Percentage of children aged 0-59 months with suspected pneumonia in the last two weeks who were taken to a health provider and percentage of children who were given antibiotics, Thailand, 2012

	Had suspected pneumonia in the last two weeks	Number of children aged 0-59 months	Children with suspected pneumonia who were taken to:							Any appropriate provider[1]	Percentage of children with suspected pneumonia who received antibiotics in the last two weeks[2]	Number of children aged 0-59 months with suspected pneumonia in the last two weeks
			Public sources		Private sources			Other source				
			Govt. hospital	Govt. health post	Private hospital/ clinic	Private physician	Private pharmacy	Shop	Other*			
Age												
0-11 months	2.3	1,912	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	44
12-23 months	3.1	1,827	(30.9)	(10.1)	(33.9)	(3.0)	(0.0)	(0.0)	0.0	(78.0)	(30.5)	57
24-35 months	2.3	1,995	(31.5)	(10.8)	(33.6)	(1.1)	(3.2)	(0.0)	0.0	(77.0)	(56.4)	46
36-47 months	1.3	1,887	(32.5)	(1.8)	(46.6)	(5.5)	(1.8)	(1.2)	0.0	(86.4)	(56.0)	25
48-59 months	0.8	2,095	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	17
Mother's education												
None	1.6	375	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	6
Primary	2.1	3,775	45.8	6.5	27.6	6.6	0.5	0.0	0.0	86.6	40.9	81
Secondary	1.9	3,812	30.6	7.2	37.4	1.7	2.0	0.4	0.0	76.9	50.1	72
Higher	1.7	1,754	(38.4)	(1.1)	(47.4)	(3.3)	(0.0)	(0.0)	(0.0)	(90.2)	(51.0)	30
Wealth index quintile												
Poorest	3.5	1,858	(54.3)	(9.9)	(23.0)	(7.6)	(2.9)	(0.0)	(0.0)	(94.9)	(43.7)	66
Second	1.8	2,127	(15.1)	(16.1)	(54.4)	(2.9)	(0.0)	(1.7)	(0.0)	(88.5)	(32.7)	39
Middle	2.1	2,183	(36.2)	(2.2)	(30.5)	(0.0)	(0.0)	(0.0)	(0.0)	(68.9)	(58.2)	46
Fourth	0.8	1,897	(30.5)	(3.2)	(34.1)	(9.4)	(0.0)	(0.0)	(0.0)	(77.2)	(58.2)	16
Richest	1.4	1,651	(34.7)	(2.4)	(36.9)	(0.0)	(0.0)	(1.3)	(0.0)	(74.0)	(37.0)	22
Ethnicity of household head**												
Thai	1.9	9,522	38.8	8.1	34.4	4.2	0.8	0.5	0.0	85.5	43.5	182
Non-Thai	3.4	184	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	6
Total	**1.9**	**9,716**	**37.5**	**7.8**	**33.9**	**4.0**	**1.0**	**0.5**	**0.0**	**83.3**	**45.4**	**189**

[1] MICS indicator 3.9 [2] MICS indicator 3.10

( ) Figures that are based on 25-49 unweighted cases

(*) Figures that are based on less than 25 unweighted cases

*such as relative, friend, traditional practitioner

**10 cases with missing ethnicity of household head not shown

Solid Fuel Use

More than three billion people around the world rely on solid fuels for their basic energy needs, including cooking and heating. Solid fuels include biomass fuels such as wood, charcoal, crops or other agricultural waste, dung, shrubs, straw and coal. Cooking and heating with solid fuels leads to high levels of indoor smoke which contains a complex mix of health-damaging pollutants. The main problem with the use of solid fuels is their incomplete combustion, which produces toxic elements such as carbon monoxide, polyaromatic hydrocarbons, and sulphur dioxide (SO_2), among others. Use of solid fuels increases the risks of incurring acute respiratory illness, pneumonia, chronic obstructive lung disease, cancer, and possibly tuberculosis, asthma, or cataracts, and may contribute to low birth weight of babies born to pregnant women exposed to smoke. The primary indicator for monitoring use of solid fuels is the proportion of the population using solid fuels as the primary source of domestic energy for cooking, shown in Table CH.8.

Overall, one quarter (26.1 per cent) of the population in Thailand are using solid fuels for cooking. The use of solid fuels is very low in municipal areas (14.7 per cent), but quite high in non-municipal areas (34.5 per cent). Differentials with respect to household wealth and the educational level of the household head are also substantial. The poorest 20 per cent of the population uses solid fuel for cooking the most (82.3 per cent), especially compared to richest 20 per cent of the population (0.1 per cent). The reverse is found in relation to the use of liquefied petroleum gas (LPG), used by 98 per cent of the richest, but only 15.4 per cent of the poorest population. Similarly, the use of solid fuels is negatively associated with the educational level of the household head. About 40.4 per cent of the population in households with uneducated household heads rely on solid fuels compared to only 1.7 per cent of the population in households whose heads have tertiary education. The findings further indicate that the use of solid fuels is very common in the Northeast (53.7 per cent) and the North (35.7 per cent) but very rare in Bangkok (0.5 per cent). The table also shows that the overall percentage is high due to high levels of charcoal and wood used for cooking purposes.

Table CH.8 Solid fuel use

Per cent distribution of household members according to type of cooking fuel used by the household, and percentage of household members living in households using solid fuels for cooking, Thailand, 2012

	Percentage of household members in households using:											Number of household members
	Electricity	Liquefied Petroleum Gas (LPG)	Natural Gas/ Biogas	Solid fuels				Other fuel	No food cooked in the household	Total	Solid fuels for cooking[1]	
				Coal/ lignite	Charcoal	Wood	Agricultural crop residue					
Region												
Bangkok	3.8	92.9	0.1	0.0	0.5	0.0	0.0	0.0	2.6	100.0	0.5	8,862
Central	1.8	91.3	0.0	0.0	4.3	0.9	0.0	0.0	1.6	100.0	5.2	19,568
North	1.2	61.1	0.0	0.0	18.0	17.7	0.0	0.0	1.4	100.0	35.7	12,700
Northeast	0.5	44.6	0.0	0.0	32.2	21.5	0.0	0.0	0.9	100.0	53.7	27,671
South	2.0	94.5	0.1	0.0	1.2	1.0	0.0	0.0	1.2	100.0	2.2	10,232
Area												
Municipal	2.5	80.2	0.0	0.0	8.2	6.5	0.0	0.0	2.3	100.0	14.7	33,424
Non-municipal	0.8	63.7	0.0	0.0	20.7	13.8	0.0	0.0	0.8	100.0	34.5	45,609
Education of household head												
None	1.6	56.5	0.0	0.0	17.3	23.1	0.0	0.0	1.2	100.0	40.4	4,508
Primary	0.8	64.3	0.0	0.0	20.3	13.7	0.0	0.0	0.7	100.0	34.0	49,886
Secondary	2.4	83.6	0.1	0.0	7.7	3.7	0.0	0.0	2.3	100.0	11.4	15,045
Higher	3.7	90.7	0.1	0.0	1.4	0.3	0.0	0.0	3.6	100.0	1.7	9,468
Missing/DK	3.0	75.9	0.0	0.0	0.3	19.2	0.0	0.0	1.6	100.0	19.5	119
Wealth index quintiles												
Poorest	0.6	15.4	0.0	0.0	47.7	34.6	0.0	0.0	1.5	100.0	82.3	15,807
Second	1.3	61.8	0.0	0.0	21.7	13.3	0.0	0.0	1.6	100.0	35.0	15,807
Middle	3.0	84.0	0.0	0.0	6.2	4.5	0.0	0.0	2.1	100.0	10.7	15,806
Fourth	1.5	94.3	0.1	0.0	1.6	1.1	0.0	0.0	1.2	100.0	2.7	15,806
Richest	1.1	98.0	0.0	0.0	0.0	0.1	0.0	0.0	0.6	100.0	0.1	15,808
Ethnicity of household head*												
Thai	1.4	70.7	0.0	0.0	15.5	10.7	0.0	0.0	1.4	100.0	26.2	77,902
Non-Thai	8.5	69.3	0.0	0.0	8.4	10.3	0.0	0.0	3.5	100.0	18.7	1,029
Total	**1.5**	**70.7**	**0.0**	**0.0**	**15.4**	**10.7**	**0.0**	**0.0**	**1.4**	**100.0**	**26.1**	**79,033**

[1] MICS indicator 3.11
*102 cases with missing ethnicity of household head not shown

Solid fuel use by place of cooking is shown in Table CH.9. The presence and extent of indoor pollution are dependent on cooking practices, places used for cooking, as well as types of fuel used. According to the Thailand MICS, 39.8 per cent of the population cook in a separate room used as a kitchen. The percentage of households members that cook within the dwelling unit is less in municipal areas than in non-municipal areas (59.5 per cent versus 66.4 per cent). A higher prevalence of outdoor cooking is observed among households in the Central region (16.9 per cent), compared to 5.1 per cent overall.

Table CH.9 Solid fuel use by place of cooking

Per cent distribution of household members in households using solid fuels by place of cooking, Thailand, 2012

	Place of cooking						Number of household members
	In a separate room used as kitchen	Elsewhere in the house	In a separate building	Outdoors	At another place	Total	
Region							
Bangkok	(18.8)	(46.8)	(12.5)	(21.9)	(0.0)	100.0	51
Central	46.5	18.8	17.8	16.9	0.0	100.0	1,020
North	47.9	21.5	27.2	3.0	0.4	100.0	4,537
Northeast	36.8	26.4	32.0	4.8	0.0	100.0	14,848
South	53.7	21.3	17.5	7.6	0.0	100.0	222
Area							
Municipal	34.9	24.6	32.6	7.8	0.1	100.0	4,909
Non-municipal	41.3	25.1	29.2	4.3	0.1	100.0	15,770
Education of household head							
None	39.8	27.9	30.1	2.2	0.0	100.0	1,824
Primary	39.9	24.6	30.1	5.4	0.1	100.0	16,949
Secondary	38.2	26.7	29.6	5.6	0.0	100.0	1,722
Higher	56.9	16.4	19.2	7.5	0.0	100.0	160
Missing/DK	(*)	(*)	(*)	(*)	(*)	100.0	23
Wealth index quintiles							
Poorest	40.0	27.7	28.3	3.9	0.2	100.0	13,002
Second	39.4	23.5	30.0	7.1	0.0	100.0	5,531
Middle	42.4	11.2	39.1	7.3	0.0	100.0	1,687
Fourth	30.7	14.9	45.5	8.8	0.0	100.0	438
Richest	(16.9)	(14.4)	(68.8)	(0.0)	(0.0)	100.0	21
Ethnicity of household head*							
Thai	40.0	24.8	30.0	5.1	0.1	100.0	20,456
Non-Thai	25.2	40.6	30.5	3.7	0.0	100.0	192
Total	**39.8**	**24.9**	**30.0**	**5.1**	**0.1**	**100.0**	**20,679**

( ) Figures that are based on 25-49 unweighted cases (*) Figures that are based on less than 25 unweighted cases
*30 cases with missing ethnicity of household head not shown

VI.
Water and Sanitation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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, especially in rural areas, who bear the primary responsibility for carrying water, often for long distances.

Millennium Development Goal 7 target c is to reduce by half between 1990 and 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation. The World Fit for Children goal calls for at least a one-third reduction in the proportion of households without access to hygienic sanitation facilities and affordable and safe drinking water.

The list of indicators[1] used in the Thailand MICS is as follows:

Water

- Use of improved drinking water sources
- Use of adequate water treatment method
- Time to source of drinking water
- Person collecting drinking water

Sanitation

- Use of improved sanitation
- Sanitary disposal of child's faeces

Use of Improved Water Sources

The distribution of the population by main source of drinking water is shown in Table WS.1 and Figure WS.1. The populations using *improved sources* of drinking water are those using any of the following types of supply: piped water (into dwelling, compound, yard or plot, to neighbour, public tap/standpipe), tube well/borehole, protected well, protected spring and rainwater collection. Bottled water is considered an improved water source only if the household is using an improved water source for handwashing and cooking.

1 For more details on water and sanitation and to access some reference documents, please visit the UNICEF childinfo website http://www.childinfo.org/wes.html

Table WS.1 Use of improved water sources

Per cent distribution of household population according to main source of drinking water and percentage of household population using improved drinking water sources, Thailand, 2012

	Main source of drinking water														Total	Percentage using improved sources of drinking water[1]	Number of hous hold members
	Improved sources									Unimproved sources							
	Piped water				Tube-well/ bore-hole	Pro-tected well	Protected spring	Rain-water collection	Bottled water*	Unpro-tected well	Tanker truck	Surface water	Bottled water*	Other			
	Into dwelling	Into yard/ plot	To neighbour	Public tap/ stand-pipe													
Region																	
Bangkok	62.0	10.7	0.1	0.0	0.1	0.0	0.0	0.4	26.7	0.0	0.0	0.0	0.0	0.0	100.0	100.0	8,862
Central	24.8	2.3	0.0	0.1	1.0	1.0	0.0	21.2	48.2	0.2	0.1	0.1	0.9	0.0	100.0	98.6	19,568
North	25.9	1.9	0.1	0.4	1.7	4.9	0.1	18.6	41.0	0.2	0.1	3.3	1.8	0.1	100.0	94.6	12,700
Northeast	8.0	1.3	0.0	0.2	3.2	1.5	0.0	56.8	27.8	0.3	0.1	0.4	0.4	0.0	100.0	98.8	27,671
South	8.3	1.0	0.1	0.2	7.3	10.0	0.0	15.5	47.2	4.8	0.0	0.5	4.9	0.2	100.0	89.6	10,232
Area																	
Municipal	30.9	4.4	0.0	0.1	1.1	1.8	0.0	14.3	45.6	0.3	0.1	0.6	0.6	0.1	100.0	98.3	33,424
Non-municipal	14.0	1.4	0.1	0.2	3.7	3.6	0.0	41.8	31.3	1.2	0.1	0.9	1.8	0.0	100.0	96.0	45,609
Education of household head																	
None	16.1	2.3	0.0	0.3	3.5	4.8	0.1	27.6	30.7	3.4	0.1	6.0	5.0	0.2	100.0	85.4	4,508
Primary	17.4	2.2	0.1	0.2	2.9	3.3	0.0	39.4	32.2	0.8	0.1	0.5	1.1	0.1	100.0	97.5	49,886
Secondary	26.6	2.6	0.0	0.2	2.4	2.0	0.0	16.7	46.9	0.6	0.1	0.4	1.3	0.0	100.0	97.6	15,052
Higher	34.5	5.3	0.0	0.0	1.0	1.2	0.0	4.7	52.3	0.1	0.2	0.3	0.5	0.0	100.0	98.9	9,468
Missing/DK	14.9	0.0	0.0	0.0	0.3	1.3	0.0	8.7	54.9	0.0	0.0	1.0	18.9	0.0	100.0	80.2	119
Wealth index quintile																	
Poorest	7.5	1.3	0.1	0.3	3.8	3.0	0.0	69.2	10.7	0.7	0.2	2.5	0.5	0.1	100.0	96.0	15,807
Second	15.3	1.8	0.1	0.2	3.4	3.3	0.0	44.5	27.7	1.5	0.1	0.8	1.2	0.1	100.0	96.4	15,807
Middle	16.0	2.3	0.1	0.2	2.9	3.9	0.0	25.5	45.3	1.3	0.1	0.3	2.2	0.0	100.0	96.1	15,806
Fourth	23.5	2.4	0.0	0.1	2.0	3.2	0.0	10.1	55.9	0.5	0.0	0.2	2.1	0.1	100.0	97.1	15,806
Richest	43.4	5.3	0.0	0.1	0.9	0.8	0.0	1.7	47.2	0.0	0.1	0.0	0.5	0.0	100.0	99.4	15,808
Ethnicity of household head**																	
Thai	21.2	2.6	0.0	0.2	2.6	2.9	0.0	30.5	37.0	0.8	0.1	0.7	1.3	0.0	100.0	97.1	77,902
Non-Thai	15.8	2.9	0.0	1.4	1.8	2.2	0.0	5.9	59.6	1.0	0.0	7.5	1.1	0.7	100.0	89.7	1,029
Total	**21.1**	**2.6**	**0.0**	**0.2**	**2.6**	**2.9**	**0.0**	**30.2**	**37.3**	**0.8**	**0.1**	**0.8**	**1.3**	**0.1**	**100.0**	**97.0**	**79,033**

[1] MICS indicator 4.1; MDG indicator 7.8

*Households using bottled water as the main source of drinking water are classified into improved or unimproved drinking water users according to the water source used for other purposes such as cooking and handwashing.

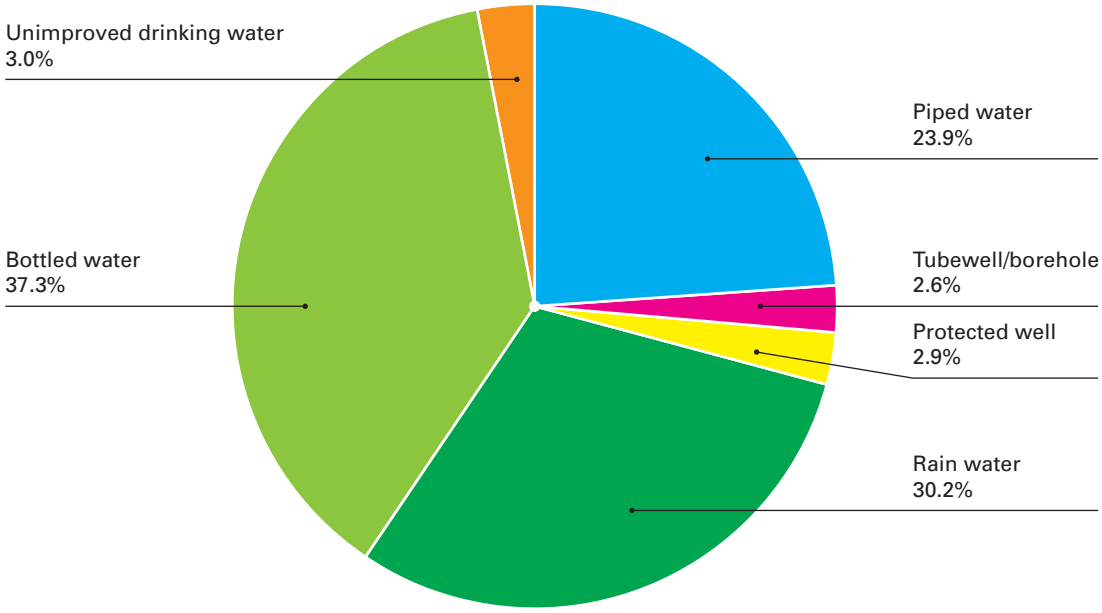
**102 cases with missing ethnicity of household head not shown

Overall, 97 per cent of the population is using an improved source of drinking water. The proportion in municipal areas is not much different than in non-municipal areas (98.3 per cent versus 96 per cent). The situation in the Southern region is considerably worse than in other regions: Only 89.6 per cent of the population in this region gets its drinking water from an improved source. In contrast, 100 per cent of Bangkok's population gets its drinking water from an improved source.

The source of drinking water varies strongly by region (Table WS.1). In Bangkok, 72.7 per cent of the population uses drinking water that is piped into dwellings, yards or plots. In contrast, fewer than 10 per cent of those residing in Northeastern and Southern regions have piped water. Bottled water use is the main source of drinking water in the Central (48.2 per cent), Southern (47.2 per cent) and Northern regions (41 per cent). Notably in the Northeast, the most important source of drinking water is rainwater collection (56.8 per cent).

As expected, living standards show the highest differential for piped water into dwellings, with 7.5 per cent of the poorest households using piped water sources compared with 43.4 per cent of the richest households. A similar differential is observed between municipal (30.9 per cent) and non-municipal areas (14 per cent). It is interesting to note that approximately 3 per cent of the population uses an unimproved source of drinking water. People living in households with a non-educated head (14.7 per cent), people living in the South (10.4 per cent) and in households headed by a non-Thai (10.3 per cent) represent the highest proportion of the population using unimproved drinking water sources.

Figure WS.1 Per cent distribution of household members by source of drinking water, Thailand, 2012



Use of household water treatment is presented in Table WS.2. Households were asked about the ways they were treating water at home to make it safer to drink. Boiling water, adding bleach or chlorine, using a water filter, and using solar disinfection are considered proper treatments of drinking water. The table shows water treatment by all households and the percentage of household members living in households using unimproved water sources but using appropriate water treatment methods.

Overall, more than half the population (64.5 per cent) accessing drinking water from either an improved or an unimproved source does not use any water treatment methods. The proportion in the Northeast (76.8 per cent) is higher than in other regions. In addition, no water treatment method used is more prevalent among people living in non-municipal areas (70 per cent), in the poorest households (73.1 per cent) and in non-Thai-headed households (70 per cent).

Water filter (21 per cent) is the most popular method used for water treatment, followed by boiling (6.1 per cent) and letting the water stand and settle (4.4 per cent). The use of a water filter is higher among people living in Bangkok, in municipal areas, people using improved drinking water sources and the better off. Boiling is a more common method in the Southern region, among people using unimproved drinking water sources and households whose heads have no education. Letting the water stand and settle is more prevalent among people living in the North and people using unimproved drinking water sources.

Table WS.2 Household water treatment

Percentage of household population by drinking water treatment method used in the household, and for household members living in households where an unimproved drinking water source is used, the percentage who are using an appropriate treatment method, Thailand, 2012

	Water treatment method used in the household								Number of household members	Percentage of household members in households using unimproved drinking water sources and using an appropriate water treatment method[1]	Number of household members in households using unimproved drinking water sources
	None	Boil	Add bleach/ chlorine	Strain through a cloth	Use water filter	Solar dis-infection	Let it stand and settle	Other			
Region											
Bangkok	25.7	5.2	0.0	0.2	68.0	0.4	0.3	0.2	8,862	-	-
Central	60.0	4.5	0.0	2.4	26.8	0.3	6.0	0.0	19,568	3.3	277
North	64.6	4.9	0.0	2.4	16.3	1.0	10.8	0.1	12,700	11.8	687
Northeast	76.8	6.9	0.2	6.0	7.8	0.4	2.0	0.0	27,671	7.4	336
South	72.9	9.0	0.0	3.2	10.9	0.0	3.7	0.3	10,232	19.1	1,069
Area											
Municipal	56.9	5.6	0.0	2.1	32.7	0.2	2.3	0.1	33,424	19.2	566
Non-municipal	70.0	6.4	0.1	4.5	12.5	0.6	6.0	0.0	45,609	11.7	1,803
Main source of drinking water											
Improved	64.3	5.9	0.1	3.5	21.6	0.4	4.2	0.1	76,665	NA*	NA*
Unimproved	70.6	10.2	0.1	4.0	3.2	0.0	12.0	0.0	2,369	13.5	2,369
Education of household head											
None	66.6	9.7	0.0	3.5	11.4	0.2	8.5	0.0	4,508	15.2	657
Primary	67.5	6.2	0.1	4.5	15.9	0.5	5.2	0.1	49,886	13.2	1,222
Secondary	61.0	5.3	0.0	2.0	28.7	0.1	2.8	0.1	15,052	10.2	365
Higher	52.7	5.2	0.1	0.8	40.2	0.2	0.9	0.0	9,468	21.4	100
Missing/DK	78.1	1.8	0.0	1.0	18.2	0.0	1.0	0.0	119	(*)	24
Wealth index quintile											
Poorest	73.1	7.7	0.1	8.7	2.8	0.6	7.0	0.0	15,807	13.3	639
Second	70.3	7.0	0.1	4.2	11.9	1.0	5.5	0.1	15,807	17.8	569
Middle	67.5	6.6	0.0	3.0	16.3	0.2	6.4	0.1	15,806	13.2	615
Fourth	65.4	5.1	0.1	1.1	25.2	0.2	2.8	0.1	15,806	10.9	451
Richest	46.0	3.9	0.0	0.6	48.9	0.1	0.5	0.1	15,808	3.2	95
Ethnicity of household head**											
Thai	64.4	6.0	0.1	3.5	21.1	0.4	4.4	0.1	77,902	13.0	2,259
Non-Thai	70.0	9.0	0.0	3.7	11.1	0.9	5.3	0.0	1,029	22.9	106
Total	**64.5**	**6.1**	**0.1**	**3.5**	**21.0**	**0.4**	**4.4**	**0.1**	**79,033**	**13.5**	**2,369**

MICS indicator 4.2
*NA = Not applicable
(*) Figures that are based on less than 25 unweighted cases
**3 cases with missing ethnicity of household head not shown

Before drinking water from unimproved water sources, one tenth (13.5 per cent) use an appropriate water treatment method. The percentage is highest in the South (19.1 per cent) and quite low in the Central region (3.3 per cent). The proportion of the municipal population appropriately treating water is more than that of non-municipal areas (19.2 per cent versus 11.7 per cent).

The amount of time it takes to obtain water is presented in Table WS.3 and the person who usually collects the water in Table WS.4. Note that these results refer to one roundtrip from home to drinking water source. Information on the number of trips made in one day was not collected.

Table WS.3 shows that for 99 per cent of households, the drinking water source is on the premises. Of these, 96.4 per cent have an improved and 2.6 per cent an unimproved water source on their premises. The differences in water source on premises by background characteristics are negligible. Among the 1 per cent of the population without a water source on their premises, 0.8 per cent needed less than 30 minutes to get to the water source and bring back water, while 0.2 per cent of households spend 30 minutes or more for this purpose.

In non-municipal areas more households spend time collecting water compared with those in municipal areas. One striking finding is the high percentage of households in the North spending 30 minutes or more to fetch drinking water (0.5 per cent).

Table WS.3 Time to source of drinking water

Per cent distribution of household population according to time to go to source of drinking water, get water and return, for users of improved and unimproved drinking water sources, Thailand, 2012

	Time to source of drinking water								Total	Number of household members
	Users of improved drinking water sources				Users of unimproved drinking water sources					
	Water on premises	Less than 30 minutes	30 minutes or more	Missing/ DK	Water on premises	Less than 30 minutes	30 minutes or more	Missing/ DK		
Region										
Bangkok	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	8,862
Central	98.5	0.1	0.0	0.0	1.2	0.1	0.1	0.0	100.0	19,568
North	92.9	1.2	0.4	0.1	3.9	1.4	0.1	0.0	100.0	12,700
Northeast	98.1	0.6	0.1	0.0	1.0	0.1	0.1	0.0	100.0	27,671
South	89.1	0.4	0.0	0.0	10.1	0.2	0.1	0.0	100.0	10,232
Area										
Municipal	97.8	0.4	0.1	0.0	1.3	0.3	0.0	0.0	100.0	33,424
Non-municipal	95.4	0.5	0.1	0.0	3.5	0.3	0.1	0.0	100.0	45,609
Education of household head										
None	83.8	1.0	0.6	0.0	11.8	2.6	0.2	0.0	100.0	4,508
Primary	96.9	0.5	0.1	0.0	2.2	0.2	0.1	0.0	100.0	49,886
Secondary	97.2	0.3	0.0	0.0	2.3	0.1	0.0	0.0	100.0	15,052
Higher	98.8	0.2	0.0	0.0	0.8	0.3	0.0	0.0	100.0	9,468
Missing/DK	79.8	0.3	0.0	0.0	18.9	1.0	0.0	0.0	100.0	119
Wealth index quintile										
Poorest	95.0	0.8	0.2	0.0	3.1	0.8	0.1	0.0	100.0	15,807
Second	95.3	0.9	0.2	0.0	3.2	0.2	0.2	0.0	100.0	15,807
Middle	95.6	0.4	0.1	0.0	3.4	0.3	0.2	0.0	100.0	15,806
Fourth	97.0	0.1	0.0	0.0	2.7	0.1	0.1	0.0	100.0	15,806
Richest	99.3	0.1	0.0	0.0	0.5	0.1	0.0	0.0	100.0	15,808
Ethnicity of household head*										
Thai	96.5	0.4	0.1	0.0	2.6	0.2	0.1	0.0	100.0	77,902
Non-Thai	87.6	0.8	1.2	0.0	4.1	5.4	0.8	0.0	100.0	1,029
Total	**96.4**	**0.5**	**0.1**	**0.0**	**2.6**	**0.3**	**0.1**	**0.0**	**100.0**	**79,033**

*102 cases with missing ethnicity of household head not shown

Table WS.4 shows that for half of households (50.5 per cent) an adult female is usually the person collecting the water, when the source of drinking water is not on the premises.

Adult men collect water in 43.6 per cent of cases, while for the rest of the households, female or male children under age 15 collect water (3.6 per cent).

Table WS.4 Person collecting water

Percentage of households without drinking water on premises, and per cent distribution of households without drinking water on premises according to the person usually collecting drinking water used in the household, Thailand, 2012

	Percentage of households without drinking water on premises	Number of households	Person usually collecting drinking water						Number of households without drinking water on premises
			Adult woman	Adult man	Female child under age 15	Male child under age 15	Missing/ DK	Total	
Region									
Bangkok	-	2,683	-	-	-	-	-	-	-
Central	0.3	6,034	(*)	(*)	(*)	(*)	(*)	100.0	18
North	2.6	4,217	59.7	34.3	1.6	1.2	3.3	100.0	110
Northeast	1.0	8,184	42.3	51.3	5.0	1.3	0.0	100.0	79
South	0.8	3,000	(41.4)	(50.7)	(0.0)	(0.0)	(7.9)	100.0	25
Area									
Municipal	0.8	10,542	38.2	52.5	5.9	1.5	1.9	100.0	86
Non-municipal	1.1	13,577	57.7	38.3	0.6	0.7	2.7	100.0	146
Education of household head									
None	3.7	1,360	72.2	17.3	9.3	0.0	1.2	100.0	50
Primary	1.0	14,663	46.0	49.6	0.7	0.8	2.9	100.0	142
Secondary	0.5	4,809	(24.1)	(70.4)	(1.1)	(4.4)	(0.0)	100.0	26
Higher	0.4	3,251	(*)	(*)	(*)	(*)	(*)	100.0	13
Missing/DK	(3.4)	36	(*)	(*)	(*)	(*)	(*)	100.0	1
Wealth index quintile									
Poorest	1.9	5,195	56.9	34.7	5.0	2.2	1.1	100.0	98
Second	1.4	4,861	48.4	48.8	0.0	0.0	2.8	100.0	69
Middle	0.8	4,831	(46.5)	(46.9)	(2.6)	(0.0)	(4.0)	100.0	41
Fourth	0.3	4,730	(52.3)	(40.3)	(0.0)	(1.2)	(6.3)	100.0	15
Richest	0.2	4,501	(*)	(*)	(*)	(*)	(*)	100.0	9
Ethnicity of household head*									
Thai	0.9	23,750	48.5	46.3	2.0	0.6	2.6	100.0	210
Non-Thai	6.0	341	(66.6)	(18.7)	(8.5)	(5.6)	(0.7)	100.0	20
Total	**1.0**	**24,119**	**50.5**	**43.6**	**2.6**	**1.0**	**2.4**	**100.0**	**232**

( ) Figures that are based on 25-49 unweighted cases (*) Figures that are based on less than 25 unweighted cases
*2 cases with missing ethnicity of household head not shown

Use of Improved Sanitation

Inadequate disposal of human excreta and personal hygiene is associated with a range of diseases, including diarrhoeal diseases and polio. Improved sanitation can reduce diarrhoeal diseases by more than a third, and can significantly lessen the adverse health impacts of other disorders responsible for death and disease among millions of children in developing countries.

An improved sanitation facility is defined as one that hygienically separates human excreta from human contact. Improved sanitation facilities for excreta disposal include flush or pour flush to a piped sewer system, septic tank, or pit latrine; ventilated improved pit latrine, pit latrine with slab, and use of a composting toilet. Data on the type of improved sanitation facilities used in Thailand are provided in Table WS.5.

Table WS.5 Types of sanitation facilities

Per cent distribution of household population according to type of toilet facility used by the household, Thailand, 2012

	Type of toilet facility used by household					Open defecation (no facility, bush, field)	Total	Number of household members
	Improved sanitation facility				Unimproved sanitation facility			
	Flush/pour flush to:			Flush/pour flush to unknown place, pit latrine	Flush/pour flush to somewhere else, pit latrine without slab/ open pit, bucket, hanging toilet/ latrine, other			
	Piped sewer system	Septic tank	Pit					
Region								
Bangkok	17.0	82.8	0.2	0.0	0.0	0.0	100.0	8,862
Central	8.7	90.7	0.4	0.0	0.1	0.0	100.0	19,568
North	4.2	92.6	2.8	0.0	0.2	0.2	100.0	12,700
Northeast	0.3	98.1	0.8	0.0	0.7	0.1	100.0	27,671
South	4.0	90.6	3.7	0.7	0.4	0.6	100.0	10,232
Area								
Municipal	8.7	90.2	0.7	0.2	0.2	0.0	100.0	33,424
Non-municipal	2.8	94.6	1.8	0.0	0.5	0.3	100.0	45,609
Education of household head								
None	3.4	89.5	6.2	0.1	0.5	0.4	100.0	4,508
Primary	3.6	94.5	1.2	0.1	0.4	0.2	100.0	49,886
Secondary	8.6	90.0	1.0	0.1	0.3	0.1	100.0	15,052
Higher	10.5	89.0	0.3	0.1	0.1	0.0	100.0	9,468
Missing/DK	9.2	89.0	1.0	0.4	0.0	0.3	100.0	119
Wealth index quintile								
Poorest	1.0	94.1	3.1	0.0	1.1	0.7	100.0	15,807
Second	2.1	96.2	0.8	0.1	0.6	0.1	100.0	15,807
Middle	4.2	94.3	1.3	0.1	0.1	0.0	100.0	15,806
Fourth	6.3	92.4	1.1	0.1	0.0	0.0	100.0	15,806
Richest	13.1	86.5	0.3	0.1	0.0	0.0	100.0	15,808
Ethnicity of household head*								
Thai	5.2	92.8	1.3	0.1	0.4	0.2	100.0	77,902
Non-Thai	13.2	80.7	6.0	0.1	0.0	0.0	100.0	1,029
Total	**5.3**	**92.7**	**1.3**	**0.1**	**0.4**	**0.2**	**100.0**	**79,033**

*102 cases with missing ethnicity of household head not shown

As Table WS.5 shows, 99.4 per cent of the population in Thailand lives in households using improved sanitation facilities. Differentials by background characteristics are generally small or practically non-existent. Among those having improved sanitation facilities, the most common facility in Thailand is a flush toilet connected to a septic tank (92.7 per cent). Notably, the percentage using unimproved sanitation facilities is highest in the South (1 per cent).

The MDGs and the WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation classify households as using an unimproved sanitation facility if they are using otherwise acceptable sanitation facilities but sharing a facility between two or more households or using a public toilet. Therefore, 'use of improved sanitation' is used both in the context of this report and as an MDG indicator to refer to improved sanitation facilities which are not shared.

Table WS.6 Use and sharing of sanitation facilities

Per cent distribution of household population by use of private and public sanitation facilities and use of shared facilities, by users of improved and unimproved sanitation facilities, Thailand, 2012

	Users of improved sanitation facilities					Users of unimproved sanitation facilities			Open defecation (no facility, bush, field)	Total	Number of household members
	Not shared[1]	Public facility	Shared by		Missing/ DK	Not shared	Public facility	Shared by 5 households or less			
			5 households or less	More than 5 households							
Region											
Bangkok	94.9	0.2	4.1	0.7	0.0	0.0	0.0	0.0	0.0	100.0	8,862
Central	98.5	0.1	1.1	0.1	0.0	0.1	0.0	0.0	0.0	100.0	19,568
North	97.5	0.0	1.9	0.1	0.0	0.1	0.0	0.1	0.2	100.0	12,700
Northeast	96.9	0.4	1.8	0.0	0.1	0.7	0.0	0.0	0.1	100.0	27,671
South	97.0	0.1	1.8	0.0	0.0	0.2	0.1	0.2	0.6	100.0	10,232
Area											
Municipal	97.2	0.3	2.1	0.2	0.0	0.1	0.0	0.0	0.0	100.0	33,424
Non-municipal	97.2	0.1	1.8	0.1	0.0	0.5	0.0	0.1	0.3	100.0	45,609
Education of household head											
None	95.5	0.1	3.4	0.2	0.0	0.3	0.1	0.0	0.4	100.0	4,508
Primary	97.1	0.1	1.9	0.1	0.0	0.4	0.0	0.0	0.2	100.0	49,886
Secondary	97.4	0.2	1.8	0.2	0.0	0.2	0.0	0.1	0.1	100.0	15,052
Higher	98.2	0.6	1.1	0.0	0.0	0.0	0.0	0.0	0.0	100.0	9,468
Missing/DK	93.7	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.3	100.0	119
Wealth index quintile											
Poorest	94.8	0.1	3.0	0.2	0.1	1.0	0.0	0.1	0.7	100.0	15,807
Second	96.5	0.1	2.5	0.2	0.0	0.5	0.0	0.1	0.1	100.0	15,807
Middle	97.1	0.3	2.3	0.2	0.0	0.0	0.0	0.0	0.0	100.0	15,806
Fourth	98.7	0.2	0.9	0.1	0.0	0.0	0.0	0.0	0.0	100.0	15,806
Richest	99.0	0.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	100.0	15,808
Ethnicity of household head*											
Thai	97.3	0.2	1.8	0.1	0.0	0.3	0.0	0.0	0.2	100.0	77,902
Non-Thai	91.6	0.3	6.2	1.9	0.0	0.0	0.0	0.0	0.0	100.0	1,029
Total	**97.2**	**0.2**	**1.9**	**0.1**	**0.0**	**0.3**	**0.0**	**0.0**	**0.2**	**100.0**	**79,033**

[1] MICS indicator 4.3; MDG indicator 7.9

*102 cases with missing ethnicity of household head not shown

As Table WS.6 shows, 97.2 per cent of the household population is using an improved sanitation facility that is not shared. Only 2 per cent of households use an improved toilet facility that is shared with other households, while 0.2 per cent of households use an improved public facility. Municipal households are slightly more likely than non-municipal households to use a shared improved toilet facility (2.3 per cent versus 1.9 per cent). The information on the household population using improved sanitation facilities that are not shared shows small disparities by most background variables.

Table WS.7 Disposal of child's faeces

Per cent distribution of children aged 0-2 years according to place of disposal of child's faeces, and the percentage of children aged 0-2 years whose stools were disposed of safely the last time the child passed stools, Thailand, 2012

	Place of disposal of child's faeces									Percentage of children whose last stools were disposed of safely[1]	Number of children age 0-2 years
	Child used toilet/ latrine	Put/rinsed into toilet or latrine	Put/rinsed into drain or ditch	Thrown into garbage	Buried	Left in the open	Other	Missing/ DK	Total		
Type of sanitation facility in dwelling											
Improved	23.3	34.0	1.3	32.2	5.7	2.7	0.8	0.1	100.0	57.3	5,753
Unimproved	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	30
Open defecation	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	18
Region											
Bangkok	17.8	27.0	0.1	54.9	0.0	0.1	0.1	0.0	100.0	44.7	504
Central	20.0	33.1	2.6	39.8	1.7	2.5	0.2	0.0	100.0	53.1	1,375
North	24.6	42.5	2.0	21.0	3.6	4.4	1.8	0.1	100.0	67.1	861
Northeast	26.9	36.1	0.5	23.2	10.6	2.0	0.4	0.2	100.0	63.0	2,198
South	20.6	23.9	1.1	40.3	6.3	5.4	2.3	0.0	100.0	44.5	862
Area											
Municipal	21.6	29.9	1.4	42.2	2.3	2.2	0.3	0.1	100.0	51.5	2,238
Non-municipal	24.1	36.2	1.2	25.8	8.2	3.2	1.2	0.1	100.0	60.4	3,562
Mother's education											
None	24.9	35.0	2.0	14.3	9.3	9.0	4.6	1.0	100.0	59.9	192
Primary	27.1	35.5	1.3	23.2	8.5	3.8	0.5	0.2	100.0	62.5	2,142
Secondary	20.9	32.8	1.8	36.2	5.1	2.0	1.2	0.0	100.0	53.7	2,390
Higher	20.1	32.3	0.1	43.9	1.8	1.6	0.2	0.0	100.0	52.4	1,077
Wealth index quintile											
Poorest	25.0	39.9	0.7	14.4	13.6	5.5	0.6	0.2	100.0	64.9	1,104
Second	22.1	34.1	1.7	28.6	8.9	3.5	0.8	0.2	100.0	56.2	1,294
Middle	23.8	33.0	2.3	32.6	4.3	2.3	1.7	0.0	100.0	56.7	1,303
Fourth	24.7	32.4	0.7	37.9	1.4	2.1	0.7	0.1	100.0	57.1	1,148
Richest	19.8	28.9	0.5	49.7	0.6	0.5	0.1	0.0	100.0	48.7	952
Ethnicity of household head*											
Thai	23.3	33.9	1.1	32.2	5.9	2.7	0.8	0.1	100.0	57.2	5,681
Non-Thai	15.4	29.3	12.8	30.6	3.6	6.8	1.5	0.0	100.0	44.6	113
Total	**23.2**	**33.8**	**1.3**	**32.1**	**5.9**	**2.8**	**0.8**	**0.1**	100.0	**56.9**	**5,801**

[1] MICS indicator 4.4
(*) Figures that are based on less than 25 unweighted cases
*6 cases with missing ethnicity of household head not shown

Safe disposal of a child's faeces is disposing of the stool by the child using a toilet or by rinsing the stool into a toilet or latrine. Disposal of faeces of children 0-2 years of age is presented in Table WS.7.

In Thailand, a noteworthy point is the popularity of disposable diapers, which are normally thrown into the garbage after use. This classifies them as an unsafe method of faeces disposal. As shown in Table WS.7, the faeces of one third of children aged 0-2 years (32.1 per cent) are thrown into the garbage. Nationally, the stools of 56.9 per cent of children 0-2 years of age were disposed of safely the last time the child defecated, with the percentage highest in the North (67.1 per cent) and lowest in the South (44.5 per cent). It is interesting to note that in Bangkok the percentage is only 44.7 per cent. The largest differential for safe disposal of children's faeces is socioeconomic status of households. Almost two thirds (64.9 per cent) of the poorest households safely dispose of faeces compared with 48.7 per cent of the wealthiest households. It is important to note that in Bangkok as well as in the wealthiest households where disposable diapers are common, this indicator produces a lower value than one might expect.

In its 2008 report, the JMP developed a new way of presenting the access figures, by disaggregating and refining the data on drinking water and sanitation and reflecting them in 'ladder' format. This ladder allows a disaggregated analysis of trends in a three-rung ladder for drinking water and a four-rung ladder for sanitation. For sanitation, this gives an understanding of the proportion of the population with no sanitation facilities at all, of those reliant on technologies defined by JMP as "unimproved," of those sharing sanitation facilities of otherwise acceptable technology, and those using "improved" sanitation facilities. Table WS.8 presents the percentages of household population by drinking water and sanitation ladders. The table also shows the percentage of household members using improved sources of drinking water and sanitary means of excreta disposal.

The table shows that 97 per cent of the population has improved drinking water and 97.2 per cent improved sanitation. At the national level, 94.3 per cent of the population is using both improved sources of drinking water and improved sanitation. The most important differences are in education of household head and ethnicity of household head. People living in households in which the head has higher education are more likely to use both improved drinking water sources and improved sanitation facilities (97.1 per cent) compared with people living in households with uneducated household heads (81.6 per cent). Likewise, 94.5 per cent of people living in Thai-headed households are using such facilities compared with only 81.9 per cent of people living in households headed by a non-Thai.

Table WS.8 Drinking water and sanitation ladders

Percentage of household population by drinking water and sanitation ladders, Thailand, 2012

	Percentage of household population using										Number of household members
	Improved drinking water[1]		Unimproved drinking water	Total	Improved sanitation[2]	Unimproved sanitation			Total	Improved drinking water sources and improved sanitation	
	Piped into dwelling, plot or yard	Other improved				Shared improved facilities	Unimproved facilities	Open defecation			
Region											
Bangkok	99.5	0.5	0.0	100.0	94.9	5.1	0.0	0.0	100.0	94.9	8,862
Central	68.4	30.2	1.4	100.0	98.5	1.3	0.1	0.0	100.0	97.1	19,568
North	61.5	33.1	5.4	100.0	97.5	2.0	0.2	0.2	100.0	92.3	12,700
Northeast	32.6	66.2	1.2	100.0	96.9	2.2	0.7	0.1	100.0	95.8	27,671
South	43.5	46.1	10.4	100.0	97.0	1.9	0.4	0.6	100.0	87.1	10,232
Area											
Municipal	76.0	22.3	1.7	100.0	97.2	2.6	0.2	0.0	100.0	95.6	33,424
Non-municipal	39.6	56.4	4.0	100.0	97.2	2.0	0.5	0.3	100.0	93.4	45,609
Education of household head											
None	44.7	40.7	14.6	100.0	95.5	3.6	0.5	0.4	100.0	81.6	4,508
Primary	45.6	51.9	2.5	100.0	97.1	2.2	0.4	0.2	100.0	94.8	49,886
Secondary	69.5	28.1	2.4	100.0	97.4	2.3	0.3	0.1	100.0	95.0	15,052
Higher	86.3	12.6	1.1	100.0	98.2	1.7	0.1	0.0	100.0	97.1	9,468
Missing/DK	62.5	17.7	19.8	100.0	93.7	6.0	0.0	0.3	100.0	73.8	119
Wealth index quintile											
Poorest	17.7	78.3	4.0	100.0	94.8	3.4	1.1	0.7	100.0	91.0	15,807
Second	39.5	56.9	3.6	100.0	96.5	2.8	0.6	0.1	100.0	93.1	15,807
Middle	55.7	40.4	3.9	100.0	97.1	2.8	0.1	0.0	100.0	93.2	15,806
Fourth	72.0	25.2	2.9	100.0	98.7	1.3	0.0	0.0	100.0	95.9	15,806
Richest	90.2	9.2	0.6	100.0	99.0	1.0	0.0	0.0	100.0	98.4	15,808
Ethnicity of household head*											
Thai	54.8	42.3	2.9	100.0	97.3	2.2	0.4	0.2	100.0	94.5	77,902
Non-Thai	70.0	19.6	10.3	100.0	91.6	8.4	0.0	0.0	100.0	81.9	1,029
Total	**55.0**	**42.0**	**3.0**	**100.0**	**97.2**	**2.3**	**0.4**	**0.2**	100.0	**94.3**	**79,033**

[1] MICS indicator 4.1; MDG indicator 7.8 [2] MICS indicator 4.3; MDG indicator 7.9
*102 cases with missing ethnicity of household head not shown

VII.
Reproductive Health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Fertility

Measures of current fertility are presented in Table RH.1A for the one-year period preceding the survey. In MICS4, age-specific and total fertility rates are calculated by using information on the date of last birth of each woman and are based on the one-year period (1-12 months) preceding the survey. Rates are underestimated by a very small margin due to an absence of information on multiple births (twins, triplets etc.) and on women who may have had multiple deliveries during the one-year period preceding the survey. The total fertility rate (TFR) is calculated by summing the age-specific fertility rates (ASFRs) calculated for each of the five-year age groups of women, from age 15 to 49. The TFR denotes the average number of children a woman will have given birth to by the end of her reproductive years if current fertility rates prevail. The general fertility rate (GFR) is the number of live births occurring during the specified period per 1,000 women aged 15-49. The crude birth rate (CBR) is the number of live births per 1,000 people during the specified period.

Table RH.1A Fertility rates

Adolescent birth rate, age-specific and total fertility rates, the general fertility rate, and the crude birth rate for the one year preceding the survey, by area, Thailand, 2012

	Municipal	Non-municipal	Total
Age			
15-19	55	63	60
20-24	69	142	106
25-29	87	95	91
30-34	61	74	68
35-39	30	40	35
40-44	8	4	6
45-49	0	0	0
Total Fertility Rate (TFR)	1.5	2.1	1.8
General Fertility Rate (GFR)	49	60	55
Crude Birth Rate (CBR)	10	13	12

[1] MICS indicator 5.1; MDG indicator 5.4

Table RH.1A shows current fertility in Thailand at the national level and by residential area. The TFR for the one year preceding the Thailand MICS is 1.8 births per woman. Fertility is considerably higher in non-municipal areas than in municipal areas (2.1 births versus 1.5 births per woman). As the age-specific fertility rates show, the pattern of higher non-municipal fertility is prevalent in the groups of women aged 15-39.

The difference between areas in fertility is most pronounced for women in the 20-24 age group (69 births per 1,000 women in municipal areas versus 142 births per 1,000 women in non-municipal areas). Fertility is low among adolescents (60 births per 1,000 women aged 15-19), increases to a peak of 106 births per 1,000 women aged 20-24, and declines thereafter.

Table RH.1B Adolescent birth rate and total fertility rate

Adolescent birth rates and total fertility rates for the one year preceding the survey, Thailand, 2012

	Adolescent birth rate[1] (Age-specific fertility rate for women age 15-19)	Total fertility rate
Region		
Bangkok	45	1.2
Central	60	1.8
North	47	1.7
Northeast	73	2.2
South	53	2.0
Area		
Municipal	55	1.5
Non-municipal	63	2.1
Women's education		
None	(*)	1.1
Primary	224	2.9
Secondary	59	2.1
Higher	7	1.2
Wealth index quintile		
Poorest	85	2.2
Second	59	2.2
Middle	74	2.1
Fourth	67	1.7
Richest	16	1.3
Ethnicity of household head		
Thai	60	1.8
Non-Thai	28	1.9
Total	**60**	**1.8**

[1] **MICS indicator 5.1; MDG indicator 5.4**
(*) Figures that are based on less than 25 unweighted cases

Table RH.1B shows adolescent birth rates and total fertility rates. The adolescent birth rate (age-specific fertility rate for women aged 15-19) is defined as the number of births to women aged 15-19 during the one-year period preceding the survey, divided by the average number of women aged 15-19 (number of women-years lived between the ages of 15 and 19, inclusive) during the same period, expressed per 1,000 women. The table reveals that the adolescent birth rate is 60 in Thailand. The Northeast has the highest adolescent birth rate, whereas Bangkok has the lowest (73 and 45 per 1,000

women, respectively). Women in non-municipal areas have a higher rate compared to municipal areas (63 and 55 per 1,000 women, respectively). The findings show a higher adolescent birth rate among the poorest women.

