



**Palestinian National Authority  
Palestinian Central Bureau of Statistics**

**Palestinian Multiple Indicator Cluster Survey, 2014**

**User Guide**

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## **Introduction**

The Palestinian Multiple Indicator Cluster Survey (MICS) was carried out in 2014 by Palestinian Central Bureau of Statistics in collaboration with Ministry of Health, as part of the global MICS programme. Technical support was provided by the United Nations Children's Fund (UNICEF). The survey was financially supported by the Palestinian National Authority (PNA), UNICEF and UNFPA.

The global MICS programme was developed by UNICEF in the 1990s as an international household survey programme to collect internationally comparable data on a wide range of indicators on the situation of children and women. MICS surveys measure key indicators that allow countries to generate data for use in policies and programmes, and to monitor progress towards the Millennium Development Goals (MDGs) and other internationally agreed upon commitments.

The Palestinian Multiple Indicator Cluster Survey has as its basic objectives:

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 Palestine and to strengthen technical expertise in the design, implementation, and analysis of such systems.

To facilitate the timely dissemination and use of results from the Palestinian MICS prior to the release of full tables and the final survey report that will contain detailed information on all survey findings by various demographic, social, economic and cultural characteristics.

## Concepts and Definitions

### **AIDS:**

Acquired Immune Deficiency Syndrome - a serious (often fatal) disease of the immune system transmitted through blood products, especially by sexual contact or contaminated needles.

### **Breast feeding:**

Refers to the method of feeding infants and children and is defined as a child fed breast milk directly from the breast or expressed.

### **Diarrhea:**

The passage of loose or liquid stools more frequently than is normal for the individual. Diarrhea may be defined as it is understood by respondents or mothers. The interviewers used the mother's definition in this survey.

### **Exclusive breastfeeding:**

Children aged 0-5 months who are breastfed and have not received any other food or drink, except for vitamins and medication.

### **Experience minor physical punishment:**

Children aged 2-14 years who were exposed to the following during the previous three days: shaken or hit on the bottom, or elsewhere on the body, with something like a belt, hairbrush, or using hands.

### **Experience psychological aggression as punishment:**

Children aged 2-14 years who were exposed to the following during the previous three days: shouted at, yelled at or screamed at, or called dumb, lazy, or another such term.

### **Experience only non-violent aggression:**

Children aged 2-14 years who were exposed to the following during the previous three days: removal of privileges, forbidden something they like or not allowed to leave the house, given an explanation as to why behavior was wrong, or given something else to do.

### **Family Planning:**

This is a method used for delaying or preventing pregnancy. Modern methods include the pill, IUD, injection, vaginal methods, female gel, female sterilization, male sterilization, and condoms.

### **Fertility:**

The actual reproductive performance of an individual, a couple, a group, or a population.

### **Folic Acid Tablets:**

Medication containing folic acid in the form of a tablet to prevent or treat folic acid deficiency, especially during pregnancy.

### **Height for Age:**

This parameter reflects the achieved linear growth and its deficit. indicates long-term cumulative inadequacies of health or nutrition. Two related terms are used when describing this parameter: length and stature. Length is the measurement while in a recumbent position and is used for children under 2 years of age, while stature refers to standing height. For simplification, the term height is used for both measurements in this report. Low height for age (below  $-2SD$  of the NCHS/WHO reference) ranges from 5 to 65% among less-developed

countries. In low prevalence countries, it is most likely due to normal variation, i.e. shortness: in less-developed countries it is likely to be due to a pathological process, resulting in stunting. A pathological process can be from the past or a continuous process. children whose height for age is less than  $-2SD$  are considered as stunted children (moderate and severe) while acute stunting reflects those who are below  $-3SD$ .

**Weight for Age:**

This parameter is influenced by both the height and weight of the child. It reflects the long and short-term health of an individual or population. Lightweight and underweight have been used to describe normal and pathological processes. children whose weight for age is less than  $-2SD$  are considered as underweight children (moderate and severe) while acute underweight reflects those who are below  $-3SD$ .

**Weight for Height:**

This parameter reflects body weight to height. Its use carries the advantage of requiring no knowledge of age. However, it is not a substitute for the other indicators. Low weight for height is called thinness if normal, or wasting if pathological, and can reflect a recent acute weight for height. Prevalence in non-disaster areas is around 5%. children whose weight for height is less than  $-2SD$  are considered as wasted children (moderate and severe) while acute wasting reflects those who are below  $-3SD$ . Lack of evidence of wasting in a population does not imply the absence of existing nutritional problems.

