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Subject: Full immunisation computation

Posted by [Oriane](#) on Tue, 19 May 2015 15:20:01 GMT

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Dear all,

I am trying to compute the full immunization of children between 12 and 23 months in Ivory Coast thanks the 2012 DHS. I am using the software R with the package survey. The problem is that I never found the same results as the report and I don't know if the problem come from the way I code my variable or from the weight I use.

I am using the children file to do the computation.

I use the variables

- HW1 for the age in month
- H2, H3, H4, H5, H6, H7, H8, H9 for the reported vaccination

I generate a dummy "vaccination" that is equal to 1 if  $11 < HW1 < 23$  and the vaccination variables (Hx) are all equal to "1", "2", "3" (children have been vaccinated according to the health card or the mother) and to 0 if  $11 < HW1 < 23$  and one one of the vaccination variables is equal to "0" (have not been vaccinated).

At this point "8" (don't know) is in the missing values, but I try by including it in the "not fully vaccinated" part of my dummy and it does not correct perfectly my results.

On R, the codes are the following

```
data <- read.css("CIKR61FL.SAV")
```

```
data$vaccination <- NA
```

```
data$vaccination [(data$HW1 < 24 & data$HW1 > 11 ) & (data$H2 == "0" | data$H3 == "0"  
  | data$H4 == "0" | data$H5 == "0"  
  | data$H6 == "0" | data$H7 == "0"  
  | data$H8 == "0" | data$H9 == "0")] <- 0
```

```
data$vaccination [(data$H2 == "1" | data$H2 == "2" | data$H2 == "3") & (data$H3 == "1" | data$H3  
  == "2" | data$H3 == "3")  
  & (data$H4 == "1" | data$H4 == "2" | data$H4 == "3") & (data$H5 == "1" | data$H5  
  == "2" | data$H5 == "3")  
  & (data$H6 == "1" | data$H6 == "2" | data$H6 == "3") & (data$H7 == "1" | data$H7  
  == "2" | data$H7 == "3")  
  & (data$H8 == "1" | data$H8 == "2" | data$H8 == "3") & (data$H9 == "1" | data$H9  
  == "2" | data$H9 == "3")  
  & data$HW1 < 24 & data$HW1 > 11] <- 1
```

```
##design for survey package
```

```
data$weight <- data$V005/1000000
```

```
design <- svydesign (ids=~V021+V002, strata=~V023, weights=~weight, data=data)
```

#computation of mean

```
svymean(~stunted, design=design, na.rm=TRUE)
```

I have a similar problem of very small differences with the report results for many computation that I run with DHS, so I am also wondering if my way to specify the design is the good one and if my personal works are acceptable.

The problem is bigger with the full immunization because the proportion per wealth quintiles or per region I obtain are far from the one of the report (for example with the command  
" vaccination\_quintiles <- svyby(~vaccination, by=~V190, design=design, FUN=svymean,  
na.rm=TRUE, vartype = c('se','ci')) " )

So if someone see an enormous mistake in my way to specify my design or my immunization variable (or in both), I would be very happy to learn a little bit more about it. Or if someone have also difficulty to reproduce various DHS report results (also on other indicators) I would be happy to know it.

Thanks in advance for your help

Oriane