Table RH.1B also shows total fertility rates according to different background characteristics. The TFR is found to be highest in the Northeast and lowest in Bangkok (2.2 versus 1.2). The rate is relatively higher in poorer quintiles. The adolescent birth rate and the TFR are lower in municipal than in non-municipal areas.

In general, sexual activity and childbearing early in life carry significant risks for young girls. Table RH.2 presents some early childbearing indicators for women aged 15-19 and 20-24 while Table RH.3 presents trends in early childbearing.

As shown in Table RH.2, 9.1 per cent of women aged 15-19 have given birth, 1.7 per cent are pregnant with their first child, 10.8 per cent have begun childbearing and 0.3 per cent have had a live birth before age 15. Regional patterns indicate that among women aged 15–19 in the Central region, 0.7 per cent have had a live birth before age 15, while in other regions 0.3 per cent or less have had a live birth before this age. It is also important to note that all indicators are found to be higher in non-municipal than in municipal areas.

Some 13 per cent of women aged 20-24 have had a live birth before age 18. Only 7.9 per cent of women in the Southern region have had a live birth before age 18 while the proportion in other regions is greater than 12 per cent. There is a negative correlation between the percentage of women aged 20-24 who had a birth before age 18 and wealth quintile. The percentage is 22.1 for women aged 20-24 in the poorest quintile compared with 7.1 per cent for women in the richest quintile.

Table RH.2 Early childbearing

Percentage of women aged 15-19 years who have had a live birth, are pregnant with their first child, and have begun childbearing, and those who have had a live birth before age 15, and percentage of women aged 20-24 who have had a live birth before age 18, Thailand, 2012

	Percentage of women aged 15-19 who:				Number of women aged 15-19	Percentage of women aged 20-24 who have had a live birth before age 18[1]	Number of women aged 20-24
	Have had a live birth	Are pregnant with first child	Have begun child-bearing	Have had a live birth before age 15			
Region							
Bangkok	8.0	2.0	10.0	0.2	384	12.2	356
Central	8.2	1.2	9.4	0.7	748	14.3	627
North	9.1	2.1	11.2	0.1	454	15.0	296
Northeast	9.7	1.8	11.5	0.2	1,094	14.6	576
South	10.0	1.5	11.5	0.3	401	7.9	379
Area							
Municipal	8.2	1.3	9.5	0.2	1,325	12.7	1,092
Non-municipal	9.7	1.9	11.6	0.4	1,755	13.4	1,142
Education							
None	(*)	(*)	(*)	(*)	12	10.6	43
Primary	34.3	3.0	37.3	2.5	150	35.0	181
Secondary	8.4	1.8	10.2	0.2	2,632	18.6	1,150
Higher	1.8	0.0	1.8	0.0	286	1.2	860

Table RH.2 Early childbearing (continued)

Percentage of women aged 15-19 years who have had a live birth, are pregnant with their first child, and have begun childbearing, and those who have had a live birth before age 15, and percentage of women aged 20-24 who have had a live birth before age 18, Thailand, 2012

	Percentage of women aged 15-19 who:				Number of women aged 15-19	Percentage of women aged 20-24 who have had a live birth before age 18[1]	Number of women aged 20-24
	Have had a live birth	Are pregnant with first child	Have begun child-bearing	Have had a live birth before age 15			
Wealth index quintile							
Poorest	11.8	2.4	14.2	0.1	536	22.1	279
Second	10.1	1.4	11.5	0.9	641	15.1	410
Middle	11.7	2.6	14.3	0.3	569	13.6	555
Fourth	9.7	1.4	11.1	0.2	705	11.3	524
Richest	2.6	0.8	3.4	0.0	629	7.1	467
Ethnicity of household head*							
Thai	9.1	1.7	10.8	0.3	3,035	13.2	2,166
Non-Thai	5.1	0.0	5.1	0.0	41	9.9	63
Total	**9.1**	**1.7**	**10.8**	**0.3**	**3,080**	**13.0**	**2,234**

[1] MICS indicator 5.2
(*) Figures that are based on less than 25 unweighted cases
*5 cases with missing ethnicity of household head not shown

Early childbearing before age 18 is more prevalent in women in the 20-24, 40-44 and 45-49 age groups, all of which indicate above 10 per cent, as shown in Table RH.3. As expected, the percentages in all age groups are slightly higher in non-municipal areas.

Table RH.3 Trends in early childbearing

Percentage of women who have had a live birth, by age 15 and 18, by area and age group, Thailand, 2012

	Municipal				Non-municipal				All			
	Percentage of women aged 15-49 years with a live birth before age 15	Numbe of women aged 15-49 years	Percentage of women aged 20-49 years with a live birth before age 18	Number of women aged 20-49 years	Percentage of women aged 15-49 years with a live birth before age 15	Number of women aged 15-49 years	Percentage of women aged 20-49 years with a live birth before age 18	Number of women aged 20-49 years	Percentage of women aged 15-49 years with a live birth before age 15	Number of women aged 15-49 years	Percentage of women aged 20-49 years with a live birth before age 18	Number of women aged 20-49 years
Age												
15-19	0.2	1,325	-	-	0.4	1,755	-	-	0.3	3,080	-	-
20-24	0.6	1,092	12.7	1,092	0.6	1,142	13.4	1,142	0.6	2,234	13.0	2,234
25-29	0.3	1,276	5.5	1,276	0.7	1,214	8.5	1,214	0.5	2,490	7.0	2,490
30-34	0.5	1,544	6.6	1,544	0.7	1,568	9.2	1,568	0.6	3,113	7.9	3,113
35-39	0.5	1,551	6.6	1,551	0.4	1,886	9.7	1,886	0.4	3,437	8.3	3,437
40-44	0.6	1,619	8.6	1,619	0.8	2,194	11.3	2,194	0.7	3,814	10.1	3,814
45-49	0.8	1,665	9.4	1,665	0.6	2,148	13.2	2,148	0.7	3,813	11.5	3,813
Total	**0.5**	**10,072**	**8.1**	**8,747**	**0.6**	**11,909**	**11.0**	**10,153**	**0.6**	**21,981**	**9.6**	**18,901**

Contraception

Appropriate family planning is important to the health of women and children by: 1) preventing pregnancies that are too early or too late; 2) extending the period between births; and 3) limiting the number of children. Access by all couples to information and services to prevent pregnancies that are too early, too closely spaced, too late or too many is critical.

Current use of contraception was reported by 79.3 per cent of women married or in union (Table RH.4). The most popular method is the pill, which is used by one in three married women in Thailand (32.1 per cent). The next most popular method is female sterilization, used by 27.4 per cent of married women, followed by injectables (12.6 per cent). Between 1 and 3 per cent of women reported use of withdrawal and the male condom. Less than 1 per cent use an IUD, periodic abstinence, male sterilization, implants, female condom, or the lactational amenorrhea method (LAM).

Contraceptive prevalence is quite high in the Northeast (81.7 per cent), the North (81.4 per cent) and the Central region (81.3 per cent). Some 75.8 per cent of married women and women in union in Bangkok use a method of contraception. Contraceptive use is lowest in the South at 69.7 per cent. Women aged 15-29 years are less likely to use contraception than older women. Between 72 and 74 per cent of married women or those in union aged 15-29 currently use a method of contraception compared with 76 per cent and higher of older women. Additionally, the majority of women with no children (57.5 per cent) are not using any method of contraception at the time of the survey.

The percentage of women using any method of contraception rises from 78.4 per cent among those with no education to 82.8 per cent among women with primary education, and falls to 79.7 per cent and 70.1 per cent among women with secondary and higher education, respectively. In addition to differences in current use of any method, the method mix varies by education. About one third of women with no education or with secondary education use the pill, followed by female sterilization. In contrast, 29.7 per cent of women with primary education only use the pill and 34.1 per cent are sterilized. Women from poorest households use contraception at a higher rate than very rich women (82.5 per cent versus 75 per cent).

More than three in four women (76.9 per cent) use modern[1] contraceptive methods while only 2.4 per cent use traditional methods. The use of traditional[2] contraceptive methods is higher among women living in the Southern region (5.2 per cent), young women aged 15-19 years (4.9 per cent), women with no children (4.1 per cent), women with higher education (5.2 per cent), and women in the richest quintile (5.1 per cent).

1 Female sterilization, male sterilization, IUD, injectables, implants, pill, male condom, female condom, diaphragm/foam/jelly.
2 Periodic abstinence, withdrawal, and LAM.

Table RH.4 Use of contraception

Percentage of women aged 15-49 years currently married or in union who are using (or whose partner is using) a contraceptive method, Thailand, 2012

	Not using any method	Per cent of women (currently married or in union) who are using:													Number of women currently married or in union
		Female serilization	Male sterilization	IUD	Injectables	Implants	Pill	Male condom	Periodic abstinence	Withdrawal	Other*	Any modern method	Any traditional method	Any method[1]	
Region															
Bangkok	24.3	24.0	1.0	0.5	6.9	1.0	33.9	3.5	1.3	3.2	0.4	71.2	4.6	75.8	1,666
Central	18.7	24.9	1.2	0.5	11.9	0.8	37.8	2.4	0.5	1.2	0.1	79.5	1.8	81.3	3,868
North	18.6	26.0	0.2	0.6	18.8	0.7	31.0	2.6	0.2	1.2	0.2	79.9	1.5	81.4	2,294
Northeast	18.3	34.6	0.2	1.1	13.1	0.5	28.2	2.5	0.5	0.8	0.2	80.3	1.4	81.7	5,131
South	30.3	18.5	0.0	1.2	10.0	1.0	30.8	2.9	2.0	2.9	0.4	64.5	5.2	69.7	2,018
Area															
Municipal	21.8	27.5	0.6	0.6	9.8	0.7	32.4	3.0	1.1	2.2	0.3	74.8	3.4	78.2	6,396
Non-municipal	19.9	27.4	0.5	0.9	14.6	0.7	31.9	2.4	0.5	1.0	0.2	78.4	1.6	80.0	8,581
Age															
15-19	26.8	1.3	0.0	0.4	20.0	0.3	42.9	3.4	1.7	2.8	0.5	68.3	4.9	73.2	502
20-24	25.7	3.9	0.0	0.6	15.8	1.4	47.0	3.3	0.6	1.6	0.1	72.0	2.3	74.3	1,156
25-29	27.9	10.2	0.2	0.3	12.7	0.5	42.6	2.8	0.8	2.0	0.1	69.3	2.9	72.2	1,688
30-34	20.9	21.1	0.2	0.4	12.9	0.6	37.7	3.0	0.8	1.8	0.4	76.3	2.8	79.1	2,486
35-39	17.6	30.1	0.3	0.9	13.6	0.7	32.0	2.5	0.9	1.2	0.1	80.2	2.2	82.4	2,865
40-44	14.1	38.7	0.7	1.2	12.8	0.9	26.7	2.4	0.9	1.3	0.3	83.5	2.4	85.9	3,191
45-49	23.6	40.7	1.3	1.0	8.6	0.6	20.4	2.3	0.3	1.1	0.1	74.8	1.5	76.3	3,091
Number of living children															
0	57.5	0.4	0.6	0.1	3.6	0.3	29.3	4.0	1.7	2.3	0.3	38.4	4.1	42.5	1,844
1	25.7	4.6	0.3	0.9	15.1	1.1	45.2	3.7	0.9	2.2	0.2	71.1	3.2	74.3	4,307
2	9.3	41.7	0.6	0.9	13.9	0.8	28.9	2.2	0.5	1.1	0.2	89.0	1.7	90.7	6,279
3	10.2	52.8	0.5	1.2	11.9	0.2	20.7	1.1	0.4	0.9	0.2	88.4	1.4	89.8	2,025
4+	28.6	41.0	0.6	0.3	10.1	0.4	17.1	0.9	0.0	0.7	0.4	70.3	1.1	71.4	521
Education															
None	21.6	22.6	0.7	0.8	16.9	1.6	34.4	0.4	0.0	0.9	0.0	77.5	0.9	78.4	458
Primary	17.2	34.1	0.6	0.9	14.0	0.7	29.7	1.4	0.4	0.9	0.2	81.4	1.4	82.8	6,627
Secondary	20.3	22.1	0.5	0.9	13.4	0.8	37.0	2.9	0.6	1.4	0.2	77.5	2.2	79.7	5,155
Higher	29.9	22.1	0.4	0.4	6.9	0.7	28.5	5.5	2.0	3.2	0.4	64.9	5.2	70.1	2,737
Wealth index quintile															
Poorest	17.5	29.3	0.3	1.1	17.7	0.8	31.1	0.6	0.4	0.9	0.1	81.0	1.4	82.4	2,536
Second	20.3	29.0	0.3	1.2	16.6	0.5	29.1	2.1	0.0	0.7	0.2	78.8	0.9	79.7	2,845
Middle	20.1	25.8	0.5	0.4	12.6	0.5	36.1	2.0	0.5	1.3	0.2	78.0	1.8	79.8	3,100
Fourth	20.0	25.5	0.4	0.8	10.7	1.1	36.4	2.6	0.8	1.4	0.3	77.7	2.3	80.0	3,346
Richest	25.0	28.1	1.1	0.6	6.8	0.7	27.2	5.4	2.0	3.1	0.2	69.9	5.1	75.0	3,151
Ethnicity of household head**															
Thai	20.7	27.6	0.5	0.8	12.5	0.7	32.0	2.7	0.8	1.5	0.2	76.9	2.4	79.3	14,723
Non-Thai	23.0	14.9	0.0	0.0	15.2	2.4	42.6	0.3	0.2	1.3	0.0	75.4	1.6	77.0	235
Total	**20.7**	**27.4**	**0.5**	**0.8**	**12.6**	**0.7**	**32.1**	**2.6**	**0.8**	**1.5**	**0.2**	**76.9**	**2.4**	**79.3**	**14,977**

[1] MICS indicator 5.3; MDG indicator 5.3
*Including female condom, diaphragm/foam/jelly, lactational amenorrhea method (LAM)
**19 cases with missing ethnicity of household head not shown

Unmet Need

Unmet need for contraception refers to fecund women who are not using any method of contraception, but who wish to postpone the next birth (spacing) or who wish to stop childbearing altogether (limiting). Unmet need is identified in MICS4 by using a set of questions eliciting current behaviours and preferences pertaining to contraceptive use, fecundity, and fertility preferences.

Table RH.5 shows the levels of met need for contraception, unmet need, and the demand for contraception satisfied.

Unmet need for spacing is defined as the percentage of women who are not using a method of contraception AND who:

- are not pregnant and not postpartum amenorrheic[3] and are fecund[4] and say they want to wait two or more years for their next birth OR
- are not pregnant and not postpartum amenorrheic and are fecund and unsure whether they want another child OR
- are pregnant and say that pregnancy was mistimed: would have wanted to wait OR
- are postpartum amenorrheic and say that the birth was mistimed: would have wanted to wait

Unmet need for limiting is defined as the percentage of women who are not using a method of contraception AND who:

- are not pregnant and not postpartum amenorrheic and are fecund and say they do not want any more children OR
- are pregnant and say they do not want to have a child OR
- are postpartum amenorrheic and say that they did not want the birth

Total unmet need for contraception is the sum of unmet need for spacing and unmet need for limiting. Table RH.5 reveals that 2.7 per cent of women aged 15-49 who are married or in a union have an unmet need for contraception for spacing and 4.2 per cent for limiting children. These two indicators combine into a total unmet need for contraception of 6.9 per cent. It is interesting to note that the unmet need for spacing is higher among younger women and for limiting among women in the age groups 45 and above. It is also notable that young women aged 15-19 report the highest rate of unmet need for contraception (11.5 per cent). In addition, regional differences are also observed, with the South indicating the highest percentage of unmet need for contraception (12.7 per cent), and the Northeast indicating the lowest (5.5 per cent).

Met need for limiting includes women who are using (or whose partner is using) a contraceptive method and who want no more children, are using male or female sterilization or declare themselves as infecund. Met need for spacing includes women who are using (or whose partner

3 A woman is postpartum amenorrheic if she had a birth in the last two years and is not currently pregnant, and her menstrual period has not returned since the birth of the last child.

4 A woman is considered infecund if she is neither pregnant nor postpartum amenorrheic, and
(1a) has not menstruated for at least six months, or (1b) never menstruated, or (1c) her last menstruation occurred before her last birth, or (1d) is in menopause/has had hysterectomy OR
(2) She declares that she has had a hysterectomy, or that she has never menstruated or that she is menopausal, or that she has been trying to get pregnant for two or more years without result in response to questions on why she thinks she is not physically able to get pregnant at the time of the survey OR
(3) She declares she cannot get pregnant when asked about her desire for a future birth OR
(4) She has not had a birth in the preceding five years, is currently not using contraception and is currently married and was continuously married during the last five years preceding the survey.

Table RH.5 Unmet need for contraception

Percentage of women age 15-49 years currently married or in union with met need for contraception, percentage with an unmet need for family planning and percentage of demand for contraception satisfied, Thailand, 2012

	Met need for contraception			Unmet need for contraception			Number of women currently married or in union	Percentage of demand for contraception satisfied	Number of women currently married or in union with need for contraception
	For spacing	For limiting	Total	For spacing	For limiting	Total[1]			
Region									
Bangkok	17.4	58.3	75.7	2.7	5.5	8.2	1,666	90.3	1,398
Central	19.4	62.1	81.5	2.3	3.4	5.7	3,868	93.5	3,366
North	16.6	64.8	81.4	2.2	3.5	5.7	2,294	93.4	1,999
Northeast	13.0	68.7	81.7	2.1	3.4	5.5	5,131	93.7	4,475
South	20.6	49.1	69.7	5.3	7.4	12.7	2,018	84.6	1,663
Area									
Municipal	17.6	60.6	78.2	2.9	4.2	7.1	6,396	91.6	5,459
Non-municipal	16.1	64.1	80.2	2.5	4.2	6.7	8,581	92.3	7,442
Age									
15-19	56.8	16.4	73.2	6.5	5.0	11.5	502	86.5	425
20-24	49.9	24.4	74.3	5.6	2.2	7.8	1,156	90.5	949
25-29	38.2	34.1	72.3	6.4	2.0	8.4	1,688	89.6	1,359
30-34	25.5	53.7	79.2	3.4	2.4	5.8	2,486	93.2	2,110
35-39	9.5	72.9	82.4	2.2	3.4	5.6	2,865	93.6	2,521
40-44	2.1	83.8	85.9	1.0	4.6	5.6	3,191	94.0	2,918
45-49	0.9	75.6	76.5	0.5	7.9	8.4	3,091	90.1	2,618
Education									
None	14.7	63.7	78.4	4.2	5.4	9.6	458	89.1	403
Primary	6.9	75.9	82.8	1.7	4.9	6.6	6,627	92.5	5,927
Secondary	25.7	54.1	79.8	3.3	3.3	6.6	5,155	92.4	4,449
Higher	23.9	46.3	70.2	3.5	3.9	7.4	2,737	90.5	2,122
Wealth index quintiles									
Poorest	13.1	69.4	82.5	2.5	2.9	5.4	2,536	93.9	2,228
Second	15.1	64.6	79.7	2.7	4.2	6.9	2,845	92.1	2,462
Middle	18.5	61.3	79.8	2.8	5.0	7.8	3,100	91.1	2,718
Fourth	19.0	61.1	80.1	2.3	4.4	6.7	3,346	92.2	2,901
Richest	17.0	58.2	75.2	2.9	4.3	7.2	3,151	91.2	2,592
Ethnicity of household head*									
Thai	16.5	62.9	79.4	2.7	4.2	6.9	14,723	92.0	12,685
Non-Thai	32.4	44.5	76.9	2.9	3.7	6.6	235	92.1	196
Total	**16.7**	**62.6**	**79.3**	**2.7**	**4.2**	**6.9**	**14,977**	**92.0**	**12,901**

[1] MICS indicator 5.4; MDG indicator 5.6
*19 cases with missing ethnicity of household head not shown

is using) a contraceptive method and who want to have another child or are undecided whether to have another child. The total of met need for spacing and limiting adds up to the total met need for contraception. In Thailand, the total percentage of women whose contraceptive needs are met is 79.3, of whom 16.7 per cent have a met need for spacing and 62.6 per cent for limiting. The met need for contraception for spacing is higher among younger women, particularly those aged 15-19 (56.8 per cent) and women in non-Thai-headed households (32.4 per cent), while the met need for limiting is higher among women aged 40-44 (83.8 per cent), and women in Thai-headed households (62.9 per cent).

Using information on contraception and unmet need, the percentage of demand for contraception satisfied is also estimated from the MICS data. The percentage of demand satisfied is defined as the proportion of women currently married or in a marital union who are currently using contraception out of the total demand for contraception. The total demand for contraception includes women who currently have an unmet need (for spacing or limiting), plus those who are currently using contraception. The percentage of demand for contraception satisfied is 92 per cent. It is more than 90 per cent for almost all women currently married or in union except for women in the South (84.6 per cent), women aged 15-19 (86.5 per cent) and 25-29 (89.6 per cent) and women with no education (89.1 per cent).

Table RH.5 shows that the total met need is higher than the total unmet need for family planning. The table also highlights that the percentage of total demand for family planning satisfied is high, though the percentage of demand satisfied in the Southern region is still relatively low.

Antenatal Care

The antenatal period presents important opportunities for reaching pregnant women with a number of interventions that may be vital to their health and well-being and that of their infants. Better understanding of foetal growth and development and its relationship to the mother's health has resulted in increased attention to the potential of antenatal care as an intervention to improve both maternal and newborn health. For example, if the antenatal period is used to inform women and families about the danger signs and symptoms of pregnancy complications and the risks of labour and delivery, it may help to ensure that pregnant women deliver with the assistance of a skilled health care provider. The antenatal period also provides an opportunity to supply information on birth spacing, which is recognized as an important factor in improving infant survival. Tetanus immunization during pregnancy can be life-saving for both the mother and infant. The prevention and treatment of malaria among pregnant women, management of anaemia during pregnancy and treatment of STIs can significantly improve foetal outcomes and improve maternal health. Adverse outcomes such as low birth weight can be reduced through a combination of interventions to improve women's nutritional status and prevent infections (e.g. malaria and STIs) during pregnancy. More recently, the potential of the antenatal period as an entry point for HIV prevention and care, in particular for the prevention of HIV transmission from mother to child, has led to renewed interest in access to and use of antenatal services.

WHO recommends a minimum of four antenatal visits based on a review of the effectiveness of different models of antenatal care. WHO guidelines are specific on the content of antenatal care visits, which should include:

- Blood pressure measurement
- Urine testing for bateriuria and proteinuria
- Blood testing to detect syphilis and severe anaemia
- Weight/height measurement (optional)

The type of personnel providing antenatal care to women aged 15-49 who gave birth in the two years preceding the survey is presented in Table RH.6. The results show that a relatively small percentage of women (1.5 per cent) do not receive antenatal care. In Thailand, most antenatal care is provided by medical doctors and nurses while a minority of women receive care from a community health worker or a traditional birth attendant. Overall, about 98.1 per cent of women have received antenatal care at least once from any skilled personnel. Women's educational level is associated with antenatal care from a skilled personnel. Some 91.9 per cent of uneducated women received antenatal care at least once from skilled personnel compared with 98.6 per cent of women with higher education.

UNICEF and WHO recommend a minimum of four antenatal care visits during pregnancy. Table RH.7 shows the number of antenatal care visits during the last pregnancy in the two years preceding the survey, regardless of provider, by selected characteristics. The results reveal that 95.5 per cent of mothers received antenatal care more than once and 93.4 per cent of mothers received antenatal care at least four times. Mothers from the poorest households and those with no education are less likely than more advantaged mothers to receive antenatal care four or more times. For example, 85.9 per cent of women living in the poorest households reported four or more antenatal care visits compared with 96 per cent of those living in the richest households. As many as 93.5 per cent of women living in Thai-headed households received antenatal care four or more times compared with 89.8 per cent of women living in non-Thai-headed households. Following the same pattern, only 1.4 per cent of women living in Thai-headed households did not receive any antenatal care compared to 9.3 per cent of women living in non-Thai-headed households.

The types of services pregnant women received during antenatal care are shown in Table RH.8. Among those women who had a live birth during the two years preceding the survey, 98.4 per cent reported that a blood sample was taken during antenatal care visits, 98.4 per cent that their blood pressure was checked and 98.3 per cent that a urine specimen was taken. Overall, 98 per cent reported receiving all three services. It is important to note that the percentage of women who received all three ranges from 94 per cent to 99 per cent in all background characteristics.

Table RH.6 Antenatal care coverage

Per cent distribution of women aged 15-49 who gave birth in the two years preceding the survey by type of personnel providing antenatal care during the pregnancy for the last birth, Thailand, 2012

	Person providing antenatal care						No antenatal care received	Total*	Any skilled personnel[1]	Number of women who gave birth in the preceding two years
	Medical doctor	Nurse/ Midwife	Health centre staff/nurse's aide/ midwife's aide	Traditional birth attendant	Community health worker	Other				
Region										
Bangkok	17.3	72.0	8.5	0.0	0.0	0.0	2.2	100.0	97.8	194
Central	32.2	61.4	3.7	0.0	0.1	0.0	2.6	100.0	97.3	520
North	30.0	52.9	14.8	0.0	0.0	1.9	0.4	100.0	97.7	266
Northeast	29.3	44.7	24.9	0.0	0.0	0.0	1.1	100.0	98.9	611
South	26.7	45.4	26.4	0.2	0.7	0.0	0.6	100.0	98.5	323
Area										
Municipal	30.9	58.8	8.2	0.0	0.2	0.2	1.8	100.0	97.8	803
Non-municipal	26.8	49.3	22.2	0.0	0.1	0.3	1.2	100.0	98.3	1,110
Mother's age at birth										
Less than 20	29.4	48.7	19.2	0.0	0.0	0.0	2.7	100.0	97.3	316
20-34	29.8	53.0	15.7	0.0	0.1	0.1	1.3	100.0	98.5	1,254
35-49	18.3	61.2	17.6	0.0	0.3	1.5	1.0	100.0	97.2	255
Missing/DK	36.3	51.1	11.4	0.6	0.2	0.0	0.5	100.0	98.7	88
Education										
None	8.4	66.1	17.4	0.0	0.0	4.9	3.2	100.0	91.9	51
Primary	17.7	54.7	24.9	0.0	0.3	0.1	2.2	100.0	97.4	412
Secondary	29.5	52.8	16.2	0.1	0.1	0.1	1.2	100.0	98.5	997
Higher	38.6	51.5	8.6	0.0	0.0	0.2	1.1	100.0	98.6	454
Wealth index quintiles										
Poorest	22.0	46.8	28.2	0.0	0.2	0.1	2.6	100.0	97.1	277
Second	20.0	53.3	24.8	0.0	0.0	0.0	1.9	100.0	98.1	397
Middle	34.3	47.5	16.1	0.1	0.0	0.6	1.4	100.0	97.9	454
Fourth	26.3	59.7	11.7	0.0	0.5	0.4	1.5	100.0	97.7	428
Richest	38.4	57.9	3.4	0.0	0.1	0.1	0.2	100.0	99.7	358
Ethnicity of household head**										
Thai	28.9	53.0	16.3	0.0	0.1	0.3	1.4	100.0	98.2	1,869
Non-Thai	12.2	65.4	17.0	0.0	0.0	0.0	5.4	100.0	94.6	43
Total	**28.5**	**53.3**	**16.3**	**0.0**	**0.1**	**0.3**	**1.5**	**100.0**	**98.1**	**1,914**

[1] MICS indicator 5.5a; MDG indicator 5.5

*If the respondent mentioned more than one provider only the most qualified is considered.
**1 case with missing ethnicity of household head not shown

Table RH.7 Number of antenatal care visits

Per cent distribution of women who had a live birth during the two years preceding the survey by number of antenatal care visits by any provider, Thailand, 2012

	Per cent distribution of women who had:					Total	Number of women who had a live birth in the preceding two years
	No antenatal care visits	One visit	Two visits	Three visits	4 or more visits[1]		
Region							
Bangkok	2.2	0.5	0.0	0.8	93.2	100.0	194
Central	3.0	0.1	0.4	1.4	94.9	100.0	520
North	0.4	0.6	0.6	0.6	91.6	100.0	266
Northeast	1.1	0.2	0.1	2.3	92.7	100.0	611
South	0.6	0.6	0.7	3.3	94.0	100.0	323
Area							
Municipal	1.8	0.3	0.2	1.2	93.6	100.0	803
Non-municipal	1.4	0.4	0.4	2.3	93.3	100.0	1,110
Mother's age at birth							
Less than 20	2.7	0.7	0.4	2.1	90.4	100.0	316
20-34	1.4	0.2	0.4	1.7	94.6	100.0	1,254
35-49	1.0	0.5	0.2	2.4	90.7	100.0	255
Missing/DK	0.5	0.9	0.3	0.7	95.6	100.0	88
Education							
None	3.2	0.5	2.6	4.6	86.5	100.0	51
Primary	2.6	0.5	0.5	1.6	92.2	100.0	412
Secondary	1.2	0.4	0.3	1.4	94.4	100.0	997
Higher	1.1	0.1	0.0	2.7	93.2	100.0	454
Wealth index quintile							
Poorest	2.6	1.4	1.2	2.2	85.9	100.0	277
Second	2.3	0.0	0.2	1.9	93.8	100.0	397
Middle	1.4	0.1	0.3	2.2	95.7	100.0	454
Fourth	1.5	0.3	0.0	2.1	93.4	100.0	428
Richest	0.2	0.2	0.3	0.7	96.0	100.0	358
Ethnicity of household head*							
Thai	1.4	0.4	0.3	1.9	93.5	100.0	1,869
Non-Thai	9.3	0.0	0.9	0.0	89.8	100.0	43
Total	**1.5**	**0.3**	**0.3**	**1.8**	**93.4**	100.0	**1,914**

[1] MICS indicator 5.5b; MDG indicator 5.5

*1 case with missing ethnicity of household head not shown

Table RH.8 Content of antenatal care

Percentage of women aged 15-49 years who had their blood pressure measured, urine sample taken, and blood sample taken as part of antenatal care, Thailand, 2012

	Percentage of pregnant women who had:				Number of women who had a live birth in the preceding two years
	Blood pressure measured	Urine sample taken	Blood sample taken	Blood pressure measured, urine and blood sample taken[1]	
Region					
Bangkok	97.8	97.8	96.6	96.6	194
Central	97.4	97.1	97.3	97.1	520
North	99.6	98.8	99.2	98.5	266
Northeast	98.6	98.8	98.9	98.6	611
South	99.2	99.1	99.4	98.9	323
Area					
Municipal	98.2	98.2	97.9	97.8	803
Non-municipal	98.6	98.3	98.7	98.1	1,110
Mother's age at birth					
Less than 20	97.3	97.3	97.1	97.1	316
20-34	98.6	98.3	98.5	98.0	1,254
35-49	99.0	99.0	99.0	99.0	255
Missing/DK	98.8	99.3	99.3	98.5	88
Education					
None	96.8	96.1	96.8	96.1	51
Primary	97.8	97.6	97.1	96.9	412
Secondary	98.5	98.6	98.7	98.3	997
Higher	98.9	98.5	98.9	98.5	454
Wealth index quintile					
Poorest	97.4	97.1	97.4	97.1	277
Second	98.0	97.5	98.1	97.5	397
Middle	98.3	98.5	98.6	98.2	454
Fourth	98.4	98.5	98.5	98.4	428
Richest	99.8	99.5	98.9	98.7	358
Ethnicity of household head*					
Thai	98.5	98.4	98.5	98.1	1,869
Non-Thai	94.6	94.6	94.6	94.6	43
Total	**98.4**	**98.3**	**98.4**	**98.0**	**1,914**

[1] MICS indicator 5.6

*1 case with missing ethnicity of household head not shown

Assistance at Delivery

Three quarters of all maternal deaths occur during delivery and the immediate post-partum period. The single most critical intervention for safe motherhood is to ensure a competent health worker with midwifery skills is present at every birth, and transport is available to a referral facility for obstetric care in case of emergency. One of the World Fit for Children goals is to ensure that women have ready and affordable access to skilled attendance at delivery. The indicators are the proportion of births with a skilled attendant, and institutional deliveries. The skilled attendant at delivery indicator is also used to track progress towards the Millennium Development target of reducing the maternal mortality ratio by three quarters between 1990 and 2015.

The MICS included a number of questions to assess the proportion of births attended by a skilled attendant. *A skilled attendant* includes a doctor, nurse, midwife or auxiliary midwife.

The results in Table RH.9 show that 99.6 per cent of births occurring in the two years preceding the MICS survey were delivered by skilled attendants. No substantial differences are observed by most background variables. However, women living in non-Thai-headed households are slightly less likely to have delivered with the assistance of a skilled attendant compared to those living in a Thai-headed household (96.8 per cent versus 99.7 per cent). The table further reveals that nearly four in five of the births (77.8 per cent) in the two years preceding the MICS survey were delivered with the assistance of a nurse/midwife. Doctors assisted with the delivery of 14.3 per cent of births and health centre staff (including nurse's aide and midwife's aide) assisted with 7.4 per cent.

In Thailand, 32 per cent of women delivered by Caesarean section. Bangkok has the highest Caesarean section rate of all the regions (42.6 per cent). Delivery through Caesarean section is higher for municipal women (38.9 per cent) than for non-municipal women (27 per cent). The Caesarean section rate is positively correlated with educational level and living standards: the more educated and the richer a woman is, the more likely she is to give birth by Caesarean section. It is interesting to note that women who gave birth at a public health facility are less likely to give birth by Caesarean section (29.4 per cent) than those who gave birth at a private health facility (61.2 per cent).

Place of Delivery

Increasing the proportion of births that are delivered in health facilities is an important factor in reducing the health risks to both the mother and the baby. Proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that can cause morbidity and mortality to either the mother or the baby. Table RH.10 presents the per cent distribution of women aged 15-49 who had a live birth in the two years preceding the survey by place of delivery and the percentage of births delivered in a health facility, according to background characteristics.

Almost 100 per cent of births in Thailand are delivered in a health facility; 90.9 per cent of deliveries occur in public sector facilities and 8.6 per cent occur in private sector facilities. Less than 1 per cent of births occur at home, with the majority of home deliveries among women living in households headed by a non-Thai, and uneducated women (1.9 per cent and 1.7 per cent, respectively). Differentials by background characteristics are generally small or almost non-existent, with institutional delivery rates above 90 per cent. Nevertheless, it is noticeable that women with no education are less likely to deliver in a health facility than educated women. Note also that women who do not have any antenatal care visits are less likely to deliver in a health facility and more likely to deliver at home compared to those who have at least one antenatal visit.

Table RH.9 Assistance during delivery

Per cent distribution of women aged 15-49 who had a live birth in the two years preceding the survey by person assisting at delivery and percentage of births delivered by C-section, Thailand, 2012

	Person assisting at delivery						No attendant	Total	Delivery assisted by any skilled attendant[1]	Per cent delivered by C-section[2]	Number of women who had a live birth in preceding two years
	Medical doctor	Nurse/ Midwife	Health center staff/ nurse's aide/ midwife's aide	Traditional birth attendant	Relative/ Friend	Other					
Region											
Bangkok	11.5	79.1	9.1	0.0	0.0	0.2	0.2	100.0	99.7	42.6	194
Central	15.2	82.8	1.9	0.0	0.0	0.0	0.1	100.0	99.9	38.6	520
North	11.1	80.0	7.9	0.0	0.1	0.9	0.0	100.0	99.0	32.8	266
Northeast	16.0	74.9	8.9	0.2	0.0	0.0	0.0	100.0	99.8	23.9	611
South	14.1	72.7	12.3	0.0	0.5	0.4	0.0	100.0	99.2	29.8	323
Area											
Municipal	14.0	79.7	5.8	0.2	0.0	0.2	0.0	100.0	99.5	38.9	803
Non-municipal	14.6	76.5	8.6	0.0	0.1	0.2	0.1	100.0	99.6	27.0	1,110
Mother's age at birth											
Less than 20	16.5	71.6	11.4	0.0	0.0	0.5	0.1	100.0	99.4	20.0	316
20-34	14.5	78.1	7.0	0.1	0.1	0.2	0.0	100.0	99.6	34.9	1,254
35-49	10.2	84.0	5.6	0.0	0.1	0.1	0.0	100.0	99.8	34.4	255
Missing/DK	16.6	78.8	4.6	0.0	0.0	0.0	0.0	100.0	100.0	27.2	88
Place of delivery											
Public sector health facility	14.2	78.2	7.4	0.0	0.0	0.2	0.0	100.0	99.8	29.4	1,740
Private sector health facility	16.0	77.4	6.6	0.0	0.0	0.0	0.0	100.0	100.0	61.2	165
Home/Other	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100.0	(*)	(*)	9
Education											
None	3.9	84.8	8.5	0.1	0.4	2.2	0.0	100.0	97.3	23.4	51
Primary	9.7	81.4	8.1	0.1	0.4	0.1	0.1	100.0	99.2	21.5	412
Secondary	15.4	75.9	8.5	0.1	0.0	0.2	0.0	100.0	99.7	26.7	997
Higher	17.4	78.2	4.3	0.0	0.0	0.1	0.0	100.0	99.9	54.2	454
Wealth index quintiles											
Poorest	14.1	76.6	7.8	0.5	0.1	0.8	0.2	100.0	98.4	17.5	277
Second	9.2	80.0	10.4	0.0	0.4	0.0	0.0	100.0	99.6	20.2	397
Middle	17.3	73.6	9.0	0.0	0.0	0.0	0.0	100.0	100.0	28.7	454
Fourth	10.4	82.7	6.5	0.0	0.0	0.3	0.0	100.0	99.7	35.0	428
Richest	21.1	75.9	3.0	0.0	0.0	0.0	0.1	100.0	99.9	56.9	358
Ethnicity of household head*											
Thai	14.5	78.0	7.2	0.1	0.1	0.1	0.0	100.0	99.7	32.2	1,869
Non-Thai	7.1	73.4	16.4	0.2	0.4	2.6	0.0	100.0	96.8	24.1	43
Total	**14.3**	**77.8**	**7.4**	**0.1**	**0.1**	**0.2**	**0.0**	100.0	**99.6**	**32.0**	**1,914**

[1] MICS indicator 5.7; MDG indicator 5.2 [2] MICS indicator 5.9

(*) Figures that are based on less than 25 unweighted cases

*1 case with missing ethnicity of household head not shown

Table RH.10 Place of delivery

Per cent distribution of women aged 15-49 who had a live birth in two years preceding the survey by place of delivery, Thailand, 2012

	Place of delivery				Total	Delivered in health facility[1]	Number of women who had a live birth in preceding two years
	Health facility		Home	Other			
	Public sector	Private sector					
Region							
Bangkok	67.0	32.8	0.2	0.0	100.0	99.8	194
Central	88.8	11.1	0.1	0.0	100.0	99.9	520
North	94.8	4.9	0.3	0.0	100.0	99.7	266
Northeast	96.5	3.1	0.1	0.3	100.0	99.6	611
South	94.9	3.7	0.5	0.9	100.0	98.6	323
Area							
Municipal	85.1	14.4	0.1	0.4	100.0	99.5	803
Non-municipal	95.2	4.4	0.2	0.2	100.0	99.6	1,110
Mother's age at birth							
Less than 20	95.8	3.4	0.1	0.7	100.0	99.2	316
20-34	89.8	10.0	0.2	0.0	100.0	99.7	1,254
35-49	91.2	7.8	0.3	0.7	100.0	99.0	255
Missing	89.5	10.5	0.0	0.0	100.0	100.0	88
Number of antenatal care visits							
None	(94.3)	(1.0)	(0.9)	(3.8)	100.0	(95.3)	30
1-3 visits	95.5	3.9	0.6	0.0	100.0	99.4	48
4+ visits	90.6	9.0	0.2	0.2	100.0	99.6	1,788
Missing/DK	96.9	3.1	0.0	0.0	100.0	100.0	48
Education							
None	80.5	12.1	1.7	5.8	100.0	92.6	51
Primary	94.5	4.7	0.6	0.1	100.0	99.2	412
Secondary	94.1	5.8	0.0	0.1	100.0	99.9	997
Higher	81.9	18.1	0.0	0.0	100.0	100.0	454
Wealth index quintiles							
Poorest	98.7	0.0	0.7	0.6	100.0	98.7	277
Second	94.7	4.5	0.4	0.5	100.0	99.2	397
Middle	96.0	4.0	0.0	0.0	100.0	100.0	454
Fourth	93.0	7.0	0.0	0.0	100.0	100.0	428
Richest	71.9	27.6	0.1	0.3	100.0	99.6	358
Ethnicity of household head*							
Thai	91.2	8.6	0.2	0.1	100.0	99.8	1,869
Non-Thai	80.5	10.8	1.9	6.8	100.0	91.3	43
Total	**90.9**	**8.6**	**0.2**	**0.2**	**100.0**	**99.6**	**1,914**

[1] MICS indicator 5.8 ( ) Figures that are based on 25-49 unweighted cases

*1 case with missing ethnicity of household head not shown

VIII.
Child Development


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Early Childhood Education and Learning

The readiness of children for primary school can be improved through attendance in early childhood education programmes or through pre-school attendance. Early childhood education includes programmes for children that have organized learning components as opposed to baby-sitting and day-care which do not typically have organized learning.

Table CD.1 Early childhood education

Percentage of children aged 36-59 months who are attending an organized early childhood education programme, Thailand, 2012

	Percentage of children aged 36-59 months currently attending early childhood education[1]	Number of children aged 36-59 months
Sex		
Male	83.6	1,940
Female	85.1	2,041
Region		
Bangkok	66.3	343
Central	77.8	906
North	90.9	643
Northeast	91.0	1,487
South	81.4	603
Area		
Municipal	80.1	1,516
Non-municipal	87.0	2,466
Age of child		
36-47 months	75.0	1,887
48-59 months	92.9	2,095
Mother's education		
None	74.7	182
Primary	85.7	1,655
Secondary	82.8	1,453
Higher	87.2	691

Table CD.1 Early childhood education (continued)

Percentage of children aged 36-59 months who are attending an organized early childhood education programme, Thailand, 2012

	Percentage of children aged 36-59 months currently attending early childhood education[1]	Number of children aged 36-59 months
Wealth index quintile		
Poorest	84.7	763
Second	85.9	843
Middle	85.5	891
Fourth	83.5	764
Richest	81.9	720
Ethnicity of household head*		
Thai	85.0	3,902
Non-Thai	54.8	74
Total	**84.4**	**3,982**

[1] MICS indicator 6.7
*5 cases with missing ethnicity of household head not shown

Table CD.1 shows that 84.4 per cent of children aged 36-59 months are attending an organized early childhood education programme. Urban-rural and regional differentials are notable with attendance at 87 per cent in non-municipal areas compared to 80.1 per cent in municipal areas. Among children aged 36-59 months, attendance in early childhood education programmes is more prevalent in the Northeastern region (91 per cent), and lowest in Bangkok (66.3 per cent). No gender differential exists, but small differentials by socioeconomic status are seen. Some 81.9 per cent of children living in the richest households attend such programmes compared to 84.7 per cent in the poorest households. It is interesting to note that the proportions of children attending early childhood education programmes at ages 36-47 months and 48-59 months are very different (75 per cent and 92.9 per cent).

It is well recognized that a period of rapid brain development occurs in the first three to four years of life, and the quality of home care is the major determinant of the child's development during this period. In this context, engagement of adults in activities with children, the presence of books in the home for the child, and the conditions of care are important indicators of the quality of home care. Children should be physically healthy, mentally alert, emotionally secure, socially competent and ready to learn.

Information on a number of activities that support early learning was collected in the survey. These include the involvement of adults with children in the following activities: reading books or looking at picture books, telling stories, singing songs, taking children outside the home, compound or yard, playing with children, and spending time with children naming, counting, or drawing things.

Table CD.2 shows that 92.7 per cent of under-5 children had an adult household member engage with them in four or more activities that promote learning and school readiness during the three days preceding the survey. The average number of activities that adults engaged in with children was 5.4. The table also indicates that the father's involvement in such activities was somewhat limited. Father's involvement with one or more activities was only 35.3 per cent. Note also that 38.6 per cent of children were living in a household without their fathers.

Table CD.2 Support for learning

Percentage of children aged 36-59 months with whom an adult household member engaged in activities that promote learning and school readiness during the last three days, Thailand, 2012

	Percentage of children aged 36-59 months		Mean number of activities		Percentage of children not living with their natural father	Number of children aged 36-59 months
	With whom adult household members engaged in four or more activities[1]	With whom the father engaged in one or more activities[2]	Any adult Household member engaged with the child	The father engaged with the child		
Sex						
Male	92.4	37.0	5.4	1.2	37.4	1,940
Female	93.0	33.6	5.5	1.1	39.7	2,041
Region						
Bangkok	93.5	48.1	5.5	1.9	22.5	343
Central	92.7	41.9	5.5	1.4	32.9	906
North	90.7	35.8	5.3	1.2	38.6	643
Northeast	93.4	24.8	5.5	0.7	52.6	1,487
South	92.9	43.2	5.5	1.4	21.7	603
Area						
Municipal	91.8	41.6	5.4	1.4	30.0	1,516
Non-municipal	93.3	31.4	5.4	1.0	43.9	2,466
Age						
36-47 months	90.7	33.9	5.3	1.1	35.8	1,887
48-59 months	94.6	36.5	5.5	1.2	41.1	2,095
Mother's education						
None	83.8	23.5	5.0	0.7	54.4	182
Primary	90.6	23.5	5.3	0.7	54.8	1,655
Secondary	94.2	44.5	5.5	1.4	24.0	1,453
Higher	97.3	47.2	5.7	1.6	26.4	691
Father's education						
None	80.3	34.9	4.9	0.7	0.0	48
Primary	92.6	53.6	5.4	1.7	0.0	832
Secondary	93.4	57.9	5.5	1.8	0.0	1,045
Higher	96.1	64.8	5.7	2.2	0.0	515
Father not in household	91.6	NA*	5.4	NA*	100.0	1,538
Missing/DK	(*)	(*)	(*)	(*)	(*)	3
Wealth index quintiles						
Poorest	86.8	25.4	5.2	0.8	53.8	763
Second	91.9	26.9	5.3	0.8	48.4	843
Middle	94.2	35.3	5.4	1.1	37.6	891
Fourth	94.7	42.1	5.6	1.5	29.7	764
Richest	96.0	48.2	5.7	1.6	21.8	720
Ethnicity of household head**						
Thai	93.0	35.3	5.5	1.1	38.8	3,902
Non-Thai	77.9	35.0	4.6	1.2	29.2	74
Total	**92.7**	**35.3**	**5.4**	**1.1**	**38.6**	**3,982**

[1] MICS indicator 6.1 [2] MICS Indicator 6.2
(*) Figures that are based on less than 25 unweighted cases
*NA = Not applicable
**5 cases with missing ethnicity of household head not shown

There are no gender differentials in terms of engagement of adults in activities with children. However, fathers engaged in activities with a larger proportion of male children (37.0 per cent) than female children (33.6 per cent). In term of residential differences, fewer adults engaged in learning and school readiness activities with children living in municipal areas (91.8 per cent) than in non-municipal areas (93.3 per cent). Differentials by region and socioeconomic status are also observed. Adult engagement in activities with children was highest in Bangkok (93.5 per cent) and lowest in the North (90.7 per cent), and at 96 per cent for children living in the richest households compared with 86.8 per cent for those living in the poorest households. The involvement of fathers showed a similar pattern in terms of adults' engagement in such activities. However, the engagement of fathers in activities with their children was lowest in the Northeastern region, and higher for children living in municipal areas than in non-municipal areas.

Exposure to books in the early years not only provides a child with a greater understanding of the nature of print, but may also give the child opportunities to see others reading, such as older siblings doing school work. The presence of books is important for later school performance. The mother/caretaker of all children under 5 were asked about the number of children's books or picture books, household objects or outside objects, and homemade toys or toys that came from a shop that are available at home.

In Thailand, fewer than half (42.7 per cent) of children aged 0-59 months live in households which have at least three children's books (Table CD.3) while those with 10 or more books account for 14.2 per cent. While no gender differentials are observed, children living in municipal areas appear to have more access to children's books than those living in non-municipal areas. Some 50.4 per cent of children under-5 years of age in municipal areas have three or more children's books compared with 37.9 per cent in non-municipal areas. The presence of children's books is positively correlated with the child's age: 56.1 per cent of children aged 24-59 months, have three or more children's books in the home compared with 21.2 per cent for children aged 0-23 months. For children having 10 or more children's books or picture books at home, the findings show almost similar patterns.

Table CD.3 also shows that 70.8 per cent of children aged 0-59 months had two or more types of playthings to play with in their homes. These included homemade toys (such as dolls and cars, or other toys made at home), toys that came from a store, and household objects (such as pots and bowls) or objects and materials found outside the home (such as sticks, rocks, animal shells or leaves). It is interesting to note that 89.3 per cent of children played with toys that came from a store, with the fewest (32.7 per cent) playing with homemade toys. The proportion of children who had two or more types of playthings to play with is 70 per cent among boys and 71.5 per cent among girls. No urban-rural differentials are observed but there are small differences in terms of mother's education: not more than 73 per cent of children whose mothers are educated have two or more types of playthings compared with 75.6 per cent for children whose mothers have no education. Moreover, the proportion in the South is found highest compared to other regions (78.4 per cent). Differentials are small by socioeconomic status of households.