**Iodized Salt:**

Food salt fortified with an adequate amount of Iodine 15 ppm and above to prevent iodine deficiency disorder, including goiter, in adults and children and mental handicap in children.

**Infant:**

A live-born child from the moment of birth through the completion of the first year.

**Infant Mortality Rate:**

The number of infant deaths under one year of age per 1,000 live births during a given year.

**Iron Tablets:**

Medication containing iron supplement given in the form of a tablet or syrup to prevent or treat iron deficiency anemia.

**Live Birth:**

A birth is considered live if the newborn has shouted, cried, or shown any signs of life upon birth.

**Malnutrition:**

Malnutrition means ‘badly nourished’ but is more than a measure of what we eat or fail to eat. Clinically, malnutrition is characterized by inadequate intake of protein, energy, and micronutrients and by frequent infections or disease. Nutritional status is the result of the complex interaction between the food we eat, our overall state of health, and the environment in which we live – in short, food, health and caring, the three “pillars of well-being”.

**Nutritional Status:**

Nutritional status is the state of nutrition of individuals and is one of the indicators of the level of development in a given country. Nutritional status is linked to the availability and type of

food consumed, food habits and practices, as well as the level of poverty in a given society. It is usually assessed using anthropometric parameters and growth (weight, height, i.e., wasting and stunting) body mass, as well as dietary intake of selected foods important for growth and good nutrition.

**Reproductive Health:**

Reproductive health is defined by WHO as a state of physical, mental, and social well-being in all matters relating to the reproductive system at all stages of life. Reproductive health implies that people have the capability to reproduce and the freedom to decide if, when, and how often to do so. Implicit in this is the right of men and women to be informed and to have access to safe, effective, affordable, and acceptable methods of family planning of their choice, and the right to appropriate health-care services that enable women to have a safe pregnancy and childbirth.

**Suspected Pneumonia:**

Children aged 0-59 months who suffer from coughing during the two weeks preceding the survey, who are short of breath or have difficulty breathing due to a problem in the chest or in both the chest and a blocked nose.

**Under-Five Mortality:**

The proportion of children born alive who die before reaching their fifth birthday.

**Vitamin A/D:**

Vitamin A and D drops. They are given to children from birth until one year of age by child health clinics belonging to the Ministry of Health. They are not given by UNRWA clinics.

## Survey Questionnaires

Three sets of questionnaires were used in the survey: 1) a household questionnaire which was used to collect basic demographic information on all *de jure* household members (usual residents), the household, and the dwelling; 2) a questionnaire for individual women administered in each household to all women age 15-49 years; and 3) an under-5 questionnaire, administered to mothers (or caretakers) for all children under 5 years of age<sup>1</sup> living in the household. The questionnaires included the following modules:

The Household Questionnaire included the following modules:

- List of Household Members
- Education
- Child Discipline
- Household Characteristics
- Water and Sanitation
- Salt Iodization

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

- Woman's Background
- Fertility/Birth History
- Desire for Last Birth
- Maternal and Newborn Health
- Post-natal Health Checks
- Contraception
- Unmet Need
- Marriage
- HIV/AIDS

The Questionnaire for Children Under Five was administered to mothers (or caretakers) of children under 5 years of age living in the households. Normally, the questionnaire was administered to mothers of under-5 children; in cases when 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 and Dietary Intake
- Immunization
- Care of Illness
- Anthropometry

The questionnaires are based on the MICS5 model questionnaire<sup>2</sup>. From the MICS5 model English version, the questionnaires were customised and translated into Arabic and were pre-tested in December, 2013 in 4 clusters.

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<sup>1</sup> The terms "children under 5", "children age 0-4 years", and "children age 0-59 months" are used interchangeably in this report.

<sup>2</sup> The model MICS5 questionnaires can be found at <http://mics.unicef.org/tools>

### Data Set Linkage

The data set for users consists of two primary files that are related by identification variables (keys). A description of the files is below.

