Which Anthropometric Indicators Identify a Pregnant Woman as Acutely Malnourished and Predict Adverse Birth Outcomes in the Humanitarian Context?

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Abstract

Currently there is no consensus on how to identify pregnant women as acutely malnourished and when to enroll them in nutritional programmes. Médecins Sans Frontières Switzerland undertook a literature review with the purpose of determining values of anthropometric indicators for acute malnutrition that are associated with adverse birth outcomes (such as low birth weight (LBW)), pre-term birth and intra-uterine growth retardation (IUGR). A literature search in PUBMED was done covering 1 January 1995 to 12 September 2012 with the key terms maternal anthropometry and pregnancy. The review focused on the humanitarian context. Mid-upper-arm circumference (MUAC) was identified as the preferential indicator of choice because of its relatively strong association with LBW, narrow range of cut-off values, simplicity of measurement (important in humanitarian settings) and it does not require prior knowledge of gestational age. The MUAC values below which most adverse effects were identified were <22 and <23 cm. A conservative cut-off of <23 cm is recommended to include most pregnant women at risk of LBW for their infants in the African and Asian contexts.