Leaving children alone or in the presence of other young children is known to increase the risk of accidents. In the MICS, two questions were asked to find out whether children aged 0-59 months were left alone for more than one hour at least once during the week preceding the interview, and whether children were left in the care of other children under 10 years of age for more than one hour at least once during the past week.

Table CD.3 Learning materials

Percentage of children under age 5 by numbers of children's books present in the household, and by playthings that child plays with, Thailand, 2012

	Household has for the child		Child plays with			Two or more types of playthings[2]	Number of children under age 5
	3 or more children's books[1]	10 or more children's books	Home-made toys	Toys from a shop/ manufactured toys	Household objects/objects found outside		
Sex							
Male	41.3	12.7	33.6	89.3	67.1	70.0	4,836
Female	44.0	15.7	31.7	89.2	69.7	71.5	4,880
Region							
Bangkok	62.4	23.2	26.2	85.5	65.0	66.3	833
Central	47.7	16.5	29.8	91.1	67.3	69.5	2,268
North	43.4	19.0	33.4	87.3	66.1	68.8	1,493
Northeast	33.8	8.6	30.4	89.2	68.5	70.3	3,672
South	45.2	14.9	45.9	90.6	74.4	78.4	1,450
Area							
Municipal	50.4	19.4	30.1	89.5	67.0	69.9	3,723
Non-municipal	37.9	11.0	34.3	89.1	69.3	71.3	5,993
Age							
0-23 months	21.2	5.5	22.3	76.1	45.6	48.8	3,739
24-59 months	56.1	19.7	39.2	97.5	82.7	84.5	5,977
Mother's education							
None	21.7	6.5	46.9	89.0	73.7	75.6	375
Primary	33.0	7.0	32.5	89.7	71.8	72.8	3,775
Secondary	43.9	13.1	32.4	87.6	64.8	68.5	3,812
Higher	65.2	33.9	30.5	92.0	67.9	70.2	1,754
Wealth index quintiles							
Poorest	24.1	2.5	33.7	86.8	69.7	68.7	1,858
Second	30.0	6.4	33.7	87.6	67.0	70.8	2,127
Middle	40.4	9.6	35.4	88.7	69.7	72.2	2,183
Fourth	53.1	18.8	31.1	90.8	68.2	71.5	1,897
Richest	70.8	38.2	28.6	93.0	67.5	70.3	1,651
Ethnicity of household head*							
Thai	43.1	14.4	32.6	89.4	68.5	70.8	9,522
Non-Thai	18.4	6.0	37.8	78.7	64.7	66.6	184
Total	**42.7**	**14.2**	**32.7**	**89.3**	**68.4**	**70.8**	**9,716**

[1] MICS indicator 6.3 [2] MICS indicator 6.4
*10 cases with missing ethnicity of household head not shown

Table CD.4 shows that 3.7 per cent of children aged 0-59 months were left in the care of other children, while 1.7 per cent were left alone during the week preceding the interview. Combining the two care indicators, it is calculated that 4.6 per cent of children were left with inadequate care during the week preceding the survey, either by being left alone or in the care of another child. No differences were observed by gender of the child or between municipal and non-municipal areas. On the other hand, inadequate care was more prevalent among children whose mothers had no education (5.4 per cent), as opposed to children whose mothers had above secondary education

(2.8 per cent). Children aged 24-59 months were left with inadequate care more (6.1 per cent) than children aged 0-23 months (2.2 per cent). Differences are also observed in regard to socioeconomic status of the household. Children living in the richest households were left with inadequate care less (2.3 per cent) than those living in the poorest households (6.5 per cent).

Table CD.4 Inadequate care

Percentage of children under age 5 left alone or left in the care of another child younger than 10 years of age for more than one hour at least once during the past week, Thailand, 2012

	Percentage of children under age 5			Number of children under age 5
	Left alone in the past week	Left in the care of another child younger than 10	Left with inadequate care in the past week[1]	
Sex				
Male	1.9	3.9	5.1	4,836
Female	1.5	3.6	4.2	4,880
Region				
Bangkok	1.9	4.3	5.5	833
Central	0.9	2.0	2.6	2,268
North	1.7	2.5	3.6	1,493
Northeast	2.4	4.7	5.8	3,672
South	0.9	5.0	5.3	1,450
Area				
Municipal	1.8	3.6	4.7	3,723
Non-municipal	1.6	3.8	4.6	5,993
Age				
0-23 months	0.4	2.0	2.2	3,739
24-59 months	2.5	4.8	6.1	5,977
Mother's education				
None	2.6	4.4	5.4	375
Primary	2.0	4.5	5.4	3,775
Secondary	1.7	3.5	4.6	3,812
Higher	0.9	2.5	2.8	1,754
Wealth index quintiles				
Poorest	2.4	5.7	6.5	1,858
Second	1.2	4.4	5.0	2,127
Middle	2.3	3.7	5.2	2,183
Fourth	1.4	3.0	3.7	1,897
Richest	1.0	1.5	2.3	1,651
Ethnicity of household head*				
Thai	1.7	3.7	4.6	9,522
Non-Thai	2.3	4.7	5.8	184
Total	**1.7**	**3.7**	**4.6**	**9,716**

[1] MICS indicator 6.5
*10 cases with missing ethnicity of household head not shown

Early Childhood Development

Early child development is defined as an orderly, predictable process along a continuous path, where a child learns to handle more complicated levels of moving, thinking, speaking, feeling and relating to others. Physical growth, literacy and numeracy skills, socio-emotional development and readiness to learn are vital domains of a child's overall development, which is a basis for overall human development.

A 10-item module that has been developed for the MICS programme was used to calculate the Early Child Development Index (ECDI). The indicator is based on some benchmarks that children would be expected to have if they are developing like the majority of children in that age group. The primary purpose of the ECDI is to inform public policy regarding the developmental status of children in Thailand.

Each of the 10 items is used in one of the four domains, to determine if children are developmentally on track in that domain. The domains in question are:

- Literacy-numeracy: Children are identified as being developmentally on track based on whether they can identify/name at least 10 letters of the alphabet, whether they can read at least four simple, popular words, and whether they know the name and recognize the symbols of all numbers from 1 to 10. If at least two of these are true, then the child is considered developmentally on track.
- Physical: If the child can pick up a small object with two fingers, like a stick or a rock from the ground and/or the mother/caretaker does not indicate that the child is sometimes too sick to play, then the child is regarded as being developmentally on track in the physical domain.
- Social-emotional: Children are considered to be developmentally on track if two of the following are true; if the child gets along well with other children, if the child does not kick, bite, or hit other children and if the child does not get distracted easily.
- Learning: If the child follows simple directions on how to do something correctly and/or when given something to do, and is able to do it independently, then the child is considered to be developmentally on track in this domain.

ECDI is then calculated as the percentage of children who are developmentally on track in at least three of these four domains.

The results are presented in Table CD.5. In Thailand, 91.5 per cent of children aged 36-59 months are developmentally on track. The ECDI is lower among boys (90.2 per cent) than girls (92.8 per cent). As expected, the ECDI is much higher in the older age group (88.1 per cent among 36-47 month olds compared to 94.6 per cent among 48-59 month olds), since children mature more skills with increasing age. A higher early childhood development index is seen in children attending an early childhood education programme (94.1 per cent versus 77.4 per cent for those who are not attending). Children living in the poorest households have a lower ECDI (88.7 per cent) compared to children living in the richest households (92.9 per cent of children developmentally on track). An analysis of the four domains of child development shows that 97.4 per cent of children are on track in the physical domain, but fewer are on track in the domains of learning (96.5 per cent), social-emotional (86.5 per cent) and literacy-numeracy (63.3 per cent). In each individual domain the higher score is associated with children attending an early childhood education programme, and with older children.

Table CD.5 Early child development index

Percentage of children aged 36-59 months who are developmentally on track in literacy-numeracy, physical, social-emotional, and learning domains, and the early child development index score, Thailand, 2012

	Percentage of children age 36-59 months who are developmentally on track for indicated domains				Early child development index score[1]	Number of children age 36-59 months
	Literacy-numeracy	Physical	Social-Emotional	Learning		
Sex						
Male	60.8	97.5	84.1	97.1	90.2	1,940
Female	65.6	97.4	88.8	95.9	92.8	2,041
Region						
Bangkok	71.8	94.4	82.4	94.8	91.8	343
Central	68.6	97.8	91.4	97.1	96.1	906
North	61.4	96.7	80.9	96.5	87.9	643
Northeast	59.1	98.4	87.1	96.9	90.4	1,487
South	62.9	96.9	86.0	95.7	91.0	603
Area						
Municipal	65.8	96.7	85.8	95.8	91.9	1,516
Non-municipal	61.8	97.9	87.0	96.9	91.3	2,466
Age						
36-47 months	50.4	95.0	84.6	94.1	88.1	1,887
48-59 months	74.9	99.7	88.2	98.7	94.6	2,095
Attendance in early childhood education						
Attending	68.1	99.5	88.5	98.9	94.1	3,361
Not attending	37.2	86.5	75.9	83.5	77.4	621
Mother's education						
None	38.6	99.1	77.5	96.3	83.0	182
Primary	61.8	97.5	88.4	96.3	91.8	1,655
Secondary	61.1	97.0	83.9	96.7	90.8	1,453
Higher	78.0	97.7	90.0	96.5	94.3	691
Wealth index quintiles						
Poorest	49.8	98.6	84.1	96.1	88.7	763
Second	59.0	97.3	87.9	96.9	91.3	843
Middle	60.7	97.8	84.1	96.6	90.6	891
Fourth	69.9	97.1	88.4	96.8	94.2	764
Richest	78.8	96.3	88.4	96.0	92.9	720
Ethnicity of household head*						
Thai	64.1	97.6	86.8	96.7	92.0	3,902
Non-Thai	22.0	92.3	74.8	87.7	68.8	74
Total	**63.3**	**97.4**	**86.5**	**96.5**	**91.5**	**3,982**

[1] MICS indicator 6.6
*5 cases with missing ethnicity of household head not shown

IX.
Literacy and Education


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Literacy among Young Women

One of the World Fit for Children goals is to assure adult literacy. Adult literacy is also an MDG indicator, relating to both men and women. In MICS, since only a women's questionnaire was administered, the results are based only on females age 15-24. For women with no education or primary education, literacy is assessed on the ability of the respondent to read a short simple statement, while those with at least secondary level are explicitly classified as literate.

Table ED.1 Literacy among young women

Percentage of women aged 15-24 years who are literate, Thailand, 2012

	Percentage literate[1]	Percentage not known	Number of women aged 15-24 years
Region			
Bangkok	97.0	0.5	740
Central	97.5	0.7	1,375
North	97.7	0.0	750
Northeast	99.1	0.0	1,670
South	97.5	0.0	780
Area			
Municipal	97.2	0.5	2,417
Non-municipal	98.6	0.1	2,897
Education			
None	1.1	11.2	55
Primary	83.5	2.3	331
Secondary	100.0	0.0	3,783
Higher	100.0	0.0	1,146
Age			
15-19	98.8	0.3	3,080
20-24	96.7	0.2	2,234
Wealth index quintile			
Poorest	96.7	0.1	814
Second	96.3	0.4	1,051
Middle	97.2	0.5	1,124
Fourth	99.4	0.3	1,229
Richest	99.6	0.1	1,096

Table ED.1 Literacy among young women (continued)

Percentage of women aged 15-24 years who are literate, Thailand, 2012

	Percentage literate[1]	Percentage not known	Number of women aged 15-24 years
Ethnicity of household head*			
Thai	98.9	0.1	5,201
Non-Thai	48.2	9.4	103
Total	**98.0**	**0.3**	**5,314**

[1] MICS indicator 7.1; MDG indicator 2.3
*10 cases with missing ethnicity of household head not shown

Table ED.1 indicates that almost all women (98 per cent) in Thailand are literate and that literacy status varies only slightly by region, residential area and women's age. However, differences are found in terms of socioeconomic status. The proportion of women from very wealthy households who are literate (99.6 per cent) is higher than that of women from very poor households (96.7 per cent). Among women who stated that primary school was their highest level of education, 83.5 per cent were actually able to read the statement shown to them.

School Readiness

Attendance at pre-school in an organized learning environment or in an early childhood education programme is important for preparing children for primary school. Table ED.2 shows the proportion of children in the first grade of primary school who attended pre-school the previous year. Overall, all children (100 per cent) who are currently in the first grade of primary school attended pre-school the previous year, with no differences in terms of gender. Urban-rural, regional and socioeconomic status differentials are also insignificant.

Table ED.2 School readiness

Percentage of children attending first grade of primary school who attended pre-school the previous year, Thailand, 2012

	Percentage of children attending first grade who attended preschool in previous year[1]	Number of children attending first grade of primary school
Sex		
Male	100.0	563
Female	100.0	505
Region		
Bangkok	100.0	98
Central	100.0	243
North	99.9	169
Northeast	100.0	377
South	100.0	180
Area		
Municipal	100.0	398
Non-municipal	100.0	670

Table ED.2 School readiness (continued)

Percentage of children attending first grade of primary school who attended pre-school the previous year, Thailand, 2012

	Percentage of children attending first grade who attended preschool in previous year[1]	Number of children attending first grade of primary school
Mother's education		
None	99.8	53
Primary	100.0	511
Secondary	100.0	354
Higher	100.0	150
Wealth index quintile		
Poorest	99.9	210
Second	100.0	210
Middle	100.0	236
Fourth	100.0	222
Richest	100.0	189
Ethnicity of household head*		
Thai	100.0	1,047
Non-Thai	(*)	17
Total	**100.0**	**1,067**

[1] MICS indicator 7.2 (*) Figures that are based on less than 25 unweighted cases
*3 cases with missing ethnicity of household head not shown

Primary and Secondary School Participation

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 Millennium Development Goals and A World Fit for Children. Education is a vital prerequisite for combating poverty, empowering women, protecting children from hazardous and exploitative labour and sexual exploitation, promoting human rights and democracy, protecting the environment, and influencing population growth.

The indicators for primary and secondary school attendance include:

- Net intake rate in primary education
- Primary school net attendance ratio (adjusted)
- Secondary school net attendance ratio (adjusted)
- Female to male education ratio (or gender parity index - GPI) in primary and secondary school

The indicators of school progression include:

- Children reaching last grade of primary
- Primary completion rate
- Transition rate to secondary school

In Thailand, children enter primary school at age 6 and enter secondary school at age 12. There are 6 grades in primary school and 6 grades in secondary school. In primary school, grades are referred to as Prathom 1 to Prathom 6. For secondary school, grades are referred to as Mathayom 1 to Mathayom 6. The school year typically runs from May of one year to February of the following year.

Of children who are of primary school entry age (age 6) in Thailand, 75.3 per cent are attending the first grade of primary school (Table ED.3). Sex differentials are slightly observed at 76.2 per cent for boys and 74.2 per cent for girls; however, significant differentials are present by region and urban-rural areas. In Bangkok, for instance, the value of the indicator reaches 83.2 per cent, while it is 69.5 per cent in the Northeast. Children's participation to primary school is timelier in municipal areas (77.3 per cent) than in non-municipal areas (74 per cent). A positive correlation with mother's education and socioeconomic status is observed; for children age 6 whose mothers have higher than secondary school education, 79.9 per cent were attending the first grade compared to 58.8 per cent for those whose mothers have no education. In rich households, the proportion is 81.6 per cent compared with 65.3 per cent among children living in the poorest households.

Table ED.3 Primary school entry

Percentage of children of primary school entry age entering Grade 1 (net intake rate), Thailand, 2012

	Percentage of children of primary school entry age entering Grade 1[1]	Number of children of primary school entry age
Sex		
Male	76.2	571
Female	74.2	528
Region		
Bangkok	83.2	101
Central	77.9	233
North	76.6	165
Northeast	69.5	423
South	79.7	177
Area		
Municipal	77.3	420
Non-municipal	74.0	680
Mother's education		
None	58.8	55
Primary	72.7	498
Secondary	78.9	366
Higher	79.9	181
Wealth index quintile		
Poorest	65.3	227
Second	73.2	229
Middle	76.7	226
Fourth	80.4	219
Richest	81.6	197
Ethnicity of household head		
Thai	75.2	1,090
Non-Thai	(*)	9
Total	75.3	1,099

[1] MICS indicator 7.3
(*) Figures that are based on less than 25 unweighted cases

Table ED.4 provides the percentage of primary school-aged children 6 to 11 years who are attending primary or secondary school[1]. The majority of children of primary school age are attending school (95.7 per cent). However, 4.3 per cent of children are not in school. Regional, residential and socioeconomic status differentials are not significant. In terms of mother's education, 92.5 per cent of children whose mothers have no education are attending school versus more than 95 per cent of those whose mothers have some education.

Table ED.4 Primary school attendance

Percentage of children of primary school age attending primary or secondary school (adjusted net attendance ratio), Thailand, 2012

	Male		Female		Total	
	Net attendance ratio (adjusted)	Number of children	Net attendance ratio (adjusted)	Number of children	Net attendance ratio (adjusted)[1]	Number of children
Region						
Bangkok	96.8	289	96.0	289	96.4	577
Central	95.6	806	96.2	786	95.9	1,592
North	96.7	497	94.4	528	95.5	1,025
Northeast	95.1	1,327	95.6	1,406	95.3	2,733
South	95.4	517	96.8	495	96.1	1,013
Area						
Municipal	95.8	1,312	95.2	1,276	95.5	2,588
Non-municipal	95.5	2,124	96.1	2,228	95.8	4,352
Age at beginning of school year						
6	78.2	571	75.7	528	77.0	1,099
7	99.3	574	99.2	622	99.2	1,197
8	99.2	553	99.2	610	99.2	1,163
9	99.1	556	99.3	595	99.2	1,151
10	99.1	579	98.9	556	99.0	1,135
11	98.9	603	100.0	592	99.4	1,195
Mother's education						
None	90.8	189	94.2	192	92.5	381
Primary	96.2	1,822	95.7	1,883	95.9	3,705
Secondary	95.8	955	96.0	959	95.9	1,914
Higher	95.1	469	96.2	471	95.6	940
Wealth index quintile						
Poorest	94.7	751	94.1	780	94.4	1,531
Second	96.3	712	94.7	738	95.5	1,450
Middle	94.7	685	96.5	686	95.6	1,371
Fourth	95.5	735	97.5	670	96.4	1,405
Richest	97.4	553	96.4	630	96.8	1,184
Ethnicity of household head*						
Thai	95.8	3,397	95.9	3,465	95.8	6,862
Non-Thai	80.5	32	84.6	36	82.6	68
Total	**95.6**	**3,436**	**95.7**	**3,504**	**95.7**	**6,940**

[1] MICS indicator 7.4; MDG indicator 2.1
*9 cases with missing ethnicity of household head not shown

1 Ratios presented in this table are 'adjusted' since they include not only primary school attendance, but also secondary school attendance in the numerator.

Table ED.5 Secondary school attendance

Percentage of children of secondary school age attending secondary school or higher (adjusted net attendance ratio) and percentage of children attending primary school, Thailand, 2012

	Male			Female			Total		
	Net attendance ratio (adjusted)[1]	Per cent attending primary school	Number of children	Net attendance ratio (adjusted)[1]	Per cent attending primary school	Number of children	Net attendance ratio (adjusted)[1]	Per cent attending primary school	Number of children
Region									
Bangkok	80.2	6.4	366	83.3	3.5	366	82.0	4.9	732
Central	75.0	5.2	860	80.0	6.6	846	77.4	5.9	1,706
North	75.9	7.2	546	84.9	7.0	613	80.7	7.1	1,158
Northeast	77.0	5.8	1,408	84.6	4.4	1,392	80.8	5.1	2,800
South	64.2	6.6	513	79.2	7.3	460	71.3	6.9	973
Area									
Municipal	77.1	6.0	1,476	82.9	4.7	1,431	80.0	5.4	2,907
Non-municipal	73.4	6.0	2,216	82.7	6.2	2,246	78.1	6.1	4,462
Age at beginning of school year									
12	63.1	34.0	573	67.2	31.6	605	65.2	32.7	1,179
13	90.7	2.1	641	95.5	2.1	575	93.0	2.1	1,216
14	90.1	1.5	670	93.1	0.5	682	91.6	1.0	1,352
15	76.2	0.4	649	87.4	0.0	591	81.5	0.2	1,240
16	66.5	0.1	573	81.8	0.0	588	74.2	0.1	1,162
17	58.7	0.0	586	71.7	0.0	635	65.5	0.0	1,221
Mother's education									
None	47.8	20.2	155	69.9	14.2	163	59.1	17.1	318
Primary	73.7	7.3	1,870	82.5	7.3	1,819	78.0	7.3	3,689
Secondary	86.2	6.3	690	91.6	5.2	698	88.9	5.8	1,387
Higher	94.0	2.9	293	94.6	4.2	312	94.3	3.6	605
Not in household	70.3	0.4	450	75.7	0.3	478	73.1	0.3	928
Cannot be determined	54.3	0.0	234	64.8	0.0	207	59.2	0.0	441
Wealth index quintile									
Poorest	69.4	6.7	802	79.2	6.0	748	74.2	6.3	1,550
Second	73.3	6.2	806	80.7	6.3	789	77.0	6.2	1,595
Middle	67.2	8.3	791	77.6	6.7	681	72.0	7.5	1,472
Fourth	76.6	6.7	637	86.3	5.1	754	81.9	5.8	1,392
Richest	91.3	1.6	656	90.2	4.1	704	90.7	2.9	1,359
Ethnicity of household head*									
Thai	75.2	6.0	3,659	83.3	5.5	3,627	79.2	5.8	7,286
Non-Thai	47.2	3.5	29	41.0	20.6	43	43.5	13.7	73
Total	**74.9**	**6.0**	**3,693**	**82.8**	**5.6**	**3,677**	**78.8**	**5.8**	**7,369**

[1] MICS indicator 7.5
*11 cases with missing ethnicity of household head not shown

The secondary school (age 12-17 years) net attendance ratio is presented in Table ED.5[2]. The table reveals that 78.8 per cent of children of secondary school age are attending secondary school. More girls attend than boys (82.8 per cent versus 74.9 per cent). Differences by region are observed. Children in Bangkok have the highest attendance rate at 82 per cent, followed by those in the Northeast (80.8 per cent), with the lowest rate in the South (71.3 per cent). There is no significant difference in regards to residential area, but a positive correlation with mother's education is observed. Of those boys and girls whose mothers have post secondary school education, 94.3 per cent were attending secondary school or higher, with the proportion dropping to 59.1 per cent among children whose mothers have no education.

In terms of secondary-age children who do not attend secondary school, 5.8 per cent attend primary school (6 per cent boys and 5.6 per cent girls), while the remaining 15.3 per cent are out of school. Of these, most are in the South, (21.8 per cent), with the fewest in the North (12.3 per cent). The results further reveal that about one third of children aged 17 (34.5 per cent) and one in four children whose mothers have no education (23.7 per cent) are not attending school, compared with 2 per cent of children aged 12 and 2.1 per cent of children whose mothers have higher education.

The percentage of children entering first grade who eventually reach the last grade of primary school is presented in Table ED.6. Results show that almost all children (99.5 per cent) will eventually reach the last grade. Note that this figure includes children that repeat grades and who will eventually move up to reach the last grade. Insignificant differences by region, residential area and background characteristics are observed with regards to children's attendance.

Table ED.6 Children reaching last grade of primary school

Percentage of children entering first grade of primary school who eventually reach the last grade of primary school (Survival rate to last grade of primary school), Thailand, 2012

	Per cent attending Grade 1 last school year who are in Grade 2 this school year	Per cent attending Grade 2 last school year who are attending Grade 3 this school year	Per cent attending Grade 3 last school year who are attending Grade 4 this school year	Per cent attending Grade 4 last school year who are attending Grade 5 this school year	Per cent attending Grade 5 last school year who are attending Grade 6 this school year	Per cent who reach Grade 6 of those who enter Grade 1[1]
Sex						
Male	99.8	100.0	99.8	100.0	100.0	99.5
Female	99.6	100.0	100.0	99.9	100.0	99.5
Region						
Bangkok	100.0	100.0	99.6	99.8	100.0	99.4
Central	98.6	100.0	99.8	100.0	100.0	98.4
North	100.0	99.9	100.0	100.0	99.9	99.8
Northeast	100.0	100.0	100.0	100.0	100.0	100.0
South	100.0	100.0	100.0	99.4	100.0	99.4
Area						
Municipal	99.4	100.0	99.9	100.0	100.0	99.3
Non-municipal	99.8	100.0	99.9	99.9	100.0	99.6

2 Ratios presented in this table are 'adjusted' since they include not only secondary school attendance, but also attendance in higher levels in the numerator.

Table ED.6 Children reaching last grade of primary school (continued)

Percentage of children entering first grade of primary school who eventually reach the last grade of primary school (Survival rate to last grade of primary school), Thailand, 2012

	Per cent attending Grade 1 last school year who are in Grade 2 this school year	Per cent attending Grade 2 last school year who are attending Grade 3 this school year	Per cent attending Grade 3 last school year who are attending Grade 4 this school year	Per cent attending Grade 4 last school year who are attending Grade 5 this school year	Per cent attending Grade 5 last school year who are attending Grade 6 this school year	Per cent who reach Grade 6 of those who enter Grade 1[1]
Wealth index quintile						
Poorest	100.0	100.0	100.0	100.0	99.9	99.9
Second	100.0	100.0	99.7	100.0	100.0	99.7
Middle	99.4	99.9	100.0	99.9	100.0	99.3
Fourth	99.0	100.0	99.9	100.0	100.0	98.9
Richest	100.0	100.0	100.0	99.6	100.0	99.6
Ethnicity of household head						
Thai	99.7	100.0	99.9	99.9	100.0	99.5
Non-Thai	100.0	98.5	100.0	100.0	100.0	98.5
Total	**99.7**	**100.0**	**99.9**	**99.9**	**100.0**	**99.5**

[1] **MICS indicator 7.6; MDG indicator 2.2**

The primary school completion rate and transition rate to secondary education are presented in Table ED.7. The primary completion rate is the ratio of the total number of students, regardless of age, entering the last grade of primary school for the first time, to the number of children of the primary graduation age at the beginning of the current (or most recent) school year. At the time of the survey, the primary school completion rate was 106.8 per cent.

Some 98.5 per cent of children that completed the last grade of primary school were found to be attending the first grade of secondary school. The lowest proportion was among children living in the South (97.7 per cent) although regional differential are small. Children whose mothers have no education had the lowest rate (97.9 per cent) compared with those whose mothers have higher education (100 per cent).

Table ED.8 shows the ratio of girls to boys attending primary and secondary education, known as the Gender Parity Index (GPI). Note that the ratios included here are obtained from net attendance rather than gross attendance ratios, which provide an erroneous description of the GPI mainly because the majority of overage children attending primary education tend to be boys. The table shows that gender parity for primary school is 1.0, indicating no difference in the attendance of girls and boys. However, the indicator rises to 1.2 for secondary education, indicating that more girls than boys attend secondary school.

Table ED.7 Primary school completion and transition to secondary school

Primary school completion rates and transition rate to secondary school, Thailand, 2012

	Primary school Completion rate[1]	Number of children of primary school completion age	Transition rate to secondary school[2]	Number of children who were in the last grade of primary school the previous year
Sex				
Male	102.9	603	97.4	565
Female	110.9	592	99.5	555
Region				
Bangkok	108.6	98	98.9	76
Central	122.4	273	98.3	237
North	122.6	174	98.8	174
Northeast	94.3	487	98.5	484
South	100.4	162	97.7	149
Area				
Municipal	110.3	461	97.7	368
Non-municipal	104.6	734	98.8	752
Mother's education				
None	142.0	55	97.9	55
Primary	103.8	734	98.0	704
Secondary	104.4	284	99.2	259
Higher	113.5	122	100.0	94
Not in household	—	—	(*)	5
Wealth index quintile				
Poorest	97.1	306	97.4	281
Second	112.1	217	98.2	244
Middle	105.1	235	98.2	239
Fourth	114.1	227	99.2	204
Richest	109.6	210	100.0	153
Ethnicity of household head				
Thai	106.7	1,177	98.4	1,113
Non-Thai	(115.7)	17	(*)	8
Total	**106.8**	**1,195**	**98.5**	**1,121**

[1] MICS indicator 7.7 [2] MICS indicator 7.8
( ) Figures that are based on 25-49 unweighted cases (*) Figures that are based on less than 25 unweighted cases

Table ED.8 Education gender parity

Ratio of adjusted net attendance ratios of girls to boys, in primary and secondary school, Thailand, 2012

	Primary school adjusted net attendance ratio (NAR), girls	Primary school adjusted net attendance ratio (NAR), boys	Gender parity index (GPI) for primary school adjusted NAR[1]	Secondary school adjusted net attendance ratio (NAR), girls	Secondary school adjusted net attendance ratio (NAR), boys	Gender parity index (GPI) for secondary school adjusted NAR[2]
Region						
Bangkok	96.0	96.8	1.0	72.5	69.1	1.0
Central	96.2	95.6	1.0	74.1	63.8	1.2
North	94.4	96.7	1.0	79.2	67.4	1.2
Northeast	95.6	95.1	1.0	81.2	71.8	1.1
South	96.8	95.4	1.0	73.4	59.0	1.2
Area						
Municipal	95.2	95.8	1.0	74.2	68.1	1.1
Non-municipal	96.1	95.5	1.0	79.4	66.7	1.2
Education of mother/caretaker						
None	94.2	90.8	1.0	69.2	46.3	1.5
Primary	95.7	96.2	1.0	77.8	67.8	1.1
Secondary	96.0	95.8	1.0	86.0	79.5	1.1
Higher	96.2	95.1	1.0	92.7	86.7	1.1
Not in household	—	—	—	65.7	58.2	1.1
Cannot be determined	—	—	—	55.5	34.1	1.6
Wealth index quintile						
Poorest	94.1	94.7	1.0	75.3	66.5	1.1
Second	94.7	96.3	1.0	76.4	67.8	1.1
Middle	96.5	94.7	1.0	70.3	58.2	1.2
Fourth	97.5	95.5	1.0	78.9	65.7	1.2
Richest	96.4	97.4	1.0	86.0	79.9	1.1
Ethnicity of household head						
Thai	95.9	95.8	1.0	77.8	67.5	1.2
Non-Thai	84.6	80.5	1.1	38.6	47.2	0.8
Total	**95.7**	**95.6**	**1.0**	**77.4**	**67.2**	**1.2**

[1] MICS indicator 7.9; MDG indicator 3.1 [2] MICS indicator 7.10; MDG indicator 3.1

Table ED.9 reports the percentage of household members aged 5-24 years attending school. Most children between the ages of 5 and 12 attend some form of school. Over 99 per cent of 6 year olds (the official school-starting age) are attending school. School attendance remains at this level for children aged 6-11 and starts to decline for those aged 12-14 years. For children between 15 and 20 years of age (15-17 is the official age for upper secondary) school attendance drops quite dramatically the older the child gets. Few household members older than 20 attend school. Gender differentials are generally not large, but for the population aged 13-21 years, the proportion of boys attending school is smaller than that of girls.

Table ED.9 School attendance

Percentage of household members aged 5-24 years attending school, by area and sex, Thailand, 2012

	Municipal areas			Non-municipal areas			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Age at beginning of school year									
5	98.1	99.7	98.9	98.2	97.5	97.9	98.2	98.3	98.2
6	99.5	99.3	99.4	99.0	99.9	99.4	99.1	99.6	99.4
7	99.4	98.3	98.8	99.8	100.0	99.9	99.7	99.4	99.5
8	99.1	98.8	99.0	100.0	99.5	99.7	99.6	99.3	99.4
9	99.4	99.2	99.3	99.0	99.4	99.2	99.1	99.3	99.2
10	98.7	99.8	99.2	99.4	98.4	98.9	99.1	98.9	99.0
11	97.2	100.0	98.5	99.9	100.0	100.0	98.9	100.0	99.4
12	97.9	98.1	98.0	96.6	99.3	98.0	97.1	98.9	98.0
13	93.2	98.6	95.9	92.6	97.1	94.6	92.8	97.7	95.1
14	89.5	89.1	89.3	93.5	96.1	94.9	91.7	93.6	92.6
15	80.7	88.7	85.0	74.5	86.4	79.7	76.6	87.4	81.8
16	74.4	82.9	78.8	60.9	81.0	71.0	66.6	81.8	74.3
17	65.9	75.5	70.7	55.4	72.2	64.4	60.0	73.6	67.1
18	46.5	58.7	52.7	33.7	58.6	45.3	39.1	58.7	48.6
19	45.8	51.0	48.3	31.9	37.2	34.7	38.6	43.1	40.9
20	39.2	40.6	39.8	15.8	25.7	20.8	27.8	32.5	30.0
21	28.3	43.5	36.1	10.8	17.3	14.2	19.6	30.4	25.2
22	26.1	18.5	22.0	12.9	20.1	16.3	18.6	19.3	19.0
23	14.5	6.9	10.7	6.1	6.9	6.5	9.8	6.9	8.4
24	6.9	2.0	4.1	2.4	6.5	4.3	4.3	4.1	4.2
Total	**72.7**	**74.0**	**73.3**	**71.8**	**78.3**	**75.1**	**72.1**	**76.6**	**74.3**

X.
Child Protection

Birth Registration

The UN 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. A World Fit for Children calls for the development of systems to ensure the registration of every child at or shortly after birth to fulfil his or her right to acquire a name and a nationality, in accordance with national laws and relevant international instruments. The MICS4 indicator related to birth registration is the percentage of children under 5 years of age whose birth is registered.

In Thailand a child whose birth is registered always has a certificate. Table CP.1 reveals that the births of 99.4 per cent of children under 5 in Thailand have been registered. There are no essential variations in birth registration across gender, age, or socioeconomic status of households. However, children whose mothers have no education are somewhat less likely to have their births registered (93.4 per cent) than other children. Likewise, children with non-Thai household heads have a lower birth registration rate (79.2 per cent). Note also that the proportion of children under age 5 whose birth is not registered but whose mother/caretaker knows that it is obligatory to report the birth and obtain a birth certificate is only 28 per cent.

Table CP.1: Birth registration

Percentage of children under age 5 by whether birth is registered and percentage of children not registered whose mothers/caretakers know that it is obligatory to report the birth and obtain a birth certificate, Thailand, 2012

	Children under age 5 with a birth certificate			Number of children	Children under age 5 whose birth is not registered	
	Certificate is seen	Certificate is not seen	Total with a birth certificate[1]		Percent of children whose mother/caretaker knows that it is obligatory to report the birth and obtain a birth certificate	Number of children without a birth certificate
Sex						
Male	68.6	31.1	99.8	4,836	(*)	12
Female	66.6	32.6	99.1	4,880	(29.2)	43

Table CP.1: Birth registration (continued)

Percentage of children under age 5 by whether birth is registered and percentage of children not registered whose mothers/caretakers know that it is obligatory to report the birth and obtain a birth certificate, Thailand, 2012

	Children under age 5 with a birth certificate			Number of children	Children under age 5 whose birth is not registered	
	Certificate is seen	Certificate is not seen	Total with a birth certificate[1]		Percent of children whose mother/caretaker knows that it is obligatory to report the birth and obtain a birth certificate	Number of children without a birth certificate
Region						
Bangkok	51.7	48.2	99.9	833	(*)	1
Central	66.4	32.6	99.3	2,268	(*)	22
North	66.5	32.5	99.0	1,493	(*)	15
Northeast	72.5	27.5	99.9	3,672	(*)	2
South	67.3	31.6	99.0	1,450	(*)	15
Area						
Municipal	64.2	34.9	99.0	3,723	(19.8)	35
Non-municipal	69.7	30.0	99.7	5,993	(*)	19
Age						
0-11 months	72.8	26.7	99.5	1,912	(*)	9
12-23 months	65.5	34.1	99.6	1,827	(*)	8
24-35 months	64.2	35.1	99.4	1,995	(*)	13
36-47 months	68.5	31.1	99.6	1,887	(*)	7
48-59 months	67.1	32.1	99.2	2,095	(*)	17
Mother's education						
None	64.8	28.6	93.4	375	(*)	25
Primary	66.1	33.3	99.4	3,775	(49.1)	24
Secondary	71.5	28.4	99.9	3,812	(*)	2
Higher	62.9	36.9	99.8	1,754	(*)	4
Wealth index quintile						
Poorest	72.7	25.9	98.6	1,858	(21.1)	27
Second	69.5	29.7	99.1	2,127	(*)	19
Middle	68.8	31.1	99.9	2,183	(*)	3
Fourth	65.1	34.8	99.9	1,897	(*)	2
Richest	60.7	39.0	99.7	1,651	(*)	5
Ethnicity of household head*						
Thai	67.8	32.1	99.8	9,522	(*)	16
Non-Thai	58.6	20.5	79.2	184	(23.3)	38
Total	**67.6**	**31.8**	**99.4**	**9,716**	**28.0**	**55**

[1] MICS indicator 8.1
( ) Figures that are based on 25-49 unweighted cases (*) Figures that are based on less than 25 unweighted cases
*13 cases with missing ethnicity of household head not shown

Early Marriage

Marriage before the age of 18 is a reality for many young girls. Over 60 million women aged 20-24 are estimated by UNICEF to be married/in union before the age of 18. Factors that influence child marriage rates include: the state of the country's civil registration system, which provides proof of age for children; the existence of an adequate legislative framework with an accompanying enforcement mechanism to address cases of child marriage; and the existence of customary or religious laws and practices that condone the practice.

In many parts of the world parents encourage the marriage of their daughters while they are still children in hopes that the marriage will benefit them both financially and socially. In actual fact, child marriage is a violation of human rights, compromising the development of girls and often resulting in early pregnancy and social isolation, with little education and poor vocational training reinforcing the gendered nature of poverty. The right to 'free and full' consent to a marriage is recognized in the Universal Declaration of Human Rights – with the recognition that consent cannot be 'free and full' when one of the parties involved is not sufficiently mature to make an informed decision about a life partner.

Closely related to the issue of child marriage is the age at which girls become sexually active. Women who are married before the age of 18 tend to have more children than those who marry later in life. Pregnancy related deaths are known to be a leading cause of mortality for both married and unmarried girls between the ages of 15 and 19, particularly among the youngest of this cohort. There is evidence to suggest that girls who marry at young ages are more likely to marry older men, which puts them at increased risk of HIV infection. The demand for this young wife to reproduce and the power imbalance resulting from the age differential lead to very low condom use among such couples.

Two of the indicators used in this survey to gauge the prevalence of early marriage are the percentage of women who were first married or in a union before 15 years of age and the percentage who were first married or in a union before 18 years of age. Results based on indicators used are provided in Table CP.2. Data show that around one in six young women aged 15-19 years is currently married or in a union (16.3 per cent). The highest proportion of women currently married is found in the Northeast (18.4 per cent), while the lowest is in Bangkok (12.3 per cent). This proportion also varies between municipal (13.1 per cent) and non-municipal (18.7 per cent) areas. Furthermore, it is strongly related to the woman's level of education. More than half of young women with primary education (58.7 per cent) are currently married, compared to 2.2 per cent for those with higher education. The disparity between the poorest and the richest is large (23.1 per cent versus 4.7 per cent).

Table CP.2 Early marriage

Percentage of women aged 15-49 years who first married or entered a marital union before their 15th birthday, percentages of women aged 20-49 years who first married or entered a marital union before their 15th and 18th birthdays, and percentage of women aged 15-19 years currently married or in union, Thailand, 2012

	Percentage of women aged 15-49 years married before age 15[1]	Number of women aged 15-49 years	Percentage of women aged 20-49 years married before age 15	Percentage of women aged 20-49 years married before age 18[2]	Number of women aged 20-49 years	Percentage of women aged 15-19 years currently married/in union[3]	Number of women aged 15-19 years	Number of women aged 15-49 years currently married/in union
Region								
Bangkok	2.5	2,881	2.3	11.6	2,497	12.3	384	1,666
Central	2.8	5,851	2.6	12.1	5,104	16.4	748	3,868
North	2.8	3,258	2.8	14.6	2,805	15.1	454	2,294
Northeast	2.7	7,022	2.8	19.1	5,928	18.4	1,094	5,131
South	2.4	2,968	2.4	12.8	2,567	15.4	401	2,018
Area								
Municipal	2.4	10,072	2.2	12.1	8,747	13.1	1,325	6,396
Non-municipal	2.9	11,909	3.0	17.0	10,153	18.7	1,755	8,581
Age								
15-19	3.1	3,080	NA*	NA*	0	16.3	3,080	502
20-24	3.8	2,234	3.8	22.1	2,234	NA*	NA*	1,156
25-29	2.9	2,490	2.9	13.0	2,490	NA*	NA*	1,688
30-34	2.6	3,113	2.6	12.0	3,113	NA*	NA*	2,486
35-39	2.1	3,437	2.1	13.8	3,437	NA*	NA*	2,865
40-44	2.7	3,814	2.7	14.6	3,814	NA*	NA*	3,191
45-49	2.1	3,813	2.1	14.8	3,813	NA*	NA*	3,091
Education								
None	2.8	610	2.9	13.1	598	14.5	12	458
Primary	4.1	7,675	3.7	19.6	7,525	58.7	150	6,627
Secondary	2.7	8,544	3.0	18.4	5,912	15.4	2,632	5,155
Higher	0.5	5,152	0.5	2.9	4,866	2.2	286	2,737
Wealth index quintile								
Poorest	3.8	3,340	3.8	21.2	2,804	23.1	536	2,536
Second	3.0	4,007	2.8	18.5	3,366	17.9	641	2,845
Middle	3.4	4,476	3.3	17.9	3,907	20.5	569	3,100
Fourth	2.5	5,033	2.4	12.3	4,328	16.5	705	3,346
Richest	1.3	5,125	1.3	7.5	4,496	4.7	629	3,151
Ethnicity of household head**								
Thai	2.7	21,609	2.6	14.8	18,573	16.3	3,035	14,723
Non-Thai	1.5	341	1.6	8.8	301	14.2	41	235
Total	**2.7**	**21,981**	**2.6**	**14.7**	18,901	**16.3**	**3,080**	**14,977**

1 MICS indicator 8.6 2 MICS indicator 8.7 3 MICS indicator 8.8
**19 cases with missing ethnicity of household head not shown

*NA = Not Applicable

The percentage of women aged 15-49 years who were married or in union before 15 years of age is 2.7 per cent, with the highest rates in the Central region and the North (both 2.8 per cent). The proportions are relatively high for women with primary education (4.1 per cent) and women living in the poorest households (3.8 per cent).

Some 14.7 per cent of women were married/in union before 18 years of age. Almost one in five (19.1 per cent) women living in the Northeast were married before 18 against 11.6 per cent of women in Bangkok, with variances between municipal (12.1 per cent) and non-municipal (17 per cent) areas. A higher proportion of very poor women were married before the age of 18 (21.2 per cent) compared to very rich women (7.5 per cent). Likewise, the proportion of women aged 15-49 years who were married or in union before 15 years of age is negatively correlated with household wealth (Figure CP.1).

Figure CP.1 Percentage of women aged 20-49 years who were married before age 18 and percentage of women aged 15-49 years who were married before age 15 by wealth index quintiles, Thailand, 2012

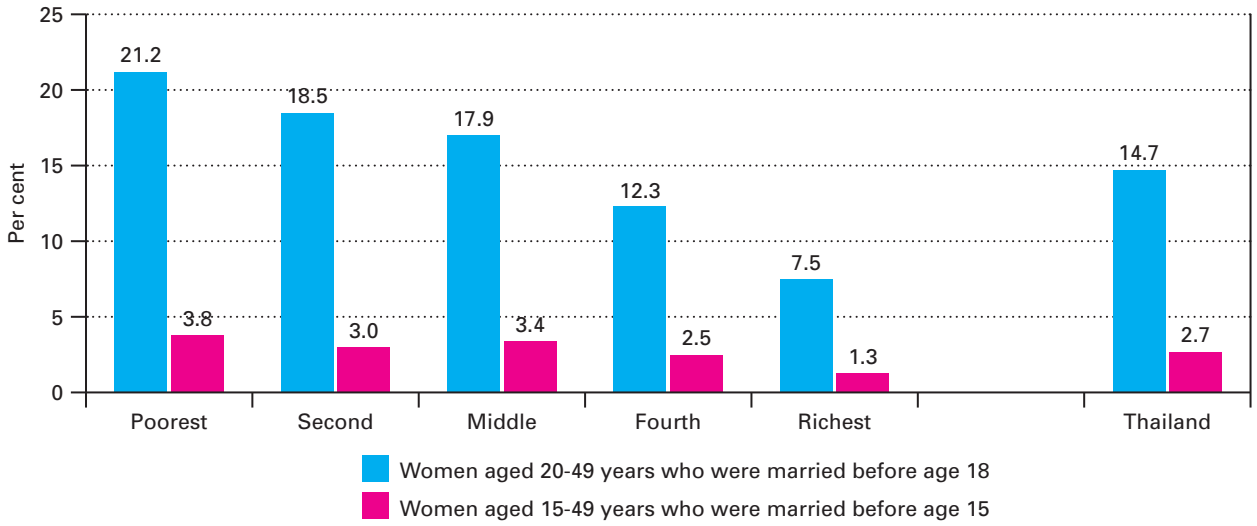

Table CP.3 presents the proportions of women who were first married or entered into a marital union before age 15 and 18 by area and age groups. Examining the percentages by different age groups allows us to see the trends in early marriage over time. For example, 22.1 per cent of women aged 20-24 years were married before their 18th birthday compared with less than 15 per cent of women in older age groups, showing that the prevalence of early marriage in this age cohort has grown.

Another component is the spousal age difference, with an indicator being the percentage of women married or in union who are 10 or more years younger than their current spouse. Table CP.4 presents spousal age difference. This table shows that 85.9 per cent of women aged 15-19 years who are married/in union have an older husband or partner, with a similar percentage for women aged 20-24 years (85.6 per cent). The findings reveal some important spousal age differences in Thailand. About one in nine women aged 15-19 is currently married to a man who is older by ten years or more (11.3 per cent), and this is the case for roughly one in eight women aged 20-24 (13.1 per cent). It is noteworthy that more than one in ten women have a younger husband/partner (13.3 per cent for women aged 15-19 and 14.4 per cent for women aged 20-24 years).

Table CP.3 Trends in early marriage

Percentage of women who were first married or entered into a marital union before age 15 and 18, by area and age groups, Thailand, 2012

	Municipal				Non-municipal				All			
	Percentage of women age 15-49 years married before age 15	Number of women age 15-49 years	Percentage of women age 20-49 years married before age 18	Number of women age 20-49 years	Percentage of women age 15-49 years married before age 15	Number of women age 15-49 years	Percentage of women age 20-49 years married before age 18	Number of women age 20-49 years	Percentage of women age 15-49 years married before age 15	Number of women age 15-49 years	Percentage of women age 20-49 years married before age 18	Number of women age 20-49 years
Age												
15-19	3.7	1,325	NA*	NA*	2.7	1,755	NA*	NA*	3.1	3,080	NA*	NA*
20-24	2.6	1,092	17.4	1,092	4.9	1,142	26.5	1,142	3.8	2,234	22.1	2,234
25-29	1.9	1,276	10.9	1,276	4.0	1,214	15.2	1,214	2.9	2,490	13.0	2,490
30-34	2.5	1,544	11.3	1,544	2.7	1,568	12.7	1,568	2.6	3,113	12.0	3,113
35-39	1.9	1,551	10.0	1,551	2.3	1,886	16.8	1,886	2.1	3,437	13.8	3,437
40-44	2.4	1,619	11.8	1,619	2.8	2,194	16.7	2,194	2.7	3,814	14.6	3,814
45-49	1.8	1,665	12.8	1,665	2.4	2,148	16.3	2,148	2.1	3,813	14.8	3,813
Total	**2.4**	**10,072**	**12.1**	**8,747**	**2.9**	**11,909**	**17.0**	**10,153**	**2.7**	**21,981**	**14.7**	**18,901**

*NA = Not Applicable

Table CP.4 Spousal age difference

Per cent distribution of women currently married/in union aged 15-19 and 20-24 according to the age difference with their husband or partner, Thailand, 2012

	Percentage of currently married/in union women aged 15-19 years whose husband or partner is						Number of women age 15-19 years currently married/in union
	Younger	0-4 years older	5-9 years older	10+ years older[1]	Husband/partner's age unknown	Total	
Region							
Bangkok	(12.0)	(48.4)	(16.9)	(17.1)	(5.6)	100.0	47
Central	4.5	61.1	26.1	7.7	0.6	100.0	123
North	6.9	64.8	23.1	4.5	0.8	100.0	69
Northeast	21.5	46.0	18.8	13.7	0.0	100.0	201
South	12.1	54.0	19.9	14.0	0.0	100.0	62
Area							
Municipal	10.4	57.3	22.5	8.3	1.7	100.0	174
Non-municipal	14.8	51.5	20.4	13.0	0.3	100.0	328
Age							
15-19	13.3	53.5	21.1	11.3	0.8	100.0	502
20-24	NA*	NA*	NA*	NA*	NA*	NA*	NA*
Education							
None	(*)	(*)	(*)	(*)	(*)	100.0	2
Primary	6.4	43.4	26.4	23.4	0.3	100.0	88
Secondary	14.9	55.2	20.1	9.0	0.9	100.0	405
Higher	(*)	(*)	(*)	(*)	(*)	100.0	6
Wealth index quintile							
Poorest	27.4	47.0	12.0	13.4	0.2	100.0	124
Second	6.5	52.6	26.5	13.8	0.6	100.0	115
Middle	5.9	62.2	21.4	10.4	0.0	100.0	117
Fourth	12.6	56.9	21.7	6.5	2.3	100.0	117
Richest	12.1	36.2	35.3	15.7	0.8	100.0	29
Ethnicity of household head							
Thai	13.0	53.8	21.1	11.2	0.8	100.0	496
Non-Thai	(*)	(*)	(*)	(*)	(*)	100.0	6
Total 15–19 years	**13.3**	**53.5**	**21.1**	**11.3**	**0.8**	**100.0**	**502**

Table CP.4 Spousal age difference (continued)

Per cent distribution of women currently married/in union aged 15-19 and 20-24 according to the age difference with their husband or partner, Thailand, 2012

	Percentage of currently married/in union women aged 20-24 years whose husband or partner is						Number of women age 20-24 years currently married/in union
	Younger	0-4 years older	5-9 years older	10+ years older[1]	Husband/partner's age unknown	Total	
Region							
Bangkok	12.5	51.2	23.8	12.5	0.0	100.0	137
Central	16.3	43.7	25.0	15.0	0.1	100.0	304
North	18.3	40.1	24.6	16.9	0.1	100.0	187
Northeast	11.2	55.4	21.6	11.8	0.0	100.0	343
South	14.3	51.2	25.4	9.2	0.0	100.0	185
Area							
Municipal	13.3	50.4	23.9	12.4	0.0	100.0	491
Non-municipal	15.2	47.4	23.8	13.7	0.0	100.0	665
Age							
15-19	NA*	NA*	NA*	NA*	NA*	NA*	NA*
20-24	14.4	48.7	23.8	13.1	0.0	100.0	1,156
Education							
None	(14.1)	(36.7)	(21.8)	(27.4)	(0.0)	100.0	29
Primary	9.5	42.9	26.2	21.5	0.0	100.0	141
Secondary	13.8	49.7	24.7	11.7	0.0	100.0	834
Higher	22.0	50.7	17.2	10.2	0.0	100.0	151
Wealth index quintile							
Poorest	14.2	46.7	29.1	9.9	0.1	100.0	198
Second	9.3	59.2	21.6	9.9	0.0	100.0	254
Middle	16.9	46.1	23.1	13.9	0.0	100.0	297
Fourth	15.9	45.7	18.9	19.6	0.0	100.0	254
Richest	15.6	43.5	30.3	10.5	0.1	100.0	152
Ethnicity of household head**							
Thai	14.4	48.9	23.5	13.2	0.0	100.0	1,114
Non-Thai	14.3	43.5	29.8	12.5	0.0	100.0	40
Total 20–24 years	**14.4**	**48.7**	**23.8**	**13.1**	**0.0**	**100.0**	**1,156**

[1] MICS indicator 8.10a [2] MICS indicator 8.10b
( ) Figures that are based on 25-49 unweighted cases (*) Figures that are based on less than 25 unweighted cases
*NA = Not Applicable **2 cases with missing ethnicity of household head not shown

Attitudes towards Domestic Violence

The Thailand MICS4 assessed the attitudes of women aged 15-49 towards wife/partner beating by asking the respondents whether husbands are justified in hitting or beating their wives/partners for a variety of scenarios. These questions were asked to get an indication of cultural beliefs that tend to be associated with the prevalence of violence against women by their husbands/partners.