File Name	Content	Identification Variable
Roster	Households members' data	CLUSTER: Questionnaire serial number HH2: Household number HL1: Member's serial number
Housing & child Discipline	Data on dwelling characteristics and on child discipline status for children aged 1-14 yrs	CLUSTER: Questionnaire serial number HH2: Household number HL1: Member's serial number
Ever Married Women	Data on ever married women aged 15-49 yrs	CLUSTER: Questionnaire serial number HH2: Household number HL1: Woman's line number
Birth history	Data on reproduction history for ever married women aged 15-49 yrs	CLUSTER: Questionnaire serial number HH2: Household number HL1: Woman's line number
Children under five	Data on health status and vaccination for children under five	CLUSTER: Questionnaire serial number HH2: Household number HL1: Member's serial number UF6: Mother / Caretaker's line number

### Filtering and Grouping of Respondents

Units of analysis (Other units are generally derived from these) and filtering instructions are as follows:

Unit	file	Filtering
Person	Rosters	Families who were interviewed
Family	Housing	Characteristics of housing for families who were interviewed
Women	Ever Married Women	Women who were interviewed (15-49) years who have been married
Children	Children under five	Children under five
Children	child Discipline	child discipline status for children aged 1-14 yrs.
Birth	Birth history	Births of women in all their reproductive life

### Target Population

The target population of the survey consists of all the following groups:

- 1- All Palestinian households normally residing in the palestine.
- 2- Females aged 15 – 49 years.
- 3- Children aged 0 – 14 years and divided into the following categories: 0-5 years, 1-14 years, 5-14 years, with parts of the questionnaire customized for each group.



### **Sampling Frame**

The 2007 census frame was used for the selection of clusters. Census enumeration areas 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 number of households in each enumeration area from the 2007 Population and Housing Census frame. The first stage of sampling was thus completed by selecting the required number of enumeration areas from each of the sixteen governorates, separately for the urban, rural and camps strata.

### **Listing Activities**

Since the sampling frame (the 2007 census) was not up-to-date, a listing of households was conducted in all the sample enumeration areas (EAs) prior to the selection of households. For this purpose, listing teams were formed who visited all of the selected enumeration areas and listed all households in these enumeration areas. The listing was conducted in 416 enumeration areas; this excludes 29 sample EAs in Jerusalem within the barriers J1. A total of 266 EAs were updated in the West Bank area and 150 EAs in the Gaza Strip. A 5-day training took place during the first week of September in order to provide the fieldworkers with the skills needed for conducting the listing in the sample EAs for the Palestinian Multiple Indicator Survey 2014.

### **Sample Size:**

The estimation of the sample size depended on the Percentage of children under 5 years who suffer from stunting, we considered it the main indicator for the survey ( $r$ ) and it is equal 10.9% (from MICS4 data –2010).

Non-response rate = 8% (MICS-4, 2010).

Design effect =1.5

Average household size = 5.9 (MICS-4, 2010)

RME (relative Margin of error) =15%

Finally, we have the sample size = **2713\*4 region (north, middle, south west bank and Gaza strip) = 10852 HHs, there was additional 198 households from camps and 75 HHs for area C. so, the final sample size = 11125 HHs.**

### **Design Strata:**

In PMICS5, two variables were selected to divide the population into strata, depending on the homogeneity of parts of the population.

previous studies showed that we can divide the Palestinian households by the following:

- 1- **Governorates:** there are **16** governorates in Palestinian Territory, 11 in the West Bank and 5 in Gaza Strip.
- 2- **Locality Types:** there are three types : (Urban, Rural and refugee Camps).

### **Sample Design and Type:**

After determining the sample size which equals 11125 households, we selected a probability sample, which is multi-stage stratified cluster sample as following:

- 1- **First stage:** selecting sample of clusters (enumeration areas), using PPS without replacement method to get 445 enumeration areas from the total EAs frame.
- 2- **Second stage:** selecting 25 households from each EA selected in the first stage.

## **Sample Weights**

The Palestinian MICS sample is not self-weighting. Essentially, by allocating equal numbers of households to each of the regions, different sampling fractions were used in each region since the sizes of the regions varied. For this reason sample weights were calculated and these were used in the subsequent analyses of the survey data.

Since the number of households in each enumeration area (PSU) from the 2007 Census frame used for the first stage selection and the updated number of households in the enumeration area from the listing are generally different, individual overall probabilities of selection for households in each sample enumeration area (cluster) were calculated.

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.

Sample weights were appended to all data sets and analyses were performed by weighting households, women, or under-5s with these sample weights.

## Variance Calculation

It is necessary to compute standard errors of the principal survey estimations, so that a user can identify the accuracy of estimations and the survey reliability.

