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Subject: Mid-upper arm circumference

Posted by [ElisabethS](#) on Sat, 12 Apr 2014 03:24:20 GMT

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We would like to propose inclusion in the DHS Core/Model Questionnaire of measurement of mid upper arm circumference (MUAC) among children and women.

1. Why is the information needed:

In addition to information on weight, height (or length), and age, MUAC is an essential anthropometric indicator. Assessment of MUAC and/or weight-for-height is used to identify children with acute malnutrition who need referral to treatment programs, including community-based management of acute malnutrition (CMAM). 1 Recommended criteria for referral include children with MUAC <115 mm and/or with weight-for-height z-score <-3 SD; some programs use MUAC (as this is easier to obtain in the community), while others use weight-for-height. Some published studies relate risk of mortality to MUAC categories while others refer to weight-for-height categories (only recent studies utilize the 2006 WHO growth standards). MUAC is also used to assess the nutritional status of adults (including pregnant and lactating women).

Collection of MUAC measurements in the DHS would provide unique information from nationally representative samples in developing countries; this is in contrast to studies that look at risk of mortality or response to treatment (such studies are generally among high risk individuals). DHS MUAC information would permit data analysis correlating various measures of anthropometric status (such as various MUAC cut-off points vs. various categories of weight-for-height). This is particularly important at this time, and would contribute to improved understanding and interpretation of various studies that relate disparate measures of nutritional status to risk of mortality and or to successful treatment (although DHS data per se will not yield information on MUAC related to risk of death or response to treatment ).

Additionally, inclusion of MUAC measurement could assist governments and various organizations when assessing the need for therapeutic feeding programs.

Inclusion of MUAC in the DHS Core/Model Questionnaire would be consistent with DHS' role as a prime source of high quality nationally representative nutritional status information globally.

2. What questions will elicit this information:

The question about MUAC would be included in the DHS Household Questionnaire. Measurement of MUAC is easy to carry out, and training materials are available, as are tapes used for measurement. The inclusion of MUAC would imply little additional cost, and the measurement of MUAC would not appreciably increase the time that an interviewer or measurer spends with an individual child or adult.

For children, the MUAC information would be recorded before or after the questions on weight (q205) and height/length (q206). The measurement would be recorded in millimeters (mm), requiring three boxes to record a maximum of three digits (no decimals). For women, the MUAC information would be recorded before or after the weight (q216) and height (q217) information.

MUAC information could also be recorded for men whose weight (q245) and height (q246) are measured.

3. How will the resulting information be used:

The information will be reported as the percentage of individuals in various categories; for example, for children the percentage in the following categories:

MUAC <115 mm (prevalence of severe acute malnutrition)

For women, the percentage with a MUAC <230 mm indicates acute malnutrition.

In addition to reporting the above prevalence information, the DHS data files will allow analysis of the MUAC information, for example, relating it to other anthropometric indicators (as well as to other information included in the DHS surveys).

4. What is the priority of the suggested additions compared with what is already in the questionnaire?

The measurement of MUAC is easy and quick, and it is suggested that MUAC be measured in addition to the weight and height measurement that is already part of the DHS Core/Model Questionnaire.

5. If suggesting more than one addition, what is the priority among the suggested additions:

N/A

6. Should the additional data be collected in all countries?

Because acute malnutrition is present--at least in some age groups and/or population subgroups--in almost all DHS countries, MUAC should be included in all countries.

References:

1 WHO. Guideline: Updates on the management of severe acute malnutrition in infants and children.

Geneva: World Health Organization; 2013.

We can provide additional references on this topic as needed.

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