The responses to these questions can be found in Table CP.5. Overall, 13.1 per cent of women in Thailand feel that a husband/partner has a right to hit or beat his wife/partner for at least one of a variety of reasons. Acceptance is more widespread among those residing in the Northeast (19.8 per cent), who have primary education (18.8 per cent), and among women aged 45-49 (17.6 per cent). Women who approve of a husband's violence in most cases agree and justify violence in instances where the woman neglects the children (10.8 per cent), or if she demonstrates her autonomy, e.g. goes out without telling her husband or argues with him (4.3 per cent and 2 per cent, respectively). Around 2 per cent of women believe that a husband has a right to hit or beat his wife/partner if she refuses to have sex with him, and 1 per cent accept a husband's violence if she burns the food.

Table CP.5 Attitudes toward domestic violence

Percentage of women aged 15-49 years who believe a husband is justified in beating his wife/partner in various circumstances, Thailand, 2012

	Percentage of women aged 15-49 years who believe a husband is justified in beating his wife/partner						Number of women age 15-49 years
	If she goes out without telling him	If she neglects the children	If she argues with him	If she refuses sex with him	If she burns the food	For any of these reasons[1]	
Region							
Bangkok	1.1	5.9	0.5	0.4	0.2	7.0	2,881
Central	1.1	5.9	0.6	0.6	0.3	6.6	5,851
North	4.7	11.6	2.4	2.6	1.4	14.8	3,258
Northeast	8.2	16.2	3.6	3.6	1.2	19.8	7,022
South	3.8	11.6	2.1	1.6	2.0	13.9	2,968
Area							
Municipal	3.0	8.5	1.3	1.3	0.6	10.4	10,072
Non-municipal	5.4	12.7	2.6	2.6	1.3	15.3	11,909
Age							
15-19	3.1	8.3	1.7	0.8	0.5	10.1	3,080
20-24	2.3	8.9	1.9	1.2	0.9	10.6	2,234
25-29	2.8	8.8	1.2	0.9	0.6	10.4	2,490
30-34	3.6	9.0	1.8	1.9	0.9	11.3	3,113
35-39	3.9	10.8	2.1	1.7	0.6	13.1	3,437
40-44	6.7	13.1	1.6	3.0	1.4	15.5	3,814
45-49	6.0	14.4	3.3	3.5	1.6	17.6	3,813
Marital/Union status							
Currently married/in union	5.2	12.2	2.1	2.3	1.0	14.9	14,977
Formerly married/in union	4.2	12.4	3.4	3.5	2.3	14.5	1,524
Never married/in union	1.8	6.5	1.4	0.8	0.5	7.7	5,480
Education							
None	6.1	15.2	3.1	3.2	2.7	16.9	610
Primary	7.5	15.3	2.9	3.2	1.6	18.8	7,675
Secondary	3.1	10.2	1.7	1.4	0.6	12.1	8,544
Higher	1.3	4.5	1.0	0.9	0.4	5.7	5,152
Wealth index quintile							
Poorest	8.7	15.2	3.4	3.2	1.4	18.1	3,340
Second	7.6	16.9	3.2	3.5	1.5	20.3	4,007
Middle	3.7	11.5	2.1	1.7	1.3	13.9	4,476
Fourth	2.9	8.4	1.2	1.3	0.7	10.3	5,033
Richest	0.8	4.9	0.9	1.0	0.2	6.2	5,125
Ethnicity of household head*							
Thai	4.3	10.8	2.0	2.0	1.0	13.1	21,609
Non-Thai	2.9	10.1	1.7	1.7	1.0	10.9	341
Total	**4.3**	**10.8**	**2.0**	**2.0**	**1.0**	**13.1**	**21,981**

[1] **MICS indicator 8.14**

*31 cases with missing ethnicity of household head not shown

XI.
HIV/AIDS and Orphans


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Knowledge about HIV Transmission and Misconceptions about HIV/AIDS

One of the most important prerequisites for reducing the rate of HIV infection is accurate knowledge of how HIV is transmitted and strategies for preventing transmission. Correct information is the first step towards raising awareness and giving young people the tools to protect themselves from infection. Misconceptions about HIV are common and can confuse young people and hinder prevention efforts. Different regions are likely to have variations in misconceptions although some appear to be universal (for example that sharing food can transmit HIV or mosquito bites can transmit HIV).

The UN General Assembly Special Session on HIV/AIDS (UNGASS) in 2001 called on governments to improve the knowledge and skills of young people to protect themselves from HIV. The indicators to measure this goal as well as the MDG of reducing HIV infections by half include improving the level of knowledge of HIV prevention, and changing behaviours to prevent further spread of the disease. HIV modules were administered to women.

One indicator, which is both an MDG and UNGASS indicator, is the percentage of young women who have comprehensive and correct knowledge of HIV prevention and transmission. In the Thailand MICS all women who had heard of AIDS were asked whether they knew of the two main ways of preventing HIV transmission: having only one faithful uninfected partner, and using a condom every time. The results are presented in Table HA.1. In Thailand, almost all the women interviewed (97.4 per cent) had heard of AIDS. However, far fewer (82.1 per cent) knew about both main ways to prevent HIV transmission, with 89.4 per cent knowing about having one faithful uninfected sex partner, and 87.4 per cent knowing about using a condom every time. Women with no education were least likely to know about both methods of prevention (51.5 per cent), along with women in non-Thai-headed households (58.8 per cent), women living in the poorest households (75.4 per cent), women in the Northeast (78.9 per cent), and women aged 40-49 (also 78.9 per cent).

Table HA.1 Knowledge about HIV transmission, misconceptions about HIV/AIDS, and comprehensive knowledge about HIV transmission

Percentage of women aged 15-49 years who know the main ways of preventing HIV transmission, percentage who know that a healthy looking person can have the AIDS virus, percentage who reject common misconceptions, and percentage who have comprehensive knowledge about HIV transmission, Thailand, 2012

	Percentage who have heard of AIDS	Percentage who know transmission can be prevented by:		Percentage of women who know both ways	Percentage who know that a healthy looking person can have the AIDS virus	Percentage who know that HIV cannot be transmitted by:			Percentage who reject the two most common misconceptions and know that a healthy looking person can have the AIDS virus	Percentage with comprehensive knowledge[1]	Number of women
		Having only one faithful uninfected sex partner	Using a condom every time			Mosquito bites	Supernatural means	Sharing food with someone with AIDS			
Region											
Bangkok	99.3	92.2	88.1	83.2	92.9	79.6	97.5	75.4	60.2	51.9	2,881
Central	98.6	92.0	90.1	85.9	88.5	82.1	96.0	78.8	65.7	60.0	5,851
North	96.7	89.8	87.5	83.1	88.0	73.4	92.6	81.6	61.5	55.6	3,258
Northeast	96.4	86.2	85.9	78.9	85.5	70.6	92.4	80.2	56.6	48.3	7,022
South	96.3	88.6	84.4	80.0	79.1	72.7	91.1	73.9	51.0	43.9	2,968
Area											
Municipal	98.1	90.4	87.8	83.1	89.1	78.3	95.1	78.0	61.6	54.4	10,072
Non-municipal	96.8	88.6	86.9	81.3	84.8	73.1	92.8	79.1	57.6	50.7	11,909
Age											
15-24	98.6	90.6	89.5	84.5	89.6	79.5	94.5	76.3	62.0	55.7	5,314
25-29	96.8	89.8	87.1	82.6	87.5	75.4	94.0	79.2	60.7	53.2	2,490
30-39	98.0	90.7	88.8	83.6	87.7	78.2	94.9	80.6	62.2	55.2	6,549
40-49	96.3	87.4	84.7	78.9	83.8	70.5	92.5	78.2	54.9	47.3	7,627
Marital status											
Ever married/ in union	97.3	89.1	87.1	81.7	86.0	73.3	93.7	78.4	57.2	50.3	16,501
Never married/ in union	97.7	90.2	88.0	83.4	89.2	82.1	94.4	79.0	66.1	58.7	5,480
Women's education											
None	74.8	60.0	58.1	51.5	55.9	41.7	66.5	46.5	26.1	22.1	610
Primary	95.7	86.1	84.8	78.1	81.6	65.8	91.6	75.3	48.9	41.7	7,675
Secondary	99.1	91.7	89.3	84.5	89.7	79.3	95.5	79.4	62.7	55.8	8,544
Higher	99.7	93.9	91.4	87.5	93.3	87.7	97.8	85.8	73.6	66.1	5,152
Wealth index quintiles											
Poorest	94.7	83.3	82.8	75.4	78.4	64.8	89.9	75.5	48.3	40.6	3,340
Second	94.5	87.0	84.8	79.7	83.1	67.5	89.9	75.2	51.9	46.3	4,007
Middle	97.6	89.2	87.7	81.8	87.5	74.8	94.1	77.1	58.4	51.5	4,476
Fourth	99.1	91.5	89.3	84.0	90.2	80.2	95.8	80.2	64.6	56.5	5,033
Richest	99.6	93.4	90.2	86.5	91.0	84.9	97.5	82.9	68.5	61.4	5,125
Ethnicity of household head*											
Thai	97.8	89.8	87.8	82.5	87.1	75.9	94.3	79.0	59.9	52.7	21,609
Non-Thai	74.8	66.6	61.7	58.8	62.9	52.4	66.8	47.2	32.8	29.2	341
Total	**97.4**	**89.4**	**87.4**	**82.1**	**86.8**	**75.5**	**93.9**	**78.6**	**59.4**	**52.4**	**21,981**

1 MICS indicator 9.1

*31 cases with missing ethnicity of household head not shown

The findings for women aged 15-24 are presented separately in Table HA.2. Virtually all young women in Thailand (98.6 per cent) had heard of AIDS. Again, fewer young women (84.5 per cent) have correct knowledge about the two key ways of preventing HIV transmission. Some 90.6 per cent of women aged 15-24 know about having one faithful uninfected sex partner, and 89.5 per cent know about using a condom every time they have sexual intercourse. The largest differentials arise from educational background. While only one in three women with no education (33.9 per cent) know how to prevent HIV transmission, as many as eight out of nine women with higher education (88.6 per cent) display correct knowledge.

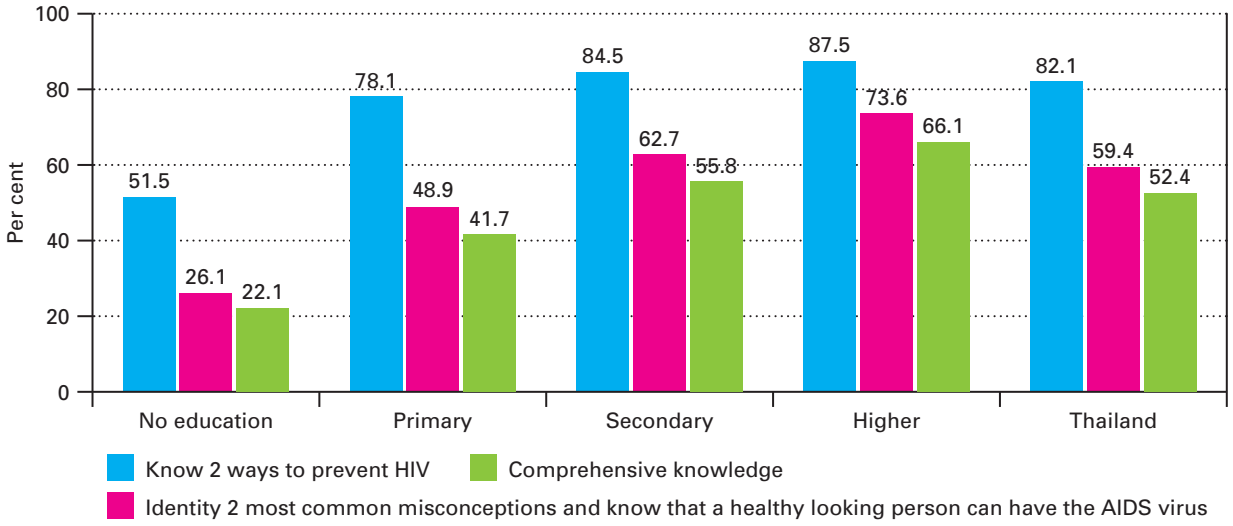
Tables HA.1 and HA.2 also present the percentages of women who can correctly identify misconceptions concerning HIV. The indicator is based on the two most common and relevant misconceptions in Thailand, that HIV can be transmitted by mosquito bites and sharing food with a person who has AIDS. The tables also provide information on whether women know that HIV cannot be transmitted by supernatural means. Of the women interviewed, 59.4 per cent reject the two most common misconceptions and know that a healthy looking person can be infected. Almost 25 per cent of women believe that HIV can be transmitted by mosquito bites and 21.4 per cent that HIV can be transmitted by sharing food with a person who has AIDS, while 86.8 per cent know that a healthy looking person can be infected.

Among young women aged 15-24 years, 62 per cent rejected the two most common misconceptions about HIV transmission and knew that a healthy looking person can have HIV. Of the background characteristics, the largest differences were in women's educational level, with 19.5 per cent of women aged 15-24 with no education versus 74.5 per cent of women with higher education rejecting the misconceptions. The Southern region is revealed to have the lowest knowledge about common misconceptions (51.2 per cent) among the five regions in Thailand. Knowledge was also low among women living in non-Thai-headed households (25.9 per cent) compared to those in Thai-headed households (62.7 per cent).

Women considered to have comprehensive knowledge about HIV prevention are those who know the two main ways of HIV prevention (having only one faithful uninfected partner and using a condom every time), know that a healthy looking person can have the AIDS virus, and who reject the two most common misconceptions. Tables HA.1 and HA.2 also present information on women with comprehensive knowledge. Just over half (52.4 per cent) of women aged 15-49 were found to have comprehensive knowledge, with more in municipal areas (54.4 per cent) than in non-municipal areas (50.7 per cent). As expected, there is a strong correlation with the woman's education level (Figure HA.1), with 66.1 per cent of women with higher education showing comprehensive knowledge compared to only 22.1 per cent of women with no education. Comprehensive HIV knowledge is also correlated with other background variables such as region, living standards and ethnicity. For example, the South displays the lowest level of comprehensive HIV knowledge among women aged 15-49, at 43.9 per cent (compared with 60 per cent in the Central region). Similarly, women in the poorest households show a considerably lower level of knowledge on HIV (40.6 per cent) than women in the richest households (61.4 per cent), as do women in non-Thai households (29.2 per cent) compared to Thai-headed households (52.7 per cent).

About 56 per cent of young women aged 15-24 correctly identified two ways of preventing HIV infection, knew that a healthy looking person can have HIV, and rejected the two most common misconceptions about HIV transmission. Comprehensive knowledge is higher among young women

Figure HA.1 Percentage of women who have comprehensive knowledge of HIV/AIDS transmission, Thailand, 2012



with higher education levels (68.3 per cent among women with tertiary education and only 18.9 per cent among women with no education), those living in better off households (58.8 per cent among women living in the richest households compared to 48.4 per cent living in the poorest households) and in households headed by a Thai (56.3 per cent versus 24.7 per cent for women living in non-Thai-headed households). The level of knowledge in the South is lower than in the other regions (45.1 per cent compared to about 50 per cent or higher).

Comparing the results of the women in the 15-49 age group from Table HA.1 with those of the 15-24 age group from Table HA.2 reveals that younger women have a somewhat higher level of comprehensive knowledge about HIV transmission. The pattern of differentials between the two groups of women is similar, with their education and ethnicity of household head producing the largest ranges.

Knowledge of mother-to-child transmission of HIV is also an important first step for women to seek HIV testing when they are pregnant to avoid infection in the baby. Women should know that HIV can be transmitted during pregnancy, during delivery, and through breastfeeding.

The level of knowledge among women aged 15-49 years concerning mother-to-child transmission is presented in Table HA.3. Overall, 93.2 per cent of women know that HIV can be transmitted from mother to child, with 74 per cent knowing all three modes of transmission and 4.2 per cent not knowing of any. Some 89.4 per cent know that HIV can be transmitted during pregnancy, 80.4 per cent know about HIV transmission during delivery and 84.9 per cent about transmission through breastfeeding. The most important differences are regional and women's educational level. The percentage of women with correct knowledge about all three modes of mother-to-child transmission is lowest in Bangkok (63.8 per cent) and highest in the Central region (80.7 per cent). Less than half of women with no education (47.2 per cent) are knowledgeable about all three transmission modes compared to 76.9 per cent of their peers with higher education. Some 65.3 per cent of women living in non-Thai-headed households know that HIV can be transmitted from mother to child, compared to 93.6 per cent of women living in Thai-headed households. Similarly, women in Thai-headed households are more aware of the three modes of mother-to-child transmission (74.4 per cent) than those living in non-Thai-headed households (49.7 per cent).

Table HA.2 Knowledge about HIV transmission, misconceptions about HIV/AIDS, and comprehensive knowledge about HIV transmission among young women

Percentage of young women aged 15-24 years who know the main ways of preventing HIV transmission, percentage who know that a healthy looking person can have the AIDS virus, percentage who reject common misconceptions, and percentage who have comprehensive knowledge about HIV transmission, Thailand, 2012

	Percentage who have heard of AIDS	Percentage who know transmission can be prevented by		Percentage of women who know both ways	Percentage who know that a healthy looking person can have the AIDS virus	Percentage who know that HIV cannot be transmitted by			Percentage who reject the two most common misconceptions and know that a healthy looking person can have the AIDS virus	Percentage with comprehensive knowledge[1]	Number of women age 15-24
		Having only one faithful uninfected sex partner	Using a condom every time			Mosquito bites	Supernatural means	Sharing food with someone with AIDS			
Region											
Bangkok	98.5	91.1	88.8	83.7	93.7	81.4	96.5	70.5	58.7	51.1	740
Central	98.5	92.4	91.7	86.9	90.3	82.5	95.7	76.3	66.7	61.5	1,375
North	98.9	90.8	91.9	86.5	93.4	76.4	94.6	80.0	65.2	59.8	750
Northeast	99.0	89.6	89.2	84.1	90.3	79.7	94.1	79.5	63.2	56.0	1,670
South	97.3	89.0	84.8	79.9	79.3	74.8	91.3	71.4	51.2	45.1	780
Area											
Municipal	98.6	90.3	89.1	83.7	90.9	80.7	94.6	74.4	61.5	54.8	2,417
Non-municipal	98.5	90.9	89.9	85.2	88.5	78.5	94.4	77.9	62.4	56.4	2,897
Age											
15-19	98.9	91.0	89.3	84.5	89.6	81.4	95.1	76.9	63.4	56.9	3,080
20-24	98.0	90.0	89.8	84.5	89.6	76.9	93.7	75.5	60.1	54.1	2,234
Marital status											
Ever married/ in union	98.2	89.6	89.7	84.1	88.0	72.8	93.4	71.4	53.3	47.9	1,786
Never married/ in union	98.7	91.1	89.4	84.7	90.4	82.8	95.1	78.8	66.4	59.6	3,528
Women's education											
None	53.2	36.1	41.7	33.9	47.3	27.1	43.1	26.0	19.5	18.9	55
Primary	94.4	87.4	82.8	78.1	77.2	65.9	88.6	59.8	39.1	32.8	331
Secondary	99.2	90.7	90.0	84.5	89.9	79.1	94.9	75.9	60.8	54.4	3,783
Higher	99.8	93.8	92.2	88.6	94.1	87.2	97.2	85.0	74.5	68.3	1,146
Wealth index quintiles											
Poorest	98.3	86.4	86.4	80.3	85.9	75.2	93.1	74.5	55.9	48.4	814
Second	97.2	89.9	90.9	85.8	88.3	73.3	92.0	74.4	56.3	52.1	1,051
Middle	98.0	90.8	88.6	83.4	89.0	79.0	94.0	75.5	62.8	57.1	1,124
Fourth	99.4	93.0	90.9	86.4	91.8	84.4	95.3	77.8	66.1	59.5	1,229
Richest	99.7	91.6	89.9	85.3	91.7	83.4	97.6	78.7	66.5	58.8	1,096
Ethnicity of household head*											
Thai	99.1	91.1	90.1	85.0	90.1	80.1	95.1	77.1	62.7	56.3	5,201
Non-Thai	72.5	65.7	61.0	58.5	63.5	50.4	63.4	35.5	25.9	24.7	103
Total	**98.6**	**90.6**	**89.5**	**84.5**	**89.6**	**79.5**	94.5	**76.3**	**62.0**	**55.7**	**5,314**

[1] MICS indicator 9.2; MDG indicator 6.3
*10 cases with missing ethnicity of household head not shown

Table HA.3 Knowledge of mother-to-child HIV transmission

Percentage of women aged 15-49 years who correctly identify means of HIV transmission from mother to child, Thailand, 2012

	Percentage who know HIV can be transmitted from mother to child	Percentage who know HIV can be transmitted:				Does not know any of the specific means	Number of women
		During pregnancy	During delivery	By breast-feeding	All three means[1]		
Region							
Bangkok	92.0	88.2	75.8	75.7	63.8	7.3	2,881
Central	95.0	92.7	86.1	88.0	80.7	3.6	5,851
North	92.7	87.3	78.7	86.4	72.9	4.0	3,258
Northeast	93.4	89.0	79.5	87.6	74.9	3.0	7,022
South	90.7	87.5	77.4	79.6	69.9	5.6	2,968
Area							
Municipal	94.0	90.1	80.9	83.9	73.3	4.2	10,072
Non-municipal	92.5	88.8	79.9	85.7	74.6	4.3	11,909
Age group							
15-24	94.6	91.4	83.8	87.2	77.8	4.0	5,314
15-19	94.5	91.6	83.0	87.1	77.3	4.4	3,080
20-24	94.7	91.0	84.8	87.4	78.5	3.3	2,234
25-29	93.5	89.8	82.4	85.5	76.2	3.3	2,490
30-39	94.2	90.5	81.4	85.3	74.8	3.9	6,549
40-49	91.3	87.0	76.4	82.6	70.0	5.0	7,627
Marital status							
Ever married/in union	93.4	89.3	80.0	85.4	73.7	3.9	16,501
Never married/in union	92.5	89.7	81.5	83.3	75.0	5.2	5,480
Education							
None	64.0	61.1	52.2	57.0	47.2	10.8	610
Primary	90.8	86.5	75.2	83.8	70.3	5.0	7,675
Secondary	95.7	92.1	83.8	87.8	77.6	3.4	8,544
Higher	96.0	92.7	85.8	84.8	76.9	3.7	5,152
Wealth index quintiles							
Poorest	90.5	86.8	76.6	85.5	72.2	4.2	3,340
Second	90.9	87.1	77.5	84.4	72.6	3.6	4,007
Middle	92.8	88.4	79.5	85.6	74.1	4.7	4,476
Fourth	95.0	91.7	82.4	86.2	75.7	4.1	5,033
Richest	95.2	91.6	83.8	82.8	74.7	4.4	5,125
Ethnicity of household head*							
Thai	93.6	89.8	80.8	85.3	74.4	4.2	21,609
Non-Thai	65.3	61.7	52.9	59.1	49.7	9.5	341
Total	**93.2**	**89.4**	**80.4**	**84.9**	**74.0**	**4.2**	**21,981**

[1] MICS indicator 9.3
*31 cases with missing ethnicity of household head not shown

Accepting Attitudes Towards People Living with HIV/AIDS

The indicators on attitudes towards people living with HIV measure stigma and discrimination in the community. Stigma and discrimination are low if respondents report an accepting attitude on the following four questions: 1) Would care for family member sick with AIDS; 2) would buy fresh vegetables from a vendor who is HIV positive; 3) thinks that a female teacher who is HIV positive should be allowed to teach in school; and 4) would ***not*** want to keep HIV status of a family member a secret.

Table HA.4 presents the attitudes of women towards people living with HIV/AIDS. They indicate that in Thailand, 97.2 per cent of women who have heard of AIDS agree with at least one accepting statement. The most common accepting attitude is caring for a family member with the AIDS virus in own home (92.1 per cent). Believing that a teacher living with HIV who is not sick should be allowed to teach is accepted by 70 per cent. Some 58.7 per cent expressed an accepting attitude in terms of buying vegetables from a shopkeeper or vendor who has HIV. Overall, only 30.5 per cent of women who had heard of AIDS expressed an accepting attitude for all four indicators. Acceptance on all four indicators is lowest among more educated women (26.6 per cent). Women in Bangkok indicate the lowest accepting attitude on all four indicators (16 per cent), while women in the North are three times more likely to show an accepting attitude (48.1 per cent). An accepting attitude on all four indicators is positively correlated with age, but negatively correlated with socioeconomic status of household.

Table HA.4 Accepting attitudes toward people living with HIV/AIDS

Percentage of women aged 15-49 years who have heard of AIDS who express an accepting attitude towards people living with HIV/AIDS, Thailand, 2012

	Percentage of women who:						Number of women who have heard of AIDS
	Are willing to care for a family member with the AIDS virus in own home	Would buy fresh vegetables from a shopkeeper or vendor who has the AIDS virus	Believe that a female teacher with the AIDS virus who is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus	Agree with at least one accepting attitude	Express accepting attitudes on all four indicators[1]	
Region							
Bangkok	91.4	53.4	70.2	30.4	97.6	16.0	2,861
Central	90.0	55.3	66.6	41.0	95.7	23.8	5,771
North	95.4	73.4	78.2	71.1	99.4	48.1	3,151
Northeast	93.8	60.4	71.8	68.4	98.6	36.9	6,769
South	89.5	50.7	63.7	47.9	94.2	24.0	2,860
Area							
Municipal	90.6	56.6	70.5	44.9	96.8	25.3	9,886
Non-municipal	93.4	60.5	69.6	61.1	97.6	34.9	11,525
Age							
15-24	90.4	51.6	67.6	49.3	96.4	25.6	5,237
15-19	89.9	50.8	67.1	50.6	96.1	26.2	3,048
20-24	91.2	52.7	68.2	47.4	97.0	24.7	2,190
25-29	92.9	58.6	69.6	47.5	97.3	26.9	2,410
30-39	92.2	61.7	72.6	52.9	97.1	31.5	6,421
40-49	93.0	61.1	69.7	59.4	97.9	34.3	7,343

Table HA.4 Accepting attitudes toward people living with HIV/AIDS (continued)

Percentage of women aged 15-49 years who have heard of AIDS who express an accepting attitude towards people living with HIV/AIDS, Thailand, 2012

	Percentage of women who:						Number of women who have heard of AIDS
	Are willing to care for a family member with the AIDS virus in own home	Would buy fresh vegetables from a shopkeeper or vendor who has the AIDS virus	Believe that a female teacher with the AIDS virus who is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus	Agree with at least one accepting attitude	Express accepting attitudes on all four indicators[1]	
Marital status							
Ever married/in union	92.9	59.8	69.7	56.6	97.6	31.9	16,059
Never married/in union	89.8	55.2	71.0	44.6	96.1	26.3	5,352
Education							
None	87.7	47.2	54.1	61.6	94.8	28.9	456
Primary	92.9	59.8	67.3	64.0	97.4	35.5	7,348
Secondary	91.3	56.6	69.9	52.2	97.0	28.6	8,468
Higher	92.7	61.6	75.6	40.4	97.6	26.6	5,138
Wealth index quintiles							
Poorest	92.6	56.2	65.9	71.1	97.6	36.3	3,164
Second	93.1	60.3	69.3	64.2	98.0	35.5	3,788
Middle	92.9	60.0	71.0	56.1	97.1	32.4	4,367
Fourth	91.5	58.3	70.2	47.8	96.9	27.3	4,986
Richest	91.0	58.3	72.2	38.5	96.8	24.6	5,106
Ethnicity of household head*							
Thai	92.2	58.8	70.3	53.6	97.2	30.6	21,125
Non-Thai	88.7	45.9	51.4	54.1	94.7	22.9	255
Total	**92.1**	**58.7**	**70.0**	**53.6**	**97.2**	**30.5**	**21,411**

1 MICS indicator 9.4
*31 cases with missing ethnicity of household head not shown

Knowledge of a Place for HIV Testing, Counselling and Testing During Antenatal Care

Another important indicator is the knowledge of where to be tested for HIV and the use of such services. In order to protect themselves and to prevent infecting others, it is important for individuals to know their HIV status. Knowledge of own status is also a critical factor in the decision to seek treatment. Questions related to knowledge among women of a facility for HIV testing and whether they have ever been tested are presented in Table HA.5. The results suggest that in Thailand, 81.4 per cent of women know where to be tested. Among women interviewed almost half (49.9 per cent) have actually been tested and 8.8 per cent were tested within the 12 months prior to the survey. Only a small proportion (8.5 per cent) had been tested and told the result in the preceding 12 months.

It is noteworthy that the percentage of women knowing where to be tested varies by region, women's education and ethnicity of household head. Women in the Northeast had the least

knowledge of where to be tested (75.3 per cent) and women in the Central region the most (86.4 per cent). Fewer women with no education (46 per cent) knew where to be tested compared with women with higher education (92.4 per cent); and a higher percentage of women in Thai-headed-households knew where to be tested than those in non-Thai-headed households (81.9 per cent versus 49.6 per cent).

Table HA.5 Knowledge of a place for HIV testing

Percentage of women aged 15-49 years who know where to get an HIV test, percentage of women who have ever been tested, percentage of women who have been tested in the last 12 months, and percentage of women who have been tested in the last 12 months and have been told the result, Thailand, 2012

	Percentage of women who:				Number of women
	Know a place to get tested[1]	Have ever been tested	Have been tested in the last 12 months	Have been tested in the last 12 months and have been told result[2]	
Region					
Bangkok	85.1	48.5	8.4	8.3	2,881
Central	86.4	53.2	9.1	8.9	5,851
North	83.3	58.1	10.5	10.0	3,258
Northeast	75.3	47.8	8.6	8.1	7,022
South	80.4	40.6	7.6	7.3	2,968
Area					
Municipal	84.0	50.7	8.9	8.6	10,072
Non-municipal	79.2	49.2	8.8	8.4	11,909
Age					
15-24	78.3	28.5	10.9	10.4	5,314
15-19	71.9	15.1	7.3	7.1	3,080
20-24	87.0	47.0	15.9	14.8	2,234
25-29	87.5	58.9	14.5	14.3	2,490
30-39	87.5	65.7	10.6	10.3	6,549
40-49	76.3	48.3	4.0	3.8	7,627
Marital status					
Ever married/in union	83.2	62.2	10.4	10.0	16,501
Never married/in union	75.8	12.9	4.2	4.1	5,480
Education					
None	46.0	34.8	5.2	4.6	610
Primary	74.3	50.3	5.3	5.2	7,675
Secondary	83.7	49.5	10.7	10.3	8,544
Higher	92.4	51.6	11.4	11.0	5,152
Wealth index quintiles					
Poorest	71.5	44.4	6.4	6.3	3,340
Second	73.3	45.8	7.6	7.0	4,007
Middle	81.0	50.0	9.8	9.4	4,476
Fourth	86.1	52.9	9.5	9.1	5,033
Richest	89.9	53.5	9.9	9.7	5,125
Ethnicity of household head*					
Thai	81.9	50.0	8.8	8.5	21,609
Non-Thai	49.6	40.0	9.2	9.0	341
Total	**81.4**	**49.9**	**8.8**	**8.5**	**21,981**

1 MICS indicator 9.5 2 MICS indicator 9.6

*31 cases with missing ethnicity of household head not shown

Table HA.6 HIV counselling and testing during antenatal care

Among women aged 15-49 who gave birth in the last two years, percentage of women who received antenatal care from a health professional during the last pregnancy, percentage who received HIV counselling, percentage who were offered and accepted an HIV test and received the results, Thailand, 2012

	Percentage of women who:					Number of women who gave birth in the two years preceding the survey
	Received antenatal care from a health care professional for last pregnancy	Received HIV counselling during antenatal care[1]	Were offered an HIV test and were tested for HIV during antenatal care	Were offered an HIV test and were tested for HIV during antenatal care, and received the results[2]	Received HIV counselling, were offered an HIV test, accepted and received the results	
Region						
Bangkok	97.8	79.1	83.3	82.9	76.8	194
Central	97.3	75.9	79.9	78.7	68.4	520
North	97.7	87.8	85.5	83.6	78.9	266
Northeast	98.9	79.8	70.3	69.1	64.9	611
South	98.5	64.2	56.8	55.1	46.4	323
Area						
Municipal	97.8	77.2	77.5	76.8	68.3	803
Non-municipal	98.3	77.1	71.6	69.9	64.1	1,110
Age						
15-24	98.2	77.2	73.1	72.1	65.4	656
15-19	97.3	72.7	73.7	73.1	66.5	231
20-24	98.6	79.7	72.8	71.5	64.8	426
25-29	98.1	76.0	72.0	71.2	64.2	465
30-39	98.8	78.4	77.3	75.6	68.5	710
40-49	91.6	71.8	65.3	62.6	56.3	83
Marital status						
Ever married/ in union	98.1	77.1	74.1	72.8	65.9	1,909
Never married/ in union	(*)	(*)	(*)	(*)	(*)	4
Education						
None	91.9	47.4	56.0	50.7	45.7	51
Primary	97.4	73.3	67.9	66.5	61.5	412
Secondary	98.5	80.2	76.9	75.6	68.6	997
Higher	98.6	77.2	75.4	74.7	66.1	454
Wealth index quintiles						
Poorest	97.1	81.7	71.7	69.8	65.6	277
Second	98.1	72.5	66.1	65.0	58.5	397
Middle	97.9	77.2	73.8	73.0	67.8	454
Fourth	97.7	76.6	80.1	78.1	68.0	428
Richest	99.7	79.4	77.8	77.1	69.3	358
Ethnicity of household head*						
Thai	98.2	77.5	74.1	72.8	66.0	1,869
Non-Thai	94.6	61.5	69.9	68.9	60.1	43
Total	**98.1**	**77.1**	**74.1**	**72.8**	**65.9**	**1,914**

1 MICS indicator 9.8 2 MICS indicator 9.9 (*) Figures that are based on less than 25 unweighted cases
*1 case with missing ethnicity of household head not shown

Among women who had given birth within the two years preceding the survey, the percentage who received counselling and HIV testing during antenatal care is presented in Table HA.6. Some 98.1 per cent of women who gave birth in the preceding two years received antenatal care from a health care professional, 77.1 per cent received HIV counselling during antenatal care visits, 74.1 per cent were offered an HIV test and were tested and 72.8 per cent received the results during antenatal care visits. Around two thirds of women (65.9 per cent) reported receiving all three services during antenatal care, that is 1) they received HIV counselling; 2) were offered an HIV test and were tested; and 3) received the result. The findings show considerable differences according to educational level. Only 45.7 per cent of women with no education received all three HIV-related services versus over 60 per cent of educated women.

Orphans

As the HIV epidemic progresses, more and more children are becoming orphaned because of AIDS. Children who are orphaned may be at increased risk of neglect or exploitation. Monitoring the variations in different outcomes for orphans and comparing them to their peers gives us a measure of how well communities and governments are responding to their needs.

Table HA.7 presents information on the living arrangements and orphanhood status of children under age 18. Nearly 58 per cent of children aged 0-17 years in Thailand live with both their parents, 15.4 per cent live with mothers only and 3.4 per cent live with fathers only. Some 20.9 per cent of children live with neither of their biological parents while both of them are alive. About 13.5 per cent live with mothers only while the biological father is alive.

Some 4.1 per cent of children have lost one or both parents, 3.1 per cent have lost their father, and 0.6 per cent their mother. There are no differences between municipal and non-municipal areas. However small variations are noticeable by region. The highest percentage of children who have lost one or both parents is in the North (5.2 per cent), while the lowest is in Bangkok (2.8 per cent). As expected, older children are slightly more likely than younger children to have lost one or both parents.

Table HA.7 also shows that the percentage of children living with both parents is the highest in the richest wealth quintile (72.4 per cent) and lowest in the poorest quintile (48.7 per cent). Some 31 per cent of children in the poorest households live with neither parent while both parents are alive compared with 8.2 per cent in the richest quintile. As expected, older children are less likely than younger children to live with both parents.

Among children not living with a biological parent, differences arise by region, residential area and socioeconomic status. The percentage of children not living with a parent is highest in the Northeast (31.2 per cent), followed by the North (23.2 per cent) and lowest in the South (12.5 per cent). More non-municipal children live with no parent than municipal children (25.6 per cent versus 18.3 per cent). The percentage of children living in the poorest households with neither parent is higher than that of the wealthiest households (33.7 per cent versus 9.2 per cent).

Table HA.7 Children's living arrangements and orphanhood

Percentage distribution of children aged 0-17 years according to living arrangements, percentage of children aged 0-17 years in households not living with a biological parent and percentage of children who have one or both parents dead, Thailand, 2012

	Living with both parents	Living with neither parent				Living with mother only		Living with father only		Impossible to determine	Total	Not living with a biological parent[1]	One or both parents dead[2]	Number of children age 0-17 years
		Only father alive	Only mother alive	Both alive	Both dead	Father alive	Father dead	Mother alive	Mother dead					
Sex														
Male	58.3	0.3	1.2	20.2	0.4	13.4	1.8	3.3	0.4	0.9	100.0	22.0	4.0	10,331
Female	56.8	0.4	1.2	21.7	0.3	13.6	2.0	3.0	0.3	0.7	100.0	23.6	4.2	10,420
Region														
Bangkok	69.5	0.2	0.7	11.8	0.3	11.2	1.2	4.2	0.4	0.5	100.0	13.0	2.8	1,851
Central	60.0	0.6	1.1	16.4	0.4	13.9	2.1	4.4	0.3	0.9	100.0	18.5	4.4	4,794
North	55.6	0.5	1.4	21.2	0.2	13.5	2.5	3.4	0.6	1.2	100.0	23.2	5.2	3,192
Northeast	49.7	0.2	1.4	29.3	0.3	14.6	1.4	2.0	0.2	0.9	100.0	31.2	3.6	7,981
South	69.7	0.1	1.0	11.2	0.2	11.3	2.7	3.2	0.4	0.2	100.0	12.5	4.4	2,932
Area														
Municipal	60.9	0.4	1.1	16.5	0.3	13.9	1.9	3.9	0.4	0.8	100.0	18.3	4.1	7,939
Non-municipal	55.5	0.3	1.3	23.7	0.3	13.2	1.9	2.7	0.3	0.8	100.0	25.6	4.1	12,813
Age														
0-4	60.0	0.1	0.2	21.0	0.0	15.7	0.4	2.0	0.2	0.4	100.0	21.3	0.9	5,272
5-9	56.0	0.3	0.8	24.1	0.2	13.2	1.2	3.6	0.1	0.6	100.0	25.4	2.6	5,770
10-14	56.3	0.4	1.9	20.1	0.5	12.8	2.7	3.8	0.5	1.1	100.0	22.9	6.1	6,024
15-17	58.7	0.5	2.1	17.2	0.6	12.1	3.7	3.0	0.7	1.4	100.0	20.5	7.7	3,686
Wealth index quintiles														
Poorest	48.7	0.4	1.9	31.0	0.4	12.2	2.1	2.1	0.3	0.9	100.0	33.7	5.1	4,370
Second	49.3	0.3	1.4	28.4	0.3	14.1	1.6	2.8	0.5	1.3	100.0	30.4	4.2	4,441
Middle	57.4	0.4	1.0	20.0	0.3	13.5	1.9	4.3	0.5	0.8	100.0	21.6	4.1	4,293
Fourth	63.3	0.4	0.9	14.3	0.4	14.7	1.9	3.4	0.1	0.6	100.0	15.9	3.7	4,044
Richest	72.4	0.2	0.7	8.2	0.1	13.0	1.8	3.0	0.2	0.3	100.0	9.2	3.1	3,603
Ethnicity of household head*														
Thai	57.4	0.3	1.2	21.1	0.3	13.4	1.9	3.2	0.3	0.8	100.0	23.0	4.1	20,467
Non-Thai	72.8	0.1	1.3	6.3	0.1	17.4	0.7	1.0	0.0	0.3	100.0	7.7	2.2	255
Total	**57.6**	**0.3**	**1.2**	**20.9**	**0.3**	**13.5**	**1.9**	**3.1**	**0.3**	**0.8**	**100.0**	**22.8**	**4.1**	**20,751**

[1] MICS indicator 9.17 [2] MICS indicator 9.18
*29 cases with missing ethnicity of household head not shown

One of the measures developed for the assessment of the status of orphaned children relative to their peers looks at the school attendance of children aged 10-14 who have lost both parents versus children aged 10-14 whose parents are alive (and who live with at least one of these parents). If children whose parents have died do not have the same access to school as their peers, then families and schools are not ensuring that these children's rights are being respected.

The findings indicate that in Thailand, 0.5 per cent of children aged 10-14 have lost both parents (Table HA.8). Among these, 91.7 per cent are currently attending school. Among children aged 10-14 who have not lost a parent and who live with at least one parent, 97.7 per cent are attending school. This would suggest that children who have lost both parents are not disadvantaged compared to the non-orphaned children in terms of school attendance and the orphans-to-non-orphans school attendance ratio is 0.9. Very low differences in terms of the school attendance ratio for both groups exist by region and residential area.

Table HA.8 School attendance of orphans and non-orphans

School attendance of children aged 10-14 years by orphanhood, Thailand, 2012

	Percentage of children whose mother and father have died (orphans)	Percentage of children of whom both parents are alive and child is living with at least one parent (non-orphans)	Number of children aged 10-14 years	Percentage of children who are orphans and are attending school[1]	Total number of orphan children aged 10-14 years	Percentage of children who are non-orphans and are attending school[2]	Total number of non-orphan children aged 10-14 years	Orphans to non-orphans school attendance ratio
Sex								
Male	0.7	73.4	3,050	(*)	22	96.7	2,240	0.9
Female	0.3	72.3	2,974	(*)	10	98.7	2,150	1.0
Region								
Bangkok	1.0	84.3	504	(*)	5	99.1	424	1.0
Central	1.1	75.4	1,374	(*)	14	97.6	1,036	1.0
North	0.1	69.1	912	(*)	1	98.6	630	1.0
Northeast	0.4	67.8	2,423	(*)	10	97.5	1,643	0.8
South	0.2	80.8	811	(*)	2	96.5	656	0.6
Area								
Municipal	0.8	76.6	2,201	(*)	17	97.7	1,686	0.9
Non-municipal	0.4	70.7	3,822	(*)	16	97.7	2,703	1.0
Total	**0.5**	**72.9**	**6,024**	**(91.7)**	**32**	**97.7**	**4,389**	**0.9**

[1] MICS indicator 9.19; MDG indicator 6.4 [2] MICS indicator 9.20; MDG indicator 6.4
(*) Figures that are based on less than 25 unweighted cases

Appendix A. Sample Design

The major features of the sample design are described in this appendix. Sample design features include target sample size, sample allocation, sampling frame and listing, choice of domains, sampling stages, stratification, and the calculation of sample weights.

The primary objective of the sample design for the Thailand Multiple Indicator Cluster Survey was to produce statistically reliable estimates of most indicators, at the national level, for urban and rural areas, and for Bangkok and four regions (Central, North, Northeast and South) of the country. Urban and rural areas in each of the four regions were defined as the sampling strata (Bangkok had only an urban area).

A multi-stage, stratified cluster sampling approach was used for the selection of the survey sample.

Sample Size and Sample Allocation

The target sample size for the Thailand MICS was calculated as 27,000 households. For the calculation of the sample size, the key indicator use was young women aged 15-19 currently married/in union. The following formula was used to estimate the required sample size for this indicator:

$$n = \frac{[4(r)(1-r)(f)(1.1)]}{[(0.12r)^2(p)(\bar{n})]}$$

where

- n is the required sample size, expressed as number of households
- 4 is a factor to achieve the 95 per cent level of confidence
- $r = 0.146$ is the predicted or anticipated value of the indicator, expressed in the form of a proportion
- 1.1 is the factor necessary to raise the sample size by 10 per cent for the expected non-response
- $f = 2$ is the shortened symbol for *deff* (design effect)
- $0.12r$ is the margin of error to be tolerated at the 95 per cent level of confidence, defined as 12 per cent of r (relative margin of error of r)
- $p = 0.0378$ is the proportion of the total population upon which the indicator, r, is based
- $\bar{n} = 3.42$ is the average household size (number of persons per household).

The resulting number of households from this exercise was 27,000 households. Equal allocation of the total sample size to Bangkok and the four regions by area (municipal and non-municipal) was used, thus the sample size in Bangkok and each region by area was 3,000 households. It was also determined that this sample size provided a sufficient level of precision at the domain level for the different key indicators. The average number of households selected per enumeration area (cluster) for the Thailand MICS was determined as 20 households, based on a number of considerations, including the design effect, the budget available, and the time that would be needed per team to complete one cluster. Dividing the total number of households by the number of sample households per cluster, it was calculated that 150 sample clusters would need to be selected in Bangkok and each region by area. The table below shows the equal allocation of clusters to the sampling strata.

Table SD.1: Allocation of sample clusters (Primary sampling units) to sampling strata

Region	Number of Clusters		
	Total	Municipal	Non-municipal
Bangkok	150	150	–
Central	300	150	150
North	300	150	150
Northeast	300	150	150
South	300	150	150
Total	**1,350**	**750**	**600**

Sampling Frame and Selection of Clusters

The 2010 census frame, which is updated every year*, was used for the selection of clusters. Enumeration areas (EAs) were defined as primary sampling units (PSUs), and were selected from each of the sampling strata by using systematic pps (probability proportional to size) sampling procedures, based on the estimated sizes of the enumeration areas from the 2010 Population Census with updated information. The first stage of sampling was thus completed by selecting the required number of enumeration areas from Bangkok and each of the four regions, separately by urban (municipal) and rural (non-municipal) strata.

Listing Activities

Since the sampling frame (the 2010 Population Census) was not completely up-to-date, a new listing of households was used as the sampling frame for the selection of households at the second stage sampling. Enumerators from the Provincial Statistical Office listed all dwellings and recorded the number of all households located in the sample EA. The listing information included identification number of building, identification number of households, address, name of head of household, the total number of household members, and two categories of household types (households with children under 5 years and households without children under 5.

Selection of Households

Lists of households were prepared by the listing teams from the Provincial Statistical Office in the field for each enumeration area. Systematic random sampling was applied to select 10 households within both Group 1 (households with children under 5) and Group 2 (households without children under 5).

Calculation of Sample Weights

The Thailand Multiple Indicator Cluster Survey sample is not self-weighting. Essentially, by allocating an equal number of households to each of the regions, different sampling fractions were used in each region since the size of the regions varied. For this reason, sample weights were calculated and these were used in the subsequent analyses of the survey data.

* Since 2012, the National Statistical Office has conducted the Basic Household Survey (BHS) annually. The main purpose of this survey is to update the master sampling frame which is then used for sample selection in various surveys.