Table SE.2: Sampling errors: Total sample						
Standard errors, coefficients of variation and confidence intervals for selected indicators, Palestine, 2014						
	Value ( <i>r</i> )	Standard error ( <i>se</i> )	Coefficient of variation ( <i>se/r</i> )	Confidence limits		Weighted count
				Lower bound <i>r</i> - 2 <i>se</i>	Upper bound <i>r</i> + 2 <i>se</i>	
<b>Household members</b>						
Use of improved drinking water sources	0.6152	0.00619	0.010	0.603	0.628	10182
Use of improved sanitation	0.9865	0.00127	0.001	0.984	0.989	10182
Basic school net attendance ratio (adjusted)	0.9680	0.00274	0.003	0.859	0.870	13752
<b>Women</b>						
Infant mortality rate	18.2371	1.74228	0.096	14.753	21.722	-
Under five mortality rate	21.7306	1.86523	0.086	18.000	25.461	-
Adolescent birth rate	48.3988	3.00414	0.062	42.391	54.407	-
Contraceptive prevalence rate	0.5719	0.00454	0.013	0.331	0.349	13367
Unmet need	0.1088	0.00215	0.057	0.033	0.042	7960
Antenatal care coverage (1+ times, skilled provider)	0.9940	0.00415	0.019	0.210	0.227	13367
Antenatal care coverage (4+ times, any provider)	0.9551	0.00401	0.019	0.203	0.219	13367
Skilled attendant at delivery	0.9957	0.00415	0.019	0.211	0.227	13367
Literacy rate (young women)	0.9716	0.00697	0.011	0.606	0.634	5860
Knowledge about HIV prevention (young women)	0.0623	0.00345	0.055	0.055	0.069	5860
<b>Under-5s</b>						
Underweight prevalence (moderate and severe)	0.0138	0.00142	0.103	0.011	0.017	7222
Underweight prevalence (severe)	0.0023	0.00059	0.255	0.001	0.003	7222

The tables above indicate a high level of data accuracy.

**Reference period:**

The period of data collection began in March/2014 and concluded in April/2014.

**Training and Fieldwork:**

Training for the fieldwork was conducted for 16 days in February /2014. Training included lectures on interviewing techniques and the contents of the questionnaires, and mock interviews between trainees to gain practice in asking questions. Towards the end of the training period, trainees spent 2 days in practice interviewing in Jenin, Tulkarm, Nablus, Ramallah, Jerusalem, Bethlehem and Hebron governorates in the West Bank, and Gaza, Deir El-Balah, Khan Yunis governorates in Gaza Strip.

The data were collected by 28 teams; each was comprised of 4-5 interviewers, one editor, one measurer and a supervisor.

**Data Processing :**

Data were entered using the CSPro software, Version 5.0. All the questionnaires were entered by using desktop computers, this process was done by 46 data entry operators and 2 data entry supervisors. For quality assurance purposes, all questionnaires were double-entered and internal consistency checks were performed. Procedures and standard programs developed under the global MICS programme and adapted to the Palestinian Multiple Indicator Cluster Survey questionnaire were used throughout. Data processing began simultaneously with data collection in February /2014 and was completed in July /2014. Data were analysed using the Statistical Package for Social Sciences (SPSS) software, Version 19. Model syntax and tabulation plans developed by UNICEF were customized and used for this purpose.

**Response Rate**

<b>Table HH.1: Results of household, women's and under-5 interviews</b>			
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, Palestine, 2014			
	Total	Region	
		West Bank	Gaza Strip
<b>Households</b>			
Sampled	11125	7375	3750
Occupied	10568	6986	3582
Interviewed	10182	6687	3495
Household response rate	96.3	95.7	97.6
<b>Women</b>			
Eligible	13964	8825	5139
Interviewed	13367	8429	4938
Women's response rate	95.7	95.5	96.1
Women's overall response rate	92.2	91.4	93.8
<b>Children under 5</b>			
Eligible	7919	4508	3411
Mother/Caretaker Interviewed	7816	4453	3363
Response rate	98.7	98.8	98.6
Overall response rate	95.1	94.6	96.2

## **Data Quality**

There are many aspects related to the concept of data quality. This comprises the initial planning of the survey, the dissemination of the results, and how well users understand and use the data. There are three components to the quality of statistics: accuracy, data comparability, and quality control.

