Title: The assessment of vulnerable areas for childhood undernutrition in Bangladesh: An application of the Fay-Herriot model

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Abastact: This study used data from the 2011 Bangladesh Demographic and Health Survey and the 2011 Bangladesh Population and Housing Census. The Fay-Herriot model was applied to estimate the districts and sub-districts (upazilas) level indicators of undernutrition (stunting, wasting and underweight) for children under five years of age in Bangladesh. At the district level, Narsingdi (63.9%), Feni (19.8%) and Bandarban (62.5%) had the highest prevalence of stunting, wasting and underweight respectively. Among the 64 districts, 28 had stunting prevalence above 40%, wasting prevalence exceeded 15% in 21 districts and 16 districts had underweight prevalence exceeding 40%. Furthermore, all sub-districts within the Sylhet Division were identified as the most severely affected areas for all three indicators of undernutrition. Overall, the Sylhet Division emerged as one of the regions facing the greatest challenges in terms of the three undernutrition indicators for children under five.

Keyword: SAE, Fay-Herriot model, undernutrition, children, Bangladesh

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