The major component of the weight is the reciprocal of the sampling fraction employed in selecting the number of sample households in that particular sampling stratum (*h*) and PSU (*i*):

$$W_{hi} = \frac{1}{f_u}$$

The term f_{hi}, the sampling fraction for the *i-th* sample PSU in the *h-th* stratum, is the product of probabilities of selection at every stage in each sampling stratum:

$$f_{hi} = p_{1hi} \times p_{2hi}$$

where p_{shi} is the probability of selection of the sampling unit at stage *s* for the *i-th* sample PSU in the *h-th* sampling stratum.

Since the estimated number of households in each enumeration area (PSU) in the sampling frame used for the first stage selection and the updated number of households in the enumeration area from the listing were different, individual sampling fractions for households in each sample enumeration area (cluster) were calculated. The sampling fractions for households in each enumeration area (cluster) therefore included the first stage probability of selection of the enumeration area in that particular sampling stratum and the second stage probability of selection of a household in the sample enumeration area (cluster).

A second component in the calculation of sample weights takes into account the level of non-response for the household and individual interviews. The adjustment for household non-response is equal to the inverse value of:

RRh = Number of interviewed households in stratum h/
Number of occupied households selected in stratum h

After the completion of fieldwork, response rates were calculated for each sampling stratum. These were used to adjust the sample weights calculated for each cluster. Response rates in the Thailand Multiple Indicator Cluster Survey are shown in Table HH.1 in this report.

Similarly, the adjustment for non-response at the individual level (women and under-5 children) for each stratum is equal to the inverse value of:

RRh = Completed women's (or under-5's) questionnaires in stratum h/
Eligible women (or under-5s) in the sample households interviewed in stratum h

The non-response adjustment factors for women's and under-5's questionnaires are applied to the adjusted household weights. The numbers of eligible women and under-5 children were obtained from the roster of household members in the Household Questionnaire for households where interviews were completed.

The design weights for the households were calculated by multiplying the above factors for each enumeration area. These weights were then standardized (or normalized), one purpose of which is to make the weighted sum of the interviewed sample units equal to the total sample size at the national level. Normalization is achieved by dividing the full sample weights (adjusted for nonresponse) by the average of these weights across all households at the national level. This is performed by multiplying the sample weights by a constant factor equal to the unweighted number of households at the national level divided by the weighted total number of households (using the full sample weights adjusted for nonresponse). A similar normalization procedure was followed in obtaining standardized weights for the women's and under-5's questionnaires. In the 1,350 sample enumeration areas (clusters) the normalized household weights varied between 0.020664 and 14.447729; the normalized women weights varied from 0.023239 to 16.178278; and the normalized children weights varied from 0.038509 to 26.748679.

Appendix B. List of Personnel Involved in the Survey

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Appendix C. Estimates of Sampling Errors

The sample of respondents selected in the Thailand Multiple Indicator Cluster Survey is only one of the samples that could have been selected from the same population, using the same design and size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between the estimates from all possible samples. The extent of variability is not known exactly, but can be estimated statistically from the survey data.

The following sampling error measures are presented in this appendix for each of the selected indicators:

- Standard error (*se*): Sampling errors are usually measured in terms of standard errors for particular indicators (means, proportions etc). Standard error is the square root of the variance of the estimate. The Taylor linearization method is used for the estimation of standard errors.
- Coefficient of variation (*se/r*) is the ratio of the standard error to the value of the indicator, and is a measure of the relative sampling error.
- Design effect (*deff*) is the ratio of the actual variance of an indicator, under the sampling method used in the survey, to the variance calculated under the assumption of simple random sampling. The square root of the design effect (*deft*) is used to show the efficiency of the sample design in relation to the precision. A deft value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a deft value above 1.0 indicates an increase in the standard error due to the use of a more complex sample design.
- Confidence limits are calculated to show the interval within which the true value for the population can be reasonably assumed to fall, with a specified level of confidence. For any given statistic calculated from the survey, the value of that statistic will fall within a range of plus or minus two times the standard error ($r + 2.se$ or $r - 2.se$) of the statistic in 95 per cent of all possible samples of identical size and design.

For the calculation of sampling errors from MICS data, SPSS Version 18 Complex Samples module has been used. The results are shown in the tables that follow. In addition to the sampling error measures described above, the tables also include weighted and unweighted counts of denominators for each indicator.

Sampling errors are calculated for indicators of primary interest, for the national level, for municipal and non-municipal areas, and for the regions. One of the selected indicators is based on households, six are based on household members, 15 are based on women, and 17 are based on children under 5. All indicators presented here are in the form of proportions. Table SE.1 shows the list of indicators for which sampling errors are calculated, including the base population (denominator) for each indicator. Tables SE.2 to SE.9 show the calculated sampling errors for selected domains.

Table SE.1 Indicators selected for sampling error calculations

List of indicators selected for sampling error calculations, and base populations (denominators) for each indicator, Thailand, 2012

MICS4 Indicator		Base Population
HOUSEHOLDS		
2.16	Iodized salt consumption	All households in which salt was tested or with no salt
HOUSEHOLD MEMBERS		
4.1	Use of improved drinking water sources	All household members
4.3	Use of improved sanitation	All household members
7.5	Secondary school net attendance ratio (adjusted)	Children of secondary school age
9.18	Prevalence of children with one or both parents dead	Children aged 0-17 years
9.19	School attendance of orphans	Children aged 10-14 years who have lost both parents
9.20	School attendance of non-orphans	Children aged 10-14 years, whose parents are alive, and who are living with at least one parent
WOMEN		
–	Pregnant women	Women aged 15-49 years
5.2	Early childbearing	Women aged 20-24 years
5.3	Contraceptive prevalence	Women aged 15-49 years who are currently married or in union
5.4	Unmet need	Women aged 15-49 years who are currently married or in union
5.5a	Antenatal care coverage – at least once by skilled personnel	Women aged 15-49 years with a live birth in the 2 years preceding the survey
5.5b	Antenatal care coverage – at least four times by any provider	Women aged 15-49 years with a live birth in the 2 years preceding the survey
5.7	Skilled attendant at delivery	Women aged 15-49 years with a live birth in the 2 years preceding the survey
5.8	Institutional deliveries	Women aged 15-49 years with a live birth in the 2 years preceding the survey
5.9	Caesarean section	Women aged 15-49 years with a live birth in the 2 years preceding the survey
7.1	Literacy rate among young women	Women aged 15-24 years
8.7	Marriage before age 18	Women aged 20-49 years
9.2	Comprehensive knowledge about HIV prevention among young people	Women aged 15-24 years
9.3	Knowledge of mother-to-child transmission of HIV	Women aged 15-49 years
9.4	Accepting attitudes towards people living with HIV	Women aged 15-49 years who have heard of HIV
9.6	Women who have been tested for HIV and know the results	Women aged 15-49 years

Table SE.1 Indicators selected for sampling error calculations (continued)

List of indicators selected for sampling error calculations, and base populations (denominators) for each indicator, Thailand, 2012

MICS4 Indicator	Base Population
UNDER-5s	
2.1a Underweight prevalence	Children under age 5
2.2a Stunting prevalence	Children under age 5
2.3a Wasting prevalence	Children under age 5
2.6 Exclusive breastfeeding under 6 months	Total number of infants under 6 months of age
2.14 Age-appropriate breastfeeding	Children aged 0-23 months
– Tuberculosis immunization coverage	Children aged 12-23 months
– Received polio immunization	Children aged 12-23 months
– Received DPT immunization	Children aged 12-23 months
– Received measles immunization	Children aged 12-23 months
– Received Hepatitis B immunization	Children aged 12-23 months
– Diarrhoea in the previous 2 weeks	Children under age 5
– Illness with a cough in the previous 2 weeks	Children under age 5
3.8 Oral rehydration therapy with continued feeding	Children under age 5 with diarrhoea in the previous 2 weeks
3.10 Antibiotic treatment of suspected pneumonia	Children under age 5 with suspected pneumonia in the previous 2 weeks
6.1 Support for learning	Children aged 36-59 months
6.7 Attendance in early childhood education	Children aged 36-59 months
8.1 Birth registration	Children under age 5

Table SE.2 Sampling errors: Thailand

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
HOUSEHOLDS										
Iodized salt consumption	2.16	0.7087	0.0077	0.011	6.930	2.632	23,908	23,958	0.693	0.724
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	4.10	0.9700	0.0032	0.003	8.699	2.949	79,033	24,119	0.964	0.977
Use of improved sanitation	4.30	0.9721	0.0026	0.003	5.969	2.443	79,033	24,119	0.967	0.977
Secondary school net attendance ratio (adjusted)	7.50	0.7885	0.0081	0.010	2.791	1.671	7,369	7,179	0.772	0.805
Prevalence of children with one or both parents dead	9.18	0.0410	0.0024	0.058	3.916	1.979	20,751	27,449	0.036	0.046
School attendance of orphans	9.19	*	*	*	*	*	32	26	*	*
School attendance of non-orphans	9.20	0.9770	0.0033	0.003	2.289	1.513	4,389	4,652	0.970	0.984
WOMEN										
Pregnant women	–	0.0210	0.0014	0.068	2.182	1.477	21,981	21,981	0.018	0.024
Early childbearing	5.20	0.1305	0.0088	0.067	1.672	1.293	2,234	2,452	0.113	0.148
Contraceptive prevalence	5.30	0.7927	0.0063	0.008	3.771	1.942	14,977	15,841	0.780	0.805
Unmet need	5.40	0.0686	0.0035	0.051	2.993	1.730	14,977	15,841	0.062	0.076
Antenatal care coverage – at least once by skilled personnel	5.50a	0.9812	0.0039	0.004	2.290	1.513	1,914	2,762	0.973	0.989
Antenatal care coverage – at least four times by any provider	5.50b	0.9342	0.0069	0.007	2.123	1.457	1,914	2,762	0.920	0.948
Skilled attendant at delivery	5.70	0.9960	0.0011	0.001	0.807	0.898	1,914	2,762	0.994	0.998
Institutional deliveries	5.80	0.9956	0.0014	0.001	1.255	1.120	1,914	2,762	0.993	0.998
Caesarean section	5.90	0.3201	0.0136	0.043	2.358	1.536	1,914	2,762	0.293	0.347
Literacy rate among young women	7.10	0.9795	0.0027	0.003	1.855	1.362	5,314	5,114	0.974	0.985
Marriage before age 18	8.70	0.1473	0.0043	0.029	2.876	1.696	18,901	19,319	0.139	0.156

* the number of unweighted observations is less than 50

Table SE.2 Sampling errors: Thailand (continued)

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
Comprehensive knowledge about HIV prevention among young people	9.20	0.5568	0.0111	0.020	2.532	1.591	5,314	5,114	0.535	0.579
Knowledge of mother-to-child transmission of HIV	9.30	0.7402	0.0063	0.008	4.517	2.125	21,981	21,981	0.728	0.753
Accepting attitudes towards people living with HIV	9.40	0.3048	0.0068	0.022	4.696	2.167	21,411	21,483	0.291	0.318
Women who have been tested for HIV and know the results	9.60	0.0851	0.0031	0.037	2.730	1.652	21,981	21,981	0.079	0.091
UNDER-5s										
Underweight prevalence	2.10a	0.0916	0.0053	0.058	3.077	1.754	9,203	9,208	0.081	0.102
Stunting prevalence	2.20a	0.1631	0.0084	0.052	4.701	2.168	9,010	9,018	0.146	0.180
Wasting prevalence	2.30a	0.0671	0.0044	0.065	2.703	1.644	8,874	8,878	0.058	0.076
Exclusive breastfeeding under 6 months	2.60	0.1228	0.0109	0.089	0.653	0.808	906	591	0.101	0.145
Age-appropriate breastfeeding	2.14	0.2087	0.0118	0.056	2.683	1.638	3,739	3,209	0.185	0.232
Tuberculosis immunization coverage	–	0.9751	0.0071	0.007	4.059	2.015	1,817	1,960	0.961	0.989
Received polio immunization	–	0.9092	0.0103	0.011	2.502	1.582	1,825	1,958	0.889	0.930
Received DPT immunization	–	0.8993	0.0113	0.013	2.731	1.653	1,807	1,948	0.877	0.922
Received measles immunization	–	0.9530	0.0080	0.008	2.782	1.668	1,808	1,949	0.937	0.969
Received Hepatitis B immunization	–	0.8360	0.0123	0.015	2.131	1.460	1,803	1,946	0.811	0.860
Diarrhoea in the previous 2 weeks	–	0.0508	0.0037	0.073	2.756	1.660	9,716	9,716	0.043	0.058
Illness with a cough in the previous 2 weeks	–	0.0194	0.0031	0.160	4.951	2.225	9,716	9,716	0.013	0.026
Oral rehydration therapy with continued feeding	3.80	0.5267	0.0344	0.065	2.156	1.468	494	454	0.458	0.596
Antibiotic treatment of suspected pneumonia	3.10	0.4543	0.0293	0.065	0.593	0.770	189	172	0.396	0.513
Support for learning	6.10	0.9274	0.0059	0.006	2.264	1.505	3,982	4,359	0.916	0.939
Attendance in early childhood education	6.70	0.8440	0.0093	0.011	2.880	1.697	3,982	4,359	0.825	0.863
Birth registration	8.10	0.9944	0.0012	0.001	2.527	1.590	9,716	9,716	0.992	0.997

Table SE.3 Sampling errors: Municipal areas

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
HOUSEHOLDS										
Iodized salt consumption	2.16	0.7333	0.0089	0.012	5.230	2.287	10,395	12,860	0.715	0.751
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	4.10	0.9831	0.0036	0.004	10.252	3.202	33,424	12,987	0.976	0.990
Use of improved sanitation	4.30	0.9718	0.0026	0.003	3.221	1.795	33,424	12,987	0.967	0.977
Secondary school net attendance ratio (adjusted)	7.50	0.7997	0.0109	0.014	2.696	1.642	2,907	3,654	0.778	0.821
Prevalence of children with one or both parents dead	9.18	0.0410	0.0031	0.076	3.450	1.857	4,368	7,157	0.035	0.047
School attendance of orphans	9.19	*	*	*	*	*	17	11	*	*
School attendance of non-orphans	9.20	0.9772	0.0057	0.006	3.472	1.863	17	11	0.966	0.989
WOMEN										
Pregnant women	–	0.0212	0.0019	0.091	2.169	1.473	10,072	12,168	0.017	0.025
Early childbearing	5.20	0.1273	0.0117	0.092	1.631	1.277	1,092	1,333	0.104	0.151
Contraceptive prevalence	5.30	0.7821	0.0080	0.010	3.194	1.787	6,396	8,454	0.766	0.798
Unmet need	5.40	0.0713	0.0041	0.058	2.182	1.477	6,396	8,454	0.063	0.080
Antenatal care coverage – at least once by skilled personnel	5.50a	0.9783	0.0060	0.006	2.466	1.570	803	1,474	0.966	0.990
Antenatal care coverage – at least four times by any provider	5.50b	0.9360	0.0099	0.011	2.418	1.555	803	1,474	0.916	0.956
Skilled attendant at delivery	5.70	0.9954	0.0014	0.001	0.601	0.775	803	1,474	0.993	0.998
Institutional deliveries	5.80	0.9950	0.0018	0.002	1.008	1.004	803	1,474	0.991	0.999
Caesarean section	5.90	0.3892	0.0196	0.050	2.370	1.540	803	1,474	0.350	0.428
Literacy rate among young women	7.10	0.9721	0.0047	0.005	2.284	1.511	2,417	2,770	0.963	0.982
Marriage before age 18	8.70	0.1214	0.0055	0.046	3.085	1.756	8,747	10,731	0.110	0.133

* the number of unweighted observations is less than 50

Table SE.3 Sampling errors: Municipal areas (continued)

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
Comprehensive knowledge about HIV prevention among young people	9.20	0.5480	0.0152	0.028	2.598	1.612	2,417	2,770	0.518	0.579
Knowledge of mother-to-child transmission of HIV	9.30	0.7330	0.0090	0.012	5.010	2.238	10,072	12,168	0.715	0.751
Accepting attitudes towards people living with HIV	9.40	0.2531	0.0077	0.030	3.739	1.934	9,886	11,933	0.238	0.268
Women who have been tested for HIV and know the results	9.60	0.0862	0.0045	0.052	3.060	1.749	10,072	12,168	0.077	0.095
UNDER-5s										
Underweight prevalence	2.10a	0.0709	0.0058	0.083	2.415	1.554	3,423	4,652	0.059	0.083
Stunting prevalence	2.20a	0.1330	0.0083	0.063	2.742	1.656	3,358	4,548	0.116	0.150
Wasting prevalence	2.30a	0.0636	0.0057	0.090	2.455	1.567	3,294	4,468	0.052	0.075
Exclusive breastfeeding under 6 months	2.60	0.1224	0.0173	0.141	0.856	0.925	375	310	0.088	0.157
Age-appropriate breastfeeding	2.14	0.1761	0.0139	0.079	2.225	1.492	1,435	1,662	0.148	0.204
Tuberculosis immunization coverage	–	0.9698	0.0103	0.011	3.656	1.912	686	1,013	0.949	0.990
Received polio immunization	–	0.8794	0.0168	0.019	2.700	1.643	684	1,010	0.846	0.913
Received DPT immunization	–	0.8751	0.0180	0.021	2.970	1.723	678	1,002	0.839	0.911
Received measles immunization	–	0.9514	0.0095	0.010	1.935	1.391	679	1,002	0.933	0.970
Received Hepatitis B immunization	–	0.7791	0.0201	0.026	2.344	1.531	678	1,003	0.739	0.819
Diarrhoea in the previous 2 weeks	–	0.0442	0.0058	0.131	3.941	1.985	3,723	5,004	0.033	0.056
Illness with a cough in the previous 2 weeks	–	0.0170	0.0033	0.196	3.316	1.821	3,723	5,004	0.010	0.024
Oral rehydration therapy with continued feeding	3.80	0.5522	0.0171	0.031	0.254	0.503	165	215	0.518	0.586
Antibiotic treatment of suspected pneumonia	3.10	0.5310	0.0680	0.128	1.673	1.293	63	91	0.395	0.667
Support for learning	6.10	0.9177	0.0091	0.010	2.442	1.563	1,516	2,222	0.900	0.936
Attendance in early childhood education	6.70	0.8010	0.0159	0.020	3.532	1.879	1,516	2,222	0.769	0.833
Birth registration	8.10	0.9905	0.0026	0.003	3.466	1.862	3,723	5,004	0.985	0.996

Table SE.4 Sampling errors: Non-municipal areas

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
HOUSEHOLDS										
Iodized salt consumption	2.16	0.6899	0.0118	0.017	7.169	2.678	13,513	11,098	0.666	0.713
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	4.10	0.9605	0.0049	0.005	7.129	2.670	45,609	11,132	0.951	0.970
Use of improved sanitation	4.30	0.9723	0.0041	0.004	6.823	2.612	45,609	11,132	0.964	0.980
Secondary school net attendance ratio (adjusted)	7.50	0.7812	0.0113	0.014	2.613	1.617	4,462	3,525	0.759	0.804
Prevalence of children with one or both parents dead	9.18	0.0409	0.0033	0.081	3.752	1.937	12,813	13,398	0.034	0.048
School attendance of orphans	9.19	*	*	*	*	*	16	15	*	*
School attendance of non-orphans	9.20	0.9769	0.0040	0.004	1.667	1.291	2,703	2,305	0.969	0.985
WOMEN										
Pregnant women	–	0.0208	0.0021	0.100	2.070	1.439	11,909	9,813	0.017	0.025
Early childbearing	5.20	0.1335	0.0132	0.099	1.678	1.295	1,142	1,119	0.107	0.160
Contraceptive prevalence	5.30	0.8007	0.0091	0.011	3.864	1.966	8,581	7,387	0.782	0.819
Unmet need	5.40	0.0666	0.0052	0.078	3.245	1.802	8,581	7,387	0.056	0.077
Antenatal care coverage – at least once by skilled personnel	5.50a	0.9832	0.0052	0.005	2.108	1.452	1,110	1,288	0.973	0.994
Antenatal care coverage – at least four times by any provider	5.50b	0.9329	0.0094	0.010	1.832	1.353	1,110	1,288	0.914	0.952
Skilled attendant at delivery	5.70	0.9964	0.0016	0.002	0.892	0.945	1,110	1,288	0.993	1.000
Institutional deliveries	5.80	0.9960	0.0020	0.002	1.346	1.160	1,110	1,288	0.992	1.000
Caesarean section	5.90	0.2701	0.0180	0.067	2.119	1.456	1,110	1,288	0.234	0.306
Literacy rate among young women	7.10	0.9857	0.0030	0.003	1.475	1.214	2,897	2,344	0.980	0.992
Marriage before age 18	8.70	0.1695	0.0064	0.038	2.469	1.571	10,153	8,588	0.157	0.182

* the number of unweighted observations is less than 50

Table SE.4 Sampling errors: Non-municipal areas (continued)

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
Comprehensive knowledge about HIV prevention among young people	9.20	0.5641	0.0158	0.028	2.367	1.539	2,897	2,344	0.533	0.596
Knowledge of mother-to-child transmission of HIV	9.30	0.7464	0.0088	0.012	4.007	2.002	11,909	9,813	0.729	0.764
Accepting attitudes towards people living with HIV	9.40	0.3493	0.0104	0.030	4.581	2.140	11,525	9,550	0.328	0.370
Women who have been tested for HIV and know the results	9.60	0.0843	0.0043	0.051	2.393	1.547	11,909	9,813	0.076	0.093
UNDER-5s										
Underweight prevalence	2.10a	0.1039	0.0075	0.073	2.778	1.667	5,780	4,556	0.089	0.119
Stunting prevalence	2.20a	0.1810	0.0123	0.068	4.569	2.137	5,653	4,470	0.156	0.206
Wasting prevalence	2.30a	0.0692	0.0061	0.088	2.537	1.593	5,580	4,410	0.057	0.081
Exclusive breastfeeding under 6 months	2.60	0.1231	0.0141	0.114	0.515	0.718	531	281	0.095	0.151
Age-appropriate breastfeeding	2.14	0.2291	0.0166	0.072	2.413	1.553	2,304	1,547	0.196	0.262
Tuberculosis immunization coverage	–	0.9783	0.0096	0.010	4.074	2.019	1,131	947	0.959	0.997
Received polio immunization	–	0.9271	0.0129	0.014	2.333	1.528	1,140	948	0.901	0.953
Received DPT immunization	–	0.9139	0.0144	0.016	2.502	1.582	1,128	946	0.885	0.943
Received measles immunization	–	0.9539	0.0115	0.012	2.840	1.685	1,129	947	0.931	0.977
Received Hepatitis B immunization	–	0.8702	0.0154	0.018	1.980	1.407	1,125	943	0.839	0.901
Diarrhoea in the previous 2 weeks	–	0.0549	0.0049	0.088	2.142	1.464	5,993	4,712	0.045	0.065
Illness with a cough in the previous 2 weeks	–	0.0209	0.0046	0.219	4.843	2.201	5,993	4,712	0.012	0.030
Oral rehydration therapy with continued feeding	3.80	0.5140	0.0510	0.099	2.478	1.574	329	239	0.412	0.616
Antibiotic treatment of suspected pneumonia	3.10	0.4155	0.0196	0.047	0.126	0.355	125	81	0.376	0.455
Support for learning	6.10	0.9334	0.0077	0.008	2.034	1.426	2,466	2,137	0.918	0.949
Attendance in early childhood education	6.70	0.8705	0.0109	0.013	2.271	1.507	2,466	2,137	0.849	0.892
Birth registration	8.10	0.9968	0.0011	0.001	1.869	1.367	5,993	4,712	0.995	0.999

Table SE.5 Sampling errors: Bangkok

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
HOUSEHOLDS										
Iodized salt consumption	2.16	0.8206	0.0132	0.016	2.853	1.689	2,598	2,413	0.794	0.847
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	4.10	1.0000	0.0000	0.000	NA	NA	8,862	2,480	1.000	1.000
Use of improved sanitation	4.30	0.9494	0.0076	0.008	2.972	1.724	8,862	2,480	0.934	0.965
Secondary school net attendance ratio (adjusted)	7.50	0.8201	0.0227	0.028	2.662	1.632	732	763	0.775	0.866
Prevalence of children with one or both parents dead	9.18	0.0283	0.0069	0.244	4.533	2.129	1,851	2,604	0.014	0.042
School attendance of orphans	9.19	*	*	*	*	*	5	3	*	*
School attendance of non-orphans	9.20	0.9912	0.0053	0.005	1.719	1.311	424	530	0.981	1.000
WOMEN										
Pregnant women	–	0.0245	0.0044	0.179	2.121	1.457	2,881	2,649	0.016	0.033
Early childbearing	5.20	0.1221	0.0235	0.192	1.617	1.272	356	315	0.075	0.169
Contraceptive prevalence	5.30	0.7574	0.0175	0.023	2.831	1.683	1,666	1,700	0.722	0.792
Unmet need	5.40	0.0818	0.0090	0.110	1.817	1.348	1,666	1,700	0.064	0.100
Antenatal care coverage – at least once by skilled personnel	5.50a	0.9780	0.0128	0.013	2.079	1.442	194	274	0.952	1.000
Antenatal care coverage – at least four times by any provider	5.50b	0.9322	0.0212	0.023	1.942	1.393	194	274	0.890	0.975
Skilled attendant at delivery	5.70	0.9968	0.0023	0.002	0.452	0.672	194	274	0.992	1.000
Institutional deliveries	5.80	0.9985	0.0015	0.002	0.419	0.647	194	274	0.995	1.000
Caesarean section	5.90	0.4259	0.0465	0.109	2.415	1.554	194	274	0.333	0.519
Literacy rate among young women	7.10	0.9699	0.0093	0.010	1.900	1.378	740	638	0.951	0.989
Marriage before age 18	8.70	0.1163	0.0124	0.107	3.497	1.870	2,497	2,326	0.091	0.141

* the number of unweighted observations is less than 50

Table SE.5 Sampling errors: Bangkok (continued)

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
Comprehensive knowledge about HIV prevention among young people	9.20	0.5108	0.0293	0.057	2.189	1.480	740	638	0.452	0.569
Knowledge of mother-to-child transmission of HIV	9.30	0.6382	0.0227	0.036	5.893	2.428	2,881	2,649	0.593	0.684
Accepting attitudes towards people living with HIV	9.40	0.1600	0.0125	0.078	3.081	1.755	2,861	2,633	0.135	0.185
Women who have been tested for HIV and know the results	9.60	0.0827	0.0079	0.095	2.157	1.469	2,881	2,649	0.067	0.098
UNDER-5s										
Underweight prevalence	2.10a	0.0785	0.0147	0.187	2.074	1.440	676	696	0.049	0.108
Stunting prevalence	2.20a	0.1625	0.0246	0.151	2.983	1.727	659	672	0.113	0.212
Wasting prevalence	2.30a	0.0669	0.0143	0.214	2.116	1.455	639	648	0.038	0.095
Exclusive breastfeeding under 6 months	2.60	0.0823	0.0393	0.477	1.347	1.161	121	67	0.004	0.161
Age-appropriate breastfeeding	2.14	0.1092	0.0266	0.244	2.115	1.454	321	292	0.056	0.162
Tuberculosis immunization coverage	–	0.9769	0.0048	0.005	0.180	0.424	145	178	0.967	0.986
Received polio immunization	–	0.7884	0.0310	0.039	1.001	1.001	143	175	0.726	0.850
Received DPT immunization	–	0.7917	0.0314	0.040	1.030	1.015	143	173	0.729	0.855
Received measles immunization	–	0.9130	0.0162	0.018	0.564	0.751	141	171	0.881	0.945
Received Hepatitis B immunization	–	0.6645	0.0259	0.039	0.513	0.716	140	171	0.613	0.716
Diarrhoea in the previous 2 weeks	–	0.0354	0.0092	0.260	2.079	1.442	833	841	0.017	0.054
Illness with a cough in the previous 2 weeks	–	0.0072	0.0027	0.369	0.830	0.911	833	841	0.002	0.013
Oral rehydration therapy with continued feeding	3.80	*	*	*	*	*	29	25	*	*
Antibiotic treatment of suspected pneumonia	3.10	*	*	*	*	*	6	10	*	*
Support for learning	6.10	0.9350	0.0238	0.025	3.458	1.860	343	373	0.887	0.983
Attendance in early childhood education	6.70	0.6628	0.0406	0.061	2.746	1.657	343	373	0.582	0.744
Birth registration	8.10	0.9986	0.0010	0.001	0.615	0.784	833	841	0.997	1.000

* the number of unweighted observations is less than 50

Table SE.6 Sampling errors: Central

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
HOUSEHOLDS										
Iodized salt consumption	2.16	0.7985	0.0118	0.015	4.498	2.121	5,993	5,166	0.775	0.822
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	4.10	0.9859	0.0033	0.003	4.042	2.010	19,568	5,190	0.979	0.992
Use of improved sanitation	4.30	0.9854	0.0024	0.002	2.145	1.464	19,568	5,190	0.981	0.990
Secondary school net attendance ratio (adjusted)	7.50	0.7745	0.0154	0.020	2.003	1.415	1,706	1,469	0.744	0.805
Prevalence of children with one or both parents dead	9.18	0.0443	0.0045	0.102	2.755	1.660	4,794	5,655	0.035	0.053
School attendance of orphans	9.19	*	*	*	*	*	14	8	*	*
School attendance of non-orphans	9.20	0.9765	0.0067	0.007	1.848	1.359	1,036	935	0.963	0.990
WOMEN										
Pregnant women	–	0.0167	0.0022	0.132	1.506	1.227	5,851	5,066	0.012	0.021
Early childbearing	5.20	0.1433	0.0179	0.125	1.629	1.276	627	622	0.107	0.179
Contraceptive prevalence	5.30	0.8133	0.0109	0.013	2.755	1.660	3,868	3,517	0.791	0.835
Unmet need	5.40	0.0569	0.0050	0.088	1.633	1.278	3,868	3,517	0.047	0.067
Antenatal care coverage – at least once by skilled personnel	5.50a	0.9729	0.0096	0.010	2.189	1.479	520	626	0.954	0.992
Antenatal care coverage – at least four times by any provider	5.50b	0.9491	0.0115	0.012	1.718	1.311	520	626	0.926	0.972
Skilled attendant at delivery	5.70	0.9989	0.0011	0.001	0.680	0.824	520	626	0.997	1.000
Institutional deliveries	5.80	0.9989	0.0011	0.001	0.680	0.824	520	626	0.997	1.000
Caesarean section	5.90	0.3859	0.0258	0.067	1.762	1.327	520	626	0.334	0.438
Literacy rate among young women	7.10	0.9746	0.0062	0.006	1.876	1.370	1,375	1,195	0.962	0.987
Marriage before age 18	8.70	0.1215	0.0070	0.058	2.055	1.433	5,104	4,493	0.108	0.135

* the number of unweighted observations is less than 50

Table SE.6 Sampling errors: Central (continued)

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
Comprehensive knowledge about HIV prevention among young people	9.20	0.6149	0.0232	0.038	2.719	1.649	1,375	1,195	0.568	0.661
Knowledge of mother-to-child transmission of HIV	9.30	0.8073	0.0110	0.014	3.964	1.991	5,851	5,066	0.785	0.829
Accepting attitudes towards people living with HIV	9.40	0.2379	0.0139	0.058	5.312	2.305	5,771	4,986	0.210	0.266
Women who have been tested for HIV and know the results	9.60	0.0891	0.0064	0.072	2.576	1.605	5,851	5,066	0.076	0.102
UNDER-5s										
Underweight prevalence	2.10a	0.0732	0.0096	0.131	2.620	1.619	2,137	1,928	0.054	0.092
Stunting prevalence	2.20a	0.1361	0.0120	0.088	2.345	1.531	2,119	1,911	0.112	0.160
Wasting prevalence	2.30a	0.0652	0.0078	0.120	1.890	1.375	2,077	1,875	0.050	0.081
Exclusive breastfeeding under 6 months	2.60	0.0786	0.0077	0.098	0.109	0.331	215	134	0.063	0.094
Age-appropriate breastfeeding	2.14	0.1792	0.0199	0.111	1.803	1.343	858	668	0.139	0.219
Tuberculosis immunization coverage	-	0.9771	0.0143	0.015	3.624	1.904	444	399	0.948	1.000
Received polio immunization	-	0.9012	0.0253	0.028	2.857	1.690	444	399	0.851	0.952
Received DPT immunization	-	0.8785	0.0284	0.032	2.984	1.727	440	396	0.822	0.935
Received measles immunization	-	0.9561	0.0171	0.018	2.766	1.663	443	398	0.922	0.990
Received Hepatitis B immunization	-	0.8032	0.0308	0.038	2.381	1.543	441	397	0.742	0.865
Diarrhoea in the previous 2 weeks	-	0.0443	0.0087	0.195	3.597	1.897	2,268	2,036	0.027	0.062
Illness with a cough in the previous 2 weeks	-	0.0215	0.0057	0.264	3.134	1.770	2,268	2,036	0.010	0.033
Oral rehydration therapy with continued feeding	3.80	0.5666	0.0355	0.063	0.415	0.644	100	82	0.496	0.638
Antibiotic treatment of suspected pneumonia	3.10	*	*	*	*	*	49	44	*	*
Support for learning	6.10	0.9272	0.0107	0.012	1.513	1.230	906	887	0.906	0.949
Attendance in early childhood education	6.70	0.7779	0.0234	0.030	2.818	1.679	906	887	0.731	0.825
Birth registration	8.10	0.9904	0.0035	0.004	2.684	1.638	2,268	2,036	0.983	0.997

* the number of unweighted observations is less than 50

Table SE.7 Sampling errors: North

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
HOUSEHOLDS										
Iodized salt consumption	2.16	0.7729	0.0114	0.015	4.086	2.022	4,196	5,512	0.750	0.796
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	4.10	0.9459	0.0151	0.016	24.628	4.963	12,700	5,532	0.916	0.976
Use of improved sanitation	4.30	0.9751	0.0044	0.005	4.450	2.109	12,700	5,532	0.966	0.984
Secondary school net attendance ratio (adjusted)	7.50	0.8065	0.0156	0.019	2.173	1.474	1,158	1,397	0.775	0.838
Prevalence of children with one or both parents dead	9.18	0.0518	0.0051	0.098	2.985	1.728	3,192	5,634	0.042	0.062
School attendance of orphans	9.19	*	*	*	*	*	1	2	*	*
School attendance of non-orphans	9.20	0.9856	0.0053	0.005	1.585	1.259	630	808	0.975	0.996
WOMEN										
Pregnant women	–	0.0199	0.0034	0.171	2.608	1.615	3,258	4,399	0.013	0.027
Early childbearing	5.20	0.1500	0.0193	0.129	1.327	1.152	296	456	0.111	0.189
Contraceptive prevalence	5.30	0.8145	0.0142	0.017	4.386	2.094	2,294	3,265	0.786	0.843
Unmet need	5.40	0.0571	0.0085	0.149	4.390	2.095	2,294	3,265	0.040	0.074
Antenatal care coverage – at least once by skilled personnel	5.50a	0.9769	0.0101	0.010	2.464	1.570	266	541	0.957	0.997
Antenatal care coverage – at least four times by any provider	5.50b	0.9162	0.0201	0.022	2.841	1.685	266	541	0.876	0.956
Skilled attendant at delivery	5.70	0.9901	0.0049	0.005	1.345	1.160	266	541	0.980	1.000
Institutional deliveries	5.80	0.9968	0.0023	0.002	0.942	0.970	266	541	0.992	1.000
Caesarean section	5.90	0.3278	0.0311	0.095	2.375	1.541	266	541	0.266	0.390
Literacy rate among young women	7.10	0.9769	0.0080	0.008	2.808	1.676	750	981	0.961	0.993
Marriage before age 18	8.70	0.1461	0.0099	0.068	3.044	1.745	2,805	3,874	0.126	0.166

* the number of unweighted observations is less than 50

Table SE.7 Sampling errors: North (continued)

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
Comprehensive knowledge about HIV prevention among young people	9.20	0.5983	0.0244	0.041	2.427	1.558	750	981	0.550	0.647
Knowledge of mother-to-child transmission of HIV	9.30	0.7293	0.0116	0.016	2.976	1.725	3,258	4,399	0.706	0.752
Accepting attitudes towards people living with HIV	9.40	0.4806	0.0164	0.034	4.586	2.142	3,151	4,267	0.448	0.513
Women who have been tested for HIV and know the results	9.60	0.1002	0.0079	0.079	3.071	1.752	3,258	4,399	0.084	0.116
UNDER-5s										
Underweight prevalence	2.10a	0.0783	0.0082	0.105	1.956	1.398	1,457	2,093	0.062	0.095
Stunting prevalence	2.20a	0.1380	0.0131	0.095	2.974	1.725	1,434	2,063	0.112	0.164
Wasting prevalence	2.30a	0.0612	0.0077	0.127	2.130	1.459	1,418	2,039	0.046	0.077
Exclusive breastfeeding under 6 months	2.60	0.1958	0.0132	0.067	0.124	0.352	138	114	0.170	0.222
Age-appropriate breastfeeding	2.14	0.2130	0.0240	0.113	2.322	1.524	548	674	0.165	0.261
Tuberculosis immunization coverage	–	0.9915	0.0045	0.005	1.018	1.009	279	427	0.983	1.000
Received polio immunization	–	0.9676	0.0086	0.009	1.001	1.000	281	427	0.950	0.985
Received DPT immunization	–	0.9654	0.0086	0.009	0.949	0.974	280	427	0.948	0.983
Received measles immunization	–	0.9787	0.0133	0.014	3.576	1.891	279	425	0.952	1.000
Received Hepatitis B immunization	–	0.9090	0.0197	0.022	1.995	1.413	278	425	0.870	0.948
Diarrhoea in the previous 2 weeks	–	0.0642	0.0092	0.143	3.003	1.733	1,493	2,150	0.046	0.083
Illness with a cough in the previous 2 weeks	–	0.0152	0.0039	0.254	2.149	1.466	1,493	2,150	0.007	0.023
Oral rehydration therapy with continued feeding	3.80	0.4247	0.0777	0.183	3.013	1.736	96	123	0.269	0.580
Antibiotic treatment of suspected pneumonia	3.10	*	*	*	*	*	23	41	*	*
Support for learning	6.10	0.9073	0.0129	0.014	1.980	1.407	643	996	0.881	0.933
Attendance in early childhood education	6.70	0.9094	0.0153	0.017	2.822	1.680	643	996	0.879	0.940
Birth registration	8.10	0.9902	0.0044	0.004	4.202	2.050	1,493	2,150	0.981	0.999

* the number of unweighted observations is less than 50

Table SE.8 Sampling errors: Northeast

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
HOUSEHOLDS										
Iodized salt consumption	2.16	0.5401	0.0175	0.032	6.923	2.631	8,144	5,614	0.505	0.575
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	4.10	0.9879	0.0040	0.004	7.534	2.745	27,671	5,631	0.980	0.996
Use of improved sanitation	4.30	0.9692	0.0062	0.006	7.360	2.713	27,671	5,631	0.957	0.982
Secondary school net attendance ratio (adjusted)	7.50	0.8075	0.0159	0.020	2.982	1.727	2,800	1,833	0.776	0.839
Prevalence of children with one or both parents dead	9.18	0.2286	0.0129	0.057	3.500	1.871	4,642	3,683	0.203	0.254
School attendance of orphans	9.19	*	*	*	*	*	10	10	*	*
School attendance of non-orphans	9.20	0.7983	0.0000	0.000	0.000	0.000	10	10	0.798	0.798
WOMEN										
Pregnant women	–	0.0204	0.0031	0.151	2.303	1.518	7,022	4,848	0.014	0.027
Early childbearing	5.20	0.1456	0.0182	0.125	1.243	1.115	576	469	0.109	0.182
Contraceptive prevalence	5.30	0.8167	0.0130	0.016	4.194	2.048	5,131	3,705	0.791	0.843
Unmet need	5.40	0.0554	0.0073	0.133	3.812	1.952	5,131	3,705	0.041	0.070
Antenatal care coverage – at least once by skilled personnel	5.50a	0.9888	0.0064	0.007	2.287	1.512	611	613	0.976	1.000
Antenatal care coverage – at least four times by any provider	5.50b	0.9268	0.0147	0.016	1.943	1.394	611	613	0.897	0.956
Skilled attendant at delivery	5.70	0.9980	0.0014	0.001	0.614	0.784	611	613	0.995	1.000
Institutional deliveries	5.80	0.9964	0.0023	0.002	0.886	0.941	611	613	0.992	1.000
Caesarean section	5.90	0.2390	0.0253	0.106	2.149	1.466	611	613	0.188	0.290
Literacy rate among young women	7.10	0.9913	0.0031	0.003	1.214	1.102	1,670	1,110	0.985	0.997
Marriage before age 18	8.70	0.1912	0.0093	0.049	2.356	1.535	5,928	4,207	0.173	0.210

* the number of unweighted observations is less than 50

Table SE.8 Sampling errors: Northeast (continued)

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
Comprehensive knowledge about HIV prevention among young people	9.20	0.5602	0.0208	0.037	1.940	1.393	1,670	1,110	0.519	0.602
Knowledge of mother-to-child transmission of HIV	9.30	0.7488	0.0124	0.017	3.982	1.996	7,022	4,848	0.724	0.774
Accepting attitudes towards people living with HIV	9.40	0.3688	0.0133	0.036	3.591	1.895	6,769	4,740	0.342	0.395
Women who have been tested for HIV and know the results	9.60	0.0811	0.0062	0.076	2.488	1.577	7,022	4,848	0.069	0.093
UNDER-5s										
Underweight prevalence	2.10a	0.1071	0.0107	0.100	2.862	1.692	3,543	2,396	0.086	0.129
Stunting prevalence	2.20a	0.1891	0.0186	0.099	5.239	2.289	3,433	2,315	0.152	0.226
Wasting prevalence	2.30a	0.0649	0.0086	0.132	2.787	1.670	3,407	2,289	0.048	0.082
Exclusive breastfeeding under 6 months	2.60	0.1376	0.0244	0.177	0.681	0.825	299	137	0.089	0.186
Age-appropriate breastfeeding	2.14	0.2322	0.0237	0.102	2.552	1.597	1,439	809	0.185	0.280
Tuberculosis immunization coverage	–	0.9658	0.0168	0.017	4.250	2.061	653	499	0.932	0.999
Received polio immunization	–	0.9177	0.0201	0.022	2.665	1.632	661	500	0.878	0.958
Received DPT immunization	–	0.9110	0.0222	0.024	3.016	1.737	650	498	0.867	0.955
Received measles immunization	–	0.9578	0.0169	0.018	3.519	1.876	650	498	0.924	0.992
Received Hepatitis B immunization	–	0.8659	0.0227	0.026	2.212	1.487	650	498	0.820	0.911
Diarrhoea in the previous 2 weeks	–	0.0488	0.0061	0.125	1.984	1.408	3,672	2,490	0.037	0.061
Illness with a cough in the previous 2 weeks	–	0.0256	0.0069	0.272	4.822	2.196	3,672	2,490	0.012	0.039
Oral rehydration therapy with continued feeding	3.80	0.5576	0.0822	0.147	2.820	1.679	179	104	0.393	0.722
Antibiotic treatment of suspected pneumonia	3.10	0.4184	0.0236	0.056	0.139	0.373	94	62	0.371	0.466
Support for learning	6.10	0.9340	0.0108	0.012	2.103	1.450	1,487	1,116	0.912	0.956
Attendance in early childhood education	6.70	0.9100	0.0125	0.014	2.133	1.460	1,487	1,116	0.885	0.935
Birth registration	8.10	0.9995	0.0003	0.000	0.423	0.650	3,672	2,490	0.999	1.000

Table SE.9 Sampling errors: South

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
HOUSEHOLDS										
Iodized salt consumption	2.16	0.8012	0.0103	0.013	3.474	1.864	2,976	5,253	0.781	0.822
HOUSEHOLD MEMBERS										
Use of improved drinking water sources	4.10	0.8955	0.0098	0.011	5.438	2.332	10,232	5,286	0.876	0.915
Use of improved sanitation	4.30	0.9702	0.0045	0.005	3.775	1.943	10,232	5,286	0.961	0.979
Secondary school net attendance ratio (adjusted)	7.50	0.7130	0.0156	0.022	2.030	1.425	973	1,717	0.682	0.744
Prevalence of children with one or both parents dead	9.18	0.0438	0.0055	0.126	4.708	2.170	2,932	6,503	0.033	0.055
School attendance of orphans	9.19	*	*	*	*	*	2	3	*	*
School attendance of non-orphans	9.20	0.9650	0.0059	0.006	1.271	1.127	656	1,222	0.953	0.977
WOMEN										
Pregnant women	–	0.0284	0.0027	0.096	1.343	1.159	2,968	5,019	0.023	0.034
Early childbearing	5.20	0.0790	0.0147	0.186	1.746	1.321	379	590	0.050	0.108
Contraceptive prevalence	5.30	0.6969	0.0120	0.017	2.472	1.572	2,018	3,654	0.673	0.721
Unmet need	5.40	0.1270	0.0085	0.067	2.367	1.539	2,018	3,654	0.110	0.144
Antenatal care coverage – at least once by skilled personnel	5.50a	0.9854	0.0042	0.004	0.853	0.924	323	708	0.977	0.994
Antenatal care coverage – at least four times by any provider	5.50b	0.9400	0.0110	0.012	1.514	1.230	323	708	0.918	0.962
Skilled attendant at delivery	5.70	0.9918	0.0035	0.004	1.059	1.029	323	708	0.985	0.999
Institutional deliveries	5.80	0.9860	0.0064	0.007	2.109	1.452	323	708	0.973	0.999
Caesarean section	5.90	0.2975	0.0282	0.095	2.691	1.640	323	708	0.241	0.354
Literacy rate among young women	7.10	0.9747	0.0057	0.006	1.575	1.255	780	1,190	0.963	0.986
Marriage before age 18	8.70	0.1284	0.0075	0.058	2.225	1.492	2,567	4,419	0.113	0.143

* the number of unweighted observations is less than 50

Table SE.9 Sampling errors: South (continued)

Standard errors, coefficients of variation, design effects (*deff*), square root of design effects (*deft*) and confidence intervals for selected indicators, Thailand, 2012

	MICS Indicator	Value (*r*)	Standard error (*se*)	Coefficient of variation (*se/r*)	Design effect (*deff*)	Square root of design effect (*deft*)	Weighted count	Unweighted count	Confidence limits	
									r - 2se	*r + 2se*
Comprehensive knowledge about HIV prevention among young people	9.20	0.4508	0.0292	0.065	4.099	2.024	780	1,190	0.392	0.509
Knowledge of mother-to-child transmission of HIV	9.30	0.6986	0.0137	0.020	4.457	2.111	2,968	5,019	0.671	0.726
Accepting attitudes towards people living with HIV	9.40	0.2396	0.0133	0.056	4.742	2.178	2,860	4,857	0.213	0.266
Women who have been tested for HIV and know the results	9.60	0.0727	0.0050	0.069	1.868	1.367	2,968	5,019	0.063	0.083
UNDER-5s										
Underweight prevalence	2.10a	0.1005	0.0100	0.099	2.294	1.515	1,391	2,095	0.081	0.120
Stunting prevalence	2.20a	0.1665	0.0123	0.074	2.249	1.500	1,364	2,057	0.142	0.191
Wasting prevalence	2.30a	0.0820	0.0098	0.119	2.561	1.600	1,334	2,027	0.063	0.102
Exclusive breastfeeding under 6 months	2.60	0.1221	0.0263	0.215	0.891	0.944	133	139	0.070	0.175
Age-appropriate breastfeeding	2.14	0.2457	0.0205	0.083	1.728	1.315	574	766	0.205	0.287
Tuberculosis immunization coverage	–	0.9764	0.0041	0.004	0.333	0.577	295	457	0.968	0.985
Received polio immunization	–	0.9054	0.0158	0.017	1.330	1.153	295	457	0.874	0.937
Received DPT immunization	–	0.8941	0.0161	0.018	1.246	1.116	293	454	0.862	0.926
Received measles immunization	–	0.9323	0.0121	0.013	1.064	1.031	295	457	0.908	0.957
Received Hepatitis B immunization	–	0.8314	0.0213	0.026	1.472	1.213	294	455	0.789	0.874
Diarrhoea in the previous 2 weeks	–	0.0611	0.0085	0.139	2.770	1.664	1,450	2,199	0.044	0.078
Illness with a cough in the previous 2 weeks	–	0.0119	0.0042	0.353	3.293	1.815	1,450	2,199	0.003	0.020
Oral rehydration therapy with continued feeding	3.80	0.5041	0.0343	0.068	0.560	0.749	89	120	0.436	0.573
Antibiotic treatment of suspected pneumonia	3.10	*	*	*	*	*	17	15	*	*
Support for learning	6.10	0.9288	0.0127	0.014	2.421	1.556	603	987	0.903	0.954
Attendance in early childhood education	6.70	0.8140	0.0198	0.024	2.554	1.598	603	987	0.774	0.854
Birth registration	8.10	0.9897	0.0035	0.004	2.717	1.648	1,450	2,199	0.983	0.997

* the number of unweighted observations is less than 50

Appendix D. Data Quality Tables

Table DQ.1 Age distribution of household population

Single-year age distribution of household population by sex, Thailand, 2012

	Males		Females			Males		Females	
	Number	Per cent	Number	Per cent		Number	Per cent	Number	Per cent
0	562	1.5	516	1.2	36	568	1.5	605	1.5
1	480	1.3	512	1.2	37	541	1.4	634	1.5
2	543	1.4	529	1.3	38	621	1.7	610	1.5
3	484	1.3	555	1.3	39	556	1.5	599	1.4
4	551	1.5	540	1.3	40	592	1.6	683	1.6
5	614	1.6	566	1.4	41	555	1.5	664	1.6
6	524	1.4	554	1.3	42	591	1.6	679	1.6
7	610	1.6	581	1.4	43	620	1.7	650	1.6
8	568	1.5	621	1.5	44	674	1.8	753	1.8
9	531	1.4	600	1.4	45	641	1.7	698	1.7
10	590	1.6	583	1.4	46	605	1.6	730	1.8
11	576	1.5	570	1.4	47	674	1.8	670	1.6
12	611	1.6	569	1.4	48	617	1.6	740	1.8
13	632	1.7	664	1.6	49	660	1.8	627	1.5
14	642	1.7	587	1.4	50	639	1.7	736	1.8
15	688	1.8	632	1.5	51	555	1.5	706	1.7
16	529	1.4	581	1.4	52	634	1.7	712	1.7
17	597	1.6	658	1.6	53	570	1.5	617	1.5
18	553	1.5	505	1.2	54	457	1.2	549	1.3
19	414	1.1	413	1.0	55	543	1.4	579	1.4
20	441	1.2	434	1.0	56	532	1.4	597	1.4
21	421	1.1	378	0.9	57	472	1.3	568	1.4
22	374	1.0	412	1.0	58	474	1.3	481	1.2
23	403	1.1	401	1.0	59	452	1.2	445	1.1
24	351	0.9	390	0.9	60	440	1.2	504	1.2
25	431	1.1	454	1.1	61	304	0.8	456	1.1
26	424	1.1	418	1.0	62	395	1.1	484	1.2
27	410	1.1	392	0.9	63	317	0.8	443	1.1
28	418	1.1	494	1.2	64	330	0.9	390	0.9
29	466	1.2	506	1.2	65	292	0.8	403	1.0
30	554	1.5	585	1.4	66	234	0.6	325	0.8
31	448	1.2	516	1.2	67	265	0.7	282	0.7
32	499	1.3	548	1.3	68	267	0.7	296	0.7
33	530	1.4	559	1.3	69	195	0.5	304	0.7
34	484	1.3	596	1.4	70	239	0.6	310	0.7
35	569	1.5	656	1.6	71	201	0.5	238	0.6

Table DQ.1 Age distribution of household population (continued)

Single-year age distribution of household population by sex, Thailand, 2012

	Males		Females			Males		Females	
	Number	Per cent	Number	Per cent		Number	Per cent	Number	Per cent
72	202	0.5	273	0.7	81	67	0.2	109	0.3
73	172	0.5	225	0.5	82	56	0.1	105	0.3
74	172	0.5	243	0.6	83	59	0.2	79	0.2
75	139	0.4	189	0.5	84	71	0.2	102	0.2
76	155	0.4	225	0.5	85+	226	0.6	391	0.9
77	137	0.4	170	0.4					
78	124	0.3	188	0.5	DK/	0	0.0	0	0.0
79	90	0.2	148	0.4	Missing				
80	82	0.2	150	0.4	**Total**	**37,597**	**100.0**	**41,438**	**100.0**

Typical data quality issues: Heaping on ages with digits ending with 0 and 5. If age reporting is good, the distribution should be smooth. The table should also provide insights into over-reporting or under-reporting at certain age groups or intervals, and the extent of missing information on age. Deficits at ages 4, 15, and 49, excesses at ages 5 and 6, 14, and 50 might be indicative of out-transference of ages to avoid administering individual questionnaires.

