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Subject: Appropriate Sampling Strata Across 112 Surveys  
Posted by [Alexa Humphreys](#) on Wed, 03 Feb 2021 14:45:10 GMT  
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Dear all,

My colleague and I are conducting an analysis of 112 DHS surveys (DHS-V and newer) with the aim of analyzing anthropometric indices among children under 5. We would like to solicit your thoughts on the best approach on the strata variables to use to account for survey design. In other words, is it recommended to:

A) combine variables v024/v025 across all surveys for consistency

Based on previous forums which have stated that "a cross of v024 and v025 will always be very close to correct" [https:// userforum.dhsprogram.com/index.php?t=msg&goto=13398& S=Google](https://userforum.dhsprogram.com/index.php?t=msg&goto=13398&S=Google)  
[https:// userforum.dhsprogram.com/index.php?t=msg&goto=13398& S=Google](https://userforum.dhsprogram.com/index.php?t=msg&goto=13398&S=Google)

B) verify survey-by-survey which strata variable is appropriate (i.e. v022, v023, v024/v025, v023/v025)

To note, we have reviewed the Strata Master List .do file made available in this post [https:// userforum.dhsprogram.com/index.php?t=msg&goto=13398& S=Google](https://userforum.dhsprogram.com/index.php?t=msg&goto=13398&S=Google) but found some inconsistencies/difficulties in deciphering when compared to the sampling design appendix information in the final reports (notably Egypt 2008, India 2005, and India 2015). Perhaps a follow-up question is if this list has been formally validated by DHS and can be relied upon without further examination of the reports?

In short, what is the recommended way forward between options A and B knowing that our stratification and analysis needs focus on child nutrition?

Many thanks in advance,  
Alexa

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Subject: Re: Appropriate Sampling Strata Across 112 Surveys  
Posted by [Bridgette-DHS](#) on Mon, 08 Feb 2021 14:58:30 GMT  
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Following is a response from DHS Senior Analysis & Research Manager, Shireen Assaf:

A correction for the Egypt survey was made and updated in the do file - the other two surveys are correct.

#### File Attachments

1) [Survey\\_strata.do](#), downloaded 332 times

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Subject: Re: Appropriate Sampling Strata Across 112 Surveys  
Posted by [Alexa Humphreys](#) on Tue, 23 Feb 2021 13:23:29 GMT  
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Dear Bridgette,

Thank you for this feedback. We will proceed with applying the appropriate strata survey-by-survey following the shared .do file.

Kind regards,  
Alexa

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Subject: Re: Appropriate Sampling Strata Across 112 Surveys  
Posted by [Alexa Humphreys](#) on Thu, 25 Feb 2021 14:59:44 GMT  
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Dear Bridgette,

Thank you again for providing us with the updated DHS strata .do file and recommendation to follow it. We have applied the strata coding from the .do file as recommended to our 112 surveys.

Once we had applied these strata, we reviewed the number of strata survey-by-survey and identified 4 'outliers' with >100 strata. For these we again reviewed the reports to understand if the high number of strata were correct and documented. Knowing that we previously identified strata for one survey that needed to be corrected (Egypt 2008) from the earlier iteration of the .do file we would like to ask about the following surveys as well:

1) Benin DHS-VI - per the .do file we would apply v022 for 135 strata

Per the Benin report: "Les principaux domaines d'étude retenus sont les douze départements du pays. Hormis le département du Littoral qui se limite à la commune de Cotonou, essentiellement urbaine, chaque département ou domaine d'études a été ensuite stratifié en urbain et rural ; ce qui a donné 23 strates." And "Pour l'ensemble du pays, 17 982 ménages ont été sélectionnés pour l'enquête ménage dans les 750 zones de dénombrement ou grappes de l'échantillon."

Based on the report, should we not use v023 for 23 strata?

2) Eswatini DHS-V - per the .do file we would apply v022 for 135 strata

Per the Eswatini report "The 2006-07 SDHS was designed to provide estimates of health and demographic indicators at the national level, for urban-rural areas, and for the four regions of Manzini, Hhohho, Lubombo, and Shiselweni" and "A total of 275 clusters were drawn from the census sample frame, 111 in the urban areas and 164 in the rural areas."

Based on the report, should we not use v024/v025 for 8 strata?

3) Liberia DHS-V - per the .do file we would apply v022 for 145 strata

Per the Liberia report "Therefore the 15 counties plus Greater Monrovia which has only urban areas were stratified into 31 sampling strata, 15 rural strata and 16 urban strata" and "the survey covered a total of 298 clusters--114 urban and 184 rural" and "The second stage of selection involved the systematic sampling of 25 of the households listed in each cluster"

Based on the report, it sounds as if there should be 31 strata, but there was not a variable or combination of variables that would create this number of strata. Kindly advise.

4) Rwanda DHS-VI - per the .do file we would apply v022 for 246 strata

Per the Rwanda report: "The sample was selected in two stages. In the first stage, 492 villages (also known as clusters or enumeration areas) were selected with probability proportional to the village size" and "In total, 30 sampling strata had been created."

Based on the report, should we not use v023 for 30 strata?

Many thanks in advance,  
Alexa

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Subject: Re: Appropriate Sampling Strata Across 112 Surveys  
Posted by [Shireen-DHS](#) on Mon, 01 Mar 2021 00:07:02 GMT  
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Hello,

You are correct that for Benin and Eswatini you should use the grouping of v024 and v025 and for Rwanda it should be v023. For the Liberia survey there was a special variable called scty that is required so please use:  
egen strata=group(scty v025 v024)

We will update our strata do file according to this.

Thank you for bringing it to our attention.

Best,

Shireen Assaf  
The DHS Program

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Subject: Re: Appropriate Sampling Strata Across 112 Surveys  
Posted by [Alexa Humphreys](#) on Mon, 01 Mar 2021 13:03:59 GMT

Dear Shireen.

Thank you for your swift response and clear guidance. We will proceed in the manner you have outlined.

Best regards,  
Alexa

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