Challenges and possibilities of usage MICS in Belarus

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Multiple Indicator Cluster Surveys (MICS):

▸ *MICS 1* was conducted around 1995 in more than 60 countries

▸ *MICS 2* was conducted in 2000, and it included about 65 surveys

▸ *MICS 3* covered about 50 countries including Belarus

▸ *MICS 4* was carried out in 2009-2012 (including Belarus)

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MICS 3 in Belarus

- *The object of the study*: children aged under five years old and women aged 15-49 years in the total households sample (**7000** HH, including those with the children under 5 years old – **2870**).

- *The purpose of the survey*: obtaining statistical data to assess the status of women in reproductive age and children under five years old

- *Sampling method*: random sampling without replacement

Survey instruments

▶ "Household Questionnaire": information about the household, household inventory, education, water and sanitation, household characteristics, child labour

▶ "Individual Questionnaire For Women Aged 15-49 Years": information about the woman, infant mortality, maternal and neonatal health, marital status, contraceptive use, HIV / AIDS

▶ "Questionnaire For Children Under Five Years Old": early training, breastfeeding, disease treatment and child care, immunization, children's anthropometric data

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MICS 4 in Belarus (March - June 2012)

Survey instruments

▸ "Household Questionnaire" (*modules added*): discipline of children, salt iodization

▸ "Individual Questionnaire For Women Aged 15-49 Years" (*modules added*): access to media and information and communication technologies, desirability of the last born child, monitoring during the postpartum period, symptoms of diseases, relation to domestic violence, sexual behaviour, tobacco and alcohol use, life satisfaction

▸ "Individual Questionnaire For Men Aged 15-59 Years"

▸ "Questionnaire For Children Under Five Years Old"

▸

MICS 4 in Belarus

▸ *The purpose of the survey* : obtaining at the national level, as well as by regions, the data to assess the level of living conditions, health status of women in reproductive age, children under 5 years and men 15-59 years of age

▸ *Sample unit*: household (collective households (1.1% of the total population), students living in residence (1.7%) and homeless (less than 0.1%) are excluded)

Sample size

$$n = \frac{4(r)(1-r)(f)(1.1)}{(0.12r)^2 (p)(n_h)}, \qquad (1)$$

where n is a required sample size; 4 is the coefficient, providing 95 percent confidence level; r – predicted or expected prevalence (coverage rate) of the indicator; 1.1 – the coefficient that is required to increase the sample size by 10% for non-response compensation; f – deff; $0.12r$ – the margin of error acceptable at the 95-percent confidence level, defined as 12% of r (a relative sampling error for the r); p – proportion in the total population, which is based on the parameter r; n_h is the average household size.

▸ r (hypothetical prevalence of any key indicator) is 50%

▸ f is 1.5

▸ p (the proportion of children aged 0-4 years in the total population) is 5.2%

▸ n_h (average household size) is 2.43

- ***Sample size for each territory***: **3627** HHs. The number of HHs in Belarus as a whole is equal to **25,389** HH (i.e., **3627×7 = 25,389**)

- Considering financial expenditures and the limited time of the survey, the existing in the country sample set (used for the survey of households' living standards - ***6000*** HH) was used

- Due to the low average size of household (**2.4** by the Census of 2009), a small weight of children under 5 years in the population (**5.2%**) and the age of 2 years (**2.2%**) a limited number of children under five years was represented in the sample

$$n = \frac{4(r)(1-r)(f)(1.05)}{(0.12r)^2(l)}, \qquad (2)$$

where n is a required quantity of children in the sample; 4 is the coefficient, providing 95 percent confidence level; r – expected prevalence rate; 1.05 – the coefficient that is required to increase the sample size by 5% for non-response compensation; f – deff; $0.12r$ – the margin of error acceptable at the 95-percent confidence level, defined as 12% of r (a relative sampling error for the r); l is the size of target group of children on the average per household with children under the age of five years

▸ *r is 50%*

▸ *f is 1.5*

▸ *l is 1.13 (based on estimates obtained from the survey of households' living standards)*

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Sampling method

Three-stage territorial probability stratified sampling has been used; equiprobable selection method has been applied:

▶ *at the first stage* the primary sampling units included administrative-territorial items: cities, towns, village councils. To form a representative sample set and to ensure a relative homogeneity of the groups the stratification of the total population has been carried out

▶ *at the second stage* the following units have been taken: in cities and towns – Census plots, in rural areas – a set of settlements within the rural councils

▶ *at the third stage* the sampling unit was household

The survey has covered more than 7800 HH, 2710 of them – households with children under the age of 5 years

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Sample Weights

▸ Sample weights are used to adjust the sample to produce accurate estimates for the whole country

▸ Sample weights are the inverse of the probabilities of selection

▸ Sample weights have two components:
  - The initial probability of selection
  - Non-response

Shortcomings of the survey:

▸ it is carried out not regularly (every five-seven years)

▸ the module "Reproductive Health" is introduced in the survey for the first time and is only available for women

▸ the wealth of information is insufficient for a comprehensive evaluation of reproductive population health

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Thank you very much for your attention!