Table DQ.2 Age distribution of eligible and interviewed women

Household population of women aged 10-54, interviewed women aged 15-49, and percentage of eligible women who were interviewed by five-year age groups, Thailand, 2012

Age	Household population of women aged 10-54 years	Interviewed women aged 15-49 years		Percentage of eligible women interviewed (Completion rate)
	Number	Number	Per cent	
10-14	2,974	NA*	NA*	NA*
15-19	2,788	2,751	14.0	98.7
20-24	2,014	1,992	10.2	98.9
25-29	2,263	2,223	11.3	98.2
30-34	2,804	2,777	14.2	99.1
35-39	3,104	3,067	15.6	98.8
40-44	3,428	3,405	17.4	99.3
45-49	3,464	3,403	17.3	98.3
50-54	3,320	NA*	NA*	NA*
Total (15-49)	**19,865**	**19,618**	**100.0**	**98.8**
Ratio of 50-54 to 45-49		0.96		

* NA = Not applicable

Typical data quality issues: In countries with growing populations, the percentages in each age group of women should decline with age (the second column). The last column shows whether the survey was equally effective in interviewing women in all age groups – typically, some surveys fail to interview the younger women, sometimes because of problems in sample implementation, sometimes because of interviewers' reluctance to interview young women. These figures should be high, preferably over 95 per cent, or at least 90 per cent, and should not vary much by age. The distribution in the 3rd column should be similar to the distribution in the 2nd Column.

If completion rates vary greatly by age and fall below 85 per cent in two or three groups, say for groups aged 15 to 24, it may be necessary to re-calculate sample weights by taking age-specific non-response into account. Failure to do so may lead to biased estimates of indicators which typically vary by age of women.

Weights used for both household population of women and interviewed women are household weights. Age is based on the household schedule.

Table DQ.3 Age distribution of under-5s in household and under-5 questionnaires

Household population of children aged 0-7, children aged 0-4 whose mothers/caretakers were interviewed, and percentage of under-5 children whose mothers/caretakers were interviewed, by single ages, Thailand, 2012

Age	Household population of women aged 10-54 years	Interviewed women aged 15-49 years		Percentage of eligible women interviewed (Completion rate)
	Number	Number	Per cent	
0	1,078	1,075	20.5	99.7
1	993	991	18.9	99.9
2	1,072	1,070	20.4	99.8
3	1,038	1,034	19.7	99.5
4	1,091	1,084	20.6	99.3
5	1,180	NA*	NA*	NA*
6	1,078	NA*	NA*	NA*
7	1,191	NA*	NA*	NA*
Total (0-4)	**5,272**	**5,253**	**100.0**	**99.6**
Ratio of 5 to 4		1.08		

* NA = Not applicable

Typical data quality issues: In countries with growing populations, the numbers of children at each age (the second column) should be declining. The table is intended to provide information on the efficiency of the survey in collecting information on under-5s. Distribution of children by age in the household questionnaire should be smooth, with little or no heaping on age 5. Heaping on age 5 may be indicative of out-transference of children aged 0-4 to outside the eligibility range. Percentages in the last column (completion rates) should be over 90, preferably over 95.

Weights used for both household population of children and under-5 interviews are household weights. Age is based on the household schedule.

Table DQ.4 Women's completion rates by socio-economic characteristics of households

Household population of women aged 15-49, interviewed women aged 15-49, and percentage of eligible women who were interviewed, by selected social and economic characteristics of the household, Thailand, 2012

	Household population of women aged 10-54 years		Interviewed women aged 15-49 years		Percentage of eligible women interviewed (Completion rate)
	Number	Per cent	Number	Per cent	
Region					
Bangkok	2,607	13.1	2,543	13.0	97.5
Central	5,286	26.6	5,251	26.8	99.3
North	2,945	14.8	2,919	14.9	99.1
Northeast	6,346	31.9	6,256	31.9	98.6
South	2,682	13.5	2,650	13.5	98.8
Area					
Municipal	9,107	45.8	8,965	45.7	98.4
Non-municipal	10,758	54.2	10,654	54.3	99.0
Household size					
1-3	7,775	39.1	7,678	39.1	98.8
4-6	10,335	52.0	10,208	52.0	98.8
7+	1,755	8.8	1,732	8.8	98.7
Education of household head					
None	886	4.5	870	4.4	98.1
Primary	11,485	57.8	11,340	57.8	98.7
Secondary	4,466	22.5	4,437	22.6	99.4
Higher	3,003	15.1	2,946	15.0	98.1
Missing/DK	25	0.1	25	0.1	99.5
Wealth index quintiles					
Poorest	3,030	15.3	2,981	15.2	98.4
Second	3,599	18.1	3,578	18.2	99.4
Middle	4,034	20.3	3,997	20.4	99.1
Fourth	4,549	22.9	4,493	22.9	98.8
Richest	4,652	23.4	4,569	23.3	98.2
Ethnicity of household head					
Thai	19,529	98.3	19,286	98.3	98.8
Non-Thai	309	1.6	305	1.6	98.6
Missing/DK	28	0.1	28	0.1	100.0
Total	**19,865**	**100.0**	**19,618**	**100.0**	**98.8**

Typical data quality issues: Completion rates by socioeconomic background characteristics should be similar across socioeconomic groups. In cases when completion rates vary greatly by background characteristics, the sample may be biased.

Completion rates by regions and urban-rural areas are reflected in sample weights when the sample design is based on regions and urban-rural areas. While this 'corrects' for differential response rates by these characteristics, it does not necessarily mean that the sample is no longer biased in terms of other socio-economic characteristics.

Weights for both household population of women and interviewed women are household weights.

Table DQ.5 Completion rates for under-5 questionnaires by socio-economic characteristics of households

Household population of under-5 children, under-5 questionnaires completed, and percentage of under-5 children for whom interviews were completed, by selected socio-economic characteristics of the household, Thailand, 2012

	Household population of under-5 children		Interviewed under-5 children		Percentage of eligible under-5s with completed under-5 questionnaires (Completion rate)
	Number	Per cent	Number	Per cent	
Region					
Bangkok	453	8.6	446	8.5	98.4
Central	1,233	23.4	1,229	23.4	99.7
North	808	15.3	805	15.3	99.7
Northeast	1,991	37.8	1,990	37.9	99.9
South	787	14.9	783	14.9	99.6
Area					
Municipal	2,023	38.4	2,009	38.3	99.4
Non-municipal	3,249	61.6	3,244	61.7	99.8
Household size					
1-3	980	18.6	974	18.5	99.4
4-6	3,369	63.9	3,360	64.0	99.7
7+	924	17.5	919	17.5	99.5
Education of household head					
None	307	5.8	307	5.8	100.0
Primary	3,336	63.3	3,326	63.3	99.7
Secondary	1,024	19.4	1,021	19.4	99.7
Higher	597	11.3	592	11.3	99.1
Missing/DK	7	0.1	7	0.1	100.0
Wealth index quintiles					
Poorest	1,008	19.1	1,006	19.1	99.8
Second	1,153	21.9	1,151	21.9	99.8
Middle	1,180	22.4	1,180	22.5	100.0
Fourth	1,029	19.5	1,025	19.5	99.7
Richest	903	17.1	891	17.0	98.7
Ethnicity of household head					
Thai	5,168	98.0	5,149	98.0	99.6
Non-Thai	99	1.9	99	1.9	100.0
Missing/DK	5	0.1	5	0.1	100.0
Total	**5,272**	**100.0**	**5,253**	**100.0**	**99.6**

Typical data quality issues: Completion rates by socio-economic background characteristics should be similar across socio-economic groups. In cases when completion rates vary greatly by background characteristics, the sample may be biased.

Completion rates by regions and urban-rural areas are reflected in sample weights when the sample design is based on regions and urban-rural areas. While this 'corrects' for differential response rates by these characteristics, it does not necessarily mean that the sample is no longer biased in terms of other socio-economic characteristics.

Weights for both household population of children and interviewed children are household weights.

Table DQ.6 Completeness of reporting

Percentage of observations that are missing information for selected questions and indicators, Thailand, 2012

Questionnaire and type of missing information	Reference group	Per cent with missing/incomplete information*	Number of cases
Household			
Age	All household members	0.0	89,037
Salt test result	All households interviewed that have salt	0.0	24,119
Starting time of interview	All households interviewed	0.0	24,119
Ending time of interview	All households interviewed	0.0	24,119
Women			
Woman's date of birth	All women aged 15-49		
Only month		1.8	21,981
Both month and year		0.0	21,981
Date of first birth	All women aged 15-49 with at least one live birth		
Only month		1.7	14,554
Both month and year		0.2	14,554
Completed years since first birth	All women aged 15-49 with at least one live birth with year of first birth unknown	13.8	28
Date of last birth	All women aged 15-49 with a live birth in last 2 years		
Only month		0.4	14,554
Both month and year		0.1	14,554
Date of first marriage/union	All ever married women aged 15-49		
Only month		29.1	16,501
Both month and year		5.1	16,501
Age at first marriage/union	All ever married women aged 15-49 with year of first marriage not known	0.0	16,501
Starting time of interview	All women interviewed	0.1	21,981
Ending time of interview	All women interviewed	0.1	21,981

* Includes "Don't know" responses

Table DQ.6 Completeness of reporting (continued)

Percentage of observations that are missing information for selected questions and indicators, Thailand, 2012

Questionnaire and type of missing information	Reference group	Per cent with missing/incomplete information*	Number of cases
Under-5			
Date of birth	All under-5 children		
Only month		0.0	9,716
Both month and year		0.0	9,716
Anthropometric measurements	All under-5 children		
Weight		4.9	9,716
Height		6.2	9,716
Both weight and height		4.8	9,716
Starting time of interview	All under-5 children	0.0	9,716
Ending time of interview	All under-5 children	0.0	9,716

* Includes "Don't know" responses

Typical data quality issues: Surveys always have cases with missing information. The extent of missing information is important, because it can result in biased results if such proportions are high. Particularly informative about the quality of the survey is the extent of missing information on measurements, ages, and dates of events.

Table DQ.7 Completeness of information for anthropometric indicators

Distribution of children under 5 by completeness of information for anthropometric indicators, Thailand, 2012

	Valid weight and date of birth	Reason for exclusion from analysis				Total	Per cent of children excluded from analysis	Number of children under 5
		Weight not measured	Incomplete date of birth	Weight not measured, incomplete date of birth	Flagged cases (outliers)			
Weight by age								
< 6 months	92.2	7.4	0.0	0.0	0.3	100.0	7.8	591
6-11 months	96.8	3.1	0.0	0.0	0.2	100.0	3.2	655
12-23 months	95.9	3.7	0.0	0.0	0.4	100.0	4.1	1,963
24-35 months	94.6	4.7	0.0	0.0	0.7	100.0	5.4	2,148
36-47 months	94.4	5.2	0.0	0.0	0.4	100.0	5.6	2,134
48-59 months	94.3	5.4	0.0	0.0	0.3	100.0	5.7	2,225
Total	**94.8**	**4.8**	**0.0**	**0.0**	**0.4**	**100.0**	**5.2**	**9,716**

Table DQ.7 Completeness of information for anthropometric indicators (continued)

Distribution of children under 5 by completeness of information for anthropometric indicators, Thailand, 2012

	Valid height and date of birth	Reason for exclusion from analysis				Total	Per cent of children excluded from analysis	Number of children under 5
		Height not measured	Incomplete date of birth	Height not measured, incomplete date of birth	Flagged cases (outliers)			
Height by age								
< 6 months	85.6	11.5	0.0	0.0	2.9	100.0	14.4	591
6-11 months	93.4	5.2	0.0	0.0	1.4	100.0	6.6	655
12-23 months	92.5	5.9	0.0	0.0	1.6	100.0	7.5	1,963
24-35 months	92.9	6.6	0.0	0.0	0.5	100.0	7.1	2,148
36-47 months	93.9	5.7	0.0	0.0	0.5	100.0	6.1	2,134
48-59 months	93.8	5.8	0.0	0.0	0.4	100.0	6.2	2,225
Total	**92.8**	**6.3**	**0.0**	**0.0**	**0.9**	**100.0**	**7.2**	**9,716**
	Valid weight and height	**Reason for exclusion from analysis**				**Total**	**Per cent of children excluded from analysis**	**Number of children under 5**
		Weight not measured	**Height not measured**	**Weight and height not measured**	**Flagged cases (outliers)**			
Weight by height								
< 6 months	84.4	0.0	4.1	7.4	4.1	100.0	15.6	591
6-11 months	93.1	0.3	2.4	2.7	1.4	100.0	6.9	655
12-23 months	92.4	0.1	2.2	3.7	1.7	100.0	7.6	1,963
24-35 months	90.7	0.0	2.0	4.7	2.6	100.0	9.3	2,148
36-47 months	92.1	0.0	0.6	5.1	2.2	100.0	7.9	2,134
48-59 months	91.8	0.0	0.4	5.4	2.4	100.0	8.2	2,225
Total	**91.4**	**0.1**	**1.5**	**4.8**	**2.3**	**100.0**	**8.6**	**9,716**

Typical data quality issues: Under-5 children may be excluded from anthropometric analysis due to a number of reasons. The second column shows the percentage of under-5 children who are included in anthropometric analysis for each of the three anthropometric indicators (underweight, stunting and wasting). Both in terms of the total rows and across age groups, these percentages should be above 90 per cent, preferably 95 per cent.

Table DQ.8 Heaping in anthropometric measurements

Distribution of weight and height/length measurements by digits reported for decimals, Thailand, 2012

Digits	Weight		Height or length	
	Number	Per cent	Number	Per cent
0	1,653	17.9	3,521	38.1
1	797	8.6	603	6.5
2	1,065	11.5	994	10.7
3	853	9.2	843	9.1
4	836	9.0	583	6.3
5	1,103	11.9	1,145	12.4
6	802	8.7	531	5.7
7	674	7.3	410	4.4
8	798	8.6	336	3.6
9	667	7.2	287	3.1
0 or 5	2,756	29.8	4,666	50.4
Total	**9,248**	**100.0**	**9,253**	**100.0**

Typical data quality issues: Under normal circumstances, approximately 10 per cent of anthropometric measurements should be reported for each of the digits for the decimals. Significant excesses over 10 per cent are indicative of heaping, and therefore quality problems in anthropometric measurements, either due to truncation or rounding.

Typically, more heaping is expected in height/length than weight measurements.

Table DQ.9 Observation of women's health cards

Per cent distribution of women with a live birth in the last two years by presence of a health card, and the percentage of health cards seen by the interviewers, Thailand, 2012

	Woman does not have health card	Woman has health card		Missing /DK	Total	Per cent of health cards seen by the interviewer (1)/(1+2)*100	Number of women with a live birth in the last two years
		Seen by the interviewer (1)	Not seen by the interviewer (2)				
Region							
Bangkok	25.9	27.7	46.4	0.0	100.0	37.4	274
Central	9.6	57.5	32.7	0.2	100.0	63.7	626
North	17.4	62.3	19.6	0.7	100.0	76.1	541
Northeast	14.7	65.9	19.1	0.3	100.0	77.5	613
South	5.2	72.0	22.5	0.3	100.0	76.2	708
Area							
Municipal	13.9	56.8	29.0	0.3	100.0	66.2	1,474
Non-municipal	11.4	66.0	22.2	0.4	100.0	74.8	1,288

Table DQ.9 Observation of women's health cards (continued)

Per cent distribution of women with a live birth in the last two years by presence of a health card, and the percentage of health cards seen by the interviewers, Thailand, 2012

	Woman does not have health card	Woman has health card		Missing /DK	Total	Per cent of health cards seen by the interviewer (1)/(1+2)*100	Number of women with a live birth in the last two years
		Seen by the interviewer (1)	Not seen by the interviewer (2)				
Wealth index quintiles							
Poorest	16.8	65.9	16.2	1.2	100.0	80.3	340
Second	15.2	67.2	17.6	0.0	100.0	79.3	467
Middle	9.9	66.9	23.0	0.2	100.0	74.4	644
Fourth	11.2	59.8	28.7	0.3	100.0	67.6	687
Richest	13.3	49.2	37.2	0.3	100.0	57.0	624
Total	**12.7**	**61.1**	**25.9**	**0.3**	**100.0**	**70.3**	**2,762**

Typical data quality issues: Interviewers are required to ask respondents if they have health cards, and if so, ask to see these cards (MN5 in Women's Questionnaire). These cards are then used by the interviewer to record information on tetanus toxoid vaccinations during pregnancy, or any other useful information on the card. Observation of cards is likely to improve the quality of information collected, as the data collected becomes less dependent on the recall of the respondent.

Table DQ.10 Observation of under-5s birth certificates

Per cent distribution of children under 5 by presence of birth certificates, and percentage of birth certificates seen, Thailand, 2012

	Woman does not have birth certificate	Child has birth certificate		Missing /DK	Total	Per cent of birth certificate seen by the interviewer (1)/(1+2)*100	Number of children under age 5
		Seen by the interviewer (1)	Not seen by the interviewer (2)				
Region							
Bangkok	0.2	48.8	51.0	0.0	100.0	48.9	841
Central	0.5	65.6	33.6	0.2	100.0	66.1	2,036
North	0.5	68.1	31.2	0.1	100.0	68.6	2,150
Northeast	0.1	71.6	28.2	0.1	100.0	71.8	2,490
South	1.0	66.9	32.1	0.0	100.0	67.6	2,199
Area							
Municipal	0.6	64.2	35.1	0.1	100.0	64.7	5,004
Non-municipal	0.4	69.0	30.5	0.1	100.0	69.4	4,712
Child's age							
0	0.6	70.4	28.9	0.1	100.0	70.9	1,334
1	0.4	67.1	32.4	0.1	100.0	67.4	1,963
2	0.6	66.2	33.1	0.1	100.0	66.6	2,134
3	0.3	65.3	34.2	0.1	100.0	65.6	2,161
4	0.6	65.3	34.0	0.0	100.0	65.7	2,124
Total	**0.5**	**66.6**	**32.9**	**0.1**	**100.0**	**66.9**	**9,716**

Typical data quality issues: Interviewers are required to ask and see the birth certificates of children. This is important for the completion of the Birth Registration module in the Under-5 questionnaire, but may also be useful for obtaining accurate information on children's dates of birth and ages.

Per cent of birth certificates seen by the interviewer is desired to be as high as possible, preferably over 90 per cent.

Table DQ.11 Observation of vaccination cards

Per cent distribution of children under 5 by presence of a vaccination card, and the percentage of vaccination cards seen by the interviewers, Thailand, 2012

	Child does not have vaccination card		Child have vaccination card		Missing /DK	Total	Per cent of birth certificate seen by the interviewer (1)/(1+2)*100	Number of children under age 5
	Had vaccination card previously	Never had vaccination card	Seen by the interviewer (1)	Not seen by the interviewer (2)				
Region								
Bangkok	1.7	0.5	59.5	39.5	0.0	100.0	60.1	841
Central	1.5	0.2	71.6	27.2	0.0	100.0	72.5	2,036
North	1.2	0.4	88.9	10.0	0.0	100.0	89.9	2,150
Northeast	0.8	0.0	83.6	15.9	0.0	100.0	84.0	2,490
South	1.0	0.3	78.1	20.9	0.0	100.0	78.9	2,199
Area								
Municipal	1.2	0.3	76.4	22.6	0.0	100.0	77.2	5,004
Non-municipal	1.1	0.2	81.6	17.5	0.0	100.0	82.3	4,712
Child's age								
0	0.3	0.1	87.0	13.0	0.0	100.0	87.0	1,334
1	0.7	0.3	82.9	16.4	0.0	100.0	83.5	1,963
2	1.3	0.2	79.6	19.6	0.0	100.0	80.3	2,134
3	1.5	0.3	74.5	24.1	0.0	100.0	75.6	2,161
4	1.7	0.3	73.9	24.6	0.0	100.0	75.0	2,124
Total	**1.2**	**0.2**	**78.9**	**20.1**	**0.0**	**100.0**	**79.7**	**9,716**

Typical data quality issues: Interviewers are required to ask to see the vaccination cards of under-5s from the respondent, and copy the information on the cards to the under-5 questionnaire. Information on vaccination cards is believed to be more accurate than information that would be provided by mothers or caretakers in the absence of vaccination cards.

Particularly important are the results for children age 1, as immunization indicators are based on these children in most countries.

Table DQ.12 Presence of mother in the household and the person interviewed for the under-5 questionnaire

Distribution of children under 5 by whether the mother lives in the same household, and the person interviewed for the under-5 questionnaire, Thailand, 2012

	Mother in the household				Mother not in the household			Total	Number of children under 5
	Mother interviewed	Father interviewed	Other adult interviewed		Father interviewed	Other adult interviewed			
			female	male		female	male		
Age									
0	82.9	0.1	0.7	0.0	0.4	15.5	0.5	100.0	1,078
1	75.6	0.2	1.0	0.0	0.2	22.4	0.5	100.0	993
2	74.1	0.2	0.8	0.0	0.7	23.2	1.0	100.0	1,072
3	72.8	0.1	0.8	0.2	1.0	24.7	0.3	100.0	1,038
4	70.9	0.2	0.7	0.1	1.4	25.5	1.3	100.0	1,091
Total	**75.3**	**0.2**	**0.8**	**0.1**	**0.7**	**22.2**	**0.7**	**100.0**	**5,272**

Typical data quality issues: The under-5 questionnaire should be administered to the mother, if the mother is listed in the household roster. The table is informative on whether the questionnaire was administered to the right person during the fieldwork. Not all information will have been collected from mothers, but cases where the mother is in the household but somebody else was interviewed can be problematic.

"Adult" males and females are defined as those aged 15 and above.

Table DQ.13 School attendance by single age

Distribution of household population aged 5-24 by educational level and grade attended in the current school year, Thailand, 2012

	Not attending school	Currently attending												Missing /DK	Total	Number of household members
		Preschool	Primary school						Lower secondary school				Upper secondary /Technical vocational	Higher than secondary			
			Grade						Grade								
			1	2	3	4	5	6	1	2	3	DK					
Age at beginning of school year																	
5	1.8	92.0	5.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1,178
6	0.6	22.4	67.0	8.3	1.3	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1,099
7	0.5	0.3	21.2	70.8	7.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1,197
8	0.6	0.3	0.8	24.9	66.3	6.9	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1,163
9	0.8	0.0	0.0	1.0	23.5	67.4	6.5	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1,151
10	1.0	0.0	0.2	0.4	0.9	21.8	69.6	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1,135
11	0.6	0.0	0.0	0.0	0.5	0.9	27.9	66.2	3.9	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1,195
12	2.0	0.0	0.0	0.0	0.0	0.2	1.3	31.3	57.8	7.3	0.2	0.0	0.0	0.0	0.0	100.0	1,179
13	4.9	0.0	0.0	0.1	0.0	0.1	0.1	1.8	28.4	59.2	5.4	0.0	0.0	0.0	0.0	100.0	1,216
14	7.4	0.0	0.0	0.0	0.0	0.1	0.2	0.7	1.6	19.4	67.5	0.0	3.1	0.0	0.0	100.0	1,352
15	18.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	2.4	24.2	0.0	54.5	0.0	0.0	100.0	1,240
16	25.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.5	0.0	71.4	0.0	0.0	100.0	1,162
17	32.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	63.3	2.6	0.0	100.0	1,221
18	51.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.0	25.5	22.3	0.0	100.0	924
19	59.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	7.7	32.6	0.0	100.0	844
20	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	2.0	27.8	0.0	100.0	864
21	74.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.3	0.9	23.8	0.0	100.0	810
22	81.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.4	18.4	0.0	100.0	771
23	91.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	8.3	0.0	100.0	738
24	93.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.5	0.0	0.3	6.0	0.0	100.0	829

Typical data quality issues: The table could be used to look at outliers. Data entry programmes do not check age versus educational grade in detail. If data have been collected and entered correctly, one should see cases concentrated over the diagonal, and should not expect to see cases such as 22-year-old persons attending grades in primary school, very young people in Grade 6 of secondary school etc. Many cases outside the diagonal would be indicative of both poor fieldwork supervision, as well as poor data entry and (lack of) verification.

Age at the beginning of the school year is calculated from dates of birth of household members or by rejuvenating household members based on the date of the survey and current age. Levels and grades refer to the current school year.

Table DQ.14 Sex ratio at birth among children ever born and living

Sex ratio (number of males per 100 females) among children ever born (at birth), children living, and deceased children, by age of women, Thailand, 2012

	Children Ever Born			Children Living			Children Deceased			Number of women
	Number of sons ever born	Number of daughters ever born	Sex ratio at birth	Number of sons living	Number of daughters living	Sex ratio	Number of deceased sons	Number of deceased daughters	Sex ratio	
Age										
15-19	216	185	1.2	212	184	1.2	4	1	4.0	2,662
20-24	919	905	1.0	915	897	1.0	4	8	0.5	2,452
25-29	1,834	1,657	1.1	1,818	1,647	1.1	16	10	1.6	3,031
30-34	2,730	2,556	1.1	2,705	2,542	1.1	25	14	1.8	3,594
35-39	3,287	3,119	1.1	3,215	3,076	1.0	72	43	1.7	3,568
40-44	3,360	3,250	1.0	3,275	3,207	1.0	85	43	2.0	3,391
45-49	3,422	3,413	1.0	3,272	3,337	1.0	150	76	2.0	3,283
Total	**15,768**	**15,085**	**1.1**	**15,412**	**14,890**	**1.1**	**356**	**195**	**1.9**	**21,981**

Typical data quality issues: Universally, the sex ratio among live births is around 105 males per 100 females, typically ranging from 103 to 107 in sizeable populations (with the exception of populations where sex-selective abortions is widely practiced). However, since surveys are influenced by chance fluctuations, one should be looking for systematically low or high ratios in all or most of the age groups (in several countries, very young daughters may not be reported, or deaths of males may not be reported). In most populations, death rates at early ages are higher for males than females – hence, the sex ratios among deceased children should also be above 100.

Appendix E. Thailand 2012 MICS Indicators: Numerators and Denominators

MICS4 INDICATOR		Module[1]	Numerator	Denominator	MDG[2]
NUTRITION					
2.1a 2.1b	Underweight prevalence	AN	Number of children under age 5 who (a) fall below minus two standard deviations (moderate and severe) (b) fall below minus three standard deviations (severe) from the median weight-for-age of the WHO standard	Total number of children under age 5	MDG 1.8
2.2a 2.2b	Stunting prevalence	AN	Number of children under age 5 who (a) fall below minus two standard deviations (moderate and severe) (b) fall below minus three standard deviations (severe) from the median height-for-age of the WHO standard	Total number of children under age 5	
2.3a 2.3b	Wasting prevalence	AN	Number of children under age 5 who (a) fall below minus two standard deviations (moderate and severe) (b) fall below minus three standard deviations (severe) from the median weight-for-height of the WHO standard	Total number of children under age 5	
2.4	Children ever breastfed	MN	Number of women with a live birth in the two years preceding the survey who breastfed the child at any time	Total number of women with a live birth in the two years preceding the survey	
2.5	Early initiation of breastfeeding	MN	Number of women with a live birth in the two years preceding the survey who put the newborn infant to the breast within one hour of birth	Total number of women with a live birth in the two years preceding the survey	
2.6	Exclusive breastfeeding under 6 months	BF	Number of infants under 6 months of age who are exclusively breastfed[3]	Total number of infants under 6 months of age	
2.7	Continued breastfeeding at 1 year	BF	Number of children aged 12-15 months who are currently breastfeeding	Total number of children aged 12-15 months	
2.8	Continued breastfeeding at 2 years	BF	Number of children aged 20-23 months who are currently breastfeeding	Total number of children aged 20-23 months	
2.9	Predominant breastfeeding under 6 months	BF	Number of infants under 6 months of age who received breast milk as the predominant source of nourishment[4] during the previous day	Total number of infants under 6 months of age	

[1] Some indicators are constructed by using questions in several modules. In such cases, only the module(s) which contains most of the necessary information is indicated.

[2] http://mdgs.un.org/unsd/mdg/Host.aspx?Content=Indicators/OfficialList.htm

[3] Infants receiving breast milk, and not receiving any other fluids or foods, with the exception of oral rehydration solution, vitamins, mineral supplements and medicines.

[4] Infants who receive breast milk and certain fluids (water and water-based drinks, fruit juice, ritual fluids, oral rehydration solution, drops, vitamins, minerals, and medicines), but do not receive anything else (in particular, non-human milk and food-based fluids).

MICS4 INDICATOR		Module[1]	Numerator	Denominator	MDG[2]
NUTRITION (continued)					
2.10	Duration of breastfeeding	BF	The age in months when 50 per cent of children age 0-35 months did not receive breast milk during the previous day		
2.11	Bottle feeding	BF	Number of children aged 0-23 months who were fed with a bottle during the previous day	Total number of children aged 0-23 months	
2.12	Introduction of solid, semi-solid or soft foods	BF	Number of infants aged 6-8 months who received solid, semi-solid or soft foods during the previous day	Total number of infants aged 6-8 months	
2.13	Minimum meal frequency	BF	Number of children aged 6-23 months receiving solid, semi-solid and soft foods (plus milk feeds for non-breastfed children) the minimum times[5] or more, according to breastfeeding status, during the previous day	Total number of children aged 6-23 months	
2.14	Age-appropriate breastfeeding	BF	Number of children aged 0-23 months appropriately fed[6] during the previous day	Total number of children aged 0-23 months	
2.15	Milk feeding frequency for non-breastfed children	BF	Number of non-breastfed children aged 6-23 months who received at least 2 milk feedings during the previous day	Total number of non-breastfed children aged 6-23 months	
2.16	Iodized salt consumption	SI	Number of households with salt testing 15 parts per million or more of iodide/iodate	Total number of households in which salt was tested or with no salt	
2.18	Low-birthweight infants	MN	Number of last live births in the two years preceding the survey weighing below 2,500 grams at birth	Total number of last live births in the two years preceding the survey	
2.19	Infants weighed at birth	MN	Number of last live births in the two years preceding the survey who were weighed at birth	Total number of last live births in the two years preceding the survey	
CHILD HEALTH					
3.1	Tuberculosis immunization coverage	IM	Number of children aged 12-23 months[7] who received BCG vaccine before their first birthday	Total number of children aged 12-23 months	
3.2	Polio immunization coverage	IM	Number of children aged 12-23 months who received OPV3 vaccine before their first birthday	Total number of children aged 12-23 months	
3.3	Immunization coverage for diphtheria, pertussis and tetanus (DPT)	IM	Number of children aged 12-23 months who received DPT3 vaccine before their first birthday	Total number of children aged 12-23 months	
3.4	Measles immunization coverage	IM	Number of children aged 12-23 months who received measles vaccine before their first birthday	Total number of children aged 12-23 months	MDG 4.3

[5] Breastfeeding children: Solid, semi-solid, or soft foods, two times for infants aged 6-8 months, three times for children aged 9-23 months; Non-breastfeeding children: Solid, semi-solid, or soft foods, or milk feeds, four times for children aged 6-23 months.

[6] Infants aged 0-5 who are exclusively breastfed, and children aged 6-23 months who are breastfed and ate solid, semi-solid or soft foods.

[7] Indicators 3.1, 3.2, 3.3, 3.4, 3.5 and 3.6 may be calculated for an older age group, such as 15-26 months or 18-29 months, depending on the immunization schedule.

MICS4 INDICATOR		Module[1]	Numerator	Denominator	MDG[2]
CHILD HEALTH (continued)					
3.5	Hepatitis B immunization coverage	IM	Number of children aged 12-23 months who received the third dose of Hepatitis B vaccine before their first birthday	Total number of children aged 12-23 months	
3.7	Neonatal tetanus protection	MN	Number of women aged 15-49 years with a live birth in the two years preceding the survey who were given at least two doses of tetanus toxoid vaccine within the appropriate interval[8] prior to giving birth	Total number of women aged 15-49 years with a live birth in the two years preceding the survey	
3.8	Oral rehydration therapy with continued feeding	CA	Number of children under age 5 with diarrhoea in the previous two weeks who received ORT (ORS packet or recommended homemade fluid or increased fluids) and continued feeding during the episode of diarrhoea	Total number of children under age 5 with diarrhoea in the previous two weeks	
3.9	Care-seeking for suspected pneumonia	CA	Number of children under age 5 with suspected pneumonia in the previous two weeks who were taken to an appropriate health provider	Total number of children under age 5 with suspected pneumonia in the previous two weeks	
3.10	Antibiotic treatment of suspected pneumonia	CA	Number of children under age 5 with suspected pneumonia in the previous two weeks who received antibiotics	Total number of children under age 5 with suspected pneumonia in the previous two weeks	
3.11	Solid fuels	HC	Number of household members in households that use solid fuels as the primary source of domestic energy to cook	Total number of household members	
WATER AND SANITATION					
4.1	Use of improved drinking water sources	WS	Number of household members using improved sources of drinking water	Total number of household members	MDG 7.8
4.2	Water treatment	WS	Number of household members using unimproved drinking water who use an appropriate treatment method	Total number of household members in households using unimproved drinking water sources	
4.3	Use of improved sanitation	WS	Number of household members using improved sanitation facilities which are not shared	Total number of household members	MDG 7.9
4.4	Safe disposal of child's faeces	CA	Number of children aged 0-2 years whose last stools were disposed of safely	Total number of children aged 0-2 years	

[8] See MICS4 manual for a detailed description.

MICS4 INDICATOR		Module[1]	Numerator	Denominator	MDG[2]
REPRODUCTIVE HEALTH					
5.1	Adolescent birth rate	CM	Age-specific fertility rate for women aged 15-19 years for the one-year period preceding the survey		MDG 5.4
5.2	Early childbearing	CM	Number of women aged 20-24 years who had at least one live birth before age 18	Total number of women aged 20-24 years	
5.3	Contraceptive prevalence rate	CP	Number of women aged 15-49 years currently married or in union who are using (or whose partner is using) a (modern or traditional) contraceptive method	Total number of women aged 15-49 years who are currently married or in union	MDG 5.3
5.4	Unmet need[9]	UN	Number of women aged 15-49 years who are currently married or in union who are fecund and want to space their births or limit the number of children they have and who are not currently using contraception	Total number of women aged 15-49 years who are currently married or in union	MDG 5.6
5.5a 5.5b	Antenatal care coverage	MN	Number of women aged 15-49 years who were attended during pregnancy in the two years preceding the survey (a) at least once by skilled personnel (b) at least four times by any provider	Total number of women aged 15-49 years with a live birth in the two years preceding the survey	MDG 5.5
5.6	Content of antenatal care	MN	Number of women aged 15-49 years with a live birth in the two years preceding the survey who had their blood pressure measured and gave urine and blood samples during the last pregnancy	Total number of women aged 15-49 years with a live birth in the two years preceding the survey	
5.7	Skilled attendant at delivery	MN	Number of women aged 15-49 years with a live birth in the two years preceding the survey who were attended during childbirth by skilled health personnel	Total number of women aged 15-49 years with a live birth in the two years preceding the survey	MDG 5.2
5.8	Institutional deliveries	MN	Number of women aged 15-49 years with a live birth in the two years preceding the survey who delivered in a health facility	Total number of women aged 15-49 years with a live birth in the two years preceding the survey	
5.9	Caesarean section	MN	Number of last live births in the two years preceding the survey who were delivered by caesarean section	Total number of last live births in the two years preceding the survey	

[9] See MICS4 manual for a detailed description.

MICS4 INDICATOR		Module[1]	Numerator	Denominator	MDG[2]
CHILD DEVELOPMENT					
6.1	Support for learning	EC	Number of children aged 36-59 months with whom an adult has engaged in four or more activities to promote learning and school readiness in the past three days	Total number of children aged 36-59 months	
6.2	Father's support for learning	EC	Number of children aged 36-59 months whose father has engaged in one or more activities to promote learning and school readiness in the past three days	Total number of children aged 36-59 months	
6.3	Learning materials: children's books	EC	Number of children under age 5 who have three or more children's books	Total number of children under age 5	
6.4	Learning materials: playthings	EC	Number of children under age 5 with two or more playthings	Total number of children under age 5	
6.5	Inadequate care	EC	Number of children under age 5 left alone or in the care of another child younger than 10 years of age for more than one hour at least once in the past week	Total number of children under age 5	
6.6	Early child development index	EC	Number of children aged 36-59 months who are developmentally on track in literacy-numeracy, physical, social-emotional, and learning domains	Total number of children aged 36-59 months	
6.7	Attendance to early childhood education	EC	Number of children aged 36-59 months who are attending an early childhood education programme	Total number of children aged 36-59 months	
CHILD DEVELOPMENT					
7.1	Literacy rate among young women	WB	Number of women aged 15-24 years who are able to read a short simple statement about everyday life or who attended secondary or higher education	Total number of women aged 15-24 years	MDG 2.3
7.2	School readiness	ED	Number of children in first grade of primary school who attended pre-school during the previous school year	Total number of children attending the first grade of primary school	
7.3	Net intake rate in primary education	ED	Number of children of school-entry age who enter the first grade of primary school	Total number of children of school-entry age	
7.4	Primary school net attendance ratio (adjusted)	ED	Number of children of primary school age currently attending primary or secondary school	Total number of children of primary school age	MDG 2.1
7.5	Secondary school net attendance ratio (adjusted)	ED	Number of children of secondary school age currently attending secondary school or higher	Total number of children of secondary school age	
7.6	Children reaching last grade of primary	ED	Proportion of children entering the first grade of primary school who eventually reach last grade		MDG 2.2

MICS4 INDICATOR		Module[1]	Numerator	Denominator	MDG[2]
CHILD DEVELOPMENT (continued)					
7.7	Primary completion rate	ED	Number of children attending the last grade of primary school (excluding repeaters)	Total number of children of primary school completion age (age appropriate to final grade of primary school)	
7.8	Transition rate to secondary school	ED	Number of children attending the last grade of primary school during the previous school year who are in the first grade of secondary school during the current school year	Total number of children attending the last grade of primary school during the previous school year	
7.9	Gender parity index (primary school)	ED	Primary school net attendance ratio (adjusted) for girls	Primary school net attendance ratio (adjusted) for boys	MDG 3.1
7.10	Gender parity index (secondary school)	ED	Secondary school net attendance ratio (adjusted) for girls	Secondary school net attendance ratio (adjusted) for boys	MDG 3.1
CHILD PROTECTION					
8.1	Birth registration	BR	Number of children under age 5 whose births are reported registered	Total number of children under age 5	
8.6	Marriage before age 15	MA	Number of women aged 15-49 years who were first married or in union by the exact age of 15	Total number of women aged 15-49 years	
8.7	Marriage before age 18	MA	Number of women aged 20-49 years who were first married or in union by the exact age of 18	Total number of women aged 20-49 years	
8.8	Young women aged 15-19 years currently married or in union	MA	Number of women aged 15-19 years who are currently married or in union	Total number of women aged 15-19 years	
8.10a 8.10b	Spousal age difference	MA	Number of women currently married or in union whose spouse is 10 or more years older, (a) for women aged 15-19 years, (b) for women aged 20-24 years	Total number of women currently married or in union (a) aged 15-19 years, (b) aged 20-24 years	
8.14	Attitudes towards domestic violence	DV	Number of women who state that a husband/partner is justified in hitting or beating his wife in at least one of the following circumstances: (1) she goes out without telling him, (2) she neglects the children, (3) she argues with him, (4) she refuses sex with him, (5) she burns the food	Total number of women aged 15-49 years	
HIV/AIDS AND ORPHANS					
9.1	Comprehensive knowledge about HIV prevention	HA	Number of women aged 15-49 years who correctly identify two ways of preventing HIV infection[10], know that a healthy looking person can have HIV, and reject the two most common misconceptions about HIV transmission	Total number of women aged 15-49 years	

[10] Using condoms and limiting sex to one faithful, uninfected partner.

MICS4 INDICATOR		Module[1]	Numerator	Denominator	MDG[2]
HIV/AIDS AND ORPHANS (continued)					
9.2	Comprehensive knowledge about HIV prevention among young people	HA	Number of women aged 15-24 years who correctly identify two ways of preventing HIV infection[11], know that a healthy looking person can have HIV, and reject the two most common misconceptions about HIV transmission	Total number of women aged 15-24 years	MDG 6.3
9.3	Knowledge of mother-to-child transmission of HIV	HA	Number of women aged 15-49 years who correctly identify all three means[12] of mother-to-child transmission of HIV	Total number of women aged 15-49 years	
9.4	Accepting attitudes towards people living with HIV	HA	Number of women aged 15-49 years expressing accepting attitudes on all four questions[13] toward people living with HIV	Total number of women aged 15-49 years who have heard of HIV	
9.5	Women who know where to be tested for HIV	HA	Number of women aged 15-49 years who state knowledge of a place to be tested for HIV	Total number of women aged 15-49 years	
9.6	Women who have been tested for HIV and know the results	HA	Number of women aged 15-49 years who have been tested for HIV in the 12 months preceding the survey and who know their results	Total number of women aged 15-49 years	
9.8	HIV counselling during antenatal care	HA	Number of women aged 15-49 years who gave birth in the two years preceding the survey and received antenatal care, reporting that they received counselling on HIV during antenatal care	Total number of women aged 15-49 years who gave birth in the two years preceding the survey	
9.9	HIV testing during antenatal care	HA	Number of women aged 15-49 years who gave birth in the two years preceding the survey and received antenatal care, reporting that they were offered and accepted an HIV test during antenatal care and received their results	Total number of women aged 15-49 years who gave birth in the two years preceding the survey	
9.17	Children's living arrangements	HL	Number of children aged 0-17 years not living with a biological parent	Total number of children aged 0-17 years	
9.18	Prevalence of children with one or both parents dead	HL	Number of children aged 0-17 years with one or both parents dead	Total number of children aged 0-17 years	

[11] Same explanation as indicator 9.1.

[12] Transmission during pregnancy, during delivery, and by breastfeeding.

[13] Women (1) who think that a female teacher with the AIDS virus should be allowed to teach in school, (2) who would buy fresh vegetables from a shopkeeper or vendor who has the AIDS virus, (3) who would not want to keep it as a secret if a family member became infected with the AIDS virus, and (4) who would be willing to care for a family member who became sick with the AIDS virus.

MICS4 INDICATOR		Module[1]	Numerator	Denominator	MDG[2]
HIV/AIDS AND ORPHANS (continued)					
9.19	School attendance of orphans	HL – ED	Number of children aged 10-14 years who have lost both parents and are attending school	Total number of children aged 10-14 years who have lost both parents	MDG 6.4
9.20	School attendance of non-orphans	HL – ED	Number of children aged 10-14 years, whose parents are alive, who are living with one or both parents, and who are attending school	Total number of children aged 10-14 years, whose parents are alive, and who are living with one or both parents	MDG 6.4

Appendix F. Definitions

1) Collective Household

Any household comprising one person or more, who live together in a house or residence and take part in providing or consuming food and necessities for living. These individuals may or may not be related.

2) Age

Age in years as of the individual's last birthday before the interview.

3) Education

Learning that has taken place in the formal education system at all levels: pre-school, primary, lower secondary, and upper secondary; academic and vocational; and university, which include open universities such as Ramkhamhaeng University; and distant learning universities such as Sukhothai Thammathirat University where teaching takes place through various media and class attendance is not required. These educational facilities are managed by either the government or private sector. On completion of the programme, graduates of formal education receive certificates, diplomas or degrees, which they can use in application for further study at any relevant higher level provided in the system. Formal education excludes short-term vocational training programmes, such as hairdressing, dressmaking, driving, radio repairing, typing, and so on, which do not involve learning of any academic subjects. However, a non-formal education programme whose degree is equivalent to formal education is included.

4) No Education (or None)

Never attended school or received any education.

5) Levels of Education

Education is classified into four levels as follows:

5.1 Pre-school Level – child education programmes to prepare children for school before they start primary school, which is compulsory. Programmes include two to three years of kindergarten or one year of pre-school.

5.2 Primary Level – Compulsory basic education of knowledge and skills over six years, from Prathom (Por.) 1-6 (formerly Por.1-7 or Por. 1-4 plus Mattayom (Mor.) 1-3).

5.3 Secondary Level – Education continued from primary that is divided into two levels of three years each: lower and upper secondary.

5.3.1 Lower Secondary Level – currently three years, Mor. 1-3, (formerly Mattayomsuksa (MorSor.) 1-3, or Mor. 4-6) including other educational programmes equivalent to lower secondary level, such as the three-year basic classical dance programme. Lower secondary education is geared towards developing students' ethics, knowledge and abilities. It allows students to explore their needs, areas of interests and aptitudes.

5.3.2 Upper Secondary Level – Divided into two fields:

a) Academic Field – currently three years, Mor. 4-6 (formerly MorSor. 4-5, or Mor. 7-8) including other educational programmes equivalent to upper secondary level in academic fields such as non-formal education (KorSorNor.) Level 5, or two years of Military Cadet School.

b) Formal Vocational and Technical Field – A three-year educational programme leading to a lower certificate of vocational education (PorWorChor.) and a three-year intermediate Thai classical dance programme, including other educational programmes equivalent to the upper secondary level of formal vocational education, such as the military machinist programme (three years), railway engineering (five years), artisan skills (two years at Phradabot Foundation), and a former certificate of education (PorKorSor.) programme.

5.4 Higher Level – Academic education in colleges or universities leading to diplomas and degrees (bachelor, master and philosophy/doctoral) and special programme education leading to certificates from a university, college, military academy, police academy, or other institutions of higher-level education leading to a diploma or vocational associate degree (PorWorSor.), technical vocational certificate (PorWorThor.), and higher certificate of education (PorKorSor. Soong), including the advance Thai classical dance programme.

Note: Educational programmes which are not comparable to any of the above mentioned formal education levels are considered Other Levels of Education.

6) Academic Year

A period of the academic calendar running from the first day of school until end-of-year examinations. For the MICS, it was from May 2012 to February 2013 for students of upper secondary level and below, and June 2012 to March 2013 for students of higher education.

7) Marriage

A commitment between a man and a woman living together as husband and wife, with or without legal registration.

8) Live birth

Live-born children regardless of the survival period, excluding step-children, adopted children and fetal deaths.

9) Contraception

A regimen of one or more actions, devices, or medications followed in order to deliberately prevent or reduce the likelihood of a woman becoming pregnant. There are many contraceptive methods, including contraceptive pills, injections, implants, IUD (intrauterine device), condoms, female sterilization, male sterilization, breastfeeding (LAM), and safety period (calendar method).

