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Subject: SPA survey Tanzania: Setting survey design and using weights for health facilities and health care p

Posted by [masjas](#) on Fri, 22 Jul 2016 08:06:23 GMT

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Using data from the SPA survey Tanzania we are interested in exploring the association between health care providers characteristics and their response to question w167 (dichotomized in yes and no).

The data set contains facility data and health provider data and includes weights for facility and health provider.

We want to conduct multilevel mixed effect logistic regression analyses (MELOGIT in STATA). As health providers within facility are more likely to be more similar compared to health providers between facilities we want to include random effects for health facilities.

MELOGIT requires that weights for each level need to be included ( [http://www.stata.com/new-in-stata/multilevel-models-survey-d ata/](http://www.stata.com/new-in-stata/multilevel-models-survey-data/)).

We have therefore set the survey design to indicate that health care providers (weight u005\_2 which is transformed weight factor by dividing U005 by 100,000) are nested within health facilities (hfid with weight v005\_2) as follows:

```
svyset hfid, weight(v005_2)|| _n, weight(u005_2)
```

Next: we run melogit as follows in STATA (example agecategorie, hfid is health facility unique ID):  
svy: melogit w167 i.agecat || hfid;

We would like to hear your thoughts if this is the correct analyses?

STATA requires that weights from all levels are included in setting survey design; therefore we conducted above analyses including. However, the program R does not seem to have this requirement as within R the analyses run while only health care providers weights are included in survey design (while STATA does not run the melogit analyses then as it gives the following error: weights in variable u005\_2 not constant within group defined by:hfid)

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Subject: Re: SPA survey Tanzania: Setting survey design and using weights for health facilities and health care p

Posted by [Bridgette-DHS](#) on Fri, 22 Jul 2016 14:43:04 GMT

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Following is a response from Senior DHS Stata Specialist, Tom Pullum:

I believe your svyset is correct. Providers nested within facilities is equivalent to households nested within clusters. However, strata should be included in svyset. I just tried this with the Tanzania 2006 SPA data (I merged the facility and provider data and used the outcome variable you indicated). You need to check the final report but usually the SPA strata are region by facility type.

```
egen strata = group(u001 u007)
gen v005_2= v005/1000000
gen u005_2= u005/1000000
```

\*outcome variable  
recode w167 (8/9=0), gen(w167b)

```
svyset inv_id, weight(v005_2) strata(strata) singleunit(centered) || _n, weight(u005_2)
svy: melogit w167b w102 || inv_id:
```

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Subject: Re: SPA survey Tanzania: Setting survey design and using weights for health facilities and health care p

Posted by [masjas](#) on Mon, 25 Jul 2016 13:29:13 GMT

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Thank you for your clear answer, this will help me to continue.

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