Methodological issues raised from the coverage survey of the MSF nutritional programme. Madarounfa and Guidan Roumdji, Maradi region, Niger 2006.

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Background: MSF started its nutritional intervention in Maradi region in 2001, targeting children aged 6-59 months suffering from severe acute malnutrition. In 2006, the programme was enlarged to moderate malnutrition and more than 60000 admissions were recorded from January to October. Majority of children were treated on an ambulatory basis.

Coverage survey: We conducted a Centric Systematic Area Sampling survey to estimate the coverage of the MSF nutritional programme in the departments of Guidan Roumdji and Madarounfa in October 2006. The target area was divided in 48 quadrats of 12x12 km². In total, we investigated 141 villages including 23839 children aged 6-59 months. We only investigated further children presenting a mid upper arm circumference (MUAC) less than 135mm *i.e.*, 5542 children. Of those, 1817 presented the programme admissions criteria (weight for height less than 80% of the median NCHS and/or oedema, and/or MUAC less than 110 mm). Point coverage was estimated at 17.7% (95%CI : 16.0 – 19.5) for global malnutrition and at 37.1% (95%CI: 29.3 – 45.2) for severe malnutrition. Period coverage estimation was overall 29.8% (95%CI : 27.9 – 31.8) and exceeded 50% in 13 quadrats. Among the children with a MUAC less than 135 mm, 40.5% were reported to have been admitted in the MSF programme at least once in their life. Overall proportion of children presenting the programme admissions criteria and a MUAC less than 135 mm in the surveyed population (proxy of prevalence) was 7.7% (95%CI: 7.3 – 8.0). Per quadrat distribution of coverage and proxy-prevalence were plotted on a geographical map. Coverage estimation appeared surprisingly low in some quadrats close to or containing a nutritional centre.

Methodological issues: (1) Information bias: The study suffered from an information bias leading to an underestimation of programme coverage. Mothers were underreporting the fact that their children were currently receiving nutritional aid. Obtaining accurate information on programme participation in a population used to receive aid can be problematic. (2) CSAS method for moderate malnutrition: Quality of the results from a CSAS survey relies on the sensitivity of the method used to identify eligible children in the target population. Sensitivity is lower for moderate malnutrition compared to severe malnutrition. (3) CSAS as a tool for acute malnutrition prevalence estimation: Geographical distribution of proxy-prevalence appeared very useful for intervention planning. This per-quadrat prevalence estimation needs further consideration.