To ensure the high quality of the data, a series of steps were undertaken:

- Inspect and review all the tools of the survey.
- Training of researchers on the questionnaires for sufficient time according to international recommendations and by qualified trainers.
- The constant supervision of all areas and all phases of fieldwork.
- Examination of the questionnaires in the field and auditing at office.
- Continuous examination of the data entered in terms of consistency and rationality.
- During the fieldwork, field-testing the use of tables (16 tables) that examine the distribution and collection of questionnaires depending on the difference, sex ratio, age heaping, target groups, and other relevant tests.
- After receipt of the raw data file it has been cleaned and examined the abnormal values and examine the consistency between the different questions on the questionnaire .

Accuracy of data comprises different aspects of the survey, mainly statistical errors due to the use of a statistical sample, as well as non-statistical errors due to staff and survey tools, in addition to response rates in the survey and its effect on estimates.

## **Statistical Errors**

Since the data reported in this survey are based on a sample survey and not on a complete enumeration, there may be sampling errors as well as non-sampling errors.

Data from this survey may be affected by statistical errors due to use of the sample. Therefore, the emergence of certain differences from the real values obtained through censuses is possible.

## **Non-Statistical Errors**

Procedures were developed to ensure that non-statistical errors were minimized as much as possible. Fieldworkers were selected based on strict criteria with adequate qualifications and experience in data collection. All fieldworkers underwent training on data collection best practices, topics of the questionnaires, and how to interview and obtain accurate answers from respondents.

In addition, office editors were also trained on editing guidance to ensure data was consistent and complete. Data entry programs were also designed to resemble the structure of the questionnaire itself to ensure consistency within the data in each record and cross-records. All entered data were verified by different data entry clerks to ensure that all data were entered correctly.

The fieldworkers reported that respondents sometimes had difficulty understanding some of the questions and terminology. However, fieldworkers were able to overcome these difficulties due to the good training and proper understanding of the survey's instruments.

The main non-statistical errors that emerged during the implementation of the survey can be summarized as:

1. Errors resulting from the way a question was presented by the fieldworker during the interview.
2. Errors resulting from the way the respondent understood and answered the questions of the survey.

### Assessment of Data

Different methods were applied in the assessment of the survey data, including:

1. Occurrences of missing values and answers like "other" and "do not know".
2. Examining inconsistencies between the various sections of the questionnaire, including within record and cross-record consistencies.
3. Comparability of data with previous surveys 2006, 2010 and showed logical homogeneity in the results.

The results of these assessment procedures show that the data are of high quality and consistency.

### Derived Variables

Variable name	Description	Values
Region	Region	1. West Bank 2. Gaza Strip
BMI	body mass index	99.97 Measurement out of range 99.99 Not measured
ZBMI	body mass index (zscore)	99.97 Measurement out of range 99.98 Z-score out of range 99.99 Not measured
HAZ2	height for age WHO (zscore)	99.97 Measurement out of range 99.98 Z-score out of range 99.99 Not measured
WAZ2	weight for age	99.97 Measurement out of range 99.98 Z-score out of range 99.99 Not measured
WHZ2	weight for height	99.97 Measurement out of range 99.98 Z-score out of range 99.99 Not measured
HAZFLAG	Height for age flag WHO	value
WAZFLAG	Weight for age flag WHO	value
WHZFLAG	Weight for height flag WHO	value
BMIFLAG	BMI flag WHO	value
WHZNOAGE	Weight for height - Age flag WHO	value
Flag	Flag for anthropometric indicators	value
CAGE	Age in Months	age
CAGED	Age in Day	age
CEB	Children ever born	value

CSURV	Children surviving	value
CDEAD	Children dead	value
WDOBFC	Date of birth of first child (Calculated)	value
WDOBLC	Date of birth of last child (Calculated)	value
WDOB	Date of birth of woman (Calculated)	value
WDOM	Date of marriage (Calculated)	value
brthord	Birth order	value
magebrt	Mother's age at birth	value
birthint	Previous birth interval	value
BH4C	Date of birth of child (Calculated)	
BH4F	Date flag for BH4C	1. Month and year
		2. Month and age -y imp
		3. Year and age - m imp
		4. Y & age - y ignored
		5. Year - a, m imp
		6. Age - y, m imp
		7. Month - a, y imp
		8. None - all imp
BH9C	Age at death months (Calculated)	
MSTATUS	Marital status	1. Currently married
		2. Formerly married
		3. Never married
windex5	Wealth index quintile	1. Poorest
		2. Second
		3. Middle
		4. Fourth
		5. Richest
HH6	Type of locality	1. Urban
		2. Rural
		3. Camps