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Subject: Re: Weighted multilevel models using Tanzania SPA

Posted by [Liz-DHS](#) on Fri, 06 Apr 2018 13:18:28 GMT

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Dear User,

A response from sampling experts, Dr. Ruilin Ren:

Quote:

Firstly, about the multilevel modeling with SPA data, we do not know if other people did the same research or not, this question was never asked before. When talking about the multilevel weights, it needs additional attention because the weights we developed in the SPA data may not be "multilevel" since the provider weights and client weights all use the facility weights as base weights. This means the provider weights and client weights already take the multi-stage selection into account, they do not just reflect the selection of providers and clients in the second stage. Secondly, about the skewed distribution of the sampling weights, this should be the case for SPA surveys by facility type because the important health facilities such as hospitals and health centers are included with probability one in the sample, so their sampling weight should be small compared with facilities of other types which are sampled. If the skewed weight distribution is a problem for your modeling work, you may need to take the facility type as a co-variable. This may make more sense for your analysis because of the big difference on the role played by different types of facility in the health system.

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