10) Stunting (in Children Aged Under 5)

Stunting is a reflection of chronic malnutrition obtained from comparisons of children's height-for-age with a standard deviation of reference. 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. Stunting is a result of failure to receive adequate nutrition over a long period and recurrent or chronic illness.

11) Wasting (in Children Aged Under 5)

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

12) Exclusive Breastfeeding

Infants received only breast milk and vitamins, mineral supplements or medicine in the 24 hours prior to the interview.

13) Ministry of Health's Tetanus Immunization Coverage in Pregnant Women

- For pregnant women who have never received any tetanus vaccine, they should receive at least three doses. The first dose should be given at their first antenatal care visit. The second dose should be given one month after the first dose, and the third dose six months after the first dose. Later, one booster dose should be given every 10 years.
- For women who have already received one dose of tetanus vaccine, they should receive two more doses at zero and six-month intervals. If the women have already received two doses of the vaccine, they should receive one more dose at least six months after the second dose. Later, one booster dose should be given every 10 years.

14) Ministry of Health's Vaccination Schedule for Children Aged Under Five

Age	Vaccine Provision
New Born	Vaccination against tuberculosis (BCG) Vaccination against hepatitis B (HEPB0)
2 months	Combined vaccination against diphtheria, pertussis, and tetanus, 1st dose (DPT1); and oral polio vaccine, 1st dose (OPV1)
	Vaccination against hepatitis B, 1st dose (HEPB1)
4 months	Combined vaccination against diphtheria, pertussis, and tetanus, 2nd dose (DPT2); and oral polio vaccine, 2nd dose (OPV2)
	Vaccination against hepatitis B, 2nd dose (HEPB2)
6 months	Combined vaccination against diphtheria, pertussis, and tetanus, 3rd dose (DPT3); and oral polio vaccine, 3rd dose (OPV3)
	Vaccination against hepatitis B, 3rd dose (HEPB3)
9 months	Vaccination against measles – measles, mumps and rubella or German measles (MMR)
1.5 years	Combined vaccination against diphtheria, pertussis, and tetanus, 4th dose (DPT4); and oral polio vaccine, 4th dose (OPV4)
	Vaccination against Japanese encephalitis, 1st dose (JE1)
1 month after JE1	Vaccination against Japanese encephalitis, 2nd dose (JE2)
2.5 years	Vaccination against Japanese encephalitis, 3rd dose (JE3)
4 years	Combined vaccination against diphtheria, pertussis, and tetanus, 5th dose (DPT5); and oral polio vaccine, 5th dose (OPV5)

15) Flush/Pour Flush Toilets Connected to Piped Sewer System

Flush/pour flush toilets with treatment system and treated water overflowing to sewage system without having to empty the content. A piped sewer system is a system of sewer pipes, also called sewerage, that is designed to collect human excreta (faeces and urine) and wastewater and remove them from the household environment. Sewerage systems consist of facilities for collection, pumping, treating and disposing of human excreta and wastewater.

16) Flush/Pour Flush Toilets Connected to Septic Tank

Flush/pour flush toilets that keep all excreta disposal in a septic tank without overflow system for water or solid waste. When the tank is full, it needs to be emptied by suction truck. The tank may be located inside or outside the house. This type of toilet is mostly found in houses.

17) Flush/Pore Flush Toilets Connected to Pit Latrines

A flush/pour flush to pit latrine refers to a system that flushes excreta to a hole in the ground and has a water seal.

18) Piped Water

Chlorine-sterilized water including systematically filtered water. Water pumped from rivers, canals or dug wells and stored in a water tower before running into a piped system must be sterilized or filtered systematically.

19) Wealth Index Quintiles

Important indicators for measurement of factors related to accumulated household living standards

- Ownership of certain types of household assets, such as refrigerator, television, car, truck, bicycle, motorcycle, and so on
- Materials used in household construction, such as wood, bricks, rocks, cement, and so on
- Having electricity in the household
- Access to drinking water and water for general usage
- Improved sanitation facilities

Wealth index quintiles are calculated by a statistical method called Analysis of Principal Factors, where households are grouped together in a continuum of comparative wealth. The values are particularly valuable for countries that lack reliable data on incomes and expenses, which were formerly used for measurement of wealth.

Wealth index quintiles can be used to analyze economic inequalities in access to important health services and outcomes, such as childhood illness and fatality. In addition, the wealth index quintiles can enable the government to assess whether poor population groups have access to public health services, immunization, education, and other important programmes.

Wealth index quintiles enable the analysis of multi-variable data from population and health surveys to be more comprehensive and to identify the extent of the impact of a household's economic status on health outcomes.

Caution: The Thailand MICS wealth index quintiles can be used for comparisons with international MICS results only and not with any other surveys since they were created specifically for the analysis of MICS data only.

Appendix G. Questionnaires

MICS

HOUSEHOLD QUESTIONNAIRE [THAILAND]

HOUSEHOLD INFORMATION PANEL	HH
HH1. EA number from the MICS sample: ___ ___ ___ ___ HH1A. Household cluster (from listing) Households with children under 5 years……..1 Households with no children under 5 years…….2	HH2. Household number: ___ ___
HH3. Interviewer name and number: First – Last name _____ ___ ___ ___ ___ ___	HH4. Supervisor name and number: First – Last name_____ ___ ___ ___ ___ ___
HH5. Day / Month / Year of interview: ___ ___ / ___ ___ / 2 0 1 2	
HH6. Administrative Area: Municipal area ..... 1 Non-municipal area ..... 2 ___ (Village number___ Village name_____)	HH7. Region: Bangkok .....1 Northern.....3 Central.....2 North-eastern .....4 Southern.....5 ___
Province_____ CWT ___ ___ District_____ Sub-district _____ AMP ___ ___ TMB ___ ___ House number _____ Street _____ Lane _____	

WE ARE FROM THE NATIONAL STATISTICAL OFFICE. WE ARE WORKING ON THE 2012 SURVEY OF CHILDREN AND WOMEN IN THAILAND. I WOULD LIKE TO TALK TO YOU ABOUT THIS TOPIC. THE INTERVIEW WILL TAKE ABOUT 20-25 MINUTES. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND YOUR ANSWERS WILL NEVER BE SHARED WITH ANYONE.

MAY I START NOW?

☐ *Yes, permission is given ⇨ Go to HH18 to record the time and then begin the interview.*

☐ *No, permission is not given ⇨ Complete HH9. Discuss this result with your supervisor.*

After all questionnaires for the household have been completed, fill in the following information:

HH8. Name of head of household: _____

HH9. Result of household interview:

Successful interview with sample household 11
Demolished, fire ……...12
Empty household..... 13
Successful interview (new household)……..14
Partly successful..... 15
Visited 3 times without meeting a person to interview……..21

Refused 22
Could not locate the household..... 23
Demolished, flood……24
Demolished, storm..... 25
Cannot find households during the survey period..... 26

Other (*specify*) _____ 96

HH10. Name of Respondent:

Name:_____

Household member number: ___ ___

HH11. Total number of household members (From MICS_H):.....___ ___

HH12. Number of women age 15-49 years (From MICS_H): .....___ ___

HH13. Number of woman age 15-49 years successfully interviewed (From MICS_W): ..... ___ ___

HH14. Number of children under 5 years (From MICS_H): .....___ ___

HH15. Number of under-5 years successfully interviewed (From MICS_C): ___ ___

HH15A. Household cluster (MICS Interview's result)

Households with children under 5 years……....1
Households with no children under 5 years…….2

HH18. Starting time of the interview (hours and minutes). ___ ___ : ___ ___

HH18.
Record the time.

Hour..... __ __

Minutes..... __ __

HOUSEHOLD LISTING FORM HL

FIRST, PLEASE TELL ME THE NAME OF EACH PERSON WHO USUALLY LIVES HERE, STARTING WITH THE HEAD OF THE HOUSEHOLD.
Record the information of the head of the household in the first column, starting from ordinal no. (HL1, first name and last name (HL2, relationship to the household head (HL3), and their sex (HL4, month of birth (HL5M), year of birth (HL5y), and age (HL6))
Then ask: ARE THERE ANY OTHERS WHO LIVE HERE, EVEN IF THEY ARE NOT AT HOME NOW? *If yes, complete listing for questions HL1-HL6. Then, ask questions starting with HL7 for each person at a time.*

							For women age **15-49**	*For children age 0-14*	*For every household member*		*For children age* **0-17** *years*					
HL1. *Ordinal No.*	HL2. *First name - Last name*	HL3. WHAT IS THE RELATION-SHIP OF (*name*) TO THE HEAD OF HOUSE-HOLD?	HL4. IS (*name*) MALE OR FEMALE? 1 Male 2 Female	HL5. WHAT IS (*name*)'S DATE OF BIRTH? 98 DK 9998 DK		HL6. HOW OLD IS (*name*)? *Record in completed years.*	HL7. *Copy ordinal no. from HL1*	HL8. WHO IS THE MOTHER OR PRIMARY CARETAKER OF (*name*)? *Record ordinal no. of mother/ caretaker from HL1*	HL8A. WHAT NATIONALITY IS (*name*)? 1 Thai 2 Non-Thai 3 Stateless 8 DK	HL8B. WHAT TYPE OF PUBLIC HEALTH WELFARE DOES (*name*) HAVE?	HL11. IS (*name*)'S NATURAL MOTHER ALIVE? 1 Yes 2 No⇘ HL13 8 DK⇘ HL13	HL12. DOES (*name*)'S NATURAL MOTHER LIVE IN THIS HOUSE-HOLD? *If not record "00" Copy ordinal no. of the natural mother from HL1* 00 No⇘ HL12A Others⇘ HL13	HL12A. WHERE DOES THE NATURAL MOTHER OF (*name*) LIVE?	HL13. IS (*name*)'S NATURAL FATHER ALIVE? 1 Yes 2 No⇘ Next person in order 8 DK⇘ Next person in order	HL14. DOES (*name*)'S NATURAL FATHER LIVE IN THIS HOUSE-HOLD? *If not, record "00" Copy ordinal no. of the natural mother from HL1* 00 No⇘ HL14A Others⇘ Next person in order	HL14A. WHERE DOES THE NATURAL FATHER OF (*name*) LIVE?
Ordinal	Name	Relation *	M	F	Month	Year	Age	15-49	0-14	Nationality	Health welfare **	Y N DK		Mother***	Y N DK		Father***
01		0 1	1	2	__ __	__ __ __ __	__ __	01	01	—	—	1 2 8	__ __	___ ___	1 2 8	__ __	___ ___
02		___ ___	1	2	__ __	__ __ __ __	__ __	02	02	—	—	1 2 8	— —	___ ___	1 2 8	— —	___ ___

HL1. *Ordinal No.*	HL2. *First name - Last name*	HL3. WHAT IS THE RELATION-SHIP OF (*name*) TO THE HEAD OF HOUSE-HOLD?	HL4. IS (*name*) MALE OR FEMALE? 1 Male 2 Female	HL5. WHAT IS (*name*)'S DATE OF BIRTH? 98 DK 9998 DK		HL6. HOW OLD IS (*name*)? *Record in completed years.*	HL7. *Copy ordinal no. from HL1*	HL8. WHO IS THE MOTHER OR PRIMARY CARETAKER OF (*name*)? *Record ordinal no. of mother/ caretaker from HL1*	HL8A. WHAT NATIONALITY IS (*name*)? 1 Thai 2 Non-Thai 3 Stateless 8 DK	HL8B. WHAT TYPE OF PUBLIC HEALTH WELFARE DOES (*name*) HAVE?	HL11. IS (*name*)'S NATURAL MOTHER ALIVE? 1 Yes 2 No⇘ HL13 8 DK⇘ HL13	HL12. DOES (*name*)'S NATURAL MOTHER LIVE IN THIS HOUSE-HOLD? *If not record "00" Copy ordinal no. of the natural mother from HL1* 00 No⇘ HL12A Others⇘ HL13	HL12A. WHERE DOES THE NATURAL MOTHER OF (*name*) LIVE?	HL13. IS (*name*)'S NATURAL FATHER ALIVE? 1 Yes 2 No⇘ Next person in order 8 DK⇘ Next person in order	HL14. DOES (*name*)'S NATURAL FATHER LIVE IN THIS HOUSE-HOLD? *If not, record "00" Copy ordinal no. of the natural mother from HL1* 00 No⇘ HL14A Others⇘ Next person in order	HL14A. WHERE DOES THE NATURAL FATHER OF (*name*) LIVE?
Ordinal	Name	Relation *	M F	Month	Year	Age	15-49	0-14	Nationality	Health welfare **	Y N DK		Mother***	Y N DK		Father***
03		__ __	1 2	__ __	__ __ __ __	__ __	03	03	—	—	1 2 8	— —	__ __	1 2 8	— —	__ __
04		__ __	1 2	__ __	__ __ __ __	__ __	04	04	—	—	1 2 8	— —	__ __	1 2 8	__ __	__ __
05		__ __	1 2	__ __	__ __ __ __	— —	05	05	—	—	1 2 8	— —	__ __	1 2 8	— —	__ __
06		__ __	1 2	__ __	__ __ __ __	— —	06	06	—	—	—	— —	__ __	1 2 8	— —	__ __
07		__ __	1 2	__ __	__ __ __ __	— —	07	07	—	—	—	— —	__ __	1 2 8	__ __	__ __
08		__ __	1 2	__ __	__ __ __ __	— —	08	08	—	—	—	— —	__ __	1 2 8	— —	__ __
09		__ __	1 2	__ __	__ __ __ __	— —	09	09	—	—	—	— —	__ __	1 2 8	— —	__ __
10		__ __	1 2	__ __	__ __ __ __	— —	10	10	—	—	—	— —	__ __	1 2 8	— —	__ __

HL1. *Ordinal No.*	HL2. *First name - Last name*	HL3. WHAT IS THE RELATION-SHIP OF (*name*) TO THE HEAD OF HOUSE-HOLD?	HL4. IS (*name*) MALE OR FEMALE? 1 Male 2 Female	HL5. WHAT IS (*name*)'S DATE OF BIRTH? 98 DK 9998 DK		HL6. HOW OLD IS (*name*)? *Record in completed years.*	HL7. *Copy ordinal no. from HL1*	HL8. WHO IS THE MOTHER OR PRIMARY CARETAKER OF (*name*)? *Record ordinal no. of mother/ caretaker from HL1*	HL8A. WHAT NATIONALITY IS (*name*)? 1 Thai 2 Non-Thai 3 Stateless 8 DK	HL8B. WHAT TYPE OF PUBLIC HEALTH WELFARE DOES (*name*) HAVE?	HL11. IS (*name*)'S NATURAL MOTHER ALIVE? 1 Yes 2 No⇘ HL13 8 DK⇘ HL13	HL12. DOES (*name*)'S NATURAL MOTHER LIVE IN THIS HOUSE-HOLD? *If not record "00" Copy ordinal no. of the natural mother from HL1* 00 No⇘ HL12A Others⇘ HL13	HL12A. WHERE DOES THE NATURAL MOTHER OF (*name*) LIVE?	HL13. IS (*name*)'S NATURAL FATHER ALIVE? 1 Yes 2 No⇘ Next person in order 8 DK⇘ Next person in order	HL14. DOES (*name*)'S NATURAL FATHER LIVE IN THIS HOUSE-HOLD? *If not, record "00" Copy ordinal no. of the natural mother from HL1* 00 No⇘ HL14A Others⇘ Next person in order	HL14A. WHERE DOES THE NATURAL FATHER OF (*name*) LIVE?
Ordinal	Name	Relation *	M F	Month	Year	Age	15-49	0-14	Nationality	Health welfare **	Y N DK		Mother***	Y N DK		Father***
11		__ __	1 2	__ __	__ __ __ __	— —	11	11	—	—	—	— —	__ __	1 2 8	— —	__ __
12		__ __	1 2	__ __	__ __ __ __	__ __	12	12	—	—	—	— —	__ __	1 2 8		__ __
13		__ __	1 2	__ __	__ __ __ __	__ __	13	13	—	—	—	— —	__ __	1 2 8		__ __
14		__ __	1 2	__ __	__ __ __ __	__ __	14	14	—	—	—	— —	__ __	1 2 8		__ __
15		__ __	1 2	__ __	__ __ __ __	__ __	15	15	—	—	—	— —	__ __	1 2 8		__ __

Tick here if additional questionnaire used ☐

Probe for additional household members.
Probe especially for any infants or small children not listed, and others who may not be members of the family (such as servants, friends) but who usually live in the household.
Insert names of additional members in the household list and complete form accordingly.

Now for each woman age 15-49 years, write her name and line number and other identifying information in the information panel of a separate Individual Women's Questionnaire.
For each child under age 5, write his/her name and line number AND the line number of his/her mother or caretaker in the information panel of a separate Under-5 Questionnaire.
You should now have a separate questionnaire for each eligible woman and each child under five in the household.

** Codes for HL3: Relationship to head of household:*

01 Head	06 Parent	11 Niece / Nephew
02 Wife / Husband	07 Parent-In-Law	12 Other relative
03 Son / Daughter	08 Brother / Sister	13 Adopted / Foster / Stepchild
04 Son-In-Law / Daughter-In-Law	09 Brother-In-Law / Sister-In-Law	14 Not related
05 Grandchild	10 Uncle / Aunt	98 Don't know

*** Codes for HL8B: Type of public health welfare:*

Has public health welfare
A Gold card/Universal health card
B Social security card / compensation fund
C Civil servant / state enterprise medical care benefit
D Other public health welfare (specify)_____

Y Does not have public health welfare
Z Don't know

**** Codes for HL12A / HL14A: Where the natural mother/ father of (name) lives:*

1 Foreign country
2 Thailand – another household
3 Thailand – Institution (such as hospital, nursing home, prison, etc.)
8 Don't know

EDUCATION — ED

For household members age **5 and above**

For household members age **5-24** *years*

ED1. *Ordinal No. (copy from HL1)*	ED2. *Name and age* *Copy from HL6*		ED3. HAS (*name*) EVER ATTENDED SCHOOL OR PRE-SCHOOL? 1 Yes 2 No ⇘ Next person in order		ED4A. WHAT IS THE HIGHEST LEVEL OF SCHOOL (*name*) HAS ATTENDED? Level: 00 Preschool ⇘ ED5 01 Primary 02 Lower Secondary 03 Upper Secondary 04 Associate / Commercial college degree 05 Diploma 06 Bachelor degree 07 Master degree 08 Doctoral degree 98 DK ⇘ ED5	ED4B. WHAT IS THE HIGHEST GRADE (*name*) COMPLETED AT THIS LEVEL? *If unknown, record "98"* *If less than one grade, record "00"* *Record the highest grade/year completed*	ED5. DURING THE ***2012*** SCHOOL YEAR, DID (*name*) ATTEND SCHOOL OR PRESCHOOL AT ANY TIME? 1 Yes 2 No ⇘ ED7		ED6. DURING THIS/THAT SCHOOL YEAR, WHICH LEVEL AND GRADE IS/WAS (*name*) ATTENDING? Level: 00 Preschool ⇘ ED7 01 Primary 02 Lower Secondary 03 Upper Secondary 04 Associate/ Commercial college degree 05 Diploma 06 Bachelor degree 07 Master degree 08 Doctoral degree 98 DK ⇘ ED7	*If unknown, record "98"* *Record the grade attending in 2012 school year.*	ED7. DURING THE 2011 SCHOOL YEAR, THAT IS (MAY ***2011-MAR 2012***), DID (*name*) ATTEND SCHOOL OR PRESCHOOL AT ANY TIME? 1 Yes 2 No ⇘ Next person in order 8 DK ⇘ Next person in order			ED8. DURING THAT PREVIOUS SCHOOL YEAR, WHICH LEVEL AND GRADE DID (*name*) ATTEND? Level: 00 Preschool ⇘ Next person in order 01 Primary 02 Lower Secondary 03 Upper Secondary 04 Associate / Commercial college degree 05 Diploma 06 Bachelor degree 07 Master degree 08 Doctoral degree 98 DK ⇘ Next person in order	*If unknown, record "98".* *Record the grade attending in 2011 school year.*
Line	Name	Age	Yes	No	Level	Grade	Yes	No	Level	Grade	Y	N	DK	Level	Grade
01		___ ___	1	2	___ ___	___ ___	1	2	___ ___	___ ___	1	2	8	___ ___	___ ___
02		___ ___	1	2	___ ___	___ ___	1	2	___ ___	___ ___	1	2	8	___ ___	___ ___
03		___ ___	1	2	___ ___	___ ___	1	2	___ ___	___ ___	1	2	8	___ ___	___ ___
04		___ ___	1	2	___ ___	___ ___	1	2	___ ___	___ ___	1	2	8	___ ___	___ ___
05		___ ___	1	2	___ ___	___ ___	1	2	___ ___	___ ___	1	2	8	___ ___	___ ___

06		___ ___	1 2	___ ___	___ ___	1 2	___ ___	___ ___	1 2 8	___ ___	___ ___
07		___ ___	1 2	___ ___	___ ___	1 2	___ ___	___ ___	1 2 8	___ ___	___ ___
08		___ ___	1 2	___ ___	___ ___	1 2	___ ___	___ ___	1 2 8	___ ___	___ ___
09		___ ___	1 2	___ ___	___ ___	1 2	___ ___	___ ___	1 2 8	___ ___	___ ___
10		___ ___	1 2	___ ___	___ ___	1 2	___ ___	___ ___	1 2 8	___ ___	___ ___
11		___ ___	1 2	___ ___	___ ___	1 2	___ ___	___ ___	1 2 8	___ ___	___ ___
12		___ ___	1 2	___ ___	___ ___	1 2	___ ___	___ ___	1 2 8	___ ___	___ ___
13		___ ___	1 2	___ ___	___ ___	1 2	___ ___	___ ___	1 2 8	___ ___	___ ___
14		___ ___	1 2	___ ___	___ ___	1 2	___ ___	___ ___	1 2 8	___ ___	___ ___
15		___ ___	1 2	___ ___	___ ___	1 2	___ ___	___ ___	1 2 8	___ ___	___ ___

WATER AND SANITATION		**WS**
WS1. WHAT IS THE MAIN SOURCE OF DRINKING WATER FOR MEMBERS OF YOUR HOUSEHOLD? *Record only one main source of drinking water.*	Piped water Piped into dwelling.....11 Piped into compound, yard or plot.....12 Piped to neighbour .....13 Public tap/standpipe .....14 Tube Well, Borehole.....21 Dug well Protected well (e.g. has a roof/lid, etc.) .31 Unprotected well.....32 Water from spring such as hot spring Protected spring (e.g. with a fence surrounding it, etc.).....41 Unprotected spring .....42 Rainwater collection .....51 Tanker-truck .....61 Cart with small tank/drum.....71 Surface water (river, stream, dam, lake, pond, canal, irrigation channel) .....81 Bottled water/machine-dispensed drinking water .....91 Other (*specify*) _____ 96	 11⇨WS6 12⇨WS6 13⇨WS6 14⇨WS3 21⇨WS3 31⇨WS3 32⇨WS3 41⇨WS3 42⇨WS3 51⇨WS3 61⇨WS3 71⇨WS3 81⇨WS3 96⇨WS3
WS2. WHAT IS THE MAIN SOURCE OF WATER USED BY YOUR HOUSEHOLD FOR OTHER PURPOSES SUCH AS COOKING AND HAND WASHING, ETC.? *Record only one main source of water used.*	Piped water Piped into dwelling.....11 Piped into compound, yard or plot.....12 Piped to neighbour .....13 Public tap/standpipe .....14 Tube Well, Borehole.....21 Dug well Protected well (e.g. has a roof/lid, etc.) .31 Unprotected well.....32 Water from spring such as hot spring Protected spring (e.g., with a fence surrounding it, etc.).....41 Unprotected spring .....42 Rainwater collection .....51 Tanker-truck .....61 Cart with small tank/drum.....71 Surface water (river, stream, dam, lake, pond, canal, irrigation channel) .....81 Other (*specify*) _____ 96	 11⇨WS6 12⇨WS6 13⇨WS6
WS3. WHERE IS THAT WATER SOURCE LOCATED?	In own dwelling.....1 In own yard / plot .....2 Elsewhere.....3	1⇨WS6 2⇨WS6
WS4. HOW LONG DOES IT TAKE TO GO THERE, GET WATER, AND COME BACK?	Number of minutes .....__ __ __ DK.....998	

WS5. WHO USUALLY GOES TO THIS SOURCE TO COLLECT THE WATER FOR YOUR HOUSEHOLD? *Probe:* IS THIS PERSON UNDER AGE 15? WHAT SEX?	Adult woman (age 15+ years) ....1 Adult man (age 15+ years)..........................2 Female child (under 15) ....3 Male child (under 15).................................4 DK...8	
WS6. DO YOU DO ANYTHING TO THE WATER TO MAKE IT SAFER TO DRINK?	Yes ....1 No ....2 DK..8	 2⇨WS8 8⇨WS8
WS7. WHAT DO YOU USUALLY DO TO MAKE THE WATER SAFER TO DRINK? *Probe:* ANYTHING ELSE? *Record all items mentioned.*	Boil.. A Add bleach/chlorine.................................. B Strain it through a cloth .... C Use water filter (ceramic, sand, composite, etc.) .... D Solar disinfection .... E Let it stand and settle ....F Other (*specify*) ____________________ X DK...Z	
WS8. WHAT KIND OF TOILET FACILITY DO MEMBERS OF YOUR HOUSEHOLD USUALLY USE? *If "flush" or "pour flush", probe:* WHERE DOES IT FLUSH TO? *If necessary, ask permission to observe the facility.*	Flush/Pour flush Flush to piped sewer system................11 Flush to septic tank ....12 Flush to pit (latrine)...............................13 Flush to somewhere else ....14 Flush to unknown place/Not sure/DK where ....15 Pit latrine Ventilated Improved Pit latrine (VIP) ....21 Pit latrine with slab ....22 Pit latrine without slab/Open pit............23 Composting toilet.....................................31 Bucket..41 Hanging toilet, Hanging latrine ....51 No facility, Bush, Field.............................95 Other (*specify*) ____________________ 96	95⇨Next Module
WS9. DO YOU SHARE THIS FACILITY WITH OTHERS WHO ARE NOT MEMBERS OF YOUR HOUSEHOLD?	Yes ....1 No 2	2⇨Next Module
WS10. DO YOU SHARE THIS FACILITY ONLY WITH MEMBERS OF OTHER HOUSEHOLDS THAT YOU KNOW, OR IS THE FACILITY OPEN TO THE USE OF THE GENERAL PUBLIC?	Other households only (not public) ....1 Public facility..2	2⇨Next Module
WS11. HOW MANY HOUSEHOLDS IN TOTAL USE THIS TOILET FACILITY, INCLUDING YOUR OWN HOUSEHOLD?	Number of households (if less than 10) 0 __ Ten or more households ....10 DK...98	

HOUSEHOLD CHARACTERISTICS		HC
HC1A. WHAT IS THE RELIGION OF THE HEAD OF THIS HOUSEHOLD?	*Buddhism* ..... 1 Islam ..... 2 Christianity ..... 3 Other religion (*specify*) _____ 6 No religion 7	
HC1B. WHAT IS THE MOTHER TONGUE/NATIVE LANGUAGE OF THE HEAD OF THIS HOUSEHOLD?	Thai (including local dialect) ..... 01 Chinese ..... 02 Burmese ..... 03 Khmer/Kuy ..... 04 Malaysian/Yawee ..... 05 Lao ..... 06 English ..... 07 Other language (*specify*)_____ 96	
HC1C. TO WHAT ETHNIC GROUP DOES THE HEAD OF THIS HOUSEHOLD BELONG?	Thai ..... 01 Chinese ..... 02 Burmese ..... 03 Khmer ..... 04 Malaysian ..... 05 Lao ..... 06 Other language (*specify*)_____ 96	
HC2. HOW MANY ROOMS IN THIS HOUSEHOLD ARE USED FOR SLEEPING?	Number of rooms ..... __ __	
HC3. *Main material of the dwelling floor.* *Record observation.*	Natural floor Earth/Sand ..... 11 Dung ..... 12 Rudimentary floor Wood planks ..... 21 Palm/Bamboo ..... 22 Finished floor Parquet or polished wood ..... 31 Vinyl or asphalt strips ..... 32 Ceramic tiles ..... 33 Cement ..... 34 Half cement/mortar, half wood ..... 37 Other (*specify*)_____ 96	
HC4. *Main material of the roof.* *Record observation.*	Natural roofing No Roof ..... 11 Leaves (Palm/coconut leaf) ..... 12 Grass (thatch/straw) ..... 13 Rudimentary Roofing Woven mat ..... 21 Bamboo ..... 22 Wood planks ..... 23 Cardboard ..... 24 Finished roofing Metal alloy (such as zinc/metal/aluminium) ..... 31 Wood ..... 32 Fiber ..... 33 Ceramic tiles ..... 34 Cement ..... 35 Roofing shingles ..... 36 Other (*specify*)_____ 96	

HC5. *Main material of the exterior walls.* *Record observation.*	Natural walls No walls ..... 11 Cane/Palm/Trunks ..... 12 Dirt ..... 13 Rudimentary walls Bamboo ..... 21 Stone with mud ..... 22 Plywood ..... 24 Cardboard ..... 25 Reused wood ..... 26 Finished walls Cement ..... 31 Stone with cement ..... 32 Bricks ..... 33 Cement blocks ..... 34 Wood planks/shingles ..... 36 Half cement, half wood ..... 37 Other (*specify*) _____ 96	
HC6. WHAT TYPE OF FUEL DOES YOUR HOUSEHOLD MAINLY USE FOR COOKING? PRIMARY SOURCE OF FUEL USED FOR COOKING IN THE HOUSEHOLD?	Electricity ..... 01 Liquefied Petroleum Gas (LPG) ..... 02 Natural gas ..... 03 Biogas ..... 04 Kerosene ..... 05 Coal/Lignite ..... 06 Charcoal ..... 07 Wood ..... 08 Straw/Shrubs/Grass ..... 09 Animal dung ..... 10 Agricultural crop residue ..... 11 No food cooked in household ..... 95 Other (*specify*) _____ 96	01⇨HC8 02⇨HC8 03⇨HC8 04⇨HC8 05⇨HC8 95⇨HC8
HC7. IS THE COOKING USUALLY DONE IN THE HOUSE, IN A SEPARATE BUILDING, OR OUTDOORS? *If 'In the house', probe*: IS IT DONE IN A SEPARATE ROOM USED AS A KITCHEN?	In the house In a separate room used as kitchen ..... 1 Elsewhere in the house ..... 2 In a separate building ..... 3 Outdoors ..... 4 Other (*specify*) _____ 6	

HC8. DOES YOUR HOUSEHOLD HAVE:		Yes	No
[A] ELECTRICITY?	Electricity	1	2
[B] A RADIO?	Radio	1	2
[C1]A TELEVISION (PLAIN MONITOR)?	Television	1	2
[C2]A TELEVISION (LCD/LED/PLASMA MONITOR)?	Television	1	2
[D] A NON-MOBILE TELEPHONE?	Non-mobile telephone	1	2
[E] A REFRIGERATOR?	Refrigerator	1	2
[F] AN ELECTRIC FAN?	Electric fan	1	2
[G] A WASHING MACHINE?	Washing machine	1	2

[H] AN OVEN/ MICROWAVE OVEN?	Oven/Microwave oven 1 2	
[I] A COMPUTER?	Computer 1 2	
[J] A VIDEO PLAYER (VCD,DVD, BLUE RAY)?	Video player 1 2	
[K] AN AIR CONDITIONER?	Air conditioner 1 2	
HC9. DOES ANY MEMBER OF YOUR HOUSEHOLD OWN:	Yes No	
[A] A WATCH (E.G. WRIST WATCH)?	Watch 1 2	
[B] A MOBILE TELEPHONE?	Mobile telephone 1 2	
[C] A BICYCLE?	Bicycle 1 2	
[D] A MOTORCYCLE OR SCOOTER?	Motorcycle/Scooter 1 2	
[E] AN ANIMAL-DRAWN CART?	Animal drawn-cart 1 2	
[F] A CAR OR TRUCK?	Car/Truck 1 2	
[G] A BOAT WITH A MOTOR?	Boat with motor 1 2	
[H] TWO-WHEELED TRACTOR	Two-wheeled tractor 1 2	
[I] FOUR-WHEELED TRACTOR	Four-wheeled tractor 1 2	
HC10. DO YOU OR SOMEONE LIVING IN THIS HOUSEHOLD OWN THIS DWELLING? *If "No", then ask:* DO YOU RENT THIS DWELLING FROM SOMEONE NOT LIVING IN THIS HOUSEHOLD? *If "Rented from someone else", circle "2". For other responses, circle "6".*	Own ..... 1 Rent ..... 2 Other (Not owned or rented) 6	
HC15. DOES ANY MEMBER OF THIS HOUSEHOLD HAVE A BANK ACCOUNT?	Yes ..... 1 No 2	
HC15A. DOES ANY MEMBER OF THIS HOUSEHOLD HAVE A CREDIT CARD?	Yes ..... 1 No 2	

ACTIVITIES OF CHILDREN — CL

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CL1. *Ordinal No. (copy from HL1)*	CL2. *Name (copy from HL2)* *Age (copy from HL6)*		CL3. DURING THE PAST 7 DAYS, DID (*name*) DO ANY KIND OF WORK FOR SOMEONE WHO IS NOT A MEMBER OF THIS HOUSEHOLD? *If yes*: FOR PAY IN CASH OR KIND? 1 Yes, for pay (cash or kind) 2 Yes, unpaid 3 No ⇨CL5			CL4. SINCE LAST (*day of the week*), ABOUT HOW MANY HOURS DID HE/SHE DO THIS WORK FOR SOMEONE WHO IS NOT A MEMBER OF THIS HOUSEHOLD? *If more than one job, include all hours at all jobs.* *If less than 1 hour, record "00".* *If unknown, record "98".*	CL5. DURING THE PAST 7 DAYS, DID (*name*) FETCH WATER OR COLLECT FIREWOOD FOR HOUSEHOLD USE? 1 Yes 2 No ⇨ CL7		CL6. SINCE LAST (*day of the week*), ABOUT HOW MANY HOURS DID HE/SHE FETCH WATER OR COLLECT FIREWOOD FOR HOUSEHOLD USE? *If less than 1 hour, record "00".* *If unknown, record "98".*	CL7. DURING THE PAST 7 DAYS, DID (*name*) DO ANY PAID OR UNPAID WORK ON A FAMILY FARM OR IN A FAMILY BUSINESS OR SELLING GOODS IN THE STREET? *Include work for a business run by the child, alone or with one or more partners.* 1 Yes 2 No ⇨ CL9		CL8. SINCE LAST (*day of the week*), ABOUT HOW MANY HOURS DID HE/SHE DO THIS WORK FOR HIS/HER FAMILY OR HIMSELF/ HERSELF? *If less than 1 hour, record "00".* *If unknown, record "98".*	CL9. DURING THE PAST 7 DAYS, DID (*name*) HELP WITH HOUSEHOLD CHORES SUCH AS SHOPPING, CLEANING, WASHING CLOTHES, COOKING; OR CARING FOR CHILDREN, OLD OR SICK PEOPLE? 1 Yes 2 No ⇨ Next person in order		CL10. SINCE LAST (*day of the week*), ABOUT HOW MANY HOURS DID HE/SHE SPEND DOING THESE CHORES? *If less than 1 hour, record "00".* *If unknown, record "98".*
Line	Name	Age	Yes Paid	Yes Unpaid	No	Number of hours	Yes	No	Number of hours	Yes	No	Number of hours	Yes	No	Number of hours	Yes	No	Number of hours
01		__ __	1	2	3	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____
02		__ __	1	2	3	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____
03		__ __	1	2	3	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____
04		__ __	1	2	3	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____
05		__ __	1	2	3	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____
06		__ __	1	2	3	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____
07		__ __	1	2	3	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____
08		__ __	1	2	3	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____
09		__ __	1	2	3	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____
10		__ __	1	2	3	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____
11		__ __	1	2	3	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____
12		__ __	1	2	3	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____
13		__ __	1	2	3	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____
14		__ __	1	2	3	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____
15		__ __	1	2	3	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____	1	2	____ ____

HH19. *Ending time of interview.*	Hour and minutes.....__ __ : __ __	

SALT IODIZATION		**SI**
SI1. WE WOULD LIKE TO CHECK WHETHER THE SALT USED IN YOUR HOUSEHOLD IS IODIZED. MAY I HAVE A SAMPLE OF THE SALT USED TO COOK MEALS IN YOUR HOUSEHOLD? *Once you have tested the salt, circle number that corresponds to test outcome.*	Result of the test using iodate reagent Not iodized 0 PPM .....1 More than 0 PPM & less than 15 PPM.....2 15 PPM or more .....3 No salt in the house.....6 Salt not tested 7	 1⇨SI2 2⇨HH20 3⇨HH20 6⇨HH20 7⇨HH20
SI2.	Result of the test using iodide reagent Not iodized 0 PPM .....1 More than 0 PPM & less than 15 PPM.....2 15 PPM or more 3	

HH20. *Thank the respondent for his/her cooperation and return to HH8-HH15A on the cover page to check:*

☐ *If there are women age 15-49 years in the household, proceed with a separate woman questionnaire for each women.*

☐ *If there are children under age five years in the household, proceed with a separate children questionnaire for each child.*

__ __

Interviewer's Observations

Field Editor's Observations

Supervisor's Observations

MICS

QUESTIONNAIRE FOR INDIVIDUAL WOMEN [THAILAND]

WOMAN'S INFORMATION PANEL	WM
This questionnaire is to be administered to all women age 15 through 49 (see Household Listing Form, column HL7). A separate questionnaire should be used for each eligible woman.	
WM1. EA number from the MICS sample: ___ ___ ___ ___ WM1A. Household cluster (from listing): Households with children under 5 years……..1 Households with no children under 5 years….2 ___	WM2. Household number: ___ ___
WM3. Woman's name (copy from HL2 of the Household Listing Form): First – Last name_____	WM4. Woman's ordinal number (copy from HL1 of the Household Listing Form): ___ ___
WM5. Interviewer name and number: First – Last name _____ ___ ___ ___ ___ ___ ___ ___	WM6. Day / Month / Year of interview: ___ ___ / ___ ___ / 2 0 1 2

NOW I WOULD LIKE TO ASK ABOUT YOUR HEALTH AND OTHER TOPICS. THIS INTERVIEW SHOULD TAKE 20-25 MINUTES. THE INFORMATION WE COLLECT FROM YOU WILL BE KEPT CONFIDENTIAL AND YOUR ANSWERS WILL NEVER BE SHARED WITH ANYONE.

MAY I START NOW?

☐ *Yes, permission is given ⇨ Go to WM10 to record the time and then begin the interview.*

☐ *No, permission is not given ⇨ Complete WM7.*

WM7. Result of the interview with woman age 15-49 years.	Completed .....01 Not at home .....02 Refused .....03 Partly completed .....04 Incapacitated .....05 Other (*specify*) _____ 96

WM10. *Record the time.*	Hour and minutes .....__ __ : __ __	

WOMAN'S BACKGROUND		WB
WB1. IN WHAT MONTH AND YEAR WERE YOU BORN?	Date of birth Month.....__ __ DK month.....98 Year .....__ __ __ __ DK year.....9998	
WB2. HOW OLD ARE YOU? *Probe:* HOW OLD WERE YOU AT YOUR LAST BIRTHDAY? *Compare and correct WB1 and/or WB2 if inconsistent.*	Age (in completed years) .....__ __	
WB3. HAVE YOU EVER ATTENDED SCHOOL OR PRESCHOOL?	Yes .....1 No 2	 2⇨WB7
WB4. WHAT IS THE HIGHEST LEVEL OF SCHOOL YOU ATTENDED?	Preschool .....00 Primary .....01 Lower Secondary .....02 Upper Secondary .....03 Associate/Commercial college degree.....04 Diploma .....05 Bachelor degree .....06 Higher .....07 Doctoral degree.....08	0⇨WB7
WB5. WHAT IS THE HIGHEST GRADE YOU COMPLETED AT THAT LEVEL? *If the highest grade completed is lower than the highest grade attained, enter "00".*	Grade .....__ __ DK.....98	
WB6. *Check WB4:* ☐ Lower s*econdary or higher (WB4 = 02 - 08).* ⇨ *Go to Next Module* ☐ *Primary(WB4 = 01)* ⇨ *Continue with WB7*		
WB7. NOW I WOULD LIKE YOU TO READ THIS SENTENCE TO ME. *Show sentence on the card to the respondent. If respondent cannot read whole sentence, probe:* CAN YOU READ PART OF THE SENTENCE TO ME?	Cannot read at all .....1 Able to read only parts of sentence.....2 Able to read whole sentence .....3 No sentence in required language _____ 4 *(specify language)* Blind/mute, visually/speech impaired 5	

CHILD MORTALITY		**CM**
All questions refer only to LIVE births.		
CM1. NOW I WOULD LIKE TO ASK ABOUT ALL THE BIRTHS YOU HAVE HAD DURING YOUR LIFE. HAVE YOU EVER GIVEN BIRTH?	Yes ..... 1 No 2	2⇨CM8
CM2. WHAT WAS THE DATE OF YOUR FIRST BIRTH? I MEAN THE VERY FIRST TIME YOU GAVE BIRTH, EVEN IF THE CHILD IS NO LONGER LIVING, OR WHOSE FATHER IS NOT YOUR CURRENT PARTNER.	Date of birth Day ..... __ __ DK day ..... 98 Month ..... __ __ DK month ..... 98 Year ..... __ __ __ __ DK year 9998	⇨CM4
CM3. HOW MANY YEARS AGO DID YOU HAVE YOUR FIRST BIRTH?	Completed years since first birth..... __ __	
CM4. DO YOU HAVE ANY SONS OR DAUGHTERS TO WHOM YOU HAVE GIVEN BIRTH WHO ARE NOW LIVING WITH YOU?	Yes ..... 1 No 2	2⇨CM6
CM5. HOW MANY SONS LIVE WITH YOU? HOW MANY DAUGHTERS LIVE WITH YOU? *If none, record '00'.*	Sons living in this household ..... __ __ Daughters living in this household ..... __ __	
CM6. DO YOU HAVE ANY SONS OR DAUGHTERS TO WHOM YOU HAVE GIVEN BIRTH WHO ARE ALIVE BUT DO NOT LIVE WITH YOU?	Yes ..... 1 No 2	2⇨CM8
CM7. HOW MANY SONS ARE ALIVE BUT DO NOT LIVE WITH YOU? HOW MANY DAUGHTERS ARE ALIVE BUT DO NOT LIVE WITH YOU? *If none, record '00'.*	Sons elsewhere ..... __ __ Daughters elsewhere ..... __ __	
CM8. HAVE YOU EVER GIVEN BIRTH TO A BOY OR GIRL WHO WAS BORN ALIVE BUT LATER DIED? *If "No" probe by asking:* I MEAN, TO A CHILD WHO EVER BREATHED OR CRIED OR SHOWED OTHER SIGNS OF LIFE – EVEN IF HE OR SHE LIVED ONLY A FEW MINUTES OR HOURS?	Yes ..... 1 No 2	2⇨CM10

CM9. HOW MANY BOYS HAVE DIED? HOW MANY GIRLS HAVE DIED? *If none, record '00'.*	Boys dead .....__ __ Girls dead .....__ __	
CM10. Sum answers to CM5, CM7, and CM9.	Sum .....__ __	
CM11. JUST TO MAKE SURE THAT I HAVE THIS RIGHT, YOU HAVE HAD IN TOTAL (*total number in CM10*) LIVE BIRTHS DURING YOUR LIFE. IS THIS CORRECT? ☐ *Yes. Check below:* ☐ *No live births ⇨ Go to CONTRACEPTION Module (CP1)* ☐ *One or more live births ⇨ Continue with CM12* ☐ *No ⇨ Check responses to CM1-CM10 and make corrections as necessary before proceeding to CM12.*		
CM12. OF THESE (TOTAL NUMBER IN CM10) BIRTHS YOU HAVE HAD, WHEN DID YOU DELIVER THE LAST ONE (EVEN IF HE OR SHE HAS DIED)? *If unknown day, enter "98". Month and year must be recorded.*	Day .....__ __ Month.....__ __ Year.....__ __	
CM13. *Check CM12: Last birth occurred within the last 2 years.* ☐ *No live birth in last 2 years. ⇨ Go to CONTRACEPTION Module (CP1)* ☐ *One or more live births in last 2 years. ⇨ Ask for the name of the last born child and continue with next question* *Name of the last born child*_____ *If the last live birth is dead, try to show compassion when referring to that child, and enter the child's name in the following sections.*		
CM13A. IS (*name of last child*) HE OR SHE STILL ALIVE?	Yes.....1 NO.....2	1⇨Next MODULE
CM13B. WHEN DID (*name of last child*) HE OR SHE DIE? *If unknown day, enter "98".* *The interviewer must ask month and year of the death of last child.*	Day .....__ __ Month.....__ __ Year.....__ __ ___ ___	

DESIRE FOR LAST CHILD		**DB**
This module is to be administered to all women with a live birth in the 2 years preceding date of interview. Check child mortality module CM13 and record name of last-born child here _____. Use this child's name in the following questions, where indicated.		
DB1. WHEN YOU GOT PREGNANT WITH (*name*), DID YOU WANT TO GET PREGNANT AT THAT TIME?	Yes .....1 No 2	1⇨Next Module
DB2. DID YOU WANT TO HAVE A BABY LATER ON, OR DID YOU NOT WANT ANY (MORE) CHILDREN?	Later .....1 No more 2	2⇨Next Module
DB3. HOW MUCH LONGER DID YOU WANT TO WAIT?	Months .....1 __ __ Years .....2 __ __ DK 998	

MATERNAL AND NEWBORN HEALTH		**MN**
This module is to be administered to all women with a live birth in the 2 years preceding date of interview. Check child mortality module CM13 and record name of last-born child here _____. Use this child's name in the following questions, where indicated.		
MN1. DID YOU SEE ANYONE FOR ANTENATAL CARE DURING YOUR PREGNANCY WITH (*name*)?	Yes ..... 1 No 2	2⇨MN4D
MN2. WHOM DID YOU SEE? *Probe:* ANYONE ELSE? *Probe for the type of person seen and circle all answers given.*	Health professional: Physician ..... A Nurse/Midwife ..... B Other health professional Health centre staff/nurse's aide/midwife's aide ..... E Other personnel Traditional birth attendant (trained or untrained) ..... F Village health volunteer (VHV) ..... G Other (*specify*) _____ X	
MN3. HOW MANY TIMES DID YOU RECEIVE ANTENATAL CARE DURING THIS PREGNANCY?	Number of times ..... __ __ DK 98	
MN4. AS PART OF YOUR ANTENATAL CARE DURING THIS PREGNANCY, WERE ANY OF THE FOLLOWING DONE AT LEAST ONCE: [A] WAS YOUR BLOOD PRESSURE MEASURED? [B] DID YOU GIVE A URINE SAMPLE? [C] DID YOU GIVE A BLOOD SAMPLE?	Yes No Blood pressure ..... 1 2 Urine sample ..... 1 2 Blood sample 1 2	
MN4D. DURING THIS PREGNANCY, DID YOUR HUSBAND RECEIVE COUNSELLING AND INFORMATION FROM A HEALTH OFFICIAL ABOUT MATERNAL AND CHILD CARE?	Yes ..... 1 No 2	
MN5. DO YOU HAVE A CARD OR OTHER DOCUMENT WITH YOUR OWN IMMUNIZATIONS LISTED? MAY I SEE IT PLEASE? *If a card or any other document is presented, use it to assist with answers to the following questions.*	Yes (card seen) ..... 1 Yes (card not seen) ..... 2 No ..... 3 DK 8	
MN6. WHEN YOU WERE PREGNANT WITH (*name*), DID YOU RECEIVE ANY INJECTION IN THE ARM OR SHOULDER TO PREVENT THE BABY FROM GETTING TETANUS, THAT IS CONVULSIONS AFTER BIRTH?	Yes ..... 1 No ..... 2 DK 8	 2⇨MN9 8⇨MN9

MN7. HOW MANY TIMES DID YOU RECEIVE THIS TETANUS INJECTION DURING YOUR PREGNANCY WITH (*name*)? *If 7 or more times, record '7'.*	Number of times..... __ DK 8	 8⇨MN9
MN8. *How many tetanus injections during last pregnancy were reported in MN7?* ☐ *At least two tetanus injections during last pregnancy. ⇨ Go to MN12* ☐ *Fewer than two tetanus injections during last pregnancy. ⇨ Continue with MN9*		
MN9. DID YOU RECEIVE ANY TETANUS INJECTION AT ANY TIME BEFORE YOUR PREGNANCY WITH (*name*), EITHER TO PROTECT YOURSELF OR ANOTHER BABY?	Yes ..... 1 No..... 2 DK 8	 2⇨MN17 8⇨MN17
MN10. HOW MANY TIMES DID YOU RECEIVE A TETANUS INJECTION BEFORE YOUR PREGNANCY WITH (*name*)? *If 7 or more times, record '7'.*	Number of times..... __ DK 8	 8⇨MN17
MN11. HOW MANY YEARS AGO DID YOU RECEIVE THE LAST TETANUS INJECTION BEFORE YOUR PREGNANCY WITH (*name*)?	Years ago..... __ __	
MN17. WHO ASSISTED WITH THE DELIVERY OF (*name*)? *Probe:* ANYONE ELSE? *Probe for the type of person assisting and circle all answers given.* *If respondent says no one assisted, probe to determine whether any adults were present at the delivery.*	Health professional: Physician .....A Nurse/Midwife.....B Other health professional Health centre staff/nurse's aide/midwife's aide……..…E Other personnel Traditional birth attendant (trained or untrained).....F Village health volunteer (VHV) ..... G Relative/friend……...……H Other (*specify*) .....X No one..…… Y	

MN18. WHERE DID YOU GIVE BIRTH TO (*name*)? *Probe to identify the type of source.* *If unable to determine whether public or private, write the name of the place.* _____ *(Name of place)*	Home Your home ..... 11 Other home ..... 12 Govt. health facility Hospital ..... 21 Maternal and child health hospital ..... 22 Health centre/Sub-district promotion hospital/Bangkok Health centre ..... 23 Other public (*specify*) _____ 26 Private health facility Private hospital ..... 31 Private clinic ..... 32 Other private medical (*specify*) _____ 36 Other (*specify*) _____ 96	11⇨MN20 12⇨MN20 96⇨MN20
MN19. WAS (*name*) DELIVERED BY CAESAREAN SECTION? THAT IS, DID THEY CUT YOUR BELLY OPEN TO TAKE THE BABY OUT?	Yes ..... 1 No 2	
MN20. WHEN (*name*) WAS BORN, WAS HE/SHE VERY LARGE, LARGER THAN AVERAGE, AVERAGE, SMALLER THAN AVERAGE, OR VERY SMALL?	Very large ..... 1 Larger than average ..... 2 Average ..... 3 Smaller than average ..... 4 Very small ..... 5 DK 8	
MN21. WAS (*name*) WEIGHED AT BIRTH?	Yes ..... 1 No ..... 2 DK 8	 2⇨MN23 8⇨MN23
MN22. HOW MUCH DID (*name*) WEIGH? *Record weight from health card, booklet, if available. Record in kilograms.*	From card/booklet ..... 1 (kg) __ . __ __ __ From recall ..... 2 (kg) __ . __ __ __ DK 9998	
MN23. HAS YOUR MENSTRUAL PERIOD RETURNED SINCE THE BIRTH OF (*name*)?	Yes ..... 1 No 2	
MN24. DID YOU EVER BREASTFEED (*name*)?	Yes ..... 1 No 2	2⇨MN27A
MN25. HOW LONG AFTER BIRTH DID YOU FIRST PUT (*name*) TO THE BREAST? *If less than 1 hour, record '00' hours.*	Immediately ..... 000 Within 24 hours ..... 1 __ __ More than 24 hours: enter the number of days ..... 2 __ __ Don't know / remember 998	
MN26. IN THE FIRST THREE DAYS AFTER DELIVERY, WAS (*name*) GIVEN ANYTHING TO DRINK OTHER THAN BREAST MILK?	Yes ..... 1 No 2	 2⇨MN27A

MN27. WHAT WAS (*name*) GIVEN TO DRINK? *Probe:* ANYTHING ELSE?	Milk (other than breast milk).....A Plain water.....B Sugar or glucose water ..... C Water to prevent constipation (Gripe water)D Oral rehydration solution .....E Fruit juice .....F Infant formula ..... G Tea (other type of brewed beverage)..... H Honey .....I Other (*specify*) _____ X	
MN27A. IN THE 2ND WEEK AFTER DELIVERY, DID ANY HEALTH PERSONNEL VISIT AND CHECK YOUR HEALTH AT HOME?	Yes.....1 No .....2 Not yet the appointment date.....3	
MN27B. IN THE 4TH-6TH WEEK AFTER DELIVERY, DID ANY HEALTH PERSONNEL VISIT AND CHECK YOUR HEALTH AT HOME?	Yes.....1 No .....2 Not yet the appointment date.....3	
MN27C. IN THE 2ND WEEK AFTER DELIVERY, DID ANY HEALTH PERSONNEL VISIT AND CHECK YOUR LAST CHILD'S HEALTH AT HOME?	Yes.....1 No .....2 Not yet the appointment date.....3	
MN27D. IN THE 4TH-6TH WEEK AFTER DELIVERY, DID ANY HEALTH PERSONNEL VISIT AND CHECK YOUR LAST CHILD'S HEALTH AT HOME?	Yes.....1 No .....2 Not yet the appointment date.....3	

CONTRACEPTION		CP
CP1. I WOULD LIKE TO TALK WITH YOU ABOUT ANOTHER SUBJECT – FAMILY PLANNING. ARE YOU PREGNANT NOW?	Yes.....1 No .....2 Unsure or DK.....8	1⇨Next Module
CP2. ARE YOU CURRENTLY DOING SOMETHING OR USING ANY METHOD TO DELAY OR AVOID GETTING PREGNANT?	Yes.....1 No 2	2⇨CP3A
CP3. WHAT ARE YOU DOING TO DELAY OR AVOID A PREGNANCY? Do not prompt. If more than one method is mentioned, circle each one.	Female sterilization..... A Vasectomy..... B IUD..... C Injectables..... D Implants ..... E Oral contraceptive pill ..... F Male condom .....G Female condom.....H Diaphragm .....I Foam/Jelly .....J Lactational amenorrhoea method (LAM)..... K Periodic abstinence/Rhythm.....L Withdrawal.....M Other (*specify*) _____X	⇨Next Module ⇨Next Module ⇨Next Module ⇨Next Module ⇨Next Module ⇨Next Module ⇨Next Module ⇨Next Module ⇨Next Module ⇨Next Module ⇨Next Module ⇨Next Module ⇨Next Module ⇨Next Module
CP3A. WHAT IS THE MAIN REASON THAT YOU ARE NOT DOING SOMETHING OR USING ANY METHOD TO DELAY OR AVOID GETTING PREGNANT?	Afraid of being harmful to health……..01 The cost of contraception is expensive…..02 Just deliver/Post-abortion……..03 Think of being too old/menopausal……04 Difficulty to access the service (far, difficulty traveling, etc.)……..05 No desirable contraception at the service outlet ……..06 Husband/partner forces to have sex……..07 Not anticipate to have sex……08 No time to receive the service/busy……09 Other (specify) _____ 96	
CP3B. IN THE PAST, DID YOU EVER DO SOMETHING OR USE ANY METHOD TO DELAY OR AVOID GETTING PREGNANT?	Yes.....1 No 2	

UNMET NEED		**UN**
UN1. *Check CP1. Currently pregnant?* ☐ Yes, currently pregnant (CP1 = 1) ⇨ Continue with UN2 ☐ No, unsure or DK (CP1 = 2, 8) ⇨ Go to UN5		
UN2. NOW I WOULD LIKE TO TALK TO YOU ABOUT YOUR CURRENT PREGNANCY. WHEN YOU GOT PREGNANT, DID YOU WANT TO GET PREGNANT AT THAT TIME?	Yes ..... 1 No 2	1⇨UN4
UN2A. BEFORE THIS PREGNANCY, DID YOU DO SOMETHING OR USE ANY METHOD TO DELAY OR AVOID GETTING PREGNANT?	Yes ..... 1 No 2	 2⇨UN3
UN2B. WHAT DID YOU DO TO DELAY OR AVOID A PREGNANCY? Do not prompt. If more than one method is mentioned, circle each one.	Female sterilization ..... A Vasectomy ..... B IUD ..... C Injectables ..... D Implants ..... E Oral contraceptive pill ..... F Male condom ..... G Female condom ..... H Diaphragm ..... I Foam/Jelly ..... J Lactational amenorrhoea method (LAM) ..... K Periodic abstinence/Rhythm ..... L Withdrawal ..... M Other (*specify*) _____ X	
UN3. DID YOU WANT TO HAVE A BABY LATER ON OR DID YOU NOT WANT ANY (MORE) CHILDREN?	Later ..... 1 No more 2	
UN4. NOW I WOULD LIKE TO ASK SOME QUESTIONS ABOUT THE FUTURE. AFTER THE CHILD YOU ARE NOW EXPECTING, WOULD YOU LIKE TO HAVE ANOTHER CHILD, OR WOULD YOU PREFER NOT TO HAVE ANY MORE CHILDREN?	Have another child ..... 1 No more/None ..... 2 Undecided/Don't know 8	1⇨UN7 2⇨UN13 8⇨UN13
UN5. *Check CP3. Currently using "Female sterilization"?* ☐ Yes ⇨ Go to UN13 ☐ No ⇨ Continue with UN6		
UN6. NOW I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT THE FUTURE. WOULD YOU LIKE TO HAVE (A/ANOTHER) CHILD, OR WOULD YOU PREFER NOT TO HAVE ANY (MORE) CHILDREN?	Have (a/another) child ..... 1 No more/None ..... 2 Says she cannot get pregnant ..... 3 Undecided/Don't know 8	 2⇨UN9 3⇨UN11 8⇨UN9

UN7. HOW LONG WOULD YOU LIKE TO WAIT BEFORE THE BIRTH OF (A/ANOTHER) CHILD?	Months ..... 1 __ __ Years..... 2 __ __ Soon/Now ..... 993 Says she cannot get pregnant ..... 994 After marriage ..... 995 Other ..... 996 Don't know 998	994⇨UN11
UN8. *Check CP1. Currently pregnant?* ☐ Yes, currently pregnant (CP1 = 1) ⇨ Go to UN13 ☐ No, unsure or DK (CP1 = 2,8) ⇨ Continue with UN9		
UN9. *Check CP2. Currently using a method?* ☐ Yes (CP2 = 1) ⇨ Go to UN13 ☐ No (CP2 = 2) ⇨ Continue with UN10		
UN10. DO YOU THINK YOU ARE PHYSICALLY ABLE TO GET PREGNANT AT THIS TIME?	Yes ..... 1 No..... 2 DK 8	1 ⇨UN13 8 ⇨UN13
UN11. WHY DO YOU THINK YOU ARE NOT PHYSICALLY ABLE TO GET PREGNANT?	Infrequent sex / No sex ..... A Menopausal ..... B Never menstruated ..... C Hysterectomy (surgical removal of uterus) ..... D Has been trying to get pregnant for 2 years or more without result ..... E Postpartum amenorrheic ..... F Breastfeeding ..... G Too old ..... H Fatalistic ..... I Other (*specify*) _____ X Don't know ..... Z	
UN12. *Check UN11. "Never menstruated" mentioned?* ☐ Mentioned ⇨ Go to Next Module ☐ Not mentioned ⇨ Continue with UN13		

UN13. WHEN DID YOUR LAST MENSTRUAL PERIOD START?	(Number of) days ago ..... 1 __ __ (Number of) weeks ago..... 2 __ __ (Number of) months ago ..... 3 __ __ (Number of) years ago ..... 4 __ __ In menopause/ Has had hysterectomy ..... 994 Before last birth ..... 995 Never menstruated 996	

MARRIAGE/UNION		MA
MA1. ARE YOU CURRENTLY MARRIED OR LIVING TOGETHER WITH A MAN AS IF MARRIED?	Yes, currently married .....1 Yes, living with a man.....2 No, not in union 3	 3⇨MA5
MA2. HOW OLD IS YOUR HUSBAND/PARTNER? *Probe*: HOW OLD WAS YOUR HUSBAND/PARTNER ON HIS LAST BIRTHDAY?	Age in completed years.....__ __ DK.....98	
MA2A. BEFORE MARRIAGE, DID YOU EVER RECEIVE INFORMATION OR COUNSELLING ABOUT FAMILY PLANNING FROM A HEALTH SERVICE PROVIDER?	Yes .....1 No .....2 DK/Unsure 8	
MA2B. BEFORE MARRIAGE, DID YOUR HUSBAND/PARTNER EVER RECEIVE INFORMATION OR COUNSELLING ABOUT FAMILY PLANNING FROM A HEALTH SERVICE PROVIDER?	Yes .....1 No .....2 DK/Unsure 8	
MA2C. BEFORE MARRIAGE, DID YOU EVER RECEIVE A BLOOD TEST FOR THALASSEMIA? *If yes, probe*: DOES SHE KNOW THE RESULTS OF THE TEST (*Not necessary to ask what the results were*)?	Yes, and know the results .....1 Yes, but don't know the results .....2 No ..... 3 DK/Unsure 8	
MA2D. BEFORE MARRIAGE, DID YOU EVER RECEIVE A BLOOD TEST FOR HIV? *If yes, probe*: DOES SHE KNOW THE RESULTS OF THE TEST (*Not necessary to ask what the results were*)?	Yes, and know the results .....1 Yes, but don't know the results .....2 No ..... 3 DK/Unsure 8	
MA2E. BEFORE MARRIAGE, DID YOUR HUSBAND/PARTNER EVER RECEIVE A BLOOD TEST FOR THALASSEMIA? *If yes, probe*: DOES SHE KNOW THE RESULTS OF THE TEST (*Not necessary to ask what the results were*)?	Yes, and know the results .....1 Yes, but don't know the results .....2 No ..... 3 DK/Unsure 8	
MA2F. BEFORE MARRIAGE, DID YOUR HUSBAND/PARTNER EVER RECEIVE A BLOOD TEST FOR HIV? *If yes, probe*: DOES SHE KNOW THE RESULTS OF THE TEST (*Not necessary to ask what the results were*)?	Yes, and know the results .....1 Yes, but don't know the results .....2 No ..... 3 DK/Unsure 8	1⇨MA7 2⇨MA7 3⇨MA7 8⇨MA7
MA5. HAVE YOU EVER BEEN MARRIED OR LIVED TOGETHER WITH A MAN AS IF MARRIED?	Yes, formerly married .....1 Yes, formerly lived with a man .....2 No 3	 3 ⇨Next Module
MA6. WHAT IS YOUR MARITAL STATUS NOW: ARE YOU WIDOWED, DIVORCED OR SEPARATED?	Widowed.....1 Divorced .....2 Separated 3	
MA7. HAVE YOU BEEN MARRIED OR LIVED WITH A MAN ONLY ONCE OR MORE THAN ONCE?	Only once .....1 More than once.....2	

MA8. IN WHAT MONTH AND YEAR DID YOU FIRST MARRY OR START LIVING WITH A MAN AS IF MARRIED?	Date of first marriage Month.....__ __ DK month.....98 Year .....__ __ __ __ DK year.....9998	⇨Next Module
MA9. HOW OLD WERE YOU WHEN YOU STARTED LIVING WITH YOUR FIRST HUSBAND/PARTNER?	Age in years.....__ __	

HIV/AIDS		**HA**
HA1. NOW I WOULD LIKE TO ASK ABOUT THE KNOWLEDGE AND UNDERSTANDING OF HIV/AIDS HAVE YOU EVER HEARD OF AN ILLNESS CALLED AIDS?	Yes ..... 1 No 2	2⇨ Next Module
HA2. CAN PEOPLE REDUCE THEIR CHANCE OF GETTING THE AIDS VIRUS BY HAVING JUST ONE UNINFECTED SEX PARTNER WHO HAS NO OTHER SEX PARTNERS?	Yes ..... 1 No ..... 2 DK 8	
HA3. CAN PEOPLE GET THE AIDS VIRUS BECAUSE OF WITCHCRAFT OR OTHER SUPERNATURAL MEANS?	Yes ..... 1 No ..... 2 DK 8	
HA4. CAN PEOPLE REDUCE THEIR CHANCE OF GETTING THE AIDS VIRUS BY USING A CONDOM EVERY TIME THEY HAVE SEX?	Yes ..... 1 No ..... 2 DK 8	
HA5. CAN PEOPLE GET THE AIDS VIRUS FROM MOSQUITO BITES?	Yes ..... 1 No ..... 2 DK 8	
HA6. CAN PEOPLE GET THE AIDS VIRUS BY SHARING FOOD WITH A PERSON WHO HAS THE AIDS VIRUS?	Yes ..... 1 No ..... 2 DK 8	
HA7. IS IT POSSIBLE FOR A HEALTHY-LOOKING PERSON TO HAVE THE AIDS VIRUS?	Yes ..... 1 No ..... 2 DK 8	
HA8. CAN THE VIRUS THAT CAUSES AIDS BE TRANSMITTED FROM A MOTHER TO HER BABY: [A] DURING PREGNANCY? [B] DURING DELIVERY? [C] BY BREASTFEEDING?	Yes No DK During pregnancy ..... 1 2 8 During delivery ..... 1 2 8 By breastfeeding 1 2 8	
HA9. IN YOUR OPINION, IF A FEMALE TEACHER HAS THE AIDS VIRUS BUT IS NOT SICK, SHOULD SHE BE ALLOWED TO CONTINUE TEACHING IN SCHOOL?	Yes ..... 1 No ..... 2 DK/Not sure/Depends 8	
HA10. WOULD YOU BUY FRESH VEGETABLES FROM A SHOPKEEPER OR VENDOR IF YOU KNEW THAT THIS PERSON HAD THE AIDS VIRUS?	Yes ..... 1 No ..... 2 DK/Not sure/Depends 8	
HA11. IF A MEMBER OF YOUR FAMILY GOT INFECTED WITH THE AIDS VIRUS, WOULD YOU WANT IT TO REMAIN A SECRET?	Yes ..... 1 No ..... 2 DK/Not sure/Depends 8	
HA12. IF A MEMBER OF YOUR FAMILY BECAME SICK WITH AIDS, WOULD YOU BE WILLING TO CARE FOR HER OR HIM IN YOUR OWN HOUSEHOLD?	Yes ..... 1 No ..... 2 DK/Not sure/Depends 8	

HA13. *Check CM13: Any live birth in last 2 years?*

☐ *No live birth in last 2 years (CM13 = N or blank)* ⇨ *Go to HA24*

☐ *One or more live births in last 2 years (CM13 = Y)* ⇨ *Continue with HA14*

HA14. *Check MN1: Received antenatal care?*

☐ *Received antenatal care (MN1 = 1)* ⇨ *Continue with HA15*

☐ *Did not receive antenatal care (MN1 = 2)* ⇨ *Go to HA24*

HA15. DURING ANY OF THE ANTENATAL VISITS FOR YOUR PREGNANCY WITH (*name*), WERE YOU GIVEN ANY INFORMATION ABOUT:		Y	N	DK	
[A] BABIES GETTING THE AIDS VIRUS FROM THEIR MOTHER?	AIDS from mother	1	2	8	
[B] THINGS THAT YOU CAN DO TO PREVENT GETTING THE AIDS VIRUS?	Things to do	1	2	8	
[C] GETTING TESTED FOR THE AIDS VIRUS?	Tested for AIDS	1	2	8	
WERE YOU: [D] OFFERED A TEST FOR THE AIDS VIRUS?	Offered a test	1	2	8	
HA16. I DON'T WANT TO KNOW THE RESULTS, BUT WERE YOU TESTED FOR THE AIDS VIRUS AS PART OF YOUR ANTENATAL CARE?	Yes	1			
	No	2			2⇨HA19
	DK	8			8⇨HA19
HA17. I DON'T WANT TO KNOW THE RESULTS, BUT DID YOU GET THE RESULTS OF THE TEST?	Yes	1			
	No	2			2⇨HA22
	DK	8			8⇨HA22
HA18. REGARDLESS OF THE RESULT, ALL WOMEN WHO ARE TESTED ARE SUPPOSED TO RECEIVE COUNSELLING AFTER GETTING THE RESULT. AFTER YOU WERE TESTED, DID YOU RECEIVE COUNSELLING?	Yes	1			1⇨HA22
	No	2			2⇨HA22
	DK	8			8⇨HA22

HA19. *Check MN17: Birth delivered by health professional (A or B)?*

☐ *Yes, birth delivered by health professional* ⇨ *Continue with HA20*

☐ *No, birth not delivered by health professional* ⇨ *Go to HA24*

HA20. I DON'T WANT TO KNOW THE RESULTS, BUT WERE YOU TESTED FOR THE AIDS VIRUS BETWEEN THE TIMES YOU WENT FOR DELIVERY BUT BEFORE THE BABY WAS BORN?	Yes	1	
	No	2	2⇨HA24
HA21. I DON'T WANT TO KNOW THE RESULTS, BUT DID YOU GET THE RESULTS OF THE TEST?	Yes	1	
	No	2	
HA22. HAVE YOU BEEN TESTED FOR THE AIDS VIRUS SINCE THAT TIME YOU WERE TESTED DURING YOUR PREGNANCY?	Yes	1	
	No	2	1⇨HA25

HA23. WHEN WAS THE MOST RECENT TIME YOU WERE TESTED FOR THE AIDS VIRUS?	Less than 12 months ago .....1 12-23 months ago.....2 2 or more years ago 3	1⇨ Next Module 2⇨ Next Module 3⇨ Next Module
HA24. I DON'T WANT TO KNOW THE RESULTS, BUT HAVE YOU EVER BEEN TESTED TO SEE IF YOU HAVE THE AIDS VIRUS?	Yes .....1 No 2	2⇨HA27
HA25. WHEN WAS THE MOST RECENT TIME YOU WERE TESTED?	Less than 12 months ago .....1 12-23 months ago.....2 2 or more years ago 3	
HA26. I DON'T WANT TO KNOW THE RESULTS, BUT DID YOU GET THE RESULTS OF THE TEST?	Yes .....1 No .....2 DK.....8	1⇨ Next Module 2⇨ Next Module 8⇨ Next Module
HA27. DO YOU KNOW OF A PLACE WHERE PEOPLE CAN GO TO GET TESTED FOR THE AIDS VIRUS?	Yes .....1 No 2	

ATTITUDES TOWARD DOMESTIC VIOLENCE					DV
DV1. SOMETIMES A HUSBAND IS ANNOYED OR ANGERED BY THINGS THAT HIS WIFE DOES. IN YOUR OPINION, IS A HUSBAND JUSTIFIED IN HITTING OR BEATING HIS WIFE IN THE FOLLOWING SITUATIONS:		OK	Not OK	DK	
[A] IF SHE GOES OUT WITHOUT TELLING HIM?	Goes out without telling him	1	2	8	
[B] IF SHE NEGLECTS THE CHILDREN?	Neglects the children	1	2	8	
[C] IF SHE ARGUES WITH HIM?	Argues with him	1	2	8	
[D] IF SHE REFUSES TO HAVE SEX WITH HIM?	Refuses to have sex with him	1	2	8	
[E] IF SHE BURNS THE FOOD?	Burns the food	1	2	8	

WM11. *Record the time.*	Hour and minutes .....__ __ : __ __	

WM12. *Check Household Listing Form, column HL8.*
Is the respondent the mother or caretaker of any child age 0-4 living in this household?

☐ *Yes ⇨ Go to QUESTIONNAIRE FOR CHILDREN UNDER FIVE for that child and start the interview with this respondent.*

☐ *No ⇨ End the interview with this respondent by thanking her for her cooperation.*
Check for the presence of any other eligible woman, man or child under-5 in the household.

Interviewer's Observations

Field Editor's Observations

Supervisor's Observations

QUESTIONNAIRE FOR CHILDREN UNDER FIVE [THAILAND]

UNDER-FIVE CHILD INFORMATION PANEL	UF

This questionnaire is to be administered to all mothers or caretakers (see Household Listing Form, column HL9) who care for a child that lives with them and is under the age of 5 years (see Household Listing Form, column HL6).
A separate questionnaire should be used for each eligible child.

UF1. EA number from the MICS sample: ___ ___ ___ UF1A. Household cluster (from listing) Households with children under 5 years……..1 Households with no children under 5 years……2	UF2. Household number: ___ ___
UF3. Child's name (copy from HL2 of the Household Listing Form): First-Last name_____	UF4. Child's ordinal number (copy from HL1 of the Household Listing Form): ___ ___
UF5. Mother's / Caretaker's name (copy from HL2 of the Household Listing Form): First-Last name_____	UF6. Mother's / Caretaker's ordinal number (copy from HL8 of the Household Survey Form): : ___ ___
UF7. Interviewer name and number: First-Last name_____ ___ ___	UF8. Day / Month / Year of interview: ___ ___ / ___ ___ / 2 0 1 2

NOW I WOULD LIKE TO TALK TO YOU MORE ABOUT (***child's name from UF3***)'S HEALTH AND OTHER TOPICS. THIS INTERVIEW WILL TAKE ABOUT 20-25 MINUTES. AGAIN, ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND YOUR ANSWERS WILL NEVER BE SHARED WITH ANYONE.

MAY I START NOW?

☐ *Yes, permission is given ⇨ Go to UF12 to record the time and then begin the interview.*

☐ *No, permission is not given ⇨ Complete UF9.*

UF9. Result of interview for children under 5 Codes refer to mother/caretaker.	Completed .....01 Not at home during 3 visits .....02 Refused .....03 Partly completed .....04 Incapacitated .....05 Other (*specify*) _____ 96

UF12. STARTING TIME OF THE INTERVIEW.	Hour and minutes..... __ __ : __ __	

AGE		AG
AG1. NOW I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT THE HEALTH OF (*name*). IN WHAT DAY, MONTH AND YEAR WAS (*name*) BORN? *Probe:* WHAT IS HIS / HER BIRTHDAY? If the mother/caretaker knows the exact birth date, also enter the day; otherwise, circle 98 for day. Month and year must be recorded.	Date of birth Day .....__ __ Month.....__ __ Year .....__ __ __ __	
AG2. HOW OLD IS (*name*)? *Probe*: HOW OLD WAS (*name*) AT HIS / HER LAST BIRTHDAY? Record age in completed years. Record '0' if less than 1 year. Compare and correct AG1 and/or AG2 if inconsistent.	Age (in completed years) .....__	

BIRTH REGISTRATION		**BR**
The birth certificate is issued by the registrar after a birth report is sent to the district or municipality. If the parent/guardian has only a "birth report" issued by the delivering hospital, the child's birth was not yet registered.		
BR1. DOES (*name*) HAVE A BIRTH CERTIFICATE? *If yes, ask:* MAY I SEE IT?	Yes, seen.....1 Yes, not seen.....2 No .....3 DK.....8	1⇨Next Module 3⇨BR2A
BR2. HAS (*name*)'S BIRTH CERTIFICATE BEEN ISSUED BY THE REGISTRAR AT THE DISTRICT OR MUNICIPALITY?	Yes .....1 No .....2 DK.....8	1⇨Next Module
BR2A. DO YOU KNOW THAT YOU HAVE TO REPORT THE BIRTH AND OBTAIN A BIRTH CERTIFICATE FOR (*name*)?	Yes .....1 No 2	2⇨Next Module
BR2B. WHAT IS THE MAIN REASON FOR NOT REPORTING THE BIRTH AND OBTAIN A BIRTH CERTIFICATE FOR (*name*)?	High cost……1 Too far to travel……..2 Did not want to be fined……3 Did go to the district/municipality, but the registrar did not register the birth……4 Other (specify)……6 DK……..8	

EARLY CHILDHOOD DEVELOPMENT		**EC**
EC1. HOW MANY CHILDREN'S BOOKS OR PICTURE BOOKS DOES THIS HOUSEHOLD HAVE FOR (*name*)? *(Not including school books or books for older children/adults)* *If 10 or more books, record "10".* *If none, record "00".*	Number of children's books.....__ __	
EC2. I AM INTERESTED IN LEARNING ABOUT THE THINGS THAT (*name*) PLAYS WITH WHEN HE/SHE IS AT HOME. DOES HE/SHE PLAY WITH: [A] HOMEMADE TOYS (SUCH AS DOLLS, CARS, OR OTHER TOYS MADE AT HOME)? [B] TOYS FROM A SHOP OR MANUFACTURED TOYS? [C] HOUSEHOLD OBJECTS (SUCH AS BOWLS OR POTS) OR OBJECTS FOUND OUTSIDE (SUCH AS STICKS, ROCKS, ANIMAL SHELLS OR LEAVES)?	Y N DK Homemade toys .....1 2 8 Toys from a shop.....1 2 8 Household objects or outside objects 1 2 8	
EC3. SOMETIMES ADULTS TAKING CARE OF CHILDREN HAVE TO LEAVE THE HOUSE TO GO SHOPPING, DO HOUSEHOLD CHORES OR FOR OTHER REASONS AND HAVE TO LEAVE YOUNG CHILDREN. ON HOW MANY DAYS IN THE PAST WEEK WAS (*name*): [A] LEFT ALONE FOR MORE THAN AN HOUR? [B] LEFT IN THE CARE OF ANOTHER CHILD, THAT IS, SOMEONE LESS THAN 10 YEARS OLD, FOR MORE THAN AN HOUR? If 'none' enter' 0'. If 'don't know' enter'8'.	Number of days left alone for more Than an hour .....__ Number of days left with other child for more than an hour .....__	
EC4. *Check AG2: Age of child* ☐ *Child age 3 or 4 ⇨ Continue with EC5* ☐ *Child age 0, 1 or 2 ⇨ Go to Next Module*		
EC5. DOES (*name*) ATTEND ANY ORGANIZED LEARNING OR EARLY CHILDHOOD EDUCATION PROGRAMME, SUCH AS A PRIVATE OR GOVERNMENT FACILITY, INCLUDING KINDERGARTEN OR COMMUNITY CHILD CARE?	Yes .....1 No .....2 DK.....8	 2⇨EC7 8⇨EC7
EC6. WITHIN THE LAST SEVEN DAYS, ABOUT HOW MANY HOURS DID (*name*) ATTEND?	Number of hours.....__ __	

EC7. IN THE PAST 3 DAYS, DID YOU OR ANY HOUSEHOLD MEMBER OVER 15 YEARS OF AGE ENGAGE IN ANY OF THE FOLLOWING ACTIVITIES WITH (*name*): *If yes, ask:* WHO ENGAGED IN THIS ACTIVITY WITH (*name*)? *Circle all that apply.*		Mother	Father	Other	No one	
[A] READ BOOKS TO OR LOOKED AT PICTURE BOOKS WITH (*name*)?	Read books	A	B	X	Y	
[B] TOLD STORIES TO (*name*)?	Told stories	A	B	X	Y	
[C] SANG SONGS TO (*name*) OR WITH (*name*), INCLUDING LULLABIES?	Sang songs	A	B	X	Y	
[D] TOOK (*name*) OUTSIDE THE HOME, COMPOUND, YARD OR ENCLOSURE?	Took outside	A	B	X	Y	
[E] PLAYED WITH (*name*)?	Played with	A	B	X	Y	
[F] NAMED, COUNTED, OR DREW THINGS TO OR WITH (*name*)?	Named/counted	A	B	X	Y	
EC8. I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT THE HEALTH AND DEVELOPMENT OF YOUR CHILD. CHILDREN DO NOT ALL DEVELOP AND LEARN AT THE SAME RATE. FOR EXAMPLE, SOME WALK EARLIER THAN OTHERS. THESE QUESTIONS ARE RELATED TO SEVERAL ASPECTS OF YOUR CHILD'S DEVELOPMENT. CAN (*name*) IDENTIFY OR NAME AT LEAST TEN LETTERS OF THE ALPHABET?	Yes .....1 No .....2 DK.....8					
EC9. CAN (*name*) READ AT LEAST FOUR SIMPLE, POPULAR WORDS?	Yes .....1 No .....2 DK.....8					
EC10. DOES (*name*) KNOW THE NAME AND RECOGNIZE THE SYMBOL OF ALL NUMBERS FROM 1 TO 10?	Yes .....1 No .....2 DK.....8					
EC11. CAN (*name*) PICK UP A SMALL OBJECT WITH TWO FINGERS, LIKE A STICK OR A ROCK FROM THE GROUND?	Yes .....1 No .....2 DK.....8					
EC12. IS (*name*) SOMETIMES TOO SICK TO PLAY?	Yes .....1 No .....2 DK.....8					
EC13. DOES (*name*) FOLLOW SIMPLE DIRECTIONS ON HOW TO DO SOMETHING CORRECTLY?	Yes .....1 No .....2 DK.....8					

EC14. WHEN GIVEN SOMETHING TO DO, IS (*name*) ABLE TO DO IT INDEPENDENTLY?	Yes .....1 No .....2 DK.....8	
EC15. DOES *(name)* GET ALONG WELL WITH OTHER CHILDREN?	Yes .....1 No .....2 DK.....8	
EC16. DOES (*name*) KICK, BITE, OR HIT OTHER CHILDREN OR ADULTS?	Yes .....1 No .....2 DK.....8	
EC17. DOES (*name*) GET DISTRACTED EASILY?	Yes .....1 No .....2 DK.....8	

BREASTFEEDING		**BF**
BF1. HAS (*name*) EVER BEEN BREASTFED? *(By natural mother or other women)*	Yes ..... 1 No ..... 2 DK 8	 2⇨BF3 8⇨BF3
BF2. IS HE/SHE STILL BEING BREASTFED? *(By natural mother or other women, at least once a day)*	Yes ..... 1 No ..... 2 DK 8	 1⇨BF3
BF2A. FOR HOW MANY MONTHS HAS HE/SHE EVER BEEN BREASTFED CONTINUOUSLY? *IF LESS THAN 1 MONTH RECORD "00".* *IF DON'T KNOW RECORD "98".*	Number of times ..... __ __	
BF3. I WOULD LIKE TO ASK YOU ABOUT LIQUIDS THAT (*name*) MAY HAVE HAD IN THE PAST 24 HOURS (DAY AND NIGHT). I AM INTERESTED IN WHETHER (*name*) HAD THE ITEM EVEN IF IT WAS COMBINED WITH OTHER FOODS. DID (*name*) DRINK PLAIN WATER?	Yes ..... 1 No ..... 2 DK 8	
BF4. DID (*name*) DRINK INFANT FORMULA?	Yes ..... 1 No ..... 2 DK 8	 2⇨BF6 8⇨BF6
BF5. HOW MANY TIMES DID (*name*) DRINK INFANT FORMULA?	Number of times ..... __ __	
BF6. DID (*name*) DRINK TINNED, BOXED, POWDERED OR FRESH ANIMAL MILK?	Yes ..... 1 No ..... 2 DK 8	 2⇨BF7A 8⇨BF7A
BF7. HOW MANY TIMES DID (*name*) DRINK TINNED, BOXED, POWDERED OR FRESH ANIMAL MILK?	Number of times ..... __ __	
BF7A. DID (*name*) DRINK SWEETENED CONDENSED MILK?	Yes ..... 1 No ..... 2 DK 8	 2⇨BF8 8⇨BF8
BF7B. HOW MANY TIMES DID (*name*) DRINK SWEETENED CONDENSED MILK?	Number of times ..... __ __	
BF8. DID (*name*) DRINK JUICE OR JUICE DRINKS?	Yes ..... 1 No ..... 2 DK 8	

BF9. DID (*name*) DRINK CLEAR SOUP/CLEAR BROTH?	Yes .....1 No .....2 DK.....8	
BF10. DID (*name*) DRINK OR EAT VITAMIN OR MINERALS SUPPLEMENTS OR ANY MEDICINES SUCH AS FISH LIVER OIL, IRON?	Yes .....1 No .....2 DK.....8	
BF11. DID (*name*) DRINK ORS (ORAL REHYDRATION SALTS)?	Yes .....1 No .....2 DK.....8	
BF11A. DID (*name*) DRINK SODA / SWEETENED DRINKS?	Yes .....1 No .....2 DK.....8	
BF12. DID (*name*) DRINK ANY OTHER LIQUIDS?	Yes .....1 No .....2 DK.....8	
BF13. DID (*name*) DRINK OR EAT YOGURT?	Yes .....1 No .....2 DK.....8	 2⇨BF15 8⇨BF15
BF14. HOW MANY TIMES DID (*name*) DRINK OR EAT YOGURT?	Number of times .....__ __	
BF15. DID (*name*) EAT RICE PORRIDGE?	Yes .....1 No .....2 DK.....8	
BF16. DID (*name*) EAT SOLID OR SEMI-SOLID (SOFT, MUSHY) FOOD?	Yes .....1 No .....2 DK.....8	 2⇨BF18 8⇨BF18
BF17. HOW MANY TIMES DID (*name*) EAT SOLID OR SEMI-SOLID (SOFT, MUSHY) FOOD SUCH AS MASHED RICE OR MASHED BANANA?	Number of times .....__ __	
BF18. WITHIN LAST 24 HOURS (DAY AND NIGHT), DID (*name*) DRINK ANYTHING FROM A BOTTLE WITH A NIPPLE?	Yes .....1 No .....2 DK.....8	

CARE OF ILLNESS		**CA**
CA1. IN THE LAST TWO WEEKS, HAS (*name*) HAD DIARRHOEA (LOOSE STOOLS AT LEAST THREE TIMES A DAY, BLOODY MUCOUS IN THE STOOLS AT LEAST ONCE A DAY, OR WATERY STOOL MORE THAN ONCE A DAY)?	Yes ..... 1 No ..... 2 DK 8	 2⇨CA7 8⇨CA7
CA2. HOW MUCH (*name*) WAS GIVEN TO DRINK DURING THE DIARRHOEA (INCLUDING BREAST-MILK)? DURING THE TIME (*name*) HAD DIARRHOEA, WAS HE/SHE GIVEN LESS THAN USUAL TO DRINK, ABOUT THE SAME AMOUNT OR MORE THAN USUAL? *If less, probe*: WAS HE/SHE GIVEN MUCH LESS THAN USUAL TO DRINK, OR SOMEWHAT LESS?	Much less ..... 1 Somewhat less ..... 2 About the same ..... 3 More ..... 4 Nothing to drink ..... 5 DK 8	
CA3. DURING THE TIME (*name*) HAD DIARRHOEA, WAS HE/SHE GIVEN LESS THAN USUAL TO EAT, ABOUT THE SAME AMOUNT, MORE THAN USUAL? If "less", probe: WAS HE/SHE GIVEN MUCH LESS THAN USUAL TO EAT OR SOMEWHAT LESS?	Much less ..... 1 Somewhat less ..... 2 About the same ..... 3 More ..... 4 Stopped food ..... 5 Never gave food ..... 6 DK 8	
CA4. DURING THE EPISODE OF DIARRHOEA, WAS (*name*) GIVEN TO DRINK ANY OF THE FOLLOWING: Read each item aloud and record response before proceeding to the next item. [A] FLUID FROM ORS PACKET…….. [C] HEALTH PERSONNEL RECOMMENDED HOMEMADE FLUID……..	Y N DK Fluid from ORS packet ..... 1 2 8 Health personnel recommended homemade fluid…….. 1 2 8	
CA5. WAS ANYTHING (ELSE) GIVEN TO TREAT THE DIARRHOEA?	Yes ..... 1 No ..... 2 DK 8	 2⇨CA7 8⇨CA7

CA6. WHAT (ELSE) WAS GIVEN TO TREAT THE DIARRHOEA? *Probe*: ANYTHING ELSE? *Record all treatments given. Write brand name(s) of all medicines mentioned.* _____ (Name)	Pill or Syrup Antibiotic ..... A Antimotility ..... B Zinc ..... C Other pill or syrup (Not antibiotic, antimotility or zinc) ..... G Unknown pill or syrup ..... H Injection Antibiotic ..... L Non-antibiotic ..... M Unknown injection ..... N Intravenous ..... O Herbal/traditional medicine ..... Q Other (*specify*) _____ X	
CA6A. FROM WHERE DID YOU SEEK ADVICE OR TREATMENT? *Probe*: ANYWHERE ELSE? *Circle all providers mentioned, but do NOT prompt with any suggestions.* *Probe to identify each type of source. If unable to determine if public or private sector, write the name of the place.* _____ (Name of health outlet)	Did not seek advice or treatment ..... Y DK ..... Z Public sector Govt. hospital ..... A Maternal and child health hospital ..... B Health centre/Sub-district health promotion hospital/BMA health centre ... C Village health volunteer (VHV) ..... D Mobile clinic ..... E Other public (*specify*) _____ H Private medical sector Private hospital/clinic ..... I Private physician ..... J Private pharmacy ..... K Mobile clinic ..... L Other private medical (*specify*)_____ O Other source Relative/friend ..... P Shop ..... Q Traditional practitioner ..... R Other (specify) X	
CA7. AT ANY TIME IN THE LAST TWO WEEKS, HAS (*name*) HAD AN ILLNESS WITH A COUGH?	Yes ..... 1 No ..... 2 DK 8	 2⇨CA14 8⇨CA14
CA8. WHEN (*name*) HAD AN ILLNESS WITH A COUGH, DID HE/SHE BREATHE FASTER THAN USUAL WITH SHORT, RAPID BREATHS OR HAVE DIFFICULTY BREATHING?	Yes ..... 1 No ..... 2 DK 8	 2⇨CA14 8⇨CA14
CA9. WAS THE FAST OR DIFFICULT BREATHING DUE TO A PROBLEM IN THE CHEST OR A BLOCKED OR RUNNY NOSE?	Problem in chest only ..... 1 Blocked or runny nose only ..... 2 Both ..... 3 Other (*specify*) _____ 6 DK 8	 2⇨CA14 6⇨CA14

CA10. DID YOU SEEK ANY ADVICE OR TREATMENT FOR THE ILLNESS FROM ANY SOURCE?	Yes ..... 1 No ..... 2 DK 8	 2⇨CA12 8⇨CA12
CA11. FROM WHERE DID YOU SEEK ADVICE OR TREATMENT? _____ (Name of health outlet)	Public sector Govt. hospital ..... A Maternal and child health hospital ..... B Health centre/Sub-district health promotion hospital/BMA health centre ... C Village health volunteer (VHV) ..... D Mobile clinic ..... E Other public (*specify*) _____ H Private medical sector Private hospital/clinic ..... I Private physician ..... J Private pharmacy ..... K Mobile clinic ..... L Other private medical (*specify*) _____ O Other source Relative/friend ..... P Shop ..... Q Traditional practitioner ..... R Other (specify) X	
CA12. WAS (*name*) GIVEN ANY MEDICINE TO TREAT THIS ILLNESS?	Yes ..... 1 No ..... 2 DK 8	 2⇨CA14 8⇨CA14
CA13. WHAT MEDICINE WAS (*name*) GIVEN? *Probe:* ANY OTHER MEDICINE? Circle all medicines given. Write brand name(s) of all medicines mentioned. _____ (Names of medicines)	Antibiotic Pill/Syrup ..... A Injection ..... B Anti-malarials ..... M Paracetamol ..... P Aspirin ..... Q Ibuprofen ..... R Other (*specify*) _____ X DK ..... Z	
CA14. Check AG2: Child age under 3? ☐ Yes ⇨ Continue with CA15 ☐ *No ⇨ Go to Next Module*		
CA15. THE LAST TIME *(name)* PASSED STOOLS, WHAT WAS DONE TO DISPOSE OF THE STOOLS?	Child used toilet / latrine ..... 01 Put/Rinsed into toilet or latrine ..... 02 Put/Rinsed into drain or ditch ..... 03 Thrown into garbage (solid waste) ..... 04 Buried ..... 05 Left in the open ..... 06 Other (*specify*) _____ 96 DK 98	

IMMUNIZATION											**IM**
If an immunization booklet is available, copy the dates in IM3 for each type of immunization recorded on the booklet. IM6-IM1are for registering vaccinations that are not recorded on the booklet. IM6-IM17 will only be asked when a booklet is not available.											
IM1. DO YOU HAVE A BOOKLET WHERE (*name*)'S VACCINATIONS ARE WRITTEN DOWN? (*If yes*) MAY I SEE IT PLEASE?		Yes, seen ..... 1 Yes, not seen ..... 2 No booklet 3									1⇨IM3 2⇨IM6
IM2. DID YOU EVER HAVE A VACCINATION BOOKLET FOR (*name*)?		Yes ..... 1 No 2									1⇨IM6 2⇨IM6
IM3. (a) Copy dates for each vaccination from the booklet. (b) Write '44' in day column if booklet shows that vaccination was given but no date recorded.		Date of Immunization Day		Month		Year					
BCG	BCG										
POLIO 1	OPV1										
POLIO 2	OPV2										
POLIO 3	OPV3										
POLIO 4	OPV4										
POLIO 5	OPV5										
DPT1	DPT1										
DPT2	DPT2										
DPT3	DPT3										
DPT4	DPT4										
DPT5	DPT5										
HEPB AT BIRTH	H0										
HEPB1	H1										
HEPB2	H2										
HEPB3	H3										
MEASLES	MMR										
JAPE 1	JE1										
JAPE 2	JE2										
JAPE 3	JE3										

IM4. *Check IM3. Are all vaccines (BCG to JapE 3) recorded?* ☐ *Yes ⇨ Go to IM19* ☐ *No ⇨ Continue with IM5*		
IM5. IN ADDITION TO WHAT IS RECORDED ON THIS BOOKLET, DID (*name*) RECEIVE ANY OTHER VACCINATIONS FROM ELSEWHERE THAT ARE NOT RECORDED, INCLUDING VACCINATIONS RECEIVED IN CAMPAIGNS OR IMMUNIZATION DAYS? Record 'Yes' only if respondent mentions vaccines shown in the table above.	Yes ..... 1 (Probe for vaccinations and write '66' in the corresponding day column for each vaccine mentioned. Then skip to IM19) No ..... 2 DK 8	 2⇨IM19 8⇨IM19
IM6. HAS (*name*) EVER RECEIVED ANY VACCINATIONS TO PREVENT HIM/HER FROM GETTING DISEASES, INCLUDING VACCINATIONS RECEIVED IN A CAMPAIGN OR IMMUNIZATION DAY?	Yes ..... 1 No ..... 2 DK 8	 2⇨IM19 8⇨IM19
IM7. HAS (*name*) EVER RECEIVED A BCG VACCINATION AGAINST TUBERCULOSIS – THAT IS, AN INJECTION IN THE ARM OR SHOULDER THAT USUALLY CAUSES A SCAR?	Yes ..... 1 No ..... 2 DK 8	
IM8. HAS (*name*) EVER RECEIVED ANY "VACCINATION DROPS IN THE MOUTH" TO PROTECT HIM/HER FROM GETTING DISEASES – THAT IS, POLIO?	Yes ..... 1 No ..... 2 DK 8	 2⇨IM11 8⇨IM11
IM9. WAS THE FIRST POLIO VACCINE RECEIVED IN THE FIRST TWO WEEKS AFTER BIRTH OR LATER?	First two weeks ..... 1 Later 2	
IM10. HOW MANY TIMES WAS THE POLIO VACCINE RECEIVED?	Number of times ..... __	
IM11. HAS (*name*) EVER RECEIVED A DPT VACCINATION – THAT IS, AN INJECTION IN THE THIGH OR BUTTOCKS – TO PREVENT HIM/HER FROM GETTING TETANUS, WHOOPING COUGH, OR DIPHTHERIA? *Probe by indicating that DPT vaccination is sometimes given at the same time as Polio*	Yes ..... 1 No ..... 2 DK 8	 2⇨IM13 8⇨IM13
IM12. HOW MANY TIMES WAS A DPT VACCINE RECEIVED?	Number of times ..... __	
IM13. HAS (*name*) EVER BEEN GIVEN A HEPATITIS B VACCINATION – THAT IS, AN INJECTION IN THE THIGH OR BUTTOCKS – TO PREVENT HIM/HER FROM GETTING HEPATITIS B? *Probe by indicating that the Hepatitis B vaccine is sometimes given at the same time as Polio and DPT vaccines*	Yes ..... 1 No ..... 2 DK 8	 2⇨IM16 8⇨IM16
IM14. WAS THE FIRST HEPATITIS B VACCINE RECEIVED WITHIN 24 HOURS AFTER BIRTH, OR LATER?	Within 24 hours ..... 1 Later 2	

IM15. HOW MANY TIMES WAS A HEPATITIS B VACCINE RECEIVED?	Number of times .....__	
IM16. HAS (*name*) EVER RECEIVED A MEASLES INJECTION OR AN MMR INJECTION – THAT IS, A SHOT IN THE ARM AT THE AGE OF 9 MONTHS OR OLDER - TO PREVENT HIM/HER FROM GETTING MEASLES?	Yes .....1 No .....2 DK.....8	
IM16A. HAS (*name*) EVER RECEIVED A JE VACCINE - TO PREVENT HIM/HER FROM GETTING JAPANESE ENCEPHALITIS?	Yes .....1 No .....2 DK.....8	 2⇨IM19 8⇨IM19
IM16B. HOW MANY TIMES WAS A JE VACCINE RECEIVED?	Number of times .....__	
IM19. Has (*name*) ever participated in a polio prevention campaign?"	Yes .....1 No .....2 DK.....8	

UF13. *Ending time of interview (hours and minutes).*	Hour and minutes .....__ __ : __ __	

UF14. *Is the respondent the mother or caretaker of another child age 0-4 living in this household?*

☐ *Yes ⇨ Indicate to the respondent that you will need to measure the weight and height of the child later. Go to the next QUESTIONNAIRE FOR CHILDREN UNDER FIVE to be administered to the same respondent.*

☐ *No ⇨ End the interview with this respondent by thanking him/her for his/her cooperation and tell her/him that you will need to measure the weight and height of the child.*

Check to see if there are other woman's, man's or under-5 questionnaires to be administered in this household.

Move to another woman's or under-5 questionnaire, or start making arrangements for anthropometric measurements of all eligible children in the household.

ANTHROPOMETRY		**AN**
After questionnaires for all children are complete, the measurer weighs and measures each child. Record weight and length/height below, taking care to record the measurements on the correct questionnaire for each child. Check the child's name and line number on the household listing before recording measurements.		
AN1. *Measurer's name and number:*	Name_____ ___ ___	
AN2. *Result of height / length and weight measurement.*	Either or both measured.....1 Child not present .....2 Child or caretaker refused.....3 Other (*specify*) _____ 6	 2⇨AN6 3⇨AN6 6⇨AN6
AN3. *Child's weight.*	Kilograms (kg) .....__ __ . __ Weight not measured 99.9	
AN4. *Child's length or height.* Check age of child in AG2: ☐ Child under 2 years old. ⇨ Measure length (lying down). ☐ Child age 2 or more years. ⇨ Measure height (standing up).	Length (cm) Lying down .....1 __ __ __ . __ Height (cm) Standing up .....2 __ __ __ . __ Length / Height not measured.....9999.9	

AN6. Is there another child in the household who is eligible for measurement?

☐ Yes ⇨ Record measurements for next child.

☐ No ⇨ Check whether there are any other household members who are eligible for interview. If yes, then proceed interviewing until all eligible are interviewed.

Interviewer's Observations

Field Editor's Observations

Supervisor's Observations

Thailand

Multiple Indicator Cluster Survey

2012